

# INTEL® PRODUCT QUICK REFERENCE MATRIX

FIRST HALF 2011 NON-NDA

## INTRODUCTION

## INTEL® vPRO™ TECHNOLOGY

**Intel® vPro™ Technology Solution**

## GRAPHICS

**Client Graphics**

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**SATA Solid-State Drives**

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**Desktop Boards**

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**Server / Workstation Processors**

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**Server Chassis**

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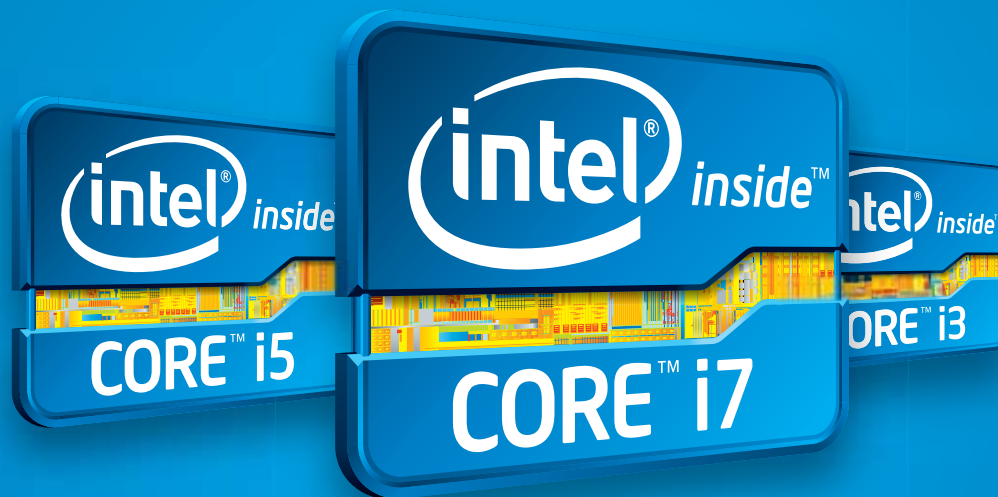
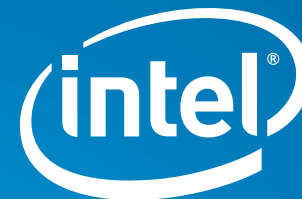
**RAID**

**Server Adapters**

**Enabled Solutions Acceleration Alliance**

**VMware® Software**

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.







DEAR INTEL® CHANNEL PARTNER PROGRAM MEMBER,

We have an exciting lineup of new product offerings with the 2nd gen Intel® Core™ processor family based on 32nm microarchitecture. These new products deliver smarter performance that adapts to your customers' needs. Key elements to highlight are:

- Adaptable performance when you need it with Intel® Turbo Boost Technology<sup>1</sup> 2.0 and Intel® Hyper-Threading Technology<sup>2</sup>
- Incredibly fast content creation with Intel® Advanced Vector Extensions
- Advanced manageability with Intel® vPro™ Technology and Intel® SIPP
- A stunning visual experience with Intel® Clear Video Technology
- Energy-efficient innovative designs
- I/O performance leadership with SATA 6.0 Gb/s
- Significant 3-D performance and overall experience

Get the New Intel® Desktop Processor Decoder and Intel® Solid-State Drives Apps

There are two new iPhone® apps out and this time, they are by Intel. First is the Intel® Desktop Boxed Processor Decoder. Just like past processor reference guides, users can compare Intel's desktop boxed channel processor lineup by brand as well as specs, speeds, and feeds—but more quickly and easily using their phone. Second is the Intel® Solid-

State Drives Utility which features a quick reference for specs and product codes, an interactive SSD vs. HDD game that simulates drive durability, and "where to buy" links.

Install the iPhone apps by going to iTunes® directly at <http://itunes.apple.com/us/app/intel-boxed-cpu-decoder/id392368120?mt=8>

and <http://itunes.apple.com/us/app/intel-solid-state-drives/id407109254?mt=8>

Plans for Android® and Blackberry® applications are expected in late January 2011.

We hope you have a very successful selling quarter and make sure to visit the NEW Intel® Technology Provider Web site at [www.intel.com/p/en\\_US/reseller](http://www.intel.com/p/en_US/reseller), designed to support your technology sales and marketing efforts.



*Steve Dallman*

Steve Dallman  
Vice President and General Manager  
Worldwide Reseller Channel Organization

<sup>1</sup> Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

<sup>2</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading).

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## THE 2010 VERSION OF INTEL® vPRO™ TECHNOLOGY

Processor



Intel® Core™ i7 and  
Intel® Core™ i5 Processors<sup>1</sup>

+

Chipset



Intel® 5 Series Chipsets

+

Network



Intel® Gigabit Network



## SELL INTEL® CORE™ vPRO™ TO MORE SMALL- AND MEDIUM-SIZE BUSINESSES

1

**Intel® Core™ vPro™ processors  
deliver easy PC care**

| Intel KVM Remote Control <sup>2</sup>                                                                                                                                                                                                           | Remote On / Off                                                                                                                                                           | AES-NI Encryption                                                                                                                                                                                                                                 | Rapid Storage Technology                                                                                                                                                                                                  | Partner and Distribution Opportunities                                                                                                                                                                                                                                                                                                                                   | Small- and Medium-size Business Return on Investment                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Easier remote support, even if the operating system crashes</li> <li>No additional software or hardware is needed on the client PC</li> <li>No other solution on the market today can do this</li> </ul> | <ul style="list-style-type: none"> <li>Turn systems off after work hours</li> <li>Turn them back on when IT needs access</li> <li>Tangible energy cost savings</li> </ul> | <p>"Use WinZip* to encrypt sensitive data up to 4x faster."</p> <p>AnandTech.com*, January 2010</p> <ul style="list-style-type: none"> <li>Significantly reduce the performance penalty when taking advantage of whole disk encryption</li> </ul> | <ul style="list-style-type: none"> <li>Built-in data protection in three easy steps: connect, confirm, enable</li> <li>Sell the eSATA drive with the PC</li> <li>Hard drive failure rates and cost of recovery</li> </ul> | <ul style="list-style-type: none"> <li>Up to a \$20 Intel vPro activation rebate paid per board, directly to system integrators. Visit <a href="http://www.intel.com/go/activate">www.intel.com/go/activate</a> for details.</li> <li>Recurring revenue by delivering remote PC support services</li> <li>Stronger customer relationships and repeat business</li> </ul> | <ul style="list-style-type: none"> <li>Tangible return on investment via reduced support and energy costs<sup>3</sup></li> </ul> |

2

**Intel Core vPro processors  
enable smart security**

3

**Take advantage of money on the  
table by selling Intel® vPro™**

For more information about Intel® vPro™ technology and solutions, visit: [www.intelsalestools.com/#category=4](http://www.intelsalestools.com/#category=4)

For more information, visit the Intel Web site at: [www.intelsalestools.com/#category=4](http://www.intelsalestools.com/#category=4)

<sup>1</sup> The following SKUs are Intel® vPro™ eligible:

Desktop—i5-650, i5-660, i5-670, i7-870, i7-860, and i7-860s.

Mobile—i7-820QM, i7-720QM, i7-620M, i7-640LM, i7-620LM, i7-640UM, i7-620UM, i5-540M, i5-520M, and i5-520UM.

<sup>2</sup> Intel KVM Remote Control Specifications:

a. These SKUs support Intel KVM Remote Control—i5-650, i5-660, i5-670, i7-620M, i7-640LM, i7-640UM, i7-620LM, i7-620UM, i5-540M, i5-520M, and i5-520UM.

b. Intel® HD Graphics must be active to support Intel KVM Remote Control. KVM is not supported with discrete graphics installed. Systems must be using Intel® Active Management Technology 6.0 (Intel® AMT 6.0) or above.

c. Intel KVM Remote Control is only available on Intel® vPro™ platforms.

d. Other requirements are Intel vPro eligible LAN, and Intel vPro eligible chipsets (Q57, QM57, QS57), along with requisite BIOS enabling.

e. The client PC does not require additional software.

f. Remote consoles must be enabled with KVM protocol to remotely control Intel KVM Remote Control capable clients.

<sup>3</sup> For more details on the powerful ROI calculations to show end users the value of moving to Intel® vPro™ technology platforms, visit [www3.intel.com/cd/channel/distributor/asmo-na/eng/446248.htm](http://www3.intel.com/cd/channel/distributor/asmo-na/eng/446248.htm).

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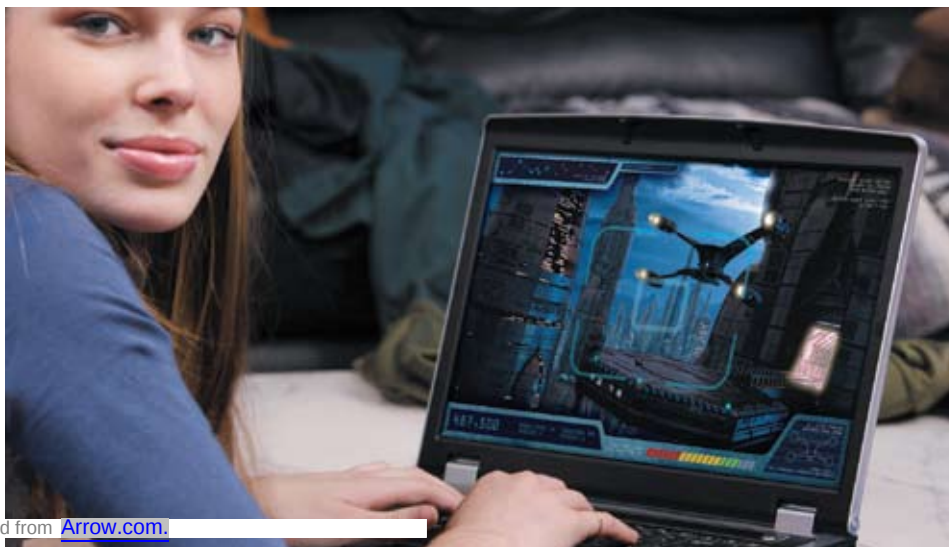
## GET A STUNNING VISUAL EXPERIENCE WITH INTEL® HD GRAPHICS, AVAILABLE ON SELECT MODELS OF THE 2010 INTEL® CORE™ PROCESSOR FAMILY

### Intel® HD Graphics—Built for Mainstream Desktop and Mobile PC Users

Intel® HD Graphics provides superb visual performance for sharper images, richer color, and lifelike video and audio. Watch movies and Internet videos in high definition, play popular game titles, and get full support for Microsoft® Windows® 7. There's no need for an extra add-in graphics card—full graphics and media support is already built-in. Intel HD Graphics is available on select models of the all-new 2010 Intel® Core™ processor family.

### Full Support for a Great Microsoft® Windows® 7 Experience

Together, Intel and Microsoft deliver a combination of powerful performance and intuitive design so consumers can complete multiple tasks faster and more easily on their PCs. From high-definition TV and movies to music, video, and photos, you'll be entertained like never before with Intel Core processors and Windows 7.



# VIDEO FEATURE COMPARISON

Today's PC users are demanding high-quality video playback and sharp image quality from their PC. Intel® Core™ processors with Intel® HD Graphics and Intel® Clear Video HD Technology provide advanced processing capabilities to enable a richer entertainment experience. Intel HD Graphics also support the latest in high-definition formats including Blu-ray\*.

|                                           |                                                                                                                         | Intel® Graphics Series<br><br>Processor or Chipset | Intel® Core™ Processors<br>with Intel® HD Graphics                                                            |                                                               | Intel® Graphics Media<br>Accelerator 4500 Series                  | Intel® Graphics Media<br>Accelerator 3150                |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|
|                                           |                                                                                                                         |                                                    | Intel® Core™ i7-600M,<br>Intel® Core™ i5-600, Intel®<br>Core™ i5-500M, and Intel®<br>Core™ i5-400M processors | Intel® Core™ i3-500 and<br>Intel® Core™ i3-300M<br>processors | Intel® G45, GM45, GS45,<br>G43, G41, and GL40<br>Express Chipsets | Intel® Atom™ D410,<br>D510, N450, and N470<br>processors |
| FEATURE                                   | BENEFIT                                                                                                                 |                                                    |                                                                                                               |                                                               |                                                                   |                                                          |
| <b>Blu-ray® Disc Playback</b>             | High-density optical disc format designed for the storage of data and high-definition video.                            |                                                    | <b>New</b><br>(with premium audio and dual decode)                                                            | <b>New</b><br>(with premium audio and dual decode)            | Yes                                                               | No                                                       |
| <b>Blu-ray® Stereo 3-D Disc Playback¹</b> | Playback of Blu-ray stereo 3-D content on the PC.                                                                       |                                                    | <b>New</b>                                                                                                    | <b>New</b>                                                    | No                                                                | No                                                       |
| <b>Intel® Clear Video HD Technology</b>   | Delivers enhanced high-definition video playback, sharper images, and precise color control.                            |                                                    | <b>New</b><br>(with x.v.Color and HD sharpness)                                                               | <b>New</b><br>(with x.v.Color and HD sharpness)               | Yes<br>(with Intel® Core™ processors only)                        | Yes<br>(with SD only)                                    |
| <b>DVD Upscaling</b>                      | Provides high-quality DVD upscaling through Windows® 7.                                                                 |                                                    | Yes<br>(8x8 polyphase)                                                                                        | Yes<br>(8x8 polyphase)                                        | Yes<br>(6x6 polyphase)                                            | No                                                       |
| <b>HD Hardware Acceleration</b>           |                                                                                                                         |                                                    |                                                                                                               |                                                               |                                                                   |                                                          |
| <b>AVC/H.264, MPEG2, VC1 Decode</b>       | Enables smoother playback and longer battery life when viewing h.264, MPEG2, or VC1 DVD, Blu-ray, or streaming content. |                                                    | Yes                                                                                                           | Yes                                                           | Yes²                                                              | No<br>(MPEG2 only)                                       |
| <b>Dual Video Decode</b>                  | Enables Blu-ray picture-in-picture hardware acceleration.                                                               |                                                    | <b>New</b>                                                                                                    | <b>New¹</b>                                                   | No                                                                | No                                                       |
| <b>HW Decode MFTs</b>                     | Enables faster Windows 7 drag and drop transcoding for MPEG2, VC1, and h.264 content.                                   |                                                    | <b>New</b>                                                                                                    | <b>New</b>                                                    | No                                                                | No                                                       |
| <b>Video Sharpness / Detail</b>           |                                                                                                                         |                                                    |                                                                                                               |                                                               |                                                                   |                                                          |
| <b>De-interlacing</b>                     | Reduces static and motion artifacts, improving the clarity and stability of the video picture.                          |                                                    | Advanced                                                                                                      | Advanced                                                      | Advanced                                                          | Adaptive                                                 |
| <b>Sharpness Detail</b>                   | Sharpens the image to provide finer detail and improved image quality.                                                  |                                                    | <b>New</b><br>(with HD)                                                                                       | <b>New¹</b><br>(with HD)                                      | Yes<br>(with SD only)                                             | No                                                       |
| <b>Noise Reduction</b>                    | Filters out unwanted noise to provide finer detail and cleaner images.                                                  |                                                    | Yes                                                                                                           | Yes                                                           | Yes                                                               | No                                                       |
| <b>Film Mode Detection</b>                | Detects film cadence and recovers original film content to improve image quality.                                       |                                                    | Yes                                                                                                           | Yes                                                           | Yes                                                               | No                                                       |
| <b>Video Scaling / Panel Scalar</b>       | Provides high-quality scaling to view content clearly in non-native resolution.                                         |                                                    | <b>New</b><br>(8x8 polyphase)                                                                                 | <b>New</b><br>(8x8 polyphase)                                 | Yes<br>(6x6 polyphase)                                            | Yes<br>(2x2 bilinear)                                    |
| <b>Vibrant Color</b>                      |                                                                                                                         |                                                    |                                                                                                               |                                                               |                                                                   |                                                          |
| <b>Deep Color and x.v.Color</b>           | Together, Deep Color and x.v.Color enable future HDTVs to display more natural, accurate, and vivid colors.             |                                                    | Yes                                                                                                           | Yes¹                                                          | No                                                                | No                                                       |
| <b>ProcAmp / Color Control</b>            | Enhances fine detail of video playback and allows for user control over brightness, contrast, and saturation.           |                                                    | Yes                                                                                                           | Yes                                                           | Yes                                                               | Yes                                                      |

# DISPLAY AND AUDIO FEATURES COMPARISON

Intel® HD Graphics allow the PC to connect to a wide range of digital displays and resolutions, including the latest digital interfaces such as HDMI\* and DisplayPort\*. In addition, Intel HD Graphics support all high-definition resolutions, including 720p, 1080i, and 1080p.

|                                           |                                                                                                                               | Intel® Graphics Series | Intel® Core™ Processors with Intel® HD Graphics                                                      |                                                         | Intel® Graphics Media Accelerator 4500 Series               | Intel® Graphics Media Accelerator 3150                       |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|
|                                           |                                                                                                                               | Processor or Chipset   | Intel® Core™ i7-600M, Intel® Core™ i5-600, Intel® Core™ i5-500M, and Intel® Core™ i5-400M processors | Intel® Core™ i3-500 and Intel® Core™ i3-300M processors | Intel® G45, GM45, GS45, G43, G41, and GL40 Express Chipsets | Intel® Atom™ D410, D510, N450, and N470 processors           |
| FEATURE                                   | BENEFIT                                                                                                                       |                        |                                                                                                      |                                                         |                                                             |                                                              |
| <b>New Control Panel</b>                  | New look and feel, easier to use, with custom resolution settings.                                                            |                        | <b>New</b>                                                                                           | <b>New</b>                                              | <b>New</b>                                                  | No                                                           |
| <b>TV Setup Utility</b>                   | Provides step-by-step configuration wizard for seamless TV setup and configuration.                                           |                        | Intel® TV Wizard                                                                                     | Intel® TV Wizard                                        | Intel® TV Wizard                                            | No                                                           |
| <b>Maximum Display Resolution</b>         | Higher pixel resolutions allow the PC to show more image detail.                                                              |                        | DisplayPort* 2560 x 1600, HDMI*, VGA                                                                 | DisplayPort* 2560 x 1600, HDMI*, VGA                    | DisplayPort* 2560 x 1600, HDMI*, VGA                        | VGA 2048 x 1536 <sup>7</sup> or VGA 1400 x 1050 <sup>8</sup> |
| Display Support                           |                                                                                                                               |                        |                                                                                                      |                                                         |                                                             |                                                              |
| <b>HDMI* with HDCP</b>                    | Provides a user-friendly, single-cable connector that enables transmission of superior, uncompressed digital video and audio. |                        | Version 1.3a (Deep Color, premium audio, auto lip-sync)                                              | Version 1.3a (Deep Color, premium audio, auto lip-sync) | Version 1.3a (auto lip-sync)                                | No                                                           |
| <b>DisplayPort* with HDCP</b>             | Highly scalable and efficient display interface for the PC.                                                                   |                        | Version 1.1 (with audio)                                                                             | Version 1.1 (with audio)                                | Version 1.1                                                 | No                                                           |
| <b>Embedded DisplayPort</b>               | Highly scalable and efficient display interface for notebooks.                                                                |                        | Yes <sup>4</sup>                                                                                     | Yes <sup>4</sup>                                        | No                                                          | No                                                           |
| <b>LVDS</b>                               | Low-voltage digital display interface.                                                                                        |                        | Yes <sup>5</sup>                                                                                     | Yes <sup>5</sup>                                        | Yes <sup>5</sup>                                            | Yes                                                          |
| <b>S-Video, Composite, Component</b>      | Analog connection that carries high-bandwidth video, resulting in sharper images over standard RGB video.                     |                        | Yes <sup>6</sup>                                                                                     | Yes <sup>6</sup>                                        | Yes <sup>6</sup>                                            | No                                                           |
| <b>DVI with HDCP</b>                      | Digital video interface that maximizes the visual quality of digital displays such as LCD displays and digital projectors.    |                        | Yes                                                                                                  | Yes                                                     | Yes                                                         | No                                                           |
| <b>VGA</b>                                | Standard analog display interfaces, such as VGA, provide basic visual quality when connected to CRTs, LCDs, or HDTVs.         |                        | Yes                                                                                                  | Yes                                                     | Yes                                                         | Yes                                                          |
| Audio Support                             |                                                                                                                               |                        |                                                                                                      |                                                         |                                                             |                                                              |
| <b>Dolby* TrueHD, DTS* Premium Suite*</b> | Supported on a significant number of Blu-ray* titles for the highest quality audio.                                           |                        | Yes                                                                                                  | Yes <sup>1</sup>                                        | No                                                          | No                                                           |

## 3-D FEATURES COMPARISON

Intel® Core™ processors with Intel® HD Graphics deliver a responsive, attractive 3-D visual experience for casual and mainstream PC games. When you buy a PC equipped with Intel graphics, you get a cost-effective solution with the performance for more gaming fun.

| Intel® Graphics Series      |                                                                                                                                         | Intel® Core™ Processors with Intel® HD Graphics                                                      |                                                         | Intel® Graphics Media Accelerator 4500 Series               | Intel® Graphics Media Accelerator 3150             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------|
| Processor or Chipset        |                                                                                                                                         | Intel® Core™ i7-600M, Intel® Core™ i5-600, Intel® Core™ i5-500M, and Intel® Core™ i5-400M processors | Intel® Core™ i3-500 and Intel® Core™ i3-300M processors | Intel® G45, GM45, GS45, G43, G41, and GL40 Express Chipsets | Intel® Atom™ D410, D510, N450, and N470 processors |
| FEATURE                     | BENEFIT                                                                                                                                 |                                                                                                      |                                                         |                                                             |                                                    |
| <b>Dynamic Frequency</b>    | Automatically distributes extra graphics power for your laptop when you need it.                                                        | <b>New</b><br>(Mobile only)                                                                          | <b>New</b><br>(Mobile only)                             | No                                                          | No                                                 |
| <b>Video Memory</b>         | Enables more realistic game play and provides greater resolution and color depth settings to the system's video and graphics subsystem. | Up to 1.70 GB                                                                                        | Up to 1.70 GB                                           | Up to 1.70 GB                                               | Up to 384 MB                                       |
| <b>DirectX* Support</b>     | Standardized programming interface used in games as an interface to the system's graphics through Microsoft® Windows*.                  | 10                                                                                                   | 10                                                      | 10                                                          | 9                                                  |
| <b>OpenGL* Support</b>      | Standardized programming interface used by 2-D and 3-D graphics applications.                                                           | 2.1                                                                                                  | 2.1                                                     | 2.0                                                         | 1.5 <sup>9</sup>                                   |
| <b>Shader Model Support</b> | Enables complex animations and visual effects in games with realistic shading, lighting, and textures.                                  | 4.0                                                                                                  | 4.0                                                     | 4.0                                                         | 3.0                                                |

## INTEL® CLEAR VIDEO HD TECHNOLOGY

Intel® Clear Video HD Technology is a combination of video processing hardware and software technologies that deliver enhanced HD video playback, sharper images, precise color control, and advanced support for a wide range of digital displays—without the extra expense of add-in video cards or decoders.

| FEATURE                                        | BENEFIT                                                                                                                                                                                                                                                                |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enhanced High-Definition Video Playback</b> | Experience high-definition video playback without the need for expensive add-in video cards or decoders. Enables smoother video playback and multi-stream playback for picture-in-picture, including full support for Blu-ray* disc playback.                          |
| <b>Sharper Image Quality</b>                   | Maintain sharp image quality even at high resolutions and reduce annoying artifacts through both analog and digital video signals. Detects film cadence and recovers original film content to improve image quality.                                                   |
| <b>Vibrant Colors</b>                          | Allows user adjustment of hue, saturation, brightness, and contrast enabling more accurate color of video clips under any environmental lighting condition.                                                                                                            |
| <b>Advanced Digital Display Support</b>        | Allows your PC to connect to a wide range of digital displays by supporting the latest digital display interfaces, including High-Definition Multimedia Interfaces for HDMI* and DisplayPort*, which carry uncompressed HD video and multi-channel audio in one cable. |

For more information, visit the Intel Web site at: [www.intel.com/go/graphics](http://www.intel.com/go/graphics)

<sup>1</sup> Feature not available on Intel® Pentium® processors.

<sup>2</sup> Intel® G41 and G43 Express Chipsets provide partial H.264 decode hardware acceleration.

<sup>3</sup> Intel® G41 and G43 Express Chipsets provide partial VC-1 decode hardware acceleration.

<sup>4</sup> Mobile only, not supported on desktops.

<sup>5</sup> For desktops, only supported with the Intel® A57 Express Chipset.

<sup>6</sup> Requires SDVO chip.

<sup>7</sup> Supported on Intel® Atom™ D410 and D510 processors.

<sup>8</sup> Supported on Intel® Atom™ N450 and N470 processors.

<sup>9</sup> Intel® Graphics Media Accelerator 3150 supports OpenGL® 1.5 with Microsoft® Windows® and OpenGL 2.0 with Linux®.

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## INTEL® HIGH-PERFORMANCE SATA SOLID-STATE DRIVES (SSD)

Intel® Solid-State Drives represent a revolutionary breakthrough that delivers a giant leap in storage performance. Unlike traditional hard disk drives, Intel SSDs have no moving parts, resulting in a quiet, cool, highly rugged storage solution that also offers faster system responsiveness.

Drawing from decades of memory engineering experience, and industry-leading, compute-quality NAND Flash memory manufacturing processes, Intel SSDs are designed to deliver outstanding performance for a wide range of computing applications. Intel SSDs also feature low write amplification and a unique wear-leveling design for higher reliability, meaning Intel SSDs not only perform better, they last longer.

| Intel® Solid-State Drive                                                          | Intel® X25-E SSD                                                                                          | Intel® X25-M / Intel® X18-M SSD                                                                                                                                                      | Intel® X25-V SSD                                                                                                   | Intel® SSD 310 Series                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Target Applications                                                               | <b>Enterprise SSD:</b> Extreme performance and reliability for servers, storage, and workstations         | <b>Mainstream SSD:</b> High-performance storage for notebook and desktop PCs with a SATA 3.0 Gb/s interface                                                                          | <b>Value SSD:</b> Performance boot drive for client PCs and for use in embedded PCs with a SATA 3.0 Gb/s interface | <b>Value SSD:</b> Performance boot drive and primary drive for very small form factor client PCs and for use in embedded PCs with a SATA 3.0 Gb/s interface                |
| SATA Interface                                                                    | SATA 3.0 Gb/s                                                                                             | SATA 3.0 Gb/s                                                                                                                                                                        | SATA 3.0 Gb/s                                                                                                      | SATA 3.0 Gb/s                                                                                                                                                              |
| Form Factor                                                                       | 2.5" drive<br>           | 2.5" / 1.8" drive<br>                                                                              | 2.5" drive<br>                  | mSATA (mini PCI Express*)<br>                                                           |
| Capacities                                                                        | 64 GB / 32 GB                                                                                             | 160 GB / 120 <sup>2</sup> GB / 80 GB                                                                                                                                                 | 40 GB                                                                                                              | 80 GB / 40 GB                                                                                                                                                              |
| Random IOPs (4 KB)                                                                | 64 GB / 32 GB<br>Reads: greater than 35K <sup>1</sup> IOPs<br>Writes: greater than 3.3K <sup>1</sup> IOPs | 160 GB / 120 GB<br>Reads: up to 35K <sup>3</sup> IOPs<br>Writes: up to 8.6K <sup>3</sup> IOPs<br>80 GB<br>Reads: up to 35K <sup>3</sup> IOPs<br>Writes: up to 6.6K <sup>3</sup> IOPs | 40 GB<br>Reads: up to 25K <sup>3</sup> IOPs<br>Writes: up to 2.5K <sup>3</sup> IOPs                                | 80 GB<br>Reads: up to 35K <sup>3</sup> IOPs<br>Writes: up to 6.6K <sup>3</sup> IOPs<br>40 GB<br>Reads: up to 25K <sup>3</sup> IOPs<br>Writes: up to 2.5K <sup>3</sup> IOPs |
| Sequential Bandwidth (Sustained MB/s)                                             | 64 GB / 32 GB<br>Reads: up to 250 MB/s<br>Writes: up to 170 MB/s                                          | 160 GB / 120 GB<br>Reads: up to 250 MB/s<br>Writes: up to 100 MB/s<br>80 GB<br>Reads: up to 250 MB/s<br>Writes: up to 70 MB/s                                                        | 40 GB<br>Reads: up to 170 MB/s<br>Writes: up to 35 MB/s                                                            | 80 GB<br>Reads: up to 200 MB/s<br>Writes: up to 70 MB/s<br>40 GB<br>Reads: up to 170 MB/s<br>Writes: up to 35 MB/s                                                         |
| Write Endurance                                                                   | Up to 1 PB random writes over 3 years                                                                     | 5 years under typical client usage                                                                                                                                                   | 5 years under typical client usage                                                                                 | 5 years under typical client usage                                                                                                                                         |
| Works With:<br>Intel® Data Migration Software<br>Intel® Solid-State Drive Toolbox | Yes<br>Yes                                                                                                | Yes<br>Yes                                                                                                                                                                           | Yes<br>Yes                                                                                                         | N/A <sup>4</sup><br>Yes                                                                                                                                                    |
| Target Availability                                                               | Now                                                                                                       | Now                                                                                                                                                                                  | Now                                                                                                                | Now                                                                                                                                                                        |

### Intel® Data Migration Software

- Transfer operating system, applications, and files from an old HDD or SSD to a new Intel® Solid-State Drive<sup>5</sup>
- Easy to use
- Free

Download now at  
[www.intel.com/go/ssdinstallation](http://www.intel.com/go/ssdinstallation)

### Intel® SSD Toolbox

- Schedule and run SSD Trim<sup>6</sup> via Intel® Optimizer
- View drive information, such as model, serial, and firmware numbers
- View SMART data, such as host writes and media wear out
- Run drive diagnostics

Download now at  
[www.intel.com/go/ssdtoolbox](http://www.intel.com/go/ssdtoolbox)

|  | PRODUCT NAME                               | CAPACITY | PRODUCT CODE           | PRODUCT DESCRIPTION         | PACKAGE TYPE | PACKAGE CONTENTS                               | QUANTITY PER BOX |
|-----------------------------------------------------------------------------------|--------------------------------------------|----------|------------------------|-----------------------------|--------------|------------------------------------------------|------------------|
|                                                                                   | <b>Intel® X25-E SATA Solid-State Drive</b> | 32 GB    | <b>SSDSA2SH032G1</b>   | SLC / 2.5" / 7.0mm / 32 GB  | Bulk box     | SSDs only                                      | 50               |
|                                                                                   |                                            | 32 GB    | <b>SSDSA2SH032G101</b> | SLC / 2.5" / 7.0mm / 32 GB  | OEM box      | SSD only                                       | 1                |
|                                                                                   |                                            | 64 GB    | <b>SSDSA2SH064G1</b>   | SLC / 2.5" / 7.0mm / 64 GB  | Bulk box     | SSDs only                                      | 50               |
|                                                                                   |                                            | 64 GB    | <b>SSDSA2SH064G101</b> | SLC / 2.5" / 7.0mm / 64 GB  | OEM box      | SSD only                                       | 1                |
|                                                                                   | <b>Intel® X25-M SATA Solid-State Drive</b> | 80 GB    | <b>SSDSA2MH080G2</b>   | MLC / 2.5" / 7.0mm / 80 GB  | Bulk box     | SSDs only                                      | 50               |
|                                                                                   |                                            | 80 GB    | <b>SSDSA2MJ080G201</b> | MLC / 2.5" / 7.0mm / 80 GB  | OEM Box      | SSD only                                       | 1                |
|                                                                                   |                                            | 80 GB    | <b>SSDSA2MJ080G2C1</b> | MLC / 2.5" / 9.5mm / 80 GB  | OEM Box      | SSD only                                       | 1                |
|                                                                                   |                                            | 80 GB    | <b>SSDSA2MH080G2K5</b> | MLC / 2.5" / 9.5mm / 80 GB  | Reseller box | SSD with desktop installation kit <sup>7</sup> | 1                |
|                                                                                   |                                            | 120 GB   | <b>SSDSA2MH120G2K5</b> | MLC / 2.5" / 9.5mm / 120 GB | Reseller box | SSD with desktop installation kit <sup>7</sup> | 1                |
|                                                                                   |                                            | 160 GB   | <b>SSDSA2MH160G2</b>   | MLC / 2.5" / 7.0mm / 160 GB | Bulk box     | SSDs only                                      | 50               |
|                                                                                   |                                            | 160 GB   | <b>SSDSA2MH160G201</b> | MLC / 2.5" / 7.0mm / 160 GB | OEM box      | SSD only                                       | 1                |
|                                                                                   |                                            | 160 GB   | <b>SSDSA2MH160G2C1</b> | MLC / 2.5" / 9.5mm / 160 GB | OEM box      | SSD only                                       | 1                |
|                                                                                   |                                            | 160 GB   | <b>SSDSA2MH160G2K5</b> | MLC / 2.5" / 9.5mm / 160 GB | Reseller box | SSD with desktop installation kit <sup>7</sup> | 1                |
|                                                                                   | <b>Intel® X18-M SATA Solid-State Drive</b> | 80 GB    | <b>SSDSA1MH080G2</b>   | MLC / 1.8" / 5.0mm / 80 GB  | Bulk box     | SSDs only                                      | 50               |
|                                                                                   |                                            | 80 GB    | <b>SSDSA1MH080G201</b> | MLC / 1.8" / 5.0mm / 80 GB  | OEM box      | SSD only                                       | 1                |
|                                                                                   |                                            | 160 GB   | <b>SSDSA1MH160G2</b>   | MLC / 1.8" / 5.0mm / 160 GB | Bulk box     | SSDs only                                      | 50               |
|                                                                                   |                                            | 160 GB   | <b>SSDSA1MH160G201</b> | MLC / 1.8" / 5.0mm / 160 GB | OEM box      | SSD only                                       | 1                |
|                                                                                   | <b>Intel® X25-V SATA Solid-State Drive</b> | 40 GB    | <b>SSDSA2MH040G2K5</b> | MLC / 2.5" / 9.5mm / 40 GB  | Reseller box | SSD with desktop installation kit <sup>7</sup> | 1                |
| ✓                                                                                 | <b>Intel® Solid-State Drive 310 Series</b> | 80 GB    | <b>SSDMAEMC080G2C1</b> | MLC / mSATA / 80 GB         | OEM box      | SSD only                                       | 1                |
| ✓                                                                                 |                                            | 40 GB    | <b>SSDMAEMC040G2C1</b> | MLC / mSATA / 40 GB         | OEM box      | SSD only                                       | 1                |

For more information, visit the Intel Reseller Center Web site at: [www.intel.com/go/channelssd](http://www.intel.com/go/channelssd)

<sup>1</sup> With enterprise workload.

<sup>2</sup> The 120 GB capacity is only available in the 2.5" form factor, not the 1.8" form factor.

<sup>3</sup> With client workload.

<sup>4</sup> Not applicable. Intel® SSD 310 Series products are intended for original equipment installation only.

<sup>5</sup> Designed to work with any Intel® Solid-State Drive as the target drive for cloning. Other brands of SSDs are not supported as target drives. Extra cables or other hardware items are required for complete data migration solution.

<sup>6</sup> Requires firmware release 02HA or later. Download firmware updates at [www.intel.com/go/ssdfirmware](http://www.intel.com/go/ssdfirmware). Intel® SSD Optimizer utility is available to invoke Trim command for Microsoft® Windows® 7 with Intel® Matrix Storage Manager, Windows Vista®, and Windows® XP. Download the Intel® SSD Toolbox with Intel® SSD Optimizer at: [www.intel.com/go/ssdtoolbox](http://www.intel.com/go/ssdtoolbox)

<sup>7</sup> Desktop installation kit contents: SATA power and signal cables, 3.5-inch desktop drive bay to 2.5-inch SSD adapter bracket, screws, installation guide, and warranty documentation.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

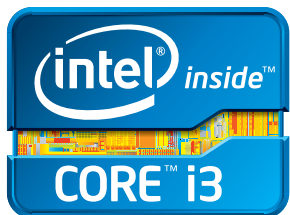
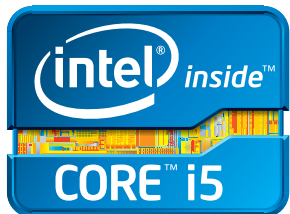
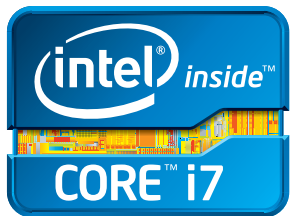
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## INTRODUCING INTEL'S 2ND GENERATION INTEL® CORE™ PROCESSORS!



**New Intel® Microarchitecture**—Based on the 32nm manufacturing process

**Optimized Intel® Turbo Boost Technology<sup>1</sup>**—Intel Turbo Boost Technology 2.0 delivers intelligent and energy-efficient performance on demand

**Intel® Hyper-Threading Technology<sup>2</sup>**—More threads and smart multitasking equals better performance, faster response time, and less waiting

**Built-in Visuals**—Significant advances in visual and 3-D graphics capabilities, including dual-stream HD playback, enhanced edit/share for video, and HD stereo 3-D

**Intel® Advanced Vector Extensions**—Improves floating point and vector computation for media and high-performance computing applications

**Impressive leap in energy-efficient performance**—Allows for sleeker, innovative designs

| FEATURES                                       | INTEL® CORE™ i7 PROCESSORS | INTEL® CORE™ i5 PROCESSORS | INTEL® CORE™ i3 PROCESSORS |
|------------------------------------------------|----------------------------|----------------------------|----------------------------|
| Intel® Turbo Boost Technology 2.0 <sup>1</sup> | ▪                          | ▪                          |                            |
| Intel® Hyper-Threading Technology <sup>2</sup> | ▪                          |                            | ▪                          |
| Intel® HD Graphics 2000 <sup>3</sup>           | ▪                          | ▪                          | ▪                          |
| Intel® Advanced Vector Extensions              | ▪                          | ▪                          |                            |
| AES-NI Encryption Acceleration                 | ▪                          | ▪                          |                            |
| Intel® vPro™ Technology <sup>4</sup>           | ▪                          | ▪                          |                            |
| Intel® Smart Cache                             | 8 MB L3                    | 6 MB L3                    | 3 MB L3                    |
| Unlocked Core Multiplier <sup>5,6</sup>        | ▪                          | ▪                          |                            |
| Cores / Threads                                | 4 / 8                      | 4 / 4                      | 2 / 4                      |

# BETTER TOGETHER: GET MORE PERFORMANCE AND RELIABILITY WITH INTEL® DESKTOP BOARDS

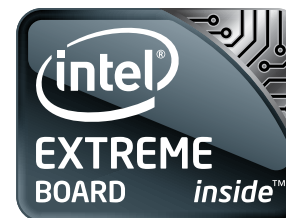
## The Lineup for Intel® Desktop Boards Supporting the Latest Intel® Express Chipsets

- New DisplayPort\*<sup>7</sup> or HDMI\*<sup>7</sup> port available for the new Intel® Core™ processors
- Ten-channel Intel® High Definition Audio (Intel® HD Audio)<sup>8</sup>
- Next-generation product in the mini-ITX form factor with a full PCI Express\* 2.0 x16 connector
- RAID capabilities with the new Intel® Rapid Storage Technology

### WHAT ARE THE NEW FEATURES?

|                  | Intel® Desktop Board DX58S02                                                 | Intel® Desktop Board DP67BG                                                                                        | Intel® Desktop Board DH67GD                                                                         | Intel® Desktop Board DH67CF                                                                         |
|------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Series           | Extreme Series                                                               | Extreme Series                                                                                                     | Media Series                                                                                        | Media Series                                                                                        |
| Form Factor      | ATX                                                                          | ATX                                                                                                                | MicroATX                                                                                            | Mini-ITX                                                                                            |
| Package          | LGA1366                                                                      | LGA1155                                                                                                            | LGA1155                                                                                             | LGA1155                                                                                             |
| Graphics Support | Three PCI Express* 2.0 x16<br><br>Supports ATI* CrossFireX* and NVIDIA* SLI* | One PCI Express* 2.0 x16 or switchable to Two PCI Express 2.0 x8<br><br>Supports ATI* CrossFireX* and NVIDIA* SLI* | DisplayPort* <sup>7</sup> + HDMI* <sup>7</sup> + DVI-I <sup>7</sup><br><br>One PCI Express* 2.0 x16 | DisplayPort* <sup>7</sup> + HDMI* <sup>7</sup> + DVI-I <sup>7</sup><br><br>One PCI Express* 2.0 x16 |
| Audio Support    | Ten-channel Intel® HD Audio <sup>8</sup>                                     | Ten-channel Intel® HD Audio <sup>8</sup>                                                                           | Ten-channel Intel® HD Audio <sup>8</sup>                                                            | Ten-channel Intel® HD Audio <sup>8</sup>                                                            |
| RAID Support     | Yes                                                                          | Yes                                                                                                                | Yes                                                                                                 | Yes                                                                                                 |
| Transition From  | Intel® Desktop Board DX58S0                                                  | Intel® Desktop Board DP55KG                                                                                        | Intel® Desktop Board DH55TC                                                                         | Intel® Desktop Board DH57JG                                                                         |

INTEL® DESKTOP BOARDS. INTEL® PROCESSORS.  
BUILT BY INTEL. BETTER TOGETHER.



## Take Your High-Performance Builds to the Extreme!

Amaze your toughest audience with incredible performance and flexibility like they've never seen: Intel® Desktop Boards Extreme Series is the choice of top gamers Team Evil Geniuses, multimedia masters, digital dominators, and every other no-compromise customer who demands the best.

From world-class gaming to HD content creation to high-power workstations, Extreme Series boards—paired with Intel® Core™ i7 processors Extreme Edition and other breakthrough Intel® technology—offer you the performance, reliability, and support you need to make sure that your customers are on the winning team of extreme computing.

## Think Big, Build Small with the Intel® Desktop Board DH67CF in the Mini-ITX Form Factor

- Save space on smaller footprint systems with standard desktop building blocks.
- Reduce packaging and transportation costs and conserve environmental resources.
- Full PCI Express 2.0 x16 connector for flexible graphics support.

## Unique Software and Tools Available

- ESET Smart Security\* gives you faster, more effective protection against viruses, spyware, spam, and Internet threats.
- Laplink\* PCmover\* moves programs, data, and settings to Microsoft® Windows\* 7, Windows Vista\*, or Windows\* XP on your new PC from any version of Windows on your old PC.

For more information, visit [www.IntelBetterTogether.com](http://www.IntelBetterTogether.com)

<sup>1</sup> Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

<sup>2</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. See [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading) for more information.

<sup>3</sup> Intel® Core™ i7 and Intel® Core™ i5 processors with a K processor number extension support Intel® HD Graphics 3000.

<sup>4</sup> Intel® Core™ i7 and Intel® Core™ i5 processors with a K processor number extension do not support Intel® vPro™ Technology.

<sup>5</sup> Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warrant, the operation of the processor beyond its specifications.

<sup>6</sup> Intel® Core™ i7 and Intel® Core™ i5 processors with a K processor number extension support overclocking.

<sup>7</sup> Requires a processor with Intel® HD Graphics.

<sup>8</sup> Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. See [www.intel.com/](http://www.intel.com/) for more information.

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# INTEL® DESKTOP PROCESSORS



## INTEL® DESKTOP PROCESSORS

|  | PROCESSOR NAME                                  | PRODUCT CODE   | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY¹ | MEMORY SPEED | CACHE           | PACKAGE |
|----------------------------------------------------------------------------------|-------------------------------------------------|----------------|-------------|--------------------------------|--------------|-----------------|---------|
|                                                                                  | Intel® Core™ i7-980X processor Extreme Edition² | BX80613I7980X  | 3.33 GHz    | 3.60 GHz                       | 1066 MHz     | 12 MB L3 shared | LGA1366 |
|  | PROCESSOR NAME                                  | PRODUCT CODE   | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY¹ | MEMORY SPEED | CACHE           | PACKAGE |
|                                                                                  | Intel® Core™ i7-970 processor                   | BX80613I7970   | 3.20 GHz    | 3.46 GHz                       | 1066 MHz     | 12 MB L3 shared | LGA1366 |
| ✓                                                                                | Intel Core i7-2600K processor²                  | BX80623I72600K | 3.40 GHz    | 3.80 GHz                       | 1333 MHz     | 8 MB L3 shared  | LGA1155 |
| ✓                                                                                | Intel Core i7-2600 processor                    | BX80623I72600  | 3.40 GHz    | 3.80 GHz                       | 1333 MHz     | 8 MB L3 shared  | LGA1155 |
|                                                                                  | Intel Core i7-960 processor                     | BX80605I960    | 3.20 GHz    | 3.46 GHz                       | 1066 MHz     | 8 MB L3 shared  | LGA1366 |
|                                                                                  | Intel Core i7-950 processor                     | BX80601I950    | 3.06 GHz    | 3.33 GHz                       | 1066 MHz     | 8 MB L3 shared  | LGA1366 |
|                                                                                  | Intel Core i7-875K processor                    | BX80605I7875K  | 2.93 GHz    | 3.60 GHz                       | 1333 MHz     | 8 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i7-870 processor                     | BX80605I7870   | 2.93 GHz    | 3.60 GHz                       | 1333 MHz     | 8 MB L3 shared  | LGA1156 |
|  | PROCESSOR NAME                                  | PRODUCT CODE   | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY¹ | MEMORY SPEED | CACHE           | PACKAGE |
| ✓                                                                                | Intel® Core™ i5-2500K processor²                | BX80623I52500K | 3.30 GHz    | 3.70 GHz                       | 1333 MHz     | 6 MB L3 shared  | LGA1155 |
| ✓                                                                                | Intel Core i5-2500 processor                    | BX80623I52500  | 3.30 GHz    | 3.70 GHz                       | 1333 MHz     | 6 MB L3 shared  | LGA1155 |
| ✓                                                                                | Intel Core i5-2400 processor                    | BX80623I52400  | 3.10 GHz    | 3.40 GHz                       | 1333 MHz     | 6 MB L3 shared  | LGA1155 |
| ✓                                                                                | Intel Core i5-2400S processor                   | BX80623I52400S | 2.50 GHz    | 3.30 GHz                       | 1333 MHz     | 6 MB L3 shared  | LGA1155 |
| ✓                                                                                | Intel Core i5-2300 processor                    | BX80623I52300  | 2.80 GHz    | 3.10 GHz                       | 1333 MHz     | 6 MB L3 shared  | LGA1155 |
|                                                                                  | Intel Core i5-760 processor                     | BX80605I5760   | 2.80 GHz    | 3.43 GHz                       | 1333 MHz     | 8 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-750S processor                    | BX80605I5750S  | 2.66 GHz    | 3.06 GHz                       | 1333 MHz     | 8 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-680 processor                     | BX80616I5680   | 3.60 GHz    | 3.80 GHz                       | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-670 processor                     | BX80616I5670   | 3.46 GHz    | 3.73 GHz                       | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-661 processor                     | BX80616I5661   | 3.33 GHz    | 3.60 GHz                       | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-660 processor                     | BX80616I5660   | 3.33 GHz    | 3.60 GHz                       | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-655K processor                    | BX80616I5655K  | 3.20 GHz    | 3.46 GHz                       | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                  | Intel Core i5-650 processor                     | BX80616I5650   | 3.20 GHz    | 3.46 GHz                       | 1333 MHz     | 4 MB L3 shared  | LGA1156 |

For more information, visit the Intel Web site at: [www.intel.com/go/desktopprocessors](http://www.intel.com/go/desktopprocessors)

|  NEW   | PROCESSOR NAME                     | PRODUCT CODE   | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY¹ | MEMORY SPEED | CACHE           | PACKAGE |
|-----------------------------------------------------------------------------------------|------------------------------------|----------------|-------------|--------------------------------|--------------|-----------------|---------|
| ✓                                                                                       | Intel® Core™ i3-2120 processor     | BX80623I32120  | 3.30 GHz    | N/A                            | 1333 MHz     | 3 MB L3 shared  | LGA1155 |
| ✓                                                                                       | Intel Core i3-2100 processor       | BX80623I32100  | 3.10 GHz    | N/A                            | 1333 MHz     | 3 MB L3 shared  | LGA1155 |
| ✓                                                                                       | Intel Core i3-2100T processor      | BX80623I32100T | 2.50 GHz    | N/A                            | 1333 MHz     | 3 MB L3 shared  | LGA1155 |
|                                                                                         | Intel Core i3-560 processor        | BX80616I3560   | 3.33 GHz    | N/A                            | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                         | Intel Core i3-550 processor        | BX80616I3550   | 3.20 GHz    | N/A                            | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                         | Intel Core i3-540 processor        | BX80616I3540   | 3.06 GHz    | N/A                            | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|                                                                                         | Intel Core i3-530 processor        | BX80616I3530   | 2.93 GHz    | N/A                            | 1333 MHz     | 4 MB L3 shared  | LGA1156 |
|  NEW   | PROCESSOR NAME                     | PRODUCT CODE   | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY¹ | MEMORY SPEED | CACHE           | PACKAGE |
|                                                                                         | Intel® Core™2 Quad processor Q9650 | BX80569Q9650   | 3 GHz       | N/A                            | 1333 MHz     | 12 MB L2 shared | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q9550  | BX80569Q9550   | 2.83 GHz    | N/A                            | 1333 MHz     | 12 MB L2 shared | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q9550S | BX80569Q9550S  | 2.83 GHz    | N/A                            | 1333 MHz     | 12 MB L2 shared | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q9505  | BX80580Q9505   | 2.83 GHz    | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q9400  | BX80580Q9400   | 2.66 GHz    | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q9400S | BX80580Q9400S  | 2.66 GHz    | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q9300  | BX80580Q9300   | 2.50 GHz    | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q8400  | BX80580Q8400   | 2.66 GHz    | N/A                            | 1333 MHz     | 4 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q8400S | BX80580Q8400S  | 2.66 GHz    | N/A                            | 1333 MHz     | 4 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Quad processor Q8300  | BX80580Q8300   | 2.50 GHz    | N/A                            | 1333 MHz     | 4 MB L2 shared  | LGA775  |
|  NEW | PROCESSOR NAME                     | PRODUCT CODE   | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY¹ | MEMORY SPEED | CACHE           | PACKAGE |
|                                                                                         | Intel® Core™2 Duo processor E8600  | BX80570E8600   | 3.33 GHz    | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Duo processor E8500   | BX80570E8500   | 3.16 GHz    | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Duo processor E8400   | BX80570E8400   | 3 GHz       | N/A                            | 1333 MHz     | 6 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Duo processor E7600   | BX80571E7600   | 3.06 GHz    | N/A                            | 1066 MHz     | 3 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Duo processor E7500   | BX80571E7500   | 2.93 GHz    | N/A                            | 1066 MHz     | 3 MB L2 shared  | LGA775  |
|                                                                                         | Intel Core 2 Duo processor E7400   | BX80571E7400   | 2.80 GHz    | N/A                            | 1066 MHz     | 3 MB L2 shared  | LGA775  |

|  PROCESSOR NAME | PRODUCT CODE | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup> | MEMORY SPEED | CACHE          | PACKAGE |
|--------------------------------------------------------------------------------------------------|--------------|-------------|--------------------------------------------|--------------|----------------|---------|
| Intel® Pentium® processor G6950                                                                  | BX80616G6950 | 2.80 GHz    | N/A                                        | 1066 MHz     | 3 MB L3 shared | LGA1156 |
| Intel Pentium processor E6800                                                                    | BX80571E6800 | 3.40 GHz    | N/A                                        | 1066 MHz     | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E6700                                                                    | BX80571E6700 | 3.20 GHz    | N/A                                        | 1066 MHz     | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E6600                                                                    | BX80571E6600 | 3.06 GHz    | N/A                                        | 1066 MHz     | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E6500                                                                    | BX80571E6500 | 2.93 GHz    | N/A                                        | 1066 MHz     | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E6300                                                                    | BX80571E6300 | 2.80 GHz    | N/A                                        | 1066 MHz     | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E5800                                                                    | BX80571E5800 | 3.20 GHz    | N/A                                        | 800 MHz      | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E5700                                                                    | BX80571E5700 | 3 GHz       | N/A                                        | 800 MHz      | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E5500                                                                    | BX80571E5500 | 2.80 GHz    | N/A                                        | 800 MHz      | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E5400                                                                    | BX80571E5400 | 2.70 GHz    | N/A                                        | 800 MHz      | 2 MB L2 shared | LGA775  |
| Intel Pentium processor E5300                                                                    | BX80571E5300 | 2.60 GHz    | N/A                                        | 800 MHz      | 2 MB L2 shared | LGA775  |
|  PROCESSOR NAME | PRODUCT CODE | CLOCK SPEED | INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup> | MEMORY SPEED | CACHE          | PACKAGE |
| Intel® Celeron® processor E3500                                                                  | BX80571E3500 | 2.70 GHz    | N/A                                        | 800 MHz      | 1 MB L2 shared | LGA775  |
| Intel Celeron processor E3400                                                                    | BX80571E3400 | 2.60 GHz    | N/A                                        | 800 MHz      | 1 MB L2 shared | LGA775  |
| Intel Celeron processor E3300                                                                    | BX80571E3300 | 2.50 GHz    | N/A                                        | 800 MHz      | 1 MB L2 shared | LGA775  |
| Intel Celeron processor E3200                                                                    | BX80571E3200 | 2.40 GHz    | N/A                                        | 800 MHz      | 1 MB L2 shared | LGA775  |
| Intel Celeron processor 430                                                                      | BX80557430   | 1.80 GHz    | N/A                                        | 800 MHz      | 512 KB L2      | LGA775  |

For more information, visit the Intel Web site at: [www.intel.com/go/desktopprocessors](http://www.intel.com/go/desktopprocessors)

<sup>1</sup> Intel® Turbo Boost Technology—maximum single-core turbo frequency (GHz). Intel Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

<sup>2</sup> Overclocking enabled. Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warrant, the operation of the processor beyond its specifications.

Please refer to the product quick reference matrix located on Intel® Reseller Center: [www.intel.com/reseller](http://www.intel.com/reseller)

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See [www.intel.com/products/processor\\_number](http://www.intel.com/products/processor_number) for more information.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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# INTEL® DESKTOP BOARDS DESIGNED FOR PERFORMANCE



|            | Desktop Board | Form Factor | Package | Memory      | Integrated Graphics Port¹ | PCIe* x16 | PCIe x1 | PCI | PATA (devices) | SATA 3 6.0 Gb/s | SATA 2 3.0 Gb/s (eSATA) | RAID | Audio | USB 3 | USB 2 (ext+int) | 1394 (ext+int) |   | 2nd Gen | Prev Gen | 2nd Gen | Prev Gen | 2nd Gen | Prev Gen |  |   |  |
|------------|---------------|-------------|---------|-------------|---------------------------|-----------|---------|-----|----------------|-----------------|-------------------------|------|-------|-------|-----------------|----------------|---|---------|----------|---------|----------|---------|----------|--|---|--|
| EXTREME    | DX58SO2       | ATX         | LGA1366 | DDR3 2400   |                           | 3         | 2       | 1   |                | 2               | 6 (2)                   | ▪    | 10-ch | 2     | 6+6             | 1+1            | ▪ |         | ▪        |         |          |         |          |  |   |  |
|            | DX580G        | ATX         | LGA1366 | DDR3 1600   |                           | 2         | 3       | 1   |                | 2               | 6                       | ▪    | 8-ch  | 2     | 6+6             | 1+1            | ▪ |         | ▪        |         |          |         |          |  |   |  |
|            | DP67BG        | ATX         | LGA1155 | DDR3 1600   |                           | 1         | 3       | 2   |                | 2               | 4 (1)                   | ▪    | 10-ch |       | 8+6             | 1+1            |   | ▪       | ▪        |         |          | ▪       |          |  |   |  |
|            | DX58SO        | ATX         | LGA1366 | DDR3 1600   |                           | 3         | 1       | 1   |                |                 | 6 (2)                   | ▪    | 10-ch |       | 8+4             | 1+1            | ▪ |         | ▪        |         |          |         |          |  |   |  |
|            | DP55KG        | ATX         | LGA1156 | DDR3 1600   |                           | 2         | 2       | 2   |                |                 | 8 (2)                   | ▪    | 10-ch |       | 8+4             | 1+1            |   |         | ▪        |         | ▪        |         |          |  |   |  |
|            | DP67BA        | ATX         | LGA1155 | DDR3 1333   |                           | 1         | 2       | 2   |                | 2               | 3 (1)                   | ▪    | 10-ch | 2     | 6+8             | 1+1            |   | ▪       |          | ▪       |          | ▪       |          |  |   |  |
| MEDIA      | DP67DE        | MicroATX    | LGA1155 | DDR3 1333   |                           | 1         | 2       | 1   |                | 2               | 3 (1)                   | ▪    | 10-ch | 2     | 6+8             | 1+1            |   | ▪       |          | ▪       |          | ▪       |          |  |   |  |
|            | DH67CF        | mini-ITX    | LGA1155 | DDR3 1333   | DisplayPort+ HDMI+DVI-I   | 1         |         |     |                | 2               | 2 (1)                   | ▪    | 10-ch | 2     | 4+6             |                |   | 2       |          | ▪       |          | ▪       |          |  |   |  |
|            | DH67GD        | MicroATX    | LGA1155 | DDR3 1333   | DisplayPort+ HDMI+DVI-I   | 1         | 2       | 1   |                | 2               | 3 (1)                   | ▪    | 10-ch | 2     | 6+8             | 1+1            |   | ▪       |          | ▪       |          | ▪       |          |  |   |  |
|            | DH67BL        | MicroATX    | LGA1155 | DDR3 1333   | HDMI+DVI-I                | 1         | 2       | 1   |                | 2               | 3 (1)                   | ▪    | 10-ch | 2     | 6+8             |                |   | ▪       |          | ▪       |          | ▪       |          |  |   |  |
|            | DH67CL        | ATX         | LGA1155 | DDR3 1333   | HDMI+DVI-I                | 1         | 2       | 3   |                | 2               | 3 (1)                   | ▪    | 10-ch | 2     | 6+8             |                |   | ▪       |          | ▪       |          | ▪       |          |  |   |  |
|            | DP55WG        | ATX         | LGA1156 | DDR3 1600   |                           | 2         | 2       | 2   |                |                 | 6                       | ▪    | 10-ch |       | 8+6             | 1+1            |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DP55WB        | MicroATX    | LGA1156 | DDR3 1333   |                           | 1         | 2       | 1   |                |                 | 6                       | ▪    | 8-ch  |       | 8+6             | 1+1            |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DH57JG        | mini-ITX    | LGA1156 | DDR3 1333   | HDMI+DVI                  | 1         |         |     |                |                 | 4 (1)                   | ▪    | 10-ch |       | 6+6             |                |   |         | 2        |         | ▪        |         | ▪        |  |   |  |
|            | DH57DD        | MicroATX    | LGA1156 | DDR3 1333   | HDMI+DVI                  | 1         | 2       | 1   |                |                 | 5 (1)                   | ▪    | 10-ch |       | 6+8             | 1+1            |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DH55TC        | MicroATX    | LGA1156 | DDR3 1333   | HDMI+DVI+ VGA             | 1         | 2       | 1   |                |                 | 6 (2)                   |      | 8-ch  |       | 6+6             |                |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
| EXECUTIVE  | DH55HC        | ATX         | LGA1156 | DDR3 1333   | HDMI+DVI+ VGA             | 1         | 2       | 3   |                |                 | 6 (2)                   |      | 8-ch  |       | 6+6             |                |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DQ57TM        | MicroATX    | LGA1156 | DDR3 1333   | DisplayPort+ DVI+DVI      | 1         | 2       | 1   |                |                 | 5 (1)                   | ▪    | 6-ch  |       | 6+8             |                |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DQ57TML       | MicroATX    | LGA1156 | DDR3 1333   | DVI+VGA                   | 1         | 2       | 1   |                |                 | 4                       | ▪    | 6-ch  |       | 4+8             |                |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DQ45EK        | mini-ITX    | LGA775  | DDR2 800    | DVI+DVI                   |           | 1       |     |                |                 | 4 (1)                   | ▪    | 4-ch  |       | 6+4             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |
| CLASSIC    | DH55PJ        | MicroATX    | LGA1156 | DDR3 1333   | DVI+VGA                   | 1         | 2       | 1   |                |                 | 4                       |      | 8-ch  |       | 6+6             |                |   |         | ▪        |         | ▪        |         | ▪        |  |   |  |
|            | DG43RK        | MicroATX    | LGA775  | DDR3 1333³  | HDMI+DVI                  | 1         | 2       | 1   |                |                 | 4                       |      | 10-ch |       | 6+6             | 1+1            |   |         |          |         |          |         | ▪        |  | ▪ |  |
|            | DP43BF        | ATX         | LGA775  | DDR3 1333³  |                           | 1         | 2       | 4   | 1 (2)          |                 | 5 (1)                   |      | 10-ch |       | 6+6             | 1+1            |   |         |          |         |          |         | ▪        |  | ▪ |  |
|            | DP43BFL       | ATX         | LGA775  | DDR3 1333³  |                           | 1         | 2       | 4   | 1 (2)          |                 | 5                       |      | 10-ch |       | 6+6             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |
|            | DG41TX        | MicroATX    | LGA775  | DDR3 1333³  | DVI+VGA                   | 1         | 1       | 2   | 1 (2)          |                 | 4                       |      | 6-ch  |       | 4+4             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |
|            | DG41KR        | MicroATX    | LGA775  | DDR3 1066   | HDMI+VGA                  | 1         | 1       | 2   | 1 (2)          |                 | 4                       |      | 10-ch |       | 4+4             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |
| INNOVATION | DG41AN        | mini-ITX    | LGA775  | DDR3 1333³  | DVI+VGA                   |           |         | 1   |                |                 | 3                       |      | 6-ch  |       | 4+4             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |
|            | D525MW        | mini-ITX    |         | DDR3 SODIMM | VGA+LVDS                  |           |         | 1   |                |                 | 2                       |      | 8-ch  |       | 4+2             |                |   |         |          |         |          |         |          |  | ▪ |  |
|            | D425KT        | mini-ITX    |         | DDR3 SODIMM | VGA                       |           |         | 1   |                |                 | 2                       |      | 4-ch  |       | 4+4             |                |   |         |          |         |          |         |          |  | ▪ |  |
|            | DG41WV        | MicroATX    | LGA775  | DDR3 1066   | VGA                       | 1         | 1       | 2   |                |                 | 4                       |      | 6-ch  |       | 4+4             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |
| ESSENTIAL  | D510MO        | mini-ITX    |         | DDR2 800    | VGA                       |           |         | 1   |                |                 | 2                       |      | 6-ch  |       | 4+3             |                |   |         |          |         |          |         |          |  | ▪ |  |
|            | D410PT        | mini-ITX    |         | DDR2 800    | VGA                       |           |         | 1   |                |                 | 2                       |      | 4-ch  |       | 4+4             |                |   |         |          |         |          |         |          |  | ▪ |  |
|            | D945GSEJT     | mini-ITX    |         | SODIMM      | DVI+VGA                   |           |         | 1   | 1 (2)          |                 | 2                       |      | 4-ch  |       | 3+3             |                |   |         |          |         |          |         |          |  | ▪ |  |
|            | DG41CN        | MicroATX    | LGA775  | DDR2 800    | VGA                       | 1         | 1       | 2   |                |                 | 4                       |      | 6-ch  |       | 4+4             |                |   |         |          |         |          |         | ▪        |  | ▪ |  |

For specific processor compatibility, visit <http://processormatch.intel.com>

For more information, visit the Intel Web site at: [www.intel.com/products/motherboard](http://www.intel.com/products/motherboard)

|                                                      |                                                                                                                                                                |                                                                                                                                                 |                                                                                                                                                                                              |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      |                                                                               |                                                               |                                                                                                           |
| Series                                               | Extreme Series                                                                                                                                                 | Extreme Series                                                                                                                                  | Extreme Series                                                                                                                                                                               |
| Product Family                                       | Intel® Desktop Board DX58S02                                                                                                                                   | Intel® Desktop Board DX580G                                                                                                                     | Intel® Desktop Board DP67BG                                                                                                                                                                  |
| Form Factor                                          | ATX                                                                                                                                                            | ATX                                                                                                                                             | ATX                                                                                                                                                                                          |
| Product Code / UPC                                   | BOXDX58S02 / 00735858217255                                                                                                                                    | BOXDX580G / 00735858217293                                                                                                                      | BOXDP67BG / 00735858217101                                                                                                                                                                   |
| 10-pack Product Code / UPC                           | BLKDX58S02 / 00735858217279                                                                                                                                    | BLKDX580G / 00735858217309                                                                                                                      | BLKDP67BG / 00735858217064                                                                                                                                                                   |
| Processor Support                                    | Intel® Core™ i7 processor Extreme Edition and Intel® Core™ i7 processors in the LGA1366 package                                                                | Intel® Core™ i7 processor Extreme Edition and Intel® Core™ i7 processors in the LGA1366 package                                                 | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package                                                                                                      |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                            | N/A                                                                                                                                             | N/A                                                                                                                                                                                          |
| Chipset                                              | Intel® X58 Express Chipset                                                                                                                                     | Intel® X58 Express Chipset                                                                                                                      | Intel® P67 Express Chipset                                                                                                                                                                   |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                            | Yes                                                                                                                                             | Yes                                                                                                                                                                                          |
| Integrated Graphics Core <sup>1</sup>                | N/A                                                                                                                                                            | N/A                                                                                                                                             | N/A                                                                                                                                                                                          |
| Discrete Graphics Connector                          | Three PCI Express* 2.0 x16 connectors<br>ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support                                                          | Two PCI Express* 2.0 x16 connectors ( <i>x16 electrical</i> )<br>ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support                   | One PCI Express* 2.0 x16 connector or switchable to two PCI Express 2.0 x8 connectors<br>ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support                                        |
| Memory Support                                       | Tri-channel DDR3 with six connectors for 2400 MHz memory ( <i>overclocked<sup>6</sup></i> ) (48 GB <sup>7</sup> max)<br>Intel® Extreme Memory Profiles support | Tri-channel DDR3 with six connectors for 1600+ MHz memory (48 GB <sup>7</sup> max)                                                              | Dual-channel DDR3 with four connectors for 1600 / 1333 / 1066 MHz (16 GB <sup>7</sup> max)                                                                                                   |
| Expansion Connectors                                 | Two PCI Express* 2.0 x1 connectors and one PCI connector                                                                                                       | Three PCI Express* 2.0 x1 connectors and one PCI connector                                                                                      | Three PCI Express* 2.0 x1 connectors and two PCI connectors                                                                                                                                  |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>8</sup> ( <i>five back panel analog ports and one optical port</i> )                                             | Eight-channel Intel® High Definition Audio <sup>8</sup> ( <i>three back panel analog ports</i> )                                                | Ten-channel Intel® High Definition Audio <sup>8</sup> ( <i>six back panel analog ports and one optical port</i> )                                                                            |
| USB Ports                                            | Twelve Hi-Speed USB 2.0 ports ( <i>six external ports and six additional ports via internal headers</i> ) and two USB 3.0 ports                                | Twelve Hi-Speed USB 2.0 ports ( <i>six external ports and six additional ports via internal headers</i> ) and two USB 3.0 ports                 | Fourteen USB 2.0 ports ( <i>eight external ports and six additional ports via internal headers</i> )                                                                                         |
| 1394 Ports                                           | Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )                                                                | Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )                                                 | Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )                                                                                              |
| Storage                                              | Two SATA ports (6.0 Gb/s), six SATA ports (3.0 Gb/s), and two eSATA ports                                                                                      | Two SATA ports (6.0 Gb/s) and six SATA ports (3.0 Gb/s)                                                                                         | Two SATA ports (6.0 Gb/s), four SATA ports (3.0 Gb/s), and one eSATA port                                                                                                                    |
| RAID                                                 | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                       | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                        | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                                     |
| Onboard LAN                                          | Dual Intel® PRO 10/100/1000 Network Connection<br>Bluetooth* / Wi-Fi* module                                                                                   | Intel® PRO 10/100/1000 Network Connection                                                                                                       | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                    |
| Trusted Platform Module                              | N/A                                                                                                                                                            | N/A                                                                                                                                             | N/A                                                                                                                                                                                          |
| Lead Free                                            | Yes                                                                                                                                                            | Yes                                                                                                                                             | Yes                                                                                                                                                                                          |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Extreme Tuning Utility <sup>10</sup><br>ESET* Smart Security 4<br>Laplink* PCmover Express*                | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Extreme Tuning Utility <sup>10</sup><br>ESET* Smart Security 4<br>Laplink* PCmover Express* | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Intel® Extreme Tuning Utility <sup>10</sup><br>ESET* Smart Security 4 (45-day license)<br>Laplink* PCmover Express* |
| BIOS                                                 | Intel® Rapid BIOS Boot<br>Intel® Express BIOS                                                                                                                  | Intel® Rapid BIOS Boot<br>Intel® Express BIOS                                                                                                   | Intel® Rapid BIOS Boot<br>Intel® Express BIOS                                                                                                                                                |
| WHQL Support                                         | Windows Vista* Premium                                                                                                                                         | Windows Vista* Premium                                                                                                                          | Windows Vista* Premium                                                                                                                                                                       |
| Warranty                                             | 3 year limited warranty                                                                                                                                        | 3 year limited warranty                                                                                                                         | 3 year limited warranty                                                                                                                                                                      |

|                                                      |                                                                                                                                                                                              |                                                                                                                                                                                             |                                                                                                                                                                               |                                                         |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|                                                      |                                                                                                             |                                                                                                          |                                                                                            |                                                         |
| Series                                               | Extreme Series                                                                                                                                                                               | Extreme Series                                                                                                                                                                              | Media Series                                                                                                                                                                  |                                                         |
| Product Family                                       | Intel® Desktop Board DX58SO                                                                                                                                                                  | Intel® Desktop Board DP55KG                                                                                                                                                                 | Intel® Desktop Board DP67BA                                                                                                                                                   |                                                         |
| Form Factor                                          | ATX                                                                                                                                                                                          | ATX                                                                                                                                                                                         | ATX                                                                                                                                                                           |                                                         |
| Product Code / UPC                                   | BOXDX58SO / 00735858203036                                                                                                                                                                   | BOXDP55KG / 00735858205979                                                                                                                                                                  | BOXDP67BA / 00735858217088                                                                                                                                                    |                                                         |
| 10-pack Product Code / UPC                           | BLKDX58SO / 00735858203043                                                                                                                                                                   | BLKDP55KG / 00735858205986                                                                                                                                                                  | BLKDP67BA / 00735858217057                                                                                                                                                    |                                                         |
| Processor Support                                    | Intel® Core™ i7 processor Extreme Edition and Intel® Core™ i7 processors in the LGA1366 package                                                                                              | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                                                                     | Intel® Core™ i7, Intel® Core™ i5, Intel® Core™ i3, and other Intel® processors in the LGA1155 package                                                                         |                                                         |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | 6.40 GT/s / 4.80 GT/s                                                                                                                                                                        | N/A                                                                                                                                                                                         | N/A                                                                                                                                                                           |                                                         |
| Chipset                                              | Intel® X58 Express Chipset                                                                                                                                                                   | Intel® P55 Express Chipset                                                                                                                                                                  | Intel® P67 Express Chipset                                                                                                                                                    |                                                         |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                                                          | Yes                                                                                                                                                                                         | Yes                                                                                                                                                                           |                                                         |
| Integrated Graphics Core <sup>1</sup>                | N/A                                                                                                                                                                                          | N/A                                                                                                                                                                                         | N/A                                                                                                                                                                           |                                                         |
| Discrete Graphics Connector                          | Two PCI Express* 2.0 x16 connectors ( <i>electrical x16</i> ) and one PCI Express 2.0 x16 connector ( <i>electrical x4</i> )<br>ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support | Two PCI Express* 2.0 x16 connectors ( <i>electrical x8</i> ) and one PCI Express 2.0 x16 connector ( <i>electrical x4</i> )<br>ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support | One PCI Express* 2.0 x16 connector                                                                                                                                            |                                                         |
| Memory Support                                       | Tri-channel DDR3 with four connectors for 1600+ / 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)<br>Intel® Extreme Memory Profiles support                                                  | Dual-channel DDR3 with four connectors for 1600+ / 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)<br>Intel® Extreme Memory Profiles support                                                | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max)<br>1.2 V to 1.8 V memory voltage control for max DIMM compatibility                |                                                         |
| Expansion Connectors                                 | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                                                                      | Two PCI Express 2.0 x1 connectors and two PCI connectors                                                                                                                                    | Two PCI Express* 2.0 x1 connectors and two PCI connectors                                                                                                                     |                                                         |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                                                           | Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby® Home Theater (five back panel analog ports and two optical ports)                                                         | Ten-channel Intel® High Definition Audio <sup>8</sup>                                                                                                                         |                                                         |
| USB Ports                                            | Twelve Hi-Speed USB 2.0 ports (eight back panel ports and four additional ports via two internal headers)                                                                                    | Thirteen Hi-Speed USB 2.0 ports (eight back panel ports, one external onboard port, and four additional ports via two internal headers)                                                     | Fourteen USB 2.0 ports (six external ports and eight via internal headers) and two USB 3.0 ports                                                                              |                                                         |
| 1394 Ports                                           | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                                                       | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                                                      | Two IEEE 1394a ports (one external port and one via internal header)                                                                                                          |                                                         |
| Storage                                              | Six SATA ports (3.0 Gb/s) and two eSATA ports                                                                                                                                                | Eight SATA ports (3.0 Gb/s) and two eSATA ports                                                                                                                                             | Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)                                |                                                         |
| RAID                                                 | Intel® Matrix Storage Technology for RAID 0, 1, 5, and 10                                                                                                                                    | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                                    | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                      |                                                         |
| Onboard LAN                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                    | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                   | Intel® PRO 10/100/1000 Network Connection                                                                                                                                     |                                                         |
| Trusted Platform Module                              | N/A                                                                                                                                                                                          | N/A                                                                                                                                                                                         | N/A                                                                                                                                                                           |                                                         |
| Lead Free                                            | Yes                                                                                                                                                                                          | Yes                                                                                                                                                                                         | Yes                                                                                                                                                                           |                                                         |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Control Center<br>Acronis® True Image 11 Home<br>CyberLink® Live Premium<br>Diskeeper® Home Edition<br>DivX® Pro for Windows®    | Dolby® Control Center<br>Norton 360®<br>PLAYXPERT® In-Game Platform<br>Kaspersky® Anti-Virus <sup>11</sup><br>Kingsoft® Antivirus <sup>12</sup><br>Kingsoft® Powerword® <sup>12</sup>       | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Control Center<br>Diskeeper® Pro Premier<br>(Microsoft® Windows® XP and Windows Vista®)<br>DivX® Pro for Windows® | Dolby® Control Center<br>Norton Internet Security® 2009 |
| BIOS                                                 | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                                                                                                | Digital Signature Technology<br>Unified Firmware Interface (UEFI)<br>Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                          | Digital Signature Technology<br>Unified Firmware Interface (UEFI)                                                                                                             | N/A                                                     |
| WHQL Support                                         | Windows Vista® Premium<br>Windows® 7                                                                                                                                                         | Windows Vista Premium<br>Windows® 7                                                                                                                                                         | Windows Vista® Premium<br>Windows® 7                                                                                                                                          | Windows Vista® Premium<br>Windows® 7                    |
| Warranty                                             | 3 year limited warranty                                                                                                                                                                      | 3 year limited warranty                                                                                                                                                                     | 3 year limited warranty                                                                                                                                                       | 3 year limited warranty                                 |

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| Series                                               | Media Series                                                                                                                                                   | Media Series                                                                                                                                                  | Media Series                                                                                                                                                   | Media Series                                                                                                                                                   |
| Product Family                                       | Intel® Desktop Board DP67DE                                                                                                                                    | Intel® Desktop Board DH67CF                                                                                                                                   | Intel® Desktop Board DH67GD                                                                                                                                    | Intel® Desktop Board DH67BL                                                                                                                                    |
| Form Factor                                          | MicroATX                                                                                                                                                       | Mini-ITX                                                                                                                                                      | MicroATX                                                                                                                                                       | MicroATX                                                                                                                                                       |
| Product Code / UPC                                   | BOXDP67DE / 00735858217125                                                                                                                                     | BOXDH67CF / 00735858216999                                                                                                                                    | BOXDH67GD / 00735858217033                                                                                                                                     | BOXDH67BL / 00735858216975                                                                                                                                     |
| 10-pack Product Code / UPC                           | BLKDP67DE / 00735858217071                                                                                                                                     | BLKDH67CF / 00735858216944                                                                                                                                    | BLKDH67GD / 00735858216968                                                                                                                                     | BLKDH67BL / 00735858216937                                                                                                                                     |
| Processor Support                                    | Intel® Core™ i7, Intel® Core™ i5, Intel® Core™ i3, and other Intel® processors in the LGA1155 package                                                          | Intel® Core™ i7 <sup>2</sup> , Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package                                                         | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package                                                                        | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package                                                                        |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                            | N/A                                                                                                                                                           | N/A                                                                                                                                                            | N/A                                                                                                                                                            |
| Chipset                                              | Intel® P67 Express Chipset                                                                                                                                     | Intel® H67 Express Chipset                                                                                                                                    | Intel® H67 Express Chipset                                                                                                                                     | Intel® H67 Express Chipset                                                                                                                                     |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                            | Yes                                                                                                                                                           | Yes                                                                                                                                                            | Yes                                                                                                                                                            |
| Integrated Graphics Core <sup>1</sup>                | N/A                                                                                                                                                            | Intel® HD Graphics (DisplayPort* + HDMI* + DVI-I)                                                                                                             | Intel® HD Graphics (DisplayPort* + HDMI* + DVI-I)                                                                                                              | Intel® HD Graphics (HDMI* + DVI-I)                                                                                                                             |
| Discrete Graphics Connector                          | One PCI Express* 2.0 x16 connector                                                                                                                             | One PCI Express* 2.0 x16 connector                                                                                                                            | One PCI Express* 2.0 x16 connector                                                                                                                             | One PCI Express* 2.0 x16 connector                                                                                                                             |
| Memory Support                                       | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max)<br>1.2 V to 1.8 V memory voltage control for max DIMM compatibility | Dual-channel DDR3 with two connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)<br>1.2 V to 1.8 V memory voltage control for max DIMM compatibility | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max)<br>1.2 V to 1.8 V memory voltage control for max DIMM compatibility | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max)<br>1.2 V to 1.8 V memory voltage control for max DIMM compatibility |
| Expansion Connectors                                 | Two PCI Express* 2.0 x1 connectors and one PCI connector                                                                                                       | N/A                                                                                                                                                           | Two PCI Express* 2.0 x1 connectors and one PCI connector                                                                                                       | Two PCI Express* 2.0 x1 connectors and one PCI connector                                                                                                       |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>8</sup>                                                                                                          | Ten-channel Intel® High Definition Audio <sup>8</sup>                                                                                                         | Ten-channel Intel® High Definition Audio <sup>8</sup>                                                                                                          | Ten-channel Intel® High Definition Audio <sup>8</sup>                                                                                                          |
| USB Ports                                            | Fourteen USB 2.0 ports (six external ports and eight additional ports via internal headers) and two USB 3.0 ports                                              | Ten USB 2.0 ports (four external ports and six additional ports via internal headers) and two USB 3.0 ports                                                   | Fourteen USB 2.0 ports (six external ports and eight via internal headers) and two USB 3.0 ports                                                               | Fourteen USB 2.0 ports (six external ports and eight additional ports via internal headers) and two USB 3.0 ports                                              |
| 1394 Ports                                           | Two IEEE 1394a ports (one external port and one via internal header)                                                                                           | N/A                                                                                                                                                           | Two IEEE 1394a ports (one back panel port and one via internal header)                                                                                         | N/A                                                                                                                                                            |
| Storage                                              | Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)                 | Two SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)                  | Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)                 | Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)                 |
| RAID                                                 | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                       | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                      | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                       | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                       |
| Onboard LAN                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                      | Intel® PRO 10/100/1000 integrated NIC                                                                                                                         | Intel® PRO 10/100/1000 integrated NIC                                                                                                                          | Intel® PRO 10/100/1000 integrated NIC                                                                                                                          |
| Trusted Platform Module                              | N/A                                                                                                                                                            | N/A                                                                                                                                                           | N/A                                                                                                                                                            | N/A                                                                                                                                                            |
| Lead Free                                            | Yes                                                                                                                                                            | Yes                                                                                                                                                           | Yes                                                                                                                                                            | Yes                                                                                                                                                            |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Laplink® PCmover Express*<br>ESET® Smart Security 4                                   | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Laplink® PCmover Express*<br>ESET® Smart Security 4                                  | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Laplink® PCmover Express*<br>ESET® Smart Security 4                                   | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Laplink® PCmover Express*<br>ESET® Smart Security 4                                   |
| BIOS                                                 | N/A                                                                                                                                                            | N/A                                                                                                                                                           | N/A                                                                                                                                                            | N/A                                                                                                                                                            |
| WHQL Support                                         | Windows Vista® Premium<br>Windows* 7                                                                                                                           | Windows Vista® Premium                                                                                                                                        | Windows Vista® Premium<br>Windows* 7                                                                                                                           | Windows Vista® Premium<br>Windows* 7                                                                                                                           |
| Warranty                                             | 3 year limited warranty                                                                                                                                        | 3 year limited warranty                                                                                                                                       | 3 year limited warranty                                                                                                                                        | 3 year limited warranty                                                                                                                                        |

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| Series                                               | Media Series                                                                                                                                                   | Media Series                                                                                                                                                                                                                                                      | Media Series                                                                                                                                                |
| Product Family                                       | Intel® Desktop Board DH67CL                                                                                                                                    | Intel® Desktop Board DP55WG                                                                                                                                                                                                                                       | Intel® Desktop Board DP55WB                                                                                                                                 |
| Form Factor                                          | ATX                                                                                                                                                            | ATX                                                                                                                                                                                                                                                               | MicroATX                                                                                                                                                    |
| Product Code / UPC                                   | BOXDH67CL / 00735858217019                                                                                                                                     | BOXDP55WG / 00735858206037                                                                                                                                                                                                                                        | BOXDP55WB / 00735858209144                                                                                                                                  |
| 10-pack Product Code / UPC                           | BLKDH67CL / 00735858216951                                                                                                                                     | BLKDP55WG / 00735858206044                                                                                                                                                                                                                                        | BLKP55WB / 00735858209151                                                                                                                                   |
| Processor Support                                    | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package                                                                        | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                                                                                                                                           | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                                     |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                            | N/A                                                                                                                                                                                                                                                               | N/A                                                                                                                                                         |
| Chipset                                              | Intel® H67 Express Chipset                                                                                                                                     | Intel® P55 Express Chipset                                                                                                                                                                                                                                        | Intel® P55 Express Chipset                                                                                                                                  |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                            | Yes                                                                                                                                                                                                                                                               | Yes                                                                                                                                                         |
| Integrated Graphics Core <sup>1</sup>                | Intel® HD Graphics (HDMI* + DVI-I)                                                                                                                             | N/A                                                                                                                                                                                                                                                               | N/A                                                                                                                                                         |
| Discrete Graphics Connector                          | One PCI Express* 2.0 x16 connector                                                                                                                             | Two PCI Express* 2.0 x16 connectors (electrical x8) and one PCI Express 2.0 x16 connector (electrical x4)                                                                                                                                                         | One PCI Express* 2.0 x16 connector                                                                                                                          |
| Memory Support                                       | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>2</sup> max)<br>1.2 V to 1.8 V memory voltage control for max DIMM compatibility | Dual-channel DDR3 with four connectors for 1600+ / 1333 / 1066 MHz memory (16 GB <sup>2</sup> max)                                                                                                                                                                | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>2</sup> max)                                                                  |
| Expansion Connectors                                 | Two PCI Express* 2.0 x1 connectors and three PCI connectors                                                                                                    | Two PCI Express 2.0 x1 connectors and two PCI connectors                                                                                                                                                                                                          | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                                     |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>8</sup>                                                                                                          | Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                                                                                                                                | Eight-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                     |
| USB Ports                                            | Fourteen USB 2.0 ports (six external ports and eight additional ports via internal headers) and two USB 3.0 ports                                              | Fourteen Hi-Speed USB 2.0 ports (eight back panel ports and six additional ports via three internal headers)                                                                                                                                                      | Fourteen Hi-Speed USB 2.0 ports (eight back panel ports and six additional ports via three internal headers)                                                |
| 1394 Ports                                           | N/A                                                                                                                                                            | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                                                                                                                            | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                      |
| Storage                                              | Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)                 | Six SATA ports (3.0 Gb/s)                                                                                                                                                                                                                                         | Six SATA ports (3.0 Gb/s)                                                                                                                                   |
| RAID                                                 | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                       | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                                                                                                          | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                    |
| Onboard LAN                                          | Intel® PRO 10/100/1000 integrated NIC                                                                                                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                                                                                         | Intel® PRO 10/100/1000 Network Connection                                                                                                                   |
| Trusted Platform Module                              | N/A                                                                                                                                                            | N/A                                                                                                                                                                                                                                                               | N/A                                                                                                                                                         |
| Lead Free                                            | Yes                                                                                                                                                            | Yes                                                                                                                                                                                                                                                               | Yes                                                                                                                                                         |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Laplink® PCmover Express*<br>ESET® Smart Security 4                                   | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DiveX* Pro for Windows*<br>Dolby® Control Center<br>Diskeeper® Pro Premier<br>Laplink® PCmover Express*<br>(Microsoft® Windows® XP and Windows Vista®)<br>Norton Internet Security* 2009 | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DiveX* for Windows*<br>Laplink® PCmover Express*<br>Norton Internet Security* 2009 |
| BIOS                                                 | N/A                                                                                                                                                            | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)                                                                                                                | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)          |
| WHQL Support                                         | Windows Vista® Premium<br>Windows® 7                                                                                                                           | Windows Vista Premium<br>Windows® 7                                                                                                                                                                                                                               | Windows Vista® Premium<br>Windows® 7                                                                                                                        |
| Warranty                                             | 3 year limited warranty                                                                                                                                        | 3 year limited warranty                                                                                                                                                                                                                                           | 3 year limited warranty                                                                                                                                     |

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| Series                                               | Media Series                                                                                                                                       | Media Series                                                                                                                                                                        | Media Series                                                                                                                                                                        |
| Product Family                                       | Intel® Desktop Board DH57JG                                                                                                                        | Intel® Desktop Board DH57DD                                                                                                                                                         | Intel® Desktop Board DH55TC                                                                                                                                                         |
| Form Factor                                          | Mini-ITX                                                                                                                                           | MicroATX                                                                                                                                                                            | MicroATX                                                                                                                                                                            |
| Product Code / UPC                                   | BOXDH57JG / 00735858210232                                                                                                                         | BOXDH57DD / 00735858213264                                                                                                                                                          | BOXDH55TC / 00735858210171                                                                                                                                                          |
| 10-pack Product Code / UPC                           | BLKDH57JG / 00735858210249                                                                                                                         | BLKDH57DD / 00735858213288                                                                                                                                                          | BLKDH55TC / 00735858210188                                                                                                                                                          |
| Processor Support                                    | Intel® Core™ i7 <sup>2</sup> , Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                              | Intel® Core™ i7, Intel® Core™ i5, Intel® Core™ i3, and Intel® Pentium® processors in the LGA1156 package                                                                            | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                                                             |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                | N/A                                                                                                                                                                                 | N/A                                                                                                                                                                                 |
| Chipset                                              | Intel® H57 Express Chipset                                                                                                                         | Intel® H57 Express Chipset                                                                                                                                                          | Intel® H55 Express Chipset                                                                                                                                                          |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                | Yes                                                                                                                                                                                 | Yes                                                                                                                                                                                 |
| Integrated Graphics Core <sup>1</sup>                | Intel® HD Graphics (HDMI* + DVI-I)                                                                                                                 | Intel® HD Graphics (HDMI* + DVI)                                                                                                                                                    | Intel® HD Graphics (HDMI* + DVI-D + VGA)                                                                                                                                            |
| Discrete Graphics Connector                          | One PCI Express* 2.0 x16 connector                                                                                                                 | One PCI Express* 2.0 x16 connector                                                                                                                                                  | One PCI Express* 2.0 x16 connector                                                                                                                                                  |
| Memory Support                                       | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)                                                         | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)                                                                                          | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)                                                                                          |
| Expansion Connectors                                 | N/A                                                                                                                                                | One PCI Express 2.0 x1 connector and two PCI connectors                                                                                                                             | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                                                             |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                 | Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                                                  | Eight-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                                             |
| USB Ports                                            | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                           | Fourteen Hi-Speed USB 2.0 ports (six back panel ports and eight additional ports via four internal headers)                                                                         | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                                                            |
| 1394 Ports                                           | N/A                                                                                                                                                | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                                              | N/A                                                                                                                                                                                 |
| Storage                                              | Four SATA ports (3.0 Gb/s) and one eSATA port                                                                                                      | Five SATA ports (3.0 Gb/s) and one eSATA port                                                                                                                                       | Six SATA ports (3.0 Gb/s) with two ports compatible with eSATA dongles                                                                                                              |
| RAID                                                 | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                           | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                            | N/A                                                                                                                                                                                 |
| Onboard LAN                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                                           | Intel® PRO 10/100/1000 Network Connection                                                                                                                                           |
| Trusted Platform Module                              | N/A                                                                                                                                                | N/A                                                                                                                                                                                 | N/A                                                                                                                                                                                 |
| Lead Free                                            | Yes                                                                                                                                                | Yes                                                                                                                                                                                 | Yes                                                                                                                                                                                 |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DivX® Pro for Windows*<br>Dolby® Control Center<br>ESET® Smart Security 4 | Laplink® PCmover Express*<br><br>Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DivX® Pro for Windows*<br>Dolby® Control Center<br>ESET® Smart Security 4 | Laplink® PCmover Express*<br><br>Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DivX® for Windows*<br>ESET® Smart Security 4<br>Laplink® PCmover Express* |
| BIOS                                                 | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                                                      | Digital Signature Technology<br>Unified Firmware Interface (UEFI)<br>Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                  | Digital Signature Technology<br>Unified Firmware Interface (UEFI)<br>Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                  |
| WHQL Support                                         | Windows Vista® Premium<br>Windows® 7                                                                                                               | Windows Vista® Premium<br>Windows® 7                                                                                                                                                | Windows Vista® Premium<br>Windows® 7                                                                                                                                                |
| Warranty                                             | 3 year limited warranty                                                                                                                            | 3 year limited warranty                                                                                                                                                             | 3 year limited warranty                                                                                                                                                             |

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| Series                                               | Media Series                                                                                                                                       | Executive Series – Supports Intel® vPro™ technology                                                                                                                                                                        |                                                                                                                                                                                                                            |
| Product Family                                       | Intel® Desktop Board DH55HC                                                                                                                        | Intel® Desktop Board DQ57TM                                                                                                                                                                                                | Intel® Desktop Board DQ57TML                                                                                                                                                                                               |
| Form Factor                                          | ATX                                                                                                                                                | MicroATX                                                                                                                                                                                                                   | MicroATX                                                                                                                                                                                                                   |
| Product Code / UPC                                   | BOXDH55HC / 00735858210218                                                                                                                         | BOXDQ57TM / 00735858210263                                                                                                                                                                                                 | N/A                                                                                                                                                                                                                        |
| 10-pack Product Code / UPC                           | BLKDH55HC / 00735858210201                                                                                                                         | BLKDQ57TM / 00735858210270                                                                                                                                                                                                 | BLKDQ57TML / 00735858215169                                                                                                                                                                                                |
| Processor Support                                    | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                            | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                                                                                                    | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                                                                                                    |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                | N/A                                                                                                                                                                                                                        | N/A                                                                                                                                                                                                                        |
| Chipset                                              | Intel® H55 Express Chipset                                                                                                                         | Intel® Q57 Express Chipset<br>Intel® Active Management Technology <sup>13</sup> 6.0                                                                                                                                        | Intel® Q57 Express Chipset<br>Intel® Active Management Technology <sup>13</sup> 6.0                                                                                                                                        |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                | Yes                                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                        |
| Integrated Graphics Core <sup>1</sup>                | Intel® HD Graphics (HDMI* + DVI-D + VGA)                                                                                                           | Intel® HD Graphics (DisplayPort* + DVI-D + DVI-I)                                                                                                                                                                          | Intel® HD Graphics (DVI-D + VGA)                                                                                                                                                                                           |
| Discrete Graphics Connector                          | One PCI Express* 2.0 x16 connector                                                                                                                 | One PCI Express* 2.0 x16 connector                                                                                                                                                                                         | One PCI Express* 2.0 x16 connector                                                                                                                                                                                         |
| Memory Support                                       | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB* max)                                                                     | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB* max)                                                                                                                                             | Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB* max)                                                                                                                                             |
| Expansion Connectors                                 | Two PCI Express 2.0 x1 connectors and three PCI connectors                                                                                         | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                                                                                                    | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                                                                                                    |
| Audio                                                | Eight-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)                                                            | Six-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)                                                                                                                                      | Six-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)                                                                                                                                      |
| USB Ports                                            | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                           | Fourteen Hi-Speed USB 2.0 ports (six back panel ports and eight additional ports via four internal headers)                                                                                                                | Twelve Hi-Speed USB 2.0 ports (four back panel ports and eight additional ports via four internal headers)                                                                                                                 |
| 1394 Ports                                           | N/A                                                                                                                                                | N/A                                                                                                                                                                                                                        | N/A                                                                                                                                                                                                                        |
| Storage                                              | Six SATA ports (3.0 Gb/s) with two ports compatible with eSATA dongles                                                                             | Five SATA ports (3.0 Gb/s) with one port compatible with eSATA dongles and one back panel eSATA port                                                                                                                       | Four SATA ports (3.0 Gb/s)                                                                                                                                                                                                 |
| RAID                                                 | N/A                                                                                                                                                | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                                                                   | Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10                                                                                                                                                                   |
| Onboard LAN                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                                                  | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                                                  |
| Trusted Platform Module                              | N/A                                                                                                                                                | Yes (discrete)                                                                                                                                                                                                             | Yes (discrete)                                                                                                                                                                                                             |
| Lead Free                                            | Yes                                                                                                                                                | Yes                                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                        |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DivX* for Windows*<br>ESET* Smart Security 4<br>Laplink* PCmover Express* | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Intel® IT Director<br>Intel® Remote PC Assist<br>Technology Client Agent<br>ESET* Smart Security 4<br>Laplink* PCmover*<br>Spiceworks* IT Desktop | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Intel® IT Director<br>Intel® Remote PC Assist<br>Technology Client Agent<br>ESET* Smart Security 4<br>Laplink* PCmover*<br>Spiceworks* IT Desktop |
| BIOS                                                 | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI) | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)                                                                         | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)                                                                         |
| WHQL Support                                         | Windows Vista* Premium<br>Windows* 7                                                                                                               | Windows Vista* Premium<br>Windows* 7                                                                                                                                                                                       | Windows Vista* Premium<br>Windows* 7                                                                                                                                                                                       |
| Warranty                                             | 3 year limited warranty                                                                                                                            | 3 year limited warranty                                                                                                                                                                                                    | 3 year limited warranty                                                                                                                                                                                                    |

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|                                                      |                                                                                 |                                                                 |                                                                                              |
| Series                                               | Executive Series – Supports Intel® vPro™ technology                                                                                                              | Classic Series                                                                                                                                     | Classic Series                                                                                                                                                                  |
| Product Family                                       | Intel® Desktop Board DQ45EK                                                                                                                                      | Intel® Desktop Board DH55PJ                                                                                                                        | Intel® Desktop Board DG43RK                                                                                                                                                     |
| Form Factor                                          | Mini-ITX / MicroATX-compatible                                                                                                                                   | MicroATX                                                                                                                                           | MicroATX                                                                                                                                                                        |
| Product Code / UPC                                   | BOXDQ45EK / 00735858200325                                                                                                                                       | BOXDH55PJ / 00735858215077                                                                                                                         | BOXDG43RK / 00735858213615                                                                                                                                                      |
| 10-pack Product Code / UPC                           | BLKDQ45EK / 00735858200332                                                                                                                                       | BLKDH55PJ / 00735858215060                                                                                                                         | BLKDG43RK / 00735858213608                                                                                                                                                      |
| Processor Support                                    | Intel® Core™2 Quad (65 W TDP), Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                                          | Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package                                                            | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                                                                    |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                                    | N/A                                                                                                                                                | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                                                   |
| Chipset                                              | Intel® Q45 Express Chipset<br>Intel® Active Management Technology <sup>13</sup> Specification 5.0                                                                | Intel® H55 Express Chipset                                                                                                                         | Intel® G43 Express Chipset                                                                                                                                                      |
| Supports HT Technology <sup>5</sup>                  | N/A                                                                                                                                                              | Yes                                                                                                                                                | N/A                                                                                                                                                                             |
| Integrated Graphics Core <sup>1</sup>                | Intel® Graphics Media Accelerator 4500 (DVI-D + DVI-I)                                                                                                           | Intel® HD Graphics (DVI-D + VGA)                                                                                                                   | Intel® Graphics Media Accelerator X4500 (HDMI* + DVI-I)                                                                                                                         |
| Discrete Graphics Connector                          | N/A                                                                                                                                                              | One PCI Express* 2.0 x16 connector                                                                                                                 | One PCI Express* 2.0 x16 connector                                                                                                                                              |
| Memory Support                                       | Dual-channel DDR2 with two connectors for 800 / 667 MHz memory (4 GB <sup>7</sup> max)                                                                           | Dual-channel DDR3 with two connectors for 1333 / 1066 MHz memory (8 GB <sup>7</sup> max)                                                           | Dual-channel DDR3 with four connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (8 GB <sup>7</sup> max)                                                                    |
| Expansion Connectors                                 | One PCI Express* 2.0 x1 connector                                                                                                                                | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                            | Two PCI Express 2.0 x1 connectors and one PCI connector                                                                                                                         |
| Audio                                                | Four-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                           | Eight-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                            | Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                                              |
| USB Ports                                            | Ten Hi-Speed USB 2.0 ports (six back panel ports and four additional ports via three internal headers)                                                           | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                           | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                                                        |
| 1394 Ports                                           | N/A                                                                                                                                                              | N/A                                                                                                                                                | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                                          |
| Storage                                              | Four SATA ports (3.0 Gb/s) with port multiplier and one eSATA port (3.0 Gb/s)                                                                                    | Four SATA ports (3.0 Gb/s)                                                                                                                         | Four SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices                                                                                                |
| RAID                                                 | Intel® Matrix Storage Technology for RAID 0, 1, 5, and 10                                                                                                        | N/A                                                                                                                                                | N/A                                                                                                                                                                             |
| Onboard LAN                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                        | Intel® PRO 10/100/1000 Network Connection                                                                                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                                       |
| Trusted Platform Module                              | Yes (integrated in chipset)                                                                                                                                      | N/A                                                                                                                                                | N/A                                                                                                                                                                             |
| Lead Free                                            | Yes                                                                                                                                                              | Yes                                                                                                                                                | Yes                                                                                                                                                                             |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>Intel® IT Director<br>Intel® System Defense Utility<br>Laplink® PCmover*<br>Norton 360* | Intel® Core Utilities Bundle <sup>9</sup><br>Intel® Desktop Utilities<br>DivX® for Windows*<br>ESET® Smart Security 4<br>Laplink® PCmover Express* | Intel® Core Utilities Bundle <sup>9</sup><br>DivX® for Windows*<br>Laplink® PCmover Express*<br>Norton Internet Security* 2009<br>Skype*<br>TypePad*<br>WildTangent® WildGames* |
| BIOS                                                 | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)               | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI) | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)                              |
| WHQL Support                                         | Windows Vista® Premium<br>Windows* 7                                                                                                                             | Windows Vista® Premium<br>Windows* 7                                                                                                               | Windows Vista Premium<br>Windows* 7                                                                                                                                             |
| Warranty                                             | 3 year limited warranty                                                                                                                                          | 3 year limited warranty                                                                                                                            | 3 year limited warranty                                                                                                                                                         |



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| Series                                               | Classic Series                                                                                                                                                                                          |                                                                                                                                                                 | Classic Series                                                                                                                                                                  | Classic Series                                                                                                                            |
| Product Family                                       | Intel® Desktop Board DP43BF                                                                                                                                                                             |                                                                                                                                                                 | Intel® Desktop Board DP43BFL                                                                                                                                                    | Intel® Desktop Board DG41TX                                                                                                               |
| Form Factor                                          | ATX                                                                                                                                                                                                     |                                                                                                                                                                 | ATX                                                                                                                                                                             | MicroATX                                                                                                                                  |
| Product Code / UPC                                   | BOXDP43BF / 00735858214339                                                                                                                                                                              |                                                                                                                                                                 | BOXDP43BFL / 00735858214346                                                                                                                                                     | BOXDG41TX / 00735858214384                                                                                                                |
| 10-pack Product Code / UPC                           | BLKDP43BF / 00735858214322                                                                                                                                                                              |                                                                                                                                                                 | BLKDP43BFL / 00735858214858                                                                                                                                                     | BLKDG41TX / 00735858214407                                                                                                                |
| Processor Support                                    | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                                                                                            |                                                                                                                                                                 | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                                                                    | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                              |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                                                                           |                                                                                                                                                                 | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                                                   | 1333 MHz / 1066 MHz / 800 MHz                                                                                                             |
| Chipset                                              | Intel® P43 Express Chipset                                                                                                                                                                              |                                                                                                                                                                 | Intel® P43 Express Chipset                                                                                                                                                      | Intel® G41 Express Chipset                                                                                                                |
| Supports HT Technology <sup>5</sup>                  | N/A                                                                                                                                                                                                     |                                                                                                                                                                 | N/A                                                                                                                                                                             | N/A                                                                                                                                       |
| Integrated Graphics Core <sup>1</sup>                | N/A                                                                                                                                                                                                     |                                                                                                                                                                 | N/A                                                                                                                                                                             | Intel® Graphics Media Accelerator X4500 (DVI-D + VGA)                                                                                     |
| Discrete Graphics Connector                          | One PCI Express* 2.0 x16 connector                                                                                                                                                                      |                                                                                                                                                                 | One PCI Express* 2.0 x16 connector                                                                                                                                              | One PCI Express* 2.0 x16 connector                                                                                                        |
| Memory Support                                       | Dual-channel DDR3 with four connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (8 GB <sup>2</sup> max)                                                                                            |                                                                                                                                                                 | Dual-channel DDR3 with four connectors for 1333 <sup>3</sup> / 1066 MHz memory (8 GB <sup>2</sup> max)                                                                          | Dual-channel DDR3 with two connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (4 GB <sup>2</sup> max)                               |
| Expansion Connectors                                 | Two PCI Express 2.0 x1 connectors and four PCI connectors                                                                                                                                               |                                                                                                                                                                 | Two PCI Express 2.0 x1 connectors and four PCI connectors                                                                                                                       | One PCI Express 2.0 x1 connector and two PCI connectors                                                                                   |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>9</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                                                                      |                                                                                                                                                                 | Ten-channel Intel® High Definition Audio <sup>9</sup> with Dolby® Home Theater (five back panel analog ports and one optical port)                                              | Six-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)                                                     |
| USB Ports                                            | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                                                                                |                                                                                                                                                                 | Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)                                                                        | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)                                   |
| 1394 Ports                                           | Two IEEE 1394a ports (one back panel port and one additional port via internal header)                                                                                                                  |                                                                                                                                                                 | N/A                                                                                                                                                                             | N/A                                                                                                                                       |
| Storage                                              | Five SATA ports (3.0 Gb/s) with one eSATA port and one PATA 100 / 66 connector for up to two devices                                                                                                    |                                                                                                                                                                 | Five SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices                                                                                                | Four SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices                                                          |
| RAID                                                 | N/A                                                                                                                                                                                                     |                                                                                                                                                                 | N/A                                                                                                                                                                             | N/A                                                                                                                                       |
| Onboard LAN                                          | Intel® PRO 10/100/1000 Network Connection                                                                                                                                                               |                                                                                                                                                                 | Intel® PRO 10/100/1000 Network Connection                                                                                                                                       | Integrated 10/100/1000 Network Connection                                                                                                 |
| Trusted Platform Module                              | N/A                                                                                                                                                                                                     |                                                                                                                                                                 | N/A                                                                                                                                                                             | N/A                                                                                                                                       |
| Lead Free                                            | Yes                                                                                                                                                                                                     |                                                                                                                                                                 | Yes                                                                                                                                                                             | Yes                                                                                                                                       |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>Diskeeper® 9 Home Edition (Microsoft® Windows® XP and Windows Vista®)<br>DivX® for Windows®<br>Laplink® PCmover Express®<br>Norton Internet Security® 2009 | Skype®<br>TypePad®<br>WildTangent® WildGames®<br>Kaspersky® Anti-Virus <sup>11</sup><br>Kingsoft® Antivirus <sup>12</sup><br>Kingsoft® Powerword <sup>*12</sup> | Intel® Core Utilities Bundle <sup>9</sup><br>Diskeeper® Home Edition<br>DivX® for Windows®<br>Laplink® PCmover Express®<br>Norton Internet Security® 2009<br>Skype®<br>TypePad® | WildTangent® WildGames®<br>Kaspersky® Anti-Virus <sup>11</sup><br>Kingsoft® Antivirus <sup>12</sup><br>Kingsoft® Powerword <sup>*12</sup> |
| BIOS                                                 | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                                                                                                           | Digital Signature Technology<br>Unified Firmware Interface (UEFI)                                                                                               | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery                                                                                                   | Digital Signature Technology<br>Unified Firmware Interface (UEFI)                                                                         |
| Windows Vista® and WHQL Support                      | Windows Vista® Premium<br>Windows® 7                                                                                                                                                                    |                                                                                                                                                                 | Windows Vista® Premium<br>Windows® 7                                                                                                                                            | Windows Vista® Premium<br>Windows® 7                                                                                                      |
| Warranty                                             | 3 year limited warranty                                                                                                                                                                                 |                                                                                                                                                                 | 3 year limited warranty                                                                                                                                                         | 3 year limited warranty                                                                                                                   |

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|                                                      |                                                                   |                                                                 |                                                                                                   |
| Series                                               | Classic Series                                                                                                                                     | Classic Series                                                                                                                                     | Innovation Series                                                                                                                                                                    |
| Product Family                                       | Intel® Desktop Board DG41KR                                                                                                                        | Intel® Desktop Board DG41AN                                                                                                                        | Intel® Desktop Board D525MW                                                                                                                                                          |
| Form Factor                                          | MicroATX                                                                                                                                           | Mini-ITX / MicroATX-compatible                                                                                                                     | Mini-ITX                                                                                                                                                                             |
| Product Code / UPC                                   | BOXDG41KR / 00735858209212                                                                                                                         | BOXDG41AN / 00735858215329                                                                                                                         | BOXD525MW / 00735858215206                                                                                                                                                           |
| 10-pack Product Code / UPC                           | BLKDG41KR / 00735858209229                                                                                                                         | BLKDG41AN / 00735858215312                                                                                                                         | BLKD525MW / 00735858215183                                                                                                                                                           |
| Processor Support                                    | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                                       | Intel® Core™2 Quad (65 W TDP), Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                            | Intel® Atom™ processor D525 integrated                                                                                                                                               |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                      | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                      | N/A                                                                                                                                                                                  |
| Chipset                                              | Intel® G41 Express Chipset                                                                                                                         | Intel® G41 Express Chipset                                                                                                                         | Intel® NM10 Express Chipset                                                                                                                                                          |
| Supports HT Technology <sup>5</sup>                  | N/A                                                                                                                                                | N/A                                                                                                                                                | Yes                                                                                                                                                                                  |
| Integrated Graphics Core <sup>1</sup>                | Intel® Graphics Media Accelerator X4500 (HDMI* + VGA)                                                                                              | Intel® Graphics Media Accelerator X4500 (DVI-D + VGA)                                                                                              | Intel® Graphics Media Accelerator 3150 (VGA)                                                                                                                                         |
| Discrete Graphics Connector                          | One PCI Express* x16 connector                                                                                                                     | N/A                                                                                                                                                | N/A                                                                                                                                                                                  |
| Memory Support                                       | Dual-channel DDR3 with two connectors for 1066 / 800 MHz memory (4 GB* max)                                                                        | Dual-channel DDR3 with four connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (4 GB* max)                                                   | DDR3 with two SODIMM connectors for 1066 / 800 MHz memory (4 GB* max)                                                                                                                |
| Expansion Connectors                                 | One PCI Express 2.0 x1 connector and two PCI connectors                                                                                            | One PCI connector                                                                                                                                  | One PCI connector and one PCI Express* Mini Card connector                                                                                                                           |
| Audio                                                | Ten-channel Intel® High Definition Audio <sup>8</sup> (five back panel analog ports and one optical port)                                          | Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                              | Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                                                |
| USB Ports                                            | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)                                            | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)                                            | Eight Hi-Speed USB 2.0 ports (four back panel ports, two additional ports via internal headers, one port for PCI Express Mini Card, and one port for flash card / Solid-State Drive) |
| 1394 Ports                                           | N/A                                                                                                                                                | N/A                                                                                                                                                | N/A                                                                                                                                                                                  |
| Storage                                              | Four SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices                                                                   | Three SATA ports (3.0 Gb/s)                                                                                                                        | Two SATA ports (3.0 Gb/s)                                                                                                                                                            |
| RAID                                                 | N/A                                                                                                                                                | N/A                                                                                                                                                | N/A                                                                                                                                                                                  |
| Onboard LAN                                          | Integrated 10/100/1000 Network Connection                                                                                                          | Integrated 10/100/1000 Network Connection                                                                                                          | Integrated 10/100/1000 Network Connection                                                                                                                                            |
| Trusted Platform Module                              | N/A                                                                                                                                                | N/A                                                                                                                                                | N/A                                                                                                                                                                                  |
| Lead Free                                            | Yes                                                                                                                                                | Yes                                                                                                                                                | Yes                                                                                                                                                                                  |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>DivX* for Windows*<br>Laplink* PCmover Express*<br>Norton Internet Security* 2009                     | Intel® Core Utilities Bundle <sup>9</sup><br>DivX* for Windows*<br>ESET* Smart Security 4<br>Laplink* PCmover Express*                             | Intel AppUp <sup>SM</sup><br>Intel® Core Utilities Bundle <sup>9</sup><br>DivX* for Windows*<br>ESET* Smart Security 4<br>Laplink* PCmover Express*                                  |
| BIOS                                                 | Intel® Easy Update<br>Digital Signature Technology<br>Intel® Quiet System Technology<br>Unified Firmware Interface (UEFI)<br>Intel® Smart Recovery | Intel® Easy Update<br>Digital Signature Technology<br>Intel® Quiet System Technology<br>Unified Firmware Interface (UEFI)<br>Intel® Smart Recovery | Intel® Easy Update<br>Intel® Smart Recovery<br>Unified Firmware Interface (UEFI)                                                                                                     |
| Windows Vista* and WHQL Support                      | Windows Vista* Premium<br>Windows* 7                                                                                                               | Windows Vista* Premium<br>Windows* 7                                                                                                               | Windows* 7 Home Basic<br>Windows* 7 Starter                                                                                                                                          |
| Warranty                                             | 3 year limited warranty                                                                                                                            | 3 year limited warranty                                                                                                                            | 3 year limited warranty                                                                                                                                                              |

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|                                                      |                                                                    |                                                                                 |                                                                   |
| Series                                               | Innovation Series                                                                                                                                   | Essential Series                                                                                                                                                   | Essential Series                                                                                                                                     |
| Product Family                                       | Intel® Desktop Board D425KT                                                                                                                         | Intel® Desktop Board DG41WV                                                                                                                                        | Intel® Desktop Board D510M0                                                                                                                          |
| Form Factor                                          | Mini-ITX                                                                                                                                            | MicroATX                                                                                                                                                           | Mini-ITX                                                                                                                                             |
| Product Code / UPC                                   | BOXD425KT / 00735858215251                                                                                                                          | BOXDG41WV / 00735858214216                                                                                                                                         | BOXD510M0 / 00735858210362                                                                                                                           |
| 10-pack Product Code / UPC                           | BLKD425KT / 00735858215244                                                                                                                          | BLKDG41WV / 00735858214223                                                                                                                                         | BLKD510M0 / 00735858210379                                                                                                                           |
| Processor Support                                    | Intel® Atom™ processor D425 integrated                                                                                                              | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package                                                       | Intel® Atom™ processor D510 integrated                                                                                                               |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                 | 1333 MHz / 1066 MHz / 800 MHz                                                                                                                                      | N/A                                                                                                                                                  |
| Chipset                                              | Intel® NM10 Express Chipset                                                                                                                         | Intel® G41 Express Chipset                                                                                                                                         | Intel® NM10 Express Chipset                                                                                                                          |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                 | N/A                                                                                                                                                                | Yes                                                                                                                                                  |
| Integrated Graphics Core <sup>1</sup>                | Intel® Graphics Media Accelerator 3150 (VGA)                                                                                                        | Intel® Graphics Media Accelerator X4500 (VGA)                                                                                                                      | Intel® Graphics Media Accelerator 3150 (VGA)                                                                                                         |
| Discrete Graphics Connector                          | N/A                                                                                                                                                 | One PCI Express* x16 connector                                                                                                                                     | N/A                                                                                                                                                  |
| Memory Support                                       | DDR3 with two SODIMM connectors for 1066 / 800 MHz memory (4 GB <sup>2</sup> max)                                                                   | Dual-channel DDR3 with two connectors for 1333 <sup>14</sup> / 1066 / 800 MHz memory (4 GB <sup>2</sup> max)                                                       | DDR2 with two connectors for 800 / 667 MHz memory (4 GB <sup>2</sup> max)                                                                            |
| Expansion Connectors                                 | One PCI connector                                                                                                                                   | One PCI Express 2.0 x1 connector and two PCI connectors                                                                                                            | One PCI connector and one PCI Express* Mini Card connector                                                                                           |
| Audio                                                | Four-channel Intel® High Definition Audio <sup>8</sup> (two back panel analog ports)                                                                | Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                              | Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                |
| USB Ports                                            | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)                                             | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)                                                            | Seven Hi-Speed USB 2.0 ports (four back panel ports, two additional ports via internal header, and one USB port for flash card / Solid-State Drive)  |
| 1394 Ports                                           | N/A                                                                                                                                                 | N/A                                                                                                                                                                | N/A                                                                                                                                                  |
| Storage                                              | Two SATA ports (3.0 Gb/s)                                                                                                                           | Four SATA ports (3.0 Gb/s)                                                                                                                                         | Two SATA ports (3.0 Gb/s)                                                                                                                            |
| RAID                                                 | N/A                                                                                                                                                 | N/A                                                                                                                                                                | N/A                                                                                                                                                  |
| Onboard LAN                                          | Integrated 10/100/1000 Network Connection                                                                                                           | Integrated 10/100/1000 Network Connection                                                                                                                          | Integrated 10/100/1000 Network Connection                                                                                                            |
| Trusted Platform Module                              | N/A                                                                                                                                                 | N/A                                                                                                                                                                | N/A                                                                                                                                                  |
| Lead Free                                            | Yes                                                                                                                                                 | Yes                                                                                                                                                                | Yes                                                                                                                                                  |
| Software                                             | Intel AppUp <sup>SM</sup><br>Intel® Core Utilities Bundle <sup>9</sup><br>DivX® for Windows*<br>ESET® Smart Security 4<br>Laplink® PCmover Express* | Intel® Core Utilities Bundle <sup>9</sup><br>Diskeeper® Pro Premier<br>DivX® for Windows*<br>Laplink® PCmover Express*<br>Norton Internet Security* 2009<br>Skype* | TypePad*<br>WildTangent® WildGames*<br>Kaspersky® Anti-Virus <sup>11</sup><br>Kingsoft® Antivirus <sup>12</sup><br>Kingsoft® Powerword <sup>12</sup> |
| BIOS                                                 | Intel® Easy Update<br>Intel® Smart Recovery<br>Unified Firmware Interface (UEFI)                                                                    | Intel® Easy Update<br>Intel® Quiet System Technology<br>Intel® Smart Recovery<br>Digital Signature Technology<br>Unified Firmware Interface (UEFI)                 | Intel® Easy Update<br>Intel® Smart Recovery<br>Unified Firmware Interface (UEFI)                                                                     |
| Windows Vista® and WHQL Support                      | Windows® 7 Home Basic<br>Windows® 7 Starter                                                                                                         | Windows Vista® Premium                                                                                                                                             | Windows® 7 Home Basic<br>Windows® 7 Starter                                                                                                          |
| Warranty                                             | 3 year limited warranty                                                                                                                             | 3 year limited warranty                                                                                                                                            | 3 year limited warranty                                                                                                                              |

|                                                      |                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                             |                                                                                                              |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                                                      |                                                                         |                                                                                                                                                                                                                                                                          |                           |
| Series                                               | Essential Series                                                                                                                                         | Essential Series                                                                                                                                                                                                                                                                                                                                            | Essential Series                                                                                             |
| Product Family                                       | Intel® Desktop Board D410PT                                                                                                                              | Intel® Desktop Board D945GSEJT                                                                                                                                                                                                                                                                                                                              | Intel® Desktop Board DG41CN                                                                                  |
| Form Factor                                          | Mini-ITX                                                                                                                                                 | Mini-ITX / MicroATX-compatible                                                                                                                                                                                                                                                                                                                              | MicroATX                                                                                                     |
| Product Code / UPC                                   | BOXD410PT / 00735858210416                                                                                                                               | N/A                                                                                                                                                                                                                                                                                                                                                         | BOXDG41CN / 00735858212960                                                                                   |
| 10-pack Product Code / UPC                           | BLKD410PT / 00735858210423                                                                                                                               | BLKD945GSEJT / 00735858206945                                                                                                                                                                                                                                                                                                                               | BLKDG41CN / 00735858213134                                                                                   |
| Processor Support                                    | Intel® Atom™ processor D410 integrated                                                                                                                   | Intel® Atom™ processor N270 integrated                                                                                                                                                                                                                                                                                                                      | Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package |
| Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz) | N/A                                                                                                                                                      | 533 MHz                                                                                                                                                                                                                                                                                                                                                     | 1333 / 1066 / 800 MHz                                                                                        |
| Chipset                                              | Intel® NM10 Express Chipset                                                                                                                              | Intel® 945GSE Express Chipset                                                                                                                                                                                                                                                                                                                               | Intel® G41 Express Chipset                                                                                   |
| Supports HT Technology <sup>5</sup>                  | Yes                                                                                                                                                      | Yes                                                                                                                                                                                                                                                                                                                                                         | Yes                                                                                                          |
| Integrated Graphics Core <sup>1</sup>                | Intel® Graphics Media Accelerator 3150 (VGA)                                                                                                             | Intel® Graphics Media Accelerator 950 (DVI + VGA)                                                                                                                                                                                                                                                                                                           | Intel® Graphics Media Accelerator X4500 (VGA)                                                                |
| Discrete Graphics Connector                          | N/A                                                                                                                                                      | N/A                                                                                                                                                                                                                                                                                                                                                         | One PCI Express* 2.0 x16 connector                                                                           |
| Memory Support                                       | DDR2 with two connectors for 800 / 667 MHz memory (4 GB <sup>2</sup> max)                                                                                | DDR2 SDRAM with one connector for 533 MHz memory (2 GB max)                                                                                                                                                                                                                                                                                                 | Dual-channel DDR2 with two connectors for 800 / 667 MHz memory (4 GB <sup>2</sup> max)                       |
| Expansion Connectors                                 | One PCI connector                                                                                                                                        | One PCI Express* Mini Card connector and one PCI connector                                                                                                                                                                                                                                                                                                  | One PCI Express* 2.0 x1 connector and two PCI connectors                                                     |
| Audio                                                | Four-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                   | Four-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                                                                                                                                                                                                                                                                      | Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)                        |
| USB Ports                                            | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)                                                  | Six Hi-Speed USB 2.0 ports (three back panel ports, one front panel port, and one additional USB port for Solid-State Drive)                                                                                                                                                                                                                                | Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)      |
| 1394 Ports                                           | N/A                                                                                                                                                      | N/A                                                                                                                                                                                                                                                                                                                                                         | N/A                                                                                                          |
| Storage                                              | Two SATA ports (3.0 Gb/s)                                                                                                                                | Two SATA ports and one PATA 100 connector for up to two devices (44-pin mobile header)                                                                                                                                                                                                                                                                      | Four SATA ports (3.0 Gb/s)                                                                                   |
| RAID                                                 | N/A                                                                                                                                                      | N/A                                                                                                                                                                                                                                                                                                                                                         | N/A                                                                                                          |
| Onboard LAN                                          | Integrated 10/100/1000 Network Connection                                                                                                                | Integrated 10/100/1000 Network Connection                                                                                                                                                                                                                                                                                                                   | Integrated 10/100/1000 Network Connection                                                                    |
| Trusted Platform Module                              | N/A                                                                                                                                                      | N/A                                                                                                                                                                                                                                                                                                                                                         | N/A                                                                                                          |
| Lead Free                                            | Yes                                                                                                                                                      | Yes                                                                                                                                                                                                                                                                                                                                                         | Yes                                                                                                          |
| Software                                             | Intel® Core Utilities Bundle <sup>9</sup><br>DivX* for Windows*<br>ESET* Smart Security 4<br>Laplink* PCmover Express*<br>Norton Internet Security* 2009 | Intel® Core Utilities Bundle <sup>9</sup><br>Acronis* True Image 11 Home<br>Diskeeper* Home Edition<br>DivX* for Windows*<br>Laplink* PCmover Express*<br>Norton Internet Security* 2009<br>Skype*<br>TypePad*<br>WildTangent* WildGames*<br>Kaspersky* Anti-Virus <sup>11</sup><br>Kingsoft* Antivirus <sup>12</sup><br>Kingsoft* Powerword* <sup>12</sup> | Intel® Integrator Toolkit                                                                                    |
| BIOS                                                 | Intel® Easy Update<br>Intel® Smart Recovery<br>Unified Firmware Interface (UEFI)                                                                         | Unified Firmware Interface (UEFI)                                                                                                                                                                                                                                                                                                                           | Intel® Express BIOS Update<br>Intel® Rapid BIOS Boot                                                         |
| Windows Vista* and WHQL Support                      | Windows* 7 Home Basic<br>Windows* 7 Starter                                                                                                              | Windows Vista* Basic                                                                                                                                                                                                                                                                                                                                        | Windows Vista* Basic                                                                                         |
| Warranty                                             | 3 year limited warranty                                                                                                                                  | 3 year limited warranty                                                                                                                                                                                                                                                                                                                                     | 3 year limited warranty                                                                                      |

For more information, visit the Intel Web site at: [www.intel.com/products/motherboard](http://www.intel.com/products/motherboard)

<sup>1</sup> Requires a processor with Intel® HD Graphics.

<sup>2</sup> Requires a custom thermal solution—Pairing a mini-ITX chassis with the thermal solution supplied with an Intel® Core™ i7 processor will not meet the thermal requirements of an Intel Core i7 processor. Therefore, before pairing the Intel® Desktop Board DH67CF or DH57JG with an Intel Core i7 processor, verify that your thermal solution and chassis will meet the necessary thermal requirements. Failing to do so will cause the processor to throttle, significantly decreasing system performance.

<sup>3</sup> DDR3 1333 is supported through overclocking in BIOS.

<sup>4</sup> Intel® QPI—Intel® QuickPath Interconnect; GT/s—Gigatransfers per second.

<sup>5</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading)

<sup>6</sup> Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warrant, the operation of the processor beyond its specifications.

<sup>7</sup> System resources and hardware (such as PCI and PCI Express\*) require physical memory address locations that can reduce available addressable system memory. This could result in a reduction of as much as 1 GB or more of physical addressable memory being available to the operating system and applications, depending on the system configuration and operating system.

<sup>8</sup> Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. For more information about Intel® HD Audio, refer to [www.intel.com/design/chipsets/hdaudio.htm](http://www.intel.com/design/chipsets/hdaudio.htm)

<sup>9</sup> The Intel® Core Utilities Bundle includes Intel® Integrator Assistant, Intel® Integrator Toolkit, Intel® Express Installer, and Intel® Express BIOS Update.

<sup>10</sup> Intel® Extreme Tuning Utility is only compatible with Intel® Desktop Boards based on the Intel® X38 Express Chipset and newer. Auto-tuning capabilities may not be available for all Extreme Series motherboards.

<sup>11</sup> Russian only.

<sup>12</sup> Chinese only.

<sup>13</sup> Intel® Active Management Technology (Intel® AMT) requires the computer to have an Intel® AMT-enabled chipset, network hardware and software, connection with a power source, and a network connection.

<sup>14</sup> DDR3 1333 MHz SDRAM will run at 1066 MHz speed.

Intel® Desktop Boards may contain design defects or errors known as errata, which may cause the product to deviate from published specifications. Current characterized errata are available on request. All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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## INTEL® ETHERNET DESKTOP ADAPTERS

10/100/1000 Mb/s-OVER-COPPER



10/100 Mb/s-OVER-COPPER



|                                                           | Intel® Gigabit CT Desktop Adapter | Intel® PRO/1000 GT Desktop Adapter | Intel® PRO/100 M Desktop Adapter |
|-----------------------------------------------------------|-----------------------------------|------------------------------------|----------------------------------|
| Product Code—Singles                                      | EXPI9301CT                        | PWLA8391GT                         | PILA8460M                        |
| Product Code—Bulk Twenty Packs (Full-Height End Brackets) | EXPI9301CTBLK <sup>1</sup>        | PWLA8391GTBLK                      | PILA8460MBLK20                   |
| Product Code—Bulk Twenty Packs (Low-Profile End Brackets) | EXPI9301CTBLK <sup>1</sup>        | PWLA8391GTLBLK                     | N/A                              |
| Connector                                                 | 1 RJ-45                           | 1 RJ-45                            | 1 RJ-45                          |
| Ethernet Controllers                                      | Intel® 82574L                     | Intel® 82541PI                     | Intel® 82551QM                   |
| Bus Width and Type                                        | PCI Express* x1                   | 32-bit PCI 2.3                     | 32-bit PCI 2.2                   |

Intel offers an award-winning line of Ethernet, Fast Ethernet, and Gigabit Ethernet desktop adapters. Choose from a variety of adapters designed to extend Gigabit Ethernet performance to the desktop, enhance desktop management, and provide flexible connectivity for your legacy PCs.

For more information, visit the Intel Web site at: [www.intel.com/network/connectivity/products/desktop\\_adapters.htm](http://www.intel.com/network/connectivity/products/desktop_adapters.htm)

<sup>1</sup> Full-height bracket installed, low-profile bracket added in package.

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## 2ND GENERATION INTEL® CORE™ MOBILE PROCESSOR FAMILY

### Incredible Performance and Responsiveness

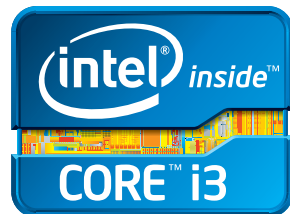
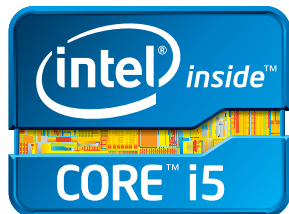
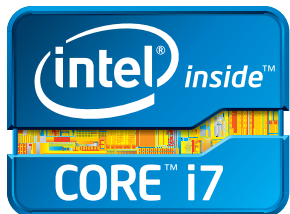
- New Intel® Core™ microarchitecture—higher performance and lower power
- Unquestioned energy-efficient performance leadership
- Optimized performance with Intel® Turbo Boost Technology<sup>1</sup> 2.0 and Intel® Hyper-Threading Technology<sup>2</sup>
- New Intel® Advanced Vector Extensions instructions for better floating point-intensive application performance

### Fantastic Visuals and Graphic Capabilities

- Great media processing for faster video editing and sharing
- Enthusiast-class HD video playback with next-generation picture quality
- Great mainstream and casual gaming experience

Smarter performance has an immediate, perceptible impact to what you do on your PC everyday

| WHY YOU'LL LOVE IT                                                                                                                                                                               | WHAT ENABLES IT                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>▪ Do more, wait less</li><li>▪ Save battery life</li><li>▪ Increased productivity</li><li>▪ Responsive interaction</li><li>▪ Smooth multitasking</li></ul> | <p><b>Up to 8-way multitask processing</b>—More compute muscle for highly threaded workloads</p> <p><b>Intel® Turbo Boost Technology<sup>1</sup> 2.0</b>—Higher speeds where needed</p> <p><b>Intel® Advanced Vector Extensions</b>—Breakthrough media processing for incredibly fast video editing and sharing</p> <p><b>New 32nm microarchitecture</b>—Impressive leap in energy-efficient performance over previous-generation processors</p> |



## Built-in Visual Features

| INTEL® QUICK SYNC VIDEO                                                                                                                                                                                                                               | INTEL® INTRU™ 3D                                                                                   | INTEL® CLEAR VIDEO HD                                                                                  | INTEL® WIRELESS DISPLAY <sup>3</sup>                                                                                                                                                              | INTEL® HD GRAPHICS                                                                                                             | INTEL® ADVANCED VECTOR EXTENSIONS                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Breakthrough media processing for incredibly fast creating, editing, and sharing of content.<br><br>Accelerated encoding, decoding, and transcoding features, such as the conversion of media for portable players and online video sharing services. | Stereoscopic 3-D Blu-ray* playback experience in full HD 1080p resolution in 3-D (over HDMI* 1.4). | Visual quality and color fidelity enhancements for spectacular HD playback and immersive Web browsing. | Hassle-free wireless connection from a PC to an HDTV via home network. Share videos, photos, and music on the biggest screen in the house.<br><br>Now with 1080p playback and 5.1 surround sound. | Significant 3-D performance for an immersive mainstream and casual gaming experience, supporting a broad range of game titles. | Increases performance for demanding visual applications such as professional video and image editing. |

2nd generation Intel® Core™ mobile processors deliver a new set of built-in visual features targeting the desires of today's consumers.



For more information, visit [www.intel.com/products/laptop/index.htm](http://www.intel.com/products/laptop/index.htm)

<sup>1</sup> Requires a system with Intel® Turbo Boost Technology capability. Intel Turbo Boost Technology 2.0 is the next generation of Intel Turbo Boost Technology and is available only on 2nd gen Intel® Core™ i7 and Intel® Core™ i5 processors. Consult your PC manufacturer. Performance varies depending on hardware, software, and system configuration. For more information, visit [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost)

<sup>2</sup> Available on select Intel® Core™ processors. Requires Intel® Hyper-Threading Technology-enabled system. Consult your PC manufacturer. Performance will vary depending on the specific hardware and software used. For more information, including details on which processors support HT Technology, visit [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading)

<sup>3</sup> Requires an Intel® Wireless Display enabled PC, TV adapter, and compatible television. Available on select Intel® Core™ processors. Does not support Blu-ray\* or other protected-content playback. Consult your PC manufacturer. For more information, visit [www.intel.com/wirelessdisplay](http://www.intel.com/wirelessdisplay)

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# INTEL® MOBILE PROCESSORS



| NEW | PROCESSOR NAME                                   | PRODUCT CODE                | CLOCK SPEED | DDR3 MEMORY | CACHE   | PACKAGE / TYPE   |
|-----|--------------------------------------------------|-----------------------------|-------------|-------------|---------|------------------|
| ✓   | Intel® Core™ i7-2920XM processor Extreme Edition | FF8062700834406 (tray only) | 2.50 GHz    | 1600 MHz    | 8 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-940XM processor Extreme Edition    | BY80607002526AE (tray only) | 2.13 GHz    | 1333 MHz    | 8 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-920XM processor Extreme Edition    | BY80607002529AF (tray only) | 2 GHz       | 1333 MHz    | 8 MB L3 | Socket-G1 (45nm) |
| NEW | PROCESSOR NAME                                   | PRODUCT CODE                | CLOCK SPEED | DDR3 MEMORY | CACHE   | PACKAGE / TYPE   |
| ✓   | Intel® Core™ i7-2820QM processor                 | BX80627I72820QM             | 2.30 GHz    | 1600 MHz    | 8 MB L3 | Socket-G1 (45nm) |
| ✓   | Intel Core i7-2720QM processor                   | BX80627I72720QM             | 2.20 GHz    | 1600 MHz    | 6 MB L3 | Socket-G1 (45nm) |
| ✓   | Intel Core i7-2620M processor                    | FF8062700838809 (tray only) | 2.70 GHz    | 1333 MHz    | 4 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-840QM processor                    | BX80607I7840QM              | 1.86 GHz    | 1333 MHz    | 8 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-820QM processor                    | BY80607002904AK (tray only) | 1.73 GHz    | 1333 MHz    | 8 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-740QM processor                    | BX80607I7740QM              | 1.73 GHz    | 1333 MHz    | 6 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-720QM processor                    | BX80607I7720QM              | 1.60 GHz    | 1333 MHz    | 6 MB L3 | Socket-G1 (45nm) |
|     | Intel Core i7-640M processor                     | CP80617004152AE (tray only) | 2.80 GHz    | 1066 MHz    | 4 MB L3 | Socket-G1 (32nm) |
|     | Intel Core i7-620M processor                     | CP80617003981AH (tray only) | 2.66 GHz    | 1066 MHz    | 4 MB L3 | Socket-G1 (32nm) |

Unlock your on-the-go computing experience with mobile-optimized processor technologies from Intel. Providing revolutionary levels of performance, long battery life, and expansive connectivity, along with enhanced security and manageability for business, Intel® technologies enable a powerful computing experience in sleek, thin, and light notebook designs.

For more information, visit the Intel Web site at: [www.intel.com/go/notebooks](http://www.intel.com/go/notebooks)

|  NEW | PROCESSOR NAME                  | PRODUCT CODE                | CLOCK SPEED | DDR3 MEMORY    | CACHE   | PACKAGE / TYPE   |
|---------------------------------------------------------------------------------------|---------------------------------|-----------------------------|-------------|----------------|---------|------------------|
|      | Intel® Core™ i5-2540M processor | BX80627I52540M              | 2.60 GHz    | 1333 MHz       | 3 MB L3 | Socket-G1 (32nm) |
|      | Intel Core i5-2520M processor   | BX80627I52520M              | 2.50 GHz    | 1333 MHz       | 3 MB L3 | Socket-G1 (32nm) |
|                                                                                       | Intel Core i5-580M processor    | BX80617I5580M               | 2.66 GHz    | 1066 MHz       | 3 MB L3 | Socket-G1 (32nm) |
|                                                                                       | Intel Core i5-560M processor    | BX80617I5560M               | 2.66 GHz    | 1066 MHz       | 3 MB L3 | Socket-G1 (32nm) |
|                                                                                       | Intel Core i5-540M processor    | BX80617I5540M               | 2.53 GHz    | 1066 MHz       | 3 MB L3 | Socket-G1 (32nm) |
|                                                                                       | Intel Core i5-520M processor    | BX80617I5520M               | 2.40 GHz    | 1066 MHz       | 3 MB L3 | Socket-G1 (32nm) |
|  NEW | PROCESSOR NAME                  | PRODUCT CODE                | CLOCK SPEED | FRONT SIDE BUS | CACHE   | PACKAGE / TYPE   |
|                                                                                       | Intel® Celeron® processor P4600 | CP80617005307AB (tray only) | 2 GHz       | 1066 MHz       | 2 MB L3 | Socket-G1 (32nm) |
|                                                                                       | Intel Celeron processor P4500   | CP80617004803AA (tray only) | 1.86 GHz    | 1066 MHz       | 2 MB L3 | Socket-G1 (32nm) |
|  NEW | PROCESSOR NAME                  | PRODUCT CODE                | CLOCK SPEED | FRONT SIDE BUS | CACHE   | PACKAGE / TYPE   |
|                                                                                       | Intel® Celeron® processor T3500 | AW80577GG0451ML (tray only) | 2.10 GHz    | 800 MHz        | 1 MB L2 | Socket-P (45nm)  |
|                                                                                       | Intel Celeron processor T3300   | AW80577NG0411ML (tray only) | 2 GHz       | 800 MHz        | 1 MB L2 | Socket-P (45nm)  |
|                                                                                       | Intel Celeron processor T3100   | AW80577GG0371ML (tray only) | 1.90 GHz    | 800 MHz        | 1 MB L2 | Socket-P (45nm)  |
|                                                                                       | Intel Celeron processor T3000   | AW80577GG0331ML (tray only) | 1.80 GHz    | 800 MHz        | 1 MB L2 | Socket-P (45nm)  |
|                                                                                       | Intel Celeron processor 900     | AW80585NG0491MA (tray only) | 2.20 GHz    | 800 MHz        | 1 MB L2 | Socket-P (45nm)  |

For more information, visit the Intel Web site at: [www.intel.com/go/notebooks](http://www.intel.com/go/notebooks)

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Visit [www.intel.com/products/processor\\_number](http://www.intel.com/products/processor_number) for more details.

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# INTEL® CENTRINO® WIRELESS

| SEGMENT                                              | SIMPLE CONNECTIVITY                                                                 |                                                                                                       | DUAL-STREAM                                                                          |                                                                                                         | ADVANCED FEATURES                                                                     |                                                                                                         | HIGHEST PERFORMANCE                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Intel® Centrino® Wireless</b><br>(Intel Codename) | <b>Wireless-N 100</b><br>(Crane Peak)                                               | <b>Wireless-N 130</b><br>(Crane Peak + Bluetooth*)                                                    | <b>Wireless-N 1000</b><br>(Condor Peak)                                              | <b>Wireless-N 1030</b><br>(Rainbow Peak 1)                                                              | <b>Advanced-N 6205</b><br>(Taylor Peak)                                               | <b>Advanced-N 6230</b><br>(Rainbow Peak 2)                                                              | <b>Ultimate-N 6300</b><br>(Puma Peak)                                                 |
| <b>Speed</b>                                         | 150 Mb/s RX                                                                         | 150 Mb/s RX                                                                                           | 300 Mb/s RX                                                                          | 300 Mb/s RX                                                                                             | 300 Mb/s RX                                                                           | 300 Mb/s RX                                                                                             | 450 Mb/s RX                                                                           |
| <b>Spatial Streams</b><br>(TX x RX)                  | 150 Mb/s TX<br>(1x1)                                                                | 150 Mb/s TX<br>(1x1)                                                                                  | 150 Mb/s TX<br>(1x2)                                                                 | 150 Mb/s TX<br>(1x2)                                                                                    | 300 Mb/s TX<br>(2x2)                                                                  | 300 Mb/s TX<br>(2x2)                                                                                    | 450 Mb/s TX<br>(3x3)                                                                  |
| <b>Bands</b>                                         | 2.40 GHz<br>Single Band                                                             | 2.40 GHz<br>Single Band                                                                               | 2.40 GHz<br>Single Band                                                              | 2.40 GHz<br>Single Band                                                                                 | 2.40 GHz and 5 GHz<br>Dual Band                                                       | 2.40 GHz and 5 GHz<br>Dual Band                                                                         | 2.40 GHz and 5 GHz<br>Dual Band                                                       |
| <b>Enterprise / SMB Features</b>                     |                                                                                     |                                                                                                       | Intel® PROSet for Windows* 7<br>Cisco* CCXv4                                         | Intel® PROSet for Windows* 7<br>Cisco* CCXv4                                                            | Intel® PROSet for Windows* 7<br>Cisco* CCXv4                                          | Intel® PROSet for Windows* 7<br>Cisco* CCXv4                                                            | Intel® PROSet for Windows* 7<br>Cisco* CCXv4                                          |
| <b>Intel® vPro™ Technology</b>                       |                                                                                     |                                                                                                       |                                                                                      |                                                                                                         | ✓                                                                                     | ✓                                                                                                       | ✓                                                                                     |
| <b>Intel® My WiFi Technology</b>                     | ✓                                                                                   | ✓                                                                                                     | ✓                                                                                    | ✓                                                                                                       | ✓                                                                                     | ✓                                                                                                       | ✓                                                                                     |
| <b>Intel® Wireless Display</b>                       |                                                                                     |                                                                                                       |    |                      |    |                      |    |
| <b>Bluetooth*</b>                                    |                                                                                     |  <b>Bluetooth®</b> |                                                                                      |  <b>Bluetooth®</b> |                                                                                       |  <b>Bluetooth®</b> |                                                                                       |
| <b>Wi-Fi* Certification</b>                          |  |                    |  |                    |  |                    |  |
| <b>Order Codes</b>                                   |                                                                                     |                                                                                                       |                                                                                      |                                                                                                         |                                                                                       |                                                                                                         |                                                                                       |
| 100 pieces                                           | 100BN.HMWG                                                                          | 130BN.HMWG                                                                                            | 112BN.HMWG                                                                           | 11230BN.HMWG                                                                                            | 62205AN.HMWG                                                                          | 62230AN.HMWG                                                                                            | 633AN.HMWG                                                                            |
| 10 pieces                                            | 100BN.HMWWB                                                                         | 130BN.HMWWB                                                                                           | 112BN.HMWWB                                                                          | 11230BN.HMWWB                                                                                           | 62205AN.HMWWB                                                                         | 62230AN.HMWWB                                                                                           | 633AN.HMWWB                                                                           |

Intel® Centrino® wireless networking solutions enable network connectivity without wires for notebook PC platforms. Intel® products provide uncompromising performance, enhanced security, and scalability for fast, flexible connectivity at work, at home, or on the road.

For more information, visit the Intel Web site at: [www.intel.com/network/connectivity/products/wireless/index.htm](http://www.intel.com/network/connectivity/products/wireless/index.htm)

For more information, visit the Intel Web site at: [www.intel.com/network/connectivity/products/wireless/index.htm](http://www.intel.com/network/connectivity/products/wireless/index.htm)

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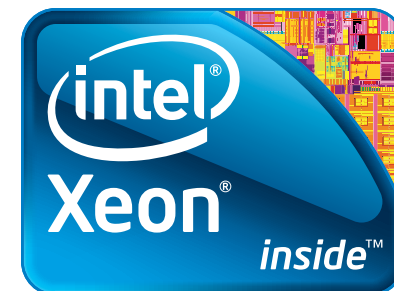
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## INTEL® XEON® PROCESSOR 5600 SERIES

NEXT-GENERATION INTEL® XEON® PROCESSOR-BASED  
SERVER PLATFORM FOR THE EFFICIENT PERFORMANCE  
SERVER AND WORKSTATION SEGMENTS



### PROCESSOR COMPARISON

|                                                  | Intel® Xeon® processor<br>5600 series                                                                             | Intel® Xeon® processor<br>5500 series                                                                             |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Maximum Processors per System                    | 2                                                                                                                 | 2                                                                                                                 |
| Number of Cores / Threads                        | Up to 6 / 12                                                                                                      | Up to 4 / 8                                                                                                       |
| Shared L3 Cache                                  | Up to 12 MB                                                                                                       | Up to 8 MB                                                                                                        |
| Integrated Memory Controller                     | Yes                                                                                                               | Yes                                                                                                               |
| Memory Support                                   | Integrated Memory Controller,<br>DDR3 1333 / 1066 / 800 MHz,<br>3 channels per processor,<br>max. capacity 192 GB | Integrated Memory Controller,<br>DDR3 1333 / 1066 / 800 MHz,<br>3 channels per processor,<br>max. capacity 192 GB |
| Intel® Turbo Boost Technology <sup>1</sup>       | Yes <sup>4</sup>                                                                                                  | Yes <sup>4</sup>                                                                                                  |
| Intel® Hyper-Threading Technology <sup>2</sup>   | Yes <sup>4</sup>                                                                                                  | Yes <sup>4</sup>                                                                                                  |
| Intel® Trusted Execution Technology <sup>3</sup> | Yes                                                                                                               | No                                                                                                                |
| ECC Memory Support                               | Yes                                                                                                               | Yes                                                                                                               |
| Server Platform Thermal Design                   | 40 to 130 W                                                                                                       | 60 to 95 W                                                                                                        |
| Socket                                           | LGA1366                                                                                                           | LGA1366                                                                                                           |
| Process Technology                               | 32nm                                                                                                              | 45nm                                                                                                              |
| Boxed Thermal Solution                           | Sold separately                                                                                                   | Sold separately                                                                                                   |

Help your customers reduce operating costs and achieve rapid return on investment with the industry-leading performance and energy efficiency of the Intel® Xeon® processor 5600 series. The advantages are clear:

- **Intelligent performance.** With up to six Intel® Microarchitecture-based processing cores and 12 MB of L3 cache on each processor, the Intel Xeon processor 5600 series delivers up to a 60 percent performance increase over the Intel® Xeon® processor 5500 series.<sup>5</sup> Processor performance is intelligently optimized with Intel® Turbo Boost Technology<sup>1</sup> and Intel® Hyper-Threading Technology,<sup>2</sup> while new hardware-based instructions for the AES accelerate secure server transaction performance.
- **Automated energy efficiency.** Intel® Intelligent Power Technology and low-power states automatically adjust power consumption to meet the processor and memory workload, while new low-power processor SKUs and low-voltage DDR3 memory support options provide new opportunities to increase power savings by up to 30 percent over the Intel Xeon processor 5500 series.<sup>6</sup>
- **Flexible virtualization.** Consolidate capacity in virtualized environments by supporting more virtualized machines at higher levels of performance compared to the Intel Xeon processor 5500 series, with enhanced security from emerging threats with the new Intel Trusted Execution Technology (Intel® TXT).<sup>3</sup>

For more information, visit the Intel Web site at: [www.intel.com/go/xeon](http://www.intel.com/go/xeon)

Available Q1 2011

## NEW INTEL® MULTI-SERVER MANAGER 1.0

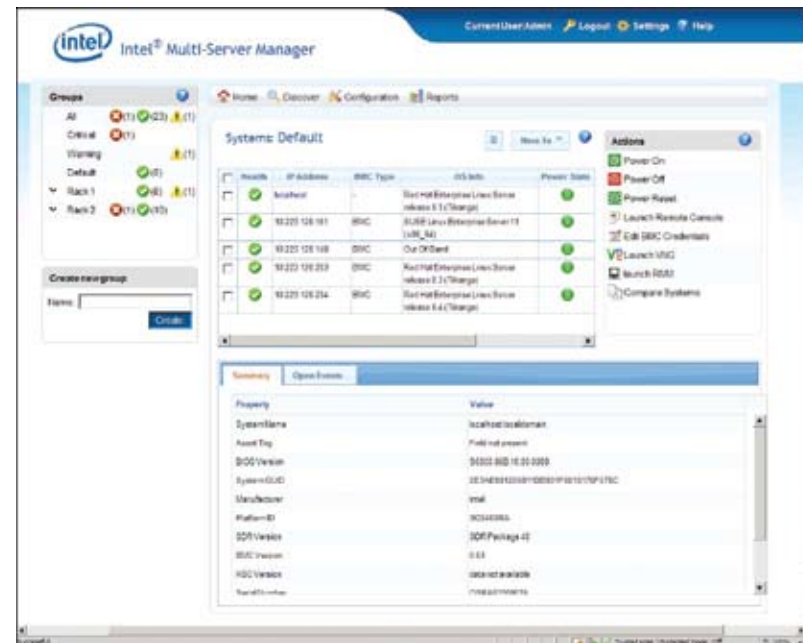
### The new Intel® Multi-Server Manager for managing multiple servers

The Intel® Multi-Server Manager is included with all Intel® Server Products at no additional charge, providing customers the peace of mind that all Intel Servers in their environment are healthy—now all from a single easy-to-use unified console.

- Discover, organize, and manage all Intel® Servers in the network
- Manages Windows\*, Linux\*, and agentless (out-of-band) using a single discovery sweep
- Power on, off, or reset any of the systems either individually or as a group
- See overall health and asset inventory for each system from a single view
- Launch Intel® Active System Console or Intel® Remote Management Module for detailed information
- Full reporting and alerting capabilities
- Snapshot comparison of multiple systems to see how the configuration is different

For more information, visit the Intel Web site at:

[www.intel.com/go/servermanagement](http://www.intel.com/go/servermanagement)



Available Q1 2011

## SYMANTEC\* BACKUP EXEC\* 2010 SOFTWARE

Available for purchase from Intel® Authorized Distributors in North America, the addition of Symantec\* Backup Exec\* expands Intel's current software offering to its channel partners as part of the Intel® Enabled Solutions Acceleration Alliance (ESAA) Program.

Symantec Backup Exec 2010 seamlessly integrates virtual machine protection, deduplication, and archiving technology to help small and mid-sized businesses reduce their backup windows and storage consumed without adding complexity to their environment.

The Backup Exec 2010 SKUs offered by Intel include support for Microsoft\* Windows\*, Windows\* Small Business Server, Microsoft\* Exchange, Microsoft\* SQL Server\*, Microsoft\* Hyper-V\*, VMware vSphere\*, plus options to add deduplication and/or archiving support.

To accelerate the installation and configuration of these software packages by system builders on Intel® Server products, the Intel ESAA Program offers pre-tested "recipes" that reduce the cost of implementation and speed time to market.

Intel channel customers will be able to choose from nine different Backup Exec 2010 SKUs that have been tested to run on Intel® Server Boards and Intel® Server Systems and come bundled with one year of Symantec 24x7 Essential support.

## SYMANTEC\* BACKUP EXEC\* 2010 SOFTWARE

| Data Protection Need                             | Backup for one Windows* Server                              | Backup for one Windows* Small Business Server                                                                                                                                                                                                                                                                                 | Backup for up to four Windows* Servers                                                                                                                                                                                                                                                             | Backup for one Windows* Server with Microsoft* Exchange                                                        | Backup for one Windows* Server with Microsoft* SQL                                                                                                                                                              | Backup support for VMware* Virtualization Environments                                                          | Backup support for Hyper-V* Virtualization Environments                                                    | Deduplication                                                                                                                              | Deduplication and Archiving                                                                                                                                                                                |
|--------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended Symantec* Backup Exec* 2010 Suite    | Symantec* Backup Exec* 2010                                 | Symantec* Backup Exec* 2010 for Windows Small Business Server                                                                                                                                                                                                                                                                 | Symantec* Backup Exec* 2010 Remote Suite                                                                                                                                                                                                                                                           | Symantec* Backup Exec* 2010 Microsoft Exchange Suite                                                           | Symantec* Backup Exec* 2010 Microsoft SQL Suite                                                                                                                                                                 | Symantec* Backup Exec* 2010 VMware Suite                                                                        | Symantec* Backup Exec* 2010 Hyper-V Suite                                                                  | Symantec* Backup Exec* 2010 Deduplication Suite                                                                                            | Symantec* Backup Exec* 2010 Deduplication and Archiving Suite                                                                                                                                              |
| Symantec Backup Exec 2010 License Information    | Includes one Backup Exec Media Server license               | Includes one Backup Exec for Windows Small Business Server and agent for Microsoft* Exchange, agent for Microsoft* SQL, agent for Microsoft SharePoint*, agent for Windows systems (one license), desktop and laptop option (up to 75 licenses), and Backup Exec System Recovery 2010 (one license for server and SBS server) | Includes one Backup Exec Media Server license and agent for Windows Systems (three licenses) along with the remote agent for Windows Servers and the continuous protection agent capabilities, this agent now also includes the advanced open file option and intelligent disaster recovery option | Includes one Backup Exec Media Server license and agent for Microsoft Exchange Server 2003, 2007, and 2010 SP1 | Includes one Backup Exec Media Server license and agent for Microsoft SQL Server 2008 R2, 2005, and 2000 users with granular protection on 32- and 64-bit systems down to the individual database or file group | Includes one Backup Exec Media Server license and one Backup Exec 2010 Agent for VMware Virtual Infrastructures | Includes one Backup Exec Media Server license and one Backup Exec 2010 Agent for Microsoft Hyper-V license | Includes one Backup Exec Media Server license and one deduplication option license which will support your entire media server environment | Includes one Backup Exec Media Server license, one deduplication option license which will support your entire media server environment, one exchange archive option (10 pack), and one agent for exchange |
| Included Symantec* Support                       | All SKUs include one-year 24x7 Symantec* Essentials Support |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                    |                                                                                                                |                                                                                                                                                                                                                 |                                                                                                                 |                                                                                                            |                                                                                                                                            |                                                                                                                                                                                                            |
| Intel® Order Codes for Symantec Backup Exec 2010 | SYMCBE                                                      | SYMCBESBS                                                                                                                                                                                                                                                                                                                     | SYMCBE3WIN                                                                                                                                                                                                                                                                                         | SYMCBEEXC                                                                                                      | SYMCBESQL                                                                                                                                                                                                       | SYMCBEVMW                                                                                                       | SYMCBEHYP                                                                                                  | SYMCDEDUP                                                                                                                                  | SYMCDEDUPA                                                                                                                                                                                                 |

For Backup Exec feature information, visit [www.backupexec.com/be](http://www.backupexec.com/be)

For Intel® ESAA recipes on Backup Exec 2010, visit [www.intel.com/go/esaa](http://www.intel.com/go/esaa)

<sup>1</sup> Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

<sup>2</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. See [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading) for more information.

<sup>3</sup> Intel® Trusted Execution Technology (Intel® TXT) has specific platform hardware and operating system requirements. Consult your motherboard manufacturer for more details.

<sup>4</sup> Varies by SKU.

<sup>5</sup> Source: Internal Intel measurements based on Intel® Xeon® processor X5680 vs. Intel® Xeon® processor X5570—results on SPECint\*\_rate\_base2006 and OLTP workload. Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit [www.intel.com/performance/resources/benchmark\\_limitations.htm](http://www.intel.com/performance/resources/benchmark_limitations.htm)

<sup>6</sup> Source: Internal Intel estimates comparing Intel® Xeon® processor X5570 vs. Intel® Xeon® processor L5640 SKUs using SPECint\*\_rate\_2006.

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321810-007US **January 2011**



# INTEL® SERVER PLATFORMS



Better Together: Recommend the Best Intel® Xeon® Processor and Intel® Chipset

| SEGMENT                                                                                                                                                                                                                                                                                 | POSITIONING | RECOMMENDED PROCESSOR SERIES <sup>1</sup> | MAX. SOCKETS PER SYSTEM | NO. OF CORES | MAX. FREQ. <sup>2</sup> | POWER    | INTEL® QPI (GT/s) <sup>3</sup> / MAX. BUS (MHz) | CACHE                 | RECOMMENDED INTEL® CHIPSET         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------|-------------------------|--------------|-------------------------|----------|-------------------------------------------------|-----------------------|------------------------------------|
| <b>Expandable</b><br>Leading performance, reliability, and scalability<br><br><b>Target usage:</b><br>Optimized for large enterprises, data centers, and server consolidation<br><br><b>Recommended configuration:</b><br>4+ processors                                                 | Best        | Intel® Xeon® processor 7500 series        | 4                       | Up to 8      | 2.66 GHz                | 95-130 W | 1066 MHz                                        | Up to 24 MB L3        | Intel® 7500 Chipset                |
|                                                                                                                                                                                                                                                                                         | Good        | Intel® Xeon® processor 5500 series        | 2                       | Up to 4      | 2.93 GHz                | 60-95 W  | 1333 MHz                                        | 8 MB L3 shared        | Intel® 3400 or Intel® 3420 Chipset |
| <b>Efficient Performance</b><br>Energy efficient, cost effective<br><br><b>Target usage:</b><br>Optimized for general purpose servers ( <i>e-mail, Web, file, business applications</i> ) and IT infrastructure virtualization<br><br><b>Recommended configuration:</b><br>2 processors | Best        | Intel® Xeon® processor 5600 series        | 2                       | Up to 6      | 3.46 GHz                | 40-130 W | Up to 6.40 GT/s                                 | Up to 12 MB L3 shared | Intel® 5520 Chipset                |
|                                                                                                                                                                                                                                                                                         | Good        | Intel® Xeon® processor 5500 series        | 2                       | Up to 4      | 2.93 GHz                | 60-95 W  | Up to 6.40 GT/s                                 | Up to 8 MB L3 shared  | Intel® 5520 Chipset                |
| <b>Entry</b><br>Cost optimized<br><br><b>Target usage:</b><br>Small businesses with fewer than 100 employees, basic needs ( <i>e-mail, network, file / print</i> )<br><br><b>Recommended configuration:</b><br>1-2 processors                                                           | Best        | Intel® Xeon® processor 5500 series        | 2                       | Up to 4      | 2.93 GHz                | 60-95 W  | Up to 6.40 GT/s                                 | Up to 8 MB L3 shared  | Intel® 5500 Chipset                |
|                                                                                                                                                                                                                                                                                         | Good        | Intel® Xeon® processor 3400 series        | 1                       | 4            | 3.06 GHz                | 30-95 W  | 1333 MHz                                        | 8 MB L3 shared        | Intel® 3400 or Intel® 3420 Chipset |

For more information, visit the Intel Web site at: [www.intel.com/go/serverprocessors](http://www.intel.com/go/serverprocessors)

## Better Together: Recommend the Best Intel® Xeon® Processor and Intel® Chipset

| SEGMENT                                                                                                                                                                                                            | POSITIONING | RECOMMENDED PROCESSOR SERIES <sup>1</sup> | MAX. SOCKETS PER SYSTEM | NO. OF CORES | MAX. FREQ. <sup>2</sup> | POWER    | INTEL® QPI (GT/s) <sup>3</sup> / MAX. BUS (MHz) | CACHE                 | RECOMMENDED INTEL® CHIPSET         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------|-------------------------|--------------|-------------------------|----------|-------------------------------------------------|-----------------------|------------------------------------|
| <b>HPC</b><br>Optimized for high-performance analytics<br><br><b>Target usage:</b><br>Bandwidth-intensive applications, high-performance clusters, and complex computation                                         | Best        | Intel® Xeon® processor 7500 series        | 4                       | Up to 8      | 2.66 GHz                | 95-130 W | 1066 MHz                                        | Up to 24 MB L3        | Intel® 7500 Chipset                |
|                                                                                                                                                                                                                    | Better      | Intel® Xeon® processor 5600 series        | 2                       | Up to 6      | 3.46 GHz                | 40-130 W | Up to 6.40 GT/s                                 | Up to 12 MB L3 shared | Intel® 5520 Chipset                |
|                                                                                                                                                                                                                    | Good        | Intel® Xeon® processor 3400 series        | 1                       | 4            | 3.06 GHz                | 30-95 W  | 1333 MHz                                        | Up to 8 MB L3 shared  | Intel® 3400 or Intel® 3420 Chipset |
| <b>Workstation</b><br>Optimized for complex analysis / visualization<br><br><b>Target usage:</b><br>Graphics rendering, multimedia content development, engineering applications (CAD / CAM), software development | Best        | Intel® Xeon® processor 5600 series        | 2                       | Up to 6      | 3.46 GHz                | 40-130 W | Up to 6.40 GT/s                                 | Up to 12 MB L3 shared | Intel® 5520 Chipset                |
|                                                                                                                                                                                                                    | Better      | Intel® Xeon® processor 5500 series        | 2                       | Up to 4      | 2.93 GHz                | 60-95 W  | Up to 6.40 GT/s                                 | Up to 8 MB L3 shared  | Intel® 5520 Chipset                |
|                                                                                                                                                                                                                    | Good        | Intel® Xeon® processor 3600 series        | 1                       | 6            | 3.33 GHz                | 130 W    | 6.40 GT/s                                       | Up to 12 MB L3 shared | Intel® X58 Express Chipset         |
|                                                                                                                                                                                                                    |             | Intel® Xeon® processor 3500 series        | 1                       | 4            | 3.33 GHz                | 130 W    | 6.40 GT/s                                       | Up to 8 MB L3 Shared  | Intel® X58 Express Chipset         |

For more information, visit the Intel Web site at: [www.intel.com/go/serverprocessors](http://www.intel.com/go/serverprocessors)

<sup>1</sup> Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See [www.intel.com/products/processor\\_number/](http://www.intel.com/products/processor_number/) for details.

<sup>2</sup> Processor frequency as shown represents maximum frequency specification for the respective processor number family.

<sup>3</sup> Intel® QPI-Intel® QuickPath Interconnect; GT/s-Gigatransfers per second.

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## INTEL® SERVER / WORKSTATION PROCESSORS



### INTEL® XEON® PROCESSOR W3600 SERIES FOR WORKSTATION SYSTEMS FEATURING ONE LGA1366 SOCKET (thermal solution included)

| PROCESSOR NAME               | PRODUCT CODE | CLOCK SPEED | INTEL® QPI® SPEED | SHARED L3 CACHE | MAX. MEMORY SPEED | NO. OF CORES / THREADS | INTEL® HYPER-THREADING TECHNOLOGY <sup>2</sup> | INTEL® TURBO BOOST TECHNOLOGY <sup>3</sup> | POWER | UPC CODE        |
|------------------------------|--------------|-------------|-------------------|-----------------|-------------------|------------------------|------------------------------------------------|--------------------------------------------|-------|-----------------|
| Intel® Xeon® processor W3670 | BX80613W3670 | 3.20 GHz    | 4.80 GT/s         | 12 MB           | 1066 MHz          | 6 / 12                 | ■                                              | ■                                          | 130 W | 7 35858 21409 4 |

### INTEL® XEON® PROCESSOR W3500 SERIES FOR WORKSTATION SYSTEMS FEATURING ONE LGA1366 SOCKET (thermal solution included)

| PROCESSOR NAME               | PRODUCT CODE | CLOCK SPEED | INTEL® QPI® SPEED | SHARED L3 CACHE | MAX. MEMORY SPEED | NO. OF CORES / THREADS | INTEL® HYPER-THREADING TECHNOLOGY <sup>2</sup> | INTEL® TURBO BOOST TECHNOLOGY <sup>3</sup> | POWER | UPC CODE        |
|------------------------------|--------------|-------------|-------------------|-----------------|-------------------|------------------------|------------------------------------------------|--------------------------------------------|-------|-----------------|
| Intel® Xeon® processor W3580 | BX80601W3580 | 3.33 GHz    | 6.40 GT/s         | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 21004 1 |
| Intel Xeon processor W3565   | BX80601W3565 | 3.20 GHz    | 4.80 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 21200 7 |
| Intel Xeon processor W3550   | BX80601W3550 | 3.06 GHz    | 4.80 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 21005 8 |
| Intel Xeon Processor W3540   | BX80601W3540 | 2.93 GHz    | 4.80 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 20634 1 |
| Intel Xeon processor W3530   | BX80601W3530 | 2.80 GHz    | 4.80 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 21384 4 |
| Intel Xeon processor W3520   | BX80601W3520 | 2.66 GHz    | 4.80 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 20635 8 |

Intel® Xeon® processors are the preferred choice for demanding server and workstation applications. The Intel® Xeon® processor W3500 series has scalable performance for entry design and development workstation use. The Intel® Xeon® processor 3000 sequence delivers high levels of dependability and productivity at an entry-level price point for basic server applications. The enterprise-class Intel® Xeon® processor 5000 sequence provides energy-efficient performance for data-intensive business applications. The Intel® Xeon® processor 7000 sequence is built for large-scale enterprise computing and server consolidation with breakthrough gains in performance and energy efficiency.

For more information, visit the Intel Web site at: [www.intel.com/go/serverprocessors](http://www.intel.com/go/serverprocessors)

INTEL® XEON® PROCESSOR 3400 SERIES FOR SERVER SYSTEMS FEATURING ONE LGA1156 SOCKET *(thermal solution included)*

| PROCESSOR NAME               | PRODUCT CODE | CLOCK SPEED | SHARED L3 CACHE | MAX. MEMORY SPEED | NO. OF CORES / THREADS | INTEL® HYPER-THREADING TECHNOLOGY <sup>2</sup> | INTEL® TURBO BOOST TECHNOLOGY <sup>3</sup> | POWER | UPC CODE        |
|------------------------------|--------------|-------------|-----------------|-------------------|------------------------|------------------------------------------------|--------------------------------------------|-------|-----------------|
| Intel® Xeon® processor X3480 | BX80605X3480 | 3.06 GHz    | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 21457 5 |
| Intel Xeon processor X3470   | BX80605X3470 | 2.93 GHz    | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 21029 4 |
| Intel Xeon processor X3460   | BX80605X3460 | 2.80 GHz    | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 21030 0 |
| Intel Xeon processor X3450   | BX80605X3450 | 2.66 GHz    | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 21031 7 |
| Intel Xeon processor X3440   | BX80605X3440 | 2.53 GHz    | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 21032 4 |
| Intel Xeon processor X3430   | BX80605X3430 | 2.40 GHz    | 8 MB            | 1333 MHz          | 4 / 4                  |                                                | ■                                          | 95 W  | 7 35858 21033 1 |
| Intel Xeon processor L3426   | BX80605L3426 | 1.86 GHz    | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 45 W  | 7 35858 21201 4 |
| Intel Xeon processor L3406   | BX80605L3406 | 2.26 GHz    | 4 MB            | 1066 MHz          | 2 / 4                  | ■                                              | ■                                          | 30 W  | 7 35858 21347 9 |

## INTEL® XEON® PROCESSOR 3000 SEQUENCE FOR SERVER SYSTEMS FEATURING ONE LGA775 SOCKET

| PROCESSOR NAME               | PRODUCT CODE | CLOCK SPEED | FRONT SIDE BUS | L2 CACHE | NO. OF CORES / THREADS | POWER | UPC CODE        |
|------------------------------|--------------|-------------|----------------|----------|------------------------|-------|-----------------|
| Intel® Xeon® processor X3330 | BX80569X3330 | 2.66 GHz    | 1333 MHz       | 6 MB     | 4 / 4                  | 95 W  | 7 35858 20343 2 |
| Intel Xeon processor E3120   | BX80570E3120 | 3.16 GHz    | 1333 MHz       | 6 MB     | 2 / 2                  | 65 W  | 7 35858 20345 6 |
| Intel Xeon processor E3110   | BX80570E3110 | 3 GHz       | 1333 MHz       | 6 MB     | 2 / 2                  | 65 W  | 7 35858 19983 4 |

MULTI-CORE INTEL® XEON® PROCESSOR 5600 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS *(thermal solution sold separately)*

| PROCESSOR NAME               | PRODUCT CODE                                 | CLOCK SPEED | INTEL® QPI® SPEED | SHARED L3 CACHE | MAX. MEMORY SPEED | NO. OF CORES / THREADS | INTEL® HYPER-THREADING TECHNOLOGY <sup>2</sup> | INTEL® TURBO BOOST TECHNOLOGY <sup>3</sup> | POWER | UPC CODE        |
|------------------------------|----------------------------------------------|-------------|-------------------|-----------------|-------------------|------------------------|------------------------------------------------|--------------------------------------------|-------|-----------------|
| Intel® Xeon® processor X5680 | <b>BX80614X5680</b>                          | 3.33 GHz    | 6.40 GT/s         | 12 MB           | 1333 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 130 W | 7 35858 21412 4 |
| Intel Xeon processor X5677   | <b>AT80614005145AB</b><br><i>(tray only)</i> | 3.46 GHz    | 6.40 GT/s         | 12 MB           | 1333 MHz          | 4 / 8                  | ▪                                              | ▪                                          | 130 W |                 |
| Intel Xeon processor X5670   | <b>BX80614X5670</b>                          | 2.93 GHz    | 6.40 GT/s         | 12 MB           | 1333 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 95 W  | 7 35858 21413 1 |
| Intel Xeon processor X5667   | <b>AT80614005154AB</b><br><i>(tray only)</i> | 3.06 GHz    | 6.40 GT/s         | 12 MB           | 1333 MHz          | 4 / 8                  | ▪                                              | ▪                                          | 95 W  |                 |
| Intel Xeon processor X5660   | <b>BX80614X5660</b>                          | 2.80 GHz    | 6.40 GT/s         | 12 MB           | 1333 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 95 W  | 7 35858 21414 8 |
| Intel Xeon processor X5650   | <b>BX80614X5650</b>                          | 2.66 GHz    | 6.40 GT/s         | 12 MB           | 1333 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 95 W  | 7 35858 21415 5 |
| Intel Xeon processor E5640   | <b>BX80614E5640</b>                          | 2.66 GHz    | 5.86 GT/s         | 12 MB           | 1066 MHz          | 4 / 8                  | ▪                                              | ▪                                          | 80 W  | 7 35858 21416 2 |
| Intel Xeon processor E5630   | <b>BX80614E5630</b>                          | 2.53 GHz    | 5.86 GT/s         | 12 MB           | 1066 MHz          | 4 / 8                  | ▪                                              | ▪                                          | 80 W  | 7 35858 21417 9 |
| Intel Xeon processor E5620   | <b>BX80614E5620</b>                          | 2.40 GHz    | 5.86 GT/s         | 12 MB           | 1066 MHz          | 4 / 8                  | ▪                                              | ▪                                          | 80 W  | 7 35858 21418 6 |
| Intel Xeon processor L5640   | <b>BX80614L5640</b>                          | 2.40 GHz    | 5.86 GT/s         | 12 MB           | 1066 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 60 W  | 7 35858 21411 7 |
| Intel Xeon processor L5630   | <b>BX80614L5630</b>                          | 2.13 GHz    | 5.86 GT/s         | 12 MB           | 1066 MHz          | 4 / 8                  | ▪                                              | ▪                                          | 40 W  | 7 35858 21419 3 |
| Intel Xeon processor L5609   | <b>AT80614005940AA</b><br><i>(tray only)</i> | 1.86 GHz    | 4.80 GT/s         | 12 MB           | 1066 MHz          | 4 / 4                  |                                                |                                            | 40 W  |                 |

MULTI-CORE INTEL® XEON® PROCESSOR 5500 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS *(thermal solution sold separately)*

| PROCESSOR NAME               | PRODUCT CODE | CLOCK SPEED | INTEL® QPI® SPEED | SHARED L3 CACHE | MAX. MEMORY SPEED | NO. OF CORES / THREADS | INTEL® HYPER-THREADING TECHNOLOGY <sup>2</sup> | INTEL® TURBO BOOST TECHNOLOGY <sup>3</sup> | POWER | UPC CODE        |
|------------------------------|--------------|-------------|-------------------|-----------------|-------------------|------------------------|------------------------------------------------|--------------------------------------------|-------|-----------------|
| Intel® Xeon® processor W5590 | BX80602W5590 | 3.33 GHz    | 6.40 GT/s         | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 20995 3 |
| Intel Xeon processor W5580   | BX80602W5580 | 3.20 GHz    | 6.40 GT/s         | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 130 W | 7 35858 20568 9 |
| Intel Xeon processor X5570   | BX80602X5570 | 2.93 GHz    | 6.40 GT/s         | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 20569 6 |
| Intel Xeon processor X5560   | BX80602X5560 | 2.80 GHz    | 6.40 GT/s         | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 20570 2 |
| Intel Xeon processor X5550   | BX80602X5550 | 2.66 GHz    | 6.40 GT/s         | 8 MB            | 1333 MHz          | 4 / 8                  | ■                                              | ■                                          | 95 W  | 7 35858 20571 9 |
| Intel Xeon processor E5540   | BX80602E5540 | 2.53 GHz    | 5.86 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 80 W  | 7 35858 20572 6 |
| Intel Xeon processor E5530   | BX80602E5530 | 2.40 GHz    | 5.86 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 80 W  | 7 35858 20573 3 |
| Intel Xeon processor L5530   | BX80602L5530 | 2.40 GHz    | 5.86 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 60 W  | 7 35858 20996 0 |
| Intel Xeon processor E5520   | BX80602E5520 | 2.26 GHz    | 5.86 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 80 W  | 7 35858 20574 0 |
| Intel Xeon processor L5520   | BX80602L5520 | 2.26 GHz    | 5.86 GT/s         | 8 MB            | 1066 MHz          | 4 / 8                  | ■                                              | ■                                          | 60 W  | 7 35858 20575 7 |
| Intel Xeon processor E5507   | BX80602E5507 | 2.26 GHz    | 4.80 GT/s         | 4 MB            | 800 MHz           | 4 / 4                  |                                                |                                            | 80 W  | 7 35858 21389 9 |
| Intel Xeon processor E5506   | BX80602E5506 | 2.13 GHz    | 4.80 GT/s         | 4 MB            | 800 MHz           | 4 / 4                  |                                                |                                            | 80 W  | 7 35858 20576 4 |
| Intel Xeon processor L5506   | BX80602L5506 | 2.13 GHz    | 4.80 GT/s         | 4 MB            | 800 MHz           | 4 / 4                  |                                                |                                            | 60 W  | 7 35858 20579 5 |
| Intel Xeon processor E5504   | BX80602E5504 | 2 GHz       | 4.80 GT/s         | 4 MB            | 800 MHz           | 4 / 4                  |                                                |                                            | 80 W  | 7 35858 20577 1 |
| Intel Xeon processor E5503   | BX80602E5503 | 2 GHz       | 4.80 GT/s         | 4 MB            | 800 MHz           | 2 / 2                  |                                                |                                            | 80 W  | 7 35858 21390 5 |
| Intel Xeon processor E5502   | BX80602E5502 | 1.86 GHz    | 4.80 GT/s         | 4 MB            | 800 MHz           | 2 / 2                  |                                                |                                            | 80 W  | 7 35858 20578 8 |

## INTEL® THERMAL SOLUTION STS100 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS

| PRODUCT NAME                    | BOXED PRODUCT CODE | DESCRIPTION                                                      | RECOMMENDED USAGE <sup>4</sup>                                                                                                                                                                                                                                                                                                                                                                                                                  | MAX. THERMAL DESIGN POWER |
|---------------------------------|--------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Intel® Thermal Solution STS100C | BXSTS100C          | Passive / active combination thermal solution with removable fan | <i>With fan installed:</i> <ul style="list-style-type: none"> <li>▪ Pedestal chassis that provide adequate ventilation and correct temperature air to the thermal solution.</li> </ul> <i>With fan removed:</i> <ul style="list-style-type: none"> <li>▪ Pedestal chassis that provide ducted airflow to the thermal solution.</li> <li>▪ 2U or larger rack chassis<sup>4</sup> that provide ducted airflow to the thermal solution.</li> </ul> | 130 W                     |
| Intel Thermal Solution STS100A  | BXSTS100A          | Active thermal solution with fixed fan                           | Pedestal chassis that provide adequate ventilation and correct temperature air to the thermal solution.                                                                                                                                                                                                                                                                                                                                         | 80 W                      |
| Intel Thermal Solution STS100P  | BXSTS100P          | 25.5mm-tall passive thermal solution                             | 1U, 2U, or blade chassis that provide ducted airflow to the thermal solution.                                                                                                                                                                                                                                                                                                                                                                   | 95 W                      |

## MULTI-CORE INTEL® XEON® PROCESSOR 7500 SERIES FOR SERVER SYSTEMS FEATURING UP TO FOUR FCLGA1567 SOCKETS (thermal solution sold separately)

| PROCESSOR NAME               | PRODUCT CODE                   | CLOCK SPEED | INTEL® QPI <sup>1</sup> SPEED | SHARED L3 CACHE | MAX. MEMORY SPEED | NO. OF CORES / THREADS | INTEL® HYPER-THREADING TECHNOLOGY <sup>2</sup> | INTEL® TURBO BOOST TECHNOLOGY <sup>3</sup> | POWER | UPC CODE        |
|------------------------------|--------------------------------|-------------|-------------------------------|-----------------|-------------------|------------------------|------------------------------------------------|--------------------------------------------|-------|-----------------|
| Intel® Xeon® processor X7560 | BX80604X7560                   | 2.26 GHz    | 6.40 GT/s                     | 24 MB           | 1066 MHz          | 8 / 16                 | ▪                                              | ▪                                          | 130 W | 7 35858 21315 8 |
| Intel Xeon processor L7555   | AT80604004875AA<br>(tray only) | 1.86 GHz    | 5.86 GT/s                     | 24 MB           | 1066 MHz          | 8 / 16                 | ▪                                              | ▪                                          | 95 W  |                 |
| Intel Xeon processor X7550   | BX80604X7550                   | 2 GHz       | 6.40 GT/s                     | 18 MB           | 1066 MHz          | 8 / 16                 | ▪                                              | ▪                                          | 130 W | 7 35858 21316 5 |
| Intel Xeon processor L7545   | AT80604004881AA<br>(tray only) | 1.86 GHz    | 5.86 GT/s                     | 18 MB           | 1066 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 95 W  |                 |
| Intel Xeon processor X7542   | AT80604005280AA<br>(tray only) | 2.66 GHz    | 5.86 GT/s                     | 12 MB           | 1066 MHz          | 6 / 6                  |                                                | ▪                                          | 130 W |                 |
| Intel Xeon processor E7540   | BX80604E7540                   | 2 GHz       | 6.40 GT/s                     | 18 MB           | 1066 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 105 W | 7 35858 21317 2 |
| Intel Xeon processor E7530   | AT80604004884AA<br>(tray only) | 1.86 GHz    | 5.86 GT/s                     | 12 MB           | 1066 MHz          | 6 / 12                 | ▪                                              | ▪                                          | 105 W |                 |
| Intel Xeon processor E7520   | BX80604E7520                   | 1.86 GHz    | 4.80 GT/s                     | 18 MB           | 800 MHz           | 4 / 8                  | ▪                                              |                                            | 95 W  | 7 35858 21318 9 |

## MULTI-CORE INTEL® XEON® PROCESSOR 7000 SEQUENCE FOR SERVER SYSTEMS FEATURING UP TO FOUR MPGA604 SOCKETS

| PROCESSOR NAME               | PRODUCT CODE                       | CLOCK SPEED | NO. OF CORES / FRONT SIDE BUS | L2 CACHE | THREADS | POWER | UPC CODE        |
|------------------------------|------------------------------------|-------------|-------------------------------|----------|---------|-------|-----------------|
| Intel® Xeon® processor X7460 | <b>BX80582X7460</b>                | 2.67 GHz    | 1066 MHz                      | 16 MB L3 | 6 / 6   | 130 W | 7 35858 20355 5 |
| Intel Xeon processor L7455   | <b>AD80582JH046003</b> (tray only) | 2.13 GHz    | 1066 MHz                      | 12 MB L3 | 6 / 6   | 50 W  |                 |
| Intel Xeon processor E7450   | <b>BX80582E7450</b>                | 2.40 GHz    | 1066 MHz                      | 12 MB L3 | 6 / 6   | 90 W  | 7 35858 20356 2 |
| Intel Xeon processor L7445   | <b>AD80583JH046003</b> (tray only) | 2.13 GHz    | 1066 MHz                      | 12 MB L3 | 4 / 4   | 50 W  |                 |
| Intel Xeon processor E7440   | <b>BX80583E7440</b>                | 2.40 GHz    | 1066 MHz                      | 16 MB L3 | 4 / 4   | 90 W  | 7 35858 20357 9 |
| Intel Xeon processor E7430   | <b>AD80583QH046003</b> (tray only) | 2.13 GHz    | 1066 MHz                      | 12 MB L3 | 4 / 4   | 90 W  |                 |
| Intel Xeon processor E7420   | <b>BX80583E7420</b>                | 2.13 GHz    | 1066 MHz                      | 8 MB L3  | 4 / 4   | 90 W  | 7 35858 20358 6 |
| Intel Xeon processor E7310   | <b>BX80565E7310</b>                | 1.60 GHz    | 1066 MHz                      | 4 MB     | 4 / 4   | 80 W  | 7 35858 19669 7 |
| Intel Xeon processor L7345   | <b>LF80565JH0368M</b> (tray only)  | 1.86 GHz    | 1066 MHz                      | 8 MB     | 4 / 4   | 50 W  |                 |
| Intel Xeon processor E7220   | <b>LF80564QH0778M</b> (tray only)  | 2.93 GHz    | 1066 MHz                      | 8 MB     | 2 / 2   | 80 W  |                 |

For more information, visit the Intel Web site at: [www.intel.com/go/serverprocessors](http://www.intel.com/go/serverprocessors)

<sup>1</sup> Intel® QPI-Intel® QuickPath Interconnect; GT/s–Gigatransfers per second.

<sup>2</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading).

<sup>3</sup> Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

<sup>4</sup> Contact your chassis supplier for compatibility details.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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# INTEL® SERVER BOARDS



| Boards                         | Intel® Entry Server Board S3420GPLX                                                                                                                                                                                                                                            | Intel® Entry Server Board S3420GPLC                                                                                                                                                                     |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | <i>Entry server board with support for mainstream applications and additional features</i>                                                                                                                                                                                     | <i>Entry server board with support for mainstream applications</i>                                                                                                                                      |
| Order Code¹                    | S3420GPLX                                                                                                                                                                                                                                                                      | S3420GPLC                                                                                                                                                                                               |
| Intel® Server Chassis Support  | Intel® Server Chassis SC5650UP                                                                                                                                                                                                                                                 | Intel® Server Chassis SC5650UP<br>Intel® Server System SR1630GP<br>Intel® Server System SR1630HGP                                                                                                       |
| Processor Support²             | Intel® Xeon® processor 3400 series                                                                                                                                                                                                                                             | Intel® Xeon® processor 3400 series                                                                                                                                                                      |
| Number of Processors Supported | 1                                                                                                                                                                                                                                                                              | 1                                                                                                                                                                                                       |
| Chipset                        | Intel® 3420 Chipset and PCI Express* switch                                                                                                                                                                                                                                    | Intel® 3420 Chipset                                                                                                                                                                                     |
| Total Slots                    | 6                                                                                                                                                                                                                                                                              | 4                                                                                                                                                                                                       |
| Slot Types                     | 1 x PCI Express 2.0 x8 (x16 mechanical)<br>1 x PCI Express 2.0 x8 (x8 mechanical)<br>1 x PCI Express 2.0 x4 (x8 mechanical)<br>1 x PCI Express x4 (x8 mechanical)<br>1 x PCI Express x1 (x1 mechanical)<br>1 x PCI 32-bit / 33 MHz (5 V)<br>1 x Mezzanine connector—SAS module | 1 x PCI Express* 2.0 x8 (x16 mechanical)<br>1 x PCI Express 2.0 x8 (x8 mechanical)<br>1 x PCI Express x4 (x8 mechanical)<br>1 x PCI 32-bit / 33 MHz (5 V)                                               |
| Memory Capacity                | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels (32 GB max for RDIMM and 16 GB max for UDIMM)                                                                                                                                                                | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels (32 GB max for RDIMM and 16 GB max for UDIMM)                                                                                         |
| Integrated Serial ATA          | 6-port SATA (3.0 Gb/s)                                                                                                                                                                                                                                                         | 6-port SATA (3.0 Gb/s)                                                                                                                                                                                  |
| SAS Option                     | Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules                                                                                                                                                                                                            | N/A                                                                                                                                                                                                     |
| Integrated LAN                 | Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM                                                                                                                                                                                                                    | Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM                                                                                                                                             |
| Integrated Graphics            | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                         |
| System Management Software     | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                           | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                    |
| Server Management Support      | Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXMM3)                                                                                              | Integrated baseboard management controller with IPMI 2.0 support                                                                                                                                        |
| Intel® RAID Support            | Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10                                                                        | Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10 |
| Warranty                       | 3 year limited warranty                                                                                                                                                                                                                                                        | 3 year limited warranty                                                                                                                                                                                 |

For more information, visit the Intel Web site at: [www.intel.com/go/serverboards](http://www.intel.com/go/serverboards)



| Boards                         | Intel® Entry Server Board S3420GPRX                                                                                                                                                                     | Intel® Entry Server Board S3420GPV                                                                                                                        |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | <i>High-efficiency server board for rack optimization</i>                                                                                                                                               | <i>Essential server features for entry-level applications</i>                                                                                             |
| Order Code <sup>1</sup>        | S3420GPRX                                                                                                                                                                                               | S3420GPV                                                                                                                                                  |
| Intel® Server Chassis Support  | Intel® Server System SR1630GPRX<br>Intel® Server System SR1630HGPRX                                                                                                                                     | Intel® Server Chassis SC5650UP                                                                                                                            |
| Processor Support <sup>2</sup> | Intel® Xeon® processor 3400 series                                                                                                                                                                      | Intel® Xeon® processor 3400 series                                                                                                                        |
| Number of Processors Supported | 1                                                                                                                                                                                                       | 1                                                                                                                                                         |
| Chipset                        | Intel® 3420 Chipset                                                                                                                                                                                     | Intel® 3420 Chipset                                                                                                                                       |
| Total Slots                    | 1                                                                                                                                                                                                       | 4                                                                                                                                                         |
| Slot Types                     | 1 x PCI Express* 2.0 x8 (x16 mechanical)<br>1 x Mezzanine connector—internal SAS module<br>2 x Mezzanine connector—external I/O module (GbE and SAS)                                                    | 1 x PCI Express* 2.0 x8 (x16 mechanical)<br>1 x PCI Express 2.0 x8 (x8 mechanical)<br>1 x PCI Express x4 (x8 mechanical)<br>1 x PCI 32-bit / 33 MHz (5 V) |
| Memory Capacity                | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels (32 GB max for RDIMM and 16 GB max for UDIMM)                                                                                         | 4 x UDIMMs DDR3 memory through dual memory channels (16 GB max for UDIMM)                                                                                 |
| Integrated Serial ATA          | 6-port SATA (3.0 Gb/s)                                                                                                                                                                                  | 6-port SATA (3.0 Gb/s)                                                                                                                                    |
| SAS Option                     | Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules                                                                                                                                     | N/A                                                                                                                                                       |
| Integrated LAN                 | Embedded Intel® 5 ports Gigabit Controllers (one for 82574L and four for 82576EB)<br>Optional Quad or Dual GbE solution via Intel® I/O Expansion Modules                                                | Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM                                                                                               |
| Integrated Graphics            | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                         | Onboard graphic controller (SM712)                                                                                                                        |
| System Management Software     | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>Intel® Remote Management Module 3 Lite (AXXRMMLITE)                                                                             | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                      |
| Server Management Support      | Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via 82574L (RMM3 Lite required)                                    | N/A                                                                                                                                                       |
| Intel® RAID Support            | Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10 | Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10                                                                     |
| Warranty                       | 3 year limited warranty                                                                                                                                                                                 | 3 year limited warranty                                                                                                                                   |

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                   |
| Boards                                            | <b>Intel® Server Board S5520UR</b><br><i>Highly integrated, rack-optimized server board for enterprise data centers and high-performance computing</i>                                                                                                                                                                                                                                                                                                                                    | <b>Intel® Server Board S5500WB</b><br><i>A rack-optimized server board, purpose-built for high energy efficiency and lowest total cost of ownership in dense computing applications</i>                                                                                                                                                              | <b>Intel® Server Board S5520HC</b><br><i>A pedestal-optimized server board designed with world-class performance, scalable management, and maximum expandability for small and medium business applications</i>                                                                                                                                      |
| Order Code <sup>1</sup>                           | BB5520URR (OEM 10-pack) / S5520URT (TPM-enabled option)                                                                                                                                                                                                                                                                                                                                                                                                                                   | S5500WBR or S5500WBR12V                                                                                                                                                                                                                                                                                                                              | S5520HCR / S5520HCT (TPM-enabled option)                                                                                                                                                                                                                                                                                                             |
| Intel® Server Chassis Support                     | Intel® Server System SR1600UR family<br>Intel® Server System SR1625UR family<br>Intel® Server System SR2600UR family<br>Intel® Server System SR2625UR family                                                                                                                                                                                                                                                                                                                              | Intel® Server System SR1690WB<br>Intel® Server System SR1695WB                                                                                                                                                                                                                                                                                       | Intel® Server Chassis SC5600 family<br>Intel® Server Chassis SC5650 family<br>Intel® Server System SC5650HCBRP                                                                                                                                                                                                                                       |
| Processor Support <sup>2</sup>                    | Intel® Xeon® processor 5500 or 5600 series <sup>4</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                   | Intel® Xeon® processor 5500 or 5600 series <sup>4</sup>                                                                                                                                                                                                                                                                                              | Intel® Xeon® processor 5500 or 5600 series <sup>4</sup>                                                                                                                                                                                                                                                                                              |
| Number of Processors Supported                    | 1 or 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1 or 2                                                                                                                                                                                                                                                                                                                                               | 1 or 2                                                                                                                                                                                                                                                                                                                                               |
| Intel® QuickPath Interconnect (GT/s) <sup>3</sup> | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                    | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                    |
| Chipset                                           | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                      | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                      |
| Total Slots                                       | 1U: 1<br>2U: up to 5<br>Plus proprietary I/O module and Midplane2 connection                                                                                                                                                                                                                                                                                                                                                                                                              | Up to 2, plus 1 via Intel® I/O Expansion Module (chassis dependent)                                                                                                                                                                                                                                                                                  | 6                                                                                                                                                                                                                                                                                                                                                    |
| Slot Types                                        | 1U: 1 x PCI Express* 2.0 x16 (x16 mechanical via riser)<br>2U: Options vary by system<br>3 x full-height PCI Express 2.0 x8 (passive riser)<br>3 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8<br>3 x full-height PCI-X 133 MHz<br>2 x full-height PCI-X 133 MHz, 1 x full-height and 2 x low-profile PCI Express 2.0 x8<br>Optional 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module<br>Optional 1 x PCI Express x4 via bridge board connector on Midplane2 | 1 x PCI Express* 2.0 x8 in slot 6 (x16 mechanical)<br>1 x PCI Express 2.0 x4 in slot 1 (x8 mechanical)<br>1 x PCI Express 2.0 x8 (GbE, 10 GbE, SAS, and InfiniBand* options) via Intel® I/O Expansion Module                                                                                                                                         | 1 x PCI Express* 2.0 x8 (x16 mechanical)<br>3 x PCI Express 2.0 x8 (x8 mechanical)<br>1 x PCI Express 2.0 x4 (x8 mechanical shared with Intel® 4-port SAS I/O module)<br>1 x PCI 32-bit / 33 MHz (5 V)                                                                                                                                               |
| Memory Capacity                                   | 12 x DDR3 memory DIMM slots through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                                                                                     | 8 x DDR3 memory DIMM slots through 6 memory channels                                                                                                                                                                                                                                                                                                 | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                     |
| Integrated Serial ATA                             | 6-port SATA (3.0 Gb/s) via ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6-ports SATA (3.0 Gb/s) via ICH10R                                                                                                                                                                                                                                                                                                                   | 6-port SATA (3.0 Gb/s) via ICH10R                                                                                                                                                                                                                                                                                                                    |
| SAS Option                                        | Optional SAS / SATA RAID solution via Intel® Integrated Server RAID system boards                                                                                                                                                                                                                                                                                                                                                                                                         | Optional via Intel® I/O Expansion Modules: 4-port internal SAS, 4-port internal SAS hardware RAID                                                                                                                                                                                                                                                    | Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules                                                                                                                                                                                                                                                                                  |
| Integrated LAN                                    | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>5</sup>                                                                                                                                                                                                                                                                                                                                                                                        | Embedded Intel® Dual-Gigabit Controller 82576EB with Intel® Virtualization Technology <sup>5</sup>                                                                                                                                                                                                                                                   | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>5</sup>                                                                                                                                                                                                                                                   |
| Integrated Graphics                               | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                                                                                           | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                      | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                      |
| System Management Software                        | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                                                                                                                                                                                                                                      | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                                                                                                 | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                                                                                                 |
| Server Management Support                         | Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRRMM3)                                                                                                                                                                                                                                                                | Support for the new simplified Data Center Management Interface (DCMI), IPMI 2.0, and Intel® Intelligent Power Node Manager<br>Optional Intel® Remote Management Module (AXXRRMM3)                                                                                                                                                                   | Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRRMM3)                                                                                                                           |
| Intel® RAID Support                               | Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10<br>Optional host-based RAID 5 with activation key AXXRAKSW5<br>Optional SAS RAID with Intel® Integrated RAID module AXXROMBSASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60<br>Compatible with Intel® RAID Controller add-in cards                                                                                                                                      | Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10<br>Optional host-based RAID 5 with activation key AXXRAKSW5<br>Optional SAS RAID with Intel® Integrated RAID module AXXROMBSASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60<br>Compatible with Intel® RAID Controller add-in cards | Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10<br>Optional host-based RAID 5 with activation key AXXRAKSW5<br>Optional SAS RAID with Intel® Integrated RAID module AXXROMBSASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60<br>Compatible with Intel® RAID Controller add-in cards |
| Warranty                                          | 3 year limited warranty                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3 year limited warranty                                                                                                                                                                                                                                                                                                                              | 3 year limited warranty                                                                                                                                                                                                                                                                                                                              |

|                                                   |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                               |                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                                                                                                                                                                                                                                                                     |                                                                            |                                                                                                                                                                                                |
| Boards                                            | <b>Intel® Server Board S5500HCV</b><br><i>A pedestal-optimized server board designed with enterprise-class performance and scalable management, for small and medium business applications</i>                                                                                                                                                       | <b>Intel® Server Board S5500HV</b><br><i>A high-performance, half-width dual-socket server board optimized for high-density HPC applications</i>              | <b>Intel® Server Board S5500BC</b><br><i>An entry-level server board for rack- and pedestal-optimized server solutions designed for business-class performance and quality</i>                                                                                                    |
| Order Code <sup>1</sup>                           | <b>S5500HCVR</b>                                                                                                                                                                                                                                                                                                                                     | <b>BB5500HVR (OEM 10-pack)</b>                                                                                                                                | <b>S5500BCR</b>                                                                                                                                                                                                                                                                   |
| Intel® Server Chassis Support                     | Intel® Server Chassis SC5600 family<br>Intel® Server Chassis SC5650 family                                                                                                                                                                                                                                                                           | Intel® Server System SR1670HV                                                                                                                                 | Pedestal: Intel® Server System SC5650BCDP, Intel® Server Chassis SC5650 family<br>1U Rack: Intel® Server System SR1630BC                                                                                                                                                          |
| Processor Support <sup>2</sup>                    | <b>Intel® Xeon® processor 5500 or 5600 series<sup>4</sup></b>                                                                                                                                                                                                                                                                                        | <b>Intel® Xeon® processor 5500 or 5600 series<sup>4</sup></b>                                                                                                 | <b>Intel® Xeon® processor 5500 or 5600 series<sup>4</sup></b>                                                                                                                                                                                                                     |
| Number of Processors Supported                    | 1 or 2                                                                                                                                                                                                                                                                                                                                               | 1 or 2                                                                                                                                                        | 1 or 2                                                                                                                                                                                                                                                                            |
| Intel® QuickPath Interconnect (GT/s) <sup>3</sup> | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                    | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                             | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                 |
| Chipset                                           | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                      | Intel® 5500 Chipset with ICH10R                                                                                                                               | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                   |
| Total Slots                                       | 5                                                                                                                                                                                                                                                                                                                                                    | 1                                                                                                                                                             | 5                                                                                                                                                                                                                                                                                 |
| Slot Types                                        | 2 x PCI Express* 2.0 x8 (x8 mechanical)<br>1 x PCI Express 2.0 x4 (x16 mechanical)<br>1 x PCI Express x4 (x8 mechanical shared with Intel® 4-port SAS I/O module)<br>1 x PCI 32-bit / 33 MHz (5 V)                                                                                                                                                   | 1 x low-profile, half-length PCI Express* 2.0 x 16                                                                                                            | Pedestal:<br>2 x half-length PCI Express* 2.0 x8 (x8 mechanical)<br>1 x half-length PCI Express 2.0 x4 (x8 mechanical)<br>1 x half-length PCI Express x4<br>1 x half-length PCI 32-bit / 33 MHz (5 V)<br>Rack:<br>1 x low-profile, half-length PCI Express 2.0 x8 riser in slot 6 |
| Memory Capacity                                   | 9 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                      | 12 x DDR3 memory DIMM slots through 6 memory channels                                                                                                         | 8 x DDR3 memory DIMMs through 4 memory channels                                                                                                                                                                                                                                   |
| Integrated Serial ATA                             | 6-port SATA (3.0 Gb/s) via ICH10R                                                                                                                                                                                                                                                                                                                    | 4-port SATA (3.0 Gb/s) via ICH10R                                                                                                                             | 6-port SATA ports (3.0 Gb/s) via ICH10R                                                                                                                                                                                                                                           |
| SAS Option                                        | Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules                                                                                                                                                                                                                                                                                  | N/A                                                                                                                                                           | N/A                                                                                                                                                                                                                                                                               |
| Integrated LAN                                    | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>5</sup>                                                                                                                                                                                                                                                   | Embedded Intel® 82574L PHYs with Intel® I/O Acceleration Technology                                                                                           | Embedded Intel® Dual-Gigabit Controllers 82574L and 82567LM                                                                                                                                                                                                                       |
| Integrated Graphics                               | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                      | Onboard ASPEED* AST2050 with integrated 2D video controller with 8 MB video memory                                                                            | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                   |
| System Management Software                        | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                                                                                                 | IPMI 2.0 Management Features                                                                                                                                  | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                              |
| Server Management Support                         | Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRM3)                                                                                                                             | Onboard ASPEED AST2050 with integrated Baseboard Management Controller (BMC) Management Module with IPMI 2.0 support                                          | Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRM3)                                                                                                 |
| Intel® RAID Support                               | Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10<br>Optional host-based RAID 5 with activation key AXXRAKSw5<br>Optional SAS RAID with Intel® Integrated RAID module AXXROMBSASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60<br>Compatible with Intel® RAID Controller add-in cards | Includes SATA RAID support using Intel® Matrix RAID 0, 1, 5, and 10 or LSI® MegaSR 0, 1, and 10<br>Compatible with select Intel® RAID Controller add-in cards | Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10<br>Optional host-based RAID 5 with activation key AXXRAKSw5<br>Compatible with Intel® RAID Controller add-in cards                                                          |
| Warranty                                          | 3 year limited warranty                                                                                                                                                                                                                                                                                                                              | 3 year limited warranty                                                                                                                                       | 3 year limited warranty                                                                                                                                                                                                                                                           |



| Boards                                            | Intel® Workstation Board S5520SC                                                                                                                                                                                                                                                                                                                  | Intel® Workstation Board WX58BP                                                                                               |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
|                                                   | <i>A workstation-optimized board designed with world-class performance and flexible expandability for graphics-intensive applications</i>                                                                                                                                                                                                         | <i>Entry-level workstation board supports ECC memory</i>                                                                      |
| Order Code <sup>1</sup>                           | S5520SCR                                                                                                                                                                                                                                                                                                                                          | WX58BP                                                                                                                        |
| Intel® Server Chassis Support                     | Intel® Server Chassis SC5600BASE<br>Intel® Server Chassis SC5650WS<br>Intel® Server System SC5650SCWS                                                                                                                                                                                                                                             | N/A                                                                                                                           |
| Processor Support <sup>2</sup>                    | Intel® Xeon® processor 5500 or 5600 series <sup>4</sup>                                                                                                                                                                                                                                                                                           | Intel® Xeon® processor 3500 or 3600 series <sup>6</sup>                                                                       |
| Number of Processors Supported                    | 1 or 2                                                                                                                                                                                                                                                                                                                                            | 1                                                                                                                             |
| Intel® QuickPath Interconnect (GT/s) <sup>3</sup> | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                 | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                             |
| Chipset                                           | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                   | Intel® X58 Express Chipset                                                                                                    |
| Total Slots                                       | 5                                                                                                                                                                                                                                                                                                                                                 | 6                                                                                                                             |
| Slot Types                                        | 2 x PCI Express* 2.0 x16 (x16 mechanical)<br>1 x PCI Express 2.0 x4 (x8 mechanical shared with Intel® 4-port SAS I/O module)<br>1 x PCI Express x1 (x4 mechanical)<br>1 x PCI 32-bit / 33 MHz (5 V)                                                                                                                                               | 2 x PCI Express* 2.0 x16 (supports ATI CrossFire*)<br>1 x PCI Express 2.0 x4<br>2 x PCI Express x1<br>1 x PCI 32-bit / 33 MHz |
| Memory Capacity                                   | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                  | 4 DIMM slots for DDR3 1333 / 1066<br>Unbuffered ECC / non-ECC DIMMs (16 GB max) via 3 channels                                |
| Integrated Serial ATA                             | 6-port SATA (3.0 Gb/s) via ICH10R                                                                                                                                                                                                                                                                                                                 | 6-port SATA (3.0 Gb/s)                                                                                                        |
| SAS Option                                        | Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules                                                                                                                                                                                                                                                                               | N/A                                                                                                                           |
| Integrated LAN                                    | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>5</sup>                                                                                                                                                                                                                                                | 1 x Intel® Gigabit Ethernet Controller                                                                                        |
| Integrated Graphics                               | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                   | N/A                                                                                                                           |
| System Management Software                        | Intel® System Management Software 3.x<br>Intel® Deployment Assistant                                                                                                                                                                                                                                                                              | N/A                                                                                                                           |
| Server Management Support                         | Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRMM3)                                                                                                                                                                | N/A                                                                                                                           |
| Intel® RAID Support                               | Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10<br>Optional host-based RAID 5 with activation key AXXRKSW5<br>Optional SAS RAID with Intel® Integrated RAID module AXXRMBASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60<br>Compatible with Intel® RAID Controller add-in cards | Includes SATA RAID support using Intel® Matrix RAID 0, 1, 5, and 10<br>Compatible with Intel® RAID Controller add-in cards    |
| Warranty                                          | 3 year limited warranty                                                                                                                                                                                                                                                                                                                           | 3 year limited warranty                                                                                                       |

For more information, visit the Intel Web site at: [www.intel.com/go/serverboards](http://www.intel.com/go/serverboards)

<sup>1</sup> Out of the box support for the Intel® Xeon® processor 5600 series will be indicated by the addition of the letter "R" at the end of the Product Order Code. For boards and systems currently supporting the Intel® Xeon® processor 5500 series, a BIOS update is required before installing the Intel Xeon processor 5600 series. Refer to <http://support.intel.com> for more information.

<sup>2</sup> Refer to <http://support.intel.com/support/motherboards/server> for up-to-date details on processors supported by each server board.

<sup>3</sup> GT/s—Gigatransfers per second.

<sup>4</sup> When installing two processors, both processors must be from the same processor series—either two Intel® Xeon® processor 5500 series or two Intel® Xeon® processor 5600 series.

<sup>5</sup> Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance, or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

<sup>6</sup> For the Intel® Workstation Board WX58BP currently supporting the Intel® Xeon® processor 3500 series, a BIOS update is required before installing the Intel® Xeon® processor 3600 series. Visit <http://support.intel.com> for more information.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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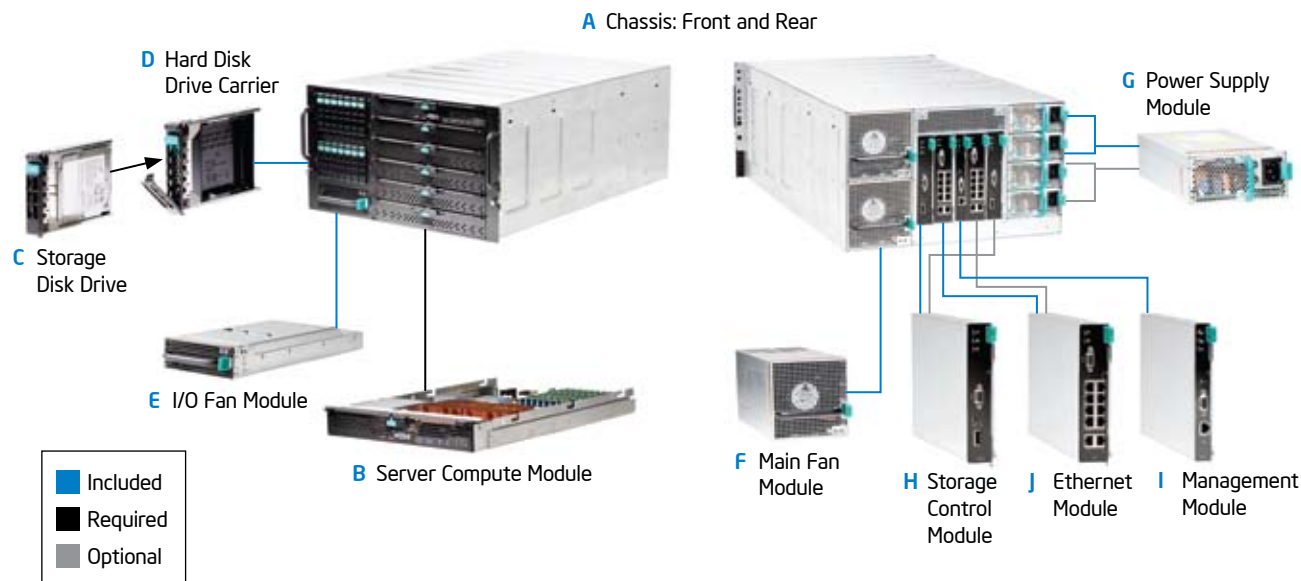
## INTEL® MODULAR SERVER

### Simple. Flexible. Complete.

The Intel® Modular Server is an integrated system built on Intel® Multi-Flex Technology that includes SAN storage, computing, and networking to simplify the growing demands of your IT infrastructure. The Intel Modular Server features:

- Up to six Server Compute Modules
- Integrated SAN storage
- Integrated Ethernet Switch Modules
- All hot-swappable components
- Virtual Presence remote management capabilities
- Optional software upgrade features (Intel® Shared LUN that allows HA clustering and advanced virtualization applications and Intel® Modular Server Storage Management Pack for LUN cloning, RAID morphing, and storage pool defragmentation)

As an integrated system, the Intel Modular Server has capabilities not found in the common rack server setup, including virtual drives that provide grow-as-you-go flexibility and Virtual Presence management for simplicity.



#### A Chassis

- 1-6 Server Compute Modules
- Storage Drive Bay

#### B Server Compute Module (required)

- Model MFS5520VIR
- Up to 2 Intel® Xeon® processors
- Up to 12 DDR3 DIMMs
- Dual Gigabit Mezzanine expansion card (optional)

#### C Storage Hard Disk Drive (required)

- Up to 14 2.5-inch SAS / SATA drives or
- Up to 6 3.5-inch SAS / SATA drives

#### D Hard Disk Drive Carriers (included)

#### E Hot-Swappable I/O Fan Module (included)

#### F Hot-Swappable Main Fan Module (included)

#### G Hot-Swappable Power Supply Module (2 included, 2 optional)

- 3 + 1 redundancy

#### H Storage Control Module (1 included, 1 optional)

- Up to 2 Storage Control Modules for redundancy

#### I Management Module (included)

#### J Ethernet Switch Module (1 included, 1 optional)

- Up to 2 Ethernet Switch Modules
- Each module features 10/100/1000GbE full-duplex ports

## INTEL® MODULAR SERVER PRODUCTS



|                                |                                                                                             |
|--------------------------------|---------------------------------------------------------------------------------------------|
| Server                         | <b>Intel® Modular Server Compute Module MFS5520VI</b>                                       |
|                                | <i>High-performance, power- and heat-efficient Intel® 64-bit-capable, multi-core server</i> |
| Order Code                     | <b>MFS5520VIR</b>                                                                           |
| Intel® Server Chassis Support  | Intel® Modular Server System MFSYS25 / MFSYS35                                              |
| Processor Support              | <b>Intel® Xeon® processor</b>                                                               |
| Number of Processors Supported | 2                                                                                           |
| Supported Speeds               | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s (Intel® QuickPath Interconnect)                           |
| Chipset                        | Intel® 5520 Server Chipset                                                                  |
| Total Slots                    | 1 Mezzanine expansion connector                                                             |
| Memory Capacity                | 12 DDR3 DIMMs (6 per processor)                                                             |
| Integrated SAS HBA             | Connectivity to shared storage provided via onboard LSI* 1064e controller                   |
| Integrated LAN                 | 2 x Gigabit Ethernet (4 x with optional gigabit mezzanine card AXXGBIOMEZV)                 |
| Integrated Graphics            | Server Engines* LLC Pilot II* controller with 64 MB DDR2 memory                             |
| Integrated Management          | Remote management (KVM over IP), Remote Media Redirection, and Remote Serial Console        |
| Application Management         | Provided by Intel® System Management Software                                               |
| Front Connectors               | 4 x USB, 1 x DB15 video                                                                     |

For more information, visit the Intel Web site at:  
[www.intel.com/go/modular](http://www.intel.com/go/modular)

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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|                             |                                                                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chassis                     | <b>Intel® Modular Server System MFSYS25 / MFSYS35</b>                                                                                                          |
|                             | <i>One system that integrates storage, compute, and networking to simplify the demands of your business</i>                                                    |
| Chassis Order Code          | <b>MFSYS25 / MFSYS35</b>                                                                                                                                       |
| Spares Kit Order Code       | See <a href="http://support.intel.com">http://support.intel.com</a> for a complete configuration guide                                                         |
| Form Factor                 | 6U (can be deployed in a rack or pedestal kit)                                                                                                                 |
| Intel® Server Board Support | <b>Intel® Modular Server Compute Module MFS5520VI</b>                                                                                                          |
| Server Slots                | 6                                                                                                                                                              |
| Shared Storage HDD Bay      | Supports up to 14 x 2.5" drives (MFSYS25) or 6 x 3.5" drives (MFSYS35)                                                                                         |
| Management Module Bay       | 1 integrated Intel® Modular Server Management Module                                                                                                           |
| Storage Module Bay          | 1 integrated Intel® Storage Controller, option for redundant storage module                                                                                    |
| I/O Module Bay              | 1 integrated Intel® Gigabit Ethernet Switch, option for redundant Ethernet switch                                                                              |
| System Cooling              | 3 x high-flow system fans included                                                                                                                             |
| Power Supply                | 2 x 1000 W, N+1 PFC 100–240 V-capable                                                                                                                          |
| Redundant Power Capable     | Yes (fully redundant system configuration requires two additional power modules AXXP5U)                                                                        |
| Tool-less Features          | Complete tool-less serviceability                                                                                                                              |
| Dimensions (H x W x D)      | 10.3" x 17.5" x 28.4"                                                                                                                                          |
| Weight                      | 187 lbs (84.8 kg) fully configured                                                                                                                             |
| Ethernet Switch Module      | 10 x external 10/100/1000 Mb/s ports, 12 x internal 1 Gb/s ports, Layer 2+, 10 Gb/s switch interlinks, integrated management                                   |
| Storage Controller Module   | SAS 3 Gb-based SAN storage supporting RAID 0, 1, 1E, 5, 6, 10, 50, and 60; external 4 x mini SAS port expansion for integration with external SAS tape or RAID |
| Chassis Management Module   | Web management GUI with remote KVM support, virtual presence, and virtualized access storage management                                                        |



# INTEL® SERVER CHASSIS



Chassis

Intel® Server Chassis SC5650

*A cost-effective entry-level chassis designed for reliable operation for small business servers and workstation environments*

| Configuration                            | Base                                                                                                                                                                                | BRP                                                                                                                                                                                 | WS                                                                                                                                                                                  | UP                                                                                                                                                              |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chassis Order Code <sup>1</sup>          | SC5650DP                                                                                                                                                                            | SC5650BRP                                                                                                                                                                           | SC5650WS                                                                                                                                                                            | SC5650UP                                                                                                                                                        |
| Spares Kit Order Code                    | Maintenance kit: FPPTPMKIT                                                                                                                                                          | Maintenance kit: FPPTPMKIT                                                                                                                                                          | Maintenance kit: FPPTPMKIT                                                                                                                                                          | Maintenance kit: FPPTUPPMKIT                                                                                                                                    |
| Form Factor                              | Pedestal, convertible to 6U Rack                                                                                                                                                    | Pedestal, convertible to 6U Rack                                                                                                                                                    | Pedestal, convertible to 6U Rack                                                                                                                                                    | Pedestal, convertible to 6U Rack                                                                                                                                |
| Intel® Server Board Support <sup>2</sup> | Intel® Server Boards S5500BC, S5520HC, and S5500HCV                                                                                                                                 | Intel® Server Boards S5500BC, S5520HC, and S5500HCV                                                                                                                                 | Intel® Workstation Board S5520SC                                                                                                                                                    | Intel® Server Boards S3420GPLX, S3420GPLC, and S3420GPV                                                                                                         |
| Drive Bays                               | Support for up to six 3.5" fixed or hot-swap SAS/SATA drives                                                                                                                        | Support for up to six 3.5" fixed or hot-swap SAS/SATA drives                                                                                                                        | Support for up to six 3.5" fixed or hot-swap SAS/SATA drives                                                                                                                        | Support for up to six 3.5" fixed or hot-swap SAS/SATA drives                                                                                                    |
| Hot-Swap Disk Drive Bay: Order Code      | Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP                      | Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP                      | Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP                      | Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP  |
| System Cooling                           | 3 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 120mm PCI fan, 1 x 92mm drive bay fan)                                                                                   | 3 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 120mm PCI fan, 1 x 92mm drive bay fan)                                                                                   | 3 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 120mm PCI fan, 1 x 92mm drive bay fan)                                                                                   | 2 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 92mm drive bay fan)                                                                                  |
| Power Supply                             | Non-redundant 600 W PFC power supply with integrated cooling fan                                                                                                                    | Redundant 1+0 high-efficiency 600 W PFC power supply with integrated cooling fan<br>One additional 600 W PSU can be added for redundancy                                            | Non-redundant 1000 W high-efficiency PFC power supply with integrated cooling fan                                                                                                   | Non-redundant 400 W high-efficiency PFC power supply with integrated cooling fan                                                                                |
| Tool-less Features                       | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, fixed PSU, floppy drives, and CD / DVD ROM drives   |
| Dimensions (H x W x D)                   | Pedestal: 17.8" x 9.256" x 19"<br>(452mm x 235mm x 483mm)<br>Rack: 9.256" x 17.6" x 19"<br>(235mm x 447mm x 483mm)                                                                  | Pedestal: 17.8" x 9.256" x 19"<br>(452mm x 235mm x 483mm)<br>Rack: 9.256" x 17.6" x 19"<br>(235mm x 447mm x 483mm)                                                                  | Pedestal: 17.8" x 9.256" x 19"<br>(452mm x 235mm x 483mm)<br>Rack: 9.256" x 17.6" x 19"<br>(235mm x 447mm x 483mm)                                                                  | Pedestal: 17.8" x 9.256" x 19"<br>(452mm x 235mm x 483mm)<br>Rack: 9.256" x 17.6" x 19"<br>(235mm x 447mm x 483mm)                                              |
| Bezel Features                           | Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports                     | Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports                     | Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports                     | Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports |
| Front Connectors                         | 2 x USB                                                                                                                                                                             | 2 x USB                                                                                                                                                                             | 2 x USB                                                                                                                                                                             | 2 x USB                                                                                                                                                         |

For more information, visit the Intel Web site at: [www.intel.com/products/server/chassis](http://www.intel.com/products/server/chassis)



| Chassis                                  | Intel® Server Chassis SC5600                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                            |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | <i>An enterprise-level chassis designed with world-class performance and maximum expandability for small and medium business applications</i>                                                                                                              |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                            |
| Configuration                            | Base                                                                                                                                                                                                                                                       | BRP                                                                                                                                                                                                                                                        | LX                                                                                                                                                                                                                                                         |
| Chassis Order Code <sup>1</sup>          | SC5600BASE                                                                                                                                                                                                                                                 | SC5600BRP                                                                                                                                                                                                                                                  | SC5600LX                                                                                                                                                                                                                                                   |
| Spares Kit Order Code                    | Maintenance kit: FRIGTPMKIT                                                                                                                                                                                                                                | Maintenance kit: FRIGTPMKIT                                                                                                                                                                                                                                | Maintenance kit: FRIGTPMKIT                                                                                                                                                                                                                                |
| Form Factor                              | Pedestal, convertible to 5U Rack                                                                                                                                                                                                                           | Pedestal, convertible to 5U Rack                                                                                                                                                                                                                           | Pedestal, convertible to 5U Rack                                                                                                                                                                                                                           |
| Intel® Server Board Support <sup>2</sup> | Intel® Server Boards S5520HC and S5500HCV<br>Intel® Workstation Board S5520SC                                                                                                                                                                              | Intel® Server Boards S5520HC and S5500HCV                                                                                                                                                                                                                  | Intel® Server Boards S5520HC and S5500HCV                                                                                                                                                                                                                  |
| Drive Bays                               | Support for up to ten 3.5" fixed or hot-swap SAS/SATA drives                                                                                                                                                                                               | Support for up to ten 3.5" fixed or hot-swap SAS/SATA drives                                                                                                                                                                                               | Support for up to ten 3.5" fixed or hot-swap SAS/SATA drives                                                                                                                                                                                               |
| Hot-Swap Disk Drive Bay: Order Code      | Up to ten hot-swap drive bays are possible with the combination of the following drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP<br>4-drive SAS/SATA—AXX4DRV3GR<br>4-drive SAS/SATA Expander—AXX4DRV3GEXP | Up to ten hot-swap drive bays are possible with the combination of the following drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP<br>4-drive SAS/SATA—AXX4DRV3GR<br>4-drive SAS/SATA Expander—AXX4DRV3GEXP | Up to ten hot-swap drive bays are possible with the combination of the following drive bay upgrade kits:<br>6-drive SAS/SATA—AXX6DRV3GR<br>6-drive SAS/SATA Expander—AXX6DRV3GEXP<br>4-drive SAS/SATA—AXX4DRV3GR<br>4-drive SAS/SATA Expander—AXX4DRV3GEXP |
| System Cooling                           | 3 x fixed, non-redundant chassis fans (2 x 120mm, 1 x 92mm)                                                                                                                                                                                                | 3 x fixed, non-redundant chassis fans (2 x 120mm, 1 x 92mm)                                                                                                                                                                                                | 4 x tool-less, hot-swappable and redundant chassis fans with handle-mounted diagnostic failure LEDs (2 x 120mm, 2 x 92mm)                                                                                                                                  |
| Power Supply                             | Non-redundant 670 W PFC power supply with integrated cooling fan                                                                                                                                                                                           | Redundant 1+1 high-efficiency 750 W PFC power supply with integrated cooling fan                                                                                                                                                                           | Redundant 1+1 high-efficiency 750 W PFC power supply with integrated cooling fan                                                                                                                                                                           |
| Tool-less Features                       | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives                                                                        | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives                                                                        | Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives                                                                        |
| Dimensions (H x W x D)                   | Rack: 8.6" x 16.6" x 27.4" (218mm x 422mm x 696mm)<br>Pedestal: 17" x 8.6" x 28.4" (432mm x 218mm x 721mm)                                                                                                                                                 | Rack: 8.6" x 16.6" x 27.4" (218mm x 422mm x 696mm)<br>Pedestal: 17" x 8.6" x 28.4" (432mm x 218mm x 721mm)                                                                                                                                                 | Rack: 8.6" x 16.6" x 27.4" (218mm x 422mm x 696mm)<br>Pedestal: 17" x 8.6" x 28.4" (432mm x 218mm x 721mm)                                                                                                                                                 |
| Bezel Features                           | Black, security lock, control panel controls and indicators, three tool-less 5.25" peripheral drive bays, internal hard drive bay cage ( <i>behind door</i> ), security lock, USB ports                                                                    | Black, security lock, control panel controls and indicators, three tool-less 5.25" peripheral drive bays, internal hard drive bay cage ( <i>behind door</i> ), security lock, USB ports                                                                    | Black, security lock, control panel controls and indicators, three tool-less 5.25" peripheral drive bays, internal hard drive bay cage ( <i>behind door</i> ), security lock, USB ports                                                                    |
| Front Connectors                         | 2 x USB<br>1 x optional front or rear mounted serial port                                                                                                                                                                                                  | 2 x USB<br>1 x optional front or rear mounted serial port                                                                                                                                                                                                  | 2 x USB<br>1 x optional front or rear mounted serial port                                                                                                                                                                                                  |

For more information, visit the Intel Web site at: [www.intel.com/products/server/chassis](http://www.intel.com/products/server/chassis)

<sup>1</sup> North American power cord included in order codes ending in NA; power cord not included in all other order codes.

<sup>2</sup> Refer to <http://support.intel.com/support/motherboards/server> for up-to-date details on server boards supported by each chassis.

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# INTEL® SERVER SYSTEMS



|                                                   |                                                                                                           |                                                                                                                                                                                         |                                                                                                                                                                                                              |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System                                            | <b>Intel® Server System SR1640TH</b><br><i>High-density, 1U four-node system with optimized power efficiency and cooling for space- and cost-sensitive customers</i>                       | <b>Intel® Server System SR1630GP</b><br><i>Highly integrated, 1U rack solution for cost-sensitive customers</i>                                                                                                                                                           | <b>Intel® Server System SR1630GPRX</b><br><i>Highly integrated, 1U rack solution for cost-sensitive customers</i>                                                                                                                                                                               |
| Order Code <sup>1,2</sup>                         | <b>SR1640TH</b>                                                                                                                                                                            | <b>SR1630GP</b>                                                                                                                                                                                                                                                           | <b>SR1630GPRX</b>                                                                                                                                                                                                                                                                               |
| Components Included                               | <ul style="list-style-type: none"> <li>Intel® Server Board S3420TH</li> <li>Intel® Server Chassis with dual 450 W 80 PLUS® Silver-level power supply</li> <li>Pre-routed cables</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S3420GPLC</li> <li>Intel® Server Chassis with 350 W power supply</li> <li>One low-profile PCI Express® riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S3420GPRX</li> <li>Intel® Server Chassis with 350 W 80 PLUS® Silver-level power supply</li> <li>One low-profile PCI Express® riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul> |
| Number of Processors Supported                    | 4                                                                                                                                                                                          | 1                                                                                                                                                                                                                                                                         | 1                                                                                                                                                                                                                                                                                               |
| Processor Support <sup>3</sup>                    | <b>Intel® Xeon® processor 3400 series</b>                                                                                                                                                  | <b>Intel® Xeon® processor 3400 series</b>                                                                                                                                                                                                                                 | <b>Intel® Xeon® processor 3400 series</b>                                                                                                                                                                                                                                                       |
| Chipset                                           | Intel® 3420 Chipset                                                                                                                                                                        | Intel® 3420 Chipset                                                                                                                                                                                                                                                       | Intel® 3420 Chipset                                                                                                                                                                                                                                                                             |
| Total Slots                                       | 0                                                                                                                                                                                          | 1                                                                                                                                                                                                                                                                         | 1                                                                                                                                                                                                                                                                                               |
| Slot Types                                        | N/A                                                                                                                                                                                        | 1 x PCI Express 2.0 x8                                                                                                                                                                                                                                                    | 1 x PCI Express 2.0 x8<br>1 x PCI Express 2.0 x8 (GbE and SAS options) via Intel® I/O Expansion Module                                                                                                                                                                                          |
| Memory Capacity                                   | 4 x DIMMs DDR3 memory through dual memory channels                                                                                                                                         | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels                                                                                                                                                                                                         | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels                                                                                                                                                                                                                               |
| Backplane                                         | N/A                                                                                                                                                                                        | N/A                                                                                                                                                                                                                                                                       | N/A                                                                                                                                                                                                                                                                                             |
| Integrated LAN                                    | 2 x Embedded Intel® Dual-Gigabit Controllers 82574L                                                                                                                                        | Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM                                                                                                                                                                                                               | Embedded 5-port Intel® Gigabit Controllers (one for 82574L and four for 82576EB)                                                                                                                                                                                                                |
| Integrated Graphics                               | Server Engine® LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                            | Server Engine® LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                           | Server Engine® LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                 |
| Server Management Support                         | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite (AXXMM3LITEV)                                | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard                                                                                                                                                                                  | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite (AXXMM3LITE)                                                                                                                                      |
| Intel® RAID Controller Compatibility <sup>4</sup> | N/A                                                                                                                                                                                        | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10                                                       | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10                                                                             |
| Form Factor                                       | 1U Rack                                                                                                                                                                                    | 1U Rack                                                                                                                                                                                                                                                                   | 1U Rack                                                                                                                                                                                                                                                                                         |
| Drive Bays                                        | 4 x fixed 3.5" SATA (3.0 Gb/s) HDDs                                                                                                                                                        | 2 x fixed 3.5" SATA (3.0 Gb/s) HDDs<br>1 x fixed slim-line DVD-ROM                                                                                                                                                                                                        | 2 x fixed 3.5" SATA (3.0 Gb/s) HDDs<br>1 x fixed slim-line DVD-ROM                                                                                                                                                                                                                              |
| Thermal Solution                                  | 4 x UP passive thermal solution included                                                                                                                                                   | 1 x UP passive thermal solution included                                                                                                                                                                                                                                  | 1 x UP passive thermal solution included                                                                                                                                                                                                                                                        |
| System Cooling                                    | 6 x fixed cooling fans with 2 x air duct                                                                                                                                                   | 2 x fixed cooling blowers with duct                                                                                                                                                                                                                                       | 3 x fixed cooling blowers with duct                                                                                                                                                                                                                                                             |
| Power Supply                                      | 450 W non-redundant 80 PLUS Silver-level efficiency                                                                                                                                        | 350 W non-redundant                                                                                                                                                                                                                                                       | 350 W non-redundant; 80 PLUS Silver-level efficiency                                                                                                                                                                                                                                            |
| Dimensions (H x W x D)                            | 1.7" x 17.3" x 26.8" (44mm x 440mm x 680mm)                                                                                                                                                | 1.7" x 16.9" x 20" (43mm x 430mm x 508mm)                                                                                                                                                                                                                                 | 1.7" x 16.9" x 20" (43mm x 430mm x 508mm)                                                                                                                                                                                                                                                       |

For more information, visit the Intel Web site at: [www.intel.com/go/serversystems](http://www.intel.com/go/serversystems)

|                                                   |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                                                                                                                                                                                          |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                      |
| System                                            | <b>Intel® Server System SR1630HGP</b><br><i>Flexible high-density server solution for entry-level system infrastructures</i>                                                                                                                                              | <b>Intel® Server System SR1630HGPRX</b><br><i>Flexible high-density server solution for entry-level system infrastructures</i>                                                                                                                                                                                                          | <b>Intel® Server System SR1695GPRX</b><br><i>High-density redundant server solution with AC PSU</i>                                                                                                                                                                                                                                     |
| Order Code <sup>1,2</sup>                         | <b>SR1630HGP</b>                                                                                                                                                                                                                                                          | <b>SR1630HGPRX</b>                                                                                                                                                                                                                                                                                                                      | <b>SR1695GPRX</b>                                                                                                                                                                                                                                                                                                                       |
| Components Included                               | <ul style="list-style-type: none"> <li>Intel® Server Board S3420GPLC</li> <li>Intel® Server Chassis with 350 W power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S3420GPRX</li> <li>Intel® Server Chassis with 350 W 80 PLUS* Silver-level power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul>                                         | <ul style="list-style-type: none"> <li>Intel® Server Board S3420GPRX</li> <li>Intel® Server Chassis with 400 W 80 PLUS* Silver-level power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Pre-routed cables</li> </ul>                                                                 |
| Number of Processors Supported                    | 1                                                                                                                                                                                                                                                                         | 1                                                                                                                                                                                                                                                                                                                                       | 1                                                                                                                                                                                                                                                                                                                                       |
| Processor Support <sup>3</sup>                    | <b>Intel® Xeon® processor 3400 series</b>                                                                                                                                                                                                                                 | <b>Intel® Xeon® processor 3400 series</b>                                                                                                                                                                                                                                                                                               | <b>Intel® Xeon® processor 3400 series</b>                                                                                                                                                                                                                                                                                               |
| Chipset                                           | Intel® 3420 Chipset                                                                                                                                                                                                                                                       | Intel® 3420 Chipset                                                                                                                                                                                                                                                                                                                     | Intel® 3420 Chipset                                                                                                                                                                                                                                                                                                                     |
| Total Slots                                       | 1                                                                                                                                                                                                                                                                         | 1                                                                                                                                                                                                                                                                                                                                       | 1                                                                                                                                                                                                                                                                                                                                       |
| Slot Types                                        | 1 x PCI Express 2.0 x8                                                                                                                                                                                                                                                    | 1 x PCI Express 2.0 x8<br>1 x PCI Express 2.0 x8 ( <i>GbE and SAS options</i> ) via Intel® I/O Expansion Module                                                                                                                                                                                                                         | 1 x PCI Express 2.0 x8<br>1 x PCI Express 2.0 x8 ( <i>GbE and SAS options</i> ) via Intel® I/O Expansion Module                                                                                                                                                                                                                         |
| Memory Capacity                                   | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels                                                                                                                                                                                                         | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels                                                                                                                                                                                                                                                                       | 6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels                                                                                                                                                                                                                                                                       |
| Backplane                                         | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                             | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                                           | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                                           |
| Integrated LAN                                    | Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM                                                                                                                                                                                                               | Embedded 5-port Intel® Gigabit Controllers ( <i>one for 82574L and four for 82576EB</i> )                                                                                                                                                                                                                                               | Embedded 5-port Intel® Gigabit Controllers ( <i>one for 82574L and four for 82576EB</i> )                                                                                                                                                                                                                                               |
| Integrated Graphics                               | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                           | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                         | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                         |
| Server Management Support                         | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard                                                                                                                                                                                  | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite ( <i>AXXRMMLITE</i> )                                                                                                                                                                     | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite ( <i>AXXRMMLITE</i> )                                                                                                                                                                     |
| Intel® RAID Controller Compatibility <sup>4</sup> | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10                                                       | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10<br>Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans 10, 50, and 60 | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10<br>Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans 10, 50, and 60 |
| Form Factor                                       | 1U Rack                                                                                                                                                                                                                                                                   | 1U Rack                                                                                                                                                                                                                                                                                                                                 | 1U Rack                                                                                                                                                                                                                                                                                                                                 |
| Drive Bays                                        | 3 x hot-swap 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs<br>1 x fixed slim-line DVD-ROM                                                                                                                                                                                            | 3 x hot-swap 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs<br>1 x fixed slim-line DVD-ROM                                                                                                                                                                                                                                                          | 4 x 3.5" hot-swap drive bays<br>Configurable to support 1 x 2.5" hot-swap drive in each bay                                                                                                                                                                                                                                             |
| Thermal Solution                                  | 1 x UP passive thermal solution included                                                                                                                                                                                                                                  | 1 x UP passive thermal solution included                                                                                                                                                                                                                                                                                                | 1 x UP passive thermal solution included                                                                                                                                                                                                                                                                                                |
| System Cooling                                    | 2 x fixed cooling blowers with duct                                                                                                                                                                                                                                       | 3 x fixed cooling blowers with duct                                                                                                                                                                                                                                                                                                     | 3 x fixed cooling blowers with duct                                                                                                                                                                                                                                                                                                     |
| Power Supply                                      | 350 W non-redundant                                                                                                                                                                                                                                                       | 350 W non-redundant; 80 PLUS Silver-level efficiency                                                                                                                                                                                                                                                                                    | 400 W non-redundant; 80 PLUS Silver-level efficiency                                                                                                                                                                                                                                                                                    |
| Dimensions (H x W x D)                            | 1.7" x 16.9" x 25.51" ( <i>43mm x 430mm x 648mm</i> )                                                                                                                                                                                                                     | 1.7" x 16.9" x 25.51" ( <i>43mm x 430mm x 648mm</i> )                                                                                                                                                                                                                                                                                   | 1.69" x 17.76" x 26.42" ( <i>43mm x 451mm x 671mm</i> )                                                                                                                                                                                                                                                                                 |



| System                                                 | Intel® Server System SR1600UR                                                                                                                                                                                                                                                                                                                                                                                                                                              | Intel® Server System SR1625UR                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        | <i>Rack-optimized, highly integrated server systems for high-density, cost-sensitive applications</i>                                                                                                                                                                                                                                                                                                                                                                      | <i>Highly integrated rack server system with reach storage subsystem for high-density applications</i>                                                                                                                                                                                                                                                                                                                      |
| Order Code <sup>1,2</sup>                              | SR1600URR<br>SR1600URHSR                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SR1625URR<br>SR1625URSASR                                                                                                                                                                                                                                                                                                                                                                                                   |
| Components Included                                    | <ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with specific configuration below:<br/>SR1600URR: Fan board in place of backplane, PCI Express* 2.0 riser with one full-height and full-length x16 slot, three cold-swap hard drive carriers<br/>SR1600URHSR: No backplane (<i>must be ordered separately</i>) PCI Express 2.0 riser with one full-height and full-length x16 slot, three hard drive carriers</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with one power supply and specific configuration below:<br/>SR1625URR: Passive midplane, PCI Express* riser with one full-height and full-length x16 slot, six hard drive carriers<br/>SR1625URSASR: Active midplane, PCI Express riser with one full-height and full-length x16 slot, six hard drive carriers</li> </ul> |
| Number of Processors Supported                         | 1 to 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1 to 2                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Processor Support <sup>3</sup>                         | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                                                                                                                                                                                    | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                                                                                                                                     |
| Intel® QPI (GT/s) <sup>5</sup> /System Bus Speed (MHz) | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                           |
| Chipset                                                | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                            | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                             |
| Total Slots                                            | 1 + Intel® I/O Expansion Module                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1 + Intel® I/O Expansion Module                                                                                                                                                                                                                                                                                                                                                                                             |
| Slot Types                                             | 1 x PCI Express 2.0 x16 via riser<br>1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module<br>1 x PCI Express x4 cable-less connection to optional SAS backplane                                                                                                                                                                                                                                                                                                          | 1 x PCI Express 2.0 x16 via riser<br>1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module<br>1 x PCI Express 1.0 x4 via bridge board connector to hardware SAS RAID controller on Midplane <sup>2</sup>                                                                                                                                                                                                                   |
| Memory Capacity                                        | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                                                                           | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                            |
| Backplane                                              | SR1600URR: Fan board only, HDDs are cabled<br>SR1600URHSR: Active SAS / SATA or Passive SATA hot-swap backplane ( <i>must be ordered separately</i> )                                                                                                                                                                                                                                                                                                                      | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                                                                                                                               |
| Integrated LAN                                         | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                                                                                                                                                         | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                                                                                                          |
| Integrated Graphics                                    | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                                                                            | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                             |
| Server Management Support                              | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                                                                                                                                                                                                                            | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                                                                                                                                                                             |
| Intel® RAID Controller Compatibility <sup>4</sup>      | Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key<br>Optional SAS: Intel® Integrated Server RAID system boards with software RAID 0, 1, and optional software RAID 5 with activation key                                                                                                                                                                                | Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key<br>Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans (10, 50, and 60) offer value above a traditional add-in card                                                                                                      |
| Form Factor                                            | 1U rack                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1U rack                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Drive Bays                                             | 3 x 3.5" drive bays                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8 x 2.5" drive bays                                                                                                                                                                                                                                                                                                                                                                                                         |
| Thermal Solution                                       | 2 x passive thermal solutions included                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2 x passive thermal solutions included                                                                                                                                                                                                                                                                                                                                                                                      |
| System Cooling                                         | 5 x non-redundant dual-rotor fans                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5 x non-redundant dual-rotor fans                                                                                                                                                                                                                                                                                                                                                                                           |
| Power Supply                                           | 600 W high-efficiency power supply, 80 PLUS* Bronze-level efficiency                                                                                                                                                                                                                                                                                                                                                                                                       | Up to two 650 W power supply modules for H1 redundant configurations, 80 PLUS* Base-level efficiency                                                                                                                                                                                                                                                                                                                        |
| Dimensions (H x W x D)                                 | 1.7" x 16.93" x 27.25" (43mm x 430mm x 692mm)                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.7" x 16.93" x 27.95" (43mm x 430mm x 710mm)                                                                                                                                                                                                                                                                                                                                                                               |



| System                                                 | Intel® Server System SR2600UR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Intel® Server System SR2625UR                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        | <i>Highly integrated rack server system with highest I/O expandability options</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <i>Highly integrated with highest I/O expandability options using 2.5" HDDs</i>                                                                                                                                                                                                                                                                                                                                                                                                 |
| Order Code <sup>1,2</sup>                              | SR2600URBRPR<br>SR2600URLXR<br>SR2600URSATAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SR2625URBRPR<br>SR2625URLXR<br>SR2625URLXTR (option with TPM-enabled board S5520URT)                                                                                                                                                                                                                                                                                                                                                                                            |
| Components Included                                    | <ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with one power supply and specific configuration below:               <ul style="list-style-type: none"> <li>SR2600URBRPR: Passive midplane, PCI Express* riser with three x8 slots, three system fans, five hard drive carriers</li> <li>SR2600URLXR: Active midplane, PCI Express riser with five x8 slots, six hot-swap and redundant fans, five hard drive carriers</li> <li>SR2600URSATAR: Passive midplane, PCI Express riser with five x8 slots, six hot-swap and redundant fans, five hard drive carriers, two power supplies</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with one power supply and specific configuration below:               <ul style="list-style-type: none"> <li>SR2625URBRPR: Passive midplane, PCI Express* riser with three x8 slots, six hard drive carriers</li> <li>SR2625URLXR: Active midplane, PCI Express riser with five x8 slots, eight hard drive carriers</li> </ul> </li> </ul>                                    |
| Number of Processors Supported                         | 1 to 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 to 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Processor Support <sup>3</sup>                         | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Intel® QPI (GT/s) <sup>5</sup> /System Bus Speed (MHz) | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Chipset                                                | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Total Slots                                            | Up to 5 + Intel® I/O Expansion Module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Up to 5 + Intel® I/O Expansion Module                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Slot Types                                             | 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module<br>1 x PCI Express 1.0 x4 via bridge board connector to hardware SAS RAID controller on Midplane2<br>SR2600URBRP: 3 x full-height PCI Express 2.0 x8<br>SR2600URLX: 3 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8<br>Optional riser 1: 1 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8, 2 x full-height PCI-X 133 MHz<br>Optional riser 2: 3 x full-height PCI-X 133 MHz                                                                                                                                                                                | 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module<br>1 x PCI Express 1.0 x4 via bridge board connector to hardware SAS RAID controller on Midplane2<br>SR2625URBRP: 3 x full-height PCI Express 2.0 x8<br>SR2625URLX: 3 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8<br>Optional riser 1: 1 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8, 2 x full-height PCI-X 133 MHz<br>Optional riser 2: 3 x full-height PCI-X 133 MHz |
| Memory Capacity                                        | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Backplane                                              | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Integrated LAN                                         | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                                                                                                                                                              |
| Integrated Graphics                                    | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                                                                                 |
| Server Management Support                              | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                                                                                                                                                                                                                                 |
| Intel® RAID Controller Compatibility <sup>4</sup>      | Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key<br>Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans (10, 50, and 60) offer value above a traditional add-in card                                                                                                                                                                                                                                                                                                                                         | Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key<br>Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans (10, 50, and 60) offer value above a traditional add-in card                                                                                                                                                          |
| Form Factor                                            | 2U rack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2U rack                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Drive Bays                                             | 6 x 3.5" drive bays<br>Optional 2 x 2.5" fixed drive mounts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8 x 2.5" drive bays<br>Optional 2 x 2.5" fixed drive mounts                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Thermal Solution                                       | 2 x passive thermal solutions included                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2 x passive thermal solutions included                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| System Cooling                                         | SR2600URBRP: 3 x non-redundant fans<br>SR2600URLX: 6 x redundant and hot-swap standard fans                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SR2625URBRP: 3 x non-redundant fans<br>SR2625URLX: 6 x redundant and hot-swap standard fans                                                                                                                                                                                                                                                                                                                                                                                     |
| Power Supply                                           | Up to two high-efficiency 750 W power supply modules for 1+1 redundant configurations, 80 PLUS* Gold-level efficiency with Intel® On Demand Redundant Power Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Up to two high-efficiency 750 W power supply modules for 1+1 redundant configurations, 80 PLUS* Gold-level efficiency with Intel® On Demand Redundant Power Technology                                                                                                                                                                                                                                                                                                          |
| Dimensions (H x W x D)                                 | 3.44" x 16.93" x 27.95" (87mm x 430mm x 710mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.44" x 16.93" x 27.95" (87mm x 430mm x 710mm)                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                         |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                               |
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|                                                         |                                                                                                                                                                                     |                                                                                                                                                                                                                                     |                                                                                                                                                                                                                            |
| System                                                  | <b>Intel® Server System SR2612UR</b><br><i>A rack-optimized, highly-integrated server system designed for applications demanding maximum storage capability, and / or performance</i>                                                                                | <b>Intel® Server System SR1670HV</b><br><i>A rack-optimized, high-performance server system providing two dual-socket 12 DIMM nodes in a 1U chassis focused on maximizing compute density for HPC workloads</i>                                                                                                       | <b>Intel® Server System SR1690WB</b><br><i>An energy-optimized 1U rack server system designed to meet your general purpose high-density needs</i>                                                                                                                                                             |
| Order Code <sup>1,2</sup>                               | SR2612URR                                                                                                                                                                                                                                                            | SR1670HVR                                                                                                                                                                                                                                                                                                             | SR1690WBR                                                                                                                                                                                                                                                                                                     |
| Components Included                                     | <ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with redundant power supply and specific configuration below:<br/>Expander midplane, PCI Express* riser with three x8 slots, twelve hard drive carriers</li> </ul> | <ul style="list-style-type: none"> <li>Two Intel® Server Boards S5500HV</li> <li>Intel® Server Chassis SR1670</li> <li>Two 770 W non-redundant power supplies</li> <li>Eight 2.5" hard drive carriers</li> <li>Hot-swap SATA backplane</li> <li>Eight high-speed fans</li> <li>Two PCI Express* 2.0 risers</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S5500WB</li> <li>Intel® Server Chassis SR1690</li> <li>650 W non-redundant power supply</li> <li>Four 3.5" hard drive carriers</li> <li>Hot-swap SAS / SATA backplane</li> <li>Four high-speed fans</li> <li>One PCI Express* 2.0 riser</li> </ul> |
| Number of Processors Supported                          | 1 to 2                                                                                                                                                                                                                                                               | 1 to 2 per node (2 to 4 total)                                                                                                                                                                                                                                                                                        | 1 to 2                                                                                                                                                                                                                                                                                                        |
| Processor Support <sup>3</sup>                          | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                              | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                               | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                       |
| Intel® QPI (GT/s) <sup>5</sup> / System Bus Speed (MHz) | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                    | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                     | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                             |
| Chipset                                                 | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                      | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                                       | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                               |
| Total Slots                                             | Up to 3 + Intel® I/O Expansion Module                                                                                                                                                                                                                                | 1                                                                                                                                                                                                                                                                                                                     | Up to 2 + Intel® I/O Expansion Module                                                                                                                                                                                                                                                                         |
| Slot Types                                              | 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module<br>3 x full-height PCI Express 2.0 x8<br>Optional riser: 2 x low-profile PCI Express 2.0 x8                                                                                                                   | 1 x low profile, half-length PCI Express 2.0 x16                                                                                                                                                                                                                                                                      | 1 x full-height PCI Express 2.0 x16<br>1 x PCI Express 2.0 x8 (GbE, 10 GbE, SAS, and InfiniBand* options) via Intel® I/O Expansion Module                                                                                                                                                                     |
| Memory Capacity                                         | 12 x DDR3 memory DIMMs                                                                                                                                                                                                                                               | 12 x DDR3 memory DIMMs through 6 memory channels on each node                                                                                                                                                                                                                                                         | 8 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                               |
| Backplane                                               | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                        | Hot-swap SATA backplane                                                                                                                                                                                                                                                                                               | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                 |
| Integrated LAN                                          | Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                   | Embedded Intel® 82574L PHYs with Intel® I/O Acceleration Technology                                                                                                                                                                                                                                                   | Embedded Intel® Dual-Gigabit Controller 82576EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                            |
| Integrated Graphics                                     | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                      | Onboard ASPEED* AST2050 with integrated 2D video controller with 8 MB video memory                                                                                                                                                                                                                                    | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                               |
| Server Management Support                               | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                      | IPMI 2.0 Management features                                                                                                                                                                                                                                                                                          | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                                                               |
| Intel® RAID Controller Compatibility <sup>4</sup>       | Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 for internal 2.5" boot drives<br>Also validated with Intel® RAID adapters                                                                                       | Integrated: Four SATA II ports supporting Intel® Matrix RAID Technology with software RAID levels 0, 1, 5, and 10 ( <i>Windows* only</i> ) and LSI* MegaRAID with software RAID levels 0, 1, and 10 ( <i>Windows and Linux*</i> )                                                                                     | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key                                                                                                                                                     |
| Form Factor                                             | 2U rack                                                                                                                                                                                                                                                              | 1U rack                                                                                                                                                                                                                                                                                                               | 1U rack                                                                                                                                                                                                                                                                                                       |
| Drive Bays                                              | 12 x 3.5" drive bays<br>2 x 2.5" fixed drive mounts ( <i>internal</i> )                                                                                                                                                                                              | 8 x 2.5" hot-swap drive bays                                                                                                                                                                                                                                                                                          | 4 x 3.5" hot-swap drive bays<br>Configurable to support 1 x 2.5" hot-swap drive in each bay                                                                                                                                                                                                                   |
| Thermal Solution                                        | 2 x passive thermal solutions included                                                                                                                                                                                                                               | 2 x passive thermal solutions per node ( <i>four total</i> ) included                                                                                                                                                                                                                                                 | 2 x passive thermal solutions included                                                                                                                                                                                                                                                                        |
| System Cooling                                          | 4 x non-redundant fans                                                                                                                                                                                                                                               | 8 x non-redundant fans ( <i>four per node</i> )                                                                                                                                                                                                                                                                       | 4 x non-redundant fans                                                                                                                                                                                                                                                                                        |
| Power Supply                                            | Two high-efficiency 760 W power supply modules supporting redundant 1+1 power configurations, 80 PLUS* Silver-level efficiency                                                                                                                                       | High-efficiency 770 W non-redundant power supply per node ( <i>two total</i> ) 80 PLUS* Silver-level efficiency                                                                                                                                                                                                       | High-efficiency 650 W non-redundant power supply with PMBus capability; 80 PLUS* Silver-level efficiency                                                                                                                                                                                                      |
| Dimensions (H x W x D)                                  | 3.44" x 17.23" x 30.75" (87mm x 438mm x 781mm)                                                                                                                                                                                                                       | 1.7" x 17.2" x 27" (43mm x 435mm x 685mm)                                                                                                                                                                                                                                                                             | 1.7" x 17" x 26" (43mm x 432mm x 659mm)                                                                                                                                                                                                                                                                       |



| System                                                  | Intel® Server System SR1695WB                                                                                                                                                                                                                                                                                                              | Intel® Server System SR1630BC                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | <i>An energy-optimized 1U rack server system featuring AC or DC PSU redundancy; designed to meet your high RAS and general purpose high-density needs</i>                                                                                                                                                                                  | <i>An entry-level family of rack-optimized server systems designed for business-class performance and quality for small- to medium-sized business applications</i>                                                                                                                                                     |
| Order Code <sup>1,2</sup>                               | SR1695WB                                                                                                                                                                                                                                                                                                                                   | SR1630BCR                                                                                                                                                                                                                                                                                                              |
| Components Included                                     | <ul style="list-style-type: none"> <li>Intel® Server Board S5500WB</li> <li>Intel® Server Chassis SR1695 with one AC or DC redundant capable 450 W high-efficiency power supply</li> <li>Four 3.5" hard drive carriers</li> <li>Hot-swap SAS / SATA backplane</li> <li>Four high-speed fans</li> <li>One PCI Express® 2.0 riser</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S5500BC (SATA)</li> <li>Intel® Server Chassis SR1630</li> <li>400 W non-redundant high-efficiency power supply</li> <li>One low-profile PCI Express® riser card</li> <li>Slim-line CD-ROM bay</li> <li>Basic rail kit</li> <li>Pre-routed cables</li> </ul> |
| Number of Processors Supported                          | 1 to 2                                                                                                                                                                                                                                                                                                                                     | 1 to 2                                                                                                                                                                                                                                                                                                                 |
| Processor Support <sup>3</sup>                          | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                                                    | Intel® Xeon® processor 5500 or 5600 series <sup>6</sup>                                                                                                                                                                                                                                                                |
| Intel® QPI (GT/s) <sup>5</sup> / System Bus Speed (MHz) | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                          | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                      |
| Chipset                                                 | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                                                            | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                                        |
| Total Slots                                             | Up to 2 + Intel® I/O Expansion Module                                                                                                                                                                                                                                                                                                      | 1                                                                                                                                                                                                                                                                                                                      |
| Slot Types                                              | 1 x full-height PCI Express 2.0 x16<br>1 x PCI Express 2.0 x8 (GbE, 10 GbE, SAS, and InfiniBand® options) via Intel® I/O Expansion Module                                                                                                                                                                                                  | 1 x low-profile, half-length PCI Express 2.0 x8 via riser                                                                                                                                                                                                                                                              |
| Memory Capacity                                         | 8 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                            | 8 x DDR3 memory DIMMs through 4 memory channels                                                                                                                                                                                                                                                                        |
| Backplane                                               | Hot-swap SAS / SATA backplane                                                                                                                                                                                                                                                                                                              | Embedded Intel® Dual-Gigabit Controllers 82574L and 82567LM                                                                                                                                                                                                                                                            |
| Integrated LAN                                          | Embedded Intel® Dual-Gigabit Controller 82576EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                         | N/A                                                                                                                                                                                                                                                                                                                    |
| Integrated Graphics                                     | Server Engine® LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                            | Server Engine® LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                        |
| Server Management Support                               | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)                                                                                                                                                                                            | Intel® System Management Software 3.x<br>Intel® Deployment Assistant<br>IPMI 2.0 onboard                                                                                                                                                                                                                               |
| Intel® RAID Controller Compatibility <sup>4</sup>       | Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key                                                                                                                                                                                  | Integrated: Intel® Embedded Server RAID Technology with software RAID levels 0, 1, and 10<br>Optional software RAID 5 with activation key                                                                                                                                                                              |
| Form Factor                                             | 1U rack                                                                                                                                                                                                                                                                                                                                    | 1U rack                                                                                                                                                                                                                                                                                                                |
| Drive Bays                                              | 4 x 3.5" hot-swap drive bays<br>Configurable to support 1 x 2.5" hot-swap drive in each bay                                                                                                                                                                                                                                                | 2 x fixed 3.5" SATA HDDs<br>Optional slim-line optical drive                                                                                                                                                                                                                                                           |
| Thermal Solution                                        | 2 x passive thermal solutions included                                                                                                                                                                                                                                                                                                     | N/A (Uses 1U passive thermal solution: BXSTS100P)                                                                                                                                                                                                                                                                      |
| System Cooling                                          | 4 x non-redundant fans                                                                                                                                                                                                                                                                                                                     | 2 x fixed cooling blowers with duct                                                                                                                                                                                                                                                                                    |
| Power Supply                                            | Up to two high-efficiency 450-watt (AC or DC) power supply modules supporting 1+0 or redundant 1+1 power configurations (Systems ship with 1 power supply; customer required to purchase second PSU module for 1+1 redundancy)                                                                                                             | 400 W high-efficiency non-redundant power supply; 80 PLUS® Bronze-level efficiency                                                                                                                                                                                                                                     |
| Dimensions (H x W x D)                                  | 1.7" x 17.75" x 26.5" (43mm x 451mm x 673mm)                                                                                                                                                                                                                                                                                               | 1.7" x 16.9" x 20" (43mm x 429mm x 508mm)                                                                                                                                                                                                                                                                              |

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                         |
| System                                                 | Intel® Server System SC5650HCBPR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Intel® Server System SC5650BCDP                                                                                                                                                                                                                                                                                                       | Intel® Workstation System SC5650SCWS                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                        | <i>High-reliability and expandable integrated dual-socket pedestal server</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <i>Integrated, cost-effective dual-socket pedestal server</i>                                                                                                                                                                                                                                                                         | <i>Integrated, high-performance dual-socket workstation</i>                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Order Code <sup>1, 2</sup>                             | SC5650HCBPRR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SC5650BCDPR                                                                                                                                                                                                                                                                                                                           | SC5650SCWSR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Components Included                                    | <ul style="list-style-type: none"> <li>Intel® Server Board S5520HC</li> <li>Intel® Server Chassis SC5650BRP</li> <li>Backplane with SAS expander (AXX6DRV3GEXP) supports up to six 3.5" hot-swap hard drives</li> <li>Two data cables for hard drive backplane</li> <li>One SATA data cable for optical drive</li> <li>One IPMB cable for hard drive backplane</li> <li>Cabled front panel with front panel cable, chassis intrusion cable, and front panel USB cable</li> <li>One SATA device power adapter cable</li> </ul> | <ul style="list-style-type: none"> <li>Intel® Server Board S5500BC</li> <li>Intel® Server Chassis SC5650DP</li> <li>Fixed hard drive cage supports up to six 3.5" hard drives, support for six hot-swap hard drives with optional backplane kit</li> <li>Four SATA data cables for hard drives and optical drives</li> </ul>          | <ul style="list-style-type: none"> <li>Intel® Workstation Board S5520SC</li> <li>Intel® Workstation Chassis SC5650WS</li> <li>Fixed hard drive cage supports up to six 3.5" hard drives, support for six hot-swap hard drives with optional backplane kit</li> <li>Four SATA data cables for hard drives and optical drives</li> <li>Cabled front panel with front panel cable, chassis intrusion cable, and front panel USB cable</li> <li>One SATA device power adapter cable</li> </ul> |
| Number of Processors Supported                         | 1 or 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1 or 2                                                                                                                                                                                                                                                                                                                                | 1 or 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Processor Support <sup>3</sup>                         | Intel® Xeon® processor 5500 or 5600 series <sup>5</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Intel® Xeon® processor 5500 or 5600 series <sup>5</sup>                                                                                                                                                                                                                                                                               | Intel® Xeon® processor 5500 or 5600 series <sup>5</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Intel® QPI (GT/s) <sup>5</sup> /System Bus Speed (MHz) | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                     | 6.40 GT/s / 5.86 GT/s / 4.80 GT/s                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Chipset                                                | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Intel® 5500 Chipset with ICH10R                                                                                                                                                                                                                                                                                                       | Intel® 5520 Chipset with ICH10R                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Total Slots                                            | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5                                                                                                                                                                                                                                                                                                                                     | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Slot Types                                             | 4 x PCI Express* 2.0 x8 (x8 mechanical)<br>1 x PCI Express 1.0 x4 (x8 mechanical shared with optional SAS module)<br>1 x PCI 32 / 33 MHz (5 V)                                                                                                                                                                                                                                                                                                                                                                                | 2 x half-length PCI Express* 2.0 x8 (x8 mechanical)<br>1 x half-length PCI Express 2.0 x4 (x8 mechanical)<br>1 x half-length PCI Express x4<br>1 x half-length PCI 32 / 33 MHz (5 V)                                                                                                                                                  | 2 x PCI Express* 2.0 x16 (x16 mechanical)<br>1 x PCI Express 1.0 x4 (x8 mechanical shared with optional SAS module)<br>1 x PCI Express 1.0 x1 (x4 mechanical)<br>1 x PCI 32 / 33 MHz (5 V)                                                                                                                                                                                                                                                                                                 |
| Memory Capacity                                        | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8 x DDR3 memory DIMMs through 4 memory channels                                                                                                                                                                                                                                                                                       | 12 x DDR3 memory DIMMs through 6 memory channels                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Integrated SCSI                                        | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Integrated LAN                                         | Embedded Intel Dual Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                                                                                                                                                                                                             | Embedded Intel® Dual-Gigabit Controllers 82574L and 82567LM                                                                                                                                                                                                                                                                           | Embedded Intel® Dual Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>                                                                                                                                                                                                                                                                                                                                                                                         |
| Integrated Graphics                                    | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                                                                                                                               | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                       | Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics                                                                                                                                                                                                                                                                                                                                                                                                            |
| Server Management Support                              | Integrated IPMI 2.0 baseboard management controller<br>Power management with Intel® Intelligent Power Node Manager<br>Optional Intel® Remote Management Module (RMM3)                                                                                                                                                                                                                                                                                                                                                         | Integrated IPMI 2.0 baseboard management controller<br>Power management with Intel® Intelligent Power Node Manager<br>Optional Intel® Remote Management Module (RMM3)                                                                                                                                                                 | Integrated IPMI 2.0 baseboard management controller<br>Power management with Intel® Intelligent Power Node Manager<br>Optional Intel® Remote Management Module (RMM3)                                                                                                                                                                                                                                                                                                                      |
| Intel® RAID Controller Compatibility <sup>4</sup>      | Integrated Intel® Embedded Server RAID Technology II with host-based Sw RAID levels 0, 1, and 10<br>Optional Sw RAID 5 with activation key<br>Optional Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SR0MBSASMR with RAID 0, 1, 5, 6, and striping capability for spans 10, 50, and 60                                                                                                                                                                                         | Integrated Intel® Embedded Server RAID Technology II with host-based Sw RAID levels 0, 1, and 10<br>Optional Sw RAID 5 with activation key<br>Optional Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SR0MBSASMR with RAID 0, 1, 5, 6, and striping capability for spans 10, 50, and 60 | Integrated Intel® Embedded Server RAID Technology II with host-based Sw RAID levels 0, 1, and 10<br>Optional Sw RAID 5 with activation key<br>Optional Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SR0MBSASMR with RAID 0, 1, 5, 6, and striping capability for spans 10, 50, and 60                                                                                                                                                      |
| Form Factor                                            | 5.2U pedestal, convertible to 6U rack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.2U pedestal, convertible to 6U rack                                                                                                                                                                                                                                                                                                 | 5.2U pedestal, convertible to 6U rack                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Drive Bays                                             | 6 x 3.5" hot-swap SAS / SATA drive bays<br>Supports 2.5" hot-swap SAS, SATA, or Solid-State Drive with optional 2.5" hard drive carrier accessory                                                                                                                                                                                                                                                                                                                                                                             | 6 x 3.5" hot-swap SAS / SATA drive bays<br>Supports 2.5" hot-swap SAS, SATA, or Solid-State Drive with optional 2.5" hard drive carrier accessory                                                                                                                                                                                     | 6 x 3.5" hot-swap SAS / SATA drive bays<br>Supports 2.5" hot-swap SAS, SATA, or Solid-State Drive with optional 2.5" hard drive carrier accessory                                                                                                                                                                                                                                                                                                                                          |
| System Cooling                                         | 3 x non-redundant fans                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3 x non-redundant fans                                                                                                                                                                                                                                                                                                                | 3 x non-redundant fans                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Power Supply                                           | 600 W high-efficiency, 1+0 redundant power supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 600 W non-redundant power supply                                                                                                                                                                                                                                                                                                      | Non-redundant 1000 W high-efficiency PFC power supply with integrated cooling fan                                                                                                                                                                                                                                                                                                                                                                                                          |
| Dimensions (H x W x D)                                 | 17.8" x 9.256" x 19" (452mm x 235mm x 483mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 17.8" x 9.256" x 19" (452mm x 235mm x 483mm)                                                                                                                                                                                                                                                                                          | 17.8" x 9.256" x 19" (452mm x 235mm x 483mm)                                                                                                                                                                                                                                                                                                                                                                                                                                               |

For more information, visit the Intel Web site at: [www.intel.com/go/serversystems](http://www.intel.com/go/serversystems)

<sup>1</sup> North American power cord included in order codes ending in NA, power cord not included in all other order codes.

<sup>2</sup> Out of the box support for the Intel® Xeon® processor 5600 series will be indicated by the addition of the letter "R" at the end of the Product Order Code. For boards and systems currently supporting the Intel® Xeon® processor 5500 series, a BIOS update is required before installing the Intel Xeon processor 5600 series. Refer to <http://support.intel.com> for more information.

<sup>3</sup> Refer to <http://support.intel.com/support/motherboards/server> for up-to-date details on processors supported by each server board.

<sup>4</sup> Refer to [http://support.intel.com/support/motherboards/server/compat\\_matrix.htm](http://support.intel.com/support/motherboards/server/compat_matrix.htm) for up-to-date details on RAID controllers supported by each server system.

<sup>5</sup> Intel® QPI—Intel® QuickPath Interconnect; GT/s—Gigatransfers per second.

<sup>6</sup> When installing two processors, both processors must be from the same processor series—either two Intel® Xeon® processor 5500 series or two Intel® Xeon® processor 5600 series.

<sup>7</sup> Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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## INTEL® SERVER MANAGEMENT

Small and midsize businesses (SMBs) face complex IT challenges similar to those of large enterprises, but often without the large budget or staff of IT specialists.

Intel® Server Management offers software and hardware solutions that:

- Make it easy to set up and maintain a reliable and secure IT infrastructure
- Reduce the cost and time of managing servers, desktops, and applications
- Keep businesses running 24/7



### COMING SOON

Exciting new features are planned for Intel® System Management Software. Contact your Intel sales representative for schedules of upcoming releases.

- New business continuity software designed specifically for the SMB market
- Data protection management (backup and restore)
- Virtualization management
- Hardware management
- RAID and storage management
- Virtual presence user interface (see actual images of the system)

### Get Peace of Mind

Intel® Server Management improves security, reduces costs, and helps businesses move from reactive to proactive system management. A mix of hardware and software enables secure remote management and monitoring of servers, clients, and applications from virtually any location—in a way that IT generalists can understand without attending weeks of training. It's all about IT made easy:

#### Simple

- Makes it easy to set up and maintain a reliable and secure IT infrastructure
- Streamlines tasks throughout server life cycle with remote management
- Manages IT functions with a single suite of tools

#### Secure

- Keeps IT informed with automated daily health reports and alerts
- Improves reliability and stability with rapid application and patch deployment

#### Smart

- Designed specifically for small to midsize businesses
- Reduces travel time and costs
- Provides a proactive solution to server management with reports and alerts

For more information, visit the Intel Web site at: [www.intel.com/go/servermanagement](http://www.intel.com/go/servermanagement)

# INTEL® MANAGEMENT MODULE



| Feature Description                        | Intel® Remote Management Module 3                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                   |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Positioning                                | Have remote, secure access to full-screen KVM features together with hardware-health monitoring, remote CD or USB access, and complete power control without ever having to visit the server. Tightly integrated with onboard system firmware so users can choose between onboard NIC or dedicated management NIC for all RMM3 functionality. The RMM3 Lite contains all of the functionality of the RMM3 without the dedicated NIC. |                                                                                   |
| Order Code                                 | AXXRMM3                                                                                                                                                                                                                                                                                                                                                                                                                              | AXXRMM3LITE                                                                       |
| Boards and Systems Support <sup>1</sup>    | Intel® Server Boards S5520UR, S5520HC, S5500HCV, S5520SC, S5500BC, S3420GPLX, and S5500WB<br><br>Intel® Server Systems SR1600UR, SR1600URSAS, SR1625UR, SR1625URSAS, SR1690WB, SR1695WB, SR2600URBRP, SR2600URLX, SR2600URSATA, SR2625URBRP, SR2625URLX, SR2612UR, SC5650HCBRP, SC5650BCDP, and SC5650SCWS                                                                                                                           | Intel® Server Boards S3420GPRX, SR1630GPRX, SR1630HGPRX, SR1695GPRX, and SR1640TH |
| Remote Server Restart                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| OEM Customization                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| USB Virtual Media Redirection              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| Hardware Sensor Monitoring                 | Support built into system firmware                                                                                                                                                                                                                                                                                                                                                                                                   | Support built into system firmware                                                |
| Text Console Redirection (Serial over LAN) | Support built into system firmware                                                                                                                                                                                                                                                                                                                                                                                                   | Support built into system firmware                                                |
| SNMP                                       | Support built into system firmware                                                                                                                                                                                                                                                                                                                                                                                                   | Support built into system firmware                                                |
| LDAP, SSH, SSL Support                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| SMASH CLP Support                          | Support built into system firmware                                                                                                                                                                                                                                                                                                                                                                                                   | Support built into system firmware                                                |
| WS-MAN                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| Embedded Video / GUI (KVM) Redirection     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| Embedded Web Server                        | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| Dedicated Server Management NIC            | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                |
| Local and Remote Configuration             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |
| Agent-less Management                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                               |

# INTEL® DEPLOYMENT ASSISTANT

| FEATURES                                                   | BENEFITS                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wizard-based user interface                                | Reduces complexity while providing comprehensive guidance in the deployment of Intel® Servers.                                                                                                                                                                                                                                |
| Automatic detection of server configuration and components | Eliminates steps and saves time by detecting key configuration information including BIOS, LAN, and server management settings, and updating your system.                                                                                                                                                                     |
| Load configuration profiles for identical servers          | Reduces redundant tasks by saving and loading configuration settings from one server to identical servers.                                                                                                                                                                                                                    |
| Wizard-guided RAID configuration                           | Configures RAID from a single console with simple step-by-step instructions.                                                                                                                                                                                                                                                  |
| Automatic detection of available software updates          | Minimizes uncertainty by automatically locating the latest drivers, firmware, and BIOS from the Internet, corporate network, or USB sources.                                                                                                                                                                                  |
| Unattended OS installation                                 | Saves time—simply answer configuration questions, choose the drivers to include, and pop in the operating system CD.                                                                                                                                                                                                          |
| <b>NEW</b> Multi-server cloning                            | Using the same easy-to-use wizard for updates, configuration, and OS installs, users can now build a silent PXE or USB image to clone everything on multiple systems at one time. Use it to create templates for future builds, give it to technicians to rebuild systems on-site, or use it in mass deployment environments. |



# INTEL® SYSTEM MANAGEMENT SOFTWARE

| Features                              | Intel® Multi-Server Manager              | Intel® Active System Console | Microsoft® System Center with Intel® Management Packs       | Intel® SNMP Subagent                                  |
|---------------------------------------|------------------------------------------|------------------------------|-------------------------------------------------------------|-------------------------------------------------------|
| Server Environment                    | 1 to 100 servers                         | 1 to 10 servers              | 10 to 30 servers<br>(Use Operations Manager for Enterprise) | Enterprise                                            |
| User Interface                        | Web-based                                | Web-based                    | Windows® Management Application                             | Integrates into enterprise tools such as HP® OpenView |
| Operating System Support              | Windows®, Linux*                         | Windows®, Linux*             | Windows®, Linux*                                            | Windows®, Linux*                                      |
| Single, Easy-to-Use Console           | Yes                                      | Yes                          | Yes                                                         |                                                       |
| Hardware Predictive Failure Analysis  | Yes                                      | Yes                          | Yes                                                         | Yes                                                   |
| Sensor Readings                       | Yes                                      | Yes                          | Yes                                                         | Yes                                                   |
| Hardware Event Log                    | Yes                                      | Yes                          | Yes                                                         |                                                       |
| Hardware and Software Inventory       | Yes<br>(hardware and operating system)   |                              | Yes                                                         |                                                       |
| OS and Application Monitoring         |                                          |                              | Yes                                                         |                                                       |
| Software Patch Deployment             |                                          |                              | Yes                                                         |                                                       |
| Application Deployment                |                                          |                              | Yes                                                         |                                                       |
| Alerting                              | Yes<br>(e-mail)                          | Yes<br>(e-mail and SNMP)     | Yes<br>(e-mail, SNMP, SMS)                                  | Yes<br>(SNMP)                                         |
| Reporting                             | Yes<br>(group or individual)             | Yes                          | Yes<br>(80 powerful software and hardware reports)          |                                                       |
| BMC Configuration                     | Yes                                      | Yes                          | Yes                                                         |                                                       |
| Power Management                      | Yes                                      | Yes                          | Yes                                                         |                                                       |
| Performance Views                     |                                          |                              | Yes                                                         |                                                       |
| Remote Management                     | Yes<br>(Windows®, Linux®, and agentless) |                              | Yes                                                         | Yes                                                   |
| Remote Power On/Off/Reboot            | Yes<br>(group or individual)             |                              | Yes                                                         |                                                       |
| Serial Over LAN (Console Redirection) | Yes                                      |                              | Yes                                                         |                                                       |
| OEM Customization                     | Yes                                      | Yes                          | Yes                                                         |                                                       |

For more information, visit the Intel Web site at: [www.intel.com/go/servermanagement](http://www.intel.com/go/servermanagement)

<sup>1</sup> For the latest Intel® Server Board support please visit <http://support.intel.com/support/motherboards/server>.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

Features and functions of the Intel® Management Packs are dependent on the features and functions available on the server and client hardware and the loaded software and operating systems. Not all features and functions are available on all products and may require Intel® AMT or IPMI technologies for additional functionality.

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## INTEL® RAID

### INTEL® INTEGRATED RAID PRODUCTS

|                                    |                                                                                           |                                                                                                                     |                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                    |          |                                  |                                  |
| Controller                         | <b>Intel® Integrated RAID Module RMS2MH080</b>                                            | <b>Intel® Integrated RAID Module RMS2AF080 / 040</b>                                                                | <b>Intel® Integrated RAID Module RMS2LL080 / 040</b>                                                                |
|                                    | <i>6.0 Gb/s SAS 2.0 RAID module for use with Intel® Server Boards S5520UR and S5500WB</i> | <i>6.0 Gb/s SAS 2.0 entry-level RAID module for use with Intel® Server Boards with at least one I/O module slot</i> | <i>6.0 Gb/s SAS 2.0 entry-level RAID module for use with Intel® Server Boards with at least one I/O module slot</i> |
| Market Segment                     | <i>Mainstream</i>                                                                         | <i>Entry</i>                                                                                                        | <i>Entry / Limited Feature</i>                                                                                      |
| Order Code                         | <b>AXXRMS2MH080</b>                                                                       | <b>AXXRMS2AF080 / AXXRMS2AF040</b>                                                                                  | <b>AXXRMS2LL080 / AXXRMS2LL040</b>                                                                                  |
| Processor / RAID On Chip           | <b>LSI* 2108</b>                                                                          | <b>LSI* 2008</b>                                                                                                    | <b>LSI* 2008</b>                                                                                                    |
| Memory                             | Embedded 512 MB ECC DDR2 SDRAM                                                            | 2 MB (on card) for RAID 0, 1, 1E, and 128 MB (from server board) for RAID 5 calculations                            | 2 MB for entry-level hardware RAID calculations                                                                     |
| PCI Bus                            | PCI Express* 2.0 x8                                                                       | PCI Express* 2.0 x4                                                                                                 | PCI Express* 2.0 x4                                                                                                 |
| Channels                           | 8 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates                 | 8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates                                       | 8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates                                       |
| Form Factor                        | 1U capable system board                                                                   | 1U capable system board                                                                                             | 1U capable system board                                                                                             |
| RAID Levels                        | 0, 1, 5, 6, 10, 50, and 60                                                                | 0, 1, 5, 10, and 50                                                                                                 | 0, 1, and 1E                                                                                                        |
| Intel® Smart Battery Backup Option | AXXRMSBBU7<br>AXXRMSBBU8 (new longer life)                                                | No                                                                                                                  | No                                                                                                                  |
| Availability                       | Now                                                                                       | Now                                                                                                                 | Now                                                                                                                 |

Intel offers three categories of RAID products to protect data, increase performance, and enhance server availability:

- **Good:** Intel® Embedded Server RAID Technology with RAID 0, 1, and 10 is included with most Intel® Server Boards and Systems. RAID 5 is available with optional accessory AXXRMSW5.
- **Better:** Intel® RAID Controllers are add-in cards designed to enable a wide variety of RAID solutions.
- **Best:** Intel® Integrated Server RAID signifies unique system boards that are designed to add value above that of a standard RAID add-in card to Intel Server Boards and Systems.

Intel also offers Battery Backup Units (BBU) and Premium Feature Keys for many RAID products. BBU options are listed in the "Intel® Smart Battery Backup Option" row of the product tables. The Premium Feature Keys are described in the last table of this section.

For more information, visit the Intel Web site at: [www.intel.com/go/raid](http://www.intel.com/go/raid)

|                                    |                                                                                            |                                                                                                                  |                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|                                    |           |                               |     |
| Controller                         | <b>Intel® Integrated RAID<br/>1U / 2U Midplane</b>                                         | <b>Intel® Integrated RAID Module<br/>SROMBSASMR</b>                                                              | <b>Intel® Integrated RAID Module<br/>AXX4SASMOD</b>                                    |
|                                    | <i>SAS and SATA RAID module for Intel® Server Systems SR1625UR, SR2600UR, and SR2625UR</i> | <i>Four-port internal RAID module for 1U, 2U, and pedestal use with Intel® Server Boards S5520HC and S5500WB</i> | <i>Flexible module offering pass-through SAS and multiple entry-level RAID options</i> |
| Market Segment                     | <i>Mainstream</i>                                                                          | <i>Mainstream</i>                                                                                                | <i>Entry</i>                                                                           |
| Order Code                         | Midplane included with systems requires AXXRAKSAS2 for HW RAID activation                  | AXXROMBSASMR                                                                                                     | AXX4SASMOD requires AXXRAKSW5 for RAID 5                                               |
| Processor / RAID On Chip           | <b>LSI* 1078</b>                                                                           | <b>LSI* 1078</b>                                                                                                 | <b>LSI* 1064</b>                                                                       |
| Memory                             | Supports up to 1 GB mini-DIMM ECC DDR2 667 MHz DDR2 SDRAM                                  | Embedded 128 MB ECC DDR2 SDRAM                                                                                   | 2 MB for entry-level hardware RAID calculations                                        |
| PCI Bus                            | PCI Express* x4                                                                            | PCI Express* x8                                                                                                  | PCI Express* x4                                                                        |
| Channels                           | 8 SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates                  | 4 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates                               | 4 SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates              |
| Form Factor                        | System midplane                                                                            | 1U capable system board                                                                                          | 1U capable system board                                                                |
| RAID Levels                        | 0, 1, 5, 6, 10, 50, and 60                                                                 | 0, 1, 5, 6, 10, 50, and 60                                                                                       | 0, 1, 1E, and optional RAID 5                                                          |
| Intel® Smart Battery Backup Option | AXXRSBBU3                                                                                  | AXXRSBBU3                                                                                                        | No                                                                                     |
| Availability                       | Now                                                                                        | Now                                                                                                              | Now                                                                                    |

## SAS 2.0 INTEL® RAID CONTROLLER ADD-IN CARDS

|                                    |                                                                                                                         |                                                                                                       |                                                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|                                    |                                        |                    |                                        |
| Controller                         | <b>Intel® RAID Controller RS2SG244</b>                                                                                  | <b>Intel® RAID Controller RS2WG160</b>                                                                | <b>Intel® RAID Expander RES2SV240</b>                                                                                     |
|                                    | <i>Scalable performance 6.0 Gb/s SAS RAID controller with 24 internal and four external ports for SAS / SATA drives</i> | <i>Scalable performance 6.0 Gb/s SAS RAID controller with 16 internal ports for SAS / SATA drives</i> | <i>24-port, 6.0 Gb/s-capable expander card for use with Intel® RAID products to expand 4 ports to 20 or 8 ports to 16</i> |
| Order Code                         | <b>RS2SG244</b>                                                                                                         | <b>RS2WG160</b>                                                                                       | <b>RES2SV240</b>                                                                                                          |
| Processor / RAID On Chip           | <b>LSI* SAS2108</b>                                                                                                     | <b>LSI* SAS2108</b>                                                                                   | <b>LSI* 6.0 Gb/s Expander</b>                                                                                             |
| Memory                             | 512 MB embedded DDR2 ECC memory                                                                                         | 512 MB embedded DDR2 ECC memory                                                                       | N/A                                                                                                                       |
| PCI Bus                            | PCI Express* 2.0 x8                                                                                                     | PCI Express* 2.0 x8                                                                                   | N/A                                                                                                                       |
| Channels                           | 24 internal and 4 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates         | 16 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates      | 24 SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates                                   |
| Form Factor                        | Full-height, 6.6" length                                                                                                | Full-height, 6.6" length                                                                              | Low-profile, 6.6" length (MD2 compliant)                                                                                  |
| RAID Levels                        | 0, 1, 5, 6, 10, 50, and 60                                                                                              | 0, 1, 5, 6, 10, 50, and 60                                                                            | N/A                                                                                                                       |
| Intel® Smart Battery Backup Option | AXXRSBBU7<br>AXXRSBBU8 (new longer life)                                                                                | AXXRSBBU7<br>AXXRSBBU8 (new longer life)                                                              | No                                                                                                                        |
| Availability                       | Now                                                                                                                     | Now                                                                                                   | Now                                                                                                                       |

|                                    |                                                                                                                 |                                                                                                                                                                         |                                                                                                                                               |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                                    |                                |   |                                                            |
| Controller                         | <b>Intel® RAID Controller RS2MB044</b>                                                                          | <b>Intel® RAID Controller RS2DB080</b>                                                                                                                                  | <b>Intel® RAID Controller RS2VB080 / 040</b>                                                                                                  |
|                                    | <i>Mainstream 6.0 Gb/s SAS RAID controller with four internal and four external ports for SAS / SATA drives</i> | <i>Mainstream dual-core 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives</i>                                                                | <i>Mainstream 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives and maintenance-free backup unit (Flash-based)</i> |
| Order Code                         | RS2MB044                                                                                                        | RS2DB080                                                                                                                                                                | RS2VB080 / RS2VB040                                                                                                                           |
| Processor / RAID On Chip           | <b>LSI* SAS2108</b>                                                                                             | <b>LSI* SAS2208</b>                                                                                                                                                     | <b>LSI* SAS2108</b>                                                                                                                           |
| Memory                             | 512 MB embedded DDR2 ECC memory                                                                                 | 1 GB embedded DDR2 ECC memory                                                                                                                                           | 512 MB embedded DDR2 ECC memory                                                                                                               |
| PCI Bus                            | PCI Express* 2.0 x8                                                                                             | PCI Express* 2.0 x8                                                                                                                                                     | PCI Express* 2.0 x8                                                                                                                           |
| Channels                           | 4 internal and 4 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates  | 8 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates                                                                         | 8 / 4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates                                           |
| Form Factor                        | Low-profile, 6.6" length (MD2 compliant)                                                                        | Low-profile, 6.6" length (MD2 compliant)                                                                                                                                | Low-profile, 6.6" length (MD2 compliant)                                                                                                      |
| RAID Levels                        | 0, 1, 5, 6, 10, 50, and 60                                                                                      | 0, 1, 5, 6, 10, 50, and 60                                                                                                                                              | 0, 1, 5, 6, 10, 50, and 60                                                                                                                    |
| Intel® Smart Battery Backup Option | AXXRSBBU7<br>AXXRSBBU8 (new longer life)                                                                        | AXXRSBBU9                                                                                                                                                               | Maintenance-free backup unit (Flash-based) included with add-in card                                                                          |
| Availability                       | Now                                                                                                             | March                                                                                                                                                                   | February                                                                                                                                      |

|                                    |                                                                                                     |                                                                                                           |                                                                                                                                                                         |
|------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    |                    |                        |   |
| Controller                         | <b>Intel® RAID Controller<br/>RS2BL080 / 040</b>                                                    | <b>Intel® RAID Controller<br/>RS2PI008</b>                                                                | <b>Intel® RAID Controller<br/>RT3WB080</b>                                                                                                                              |
|                                    | <i>Mainstream 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives</i>      | <i>Mainstream 6.0 Gb/s SAS RAID controller with eight external ports for JBODs with SAS / SATA drives</i> | <i>Mainstream SATA-only controller with eight ports and SAS expansion support for up to 16 SATA drives</i>                                                              |
| Order Code                         | <b>RS2BL080 / RS2BL040 (Standard)<br/>RS2BL080DE (Disk Encryption)</b>                              | <b>RS2PI008 (Standard)<br/>RS2PI008DE (with Drive Encryption Management)</b>                              | <b>RT3WB080</b>                                                                                                                                                         |
| Processor / RAID On Chip           | <b>LSI* SAS2108</b>                                                                                 | <b>LSI* SAS2108</b>                                                                                       | <b>LSI* SAS2108</b>                                                                                                                                                     |
| Memory                             | 512 MB embedded DDR2 ECC memory                                                                     | 512 MB embedded DDR2 ECC memory                                                                           | 256 MB embedded DDR2 ECC memory                                                                                                                                         |
| PCI Bus                            | PCI Express* 2.0 x8                                                                                 | PCI Express* 2.0 x8                                                                                       | PCI Express* 2.0 x8                                                                                                                                                     |
| Channels                           | 8 / 4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates | 8 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates           | 8 internal SATA ports supporting SAS expansion and point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates                                                             |
| Form Factor                        | Low-profile, 6.6" length (MD2 compliant)                                                            | Low-profile, 6.6" length (MD2 compliant)                                                                  | Low-profile, 6.6" length (MD2 compliant)                                                                                                                                |
| RAID Levels                        | 0, 1, 5, 6, 10, 50, and 60                                                                          | 0, 1, 5, 6, 10, 50, and 60                                                                                | 0, 1, 5, 6, 10, 50, and 60                                                                                                                                              |
| Intel® Smart Battery Backup Option | AXXRSBBU7<br>AXXRSBBU8 (new longer life)                                                            | AXXRSBBU7<br>AXXRSBBU8 (new longer life)                                                                  | AXXRSBBU7<br>AXXRSBBU8 (new longer life)                                                                                                                                |
| Availability                       | Now                                                                                                 | Now                                                                                                       | Now                                                                                                                                                                     |

|                                    |                                                                                                     |                                                                                                                                                                         |                                                                                                                                |
|------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                    |                    |   |                                             |
| Controller                         | <b>Intel® RAID Controller<br/>RS2WC080 / 040</b>                                                    | <b>Intel® RAID Controller<br/>RS25FB008</b>                                                                                                                             | <b>Intel® RAID Controller<br/>SRCASBB8I</b>                                                                                    |
|                                    | <i>Entry-level 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives</i>     | <i>Entry-level 6.0 Gb/s SAS RAID controller with eight external ports for JBOD with SAS / SATA drives</i>                                                               | <i>Eight-port internal SAS / SATA RAID in a low-profile, MD2-compliant form factor for mainstream to performance solutions</i> |
| Order Code                         | RS2WC080<br>RS2WC040                                                                                | RS25FB008                                                                                                                                                               | SRCASBB8I                                                                                                                      |
| Processor / RAID On Chip           | <b>LSI* SAS2008</b>                                                                                 | <b>LSI* SAS2308</b>                                                                                                                                                     | <b>LSI* 1078</b>                                                                                                               |
| Memory                             | 2 MB (on card) for RAID 0, 1, 1E, and 128 MB (from server board) for RAID 5 calculations            | 2 MB for entry-level hardware RAID 1 calculations                                                                                                                       | Embedded 256 MB ECC DDR2 SDRAM                                                                                                 |
| PCI Bus                            | PCI Express* 2.0 x8                                                                                 | PCI Express* 2.0 x8                                                                                                                                                     | PCI Express* x8                                                                                                                |
| Channels                           | 8 / 4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates | 8 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates                                                                         | 8 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates                                             |
| Form Factor                        | Low-profile, 6.6" length (MD2 compliant)                                                            | Low-profile, 6.6" length (MD2 compliant)                                                                                                                                | Low-profile, 6.6" length                                                                                                       |
| RAID Levels                        | 0, 1, 5, 10, and 50                                                                                 | JBOD and 0, 1, and 1E                                                                                                                                                   | 0, 1, 5, 6, 10, 50, and 60                                                                                                     |
| Intel® Smart Battery Backup Option | No                                                                                                  | No                                                                                                                                                                      | AXXRSBBU6                                                                                                                      |
| Availability                       | Now                                                                                                 | March                                                                                                                                                                   | Now                                                                                                                            |

|                                    |                                                                                    |                                                                                                                               |                                                                                                                           |
|------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|                                    |   |                                            |                                        |
| Controller                         | Intel® RAID Controller<br>SRCASRB                                                  | Intel® RAID Controller<br>SRCASLS4I                                                                                           | Intel® RAID Controller<br>SRCATAWB                                                                                        |
|                                    | <i>Eight-port internal SAS / SATA RAID for mainstream solutions</i>                | <i>Four-port internal SAS / SATA RAID in a low-profile, MD2-compliant form factor for entry-level to mainstream solutions</i> | <i>Eight-port SATA RAID supporting up to 16 HDD through an expander backplane for entry-level to mainstream solutions</i> |
| Order Code                         | SRCASRB                                                                            | SRCASLS4I                                                                                                                     | SRCATAWB                                                                                                                  |
| Processor / RAID On Chip           | LSI* 1078                                                                          | LSI* 1078                                                                                                                     | LSI* 1078                                                                                                                 |
| Memory                             | Embedded 256 MB ECC DDR2 SDRAM                                                     | Embedded 128 MB ECC DDR2 SDRAM                                                                                                | Embedded 128 MB ECC DDR2 SDRAM                                                                                            |
| PCI Bus                            | PCI Express* x4                                                                    | PCI Express* x8                                                                                                               | PCI Express* x4                                                                                                           |
| Channels                           | 8 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates | 4 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates                                            | 8 internal SATA ports with 3.0 Gb/s data-transfer rates                                                                   |
| Form Factor                        | Low-profile, 7.75" length                                                          | Low-profile, 6.6" length                                                                                                      | Low-profile, 7.75" length                                                                                                 |
| RAID Levels                        | 0, 1, 5, 6, 10, 50, and 60                                                         | 0, 1, 5, 6, 10, 50, and 60                                                                                                    | 0, 1, 5, 6, 10, 50, and 60                                                                                                |
| Intel® Smart Battery Backup Option | AXXRSBBU4                                                                          | AXXRSBBU6                                                                                                                     | AXXRSBBU4                                                                                                                 |
| Availability                       | Now                                                                                | Now                                                                                                                           | Now                                                                                                                       |

|                                    |                                                                                                  |                                                                                                               |                                                                                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                                    |                 |                            |                           |
| Controller                         | <b>Intel® RAID Controller SASMF8I</b>                                                            | <b>Intel® RAID Controller SASUC8I</b>                                                                         | <b>Intel® RAID Controller SASWT4I</b>                                                                        |
|                                    | <i>Eight-port SAS / SATA card with host-based RAID capability for entry-level RAID solutions</i> | <i>Eight-port SAS / SATA with pass through SAS and entry-level hardware RAID 0, 1, 1E, and 10E capability</i> | <i>Four-port SAS / SATA with pass through SAS and entry-level hardware RAID 0, 1, 1E, and 10E capability</i> |
| Order Code                         | <b>SASMF8I</b>                                                                                   | <b>SASUC8I</b>                                                                                                | <b>SASWT4I</b>                                                                                               |
| Processor / RAID On Chip           | <b>LSI* 1068</b>                                                                                 | <b>LSI* 1068</b>                                                                                              | <b>LSI* 1064</b>                                                                                             |
| Memory                             | N/A                                                                                              | 2 MB for entry-level hardware RAID calculations                                                               | 2 MB for entry-level hardware RAID calculations                                                              |
| PCI Bus                            | PCI Express* x4                                                                                  | PCI Express* x4                                                                                               | PCI Express* x4                                                                                              |
| Channels                           | 8 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates               | 8 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates                            | 4 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates                           |
| Form Factor                        | Low-profile, 6.6" length                                                                         | Low-profile, 6.6" length                                                                                      | Low-profile, 6.6" length                                                                                     |
| RAID Levels                        | 0, 1, 5, and 10                                                                                  | 0, 1, and 1E/10E                                                                                              | 0, 1, and 1E/10E                                                                                             |
| Intel® Smart Battery Backup Option | No                                                                                               | No                                                                                                            | No                                                                                                           |
| Availability                       | Now                                                                                              | Now                                                                                                           | Now                                                                                                          |

## INTEL® RAID PREMIUM FEATURES

These features are available as an upgrade for all LSI\* SAS2108 processor-based Intel® RAID products. To identify products with this processor, please refer to the "Processor" row of the preceding feature tables. The Premium Feature Keys are described below.



| Premium Feature     | SSD Cache with Fast-Path I/O                                                                                                                                                                                                                                                                                                                                                                                                                        | Drive Encryption Management                                                                                                                                                                                                                                                                                                                                                                       | Rapid Recovery Snapshot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key Benefits</b> | <ul style="list-style-type: none"> <li>SSD Cache allows Solid-State Drives to be utilized as additional cache for the RAID controller. Frequently accessed information is stored in the cache, allowing rapid access.</li> <li>Fast-Path I/O accelerates communication with SSDs providing up to 150,000 I/O reads per second for small, random block-size I/O activity. This is a dramatic increase over solutions not using Fast-Path.</li> </ul> | <ul style="list-style-type: none"> <li>Drive encryption management enables authentication key management, auto-lock, and instant erase of self-encrypting drives (SED).</li> <li>All drives eventually leave the data center and the use of SEDs helps reduce risk of data breaches.</li> <li>Instant erase significantly reduces the cost and time of repurposing or retiring drives.</li> </ul> | <p>Rapid Recovery Snapshot allows users to capture source volume data changes and either restore files or rollback applications to a previous Point in Time (PiT).</p> <ul style="list-style-type: none"> <li>Rapid recovery of lost data from disk can occur within minutes, minimizing the downtime experienced by users and eliminating the lengthy process of restoring data from tape.</li> <li>By isolating a server's boot volume to a separate virtual drive and enabling the auto snapshot feature, users can be guaranteed that bootable snapshots exist, should operating system corruption occur.</li> </ul> |
| <b>Order Code</b>   | AXXRPFKSSD                                                                                                                                                                                                                                                                                                                                                                                                                                          | AXXRPFKDE                                                                                                                                                                                                                                                                                                                                                                                         | AXXRPFKSNH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Availability</b> | Now                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Now                                                                                                                                                                                                                                                                                                                                                                                               | Now                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

For more information, visit the Intel Web site at: [www.intel.com/go/raid](http://www.intel.com/go/raid)

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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\* Other names and brands may be claimed as the property of others.

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# INTEL® SERVER ADAPTERS

## CONNECTIVITY FOR COPPER NETWORKS

### 10 GIGABIT-OVER-COPPER

|                         |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                         | Intel® X520-DA2<br>Dual Port Ethernet Server Adapter                              | Intel® 10 Gigabit AT2<br>Server Adapter                                            | Intel® Ethernet<br>Server Adapter X520-T2                                           | Intel® 10 Gigabit CX4<br>Dual Port Server Adapter                                   |
| Product Code—Singles    | E10G42BTDA                                                                        | E10G41AT2                                                                          | E10G42BT                                                                            | EXPX9502CX4                                                                         |
| Product Code—Five Packs | N/A                                                                               | N/A                                                                                | N/A                                                                                 | N/A                                                                                 |
| Connector(s)            | 2 SFP+ Direct Attach Copper                                                       | 1 RJ-45                                                                            | 2 RJ-45                                                                             | 2 CX4                                                                               |
| End-Brackets            | Low-profile, full-height                                                          | Low-profile, full-height                                                           | Low-profile, full-height                                                            | Low-profile, full-height                                                            |
| Ethernet Controller     | Intel® 82599ES                                                                    | Intel® 82598EB                                                                     | Intel® 82599ES                                                                      | Intel® 82598EB                                                                      |
| Bus Width and Type      | PCI Express* 2.0 (5.0 GT/s) x8                                                    | PCI Express* 2.0 (2.5 GT/s) x8                                                     | PCI Express* 2.0 (5.0 GT/s) x8                                                      | PCI Express* 2.0 (2.5 GT/s) x8                                                      |

### 10 GIGABIT-OVER-COPPER

|                         |  |  |  |
|-------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                         | Intel® 10 Gigabit AF DA<br>Dual Port Server Adapter                                | NetEffect™ Ethernet Server<br>Cluster Adapter DA                                     | NetEffect™ Ethernet Server<br>Cluster Adapter CX4                                    |
| Product Code—Singles    | E10G42AFDA                                                                         | E10G81G2P                                                                            | E10G81GT2CX4                                                                         |
| Product Code—Five Packs | N/A                                                                                | N/A                                                                                  | N/A                                                                                  |
| Connector(s)            | 2 SFP+ Direct Attach Copper                                                        | 1 SFP+ Direct Attach Copper                                                          | 1 CX4                                                                                |
| End-Brackets            | Low-profile, full-height                                                           | Low-profile, full-height                                                             | Low-profile, full-height                                                             |
| Ethernet Controller     | Intel® 82598EB                                                                     | NE020                                                                                | NE020                                                                                |
| Bus Width and Type      | PCI Express* 2.0 (2.5 GT/s) x8                                                     | PCI Express* 1.1 (2.5 GHz) x8                                                        | PCI Express* 1.1 (2.5 GHz) x8                                                        |

Help improve a server's reliability, availability, and scalability by adding an Intel® Ethernet 10GbE or 1GbE multi-port adapter.

For more information, visit the Intel Web site at: [www.intel.com/go/ethernet](http://www.intel.com/go/ethernet)

## CONNECTIVITY FOR COPPER NETWORKS

### 10/100/1000 Mb/s-OVER-COPPER MULTI-PORT

|                         |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                         | Intel® PRO/1000 PT Quad Port Server Adapter                                       | Intel® PRO/1000 GT Quad Port Server Adapter                                         | Intel® PRO/1000 PT Dual Port Server Adapter                                         |
| Product Code—Singles    | EXPI9404PTL                                                                       | PWLA8494GT                                                                          | EXPI9402PT                                                                          |
| Product Code—Five Packs | EXPI9404PTBLK                                                                     | PWLA8494GTBLK5                                                                      | EXPI9402PTBLK                                                                       |
| Connector(s)            | 4 RJ-45                                                                           | 4 RJ-45                                                                             | 2 RJ-45                                                                             |
| End-Brackets            | Low-profile, full-height                                                          | Full-height                                                                         | Low-profile, full-height                                                            |
| Ethernet Controller     | Intel® 82571GB                                                                    | Intel® 82546GB                                                                      | Intel® 82571GB                                                                      |
| Bus Width and Type      | PCI Express* x4                                                                   | 64-bit PCI / PCI-X                                                                  | PCI Express* x4                                                                     |

### 10/100/1000 Mb/s-OVER-COPPER MULTI-PORT

|                                              |  |  |  |  |
|----------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                              | Intel® PRO/1000 MT Dual Port Server Adapter                                       | Intel® Gigabit ET2 Quad Port Server Adapter                                        | Intel® Gigabit ET Dual Port Server Adapter                                          | Intel® Ethernet Server Adapter I340-T4                                              |
| Product Code—Singles                         | PWLA8492MT                                                                        | E1G44ET2                                                                           | E1G42ET                                                                             | E1G44HT                                                                             |
| Product Code—Five Packs                      | PWLA8492MTBLK5                                                                    | E1G44ET2BLK                                                                        | E1G42ETBLK                                                                          | E1G44HTBLK                                                                          |
| Connector(s)                                 | 2 RJ-45                                                                           | 4 RJ-45                                                                            | 2 RJ-45                                                                             | 4 RJ-45                                                                             |
| End-Brackets                                 | Low-profile, full-height                                                          | Low-profile, full-height                                                           | Low-profile, full-height                                                            | Low-profile, full-height                                                            |
| Ethernet Controller                          | Intel® 82546GB                                                                    | Intel® 82576                                                                       | Intel® 82576                                                                        | Intel® 82580                                                                        |
| Bus Width and Type                           | 32- or 64-bit PCI / PCI-X                                                         | PCI Express* x4                                                                    | PCI Express* x4                                                                     | PCI Express* x4                                                                     |
| Virtual Machine Device Queues (VMDq) Support | No                                                                                | Yes                                                                                | Yes                                                                                 | Yes                                                                                 |
| Security Features                            | No                                                                                | IPsec                                                                              | IPsec                                                                               | No                                                                                  |
| Halogen Free                                 | No                                                                                | No                                                                                 | No                                                                                  | Yes                                                                                 |

CONNECTIVITY FOR COPPER NETWORKS

10/100/1000 Mb/s-OVER-COPPER SINGLE PORT



|                         | Intel® PRO/1000 PT<br>Server Adapter | Intel® PRO/1000 MT<br>Server Adapter |
|-------------------------|--------------------------------------|--------------------------------------|
| Product Code—Singles    | EXPI9400PT                           | PWLA8490MT                           |
| Product Code—Five Packs | EXPI9400PTBLK                        | PWLA8490MTBLK5                       |
| Connector(s)            | 1 RJ-45                              | 1 RJ-45                              |
| End-Brackets            | Low-profile, full-height             | Low-profile, full-height             |
| Ethernet Controller     | Intel® 82572GI                       | Intel® 82545GM                       |
| Bus Width and Type      | PCI Express* x1                      | 32- or 64-bit PCI / PCI-X            |

## CONNECTIVITY FOR FIBER NETWORKS

### 10 GIGABIT-OVER-FIBER SINGLE PORT

|                         |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                         | Intel® X520-SR1<br>Ethernet Server Adapter                                        | Intel® X520-LR1<br>Ethernet Server Adapter                                          | Intel® 10 Gigabit XF SR<br>Server Adapter                                           |
| Product Code—Singles    | E10G41BFSR                                                                        | E10G41BFLR                                                                          | EXPX9501AFXSR                                                                       |
| Product Code—Five Packs | N/A                                                                               | N/A                                                                                 | N/A                                                                                 |
| Connector(s)            | 1 LC                                                                              | 1 LC                                                                                | 1 LC                                                                                |
| Fiber Optic Cabling     | MMF 62.5 / 50µm up to 300m                                                        | SMF up to 10km                                                                      | MMF 62.5 / 50µm up to 300m                                                          |
| End-Brackets            | Low-profile, full-height                                                          | Low-profile, full-height                                                            | Low-profile, full-height                                                            |
| Ethernet Controller     | Intel® 82599ES                                                                    | Intel® 82599ES                                                                      | Intel® 82598EB                                                                      |
| Bus Width and Type      | PCI Express* 2.0 (5.0 GT/s) x8                                                    | PCI Express* 2.0 (5.0 GT/s) x8                                                      | PCI Express* 2.0 (2.5 GT/s) x8                                                      |

### 10 GIGABIT-OVER-FIBER SINGLE PORT

### 10 GIGABIT-OVER-FIBER MULTI-PORT

|                         |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                         | Intel® 10 Gigabit XF LR<br>Server Adapter                                         | NetEffect® Ethernet Server<br>Cluster Adapter SFP+SR                               | Intel® X520-SR2<br>Dual Port Ethernet Server Adapter                                | Intel® 10 Gigabit XF SR<br>Dual Port Server Adapter                                 |
| Product Code—Singles    | EXPX9501AFXLR                                                                     | E10G81GF2SR                                                                        | E10G42BFSR                                                                          | EXPX9502AFXSR                                                                       |
| Product Code—Five Packs | N/A                                                                               | N/A                                                                                | N/A                                                                                 | N/A                                                                                 |
| Connector(s)            | 1 LC                                                                              | 1 LC                                                                               | 2 LC                                                                                | 2 LC                                                                                |
| Fiber Optic Cabling     | SMF up to 10km                                                                    | MMF 62.5 / 50µm up to 300m                                                         | MMF 62.5 / 50µm up to 300m                                                          | MMF 62.5 / 50µm up to 300m                                                          |
| End-Brackets            | Low-profile, full-height                                                          | Low-profile, full-height                                                           | Low-profile, full-height                                                            | Low-profile, full-height                                                            |
| Ethernet Controller     | Intel® 82598EB                                                                    | NE020                                                                              | Intel® 82599ES                                                                      | Intel® 82598EB                                                                      |
| Bus Width and Type      | PCI Express* 2.0 (2.5 GT/s) x8                                                    | PCI Express* 1.1 (2.5 GHz) x8                                                      | PCI Express* 2.0 (5.0 GT/s) x8                                                      | PCI Express* 2.0 (2.5 GT/s) x8                                                      |

## CONNECTIVITY FOR FIBER NETWORKS

### GIGABIT-OVER-FIBER MULTI-PORT

|                                              |  |  |  |  |  |
|----------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                              | Intel® PRO/1000 PF Quad Port Server Adapter                                       | Intel® PRO/1000 PF Dual Port Server Adapter                                       | Intel® PRO/1000 MF Dual Port Server Adapter                                         | Intel® Gigabit EF Dual Port Server Adapter                                          | Intel® Ethernet Server Adapter I340-F4                                              |
| Product Code—Singles                         | EXPI9404PF                                                                        | EXPI9402PF                                                                        | PWLA8492MF                                                                          | E1G42EF                                                                             | E1G44HF                                                                             |
| Product Code—Five Packs                      | EXPI9404PFBLK                                                                     | EXPI9402PFBLK                                                                     | PWLA8492MFBLK5                                                                      | E1G42EFBLK                                                                          | E1G44HFBLK                                                                          |
| Connector(s)                                 | 4 LC                                                                              | 2 LC                                                                              | 2 LC                                                                                | 2 LC                                                                                | 4 LC                                                                                |
| Fiber Optic Cabling                          | MMF 62.5 / 50µm up to 275m                                                        | MMF 62.5 / 50µm up to 275m                                                        | MMF 62.5 / 50µm up to 275m                                                          | MMF 62.5 / 50µm up to 275m                                                          | MMF 62.5 / 50µm up to 275m                                                          |
| End-Brackets                                 | Full-height                                                                       | Low-profile, full-height                                                          | Low-profile, full-height                                                            | Low-profile, full-height                                                            | Full-height                                                                         |
| Ethernet Controller                          | Intel® 82571GB                                                                    | Intel® 82571GB                                                                    | Intel® 82546GB                                                                      | Intel® 82576                                                                        | Intel® 82580                                                                        |
| Bus Width and Type                           | PCI Express* x4                                                                   | PCI Express* x4                                                                   | 64-bit PCI / PCI-X                                                                  | PCI Express* x4                                                                     | PCI Express* x4                                                                     |
| Virtual Machine Device Queues (VMDq) Support | No                                                                                | No                                                                                | No                                                                                  | Yes                                                                                 | Yes                                                                                 |
| Security Features                            | No                                                                                | No                                                                                | No                                                                                  | IPsec                                                                               | IPsec                                                                               |

### GIGABIT-OVER-FIBER SINGLE PORT

|                         |  |  |  |
|-------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                         | Intel® PRO/1000 PF Server Adapter                                                  | Intel® PRO/1000 MF Server Adapter                                                    | Intel® PRO/1000 MF Server Adapter (LX)                                               |
| Product Code—Singles    | EXPI9400PF                                                                         | PWLA8490MF                                                                           | PWLA8490LX                                                                           |
| Product Code—Five Packs | EXPI9400PFBLK                                                                      | PWLA8490MFBLK5                                                                       | PWLA8490LXBLK5                                                                       |
| Connector(s)            | 1 LC                                                                               | 1 LC                                                                                 | 1 LC                                                                                 |
| Fiber Optic Cabling     | MMF 62.5 / 50µm up to 275m                                                         | MMF 62.5 / 50µm up to 275m                                                           | SMF 9µm up to 10km, MMF 62.5 / 50µm up to 550m                                       |
| End-Brackets            | Full-height                                                                        | Low-profile, full-height                                                             | Low-profile, full-height                                                             |
| Ethernet Controller     | Intel® 82572GI                                                                     | Intel® 82545GM                                                                       | Intel® 82545GM                                                                       |
| Bus Width and Type      | PCI Express* x4                                                                    | 32- or 64-bit PCI / PCI-X                                                            | 32- or 64-bit PCI / PCI-X                                                            |

For more information, visit the Intel Web site at: [www.intel.com/go/ethernet](http://www.intel.com/go/ethernet)

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## INTEL® ENABLED SOLUTIONS ACCELERATION ALLIANCE (INTEL® ESAA)

### Seize the Future with Intel® ESAA

The Intel® Enabled Solutions Acceleration Alliance (Intel® ESAA) is a collaboration between Intel and independent software and hardware vendors (IxVs) that enables resellers and direct OEMs<sup>1</sup> to deliver pre-tested, high-quality solutions based on Intel® Server, Workstation, and Desktop Products.

**Membership in the program is an automatic benefit for Intel® Channel Partner Program members at the Premier and Associate levels. Member benefits include:**

- Faster time to market using pre-tested solution recipes that provide step-by-step configuration instructions
- Reduced engineering costs with access to validated and proven technologies
- Pass-through certification from companies such as VMware, Red Hat, Citrix, EMC, and Novell
- Alignment with Intel's world-class processor technology leadership and support infrastructure

More than 930 solution configuration recipes are now available at no charge to value-added resellers through the Intel ESAA Program, including more than 400 that include support for Intel® Solid-State Drives and the new Intel® Xeon® processor 5600 series. Also available are new configuration guides for Intel® Desktop Boards, covering deployment models such as SMB / "Green" PCs, digital surveillance, and workstation / enthusiast systems.

### Intel® ESAA Makes it Easy

Getting components from different vendors to work seamlessly in a single, reliable solution can be a challenge. Meanwhile, end customers want solutions that feature the latest and greatest hardware and software available—without deployment or troubleshooting headaches. And with so many vendors in the marketplace, validation has become critical. That's where the Intel ESAA Program comes in, giving Intel Channel Partners and direct OEMs access to pre-verified solution configuration guides ("recipes") jointly developed with IxVs around the globe. Applications include HPC, virtualization, cloud, storage and backup, digital content creation, server management, and more.



**"Having step-by-step instructions  
and certification gave my clients  
peace of mind."**

DENNIS EVANS, DENNIS' COMPUTERS

## Your Recipe for Success

Available exclusively for Intel® Server, Workstation, and Desktop Boards and Systems, Intel® ESAA recipes provide detailed hardware and software requirements and comprehensive configuration and deployment instructions to help resellers meet complex customer requirements rapidly. With help from the Intel ESAA Program, resellers can get to market early with solutions based on leading-edge Intel® processor technology—and stay ahead of the competitive curve.

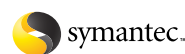
For added customer confidence, resellers can request a certificate stating that Intel and the application vendor stand behind their branded Intel-based solution. VMware, Red Hat, Citrix, EMC, and Novell-based solutions may also qualify for free pass-through branded system certification and listing on the vendor's Hardware Compatibility List (HCL).

## A Worldwide Technology Community

As a worldwide technology community, Intel ESAA strives to promote a healthy and thriving business ecosystem that connects Intel® Channel Partners and direct OEMs with industry-leading software and hardware companies to enable the reliable and seamless integration of Intel Server, Workstation, and Desktop Products. Intel ESAA members benefit from marketing and sales tools, pre- and post-sales training, and technical support so they can get to market faster with leading-edge server technologies.

Intel ESAA gives resellers the tools they need to accelerate the delivery of high-quality Intel-based IT solutions. Get to market faster, reach new customers, and achieve even greater success with Intel ESAA.

More than 30 Software and Hardware Vendors Participate in the Intel® ESAA Program Worldwide.  
Members Include:



“With Intel® ESAA, we get all our Intel® products certified under our brand name with Red Hat, Novell, and VMware—for free.”

PATRICK SCATENI, CIARA TECHNOLOGIES

For more information, visit [www.intel.com/go/esaa](http://www.intel.com/go/esaa)

<sup>1</sup> Program membership is free but restricted to direct OEMs and Intel® Channel Partner Program members at the Premier and Associate levels. For more information on how to become a member of the Intel® Channel Partner Program, visit [www.intel.com/cd/channel/reseller/emea/eng/membership/index.htm](http://www.intel.com/cd/channel/reseller/emea/eng/membership/index.htm). Direct OEMs, please contact [esaamail@intel.com](mailto:esaamail@intel.com) for membership information.

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## VMWARE vSPHERE\* NOW AVAILABLE WITH INTEL® SERVER PRODUCTS

VMware vSphere\* 4 delivers a powerful virtualization infrastructure, dramatically simplifying IT environments to enable the next generation of flexible and reliable IT services. Intel offers a range of server products and VMware vSphere product options enabling businesses of all sizes to match their virtualization solution to their specific needs.

Intel® server products cover a broad range of customer needs. Paired with the appropriate VMware vSphere product in a pre-validated Intel® ESAA solution recipe, they enable value-added resellers to pass confidence and quality on to their customers. The following matrix shows how VMware and Intel solutions scale to the needs of different businesses.



| Customer Type                                 |                                                                           | Small businesses and branch offices (<20 servers)                                                   | Small businesses and branch offices (<20 servers)                                                   | New companies starting their adoption of virtualization (>20 servers)                    | Companies early in their adoption of virtualization but looking to expand (>20 servers)   | More mature virtualization customers that are looking to transform internal IT into internal cloud infrastructure |
|-----------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Recommended VMware vSphere* Edition           |                                                                           | VMware vSphere* Essentials with VMware vCenter* Server for Essentials                               | VMware vSphere* Essentials Plus with VMware vCenter* Server for Essentials                          | VMware vSphere* Standard and VMware vCenter* Standard <sup>1</sup>                       | VMware vSphere* Advanced and VMware vCenter* Standard <sup>1</sup>                        | VMware vSphere* Enterprise Plus and VMware vCenter* Standard <sup>1</sup>                                         |
| Customer Use Cases                            | Server consolidation                                                      | Yes                                                                                                 | Yes                                                                                                 | Yes                                                                                      | Yes                                                                                       | Yes                                                                                                               |
|                                               | Improving application up time                                             |                                                                                                     | Yes                                                                                                 |                                                                                          | Yes                                                                                       | Yes                                                                                                               |
|                                               | Running mission-critical enterprise applications                          |                                                                                                     | Yes                                                                                                 |                                                                                          | Yes                                                                                       | Yes                                                                                                               |
|                                               | Backing up, restoring, and securing business-critical data                |                                                                                                     | Yes                                                                                                 |                                                                                          | Yes                                                                                       | Yes                                                                                                               |
|                                               | Ensuring regulatory and security compliance                               | Yes                                                                                                 | Yes                                                                                                 | Yes                                                                                      | Yes                                                                                       | Yes                                                                                                               |
|                                               | Automating processes to reduce costs and improve application SLAs         |                                                                                                     |                                                                                                     |                                                                                          |                                                                                           | Yes                                                                                                               |
| VMware vSphere License Information            |                                                                           | Licensed up to 3 physical hosts (with a maximum of 2 processors per each 6 cores and 256 GB of RAM) | Licensed up to 3 physical hosts (with a maximum of 2 processors per each 6 cores and 256 GB of RAM) | Licensed per processor<br>Up to 6 physical cores per processor<br>256 GB of RAM per host | Licensed per processor<br>Up to 12 physical cores per processor<br>256 GB of RAM per host | License per processor<br>Up to 12 physical cores per processor<br>No license memory limit                         |
| VMware vSphere Support and Subscription (SNS) |                                                                           | 1-year VMware subscription                                                                          | 1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS                                   | 1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS                        | 1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS                         | 1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS                                                 |
| Intel Order Codes for VMware vSphere          |                                                                           | VMW4ESS                                                                                             | VMW4ESSPLUS<br>VMW4ESSPLUSP                                                                         | VMW4STD<br>VMW4STD<br>VMWVCSTD<br>VMWVCSTD                                               | VMW4ADV<br>VMW4ADV<br>VMWVCSTD<br>VMWVCSTD                                                | VMW4ENTPLUS<br>VMW4ENTPLUSP<br>VMWVCSTD<br>VMWVCSTD                                                               |
| Recommended Intel® Products                   | Intel® Server Board S3420GP                                               | Yes                                                                                                 | Yes                                                                                                 |                                                                                          |                                                                                           |                                                                                                                   |
|                                               | Intel® Server Board S5500BC                                               | Yes                                                                                                 | Yes                                                                                                 |                                                                                          |                                                                                           |                                                                                                                   |
|                                               | Intel® Server Board S5520HC                                               | Yes                                                                                                 | Yes                                                                                                 |                                                                                          |                                                                                           |                                                                                                                   |
|                                               | Intel® Modular Server Compute Module S5520VI                              | Yes                                                                                                 | Yes                                                                                                 | Yes                                                                                      | Yes                                                                                       |                                                                                                                   |
|                                               | Intel® Server Systems SR1600UR, SR1625UR, SR2600UR, and SR2625UR families | Yes                                                                                                 | Yes                                                                                                 | Yes                                                                                      | Yes                                                                                       | Yes                                                                                                               |
|                                               | Intel® Server Board S5500WB                                               |                                                                                                     |                                                                                                     | Yes                                                                                      | Yes                                                                                       | Yes                                                                                                               |
|                                               | Intel® Server System SR1680MV                                             |                                                                                                     |                                                                                                     | Yes                                                                                      | Yes                                                                                       | Yes                                                                                                               |

For more information, visit [www.intel.com/go/vmwareonintel](http://www.intel.com/go/vmwareonintel)

<sup>1</sup> One instance of VMware vCenter\* Standard required. VMware vCenter Standard is available with 1-year VMware Basic (12x5) or 1-year VMware Production (24x7) SNS.

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## INTEL® vPRO™ TECHNOLOGY

|                                  |                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------|
| Intel® vPro™ Technology Solution | <a href="http://www.intelsalestools.com/#category=4">www.intelsalestools.com/#category=4</a> |
|----------------------------------|----------------------------------------------------------------------------------------------|

## GRAPHICS

|                 |                                                                          |
|-----------------|--------------------------------------------------------------------------|
| Client Graphics | <a href="http://www.intel.com/go/graphics">www.intel.com/go/graphics</a> |
|-----------------|--------------------------------------------------------------------------|

## INTEL® SOLID-STATE DRIVES

|                         |                                                                              |
|-------------------------|------------------------------------------------------------------------------|
| SATA Solid-State Drives | <a href="http://www.intel.com/go/channelssd">www.intel.com/go/channelssd</a> |
|-------------------------|------------------------------------------------------------------------------|

## DESKTOP

|                           |                                                                                                                                                        |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Desktop Highlights        | <a href="http://www.IntelBetterTogether.com">www.IntelBetterTogether.com</a>                                                                           |
| Desktop Processors        | <a href="http://www.intel.com/go/desktopprocessors">www.intel.com/go/desktopprocessors</a>                                                             |
| Desktop Boards            | <a href="http://www.intel.com/products/motherboard">www.intel.com/products/motherboard</a>                                                             |
| Ethernet Desktop Adapters | <a href="http://www.intel.com/network/connectivity/products/desktop_adapters.htm">www.intel.com/network/connectivity/products/desktop_adapters.htm</a> |

## MOBILE

|                           |                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Highlights         | <a href="http://www.intel.com/products/laptop/index.htm">www.intel.com/products/laptop/index.htm</a>                                               |
| Mobile Processors         | <a href="http://www.intel.com/go/notebooks">www.intel.com/go/notebooks</a>                                                                         |
| Intel® Centrino® Wireless | <a href="http://www.intel.com/network/connectivity/products/wireless/index.htm">www.intel.com/network/connectivity/products/wireless/index.htm</a> |

## SERVER

|                                         |                                                                                                  |
|-----------------------------------------|--------------------------------------------------------------------------------------------------|
| Server Highlights                       | <a href="http://www.intel.com/go/xeon">www.intel.com/go/xeon</a>                                 |
| Server Platforms                        | <a href="http://www.intel.com/go/serverprocessors">www.intel.com/go/serverprocessors</a>         |
| Server / Workstation Processors         | <a href="http://www.intel.com/go/serverprocessors">www.intel.com/go/serverprocessors</a>         |
| Server Boards                           | <a href="http://www.intel.com/go/serverboards">www.intel.com/go/serverboards</a>                 |
| Modular Server Products                 | <a href="http://www.intel.com/go/modular">www.intel.com/go/modular</a>                           |
| Server Chassis                          | <a href="http://www.intel.com/products/server/chassis">www.intel.com/products/server/chassis</a> |
| Server Systems                          | <a href="http://www.intel.com/go/serversystems">www.intel.com/go/serversystems</a>               |
| Server Management                       | <a href="http://www.intel.com/go/servermanagement">www.intel.com/go/servermanagement</a>         |
| RAID                                    | <a href="http://www.intel.com/go/raid">www.intel.com/go/raid</a>                                 |
| Server Adapters                         | <a href="http://www.intel.com/go/ethernet">www.intel.com/go/ethernet</a>                         |
| Enabled Solutions Acceleration Alliance | <a href="http://www.intel.com/go/esaa">www.intel.com/go/esaa</a>                                 |
| VMware® Software                        | <a href="http://www.intel.com/go/vmwareonintel">www.intel.com/go/vmwareonintel</a>               |

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