Product Brief

Intel® Server Systems SR1600UR, SR1625UR, SR2600UR, SR2612UR, and SR2625UR

Intel® Server System SR1600 and SR2600 Family

Rack-Optimized, Highly Integrated Server Systems for High-Density, Energy-Efficient Applications

Key Features

- Supports up to two Intel® Xeon® Processor 5600 series on Intel® Microarchitecture, codenamed Nehalem
- Highly scalable DDR3 memory (12 DIMMs)
- High-speed PCI Express* 2.0 I/O (up to 5 slots)
- Business-critical RAS
- Optimized for energy efficiency
- Supports Server Power Capping via Intel® Intelligent Power Node Manager

Target Applications: *High-performance computing (compute, I/O and management nodes), video server, virtualization platform and general purpose data center building blocks*

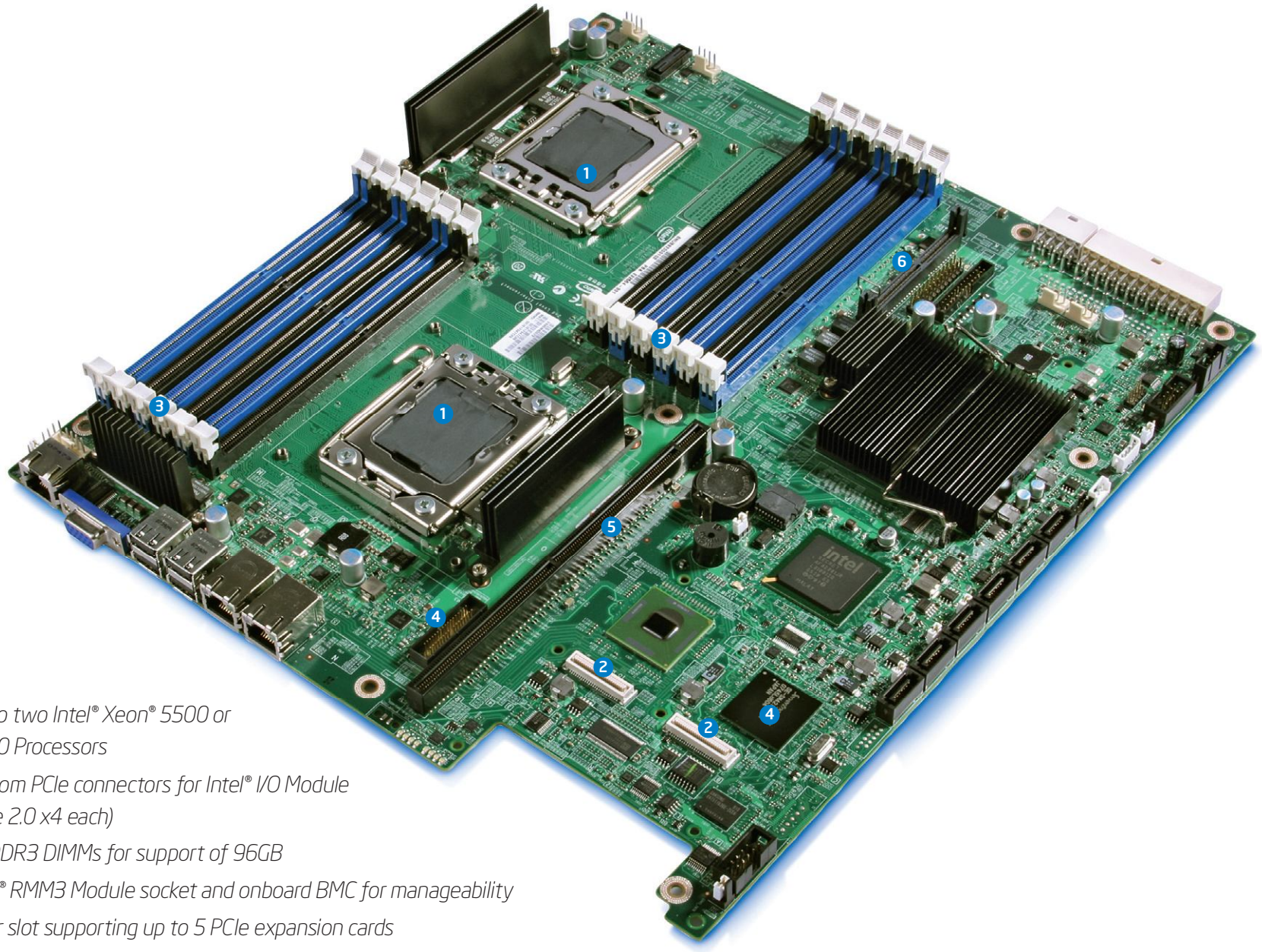
Server Board Features and Benefits

- **Supports up to two Intel® Xeon® Processors on Intel® Microarchitecture, codenamed Nehalem** Increase server performance with no increase in power consumption
- **Highly scalable, energy-efficient memory** 12 DIMMs of registered or unbuffered DDR3 ensure ample capacity and energy-efficient performance for any application
- **Highly expandable I/O architecture** 24 lanes of fast PCI Express* 2.0 x16 combined with PCI Express* 2.0 x8 expansion modules and optional PCI-X slots provide unmatched expansion flexibility[1]

Server System Features and Benefits

- **Highly flexible storage options** Hard disk configurations range from three fixed SATA drives to a ten-drive combination of eight hot-swap, two fixed SATA or SAS drives, providing optimum flexibility and scalability
- **Power efficient architecture with highly efficient power supplies** Reduced power and cooling requirements, lower operating costs
- **Server Power Capping via Intel® Intelligent Power Node Manager** Reduce power and cooling costs while increasing rack density with policy-based power and thermal management
- **Intel® Enabled Server Acceleration Alliance (Intel® ESAA) Certified** Pre-tested and certified configuration guides ("recipes") over a range of applications
- **Intel® System Management Software** Get your Intel® servers up and running with Intel® Deployment Toolkit and maintain them with the provided Intel® Active System Console, a lightweight management solution for small business or with the optional full IT management solution using Intel® Management Packs with Microsoft* System Center Essentials

Intel® Server Board S5520UR



1. *Up to two Intel® Xeon® 5500 or 5600 Processors*
2. *Custom PCIe connectors for Intel® I/O Module (PCIe 2.0 x4 each)*
3. *12 DDR3 DIMMs for support of 96GB*
4. *Intel® RMM3 Module socket and onboard BMC for manageability*
5. *Riser slot supporting up to 5 PCIe expansion cards*
6. *Bridge-board connector, supporting Midplane2 with SAS HW RAID*

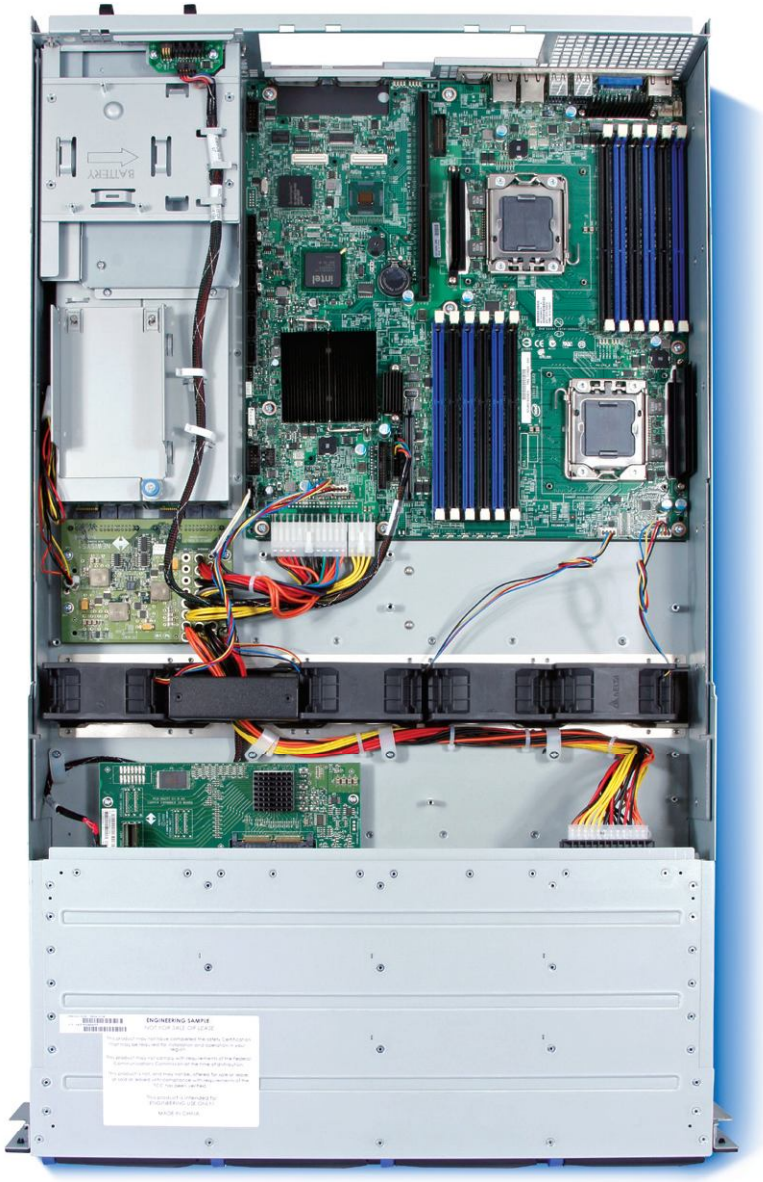
Intel® Server Board S5520UR Technical Specifications

Form Factor	SSI EEB-leveraged (12" x 13")
Processors	Supports up to two Intel® Xeon® Processor 5500 or 5600 series[2]
Chipset	Intel® 5520 chipset with Intel® ICH10R
Intel® Quick Path Technology	4.8GT/s, 5.86GT/s and 6.4GT/s
Memory Capacity	Twelve DDR3 DIMM sockets (Registered or Unbuffered) ■ Six channel native (800/1066/1333 MHz)
Memory RAS Features	Channel-Independent Mode Channel-Mirroring Mode Demand Scrubbing Mode Patrol Scrubbing Mode
Storage	Six SATA ports (3 Gbps) via ICH10R with Intel® Embedded Server RAID Technology Modular SAS RAID solution via Intel® I/O expansion module options
Intel® RAID Support	Integrated ■ Intel® Embedded Server RAID Technology with host-based SW RAID levels 0/1/10; Optional SW RAID 5 with activation key Optional ■ Intel® SAS Module AXX4SASMOD with SAS and RAID 0, 1, 1E, 10, 5 and Intel® RAID Module SROMBSASMR with RAID 0, 1, 5, 6, 10, 50 and 60 offer value above a traditional add-in card. ■ Validated Intel® RAID Controllers[3]
Integrated LAN	Embedded Intel® Dual Gigabit Controller 82575EB with Intel® Virtualization Technology[4]
Expansion Slots	Up to 5 PCI Express 2.0 with 2U riser PLUS two proprietary expansion connectors ■ 1U: 1 PCI Express 2.0 x16 bus speed (x16 mechanical via riser) ■ 2U: 3 or 5 PCI Express 2.0 x8 bus speed, or 3 PCI Express 2.0 x8 bus speed connectors plus two PCI-X 133 connectors ■ Common: • 1 PCI Express 2.0 x8 bus speed via Intel® I/O Expansion Module • 1 PCI Express 1.0 x4 bus speed via Bridgeboard connector to storage controller (HW SAS RAID controller on midplane/backplane)
Optional Intel® I/O Expansion Modules	■ Dual Gigabit Ethernet based on Intel® 82571EB ■ 4 port external SAS (based on LSI* 1064e) ■ Single port InfiniBand* (Mellanox* SDR) ■ Dual-port 10 Gigabit Ethernet based on Intel® 82598EB ■ Quad-port Gigabit Ethernet based on Intel® 82576EB ■ Single port InfiniBand (based on Mellanox* QDR) ■ Internal SAS and SAS RAID (see Intel® RAID Support)
Integrated Graphics	Onboard Server Engine* LLC Pilot II* Controller with 64 MB DDR2 memory, 8MB allocated to graphics
Management Hardware	Integrated IPMI 2.0 baseboard management controller ■ Fan speed control ■ Diagnostic LEDs ■ Temperature monitoring and recovery ■ SMASH CLP (command line interface) ■ Email alerting ■ Power management with Intel® Intelligent Power Node Manager Optional Intel® Remote Management Module (RMM3) ■ KVM & Virtual Media redirection ■ Dedicated 3rd NIC ■ Remote Power on/off ■ Embedded Web UI ■ Event log and configuration
Management Software	Intel® Deployment Assistant 3.0 ■ Wizard based UI to deploy, configure and update server ■ BIOS, BMC and RAID array configuration ■ Unattended OS install ■ Online patch updates Intel® Server Management Software 3.X ■ View critical or warning events ■ Power on/off/reset ■ View sensor (fan speeds, temperature, power) ■ Full IPMI 2.0 interface ■ Chassis Intrusion detection ■ Serial Over LAN (Text Console Redirection)

Intel® Server System SR2612UR Technical Specifications

Order Code	SR2612UR
Form Factor	2U Rack
Drive Bays	Up to 12 x Hot Swap 3.5" SAS or SATA HDDs
Optical Bay	One slim-line SATA optical drive bay
System cooling	4 Non redundant fans
Power Supply	2 high efficientcy 760-watt power supply modules supporting redundant 1+ 1 power configurations
Add-in card Support	▪ Up to 3 full-height PCI Express 2.0 x8 ▪ 1 Intel® I/O Expansion Module ▪ Optional riser: 2 x low-profile PCI Express 2.0 x8
Dimensions	3.44" (87mm) x 17.23" (438mm) x 30.75" (781mm)
Front Panel Features	▪ Power LED ▪ Hard Drive Activity LED ▪ System status LED ▪ System ID LED
Components Included	▪ Intel® Server Board S5520UR ▪ Intel® Server Chassis SR2612 ▪ 12 hot swap HDD carriers ▪ Two 760 Watt Power Supplies ▪ 4 fans ▪ One full height PCI Express* 2.0 riser card (3 PCIe 2.0 x8 slots) ▪ ODD tray ▪ Pre-routed cables ▪ Expander midplane ▪ 2 CPU Heatsinks ▪ Rack Bracket ▪ RAID cable

The Intel® Server System SR2612UR is perfect for use in server applications with large storage needs. The SR2612UR is a great building block for use as SAN, NAS, dense Application Server, or a platform for Virtualization with support for a broad range of business applications from industry-leading software vendors. Support for up to two high-performance Intel® Xeon® processors, twelve SAS or SATA hard drives, and flexible network connectivity provides room for capacity growth and efficient application processing.



Intel® Server Systems SR1600UR, SR1625UR Specifications

Configuration	Fixed	SAS	SATA	SAS
Order Code	**SR1600UR**	**SR1600URHS**	**SR1625UR**	**SR1625URSAS**
Form Factor	1U Rack	1U Rack	1U Rack	1U Rack
Drive Bays	Three Fixed 3.5" SATA HDDs	Three Hot Swap 3.5" SAS/SATA HDDs	Up to eight Hot Swap 2.5" SATA HDDs	Up to eight Hot Swap 2.5" SAS/SATA HDDs
Optical Bay	One slim SATA optical drive bay	One slim SATA optical drive bay	One slim SATA optical drive bay	One slim SATA optical drive bay
System Cooling	5 Non redundant dual-rotor fans	5 Non redundant dual-rotor fans	5 Non redundant dual-rotor fans	5 Non redundant dual-rotor fans
Power Supply	600-watt high efficiency fixed	600-watt high efficiency fixed	650-watt 1+0 high efficiency, hot swap, redundant capable	650-watt 1+0 high efficiency, hot swap, redundant capable
Add-in card support	1 full-height (PCI Express 2.0 x16) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	1 full-height (PCI Express 2.0 x16) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	1 full-height (PCI Express 2.0 x16) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	1 full-height (PCI Express 2.0 x16) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)
Dimensions (H x W x D)	1.7" (43.3mm) x 16.9" (430mm) x 27.19" (690.6mm)	1.7" (43.3mm) x 16.9" (430mm) x 27.19" (690.6mm)	1.7" (43.3mm) x 16.9" (430mm) x 27.19" (690.6mm)	1.7" (43.3mm) x 16.9" (430mm) x 27.19" (690.6mm)
Front Panel Features (optional front panels available)	Power LED Hard Drive Activity LED System status LED 2 NIC LEDs System ID LED Power/sleep switch Reset switch NMI switch Bootable USB 1.1 port	Power LED Hard Drive Activity LED System status LED Power/sleep switch 2 NIC LEDs Reset switch NMI switch System ID LED VGA port Bootable USB 1.1 port	Power LED System status LED System ID LED Power/sleep switch NMI switch System ID switch Bootable USB 1.1 connection	Power LED System status LED System ID LED Power/sleep switch NMI switch System ID switch Bootable USB 1.1 connection
Components Included	Intel® Server Board S5520UR Cabled front panel Intel® Server Chassis SR1600 3 fixed HDD sleds 600-Watt Power Supply 5 fans One full height PCI Express* 2.0 x16 riser ODD tray Fan Board Pre-routed cables Memory blanks 2 CPU Heatsinks	Intel® Server Board S5520UR Standard front panel Intel® Server Chassis SR1600 3 hot swap HDD carriers 600-Watt Power Supply 5 fans One full height PCI Express* 2.0 x16 riser ODD tray Pre-routed cables Memory blanks 2 CPU Heatsinks * requires BackPlane	Intel® Server Board S5520UR Mini front panel Intel® Server Chassis SR1625 6 hot swap HDD carriers One 650 Watt Power Supply 5 fans One full height PCI Express* 2.0 x16 riser ODD tray Pre-routed cables Passive midplane Memory blanks 2 CPU Heatsinks	Intel® Server Board S5520UR Mini front panel Intel® Server Chassis SR1625 6 hot swap HDD carriers One 650 Watt Power Supply 5 fans One full height PCI Express* 2.0 x16 riser ODD tray Pre-routed cables Active SAS midplane (with optional HW RAID support) Memory blanks 2 CPU Heatsinks

Intel® Server Systems SR2600UR, SR2625UR Specifications

BRP	LX	SATA	BRP	LX
SR2600URBRP	**SR2600URLX**	**SR2600URSATA**	**SR2625URBRP**	**SR2625URLX**
2U Rack	2U Rack	2U Rack	2U Rack	2U Rack
Up to six Hot Swap 3.5" SATA HDDs One 3.5 tape drive	Up to six Hot Swap 3.5" SATA HDDs One 3.5 tape drive	Up to six Hot Swap 3.5" SATA HDDs One 3.5 tape drive	Eight Hot Swap 2.5" SATA HDDs	Eight Hot Swap 2.5" SAS/SATA HDDs
One slim SATA optical drive bay	One slim SATA optical drive bay	One slim SATA optical drive bay	One slim SATA optical drive bay	One slim SATA optical drive bay
3 Non redundant fans	6 Redundant & hot swap fans	6 Redundant & hot swap fans	3 Non redundant fans	6 Redundant & hot swap fans
750-watt 1+0 high efficiency, hot swap, redundant capable	750-watt 1+0 high efficiency, hot swap, redundant capable	Two 750 1 + 1 high efficiency, hot swap, redundant capable	750-watt 1+0 high efficiency, hot swap, redundant capable	750-watt 1+0 high efficiency, hot swap, redundant capable
Up to 3 full-height PCI Express 2.0 x8 or up to 2 full-height PCI-X 133 Up to 2 low-profile (PCI Express 2.0) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	Up to 3 full-height PCI Express 2.0 x8 or up to 2 full-height PCI-X 133 Up to 2 low-profile (PCI Express 2.0) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	Up to 3 full-height PCI Express 2.0 x8 or up to 2 full-height PCI-X 133 Up to 2 low-profile (PCI Express 2.0) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	Up to 3 full-height PCI Express 2.0 x8 or up to 2 full-height PCI-X 133 Up to 2 low-profile (PCI Express 2.0) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)	Up to 3 full-height PCI Express 2.0 x8 or up to 2 full-height PCI-X 133 Up to 2 low-profile (PCI Express 2.0) 1 Intel® I/O Expansion Module (PCI Express 2.0 x8)
3.4" (87.3mm) x 16.9" (430mm) x 27.75" (704.86mm)	3.4" (87.3mm) x 16.9" (430mm) x 27.75" (704.86mm)	3.4" (87.3mm) x 16.9" (430mm) x 27.75" (704.86mm	3.4" (87.3mm) x 16.9" (430mm) x 27.75" (704.86mm	3.4" (87.3mm) x 16.9" (430mm) x 27.75" (704.86mm
Power LED Hard Drive Activity LED System status LED Power/sleep switch 2 NIC LEDs Reset switch NMI switch System ID LED VGA port Bootable USB 1.1 port	Power LED Hard Drive Activity LED System status LED Power/sleep switch 2 NIC LEDs Reset switch NMI switch System ID LED VGA port Bootable USB 1.1 port	Power LED Hard Drive Activity LED System status LED Power/sleep switch 2 NIC LEDs Reset switch NMI switch System ID LED VGA port Bootable USB 1.1 port	Power LED Hard Drive Activity LED System status LED Power/sleep switch 2 NIC LEDs Reset switch NMI switch System ID LED VGA port Bootable USB 1.1 port	Power LED Hard Drive Activity LED System status LED Power/sleep switch 2 NIC LEDs Reset switch NMI switch System ID LED VGA port Bootable USB 1.1 port
Intel® Server Board S5520UR Standard front panel Intel® Server Chassis SR2600 5 hot swap HDD carriers One 750 Watt Power Supply 3 fans One full height PCI Express* 2.0 riser card (3 PCIe 2.0 x8 slots) ODD tray Pre-routed cables Passive midplane Memory blanks 2 CPU Heatsinks	Intel® Server Board S5520UR Standard front panel Intel® Server Chassis SR2600 5 hot swap HDD carriers One 750 Watt Power Supply 6 fans One full height+low profile PCI Express* 2.0 riser card (5 PCIe 2.0 x8 slots) ODD tray Pre-routed cables Active SAS midplane (with optional HW RAID support) Memory blanks 2 CPU Heatsinks	Intel® Server Board S5520UR Standard front panel Intel® Server Chassis SR2600 5 hot swap HDD carriers Two 750 Watt Power Supplies 6 fans One full height+low profile PCI Express* 2.0 riser card (5 PCIe 2.0 x8 slots) ODD tray Pre-routed cables Passive midplane Memory blanks 2 CPU Heatsinks	Intel® Server Board S5520UR Standard front panel Intel® Server Chassis SR2625 6 hot swap HDD carriers One 750 Watt Power Supply 3 fans One full height PCI Express* 2.0 riser card (3 PCIe 2.0 x8 slots) ODD tray Pre-routed cables Passive midplane Memory blanks 2 CPU Heatsinks	Intel® Server Board S5520UR Standard front panel Intel® Server Chassis SR2625 6 hot swap HDD carriers One 750 Watt Power Supply 6 fans One full height+low profile PCI Express* 2.0 riser card (up to 5 PCIe 2.0 x8 slots) ODD tray Pre-routed cables Active SAS midplane (with optional HW RAID support) Memory blanks 2 CPU Heatsinks

Safety and EMC Regulatory Compliance

Regulatory compliance for an Intel host system is based on the use of an Intel server base board that was tested in the host system and found compliant. Intel server base boards and host systems are tested to Class A EMC requirements. Intel server products comply with RoHS (Restriction of Hazardous Substances).

	Baseboard Certifications			Host System Certifications		
Region	**Regulation**	**Regulatory Marks**		**Regulation**	**Regulatory Marks**	
Argentina (IRAM	Not Required	Not Required	n/a	IRAM	IRAM	
Australia/ New Zealand	ACA/MED	C-Tick		ACA/MED	C-Tick	
Canada	NRTL	cUR		NRTL	cUL	
Canada EMC	Industry Canada	ICES-003	ICES-003	Industry Canada	ICES-003	ICES-003
China	Not Required	Not Required	n/a	CNCA / CQC	CCC	
	Not Required	Not Required	n/a	CNCA / CQC EMC		
	RoHS - MI	EFUP20		RoHS - MI	EFUP20	
Europe	European Directives	CE		European Directives	CE	
Europe RoHS	European Directives	Not Required	n/a	European Directives	Not Required	n/a
Europe WEEE	European Directives	Not Required	n/a	European Directives	Voluntarily Added for Customers	
Germany	Not Required	Not Required	n/a	National Requirements	GS	
Germany Recycling		Green Dot		Not Required	Not Required	n/a
International	CB Report / CISPR	Not Required	n/a	CB Report / CISPR	Not Required	n/a
Japan	VCCI (Verification Only)	Not Required	n/a	VCCI		
Japan Recycling				Not Required	Not Required	n/a
Korea	KCC	KCC		KCC	KCC	
Russia	Not Required	Not Required	n/a	GOST	GOST	
Taiwan	BSMI	BSMI DOC		BSMI	BSMI RPC	
	BSMI EMC			BSMI EMC		
Ukraine	Not Required	Not Required	n/a	URKTEST	Not Required	n/a
United States	NRTL	URus		NRTL	ULus	
	FCC	Not Required	n/a	FCC	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation.	

To build your system and get more details on server configurations from Intel visit:
www.intel.com/go/serverconfigurator

For more information on Intel® Server Products, visit:
www.intel.com/go/serverproducts

[1] Configuration available on Intel Server Systems SR2600UR and SR2625UR

[2] 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. Out of the box support for the Intel Xeon 5600 series processors 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 5500 series, a BIOS update is required before installing the 5600 series processor(s). Refer to http://support.intel.com for more information.

[3] For tested Intel® RAID Controller options go to http://support.intel.com/support/motherboards/server/compat_matrix.html

[4] 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.