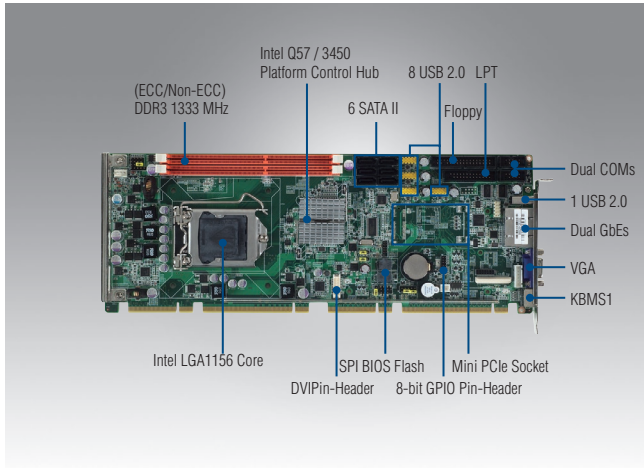


# PCE-5125

**LGA1156 Intel® Core™ i7/i5/i3/Xeon® SHB with DDR3/Dual GbE/SATA 2.0**



CE FCC

## Specifications

|                   |                         |                                                                                                                                           |             |             |             |             |               |
|-------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|---------------|
| Processor System  | CPU                     | Xeon X3450/3430                                                                                                                           | Core i7-860 | Core i5-750 | Core i5-660 | Core i3-540 | Pentium G6950 |
|                   | Speed                   | 2.66/2.40 GHz                                                                                                                             | 2.80 GHz    | 2.66 GHz    | 3.33 GHz    | 3.06 GHz    | 2.8 GHz       |
|                   | Integrated Graphics     | -                                                                                                                                         | -           | -           | Yes         | Yes         | Yes           |
|                   | L3 Cache                | 8 MB                                                                                                                                      | 8 MB        | 8 MB        | 4 MB        | 4 MB        | 3 MB          |
|                   | Support Model           | WG2                                                                                                                                       | QG2         | QG2         | QG2/WG2     | QG2/WG2     | QG2/WG2       |
|                   | Socket                  | LGA1156                                                                                                                                   |             |             |             |             |               |
|                   | Chipset                 | QG2: Intel Q57<br>WG2: Intel 3450                                                                                                         |             |             |             |             |               |
| Bus               | BIOS                    | AMI 64 Mbit SPI Flash                                                                                                                     |             |             |             |             |               |
|                   | PCI-Express             | One PCIe x16 or two x8, plus four x1 to backplane (Gen 2.0) (Only WG2 version supports two PCIe x8 to support PCE-7XXX backplanes)        |             |             |             |             |               |
| Memory            | PCI                     | Four 32-bit 33 MHz PCI Masters to Backplane                                                                                               |             |             |             |             |               |
|                   | Technology              | Dual channel (ECC/Non-ECC) DDR3 800/1066/1333 MHz (ECC is only for WG2 version)<br>Note: CPU don't support 512M x 8-bit memory technology |             |             |             |             |               |
|                   | Max. Cap.               | 4 GB per DIMM, total 8 GB, non-ECC for QG2 version; ECC for WG2 version                                                                   |             |             |             |             |               |
| Graphics          | Socket                  | Two 240-pin DDR3 memory sockets                                                                                                           |             |             |             |             |               |
|                   | Onboard                 | Intel HD Graphics (Only the Core i5 6XX, Core i35XX and Pentium G69XX processors are embedded with Intel HD Graphics)                     |             |             |             |             |               |
|                   | VRAM                    | 1 GB maximum shared memory with 2 GB and above system memory installed                                                                    |             |             |             |             |               |
| Ethernet          | Video Output            | 15 pin VGA D-sub connector x1/onboard DVI pin header x 1 (DVI cable optional)                                                             |             |             |             |             |               |
|                   | Interface               | 10/100/1000 Mbps                                                                                                                          |             |             |             |             |               |
|                   | Controller              | LAN1: Intel 82578DM<br>LAN2: Intel 82583V for QG2 version; Intel 82574L for WG2 version                                                   |             |             |             |             |               |
| SATA 2            | Connector               | RJ-45 with LED Connector x 2 for QG2, WG2 versions                                                                                        |             |             |             |             |               |
|                   | Max. Transfer Rate      | 300 MB/s                                                                                                                                  |             |             |             |             |               |
|                   | Channel                 | 6                                                                                                                                         |             |             |             |             |               |
| EIDE              | RAID                    | 0, 1, 5, 10                                                                                                                               |             |             |             |             |               |
|                   | Mode                    | N/A                                                                                                                                       |             |             |             |             |               |
| I/O Interface     | Channel                 | N/A                                                                                                                                       |             |             |             |             |               |
|                   | USB 2.0                 | 9 ports on the SHB, 4 ports to the BP                                                                                                     |             |             |             |             |               |
|                   | Serial                  | 2 RS-232 with pin Headers                                                                                                                 |             |             |             |             |               |
|                   | Parallel                | 1 (EPP/ECP)                                                                                                                               |             |             |             |             |               |
|                   | FDD                     | 1                                                                                                                                         |             |             |             |             |               |
|                   | PS/2                    | 1 (for mouse and keyboard, a Y cable is included in the package)                                                                          |             |             |             |             |               |
| Watchdog Timer    | Mini PCI Express Socket | 1 (1 PCIe x 1 Gen 2.0 and 1 USB 2.0)                                                                                                      |             |             |             |             |               |
|                   | Output                  | System reset                                                                                                                              |             |             |             |             |               |
| Miscellaneous     | Interval                | Programmable, 1~255 sec/min                                                                                                               |             |             |             |             |               |
|                   | Audio Output            | Intel High Definition audio interface (requires an audio extension module, P/N: PCA-AUDIO-HDA1E)                                          |             |             |             |             |               |
| Power Requirement | Test Equipment          | Intel Core i7-860 processor; DDR3 1333 MHz 2 GB x 2                                                                                       |             |             |             |             |               |
|                   | Voltage                 | +12 V      +5 V      +3.3 V      +5 VSB      -12 V      -5 V                                                                              |             |             |             |             |               |
|                   | Current                 | 12.156 A      15.576 A      12.108 A      0.024 A      0 A      0 A                                                                       |             |             |             |             |               |
| Environment       | Operating               | Non-Operating                                                                                                                             |             |             |             |             |               |
|                   | Temperature             | 0 ~ 60° C (32 ~ 140° F) (operating humidity: 40° C @ 85% RH Non-Condensing)                                                               |             |             |             |             |               |
| Physical          |                         | -40 ~ 85° C and 60° C @ 95% RH Non-Condensing                                                                                             |             |             |             |             |               |
|                   | Dimensions              | 338 x 122 mm (13.3" x 4.8")                                                                                                               |             |             |             |             |               |

## Features

- LGA 1156 Intel® Core™ i7/i5/i3/Pentium®/Xeon® processors
- Dual Channel (ECC/Non-ECC) DDR3 1333 MHz up to 8 GB
- Supports mini-PCIe 1.2 interface
- Supports embedded software APIs and Utilities

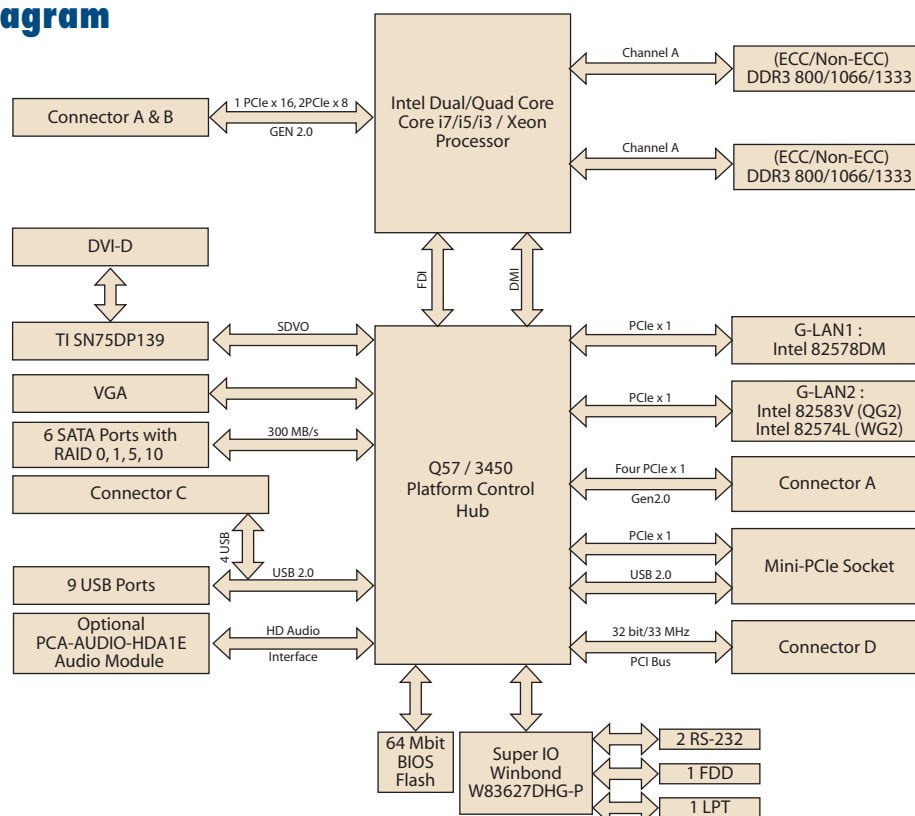
### Software APIs:



### Utilities:



## Board Diagram



## Ordering Information

| Model Name        | Chipset | Memory      | Backplane     | LAN   | VGA | USB | COM |
|-------------------|---------|-------------|---------------|-------|-----|-----|-----|
| PCE-5125QG2-00A1E | Q57     | Non-ECC     | PCE-5XXX      | 2 GbE | Yes | 13  | 2   |
| PCE-5125WG2-00A1E | 3450    | ECC/Non-ECC | PCE-5XXX/7XXX | 2 GbE | Yes | 13  | 2   |

Note 1: Only the Core i5 6XX, Core i3 5XX and Pentium G69XX processors support onboard VGA output, others do not have VGA output and a discrete graphics card is necessary for graphics functions.

Note 2: WG2 version supports all Advantech PCE-5XXX/7XXX backplanes EXCEPT PCE-7B10-04A1E\*.

Note 3: WG2 version: Intel Xeon 34XX CPU can configure 4\*PClex4 on PCE-7B10-04(PPCIE2~5(4\*PClex4); PPCIE1 is from PCH).

## Optional Accessories

| Part Number      | Description                                          |
|------------------|------------------------------------------------------|
| PCA-AUDIO-HDA1E  | Audio extension module                               |
| 1960047831N001   | PCE-5125 Proprietary CPU Cooler                      |
| PCA-5650-00A1E   | Mini PCIe graphic card with Silicon Motion SM750 GPU |
| PCA-5612-00A1E   | PCI graphic card with XGI Z9s GPU                    |
| PCA-COM485-00A1E | COM485 module                                        |
| PCA-TPM-00A1E    | TPM module                                           |

Note: Purchasing PCE-5125's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with PCE-5125.

## Packing List

| Part Number | Description                   | Quantity |
|-------------|-------------------------------|----------|
| 1700003194  | Serial ATA HDD data cable     | x 2      |
| 1703150102  | Serial ATA HDD power cable    | x 2      |
| 1701260305  | COM + printer ports cable kit | x 1      |
| 1700060202  | Keyboard and mouse Y-cable    | x 1      |
| 1700008461  | 4-port USB cable kit          | x 1      |
| 9689000068  | Jumper package                | x 1      |
| 2190000902  | Warranty Card                 | x 1      |
| 2002512510  | Startup manual                | x 1      |
| 2062512500  | Utility CD                    | x 1      |

## Bracket View



PCE-5125QG2-00A1E  
PCE-5125WG2-00A1E