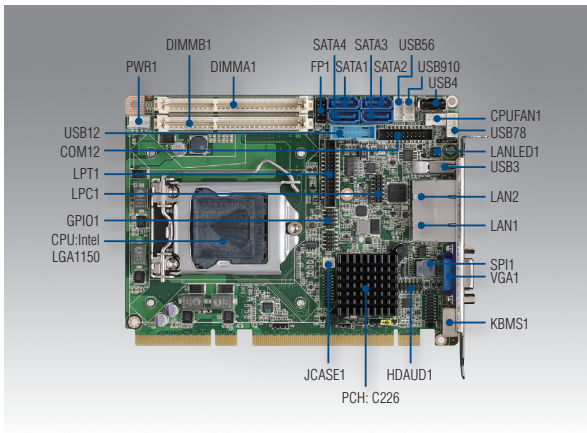


# PCE-4128

**LGA 1150 4th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple independent display/Dual GbE LAN/SATA 3.0/m-SATA/ USB 3.0**



## Features

- Complies with PICMG 1.3
- Supports Intel Xeon E3 1200v3 series, Core i7/i5/i3 LGA1150 processors with C226
- Dual Channel DDR3 1066/1333/1600 up to 16 GB
- Supports PCIe 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports triple displays
- Support dual 10/100/1000 Mbps Ethernet
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

### Software APIs:



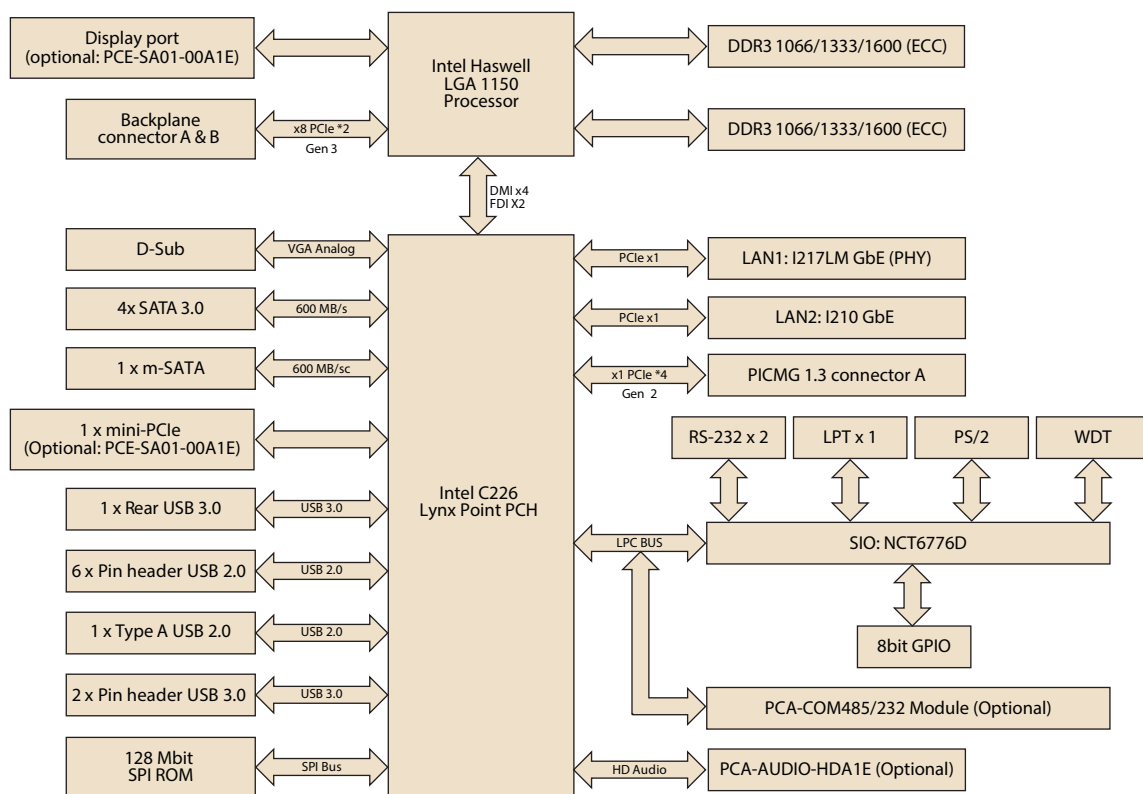
### Utilities:



## Specifications

|                    |                      |   |           |           |           |         |         |           |   |         |         |         |
|--------------------|----------------------|---|-----------|-----------|-----------|---------|---------|-----------|---|---------|---------|---------|
| Processor System   | CPU                  | E3-1275v3   | E3-1225v3 | E3-1268v3 | i5-4570TE | i3-4360 | i3-4330 | i3-4330TE | G3420   | G3320TE | G1820   | G1820TE |
|                    | Base Frequency       | 3.5GHz  | 3.2GHz    | 2.3GHz    | 2.7GHz    |         | 3.5GHz  | 2.4GHz    | 3.2 GHz                                       | 2.3 GHz | 2.7 GHz | 2.2 GHz |
|                    | L3 Cache             | 8MB   | 8MB       | 8MB       | 4MB       |         | 4MB     | 4MB       | 3MB   | 3MB     | 2MB     | 2MB     |
|                    | SKU/Chipset          | Intel C226  |           |           |           |         |         |           |   |         |         |         |
| Bus                | BIOS                 | AMI 128Mbit SPI Flash   |           |           |           |         |         |           |   |         |         |         |
|                    | PCI-Express          | Two x8 or one x16, plus four x1 to backplane  |           |           |           |         |         |           |   |         |         |         |
| Memory             | Technology           | Dual channel DDR3 ECC 1066/1333/1600 MHz (ECC function enable depends on processor support)     |           |           |           |         |         |           |   |         |         |         |
|                    | Max. Cap.            | 16 GB (8 GB per DIMM)   |           |           |           |         |         |           |   |         |         |         |
|                    | Socket               | DDR3 204-pin SO-DIMM X2   |           |           |           |         |         |           |   |         |         |         |
| Graphics           | Controller           | Chipset integrated Intel GT2 P4600 or GT2 4600 or GT1 HD graphics (Depends on CPU support)      |           |           |           |         |         |           |   |         |         |         |
|                    | VRAM                 | Shared system memory is subject to OS   |           |           |           |         |         |           |   |         |         |         |
|                    | CRT                  | Supports resolution up to 1920 x 1200 pixel at 60MHz  |           |           |           |         |         |           |   |         |         |         |
|                    | DP                   | Supports resolution up to 3840 x 2160 @ 60Hz  |           |           |           |         |         |           |   |         |         |         |
| Ethernet           | Triple Display       | CRT + DP (Optional: PCE-SA01-00A1E)   |           |           |           |         |         |           |   |         |         |         |
|                    | Interface            | 10/100/1000 Mbps  |           |           |           |         |         |           |   |         |         |         |
|                    | Controller           | LAN 1: Intel I217LM<br>LAN 2: Intel I210AT  |           |           |           |         |         |           |   |         |         |         |
| Rear I/O           | Connector with LED   | RJ45 x 2  |           |           |           |         |         |           |   |         |         |         |
|                    | USB 3.0              | 1   |           |           |           |         |         |           |   |         |         |         |
|                    | Ethernet             | 2   |           |           |           |         |         |           |   |         |         |         |
|                    | VGA                  | 1   |           |           |           |         |         |           |   |         |         |         |
|                    | PS/2                 | 1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)  |           |           |           |         |         |           |   |         |         |         |
| Internal Connector | USB                  | Seven USB2.0 (6 pin headers + 1 USB Type A);<br>Three USB3.0 (1 on rear IO + 2 pin header)      |           |           |           |         |         |           |   |         |         |         |
|                    | SATA 3.0             | 4 (600 MB/sec, supports S/W RAID 0, 1, 5, 10)   |           |           |           |         |         |           |   |         |         |         |
|                    | COM                  | 2   |           |           |           |         |         |           |   |         |         |         |
|                    | Parallel             | 1   |           |           |           |         |         |           |   |         |         |         |
|                    | GPIO                 | 8bit  |           |           |           |         |         |           |   |         |         |         |
| Watchdog Timer     | Output               | System reset  |           |           |           |         |         |           |   |         |         |         |
|                    | Interval             | Programmable 1-255 sec  |           |           |           |         |         |           |   |         |         |         |
| Miscellaneous      | Audio                | Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E) |           |           |           |         |         |           |   |         |         |         |
| Power Requirement  | Test environment     | Intel Xeon E3-1275 v3 (3.5GHz), DDR3 1600 8GB *2  |           |           |           |         |         |           |   |         |         |         |
|                    | Voltage              | 12V   | 5V        | 3.3V      | 5VSB      | -5V     | -12V    |           |   |         |         |         |
|                    | Current              | 7.36  | 0.96      | 0.83      | 0.13      | 0       | 0       |           |   |         |         |         |
| Environment        | Operating            | Non-operating   |           |           |           |         |         |           |   |         |         |         |
|                    | Temperature/Humidity | 0 ~ 60° C (32~140° F); Depends on CPU frequency and cooler solution                             |           |           |           |         |         |           | -40 ~ 85° C and 60° C @ 95% RH Non-Condensing |         |         |         |
| Physical           | Operating humidity   | 40° C @ 85% RH Non-Condensing   |           |           |           |         |         |           |   |         |         |         |
|                    | Dimensions           | 167.64 mm x 126.39 mm (6.6" x 4.98")  |           |           |           |         |         |           |   |         |         |         |

## Block Diagram



\*Display type depends on optional stack board

## Ordering Information

| Part Number      | PCH  | Memory | Backplane            | LAN | VGA | DP | COM   | SATA III | USB 2.0 | USB 3.0 | m-SATA | mini-PCIe | S/W Raid | AMT |
|------------------|------|--------|----------------------|-----|-----|----|---|----------|---------|---------|--------|-----------|----------|-----|
| PCE-4128G2-00A1E | C226 | ECC    | PCE-3BXX<br>PCE-4BXX | 2   | 1   | 1* | RS-232 x2 onboard<br>Optional RS-422/485 x4,<br>or RS-232 x4 via module | 4        | 7       | 3       | 1      | 1*        | Yes      | Yes |

\*Optional: PCE-SA01-00A1E. PCE-SA01-00A1E is compatible with IPC-3026/IPC-6806S/ACP-4D00/ACP-4020, but not compatible with IPC-3012.

## Optional Accessories

| Part Number      | Description  |
|------------------|--|
| PCA-COM485-00A1E | 4 x RS-244/485 module  |
| PCA-COM232-00A1E | 4 x RS-232 module  |
| PCA-AUDIO-HDA1E  | Audio module with Realtek ALC-888  |
| PCA-AUDIO-HDB1E  | Audio module with Realtek ALC-892  |
| PCA-TPM-00A1E    | TPM module (Trust Platform management)   |
| PCE-SA01-00A1E   | I/O extension stack board  |
| 1960047831N001   | 2U cooler for Xeon E3-1275v3, E3-1225v3, E3-1268v3, i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE |
| 1960053207N001   | 1.5U cooler for i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE                                     |
| 1960053065N001   | 1U blower for i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE  |

## Packing List

| Part Number   | Description                | Quantity |
|---------------|----------------------------|----------|
| 1700003194    | Serial ATA HDD data cable  | x1       |
| 1703150102    | Serial ATA HDD power cable | x1       |
| 1700008762    | 2-port COM cable           | x1       |
| 1700002223    | 1-port LPT cable           | x1       |
| 1700060202    | Keyboard and mouse Y-cable | x1       |
| 1700014398    | 4-port USB cable kit       | x1       |
| 1700020277-01 | 2 ports USB3.0 cable W/BKT | x1       |
| 1703040100    | Power converter            | x1       |
| 9689000002    | Jumper package             | x1       |
| 2190000902    | Warranty Card              | x1       |
| 2006302800    | Startup manual             | x1       |
| 2066302800    | Utility CD                 | x1       |

## Bracket View



PCE-4128G2-00A1E