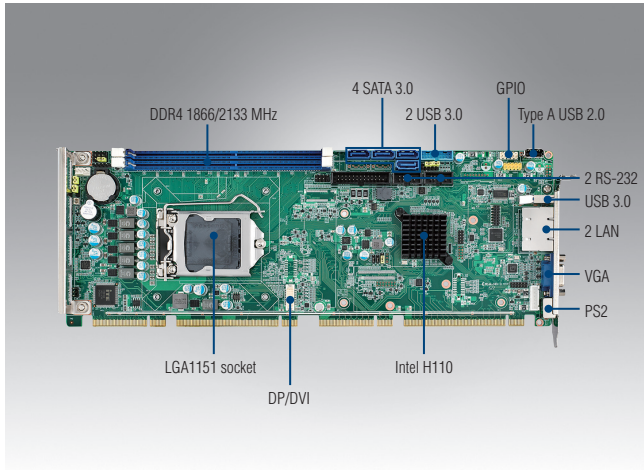


PCE-5029

LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, Dual GbE, and Dual Displays



CE FCC

Features

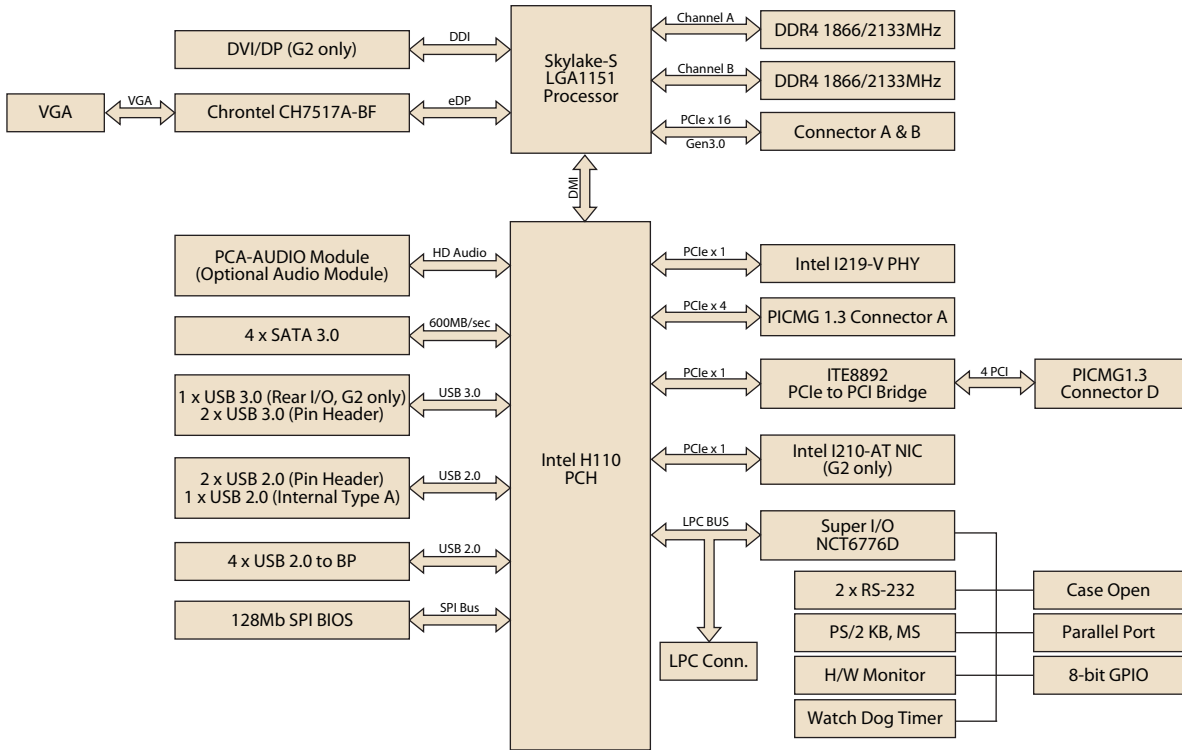
- Intel® Core™ i7/i5/i3 LGA1151 processor with H110 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, USB 3.0, and SATA 3.0 slots
- Supports CRT and DVI-D/DP display (with optional cable)
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note 1: Intel 7th generation processors only support Windows 10 (64-bit).

Specifications

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--------------------|--|--------------|---------|-----------|---------|----------|---------|-----------|----------|-----------|---------|-----------|---------|---------|---------|--|--|--|--|--|
| Processor System | CPU | i7-7700 | i7-7700T | i7-6700 | i7-6700TE | i5-7500 | i5-7500T | i5-6500 | i5-6500TE | i3-7101E | i3-7101TE | i3-6100 | i3-6100TE | G4400 | G4400TE | G3900 | G3900TE | | | | |
| | Speed | 3.6GHz | 2.9GHz | 3.4 GHz | 2.4 GHz | 3.4GHz | 2.7GHz | 3.2 GHz | 2.3 GHz | 3.9GHz | 3.4GHz | 3.7 GHz | 2.7 GHz | 3.3 GHz | 2.9 GHz | 2.8 GHz | 2.6 GHz | | | | |
| | Cache | 8MB | 8MB | 8 MB | 8 MB | 6MB | 6MB | 6 MB | 6 MB | 3MB | 3MB | 4 MB | 4 MB | 3 MB | 3 MB | 2 MB | 2 MB | | | | |
| | Socket | LGA 1151 | | | | | | | | | | | | | | | | | | | |
| | Chipset | Intel H110 | | | | | | | | | | | | | | | | | | | |
| Bus | BIOS | AMI 128Mbit SPI Flash | | | | | | | | | | | | | | | | | | | |
| | PCI-Express | 1 x PCIe x16 and 1 x PCIe x4 to backplane | | | | | | | | | | | | | | | | | | | |
| Memory | PCI | 4 x PCI master to backplane, 32-bit, 33 MHz | | | | | | | | | | | | | | | | | | | |
| | Technology | Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz | | | | | | | | | | | | | | | | | | | |
| | Max. Capacity | 32 GB (16 GB per DIMM) | | | | | | | | | | | | | | | | | | | |
| Graphics | Socket | 2 x DDR4 288-pin DIMM | | | | | | | | | | | | | | | | | | | |
| | Controller | Chipset integrated with Intel® HD Graphics | | | | | | | | | | | | | | | | | | | |
| | VRAM | Shared system memory is subject to OS | | | | | | | | | | | | | | | | | | | |
| | CRT | Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz | | | | | | | | | | | | | | | | | | | |
| | DVI-D | Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz | | | | | | | | | | | | | | | | | | | |
| | Display Port | Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz | | | | | | | | | | | | | | | | | | | |
| Ethernet | Dual Display | CRT+DP/CRT+DVI | | | | | | | | | | | | | | | | | | | |
| | Interface | 10/100/1000 Mbps | | | | | | | | | | | | | | | | | | | |
| | Controller | LAN 1: Intel® I219-V LAN 2: Intel® I210-AT | | | | | | | | | | | | | | | | | | | |
| Rear I/O | Connector with LED | RJ45 x 2 | | | | | | | | | | | | | | | | | | | |
| | USB 3.0 | 1 (G2 SKU) | | | | | | | | | | | | | | | | | | | |
| | Ethernet | 1 (VG SKU); 2 (G2 SKU) | | | | | | | | | | | | | | | | | | | |
| | VGA | 1 | | | | | | | | | | | | | | | | | | | |
| | Serial | 1 (VG SKU) | | | | | | | | | | | | | | | | | | | |
| | PS/2 | 1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse) | | | | | | | | | | | | | | | | | | | |
| Internal Connector | USB | 7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 2 x USB 3.0 (pin header) | | | | | | | | | | | | | | | | | | | |
| | SATA | 4 | | | | | | | | | | | | | | | | | | | |
| | DP/DVI-D | 1 (Pin header) | | | | | | | | | | | | | | | | | | | |
| | COM | 2 (G2 SKU) 1 (VG SKU) | | | | | | | | | | | | | | | | | | | |
| | GPIO | 8 bits | | | | | | | | | | | | | | | | | | | |
| | Watchdog Timer | Output | System reset | | | | | | | | | | | | | | | | | | |
| Interval | | Programmable 1-255 sec | | | | | | | | | | | | | | | | | | | |
| Miscellaneous | Audio | Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E) | | | | | | | | | | | | | | | | | | | |
| Power Requirement | Test Environment | i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133 | | | | | | | | | | | | | | | | | | | |
| | Voltage | +12V | | | +5V | | | +3.3V | | | +5Vsb | | | | | | | | | | |
| | Current | 2.64A | | | 1.23A | | | 0.19A | | | 0.09A | | | | | | | | | | |
| Environment | Operating | | | | | | | | | | | | | | | | Non-operating | | | | |
| | Temperature | 0 ~ 60 °C (dependent on CPU and cooler solution) | | | | | | | | | | | | | | | -40 ~ 85 °C | | | | |
| | Humidity | 40 °C @ 85% relative humidity (non-condensing) | | | | | | | | | | | | | | | 60 °C @ 95% relative humidity (non-condensing) | | | | |
| Physical | Dimensions (L x H) | 338 x 122 mm (13.3" x 4.8") | | | | | | | | | | | | | | | | | | | |

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | Backplane | Display | USB 3.0 | USB 2.0 | COM | GbE LAN | AMT | SATA | SW RAID | Intelligent System Module Support |
|------------------|---------|---------|-----------|---------------|---------|---------|-----|---------|-----|------|---------|-----------------------------------|
| PCE-5029G2-00A5 | H110 | Non-ECC | PCE-5BXX | VGA + DVI/DP* | 3 | 7 | 2 | 2 | No | 4 | No | Yes |
| PCE-5029VG-00A2E | H110 | Non-ECC | PCE-5BXX | VGA | 2 | 7 | 2 | 1 | No | 4 | No | No |

*Note: DP cable (P/N: PCE-DP10-00A1E) and DVI-D

Packing List

| Part Number | Description | Quantity |
|-------------|----------------------------|----------|
| 1700003194 | Serial ATA HDD data cable | x2 |
| 1700060202 | Keyboard and mouse Y-cable | x1 |
| 1701090401 | 1-port COM cable kit | x1 |
| 1700002204 | 2-port USB 2.0 cable kit | x1 |
| 2190000902 | Warranty card | x1 |
| 2001512912 | Startup manual | x1 |
| 2061512900 | Utility CD | x1 |

Optional Accessories

| Part Number | Description |
|------------------|--|
| 1960049408N001 | CPU heat sink for 1U Chassis and 35W TDP |
| 1960050255N001 | CPU cooler for 2U Chassis and 95W TDP |
| 1960052651N021 | CPU cooler for 2U/4U Chassis and 80W TDP |
| 1700002204 | 2-port USB 2.0 cable kit |
| 1700028292-01 | 2-port USB 3.0 cable w/ BKT (30 cm) |
| 1701090401 | 1-port COM cable kit |
| 1701092300 | 2-port COM cable kit |
| PCE-DP10-00A1E | DP to DP cable kit |
| 1700021831-01 | DP to DVI-D cable kit |
| PCA-TPM-00B1E | TPM 2.0 module |
| PCA-AUDIO-HDB1E | Audio module |
| PCA-COM232-00A2 | 4-port RS-232 module via LPC interface |
| PCA-COM485-00A1E | 4-port RS-422/485 module via LPC interface |

I/O View



PCE-5029G2-00A5

PCE-5029VG-00A2E