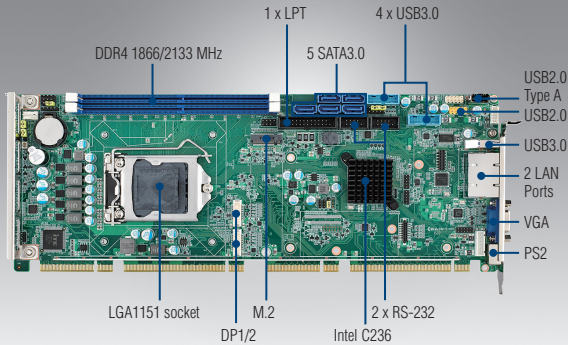


# PCE-7129

## LGA1151 6th and 7th Generation Intel® Xeon®/Core™ i7/i5/i3/Pentium® LGA1151 System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays



### Features

- Intel® Xeon® E3-1200v5/Core™ i7/i5/i3 LGA1151 processor with C236 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, M.2, USB 3.0, SATA 3.0, and SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DVI-D/DP display (with optional cable)
- Supports out-of-band remote management with AMT 11.0
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

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

Quiet

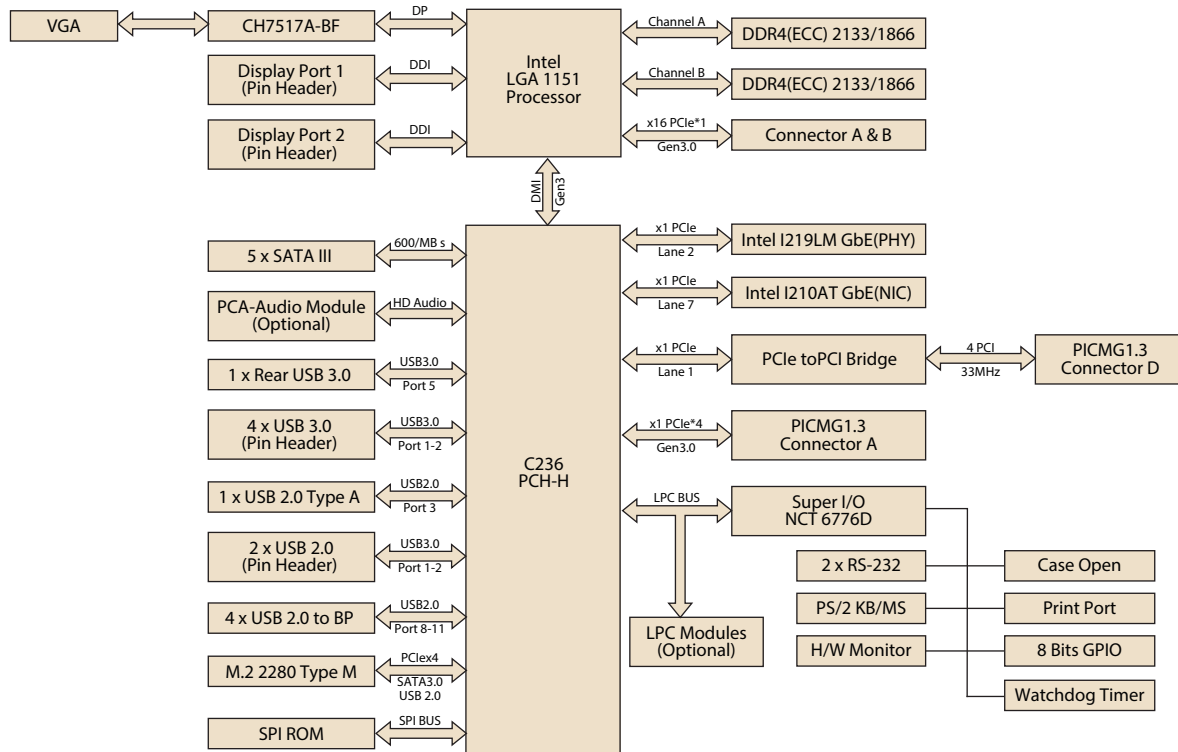
CE FCC

### Specifications

|                    |                         |                                                                                                                                                          |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|--------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|------------|---------|----------|---------|-----------|---------|----------|---------|-----------|----------|-----------|------------------------------------------------|-----------|--------|---------|--------|---------|
| Processor System   | CPU                     | E3-1275v6                                                                                                                                                | E3-1275v5 | E3-1225v5 | E3-1268Lv5 | 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 |
|                    | Base Frequency          | 3.8 GHz                                                                                                                                                  | 3.6GHz    | 3.3GHz    | 2.4GHz     | 3.6 GHz | 2.9 GHz  | 3.4GHz  | 2.4GHz    | 3.4 GHz | 2.7 GHz  | 3.2GHz  | 2.3GHz    | 3.9 GHz  | 3.4 GHz   | 3.7GHz                                         | 2.7GHz    | 3.3GHz | 2.9GHz  | 2.8GHz | 2.6GHz  |
|                    | L3 Cache                | 8 MB                                                                                                                                                     | 8MB       | 6MB       | 8MB        | 8MB     | 8 MB     | 8MB     | 8MB       | 6 MB    | 6 MB     | 6MB     | 6MB       | 3 MB     | 3 MB      | 4MB                                            | 4MB       | 3MB    | 3MB     | 2MB    | 2MB     |
|                    | SKU/Chipset             | Intel® C236                                                                                                                                              |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | BIOS                    | AMI® SPI Flash 128 Mbit                                                                                                                                  |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
| Bus                | PCI-Express             | 1 x PCIe x16/2 x PCIe x8 and 1 x PCIe x4 to backplane                                                                                                    |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | PCI                     | 4 x PCI master to backplane, 32-bit, 33 MHz                                                                                                              |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
| Memory             | Technology              | Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz (supports x8 DDR4 1024 M) (Note: Intel ECC-supported processor must be selected to enable ECC function) |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Max. Capacity           | 32 GB (16 GB per DIMM)                                                                                                                                   |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Socket                  | 2 x DDR4 288-pin DIMM                                                                                                                                    |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
| Graphics           | 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                                                                                                  |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Triple Display          | CRT+DP/DVI-D+DP/DVI-D                                                                                                                                    |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
| Ethernet           | Interface               | 10/100/1000 Mbps                                                                                                                                         |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Controller              | LAN 1: Intel® I219-LM<br>LAN 2: Intel® I210-AT                                                                                                           |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Connector with LED      | 2 x RJ45                                                                                                                                                 |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
| Rear I/O           | 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                     | 7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane)<br>4 x USB 3.0 (pin header)                                                                   |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | SATA (SW Raid 0,1,5,10) | 5                                                                                                                                                        |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | M.2 (2280 Type M)       | 1 (supports SATA 3.0 or PCIe x4)                                                                                                                         |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | DP/DVI-D                | 2 (Pin header)                                                                                                                                           |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | COM                     | 2                                                                                                                                                        |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Parallel                | 1                                                                                                                                                        |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | IrDA                    | 1                                                                                                                                                        |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | GPIO                    | 8bit                                                                                                                                                     |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
| 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                                                                                                                                                |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |
|                    | Temperature             | 0 ~ 60 °C (dependent on CPU and cooler solution)                                                                                                         |           |           |            |         |          |         |           |         |          |         |           |          |           | Non-Operating<br>-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")                                                                                                                              |           |           |            |         |          |         |           |         |          |         |           |          |           |                                                |           |        |         |        |         |

## PCE-7129

### Block Diagram



### Ordering Information

| Part Number      | PCH  | Memory      | Backplane            | LAN | VGA | DP/DVI-D | COM | SATA III | M.2 | USB 2.0 | USB 3.0 | S/W Raid | AMT |
|------------------|------|-------------|----------------------|-----|-----|----------|-----|----------|-----|---------|---------|----------|-----|
| PCE-7129G2-00A1E | C236 | ECC/Non-ECC | PCE-5BXX<br>PCE-7BXX | 2   | Yes | 2*       | 2   | 5        | 1   | 7       | 5       | Yes      | Yes |

Note: DP/DVI-D cable is optional

### Packing List

| Part Number   | Description                   | Quantity |
|---------------|-------------------------------|----------|
| 1700003194    | Serial ATA HDD data cable     | x2       |
| 1700022749-11 | Serial ATA HDD power cable    | x1       |
| 1701260305    | COM + printer ports cable kit | x1       |
| 1700060202    | Keyboard and mouse Y-cable    | x1       |
| 1700002204    | 2-port USB cable kit          | x1       |
| 9689000068    | Jumper package                | x1       |
| 2190000902    | Warranty card                 | x1       |
| 2001512910    | Startup manual                | x1       |
| 2061512900    | Utility CD                    | x1       |

### Optional Accessories

| Part Number      | Description                         |
|------------------|-------------------------------------|
| 1960052651N021   | 2U CPU cooler (PWM fan)             |
| 1960049408N001   | CPU cooler for 1U chassis           |
| PCA-AUDIO-HDB1E  | Audio module                        |
| PCA-TPM-00A1E    | TPM 1.2 module                      |
| PCA-COM232-00A1E | 4-port RS-232 LPC module            |
| PCA-COM485-00A1E | 4-port RS-422/485 LPC module        |
| 1700020277-01    | 2-port USB 3.0 cable w/ BKT (30 cm) |
| 1700021831-01    | DP to DVI-D cable w/ BKT            |
| PCE-DP10-00A1E   | DP to DP cable w/ BKT               |
| PCA-TPM-00B1E    | TPM 2.0 module                      |

### I/O View



PCE-7129G2-00A1E