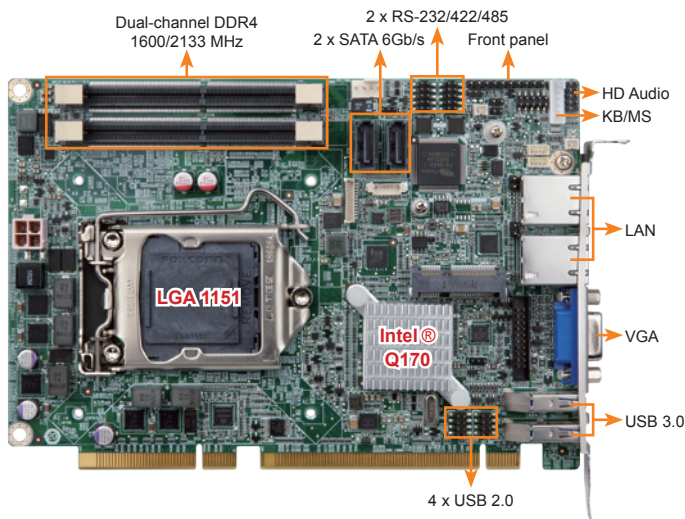


# HPCIE-Q170

Half-size PICMG 1.3 CPU Card supports LGA 1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® CPU with Intel® Q170, DDR4 SO-DIMM, VGA/iDP, Dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, mSATA, HD Audio, Intel® AMT and RoHS



## Specifications

- ◆ CPU  
LGA 1151 Intel® 6th generation Core™ i7/i5/i3, Pentium® or Celeron® processor
- ◆ PCH  
Intel® Q170
- ◆ Memory  
Two 260-pin 1867/2133 MHz dual-channel DDR4 non-ECC unbuffered SO-DIMMs support up to 32 GB memory
- ◆ BIOS  
UEFI BIOS
- ◆ Graphics Engine  
Intel® HD Graphics Gen 9 supports DX11/12, OpenCL 2.x and OpenGL 4.3/4.4 Decode/Encode for HEVC, VP8, VP9, VDENC
- ◆ Display Output  
1 x VGA (via Chrontel CH7517A, up to 1920x1200@60 Hz)  
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60 Hz)
- ◆ Ethernet  
LAN1: Intel® I219LM Clarkville-V with Intel® AMT 11.0 support  
LAN2: Intel® I211 PCIe controller
- ◆ External I/O  
1 x VGA  
2 x RJ-45  
2 x USB 3.0
- ◆ Internal I/O  
1 x 6-pin wafer for KB/MS 1 x iDP  
2 x RS-232/422/485 4 x USB 2.0 (by pin header)  
2 x SATA 6Gb/s (SATA0, SATA1) (Q170 supports RAID 0, 1)
- ◆ Front Panel  
1 x Front panel (power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED  
2 x LAN LED (1x2 pin)
- ◆ Audio  
Support 7.1-channel HD Audio by IEI AC-KIT-892HD kit
- ◆ SMBus  
1 x SMBus (1x4 pin)
- ◆ I<sup>2</sup>C  
1 x I<sup>2</sup>C (1x4 pin)
- ◆ Expansion  
16-lane PCIe signal from CPU via golden finger (supports x16, or x8 + x8, or x4 + x4 + x8)  
4-lane PCIe signal from Q170 via golden finger  
1 x PCIe Mini supports mSATA & USB 2.0
- ◆ Watchdog Timer  
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O  
1 x 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector  
1 x 4-pin smart fan connector (CPU fan)
- ◆ Power Supply  
5V/12V, AT/ATX support
- ◆ Power Consumption  
5V@0.15A, 12V@8.39A, 3.3V@0.11A, 5VSB@0.21A  
(Intel® Core™ i7-6700K 4.0GHz with two 16 GB 2133 MHz DDR4 memory)
- ◆ Operating Temperature  
-20°C ~ 60°C
- ◆ Operating Humidity  
5% ~ 95%, non-condensing
- ◆ Dimensions  
169 mm x 126 mm
- ◆ Weight  
GW: 1000g / NW: 420g

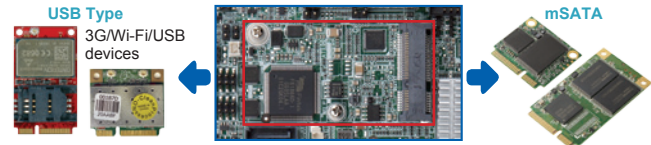
## Intel® 6th generation Core™ CPU + Intel® Q170 support 3 controllers of PCI Express Gen 3 Preliminary

Number of PCIe Controller	Configuration
1	PCIe x16
2	PCIe x8, PCIe x8
3	PCIe x4, PCIe x4, PCIe x8

Sets PCIe x16 signal via BIOS

PEG port configuration	
USB Power SW1	[1 x8, 2 x4 PCIe]
USB Power SW2	[+5V DUAL]

PCIe Mini slot provides mSATA and USB signal for full-size or half-size mSATA SSD and wireless LAN card.



## Features

- PICMG 1.3 half-size CPU card
- LGA 1151 Intel® 6th generation Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- Two 260-pin 1867/2133 MHz dual-channel DDR4 SO-DIMMs support up to 32 GB
- Supports dual independent display by VGA & internal DP pin header
- PCIe Mini supports mSATA & USB 2.0
- Intel® PCIe GbE with Intel® AMT 11.0 supported
- Supports RAID 0, 1 function via SATA 6Gb/s
- IEI jumper-less function

## Packing List

- 1 x HPCIE-Q170 single board computer
- 1 x SATA cable (P/N: 32000-062800-RS)
- 1 x QIG (Quick Installation Guide)
- 1 x Utility CD

## Ordering Information

Part No.	Description
HPCIE-Q170-R10	Half-size PICMG 1.3 CPU card supports LGA 1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® CPU with Intel® Q170, DDR4 SO-DIMM, VGA, iDP, dual Intel® PCIe GbE, USB 3.0, mSATA, SATA 6Gb/s, PCIe Mini, HD Audio, Intel® AMT and RoHS
19800-000075-RS	KB/MS cable with bracket
32102-000100-200-RS	SATA power cable
32200-074800-RS	RS-422/485 cable, 200mm
AC-KIT-892HD-R10	7.1-channel HD Audio kit with Realtek ALC892 supports dual audio streams
CF-1156A-RS-R11	High-performance LGA 1155/LGA 1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA 1155/LGA 1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA 1155/LGA 1156 cooler kit, 1U chassis compatible, 65W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
SAIDE-KIT01-R10	SATA to IDE/CF converter board