HPCIE-Q470

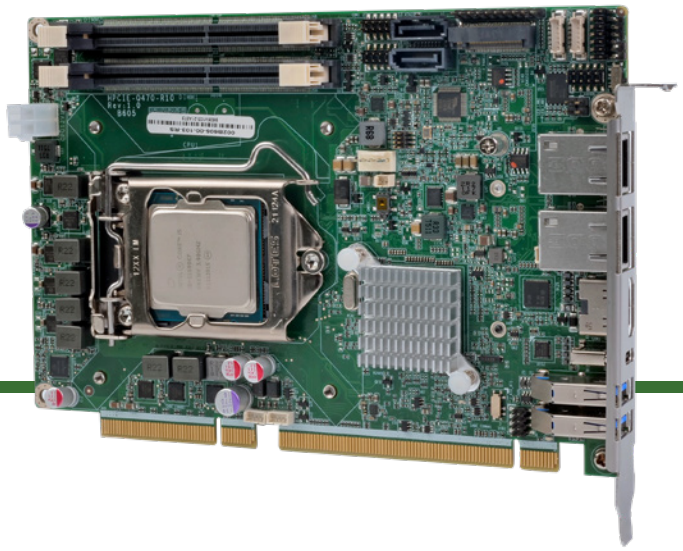
Half-size PICMG 1.3 CPU Card support Intel® 10th/11th Gen. Core™ i9/i7/i5/i3,Celeron® , Pentium® processor

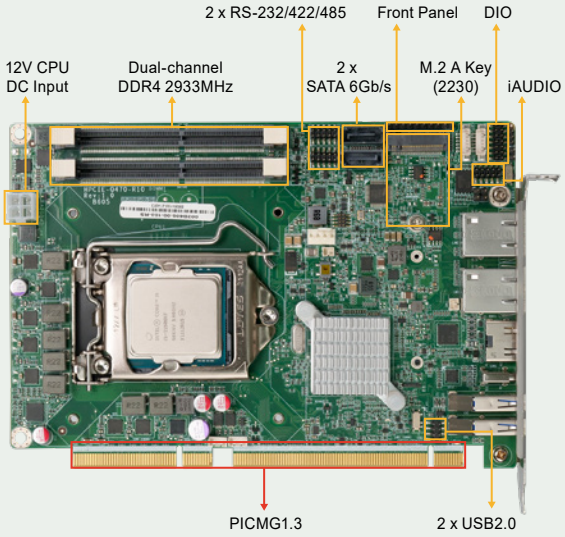
- Support Intel® Q470/Q470E chipset
- Support Dual Intel® 2.5GbE
- Support HDMI display
- Support 16-lanes PCIe signal from CPU via golden finger,
  4-lanes PCIe signal from PCH via golden finger, M.2 A key, M.2 M key expansion
- Support 1 x USB 3.2 Gen2 (10Gb/s), 2 x USB 3.2 Gen1 (5Gb/s), 2 x USB 2.0
- Support 2 x RS-232/422/485, 2 x SATA interface

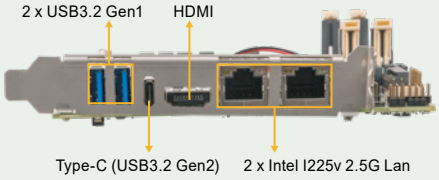
High Performance Capability with multi-tasking function

HPCIE-Q470

Half-size PICMG 1.3 CPU Card supports LGA1200 Intel® 10th/11th Gen. Core™ i9/i7/i5/i3,Pentium®,Celeron® Processor with Q470, DDR4 SO-DIMM, HDMI, Dual Intel® 2.5GbE, USB 3.2 Gen2, SATA 6Gb/s, M.2, iAUDIO, and RoHS







Support Intel® 10th/11th generation processor

Support Intel® 10th/11th generation Core™ i9/i7/i5/i3, Celeron® Pentium® Serise prcessor (LGA 1200 slot), release super performance,and can handle multiple tasks at the same time

Support Intel® I225V 2.5GbE Ethernet Controller

Support dual RJ45 network interfaces, based on Intel® I225V 2.5GbE network controller core Chip to achieve network transmission rate up to 2.5GbE

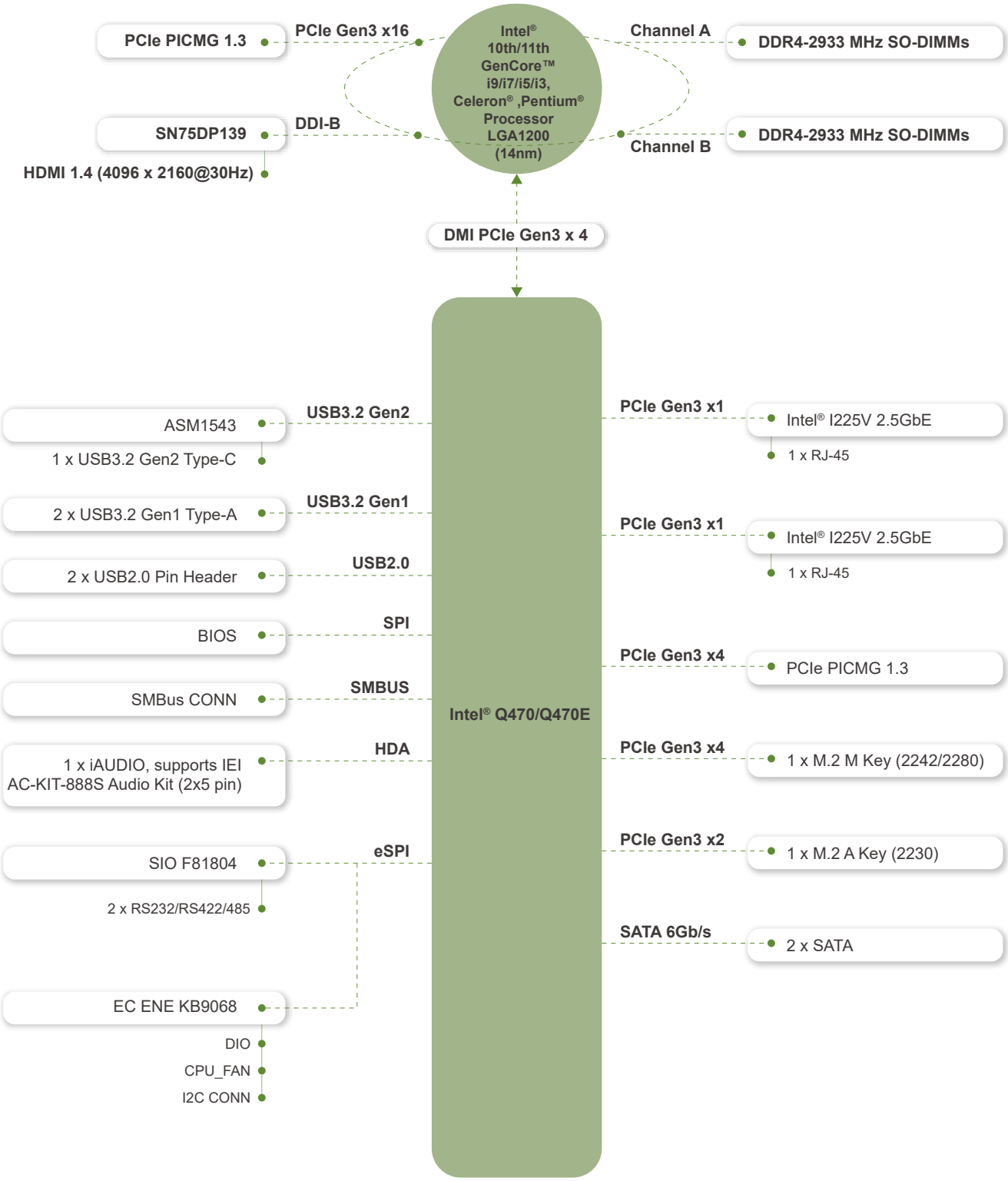
Support multiple interface

The I/O layout is 1 x Type-C (10Gb/s), 2 x USB 3.2 Gen1 (5Gb/s), providing faster transmission rates. The motherboard has 2 x USB 2.0 ports for wiring expansion, M.2 A key for Bluetooth, WiFi module expansion, and M.2 M key for NVME storage expansion

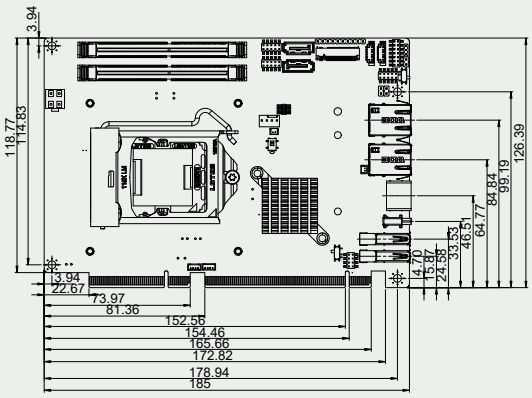
Support multiple baseboard options

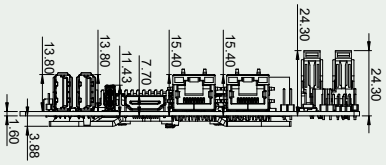
Support 16-lanes PCIe signal from CPU via golden finger, 4-lanes PCIe signal from PCH via golden finger, and the backplane can be selected according to requirements

HPCIE-Q470 Block Diagram



Dimensions





Optional accessories

CB-USB02A-RS

CF-115XA-R10

CF-1156C-R20

CF-1156D-R20

CF-115XE-R10

AC-KIT-888S-R10

32102-000100-200-RS

32205-002700-200-RS

Specifications

Model	Description
CPU	LGA1200 Intel® 10th/11th Gen. Core™ i9/i7/i5/i3,Pentium® and Celeron® Processor (Support up to 65w)
Chipset	Intel® Q470/Q470E
BIOS	AMI UEFI BIOS
Memory	2 x 260-pin 2933 MHz Dual-channel DDR4 SO-DIMM,support up to 64G
Graphics Engine	10th Generation CML-S up to Intel® UHD Graphics 630, Intel® HD 9th Generation Display Engine based on 16 low power execution units supporting DX2015, OpenGL 5.X and OpenCL2.x, ES 2.0 11th Generation RKL-SXe 12th Generation Graphics Architecture, Intel® UHD Graphics 750,supports 12-bit end-to-end,support AV1, VP9,HEVC 12b, HDR10, FP16
Display Output	1 x HDMI 1.4(up to 4096 x 2160@30Hz)
Ethernet	LAN1: Intel® I225V 2.5GbE controller LAN2: Intel® I225V 2.5GbE controller
External I/O Interface	2 x USB3.2 Gen1 (5Gb/s) 1 x USB3.2 Gen2 (10Gb/s) by USB Type-C
Internal I/O Interface	2 x SATA 6Gb/s (Support RAID 0/1) 2 x USB 2.0 (2x4 pin, P=2.0) 2 x RS-232/422/485 (2x5 pin, P=2.0) (RS-485 support AFC)
SMBus/ I²C	1 x SMBus (1x4 pin)
I²C	1 x I²C (1x4 pin)
Audio	1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2 x 5 pin)
Front Panel	1 x Front panel connector (1x10 pin) Power LED, HDD LED, Power Button, Reset Button
LAN LED	2 x LAN LED (1 x 2 pin)
Expansion	16-lanes PCIe signal from CPU via golden finger (supports x16, or x8 + x8, or x4 + x4 + x8) 4-lanes PCIe signal from PCH via golden finger (supports x4, or x1 + x1 + x1 + x1) 1 x M.2 A key (2230) with PCIe Gen3 x2/USB 2.0 1 x M.2 M key (2280/2242) with PCIe Gen3 x4
Digital I/O	1 x 12-bit digital I/O (2x7 pin)
TPM	Intel® PTT (TPM 2.0)
Fan Connector	1 x CPU Fan Connector (1x4 pin)
Chassis Open	1 x Chassis intrusion (1x2 pin)
Power Supply	5V/12V, ATX/AT power supply Support AT/ATX mode ErP/EuP Compliant
Watchdog Timer	Software programmable, support 1~255 sec. system reset
Power Consumption	3.3V@0.11A, 5V@1.12A, 12V@13.31A, 5VSB@0.15A (Intel® Core™ i9-11900K CPU with 4 GB 3200 MHz DDR4 memory)
Operating Temperature	0°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~ 95%,non-condensing
Dimension	185 mm x 126 mm
Weight	GW:1000g / NW:420g
Certification	CE/FCC compliant

Packing List

1 x HPCIE-Q470 single board computer	1 x SATA cable
1 x Mini jumper pack	1 x QIG

Ordering Information

HPCIE-Q470-R10	Half-size PICMG 1.3 CPU Card supports 14nm LGA1200 Intel® 10th/11th Generation Core™ i9/i7/i5/i3, Celeron® and Pentium® processor with Intel® Q470,DDR4 SO-DIMM,Dual Intel® 2.5GbE,USB 3.2, SATA 6Gb/s,M.2, IAUDIO and RoHS

Optional Accessories

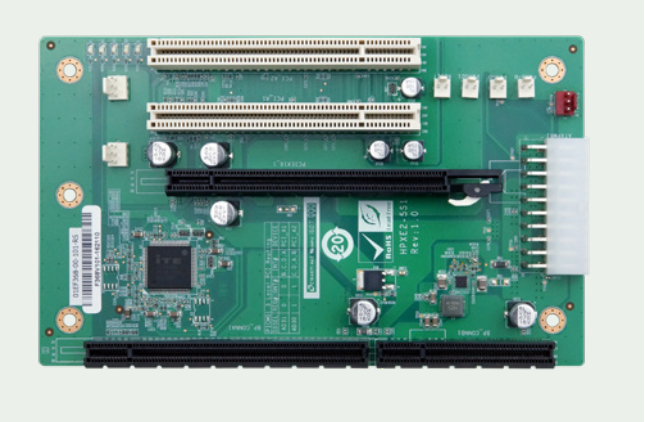
CB-USB02A-RS	Dual port USB cable with bracket,300mm,P=2.0
32102-000100-200-RS	SATA power cable,MOLEX 5264-4P to SATA15P
32205-002700-200-RS	RS-232/422/485 cable,200mm,P=2.0
CF-115XA-R10	High-performance LGA1155/1156/1200 cooler kit, 1U chassis compatible 73W
CF-1156C-R20	LGA1155/1156/1200 cooler kit, 1U chassis compatible, 45W
CF-1156D-R30	LGA1155/1156/1200 cooler kit, 1U chassis compatible, 65W
CF-115XE-R10	High-performance LGA1155/1156/1200 cooler kit, 95W
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board,RoHS

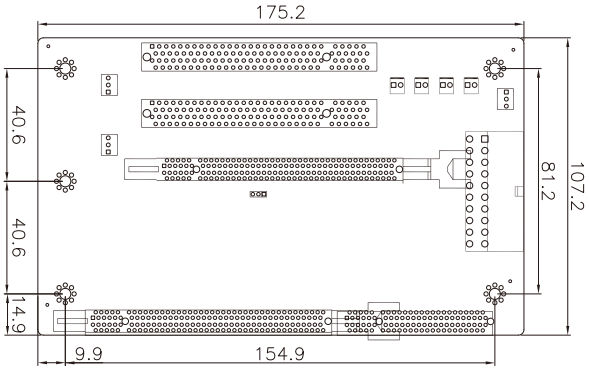
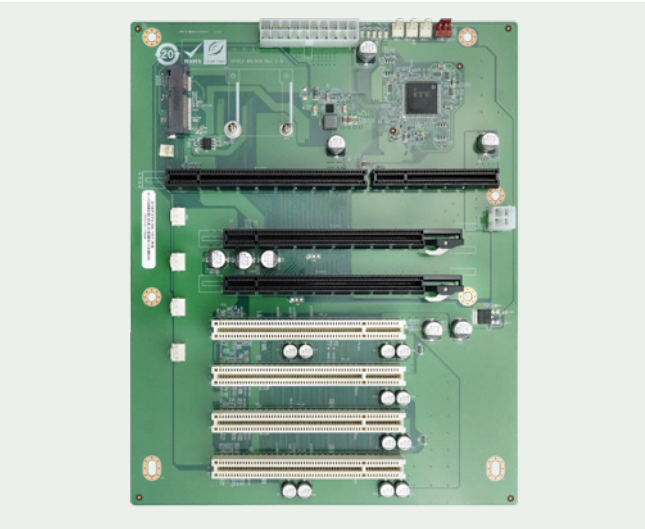
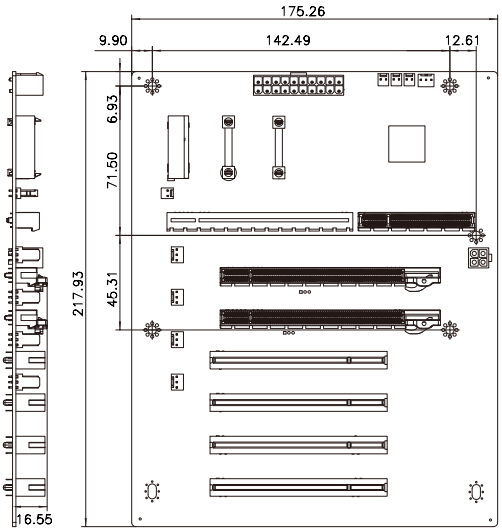
PICMG 1.3 Passive Backplane for Half-Size CPU Card

PAC series wall-mount chassis 4U rack-mount chassis

PICMG 1.3 (PCIe+PCI)	Model	HPXE2-5S1	HPXE2-8S1
Total Slot		5	8
Expansion Slots	PCIe x16	1 (Gen 3.0)	
	PCIe x8		2 (Gen 3.0)
	PCIe x4		
	PCIe x1		
	PCI-X		
	PCI	2	4
PSU Type		24+4-pin ATX	24+4-pin ATX
Chassis Option		PR-1500G	PAC-125G
		RACK-500G	RACK-3000G RACK-360G
Note		ATX power	ATX power

HPXE2-5S1-R10





HPXE2-8S1-R10