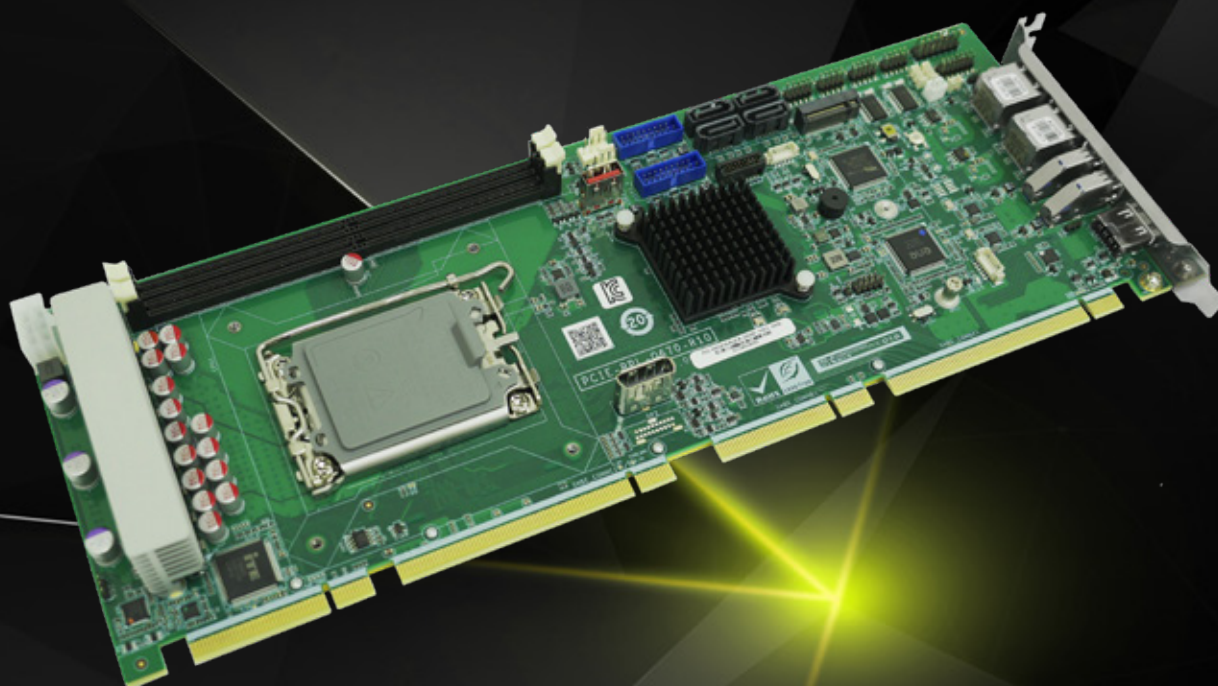


PCIE-RPL-Q670

Full-size PICMG 1.3 CPU Card supports LGA1700 Intel® 12th/13th/14th Gen. Core™ i9/i7/i5/i3/Pentium®/Celeron® CPU

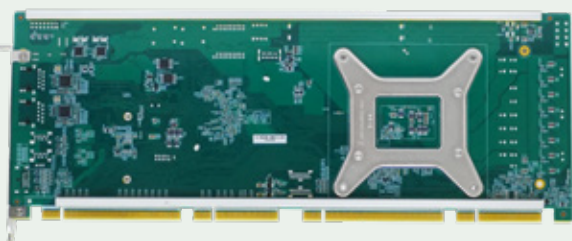
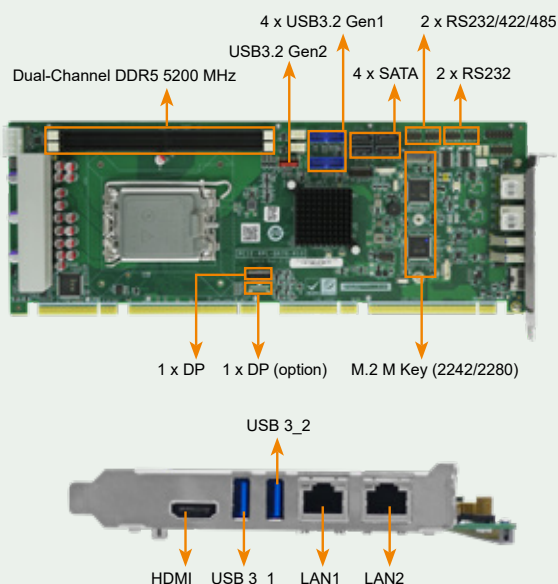
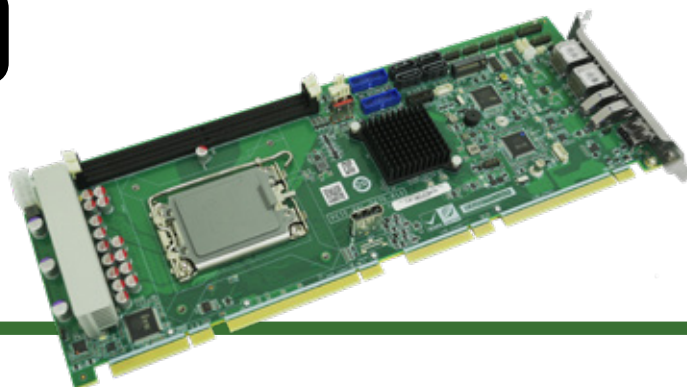
- LGA1700 Intel® 12th/13th/14th Generation Core i9/i7/i5/i3, Pentium and Celeron processor (65W)
- 5200 MHz Dual-Channel DDR5 SDRAM Unbuffered DIMMs supported up to 96GB
- Support DisplayPort 1.4 and HDMI 1.4
- Support M key for storage
- Flexible expansion with full-size PICMG1.3 CPU board



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PCIE-RPL-Q670

Full-size PICMG 1.3 CPU Card supports LGA1700 Intel® 12th/13th/14th Gen. Core™ i9/i7/i5/i3/Pentium®/Celeron® CPU with Q670E, DDR5, HDMI, DP, Dual Intel® 2.5GbE, USB 3.2, SATA 6Gb/s, M.2, HD Audio and RoHS



Support Intel® 12th/13th/14th Generation Processor

Support Intel® 12th/13th/14th generation Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor, release super performance, and can handle multiple tasks at the same time



Support Intel® I226-V/I226-LM 2.5GbE

Ethernet Controller Support dual RJ45 network interfaces, based on Intel® I226-LM, I226-V 2.5GbE network controller core Chip to achieve network transmission rate up to 2.5GbE



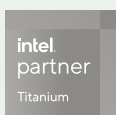
Support Multiple Interface

The I/O layout is 2 x USB 3.2 Gen2 (10Gb/s), providing faster transmission rates. The motherboard has 1 x USB 3.2 Gen2 (10Gb/s) and 4 x USB 3.2 Gen1 (5Gb/s) for wiring expansion. It also provides M.2 M key for NVME storage expansion

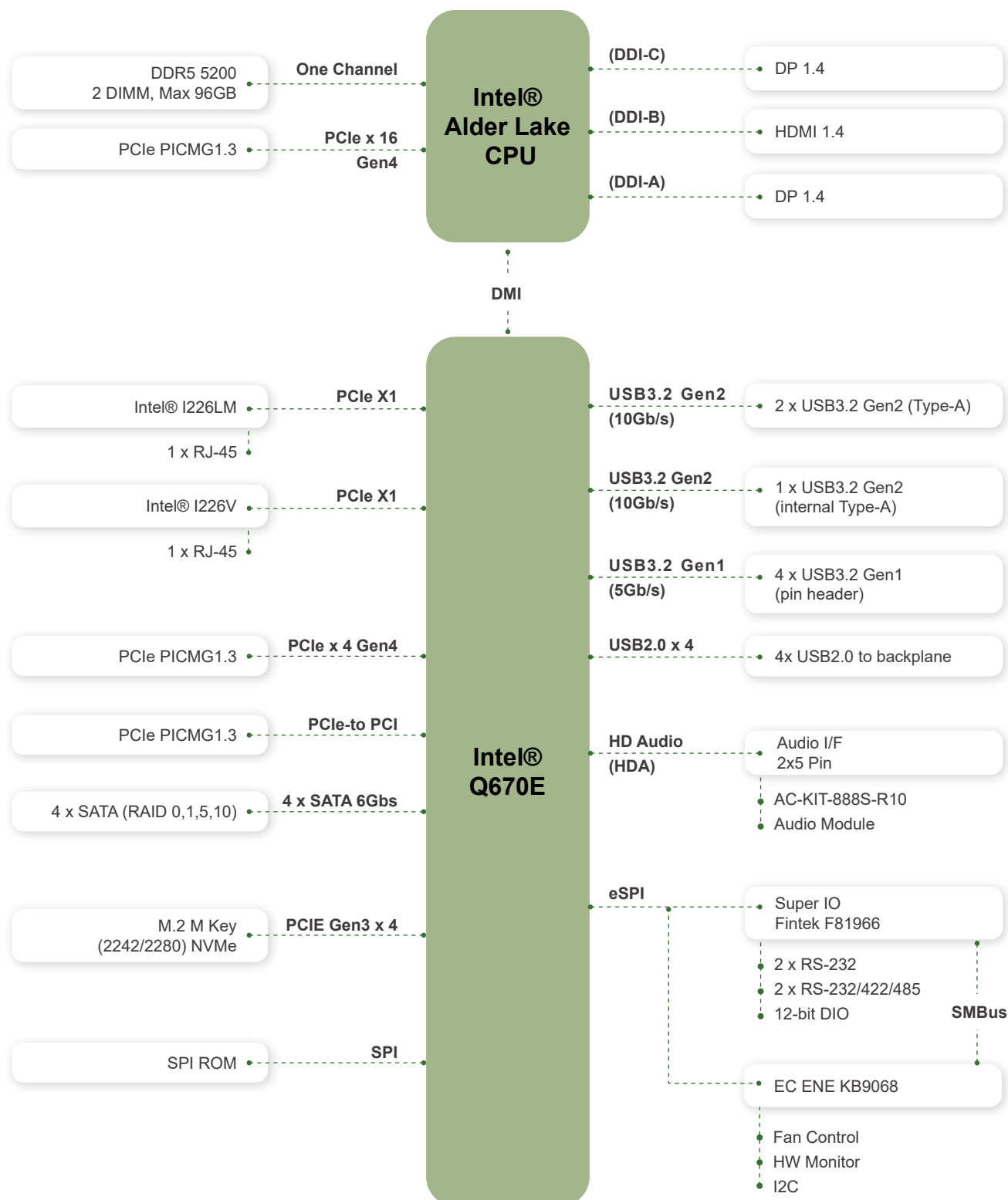


Support multiple baseboard options

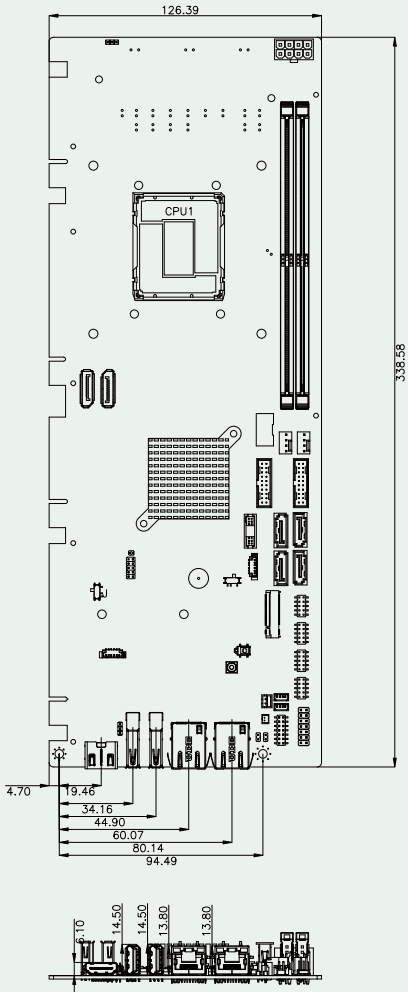
Support 16-lanes PCIe signal from CPU via golden finger, 4-lanes PCIe signal from PCH via golden finger, and the backplane can be selected according to requirements



Block Diagram



Dimensions



Optional Accessories



19800-010500-200-RS



19800-000200-100-RS



32102-000100-200-RS



19100-000323-00-RS



19100-000319-00-RS



AC-KIT-888S-R10



TPM-IN03-R10

Specifications

Model	PCIE-RPL-Q670
CPU	LGA1700 socket supports 12th/13th/14th generation Intel® Core™ i9/i7/i5/i3/ Pentium®/Celeron® Processor (up to 65W)
Chipset	Intel® Q670E
BIOS	AMI UEFI BIOS
Memory	Two 288-pin 5200 MHz Dual-Channel DDR5 SDRAM Unbuffered DIMMs supported up to 96GB
Graphics Engine	New Intel® Xe Graphics architecture with SRIOV, Genlock
Display Output	Triple independent display 1 x interface DP1.4 (up to 4096 x 2304 @60Hz) 180° (DP++) **1 x interface DP1.4 (up to 4096 x 2304 @60Hz) 180° (DP++) (Option) 1 x HDMI 1.4 (up to 4096 x 2304 @30Hz)
Ethernet	LAN1: Intel® I226-LM 2.5GbE controller LAN2: Intel® I226-V 2.5GbE controller
External I/O Interface	2 x USB 3.2 Gen2 (Type-A) (10Gb/s)
Internal I/O Interface	4 x SATA 6Gb/s (RAID 0/1/5/10 supported) 2 x RS-232/422/485 (2x5 pin, P=2.00) (RS485 support AFC) 4 x USB 2.0 to backplane 1 x USB 3.2 Gen2 (Type A 180°) (10Gb/s) 4 x USB 3.2 Gen1 (2 X 10PIN P=2.00 pin wafer) (5Gb/s) 2 x RS-232 (2x5 pin, P=2.00)
SMBus	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 (2 x 7 pin, Power LED, HDD LED, Speaker, Power Button, Reset Button)
LAN LED	2 x LAN LED (1x2 pin)
Expansion	1 x M.2 M Key (2242/2280, PCIe Gen3 x4) NVMe support 1 x PCIe Gen3 x16 & 4 x PCIe Gen3 x1 signal via golden finger 4 x PCI signal via golden finger
Digital I/O	1 x 12-bit digital I/O (2x7 pin)
TPM	Support TPM 2.0(TPM-IN03 module)&Intel PTT
FAN connector	1 x CPU fan connector (1x4 pin) 1 x System fan connector (1x4 pin)
Chassis Open	1 x Chassis intrusion (1x2 pin)
Power supply	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@2.39A, 5V@9.68A, 12V@6.56A, 5VSB@0.35A (Intel® Core™ i9-12900 CPU with 16 GB 5600 MHz DDR5 memory, EuP mode disabled)
Operating Temperature	-10°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Diemension	338 mm x 126 mm
Weight	GW:1000g / NW:500g

**The DP interface is not plugged in. If needed, MOQ is 100.

Packing List

1 x PCIE-RPL-Q670 single board computer	1 x SATA cable (PN: 32801-000100-300-RS)
1 x QIG	

Ordering Informaiton

PCIE-RPL-Q670-R10	Full-size PICMG 1.3 CPU Card supports LGA1700 Intel® 12th/13th/14th Gen. Core™ i9/i7/i5/i3/Pentium®/Celeron® CPU with Q670E, DDR5, HDMI, DP, Dual Intel® 2.5GbE, USB 3.2, SATA 6Gb/s, M.2, HD Audio and RoHS
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Optional Accessories

19800-010500-200-RS	USB 3.0 cable 450mm with bracket, P=2.0
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
19800-000200-100-RS	RS-232/422/485 cable, 300mm, P=2.00, with bracket
19100-000323-00-RS	High-performance LGA1700 cooler, 65W (72 x 70 x 25.5 mm)
19100-000319-00-RS	High-performanc 1 U LGA1700 cooler, 65W (95 x 90 x 27.45 mm)
TPM-IN03-R10	TPM2.0 module, software mangement tool
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS

PICMG 1.3 Passive Backplane

Full-Size SBC Backplane



PICMG 1.3 (PCIe+PCI)	Model		PE-2SD1	PE-4S	PE-5S
Total Slot			2	4	5
Expansion Slots	PCIe	x16 *	1 (Gen 2.0)	1	1 (Gen 2.0)
	Slots	x4		1	1 (Gen 2.0)
	PCI Slots			1	2
USB Connectors by Pin Header			4	4	4
PSU Type			24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis			RACK-1150-PE	N/A	N/A
Note			1U Type		



PICMG 1.3 (PCIe+PCI)	Model		PE-5S2	PE-6S	PE-6S2
Total Slot			5	6	6
Expansion Slots	PCIe Slots	x16 *	1 (Gen 2.0)	1 (Gen 2.0)	1 (Gen 2.0)
		x4			1 (Gen 2.0)
		x1	3 (Gen 2.0)	2 (Gen 2.0)	
	PCI Slots			2	3
USB Connectors by Pin Header			4	4	4
PSU Type			24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis			N/A	RACK-305G RACK-360G RACK-3000G PAC-1700G PAC-125 G	PAC-106G PAC-1000G
Note					



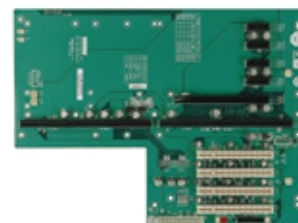
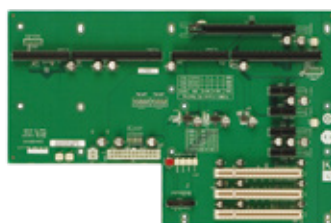
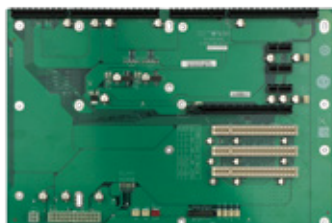
PICMG 1.3 (PCIe+PCI)		Model	PE-6SD	PE-6SD3	PE-7S
Total Slot			5	5	7
Expansion Slots	PCIe Slots	x16 *	1 (Gen 2.0)	1 (Gen 2.0)	1 (Gen 2.0)
		x4		1 (Gen 2.0)	
		x1	3 (Gen 2.0)		2 (Gen 2.0)
	PCI Slots			2	3
USB Connectors by Pin Header			4	4	4
PSU Type			24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis			N/A	N/A	PAC-1700G
Note			2U Type	2U Type	

PAC series wall-mount chassis

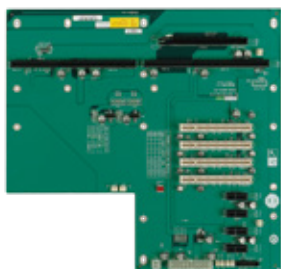
4U/5U rack-mount chassis

1U/2U rack-mount chassis

PICMG 1.3 Passive Backplane



PICMG 1.3 (PCIe+PCI)		Model	PE-8S	PE-9S	PE-10S
Total Slot			8	9	10
Expansion Slots	PCIe Slots	x16 *	1 (Gen 2.0)	1 (Gen 2.0)	1 (Gen 2.0)
		x1	3 (Gen 2.0)	4 (Gen 2.0)	4 (Gen 2.0)
	PCI Slots		3	3	4
USB Connectors by Pin Header			4	4	4
PSU Type			24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis			PAC-125G	N/A	RACK-305G / RACK-360G / RACK-3000G



PICMG 1.3 (PCIe+PCI)		Model	PE-10S2	PXE-13S	PXE-14S1
Total Slot			10	13	14
Expansion Slots		PCIe Slots	x16 *	1 (Gen 2.0)	1 (Gen 3.0)
			x1	4 (Gen 2.0)	3 (Gen 3.0)
		PCI Slots		4	8
USB Connectors by Pin Header			4	4	0
PSU Type			24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis			RACK-3000G / RACK-305G / RACK-360G	RACK-3000G / RACK-305G / RACK-360G	RACK-3000G / RACK-305G / RACK-360G
Note				PCIe to PCI Bridge Backplane	

*When using a PCIe x16 add-on card, the length of the card must not exceed 167mm or 6.57 inches.

 PAC series wall-mount chassis

 4U rack-mount chassis

Mouser Electronics

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