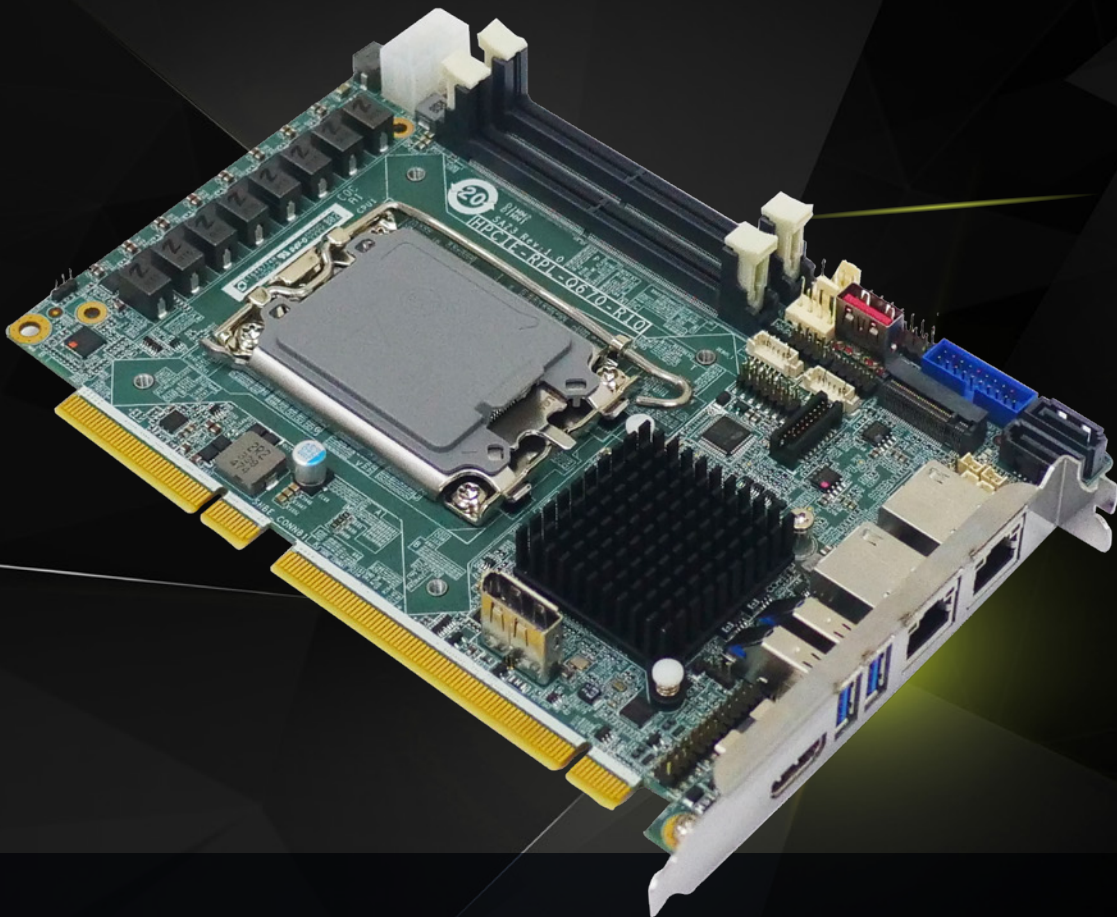


# HPCIE-RPL-Q670

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

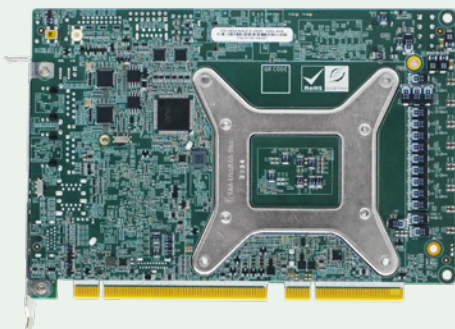
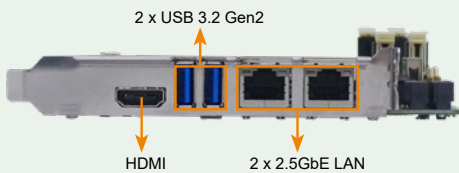
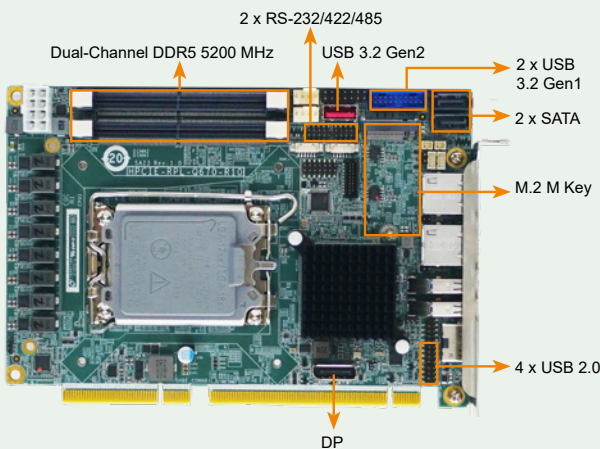
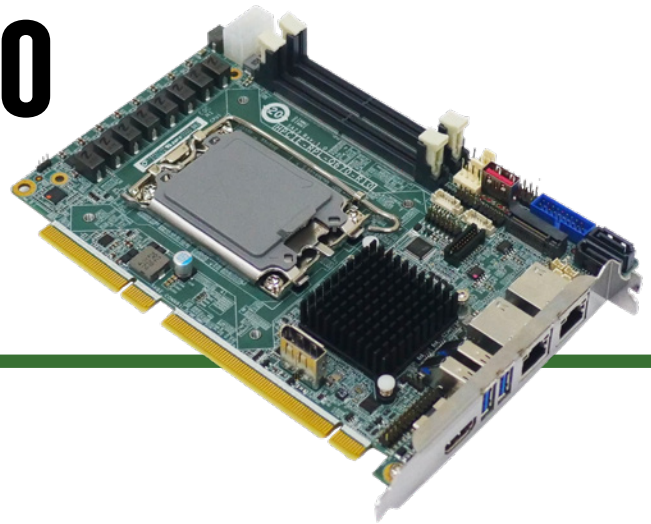
- LGA1700 Intel® 12th/13th/14th Generation Core i9/i7/i5/i3, Pentium and Celeron processor (65W)
- Dual-channel DDR5 5200MHz
- Support dual DisplayPort 1.4a and HDMI
- Support M key for storage
- Flexible expansion with full-size PICMG1.3 CPU board



[www.ieiworld.com](http://www.ieiworld.com)

# HPCIE-RPL-Q670

Half-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, iAUDIO and RoHS



## Support Intel® I226V/I226LM 2.5GbE Ethernet Controller

Support dual RJ45 network interfaces, based on Intel® I226V/I226LM 2.5GbE network controller core Chip to achieve network transmission rate up to 2.5GbE



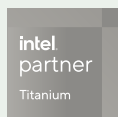
## Support multiple interface

The I/O layout is 2 x USB 3.2 Gen2 (10Gb/s), providing faster transmission rates. The motherboard has 4 x USB2.0 ports, 1 x USB 3.2 Gen2 (Type A, 10Gb/s) and 2 x USB 3.2 Gen1 (5Gb/s) for wiring expansion. It also provides M.2 M key for NVME storage expansion

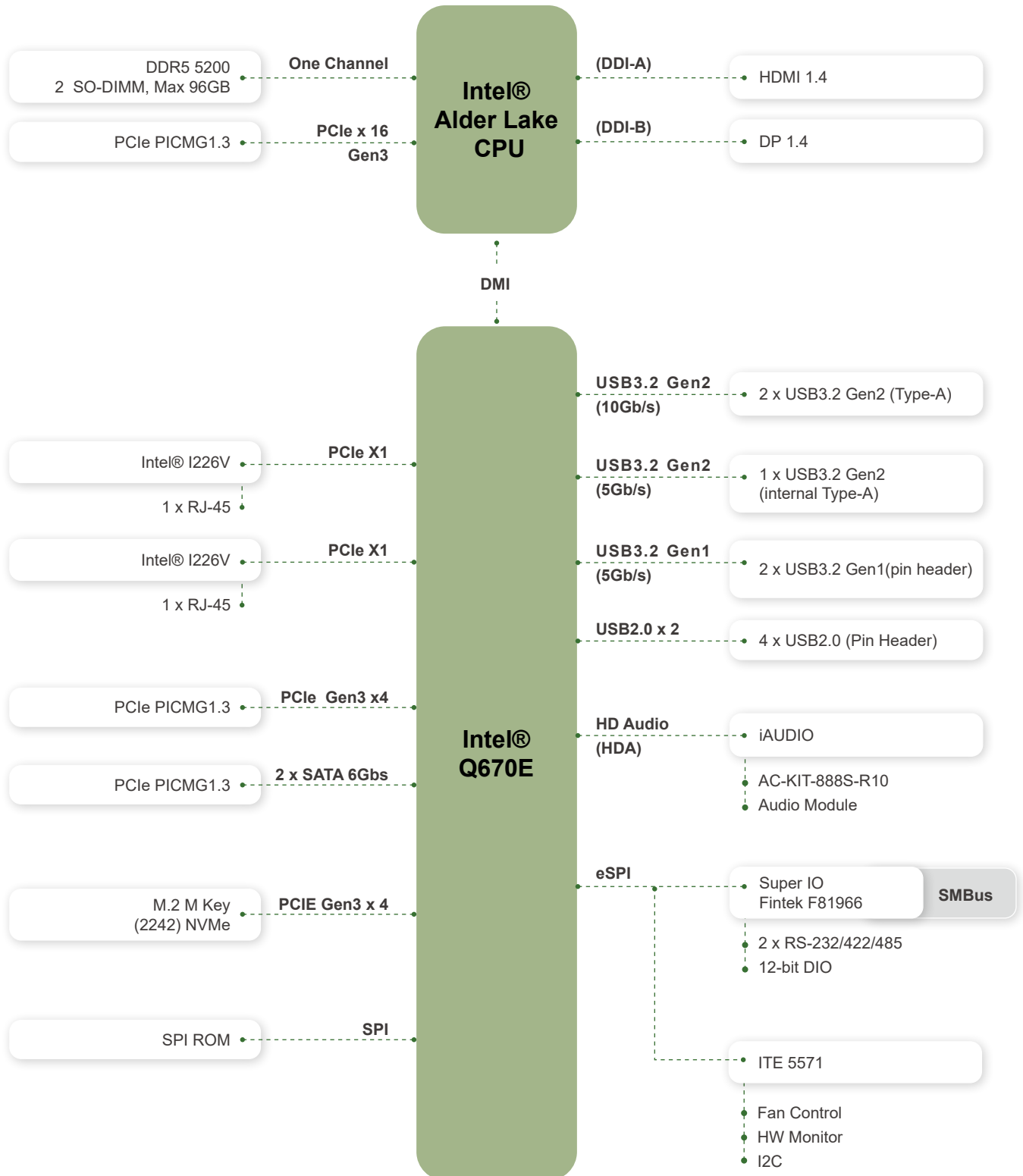


## Support multiple baseboard options

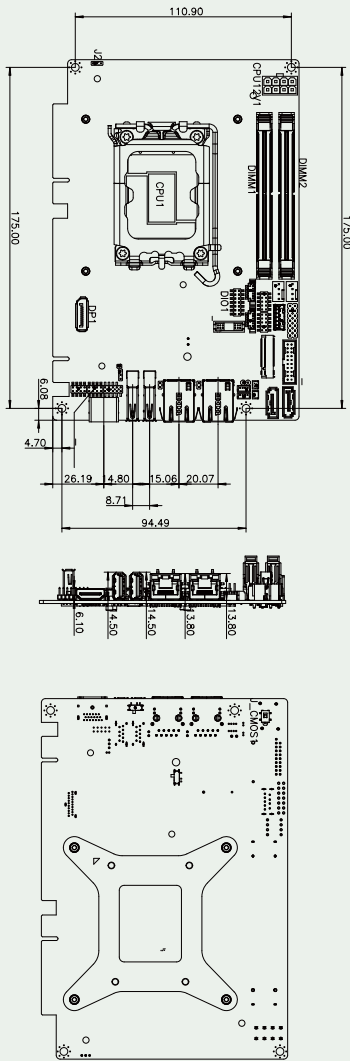
Support 16-lanes PCIe signal from CPU via golden finger, 4-lanes PCIe signal from PCH via golden finger, and the backplane can be selected according to requirements



# Block Diagram



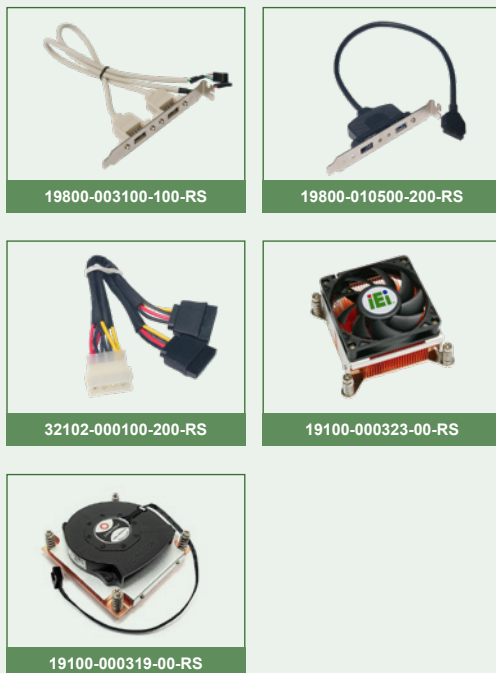
Dimensions



Specifications

Model	HPCIE-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	2 x 262-pin 5200 MHz Dual-Channel DDR5 So-DIMMs supported up to 96GB
Graphics Engine	New Intel® Xe Graphics architecture with SRIOV, Genlock
Display Output	1 x interface DP (4K @60Hz)180° (DP++) 1 x HDMI (4K @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	2 x SATA 6Gb/s (RAID 0/1 supported) 2 x RS-232/422/485 (2x5 pin, P=2.00) (RS485 support AFC) 4 x USB 2.0 (2x4 pin, P=2.54) 1 x USB 3.2 Gen2 (Type A 180°) 2 x USB 3.2 Gen1 (2 X 10PIN P=2.00 pin wafer ) (5Gb/s)
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, PCIe Gen3 x4 ) NVMe support 1 x PCIe Gen3 x16 & 4 x PCIe Gen3 x1 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)
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	TBD
Operating Temperature	-10°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Diemension	168 mm x 126 mm
Weight	GW:1000g / NW:420g

Optional Accessories



Packing List

1 x HPCIE-RPL-Q670 single board computer	1 x SATA cable (PN: 32801-000100-300-RS)
1 x mini jumper pack (33101-000656-RS)	1 x QIG

Ordering Informaiton

HPCIE-RPL-Q670-R10	Half-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, iAUDIO and RoHS
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Optional Accessories

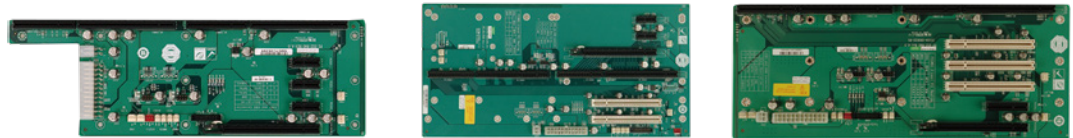
19800-003100-100-RS	Dual port USB cable with bracket, 30mm, P=2.54
19800-010500-200-RS	USB 3.0 cable 457mm with bracket
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
19100-000323-00-RS	High-performance LGA1700 cooler, 65W (72 x 70 x 25.5 mm)
19100-000319-00-RS	High-performanc 1 U LGA1700 cooler, 65W (95 x 90 x 27.45 mm)

# PICMG 1.3 Passive Backplane

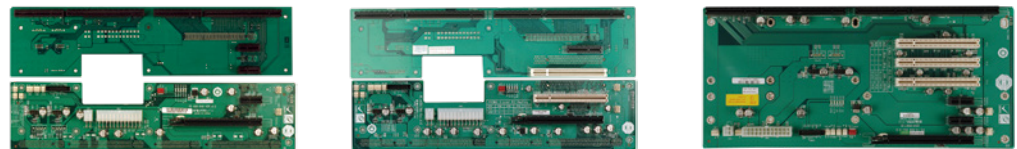
## Full-Size SBC Backplane



PICMG 1.3 (PCIe+PCI)		Model	PE-2SD1	PE-4S	PE-5S
Total Slot			2	4	5
Expansion Slots	PCIe Slots	x16 *	1 (Gen 2.0)	1	1 (Gen 2.0)
		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		2 (Gen 2.0)	1 (Gen 2.0)
	PCI Slots	x1	3 (Gen 2.0)	2 (Gen 2.0)	
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					



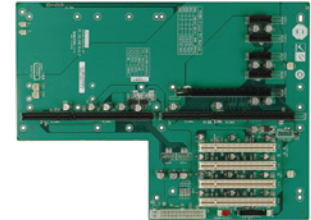
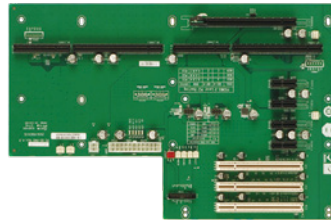
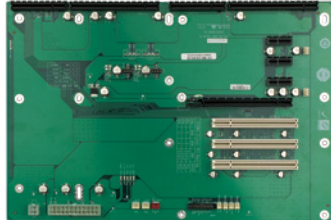
PICMG 1.3 (PCIe+PCI)		Model	PE-6SD	PE-6SD3	PE-7S
Total Slot			5	5	7
Expansion Slots	PCIe Slots	x16 *	1 (Gen 2.0)	1 (Gen 2.0)	1 (Gen 2.0)
		x4		1 (Gen 2.0)	
	PCI Slots	x1	3 (Gen 2.0)		2 (Gen 2.0)
USB Connectors by Pin Header			4	4	4
PSU Type			24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis			N/A	N/A	PAC-1700G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

PAC series wall-mount chassis

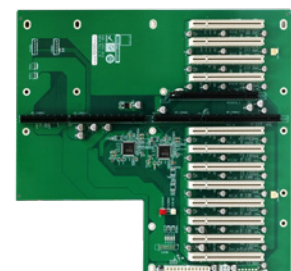
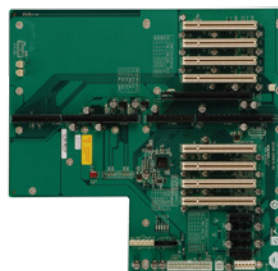
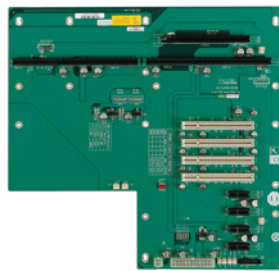
4U/5U rack-mount chassis

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)	1 (Gen 3.0)
		x1		4 (Gen 2.0)	3 (Gen 3.0)	0
	PCI Slots			4	8	12
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.

