PICMG 1.3 Passive Backplane

Selection Guide

| | PAC series wall-mount Chassis | | 4U Rack-mount Chassis | | 2U Rack-mount Chassis |

PICMG1.3 (PCIe+PCI)	Model		PE-4S	PE-4S2	PE-4S3	PE-5S	PE-5S2	PE-6S-R20	PE-6S2	PE-6S3	PE-6SD	PE-6SD2
Total Slot			4	4	4	5	5	6	6	6	5	5
Expansion Slots	PCIe SLOTS	x16 *	1	1	1	1	1	1	1	1	1	1
		x4	1			1			1			
		x1			2		3	2		3	3	2
	PCI SLOTS		1	2		2		2	3	1		1
USB Connectors by Pin Header			4	4	4	4	4	4	4	4	4	4
PSU TYPE			24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX
Chassis			PAC-42GF-R20 PACO-504F	PAC-42GF-R20 PACO-504F	PAC-42GF-R20 PACO-504F	RACK-500G-R20	RACK-500G-R20	RACK-305G-R20 RACK-360G-R20 RACK-814G-R20 RACK-3000G-R20 PAC-1700G-R20 PAC-125G-R20	PAC-106G-R20 PAC-107G-R20 PAC-1000G-R20 PACO-506F	PAC-106G-R20 PAC-107G-R20 PAC-1000G-R20 PACO-506F	RACK-221G RACK-2100G	RACK-221G RACK-2100G

PICMG1.3 (PCIe+PCI)	Model		PE-7S	PE-7S2	PE-8S	PE-9S	PE-10S-R20	PE-10S2	PE-13SD	PXE-13S	PXE-19S
Total Slot			7	7	8	9	10	10	13	13	19
Expansion Slots	PCIe SLOTS	x16 *	1	1	1	1	1	1	1/1	1	1
		x4							1/0		
		x1	2	4	3	4	4	4	0/4	3	1
	PCI SLOTS		3	1	3	3	4	4	2/2	8	16
USB Connectors by Pin Header			4	4	4	4	4	4	8	4	4
PSU TYPE			24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX	24+4 PIN ATX
Chassis			PAC-1700G-R20	PAC-1700G-R20	PAC-125G-R20	N/A	RACK-305G-R20 RACK-360G-R20 RACK-814G-R20 RACK-3000G-R20	RACK-3000G-R20 RACK-305G -R20 RACK-360G-R20 RACK-814G-R20	RACK-3000G-R20 RACK-305G-R20 RACK-360G-R20 RACK-814G-R20	RACK-3000G-R20 RACK-305G-R20 RACK-360G -R20 RACK-814G-R20	RACK-3200G-R20 RACK-3035G-R20

* PCIe x16 Slot also supports PCIe x1/x2/x4/x8 PCIe add on cards
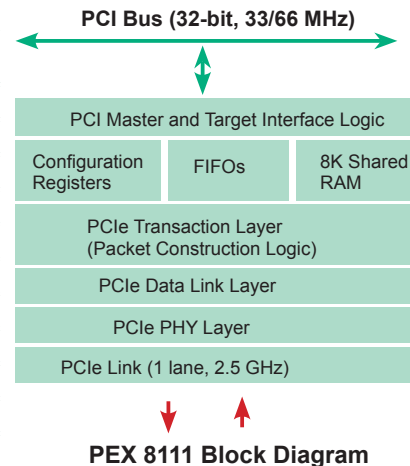
PCIe–to–PCI Bridge

A new concept to expand PCI slots on passive backplane

The creative PCIe to PCI bridge enables designers to migrate legacy PCI bus interfaces to the new advanced serial PCIe. IEI R&D choose PLX PEX8111 bridge chip to convert PICMG 1.3 SHB slot's PCIe x1 to four 32-bit 33/66MHz PCI slots. Due to almost desk top PC chipset's PCI interface is 32bit/33MHz and many high end PCI cards with capability to run up to 66MHz, it will boost the PCI card's performance when use with the PEX8111 PCIe to PCI bridge chip.
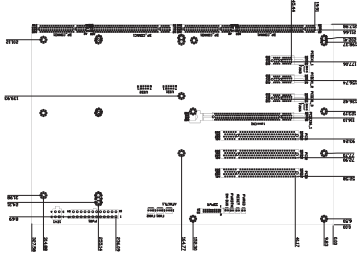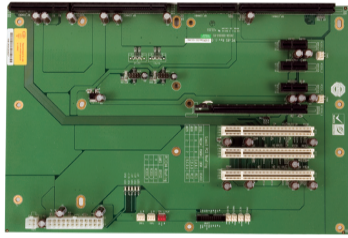
Please refer the following PCI read/wirte performance table for 32bit/66MHz PCI Card and enable DMA.

PLX PEX8111

Transfer Size (Byte)	PCI --> Local(PCI Read) MB/sec	Local --> PCI(PCI Write) MB/sec
1	0.14	0.2
4	0.5	0.7
16	2	3
32	4	6
64	8	12
128	15	24
256	31	44
1K	60	92
64K	158	160
128K	162	171
256K	164	174
1M	166	176

PCI Bus (32-bit, 33/66 MHz)

PCI Master and Target Interface Logic

| Configuration Registers | FIFOs | 8K Shared RAM |

PCIe Transaction Layer (Packet Construction Logic)

PCIe Data Link Layer

PCIe PHY Layer

PCIe Link (1 lane, 2.5 GHz)

PEX 8111 Block Diagram

Sidebar navigation:
1 Single Board Computer
2 VIDEO CARD
3 Xscale Solutions
4 Open HMI
5 VITO Universal Controller
6 DINO BLADE
7 LCD Product Series
8 Embedded System
9 Industrial Computer Chassis
10 Power Supply
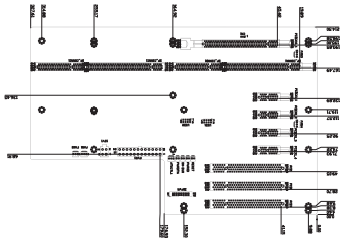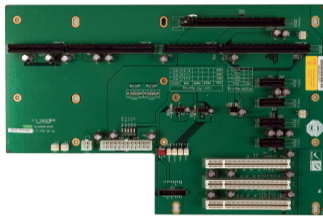11 Peripherals

CPU CARD

PE-8S

Ordering Information

PE-8S-R10   8 Slots Backplane with 1 PCIe x 16 and 3 PCIe x1 and 3 PCI slot.
PAC-125G-R20   10 Slots Full Size Industrial Chassis

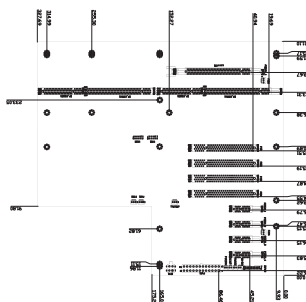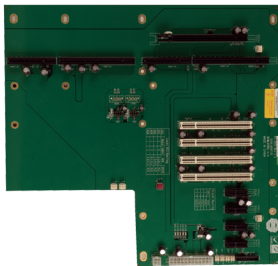## PE-9S   Mounting holes compatible with PCI-10S2

Ordering Information

PE-9S-R10   9 Slots Backplane with 1 PCIe x 16 and 4 PCIe x 1 and 3 PCI slot.

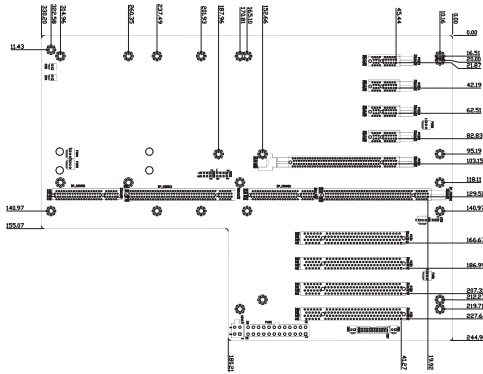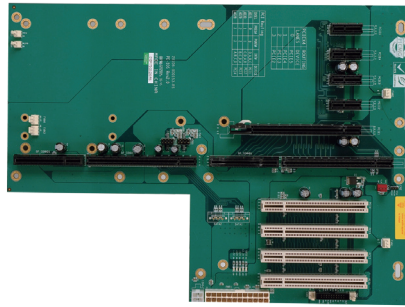## PE-10S2   Mounting holes compatible with PCI-14S

Ordering Information

PE-10S R10   10 Slots Backplane with 1 PCIe x 16 and 4 PCIe x 1 and 4 PCI slot.
RACK-3000G-R20   14 Slots Full Size Industrial Chassis
RACK-305G-R20   14 slots Full Size Industrial Chassis
RACK-360G-R20   14 slots Full Size Industrial Chassis
RACK-814G-R20   14 slots Full Size Industrial Chassis

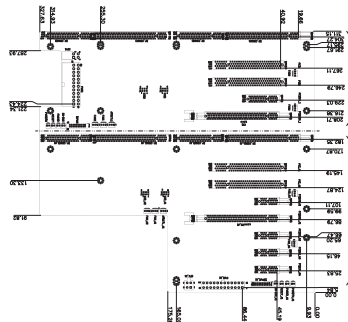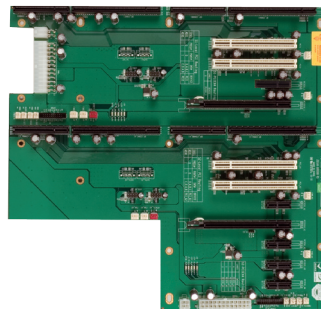## PE-10S-R20   Mounting holes compatible with PCI-14S

Ordering Information

PE-10S-R20   PICMG 1.3 10 slots backplane with 1 PCIe X16, 4 PCIe x1 and 4 PCI slots
RACK-305G-R20   4U Rack-mount Industrial Chassis
RACK-360G-R20   4U Rack-mount Industrial Chassis
RACK-814G -R20   4U Rack-mount Industrial Chassis
RACK-3000G-R20   4U Rack-mount Industrial Chassis

PE-13SD   Mounting holes compatible with PCI-14S

Dual system

Ordering Information

PE-13SD-R10   13 Slots Backplane with 2 PCIe x 16 and 1 PCIe x 4 and 4 PCIe x 1 and 4 PCI slot.
RACK-3000G-R20   14 Slots Full Size Industrial Chassis
RACK-305G-R20   14 slots Full Size Industrial Chassis
RACK-360G-R20   14 slots Full Size Industrial Chassis
RACK-814G-R20   14 slots Full Size Industrial Chassis

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