

PICMG 1.3

Allows users to protect their investment in PCI (PCI-X) technology while taking advantage of the speed and increased bandwidth of PCI Express

What is PICMG 1.3 ?

Bringing PCI Express to your SBC increased speed and bandwidth

Designed to interface with PCI Express peripherals on a backplane. The PCI Express interconnects with the backplane and can operate at x1, x4, x8, x16, and more depending on the capabilities of both the SHB and the backplane.

Support PCI (PCI-X) on board with flexibility

The optional PCI (-X) portion of the SHB interconnect with the backplane allows for 32-bit operation. The clock rate can be 33MHz, 66MHz, 100MHz, and 133MHz, depending on how the backplane and SHB are designed.

Miscellaneous IO

SATA, USB, IPMB, SMBUS, Geographic Addressing, and PCI Wake Up to the backplane is specified. Simplified the cabling on SHB for the system.

PICMG 1.3 Key Features

PCI Express

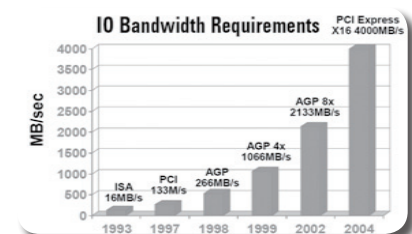
20 PCI Express lanes including x16, x4 and x1 PCI Express configuration are supported.

Reset signal line defined

Common header defined on backplane for reset function

ATX power signals are supported

AUX voltages for stand-by power and sleep states (Soft starts, wake-on-LAN). Supports PS_ON#, PWRGD, PWRRBT#, and ACPI states.



Why PICMG 1.3?

- This new technology is expected to allow PCIe transmission rates to keep pace with processor and I/O advances for the next 10 years or more.
- Same basic mechanical dimensions are maintained to minimize chassis redesign expense
- Better host board power management and simplified I/O cabling
- Supports PCI Express and PCI option cards without driver changing

The Future will be.... Chipsets no longer offer native support for ISA

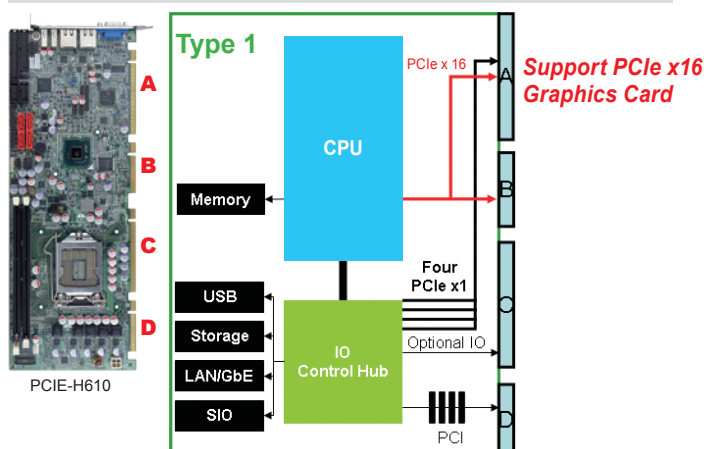
Faster chipsets & system busses →

Faster CPU →

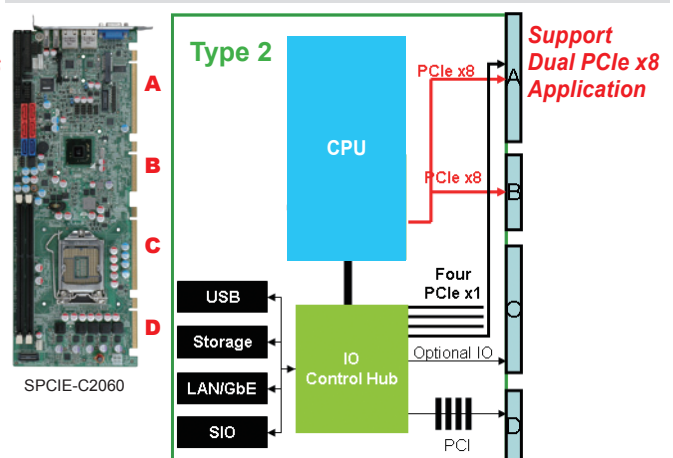
Chipsets are migrating toward PCI Express →

Graphics & Server Grade PICMG 1.3 Solutions

Type 1: Graphics Grade SBC



Type 2: Server Grade SBC



PICMG 1.3 PCIe Slots Configuration Type 1

PCIe Slots Available (Non-switch)	SBC Type	Graphics Grade		Server Grade		
		A	B	A	B	C
	x16	1	1			
	x8	x	x	2	2	
	x4	1	-	1	-	5
	x1	-	4	-	4	-
Backplane Solution		IEI PE/PXE series		IEI SPE/SPXE series		

Type 2

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Full-size PICMG 1.3 Selection Guide

**New****New****New**

Model Name	SPCIE-C2060	SPCIE-5100DX	SPCIE-5100P	PCIE-Q670	PCIE-H610
CPU Socket	Intel® LGA1155	LGA 771	Socket P	Intel® LGA1155	Intel® LGA1155
CPU Type	2nd Generation Intel® Xeon® E3/Core™ i3/Pentium®/Celeron® processor	Intel® Xeon® Processor	Intel® Core™2 Duo, Celeron® M	2nd Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron®	2nd Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron®
FSB	NA	1066/1333MHz	1066MHz	NA	NA
Chipset	Intel® C206	Intel® 5100 MCH + ICH9R	Intel® 5100 MCH + ICH9R	Intel® Q67	Intel® H61
Memory	Two 240-pin 1066/1333MHz dual-channel ECC and non-ECC unbuffered DDR3 SDRAM DIMMs (system max. 16GB)	Four 240-pin 533/667MHz dual-channel DDR2 SDRAM ECC DIMMs (system max. 32GB)	Four 240-pin 533/667MHz dual-channel DDR2 SDRAM ECC DIMMs (system max. 8GB)	Two 240-pin 1066/1333MHz dual-channel DDR3 SDRAM DIMMs (system max. 16GB)	Two 240-pin 1066/1333MHz dual-channel DDR3/DDR3L (1.35V) SDRAM DIMMs (system max. 16GB)
Display Interface	1 x VGA 1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)	1 x VGA	1 x VGA	1 x VGA 1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)	1 x VGA 1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)
Ethernet	LAN1: Intel® 82574L PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support	Dual Intel® 82547L GbE controller	Dual Intel® 82547L GbE controller	LAN1: Intel® 82574L PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support	Dual Realtek RTL8111E PCIe GbE controller, LAN1 with ASF 2.0 supported
I/O Interface	2 x RS-232 1 x RS-422/485 8 x USB 2.0 1 x LPT 1 x FDD 1 x 6-pin wafer for KB/MS	2 x RS-232 12 x USB 2.0 1 x LPT 1 x Infrared Interface 2 x 5-pin wafer for PS/2 KB & MS	2 x RS-232 8 x USB 2.0 1 x LPT 1 x Infrared Interface 1 x 6-pin wafer for PS/2 KB & MS	2 x RS-232 1 x RS-422/485 8 x USB 2.0 1 x LPT 1 x FDD 1 x 6-pin wafer for KB/MS	2 x RS-232 1 x RS-422/485 10 x USB 2.0 1 x LPT 1 x FDD 1 x 6-pin wafer for KB/MS
Driver Interface	4 x SATA 3Gb/s 2 x SATA 6Gb/s with with raid 0/1/5/10 support	6 x SATA II (RAID 0/1/10/5) 1 x FDD	6 x SATA II (RAID 0/1/10/5) 1 x FDD	4 x SATA 3Gb/s 2 x SATA 6Gb/s with with raid 0/1/5/10 support	4 x SATA 3Gb/s
Audio	Supports by IEI AC-KIT-888HD audio kit	IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector		Supports by IEI AC-KIT-888HD audio kit	Supports by IEI AC-KIT-888HD audio kit
Digital I/O	8-bit Digital I/O	8-bit Digital I/O (4-bit input/4-bit output)		8-bit Digital I/O	
Power Consumption	5V@3.98A, 12V@0.38A, Vcore_12V@7.81A, 3.3V@1.61A, 5VSB@0.15A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)	3.3V@0.62A, 5V@4.69A, 12V@2.23A (Dual Intel® Xeon® L5138 1.60GHz CPU at 1066MHz FSB with 4GB 667MHz DDR2 memory)	3.3V@0.62A, 5V@4.69A, 12V@2.23A (Intel® Core 2 Duo P8600 2.4GHz CPU at 1066MHz FSB with 8GB 667MHz DDR2 memory)	5V@3.98A, 12V@0.38A, Vcore_12V@7.81A, 3.3V@1.61A, 5VSB@0.15A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)	5V@4.41A, 12V@0.21A, Vcore_12V@7.72A, 3.3V@1.71A, 5VSB@0.16A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset				
Operation Environment	Temperature range: -10°C ~ 60°C Relative humidity: 5% ~ 95%, non-condensing	Temperature range: 0°C ~ 60°C (32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing		Temperature range: -10°C ~ 60°C Relative humidity: 5% ~ 95%, non-condensing	
Expansion Slot	PCIe mini	N/A		PCIe mini	NA
CPU Cooler	CF-1156A/B/C/D-RS	2 x 19100-000110-00-RS	CF-479B-RS	CF-1156A/B/C/D-RS	CF-1156A/B/C/D-RS

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Full-size PICMG 1.3 Selection Guide



Model Name	PCIE-Q57A	PCIE-G41A2	PCIE-Q350-R11	PCIE-9652
CPU Socket	LGA 1156	LGA 775	LGA 775	Socket P
CPU Type	Intel® Core™ i7/i5/i3/Pentium®	Intel® Core™2 Quad/Duo	Intel® Core™2 Quad/Duo	Intel® Core™2 Duo/Celeron® M
FSB	N/A	800/1066/1333MHz	800/1066/1333MHz	533/800MHz
Chipset	Intel® Q57	Intel® G41 + ICH7R	Intel® Q35 + ICH9DO	Intel®I GME965 + ICH8M-E
Memory	Two 240-pin 1066/1333MHz dual-channel DDR3 SDRAM DIMMs (system max. 8GB)	Two 240-pin 800/1066MHz dual-channel DDR3 SDRAM DIMMs (system max. 8GB)	Four 240-pin 667/800MHz dual-channel DDR2 SDRAM DIMMs (system max. 8GB)	Two 240-pin 400/533/667MHz dual-channel DDR2 SDRAM DIMMs (system max. 4GB)
Display Interface	1 x VGA	1 x VGA	1 x VGA SDVO output for dual display application (by IEI PCIe x16 SDVO add-on card)	Dual display supported 1 x VGA 1 x 24-bit dual-channel LVDS
Ethernet	Intel® 82583V PCIe GbE controller Intel® 82878DM PHY with Intel® iAMT 6.0 supported	Dual Realtek RTL8111E PCIe GbE controller	Dual Intel® collection LAN1: Intel® 82566DM GbE controller LAN2: Intel® 82573L GbE controller	Dual Intel® 82573L GbE controller
I/O Interface	2 x RS-232 14 x USB 2.0 1 x LPT 1 x Infrared Interface 1 x PS/2 KB & MS	2 x RS-232 8 x USB 2.0 1 x LPT 1 x Infrared Interface 1 x PS/2 KB & MS	2 x RS-232 12 x USB 2.0 1 x LPT 1 x Infrared Interface 1 x TPM 1 x PS/2 KB & MS	2 x RS-232 10 x USB 2.0 1 x LPT 1 x Infrared Interface 1 x TPM 1 x PS/2 KB & MS
Driver Interface	6 x SATA II (RAID 0/1/10/5) 1 x FDD	4 x SATA II (RAID 0/1/10/5) 1 x IDE 1 x FDD	6 x SATA II (RAID 0/1/10/5)	3 x SATA II (RAID 0/1/10/5) 1 x IDE 1 x FDD 1 x CF Type II
Audio	IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	AC-KIT08R-R10 5.1 channel AC'97 audio kit and IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	
Digital I/O	8-bit Digital I/O (4-bit input/4-bit output)			
Power Consumption	3.3V@0.89A, 5V@4.62A, 12V@4.35.A, 5Vsb@0.14A (Intel® Core™ i5 660 3.3GHz CPU with two 2GB 1066 MHz DDR3 memory)	3.3V@0.53A, 5V@6.2A, 12V@1.91A (Intel® Core™2 Duo E8500 3.16GHz at FSB 1333MHz with two 2GB 800MHz DDR3 memory)	3.3V@0.3A, 5V@5.1A, 12V@4.23A, 5Vsb@0.28A (Intel® Core™ 2 Duo E6700 2.66GHz at 1066MHz FSB with four 2GB 667MHz DDR2 memory)	3.3V@0.13A, 5V@5.3A, 12V@1.3A, 5Vsb@0.04A (Intel® Core™2 Duo T7300 2.0GHz at 800MHz FSB with DDR2 667MHz 1GB Memory)
Watchdog Timer	Software programmable supports 1~255 sec. system reset			
Operation Environment	Temperature range: 0°C ~ 60°C (32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing			
Expansion Slot	N/A			
CPU Cooler	CF-1156A-RS, CF-1156B-RS	CF-775A-RS, CF-520-RS-R11	CF-775A-RS, CF-520-RS-R11	CF-479B-RS

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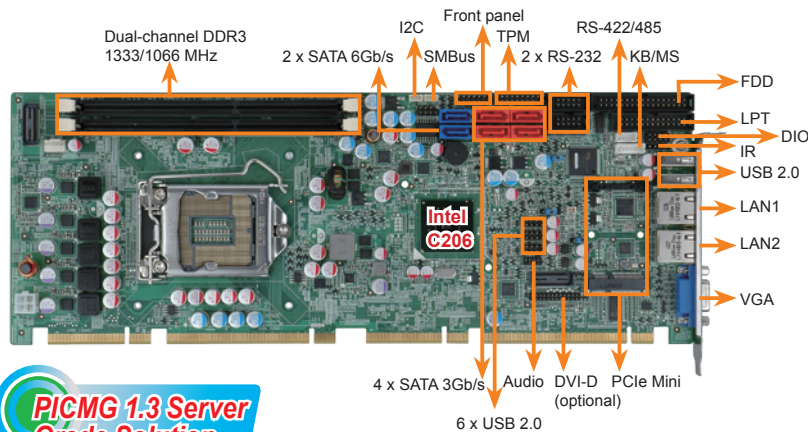
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SPCIE-C2060

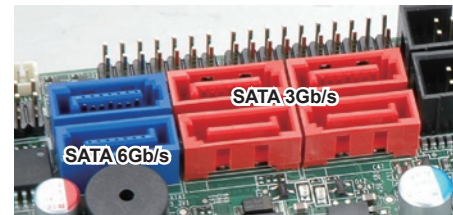
Full-size PICMG 1.3 CPU card Supports LGA1155 Intel® Xeon® E3 and Intel® Core™ i3/Pentium®/Celeron® CPU with Intel® C206, DDR3, VGA/DVI-D, Dual Intel® PCIe GbE, SATA 6Gb/s, PCIe Mini, HD Audio and RoHS

New



RAID Function Compatible with SATA 6Gb/s and SATA 3Gb/s

The latest SATA 6Gb/s connectors have double the speed of the SATA 3Gb/s interface.



IO-KIT-001
DVI cable included in the DVI model

PICMG 1.3 Server Grade Solution



TPM 1.2 Support

Specifications

- ◆ CPU
LGA1155 socket supports LGA1155 Intel® Xeon® E3/Core™ i3/Pentium®/Celeron® processor
- ◆ System Chipset
Intel® C206
- ◆ Memory
Two 240-pin 1066/1333MHz dual-channel ECC and non-ECC unbuffered DDR3 SDRAM DIMMs supported (system max.16GB)
- ◆ BIOS
UEFI BIOS
- ◆ Graphics Engine
Intel® HD Graphics Gen 6 supports for DX10.1 and OpenGL 3.0
Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA
1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)
- ◆ Ethernet
LAN1: Intel® 82574L PCIe controller
LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support
- ◆ Super I/O
Fintek F81866
- ◆ I/O Interface
2 x RS-232 1 x RS-422/485
1 x LPT 1 x FDD
8 x USB 2.0 (2 by rear I/O, 6 by on-board pin header)
1 x 6-pin wafer for KB/MS
4 x SATA 3Gb/s (RAID 0/1/5/10 supported)
2 x SATA 6Gb/s (RAID 0/1/5/10 supported)
- ◆ Front Panel
1 x Front panel connector (power LED, HDD LED, speaker, power button, reset button)
- ◆ Audio
Supports by IEI AC-KIT-888HD audio kit
- ◆ TPM
1 x 20-pin header
- ◆ SMBus
1 x 4-pin wafer
- ◆ I2C
1 x 4-pin wafer
- ◆ Infrared Interface
1 x 5-pin header
- ◆ Expansions
PCIe signal and PCI signal via golden finger
1 x PCIe Mini slot (with USB 1.1/2.0 signal)
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Fan Connector
1 x 4-pin smart Fan Connector
- ◆ Power Supply
AT/ATX power supply supported
- ◆ Power Consumption
5V@3.98A, 12V@0.38A, Vcore 12V@7.81A, 3.3V@1.61A, 5VSB@0.15A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
338 mm x 126 mm
- ◆ Weight
GW: 1200g/NW: 420g

Features

1. Full-size PICMG 1.3 server grade solution
2. LGA1155 Intel® Xeon® E3/Core™ i3/Pentium®/Celeron® processors supported
3. Up to 16 GB 1333 MHz dual-channel DDR3 SDRAM
4. Supports dual independent display by VGA and DVI-D (DVI model)
5. Supports PCIe Mini expansion
6. Intel® PCIe GbE with Intel® AMT 7.0 support
7. Supports RAID function via SATA 6Gb/s and SATA 3Gb/s
8. High-speed I/O Interface provided through the 2nd gen PCIe add-on card and SATA 6Gb/s connectors
9. TPM V1.2 hardware security provided by the TPM module
10. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x SPCIE-C2060 single board computer	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
4 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
SPCIE-C2060-R10	Full-size PICMG 1.3 CPU card supports 32nm LGA1155 Intel® Xeon® E3 and Intel® Core™ i3/Pentium®/Celeron® CPU with Intel® C206, DDR3, VGA, Dual Intel® PCIe GbE, SATA 6Gb/s, PCIe Mini, HD Audio and RoHS
SPCIE-C2060-DVI-R10	Full-size PICMG 1.3 CPU card supports 32nm LGA1155 Intel® Xeon® E3 and Intel® Core™ i3/Pentium®/Celeron® CPU with Intel® C206, DDR3, DVI-D, Dual Intel® PCIe GbE, SATA 6Gb/s, PCIe Mini, HD Audio and RoHS
32205-003800-100-RS	RS-422/485 cable, 200mm
19800-000075-RS	KB/MS cable with bracket
SAIDE-KIT01-R10	SATA to IDE/CF converter board
32102-000100-200-RS	SATA power cable
32229-000100-100-RS	FDD flat cable
32200-015100-RS	LPT cable
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
CF-1156A-RS	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156B-RS	High-performance LGA1155/LGA1156 cooler kit, 95W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W

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Industrial Computing Solutions

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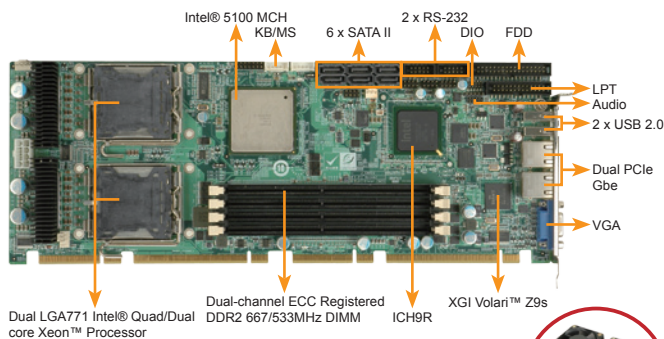
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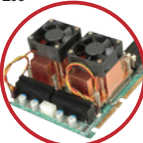
Panel Solutions Introduction

SPCIE-5100DX

Full-size PICMG 1.3 CPU card supports dual socket LGA 771 Intel® Xeon® processors and comes with VGA, Dual GbE, SATA II with RAID function, USB 2.0



CPU Cooler
(P/N: 19100-000110-00-RS)



Features

1. Full-size PICMG 1.3 CPU card with Intel® 5100 server grade chipset solution
2. Dual LGA 771 Intel® Quad/Dual core Xeon® processor with a 1333MHz FSB
3. Intel® 5100 server-grade platform supports six PCIe x4 lanes for flexible PCIe application
4. ULV XGI Volari Z9s Graphics controller supports VGA output
5. Four 240-pin DDR2 ECC Registered DIMM supported up to 32GB
6. Six SATA II with RAID function improved performance and reliability for systems
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - Dual-Core Intel® Xeon® 5100/5200 series CPU with a 1333/1066MHz FSB
 - Quad-Core Intel® Xeon® 5300/5400 series CPU with a 1333/1066MHz FSB
- ◆ System Chipset
 - Intel® 5100 MCH (San Clemente) + ICH9R chipsets
- ◆ BIOS
 - AMI BIOS
- ◆ System Memory
 - Four 240-pin 667/533 MHz dual-channel DDR2 ECC Registered DIMMs supported (system max. 32GB)
- ◆ Ethernet
 - Dual PCIe Ethernet support by Intel® 82574L GbE
- ◆ I/O Interface
 - 2 x RS-232 1 x LPT
 - 1 x FDD 2 x 5-pin headers for KB/MS
 - 6 x SATA II with RAID 0, 1, 5 and 10
 - 12 x USB 2.0 (Two on the bracket, six on board and four on backplane by pin header)
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared
 - 1 x Infrared by pin header
- ◆ Super I/O: ITE IT8718F
- ◆ Display Interface
 - D-sub analog output via XGI Volari™ Z9s
- ◆ PCI graphics controller integrated 64MB DDR memory
- ◆ Supports resolution up to UXGA (1600x1200) and CRT hot plug
- ◆ Audio
 - 7.1 channel HD audio kit with Realtek ALC888 codec supports dual audio streams
- ◆ Watchdog Timer
 - Software programmable supports 1 ~ 255 sec. system reset
- ◆ Power Supply
 - ATX Power
- ◆ Power Consumption
 - 3.3V@1.07A, 5V@5.55A, 12V@12.3A (Dual Intel® Xeon® 5110 1.6GHz processor with 8GB DDR2 667MHz)
- ◆ Temperature
 - Operation: 0°C ~ 60°C (32°F~140°F)
 - Operation: 0°C ~ 55°C (For 80W CPU limitation)
- ◆ Humidity
 - Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 126 mm
- ◆ Weight: GW: 1500 g/NW: 1200 g

Packing List

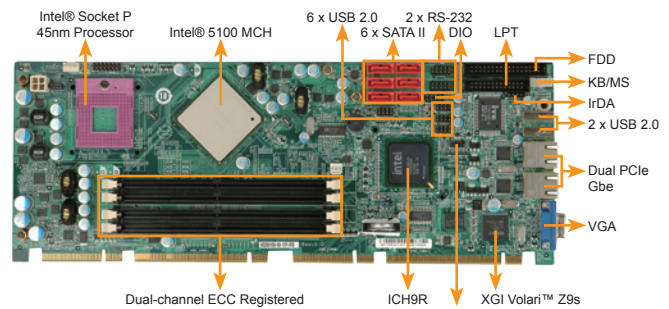
1 x SPCIE-5100DX single board computer	
1 x ATX 12V power cable (P/N: 32102-008000-100-RS)	
2 x LGA771 CPU cooler (P/N: 19100-000110-00-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x SBC support bracket
6 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x Dual USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
SPCIE-5100DX-R10	Full-size PICMG 1.3 Server Grade CPU card supports Dual Intel® Xeon Dual/Quad core processors, Intel® 5100 and ICH9R with VGA, Dual GbE, USB and SATA RAID
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable
19800-000066-RS	KB/MS cable with bracket
32102-000100-200-RS	SATA power cable

SPCIE-5100P

Full-size PICMG 1.3 CPU card supports socket P Intel® 45nm Core™2 Duo processors and comes with VGA, Dual PCIe GbE, SATA II with RAID function, USB and Audio



Features

1. Full-size PICMG 1.3 server grade solution
2. Intel® 45nm socket P Core™2 Duo processor with a 1066 MHz FSB
3. Intel® 5100 server-grade platform supports six PCIe x4 lanes for flexible PCIe application
4. ULV XGI Volari Z9s graphics controller supports VGA output
5. Four 240-pin DDR2 ECC Registered DIMM supported
6. Six SATA II with RAID 0/1/5/10 support
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - Socket P Intel® Core™2 Duo processors with a 1066 MHz FSB
- ◆ System Chipset
 - Intel® 5100 MCH + ICH9R chipsets
- ◆ BIOS
 - AMI BIOS
- ◆ System Memory
 - Four 240-pin 667/533 MHz dual-channel DDR2 ECC Registered DIMMs supported (system max. 8GB)
- ◆ Ethernet
 - Dual PCIe Ethernet support by Intel® 82574L GbE
- ◆ I/O Interface
 - 2 x RS-232 1 x LPT
 - 1 x FDD 1 x 6-pin header for KB/MS
 - 6 x SATA II with RAID 0, 1, 5 and 10
 - 12 x USB 2.0 (Two on the bracket, six on SBC and four on backplane by pin header)
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface
 - 1 x Infrared by pin header
- ◆ Super I/O
 - ITE IT8718F
- ◆ Display Interface
 - VGA support by XGI Volari Z9s graphics controller
 - Supports VGA resolution up to 1600x1200
- ◆ Audio
 - Supports by 7.1 channel HD Audio Kit
- ◆ Watchdog Timer
 - Software programmable supports 1 ~ 255 sec. system reset
- ◆ Power Supply
 - ATX Power
- ◆ Power Consumption
 - 3.3V@0.62A, 5V@4.69A, 12V@2.32A (Intel® Core™2 Duo P8600 2.4GHz 1066MHz FSB CPU with 8GB 667MHz DDR2 memory)
- ◆ Temperature
 - Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity
 - Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 126 mm
- ◆ Weight: GW: 1200 g/NW: 420 g

Packing List

1 x SPCIE-5100P single board computer	
6 x SATA cable (P/N: 32801-000703-200-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x USB cable (P/N: 19800-003100-200-RS)	
1 x One Key Recovery CD	1 x Utility CD
1 x Mini jumper pack	1 x QIG

Ordering Information

Part No.	Description
SPCIE-5100P-R10	Full-size PICMG 1.3 CPU card supports socket P Intel® 45nm Core™2 Duo processors and comes with VGA, Dual PCIe GbE, SATA II with RAID function, USB and Audio
CF-479B-RS	CPU cooler (50mm x 50mm x 26mm, 50W)
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable
19800-000075-RS	KB/MS cable with bracket
32102-000100-200-RS	SATA power cable

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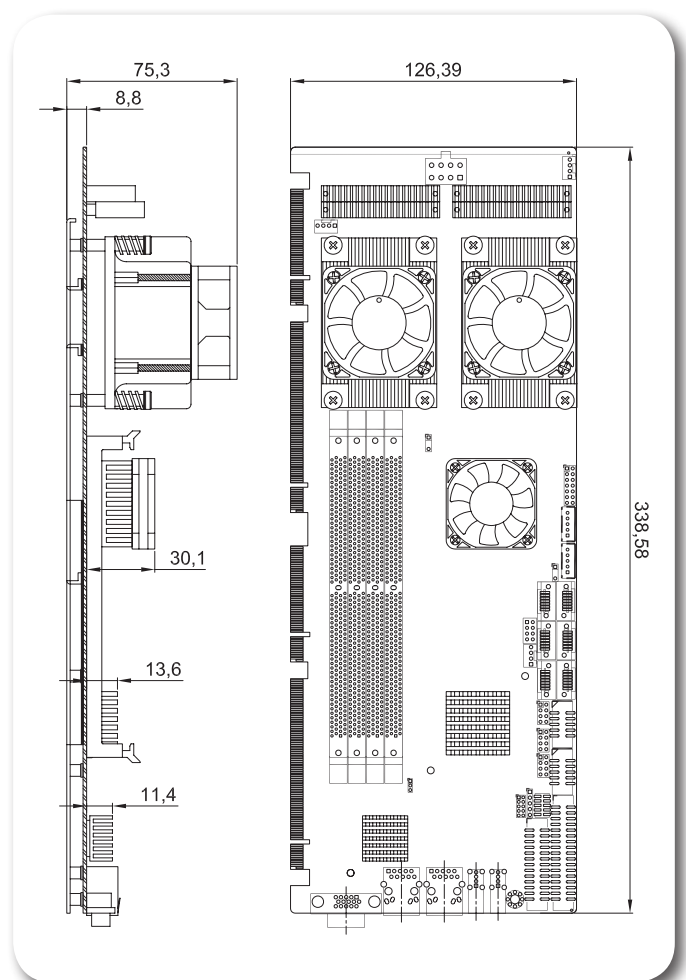
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Intel® Xeon® Processor Suggestion Table

Processor Number	Process	Clock Speed (GHz)	FSB (MHz)	L2 Cache	TDP	Cores
L5430	45nm	2.66GHz	1333MHz	12MB	50W	4
L5420	45nm	2.5GHz	1333MHz	12MB	50W	4
L5410	45nm	2.33GHz	1333MHz	12MB	50W	4
L5408	45nm	2.13GHz	1066MHz	12MB	40W	4
L5320	65nm	1.86GHz	1066MHz	8MB	50W	4
L5318	65nm	1.6GHz	1066MHz	8MB	45W	4
L5310	65nm	1.6GHz	1066MHz	8MB	50W	4
L5248	45nm	3.0GHz	1333MHz	6MB	55W	2
L5240	45nm	3.0GHz	1333MHz	6MB	40W	2
L5238	45nm	2.66GHz	1333MHz	6MB	35W	2
L5215	45nm	1.86GHz	1066MHz	6MB	20W	2
E5450	45nm	3.0GHz	1333MHz	12MB	80W	4
E5440	45nm	2.83GHz	1333MHz	12MB	80W	4
E5410	45nm	2.33GHz	1333MHz	12MB	80W	4
E5405	45nm	2.0GHz	1333MHz	12MB	80W	4
E5345	65nm	2.33GHz	1333MHz	8MB	80W	4
E5335	65nm	2.0GHz	1333MHz	8MB	80W	4
E5320	65nm	1.86GHz	1066MHz	8MB	80W	4
E5310	65nm	1.6GHz	1066MHz	8MB	80W	4
E5240	45nm	3.0GHz	1333MHz	6MB	40W	2
E5220	45nm	2.33GHz	1333MHz	6MB	65W	2
E5205	65nm	1.86GHz	1066MHz	6MB	65W	2
E5160	65nm	3.0GHz	1333MHz	4MB	80W	2
E5150	65nm	2.66GHz	1333MHz	4MB	65W	2
5148	65nm	2.33GHz	1333MHz	4MB	40W	2
5140	65nm	2.33GHz	1333MHz	4MB	65W	2
5138	65nm	2.13GHz	1066MHz	4MB	35W	2
5130	65nm	2.0GHz	1333MHz	4MB	65W	2
5128	65nm	1.86GHz	1066MHz	4MB	40W	2
5120	65nm	1.86GHz	1066MHz	4MB	40W	2
5110	65nm	1.8GHz	1066MHz	4MB	65W	2

"Yellow" means long-term support

SPCIE-5100DX Dimensions



PICMG 1.3 Server Grade System Solution

There are some limitations for certain expansion slots when the SPCIE-5100DX is installed on the backplane. Please see the table below for more details.

Model	Total Slots	System	Expansion Slots					System Type
			PCIe			PCI-X	PCI	
			x16/x8	x4	x1			
SPE-4S	4	One	2*	1	-	-	-	Single
SPE-6S	6	One	-	5*	-	-	-	Single
SPE-9S	7	One	1	3	-	-	3	Single
SPXE-9S	7	One	1	2	-	2	2	Single
SPXE-14S	14	One	1*	-	12*	-	-	Single

The limitations for certain backplane expansion slots when installed with SPCIE-5100DX are listed below.

Backplanes	Slot Label	Limitations
SPE-4S	PCIEX8_1	The length of the expansion card installed in this PCIe x8 slot should be less than 21cm.
SPE-6S	PCIEX4_1	The length of the expansion card installed in these two PCIe x4 slots should be less than 21cm.
	PCIEX4_2	
SPXE-14S	PCIEX1_A1	This PCIe x1 slot is not supported by the SPCIE-5100DX
	PCIEX8_1	The length of the expansion card installed in this PCIe x8 slot should be less than 21cm.

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PICMG 1.3 Backplane

Selection Guide

 PAC series wall-mount chassis

 4U rack-mount chassis

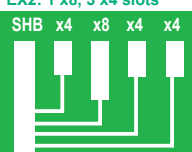
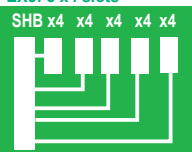
Backplane		SPE-4S	SPE-6S	SPE-9S	SPXE-9S	SPXE-14S
Total	Slot	4	6	7	7	14
PCIe	x16					
	x8	2 (x16 connector)		1 (x16 connector)	1 (x16 connector)	1 (x16 connector)
	x4	1	5	3	2	
	x1					12
	PCI-X				2	
	PCI			3	2	
PSU Type		24+4-pin ATX	24+4-pin ATX	24+4-pin ATX	24+4-pin ATX	24+8-pin ATX
Chassis Option		PAC-106G PAC-107G PAC-1000G	PAC-106G PAC-107G PAC-1000G	PAC-125G	PAC-125G	RACK-305G RACK-360G RACK-3000G

IEI Server Grade Backplane Solution

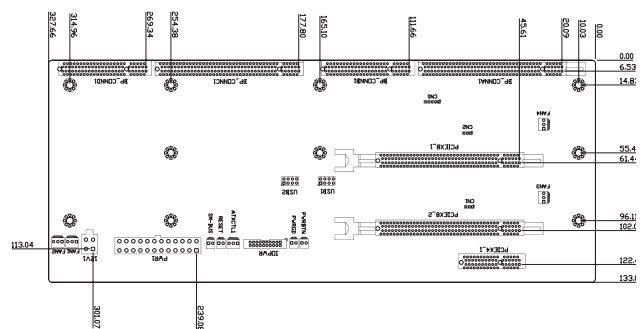
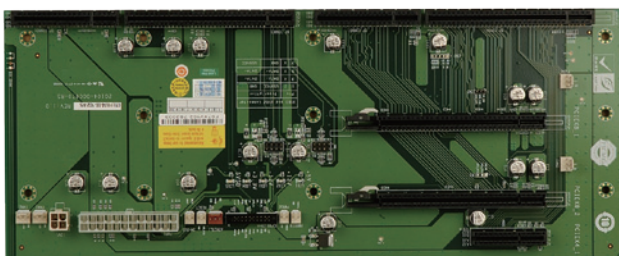
Server grade backplane accommodates PCIe x8 and multiple PCIe x4 add-on cards. It is specially designed for intensive data transfer applications such as server data storage and any application that requires more than one PCIe x4 or four PCIe x1 cards. Given the multiple PCIe x4 and x1 support, it provides a more cost effective solution for end-users by reducing the number of systems required.

System Solution for options

Backplane	Total	PCIe							PSU Type	Chassis Option
	Slot	x16	x8	x4	x1	PCI-X	PCI			
SPE-4S	4	-	2 (x16 connector)	1		-	-		24+4-pin ATX	PAC-106G, PAC-1000G
SPE-6S	6	-		5	-	-	-		24+4-pin ATX	PAC-106G, PAC-1000G
SPE-9S	7	-	1 (x16 connector)	3			3		24+4-pin ATX	PAC-125G
SPXE-9S	7	-	1 (x16 connector)	2		2	2		24+4-pin ATX	PAC-125G
SPXE-14S	14	-	1 (x16 connector)	-	12	-	-		24+4-pin ATX	RACK-305G, RACK-360G, RACK-3000G

Server Grade Backplane	
Example	Corresponding Model
EX1: 2 x8 & 1 x4 slots 	SPE-4S 
EX2: 1 x8, 3 x4 slots 	SPE-9S SPXE-9S  
EX3: 5 x4 slots 	SPE-6S 

SPE-4S-R10



Ordering Information

SPE-4S-R10	4-slot PICMG 1.3 backplane with 2 PCIe x16 (x8 signal) and 1 PCIe x4 slots
PAC-106G	6-slot full-size compact chassis
PAC-107G	6-slot full-size compact chassis
PAC-1000G	6-slot full-size compact chassis

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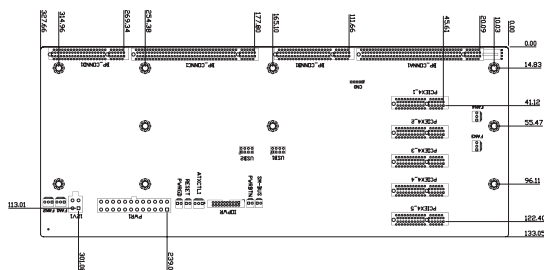
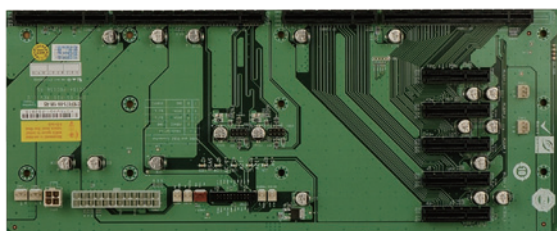
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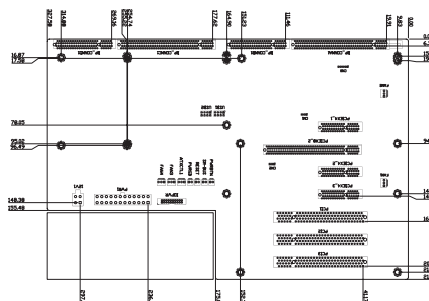
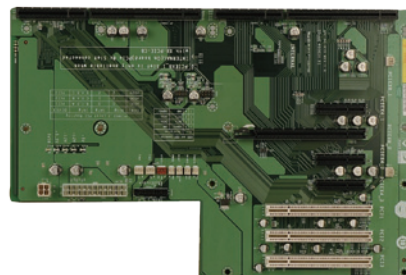
SPE-6S-R10



Ordering Information

SPE-6S-R10	6-slot PICMG 1.3 backplane with 5 PCIe x4 slots
PAC-106G	6-slot full-size compact chassis
PAC-107G	6-slot full-size compact chassis
PAC-1000G	6-slot full-size compact chassis

SPE-9S-R11



Ordering Information

SPE-9S-R11	7-slot PICMG 1.3 backplane with 1 PCIe x16 (x8 signal), 3 PCIe x4, and 3 PCI
PAC-125G	10-slot full-size compact chassis

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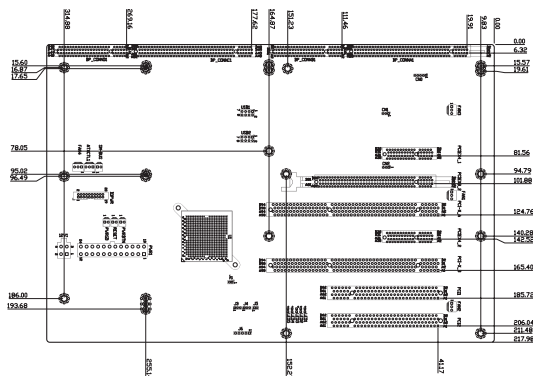
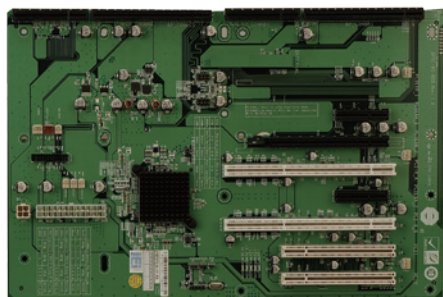
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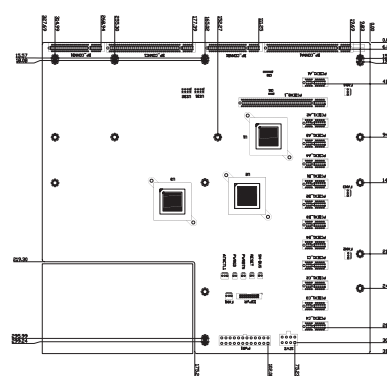
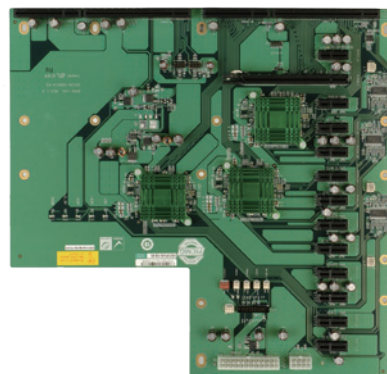
SPXE-9S-R11



Ordering Information

SPXE-9S-R11	7-slot PICMG 1.3 backplane with 1 PCIe x16 (x8 signal), 2 PCIe x4, 2 PCI-X and 2 PCI
PAC-125G	10-slot full-size compact chassis

SPXE-14S-R10

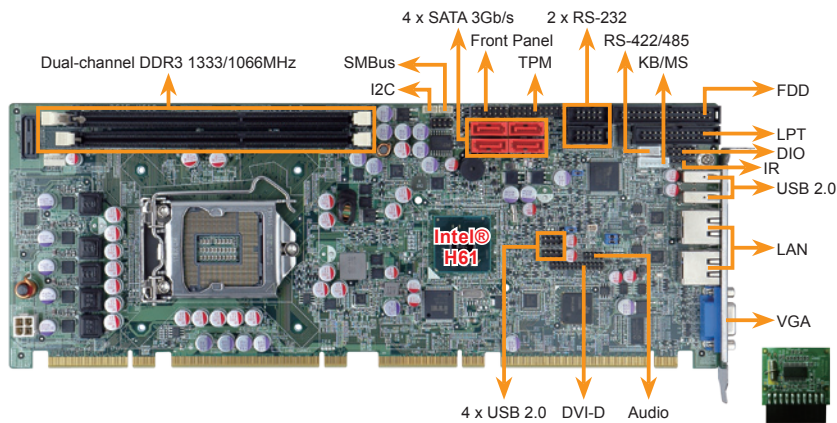


Ordering Information

SPXE-14S-R10	14-slot PICMG 1.3 backplane with 1 PCIe x16 (x8 signal) and 12 PCIe x1
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis
RACK-3000G	4U 14-slot full-size rack-mount chassis

PCIE-H610

Full-size PICMG 1.3 CPU card Supports 32nm LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA, Dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS



Specifications

- ◆ CPU
LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ PCH
Intel® H61
- ◆ Memory
Two 240-pin 1333/1066MHz dual-channel DDR3 & DDR3L (1.35V) DIMMs supported (system max. 16GB)
- ◆ BIOS
UEFI BIOS
- ◆ Graphics Engine
Intel® HD Graphics Gen 6 supports for DX10.1 and OpenGL 3.0
Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA
1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)
- ◆ Ethernet
Dual Realtek RTL8111E PCIe GbE controllers (LAN1 with ASF 2.0 supported)
- ◆ Super I/O
Fintek F81866
- ◆ PCIe Switch
TI XIO3130
- ◆ PCIe-PCI Bridge
ITE IT8892E
- ◆ I/O Interface
2 x RS-232
4 x SATA 3Gb/s
1 x FDD
6 x USB 2.0 (2 by Rear IO, 4 by on-board pin header)
4 x USB 2.0 (4 by backplane pin header via golden finger)
- ◆ Front Panel
1 x Front panel (Power LED, HDD LED, Speaker, Power Button, Reset Button)
- ◆ Audio
Supports by IEI AC-KIT-888HD audio kit
- ◆ TPM
2 x 10-pin headers
- ◆ SMBus
1 x 4-pin wafer
- ◆ I2C
1 x 4-pin wafer
- ◆ Infrared Interface
1 x 5-pin header
- ◆ Expansion
PCIe signal and PCI signal via golden finger
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit programmable I/O
- ◆ Fan Connector
1 x 4-pin smart Fan Connector
- ◆ Power Supply
5V/12V, AT/ATX support
- ◆ Power Consumption
5V@4.41A, 12V@0.21A, Vcore_12V@7.72A, 3.3V@1.71A, 5VSB@0.16A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
338 mm x 126 mm
- ◆ Weight
GW: 1200g/NW: 420g

2nd Gen Intel® Core Processors (TDP=35W) Suggest List

New

CPU No.	Clock speed	Core	Smart cache	TDP
i5-2390T	2.7GHz	2	3M	35W
i3-2120T	2.6GHz	2	3M	35W
i3-2100T	2.5GHz	2	3M	35W
G630T	2.3GHz	2	3M	35W
G620T	2.2GHz	2	3M	35W
G530T	2.0GHz	2	2M	35W
G440	1.6GHz	1	1M	35W



TPM 1.2 Support



IO-KIT-001

DVI cable included in DVI model



CF-1156C-RS

1U chassis compatible



The 2nd gen Intel® processors provide advanced technology and intelligent performance.

Features

1. Full-size PICMG 1.3 graphics grade solution
2. LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
3. Dual-channel 1333/1066MHz DDR3/DDR3L SDRAM supported up to 16GB
4. Intel® HD Graphics technology integrates high-performance graphics and media processing
5. TPM V1.2 hardware security function supported by TPM module
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

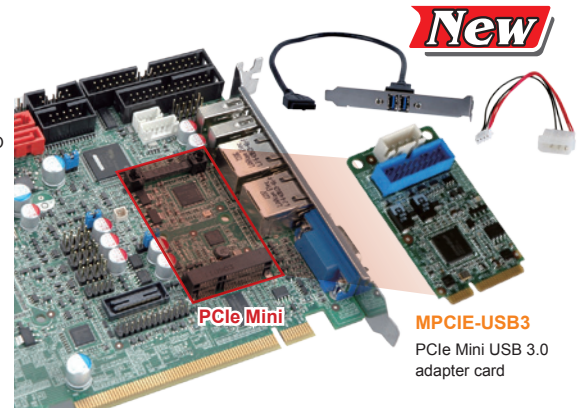
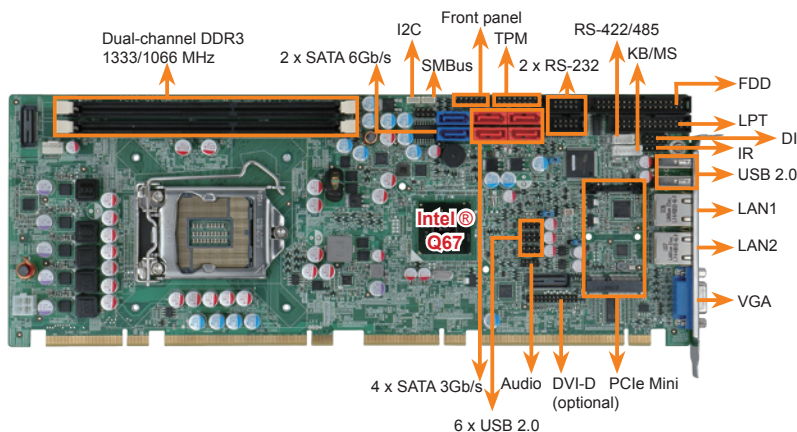
1 x PCIE-H610 single board computer	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Mini jumper pack
4 x SATA cable (P/N: 32801-000703-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
PCIE-H610-R10	Full-size PICMG 1.3 CPU card supports 32nm LGA1155 Intel® Core™ i7/i5/i3 CPU with Intel® H61, DDR3, VGA, Dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS
PCIE-H610-DVI-R10	Full-size PICMG 1.3 CPU card supports 32nm LGA1155 Intel® Core™ i7/i5/i3 CPU with Intel® H61, DDR3, VGA/DVI-D, Dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS
32205-003800-100-RS	RS-422/485 cable, 200mm
19800-000075-RS	KB/MS cable with bracket
SAIDE-KIT01-R10	SATA to IDE/CF converter board
32102-000100-200-RS	SATA power cable
32229-000100-100-RS	FDD flat cable
32200-015100-RS	LPT cable
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2100T	Intel® Core™ i3-2100T processor, LGA1155, dual core 2.5GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G620T	Intel® Pentium® G620T processor, LGA1155, dual core 2.2GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CF-1156A-RS-R10	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156B-RS-R10	High performance LGA1155/LGA1156 cooler kit, 95W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
TPM-IN01-R11	20-pin Infi neon TPM module, software management tool, firmware V3.17

PCIE-Q670

Full-size PICMG 1.3 CPU card Supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, VGA/DVI-D, Dual Intel® PCIe GbE, SATA 6Gb/s, PCIe Mini, HD Audio and RoHS



The PCIe Mini interface provides PCIe x1 and USB 1.1/2.0 signal for full-size or half-size devices such as PCIe Mini USB 3.0 adapter card (MPCIE-USB3) or wireless LAN cards.



IO-KIT-001
DVI cable included in DVI model

Specifications

- ◆ CPU
LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ PCH
Intel® Q67
- ◆ Memory
Two 240-pin 1066/1333MHz dual-channel unbuffered DDR3 SDRAM DIMMs supported (system max. 16GB)
- ◆ BIOS
UEFI BIOS
- ◆ Graphics Engine
Intel® HD Graphics Gen 6 supports for DX10.1 and OpenGL 3.0
Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA
1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)
- ◆ Ethernet
LAN1: Intel® 82583V PCIe controller
LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support
- ◆ Super I/O
Fintek F81866
- ◆ I/O Interface
 - 2 x RS-232 1 x RS-422/485
 - 1 x LPT 1 x FDD
 - 8 x USB 2.0 (2 by rear IO, 6 by on-board pin header)
 - 1 x 6-pin wafer for KB/MS
 - 4 x SATA 6Gb/s (RAID 0/1/5/10 supported)
 - 2 x SATA 6Gb/s (RAID 0/1/5/10 supported)
- ◆ Front Panel
1 x Front panel connector (power LED, HDD LED, speaker, power button, reset button)
- ◆ Audio
Supported by IEI AC-KIT-888HD audio kit
- ◆ TPM
1 x 20-pin header
- ◆ SMBus
1 x 4-pin wafer
- ◆ Infrared Interface
1 x 5-pin header
- ◆ Expansions
PCIe signal and PCI signal via golden finger
1 x PCIe Mini slot (with USB 1.1/2.0 signal)
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Fan Connector
1 x 4-pin smart Fan Connector
- ◆ Power Supply
AT/ATX power supply supported
- ◆ Power Consumption
5V@3.45A, 12V@0.32A, Vcore 12V@5.24A, 3.3V@1.69A, 5VSB@0.17A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
338 mm x 126 mm
- ◆ Weight
GW: 1200g/NW: 420g

Features

1. PICMG 1.3 full-size graphics grade solution
2. LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processors supported
3. Up to 16 GB 1333 MHz dual-channel DDR3 SDRAM
4. Supports dual independent display by VGA and DVI-D (DVI model)
5. Supports PCIe Mini expansion
6. Intel® PCIe GbE with Intel® AMT 7.0 support
7. Supports SATA 6Gb/s
8. Supports RAID function via SATA 6Gb/s and SATA 3Gb/s
9. TPM V1.2 hardware security provided by the TPM module
10. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

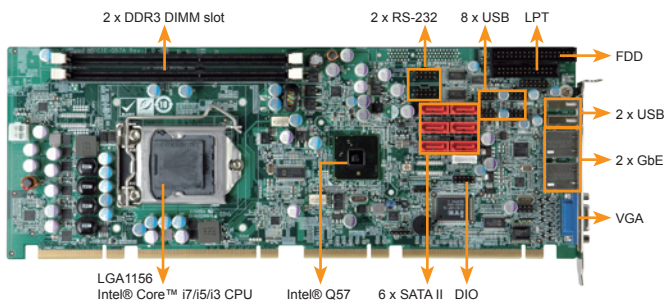
1 x PCIE-Q670 Single Board Computer	
1 x Dual RS-232 Cable (P/N: 19800-000051-RS)	
4 x SATA Cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x USB Cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
PCIE-Q670-R10	Full-size PICMG 1.3 CPU card supports LGA1155 32nm Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, VGA, dual Intel® PCIe GbE, SATA 6Gb/s, PCIe Mini, HD Audio and RoHS
PCIE-Q670-DVI-R10	Full-size PICMG 1.3 CPU card supports LGA1155 32nm Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, DVI-D, dual Intel® PCIe GbE, SATA 6Gb/s, PCIe Mini, HD Audio and RoHS
32205-003800-100-RS	RS-422/485 cable, 200mm
19800-000075-RS	KB/MS cable with bracket
SAIDE-KIT01-R10	SATA to IDE/CF converter board
32102-000100-200-RS	SATA power cable
32229-000100-100-RS	FDD flat cable
32200-015100-RS	LPT cable
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2100T	Intel® Core™ i3-2100T processor, LGA1155, dual core 2.5GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G620T	Intel® Pentium® G620T processor, LGA1155, dual core 2.2GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CF-1156A-RS	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156B-RS	High-performance LGA1155/LGA1156 cooler kit, 95W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W

PCIE-Q57A

PICMG 1.3 with LGA1156 socket for Intel® Core™ i7/i5/i3/Pentium® CPU with VGA, Dual Intel® GbE, SATA 3Gb/s, COM, USB 2.0 and Audio, RoHS



LGA1156 Cooler
IEI P/N: CF-1156A-RS



TPM 1.2 Support

Features

1. PICMG 1.3 with LGA1156 socket for Intel® Core™ i7/i5/i3/Pentium® processor
2. Supports dual-channel 8GB (max.) 800/1066/1333 MHz DDR3 SDRAM
3. Intel® GbE LAN controller with Intel® AMT 6.0 support
4. Fourteen USB 2.0 ports and two COM ports
5. Six SATA ports with RAID function
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA1156 socket supports Intel® Core™ i7/i5/i3/Pentium® processor
- ◆ System Chipset: Intel® Q57
- ◆ BIOS: AMI BIOS
- ◆ Memory
2 x 240-pin dual-channel DDR3 1333/1066/800 MHz up to 8GB
- ◆ Display Output
1 x VGA
Note:
The Intel® quad-core processor (e.g., i7-860 and i5-750) is a discrete processor which does not integrate a graphics engine. If a quad-core processor is used on the motherboard, an additional graphics card must be installed in order to support display output. Otherwise, the display will show "No display output" when connected to the on-board VGA port.
- ◆ Ethernet
Intel® 82583V PCIe controller
Intel® 82578DM with Intel® AMT 6.0 supported by IEZman software UI
- ◆ I/O Interfaces
2 x RS-232 1 x FDD
1 x LPT 1 x 6-pin wafer on board for KB/MS
14 x USB 2.0 (2 on rear side, 12 on board by pin-header)
6 x SATA II (RAID 0, 1, 5 and 10)
- ◆ Super I/O: ITE IT8718F
- ◆ Infrared Interface
1 x 5-pin infrared connector
- ◆ Digital I/O
8-bit Digital I/O (4-bit input/4-bit output)
- ◆ Audio
7.1 channel supports dual audio streams via Realtek ALC888 audio kit
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector
1 x 4-pin CPU fan connector
1 x 4-pin PCH fan connector
- ◆ Power Supply
ATX Power (Supports AT/ATX mode)
- ◆ Power Consumption
3.3V@0.89A, 5V@4.62A, 12V@0.51A, Vcore_12V@4.35A, 5VSB@0.14A (Intel® Core™ i5 660 3.3GHz CPU with two 2GB 1066MHz DDR3 memory)
- ◆ Temperature
Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity
Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 126 mm
- ◆ Weight: GW: 1.1kg

Packing List

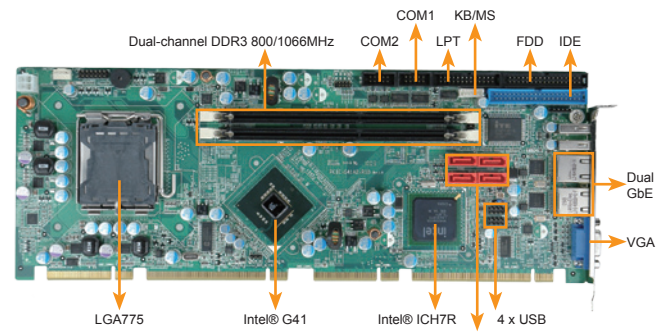
1 x PCIE-Q57A single board computer	1 x One Key Recovery CD
6 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Utility CD
1 x USB cable (P/N: 19800-003100-200-RS)	1 x QIG

Ordering Information

Part No.	Description
PCIE-Q57A-R10	PICMG 1.3 with LGA1156 socket for Intel® Core™ processor with VGA, dual Intel® GbE, SATA II, COM, USB 2.0 and Audio, RoHS
AC-KIT-888HD-R10	7.1 channel HD audio kit with realtek ALC888 codec and dual audio streams
32102-000100-200-RS	SATA power cable
19800-000075-RS	KB/MS cable with bracket
32229-000100-100-RS	FDD flat cable
19800-000400-100-RS	LPT cable
19800-000100-200-RS	4-port USB cable
CF-1156A-RS	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156B-RS	High performance LGA1155/LGA1156 cooler kit, 95W

PCIE-G41A2

Full-size PICMG 1.3 CPU card supports LGA775 Intel® Core™2 Quad processor, DDR3 with VGA, Dual PCIe GbE, SATA II, Audio, COM and USB 2.0, RoHS



Features

1. PICMG 1.3 form factor
2. LGA775 Intel® Core™2 Extreme/Quad/Duo and Celeron® processor supports up to 1333 MHz FSB
3. Dual-channel DDR3 800/1066MHz supports up to 8 GB
4. High performance PCI Express Gigabit Ethernet controller
5. Four SATA II with Intel® Matrix Storage Manager support Raid 0, 1, 5 and 10
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA775 45nm Intel® Core™2 Quad, Core™2 Duo, Pentium® D, Celeron® processors with 800/1066/1333MHz FSB
- ◆ System Chipset: Intel® G41+ ICH7R
- ◆ BIOS: AMI BIOS
- ◆ System Memory
Two 240-pin 4GB (max.) 800/1066MHz dual-channel DDR3 SDRAM DIMMs supported (System max. 8GB)
- ◆ Ethernet
Dual PCIe Realtek 8111CP GbE controller
- ◆ I/O Interface
2 x RS-232 1 x IDE
1 x LPT 1 x FDD
1 x KB/MS by 6-pin header
4 x SATA II with Intel® RAID 0, 1, 5 and 10
8 x USB 2.0 (2 on bracket, 4 by pin header, 2 to backplane via golden finger)
- ◆ Digital I/O
8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface
1 x Infrared by 5-pin pin header
- ◆ Super I/O: ITE IT8718F
- ◆ Display Interface
Intel® GMA X4500
VGA display output up to 2048x1536
- ◆ Audio
5.1 channel audio kit with Realtek ALC655 AC'97 codec
7.1 channel HD audio kit with Realtek ALC888 codec supports dual audio streams
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Power Supply: ATX Power
- ◆ Power Consumption
3.3V@0.53A, 5V@6.2A, 12V@0.11A, Vcore_12V@2.91A (Intel® Core™2 Duo E8500 3.16GHz at FSB 1333MHz CPU with two 2GB 1333MHz DDR3 memory)
- ◆ Temperature Operation: -10°C ~ 60°C
- ◆ Humidity
Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 126 mm
- ◆ Weight: GW: 1100g

Packing List

1 x PCIE-G41A2 single board computer	1 x One Key Recovery CD
4 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Utility CD
1 x USB cable (P/N: 19800-003100-200-RS)	1 x QIG

Ordering Information

Part No.	Description
PCIE-G41A2-R10	Full-size PICMG 1.3 CPU card supports LGA775 Intel® Core™2 Quad processor, DDR3 with VGA, Dual PCIe GbE, SATA II, Audio, COM and USB 2.0, RoHS
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655
19800-000075-RS	6-pin wafer to PS/2 connector cable for keyboard and mouse
19800-000100-200-RS	4 ports USB cable with bracket
CF-775A-RS	CPU cooler for 130 W
CF-520-RS-R11	CPU cooler for 115 W
CF-775B-RS	1U CPU cooler for 90 W
32102-000100-200-RS	SATA power cable
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable
32200-000052-RS	ATA66 IDE flat cable

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Industrial
Computing
Solutions

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Video
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Embedded
Computing
Solutions

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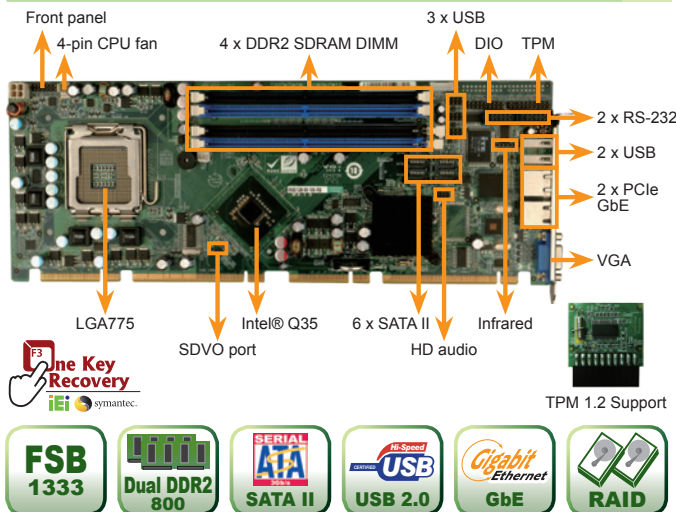
Power Supply/
Peripherals

6

Panel
Solutions
Introduction

PCIE-Q350-R12

Full-size PICMG 1.3 CPU card supports 45 nm LGA 775 Intel® Core™2 Duo and Core™2 Quad processors with an 800 MHz, 1066 MHz or 1333 MHz FSB including Intel® Q35 GMCH, ICH9DO I/O controller hub, dual Intel® GbE, SATA II with RAID and USB 2.0



Features

1. PICMG 1.3 and RoHS compliant
2. Intel® Q35 & ICH9-DO platform
3. Supports 45nm LGA775 Intel® Core™2 Duo and Core™2 Quad processors
4. Six SATA II ports with Intel® Matrix Storage Technology supported
5. Dual Intel® PCIe GbE
6. TPM 1.2 IT security solution supported
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA 775 Intel® Core™2 Quad, Core™2 Duo, Celeron® processors with an 800 MHz, 1066MHz and 1333MHz FSB
- ◆ System Chipset: Intel® Q35 + ICH9-DO
- ◆ BIOS: AMI BIOS
- ◆ System Memory: Four 240-pin 2GB (max.) 800 MHz, 667 MHz dual-channel DDR2 SDRAM DIMMs supported (system max. 8GB)
- ◆ Ethernet: Dual GbE LAN1: Intel® 82566DM GbE controller with iAMT support LAN2: Intel® 82573L GbE controller
- ◆ IO Interface: 2 x RS-232 6 x SATA II (RAID 0, 1, 5 and 10) 1 x Keyboard and mouse connector 12 x USB 2.0 (2 on bracket, six on SBC, four on backplane by pin header)
- ◆ Super IO: ITE 8718F
- ◆ Digital I/O: 16-bit Digital I/O, 8-bit input/8-bit output
- ◆ Infrared interface: 1 x Infrared by pin header
- ◆ Audio: 10-pin on-board header connects to the IEI AC-KIT-888HD 7.1 channel HD audio kit
- ◆ Graphics: Analog VGA output
- ◆ TPM 1.2: 1 x 20-pin on-board header for TPM (Trusted Platform Module)
- ◆ Watchdog Timer: Software programmable supports 1~255sec. system reset
- ◆ Power Supply: ATX
- ◆ Power Consumption: 3.3V@3.0A, 5V@5.1A, 5Vsb@0.28A, 12V@4.23A (Intel® Core™2 Duo E6700 2.66 GHz at FSB 1066 MHz, 8 GB 667 MHz DDR2, 3DMark 2001)
- ◆ Temperature: Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity: Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 126 mm
- ◆ Weight: GW: 1.1 kg

Packing List

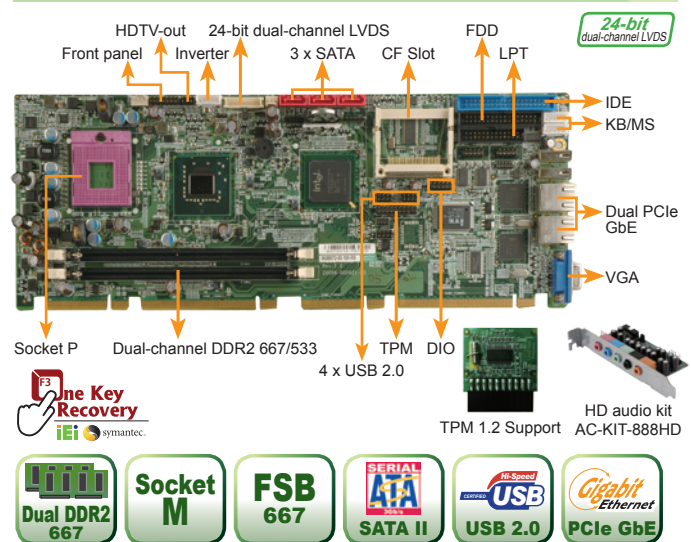
1 x PCIE-Q350 single board computer	1 x One Key Recovery CD
3 x SATA power cable (P/N: 32102-000100-200-RS)	1 x Mini jumper pack
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Utility CD
6 x SATA cable (P/N: 32801-000703-200-RS)	1 x QIG
1 x USB cable (P/N: 19800-003100-200-RS)	

Ordering Information

Part No.	Description
PCIE-Q350-R12	PICMG 1.3 CPU card supports Intel® 45nm LGA 775 Core™2 Duo/Quad CPU at FSB 800/1066/1333 MHz, Intel® Q35 & ICH9DO platform, dual Intel® GbE, SATA II with RAID, USB
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
CF-520-RS-R11	High performance CPU cooler (115 mm x 115 mm x 67 mm, 115W)
CF-775A-RS	High performance CPU cooler (92 mm x 92 mm x 73 mm, 130W)
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17
SDVO-100VGA-R10	PCIe x16 VGA output SDVO card supports dual display (IEI CPU board only)
SDVO-100DVI-R10	PCIe x16 DVI output SDVO card supports dual display (IEI CPU board only)
19800-000075-RS	KB/MS cable with bracket

PCIE-9652

Full-size PICMG 1.3 CPU card supports mobile 65 nm Intel® Core™2 Duo processors with an 800 MHz FSB including Intel® GME965 GMCH, ICH8M-E I/O controller hub, dual GbE, three SATA II with RAID and ten USB 2.0



Features

1. Supports mobile Merom core 45/65 nm Intel® Core™2 Duo processors with an 800MHz FSB
2. Two 240-pin 2 GB (max.) 667 MHz or 533 MHz dual-channel DDR2 SDRAM DIMM supported (system max. 4GB)
3. Supports analog CRT, 18/24-bit dual-channel LVDS and HDTV output
4. Dual Intel® PCIe GbE controller
5. Three 3Gb/s SATA II connectors with RAID function support
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: Socket P Intel® Core™2 Duo, Core™2 Duo, Core™ Solo and Celeron® M mobile processors with a 533 MHz or 800 MHz FSB
- ◆ System Chipset: Intel® GME965 + ICH8M-E
- ◆ BIOS: AMI BIOS
- ◆ Memory: Two 240-pin 2 GB (max.) 667MHz or 533MHz dual-channel DDR2 SDRAM DIMMs supported (system max. 4GB)
- ◆ Display Output: HDTV (NTSC/PAL and max. 1080i HDTV resolution via component output) 18/24-bit dual-channel LVDS Analog CRT
- ◆ Ethernet: Dual Intel® 82573L PCIe GbE controller
- ◆ I/O Interfaces: 2 x RS-232 1 x LPT 1 x FDD 1 x IDE 1 x CF type II 1 x TPM 2 x 5-pin wafer on board for KB/MS 3 x SATA II with RAID 0 and 1 10 x USB 2.0 (Two on bracket, four on-board and four on backplane)
- ◆ Infrared Interface: 1 x Infrared by pin header
- ◆ Digital I/O: 8-bit digital I/O (4-bit input/4-bit output)
- ◆ Audio: 10-pin on-board header connects to the IEI AC-KIT-888HD 7.1 channel HD Audio kit
- ◆ Watchdog Timer: Software Programmable supports 1~255 sec. system reset
- ◆ Power Supply: ATX
- ◆ Power Consumption: 3.3 V @ 0.13 A, 5 V @ 5.3 A, 5 Vsb @ 0.04 A, 12 V @ 1.3 A running 3DMark® 2001 with 2 GHz Intel® Core™2 Duo T7300 processor and 1 GB 667 MHz DDR2 SDRAM
- ◆ Temperature: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 126 mm
- ◆ Weight: GW:1.1 kg

Packing List

1 x PCIE-9652 single board computer	1 x Mini jumper pack
3 x SATA cable (P/N: 32801-000703-200-RS)	1 x Utility CD
1 x SATA power cable (P/N: 32102-000100-200-RS)	1 x QIG
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x USB cable (P/N: 19800-003100-200-RS)	
1 x One Key Recovery CD	

Ordering Information

Part No.	Description
PCIE-9652-R10	Full-size PICMG 1.3 CPU card with Intel® 65nm Mobile Core™2 Duo Process (Merom) at FSB 800 MHz, Intel® GME965 & ICH8M-E platform CRT/24-bit LVDS/HDTV output, dual GbE, 3 SATA II with RAID, 10 USB 2.0
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17
CF-479B	CPU cooler
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
32229-000100-100-RS	FDD cable
19800-000066-RS	KB/MS cable with bracket
HDTVCABLESET-01	HDTV cable set with S-Video/Composite/Component Interface

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Industrial Computing Solutions

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Video Capture Solutions

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Embedded Computing Solutions

4

ORing Network Communication

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Power Supply/Peripherals

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Panel Solutions Introduction

PICMG 1.3 Passive Backplane

Selection Guide

 PAC series wall-mount chassis

 4U/5U rack-mount chassis

 1U/2U rack-mount chassis

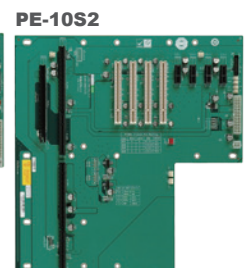
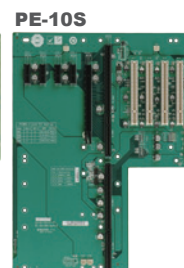
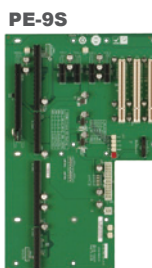
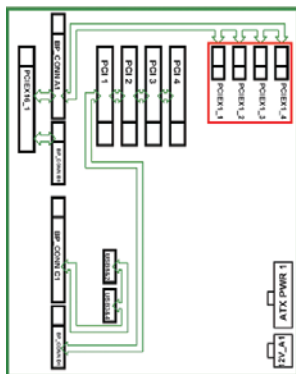
PICMG 1.3 (PCIe+PCI)	Model	PE-2SD1	PE-2SD2	PE-4S	PE-4S2	PE-4S3	PE-5S	PE-5S2	PE-6S	PE-6S2	PE-6S3	PE-6SD	PE-6SD2	PE-6SD3
Total Slot		2	2	4	4	4	5	5	6	6	6	5	5	5
Expansion Slots	PCIe Slots	x16 *	1	1	1	1	1	1	1	1	1	1	1	1
		x4		1			1		1	1				1
	PCI-X Slots	x1				2		3	2		3	3	2	
		PCI Slots		1	1	2	2		2	3	1		1	2
USB Connectors by Pin Header		4	4	4	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	24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis		RACK-1150-PE RACP-1151-PE	RACK-1150-PE RACP-1151-PE	N/A	N/A	N/A	RACK-500G	RACK-500G	RACK-305G RACK-360G RACK-3000G PAC-1700G PAC-125	PAC-106G x 1 PAC-107G x 1 PAC-1000G	PAC-106G x 1 PAC-107G x 1 PAC-1000G	N/A	N/A	N/A
Note		1U Type	1U Type									2U Type	2U Type	2U Type

PICMG 1.3 (PCIe+PCI)	Model	PE-7S	PE-7S2	PE-8S	PE-9S	PE-10S	PE-10S2	PE-13SD	PE-16SQ	PXE-12S	PXE-13S	PXE-19S	PXE-19S2
Total Slot		7	7	8	9	10	10	13	16	12	13	19	19
Expansion Slots	PCIe Slots	x16 *	1	1	1	1	1	1/1	1/1/1/1	1	1	1	1
		x4						1/0	1/1/1/1				
	PCI-X Slots	x1	2	4	3	4	4	0/4	0		3	1	1
		PCI Slots								6			
USB Connectors by Pin Header		4	4	4	4	4	4	8	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	Dual 24+4-pin ATX	Three 20+4-pin ATX One 24+4-pin ATX	24+4-pin ATX	24+4-pin ATX	24+4-pin ATX	24+4-pin ATX
Chassis		PAC-1700G	PAC-1700G	PAC-125G	N/A	RACK-305G RACK-360G RACK-3000G	RACK-3000G RACK-305G RACK-360G	RACK-3000G RACK-305G RACK-360G	N/A	RACK-3000G RACK-305G RACK-360G	RACK-3000G RACK-305G RACK-360G	N/A	N/A
Note								Dual System Backplane	Quad System Backplane	PCIe to PCI-X Bridge backplane	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.

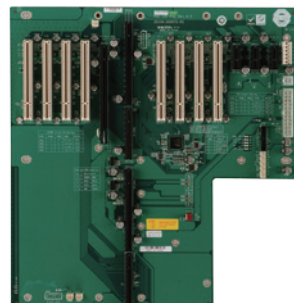
IEI Graphics Grade Backplane Solution

Graphics centric backplane targets applications which concern system speed and performance. It has higher performance over cost ratio than the previous PICMG 1.0 solution.

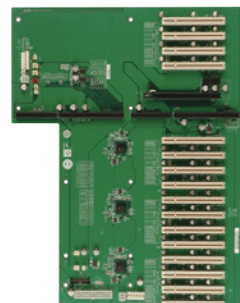


- Twenty PCIe lanes total
- One PCIe x16 slot
- Up to four PCIe x1 or one PCIe x4 slot
- Up to four local PCI slots (w/o bridge)

PXE-13S



PXE-19S



- Twenty PCIe lanes total
- One PCIe x16 slot
- Up to four PCIe x1 slots
- PCI slots expandable via PCIe to PCI bridge

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Industrial
Computing
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Video
Capture
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Embedded
Computing
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O/Ring
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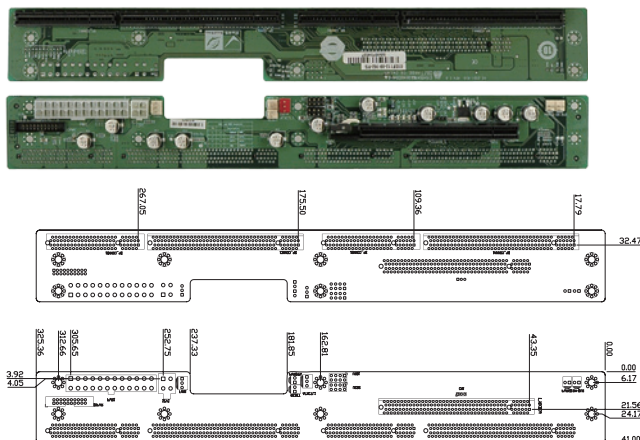
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Power Supply/
Peripherals

6

Panel
Solutions
Introduction

For 1U system!

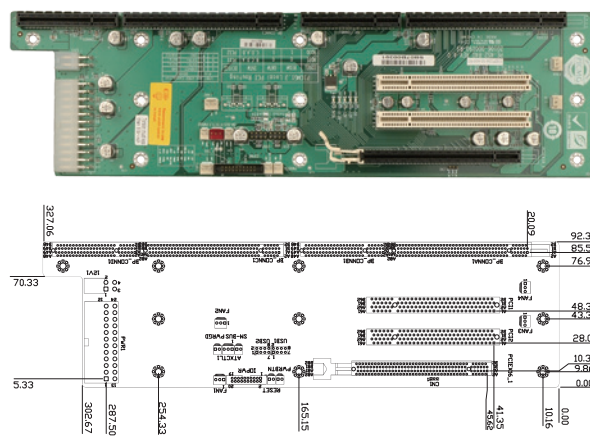


Ordering Information

PE-2SD1-R10	2-slot backplane with one PCIe slot
RACK-1150G-PE	1U full-size rack-mount chassis

PE-4S2-R40

**Mounting holes
compatible with PCI-4S**

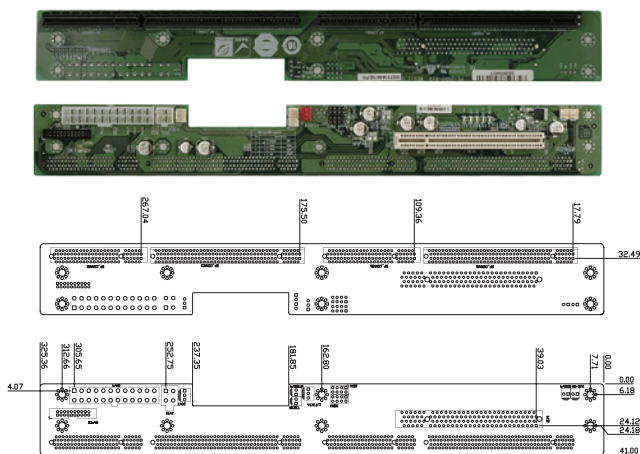


Ordering Information

PE-4S2-R40	4-slot backplane with one PCIe x16 slot and two PCI slots
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PE-2SD2-R10

For 1U system!

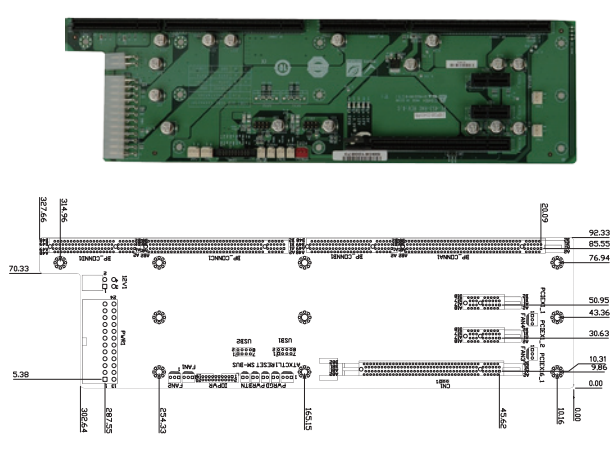


Ordering Information

PE-2SD2-R10	2-slot backplane with one PCI slot
RACK-1150G-PE	1U full-size rack-mount chassis

PE-4S3-R40

**Mounting holes
compatible with PCI-4S**

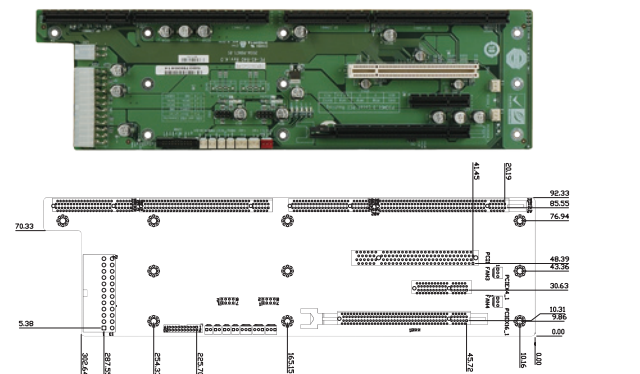


Ordering Information

PE-4S3-R40	4-slot backplane with one PCIe x16 slot and two PCIe x1 slots
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PE-4S-R40

**Mounting holes
compatible with PCI-4S**

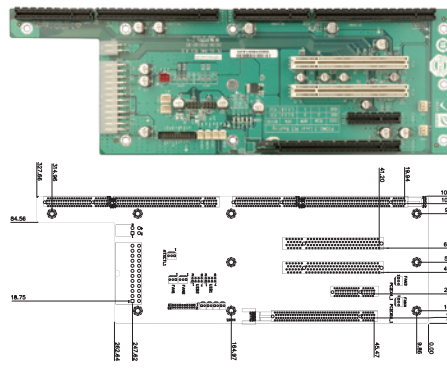


Ordering Information

PE-4S-R40	4-slot backplane with one PCIe x16 slot, one PCIe x4 slot and one PCI slot
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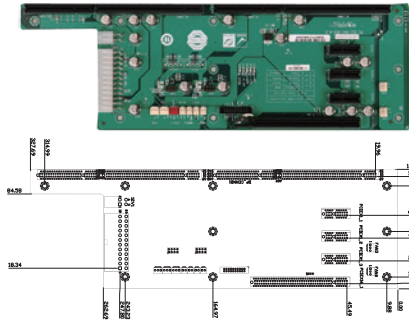
PE-5S-R40

**Mounting holes
compatible with PCI-5S**

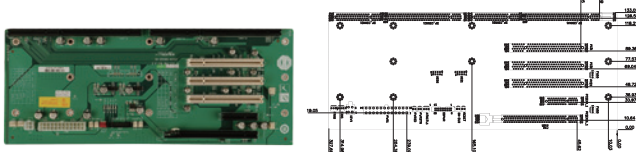


Ordering Information

PE-5S-R40	5-slot backplane with one PCIe x16 slot, one PCIe x4 slot and two PCI slots
RACK-500G	5U 5-slot full-size rack-mount chassis

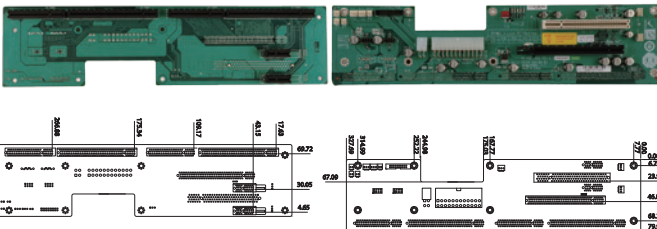
PE-5S2-R40Mounting holes
compatible with PCI-5S**Ordering Information**

PE-5S2-R40	5-slot backplane with one PCIe x16 slot and three PCIe x1 slots
RACK-500G	5U 5-slot full-size rack-mount chassis

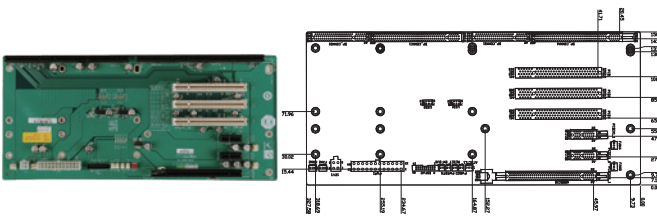
PE-6S2-R40Mounting holes
compatible with PCI-6S**Ordering Information**

PE-6S2-R40	6-slot backplane with one PCIe x16 slot, one PCIe x4 slot and three PCI slots
PAC-106G *	6-slot full-size compact chassis
PAC-107G *	6-slot full-size compact chassis
PAC-1000G	6-slot full-size compact chassis

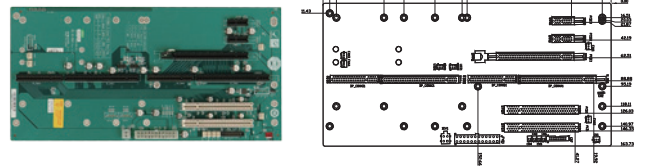
* When using a PCIe x16 add-on card, the length of the card must not exceed 167mm or 6.57 inches.

PE-6SD2-R40Mounting holes
compatible with PCI-6SD**2U Type****Ordering Information**

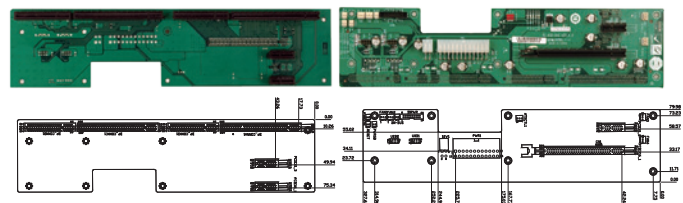
PE-6SD2-R40	5-slot backplane with one PCIe x16 slot, two PCIe x1 slots and one PCI slot
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PE-7S-R40Mounting holes
compatible with PCI-7S**Ordering Information**

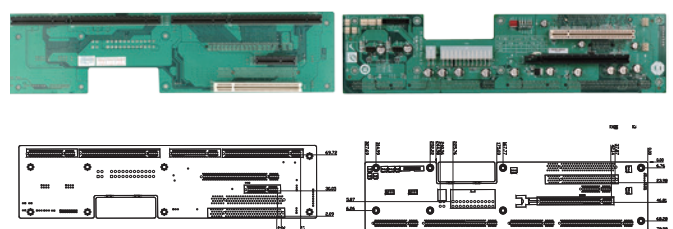
PE-7S-R40	7-slot backplane with one PCIe x16 slot, two PCIe x1 slots and three PCI slots
PAC-1700G	7-slot full-size compact chassis

PE-6S-R41Mounting holes
compatible with PCI-7S**Ordering Information**

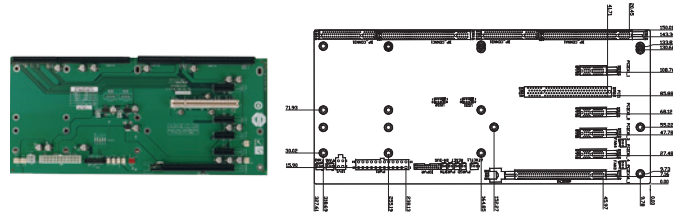
PE-6S-R41	6-slot backplane with one PCIe x16 slot, two PCIe x1 slots and two PCI slots
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis
RACK-3000G	4U 14-slot full-size rack-mount chassis
PAC-1700G	7-slot full-size compact chassis
PAC-125G	10-slot full-size compact chassis

PE-6SD-R40Mounting holes
compatible with PCI-6SD**2U Type****Ordering Information**

PE-6SD-R40	5-slot backplane with one PCIe x16 slot and three PCIe x1 slots
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PE-6SD3-R40Mounting holes
compatible with PCI-6SD**2U Type****Ordering Information**

PE-6SD3-R40	5-slot backplane with one PCIe x16 slot, one PCIe x4 slot and two PCI slots
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PE-7S2-R40Mounting holes
compatible with PCI-7S**Ordering Information**

PE-7S2-R40	7-slot backplane with one PCIe x16 slot, four PCIe x1 slots and one PCI slot
PAC-1700G	7-slot full-size compact chassis

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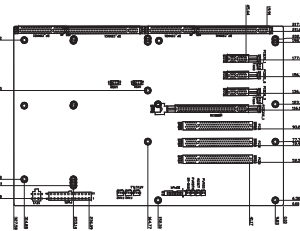
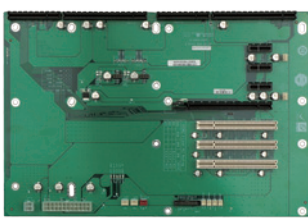
5

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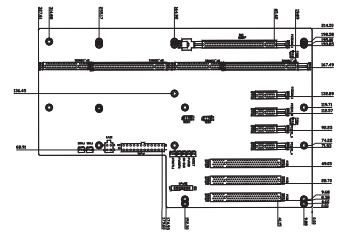
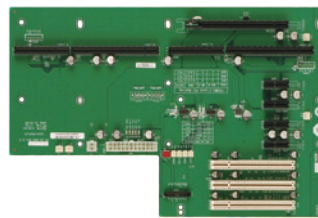
PE-8S-R40



Ordering Information

PE-8S-R40	8-slot backplane with one PCIe x16 slots, three PCIe x1 slots and three PCI slots
PAC-125G	10-slot full-size compact chassis

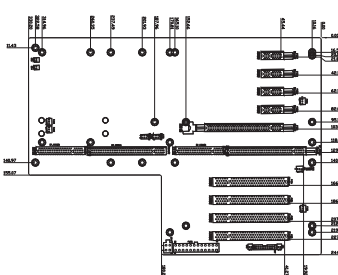
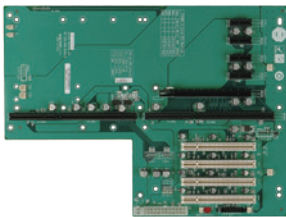
PE-9S-R40

Mounting holes
compatible with PCI-10S2

Ordering Information

PE-9S-R40	9-slot backplane with one PCIe x16 slot, four PCIe x1 slots and three PCI slots
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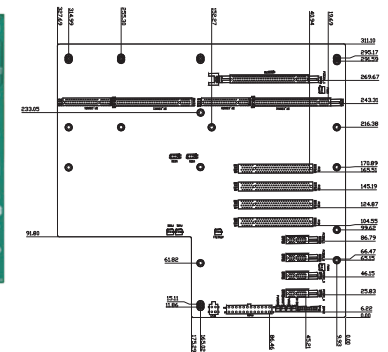
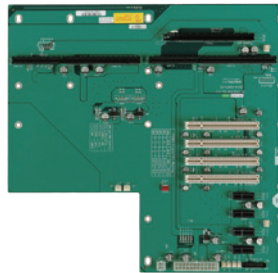
PE-10S-R40

Mounting holes
compatible with PCI-14S

Ordering Information

PE-10S-R40	10-slot backplane with one PCIe x16 slot, four PCIe x1 slots and four PCI slots
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis
RACK-3000G	4U 14-slot full-size rack-mount chassis

PE-10S2-R40

Mounting holes
compatible with PCI-14S

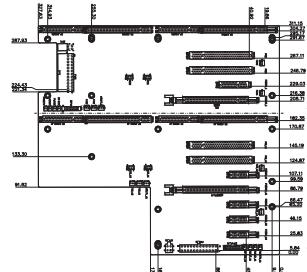
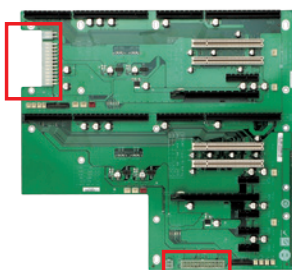
Ordering Information

PE-10S2-R40	10-slot backplane with one PCIe x16 slot, four PCIe x1 slots and four PCI slots
RACK-3000G	4U 14-slot full-size rack-mount chassis
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis

PE-13SD-R40

Mounting holes
compatible with PCI-14S

Dual system



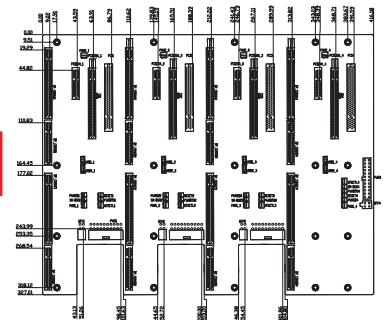
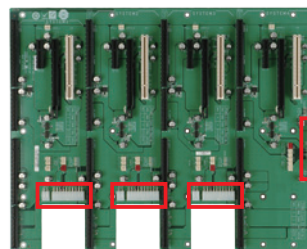
2 independent power resources

Ordering Information

PE-13SD-R40	13-slot backplane with two PCIe x16 and one PCIe x4 and four PCIe x1 and four PCI slot
RACK-3000G	4U 14-slot full-size rack-mount chassis
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis

PE-16SQ-R10

Quad system



4 independent power sources

Ordering Information

PE-16SQ-R10	4-system backplane with each system having one PCIe x16 slot, one PCIe x4 slot and one PCI slot
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Full-size PICMG 1.0 Selection Guide

New


Model Name	WSB-H610	WSB-G41A	WSB-PV-D4251/D5251	WSB-Q354-R41
CPU Socket	Intel® LGA1155	LGA 775	On board	LGA 775
CPU Type	2nd Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron®	Intel® Core™2 Quad/Duo, Pentium® D/4, Celeron® D	Intel® Atom™ D525 dual-core 1.8GHz Intel® Atom™ D425 single-core 1.8GHz	Intel® Core™2 Quad/Duo, Pentium® D/4, Celeron® D
FSB	NA	800/1066/1333MHz	N/A	800/1066/1333MHz
Chipset	Intel® H61	Intel® G41 + ICH7	Intel® ICH8M	Intel® Q35 + ICH9R
Memory	Two 240-pin 1333/1066MHz dual-channel DDR3 & DDR3L (1.35V) DIMMs supported (system max. 16GB)	Two 240-pin 800/1066MHz dual-channel DDR3 SDRAM DIMMs (system max. 8GB)	Two 204-pin 800MHz DDR3 SDRAM SO-DIMMs (system max. 4GB)	Four 240-pin 667/800MHz dual-channel DDR2 SDRAM DIMMs (system max. 8GB)
Display Interface	1 x VGA 1 x DVI-D(via header to IO-KIT-001-R20 DVI-D/USB module) (optional)	1 x VGA 1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)	Dual display supported 1 x VGA 1 x 18-bit single-channel LVDS	1 x VGA
Ethernet	Dual Realtek RTL8111E PCIe GbE controllers (LAN1 with ASF 2.0 supported)	Dual Intel® 82583V PCIe GbE controller	Dual Realtek RTL8111E PCIe GbE controller	Dual Realtek RTL8111E PCIe GbE controller
I/O Interface	2 x RS-232 1 x RS-422/485 7 x USB 2.0 1 x LPT 1 x FDD 1 x PS/2 KB/MS 1 x 6-pin wafer for KB & MS	2 x RS-232 7 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 6-pin wafer for PS/2 KB/MS	4 x RS-232 7 x USB 2.0 1 x LPT 1 x PS/2 KB & MS 1 x 6-pin wafer for PS/2 KB/MS	2 x RS-232 7 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 5-pin wafer for PS/2 KB 1 x TPM
Driver Interface	4 x SATA 3Gb/s	4 x SATA II 1 x IDE 1 x FDD	3 x SATA II 1 x IDE 1 x FDD 1 x CF Type II	6 x SATA II (RAID 0/1/10/5) 1 x IDE 1 x FDD
Audio	Supports by IEI AC-KIT-888HD audio kit	AC-KIT08R-R10 5.1 channel AC'97 audio kit and IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	
Digital I/O	8-bit Digital I/O	8-bit Digital I/O (4-bit input/4-bit output)		
Power Consumption	5V@4.53A, 12V@0.19A, Vcore_12V@7.81A, 5VSB@0.18A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)	5V@7.13A, 12V@3.02A (Intel® Core™2 Duo E8500 3.16GHz at FSB 1333MHz with two 2GB DDR3 800MHz memory)	5V@ 5.16A, 12@ 0.55A (Intel® Dual Core Atom™ D525 1.80GHz with two 2GB 1066MHz DDR3 memory)	5V@5.97A, 5Vsb@0.07A, 12V@0.29A , Vcore@2.97A (Intel® Core™2 Duo E8500 3.16GHz CPU with four 2GB 800MHz DDR2 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset			
Operation Environment	Temperation range: -10°C ~ 60°C Relative humidity: 5% ~ 95%, non-condensing	Temperature range: -10°C ~ 60°C (14°F~140°F) Relative humidity: 5% ~ 95%, non-condensing	Temperature range: -20°C ~ 65°C (-4°F~149°F) with free air for D425 CPU -20°C ~ 60°C (-4°F~140°F) with free air for D525 CPU -20°C ~ 70°C (-4°F~158°F) with force air for D425/D525 CPU Relative humidity: 5% ~ 95%, non-condensing	Temperature range: 0°C ~ 60°C (32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing
Expansion Slot	PCIe Mini	N/A		
CPU Cooler	CF-1156A/B/C/D-RS	CF-775A-RS, CF-775B-RS, CF-520-RS-R11	Heatsink (fanless) (optional CPU fan by 19FTS00032100-000001-RS)	CF-775A-RS, CF-520-RS-R11

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Full-size PICMG 1.0 Selection Guide



Model Name	WSB-9454-R40	WSB-9452-R40	WSB-945GSE	ROCKY-4786EVG-R41	ROCKY-3786EVGU2-R41
CPU Socket	LGA 775	Socket M	On board	Socket 478	Socket 370
CPU Type	Intel® Core™2 Duo, Pentium® D/4, Celeron® D	Intel® Core™2 Duo, Core Duo/Solo, Celeron® M	Intel® Atom™ Processor N270 1.6GHz	Intel® Pentium® 4/Celeron D	Intel® Pentium® III
FSB	533/800/1066MHz	533/667MHz	533MHz	533/800MHz	100/133MHz
Chipset	Intel® 945G + ICH7	Intel® 945GME + ICH7M	Intel® 945GME + ICH7M	Intel® 865GV + ICH5	Intel® 815E + ICH2
Memory	Four 240-pin 400/533/667MHz dual-channel DDR2 SDRAM DIMMs (system max. 4GB)	Two 240-pin 400/533/667MHz dual-channel DDR2 SDRAM DIMMs (system max. 4GB)	One 240-pin 533/667MHz dual-channel DDR2 SDRAM DIMM (system max. 2GB)	Two 184-pin 333/400MHz dual-channel DDR SDRAM DIMMs (system max. 2GB)	Two 168-pin PC 100/133MHz DDR SDRAM DIMMs (system max. 512MB)
Display Interface	1 x VGA	Dual display supported 1 x VGA 1 x 18/24-bit dual-channel LVDS	1 x VGA	1 x VGA	1 x VGA
Ethernet	Dual Realtek RTL8111E PCIe GbE controller	Dual Realtek RTL8111E PCIe GbE controller	Dual Realtek RTL8111CP PCIe GbE controller	Intel® 82562ET Fast Ethernet chipset (optional by Rocky-4786EV) Intel® 82547 GbE chipset (optional by Rocky-4786EVG)	Intel® 82562ET Fast Ethernet chipset (optional by Rocky-3786EV) Intel® 82541PI GbE chipset (optional by Rocky-3786EVGU2)
I/O Interface	2 x RS-232 7 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 5-pin wafer for PS/2 KB	2 x RS-232 7 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 5-pin wafer for PS/2 KB 1 x TPM	2 x RS-232 7 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS	2 x RS-232 8 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 5-pin wafer for PS/2 KB	2 x RS-232 2 x USB 1.1 4 x USB 2.0 (optional by Rocky-3786EVGU2) 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 5-pin wafer for PS/2 KB/MS
Driver Interface	4 x SATA II 1 x IDE 1 x FDD	2 x SATA II 4 x SATA II (optional by WSB-9452S-R40 & WSB-9452SDVI-R40) 1 x IDE 2 x IDE (optional by WSB-9452S-R40 & WSB-9452SDVI-R40)	2 x SATA 1 x IDE 1 x CF Type II	2 x SATA 2 x IDE 1 x FDD 1 x CF Type II	2 x SATA (RAID 0/1) 2 x IDE 1 x FDD 1 x CF Type II
Audio	AC-KIT08R-R10 5.1 channel AC'97 audio kit and IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector			Realtek ALC655 AC'97 codec	Realtek ALC655 AC'97 codec
Digital I/O	8-bit Digital I/O (4-bit input/4-bit output)			N/A	
Power Consumption	5V@7.68A, 12V@0.15A, Vcore@ 2.26A (Intel® Core™2 Duo E7400 2.8GHz CPU at FSB 1066MHz with four 1GB 800MHz DDR2 memory)	5V@4.15A, 12V@0.17A, 3.3V@0.01A, Vcore@1.46A (Intel® Core™2 Duo T2400 1.83 GHz CPU with two 2GB 800MHz DDR2 memory)	5V@2.55A, 12V@0.23A (Intel® Atom™ N270 1.6GHz at FSB 533MHz with 1GB 533MHz DDR2 memory)	5V@6.98A, 12V@7.52A (Intel® Pentium® 4 3.0GHz CPU at FSB 800MHz with 512MB 400MHz DDR memory)	5V@7.6A, 12V@0.23A (Intel® Pentium® III 1GHz CPU)
Watchdog Timer	Software programmable supports 1~255 sec. system reset				
Operation Environment	Temperature range: 0°C ~ 60°C (32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing				
Expansion Slot	N/A	1 x PCIe Mini card slot	N/A	N/A	N/A
CPU Cooler	CF-775A-RS, CF-520-RS-R11	CF-479B-RS	Heatsink (fanless)	CF-478A-RS, CF-478B-RS, CF-514-RS, CF-519-RS	CF-370A-RS

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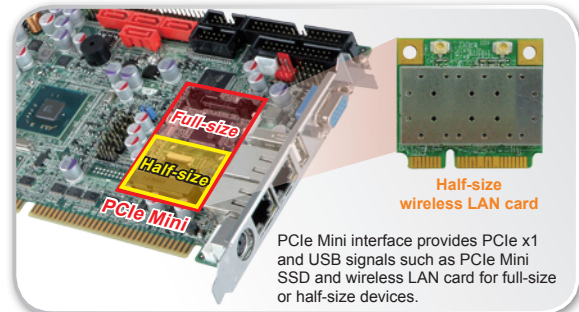
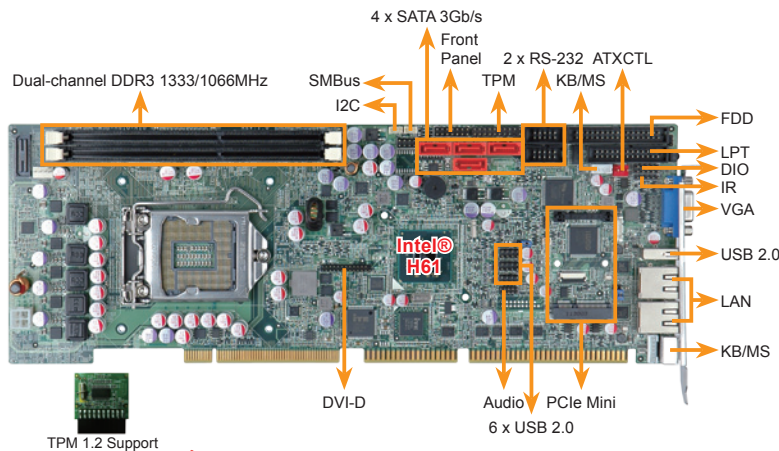
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Panel Solutions Introduction

WSB-H610

Full-size PICMG 1.0 CPU card supports 32nm LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, Dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, COM, HD Audio and RoHS

New



Specifications

- ◆ CPU
LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ PCH
Intel® H61
- ◆ Memory
Two 240-pin 1333/1066MHz dual-channel DDR3 & DDR3L (1.35V) DIMMs supported (system max. 16GB)
- ◆ BIOS
UEFI
- ◆ Graphics Engine
Intel® HD Graphics Gen 6 supports for DX10.1 and OpenGL 3.0
Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA
1 x DVI-D (via header to IO-KIT-001-R20 DVI-D/USB module) (optional)
- ◆ Ethernet
Dual Realtek RTL8111E PCIe GbE controllers (LAN1 with ASF 2.0 support)
- ◆ Super I/O
Fintek F81866
- ◆ Embedded Controller
ITE IT8519E
- ◆ PCIe-PCI Bridge
ITE IT8892E
- ◆ PCI-ISA Bridge
ITE IT888G
- ◆ I/O Interface
2 x RS-232 1 x RS-422/485
1 x LPT 1 x FDD
1 x PS/2 KB/MS 1 x 6-pin wafer for KB & MS
7 x USB 2.0 (1 on rear, 6 by pin header)
4 x SATA 3Gb/s (H61 doesn't support AHCI & RAID)
- ◆ Audio
Supports 7.1 channel HD audio by IEI AC-KIT-888HD kit
- ◆ Front Panel
1 x Front panel (power LED, HDD LED, speaker, power button, reset button)
- ◆ TPM
2 x 10-pin header
- ◆ SMBus
1 x 4-pin wafer
- ◆ I2C
1 x 4-pin wafer
- ◆ Expansion
PCI signal and ISA signal via golden finger
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Fan Connector
1 x 4-pin smart Fan Connector
1 x 4-pin system Fan Connector
- ◆ Power Supply
5V/12V, AT/ATX support
- ◆ Power Consumption
5V@4.53A, 12V@0.19A, Vcore_12V@7.81A, 5VSB@0.18A
(3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
185 mm x 122 mm
- ◆ Weight
GW: 1000g/NW: 260g



IO-KIT-001

DVI cable included in DVI model



CF-1156C-RS

1U chassis compatible



The 2nd gen Intel® processors provide advanced technology and intelligent performance.

Features

1. Full-size PICMG 1.0 CPU card with LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
2. Two DDR3 & DDR3L 1333/1066MHz DIMM SDRAM supported up to 16GB
3. Embedded controller on board supports infrared and PECI 2.0 technology
4. Dual Realtek PCIe GbE and LAN1 with ASF 2.0 support
5. TPM V1.2 hardware security function supported by TPM module
6. IEI One Key Recovery solution allows you to create raid OS backup and recovery

Packing List

1 x WSB-H610 single board computer	
1 x Dual RS-232 cable w/bracket (P/N: 19800-000051-RS)	
1 x KB/MS Y cable (P/N: 32000-133200-RS)	
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Mini jumper pack
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
WSB-H610-R10	Full-size PICMG 1.0 CPU card supports 32nm LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA, dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, COM, HD Audio and RoHS
WSB-H610-DVI-R10	Full-size PICMG 1.0 CPU card supports 32nm LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, COM, HD Audio and RoHS
32006-000300-100-RS	Male PS/2 KB/MS Y-cable w/o bracket, 12cm(KB)+14cm(MS)
19800-000075-RS	6-pin header PS/2 KB/MS Y-cable with bracket, 220mm
SAIDE-KIT01-R10	SATA to IDE/CF converter board
32102-000100-300-RS	SATA power cable
19800-000049-RS	LPT cable
32229-000100-100-RS	FDD cable
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2100T	Intel® Core™ i3-2100T processor, LGA1155, dual core 2.5GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G620T	Intel® Pentium® G620T processor, LGA1155, dual core 2.2GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CF-1156A-RS-R10	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156B-RS-R10	High performance LGA1155/LGA1156 cooler kit, 95W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Embedded Computing Solutions

4

ORing Network Communication

5

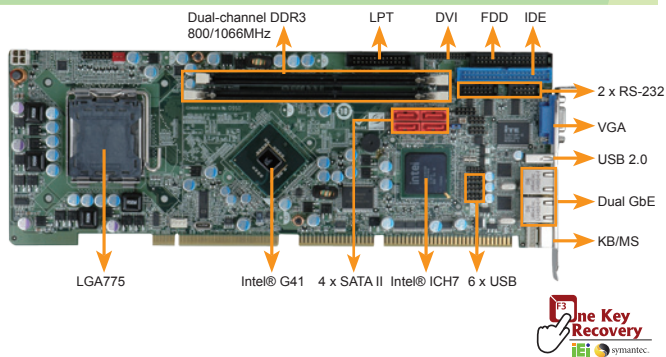
Power Supply/Peripherals

6

Panel Solutions Introduction

WSB-G41A

PICMG 1.0 CPU card with Intel® G41 supports LGA775 Intel® Core™2 Quad, VGA, DDR3, Dual PCIe GbE, SATA II, COM, USB 2.0, Audio and RoHS



Features

1. PICMG 1.0 form factor
2. Supports Intel® LGA775 Core™2 Quad processor up to 1333 MHz FSB
3. Dual-channel 800/1066MHz DDR3 SDRAM supports up to 8 GB
4. Dual Intel® GbE Ethernet, four SATA II, and two RS-232 serial port connectors
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA775 45nm Intel® Core™2 Quad, Core™2 Duo, Pentium® D, Celeron® processors at FSB 800/1066/1333MHz
- ◆ System Chipset
Intel® G41 + ICH7
- ◆ BIOS
AMI BIOS
- ◆ System Memory
Two 240-pin 4GB (max.) 800/1066MHz dual-channel DDR3 SDRAM DIMMs supported (system max. 8GB)
- ◆ Ethernet
Dual PCIe Intel® 82583V GbE controller
- ◆ I/O Interface
2 x RS-232 4 x SATA II
1 x IDE 1 x FDD
1 x LPT 1 x Keyboard and mouse (PS/2)
1 x 5-pin on-board header for KB
7 x USB 2.0 (1 on bracket, 6 on board by pin header)
- ◆ Digital I/O
8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface: 1 x Infrared by pin header
- ◆ Super I/O: ITE IT8718F
- ◆ Display Interface
VGA integrated in Intel® G41
DVI by Silicon Image SIL1362 (WSB-G41A-DVI only)
- ◆ Audio
10-pin on-board header connects to the IEI audio kit
- ◆ Watchdog Timer
Software programmable supports 1 ~255 sec. system reset
- ◆ Power Supply: AT/ATX power
- ◆ Power Consumption
5 V @ 7.13A, 12 V @ 0.27A, 5VBS@0.11A, Vcore@3.02A running 3D Mark2001SE with Intel® Core™2 Duo E8500 3.16GHz, two 2GB DDR3
- ◆ Temperature Operation: -10°C ~ 60°C
- ◆ Humidity
Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 122 mm
- ◆ Weight: GW: 1100g

Packing List

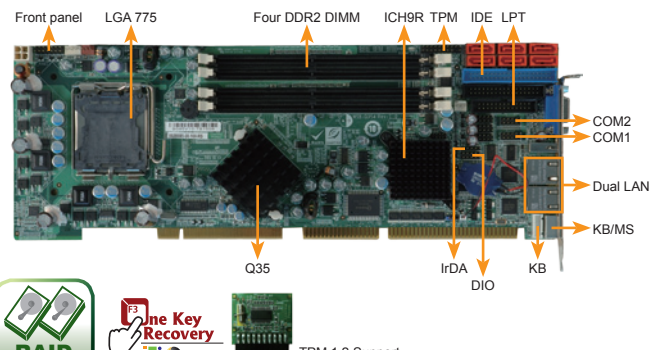
1 x WSB-G41A single board computer	
4 x SATA cable (P/N: 32801-000703-200-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x KB/MS Y cable (P/N: 32006-000300-100-RS)	
1 x IO-KIT-001-R20 (For WSB-G41A-DVI-R10)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x QIG
1 x One Key Recovery CD	1 x Utility CD

Ordering Information

Part No.	Description
WSB-G41A-R11	PICMG 1.0 CPU card with Intel® G41 supports LGA775 Intel® Core™2 Quad CPU, VGA, DDR3, dual PCIe GbE, SATA II, COM, USB 2.0 and RoHS
WSB-G41A-DVI-R11	PICMG 1.0 CPU card with Intel® G41 supports LGA775 Intel® Core™2 Quad CPU, VGA/DVI, DDR3, dual PCIe GbE, SATA II, COM, USB 2.0 and RoHS
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655
19800-000100-200-RS	4-port USB cable with bracket
CF-775A-RS	CPU cooler for 130W
CF-520-RS-R11	CPU cooler for 115W
CF-775B-RS	1U CPU cooler for 90W
32200-000052-RS	ATA 66 flat cable
32102-000100-200-RS	SATA power cable
19800-000400-100-RS	LPT cable
32229-000100-100-RS	FDD cable

WSB-Q354-R41

PICMG 1.0 CPU card supports Intel® LGA 775 Core 2 Duo CPU in 45nm process at FSB 800/1066/1333MHz, Intel® Q35 & ICH9R, VGA, dual PCIe GbE, Six SATA II with RAID, IDE, FDD, LPT, USB 2.0



Features

1. PICMG 1.0 and RoHS compliant
2. Supports Intel® LGA775 Core™2 Duo processor in 45 nm Process (Wofdale)
3. Intel® Q35 & ICH9R platform
4. 6 SATA II with Intel® Matrix Storage Technology supported
5. Dual Broadcom PCIe GbE
6. TPM 1.2 IT security solution supported
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA775 45nm Intel® Core™2 Quad (Yorkfield), Core™2 Duo (Wofdale), Celeron® at FSB 800/1066/1333MHz processors
- ◆ System Chipset
Intel® Q35 + ICH9R
- ◆ BIOS
AMI BIOS
- ◆ System Memory
4 x 240-pin 800/667MHz dual-channel DDR2 SDRAM (system max. 8 GB)
- ◆ Ethernet
Dual Realtek RTL8111E GbE with ASF 2.0
- ◆ IO Interface
2 x RS-232
7 x USB 2.0
(1 on bracket, 6 on board by pin header)
6 x SATA II support RAID 0, 1, 10, 5
1 x IDE
1 x FDD
1 x LPT
1 x Keyboard and mouse (PS/2)
1 x 5-pin on-board header for KB
- ◆ Digital I/O
8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface
1 x Infrared by pin header
- ◆ Audio
10-pin on-board header supports 7.1 channel HD audio by IEI AC-KIT-888HD-R10
- ◆ Graphics
Analog VGA output
- ◆ TPM 1.2
1 x 20-pin on-board header for TPM (Trusted Platform Module)
- ◆ Watchdog Timer
Software programmable supports 1~255sec. system reset
- ◆ Power Supply
ATX
- ◆ Power Consumption
5V@5.97A, 5Vsb@0.07A, 12V@0.29A, Vcore@2.97A (Intel® Core™2 Duo E8500 3.16 GHz, four 2GB 800MHz DDR2 running 3DMark 2001SE)
- ◆ Temperature
Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity
Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions
338 mm x 122 mm
- ◆ Weight
GW:1.1 kg

Packing List

1 x WSB-Q354 single board computer	
1 x ATA 66 flat cable (P/N: 32225-002000-100-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x KB/MS Y-cable (P/N: 32006-000300-100-RS)	
3 x SATA power cable (P/N: 32102-000100-200-RS)	
6 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
WSB-Q354-R41	PICMG 1.0 CPU card supports Intel® LGA 775 Core™2 Duo CPU in 45nm process at 800/1066/1333MHz FSB, Intel® Q35 & ICH9R, VGA, dual PCIe GbE, six SATA II with RAID, IDE, FDD, LPT, USB 2.0
AC-KIT-888HD-R10	7.1 Channel HD audio kit with Realtek ALC888 supports dual audio streams
CF-775A-RS	High performance CPU cooler (92 mm x 92 mm x 73 mm, 130W)
CF-520-RS-R11	High performance CPU cooler (115 mm x 115 mm x 67 mm, 115W)
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17
32225-002000-100-RS	IDE flat cable

1

Industrial
Computing
Solutions

2

Video
Capture
Solutions

3

Embedded
Computing
Solutions

4

O/Ring
Network
Communication

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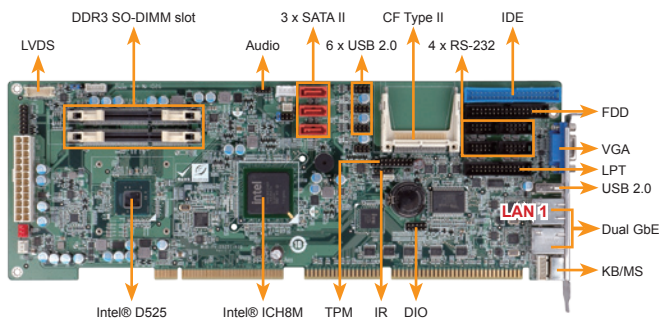
Power Supply/
Peripherals

6

Panel
Solutions
Introduction

WSB-PV-D4251/D5251

Full-size PICMG 1.0 CPU card with Intel® Atom™ D425/D525, DDR3, VGA/LVDS, Dual PCIe GbE, SATA II, COM, USB 2.0, Audio and RoHS



Features

1. PICMG 1.0 form factor and RoHS compliant
2. Support Intel® Atom™ D425/D525 1.80GHz processor
3. Supports 800MHz DDR3 SDRAM SO-DIMM up to 4GB
4. Dual PCIe Ethernet, three SATA II, and four RS-232 serial port connectors
5. VGA and 18-bit single-channel LVDS for dual independent display support
6. TPM V1.2 hardware security function supported by TPM module
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - Intel® Atom™ D525 dual-core processor (1.80GHz/1MB L2 cache)
 - Intel® Atom™ D425 single-core processor (1.80GHz/512KB L2 cache)
- ◆ System Chipset: ICH8M
- ◆ BIOS: UEFI BIOS
- ◆ System Memory
 - Two 204-pin 800MHz DDR3 SDRAM SO-DIMMs supported (system max. 4GB) for D525/D425
- ◆ Graphics Engine
 - GMA 3150
 - Gen3.5 DX9, 400MHz for D525/D425
- ◆ Ethernet
 - Dual Realtek RTL8111E PCIe GbE controller (LAN1 with ASF 2.0 support)
- ◆ Display Interface
 - Analog CRT up to 2048x1536 for D525/D425
 - Supports CRT hot plug
 - 18-bit single-channel LVDS, resolution support up to WXGA 1366x768 or XGA 1024x768
- ◆ I/O Interface
 - 4 x RS-232
 - 3 x SATA II
 - 1 x IDE
 - 1 x FDD
 - 1 x CF Type II
 - 1 x 5-pin on-board header for KB
 - 1 x LPT
 - 1 x PS/2 connector for KB/MS
 - 7 x USB 2.0 (1 on bracket, 6 on board by pin header)
- ◆ TPM: 2 x 10-pin header
- ◆ SMBus: 1 x 4-pin wafer connector
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface
 - 1 x 5-pin infrared by pin header
- ◆ Super I/O: Fintek F81865
- ◆ Audio
 - 1 x 10-pin on-board header connects to the IEI audio kit
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset
- ◆ Power Supply: AT/ATX power
- ◆ Power Consumption
 - 5V@ 5.16A, 12V@ 0.55A (Intel® dual core Atom™ D525 1.80GHz with two 2GB 1066MHz DDR3 memory)
- ◆ Temperature
 - 20°C ~ 60°C with free air, -20°C ~ 70°C with force air for D525 processor
 - 20°C ~ 65°C with free air, -20°C ~ 70°C with force air for D425 processor
- ◆ Humidity
 - Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 338 mm x 122 mm
- ◆ Weight: GW: 1100g

Packing List

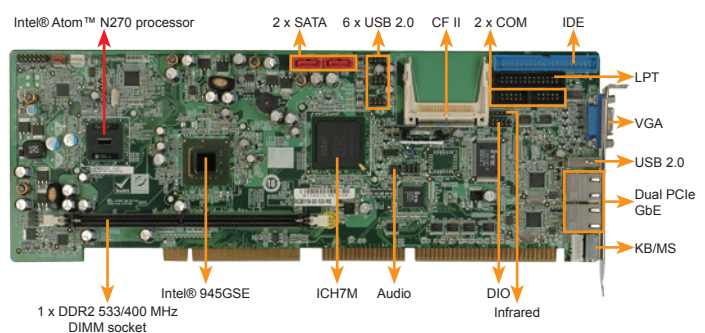
1 x WSB-PV-D4251/D5251 single board computer	
2 x SATA cable (P/N: 32801-000703-200-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
WSB-PV-D5251-R10	Full-size PICMG 1.0 CPU card with Intel® dual-core Atom™ D525 1.80GHz/1MB L2 cache, DDR3, VGA/LVDS, dual PCIe GbE, SATA II, COM, USB 2.0, audio, RoHS
WSB-PV-D4251-R10	Full-size PICMG 1.0 CPU card with Intel® single-core Atom™ D425 1.80GHz/512KB L2 cache, DDR3, VGA/LVDS, dual PCIe GbE, SATA II, COM, USB 2.0, audio, RoHS
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
CB-USB14-RS	4 ports USB cable
32006-000300-100-RS	KB/MS Y cable
32200-000052-RS	ATA 66 flat cable
32102-000100-200-RS	SATA power cable
19800-000400-100-RS	LPT cable
2200-000017-RS	FDD cable
19FTS00032100-000001-RS	CPU fan
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17

WSB-945GSE

Full-size PICMG 1.0 CPU card supports Intel® Atom™ processor and comes with VGA, Dual PCIe GbE, USB 2.0, SATA and Audio



Features

1. PICMG 1.0 and RoHS compliant
2. Intel® Atom™ processor N270 at 1.6GHz core speed with a 533MHz FSB and 512KB L2 cache
3. Enhanced technology for lower power consumption
4. Two SATA and CF type I/II for data storage
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - On-board Intel® Atom™ N270 processor, 1.6GHz 512KB L2 cache with a 533MHz FSB
- ◆ System Chipset
 - Intel® 945GSE + ICH7M
- ◆ BIOS
 - AMI BIOS
- ◆ System Memory
 - One 240-pin 533/400 MHz DDR2 SDRAM DIMM supported (system max. 2GB)
- ◆ Ethernet
 - Dual Realtek 8111CP PCIe GbE controllers
- ◆ I/O Interface
 - 2 x RS-232
 - 2 x SATA
 - 1 x IDE
 - 1 x LPT
 - 7 x USB 2.0 (1 on bracket, 6 on board by pin header)
 - 1 x PS/2 connector for KB/MS
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface
 - 1 x Infrared by pin header
- ◆ Super I/O
 - ITE IT8718F
- ◆ Display Interface
 - VGA integrated in Intel® 945GSE
- ◆ Audio
 - Support 7.1 channel HD audio or 5.1 channel AC-97 audio by IEI audio kits
- ◆ SSD
 - CF type I/II
- ◆ Watchdog Timer
 - Software programmable supports 1 ~255 sec. system reset
- ◆ Power Supply
 - AT/ATX power
- ◆ Power Consumption
 - 5V@2.55A, 12V@0.23A (Intel® Atom™ N270 1.6GHz/533MHz CPU with 1GB 533MHz DDR2)
- ◆ Temperature
 - Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity
 - Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions
 - 338 mm x 122 mm
- ◆ Weight
 - GW: 1.0 kg/NW: 0.25 kg

Packing List

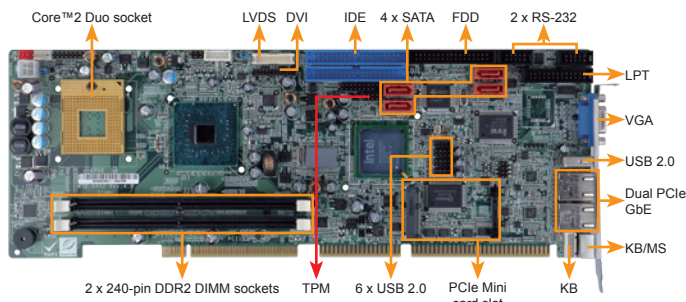
1 x WSB-945GSE single board computer	
1 x KB/MS Y-cable (P/N: 32006-000300-100-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG (quick installation guide)

Ordering Information

Part No.	Description
WSB-945GSE-N270-R10	PICMG 1.0 with Intel® Atom™ processor N270 1.6GHz processor, VGA, dual PCIe GbE, USB 2.0, SATA
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655
32200-000052-RS	ATA 66 flat cable
32102-000100-200-RS	SATA power cable
19800-000400-100-RS	LPT cable

WSB-9452-R40

Full-size PICMG 1.0 CPU card supports Socket M Intel® Core™2 Duo processors and comes with VGA, DVI, HDTV, dual PCIe GbE LAN and SATA, SATAII interfaces



Features

1. PICMG 1.0 and RoHS compliant
2. Socket M Intel® Core™2 Duo, Core™ Duo, Core™ Solo and Celeron® M mobile processors with a 533 MHz or 667 MHz FSB
3. Four 240-pin 1 GB (max.) 667/533/400 MHz dual-channel DDR2 SDRAM DIMM supported (system max. 4 GB)
4. Two PCIe GbE controllers
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
Socket M Intel® Core™2 Duo, Core™ Duo, Core™ Solo and Celeron® M mobile processors with a 533 MHz or 667MHz FSB
- ◆ System Chipset: Intel® 945GM + ICH7M
- ◆ BIOS: AMI BIOS
- ◆ System Memory
Two 240-pin 2 GB (max.) 667 MHz, 533 MHz or 400 MHz dual-channel DDR2 SDRAM DIMMs supported (system max. 4 GB)
- ◆ Ethernet
Dual Realtek RTL8111E PCIe GbE chipset with ASF 2.0
- ◆ I/O Interface
2 x RS-232 1 x 20-pin LPC (TPM module)
1 x FDD 1 X LPT
1 x Infrared 1 x PCIe Mini card slot
7 x USB 2.0 (1 on bracket, 6 on board)
1 x IDE (2 x IDE, WSB-9452S/WSB-9452SDVI only)
2 x SATA
(4 x SATA by JMB363, WSB-9452S/9452SDVI only)
1 x Keyboard and mouse (PS/2)
1 x 5-pin header for keyboard
- ◆ Digital I/O: 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Display Interface
VGA/HDTV out integrated in Intel® 945GM DVI (WSB-9452SDVI)
18-bit dual-channel LVDS
- ◆ Audio
5.1 channel AC'97 audio kit with Realtek ALC655 codec
7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Power Supply: AT/ATX Power
- ◆ Power Consumption
5V@4.15A, 12V@0.17A, 3.3V@0.01A, Vcore@1.46A (Intel® Core™ Duo T2400 1.83 GHz, two 2GB 800MHz DDR2)
- ◆ Temperature:
Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity:
Operating: 5% ~ 95%, non-condensing
- ◆ Dimensions (LxW): 338 mm x 122 mm
- ◆ Weight (GW): 1.2 kg

Packing List

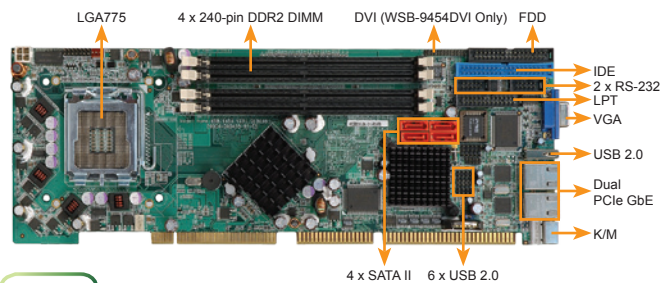
1 x WSB-9452 single board computer	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x KB/MS Y-cable (P/N: 32006-000300-100-RS)	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
2 x SATA power cable (P/N: 32102-000100-200-RS) for WSB-9452S/9452SDVI	
4 x SATA cable (P/N: 32801-000703-200-RS) for WSB-9452S/9452SDVI	
1 x ATA 66 flat cable (P/N: 32200-000052-RS)	1 x One Key Recovery CD
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x Mini jumper pack
1 x IO-KIT-001-R20 (DVI model only)	1 x Utility CD
1 x USB cable (P/N: 19800-003100-200-RS)	1 x QIG

Ordering Information

Part No.	Description
WSB-9452-R40	PICMG 1.0 Intel® Core™2 Duo 533/667 MHz processor, VGA/LVDS/HDTV, dual PCIe GbE, and 2 x SATA
WSB-9452S-R40	PICMG 1.0 Intel® Core™2 Duo 533/667 MHz processor, VGA/LVDS/HDTV, dual PCIe GbE, and 4 x SATA.
WSB-9452SDVI-R40	PICMG 1.0 Intel® Core™2 Duo 533/667 MHz processor, VGA/LVDS/HDTV/DVI, dual PCIe GbE, and 4 x SATA.
CF-479B-RS	CPU cooler
HDTVCABLESET-01	HDTV cable set with composite/S-Video/component output
AC-KIT08R-R10	5.1 channel audio kit with realtek ALC655
AC-KIT-888HD-R10	7.1 channel HD audio kit with realtek ALC888 supports dual audio streams
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable

WSB-9454-R40

Full-size PICMG 1.0 CPU card supports LGA775 Intel® Core™2 Duo, Pentium® D, Pentium® 4 and Celeron® D processors and comes with VGA or DVI, dual PCIe GbE LAN and 3.0 Gbps SATA II interfaces



Features

1. Supports LGA775 Intel® Core™2 Duo, Pentium® 4, Pentium® D and Celeron® D processors with a 533 MHz, an 800 MHz or a 1066 MHz FSB
2. Dual core processors combined physically
3. Enhanced technology for better power consumption
4. Intel® EMT64 Technology supports future 64-bit OS appliance
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA775 Intel® Core™2 Duo, Pentium® D, Pentium® 4, and Celeron® D desktop processors with a 533 MHz, 800 MHz or 1066MHz FSB
- ◆ System Chipset
Intel® 945G+ ICH7
- ◆ BIOS
AMI BIOS
- ◆ System Memory
Four 240-pin 1 GB (max.) 667 MHz, 533 MHz or 400 MHz dual-channel DDR2 SDRAM DIMMs supported (system max. 4 GB)
- ◆ Ethernet
Dual Realtek RTL8111E PCIe GbE chipset with ASF 2.0
- ◆ I/O Interface
2 x RS-232
7 x USB 2.0 (1 on bracket, 6 on board)
1 x IDE
1 x FDD
1 X LPT
4 x SATA II
1 x Infrared
1 x Keyboard and mouse (PS/2)
1 x 5-pin header for keyboard
- ◆ Digital I/O
8-bit digital I/O, 4-bit input/4-bit output
- ◆ Display Interface
VGA integrated in Intel® 945G DVI by Silicon Image SIL1362 (WSB-9454DVI only)
- ◆ Audio
5.1 channel AC'97 audio kit with Realtek ALC655 codec
7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
AT/ATX power
- ◆ Power Consumption
5V@7.68A, 12V@0.15A, Vcore@2.26A (Intel® Core™2 Duo E7400 2.8 GHz/1066 MHz CPU with four 1GB 800 MHz DDR2)
- ◆ Temperature
Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity
Operating: 5% ~ 95%, non-condensing
- ◆ Dimensions
338 mm x 122 mm
- ◆ Weight
GW: 1.2 Kg

Packing List

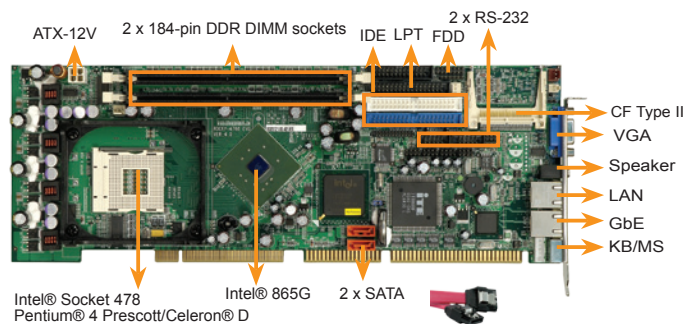
1 x WSB-9454 single board computer	
1 x ATA 66 flat cable (P/N: 32225-002000-100-RS)	
1 x KB/MS Y-cable (P/N: 32006-000300-100-RS)	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x One Key Recovery CD
1 x IO-KIT-001-R20 (DVI model only)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x QIG

Ordering Information

Part No.	Description
WSB-9454-R40	PICMG 1.0 CPU card supports Intel® Core™2 Duo, Pentium® 4/D, Celeron® D 1066 MHz processors, VGA, dual PCIe GbE and SATA II
WSB-9454DVI-R40	PICMG 1.0 CPU card supports Intel® Core™2 Duo, Pentium® 4/D, Celeron® D 1066 MHz processors, VGA/DVI, Dual PCIe GbE and SATA II
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655 code
CF-775A-RS	High performance CPU cooler (92mm x 92mm x 73mm, 130W)
CF-520-RS-R11	High performance CPU cooler (115mm x 115mm x 67mm, 115W)
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable

ROCKY-4786EVG-RS-R41

Full-size PICMG 1.0 CPU card supports Socket 478 Intel® Pentium® 4 and Celeron® D processors with an 800 MHz FSB and comes with VGA, LAN, GbE, SATA, USB 2.0 and audio



Features

1. PICMG 1.0 and RoHS compliant
2. Long term support
3. Supports Socket 478 Prescott Intel® Pentium® 4 and Celeron® D processors with an 800 MHz (max.) FSB.
4. Intel® Extreme Graphics II integrated graphics engine
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery



Specifications

- ◆ CPU
Socket 478 Intel® Pentium® 4, Celeron® D and Celeron® processors with a 400 MHz, 533 MHz or 800 MHz FSB
- ◆ System Chipsets
Intel® 865G + ICH5
- ◆ BIOS
Award BIOS
- ◆ System Memory
Two 184-pin 1 GB (max.) 400 MHz or 333 MHz dual-channel DDR SDRAM DIMMs supported (system max. 2 GB)
- ◆ Ethernet
1st Intel® 82562ET Ethernet chipset (ROCKY-4786EV)
2nd Intel® 82547 GbE chipset (ROCKY-4786EVG with ASF 2.0 remote control support)
- ◆ I/O Interface
 - 2 x RS-232
 - 1 x Infrared
 - 2 x SATA
 - 2 x IDE
 - 1 x Keyboard and mouse (PS/2)
 - 1 x 5-pin header for keyboard
- ◆ Digital I/O
N/A
- ◆ SSD
CF Type II
- ◆ Display Interface
VGA integrated in Intel® 865GV
- ◆ Audio
Realtek ALC655 AC'97 codec
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
AT/ATX power
- ◆ Power Consumption
12 V @ 7.52 A, -12 V @ 500 mA, 5 V @ 6.98 A running a 3 GHz Intel® Pentium® 4 processor with a 800 MHz FSB and 512 MB of 400 MHz dual-channel DDR SDRAM
- ◆ Temperature
Operating: 0°C ~ 60°C (32°F ~ 140°F)
- ◆ Humidity
Operating: 5% ~ 95%, non-condensing
- ◆ Dimensions
338 mm x 122 mm
- ◆ Weight
GW: 1.1 Kg

Packing List

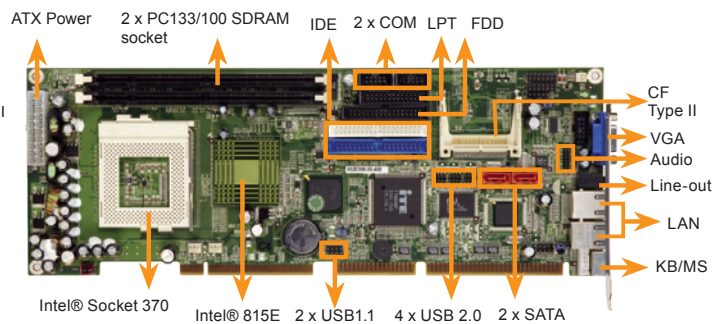
1 x ROCKY-4786 single board computer	
1 x Dual RS-232 cable (2 COM ports) (P/N: 19800-000051-RS)	
1 x KB/MS Y-cable (P/N: 32006-000300-100-RS)	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
1 x USB cable (P/N: 19800-003100-200-RS)	1 x One Key Recovery CD
1 x HDD cable (P/N: 32200-000052-RS)	1 x Mini jumper pack
2 x SATA cable (P/N: 32000-062800-RS)	1 x Utility CD
1 x power cable (P/N: 32100-087100-RS)	1 x QIG

Ordering Information

Part No.	Description
ROCKY-4786EV-RS-R41	PICMG 1.0 CPU card, Socket 478 800 MHz FSB, VGA, LAN, SATA, USB 2.0 & Audio
ROCKY-4786EVG-RS-R41	PICMG 1.0 CPU card, Socket 478 800 MHz FSB, VGA, LAN, GbE, SATA, USB 2.0 & Audio
CF-478A-RS	High performance CPU cooler (115 W)
CF-478B-RS	1U CPU cooler (86 W)
CF-514-RS	CPU cooler
CF-519-RS	CPU cooler
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable

ROCKY-3786EVGU2-RS-R41

Full-size PICMG 1.0 CPU card supports Socket 370 Intel® Pentium® III processors with a 133 MHz FSB and comes with VGA, LAN, GbE, USB 2.0, Audio and SATA RAID



Features

1. Intel® Graphics integrated graphics engine
2. PC133 SDRAM memory supports up to 512 MB
3. Supports Intel® Pentium® III, Tualatin and Celeron® processors with a 133 MHz (max.) FSB
4. LAN, USB 2.0 (ROCKY-3786EVGU2), Audio integrated
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery



Specifications

- ◆ CPU
Socket 370 Intel® Pentium® III and Celeron® processors with a 100 MHz or 133 MHz FSB
- ◆ System Chipsets
Intel® 815E + ICH2
- ◆ BIOS
Award BIOS
- ◆ System Memory
Two 168-pin 256MB (max.) PC133/100 SDRAM DIMMs supported (system max. 512MB)
- ◆ Ethernet
ROCKY-3786EV Intel® 82562ET Ethernet chipset
ROCKY-3786EVGU2 Intel® 82541PI and Intel® 82562ET Ethernet chipset
- ◆ I/O Interface
 - 2 x RS-232
 - 1 x Infrared
 - 1 x FDD
 - 4 x USB 2.0 (ROCKY-3786EVGU2)
 - 1 x Keyboard and mouse (PS/2)
 - 1 x 5-pin header for keyboard
 - 2 x SATA with VIA VT6421 RAID 0/1 function support
- ◆ Super I/O
ITE IT8712
- ◆ Display Interface
VGA integrated in Intel® 815E
- ◆ Audio
AC'97 2.3 Realtek ALC655 codec
- ◆ SSD
CF Type II
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
AT/ATX support
- ◆ Power Consumption
5V@7.6A, 12V@0.230 A running a 1 GHz Intel® Pentium® III 256MB cache processor
- ◆ Temperature
Operating: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity
Operating: 5% ~ 95%, non-condensing
- ◆ Dimensions
338 mm x 122 mm
- ◆ Weight
GW: 1.1 Kg

Packing List

1 x ROCKY-3786 single board computer	
1 x ATA66 flat cable (P/N: 32200-000052-RS)	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	
1 x USB cable (P/N: 19800-003000-100-RS for ROCKY-3786EVGU2 only)	
1 x KB/MS Y-cable (P/N: 32006-000300-100-RS)	
2 x SATA cable (P/N: 32000-062800-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

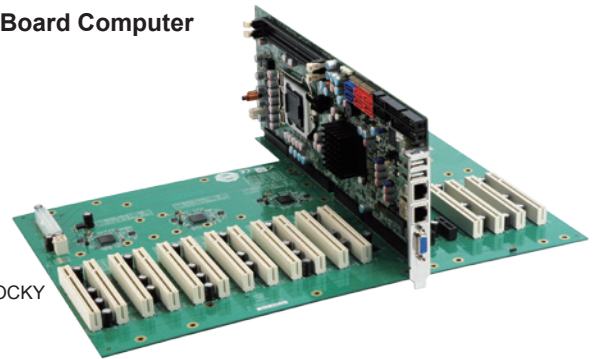
Part No.	Description
ROCKY-3786EV-RS-R41	PICMG 1.0 Socket 370 CPU card with VGA, 10/100 Mbps LAN, CF Type II socket and SATA
ROCKY-3786EVGU2-RS-R41	PICMG 1.0 Socket 370 CPU card with VGA, GbE, CF Type II socket, USB 2.0 and SATA
19800-000800-100-RS	Audio cable
CF-370A-RS	CPU cooler (slim type CPU cooler, 50 mm x 52 mm x 20 mm, 40W)
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable

PCI/PX Backplane

Supports PCI and ISA slot on one backplane! For PICMG 1.0 Single Board Computer

The advantages of using the PICMG 1.0 card series are numerous:

1. Supports standard PICMG version 1.0 slot on the PCI/PX series passive backplane.
2. Compatible with all available PCI/ISA cards. PCI/PX backplane is also integrated with the ROCKY series card slot.



Selection Guide

 PAC series wall-mount chassis

 4U/5U rack-mount chassis

 1U/2U rack-mount chassis

RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



Model	PCI-4S-RS-R40	PCI-5S-RS-R40	PCI-5S2A-RS-R40 PCI-5S2-RS-R40	PCI-6S-RS-R40	PCI-7S-RS-R41	PCI-8S-RS-R40	PX-8S-RS-R41
Total Slot	4	5	5	6	7	8	8
PCI Slot	3	3	4	4	4	4	6
ISA Slot	1	2	1	2	3	4	2
PSU Type	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT
Chassis	N/A	PAC-1000G	RACK-500G	ATX/AT PAC-106G PAC-107G PAC-1000G	PAC-1700G	N/A	N/A

RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



Dual System

RoHS Ready



RoHS Ready



Model	PCI-10S-RS-R41	PCI-10S2-RS-R41	PX-10S-RS-R50	PCI-12S-RS-R40	PCI-13SD-RS-R40	PCI-14S-RS-R40	PCI-14S2-RS-R40
Total Slot	10	10	10	12	13	14	14
PCI Slot	4	4	7	4	3+4	4	4
ISA Slot	5	5	3	7	3+3	9	8
PSU Type	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT
Chassis	PAC-125G	N/A	PAC-125G	RACK-3000G	RACK-305G RACK-360G RACK-3000G	N/A	RACK-305G RACK-360G RACK-3000G
Note					for Dual System		

RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



Model	PCI-14S3-RS-R41	PX-14S2-RS-R41	PX-14S3-RS-R50	PX-14S5-RS-R50	PCI-19S-RS-R40	PX-20S2-RS-R40	PX-20S3-RS-R40
Total Slot	14	14	14	14	19	20	20
PCI Slot	4	7	12	7	4	17	18
ISA Slot	9	6	2	6	14	3	1
PSU Type	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT	ATX/AT
Chassis	RACK-305G RACK-360G RACK-3000G	RACK-3000G	RACK-305G RACK-360G RACK-3000G	RACK-305G RACK-360G RACK-3000G	N/A	N/A	N/A

RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



Model	PCI-2SD2-RS-R41	PCI-5SD5-RS-R40	PCI-5SD6-RS-R40	PCI-5SDA-RS-R40	PCI-6SD-RS-R40/PCI-6SR-RS-R40
Total Slot	2	6	6	6	6
PCI Slot	R2	L2+R2	L2+R2	L2+R2	L1+R1 L1+R1
ISA Slot					
PSU Type	ATX/AT	AT	ATX	ATX/AT	ATX
Chassis	RACK-1150G	RACK-220G	RACK-220G	RACK-220G	RACK-220G

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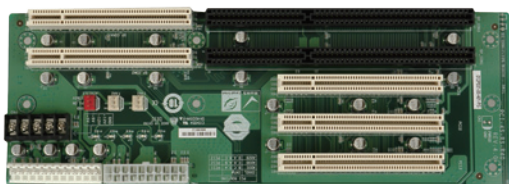
5

Power Supply/
Peripherals

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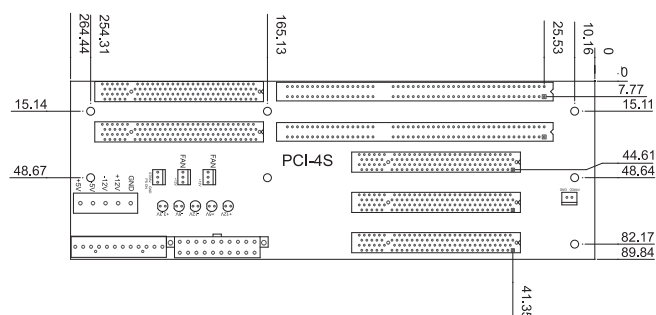
Panel
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Introduction

PCI-4S-RS-R40

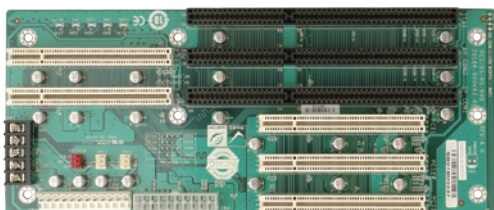


Ordering Information

PCI-4S-RS-R40 4-slot backplane with three PCI slots and one ISA slot



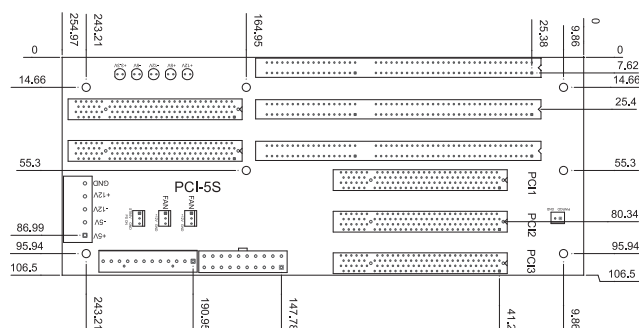
PCI-5S-RS-R40



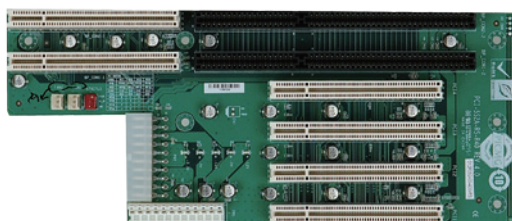
Ordering Information

PCI-5S-RS-R40 5-slot backplane with three PCI slots and two ISA slots

PAC-1000G 6-slot full-size compact chassis



PCI-5S2-RS-R40/PCI-5S2A-RS-R40

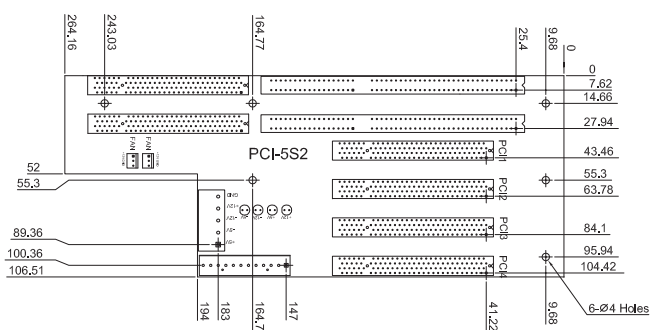


Ordering Information

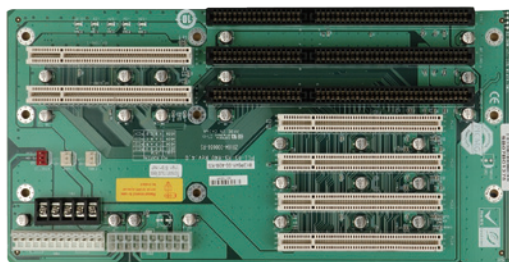
PCI-5S2-RS-R40 5-slot AT power backplane with four PCI slots and one ISA slot

PCI-5S2A-RS-R40 5-slot ATX power backplane with four PCI slots and one ISA slot

RACK-500G 5-slot full-size compact chassis



PCI-6S-RS-R40



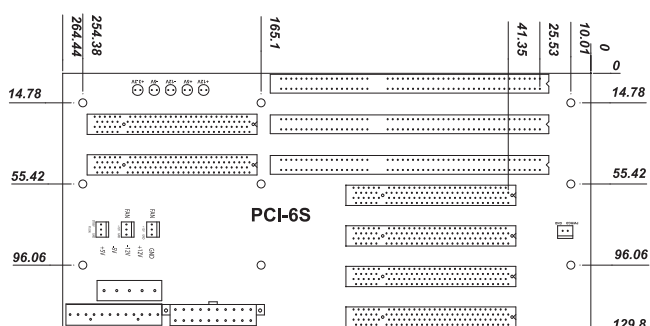
Ordering Information

PCI-6S-RS-R40 6-slot backplane with four PCI slots and two ISA slots

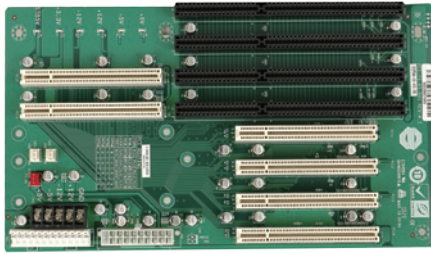
PAC-106G 6-slot full-size compact chassis

PAC-107G 6-slot full-size compact chassis

PAC-1000G 6-slot full-size compact chassis

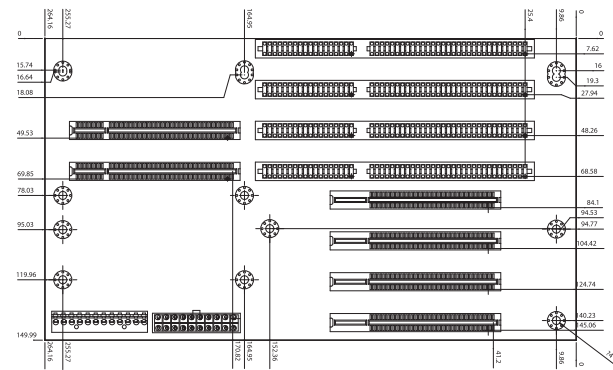


PCI-7S-RS-R41

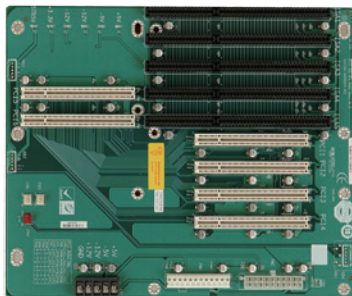


Ordering Information

PCI-7S-RS-R41	7-slot backplane with four PCI slots and three ISA slots
PAC-1700G	7-slot full-size compact chassis

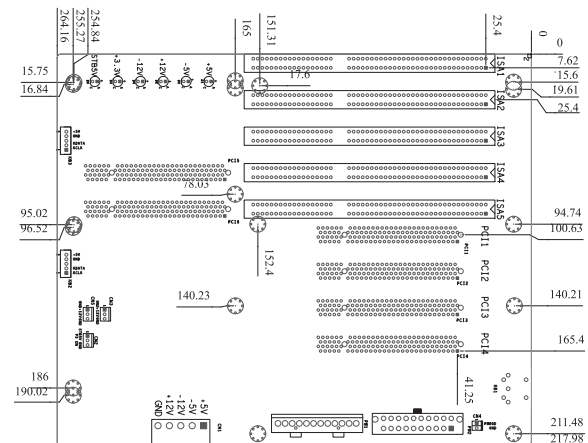


PCI-8S-RS-R40

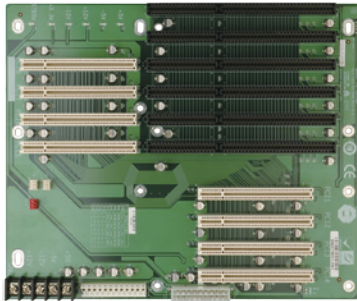


Ordering Information

PCI-8S-RS-R40	8-slot backplane with four PCI slots and four ISA slots
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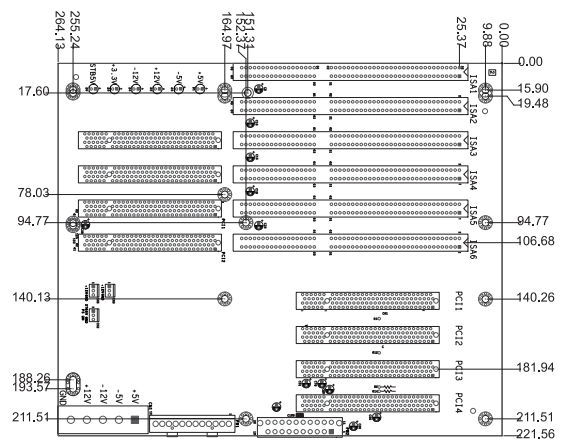


PCI-10S-RS-R41

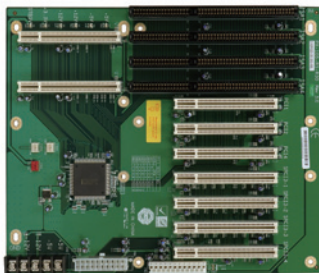


Ordering Information

PCI-10S-RS-R41	10-slot backplane with four PCI slots and five ISA slots
PAC-125G	10-slot full-size compact chassis

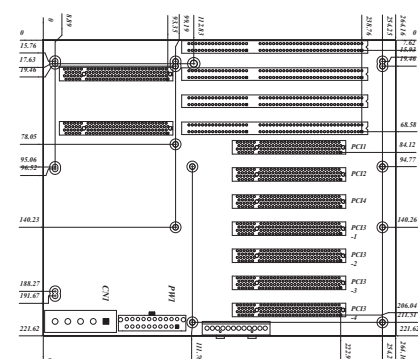


PX-10S-RS-R50



Ordering Information

PX-10S-RS-R50	10-slot backplane with seven PCI slots and three ISA slots
PAC-125G	10-slot full-size compact chassis



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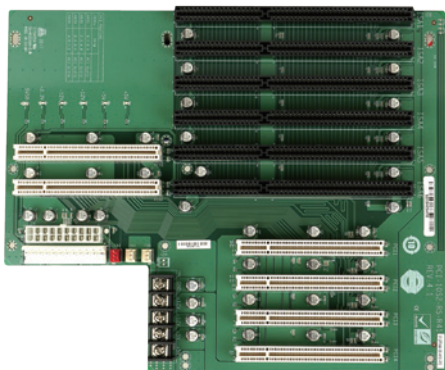
5

Power Supply/
Peripherals

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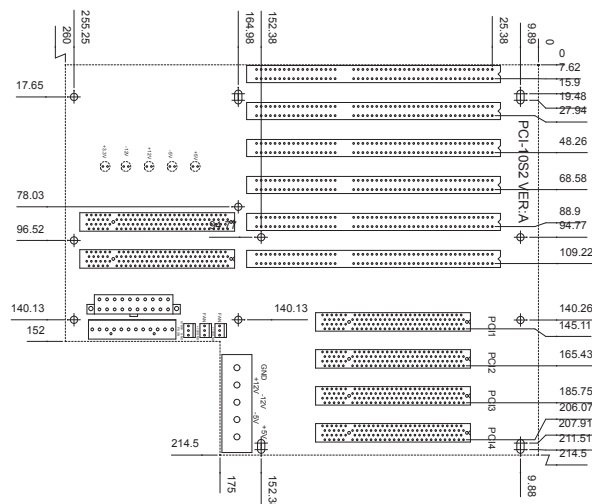
Panel
Solutions
Introduction

PCI-10S2-RS-R41

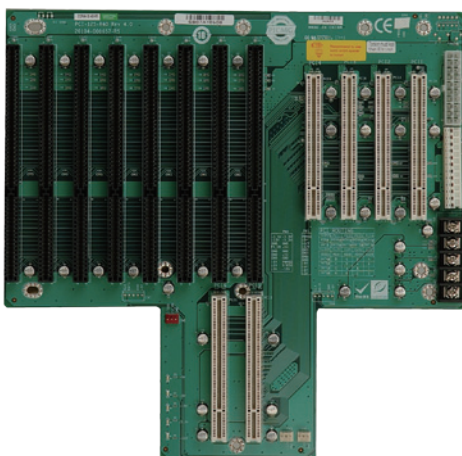


Ordering Information

PCI-10S2-RS-R41 10-slot backplane with four PCI slots and five ISA slots

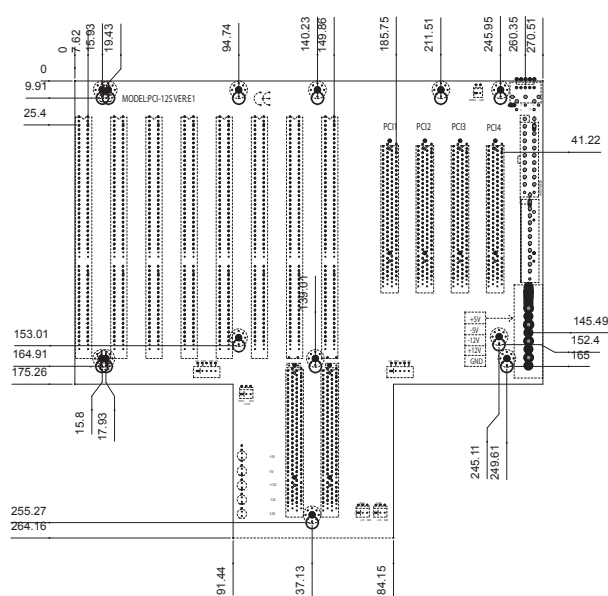


PCI-12S-RS-R40

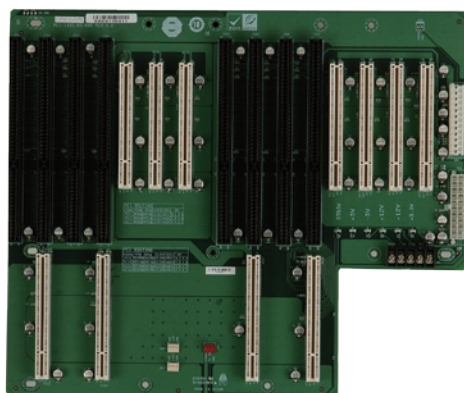


Ordering Information

PCI-12S-RS-R40 12-slot backplane with four PCI slots and seven ISA slots
 RACK-3000G 4U 14-slot full-size rack-mount chassis

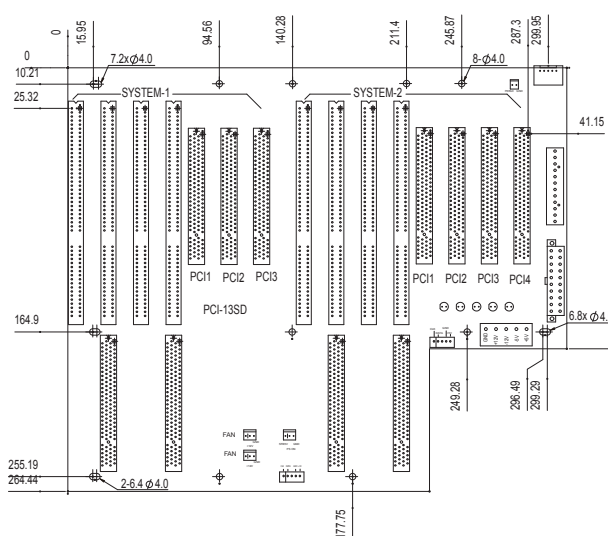


PCI-13SD-RS-R40 Dual System

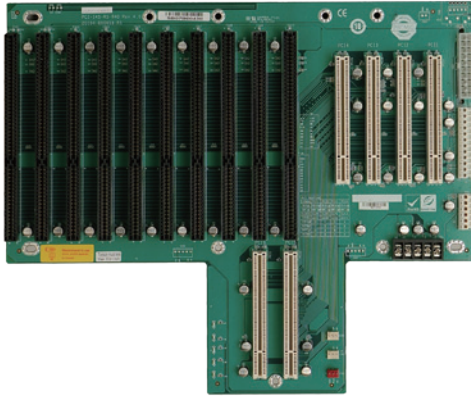


Ordering Information

PCI-13SD-RS-R40 13-slot dual-system backplane with system 1 having 3 PCI slots and three ISA slots and system 2 having four PCI slots and three ISA slots
 RACK-305G 4U 14-slot full-size rack-mount chassis
 RACK-360G 4U 14-slot full-size rack-mount chassis
 RACK-3000G 4U 14-slot full-size rack-mount chassis

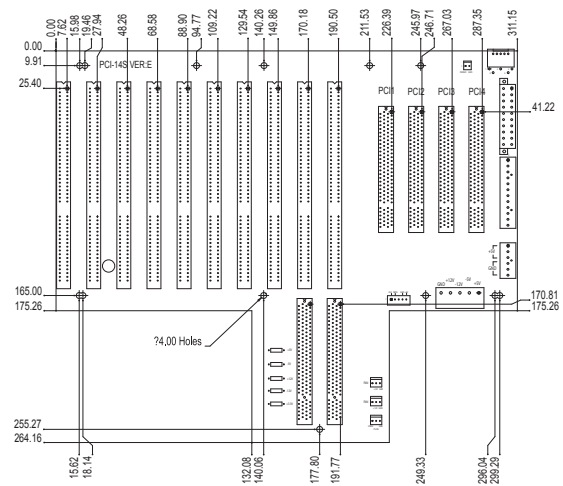


PCI-14S-RS-R40

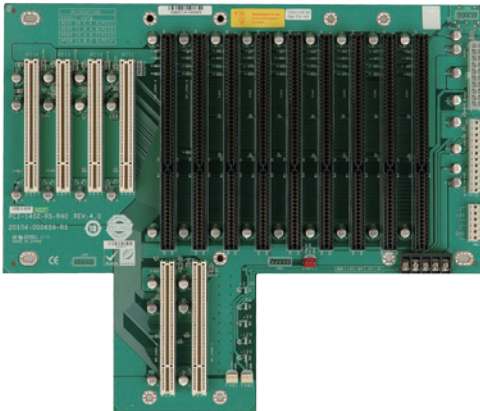


Ordering Information

PCI-14S-RS-R40 14-slot backplane with 4 PCI slots and 9 ISA slots



PCI-14S2-RS-R40



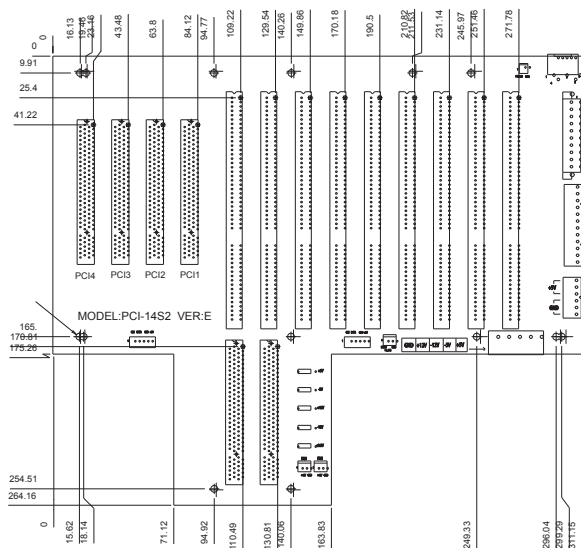
Ordering Information

PCI-14S2-RS-R40 14-slot backplane with 4 PCI slots and 8 ISA slots

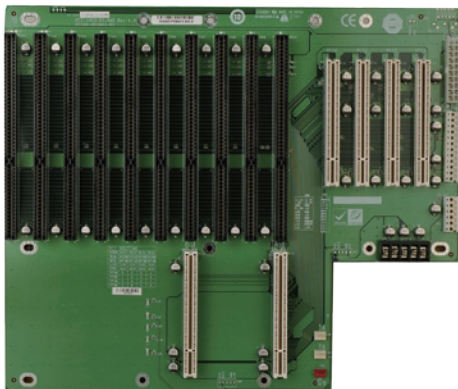
RACK-305G 4U 14-slot full-size rack-mount chassis

RACK-360G 4U 14-slot full-size rack-mount chassis

RACK-3000G 4U 14-slot full-size rack-mount chassis



PCI-14S3-RS-R40



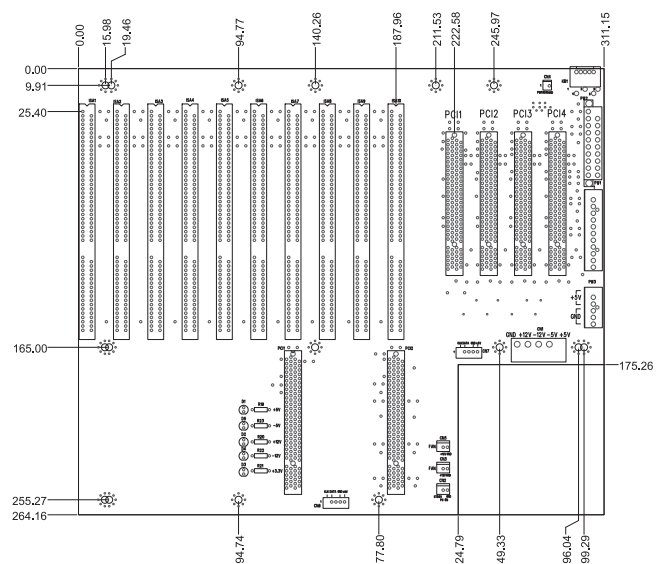
Ordering Information

PCI-14S3-RS-R40 14-slot backplane with 4 PCI slots and 9 ISA slots

RACK-305G 4U 14-slot full-size rack-mount chassis

RACK-360G 4U 14-slot full-size rack-mount chassis

RACK-3000G 4U 14-slot full-size rack-mount chassis



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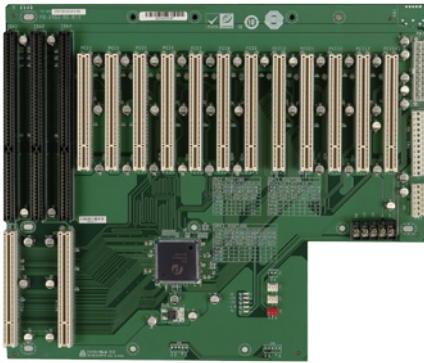
5

Power Supply/
Peripherals

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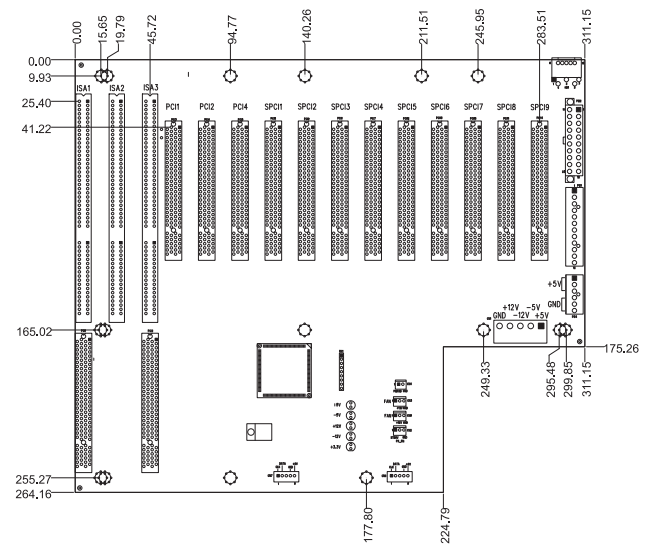
Panel
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PX-14S3-RS-R50

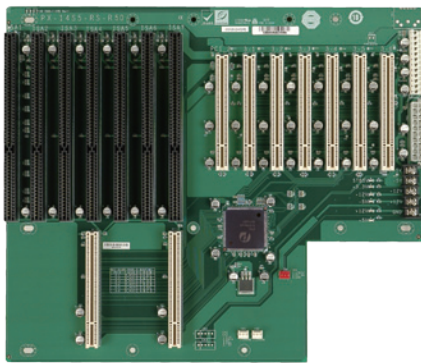


Ordering Information

PX-14S3-RS-R50	14-slot backplane with 12 PCI slots and 2 ISA slots
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis
RACK-3000G	4U 14-slot full-size rack-mount chassis

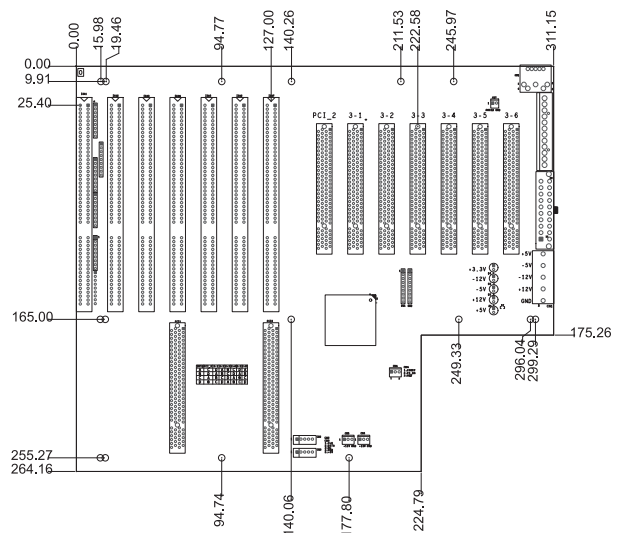


PX-14S5-RS-R50

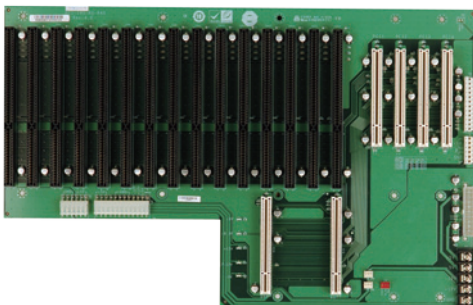


Ordering Information

PX-14S5-RS-R50	14-slot backplane with 7 PCI slots and 6 ISA slots
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis
RACK-3000G	4U 14-slot full-size rack-mount chassis

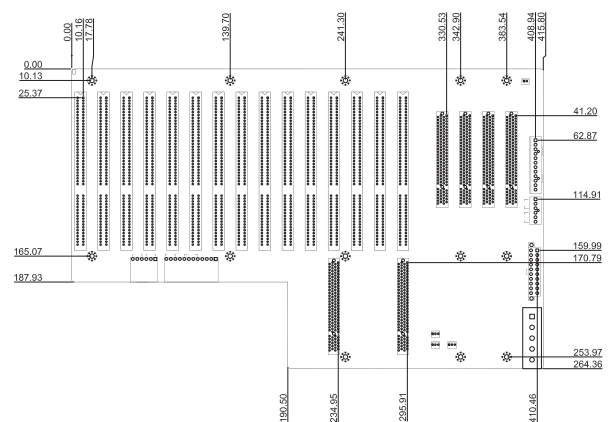


PCI-19S-RS-R40

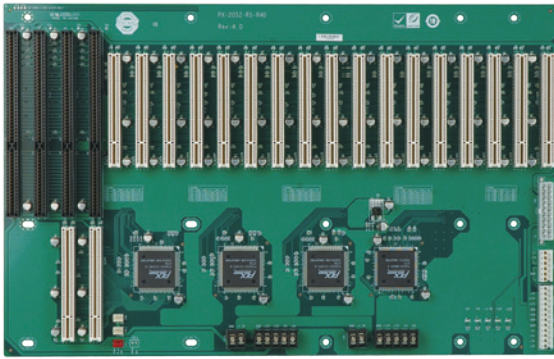


Ordering Information

PCI-19S-RS-R40	19-slot backplane with 4 PCI slots and 14 ISA slots
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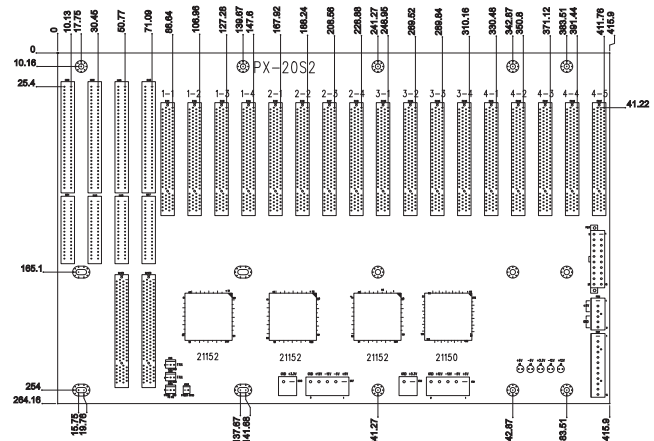


PX-20S2-RS-R40

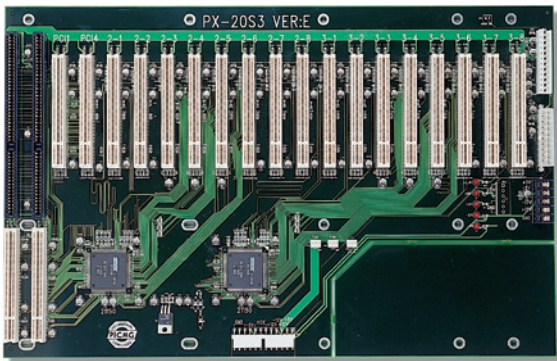


Ordering Information

PCI-20S2-RS-R40 20-slot backplane with 17 PCI slots and 3 ISA slots

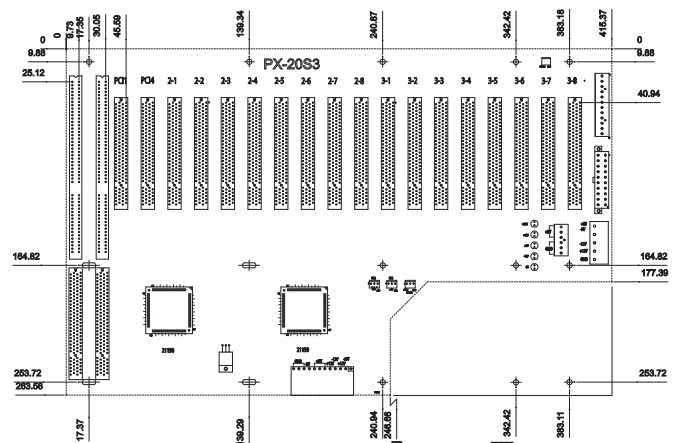


PX-20S3-RS-R40



Ordering Information

PCI-20S3-RS-R40 20-slot backplane with 18 PCI slots and 1 ISA slot



PCI-2SD2-RS-R41

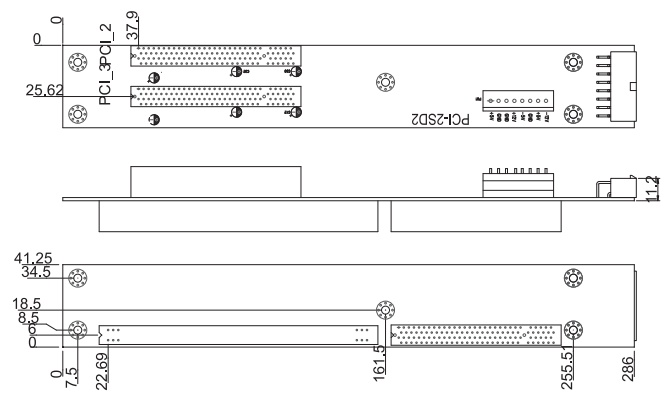


Ordering Information

PCI-2SD2-RS-R41 1U chassis backplane with 2 PCI slots

RACK-1150G 1U full-size rack-mount chassis

* The adapter cable 32100-040600-RS is required when connecting PCI-2SD2-RS to a standard ATX supply.



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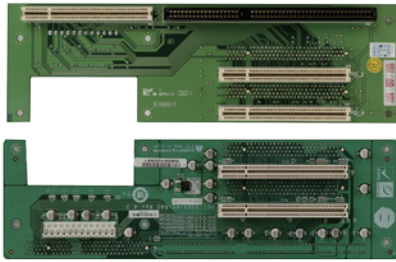
Power Supply/
Peripherals

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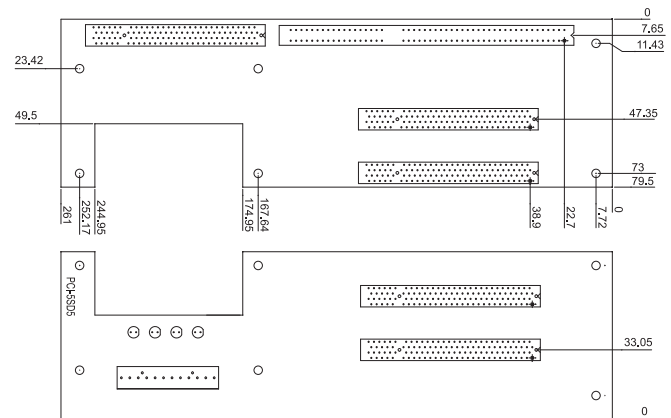
PCI-5SD5-RS-R40

2U Type



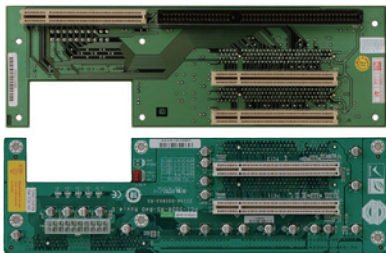
Ordering Information

PCI-5SD5-RS-R40	2U chassis backplane with 4 PCI slots
RACK-220G	2U 6-slot full-size rack-mount chassis



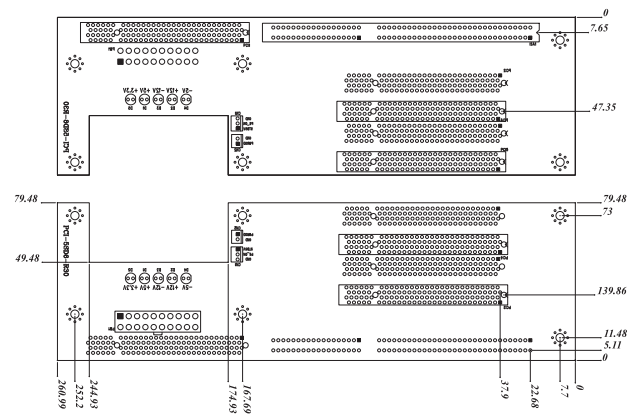
PCI-5SD6-RS-R40

2U Type



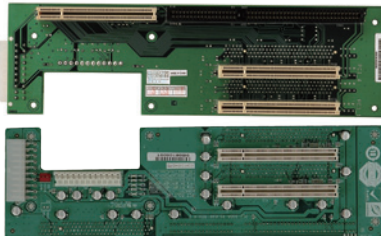
Ordering Information

PCI-5SD6-RS-R40	2U chassis backplane with 4 PCI slots
RACK-220G	2U 6-slot full-size rack-mount chassis



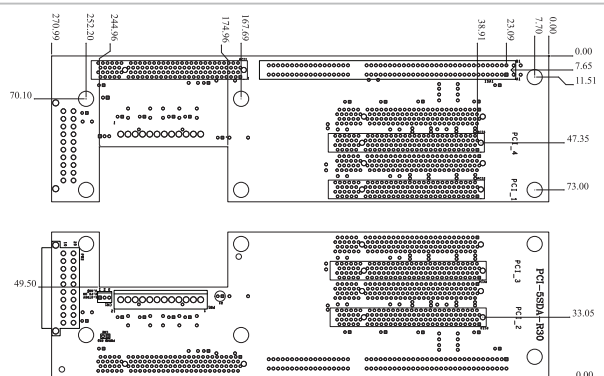
PCI-5SDA-RS-R40

2U Type



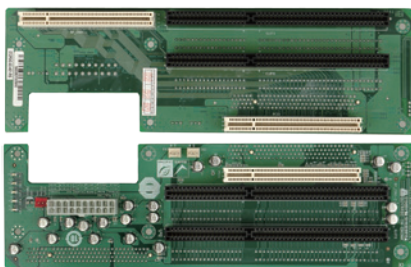
Ordering Information

PCI-5SDA-RS-R40	2U chassis backplane with 4 PCI slots
RACK-220G	2U 6-slot full-size rack-mount chassis



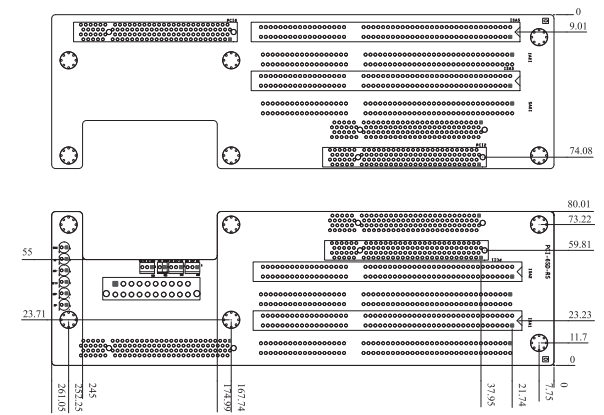
PCI-6SD-RS-R40/PCI-6SR-RS-R30 (AT mode)

2U Type

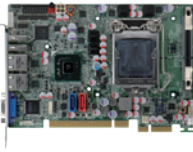
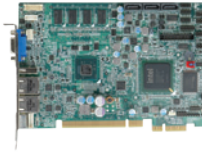
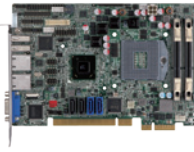


Ordering Information

PCI-6SD-RS-R40	2U chassis backplane with 2 PCI slots and 2 ISA slots
PCI-6SR-RS-R30	2U chassis backplane with 2 PCI slots and 2 ISA slots (AT mode)
RACK-220G	2U 6-slot full-size rack-mount chassis



Half Size PICOe, ISA, Selection Guide

New**New**

Model Name	PICOe-B650	PICOe-HM650	PICOe-PV-D4251/N4551/D5251-R11	PICOe-PV-D510
CPU Socket	Intel® LGA1155	Socket G2	On board	
CPU Type	2nd Generation Intel® Core™ i7/ i5/i3/Pentium®/Celeron®	2nd Generation Intel® Core™ i7/ i5/i3/Celeron®	Intel® Atom™ D525 dual-core 1.80GHz Intel® Atom™ D425 single-core 1.80GHz Intel® Atom™ N455 single-core 1.66GHz	Intel® Atom™ D510 dual-core 1.66GHz
FSB	NA	NA	N/A	N/A
Chipset	Intel® B65	Intel® HM65	Intel® ICH8M	Intel® ICH8M
Memory	One 204-pin 1333/1066MHz DDR3/DDR3L (1.35V) SO-DIMM supported (system max. 8GB)	Two 204-pin 1333/1066 MHz dual-channel DDR3 SO-DIMMs supported (system max. 16GB)	One 204-pin 800MHz DDR3 SDRAM SO-DIMM (system max. 4GB for D525/D425, 2GB for N455) (compatible w/128MB*8 SDRAM) On-board 1GB 800MHz DDR3 memory	One 200-pin 667/800MHz DDR2 SDRAM SO-DIMM (system max. 2GB) On-board 512MB 667MHz DDR2 memory
Display Interface	1 x VGA	Dual display supported 1 x VGA 1 x 18/24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x 18/24-bit single-channel LVDS	Dual display supported 1 x VGA 1 x 18/24-bit single-channel LVDS
Ethernet	Dual PCIe GbE by Realtek RT8111E supports ASF 2.0	Dual PCIe GbE by Realtek RT8111E supports ASF 2.0	Dual Realtek RTL8111E PCIe GbE controller	Intel® 82583V PCIe GbE controller Intel® 82567V PCIe GbE PHY
I/O Interface	2 x RS-232 4 x USB 2.0 1 x 6-pin wafer for KB & MS	2 x RS-232 1 x RS-422/485 8 x USB 2.0 1 x LPT 1 x 6-pin wafer for KB & MS	3 x RS-232 1 x RS-232/422/485 7 x USB 2.0 1 x LPT 1 x PS/2 KB & MS 1 x 6-pin wafer for PS/2 KB & MS	2 x RS-232 7 x USB 2.0 1 x Infrared interface 1 x PS/2 KB & MS 1 x 6-pin wafer for PS/2 KB & MS
Driver Interface	1 x SATA 3Gb/s 1 x SATA 6Gb/s	2 x SATA 3Gb/s 2 x SATA 6Gb/s	3 x SATA II 1 x CF Type II	3 x SATA II
Audio	Supports by IEI AC-KIT-888HD audio kit		IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	
Digital I/O	8-bit Digital I/O		8-bit Digital I/O (4-bit input/4-bit output)	
Power Consumption	5V@3.17A, 12V@0.46A, Vcore_12V@7.26A, 5VSB@0.18A (3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)	5V@3.99A, 12V@0.43A, Vcore_12V@3.80A, 5VSB@0.06A (2.70GHz Intel® Core™ i7-2620M with two 2GB 1333MHz DDR3 memory)	5V@3.38A, 12V@0.54A (Intel® dual-core Atom™ D525 1.80GHz CPU with 1GB 800MHz DDR3 on-board memory) 5V@3.28A, 12V@0.43A (Intel® single-core Atom™ D425 1.80GHz CPU with 1GB 800MHz DDR3 on-board memory) 5V@3.13A, 12V@0.32A (Intel® single-core Atom™ N455 1.66GHz CPU with 1GB 800MHz DDR3 on-board memory)	5V@4.55A, 12V@0.46A (Intel® dual-core Atom™ D510 1.66GHz with 1GB 667MHz DDR2 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset			
Operation Environment	Temperature range: -10°C ~ 60°C Relative humidity: 5% ~ 95%, non-condensing	Temperature range: -10°C ~ 60°C Relative humidity: 5% ~ 95%, non-condensing	Temperature range: -20°C ~ 65°C (-4°F ~ 149°F) with free air for D425 CPU -20°C ~ 60°C (-4°F ~ 140°F) with free air for D525 CPU -20°C ~ 70°C (-4°F ~ 158°F) with free air for D525 CPU -20°C ~ 70°C (-4°F ~ 158°F) with force air for D425/D525 CPU -20°C ~ 75°C (-4°F ~ 167°F) with force air for N455 CPU Relative humidity: 5% ~ 95%, non-condensing	Temperature range: 0°C ~ 60°C (32°F ~ 140°F) Relative humidity: 5% ~ 95%, non-condensing
Expansion Slot	NA	NA	PCI/PCIe	PCI/PCIe
CPU Cooler	CF-1156A/B/C/D-RS	CF-989A-RS-R12	Heatsink (fanless) (optional CPU fan by 19FTS00032100-000001-RS)	Pre-installed cooler

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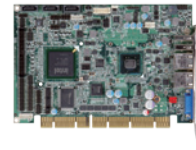
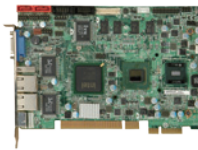
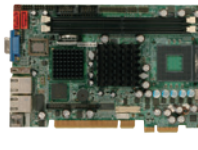
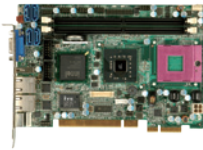
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Half Size PICOe, ISA, Selection Guide



Model Name	PICOe-GM45A	PICOe-9452-R21	PICOe-945GSE-R11	PCISA-PV-D4251/N4551/D5251
CPU Socket	Socket P	Socket M	On board	On board
CPU Type	Intel® Atom™ 2 Duo, Celeron® M	Intel® Atom™ 2 Duo, Core™ Duo, Core™ Solo, Celeron® M	Intel® Atom™ Processor N270 1.6GHz	Intel® Atom™ D525 dual-core 1.80GHz Intel® Atom™ D425 single-core 1.80GHz Intel® Atom™ N455 single-core 1.66GHz
FSB	667/800/1066MHz	533/667MHz	533MHz	N/A
Chipset	Intel® GM45 + ICH9M	Intel® 945GME + ICH7M	Intel® 945GSE + ICH7M	Intel® ICH8M
Memory	Two 240-pin 667/800MHz dual-channel DDR2 SDRAM DIMMs (system max. 4GB)	Two 240-pin 533/667MHz dual-channel DDR2 SDRAM DIMMs (system max. 4GB)	One 200-pin 400/533MHz DDR2 SDRAM SO-DIMM (system max. 2GB) On-board 512MB 667MHz DDR2 memory	One 204-pin 800MHz DDR3 SDRAM SO-DIMM (system max. 4GB for D525/D425, 2GB for N455)
Display Interface	Dual display supported 1 x VGA 1 x 24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x 24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x 18-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x 18-bit single-channel LVDS
Ethernet	Dual Intel® 82574L PCIe GbE controller	Intel® 82537L PCIe GbE controller Intel® 82562 Ethernet 10/100Mbps LAN	Dual Realtek RTL81110S PCIe GbE controller	Dual Realtek RTL8111E PCIe GbE controller
I/O Interface	2 x RS-232 7 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS	2 x RS-232 5 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS 1 x 6-pin wafer for PS/2 KB & MS	2 x RS-232 7 x USB 2.0 1 x Infrared interface 1 x PS/2 KB & MS 1 x 6-pin wafer for PS/2 KB & MS	3 x RS-232 1 x RS-232/422/485 6 x USB 2.0 1 x LPT 1 x Infrared interface 1 x PS/2 KB & MS
Driver Interface	4 x SATA II	2 x SATA II 1 x IDE 1 x CF Type II	2 x SATA II 1 x CF Type II	3 x SATA II 1 x IDE 1 x FDD 1 x CF Type II
Audio	IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	AC-KIT08R-R10 5.1 channel AC'97 audio kit and IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector		IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector
Digital I/O	8-bit Digital I/O (4-bit input/4-bit output)			
Power Consumption	5V@5.59A, 12V@0.15A (Intel® Core™2 Duo T9400 2.53GHz CPU with 2GB 667MHz DDR2 memory)	5V@3.49A, 3.3V@0.2A, 12V@1.75A (Intel® Core™2 Duo T7400 2.16GHz CPU with 512MB 667MHz DDR2 memory)	5V@2.89A, 12V@0.22A (Intel® Atom™ N270 1.6GHz at FSB 533MHz CPU with 1GB 533MHz DDR2 memory)	5V@3.36A, 12V@0.57A (Intel® dual-core Atom™ D525 1.80GHz with 1GB 1066MHz DDR3 memory) 5V@3.25A, 12V@0.48A (Intel® single-core Atom™ D425 1.80GHz with 1GB 1066MHz DDR3 memory) 5V@3.21A, 12V@0.43A (Intel® single-core Atom™ N455 1.66GHz with 1GB 1066MHz DDR3 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset			
Operation Environment	Temperature range: 0°C ~ 60°C (32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing			Temperature range: -20°C ~ 65°C (-4°F ~ 149°F) with free air for D425 CPU -20°C ~ 60°C (-4°F ~ 140°F) with free air for D525 CPU -20°C ~ 70°C (-4°F ~ 158°F) with free air for D525 CPU -20°C ~ 70°C (-4°F ~ 158°F) with force air for D425/D525 CPU -20°C ~ 75°C (-4°F ~ 167°F) with force air for N455 CPU Relative humidity: 5% ~ 95%, non-condensing
Expansion Slot	PCI/PCIe	PCI/PCIe	PCI/PCIe	PCI/ISA
CPU Cooler	CF-479B-RS		Heatsink (fanless)	Heatsink (fanless) (optional CPU fan by 19FTS00032100-000001-RS)

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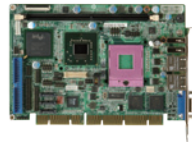
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Half Size PICOe, ISA, Selection Guide



Model Name	PCISA-9652	PCISA-945GSE-R11	IOWA-LX
CPU Socket	Socket P	On board	On board
CPU Type	Intel® Core™2 Duo, Celeron® M	Intel® Atom™ Processor N270 1.6GHz	On-board AMD Geode™ LX600 Processor (366MHz), 128KB L2 cache
FSB	533/800MHz	533MHz	N/A
Chipset	Intel® GME965 + ICH8ME	Intel® 945GSE + ICH7M	AMD Geode™ CS5536
Memory	One 240-pin 533/667MHz single-channel DDR2 SDRAM DIMM (system max. 2GB)	One 200-pin 533MHz DDR2 SDRAM SO-DIMM (system max. 2GB) On-board 512MB 533MHz DDR2 memory	On-board 128MB 200/266MHz DDR SDRAM One 200-pin 200/266MHz DDR SO-DIMM (system max. 512MB)
Display Interface	Dual display supported 1 x VGA 1 x 24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x 18-bit dual-channel LVDS	1 x VGA
Ethernet	Dual Intel® 82573L PCIe GbE controller	Dual Realtek RTL8111CP PCIe GbE controller	10/100Mbps Realtek RTL8100C Ethernet controller
I/O Interface	1 x RS-232 1 x RS-232/422/485 6 x USB 2.0 1 x LPT 1 x 6-pin wafer for PS/2 KB & MS	1 x RS-232 1 x RS-232/422/485 6 x USB 2.0 1 x LPT 1 x Infrared interface 1 x 6-pin wafer for PS/2 KB & MS	2 x RS232 1 x RS422/485 4 x USB 2.0 (by pin-header) 1 x LPT 1 x Infrared interface 1 x PS/2 KB/MS
Driver Interface	3 x SATA II (RAID 0/1) 1 x IDE 1 x FDD 1 x CF Type II	2 x SATA 1 x IDE 1 x FDD 1 x CF Type II	2 x SATA (RAID 0, 1) 1 x IDE 1 x FDD 1 x CF Type II
Audio	IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	AC-KIT08R-R10 5.1 channel AC'97 audio kit and IEI AC-KIT-888HD-R10 7.1 channel HD audio kit via the on-board 10-pin header connector	Realtek ALC203 with AC'97 codec
Digital I/O	8-bit Digital I/O (4-bit input/4-bit output)		
Power Consumption	5V@7.72A, 12V@0.139A (Intel® Core® 2 Duo T7300 2.0GHz CPU at FSB 800MHz with 1GB 667MHz DDR2 memory)	5V@2.89A, 12V@0.22A (Intel® Atom™ N270 1.6GHz at FSB 533MHz CPU with 512MB 533MHz DDR2 memory)	5V@1.51A, 5VSb@0.09A (On-board AMD Geode™ LX600 CPU 366MHz with on-board 128MB 200MHz DDR memory and 512MB 333MHz DDR memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset		
Operation Environment	Temperature range: 0°C ~ 60°C (32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing		Temperature range: 0°C ~ 60°C(32°F~140°F) Relative humidity: 5% ~ 95%, non-condensing
Expansion Slot	PCI/ISA	PCI/ISA	ISA
CPU Cooler	CF-479B-RS	Heatsink (fanless)	Heatsink (fanless)

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Introduction

PIC0e CPU Card

The Future of Half-sized CPU Cards

ISA → PCISA → PCI → PIC0e

1990~

ISA

1996~

PCISA
ISA + PCI

2006~

PIC0e
PCI + PCIe x 4

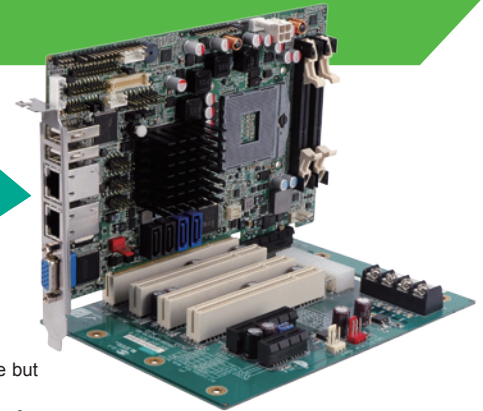
The advantage of PIC0e

PIC0e = PCI + PCIe x4

- PCIe has excellent I/O bandwidth and performance
- Backwards compatible with half-sized CPU cards
- Backplane design for half-size PCIe CPU cards is easy

The benefit of PIC0e

- Same dimensions, backwards compatible but half the size of PCI SBC
- Higher performance as PCI only solution for the same price
- More configuration options for the same price



PIC0e-HM650

IEI Patent No CN.: 200986704Y

From SIPO (State Intellectual Property Office of The P.R.C)

■ The advantages of PIC0e

● Increasing I/O bandwidth with leading technology

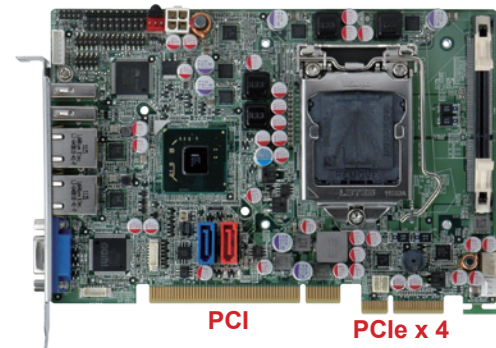
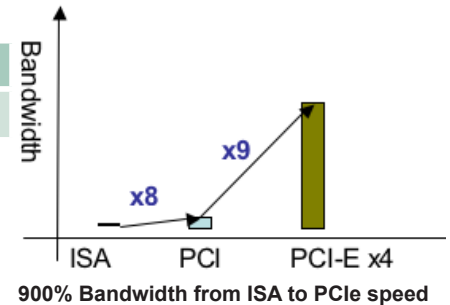
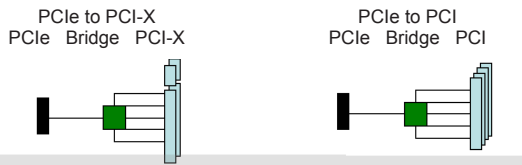
Specifications	ISA	PCI 33	PCI-E x4
Support	(16MB/s)	(132MB/s)	(1250MB/s)

● Backwards Compatible with Half-Sized PCI Backplane and Chassis

1. Dimensions: 185 mm x 122 mm
= All half-sized CPU cards
Share the same Chassis & I/O design
2. PCI pin definition same as PICMG 1.0 PCI
= All half-sized PCI CPU cards
Share all half-sized PCI backplanes

● Quick design backplane

1. Four PCI slots and one PCIe x4 or four PCIe x1 lanes
More configuration options on the backplane with a PCI and PCIe slot
2. PCIe switches and bridges such as PLX or TI solutions



PIC0e-B650

■ IEI PIC0e backplane solution

Complete PIC0e backplane solutions fully support all kinds of chassis and power modes. PIC0e is the easiest way to upgrade current systems from slow ISA+PCI architecture to the latest high performance PCIe+PCI solution.



CPU card (Located on the right side of the first slot)

Model Name	PCI	PCIe x4	PCIe x1	PSU Type	Note
HPE-3S1	2			ATX/AT	CPU on R1st
HPE-3S2	1	1		ATX/AT	CPU on R1st
HPE-4S1	3			ATX/AT	CPU on R2st
HPE-4S2	2	1		ATX/AT	CPU on R2st
HPE-5S1	4			ATX/AT	CPU on R2st
HPE-5S2	3	1		ATX/AT	CPU on R2st
HPE-5S3	2	0	2	ATX/AT	CPU on R2st
HPE-6S1	4	1		ATX/AT	CPU on R1st
HPXE-6S1	2	3		ATX/AT	CPU on R1st
HPE-6S2	3	0	2	ATX/AT	CPU on R1st
HPE-7S1	4	0	2	ATX/AT	CPU on R2st
HPE-8S0	4	0	2	ATX/AT	Reserved 1 Slot

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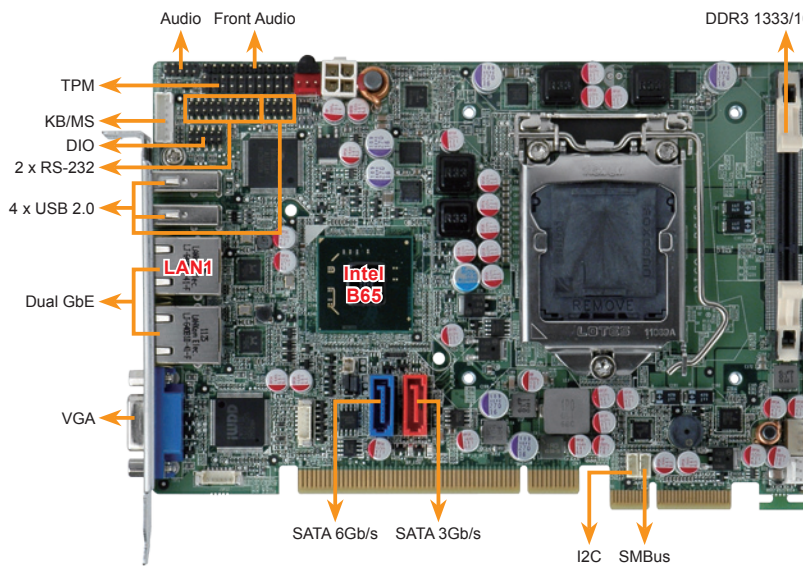
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PIC0e-B650

Half-size PCIe CPU card Supports LGA1155 32nm Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® B65, DDR3, VGA, Dual Realtek PCIe GbE, USB 2.0, SATA 6Gb/s, HD Audio and RoHS



2nd Gen Intel® Core Processors
(TDP=35W) Suggest List

New

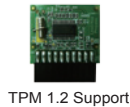
CPU No.	Clock speed	Core	Smart cache	TDP
i5-2390T	2.7GHz	2	3M	35W
i3-2120T	2.6GHz	2	3M	35W
i3-2100T	2.5GHz	2	3M	35W
G630T	2.3GHz	2	3M	35W
G620T	2.2GHz	2	3M	35W
G530T	2.0GHz	2	2M	35W
G440	1.6GHz	1	1M	35W



The 2nd gen Intel® processors provide advanced technology and intelligent performance.

Specifications

- ◆ CPU
LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ System Chipset
Intel® B65
- ◆ Memory
One 204-pin 1333/1066MHz DDR3 & DDR3L (1.35V) SO-DIMM supported (system max. 8GB)
- ◆ BIOS
UEFI
- ◆ Graphics Engine
Intel® HD Graphics Gen 6 supports for DX10.1 and OpenGL 3.0
Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA
- ◆ Ethernet
Dual Realtek RTL8111E PCIe GbE controller, LAN1 with ASF 2.0 support
- ◆ Super I/O
Fintek F81866
- ◆ Embedded Controller
ITE IT8519E
- ◆ I/O Interface
2 x RS-232 4 x USB 2.0 (2 on rear, 2 by pin header)
1 x SATA 3Gb/s 1 x SATA 6Gb/s
1 x 6-pin wafer for KB & MS
- ◆ Audio
Supports 7.1 channel HD audio by IEI AC-KIT-888HD kit
- ◆ Front Panel
1 x Front panel connector (power LED, HDD LED, speaker, power button, reset button)
- ◆ TPM
1 x 20-pin header
- ◆ SMBus
1 x 4-pin wafer
- ◆ I2C
1 x 4-pin wafer
- ◆ Expansion
PCIe signal and PCI signal via golden finger
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Fan Connector
1 x 4-pin smart Fan Connector
1 x 3-pin system Fan Connector
- ◆ Power Supply
5V/12V, AT/ATX support
- ◆ Power Consumption
5V@3.17A, 12V@0.46A, Vcore_12V@7.26A, 5VSB@0.18A
(3.4GHz Intel® Core™ i7-2600K with two 2GB 1333MHz DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
185 mm x 122 mm
- ◆ Weight
GW: 1000g/NW: 260g



TPM 1.2 Support



Features

1. Half-size PCIe CPU card with LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
2. One 1333/1066 MHz DDR3/DDR3L (1.35V) SDRAM SO-DIMM supports up to 8GB
3. On-board embedded controller supports infrared and PECI 2.0 technologies
4. One SATA 6Gb/s and dual Realtek PCIe GbE
5. TPM V1.2 hardware security provided by the TPM module
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x PIC0e-B650 single board computer	
1 x Dual RS-232 cable w/bracket (P/N: 19800-000112-RS)	
1 x USB cable (P/N: 19800-003000-200-RS)	1 x Mini jumper pack
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
PIC0e-B650-R10	Half-size PCIe CPU card supports 32nm LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® B65, DDR3, VGA, dual Realtek PCIe GbE, USB 2.0, SATA 6Gb/s, HD Audio and RoHS
19800-000075-RS	PS/2 KB/MS Y-cable with bracket, 220mm
SAIDE-KIT01-R10	SATA to IDE/CF converter board
32102-000100-200-RS	SATA power cable
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17
CPU-I5-2500T	Intel® Core™ i5-2500T processor, LGA-1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-I5-2390T	Intel® Core™ i5-2390T processor, LGA-1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-I3-2100T	Intel® Core™ i3-2100T processor, LGA-1155, dual core 2.5GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-P-G620T	Intel® Pentium® G620T processor, LGA-1155, dual core 2.2GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-C-G440	Intel® Celeron® G440 processor, LGA-1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CF-1156A-RS	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156B-RS	High-performance LGA1155/LGA1156 cooler kit, 95W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W

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Industrial Computing Solutions

2

Video Capture Solutions

3

Embedded Computing Solutions

4

ORing Network Communication

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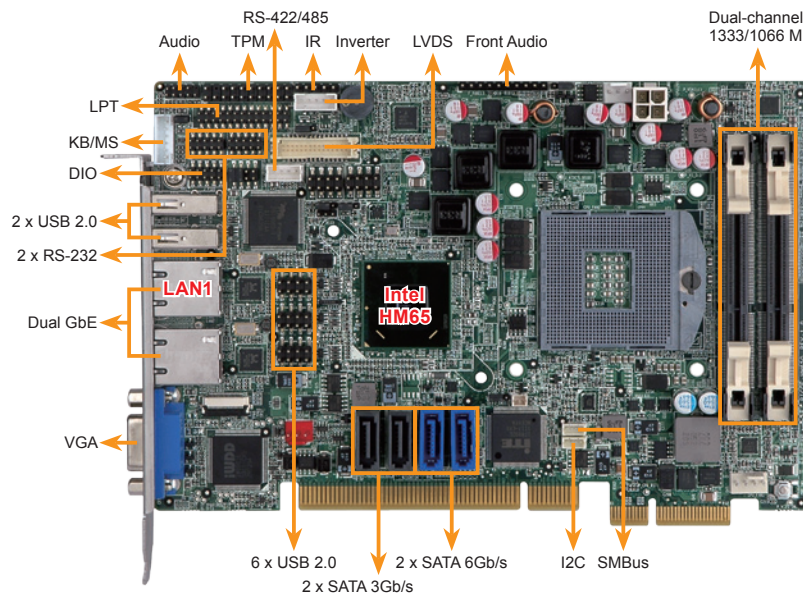
Power Supply/Peripherals

6

Panel Solutions Introduction

PIC0e-HM650

Half-size PCIe CPU card Supports Socket 989B 32nm Intel® mobile Core™ i7/i5/i3/Celeron® CPU with Intel® HM65, DDR3, VGA/LVDS, Dual PCIe GbE, SATA 6Gb/s, HD Audio and RoHS

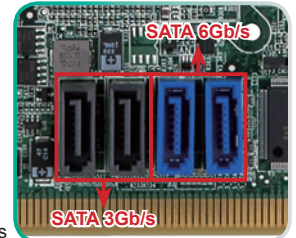


New

SATA 6Gb/s and SATA 3Gb/s



The 2nd gen Intel® processors provide advanced technology and intelligent performance.



The latest SATA 6Gb/s interfaces have double the speed of SATA 3Gb/s.



TPM 1.2 Support



CPU cooler
P/N: CF-989A-RS-R12

Specifications

- ◆ CPU
Socket G2 supports Intel® Core™ i7/i5/i3/Celeron® processor
- ◆ System Chipset
Intel® HM65
- ◆ Memory
Two 204-pin 1333/1066 MHz dual-channel DDR3 SO-DIMMs supported (system max. 16GB)
- ◆ BIOS
UEFI
- ◆ Graphics Engine
Intel® HD Graphics Gen 6 support for DX10.1 and OpenGL 3.0
Full MPEG2, VC1, AVC Decode
- ◆ Display Output
Dual display supported
1 x VGA
1 x 18/24-bit dual-channel LVDS
- ◆ Ethernet
Dual PCIe Realtek RTL8111E GbE controller, LAN1 with ASF 2.0 supported
- ◆ Super I/O
Fintek F81866
- ◆ Embedded Controller
ITE IT8519E
- ◆ I/O Interface
 - 1 x RS-422/485
 - 2 x RS-232
 - 2 x SATA 3Gb/s
 - 2 x SATA 6Gb/s
 - 1 x LPT
 - 1 x 6-pin wafer for KB & MS
 - 8 x USB 2.0 (2 on rear, 6 by pin header)
- ◆ Audio
Supports 7.1 channel HD audio by IEI AC-KIT-888HD kit
- ◆ Front Panel
1 x Front panel connector (power LED, HDD LED, speaker, power button, reset button)
- ◆ TPM
1 x 20-pin header
- ◆ SMBus
1 x 4-pin wafer
- ◆ I2C
1 x 4-pin wafer
- ◆ PCIe to PCI Bridge IC
ITE IT8892E
- ◆ Expansion
PCIe signal and PCI signal via golden finger
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Fan Connector
1 x 4-pin smart Fan Connector
1 x 3-pin system Fan Connector
- ◆ Power Supply
5V/12V, AT/ATX support
- ◆ Power Consumption
5V@3.99A, 12V@0.43A, Vcore_12V@3.80A, 5VSB@0.06A
(2.70GHz Intel® Core i7-2620M with two 2GB 1333MHz DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Operating Humidity
5% ~95%, non-condensing
- ◆ Dimensions
185 mm x 122 mm
- ◆ Weight
GW: 1000g/NW: 260g



Features

1. Half-size PCIe CPU card supports Socket G2 32nm Intel® Core™ i7/i5/i3/Celeron® processor
2. Up to 16 GB 1333/1066 MHz dual-channel DDR3 SDRAM
3. Supports 18/24-bit dual-channel LVDS and analog CRT output
4. High-speed I/O Interface provided through the 2nd gen PCIe add-on card and SATA 6Gb/s connectors
5. Rich media acceleration for hardware encoding and decoding
6. TPM V1.2 hardware security provided by the TPM module
7. IEI One Key Recovery solution allows you to create raid OS backup and recovery

Packing List

- 1 x PIC0e-HM650 single board computer
- 1 x Dual RS-232 cable (P/N: 19800-000051-RS)
- 2 x SATA cable (P/N: 32801-000703-200-RS)
- 1 x USB cable (P/N: 19800-003100-200-RS)
- 1 x One Key Recovery CD
- 1 x Mini jumper pack
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
PIC0e-HM650-R10	Half-size PCIe CPU card supports 32nm Socket 989B Intel® mobile Core™ i7/i5/i3/Celeron® CPU with Intel® HM65, DDR3, VGA/LVDS, dual PCIe GbE, SATA 6Gb/s, HD Audio and RoHS
32205-003800-100-RS	RS-422/485 cable, 200mm
19800-000075-RS	KB/MS cable with bracket
SAIDE-KIT01-R10	SATA to IDE/CF converter board
32102-000100-200-RS	SATA power cable
32200-015100-RS	LPT cable
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware V3.17
CF-989A-RS-R12	CPU cooler for mobile socket 989 and 55W CPU
CF-989B-RS	CPU cooler for mobile socket 989 and 50W CPU

1
Industrial
Computing
Solutions

2
Video
Capture
Solutions

3
Embedded
Computing
Solutions

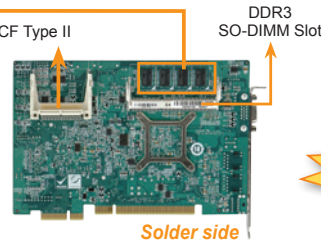
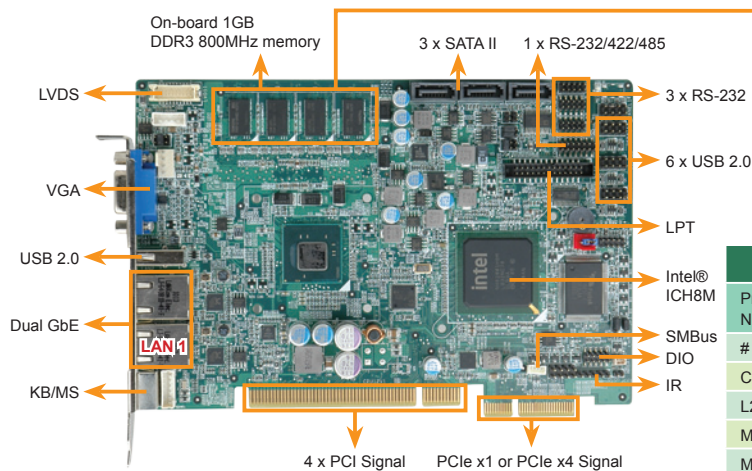
4
ORing
Network
Communication

5
Power Supply/
Peripherals

6
Panel
Solutions
Introduction

PIC0e-PV- D4251-R11 N4551-R11 D5251-R11

Half-size PCIe CPU card with Intel® Atom™ D425/ N455/D525, DDR3, 1 GB Memory on board, VGA/ LVDS, Dual PCIe GbE, USB 2.0, SATA II, Audio and RoHS



**Dual Core CPU
DDR3 Memory**

Specifications

- ◆ CPU
 - Intel® Atom™ Dual Core D525 Processor (1.80GHz with 1MB L2 cache)
 - Intel® Atom™ Single Core N455 Processor (1.66GHz with 512K L2 cache)
 - Intel® Atom™ Single Core D425 Processor (1.80GHz with 512K L2 cache)
- ◆ System Chipset
 - ICH8M
- ◆ BIOS
 - UEFI BIOS
- ◆ Memory
 - One 204-pin 800MHz DDR3 SDRAM SO-DIMM supported (system max. 4GB for D525/D425, 2GB for N455) (compatible w/128MB*8 SDRAM)
 - On-board 1 GB DDR3 800 MHz memory
- ◆ Graphics Engine
 - GMA 3150
 - Gen3.5 DX9, 400MHz for D525/D425
 - Gen3.5 DX9, 200MHz for N455
- ◆ Ethernet
 - Dual PCIe GbE by Realtek RT8111E, LAN1 with ASF 2.0 support
- ◆ Display Interface
 - Analog CRT up to 2048x1536 for D525/D425, 1400x1050 for N455
 - Supports CRT hot plug
 - Single-channel 18-bit LVDS supports resolution up to XGA (1024x768) & WXGA (1366x768)
- ◆ I/O Interfaces
 - 3 x RS-232 1 x RS-232/422/485 with auto flow control
 - 1 x LPT 1 x PS/2 for KB/MS
 - 1 x CF Type II 1 x 6-pin wafer header for KB/MS
 - 3 x SATA II 7 x USB 2.0 (6 by header, 1 on rear side)
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Super IO
 - Fintek F81865
- ◆ Infrared Interface
 - 1 x 5-pin header
- ◆ TPM (Optional)
 - On-board INFINEON SLB9635TT1.2
- ◆ SMBus
 - 1 x 4-pin wafer connector
- ◆ Fan Connector
 - 1 x 4-pin fan connector
- ◆ Expansion
 - 4 x PCI
 - 4 x PCIe x1 or 1 x PCIe x4
- ◆ Audio
 - Supports 7.1 channel HD audio by IEI AC-KIT-888HD-R10 kit
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset
- ◆ Power Consumption
 - 5V@3.38A, 12V@0.54A (Intel® Dual Core Atom™ D525 1.80GHz with 1GB DDR3 800MHz memory on board)
 - 5V@3.28A, 12V@0.43A (Intel® Single Core Atom™ D425 1.80GHz with 1GB DDR3 800MHz memory on board)
 - 5V@3.13A, 12V@0.32A (Intel® Single Core Atom™ N455 1.66GHz with 1GB DDR3 800MHz memory on board)
- ◆ Power Supply
 - 5V/12V, AT/ATX support
- ◆ Temperature
 - 20°C ~ 60°C with free air, -20°C ~ 70°C with force air for D525 processor
 - 20°C ~ 65°C with free air, -20°C ~ 70°C with force air for D425 processor
 - 20°C ~ 70°C with free air, -20°C ~ 75°C with force air for N455 processor
- ◆ Humidity
 - Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions
 - 185 mm x 122 mm
- ◆ Weight
 - GW: 1000g/NW: 250g

Intel® Atom™ Comparison Table for PIC0e-PV SKUs				
Processor Name	Intel® Atom™ D525	Intel® Atom™ N455	Intel® Atom™ D425	Intel® Atom™ D510
# of Cores	2	1	1	2
Clock Speed	1.80 GHz	1.66 GHz	1.80 GHz	1.66 GHz
L2 Cache	1 MB	512 KB	512 KB	1 MB
Max TDP	13 W	6.5 W	10 W	13 W
Memory	DDR3 800MHz	DDR3 800MHz	DDR3 800MHz	DDR2 667/800



Features

1. PCIe CPU card supports four PCIe x1 or one PCIe x4 and four PCI expansions
2. Intel® Atom™ D525/D425/N455 processor
3. 1GB of DDR3 800MHz SDRAM on board and one expansion SO-DIMM slot support
4. Supports VGA and 18-bit single-channel LVDS with dual display support
5. I/O includes three RS-232, one RS-232/422/485, seven USB 2.0 and three SATA II
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

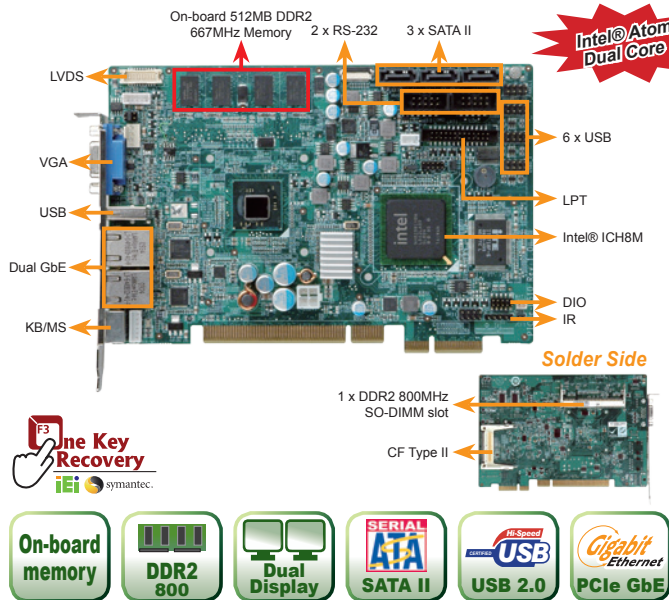
1 x PIC0e-PV-D4251/N4551/D5251 single board computer	
1 x Dual RS-232 cable (P/N: 19800-000112-RS)	
3 x SATA cable (P/N: 32801-000703-200-RS)	
1 x KB/MS Y cable (P/N: 32006-000300-100-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
PIC0e-PV-D5251-R11	Half-size PCIe CPU card with Intel® Atom™ dual-core D525 1.80GHz/1MB L2, 1GB memory on board, VGA/LVDS, dual PCIe GbE, USB 2.0, SATA II and audio, RoHS
PIC0e-PV-D5251T-R11	Half-size PCIe CPU card with Intel® Atom™ dual-core D525 1.80GHz/1MB L2, 1GB memory on board, VGA/LVDS, dual PCIe GbE, USB 2.0, SATA II and audio, TPM, RoHS
PIC0e-PV-N4551-R11	Half-size PCIe CPU card with Intel® Atom™ single-core N455 1.66GHz/512K L2, 1GB memory on board, VGA/LVDS, dual PCIe GbE, USB 2.0, SATA II and audio, RoHS
PIC0e-PV-N4551T-R11	Half-size PCIe CPU card with Intel® Atom™ single-core N455 1.66GHz/512K L2, 1GB memory on board, VGA/LVDS, dual PCIe GbE, USB 2.0, SATA II and audio, TPM, RoHS
PIC0e-PV-D4251-R11	Half-size PCIe CPU card with Intel® Atom™ single-core D425 1.80GHz/512K L2, 1GB memory on board, VGA/LVDS, dual PCIe GbE, USB 2.0, SATA II and audio, RoHS
PIC0e-PV-D4251T-R11	Half-size PCIe CPU card with Intel® Atom™ single-core D425 1.80GHz/512K L2, 1GB memory on board, VGA/LVDS, dual PCIe GbE, USB 2.0, SATA II and audio, TPM, RoHS
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
19800-000075-RS	KB/MS cable with bracket
32102-000100-200-RS	SATA power cable
32200-015100-RS	LPT cable
19800-004300-100-RS	RS-232/422/485 cable with bracket
19FTS00032100-000001-RS	CPU fan

PIC0e-PV-D510

Half-size PCIe CPU card with Intel® Atom™ D510 1.66GHz/1MB L2, 512MB Memory on board, VGA/LVDS, Dual Intel® GbE, USB 2.0 and SATA II, RoHS



Features

1. PCIe CPU card supports four PCIe x1 or one PCIe x4 and four PCI expansions
2. Intel® Atom™ dual core processor D510 at 1.66GHz core speed with a 1MB L2 Cache
3. 512MB of 667 MHz DDR2 SDRAM on board and one expansion SO-DIMM slot support
4. Support VGA and 18-bit single-channel LVDS with dual-display support
5. I/O includes, two RS-232, seven USB 2.0 and three SATA II
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: On-board 1.66GHz Intel® Atom™ D510 processor with 1MB L2 Cache
- ◆ System Chipset: Intel® ICH8M
- ◆ BIOS: AMI BIOS
- ◆ Memory: 1x 200-pin 667/800MHz DDR2 SDRAM SO-DIMM supported (max. 2GB)
On-board 512MB 667MHz DDR2 memory
- ◆ Graphics: GMA3150
- ◆ Ethernet: Intel® GbE Phy 82567V + PCIe GbE 82583V
- ◆ I/O Interfaces: 2 x RS-232, 1 x LPT, 3 x SATA II, 1 x PS/2 for KB/MS, 1 x CF Type II, 1 x 6-pin wafer for KB/MS, 7 x USB 2.0 (six by header, one on rear side)
- ◆ Digital I/O: 8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Super IO: ITE IT8718
- ◆ Infrared Interface: 1 x 5-pin header
- ◆ Display Output: Analog CRT: up to 2048x1536
Supports for CRT hot plug
Single-channel 18-bit LVDS supports up to XGA (1024x768) & WXGA (1366x768) resolution
- ◆ Expansion: Four PCI
Four PCI Express x1 or one PCI Express x4
- ◆ Audio: Support 7.1 channel HD audio by IEI AC-KIT-888HD-R10 kit
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Power Consumption: 5V@4.55A, 12V@0.46A (Intel® Atom™ D510 1.66GHz CPU, 1GB 667MHz DDR2)
- ◆ Power Supply: 5V/12V, AT/ATX support
- ◆ Fan Connector: 1 x 4-pin fan connector
- ◆ Temperature: Operation: 0°C ~ 60°C (32°F~140°F)
- ◆ Humidity: Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 185 mm x 122 mm
- ◆ Weight: GW: 1000g/NW: 260g

Packing List

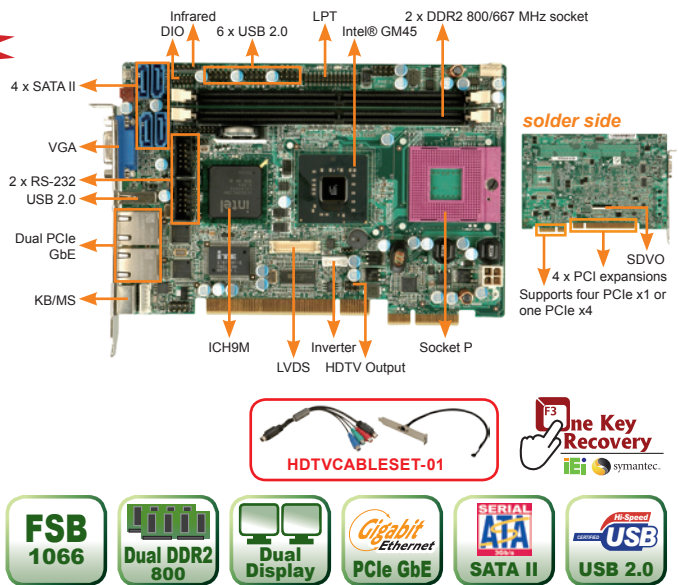
1 x PIC0e-PV-D510 single board computer	
1 x ATX power cable (P/N: 32102-006500-200-RS)	
1 x KB/MS Y cable (P/N: 32006-000300-100-RS)	1 x One Key Recovery
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x QIG
3 x SATA cable (P/N: 32801-000703-200-RS)	1 x Utility CD

Ordering Information

Part No.	Description
PIC0e-PV-D510-R10	Half-size PCIe CPU card with Intel® Atom™ D510 1.66GHz/1MB L2, 512MB memory on board, VGA/LVDS, dual Intel® GbE, USB 2.0 and SATA II, RoHS
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 codec and dual audio streams support
19800-000075-RS	KB/MS cable with bracket
32102-000100-200-RS	SATA power cable
32200-015100-RS	LPT cable

PIC0e-GM45A

Half-size PCIe CPU card supports socket P Intel® Core™2 Duo processors and comes with VGA, LVDS, HDTV-out, Dual PCIe GbE, SATA II and USB 2.0



Features

1. PCIe CPU card supports four PCIe x1 or one PCIe x4 and 4 x PCI expansions
2. Supports Intel® 45nm socket P Core™2 Duo processors with a 1066/800/667MHz FSB
3. Built-in Intel® GMA 4500MHD with hardware MPEG-2 decoding, WMV9 and H.264 supported
4. 4GB (max.) of 800/667MHz dual-channel DDR2 memory supported
5. Dual PCIe GbE, two RS-232, seven USB 2.0 and four SATA II
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: Socket P Intel® Core™2 Duo processor with a 1066/800/667 MHz FSB
- ◆ System Chipset: Intel® GM45 + ICH9M
- ◆ BIOS: AMI BIOS
- ◆ System Memory: Two 240-pin 800/667 MHz dual-channel DDR2 SDRAM DIMM supported (system max. 4 GB)
- ◆ Ethernet: Dual Intel® 82574L PCIe GbE controller
- ◆ I/O Interface: 2 x RS-232, 7 x USB 2.0, 4 x SATA II, 1 x LPT, 1 x PS/2 connector for KB/MS
- ◆ Digital I/O: 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface: 1 x Infrared by pin header
- ◆ Super I/O: ITE IT8718F
- ◆ Display Interface: VGA integrated in Intel® GM45
HDTV/TV supports NTSC/PAL and HDTV resolution up to 1080i
18/24-bit dual-channel LVDS
- ◆ Audio: HD audio supported by IEI AC-KIT-888HD-R10
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Power Supply: AT/ATX function supported
- ◆ Power consumption: 5V@5.59A, 12V@0.15A (Intel® Core™2 Duo T9400 2.53 GHz with 4 GB DDR2 800 MHz)
- ◆ Temperature: Operation: 0°C ~ 60°C (32°F ~ 140°F)
- ◆ Humidity: Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 185 mm x 122 mm
- ◆ Weight: GW: 1000 g/NW: 250 g

Packing List

1 x PIC0e-GM45A single board computer	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
1 x KB/MS Y cable (P/N: 32006-000300-100-RS)	1 x One Key Recovery
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x QIG

Ordering Information

Part No.	Description
PIC0e-GM45A-R10	PCIe CPU card supports Intel® Core™2 Duo CPU with VGA/LVDS/HDTV-out, GbE, USB 2.0 and SATA
CF-479B-RS	CPU cooler (50 mm x 50 mm x 26 mm, 50 W)
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
HDTV CABLESET-01	HDTV cable set with S-Video, composite and component interfaces
32200-015100-RS	LPT cable
32100-087100-RS	ATX-12V cable

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Embedded Computing Solutions

4

ORing Network Communication

5

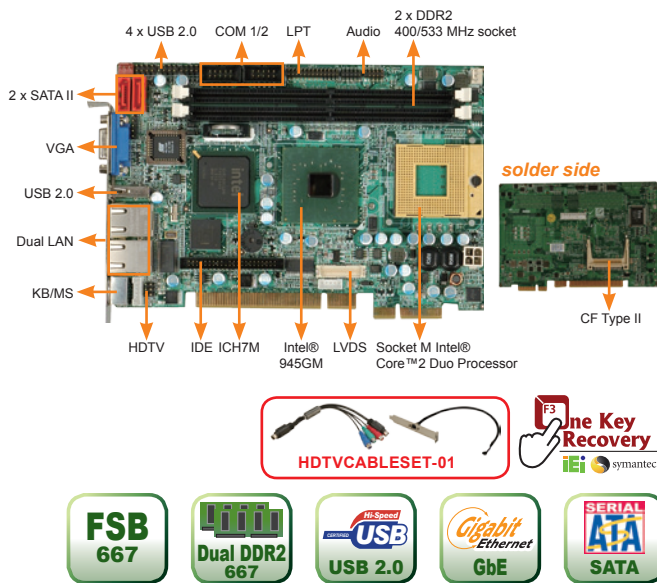
Power Supply/Peripherals

6

Panel Solutions Introduction

PIC0e-9452-R21

Half-size PCIe CPU card supports Intel® Core™2 Duo processors and comes with VGA, LVDS, HDTV-out, USB 2.0, SATA and audio



Features

1. PIC0e CPU card supports PCI and PCIe add on cards
2. Intel® Core™2 Duo CPU support FSB 667 MHz
3. Supports DDR2 400/533/667 MHz up to 4GB
4. Supports VGA and 18/24-bit dual-channel LVDS
5. Two RS-232, five USB 2.0 and two SATA
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - Socket M Intel® Core™2 Duo, Core™ Duo, Core™ Solo, Celeron® M Mobile processor with a 533 MHz or 667 MHz FSB
- ◆ System Chipset
 - Intel® 945GME + ICH7M
- ◆ BIOS
 - AMI BIOS
- ◆ System Memory
 - Two 240-pin 2 GB (max.) 667 MHz, 533 MHz or 400 MHz dual-channel DDR2 SDRAM DIMMs supported (system max. 4 GB)
- ◆ Ethernet
 - Intel® 82573 PCIe GbE controller
 - Intel® 82562 10/100 Mbps Ethernet controller
- ◆ I/O Interface
 - 2 x RS-232
 - 1 x LPT
 - 2 x SATA
 - 1 x IDE
 - 1 x CF Type II
 - 5 x USB 2.0
 - (Four on-board and one on the bracket)
 - 1 x 6-pin header for keyboard and mouse
- ◆ Digital I/O
 - 8-bit Digital IO (4-bit input/4-bit output)
- ◆ Infrared Interface
 - 1 x Infrared by pin header
- ◆ Super I/O
 - ITE IT8712F
- ◆ Display Interface
 - VGA integrated in Intel® 945GME
 - 18/24-bit dual-channel LVDS
 - TV-out supports NTSC/PAL/HDTV resolution (1080i max.) output
- ◆ Audio
 - 7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
 - 5.1 channel audio kit with Realtek ALC655 AC'97 codec
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
 - AT/ATX Power
- ◆ Power consumption
 - 5V@3.49A, 3.3V@0.2A, 12V@1.75A (Intel® Core™2 Duo, T7400 2.16GHz, 512MB, 667MHz DDR2)
- ◆ Temperature
 - Operating: 0°C ~ 60°C (32° F ~ 140° F)
- ◆ Humidity
 - Operating: 5% ~ 95%, non-condensing
- ◆ Dimensions
 - 185 mm x 122 mm
- ◆ Weight
 - GW: 1000 g/NW: 171 g

Packing List

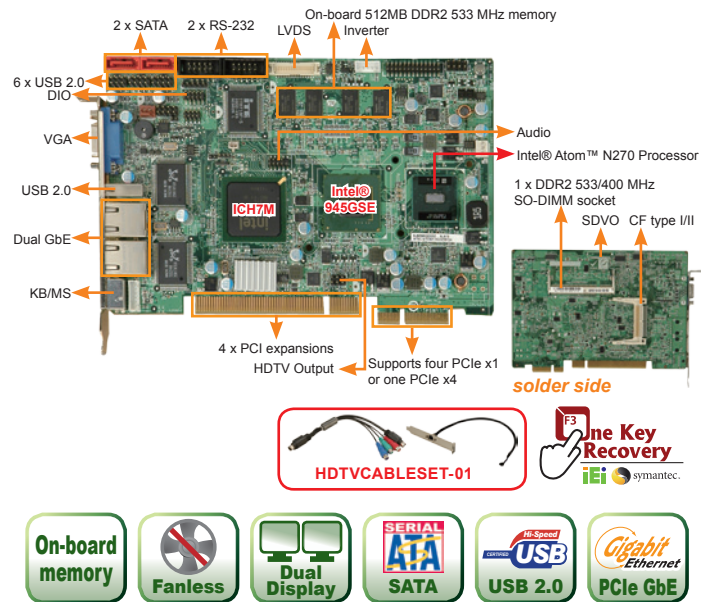
1 x PIC0e-9452 single board computer	
1 x IDE flat cable 44p/40p/40p (P/N: 32200-008800-RS)	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
1 x KB/MS cable (P/N: 32006-000300-100-RS)	1 x One Key Recovery
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x QIG

Ordering Information

Part No.	Description
PIC0e-9452-R21	PCIe CPU card Intel® Core™2 Duo CPU with VGA/LVDS/LAN/GbE, USB 2.0, SATA and Audio
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655
32200-015100-RS	LPT cable
HDTVCABLESET-01	HDTV cable set with S-Video/Composite/Component interface
CF-479B-RS	CPU cooler

PIC0e-945GSE

Half-size PCIe CPU card with Intel® Atom™ processor, 512MB memory on board, VGA/LVDS/HDTV-out, Dual GbE, USB 2.0 and SATA



Features

1. PCIe CPU card supports four PCIe x1 or one PCIe x4 and 4 x PCI expansions
2. Intel® Atom™ processor N270 at 1.6GHz core speed with a 533 MHz FSB and 512 KB L2 cache
3. 512 MB of 533 MHz DDR2 SDRAM on board
4. Supports VGA, HDTV-out (up to 1080i) and 18-bit dual-channel LVDS with dual-display support
5. I/O includes two RS-232, seven USB 2.0 and two SATA
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - On-board Intel® Atom™ N270 processor 1.6 GHz
 - 512 KB L2 cache with a 533MHz FSB
- ◆ System Chipset
 - Intel® 945GSE + ICH7M
- ◆ BIOS
 - AMI BIOS
- ◆ System Memory
 - On-board 512 MB DDR2 533 MHz memory and one 200-pin 533/400 MHz DDR2 SDRAM SO-DIMM supported (system max. 2GB)
- ◆ Ethernet
 - Dual PCI Realtek 8110SC GbE
- ◆ I/O Interface
 - 2 x RS-232
 - 2 x SATA
 - 1 x LPT
 - 1 x CF type I/II
 - 1 x PS/2 connector for KB/MS
 - 7 x USB 2.0 (1 on bracket, 6 on board by pin header)
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface
 - 1 x Infrared by pin header
- ◆ Super I/O
 - ITE IT8718F
- ◆ Display Interface
 - VGA integrated in Intel® 945GSE
 - HDTV/TV supports NTSC/PAL and HDTV resolution up to 1080i
 - 18-bit dual-channel LVDS
- ◆ Audio
 - Supports 7.1 channel HD audio or 5.1 channel AC-97 audio by IEI audio kits
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. System reset
- ◆ Power Supply
 - AT/ATX Power
- ◆ Power consumption
 - 5V@2.89A, 12V@0.22A (Intel® Atom™ N270 1.6 GHz/533 MHz CPU with 1GB DDR2 533 MHz)
- ◆ Temperature
 - Operation: 0°C ~ 60°C (32° F ~ 140° F)
- ◆ Humidity
 - Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions
 - 185 mm x 122 mm
- ◆ Weight
 - GW: 1000 g/NW: 250 g

Packing List

1 x PIC0e-945GSE single board computer	
1 x KB/MS Y cable (P/N: 32006-000300-100-RS)	1 x One Key Recovery
1 x Dual RS-232 cable (P/N: 19800-000051-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
2 x SATA cable (P/N: 32000-062800-RS)	1 x QIG

Ordering Information

Part No.	Description
PIC0e-945GSE-N270-512MB-R10	PCIe CPU card with Intel® Atom™ N270 1.6 GHz processor, 512 MB memory on board, VGA/LVDS/HDTV-out, Dual GbE, USB 2.0, SATA
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655
HDTVCABLESET-01	HDTV cable set with S-Video, composite and component interfaces
32102-000100-200-RS	SATA power cable
32200-015100-RS	LPT cable

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Industrial Computing Solutions

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Video Capture Solutions

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Embedded Computing Solutions

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O/Ring Network Communication

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Power Supply/Peripherals

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Panel Solutions Introduction

PCI/PIC0e Backplane

Supports PCI/PIC0e Slot on one backplane!

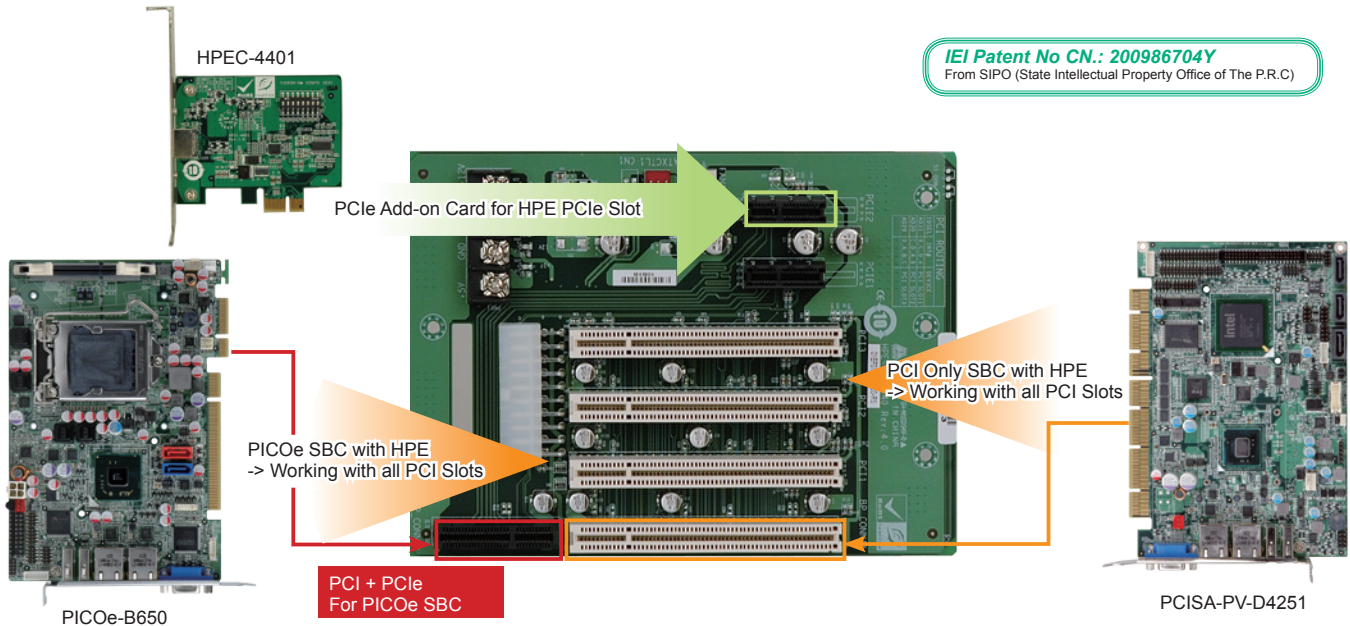
The advantages of using the PCI/PIC0e backplanes are numerous:

1. They support half-size PCI single board computers
2. They support half-size PIC0e single board computers
3. The PIC0e backplanes combine the PCI and the PCIe x4 or PCIe x1 to provide excellent I/O bandwidth and performance.

Compatible with all PICMG 1.0 Half-Sized PCI SBCs and PIC0e SBCs.

IEI Patent No CN.: 200986704Y

From SIPO (State Intellectual Property Office of The P.R.C)



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Panel
Solutions
Introduction

Selection Guide

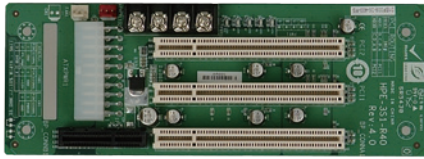
PAC series wall-mount chassis

4U rack-mount chassis

	PCIe/PCI	PCIe/ PCI	HPE-3S1	HPE-3S2	HPE-4S1	HPE-4S2	HPE-5S1	HPE-5S2
Total Slot			3	3	4	4	5	5
Expansion Slots	PCI		2	1	3	2	4	3
	PCIe	x4		1		1		1
		x1						
Chassis			PR-1300G	PR-1300G	PAC-42GH PAC-400G	PAC-42GH PAC-400G	PR-1500G RACK-500G	PR-1500G RACK-500G

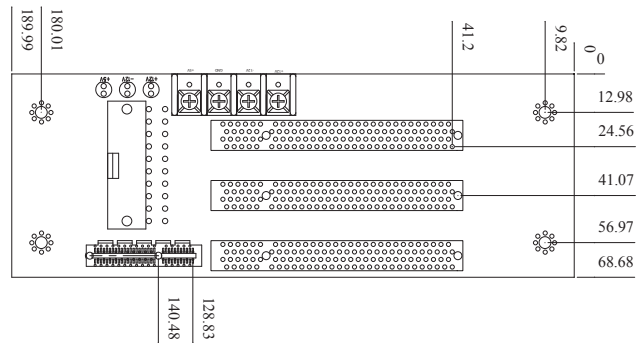
	PCIe/PCI	PCIe/ PCI	HPE-5S3	HPE-6S1	HPXE-6S1	HPE-6S2	HPE-7S1	HPE-8S
Total Slot			5	6	6	6	7	7
Expansion Slots	PCI		2	4	2	3	4	4
	PCIe	x4		1	3			
		x1	2			2	2	2
Chassis			PR-1500G RACK-500G	N/A	N/A	N/A	PAC-700G	RACK-3400G

HPE-3S1-R40

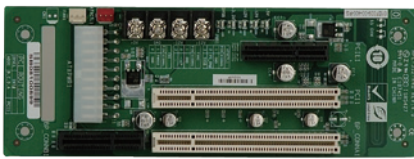


Ordering Information

HPE-3S1-R40	3-slot backplane with 2 PCI slots
PR-1300G	3-slot half-size compact chassis

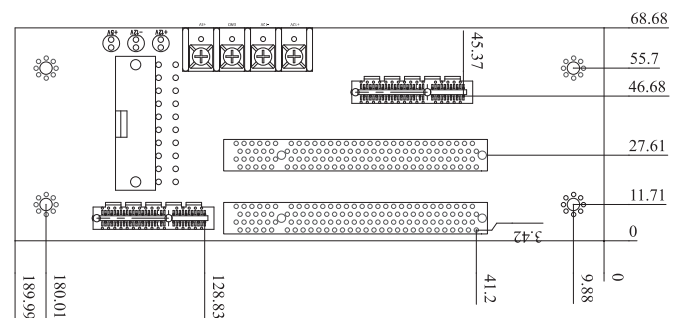


HPE-3S2-R40

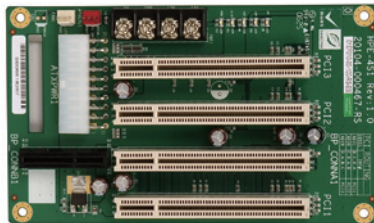


Ordering Information

HPE-3S2-R40	3-slot backplane with 1 PCI slot and 1 PCIe x4 slot
PR-1300G	3-slot half-size compact chassis

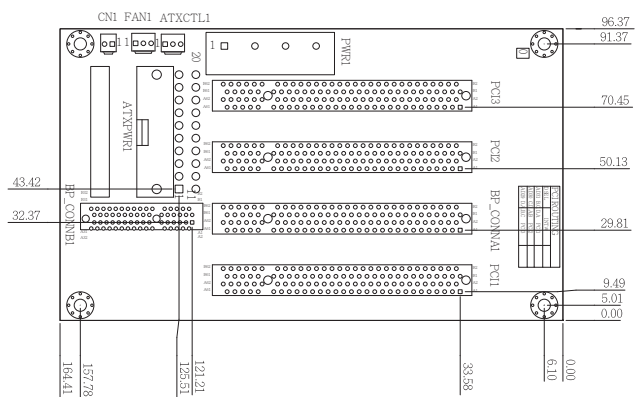


HPE-4S1-R40

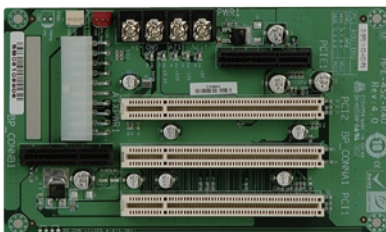


Ordering Information

HPE-4S1-R40	4-slot backplane with 3 PCI slots
PAC-42GH	4-slot half-size compact chassis
PAC-400G	4-slot half-size compact chassis

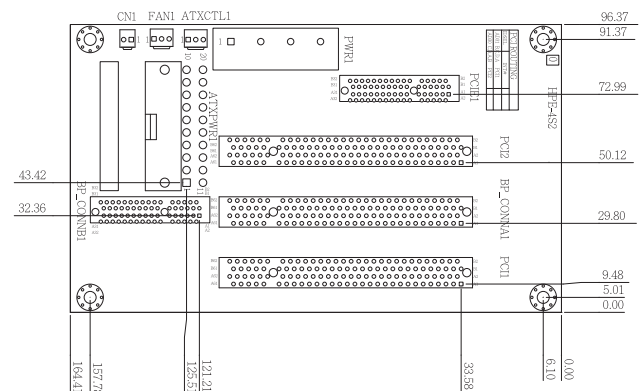


HPE-4S2-R40



Ordering Information

HPE-4S2-R40	4-slot backplane with 2 PCI slots and 1 PCIe x4 slot
PAC-42GH	4-slot half-size compact chassis
PAC-400G	4-slot half-size compact chassis



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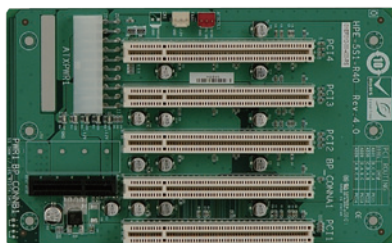
5

Power Supply/
Peripherals

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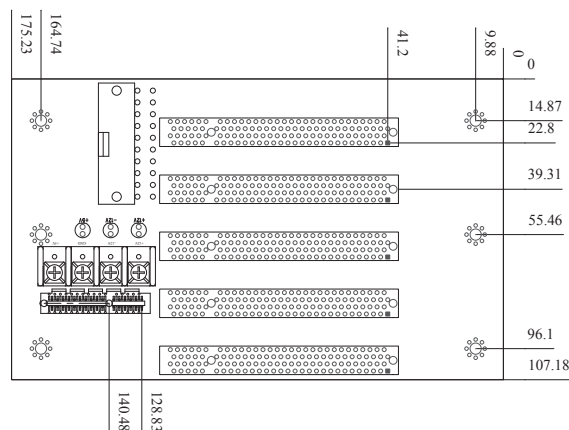
Panel
Solutions
Introduction

HPE-5S1-R50

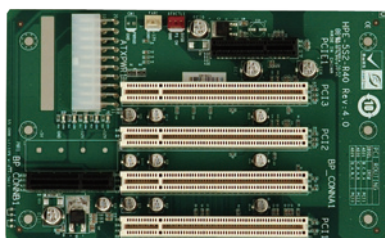


Ordering Information

HPE-5S1-R50	5-slot backplane with 4 PCI slots
PR-1500G	5-slot half-size compact chassis
RACK-500G	5U 5-slot full-size rack-mount chassis

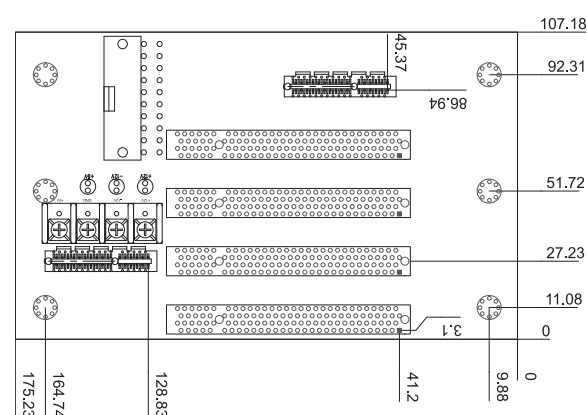


HPE-5S2-R40

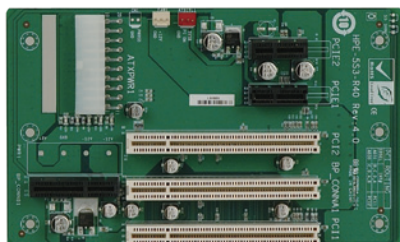


Ordering Information

HPE-5S2-R40	5-slot backplane with 3 PCI slots and 1 PCIe x4 slot
PR-1500G	5-slot half-size compact chassis
RACK-500G	5U 5-slot full-size rack-mount chassis

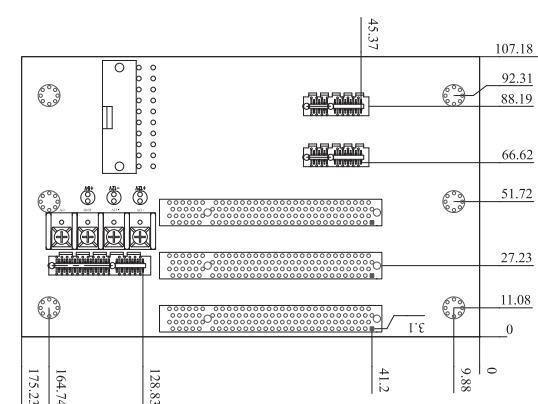


HPE-5S3-R40

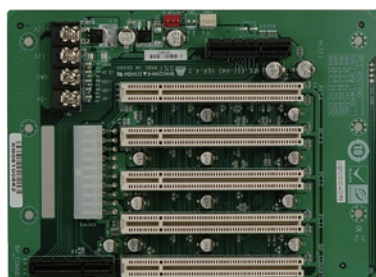


Ordering Information

HPE-5S3-R40	5-slot backplane with 2 PCI slots and 2 PCIe x1 slots
PR-1500G	5-slot half-size compact chassis
RACK-500G	5U 5-slot full-size rack-mount chassis

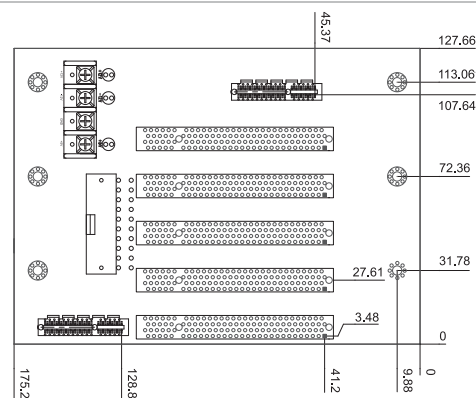


HPE-6S1-R40

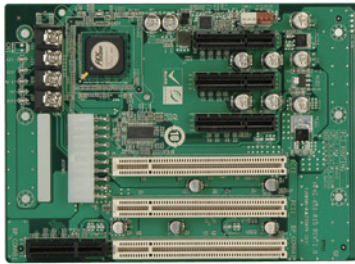


Ordering Information

HPE-6S1-R40	6-slot backplane with 4 PCI slots and 1 PCIe x4 slot
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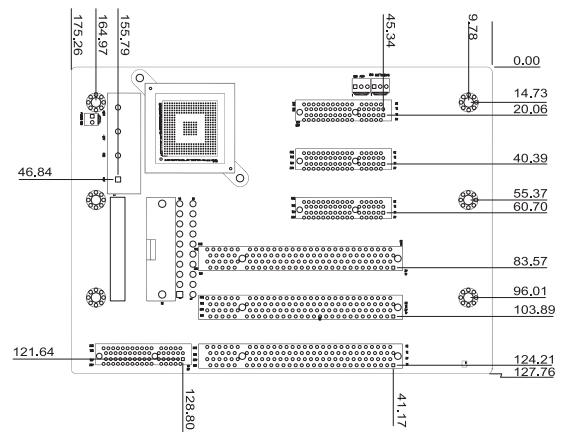


HPXE-6S1-R10

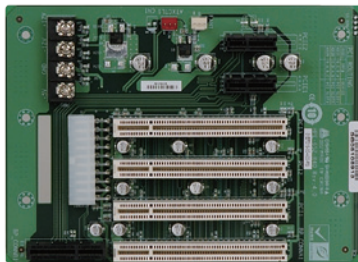


Ordering Information

HPXE-6S1-R10	6-slot backplane with 2 PCI slots and 3 PCIe x4 slots
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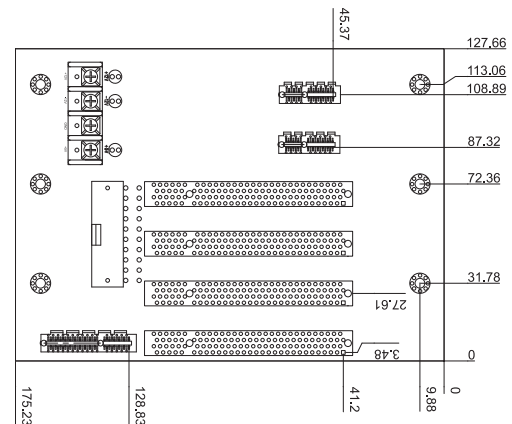


HPE-6S2-R40

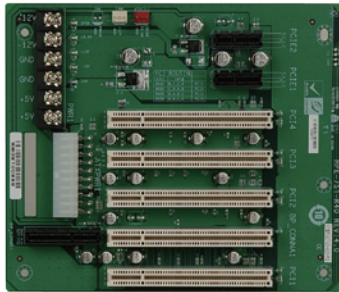


Ordering Information

HPE-6S2-R40	6-slot backplane with 3 PCI slots and 2 PCIe x1 slots
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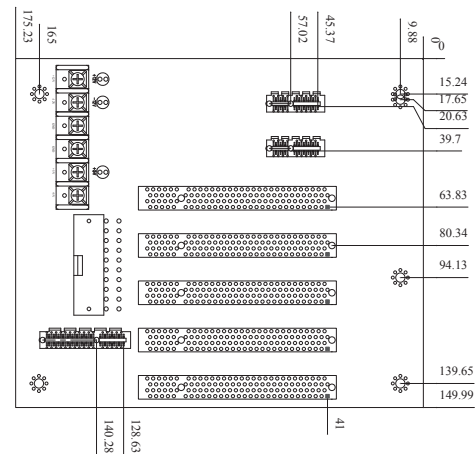


HPE-7S1-R40

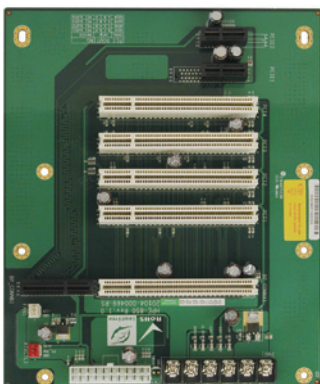


Ordering Information

HPE-7S1-R40	7-slot backplane with 4 PCI slots and 2 PCIe x1 slots
PAC-700G	7-slot half-size compact chassis

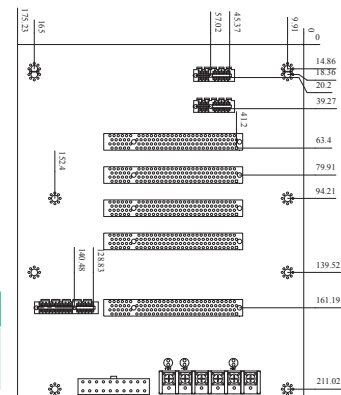


HPE-8S0-R40



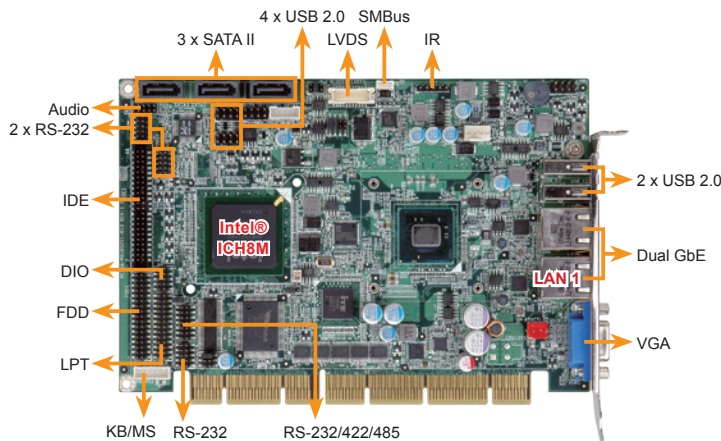
Ordering Information

HPE-8S0-R40	7-slot backplane with 4 PCI slots and 2 PCIe x1 slots
RACK-3400G	4U 10-slot half-size rack-mount chassis

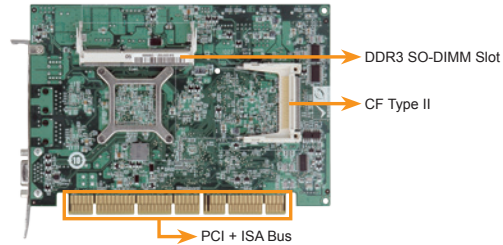


PCISA-PV-D4251 N4551 D5251

Half-size PCISA CPU card with Intel® Atom™ D425/N455/D525, DDR3, VGA/LVDS, Dual PCIe GbE, USB 2.0, four COM, three SATA II, Audio and RoHS

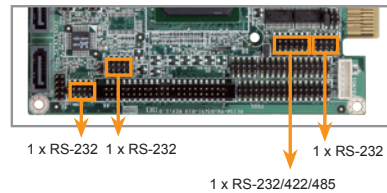


Solder Side



Four COM Ports Solution

(3 x RS-232, 1 x RS-232/422/485)



Specifications

- ◆ CPU
 - Intel® Atom™ D525 dual-core processor (1.80GHz/1MB L2 cache)
 - Intel® Atom™ D425 single-core processor (1.80GHz/512KB L2 cache)
 - Intel® Atom™ N455 single-core processor (1.66GHz/512KB L2 cache)
- ◆ Chipset
 - Intel® ICH8M
- ◆ BIOS
 - UEFI BIOS
- ◆ Memory
 - One 204-pin 800MHz DDR3 SDRAM SO-DIMM supported (system max. 4GB for D525/D425 and 2GB for N455)
- ◆ Graphics Engine
 - GMA 3150
 - Gen3.5 DX9, 400MHz for D525/D425
 - Gen3.5 DX9, 200MHz for N455
- ◆ Display Interface
 - Analog CRT up to 2048x1536 for D525/D425, 1400x1050 for N455
 - Supports for CRT hot plug
 - 18-bit single-channel LVDS supports resolution up to WXGA 1366x768 or XGA 1024x768
- ◆ Ethernet
 - Dual PCIe GbE by Realtek RT8111E, LAN1 supports ASF 2.0
- ◆ I/O Interface

3 x RS-232	1 x IDE
1 x FDD	1 x LPT
1 x KB/MS	1 x Infrared
1 x CF Type II	3 x SATA II
1 x RS-232/422/485 with auto flow control	
6 x USB 2.0 (4 by pin-header, 2 on rear side)	
- ◆ Super IO
 - Fintek F81865
- ◆ Audio
 - Realtek ALC888 HD codec
- ◆ SMBus
 - 1 x 4-pin wafer connector
- ◆ TPM (Optional)
 - On-board Infineon SLB9635TT1.2
- ◆ Expansion
 - 4 x PCI bus support
 - ISA bus support by ITE IT8888G PCI to ISA bridge
- ◆ Digital I/O
 - 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset
- ◆ Fan connector
 - 1 x 4-pin fan connector (smart fan)
- ◆ Power Supply
 - 5V/12V by PCISA bus, AT/ATX mode support
- ◆ Power Consumption
 - 5V@3.36A, 12V@0.57A (Intel® dual-core Atom™ D525 1.80GHz with 1GB 1066MHz DDR3 memory)
 - 5V@3.25A, 12V@0.48A (Intel® single-core Atom™ D425 1.80GHz with 1GB 1066MHz DDR3 memory)
 - 5V@3.21A, 12V@0.43A (Intel® single-core Atom™ N455 1.66GHz with 1GB 1066MHz DDR3 memory)
- ◆ Temperature
 - 20°C ~ 60°C with free air, -20°C ~ 70°C with force air for D525 processor
 - 20°C ~ 65°C with free air, -20°C ~ 70°C with force air for D425 processor
 - 20°C ~ 70°C with free air, -20°C ~ 75°C with force air for N455 processor
- ◆ Humidity
 - Operation
 - 5% ~ 95%, non-condensing
- ◆ Weight
 - GW: 1000g/NW: 250g



Features

1. PCISA CPU card supports PCI and ISA bus expansion
2. Supports Intel® Atom™ D525/D425/N455 processor
3. Supports VGA and 18-bit single-channel LVDS with dual display
4. Supports 800MHz DDR3 SDRAM SO-DIMM up to 4GB for D525/D425 and 2GB for N455
5. Supports four COM, six USB 2.0, three SATA II, IDE and CF type II
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x PCISA-PV-D4251/N4551/D5251 single board computer

1 x LPT/RS-232 cable (P/N: 19800-002300-100-RS)	1 x One Key Recovery CD
1 x Audio cable (P/N: 19800-000111-RS)	1 x Mini jumper pack
3 x SATA cable (P/N: 32801-000703-200-RS)	1 x Utility CD
1 x USB cable (P/N: 19800-003100-200-RS)	1 x QIG

Ordering Information

Part No.	Description
PCISA-PV-D5251-R10	PCISA CPU card with Intel® D525 1.80GHz, VGA/LVDS, dual PCIe GbE, USB 2.0, 4 COM, 3 SATA II and audio, RoHS
PCISA-PV-D5251T-R10	PCISA CPU card with Intel® D525 1.80GHz, VGA/LVDS, dual PCIe GbE, USB 2.0, 4 COM, 3 SATA II and audio, TPM, RoHS
PCISA-PV-D4251-R10	PCISA CPU card with Intel® D425 1.80GHz, VGA/LVDS, dual PCIe GbE, USB 2.0, 4 COM, 3 SATA II and audio, RoHS
PCISA-PV-D4251T-R10	PCISA CPU card with Intel® D425 1.80GHz, VGA/LVDS, dual PCIe GbE, USB 2.0, 4 COM, 3 SATA II and audio, TPM, RoHS
PCISA-PV-N4551-R10	PCISA CPU card with Intel® N455 1.66GHz, VGA/LVDS, dual PCIe GbE, USB 2.0, 4 COM, 3 SATA II and audio, RoHS
PCISA-PV-N4551T-R10	PCISA CPU card with Intel® N455 1.66GHz, VGA/LVDS, dual PCIe GbE, USB 2.0, 4 COM, 3 SATA II and audio, TPM, RoHS
19800-004300-100-RS	RS-232/422/485 cable with bracket
19800-000075-RS	KB/MS cable with bracket
32200-000058-RS	FDD cable
32102-000100-200-RS	SATA power cable
32200-000052-RS	IDE cable
19FTS00032100-000001-RS	CPU fan

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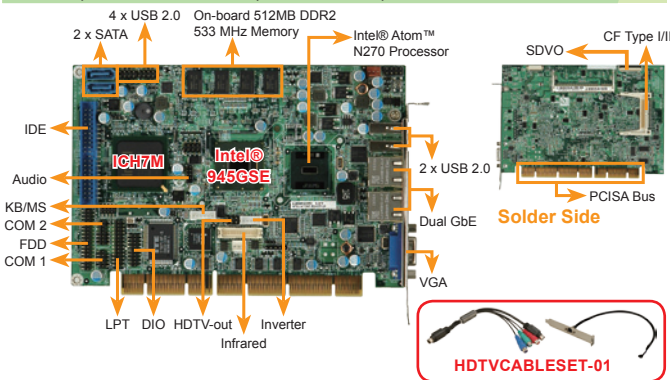
Power Supply/
Peripherals

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Panel
Solutions
Introduction

PCISA-945GSE-R11

Half-size PCISA CPU card with Intel® Atom™ processor, 512 MB memory on board, VGA/LVDS/HDTV-out, Dual PCIe GbE, USB 2.0 and SATA



Features

1. PCISA CPU card supports four PCI and ISA expansions
2. Intel® Atom™ N270 processors at 1.6GHz core speed with a 533MHz FSB and 512KB L2 cache
3. 512 MB of 533 MHz DDR2 SDRAM on board
4. Supports VGA, HDTV-out up to 1080i and 18-bit dual-channel LVDS with dual display support
5. Two SATA, one IDE, floppy and CF type I/II for data storage
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: On-board Intel® Atom™ N270 processor 1.6 GHz 512 KB L2 cache with a 533 MHz FSB
- ◆ System Chipset: Intel® 945GSE + ICH7M
- ◆ BIOS: AMI BIOS
- ◆ System Memory: On-board 512 MB DDR2 533 MHz memory. One 200-pin (system memory max. 2GB) 533MHz DDR2 SDRAM DIMM supported
- ◆ Ethernet: Dual PCIe Realtek 8111CP GbE
- ◆ I/O Interface:
 - 1 x RS-232
 - 1 x RS-232/422/485
 - 2 x SATA
 - 1 x LPT
 - 1 x IDE
 - 1 x FDD
 - 1 x CF type I/II
 - 1 x 6-pin header for KB/MS
 - 6 x USB 2.0 (2 on bracket, 4 on board by pin header)
- ◆ Digital I/O: 8-bit digital I/O, 4-bit input/4-bit output
- ◆ Infrared Interface: 1 x Infrared by pin header
- ◆ Super I/O: ITE I8718F
- ◆ Display Interface: VGA integrated in Intel® 945GSE. HDTV/TV supports NTSC/PAL and HDTV resolution up to 1080i 18-bit dual-channel LVDS
- ◆ Audio: Supports 7.1 channel HD audio or 5.1 channel AC'97 audio by IEI audio kits
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Power Supply: AT/ATX power
- ◆ Power consumption: 5V@2.89A, 12V@0.22A (Intel® Atom™ N270 1.6GHz/533 MHz CPU with 512 MB 533 MHz DDR2)
- ◆ Temperature: Operation: 0°C ~ 60°C (32°F ~ 140°F)
- ◆ Humidity: Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 185 mm x 127.6 mm
- ◆ Weight: GW: 1000g/NW: 252g

Packing List

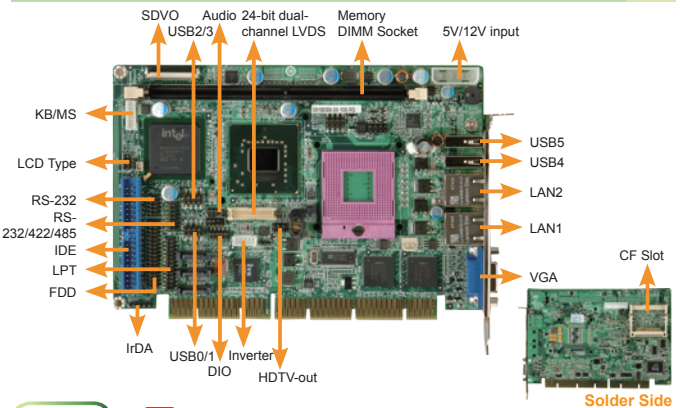
1 x PCISA-945GSE single board computer	
1 x LPT/RS-232 cable (P/N: 19800-000027-RS)	
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Mini jumper pack
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x QIG
1 x One Key Recovery CD	1 x Utility CD

Ordering Information

Part No.	Description
PCISA-945GSE-N270-512MB-R11	PCISA CPU card with Intel® Atom™ N270 1.6G processor, 512 MB memory on board, VGA/LVDS/HDTV-out, dual PCIe GbE, USB 2.0, SATA
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
AC-KIT08R-R10	5.1 channel AC'97 audio kit with Realtek ALC655
HDTVCABLESET-01	HDTV cable set with S-Video, composite and component interfaces
32102-000100-200-RS	SATA power cable
32200-000052-RS	ATA 66 flat cable
32200-000058-RS	FDD cable w/o bracket
19800-004300-100-RS	RS-232/422/485 cable with bracket
19800-000075-RS	KB/MS cable with bracket

PCISA-9652

Half-size PCISA CPU card supports a Mobile Intel® Core™2 Duo processor with a FSB 800 MHz, dual PCIe GbE, three SATA II, 24-bit dual-channel LVDS, analog CRT and USB 2.0



Features

1. Supports 45/65 nm Socket P Intel® Mobile Core™2 Duo and Celeron® M processors with a 667 MHz or 800 MHz FSB
2. Intel® GME965 integrates with GMAX3100 graphics engine and delivers high quality video playback
3. HDTV-out, LVDS and VGA display output with support for dual-display function
4. Dual PCIe GbE, three SATA II, CF Type II, and rich I/O design
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: Socket P Intel® Core™2 Duo, Core™ Duo, Core™ Solo, Celeron® M mobile processors with a 533 MHz or 800 MHz FSB
- ◆ System Chipset: GME965+ICH8M-E
- ◆ BIOS: AMI BIOS
- ◆ Memory: One 240-pin 2 GB (max.) 533 MHz or 667 MHz DDR2 SDRAM DIMM supported
- ◆ Graphics: Integrated Mobile Intel® GMA X3100 supports 2048x1536 (QXGA) at 60-Hz, 32-bpp. Intel® Clear Video Technology supports MPEG-2/WMV9 Hardware Acceleration, DirectX 9, OpenGL 1.5 and HW Pixel Shader 3.0
- ◆ I/O Interfaces:
 - 1 x RS-232
 - 1 x RS-232/422/485
 - 1 x LPT
 - 1 x FDD
 - 1 x IDE
 - 3 x SATA II with RAID 0/1
 - 1 x 6-pin header for keyboard and mouse
 - 6 x USB 2.0 (Four on-board and two on the bracket)
 - 1 x CF Type II
- ◆ Ethernet: Dual Intel® 82573L PCIe GbE controller
- ◆ Display Output: Analog CRT, 24-bit dual-channel LVDS. HDTV-out support 1080i (max.) resolution
- ◆ Digital I/O: 8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Audio: Supports 7.1 channel HD audio via AC-KIT-888HD-R10
- ◆ WDT: Software programmable supports 1~255 sec. system reset
- ◆ Power Supply: AT and ATX support
- ◆ Power Consumption: 5 V @ 7.72 A, 12 V @ 0.139 A running at 2.0 GHz Intel® Core™2 Duo T7300 processor with 1GB 667 MHz DDR2 DIMM
- ◆ Temperature: Operation: 0°C ~ 60°C (32°F ~ 140°F)
- ◆ Humidity: Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 185 mm x 127.6 mm
- ◆ Weight: GW: 1.0 kg/NW: 266 g

Packing List

1 x PCISA-9652 single board computer	
1 x SATA power cable (P/N: 32102-000100-200-RS)	
1 x LPT/RS-232 cable (P/N: 19800-000027-RS)	
1 x ATA 66 flat cable (P/N: 32200-000052-RS)	1 x Mini jumper pack
1 x USB cable (P/N: 19800-003100-200-RS)	1 x Utility CD
2 x SATA cable (P/N: 32801-000703-200-RS)	1 x QIG

Ordering Information

Part No.	Description
PCISA-9652-R10	Half-size PCI and ISA SBC with Intel® Mobile Core™2 Duo/Celeron® M CPU at FSB 800/533MHz, GME965 and ICH8M-E, dual PCIe GbE, 3 SATA II, 24-bit dual-channel LVDS output, USB 2.0
CF-479B-RS	CPU cooler (50 mm x 50 mm x 26 mm, 50 W)
32200-000058-RS	FDD cable w/o bracket
19800-004300-100-RS	RS-232/422/485 cable with bracket
19800-000075-RS	KB/MS cable with bracket
AC-KIT-888HD-R10	7.1 channel HD audio kit with Realtek ALC888 supports dual audio streams
HDTVCABLESET-01	HDTV cable set with S-Video/Composite/Component interface

IP/IPX Series Backplane

Supports PCI and ISA slot on one backplane!
For half-sized PCISA series single board computers

The advantages of using the PCISA card series are numerous:

1. Supports standard PISA version 1.0 slot on the IP/IPX series passive backplane.
2. Compatible with all available PCI/ISA cards. IP/IPX backplane is also integrated with the PCISA series card slot.

Selection Guide

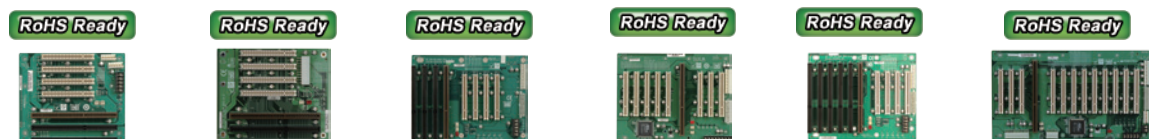
 PAC series wall-mount chassis

 4U rack-mount chassis


Model	IP-3S-RS	IP-3S2-RS	IP-3SA-RS	IP-4S-RS	IP-4S2-RS	IP-4S2A-RS	IP-4S3-RS
Total Slot	3	3	3	4	4	4	4
PCI Slot	2	1	2	3	2	3	
ISA Slot					1		3
PSU Type	AT	AT	ATX	AT	AT	ATX	AT
Chassis	PAC-53GH PR-1300G	PAC-53GH PR-1300G	PR-1300G	PAC-400G PAC-42GH	PAC-400G PAC-42GH	PAC-400G	PAC-400G PAC-42GH



Model	IP-4S4-RS	IP-4SA-RS	IP-5S2-RS	IP-5SA-RS	IP-5SA2-RS	IP-6S-RS	IP-6SA-RS
Total Slot	4	4	5	5	5	6	6
PCI Slot		3	4	3	4	3	3
ISA Slot	3			1		2	2
PSU Type	AT	ATX	AT	ATX	ATX	AT	ATX
Chassis	PAC-400G PAC-42GH	PAC-400G PAC-42GH	PR-1500G	PR-1500G	PR-1500G	PAC-107G PAC-1000G	PAC-106G PAC-107G PAC-1000G



Model	IP-7S-RS	IP-7SA-RS	IP-8S-RS	IPX-9S-RS	IP-10S-RS	IPX-13S-RS
Total Slot	7	7	8	9	10	13
PCI Slot	4	4	4	8	4	12
ISA Slot	2	2	3		5	
PSU Type	AT	ATX	ATX/AT	ATX/AT	ATX/AT	ATX/AT
Chassis	PAC-700G PAC-1700G	PAC-700G PAC-1700G	PAC-125G RACK-3400G	PAC-125G RACK-3400G	PAC-125G RACK-3400G	RACK-305G RACK-360G RACK-3000G

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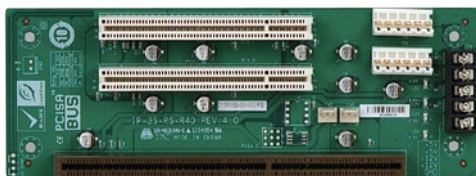
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Peripherals

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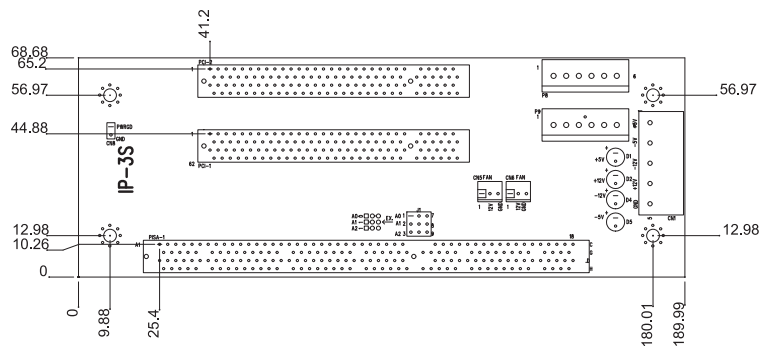
Panel
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IP-3S-RS-R40

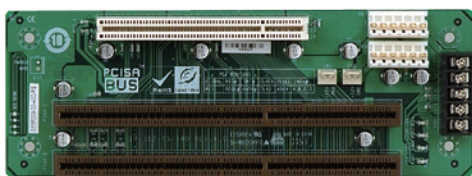


Ordering Information

IP-3S-RS-R40	3-slot backplane with 2 PCI slots
PAC-53GH	3-slot half-size compact chassis
PR-1300G	3-slot half-size compact chassis

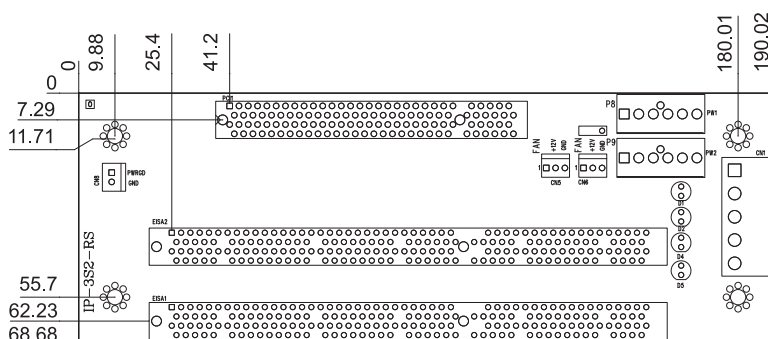


IP-3S2-RS-R40



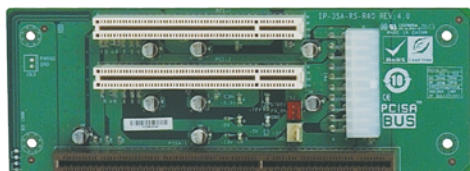
Ordering Information

IP-3S2-RS-R40	3-slot backplane with 1 PCI slot
PAC-53GH	3-slot half-size compact chassis
PR-1300G	3-slot half-size compact chassis



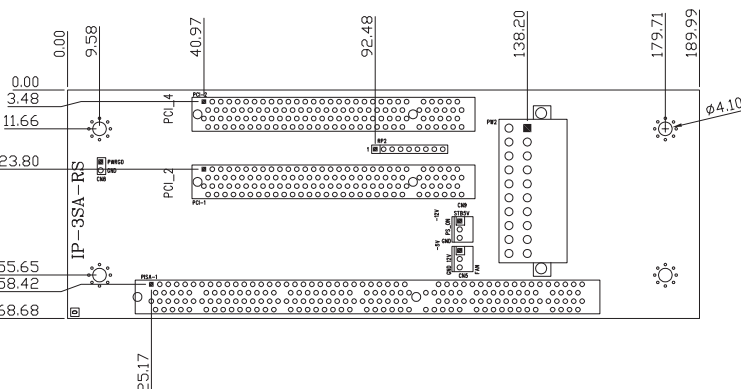
IP-3SA-RS-R40

ATX power

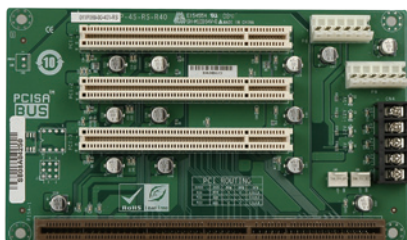


Ordering Information

IP-3SA-RS-R40	3-slot backplane with 2 PCI slots
PR-1300G	3-slot half-size compact chassis

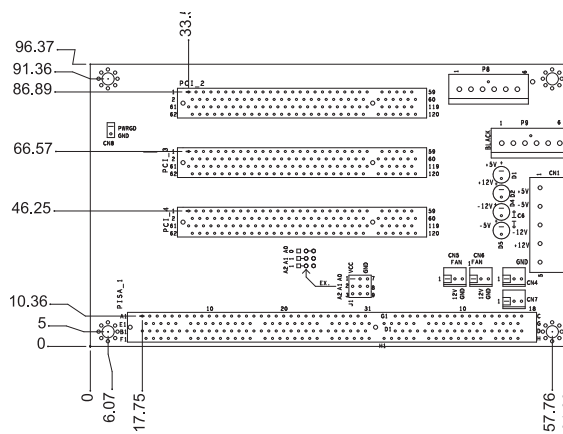


IP-4S-RS-R40



Ordering Information

IP-4S-RS-R40	4-slot backplane with 3 PCI slots
PAC-400G	4-slot half-size compact chassis
PAC-42GH	4-slot half-size compact chassis



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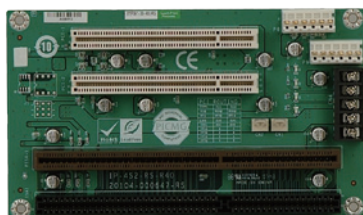
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Power Supply/
Peripherals

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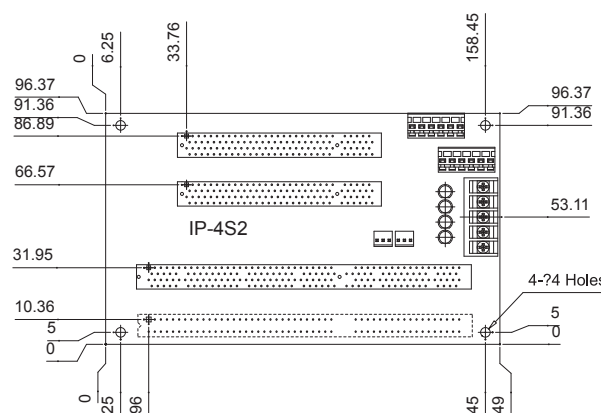
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IP-4S2-RS-R40



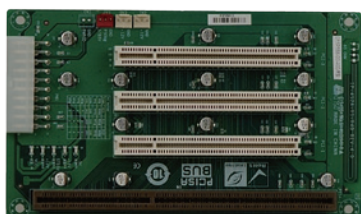
Ordering Information

IP-4S2-RS-R40	4-slot backplane with 2 PCI slots and 1 ISA slot
PAC-400G	4-slot half-size compact chassis
PAC-42GH	4-slot half-size compact chassis



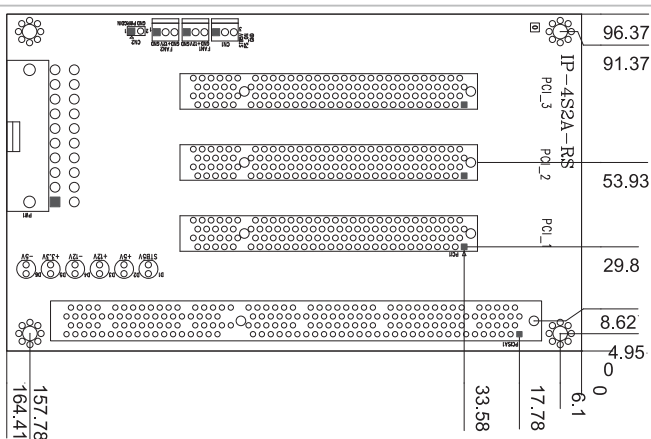
IP-4S2A-RS-R40

ATX power

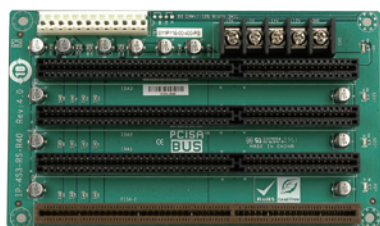


Ordering Information

IP-4S2A-RS-R40	4-slot backplane with 3 PCI slots
PAC-400G	4-slot half-size compact chassis

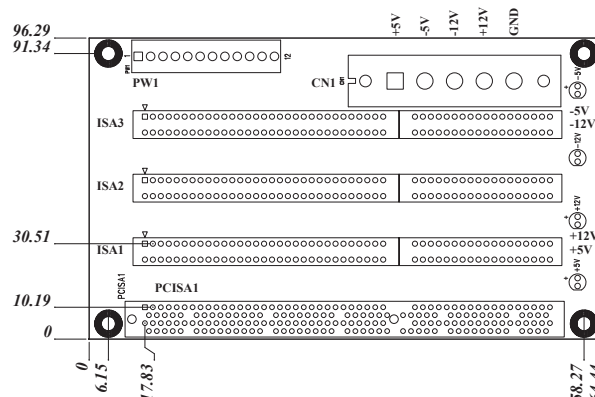


IP-4S3-RS-R40

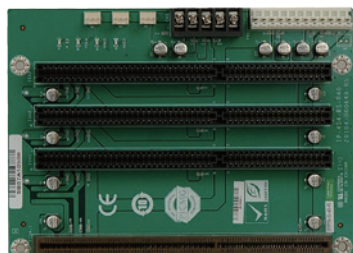


Ordering Information

IP-4S3-RS-R40	4-slot backplane with 3 ISA slots
PAC-400G	4-slot half-size compact chassis
PAC-42GH	4-slot half-size compact chassis

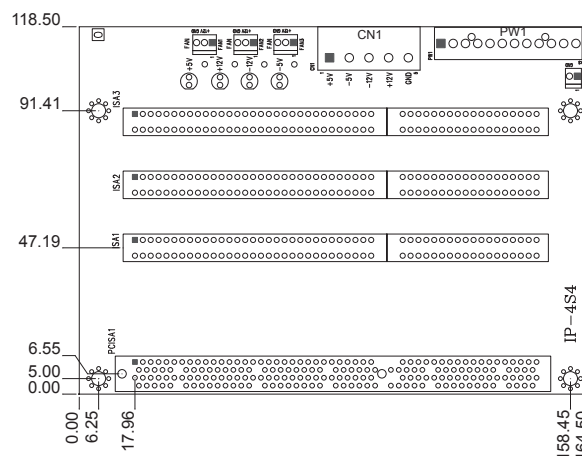


IP-4S4-RS-R40



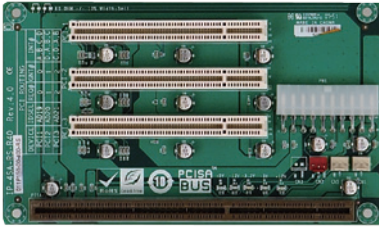
Ordering Information

IP-4S4-RS-R40	4-slot backplane with 3 ISA slots
PAC-400G	4-slot half-size compact chassis
PAC-42GH	4-slot half-size compact chassis



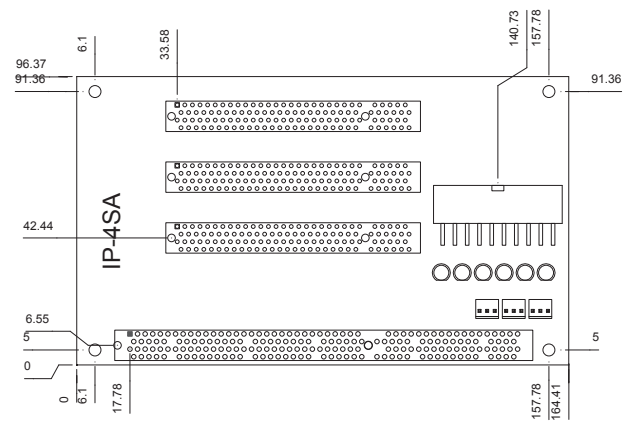
IP-4SA-RS-R40

ATX power

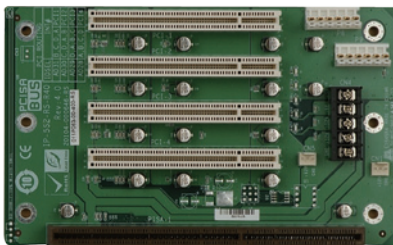


Ordering Information

IP-4SA-RS-R40	4-slot backplane with 3 PCI slots
PAC-400G	4-slot half-size compact chassis
PAC-42GH	4-slot half-size compact chassis

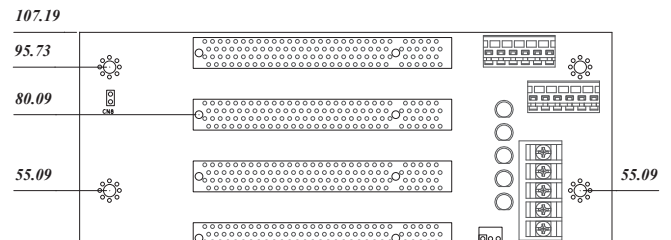


IP-5S2-RS-R40



Ordering Information

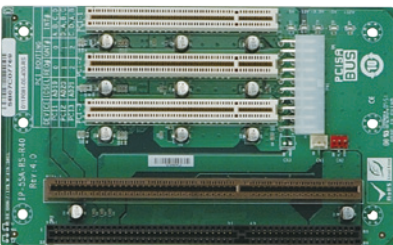
IP-5S2-RS-R40	5-slot backplane with 4 PCI slots
PR-1500G	5-slot half-size compact chassis



Ordering Information

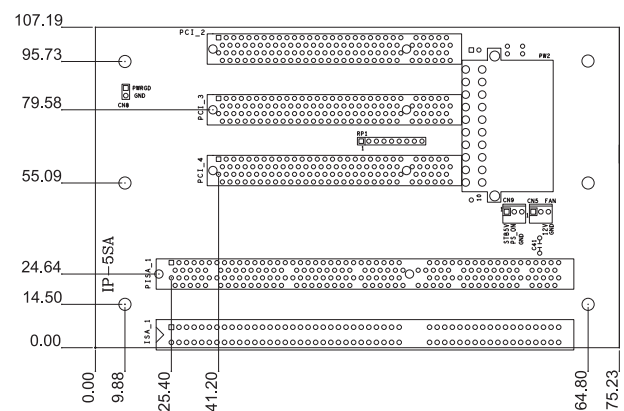
IP-5SA-RS-R40

ATX power

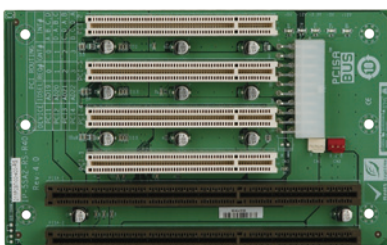


Ordering Information

IP-5SA-RS-R40	5-slot backplane with 3 PCI slots and 1 ISA slot
PR-1500G	5-slot half-size compact chassis

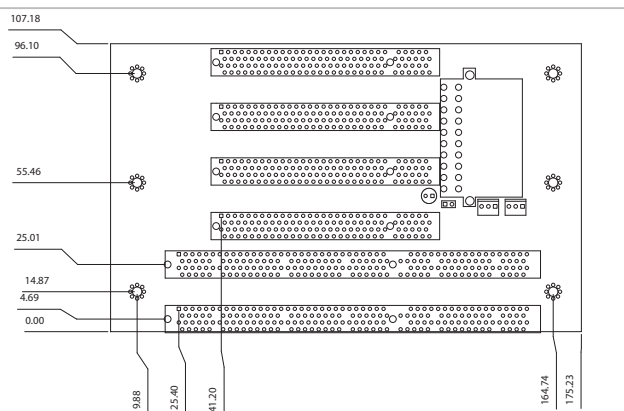


IP-5SA2-RS-R40



Ordering Information

IP-5SA2-RS-R40	5-slot backplane with 4 PCI slots
PR-1500G	5-slot half-size compact chassis



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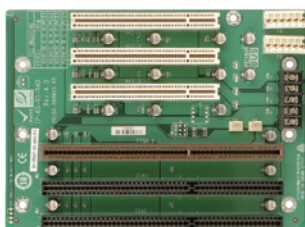
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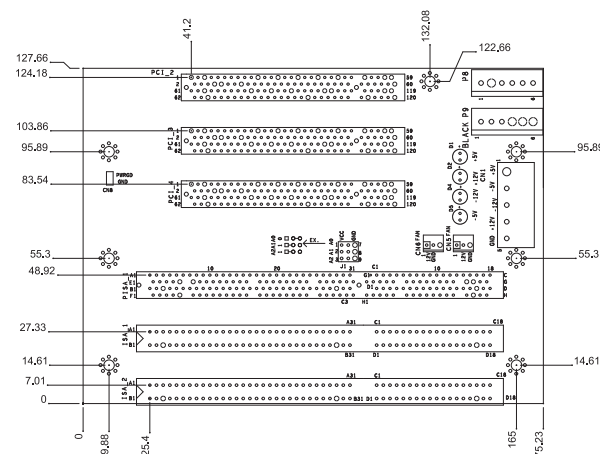
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IP-6S-RS-R40



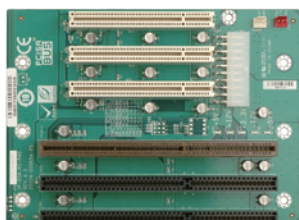
Ordering Information

IP-6S-RS-R40	6-slot backplane with 3 PCI slots and 2 ISA slots
PAC-107G	6-slot full-size compact chassis
PAC-1000G	6-slot full-size compact chassis



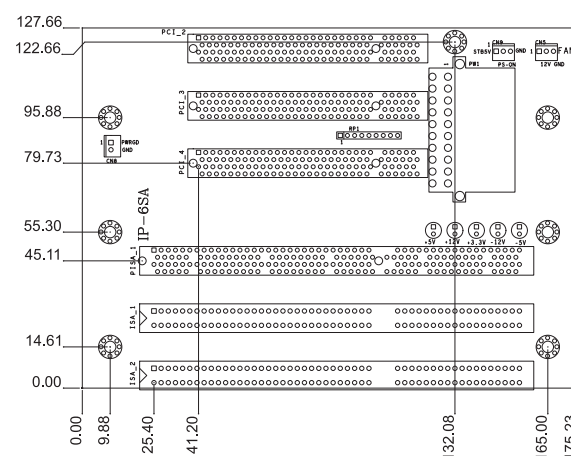
IP-6SA-RS-R40

ATX power



Ordering Information

IP-6SA-RS-R40	6-slot backplane with 3 PCI slots and 2 ISA slots
PAC-106G	6-slot full-size compact chassis
PAC-107G	6-slot full-size compact chassis
PAC-1000G	6-slot full-size compact chassis

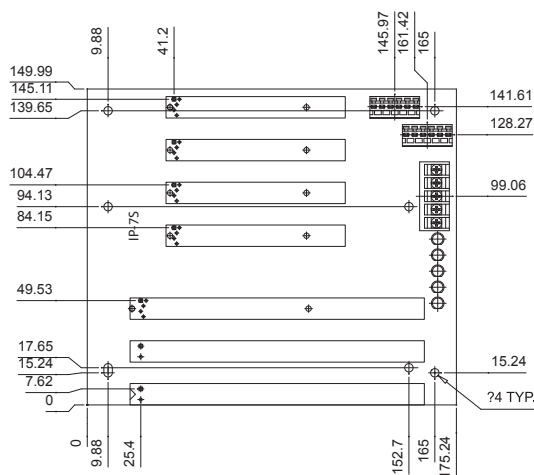


IP-7S-RS-R40



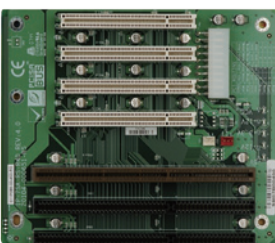
Ordering Information

IP-7S-RS-R40	7-slot backplane with 3 PCI slots and 2 ISA slots
PAC-700G	7-slot half-size compact chassis
PAC-1700G	7-slot half-size compact chassis



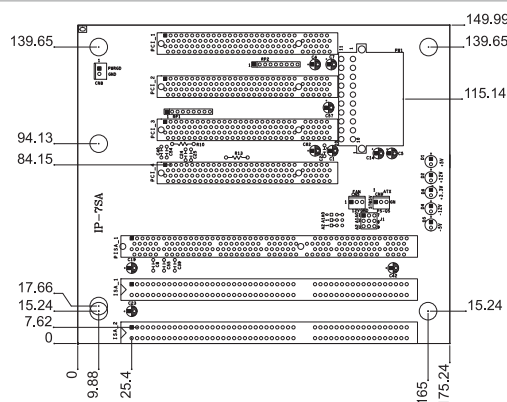
IP-7SA-RS-R40

ATX power

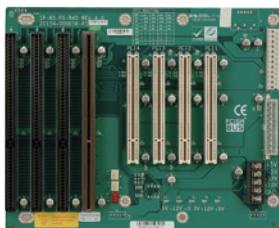


Ordering Information

IP-7SA-RS-R40	7-slot backplane with 3 PCI slots and 2 ISA slots
PAC-700G	7-slot half-size compact chassis
PAC-1700G	7-slot full-size compact chassis

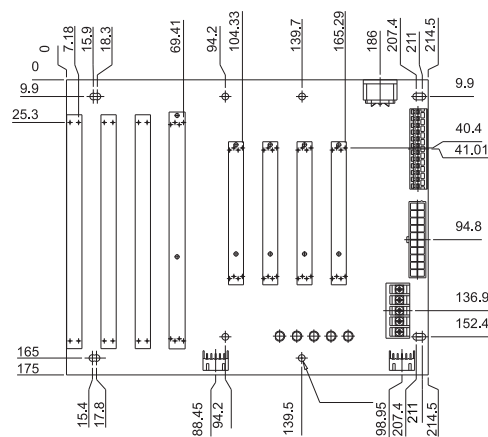


IP-8S-RS-R40

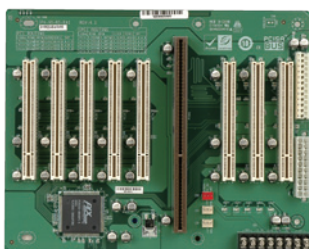


Ordering Information

IP-8S-RS-R40	8-slot backplane with 4 PCI slots and 3 ISA slots
PAC-125G	10-slot full-size compact chassis
RACK-3400G	4U 10-slot half-size rack-mount chassis

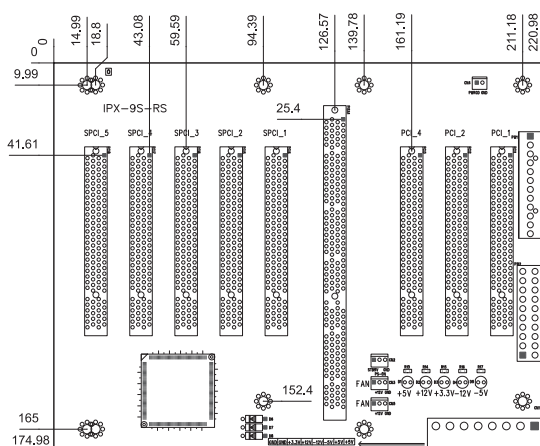


IPX-9S-RS-R41

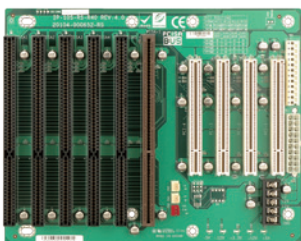


Ordering Information

IPX-9S-RS-R41	9-slot backplane with 8 PCI slots
PAC-125G	10-slot full-size compact chassis
RACK-3400G	4U 10-slot half-size rack-mount chassis

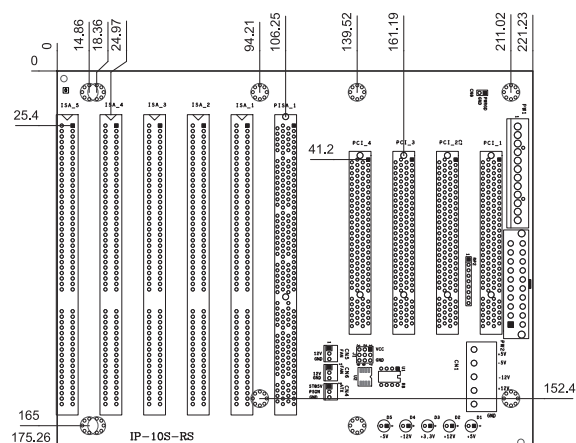


IP-10S-RS-R40

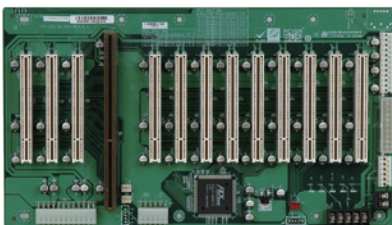


Ordering Information

IP-10S-RS-R40	10-slot backplane with 4 PCI slots and 5 ISA slots
PAC-125G	10-slot full-size compact chassis
RACK-3400G	4U 10-slot half-size rack-mount chassis

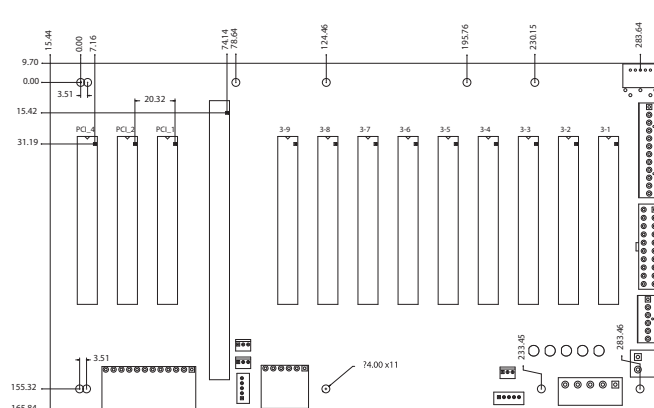


IPX-13S-RS-R40



Ordering Information

IPX-13S-RS-R40	13-slot backplane with 12 PCI slots
RACK-305G	4U 14-slot rack-mount chassis
RACK-360G	4U 14-slot rack-mount chassis
RACK-3000G	4U 14-slot rack-mount chassis



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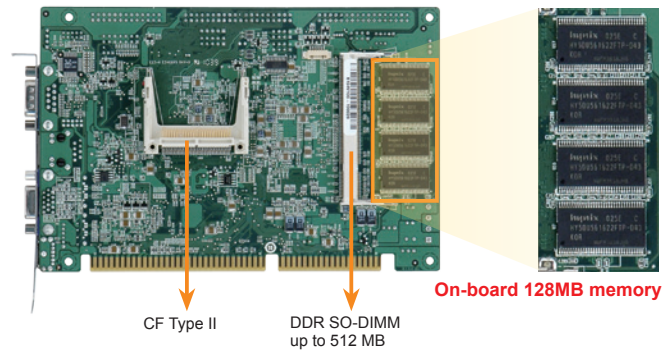
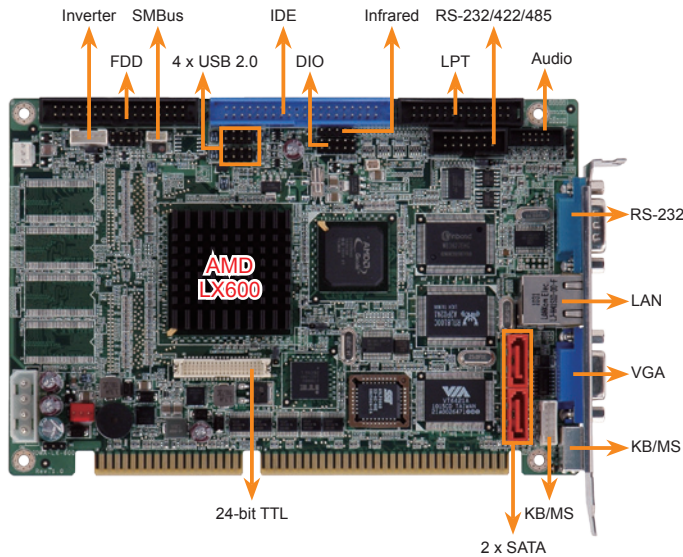
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Peripherals

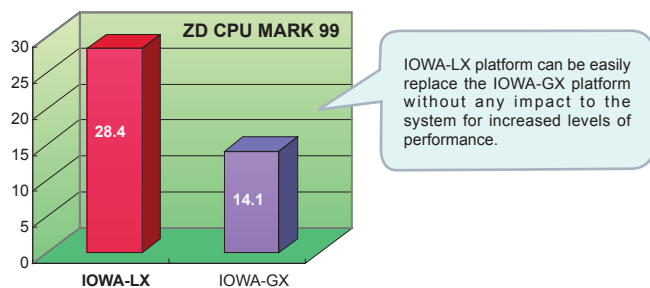
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IOWA-LX

Half-size pure ISA CPU card with on-board AMD Geode™ LX600 processor (366MHz), 128KB L2 cache, 128MB memory on board, VGA, LAN, USB 2.0, CF, COM, LPT and Audio, RoHS



Performance Comparison Chart



Specifications

- ◆ CPU
 - On-board AMD Geode™ LX600 processor (366MHz), 128KB L2 cache
- ◆ Chipset
 - AMD Geode™ CS5536
- ◆ BIOS
 - Award BIOS
- ◆ Memory
 - On-board 128MB (max.) 200/266MHz DDR SDRAM supported
 - One 200-pin 512MB (max.) 200/266MHz DDR SDRAM supported
- ◆ Graphics Engine
 - VGA integrated in the AMD Geode™ LX600
- ◆ Display Output
 - Single HD VOP 2.0 output
 - 1920x1440 CRT output
 - 1600x1200 TFT output
- ◆ Super I/O
 - Winbond W83627EHG
- ◆ I/O interface

2 x RS-232	1 x RS-422/485
1 x FDD	1 x LPT
1 x PS/2 KB/MS	1 x IrDA
1 x CF Type II	1 x IDE
4 x USB 2.0 (by pin-header)	
2 x SATA with RAID 0/1 function supported (IOWA-LX-600S-R10 only)	
- ◆ Ethernet
 - 10/100Mbps Realtek RTL8100C Ethernet controller
- ◆ Audio
 - Realtek ALC203 with AC'97 codec
- ◆ Expansion Bus
 - ISA bus supported via golden finger
- ◆ Digital I/O
 - 8-bit digital I/O, (4-bit input/4-bit output)
- ◆ WDT
 - Software programmable supports 1~255sec. system reset
- ◆ FAN connector
 - 1x3-pin fan connector (smart fan)
- ◆ Power supply
 - 5V/12V via ISA bus, AT/ATX mode supported
- ◆ Power Consumption
 - 5V@1.51A, 5VSb@0.09A
 - (On-board AMD Geode™ LX 600 CPU 366MHz with 128MB 200MHz on-board DDR memory and 512MB 333MHz DDR memory)
- ◆ Temperature
 - 10°C ~ 60°C
- ◆ Humidity
 - 5% ~ 95%, non-condensing
- ◆ Weight
 - GW: 1.0kg/NW: 250g

Features

1. ISA CPU card with on-board AMD Geode™ LX600 processor (366MHz), 128KB L2 cache
2. Flexible on-board DDR SDRAM and one SO-DIMM slot for optional
3. Enhanced TTL, RS-232, RS-422/485 and USB 2.0 interfaces for extended connectivities
4. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

- 1 x IOWA-LX-600 single board computer
- 1 x USB cable (P/N: 19800-003100-200-RS)
- 1 x KB/MS Y cable (P/N: 32006-000300-100-RS)
- 1 x Audio cable (P/N: 19800-000111-RS)
- 1 x IDE flat cable (P/N: 32200-000052-RS)
- 1 x One Key Recovery CD
- 1 x Mini jumper pack
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
IOWA-LX-600-R10	Half-size pure ISA CPU card with on-board AMD Geode™ LX600 processor (366MHz), 128KB L2 cache, on-board 128MB memory VGA, LAN, USB 2.0, COM, CF, LPT and audio, RoHS
IOWA-LX-600S-R10	Half-size pure ISA CPU card with on-board AMD Geode™ LX600 processor (366MHz), 128KB L2 cache, on-board 128MB memory VGA, LAN, USB 2.0, SATA, CF, COM, LPT and audio, RoHS
32000-062800-RS	SATA cable
32229-000100-100-RS	FDD cable
19800-000400-100-RS	LPT cable
19800-000058-RS	RS-232/422/485 cable

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BP Series Backplane

*Supports ISA slot on one backplane!
For half-sized ISA only single board computer*

The advantages of using this ISA card series are numerous:

1. Supports standard ISA slot on the BP series passive backplane.
2. Compatible with all available ISA cards. BP backplane is also integrated with the ROCKY series ISA Card slot.

Selection Guide

 PAC series wall-mount chassis

 4U rack-mount chassis

RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready

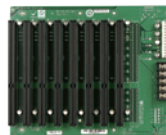


Model	BP-3S-RS-R40	BP-4S-RS-R40	BP-5S-RS-R40	BP-6S-RS-R40
Total Slot	3	4	5	6
ISA Slot	3	4	5	6
PSU Type	AT	AT	AT	AT
Chassis	PAC-53GH PR-1300G	PAC-400G PAC-42GH	PR-1500G	PAC-106G, PAC-107G, PAC-1000G

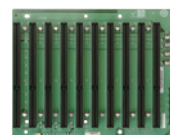
RoHS Ready



RoHS Ready



RoHS Ready



RoHS Ready



Model	BP-7S-RS-R40	BP-8S-RS-R41	BP-10S-RS-R40	BP-14S-RS-R40
Total Slot	7	8	10	14
ISA Slot	7	8	10	14
PSU Type	AT	AT	AT	AT
Chassis	PAC-700G PAC-1700G	N/A	PAC-125G RACK-3400G	RACK-305G RACK-360G RACK-3000G



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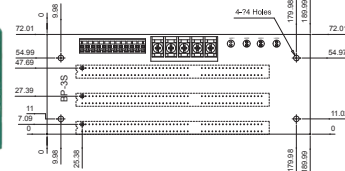
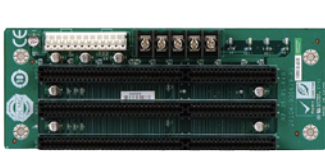
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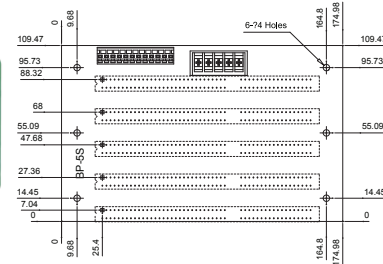
BP-3S-RS-R40



Ordering Information

BP-3S-RS-R40	3-slot backplane with 3 ISA slots
PAC-53GH	3-slot half-size compact chassis
PR-1300G	3-slot half-size compact chassis

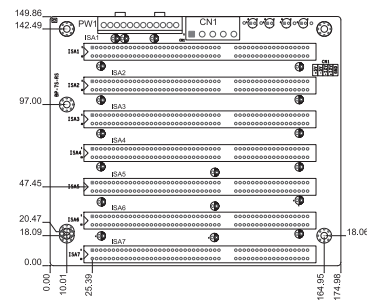
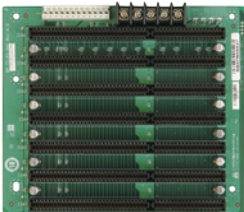
BP-5S-RS-R40



Ordering Information

BP-5S-RS-R40	5-slot backplane with 5 ISA slots
PR-1500G	5-slot half-size compact chassis

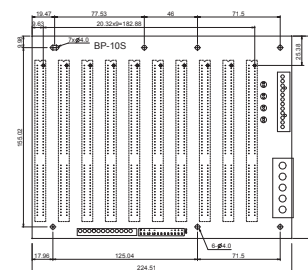
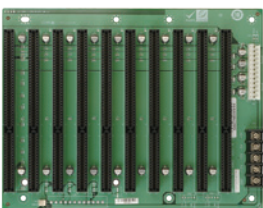
BP-7S-RS-R40



Ordering Information

BP-7S-RS-R40	7-slot backplane with 7 ISA slots
PAC-700G	7-slot half-size compact chassis
PAC-1700G	7-slot full-size compact chassis

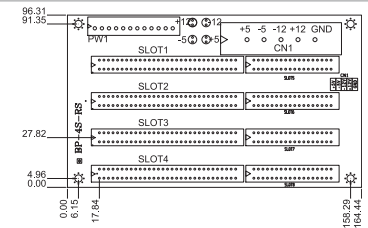
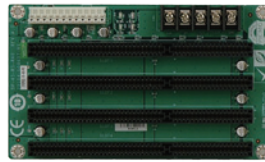
BP-10S-RS-R40



Ordering Information

BP-10S-RS-R40	10-slot backplane with 10 ISA slots
PAC-125G	10-slot full-size compact chassis
RACK-3400G	4U 10-slot half-size rack-mount chassis

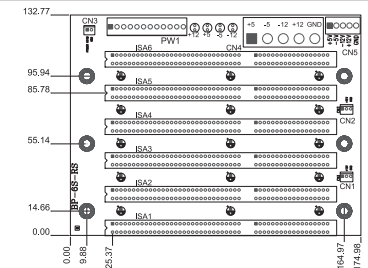
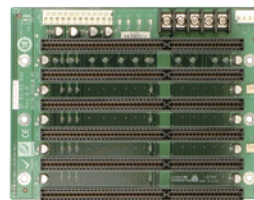
BP-4S-RS-R40



Ordering Information

BP-4S-RS-R40	4-slot backplane with 4 ISA slots
PAC-400G	4-slot half-size compact chassis
PAC-42GH	4-slot half-size compact chassis

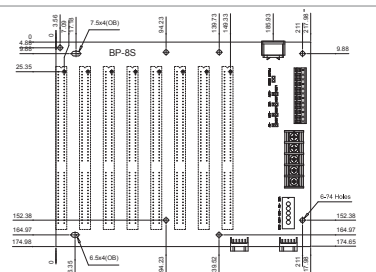
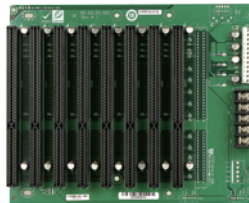
BP-6S-RS-R40



Ordering Information

BP-6S-RS-R40	6-slot backplane with 6 ISA slots
PAC-106G	6-slot full-size compact chassis
PAC-107G	6-slot full-size compact chassis
PAC-1000G	6-slot full-size compact chassis

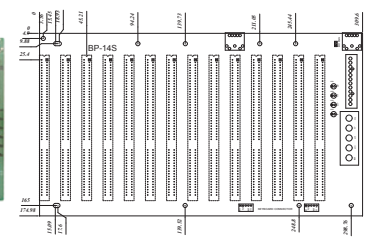
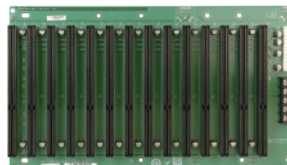
BP-8S-RS-R41



Ordering Information

BP-8S-RS-R41	3-slot backplane with 3 ISA slots
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BP-14S-RS-R40

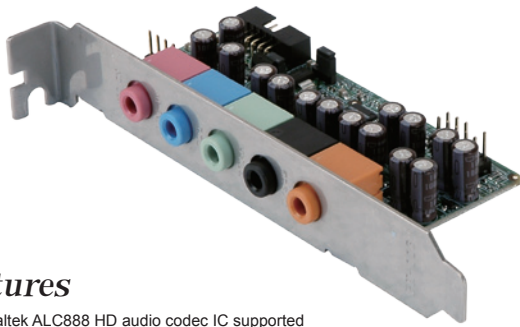


Ordering Information

BP-14S-RS-R40	14-slot backplane with 14 ISA slots
RACK-305G	4U 14-slot full-size rack-mount chassis
RACK-360G	4U 14-slot full-size rack-mount chassis
RACK-3000G	4U 14-slot full-size rack-mount chassis

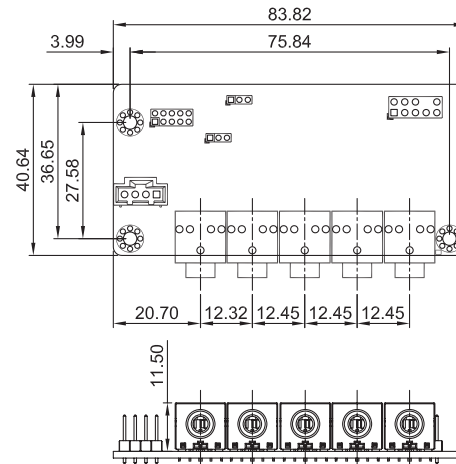
AC-KIT-888HD

Realtek ALC888 7.1 Channel HD Audio Peripheral Board, RoHS



Dimensions (Unit: mm)

New



Features

1. Realtek ALC888 HD audio codec IC supported
2. Five audio jacks for microphone, 7.1+2 channel high definition audio input and output
3. High performance 7.1+2 channel high definition audio board provides 7.1 channel sound playback and multiple streaming through the front panel stereo outputs
4. Digital to Analog Converter (DAC) with 97dB Signal to Noise Ratio (SNR)
5. Analog to Digital Converter (ADC) with 90dB Signal to Noise Ratio (SNR)
6. All the Digital to Analog Converter (DAC) supports 44.1k/48k/96k/192kHz sampling rate
7. All the Analog to Digital Converter (ADC) supports 44.1k/48k/96kHz sample rate
8. Driver supports Windows® 2000/2003/XP/VISTA/7 (32/64 bits) and Linux (Ubuntu or Debian)

Packing List

1 x AC-KIT-888HD audio peripheral board	
1 x Audio cable	1 x QIG

Ordering Information

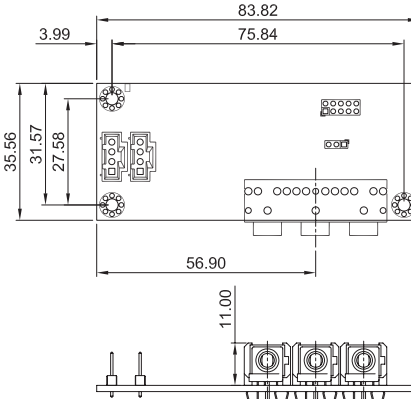
AC-KIT-888HD-R10	Realtek ALC888 7.1 channel HD audio peripheral board
32100-121100-RS	Audio cable with length 200 mm, 2 x 5-pin, pitch 2.0 mm

AC-KIT08R

Audio Converter Card via Realtek ALC665 AC'97 5.1 Channel Audio Daughter Board, RoHS



Dimensions (Unit: mm)



Features

1. Realtek ALC665 AC'97 audio codec IC supported
2. Three audio jacks for microphone, 5.1 channel AC'97 audio input and output
3. Full duplex AC'97 2.3 compatible 5.1 channel audio codec designed for PC multimedia system
4. Supports double sampling rate (96kHz) of DVD audio playback
5. Driver supports Windows® 2000/2003/XP/VISTA/7 (32/64 bits) and Linux (Ubuntu or Debian)

Packing List

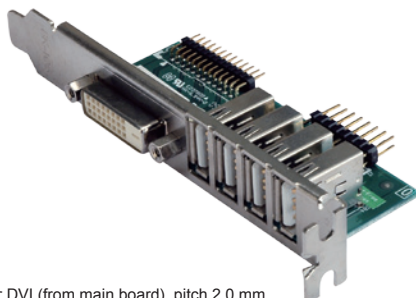
1 x AC-KIT08R audio peripheral board	
1 x Audio cable	1 x QIG

Ordering Information

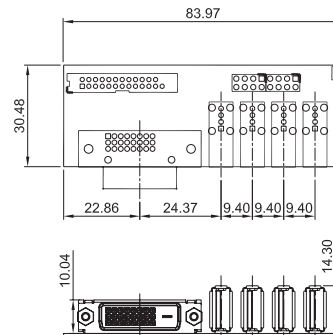
AC-KIT08R-R10	Realtek ALC888 7.1 channel HD audio peripheral board
32107-001100-100-RS	Audio cable with length 200 mm, 2 x 5-pin, pitch 2.0 mm

IO-KIT-001-R20

DVI and 4 x USB 1.1/2.0 Translation Daughter Board with Bracket, RoHS



Dimensions (Unit: mm)



Packing List

1 x IO-KIT-001-R20 (DVI and four USB 1.1/2.0 translation daughter board)
1 x DVI cable
1 x USB cable
1 x QIG

Ordering Information

IO-KIT-001-R20	DVI and four USB 1.1/2.0 translation daughter board
32000-051700-RS	DVI cable with length 200 mm, 2 x 13-pin, pitch 2.0 mm
32000-051800-RS	USB cable with length 200 mm, 2 x 8-pin, pitch 2.54 mm

Features

1. 26-pin header for DVI (from main board), pitch 2.0 mm
2. 2 x 8-pin header for USB 1.1/2.0 (from main board, four sets), pitch 2.54 mm
3. DVI-D connector on edge
4. Four USB 1.1/2.0 connectors on edge

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LAN Bypass Introduction

What is LAN Bypass function

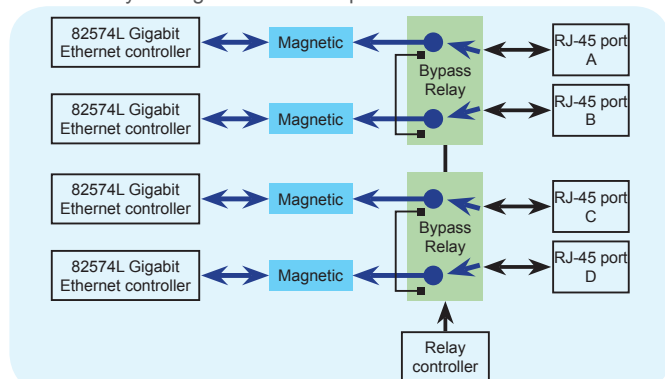
The LAN Bypass feature removes a single point of failure so that essential business communication can continue while a network failure is diagnosed and resolved. In the event of a power, hardware or software failure, Hardware Bypass will automatically activate, allowing network traffic to continue. Traffic between the LAN and WAN is allowed without interruption.

Bypass function relay modes

The bypass function uses relays to route each of the two LAN port pairs in either "bypass" mode or "normal" mode.

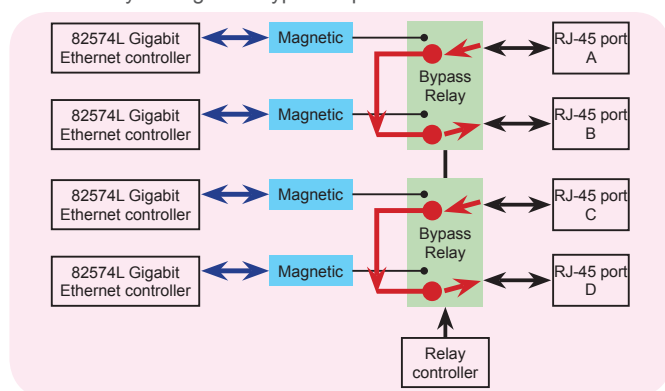
A In "normal" operation the magnetics are connected to the RJ-45s.

Relay settings for "normal" operation:



B In "bypass" operation the RJ-45s are connected together so that they form a piece of wire.

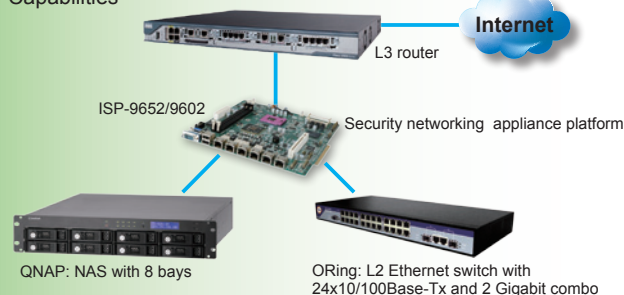
Relay settings for "bypass" operation:



Applications

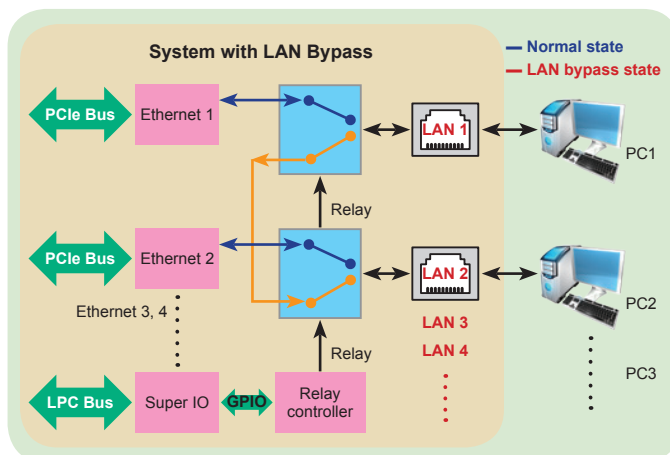
Security Networking Appliance Platform:

Firewall, Virtual Private Network (VPN), IDS/IPS, Content Filtering, UTM, Network Management, Network Security Capabilities



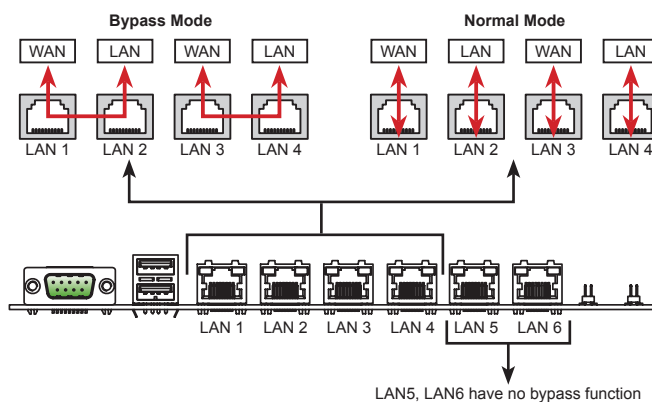
Bypass function block diagram

The bypass function block shown below depicts the block diagram for one pair of Local and Remote ports on the 4-port 10Base-T/100Base-TX/1000Base-T Ethernet board with bypass.

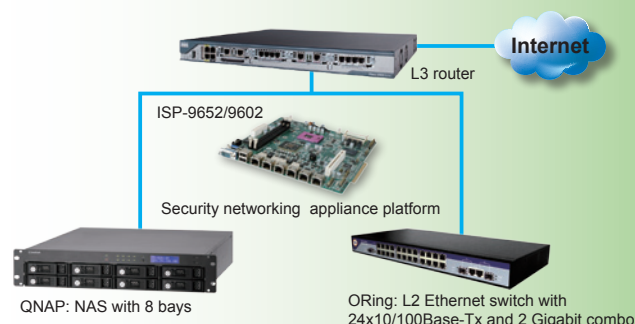


Best Choice from IEI

IEI ISP series product features a PCIe LAN bypass adapter card. It has a LAN bypass function that, in the event of a system hang, power down, hardware or software failure, allows Hardware Bypass to automatically activate and let network traffic to continue. The bypass function can be controlled by software, or by a watchdog timer configurable for 1-16 second operation. The adapter card can be migrated with concurrent network appliance platforms for network security applications and embedded box solutions.



- The LAN Bypass feature guarantees uninterrupted connection to the Internet, even if the networking appliance platform fails.



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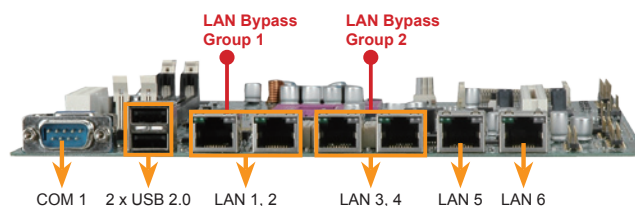
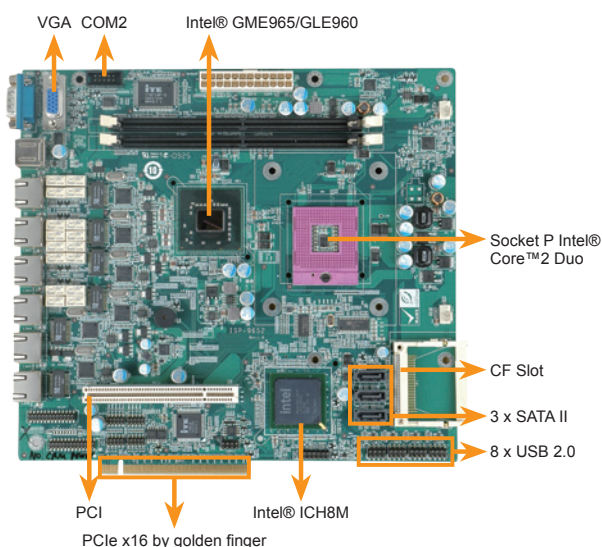
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ISP-9652/9602

Socket P for 6 Intel® GbE LAN motherboard with dual group of LAN-Bypass function, 2 COM/VGA, USB 2.0, SATA II



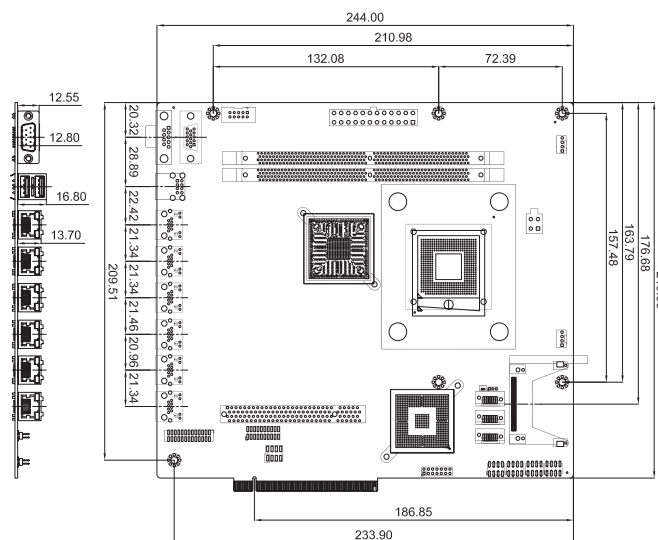
Features

1. Supports 6 Intel® 10/100/1000 Mbps LAN ports
2. Quad Gigabit ports with LAN By-pass function
3. Supports WatchDog Timer function for LAN-Bypass enabling
4. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
 - Socket P Intel® Core™2 Duo processor with 800MHz FSB
 - Socket P Intel® Celeron® M processor with 533MHz FSB
- ◆ System Chipset
 - Intel® GLE960 + ICH8M for ISP-9602
 - Intel® GME965 + ICH8M for ISP-9652
- ◆ FSB
 - 800/533 MHz for ISP-9652
 - 533MHz for ISP-9602
- ◆ Memory
 - Two 240-pins 533 MHz dual-channel DDR2 SDRAM DIMMs supported (max. 2GB for ISP-9602)
 - Two 240-pins 667/533 MHz dual-channel DDR2 SDRAM DIMMs supported (max. 4GB for ISP-9652)
- ◆ BIOS
 - AMI BIOS
- ◆ Graphics Engine
 - Intel® GMA X3100
 - Graphics core speed is 400 MHz for ISP-9602
 - Graphics core speed is 500 MHz for ISP-9652
- ◆ Display Output
 - Analog CRT by VGA
- ◆ Ethernet
 - LAN1~6: Intel® PCIe GbE controller 82574L
 - 4 x LAN-Bypass function (with Relay Control):
 - » Bypass Group 1: LAN1/LAN2
 - » Bypass Group 2: LAN3/LAN4
- ◆ Embedded Controller
 - ITE IT8512E
- ◆ I/O Interface
 - 2 x RS-232
 - 3 x SATA II
 - 1 x CF Type II
 - 10 x USB 2.0
- ◆ Super I/O
 - ITE IT8718F
- ◆ Expansion
 - PCIe x16 via PCB golden finger (for ISP-9652)
 - PCI slot
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset (by super I/O)
- ◆ Power Supply
 - ATX Power
- ◆ Fan Connector
 - 1 x 4-pin CPU FAN
 - 1 x 4-pin SYS FAN
- ◆ Humidity
 - 5% ~ 95%, non-condensing
- ◆ Temperature
 - Operating: 0°C ~ 60°C

Dimensions (Unit: mm)



Packing List

- 1 x ISP-9602/9652-R10 single board computer
- 3 x SATA cable (P/N: 32801-000703-200-RS)
- 1 x One Key Recovery CD
- 1 x Mini jumper pack
- 1 x Utility CD
- 1 x QIG

Ordering Information

Part No.	Description
ISP-9652-R10	Socket P Intel® Core™2 Duo MB, GME965 with 800MHz FSB, VGA, CF, 6 Intel® GbE LAN with dual group of LAN-Bypass function, USB 2.0, SATA II, RoHS
ISP-9602-R10	Socket P Intel® Celeron® M MB, GLE960 with 533MHz FSB, VGA, CF, 6 Intel® GbE LAN with dual group of LAN-Bypass function, USB 2.0, SATA II, RoHS
19800-000114-RS	RS-232 cable
19800-000100-200-RS	Quad port USB cable
CF-479B-RS	CPU cooler
32100-088600-RS	SATA power cable

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