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# Full Range of Industrial Computers and Integration Services for Automation Applications

## Overview

Advantech delivers a full range of industrial computers for versatile applications in the automation field. Offering sophisticated system integration services, from customization, integration, validation, and certification, we provide a one-stop solution for rugged systems to customers who require a trusted partner to maximize their solutions.

## PICMG Single Board Computers

Advantech's slot CPU cards deliver a variety of solutions for industrial and embedded applications. Offering a complete selection of standard PICMG 1.0/1.3 full-size, as well as half-size SBCs, these scalable product lines have flexible I/O and great expandability, from ISA and PCI, to PCI Express. Industrial, slot-hungry demands can be easily accommodated with Advantech's full range of backplanes, chassis, and peripheral support.



## Passive Backplanes

A wide range of Advantech backplanes are available for PICMG 1.0/1.3 SBCs. They range from two to twenty slots and allow optimal system configurations with flexible combinations of ISA, 32-bit / 64-bit PCI and PCIe slots. Our strict design policy makes it easy for customers to create solutions that ensure system compatibility. Advantech also provides a low-cost, yet professional design service that tailors backplanes to meet expansion requirements within a short time frame.



## Industrial Motherboards

Advantech provides a complete range of industrial motherboards in various form factors, from performance-rich ATX to best price/performance MicroATX and ultra compact highly integrated Mini-ITX. These motherboards are highly integrated and deliver advanced features like multi-core processing and PCI Express technology. They are suited for demanding industrial applications that require seamless upgrades, long term support, proven reliability and strict revision control.



## Industrial Computer Chassis

Advantech offers a complete selection of industrial computer chassis from 1U to 6U rackmount, to wall-mountable solutions, designed to support a variety of industrial-grade motherboard/single board computer (SBC) form factors, such as ATX, MicroATX, PICMG 1.0/1.3, and full-size/half-size SBC. Chassis include a range of features such as redundant power supply, hot swappable accessories, storage, and cooling options. High-end models with built in intelligent system modules enable system health self diagnosis, smart fan control, and remote management with WISE-PaaS/RMM or SNMP sub agent.



## CompactPCI Platforms

Advantech offers industrial CompactPCI solutions which feature front-end access, high shock and vibration tolerance characteristics, automatic cooling system, fault resilience, and hot swap capabilities. These features make our CompactPCI series the most reliable PC-based computing platform for mission-critical applications.



## Industrial Computer Peripherals

Advantech IPC peripherals can integrate with various modules including IPMI, TPM, power supplies and versatile rackmount/wallmount peripherals. They can help system integrators build easy-to-operate computer systems.



## Applications



### Automated Optical Inspection (AOI)

Automated optical inspection provides high speed production and helps manufacturers improve efficiency. Advantech AIIS series with compatible Basler and Pointgrey cameras, multiple PoE, USB3, and rich I/O Interface ensures product quality and safety.



### Factory Automation

Factory automation counts on immediate information monitoring to achieve just-in-time manufacture. Advantech WebAccess, a 100% web-based SCADA software with excellent networking capabilities, provides powerful remote monitoring and control functions. Through WebAccess web structure, users can develop a central database from project node to SCADA node via Internet or Intranet.



### Machine Diagnostic

The graphical control interface makes it easy to monitor machine status in real time, and develop an effective, dynamic, preventive maintenance solution that ensures increased equipment reliability and stable overall operation.



### Automatic Test Equipment & Data Acquisition (DAQ)

Quality control systems have become very expensive in recent years, creating a demand for more cost-effective alternatives. Along with automatic testing and inspection systems, Advantech's products help reduce human error and accelerate time to market.

## Start your Business with an IPC Expert



Tool-less thumb screws



Lockable door, flexible with-or-without key



Front-accessible fan without opening top cover



Small footprint chassis design for better work field layout arrangement

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# PICMG 1.3 System Host Boards



Model Name		LGA1150 PICMG 1.3 SHB	LGA1151 PICMG 1.3 SHB	LGA1151 PICMG 1.3 SHB
		PCE-5128	PCE-5029	PCE-5129
Processor System	CPU	Intel® Core™ i7/Core™ i5/Core™ i3 LGA1150 Processors	Intel® Core™ i7/Core™ i5/ Core™ i3 LGA1151 Processors	Intel® Core™ i7/Core™ i5/Core™ i3 LGA1151 Processors
	Max. Speed	3.1 GHz	3.4 GHz	3.4 GHz
	Cache	Up to 8 MB (Depends on CPU)	Up to 8 MB (Depends on CPU)	Up to 8 MB (Depends on CPU)
	Chipset	Intel® Q87	Intel® H110	Intel Q170
	BIOS	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash
Backplane Bus	PCIe	PICMG1.3: One x16 & Four x1	PICMG1.3: One x16 & Four x1	PICMG1.3: One x16 & Four x1
	PCI (32bit/33 MHz)	4	4	4
Memory	Technology	Dual-channel (Non-ECC) DDR3 1333/1600	Dual-channels (Non-ECC) DDR4 1866/2133	Dual-channels (Non-ECC) DDR4 1866/2133
	Max. Capacity	16 GB	32 GB	32 GB
	Socket	240-pin DIMM x 2	2 x 288-pin DIMM	2 x 288-pin DIMM
Graphics	Controller	Chipset integrated Intel® HD Graphics	Chipset integrated Intel® HD Graphics	Chipset integrated Intel® HD Graphics
	VRAM	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS
	Video Out	VGA/DVI-D/DVI-D (Optional DVI-D cable)	G2: VGA+DP/DVI (Optional DVI-D/DP cable) VG: VGA	VGA+DP/DVI-D+DP/DVI-D
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	LAN1/LAN2 Controller	Intel® I217LM/I211AT	LAN1: I219-V LAN2: I211-AT (G2 only)	Intel I219LM/I211
	Connector	RJ45 X 2	G2: 2 VG: 1	RJ45 x 2
	Disable in BIOS	✓	✓	✓
SATA	Max. Data Transfer Rate	600 MB/s SATA3.0	600 MB/s SATA3.0	600 MB/s SATA3.0
	Channel	6 x SATA3.0	4 x SATA3.0	5 x SATA3.0
	S/W Raid	0, 1, 5, 10	-	0, 1, 5, 10
Rear I/O	VGA	1	1	1
	Ethernet	2	G2: 2 VG: 1	2
	USB2.0	0	-	0
	USB3.0	1	G2: 1 VG: -	1
	PS/2	1	1	1
	Serial	-	G2: - VG: 1	-
Internal I/O	USB 2.0	9 USB 2.0 (Pin-Header x 4 + USB Type A x 1 + 4 on backplane)	7 USB 2.0 (Pin-header x 2+USB Type A x 1 + 4 on backplane)	7 USB2.0 (Pin-header x 2+USB Type A x 1 + 4 on backplane)
	USB 3.0	2 USB3.0 (Pin-Header)	2 USB3.0 (Pin header)	4 USB3.0 (Pin header)
	SATA	6	4	5
	M.2 (2280 Type M)	-	-	1 (Shared w/ SATA0 port)
	Serial	2 RS-232 (Pin-Header)	G2: 2 VG: 1	2 RS-232 (Pin-Header)
	Parallel	1(SPP/EPP/ECP)	1	1
	PS/2	1	1	1
	OBS(Onboard Security Hardware Monitor)	✓	✓	✓
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable, 1~255 sec/min	Programmable, 1~255 sec	Programmable, 1~255 sec/min
Miscellaneous	Advantech Audio Module	PCA-AUDIO-HDA1E	PCA-AUDIO-HDB1E	PCA-AUDIO-HDB1E
	Advantech SNMP-1000	✓	-	✓
	Advantech SAB-2000	✓	G2: ✓ VG: -	✓
	Advantech IPMI Module	-	-	-
	AMT	✓	-	✓

✓: supported, -: not supported, Δ: optional

# PICMG 1.3 System Host Boards



Model Name		LGA1150 PICMG 1.3 SHB	LGA1151 PICMG 1.3 SHB	LGA2011 PICMG 1.3 SHB
		PCE-7128	PCE-7129	PCE-9228
Processor System	CPU	Intel® Xeon® and Core™ i7/Core™ i5/ Core™ i3 LGA1150 Processors	Intel® Xeon and Core™ i7/Core™ i5/ Core™ i3 LGA1151 Processors	Intel Xeon E5-2600 v3 series LGA2011 Processors
	Max. Speed	3.5 GHz	3.6 GHz	2.5 GHz
	Cache	Up to 8 MB (Depends on CPU)	Up to 8 MB (Depends on CPU)	Up to 30 MB (Depends on CPU)
	Chipset	Intel® C226	Intel C236	Intel C612
	BIOS	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash
Backplane Bus	PCIe	One x16/ Two x8 & Four x1	PICMG1.3: One x16 / Two x8 & Four x1	PICMG1.3: One x16/ Two x8 & Four x1 Expansion (ODM optional): 64 lanes
	PCI (32bit/33 MHz)	4	4	4
Memory	Technology	Dual-channel (ECC) DDR3 1333/1600	Dual-channels (ECC) DDR4 1600/1866/2133	Quard-channels ECC-Register DDR4 1600/1866/2133
	Max. Capacity	16 GB	32 GB	256 GB
	Socket	240-pins DIMM x 2	2 x 288-pins DIMM	288-pins DIMM x 8
Graphics	Controller	Chipset integrated Intel® HD Graphics	Chipset integrated Intel® HD Graphics	AST1400/AST2400
	VRAM	Shared system memory is subject to OS	Shared system memory is subject to OS	DDR3 64MB
	Video Out	VGA/DVI-D/DVI-D (Optional DVI-D cable)	VGA+DP/DVI-D+DP/DVI-D	VGA
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	LAN1/LAN2 Controller	Intel® I217LM/I210AT	Intel I219LM/I210AT	Intel I210AT/I210AT
	Connector	RJ45 x 2	RJ45 x 2	RJ45 x 2
	Disable in BIOS	✓	✓	Lan1: -; Lan2: ✓
SATA	Max. Data Transfer Rate	600 MB/s SATA3.0	600 MB/s SATA3.0	600 MB/s SATA3.0
	Channel	6 x SATA3.0	5 x SATA3.0	8 x SATA3.0
	S/W Raid	0, 1, 5, 10	0, 1, 5, 10	0, 1, 5, 10
Rear I/O	VGA	1	1	1
	Ethernet	2	2	3(IPMI occupy 1 LAN)
	USB2.0	0	0	2
	USB3.0	1	1	2
	PS/2	1	1	1
	Serial	-	-	-
Internal I/O	USB 2.0	9 USB 2.0 (Pin-Header x 4 + USB Type A x 1 + 4 on backplane)	7 USB2.0 (Pin-header x 2+USB Type A x 1+ 4 on backplane)	4 USB 2.0 (On backplane)
	USB 3.0	2 USB3.0 (Pin-Header)	4 USB3.0 (Pin header)	2 USB3.0 (Pin-Header)
	SATA	6	5	8
	M.2 (2280 Type M)	-	1 (Shared w/ SATA0 port)	-
	Serial	2 RS-232(Pin-Header)	2 RS-232(Pin-Header)	1 RS-232(Pin-Header)
	Parallel	1(SPP/EPP/ECP)	1	-
	PS/2	1	1	-
Watchdog Timer	OBS(Onboard Security Hardware Monitor)	✓	✓	✓
	Output	System reset	System reset	System reset
Miscellaneous	Interval	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
	Advantech Audio Module	PCA-AUDIO-HDA1E	PCA-AUDIO-HDB1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000	✓	✓	✓
	Advantech SAB-2000	✓	✓	✓
	Advantech IPMI Module	✓	-	✓
AMT	✓	✓	-	

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# PICMG 1.0 Single Board Computers



Model Name		Core™ 2 Quad PICMG 1.0 SBC	LGA1150 PICMG 1.0 SBC
		PCA-6011	PCA-6028
Processor System	CPU	Intel® Core™ 2 Quad/Core™ 2 Duo/ Pentium dual-Core™/Celeron LGA775 processors	Intel Core i7/i5/i3/Pentium LGA 1150 Processors
	Max. Speed	3.16 GHz	3.2GHz
	Max. L2 Cache	Up to 12 MB (Depend on CPU)	Up to 8MB
	Chipset	Intel® G41 + ICH7 (VG version only) Intel® G41 + ICH7R (G2 version only)	Intel H81
	BIOS	AMI 16 Mb SPI Flash	AMI 128Mbit SPI Flash
Bus	FSB	1333/1066/800 MHz	-
	PCI	32-bit/33 MHz PCI	32 bit/33 MHz PCI
	ISA	HISA (ISA High Drive)	HISA (ISA High Driver)
Graphics	Controller	Chipset integrated Intel® Graphics Media Accelerator X4500	Chipset integrated Intel HD Graphics
	VRAM	Shared with system memory up to 352 MB	Shared system memory is subject to OS
	LCD/DVI	DVI (Optional)	DVI (G2 version only)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® 82583V LAN2: Intel® 82583V	LAN 1: Intel I217V LAN 2: Intel I211 (Only in G2 Sku)
	Connector	RJ-45 x 2	RJ45 x 1 (VG sku); RJ45 x 2 (G2 sku)
	Disabled in BIOS	✓	✓
Memory	Technology	Dual-channel DDR3 1066/800 MHz	Dual channel (Non-ECC) DDR3 1333/1600 MHz
	Max. Capacity	8 GB	16 GB (8 GB per DIMM)
	Socket	240-pin DIMM x 2	DDR3 240-pin DIMM x 2
SATA	Max. Data Transfer Rate	300 MB/s	600 MB/s
	Channel	4	4 (1x SATA2.0, 2x SATA3.0, 1x mSATA)
EIDE	RAID	0, 1, 5, 10 (G2 version only)	-
	Mode	ATA 100/66/33	-
	Channel	1 (Max. two devices)	-
I/O Interface	USB	8 (USB 2.0, for VG version) 7 (USB 2.0, for G2 version)	Up to 8 x USB2.0 (6x pin header, 1x type A, 1x rear in G2 sku only) 2x USB3.0 (Pin header)
	Serial	2 (RS-232)	2 RS-232 (Pin-Header)
	Parallel	1 (SPP/EPP/ECP)	1
	FDD	1	-
	PS/2	1	1
	LAN	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)
	OBS (Hardware Monitor)	✓	✓
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1~255 sec	Programmable, 1~255 sec
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000-B	✓	✓
	Advantech SAB-2000	✓	✓
	Solid State Disk	(Optional)	mSATA

✓: supported, -: not supported, Δ: optional

# Half-Size Single Board Computers



Specifications		PCIe Half-Size SBC	
		PCE-3028	PCE-4128
Processor System	CPU	Intel Core i7/i5/i3/Pentium LGA 1150 Processor	Intel Xeon E3 1200v3 series, Core i7/i5/i3 LGA1150 processors
	Speed	Up to 3.5 GHz	up to 3.5GHz
	L2 Cache	Up to 8MB	up to 8MB
	Chipset	Intel H81	Intel C226
	BIOS	AMI 128 Mbit SPI Flash	AMI 128Mbit SPI Flash
Bus	FSB	-	-
	PCIe	One PClex16, Four PClex1	One PCIe x16/Two PCIe x8, Four PCIe x1
	PCI	-	-
Graphics	ISA	-	-
	Controller	Chipset integrated graphics with Intel HD	GT2 P4600/GT2 4600/GT1 HD graphics
	VRAM	Shared with system memory is subject to OS	Shared system memory is subject to OS
Ethernet	Video output	D-sub VGA port, DVI	VGA, DP, CRT
	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® I217V LAN2: Intel® I211AT	LAN1: Intel I217LM, LAN2: I210AT
	Connector	RJ-45 x2	RJ-45 x2
Memory	Disabled in BIOS	✓	-
	Technology	Dual-channel DDR3 1066/1333/1600 MHz	Dual channel DDR3 ECC 1066/1333/1600 MHz(ECC function enable depends on processor support)
	Max. Capacity	16 GB	16 GB
SATA	Socket	204-pin SODIMM x2	DDR3 204-pin SO-DIMM x2
	Max. Data Transfer Rate	600 MB/s, 300 MB/s	600 MB/sec
EIDE	Channel	4	4
	RAID	-	0, 1, 5, 10
I/O Interface	Mode	-	-
	Channel	-	-
	USB	2 USB 3.0 + 7 USB 2.0	3 USB 3.0, 7 USB 2.0
	Serial	2 x RS-232 Optional: 4x RS-422/485 w/Auto-flow or 4 x RS-232 by COM module	2 x RS-232, Optional: RS-422/485 x4 or RS-232 x4 via module.
	Parallel	1	1
	FDD	-	0
	PS/2	1	1
LAN	2	2	
Watchdog Timer	OBS (Onboard Security Hardware Monitor)	-	-
	Output	System reset	System reset
Miscellaneous	Interval	Programmable 1-255 sec	Programmable 1-255 sec
	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000	-	-
Miscellaneous	IPMI	-	-
	Solid State Disk	-	-

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# Half-Size Single Board Computers



Specifications		PCIe Half-Size SBC		PCI Half-Size SBC
		PCE-3029	PCE-4129	PCI-7032
Processor System	CPU	Intel Core i7/i5/i3/Pentium LGA 1151 Processor	Intel Xeon E3-1200v5 series, Core i7/i5/i3 LGA1151 processors	Intel Celeron J1900/N2930
	Speed	Up to 3.7 GHz	Up to 3.7 GHz	2.00/1.83 GHz
	L2 Cache	Up to 8 MB	Up to 8 MB	2MB/2MB
	Chipset	Intel H110	Intel C236	Intel Celeron J1900/N2930 SOC
	BIOS	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash	AMI 64 Mbit SPI Flash
	FSB	-	-	-
Bus	PCIe	One PCIe x16, Four PCIe x1	One PCIe x16 or Two PCIe x8, Four PCIe x1	One PCIe x 1 (F SKU) Only
	PCI	-	-	32-bit/33 MHz PCI
	ISA	-	-	-
Graphics	Controller	Chipset integrated graphics with Intel HD	Chipset integrated graphics with Intel HD	Chipset integrated graphics with Intel® HD
	VRAM	Shared with system memory is subject to OS	Shared with system memory is subject to OS	Shared with system memory is subject to OS
	Video output	VGA, DVI, DP	VGA, DVI, DP	D-sub VGA port, 48-bit LVDS, DVI
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® I219V LAN2: Intel® I211AT	LAN1: Intel® I219LM LAN2: Intel® I210AT	LAN1: Intel® I211 LAN2: Intel® I211
	Connector	RJ-45 x2	RJ-45 x2	RJ-45 x 2
	Disabled in BIOS	✓	✓	✓
Memory	Technology	Dual-channel DDR4 1866/2133 MHz	Dual channel DDR4 ECC 1866/2133 MHz (ECC function enable depends on processor support)	Dual-Chnnel DDR3L 1333
	Max. Capacity	32 GB	32GB	8GB (for G2/F SKU) 4GB (for VG SKU)
	Socket	260-pin SODIMM x2	260-pin SO-DIMM X2	204-pin SODIMM x 2 (for G2/F SKU) 204-pin SODIMM x 1 (for VG SKU)
SATA	Max. Data Transfer Rate	600MB/s	600MB/s	300 MB/s
	Channel	4	4	2 (SATA 2 can change mSATA)
	RAID	-	0,1,5,10	-
EIDE	Mode	-	-	-
	Channel	-	-	-
I/O Interface	USB	3 USB 3.0 + 7 USB 2.0	3 USB 3.0 + 7 USB 2.0	1 USB 3.0 + 6 USB 2.0 (for G2/F SKU) 1 USB 3.0 + 5 USB 2.0 (for VG SKU)
	Serial	2 x RS-232 Optional: 4x RS-422/485 w/Auto-flow or 4 x RS-232 by COM module	2 x RS-232 Optional: 4x RS-422/485 w/auto-flow or 4 x RS232 by COM module	4 x RS-232/422/485 (for G2/F SKU) 2 x RS-232/422/485 (for VG SKU) Optional: 4 x RS-422/485 w/Auto-flow or 4 RS-232 by COM module
	Parallel	1	1	1
	FDD	-	-	-
	PS/2	1	1	1
	LAN	2	2	2 (for G2/F SKU) 1 (for VG SKU)
	OBS (Onboard Security Hardware Monitor)	✓	✓	✓ (G2 SKU only)
	Watchdog Timer	Output	System reset	System reset
Interval		Programmable 1-255 sec	Programmable 1-255 sec	Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDB1E	PCA-AUDIO-HDA1E	PCA-AUDIO-HDB1E
	Advantech SNMP-1000	-	-	-
	IPMI	-	-	-
	Solid State Disk	mSATA x 1	mSATA x 1	mSATA x 1

✓: supported, -: not supported, △: optional

# Half-Size Single Board Computers



Specifications		ISA Half-Size SBC		
		PCA-6763	PCA-6742	PCA-6743
Processor System	CPU	AMD G-Series APU T16R/T40E	Advantech EVA-X4300	DM&P Vortex86DX
	Speed	615 MHz/1GHz	300 MHz	800 MHz
	L2 Cache	512 KB	L1 Cache 32 KB	256 KB
	Chipset	AMD A55E	Advantech EVA-X4300	DM&P Vortex86DX
	BIOS	AMI 32 Mbit SPI Flash	Award integrated 256 KB ROM in EVA-X4300	Award integrated 256 KB ROM in Vortex86DX
Bus	FSB	-	-	-
	PCIe	-	-	-
	PCI	-	-	-
	ISA	16-bit ISA Bus	8/16-bit 8 MHz ISA	16-bit ISA Bus
Graphics	Controller	Radeon HD 6250	SMI 712 graphic controller	SMI 712 graphic controller
	VRAM	Shared with system memory up to 384MB	4 MB display memory	4 MB display memory
	Video output	D-sub VGA port, LVDS (48-bit for G2 SKU, 18-bit for VG SKU), DVI	D-Sub VGA port, 18/24 bit TTL or 18/24 bit LVDS (optional)	D-Sub VGA port, up to 24 bit TTL or 18 bit LVDS (optional)
Ethernet	Interface	10/100/1000 Mbps	10/100 Mbps	10/100 Mbps
	Controller	LAN1: Realtek RTL8111E-VL-CG LAN2: Realtek RTL8111E-VL-CG	Realtek RTL8100CL	LAN on Vortex86DX
	Connector	RJ-45 x 2	RJ-45 x 1	RJ-45 x 1
	Disabled in BIOS	✓	✓	✓
Memory	Technology	Onboard 1GB DDR3 1066 MHz SODIMM DDR3 1066 MHz up to 4GB	Default onboard DDR 2 166MHz	Default onboard DDR2 (for VE SKU) Default onboard DDR2 (for F SKU)
	Max. Capacity	5GB	128 MB	256 MB (for VE SKU) 512 MB (for F SKU)
	Socket	204-pin SODIMM x 1	-	-
SATA	Max. Data Transfer Rate	300 MB/s	-	150 MB/s
	Channel	4	-	1 (for F SKU)
	RAID	-	-	-
EIDE	Mode	-	UDMA 100	UDMA 100
	Channel	-	1 (Max. 2 devices)	1 (Max. 2 devices)
I/O Interface	USB	7 USB 2.0 (for G2 SKU) 6 USB 2.0 (for VG SKU)	4 USB 2.0	4 USB 2.0
	Serial	2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module	1 x RS-232/422/485 3 x RS-232	F SKU: 2 x RS-232/422/485 & 2 x RS-232 VE SKU: 2 x RS-232
	Parallel	1	1	1
	FDD	1	-	1
	PS/2	1	1	1
	LAN	2 (for G2/F SKU) 1 (for VG SKU)	1 (VE)	1
	OBS (Onboard Security Hardware Monitor)	-	-	-
Watchdog Timer	Output	System reset	System reset/IRQ11	System reset/IRQ11
	Interval	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDA1E	-	-
	Advantech SNMP-1000	-	-	-
	IPMI	-	-	-
	Solid State Disk	mSATA x 1	CompactFlash Type I/II	CompactFlash Type I/II

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# PICMG1.3 Full-Size SHB Backplanes

## Server Grade: Compatible with PCE-7000 Series CPU Boards

Category	Model Name	PCIe				PCI-X			PCI	Category	Model Name	Wallmount/Desktop Chassis			
		x16	x8	x4	x1	64/66	64/100	64/133	32/33			IPC-6025	IPC-6606	IPC-6806(W)	IPC-6608
2U Butterfly BP	PCE-7B06V-04A1E	-	1	-	-	-	-	-	4	2U Butterfly BP	PCE-7B06V-04A1E	-	-	-	-
8 slots BP	PCE-7B08-04A1E	-	2	1	-	-	-	-	4	8 slots BP	PCE-7B08-04A1E	-	-	-	✓
14 slots BP	PCE-7B09R-04A1E	-	1	3	-	-	-	-	4	14 slots BP	PCE-7B09R-04A1E	-	-	-	-
	PCE-7B10-04A1E	-	-	5	-	-	-	-	4		PCE-7B10-04A1E	-	-	-	-
	PCE-7B13-64C1E	-	2	-	-	4	2	-	4		PCE-7B13-64C1E	-	-	-	-
	PCE-7B13-07A1E	-	2	3	-	-	-	-	7		PCE-7B13-07A1E	-	-	-	-
PCE-7B13D-04A1E	-	1, 2	-	-	-	-	-	4	PCE-7B13D-04A1E		-	-	-	-	
20 slots BP	PCE-7B17-00A1E	-	5	11	-	-	-	-	-	20 slots BP	PCE-7B17-00A1E	-	-	-	-

Category	Model Name	Rackmount Chassis														
		ACP-1010	ACP-1320	ACP-2000EBP	IPC-602EBP	IPC-510	IPC-610	IPC-611	ACP-4000	ACP-4010	ACP-4320	ACP-4340	ACP-4360	IPC-623	IPC-622	
		2-slot / 1U		6-slot / 2U		15-slot / 4U										20-slot / 4U
2U Butterfly BP	PCE-7B06V-04A1E	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-
8 slots BP	PCE-7B08-04A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 slots BP	PCE-7B09R-04A1E	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
	PCE-7B10-04A1E	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
	PCE-7B13-64C1E	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
	PCE-7B13-07A1E	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
20 slots BP	PCE-7B17-00A1E	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	

## Desktop: Compatible with PCE-5000 Series CPU Boards

Category	Model Name	PCIe				PCI-X			PCI	Category	Model Name	Wallmount/Desktop Chassis					
		x16	x8	x4	x1	64/66	64/100	64/133	32/33			IPC-6025	IPC-6606	IPC-6806	IPC-6806W	IPC-6608	IPC-7132
1U Butterfly BP	PCE-5B03V-01A1E	1	-	-	-	-	-	-	1	1U Butterfly BP	PCE-5B03V-01A1E	-	-	-	-	-	-
	PCE-5B03V-00A1E	1	-	1	-	-	-	-	-		PCE-5B03V-00A1E	-	-	-	-	-	-
2U Butterfly BP	PCE-5B05V-30B1E	1	-	-	-	-	2	1	-	2U Butterfly BP	PCE-5B05V-30B1E	-	-	-	-	-	-
	PCE-5B06V-00A1E	1	-	-	4	-	-	-	-		PCE-5B06V-00A1E	-	-	-	-	-	-
5 slot BP	PCE-5B06V-04A1E	1	-	-	-	-	-	-	4	5 slot BP	PCE-5B06V-04A1E	-	-	-	-	-	-
	PCE-5B04-20B1E	1	-	-	-	-	2	-	PCE-5B04-20B1E		✓	-	-	-	-	-	
	PCE-5B05-02A1E	1	-	1	-	-	-	2	PCE-5B05-02A1E		✓	-	-	-	-	-	
	PCE-5B05-03A1E	1	-	-	-	-	-	3	PCE-5B05-03A1E		✓	-	-	-	-	-	
PCE-5B05-04A1E	-	-	-	-	-	-	4	PCE-5B05-04A1E	✓		-	-	-	-	-		
6 slot BP	PCE-5B06-00A1E	1	-	-	4	-	-	-	-	6 slot BP	PCE-5B06-00A1E	-	✓	-	✓	-	-
	PCE-5B06-03A1E	1	-	1	-	-	-	3	PCE-5B06-03A1E		-	✓	-	✓	-	-	
8 slot BP	PCE-5B06-04A1E	1	-	-	-	-	-	4	8 slot BP	PCE-5B06-04A1E	-	✓	-	✓	-	-	
	PCE-5B07-04A1E	1	-	1	-	-	-	4		PCE-5B07-04A1E	-	-	-	-	✓	-	
10 slot BP	PCE-5B08-02A1E	1	-	-	4	-	-	2	10 slot BP	PCE-5B08-02A1E	-	-	-	-	✓	-	
	PCE-5B09-04A1E	1	-	3	-	-	-	4		PCE-5B09-04A1E	-	-	-	-	-	✓	
14 slot BP	PCE-5B09-06A1E	1	-	1	-	-	-	6	14 slot BP	PCE-5B09-06A1E	-	-	-	-	-	✓	
	PCE-5B10-04A1E	1	-	-	4	-	-	4		PCE-5B10-04A1E	-	-	-	-	-	-	
	PCE-5B12-07A1E	1	-	3	-	-	-	7		PCE-5B12-07A1E	-	-	-	-	-	-	
	PCE-5B12-64C1E	1	-	-	-	4	2	4		PCE-5B12-64C1E	-	-	-	-	-	-	
	PCE-5B13-08A1E	1	-	-	3	-	-	8		PCE-5B13-08A1E	-	-	-	-	-	-	
20 slot BP	PCE-5B12D-04A1E	1	-	-	-	-	-	4	20 slot BP	PCE-5B12D-04A1E	-	-	-	-	-	-	
	PCE-5B12-00A1E	10	-	1	-	-	-	-		PCE-5B12-00A1E	-	-	-	-	-	-	
	PCE-5B16Q-02A1E	1	-	-	-	-	-	2		PCE-5B16Q-02A1E	-	-	-	-	-	-	
	PCE-5B18-88B1E	1	-	-	-	8	-	8		PCE-5B18-88B1E	-	-	-	-	-	-	
	PCE-5B19-00A1E	17	-	1	-	-	-	-		PCE-5B19-00A1E	-	-	-	-	-	-	

✓: supported, - : not supported, Δ: optional

# PCI/ISA Backplanes

## Selection Guide

Yes: supported/- : not supported/Δ : optional

Category	Model Name	Slot per segment					Segment	AT	ATX	1U Chassis		2U Chassis		4U Chassis		
		ISA	PCI	PICMG	PICMG/PCI	ISA/PCI				ACP-1010	ACP-1320	ACP-2000	IPC-602	IPC-510	IPC-610	IPC-611
										2-slot	2-slot	6-slot	6-slot	15-slot	15-slot	15-slot
1U Butterfly BP	PCA-6103P2V-0A2E*	-	2	1	-	-	1	-	✓	✓	-	-	-	-	-	-
	PCA-6105P4V-0B3E*	-	4	1	-	-	1	-	✓	✓	✓	✓	-	-	-	-
2U Butterfly BP	PCA-6106P3V-0B2E*	1	3	2	-	-	1	✓	✓	-	-	✓	✓	-	-	-
	PCA-6105P3-5A1E	1	2	1	-	1	1	-	✓	-	-	-	-	-	-	-
5 Slot BP	PCA-6106P4-0A2E	-	4	2	-	-	1	✓	✓	-	-	-	-	-	-	-
	PCA-6106P3-0D2E	2	2	1	1	-	1	✓	✓	-	-	-	-	-	-	-
	PCA-6108P6-0C1E	1	5	1	1	-	1	✓	✓	-	-	-	-	-	-	-
	PCA-6108P4-0C2E	3	3	1	1	-	1	✓	✓	-	-	-	-	-	-	-
	PCA-6108-0B2E	8	-	-	-	-	1	✓	✓	-	-	-	✓	✓	✓	✓
6/8 Slot BP	PCA-6114P12-0B3E	1	11	1	1	-	1	✓	✓	-	-	-	-	✓	✓	✓
	PCA-6114P10-0B2E	2	10	2	-	-	1	✓	✓	-	-	-	-	✓	✓	✓
	PCA-6114P7-0E1E	4	6	3	-	1	1	✓	✓	-	-	-	-	✓	✓	✓
	PCA-6114P4-0C2E	8	4	2	-	-	1	✓	✓	-	-	-	-	✓	✓	✓
	PCA-6113P4R-0C2E	7	4	2	-	-	1	✓	✓	-	-	-	-	✓	✓	✓
	PCA-6114-0B2E	14	-	-	-	-	1	✓	✓	-	-	-	-	-	-	-
14/15 Slot BP	PCA-6113DP4-0A2E	1	3,4	1,2	1,0	-	2	✓	✓	-	-	-	-	-	-	-
	PCA-6120P18-0A2E	1	17	1	1	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6120P4-0B2E	14	4	2	-	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6120P12-0A2E	7	11	1	1	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6119P7-0C1E	10	7	2	-	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6120Q-0B2E	5	-	-	-	-	4	✓	Δ	-	-	-	-	-	-	-
20 Slot BP	PCA-6120P18-0A2E	1	17	1	1	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6120P4-0B2E	14	4	2	-	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6120P12-0A2E	7	11	1	1	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6119P7-0C1E	10	7	2	-	-	1	✓	Δ	-	-	-	-	-	-	-
	PCA-6120Q-0B2E	5	-	-	-	-	4	✓	Δ	-	-	-	-	-	-	-

Category	Model Name	4U Chassis						6U Chassis		Wallmount/Desktop Chassis				Cage	
		ACP-4000	ACP-4010	ACP-4320	ACP-4340	ACP-4360	IPC-623	IPC-622	IPC-6608	IPC-6606	IPC-6806/IPC-6806W	IPC-6025	IPC-6006		
		15-slot	15-slot	15-slot	15-slot	15-slot	20-slot	20-slot	8-slot	6-slot	6-slot	5-slot	6-slot		
1U Butterfly BP	PCA-6103P2V-0A2E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2U Butterfly BP	PCA-6105P4V-0B3E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	PCA-6106P3V-0B2E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Slot BP	PCA-6105P3-5A1E	-	-	-	-	-	-	-	-	-	-	-	✓	-	
6/8 Slot BP	PCA-6106P4-0A2E	-	-	-	-	-	-	-	-	✓	✓	-	-	✓	
	PCA-6106P3-0D2E	-	-	-	-	-	-	-	-	✓	✓	-	-	✓	
	PCA-6108P6-0C1E	-	-	-	-	-	-	-	✓	-	-	-	-	-	
	PCA-6108P4-0C2E	-	-	-	-	-	-	-	✓	-	-	-	-	-	
14/15 Slot BP	PCA-6114P12-0B3E	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
	PCA-6114P10-0B2E	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
	PCA-6114P7-0E1E	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
	PCA-6114P4-0C2E	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
	PCA-6113P4R-0C2E	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
	PCA-6114-0B2E	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
20 Slot BP	PCA-6113DP4-0A2E	-	✓	-	-	-	-	-	-	-	-	-	-	-	
	PCA-6120P18-0A2E	-	-	-	-	-	✓	✓	-	-	-	-	-	-	
	PCA-6120P4-0B2E	-	-	-	-	-	✓	✓	-	-	-	-	-	-	
	PCA-6119P7-0C1E	-	-	-	-	-	✓	✓	-	-	-	-	-	-	
	PCA-6119P7-0B3E	-	-	-	-	-	✓	✓	-	-	-	-	-	-	
PCA-6120Q-0B2E	-	-	-	-	-	✓	✓	-	-	-	-	-	-		

Remarks:  
 \*: only compatible with Advantech's 1U/2U chassis  
 ✓: supported, - : not supported, Δ: optional

- 1
- Software and Industry Solutions
- 2
- Industrial Server
- 3
- Intelligent System
- 4
- Intelligent HMI and Monitors
- 5
- Automation Computers and Controllers
- 6
- Industrial Communication
- 7
- Remote I/O Modules
- 8
- Industrial I/O and Video Solutions

# Backplanes Compatible with Half-Size SBCs

## Selection Guide

Interface	Category	Model Name	Slots per segment							Segment
			ISA	PCI	PCIe x16	PCIe x 8	PCIe x4	PCIe x1	PICMG	
Pure ISA Backplane	-	PCA-6104-0C2E	3	-	-	-	-	-	1	1
	6-slot	PCA-6106-0B2E	5	-	-	-	-	-	1	1
	-	PCA-6108-0B2E *	7	-	-	-	-	-	1	1
	8-slot	PCA-6108E-0C2E	7	-	-	-	-	-	1	1
Pure PCI Backplane	-	PCA-6104P4-0B2E	-	3	-	-	-	-	1	1
	6-slot	PCA-6105P5-0B2E	-	4	-	-	-	-	1	1
	8-slot	PCA-6108P8-0A2E	-	7	-	-	-	-	1	1
PCI/PCIe Backplane	1U	PCI-7103P1V-01A1E	-	1	-	-	1	-	1	1
PICMG1.3 Half-Size Backplanes	6-slot	PCE-3B03-00A1E	-	-	1	-	1	-	1	1
	6-slot	PCE-3B06-00A1E	-	-	1	-	-	4	1	1
	6-slot	PCE-3B06-03A1E	-	3	1	-	-	1	1	1
	6-slot	PCE-3B06-02A1E	-	2	1	-	-	2	1	1
	3-slot	PCE-3B03A-00A1E	-	-	1	-	1	-	1	1
	3-slot	PCE-3B03-01A1E	-	1	1	-	-	-	1	1
	14-slot	PCE-3B12-08A1E	-	8	1	-	-	2	1	1
	14-slot	PCE-4B13-08A1E	-	8	-	2	-	2	1	1
	14-slot	PCE-4B12-03A1E	-	3	-	1	4	3	1	1
	14-slot	PCE-4B13-00A1E	-	-	-	1	11	-	-	-

Interface	Model Name	AT	ATX	ACP-4020	ACP-4D00	IPC-6806S*	IPC-6006S	IPC-3026	IPC-3012
				Rackmount	Rackmount	Wallmount	Wallmount	Wallmount	Wallmount
				14-slot	6-slot	6-slot	6-slot	6-slot	3-slot
Pure ISA Backplane	PCA-6104-0C2E	✓	✓	-	-	-	-	-	-
	PCA-6106-0B2E	✓	✓	-	-	✓	✓	✓	-
	PCA-6108-0B2E	✓	✓	-	-	-	-	-	-
	PCA-6108E-0C2E	✓	✓	-	-	-	-	-	-
Pure PCI Backplane	PCA-6104P4-0B2E	✓	✓	-	-	-	-	-	-
	PCA-6105P5-0B2E	✓	✓	-	✓	✓	✓	✓	-
	PCA-6108P8-0A2E	✓	✓	-	-	-	-	-	-
Half-Size Backplanes	PCE-3B03-00A1E	-	✓	-	✓	✓	-	✓	-
	PCE-3B06-00A1E	-	✓	-	✓	✓	-	✓	-
	PCE-3B06-03A1E	-	✓	-	✓	✓	-	✓	-
	PCE-3B06-02A1E	-	✓	-	✓	✓	-	✓	-
	PCE-3B03A-00A1E	-	✓	-	-	-	-	-	✓
	PCE-3B03-01A1E	-	✓	-	-	-	-	-	✓
	PCE-3B12-08A1E	-	✓	✓	-	-	-	-	-
	PCE-4B13-08A1E	-	✓	✓	-	-	-	-	-
	PCE-4B12-03A1E	-	✓	✓	-	-	-	-	-
PCE-4B13-00A1E	-	✓	✓	-	-	-	-	-	

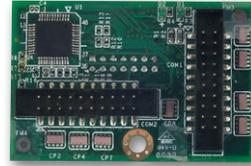
✓: supported, -: not supported, △: optional

# Extension Modules for Slot SBCs



## PCA-AUDIO-HDA1E

- 7.1 Channel HD Audio Extension Module
- Line-in, Mic-in, Lin-out, Front-out, Speaker-out, Rear-out, Subcen-out, Side-out
- Dimensions (L x H) : 47.5 x 80.74 mm (1.87" x 3.17")



## PCA-COM232-00A1E

- 4 RS-232 series ports extension module by LPC connector on CPU card.
- Dimensions (L x H) : 31.5 x 48 mm (1.24" x 1.88")



## PCA-COM485-00A1E

- 4 RS-422/485 series ports extension module by LPC connector on CPU card.
- With Auto-flow control function
- Dimensions (L x H) : 31.5 x 48 mm (1.24" x 1.88")



## PCE-SA01-00A1E

- I/O extension stack board
- 1 DP, 2 USB 3.0, MIC-in, LINE-out
- Dimensions (L x H) : 68 x 125 mm (2.67" x 4.92")
- Supports Model: PCE-3029, PCE-4128, PCE-4129



## PCA-5650-00A1E

- 2 VGA output Mini PCI Express Graphic card
- GPU: Silicon Motion SM750
- VGA output: 1920 x 1080, up to 75Hz vertical rate
- 16 Mb of embedded DDR memory



## PCA-TPM-00A1E

- Trusted platform module compliant with TCG 1.2 specification and TCG software stack 1.2 via LPC connector on CPU card
- Hardware based data protection solution for storage device encryption and decryption
- Dimensions (L x H) : 31.5 x 30.5 mm (1.24" x 1.2")



## IPMI-1000-00A1E

- IPMI2.0 Server-grade remote control solution
- OS independent hardware-based solution
- Real-time and centralized management
- KVM over IP remote control function
- User friendly UI and utility
- Supports Model: PCE-5126WG2, PCE-7127, PCE-5128



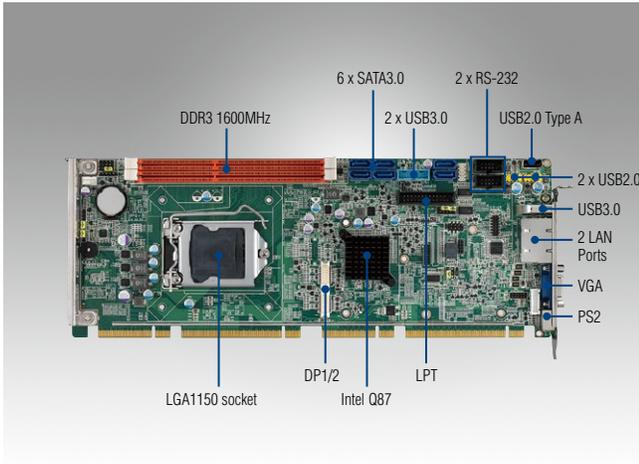
## PCA-TPM-00B1E

- Trusted platform module compliant with TCG 2.0 specification and TCG software stack 2.0 via LPC connector on CPU card
- Hardware based data protection solution for storage device encryption and decryption
- Dimensions (L x H) : 31.5 x 30.5 mm (1.24" x 1.2")

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# PCE-5128

## LGA1150 Intel® Core™i7/i5/i3/Pentium® SHB DDR3/SATA 3.0/USB3.0/Dual GbE/ 3 Displays



### Features

- Supports Intel® Core™ i7/i5/i3 LGA1150 processors with Q87
- Dual Channel (Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports PCIe 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DP/DVI-D (optional) display
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

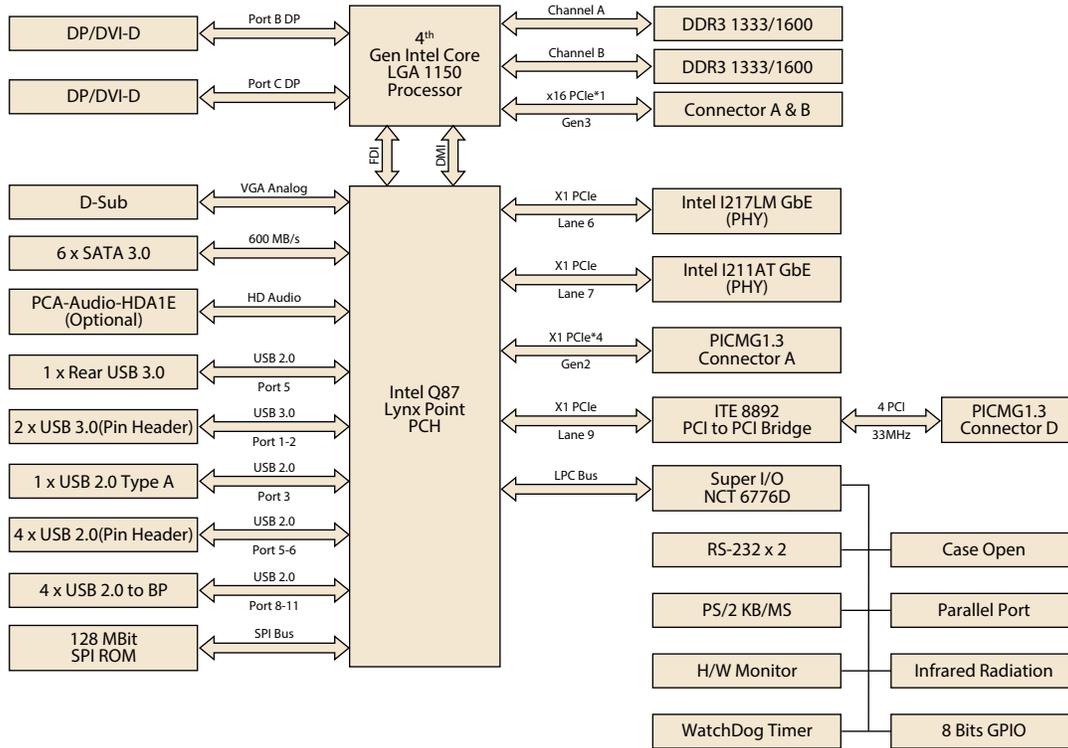
Quiet

CE FCC

### Specifications

Processor System		Haswell refresh CPUs are supported from BIOS V2.xx							
	CPU	i7-4790S	i5-4590S	i5-4590T	i3-4360	i3-4350T	i3-4340TE		
	Base Frequency	3.2GHz	3.0GHz	2.0GHz	3.7GHz	3.1GHz	2.6GHz		
	L3 Cache	8MB	6MB	6MB	4MB	4MB	4MB		
Processor System		Haswell CPUs are supported by both BIOS V1.xx and V2.xx							
	CPU	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	G3420	G3320TE
	Base Frequency	3.1GHz	2.3GHz	2.9GHz	2.7GHz	3.5GHz	2.4GHz	3.2GHz	2.3GHz
	L3 Cache	8MB	8MB	6MB	4MB	3MB	3MB	3MB	3MB
	SKU/Chipset	Intel Q87							
	BIOS	AMI 128Mbit SPI Flash							
Bus		PCI-Express	One x16 plus four x1 to backplane						
	PCI	Four 32-bit 33 MHz PCI Masters to backplane							
Memory		Technology	Dual channel (Non-ECC) DDR3 1333/1600 UDIMM						
	Max. Cap.	16 GB (8 GB per DIMM)							
	Socket	DDR3 240-pin DIMM x 2							
Graphics		Controller	Chipset integrated Intel HD Graphics						
	VRAM	Shared system memory is subject to OS							
	CRT	Supports resolution up to 1920 x 2000 pixel at 60Hz							
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz							
	Triple Display	CRT+DP/DVI-D+DP/DVI-D							
Ethernet		Interface	10/100/1000 Mbps						
	Controller	LAN 1: Intel I217LM LAN 2: Intel I211AT							
	Connector with LED	RJ-45 x 2							
SATA		S/W Raid	0, 1, 5, 10						
		SATA 3.0 x 6 (600 MB/sec)							
Rear I/O		USB 3.0	1						
	Ethernet	2							
	VGA	1							
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)							
Internal Connector		USB	NIGHT USB2.0 (Pin-header*4+USB Type A*1+ 4 on backplane); Two USB3.0 (Pin header)						
	SATA	6							
	DP/DVI-D	2 (Pin header)							
	COM	2							
	Parallel	1							
	IrDA	1							
	GPIO	8-bit							
Watchdog Timer		Output	System reset						
	Interval	Programmable 1-255 sec							
Miscellaneous		Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)						
	Test Environment	Core i7-4770S DDR3 1600 8GB x 2							
Power Requirement		Voltage	+12V	+5V	+3.3V	+5Vsb	-12V	-5V	
	Current	4.02A	1.36A	0.81A	0.09A	0A	0A	0A	
Environment		Operating	Non-operating						
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution							
		Operating humidity: 40 °C @ 85% RH Non-Condensing							
		-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing							
Physical		Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")						

## Block Diagram



## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/ DVI-D	COM	SATA III	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-5128G2-00A1E	Q87	Non-ECC	PCE-5BXX	2	Yes	2*	2	6	10	3	Yes	Yes

Note: Both DP and DVI-D cable are optional.

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
2006512800	Startup manual	x1
2066512802	Utility CD	x1

## Optional Accessories

Part Number	Description
1960047831N001	PCE-5128 optimized CPU Cooler (2U)
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module(Trust Platform management)
PCA-COM232-00A1E	4 Ports RS-232 Module by LPC
PCA-COM485-00A1E	4 Ports RS-485/422 Module by LPC
1700020277-01	2 ports USB 3.0 cable w/ BKT(30cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT

## I/O View

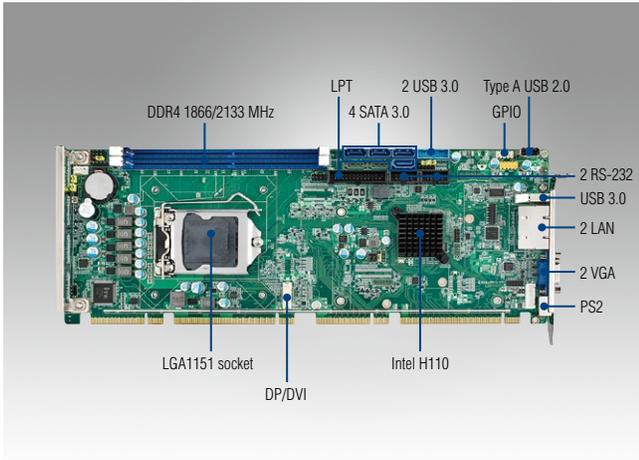


PCE-5128G2-00A1E

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# PCE-5029

## LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, Dual GbE, and Dual Displays



CE FCC

### Features

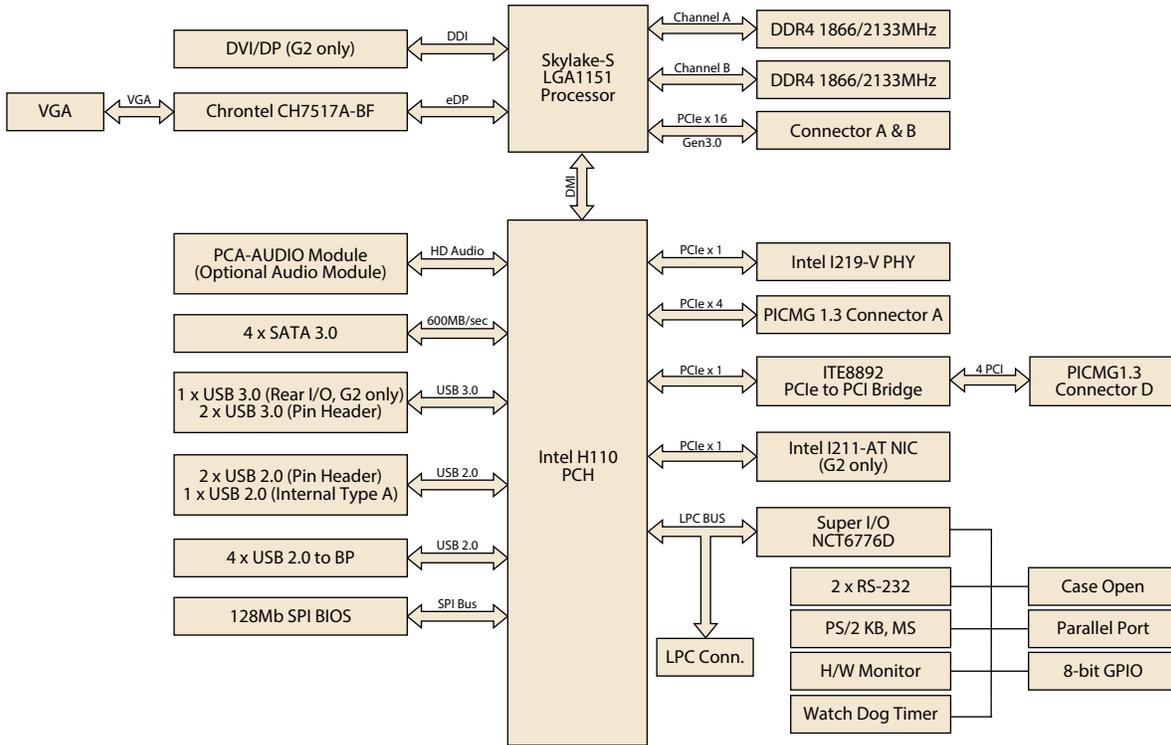
- Intel® Core™ i7/i5/i3 LGA1151 processor with H110 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, USB 3.0, and SATA 3.0 slots
- Supports CRT and DVI-D/DP display (with optional cable)
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note 1: Intel 7th generation processors only support Windows 10 (64-bit).

### Specifications

		i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE	
Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE	
	Speed	3.6GHz	2.9GHz	3.4 GHz	2.4 GHz	3.4GHz	2.7GHz	3.2 GHz	2.3 GHz	3.9GHz	3.4GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz	
	Cache	8MB	8MB	8 MB	8 MB	6MB	6MB	6 MB	6 MB	3MB	3MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB	
	Socket	LGA 1151																
	Chipset	Intel H110																
BIOS	AMI 128Mbit SPI Flash																	
Bus	PCI-Express	1 x PCIe x16 and 1 x PCIe x4 to backplane																
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz																
Memory	Technology	Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz																
	Max. Capacity	32 GB (16 GB per DIMM)																
	Socket	2 x DDR4 288-pin DIMM																
Graphics	Controller	Chipset integrated with Intel® HD Graphics																
	VRAM	Shared system memory is subject to OS																
	CRT	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																
	DVI-D	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																
	Display Port	Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz																
Ethernet	Interface	10/100/1000 Mbps																
	Controller	LAN 1: Intel® I219-V LAN 2: Intel® I211-AT																
Rear I/O	Connector with LED	RJ45 x 2																
	USB 3.0	1 (G2 SKU)																
	Ethernet	1 (VG SKU); 2 (G2 SKU)																
	VGA	1																
	Serial	1 (VG SKU)																
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)																
Internal Connector	USB	7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 2 x USB 3.0 (pin header)																
	SATA	4																
	DP/DVI-D	1 (Pin header)																
	COM	2 (G2 SKU) 1 (VG SKU)																
	Parallel	1																
	GPIO	8 bits																
Watchdog Timer	Output	System reset																
	Interval	Programmable 1-255 sec																
Miscellaneous	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)																
Power Requirement	Test Environment	i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133																
	Voltage	+12V			+5V			+3.3V			+5Vsb							
	Current	2.64A			1.23A			0.19A			0.09A							
Environment	Temperature	Operating 0 ~ 60 °C (dependent on CPU and cooler solution)										Non-operating -40 ~ 85 °C						
	Humidity	40 °C @ 85% relative humidity (non-condensing)										60 °C @ 95% relative humidity (non-condensing)						
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")																

## Block Diagram



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Chipset	Memory	Backplane	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA	SW RAID	Intelligent System Module Support
PCE-5029G2-00A1E	H110	Non-ECC	PCE-5BXX	VGA + DVI/DP*	3	7	2	2	No	4	No	Yes
PCE-5029VG-00A1E	H110	Non-ECC	PCE-5BXX	VGA	2	7	2	1	No	4	No	No

\*Note: DP cable (P/N: PCE-DP10-00A1E) and DVI-D

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700002204	2-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty card	x1
2001512910	Startup manual	x1
2061512900	Utility CD	x1

## Optional Accessories

Part Number	Description
1700020277-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700002204	2-port USB 2.0 cable w/ BKT (27 cm)
1700021831-01	DP to DVI-D cable w/ BKT for G2 SKU
1701090401	Single COM cable (40 cm)
1701092300	Dual COM cable (28.5 cm)
1960052651N021	CPU cooler for 2U, 4U, and wallmount chassis
1960049408N001	CPU cooler for 1U chassis
PCA-TPM-00A1E	TPM module
PCA-COM485-00A1E	4-port RS-422/485 LPC module
PCA-COM232-00A1E	4-port RS-232 LPC module
PCE-DP10-00A1E	DP redriver board (25 cm) for G2 SKU
PCA-AUDIO-HDB1E	Extension module for HD audio
PCA-TPM-00B1E	TPM 2.0 Module

## I/O View



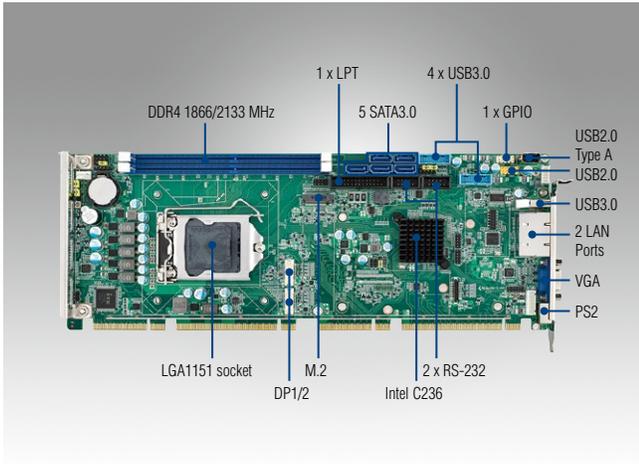
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PCE-5029VG-00A1E

# PCE-5129

## LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays



### Features

- Intel® Core™ i7/i5/i3 LGA1151 processor with Q170 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, M.2, USB 3.0, SATA 3.0, and SW Raid 0, 1, 5, 10
- Supports out-of-band remote management with AMT 11.0
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note 1: Intel 7th generation processors only support Windows 10 (64-bit).

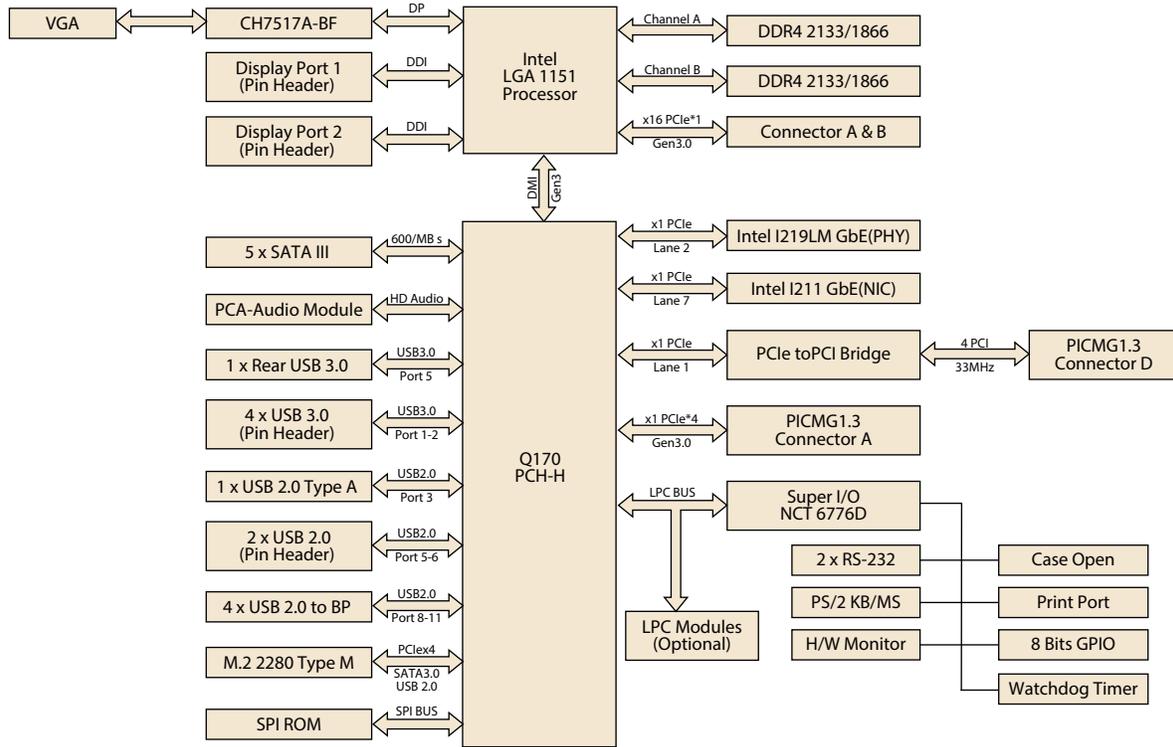
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CE FCC

### Specifications

Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE	
	Speed	3.6GHz	2.9GHz	3.4GHz	2.4GHz	3.4GHz	2.7GHz	3.2GHz	2.3GHz	3.9GHz	3.4GHz	3.7GHz	2.7GHz	3.3GHz	2.9GHz	2.8GHz	2.6GHz	
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	6MB	3MB	3MB	4MB	4MB	3MB	3MB	2MB	2MB	
	Socket	LGA1151																
	Chipset	Q170																
BIOS	AMI 128 Mbit SPI																	
Bus	PCI-Express	1 x PCIe x16 and 1 x PCIe x4 to backplane																
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz																
Memory	Technology	Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz (supports x8 DDR4 1024 M)																
	Max. Capacity	32 GB (16 GB per DIMM)																
	Socket	2 x DDR4 288-pin DIMM																
Graphics	Controller	Chipset integrated with Intel® HD Graphics																
	VRAM	Shared system memory is subject to OS																
	CRT	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																
	DVI-D	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																
	Display Port	Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz																
Ethernet	Triple Display	CRT+DP/DVI-D+DP/DVI-D																
	Interface	10/100/1000 Mbps																
	Controller	LAN 1: Intel® I219-LM LAN 2: Intel® I211																
Rear I/O	Connector with LED	2 x RJ45																
	USB 3.0	1																
	Ethernet	2																
	VGA	1																
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)																
Internal Connector	USB	7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 4 x USB 3.0 (pin header)																
	SATA (SW Raid 0,1,5,10)	5																
	M.2 (2280 Type M)	1 (supports SATA 3.0 or PCIe x4)																
	DP/DVI-D	2 (Pin header)																
	COM	2																
	Parallel	1																
	IrDA	1																
Watchdog Timer	GPIO	8bit																
	Output	System reset																
Miscellaneous	Interval	Programmable 1-255 sec																
	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)																
Power Requirement	Test Environment	i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133																
	Voltage	+12V			+5V			+3.3V			+5Vsb							
	Current	2.64A			1.23A			0.19A			0.09A							
Environment	Operating	Non-Operating																
	Temperature	0 - 60 °C (dependent on CPU and cooler solution)																
	Humidity	40 °C @ 85% relative humidity (non-condensing)																
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")																
	60 °C @ 95% relative humidity (non-condensing)																	

## Block Diagram



## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/DVI-D	COM	SATA III	M.2	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-5129G2-00A1E	Q170	Non-ECC	PCE-5BXX	2	Yes	2*	2	5	1	7	5	Yes	Yes

Note: DP/DVI-D cable is optional

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700002204	2-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty card	x1
2001512910	Startup manual	x1
2061512900	Utility CD	x1

## Optional Accessories

Part Number	Description
1960052651N021	2U CPU cooler (PWM ran)
1960049408N001	CPU cooler for 1U chassis
PCA-AUDIO-HDB1E	Audio module
PCA-TPM-00A1E	TPM module
PCA-COM232-00A1E	4-port RS-232 LPC module
PCA-COM485-00A1E	4-port RS-422/485 LPC module
1700020277-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT
PCA-TPM-00B1E	TPM 2.0 Module

## I/O View

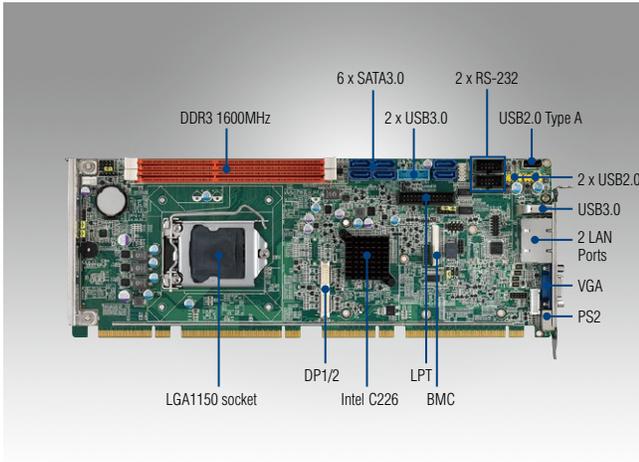


PCE-5129G2-00A1E

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- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# PCE-7128

## LGA1150 Intel® Xeon®/Core™i3/ Pentium® SHB DDR3/SATA 3.0/USB3.0/ Dual GbE /3 Displays



### Features

- Supports Intel® Xeon® E3 1200v3 series, Core™ i7/i5/i3 LGA1150 processors with C226
- Dual Channel (ECC/Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports PCIE 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DP/DVI-D (optional) display
- Supports out-of-band remote management with AMT9.0 and IPMI
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and embedded software APIs

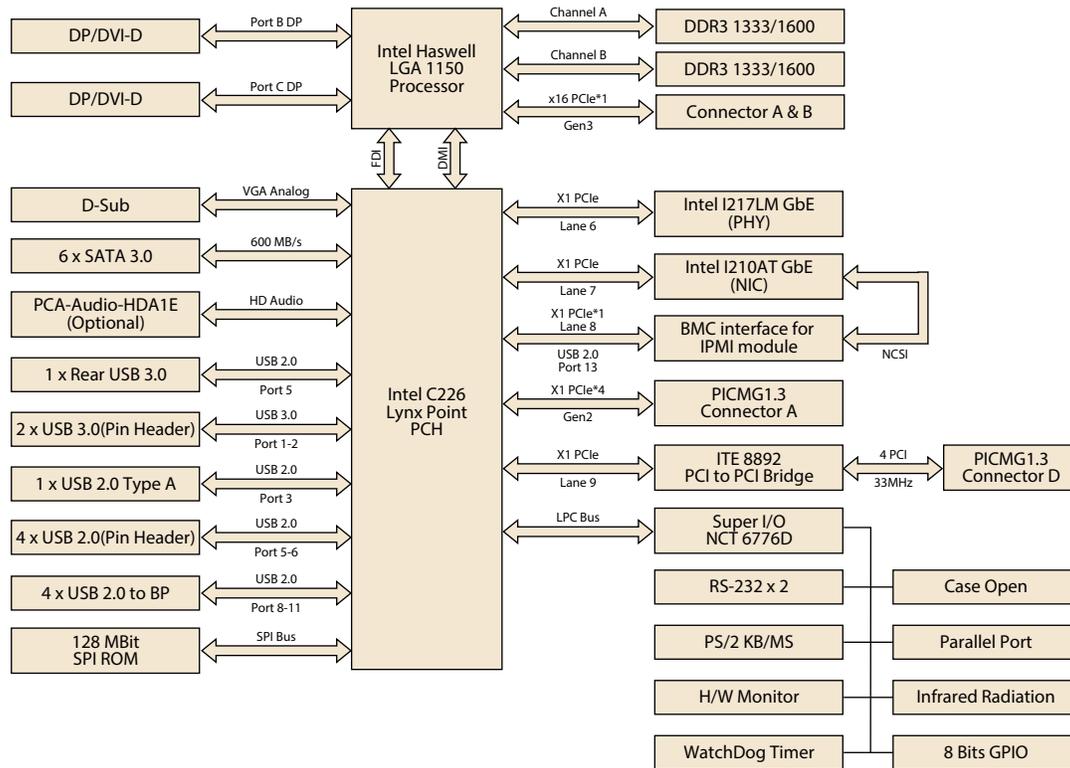
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CE FCC

### Specifications

<b>Haswell refresh CPUs are supported from BIOS V2.xx</b>	
CPU	i7-4790S i5-4590S i5-4590T i3-4360 i3-4350T i3-4340TE
Base Frequency	3.2GHz 3.0GHz 2.0GHz 3.7GHz 3.1GHz 2.6GHz
L3 Cache	8MB 6MB 6MB 4MB 4MB 4MB
<b>Haswell CPUs are supported by both BIOS V1.xx and V2.xx</b>	
CPU	E3-1275v3 E3-1225v3 E3-1268v3 i7-4770S i7-4770TE i5-4570S i5-4570TE i3-4330 i3-4330TE G4320 G4320TE
Base Frequency	3.5GHz 3.2GHz 2.3GHz 3.1GHz 2.3GHz 2.9GHz 2.7GHz 3.5GHz 2.4GHz 3.2GHz 2.3GHz
L3 Cache	8MB 8MB 8MB 8MB 8M 6MB 4MB 3M 3M 3MB 3MB
ECC Memory Supported	Yes Yes Yes N/A N/A N/A Yes Yes Yes Yes
SKU/Chipset	Intel C226
BIOS	AMI 128Mbit SPI Flash
Bus	PCI-Express One x16 or Two x8 plus four x1 to backplane PCI Four 32-bit 33 MHz PCI Masters to backplane
Memory	Technology Dual channel (ECC/Non-ECC) DDR3 1333/1600 UDIMM (Note: Please select Intel ECC supported processor to enable ECC function) Max. Cap. 16 GB (8 GB per DIMM) Socket DDR3 240-pin DIMM x 2
Graphics	Controller Chipset integrated Intel HD Graphics VRAM Shared system memory is subject to OS CRT Supports resolution up to 1920 x 2000 pixel at 60Hz DVI-D Supports resolution up to 1920 x 1200 pixel at 60Hz Triple Display CRT+DP/DVI-D+DP/DVI-D
Ethernet	Interface 10/100/1000 Mbps Controller LAN 1: Intel I217LM LAN 2: Intel I210AT Connector with LED RJ45 x 2
SATA	S/W Raid 0, 1, 5, 10 SATA 3.0 x 6 (600 MB/sec)
Rear I/O	USB 3.0 1 Ethernet 2 VGA 1 PS/2 1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)
Internal Connector	USB Night USB2.0 (Pin-header*4+USB Type A*1+ 4 on backplane); Two USB3.0 (Pin header) SATA 6 DP/DVI-D 2 (Pin header) COM 2 Parallel 1 IrDA 1 GPIO 8bit
Watchdog Timer	Output System reset Interval Programmable 1-255 sec
Miscellaneous	Audio Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)
Power Requirement	Test environment Core i7-4770S DDR3 1600 8GB x 2 Voltage +12V +5V +3.3V +5Vsb -12V -5V Current 4.02A 1.36A 0.81A 0.09A 0A 0A
Environment	Operating Temperature/Humidity 0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing Non-operating -40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing
Physical	Dimensions (L x H) 338 x 122 mm (13.3" x 4.8")

## Block Diagram



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/DVI-D	COM	SATA III	USB 2.0	USB 3.0	S/W Raid	AMT	IPMI
PCE-7128G2-00A1E	C226	ECC	PCE-5BXX PCE-7BXX	2	Yes	2*	2	6	10	3	Yes	Yes	Yes

Note: Both DP and DVI-D cable are optional.

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
2006512800	Startup manual	x1
2066512802	Utility CD	x1

## Optional Accessories

Part Number	Description
1960047831N001	PCE-7128 optimized CPU Cooler (2U)
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module (Trust Platform management)
PCA-COM232-00A1E	4 Ports RS-232 Module by LPC
PCA-COM485-00A1E	4 Ports RS-485/422 Module by LPC
IPMI-1000-00A1E	IPMI2.0 module(Remote control management)
1700020277-01	2 ports USB 3.0 cable w/ BKT(30cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT

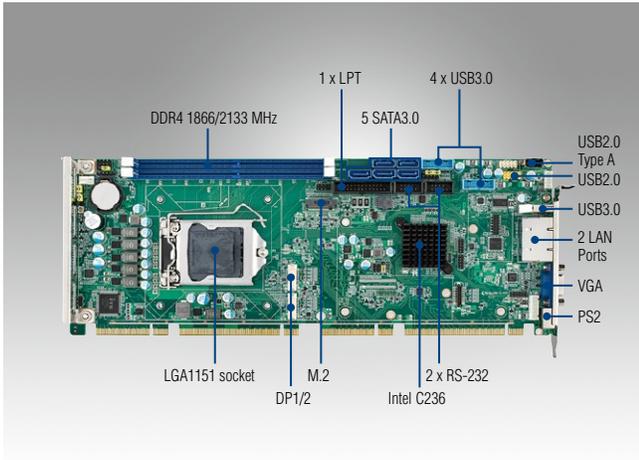
## I/O View



PCE-7128G2-00A1E

# PCE-7129

## LGA1151 6th and 7th Generation Intel® Xeon®/Core™ i7/i5/i3/Pentium® LGA1151 System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays



### Features

- Intel® Xeon® E3-1200v5/Core™ i7/i5/i3 LGA1151 processor with C236 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, M.2, USB 3.0, SATA 3.0, and SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DVI-D/DP display (with optional cable)
- Supports out-of-band remote management with AMT 11.0
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note: Intel 7th generation processors only support Windows 10 (64-bit)

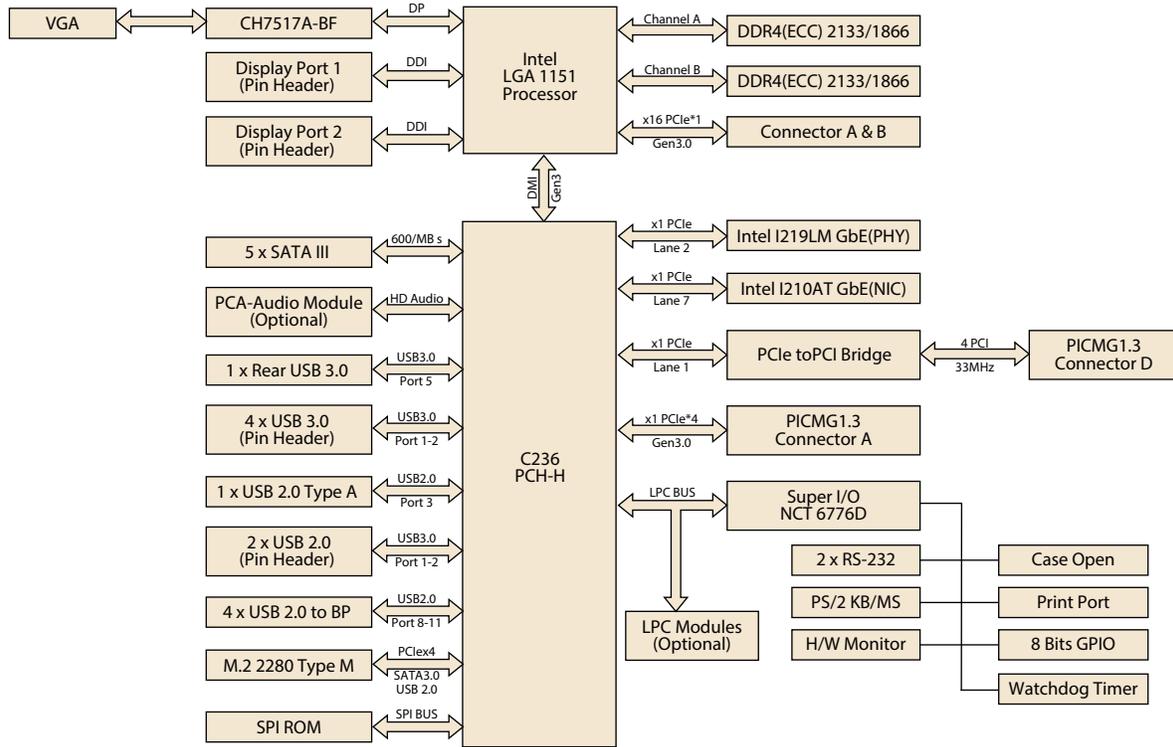
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CE FCC

### Specifications

Processor System	CPU	E3-1275v6	E3-1275v5	E3-1225v5	E3-1268Lv5	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE	
	Base Frequency	3.8 GHz	3.6GHz	3.3GHz	2.4GHz	3.6 GHz	2.9 GHz	3.4GHz	2.4GHz	3.4 GHz	2.7 GHz	3.2GHz	2.3GHz	3.9 GHz	3.4 GHz	3.7GHz	2.7GHz	3.3GHz	2.9GHz	2.8GHz	2.6GHz	2.6GHz
L3 Cache	8 MB	8MB	6MB	8MB	8MB	8 MB	8MB	8MB	8MB	6 MB	6 MB	6MB	6MB	3 MB	3 MB	4MB	4MB	3MB	3MB	2MB	2MB	
SKU/Chipset	Intel® C236																					
BIOS	AMI® SPI Flash 128 Mbit																					
Bus	PCI-Express	1 x PCIe x16/2 x PCIe x8 and 1 x PCIe x4 to backplane																				
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz																				
Memory	Technology	Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz (supports x8 DDR4 1024 M) (Note: Intel ECC-supported processor must be selected to enable ECC function)																				
	Max. Capacity	32 GB (16 GB per DIMM)																				
	Socket	2 x DDR4 288-pin DIMM																				
Graphics	Controller	Chipset integrated with Intel® HD Graphics																				
	VRAM	Shared system memory is subject to OS																				
	CRT	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																				
	DVI-D	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																				
	Display Port	Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz																				
Ethernet	Triple Display	CRT+DP/DVI-D+DP/DVI-D																				
	Interface	10/100/1000 Mbps																				
	Controller	LAN 1: Intel® I219-LM LAN 2: Intel® I210-AT																				
Rear I/O	Connector with LED	2 x RJ45																				
	USB 3.0	1																				
	Ethernet	2																				
	VGA	1																				
Internal Connector	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)																				
	USB	7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 4 x USB 3.0 (pin header)																				
	SATA (SW Raid 0,1,5,10)	5																				
	M.2 (2280 Type M)	1 (supports SATA 3.0 or PCIe x4)																				
	DP/DVI-D	2 (Pin header)																				
	COM	2																				
	Parallel	1																				
	IrDA	1																				
	GPIO	8bit																				
Watchdog Timer	Output	System reset																				
	Interval	Programmable 1-255 sec																				
Miscellaneous	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)																				
Power Requirement	Test Environment	i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133																				
	Voltage	+12V				+5V				+3.3V				+5Vsb								
	Current	2.64A				1.23A				0.19A				0.09A								
Environment	Operating	Temperature															Non-Operating					
	Temperature	0 ~ 60 °C (dependent on CPU and cooler solution)															-40 ~ 85 °C					
Physical	Humidity	40 °C @ 85% relative humidity (non-condensing)																				
	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")																				

## Block Diagram



## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/DVI-D	COM	SATA III	M.2	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-7129G2-00A1E	C236	ECC/Non-ECC	PCE-5BXX PCE-7BXX	2	Yes	2*	2	5	1	7	5	Yes	Yes

Note: DP/DVI-D cable is optional

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700002204	2-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty card	x1
2001512910	Startup manual	x1
2061512900	Utility CD	x1

## Optional Accessories

Part Number	Description
1960052651N021	2U CPU cooler (PWM fan)
1960049408N001	CPU cooler for 1U chassis
PCA-AUDIO-HDB1E	Audio module
PCA-TPM-00A1E	TPM 1.2 module
PCA-COM232-00A1E	4-port RS-232 LPC module
PCA-COM485-00A1E	4-port RS-422/485 LPC module
1700020277-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT
PCA-TPM-00B1E	TPM 2.0 module

## I/O View

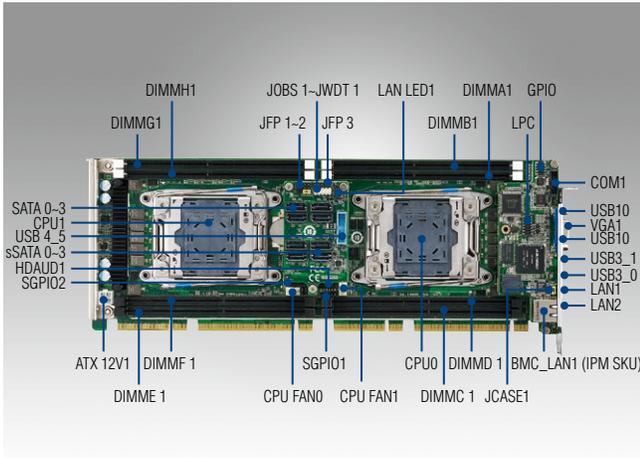


PCE-7129G2-00A1E

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# PCE-9228

## Dual LGA 2011-R3 Intel Xeon® E5-2600v3 SHB Server Board with C612, DDR4/SATA3.0/USB3.0/Dual GbE



### Features

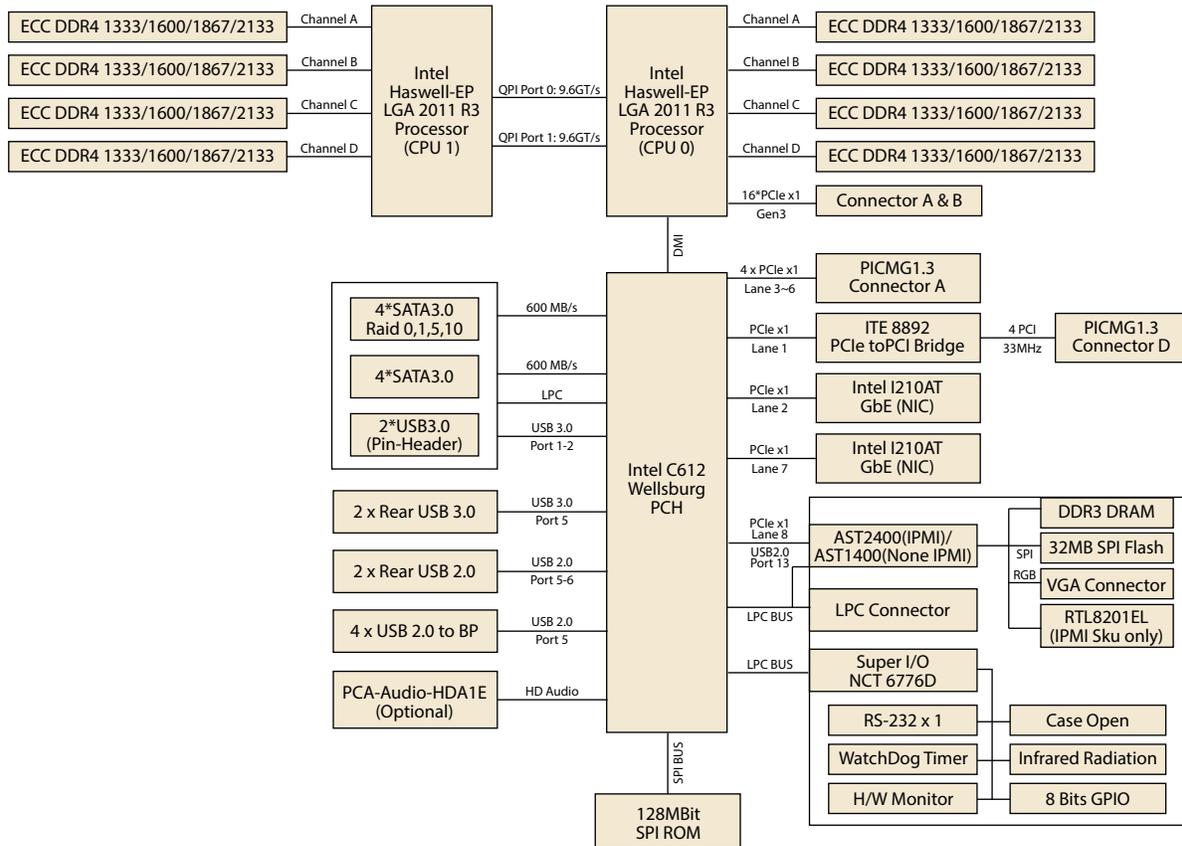
- Supports Dual Intel Xeon E5-2600v3 series processors with C612
- Supports DDR4 2133MHz RDIMM up to 256GB
- Supports PCIe3.0,USB3.0,SW raid 0, 1, 5, 10
- Supports out-of-band remote management with IPMI
- 0 ~ 40 °C ambient operation temperature range

CE FCC

### Specifications

Processor System	Socket	Intel LGA 2011-R3			
	CPU type	Intel Xeon E5-2600(v3) dual processor (TDP up to 120W per CPU)			
Core Logic	Chipset	Intel C612 chipset			
	Total slots	8 (Quad Channel)			
Memory	Capacity	Maximum 256 GB ECC RDIMM			
	Memory type	DDR4 ECC-REG 2133/1866/1600/1333 MHz DIMM			
	Memory size	1 GB, 2 GB, 4 GB, 8 GB, 16 GB, 32 GB			
Bus	PCI-Express	PICMG1.3: One PCIe x16 or Two PCIe x8, PCIe x4 from PCH			
	PCI	Four PCI 32bit/33MHz			
Graphics	VGA	Aspeed AST2400/1400 64 MB			
Storage	SATA controller	8 SATA 3.0 ports support software raid 0, 1, 5, 10			
Networking	GbE LAN	2 x Intel I210AT			
	USB connector	2 USB 3.0 ports in one pin header			
Onboard I/O Connectors	CPU Fan header	2 x 4-pin			
	GPIO	1			
	LAN LED	1			
	Audio Header	1			
	Serial port header	1 (Pin header 2.0 pitch)			
Rear I/O Connectors	External USB port	4 (2*USB2.0 + 2*USB3.0)			
	VGA port	1			
	RJ-45	3 (1 port dedicated for IPMI function)			
Management Solution	Software	SUSIAccess			
	Out of band remote management	IPMI (PCE-9228G2I sku only)			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirement	Power On	3.3V	5V	12V	5Vsb -12V
	E5-2680v3 x2				
	DDR4 RDIMM 16GB x8	2.61A	1.07A	26.73A	0.07A 0.01A
Environment	Temperature	Operating		Non-operating	
	Humidity	0 ~ 40 °C, depends on CPU speed and cooler solution		-40 ~ 85 °C	
		10% ~ 95%		10% ~ 95% (Non condensing)	
Physical Characteristics	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")			

## Block Diagram



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Chipset	Memory	GbE LAN	IPMI	VGA Chip
PCE-9228G2-00A1E	C612	DDR4 RDIMM	2	-	AST 1400
PCE-9228G2I-00A1E	C612	DDR4 RDIMM	2	Yes	AST 2400

Note: "I" sku features a dedicated LAN for IPMI function only.

## Packing List

Part Number	Description	Quantity
2066922800	Driver CD	x 1
2006922810	Startup manual	x 1
1700003194	SATA data cables	x 2
1703150102	SATA power cables	x 1

## Optional Accessories

Part Number	Description
PCA-AUDIO-HDA1E	HD Audio-card
PCA-TPM-00A1E	TPM Module
1960063011N011	Cooler IGA-2011 narrow cooler 107 x 70 x 64 for 4U chassis (120W; Puller fan)
1700020277-01	2 ports USB3.0 cable w/ BKT(30cm)
1700100250	COM port cable w/o bracket
PCA-COM232-00A1E	4 ports RS-232 module
PCA-COM485-00A1E	4 ports RS-422/485 module

## I/O View



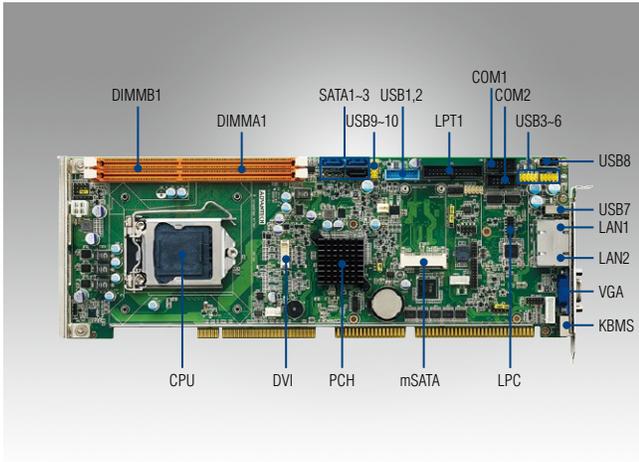
PCE-9228G2I-00A1E



PCE-9228G2-00A1E

# PCA-6028

## LGA1150 Intel® Core™ i7/i5/i3/Pentium SBC with VGA/DVI/Dual GbE LAN



### Features

- Supports Intel® Core™ i7/i5/i3/Pentium LGA1150 processors with H81
- Dual Channel (Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports USB 3.0, SATA3.0
- Dual display with VGA and DVI-D (optional)
- Supports Advantech LPC modules.
- Supports SUSIAccess and embedded software APIs

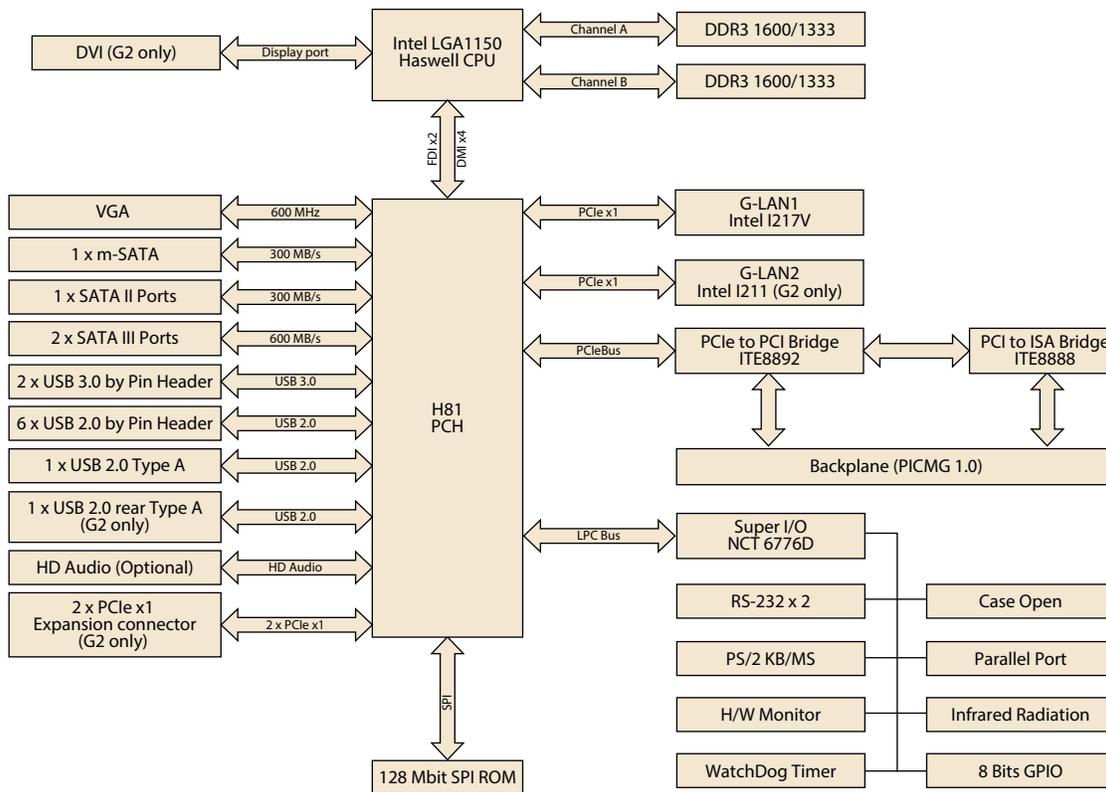
Quiet

CE FCC

### Specifications

		<b>Haswell refresh CPUs are supported from BIOS V2.xx</b>							
Processor System	CPU	i7-4790S	i5-4590S	i5-4590T	i3-4360	i3-4350T	i3-4340TE		
	Base Frequency	3.2GHz	3.0GHz	2.0GHz	3.7GHz	3.1GHz	2.6GHz		
	L3 Cache	8MB	6MB	6MB	4MB	4MB	4MB		
	<b>Haswell CPUs are supported by both BIOS V1.xx and V2.xx</b>								
Processor System	CPU	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	G3420	G3320TE
	Base Frequency	3.1GHz	2.3GHz	2.9GHz	2.7GHz	3.5GHz	2.4GHz	3.2GHz	2.3GHz
	L3 Cache	8MB	8M	6MB	4MB	4MB	3MB	3MB	3MB
	SKU/Chipset	Intel H81							
BIOS		AMI 128Mbit SPI Flash							
Bus	ISA	HISA (ISA High Driver)							
	PCI	32 bit/ 33 MHz PCI							
Memory	Technology	Dual channel (Non-ECC) DDR3 1333/1600							
	Max. Cap.	16 GB (8 GB per DIMM)							
	Socket	DDR3 240-pin DIMM x 2							
Graphics	Controller	Chipset integrated Intel HD Graphics							
	VRAM	Shared system memory is subject to OS							
	CRT	Supports resolution up to 2048 x 1536 pixel at 60Hz							
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz (G2 only)							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	LAN 1: Intel I217V LAN 2: Intel I211 (Only in G2 Sku)							
	Connector with LED	RJ45 x 1 (VG sku); RJ45 x 2(G2 sku)							
SATA	Channel	SATA 3.0 x 2 (600 MB/sec), SATA2.0 x 1 (300MB/sec), mSATA x1 (300 MB/sec)							
Rear I/O	USB 2.0	1 (Only in G2 sku)							
	Ethernet	1 (VG sku); 2 (G2 sku)							
	VGA	1							
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)							
Internal Connector	USB	Up to 8x USB2.0 (6x Pin header, 1x Type A, 1x Rear in G2 sku only) 2x USB3.0 (Pin header)							
	SATA	4(1x SATA2.0, 2x SATA3.0, 1x mSATA)							
	DVI-D	1 (Pin header)							
	COM	2							
	Parallel	1							
	IrDA	1							
	GPIO	8-bit							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1-255 sec							
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)							
Power Requirement	Test Environment	Core i7-4790S@3.20GHz; 8GB DDR3 1600 2Rx8*2; SATA HDD*1							
	Voltage	+12V	+5V	+3.3V	+5Vsb	-12V	-5V		
	Current	4.94A	1.83A	0A	0.01A	0A	0A		
Environment			Operating				Non-operating		
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution				-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing			
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")							

## Block Diagram



## Ordering Information

Part Number	LAN	VGA	DVI-D	COM	SATA	USB	m-SATA
PCA-6028VG-00A1E	1	Yes	-	2	3 (1 x 2.0 + 2 x 3.0)	9 (2 x 3.0 + 7 x 2.0)	1
PCA-6028G2-00A1E	2	Yes	1*	2	3 (1 x 2.0 + 2 x 3.0)	10 (2 x 3.0 + 8 x 2.0)	1

\*Note: Output DVI-D signal only (Required DVI-D cable: 1700021831-01)

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461-11	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
-	Startup manual	x1
-	Utility CD	x1

## Optional Accessories

Part Number	Description
1701090401	Single COM cable
1701092300	Dual COM cable
1700020277-01	2-port USB 3.0 cable w/ BKT (30cm)
1700021831-01	DP to DVI-D cable w/ BKT (digital signal only)
1960047831N001	PCA-6028 optimized CPU cooler (2U)
PCA-AUDIO-HDA1E	Extension module for 7.1 Channel High Definition Audio
PCA-COM232-00A1E	4 x RS-232 module
PCA-COM485-00A1E	4 x RS-422/485 module
PCA-TPM-00A1E	Trusted platform module compliant with TCG 1.2

## I/O View



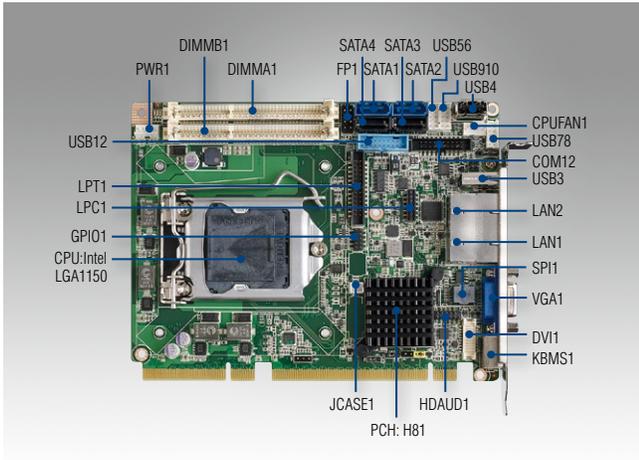
PCA-6028G2-00A1E



PCA-6028VG-00A1E

# PCE-3028

## LGA 1150 4th Generation Intel® Core™ i7/i5/i3 Half-size SHB with PCIe/VGA/DVI/Dual GbE LAN



### Features

- Complies with PICMG 1.3
- Supports Intel® Core™ i7/i5/i3 LGA1150 processors with H81
- Dual Channel (Non-ECC) DDR3 1066/1333/1600 up to 16 GB
- Supports USB 3.0, SATA3.0
- Supports CRT and DVI-D (optional) display
- Support dual 10/100/1000 Mbps Ethernet
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and embedded software APIs

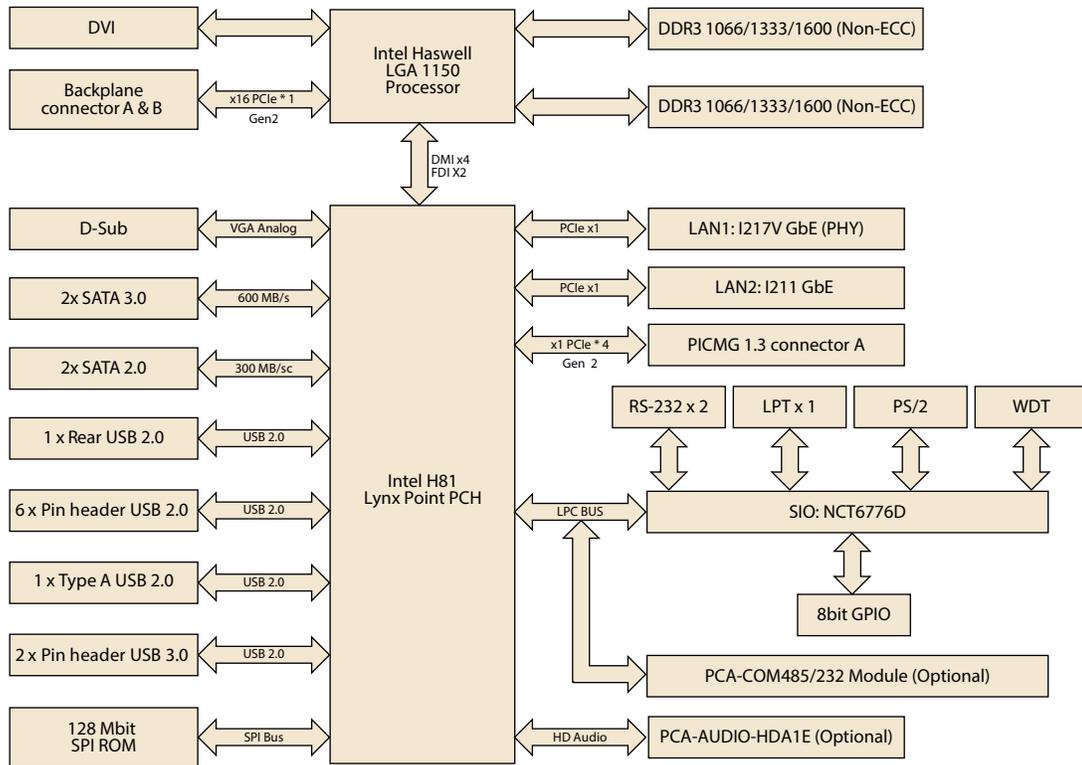
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CE FCC

### Specifications

	CPU	i7-	i7-	i7-	i7-	i5-	i5-	i5-	i5-	i3-	i3-	i3-	i3-	G3420	G3320TE	G1820	G1820TE
Processor System	CPU	4790S	4790T	4770S	4770TE	4590S	4590T	4570S	4570TE	4360	4350T	4330	4330TE	G3420	G3320TE	G1820	G1820TE
	Base Frequency	3.2GHz	2.7GHz	3.1GHz	2.3GHz	3.0GHz	2.0GHz	2.9GHz	2.7GHz	3.7GHz	3.1GHz	3.5GHz	2.4GHz	3.2 GHz	2.3 GHz	2.7 GHz	2.2 GHz
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	4MB	4MB	4MB	4MB	4MB	3MB	3MB	2MB	2MB
	SKU/Chipset	Intel H81															
	BIOS	AMI 128Mbit SPI Flash															
Bus	PCI-Express	One x16 plus four x1 to backplane															
Memory	Technology	Dual channel (Non-ECC) DDR3 1066/1333/1600															
	Max. Cap.	16 GB (8 GB per DIMM)															
	Socket	DDR3 204-pin SO-DIMM x2															
Graphics	Controller	Chipset integrated Intel GT2 4600 or GT1 HD graphics (Depends on CPU support)															
	VRAM	Shared system memory is subject to OS															
	CRT	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	Dual Independent Display	VGA+DVI-D															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	LAN 1: Intel I217V LAN 2: Intel I211AT															
	Connector with LED	RJ-45 x 2															
SATA	Max. Data Transfer Rate	SATA 3.0 x 2 (600 MB/sec), SATA 2.0 x 2 (300 MB/sec)															
Rear I/O	USB 2.0	1															
	Ethernet	2															
	VGA	1															
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)															
Internal Connector	USB	Seven USB 2.0 (Pin-header x 6 + USB Type A x 1); Two USB 3.0 (Pin header)															
	SATA	4															
	DVI-D	1															
	COM	2															
	Parallel	1															
	GPIO	8-bit															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1-255 sec															
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)															
Power Requirement	Test Environment	Intel Core i7-4770S (3.1GHz), DDR3 1600 8GB*2															
	Voltage	12V	5V	3.3V	5VSB	-5V	-12V										
	Current	7.26	1.06	0.42	0	0	0										
Environment		Operating										Non-operating					
	Temperature/Humidity	0 ~ 60 °C (32-140 °F); Depends on CPU frequency and cooler solution										-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing					
		Operating humidity: 40 °C @ 85% RH Non-Condensing															
Physical	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")															

## Block Diagram



## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DVI-D	COM	SATA III	SATA II	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-3028G2-00A1E	H81	Non-ECC	PCE-3XXX	2	1	1	RS-232 x 2 onboard Optional RS-422/485 x 4 or RS-232 x 4 via module	2	2	8	2	No	No

Note: DVI-D cable is optional

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1703150102	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700028292-01	2 ports USB 3.0 cable W/BKT	x1
1700014398	4-port USB cable kit	x1
1703040100	Power Converter	x1
9689000002	Jumper package	x1
2190000902	Warranty Card	x1
2006302800	Startup manual	x1
2066302800	Utility CD	x1

## Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-244/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module (Trust Platform management)
1700021831-01	DVI-DVI cable with bracket
1960047831N001	2U cooler for Intel Core i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE
1960053207N001	1.5 U cooler for Intel Core i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE
1960053065N001	1U blower for Intel Core i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE

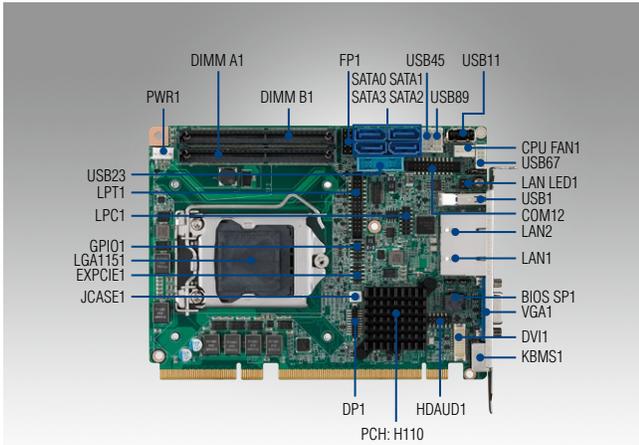
## I/O View



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# PCE-3029

**LGA 1151 6th and 7th Gen Intel® Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/ Dual Independent Display/Dual GbE LAN/ SATA III/m-SATA/ USB 3.0**



## Features

- Complies with PICMG 1.3
- Supports Intel® Core™ i7/i5/i3/Celeron®/Pentium® processor with H110 chipset
- Dual Channel (Non-ECC) DDR4 1866/2133 up to 32 GB
- Supports USB 3.0, SATA III, PCIe 3.0
- Supports CRT and DVI-D/DP (optional) display
- Supports Advantech TPM module (optional)
- Supports SUSIAccess and embedded software APIs

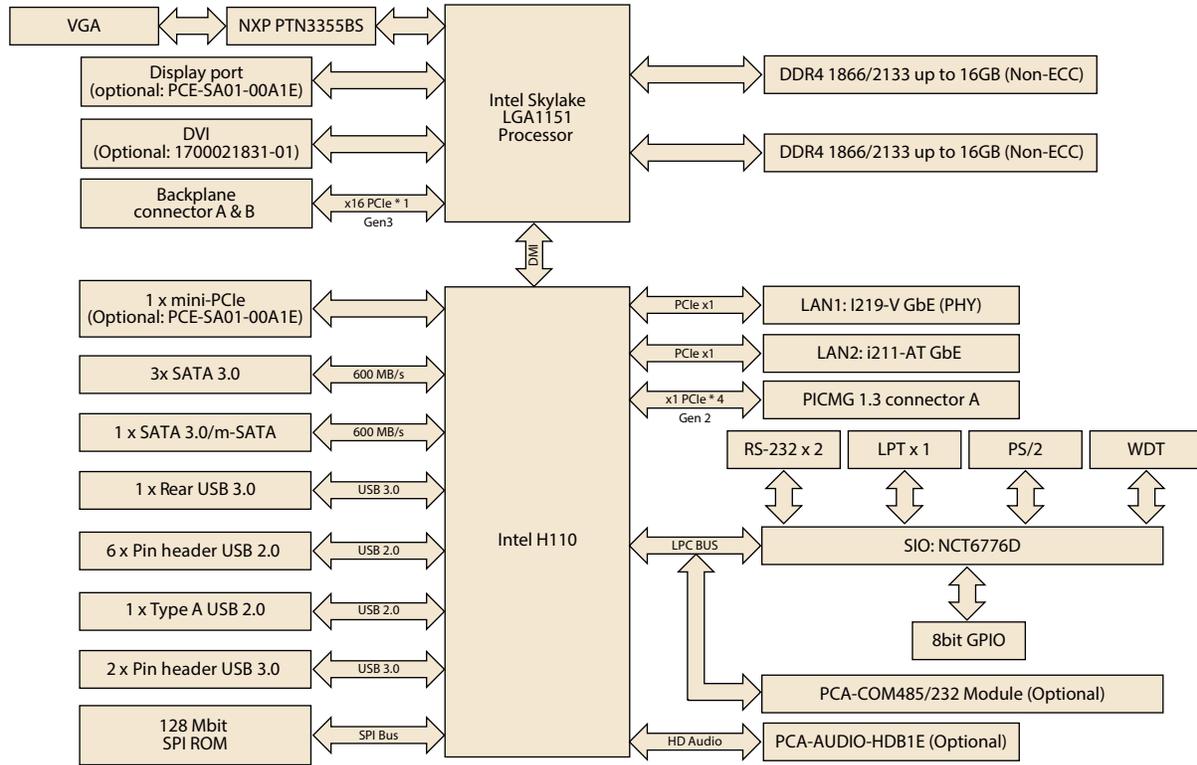
Note: Intel 7th generation processor only support Windows 10 (64-bit)

CE FCC

## Specifications

		i7-	i7-	i7-	i7-	i5-	i5-	i5-	i5-	i3-	i3-	i3-	i3-	G4400	G4400TE	G3900	G3900TE
Processor System	CPU	7700	7700T	6700	6700TE	7500	7500T	6500	6500TE	7101E	7101TE	6100	6100TE	G4400	G4400TE	G3900	G3900TE
	Base Frequency	3.6 GHz	2.9 GHz	3.4 GHz	2.4 GHz	3.4 GHz	2.7 GHz	3.2 GHz	2.3 GHz	3.9 GHz	3.4 GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz
	L3 Cache	8 MB	8 MB	8 MB	8 MB	6 MB	6 MB	6 MB	6 MB	3 MB	3 MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB
	SKU/Chipset	Intel H110															
	BIOS	AMI 128 Mbit SPI Flash															
Bus	PCI-Express	One x16 (Gen 3) plus four x1 (Gen 3) to backplane															
Memory	Technology	Dual channel (Non-ECC) DDR4 1866/2133 up to 32 GB															
	Max. Cap.	32 GB (16 GB per DIMM)															
	Socket	DDR4 260-pin SO-DIMM x2															
Graphics	Controller	Chipset integrated Intel HD Graphics															
	VRAM	Shared system memory is subject to OS															
	CRT	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	Display Port	Supports resolution up to 4096 x 2304 pixel at 60Hz															
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz															
Dual Independent Display	VGA+ DVI-D/DP (Optional)																
Ethernet	Interface	10/100/1000 Mbps															
	Controller	LAN 1: Intel I219V LAN 2: Intel I211AT															
	Connector with LED	RJ-45 x 2															
Rear I/O	USB 3.0	1															
	Ethernet	2															
	VGA	1															
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)															
Internal Connector	USB	7 USB 2.0 (Pin-header *6 + USB Type A *1); 2 USB 3.0 (Pin header)															
	SATA/m-SATA	SATA III x4 (600MB/sec) or SATA III x3 (600MB/sec)+m-SATA x1															
	mini-PCIe	(Optional: PCE-SA01-00A1E, PCIe Gen 2.0)															
	DVI-D	1															
	DP	1															
	COM	2 (RS-232)															
Watchdog Timer	Parallel	1 (SPP/EPP)															
	GPIO	8 bits															
	Output	System reset															
	Interval	Programmable 1-255 sec															
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDB1E)															
	Test Environment	Intel Core i7-6700 (3.4GHz), DDR4 2133 8GB *2															
Power Requirement	Voltage	12V 5V 3.3V 5VSB -12V -5V															
	Current	4.6 0.01 0.32 0.08 0 0															
Environment	Operating	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution															
	Temperature/Humidity	Operating humidity: 40 °C @ 85% RH Non-Condensing Non-Operating: -40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing															
Physical	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")															

## Board Diagram



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DVI-D	DP	COM	SATA III/ m-SATA	mini-PCIe	USB 2.0	USB 3.0	S/W RAID	AMT
PCE-3029G2-00A1E	H110	Non-ECC	PCE-3BXX	2	1	1*	1**	2 RS-232 4 RS-422/485 or 4 RS-232 (optional)***	4/0 3/1	1**	7	3	No	No

\* DVI-D cable (1700021831-01) is optional.

\*\* PCE-SA01-00A1E is required. PCE-SA01-00A1E is compatible with IPC-3026/IPC-6806S/ACP-4D00/ACP-4020, but not compatible with IPC-3012.

\*\*\*PCA-COM485-00A1E is required for additional 4 RS422/485; PCA-COM232-00A1E is required for additional 4 RS232.

## Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDB1E	Audio module with Realtek ACL892
PCA-TPM-00A1E	TPM 1.2 module
PCA-TPM-00B1E	TPM 2.0 module
PCE-SA01-00A1E	IO extension module
1700021831-01	DP to DVI-D cable w/ BKT
1960052651N021	2U cooler for Intel Core i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053207N001	1.5U cooler for Intel Core i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053065N001	1U cooler for Intel Core i7-6700TE, i5-6500TE, i3-6100TE, G4400TE, G3900TE

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1700022749-11	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700028292-01	2 ports USB 3.0 cable W/BKT	x1
1700014398-11	4-port USB cable kit	x1
1703040100	Power Converter	x1
9689000002	Jumper package	x1
2001302910	Startup manual	x1
2061302900	Utility CD	x1

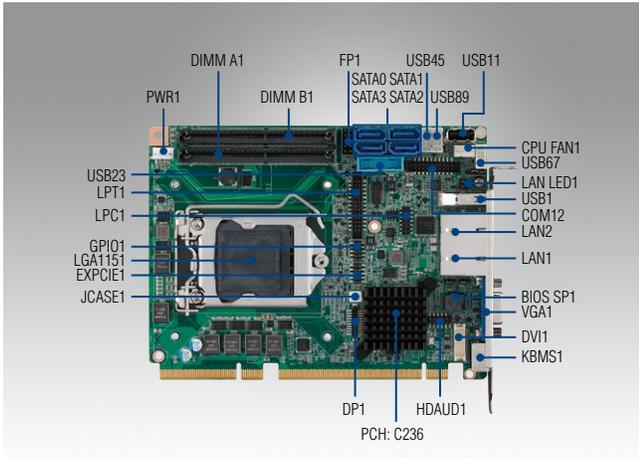
## Bracket View



PCE-3029G2-00A1E

# PCE-4129

## LGA 1151 6th and 7th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple Independent Display/ Dual GbE LAN/SATA III/m-SATA/ USB 3.0



CE FCC

### Features

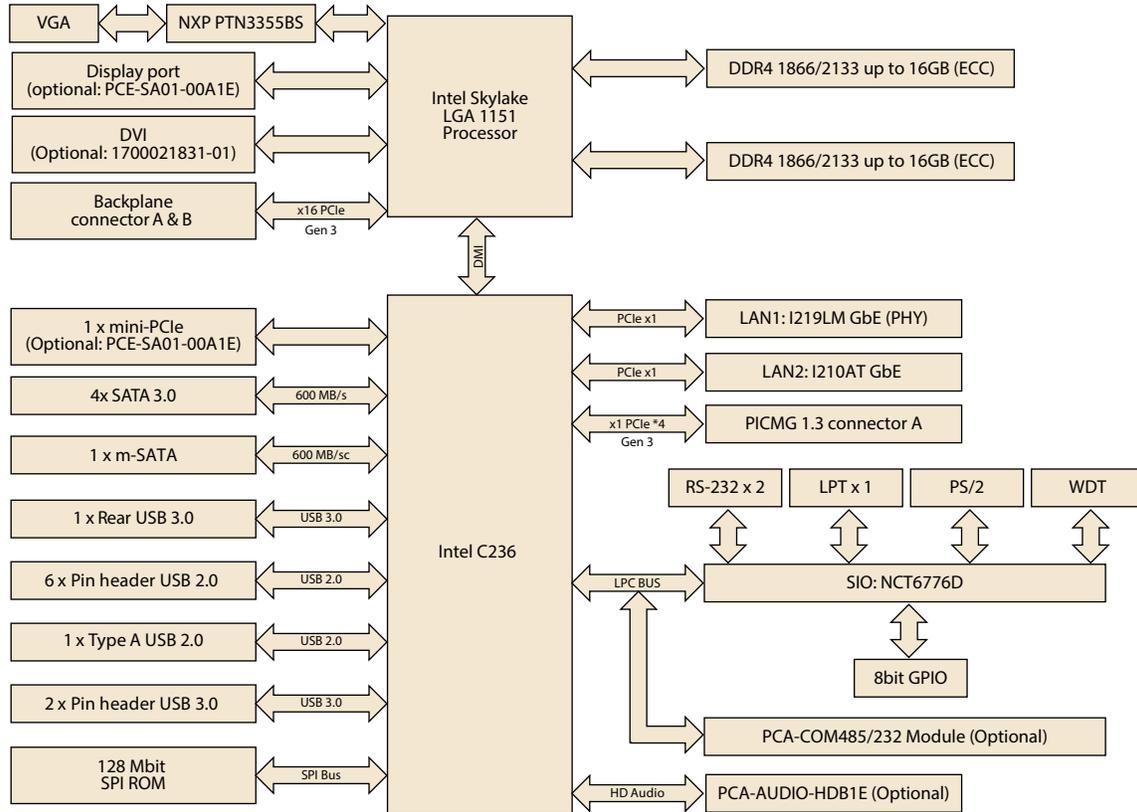
- Complies with PICMG 1.3
- Supports Intel Xeon E3 1200v5 series, Core i7/i5/i3 LGA1151 processors with C236
- Dual Channel DDR4 1866/2133 (ECC) up to 32 GB
- Supports PCIe 3.0, USB 3.0, SATA3.0, SW RAID 0, 1, 5, 10
- Supports triple displays: VGA+DVI-D (optional) + DP (optional)
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (optional)
- Supports SUSIAccess and embedded software APIs

Note: Intel 7th generation processors only support Windows 10 (64-bit)

### Specifications

	CPU	E3-1275v6	E3-1275v5	E3-1225v5	E3-1268Lv5	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE	
Processor System	Base Frequency	3.8 GHz	3.6 GHz	3.3 GHz	2.4 GHz	3.6 GHz	2.9 GHz	3.4 GHz	2.4 GHz	3.4 GHz	2.7 GHz	3.2 GHz	2.3 GHz	3.9 GHz	3.4 GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz	
	L3 Cache	8 MB	8 MB	6 MB	8 MB	8 MB	8 MB	8 MB	8 MB	6 MB	6 MB	6 MB	6 MB	3 MB	3 MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB	
	SKU/Chipset	Intel C236																				
	BIOS	AMI 128 Mbit SPI Flash																				
Bus	PCI-Express	Two x8 or one x16, plus four x1 to backplane (PCIe Gen 3.0)																				
Memory	Technology	Dual channel DDR4 ECC 1866/2133 MHz (ECC function enable depends on processor support)																				
	Max. Cap.	32 GB (16 GB per DIMM)																				
	Socket	DDR4 260-pin SO-DIMM X2																				
	Controller	Chipset integrated Intel HD Graphics																				
	VRAM	Shared system memory is subject to OS																				
Graphics	CRT	Supports resolution up to 1920 x 1200 pixel at 60MHz																				
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60MHz																				
	DP	Supports resolution up to 4096 x 2304 @ 60Hz																				
	Triple Display	CRT + DP (Optional: PCE-SA01-00A1E) + DVI-D (Optional: 1700021831-01)																				
	Interface	10/100/1000 Mbps																				
Ethernet	Controller	LAN 1: Intel I219LM LAN 2: Intel I210AT																				
	Connector with LED	RJ45 x 2																				
Rear I/O	USB 3.0	1																				
	Ethernet	2																				
	VGA	1																				
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)																				
Internal Connector	USB	7 USB2.0 (Pin headers*6 + USB Type A*1); 2 USB3.0 (Pin header)																				
	SATA 3.0	4 (600 MB/sec, supports S/W RAID 0, 1, 5, 10)																				
	m-SATA	1 (600 MB/sec)																				
	mini-PCIe	1 (Optional: PCE-SA01-00A1E, PCIe Gen 2.0)																				
	COM	2 (RS-232)																				
	Parallel	1 (SPP/EPP)																				
	GPIO	8 bits																				
Watchdog Timer	Output	System reset																				
	Interval	Programmable 1-255 sec																				
Miscellaneous	Audio	Intel High Definition audio interface (requires an audio extension module P/N: PCA-AUDIO-HDB1E)																				
	Test environment	Intel Xeon E3-1225 v5 (3.30GHz), DDR4 2133 8GB *2																				
Power Requirement	Voltage	12V	5V	3.3V				5VSB	-12V			-5V	-5V									
	Current	4.6	0.01	0.32				0.08	0			0	0									
Environment	Operating																Non-operating					
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); depends on CPU frequency and cooler solution															-40 ~ 85 °C and 60 °C @ 95% RH non-condensing					
Physical	Operating humidity	40 °C @ 85% RH non-condensing																				
	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")																				

## Board Diagram



## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DVI-D	DP	COM	SATA III	USB 2.0	USB 3.0	m-SATA	mini-PCIe	S/W RAID	AMT
PCE-4129G2-00A1E	C236	ECC/ Non-ECC	PCE-3BXX PCE-4BXX	2	1	1*	1**	2 RS-232 4 RS-422/485 or 4 RS-232 (optional)***	4	7	3	1	1**	Yes	Yes

\* DVI-D cable (1700021831-01) is optional.

\*\* PCE-SA01-00A1E is required. PCE-SA01-00A1E is compatible with IPC-3026/IPC-6806S/ACP-4D00/ACP-4020, but not compatible with IPC-3012.

\*\*\*PCA-COM485-00A1E is required for additional 4 RS422/485; PCA-COM232-00A1E is required for additional 4 RS232.

## Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDB1E	Audio module with Realtek ACL892
PCA-TPM-00A1E	TPM 1.2 module
PCA-TPM-00B1E	TPM 2.0 module
PCE-SA01-00A1E	IO extension module
1700021831-01	DP to DVI-D cable w/ BKT
1960052651N021	2U cooler for Intel Xeon E3-1275v5, E3-1225v5, E3-1268Lv5, i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053207N001	1.5U cooler for Intel E3-1268Lv5, i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053065N001	1U cooler for Intel E3-1268Lv5, i7-6700TE, i5-6500TE, i3-6100TE, G4400TE, G3900TE

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1700022749-11	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700014398-11	4-port USB cable kit	x1
1700028292-01	2 ports USB3.0 cable W/BKT	x1
1703040100	Power converter	x1
9689000002	Jumper package	x1
2001302910	Startup manual	x1
2061302900	Utility CD	x1

## Bracket View

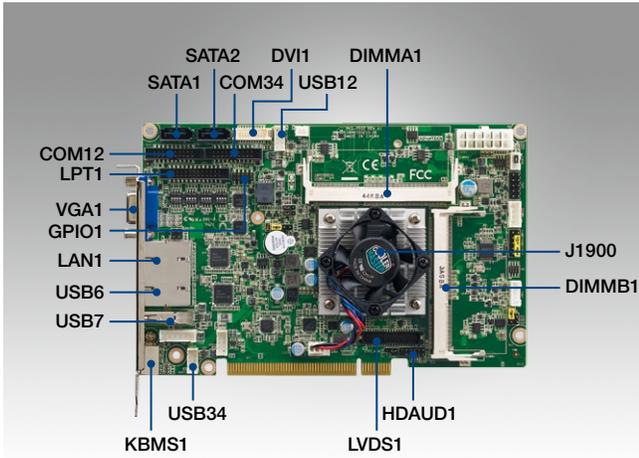


PCE-4129G2-00A1E

- 1 Software and Industry Solutions
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- 8 Industrial I/O and Video Solutions

# PCI-7032

## Intel® Celeron J1900/N2930 PCI Half-size SBC with DDR3L 1333/Dual GbE/m-SATA/4 RS-232/422/485



### Features

- Ultra low power Intel® Celeron processor J1900/N2930, VG SKU is fanless design
- Dual channel DDR3L 1066/1333 on 204-pin SO-DIMM socket
- Dual independent display
- Up to 2 GbE LAN
- 2 SATA 2.0 (300 MB/s), one of them can be configured as m-SATA
- Legacy I/O: 4 RS-232/422/485, and 1 LPT support

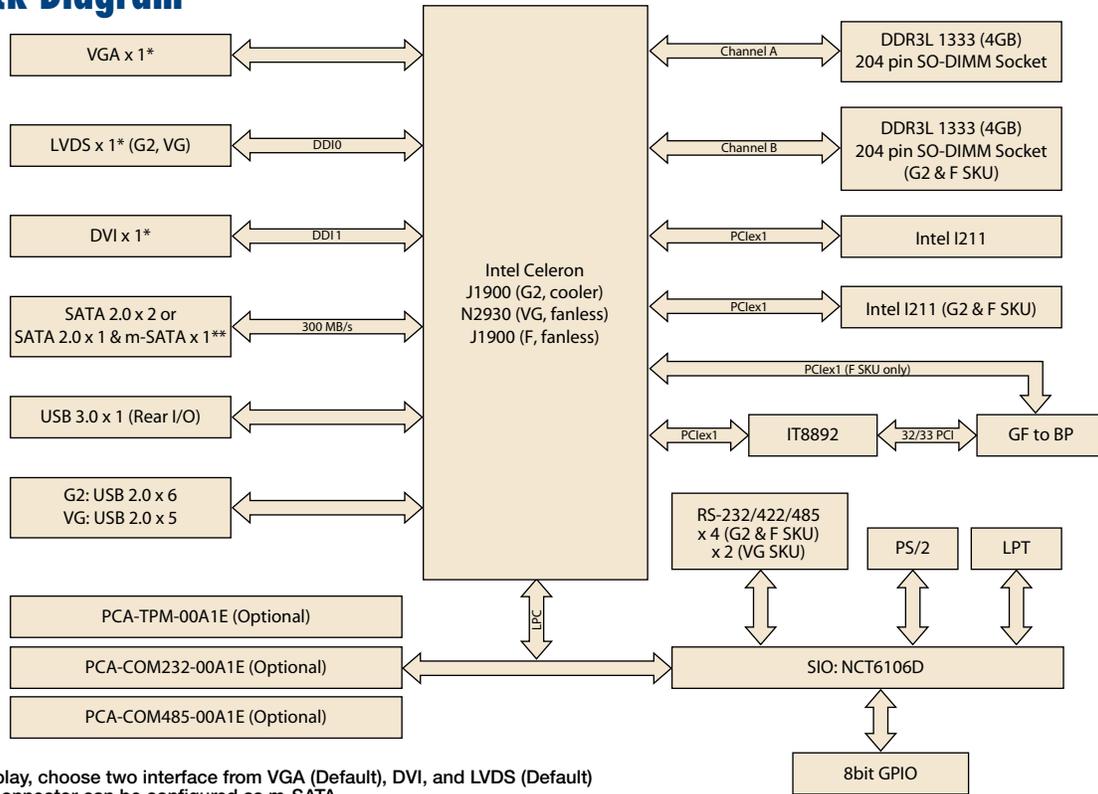
Quiet

### Specifications

CE FCC

Processor System	CPU	Intel Celeron N2930	Intel Celeron J1900
	Speed	1.83 GHz	2.0 GHz
	L2 Cache	2 MB	2 MB
	BIOS	AMI 64Mb SPI Flash	
Bus	PCI-Express	PCIe x 1 (F SKU only)	
	PCI	Four 32 bit/33 MHz PCI Masters to Backplane	
Memory	Technology	G2: Dual channel DDR3L-1333 VG: DDR3L-1333 F: Dual channel DDR3L-1333	
	Max. Cap.	8 GB (4GB per DIMM)	
	Socket	DDR3 204-pin SO-DIMM x1 (VG); x2 (G2, F)	
Graphics	Onboard	Chipset integrated Intel® HD Graphics	
	VRAM	Shared system memory. It subjects to the OS.	
	Video Interface	Dual independent display: choosing two interfaces from VGA (default), LVDS (default), and DVI VGA: Supports up to 2560 x 1600 @ 60 Hz LVDS: 48 bit (Dual channel 24 bit) LVDS up to 1920 x 1200 @ 60 Hz DVI: Supports up to 2560 x 1600 @ 60 Hz	
	Video Output	Dual independent display: choosing two interface from VGA (Default), DVI and LVDS (Default)	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	LAN1: Intel I211 LAN2: Intel I211 (G2, F)	
	Connector	RJ-45 with LED Connector x 2	
SATA	Max. Transfer Rate	300 MB/s (SATA 2.0)	
	Channel	2 (SATA2 can be configured as m-SATA)	
I/O Interface	USB 2.0	G2: one USB 3.0 (5Gbps, rear I/O), six USB 2.0 (480Mbps, pin-header x6) VG: one USB 3.0 (5Gbps, rear I/O), five USB 2.0 (480Mbps, pin-header x4, rear I/O x1) F: one USB 3.0 (5Gbps, rear I/O), six USB 2.0 (480Mbps, pin-header x6)	
	Serial	Four RS-232/422/485 for G2 & F; Two RS-232/422/485 for VG	
	Parallel	1 (EPP/ECP)	
	PS/2	1 (for mouse and keyboard, a Y cable is included in the package)	
Watchdog Timer	Output	System reset	
	Interval	Programmable, 1~255 sec/min	
Miscellaneous	Audio Output	Intel High Definition audio interface (requires a audio extension module)	
		Operating	Non-Operating
Environment	Temperature	0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing
	Test Environment	Intel Celeron J1900 (2GHz), DDR3L 1333, 4GB SO-DIMM module*2	
Power Requirement	Voltage	12V	5V 5VSB
	Current	0.737A	0.298A 0.044A
	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")	

## Block Diagram



\* Dual display, choose two interface from VGA (Default), DVI, and LVDS (Default)  
 \*\* SATA2 connector can be configured as m-SATA.

## Ordering Information

Model Name	SoC	Memory	DIMM Slot	Fanless	USB	COM Port	PCIe x 1	LPT	LAN	VGA	LVDS	DVI	m-SATA	HW Monitor
PCI-7032G2-00A1E	J1900	Dual channel DDR3L-1333 up to 8GB (204-pin SO-DIMM socket x2)	2	No	1 x USB 3.0 6 x USB 2.0	4	No	1	2	Yes	Yes	Yes	Yes	Yes
PCI-7032VG-00A1E	N2930	DDR3L-1333 up to 4GB (204-pin SO-DIMM socket x1)	1	Yes	1 x USB 3.0 5 x USB 2.0	2	No	1	1	Yes	Yes	Yes	Yes	No
PCI-7032F-00A1E	J1900	Dual channel DDR3L-1333 up to 8GB (204-pin SO-DIMM socket x2)	2	Yes	1 x USB 3.0 6 x USB 2.0	4	Yes	1	2	Yes	No	Yes	No	No

\*PCI-7032F-00A1E is only compatible with Advantech IPC-120 chassis which has special thermal design and can NOT be used with other enclosures.

## Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4x RS-422/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-TPM-00A1E	TPM module (Trusted platform management)
1700021831-01	DVI cable
1700000265	12 pin-12 pin ATX power cable kit
1703100261	2-port USB cable kit
PCA-AUDIO-HDB1E	Audio-card, B1 version

\*PCI-7032 do not support PCA-AUDIO-HDA1E

## I/O View



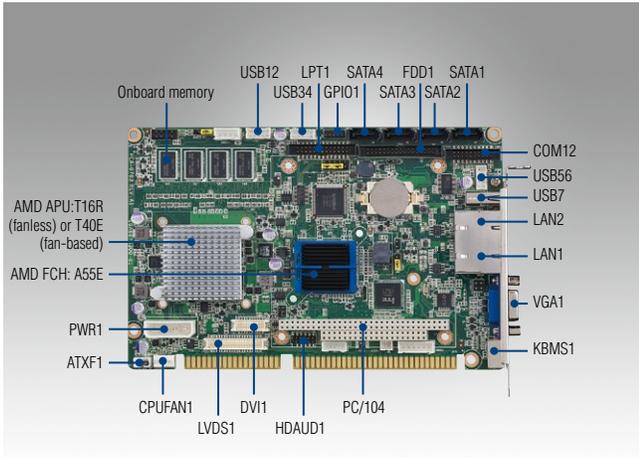
## Packing List

Part Number	Description	Quantity
1960046526N001	CPU cooler for Celeron J1900 SoC (only available for G2 SKU)	x 1
1700003194	Serial ATA HDD data cable	x 1
1700022749-11	Serial ATA HDD power cable	x 1
1700002223	Printer (parallel) port cable kit	x 1
1700008762	Dual COM ports cable kit	x2 (G2,F) x1 (VG)
1700002343	ATX feature cable	x 1
1700014398-11	4-port USB cable kit	x 1
1700060202	Y cable for PS/2 keyboard and PS/2 mouse	x 1
9689000068	Jumper pack	x 1
2001703200	PCI-7032 startup manual	x 1
2061703200	DVD with driver utility and manual (in PDF format)	x 1

- 1 Software and Industry Solutions
- 2 Industrial Server
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- 8 Industrial I/O and Video Solutions

# PCA-6763

## AMD T40E/T16R ISA Half-size SBC with Dual Independent Display/Dual GbE/SATA/USB/m-SATA/COM/LPT



### Features

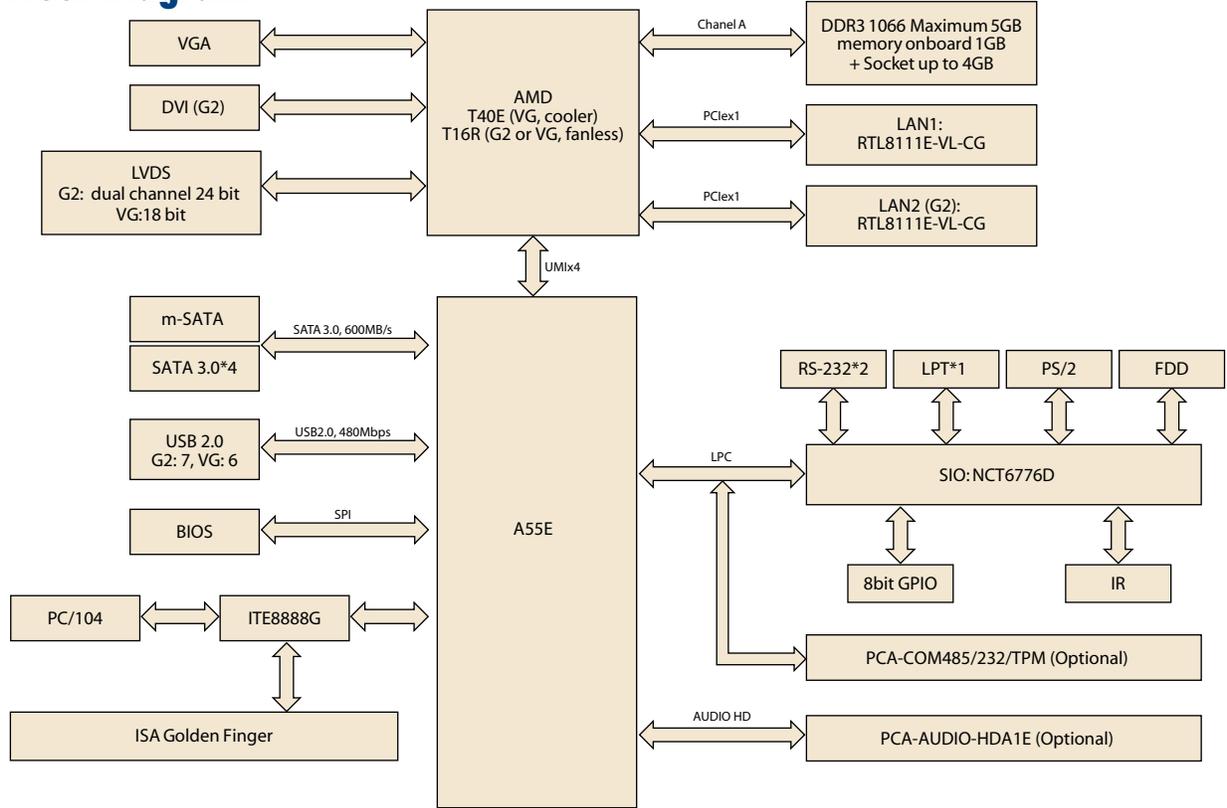
- Ultra low power, AMD dual-core Accelerated Processing Unit T40E or fanless T16R
- DDR3 1066 memory onboard 1GB+ DDR3 1066 SO-DIMM socket 4GB
- Dual independent display
- Up to 2 GbE LAN supported
- Up to 7 USB 2.0 (480 Mbps)
- 4 x SATA 3.0 (600 MB/s) and 1 m-SATA (600 MB/s)
- Legacy I/O, such as FDD/ PC/104/ COM/ LPT supported
- Optional module for 4 x RS-422/485 or 4 x RS-232, TPM and HD audio

CE FCC

### Specifications

Processor System	CPU	AMD G-Series APU T16R	AMD G-Series APU T40E				
	Max. Speed	615 MHz	1 GHz				
	L2 Cache	512 KB					
	Chipset	AMD Fusion controller hub A55E					
	BIOS	AMI-EFI 32 Mbit SPI					
Bus	ISA	Full 16-bit ISA Bus signal					
Memory	Technology	DDR3 1066 1GB onboard+ DDR3 1066 up to 4GB on 1 x 204-pin SODIMM socket					
	Controller	AMD G-Series T16R or T40E (Integrated with AMD GPU Radeon HD 6250)					
Graphics	VRAM	Optimized shared memory architecture, up to 384 MB of system memory					
	Dual Display	G2: Choosing two interface from VGA (Default), LVDS, and DVI VG: VGA (Default)+LVDS					
	VGA	Up to 1920 x 1200 @ 60Hz					
	LVDS	G2: 48 bit (Dual channel 24 bit) LVDS up to 1920 x 1200 @ 60Hz VG: 18 bit LVDS up to 1024 x 768 @ 60Hz					
	DVI	Up to 1920 x 1200 @ 60Hz					
Ethernet	Interface	10/100/1000 Mbps					
	Controller	LAN1: Realtek RTL8111E-VL-CG LAN2: Realtek RTL8111E-VL-CG					
	Connector	RJ-45 x 2					
I/O Interface	USB	G2: USB2.0 x 7 (1 on bracket, 6 onboard) VG: USB2.0 x 6 (6 onboard)					
	SATA	SATA 3.0 x 4					
	m-SATA	1					
	AUDIO	HD AUDIO interface*1 for PCA-AUDIO-HDA1E (Optional)					
	Serial	RS-232 x 2 onboard Optional: RS-422/485 x 4 (PCA-COM485-00A1E) or RS-232 x 4 (PCA-COM232-00A1E) on module					
	Parallel	1 (EPP/ECP/SPP)					
	FDD	1					
	GPIO	8 bit					
Watchdog Timer	PS/2	1 (6-pin DIN socket on bracket for PS/2 keyboard and mouse, 6-pin wafer box connector)					
	Output Interval	System reset/IRQ11 Programmable, 1~255 sec/min					
Power Requirement	Test Environment	AMD G-series T40E (1GHz), DDR3 1066 5GB (1GB onboard and 4 GB with DIMM)					
	Voltage	+12V	+5V	+3.3V	+5VSB	-12V	-5V
	Current	0.39A	1.93A	0A	0A	0A	0A
Environment	Temperature	Operating		Non-Operating			
		0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)		-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing			
Physical	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")					

### Block Diagram



### Ordering Information

P/N	APU	GbE LAN	Memory	VGA	DVI	LVDS	USB	SATA	COM	LPT	PC104	FDD	mSATA
PCA-6763G2-00A1E	T16R	2	onboard 1GB+ Socket up to 4GB	1	1	48 bit	7	4	2 RS-232	1	1	1	1
PCA-6763VG-00A1E	T16R	1	onboard 1GB+ Socket up to 4GB	1	-	18 bit	6	4	2 RS-232	1	1	1	1
PCA-6763VG-S0A1E	T40E	1	onboard 1GB+ Socket up to 4GB	1	-	18 bit	6	4	2 RS-232	1	1	1	1

### Packing List

Part Number	Description	Quantity
1700008762	Dual-COM port cable kit (for G2 SKU)	x 1
1700014398-11	4-port USB cable kit (2.0 mm pitch)	x 1
1700060202	Y cable for PS/2 keyboard, PS/2 mouse	x 1
1700003194	SATA HDD data cable	x 1
1700022749-11	SATA HDD power cable	x 1
1700002343	ATX feature cable	x1
1700002223	LPT port cable kit (for G2 SKU)	x1
1700008954	LPT+COM cable kit (for VG SKU)	x1
1960046526N001	CPU cooler for AMD T40E APU (only available for PCA-6763VG-S0A1E)	x 1

### Optional Accessories

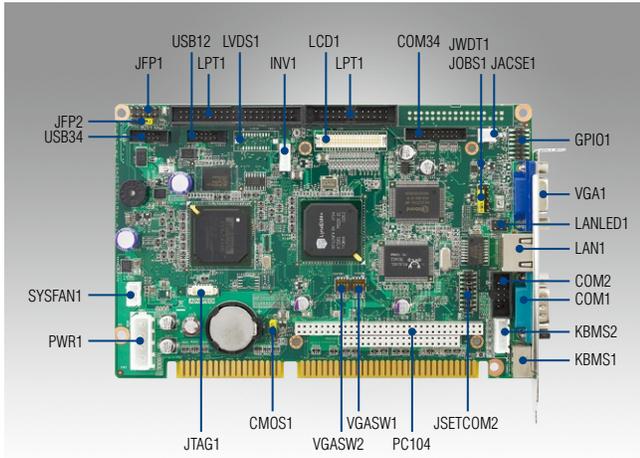
Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 COM module
PCA-COM232-00A1E	4 x RS-232 COM module
PCA-AUDIO-HDA1E	Extension module for 7.1 channel High Definition audio
PCA-TPM-00A1E	Trusted platform module compliant with TCG 1.2
1700008822	DVI cable
1701340603	FDD cable

### I/O View



# PCA-6742

## Advantech EVA-X4300 ISA Half-size SBC with VGA/LCD/LAN/CFC/USB and PC/104



### Features

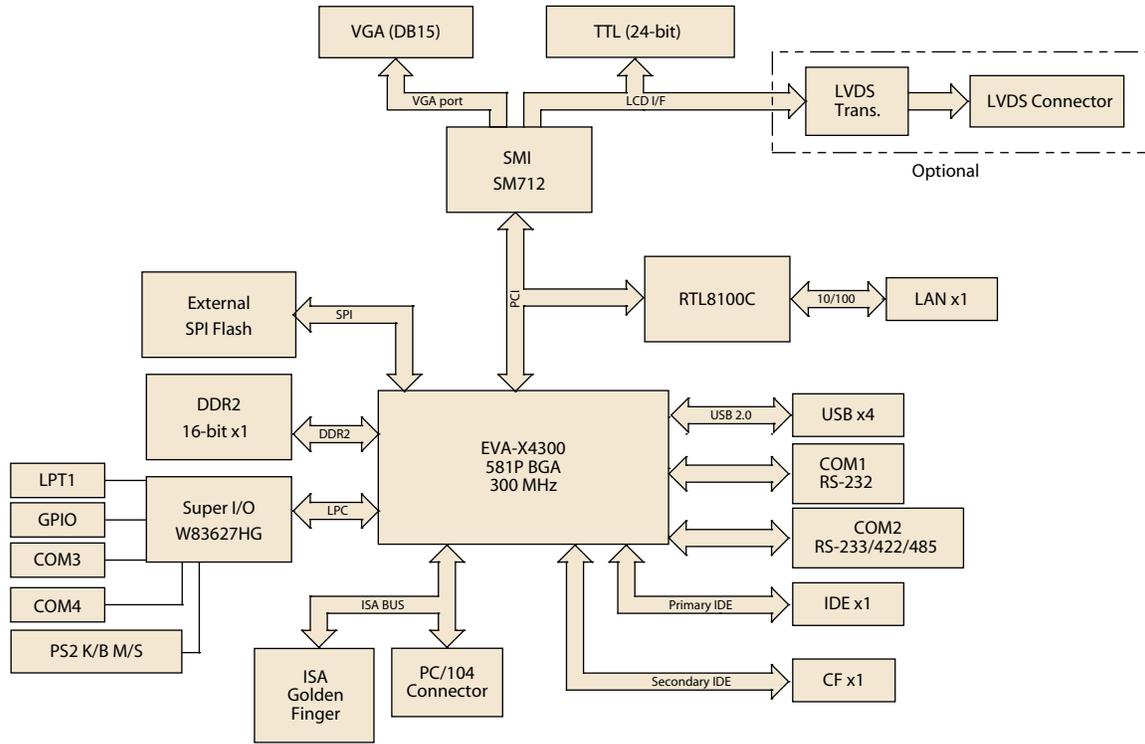
- Low power fanless EVA-X4300
- Onboard 128/64 DDR2 RAM
- 10/100 Mbps Ethernet
- 1024 x 768 @ 18/24-bit TTL/LVDS support

CE FCC

### Specifications

Processor System	CPU	Advantech EVA-X4300 up to 300 MHz	
	Max. Speed	300 MHz	
	L1 Cache	32 KB	
	Chipset	Advantech EVA-X4300 up to 300 MHz	
	BIOS	Award integrated 256 KB ROM in Advantech EVA-X4300	
Bus	PCI	32-bit/33 MHz	
	ISA	8/16-bit 8 MHz	
Memory	Technology	Default onboard DDR2 128 MB	
	Socket	-	
Graphics	Controller	Chipset integrated VGA controller VGA mode: SM712 graphics chip supports 1024 x 768 @ 24-bit true color LCD mode: SMI SM712 2D graphics chip supports 1024 x 768 @ 18/24-bit TFT	
	VRAM	4 MB display memory	
	LVDS	Yes (Optional)	
	TTL	Up to 24-bit TTL for TFT LCD	
	Dual Display	Supports CRT+LCD simultaneously display	
Ethernet	Interface	10/100 Mbps	
	Controller	Realtek RTL8100CL	
	Connector	RJ-45 x 1	
EIDE	Mode	PIO 4	
	Channel	1	
SATA (150 MB/s)	Port	-	
I/O Interface	USB	4 ports (USB 2.0 and USB1.1 under DOS)	
	Serial	4 COM (1 x RS-232/422/485 on one 2.54 mm pitch wafer box, 1 x RS-232 on rear I/O, 2 x RS-232 on one 2.0 mm pitch wafer box)	
	Parallel	1 (via super I/O)	
	FDD	-	
	GPIO	8 bit; COMS Level (0 ~ 3.3 V)	
	PS/2	6-pin DIN socket on bracket for PS/2 keyboard and mouse. (via super I/O) 6-pin (2.54 mm) wafer box connector for keyboard only	
	Watchdog Timer	Output	System reset/IRQ11
	Interval	Programmable, 1~255 sec/min	
Miscellaneous	Audio Output	-	
	Solid State Disk	CompactFlash socket (Type I/II), shared with secondary IDE	
Power Requirement	Typical	+5 V @ 1.6 A	
	Max	+5 V @ 2 A	
Environment	Temperature	Operating	Non-Operating (Storage)
		0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing
Physical	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")	
OS		DOS, Win CE 5.0	

## Block Diagram



## Ordering Information

P/N	CPU	LVDS	TTL	USB	GPIO	FE LAN	FDD
PCA-6742LV-00A1E	EVA-X4300	-	-	4	-	-	-
PCA-6742VE-00A1E	EVA-X4300	(Optional)	24-bit	4	1	RTL 8100C	-

## Packing List

Part Number	Description	Quantity
1701260305	COM2 + LPT cable	x 1
1700060202	Y-cable for PS/2 Keyboard, PS/2 Mouse	x 1
1701400452	EIDE (HDD) cable	x 1
9689000002	Jumper pack	x 1
1700008887	USB cable with 4 ports (2.0 mm pitch)	x 1
-	Utility CD	x 1
-	Startup manual	x 1

## Optional Accessories

Part Number	Description
1703100260	USB cable with 2 ports (2.0 mm pitch)
1700008762	Dual-COM port cable kit for COM 3-4
PCA-SATAP2-00A1E	IDE/SATA Adapter for CPU cards

## I/O View



PCA-6742LV-00A1E

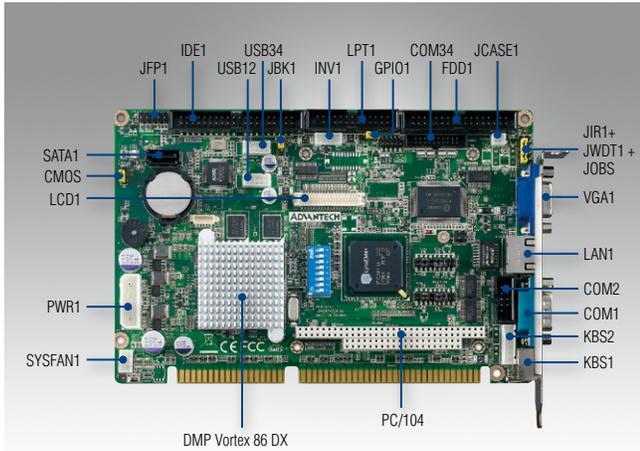


PCA-6742VE-00A1E

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# PCA-6743

## DM&P Vortex86DX ISA Half-size SBC with VGA/TTL or LVDS/LAN/USB/PC/104/CFC/COM



### Features

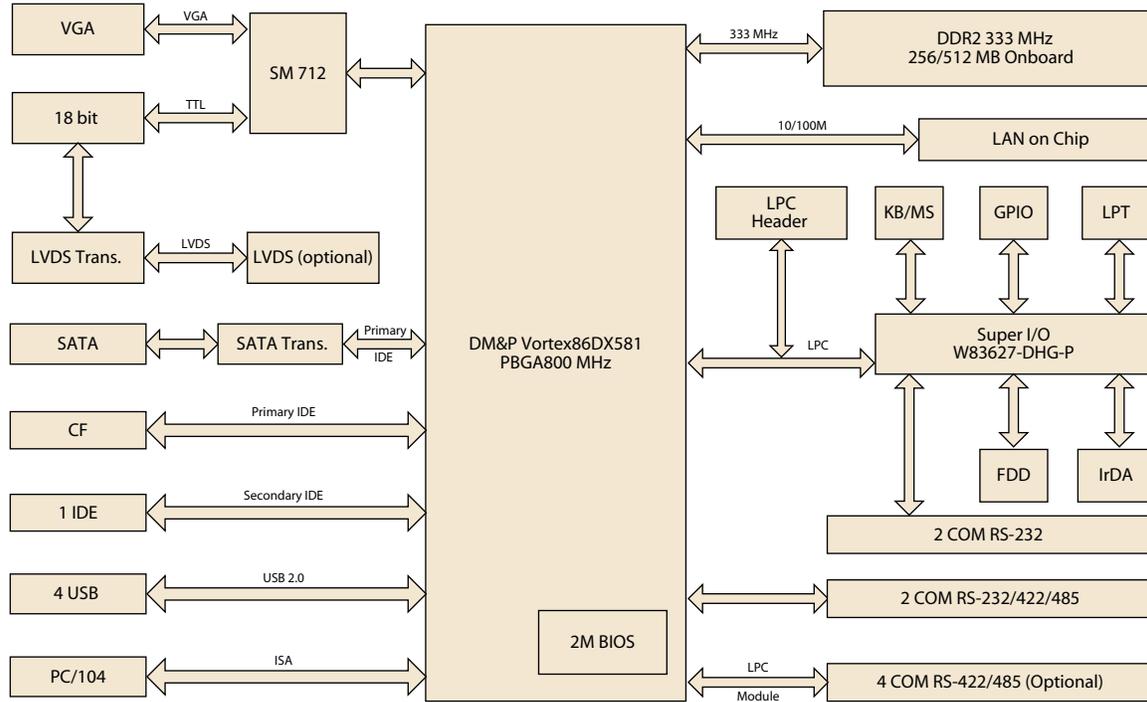
- Ultra low power, fanless DM&P Vortex86DX processor and 512/256 MB onboard DDR2 memory
- VGA+LCD dual video outputs
- FDD/ PC/104/ COM supported
- Optional module for 4 COM485 w/auto-flow control

CE FCC

### Specifications

Processor System	CPU	DM&P Vortex86DX
	Max. Speed	800 MHz
	L1 Cache	16 KB I/D-Cache
	L2 Cache	256 KB
	Chipset	DM&P Vortex86DX
BIOS	BIOS	Award integrated in DM&P Vortex86DX
	Bus	Full 16-bit ISA Bus signal
Memory	Technology	Default onboard DDR2 256MB (For VE SKU) Default onboard DDR2 512MB (For F SKU)
	Socket	-
	Graphics	Chipset integrated VGA controller VGA mode: SM712 graphics chip supports 1024 x 768 @ 24-bit true color LCD mode: SMI SM712 2D graphics chip supports 1024 x 768 @ 18-bit TFT
Graphics	VRAM	Shared 4 MB
	LVDS	18 bit LVDS (optional)
	TTL	Up to 24-bit TTL for TFT LCD
	Dual Display	Supports VGA+LCD simultaneous display
Ethernet	Interface	10/100 Mbps
	Controller	LAN on Vortex86DX
	Connector	RJ-45 x 1
EIDE	Mode	UDMA 100
	Channel	1 (2 IDE devices from secondary IDE)
SATA (150 MB/s)	Port	1 (F SKU)
I/O Interface	USB	4 (USB 2.0 ports)
	Serial	F SKU: 2 RS-232/422/485 (1 Real I/O and 1 Pin header) + 2 RS-232 (with Pin header) VE SKU: 2 RS-232 (1 Real I/O and 1 Pin header) Optional: PCA-COM485; Add 4 RS-422/485 with Auto-Flow Control (Need to check if IRQ is available or not)
	Parallel	1 (EPP/ECP/SPP)
	FDD	1
	GPIO	8-bit 4 in/4 out
	PS/2	1 (6-pin DIN socket on bracket for PS/2 keyboard and mouse, 6-pin wafer box connector for keyboard only)
Watchdog Timer	Output	System reset/IRQ11
	Interval	Programmable, 1-255 sec/min
Miscellaneous	Audio Output	-
	Solid State Disk	Compact Flash socket (Type I/II) from primary master
Power Requirement	Voltage	+12 V +5 V
	Current	0.04 A 1.44 A
Environment	Temperature	Operating: 0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing) Non-Operating: -40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing
	Physical	Dimensions (L x H)

## Block Diagram



## Ordering Information

P/N	VGA	TTL	LVDS	SATA	COM	PC104	LPT	FDD	Onboard RAM
PCA-6743VE-Q0A2E	1	1	-	-	2 RS-232	-	1	1	256 MB
PCA-6743F-Q0A2E	1	1	-	1	2 RS-232 2 RS-232/422/485	1	1	1	512 MB
PCA-6743F-L0A2E	1	-	1	1	2 RS-232 2 RS-232/422/485	1	1	1	512 MB

## Packing List

Part Number	Description	Quantity
1700008762	Dual-COM port cable kit for COM3-4 (2.00 mm) (for F SKU)	x 1
1700014398-11	4-port USB cable kit (2.0 mm pitch)	x 1
1700060202	Y cable for PS/2 keyboard, PS/2 mouse	x 1
1701260305	COM2 (2.54 mm) +LPT (2.54 mm) cable (for F SKU)	x 1
1700003194	SATA HDD data cable	x 1
1700022749-11	SATA HDD power cable	x 1

## Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 COM module

\* Please check the IRQ resource availability before add on the module.

## I/O View



PCA-6743VE-Q0A2E  
 PCA-6743F-Q0A2E  
 PCA-6743F-L0A2E

- 1 Software and Industry Solutions
- 2 Industrial Server
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- 8 Industrial I/O and Video Solutions

# PICMG 1.3 Full-Size SHB Backplanes

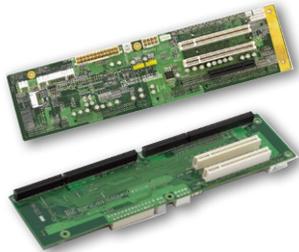
## Server Grade Backplanes

Compatible with PCE-7000 Series System Host Board

### 2U Butterfly Backplanes

#### PCE-7B06V-04A1E

- 6-slot Butterfly BP for 2U chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x8
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: ACP-2000EBP



### 8-slot Wallmount Chassis Backplanes

#### PCE-7B08-04A1E

- 8-slot BP for 8-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: Two x8; One x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-6608



### 14-slot Rackmount Chassis Backplanes

#### PCE-7B13-64C1E

- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: Two x8
- PCI-X slot: Two 64/100; Four 64/66
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, ACP-4340, and ACP-4360



#### PCE-7B13-07A1E

- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: Two x8, Three x4
- PCI-X slot: N/A
- PCI slot: Seven 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, ACP-4340, and ACP-4360



## 14-slot Rackmount Chassis Backplanes

### PCE-7B09R-04A1E

- 9-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x8, Three x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP- 4000, ACP-4010, ACP-4320, ACP-4340, and ACP-4360



## 20-slot Rackmount Chassis Backplanes

### PCE-7B17-00A1E

- 17 slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: five x8, eleven x4
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-623, IPC-622



### PCE-7B19-88B1E

- 19-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: Two X8
- PCI-X slot: Eight 64/100
- PCI slot: Eight 32/33
- Compatible with IPC chassis: IPC-623, IPC-622



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8	Industrial I/O and Video Solutions

# PICMG 1.3 Full-Size SHB Backplanes

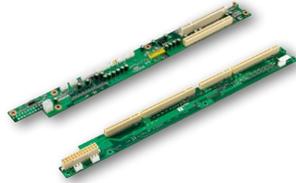
## Mainstream Backplanes

Compatible with PCE-5000 Series System Host Board

### 1U Butterfly Backplanes

#### PCE-5B03V-01A1E

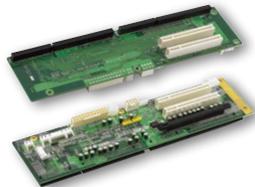
- 3-slot Butterfly BP for 1U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: One 32/33
- Compatible with IPC chassis: ACP-1010



### 2U Butterfly Backplanes

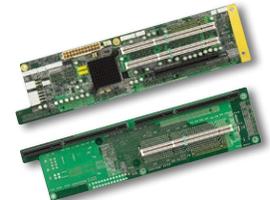
#### PCE-5B06V-04A1E

- 6-slot Butterfly BP for 2U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: ACP-2000EBP



#### PCE-5B05V-30B1E

- 5-slot Butterfly BP for 2U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Two 64/100; one 64/133
- PCI slot: N/A
- Compatible with IPC chassis: ACP-2000EBP



#### PCE-5B06V-00A1E

- 6-slot Butterfly BP for 2U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: ACP-2000EBP



### 5-slot Wallmount Chassis Backplanes

#### PCE-5B05-02A1E

- 5-slot BP for 5-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Two
- Compatible with IPC chassis: IPC-6025



#### PCE-5B04-20B1E

- 4-slot BP for 5-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Two 64/100
- PCI slot: N/A
- Compatible with IPC chassis: IPC-6025



#### PCE-5B05-04A1E

- 5-slot BP for 5-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: N/A
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC-6025



#### PCE-5B05-03A1E

- 5 slot BP for 5 slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: Three PCI 32/33
- Compatible with IPC chassis: IPC-6025



## PICMG1.3 Full-Size SHB Backplanes

### 6-slot Wallmount Chassis Backplanes

#### PCE-5B06-00A1E

- 6-slot BP for 6-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-6606, and IPC-6806W



#### PCE-5B06-04A1E

- 6-slot BP for 6-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-6606, and IPC-6806W



#### PCE-5B06-03A1E

- 6 slot BP for 6 slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Three PCI 32/33
- Compatible with IPC chassis: IPC-6606, and IPC-6806W



### 8-slot Wallmount Chassis Backplanes

#### PCE-5B07-04A1E

- 7-slot BP for 8-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-6608



#### PCE-5B08-02A1E

- 8-slot BP for 8-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: Two 32/33
- Compatible with IPC chassis: IPC-6608



### 10-slot Wallmount Chassis Backplanes

#### PCE-5B09-06A1E

- 9-slot BP for 10-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Six 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, ACP-4000, ACP-4010, ACP-4320, and ACP-4360



#### PCE-5B09-04A1E

- 9-slot for 10-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16, three x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, ACP-4000, ACP-4010, ACP-4320, and ACP-4360



### 14-slot Rackmount Chassis Backplanes

#### PCE-5B10-04A1E

- 10-slot BP for 14-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320 and ACP-4360



#### PCE-5B12-64C1E

- 12-slot BP for 14-slot Chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Two 64/100; Four 64/66
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, and ACP-4360



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8	Industrial I/O and Video Solutions

# PICMG 1.3 Full-Size SHB Backplanes

## 14-slot Rackmount Chassis Backplanes

### PCE-5B13-08A1E

- 13-slot BP for 14-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Three x1
- PCI-X slot: N/A
- PCI slot: Eight 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, and ACP-4360



### PCE-5B12D-04A1E

- 12-slot BP for 14-slot chassis
- Segments: 2
- Each segment:
  - One CPU card slot
  - PCIe slot: One x16
  - PCI-X slot: N/A
  - PCI slot: Four 32/33
- Compatible with IPC chassis: ACP-4010



### PCE-5B12-07A1E

- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x16, Three x4
- PCI-X slot: 0
- PCI slot: Seven 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4320, ACP-4360, ACP-4010



### PCE-5B13-03

- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x16, Eight x4
- PCI-X slot: 0
- PCI slot: Three 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4320, ACP-4360, ACP-4010



## 20-slot Rackmount Chassis Backplanes

### PCE-5B18-88B1E

- 18-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Eight 64/66
- PCI slot: Eight 32/33
- Compatible with IPC chassis: IPC-623, IPC-622



### PCE-5B16Q-02A1E

- 16-slot BP for 20-slot chassis
- Segments: 4
- Each segment:
  - One CPU card slot
  - PCIe slot: One x16
  - PCI-X slot: N/A
  - PCI slot: Two 32/33
- Compatible with IPC chassis: IPC-623, IPC-622



### PCE-5B12-00A1E

- 12-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: Ten x16 and one x4
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-623, IPC-622



### PCE-5B19-00A1E

- 19-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: Seventeen x16 and One x4
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-623, IPC-622



# PICMG 1.0 Full-Size SBC Backplanes

## 1U Butterfly Backplanes

### PCA-6103P2V-0A2E

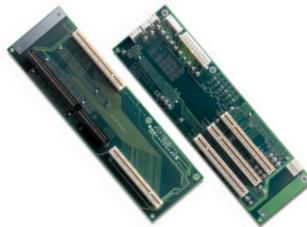
- Segments: 1
- Slots: 2 PCI, 1 CPU
- PCI bus: 32-bit/33 MHz
- Size: 40 x 400 mm (1.57" x 15.75")
- Ordering Information: 989K610303E
- Compatible with IPC chassis: ACP-1010



## 2U Butterfly Backplanes

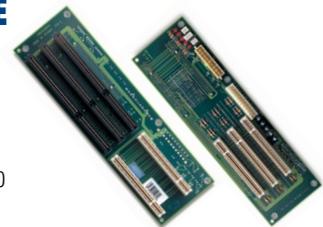
### PCA-6105P4V-0B3E

- Segments: 1
- Slots: 4 PCI, 1 PICMG
- PCI bus: 32-bit/33 MHz
- Size: 80 x 260 mm (3.15" x 10.23")
- Ordering Information: 989K610512E
- Compatible with IPC Chassis: ACP-2000



### PCA-6106P3V-0B2E

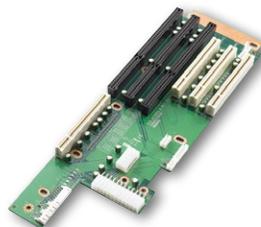
- Segments: 1
- Slots: 1 ISA, 3 PCI, 2 PICMG
- PCI bus: 32-bit/33 MHz
- Size: 80 x 260 mm (3.15" x 10.23")
- Ordering Information: 989K610622E
- Compatible with IPC Chassis: ACP-2000



## 5-slot PCI/ISA Backplanes

### PCA-6105P3-5A1E

- Segments: 1
- Slots: 1 ISA, 2 PCI, 1 PICMG, 1 PCI/ISA
- Size: 106.5 mm x 327.66 mm (4.19" x 12.9")
- Ordering Information: PCA-6105P3-5A1E
- Compatible with IPC Chassis: IPC-6025



1	Software and Industry Solutions
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# PICMG 1.0 Full-Size SBC Backplanes

## 6-slot PCI/ISA Backplanes

### PCA-6106P4-0A2E

- Segments: 1
- Slots: 4 PCI, 2 PICMG
- Size: 142 x 270 mm (5.59" x 10.63")
- Ordering Information: PCA-6106P4-0A2E
- Compatible with IPC Chassis: IPC-6806W, IPC-6806, IPC-6606, IPC-6006



### PCA-6106P3-0D2E

- Segments: 1
- Slots: 2 ISA, 2 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 142 x 270 mm (5.59" x 10.63")
- Ordering Information: PCA-6106P3-0D2E
- Compatible with IPC Chassis: IPC-6806W, IPC-6806, IPC-6606, IPC-6006



## 8-slot PCI/ISA Backplanes

### PCA-6108P6-0C1E

- Segments: 1
- Slots: 1 ISA, 5 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 180 x 260 mm (7.09" x 10.24")
- PCI bridge: PI7C8152BMAE
- Primary PCI: 3 slots; Secondary PCI: 3 slots
- Ordering Information: PCA-6108P6-0C1E
- Compatible with IPC Chassis: IPC-6608



### PCA-6108P4-0C2E

- Segments: 1
- Slots: 3 ISA, 3 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 180 x 260 mm (7.09" x 10.24")
- Ordering Information: PCA-6108P4-0C2E
- Compatible with IPC Chassis: IPC-6608



# 14-slot PCI/ISA Backplanes

- 1 Software and Industry Solutions
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- 8 Industrial I/O and Video Solutions

## PCA-6114P12-0B3E

- Segments: 1
- Slots: 1 ISA, 11 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 315 x 300 mm (12.4" x 11.8")
- PCI bridge: Pericom PI7C8150BMAE
- Primary PCI: 3 slots; Secondary PCI: 9 slots
- Ordering Information: PCA-6114P12-0B3E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611



## PCA-6114P7-0E1E

- Segments: 1
- Slots: 4 ISA, 6 PCI, 3 PICMG, 1 PCI/ISA
- Size: 315 x 260 mm (12.4" x 10.24")
- PCI bridge: PI7C8152BMAE
- Primary PCI: 3 slots; Secondary PCI: 4 slots
- Ordering Information: PCA-6114P7-0E1E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611



## PCA-6114P4-0C2E

- Segments: 1
- Slots: 8 ISA, 4 PCI, 2 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- Ordering Information: PCA-6114P4-0C2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611
- When installing ACP-4320, ACP-4340, ACP-4360 and IPC-510 chassis, a 1U cooler is required



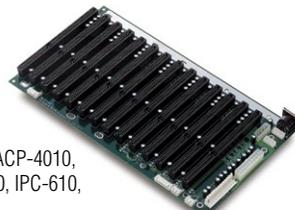
## PCA-6113P4R-0C2E

- Segments: 1
- Slots: 7 ISA, 4 PCI, 2 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- Ordering Information: PCA-6113P4R-0C2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611



## PCA-6114-0B2E

- Segments: 1
- Slots: 14 ISA
- Size: 315 x 175 mm (12.4" x 6.89")
- Ordering Information: PCA-6114-0B2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611



## PCA-6114P10-0B2E

- Segments: 1
- Slots: 2 ISA, 10 PCI, 2 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- PCI bridge: Pericom PI7C8150BMAE
- Primary PCI: 3 slots; Secondary PCI: 7 slots
- Ordering Information: PCA-6114P10-0B2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611



## PCA-6113DP4-0A2E

- Segments: 2
- Slots: 2 ISA, 7 PCI, 1 PICMG/PCI, 3 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- Ordering Information: PCA-6113DP4-0A2E
- Compatible with IPC Chassis: Only for ACP-4010
- Compatible with IPC Chassis: ACP-4010

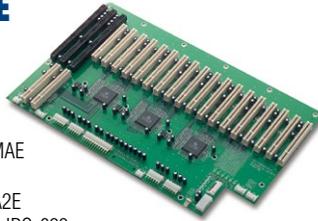


# PICMG 1.0 Full-Size SBC Backplanes

## 20-slot PCI/ISA Backplanes

### PCA-6120P18-0A2E

- Segments: 1
- Slots: 1 ISA, 17 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- PCI bridge: Three Pericom PI7C8150BMAE
- Secondary: 6 slot/6 slot/6 slot
- Ordering Information: PCA-6120P18-0A2E
- Compatible with IPC Chassis : IPC-623, IPC-622



### PCA-6119P7-0C1E

- Segments: 1
- Slots: 10 ISA, 7 PCI, 2 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- PCI bridge: PI7C8152BMAE
- Primary PCI: 3 slots; Secondary PCI: 4 slots
- Ordering Information: PCA-6119P7-0C1E
- Compatible with IPC Chassis : IPC-623, IPC-622



### PCA-6120P12-0A2E

- Segments: 1
- Slots: 7 ISA, 11 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- PCI bridge: Pericom PI7C8150BMAE
- Primary PCI: 3 slots; Secondary PCI: 9 slots
- Ordering Information: PCA-6120P12-0A2E
- Compatible with IPC Chassis : IPC-623, IPC-622



### PCA-6120P4-0B2E

- Segment: 1
- Slots: 14 ISA, 4 PCI, 2 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- Ordering Information: PCA-6120P4-0B2E
- Compatible with IPC Chassis : IPC-623, IPC-622



### PCA-6120Q-0B2E

- Segment: 4
- Slots: 5-5-5-5 ISA
- Size: 417 x 200 mm (16.42" x 7.87")
- Ordering Information: PCA-6120Q-0B2E
- Compatible with IPC Chassis : IPC-623, IPC-622

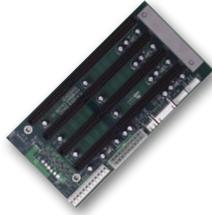


# Half-Size SBC Backplanes

## ISA Half-size SBC Backplanes

### PCA-6104-0C2E

- Segments: 1
- Slots: 4 ISA
- Size: 94.7 x 186 mm (3.7" x 7.3")
- Ordering Information: PCA-6104-0C2E



### PCA-6106-0B2E

- Segments: 1
- Slots: 6 ISA
- Size: 142 x 175 mm (5.59" x 6.89")
- Compatible with IPC-6806S, IPC-6006S, IPC-3026
- Ordering Information: PCA-6106-0B2E



### PCA-6108E-0C2E

- Segments: 1
- Slots: 8 ISA
- Size: 180 x 190 mm (7.09" x 7.48")
- Compatible with IPC-6908
- Ordering Information: PCA-6108E-0C2E



### PCA-6108-0B2E

- Segments: 1
- Slots: 8 ISA
- Size: 222 x 171 mm (8.74" x 6.73")
- Only for commercial PC chassis (baby AT size)
- Ordering Information: PCA-6108-0B2E



## PCI Half-size SBC Backplanes

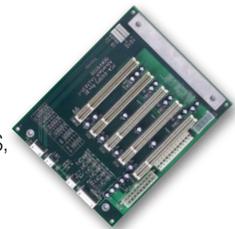
### PCA-6104P4-0B2E

- Segments: 1
- Slots: 4 PCI
- Size: 110 x 180 mm (4.3" x 7")
- Ordering Information: PCA-6104P4-0B2E



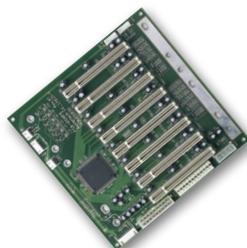
### PCA-6105P5-0B2E

- Segments: 1
- Slots: 5 PCI
- Size: 143 x 155 mm (5.6" x 6")
- Compatible with ACP-4D00, IPC-6806S, IPC-6006S, IPC-3026
- Ordering Information: PCA-6105P5-0B2E



### PCA-6108P8-0A2E

- Segments: 1
- Slots: 8 PCI
- Size: 182 x 185 mm (7.2" x 7.3")
- Compatible with IPC-6908
- Ordering Information: PCA-6108P8-0A2E



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# Half-Size SBC Backplanes

## PICMG 1.3 Half-size SHB Backplanes

### PCE-3B06-00A1E

- 6 slot backplane for 6-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, four x1
- Size: 142 x 176 mm (5.59" x 6.92")
- Compatible with ACP-4D00, IPC-6806S, IPC-3026
- Ordering information: PCE-3B06-00A1E



### PCE-3B06-03A1E

- 6 slot backplane for 6-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, One x1
- PCI slot: Three 32/33
- Size: 142 x 176 mm (5.59" x 6.92")
- Compatible with ACP-4D00, IPC-6806S, IPC-3026
- Ordering information: PCE-3B06-03A1E



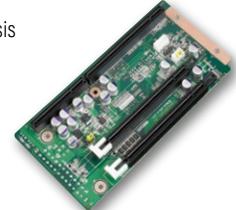
### PCE-3B06-02A1E

- 6-slot backplane for 6-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, Two x1
- PCI slot: Two 32 bit/33MHz
- Size: 142 x 176 mm (5.59" x 6.92")
- Compatible with ACP-4D00, IPC-6806S, IPC-3026
- Ordering information: PCE-3B06-02A1E



### PCE-3B03A-00A1E

- 3 slot backplane for compact-sized wall-mount chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, One x4
- Size: 173 x 86.3 mm (6.81" x 3.39")
- Compatible with IPC-3012
- Ordering information: PCE-3B03A-00A1E



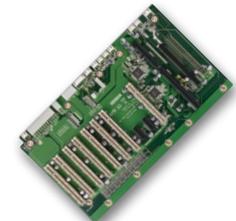
### PCE-3B03-01A1E

- 3 slot backplane for compact-sized wall-mount chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16
- PCI slot: One 32 bit/33MHz
- Size: 173 x 86.3 mm (6.81" x 3.39")
- Compatible with IPC-3012
- Ordering information: PCE-3B03-01A1E



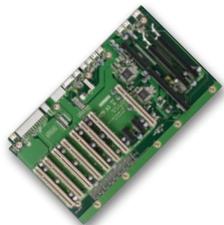
### PCE-3B12-08A1E

- 12-slot backplane for 14-slot half-sized chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, Two x1
- PCI slot: Eight 32 bit/33MHz
- Size: 315 x 185 mm (12.4" x 7.28")
- Compatible with IPC chassis: ACP-4020
- Ordering information: PCE-3B12-08A1E



### PCE-4B13-08A1E

- 13-slot backplane for 14-slot half-sized chassis
- Segments:1
- One CPU card slot
- PCIe slot: Two x8, Two x1
- PCI slot: Eight 32 bit/33MHz
- Size: 315 x 185 mm
- Compactible with IPC chassis: ACP-4020



### PCE-4B13-00A1E

- 13-slot backplane for 14-slot half-sized chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x8, Eleven x4
- PCI slot: N/A
- Size: 315 x 243.84 mm (12.4" x 9.6")
- Compatible with IPC chassis: ACP-4020
- Ordering information: PCE-4B13-00A1E



# ATX Motherboards



Model Name		AIMB-701	AIMB-782
Processor System	CPU	2nd/3rd Gen Intel Core i7/i5/i3/Pentium	2nd/3rd Gen Intel Core i7/i5/i3/Pentium
	Socket	LGA1155	LGA1155
	Max. Speed	3.4 GHz	3.4 GHz
	Front Side Bus	-	-
	Cache	L3: up to 8 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)
	Chipset	Intel H61	Intel Q77
	BIOS	AMI 64 Mbit SPI	AMI 64 Mbit SPI
Expansion Slot	PCIe x16	1 (Gen2)	1 (Gen3)
	PCIe x4	1 for VG SKU (Gen2)	1 (Gen2)
	PCIe x1	1 for G2 SKU (Gen2)	1 (Gen2)
	PCI	5	4
Memory	Technology	Dual Channel DDR3 1066/1333/1600 (1600 is only supported by Core i7/i5/i3 3xxx series processors)	Dual Channel DDR3 1066/1333/1600 MHz
	Max. Capacity	16 GB	32 GB
	Socket	2 x 240-pin DIMM	4 x 240-pin DIMM
Graphics	Controller	Intel HD Graphics	Intel HD Graphics
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed	Shared system memory up to 1 GB
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	GbE LAN1: Intel 82579V, GbE LAN2: Intel 82583V	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V
SATA	Max. Data Transfer Rate	300 MB/s	600 MB/s; 300 MB/s
	Channel	4	6 (SW RAID)
EIDE	Mode	-	-
	Channel	-	-
I/O Interface	VGA	1	1
	DVI	1 for G2 version	1
	USB	10	14 (4 USB 3.0 and 10 USB 2.0)
	Serial	6 for G2 version (3 x RS-232, 1 x RS-232/422/485 with auto-flow control)	6
	Parallel	1	1
	FDD	-	-
	PS/2	2 (1 x rear I/O and 1 x wafer box)	2 (1 x keyboard and 1 x mouse)
	Ethernet (GbE)	2 for G2 version; 1 for VG version	2
	Audio	Mic-in, Line-out	Mic-in, Line-out
	Watchdog Timer	Output	System reset
Interval		Programmable 1 ~ 255 sec	Programmable, 1 ~ 255 sec

✓: supported, -: not supported, Δ: optional

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

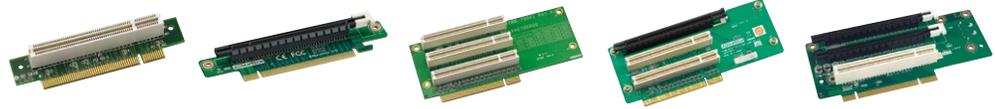
# ATX Motherboards



Model Name		AIMB-784	AIMB-705	AIMB-785
Processor System	CPU	4th Gen Intel Core i7/i5/i3/Pentium	6th/7th Gen Intel Core i7/i5/i3/Pentium	6th/7th Gen Intel Core i7/i5/i3/Pentium
	Socket	LGA1150	LGA1151	LGA1151
	Max. Speed	3.7 GHz	3.9 GHz	3.9 GHz
	Front Side Bus	-	-	-
	Cache	L3: up to 8 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)
	Chipset	Intel Q87	Intel H110	Intel Q170
Expansion Slot	BIOS	AMI 128 Mbit SPI	AMI 128 Mbit SPI	AMI 128 Mbit SPI
	PCIe x16	1 (Gen3)	1 (Gen3)	1 (Gen3)
	PCIe x4	1 (Gen2)	1 (Gen2)	3 (Gen3)
	PCIe x1	1 (Gen2)	-	-
Memory	PCI	4	5	3
	Technology	Dual Channel DDR3 1333/1600 MHz	Dual Channel DDR4 1866/2133 MHz	Dual Channel DDR4 1866/2133 MHz
	Max. Capacity	32 GB	32 GB	64 GB
Graphics	Socket	4 x 240-pin DIMM	2 x 288-pin DIMM	4 x 288-pin DIMM
	Controller	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
Ethernet	VRAM	Shared system memory up to 1 GB	Shared system memory is subject to OS	Shared system memory is subject to OS
	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
SATA	Controller	GbE LAN1: Intel I217LM, GbE LAN2: Intel I211AT	GbE LAN1: Intel I219V, GbE LAN2: Intel I211AT (for G2 version)	GbE LAN1: Intel I219LM, GbE LAN2: Intel I211AT
	Max. Data Transfer Rate	600 MB/s	600 MB/s	600 MB/s
EIDE	Channel	6 (SW RAID)	4	6 (SW RAID)
	Mode	-	-	-
I/O Interface	Channel	-	-	-
	VGA	1	1	1
	DVI	2	1 (for G2 version)	2
	USB	13 ( 4 USB 3.0 and 9 USB 2.0)	9 (4 USB 3.0 and 5 USB 2.0)	13 (6 USB 3.0 and 7 USB 2.0)
	Serial	6	6 (for G2 version) 2 (for VG version)	6
	Parallel	1	1	1
	FDD	-	-	-
	PS/2	2 (1 x keyboard and 1 x mouse)	2 (1 x rear I/O and 1 x wafer box)	1 (internal wafer box)
	Ethernet (GbE)	2	2 for G2 version; 1 for VG version	2
Watchdog Timer	Audio	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
	Output	System reset	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec	Programmable, 1-255 Sec	Programmable, 1-255 Sec

✓: supported, -: not supported, Δ: optional

# Riser Cards



## Selection Guide

Model Name		AIMB-RP10P-01A1E	AIMB-RF10F-01A1E	AIMB-RP30P-03A1E	AIMB-RP3PF-21A1E	AIMB-RP3P8-12A1E
Interface		PCI	PCIe x 16	PCI	PCIe x16/PCI	PCIe x16/PCI
Expansion Slots		1 PCI	1 PCIe x 16	3 PCI	1 PCIe x16 + 2 PCI	2 PCIe x8 + 1 PCI
Chassis	1U	✓	✓	-	-	-
	2U	-	-	✓	✓	✓
ATX	AIMB-785	-	✓	-	-	-
	AIMB-784	-	✓	-	-	-
	AIMB-782	-	-	-	-	-
	AIMB-781	-	✓	-	-	-
	AIMB-780	✓	✓	✓	✓	✓ (WG2 Only)*
	AIMB-705	✓	-	✓	✓	-
	AIMB-701	-	✓	-	-	-
	AIMB-769	-	✓	-	-	-
	AIMB-767	✓	✓	✓	✓	-
	AIMB-766	✓	-	✓	✓	-
AIMB-763	-	✓	-	✓	-	

\*Note: AIMB-RP3P8-12A1E is not compatible with ACP-2010MB/2320MB, IPC-603MB chassis unless riser card bracket is changed to P/N: 1950014302N001.



## Selection Guide

Model Name		AIMB-R4104-01A1E	AIMB-R430P-03A2E	AIMB-R4301-03A1E	AIMB-R431F-21A1E	AIMB-R43PF-21A1E
Interface		PCIe x4	PCIe x4	PCIe x4	PCIe x16/PCIe x4	PCIe x16/PCIe x4
Expansion Slots		1 PCIe x4	3 PCI	3 PCIe x1	1 PCIe x16 + 2 PCIe x1	1 PCIe x16 + 2 PCI
Chassis	1U	✓	-	-	-	-
	2U	-	✓	✓	✓	✓
ATX	AIMB-785	✓	✓	△	□	✓
	AIMB-784	-	-	-	□	✓
	AIMB-782	-	✓	-	□	✓
	AIMB-781	✓	✓	✓	✓	✓
	AIMB-780	-	-	-	-	-
	AIMB-701	✓	✓	△	-	-
	AIMB-769	✓	✓	△	-	-
	AIMB-767	-	-	-	-	-
	AIMB-766	-	-	-	-	-
	AIMB-763	-	-	-	-	-

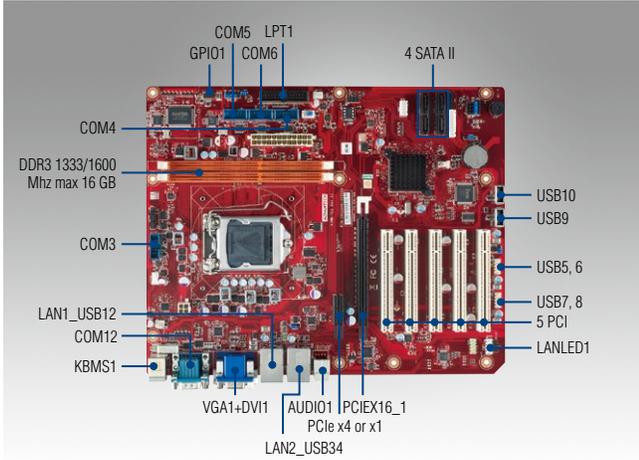
✓: Fully compatible

□: Only the PCIe x 16 and PCIe x1 (bottom slot) connectors work.

△: Only one PCIe x1 connector works (top slot).

# AIMB-701

## LGA1155 3rd Intel® Core™ i7/i5/i3/ Pentium® ATX with DVI/VGA, Dual GbE LAN



### Features

- Supports Intel® Core™ i7/i5/i3/Pentium® processor with H61 chipset
- Two DIMM sockets support up to 16 GB DDR3 1066/1333/1600
- Supports dual display VGA/DVI-D and dual GbE LAN
- Supports RS-232/422/485 with auto flow control
- Supports one PCIe x16 and 5 PCI expansion slots

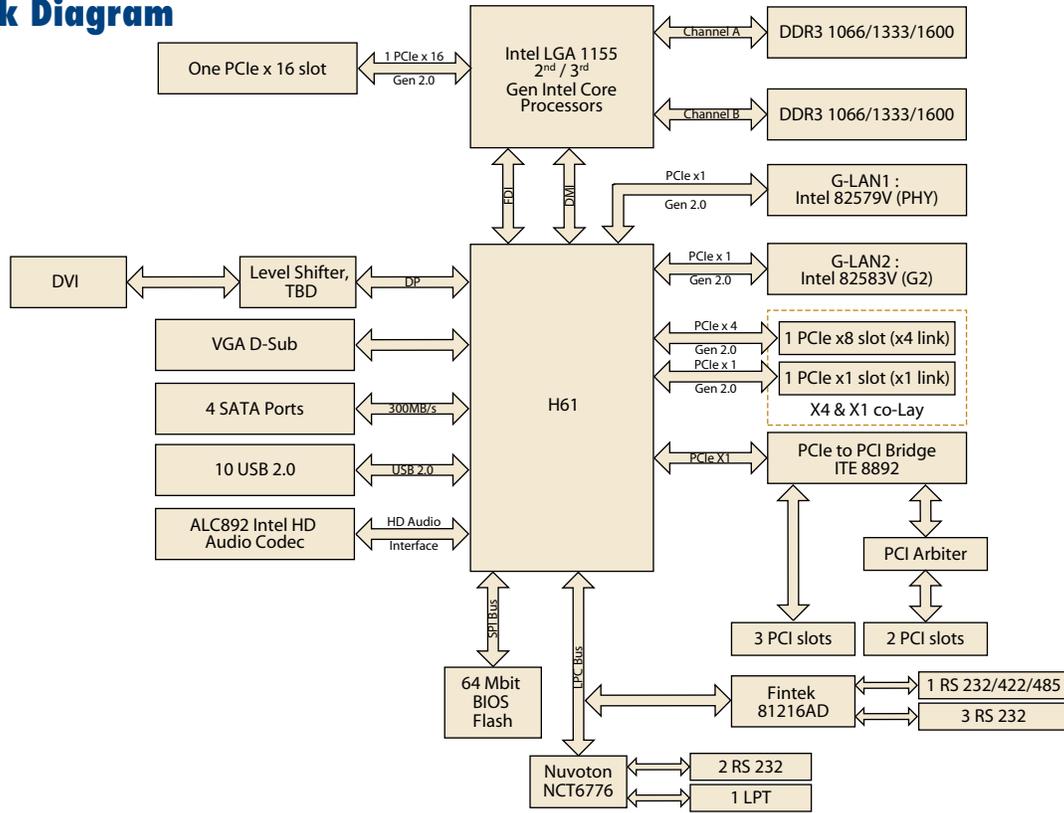
Quiet

### Specifications

CE FCC

Processor System	CPU	Core i7 3xxx	Core i5 3xxx	Core i3 3xxx	Pentium G8xx
	Speed	3.4 GHz	3.4/3.3 GHz	3.4 GHz	2.9 GHz
	L3 Cache	8 MB	6 MB	3 MB	3 MB
	Socket	LGA1155			
	Chipset	H61			
	BIOS	AMI 64 Mbit SPI			
Expansion Slot	PCI	32-bit/33 MHz, 5 slots			
	PCIe x 1 (Gen2)	500 MB/s, 1 slot for G2 SKU			
	PCIe x 4 (Gen2)	2.0 GB/s, 1 slot for VG SKU			
	PCIe x16 (Gen2)	8 GB/s, 1 slot			
Memory	Technology	Dual Channel DDR3 1066/1333/1600 (1600 is only supported by Core i7/i5/i3 3xxx series processors)			
	Max. Capacity	16 GB			
	Socket	2 x 240-pin DIMM			
Graphics	Controller	Intel HD Graphics			
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Intel 82579V, GbE LAN2: Intel 82583V			
	Connector	RJ-45 x 2			
SATA	Max Data Transfer Rate	300 MB/s			
	Channel	4			
Rear I/O	VGA	1			
	DVI	1 for G2 version			
	Ethernet	2 for G2 version; 1 for VG version			
	USB	4			
	Audio	2 (Mic-in, Line-out)			
	Serial	2 (RS-232)			
	PS/2	2 (1 x keyboard and 1 x mouse)			
Internal Connectors	USB	6			
	Serial	4 for G2 version (3 x RS-232, 1 x RS-232/422/485 with auto-flow control)			
	IDE	-			
	SATA	4			
	Parallel	1			
	IrDA	1			
Watchdog Timer	GPIO	8-bit			
	Output	System reset			
Power Requirement	Interval	Programmable 1 ~ 255 sec			
	Power On	Intel i7 2600 3.4 GHz processor, DDR3 4 GB x 2			
		3.3 V	5 V	12 V	5 Vsb
Environment	1.01 A	1.08 A	5.48 A	1.76 A	
	Operating	Non-Operating			
Physical Characteristics	Temperature	Operating		Non-Operating	
		0 ~ 60° C (32 ~ 140° F) (Depends on CPU speed and cooler solution)		-40 ~ 85° C (-40 ~ 185° F)	
Physical Characteristics	Dimensions	304.8 x 244 mm (12" x 9.6")			

## Block Diagram



## Ordering Information

Part Number	Chipset	Memory	Display	USB 2.0	COM	GbE LAN	PCIe x1	PCIe x4	SW RAID
AIMB-701G2-00A1E	H61	Non-ECC	VGA + DVI	10	6	2	Yes	NA	NA
AIMB-701VG-00A1E	H61	Non-ECC	VGA	10	2	1	NA	Yes	NA

## Packing List

Description	Quantity
SATA HDD cable	x 2
SATA power cable	x 1
I/O port bracket	x 1
Startup manual	x 1
Driver CD	x 1

## Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1960047669N001	LGA1155/1156 CPU cooler for 4U and wallmount chassis
1960047831N001	LGA1155/1156 CPU cooler for 2U and wallmount chassis
1960049408N001	LGA1155/1156 CPU cooler for 1U and wallmount chassis
1700020294-01	Printer port cable kit (42 cm)
1701092300	COM port cable kit (28.5 cm)
1700018633-05A4	COM port cable kit (60 cm)
1960055954T000	I/O port bracket for 1U chassis

Note 1: Purchasing AIMB-701's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-701.

Note 2: 1960049408N001 is design to be used with Advantech 1U chassis and supports up to 73W processor, user needs to conduct thermal test before using this cooler with other brand chassis.

## I/O View



AIMB-701G2-00A1E



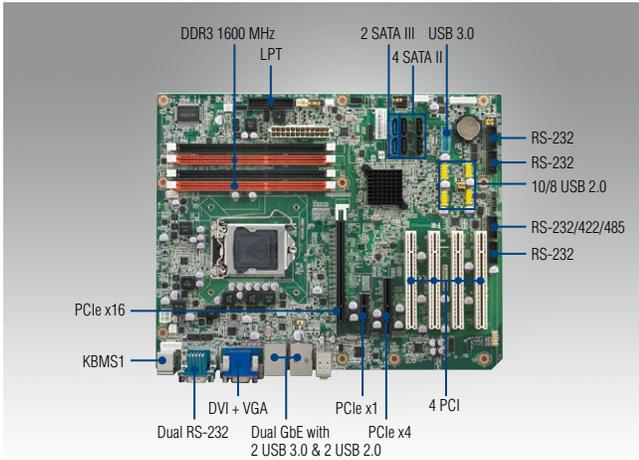
AIMB-701VG-00A1E

## Riser Card

Part Number	Description
AIMB-R4104-01A1E	1U riser card with 1 PCIe x4 expansion
AIMB-R430P-03A2E	2U riser card with 3 PCI expansion

# AIMB-782

## LGA1155 3rd Generation Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA, DDR3, SATA III



### Features

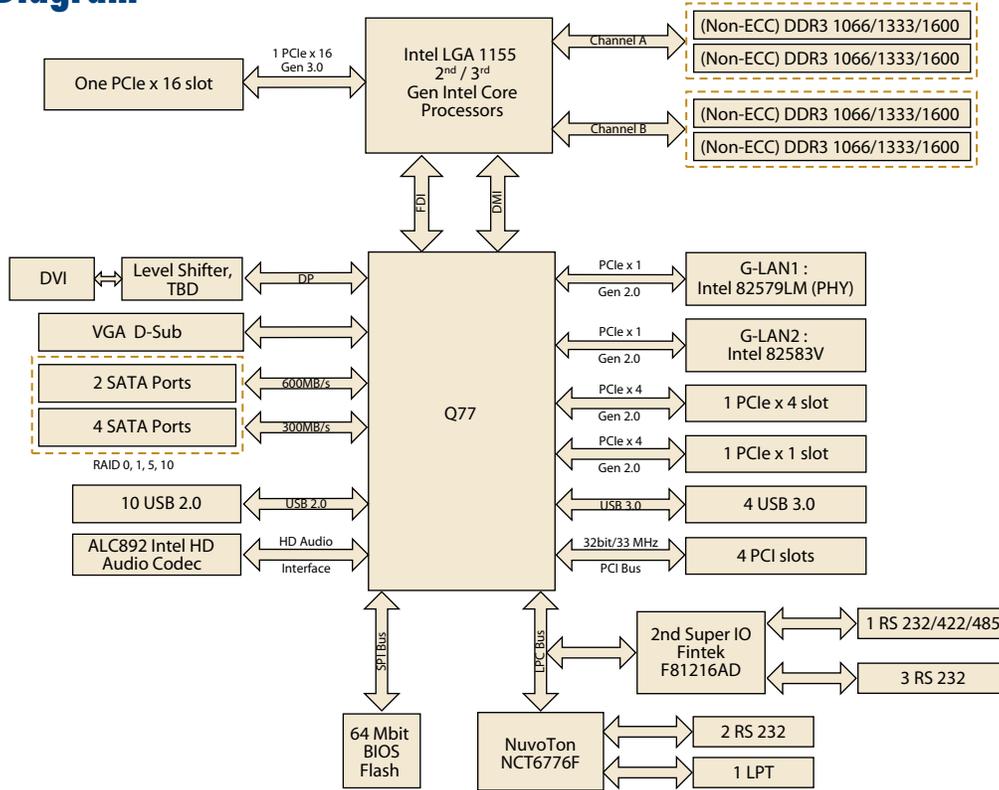
- 3rd generation Intel® Core™ processor-based platform
- Supports Intel® Core™ i7/i5/i3/Pentium processor with Q77 chipset
- Four DIMM sockets support up to 32 GB DDR3 1066/1333/1600
- Supports dual display VGA/DVI-D and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, AMT8.0, USB 3.0
- Supports Advantech LPC modules of TPM

### Quiet Specifications



Processor System	CPU	Core i7	Core i7	Core i5	Core i5	Core i3	Core i3	Pentium	Pentium	Celeron	
	Speed	3770	2600	3550S	2400	3220	2120	G2120	G850	G540	
	L3 Cache	3.4 GHz	3.4 GHz	3.0 GHz	3.1 GHz	3.3 GHz	3.3 GHz	3.1 GHz	2.9 GHz	2.5 GHz	
	Socket	8 MB	8 MB	6 MB	6 MB	3 MB	3 MB	3 MB	3 MB	2 MB	
	Chipset	LGA1155									
Expansion Slot	BIOS	Q77									
	PCI	AMI 64 Mbit SPI									
	PCIe x 1 (Gen2)	32-bit/33 MHz, 4 slots									
	PCIe x 4 (Gen2)	500 MB/s per direction, 1 slot									
Memory	Technology	2.0 GB/s per direction, 1 slot									
	Max. Capacity	16 GB/s per direction, 1 slot									
	Socket	Dual Channel DDR3 1066/1333/1600 (1600 only supported by Core i7/i5/i3 3xxx series processors)									
Graphics	Controller	32 GB									
	VRAM	4 x 240-pin DIMM									
Ethernet	Interface	Intel HD Graphics 2000/2500/3000/4000 (Depends on processor)									
	Controller	1 GB maximum shared memory with 2 GB and above system memory installed									
	Connector	10/100/1000 Mbps									
SATA	Controller	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V									
	Max Data Transfer Rate	RJ-45 x 2									
	Channel	600 MB/s									
	Max Data Transfer Rate	2									
Rear I/O	Channel	300 MB/s									
	VGA	4									
	DVI	1									
	Ethernet	2									
	USB	4 (Two USB 3.0)									
	Audio	2 (Mic-in, Line-out)									
	Serial	2 (RS-232)									
Internal Connectors	PS/2	2 (1 x keyboard and 1 x mouse)									
	USB	10 (Two USB 3.0)									
	Serial	4 (3 x RS-232, 1 x RS-232/422/485 with auto-flow control)									
	SATA	6 (SATA II x4 and SATA III x2)									
	Parallel	1									
	GPIO	8-bit									
Watchdog Timer	Output	System reset									
	Interval	Programmable 1 ~ 255 sec									
Power Requirement	Power On	Intel Core i5 3550 3.0 GHz; DDR3 8G x 4									
		3.3 V	5 V	12 V	5 Vsb						
Environment		0.77 A	2.23 A	3.56 A	0.46 A						
	Temperature	Operating							Non-Operating		
Physical Characteristics		0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution							-40 ~ 85° C (-40 ~ 185° F)		
	Dimensions	304.8 x 244 mm (12" x 9.6")									

## Block Diagram



## Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA III	SW RAID
AIMB-782QG2-00A1E	Q77	Non-ECC DDR3	VGA + DVI	4	10	6	2	Yes	2	Yes

## Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1700022749-11	SATA power cable	x 1
1960050472T000	I/O port bracket	x 1
2002078210	Startup manual	x 1
2062078200	Driver CD	x 1

## I/O View



AIMB-782QG2-00A1E

## Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700028292-01	Dual port USB 3.0 Cable with bracket
1960047669N001	LGA1155/1156 CPU cooler for 4U and wallmount chassis
1960047831N001	LGA1155/1156 CPU cooler for 2U and wallmount chassis
1960049408N001	LGA1155/1156 CPU cooler for 1U and wallmount chassis
1700008809	Printer port cable kit (25 cm)
1700020294-01	Printer port cable kit (42 cm)
1701092300	COM port cable kit
1960055954T000	I/O port bracket for 1U chassis

Note 1: Purchasing AIMB-782's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-782.

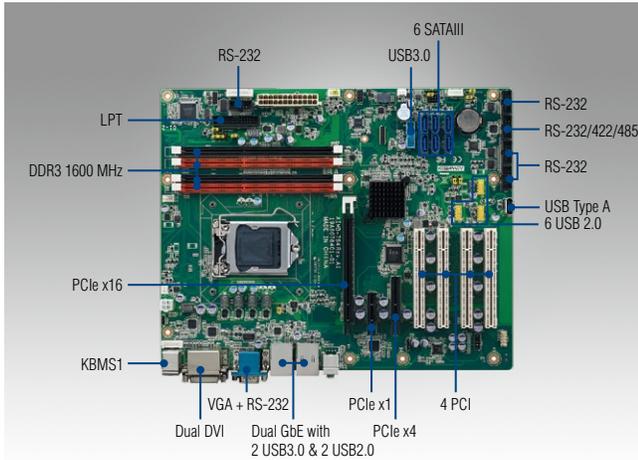
Note 2: 1960049408N001 is design to be used with Advantech 1U chassis and supports up to 73W processor, user needs to conduct thermal test before using this cooler with other brand chassis.

## Riser Card

Part Number	Description
AIMB-R430P-03A2E	2U riser card with 3 PCI expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIe x16 & 2 PCI expansion

# AIMB-784

## LGA1150 4th Generation Intel® Core™ i7/i5/i3/Pentium® ATX with DVI/VGA, DDR3, SATA III



### Features

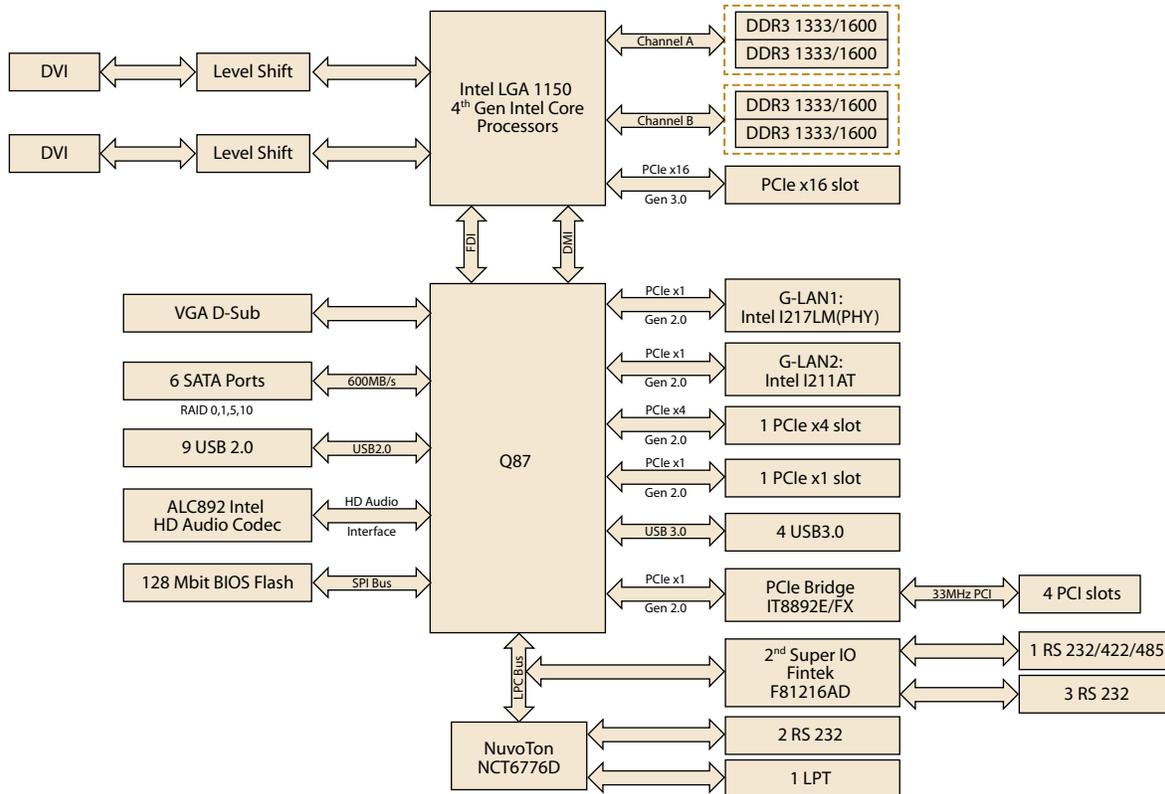
- 4th generation Intel® Core™ processor-based platform
- Supports Intel® Core™ i7/i5/i3 processor with Q87 chipset
- Four DIMM sockets support up to 32 GB DDR3 1333/1600
- Supports triple display VGA/2 DVI-D and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, USB 3.0
- Supports Intel vPro, iAMT 9.0 & TPM technologies
- Note: PCA-TPM-00A1E module is required to enable Intel vPro and TPM technologies

### Quiet Specifications



Processor System	CPU	i7-	i7-	i7-	i7-	i5-	i5-	i5-	i5-	i3-	i3-	i3-	i3-	G3420	G3320TE	G1820	G1820TE
	Speed	4790S	4790T	4770S	4770TE	4590S	4590T	4570S	4570TE	4360	4350T	4330	4330TE	3.2 GHz	2.3 GHz	2.7 GHz	2.2 GHz
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	4MB	4MB	4MB	4MB	4MB	3MB	3MB	2MB	2MB
	Socket	LGA1150															
	Chipset	Q87															
	BIOS	AMI 128 Mbit SPI															
Expansion Slot	PCI	32-bit/33 MHz, 4 slots															
	PCIe x 1 (Gen2)	500 MB/s per direction, 1 slot															
	PCIe x 4 (Gen2)	2.0 GB/s per direction, 1 slot															
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot															
Memory	Technology	Dual Channel DDR3 1333/1600															
	Max. Capacity	32 GB															
	Socket	4 x 240-pin DIMM															
Graphics	Controller	Intel HD Graphics (Depends on processor)															
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	GbE LAN1: Intel I217LM, GbE LAN2: Intel I211AT															
	Connector	RJ-45 x 2															
SATA	Max Data Transfer Rate	600 MB/s															
	Channel	6															
Rear I/O	VGA	1															
	DVI	2															
	Ethernet	2 (GbE)															
	USB	4 (Two USB 3.0)															
	Audio	2 (Mic-in, Line-out)															
	Serial	1 (RS-232)															
	PS/2	2 (1 x keyboard and 1 x mouse)															
Internal Connectors	USB	9 (Two USB 3.0)															
	Serial	5 (4 x RS-232, 1x RS-232/422/485 with auto-flow control)															
	SATA	6															
	Parallel	1															
	Display Port	-															
	IrDA	-															
	GPIO	-															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1 ~ 255 sec															
Power Requirement	Power On	Intel Core i7-4790S processor; DDR3 8GB x4															
		3.3V			5V			12V			5VSB			-12V			
		1.060			1.554			4.922			0.048			0.044			
Environment		Operating															
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and cooler solution									Non-Operating						
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")															

## Block Diagram



## Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA III	SW RAID
AIMB-784G2-00A1E	Q87	Non-ECC DDR3	VGA + dual DVI	4	9	6	2	Yes	6	Yes

## Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1700022749-11	SATA power cable	x 2
19Z0000454T000	I/O port bracket	x 1
2006078410	Startup manual	x 1
2066078401	Driver CD	x 1

## I/O View



AIMB-784G2-00A1E

## Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700028292-01	Dual port USB 3.0 Cable with bracket
1960047669N001	CPU cooler for 4U and wallmount chassis
1960047831N001	CPU cooler for 2U and wallmount chassis
1960049408N001	CPU passive heatsink for 1U chassis
1960069682N001	I/O port bracket for 1U chassis
1700020294-01	Printer port cable kit (42 cm)
1701092300	COM port cable kit
PCA-TPM-00A1E	TPM module to enable TPM and vPro technologies

Note: Purchasing AIMB-784's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-784.

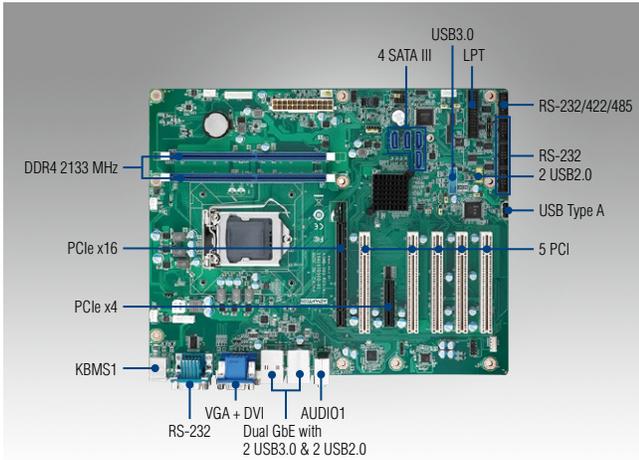
## Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x 16 expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIe x16 & 2 PCI expansion

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# AIMB-705

## LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® ATX with DVI/VGA, DDR4, SATA III, USB 3.0 & 6 COMs



### Features

- Intel® 6th/7th generation Core™ i7/i5/i3/Pentium®/Celeron® processor
- Dual channel (Non-ECC) DDR4 1866/2133 up to 32GB
- Supports VGA and DVI display
- Supports SATA3.0, USB3.0, dual GbEs
- Supports 5 RS-232 and 1 RS-232/422/485 serial ports
- 1 PCIe x16 (Gen3) and 1 PCIe x4 (Gen2), and 5 PCI expansion slots

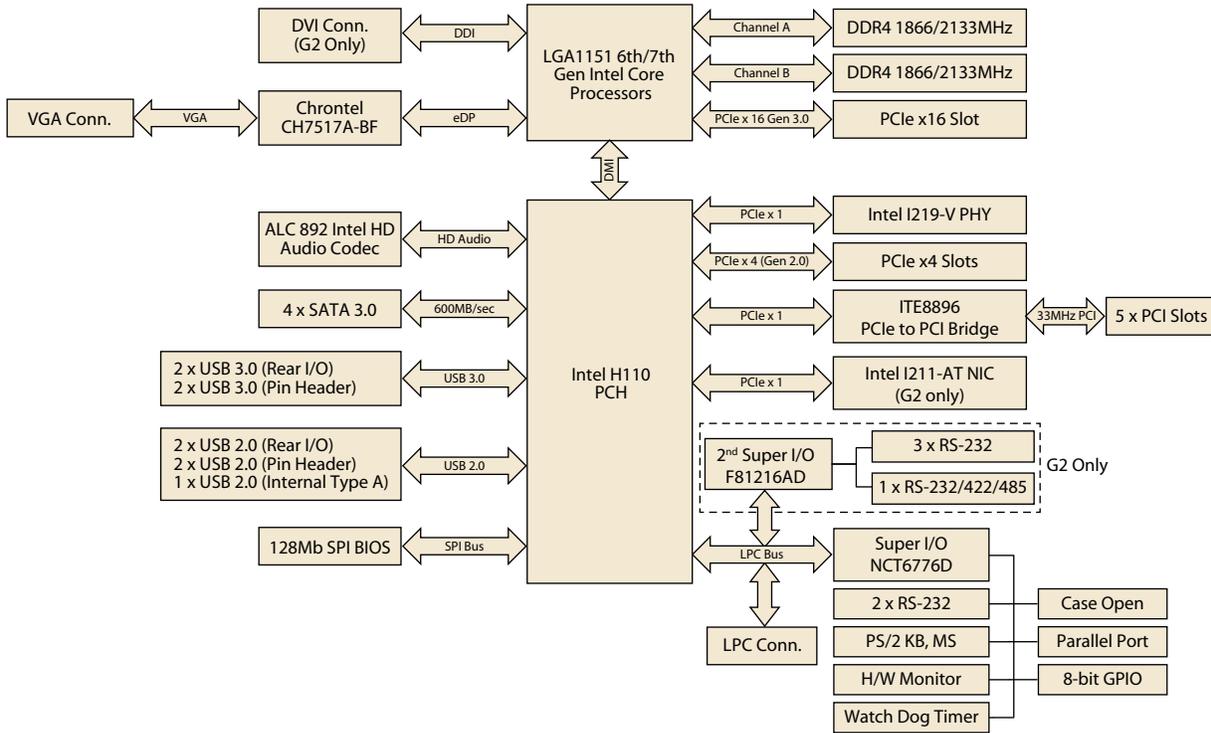
Note: Intel 7th generation processors only support Windows 10 (64-bit).

### Quiet Specifications

CE FCC

	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE	
Processor System	Speed	3.6GHz	2.9GHz	3.4 GHz	2.4 GHz	3.4GHz	2.7GHz	3.2 GHz	2.3 GHz	3.9GHz	3.4GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz	
	Cache	8MB	8MB	8 MB	8 MB	6MB	6MB	6 MB	6 MB	3MB	3MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB	
	Socket	LGA 1151																
	Chipset	Intel H110																
	BIOS	AMI 128Mbit SPI Flash																
Expansion Slot	PCI	32-bit/33 MHz, 5 slots																
	PCIe x4 (Gen2)	2 GB/s per direction, 1 slot																
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot																
Memory	Technology	Dual Channel(Non-ECC) DDR4 1866/2133 MHz																
	Max Capacity	32 GB (16 GB per DIMM)																
	Sockets	DDR4 288-pin DIMM x2																
Graphics	Controller	Chipset integrated Intel HD Graphics																
	VRAM	Shared system memory is subject to OS																
Ethernet	Interface	10/100/1000 Mbps																
	Controller	GbE LAN1: Intel I219-V, GbE LAN2: Intel I211-AT																
	Connector	RJ-45 x2																
SATA	Max Data Transfer Rate	600 MB/s																
	Channel	4																
Rear I/O	VGA	1 (Resolution up to 1920 x 1200 @ 60Hz)																
	DVI	1 for G2 version (Resolution up to 1920 x 1200 @ 60Hz)																
	Ethernet	2 for G2 version; 1 for VG version																
	USB	4 (USB3.0 x2, USB2.0 x2)																
	Audio	Line-out, Mic-in																
	Serial	2																
	PS/2	2 (1 x keyboard and 1 x mouse)																
Internal Connectors	USB	1 (Type A); 2 (USB2.0, Pin-header); 2 (USB3.0, Box-header)																
	Serial	4 for G2 version (3 x RS-232, box-header; 1 x RS-232/422/485 with auto-flow control, box-header)																
	Parallel	1																
	GPIO	8 bits																
Watchdog Timer	Output	System reset																
	Interval	Programmable 1 - 255 sec																
Power Requirement	Test Environment	Intel Core i7-6700 3.4GHz; DDR4 2133 8GB x 2																
	Voltage	3.3V	5V	12V	5Vsb	-5V	-12V											
	Current	0.49A	3.13A	7.88A	0.08A	0.07A	0.07A											
Environment	Operating												Non-Operating					
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and cooler solution											-40 ~ 85 °C (-40 ~ 185 °F)					
	Humidity	40 °C @ 95% RH Non-condensing											60 °C @ 95% RH Non-condensing					
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")																

## Block Diagram



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA	SW RAID	Intelligent System Module Support
AIMB-705G2-00A1E	H110	Non-ECC	VGA + DVI	4	5	6	2	No	4	No	No
AIMB-705VG-00A1E	H110	Non-ECC	VGA	4	5	2	1	No	4	No	No

## Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x2
1700022749-11	SATA power cable	x1
1960050472T000	I/O port bracket	x1
2001070511	Startup manual	x1
2061070501	Driver CD	x1

## Optional Accessories

Part Number	Description
1701090401	Single COM port cable(40 cm)
1701092300	Dual COM port cable(28.5 cm)
1700020294-01	Printer port cable kit(42 cm)
1700028292-01	2-port USB 3.0 cable w/ BKT(30 cm)
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
1960052651N021	CPU cooler for 2U, 4U, and wallmount chassis
1960049408N001	CPU cooler for 1U chassis
1960055954T000	IO bracket for 1U chassis
PCA-COM232-00A1E	4-port RS-232 LPC module
PCA-TPM-00A1E	TPM module (for BIOS V1.XX)
PCA-TPM-00B1E	TPM2.0 module (for BIOS V2.XX)

Note: Purchasing AIMB-705's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-705.

## I/O View



AIMB-705G2-00A1E



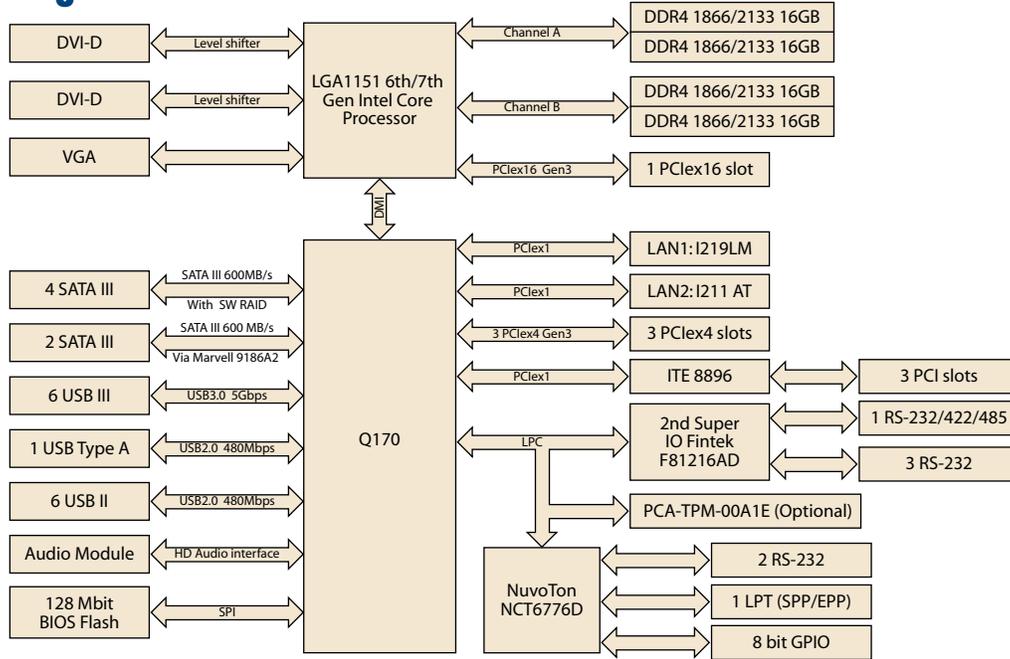
AIMB-705VG-00A1E

## Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card providing 1 PCI slot
AIMB-RP30P-03A1E	2U riser card providing 3 PCI slots
AIMB-RP3PF-21A1E	2U riser card providing 1 PCIe x16 and 2 PCI slots



## Block Diagram



## Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA III	SW RAID
AIMB-785G2-00A1E	Q170	Non-ECC DDR4 1866/2133 up to 64GB	VGA + dual DVI	6	7	6	2	Yes	6	Yes

Note: SATA0 and SATA1 (red SATA ports) don't support RAID function.

## Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1700022749-11	SATA power cable	x 2
19Z0000884T000	I/O port bracket	x 1
2006078511	Startup manual	x 1
2066078502	Driver CD	x 1

## I/O View



AIMB-785G2-00A1E

## Optional Accessories

Part Number	Description
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
1700028292-01	2-port USB 3.0 cable w/ BKT(30 cm)
1960052651N021	CPU cooler for 2U, 4U and wallmount chassis
1960049408N001	CPU cooler for 1U chassis
1960069666N101	IO bracket for 1U chassis
1700020294-01	Printer port cable kit (42 cm)
1701092300	Dual COM port cable(28.5 cm)
1700019268-11	PS/2 KB/Mouse cable
1960063434N000	IO bracket for PS/2 KB/Mouse cable
PCA-TPM-00A1E	TPM module to enable TPM and vPro technologies (for BIOS V1.XX)
PCA-TPM-00B1E	TPM2.0 module to enable TPM and vPro technologies (for BIOS V2.XX)

Note: Purchasing AIMB-785's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-785.

## Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe16 expansion
AIMB-R4104-01A1E	1U riser card with 1 PCIe4 expansion
AIMB-R430P-03A2E	2U riser card with 3 PCI expansion
AIMB-R431F-21A1E	2U riser card with 1 PCIe16 & 1 PCIe1 expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIe16 & 2 PCI expansion
AIMB-R4301-03A1E	2U riser card with 1 PCIe1 expansion

# Industrial Computer Chassis



Model Name		IPC-3012	IPC-3026	IPC-6806S	IPC-6806S-D	IPC-6806/6806W	
Form Factor Support		PICMG 1.3 Half-size SBC	PICMG 1.0/1.3 Half-size SBC	PICMG 1.0/1.3 Half-size SBC	PICMG 1.0/1.3 Half-size SBC	PICMG 1.0 Full-size SBC / PICMG 1.0/1.3 Full-size SBC	
Drive Bay	Slim Optical Drive	-	-	-	1	-	
	2.5"	2	-	-	1 (hot-swap)	-	
	3.5"	External	-	1	1	-	1 / 1
		Internal	-	-	1	1	1 / 1
	5.25"	-	-	-	-	0 / 1	
Front I/O	USB	2	2	2	2	2 / 2	
	PS/2	-	-	-	-	- / -	
Cooling	No. of Fans	2	1	1	1	1 / 1	
	CFM	27	44.6	53	53	53 / 58	
Power Supply	AC	250W Flex ATX	150W Flex ATX	250W Flex ATX	250W Flex ATX	250W Flex ATX 350W Flex ATX	
	AC Redundant	-	-	-	-	-	
	DC	-	-	-	-	-	
No. of Slots for add-on cards		2	4	4	4	5 / 5	
No. of Full-size Cards		-	-	-	-	6 / 6	
Passive Backplane Options	PICMG 1.0	-	✓	✓	✓	✓	
	PICMG 1.3	✓	✓	✓	✓	- / ✓	
Intelligent System Module		-	✓	-	-	-	
Dimensions (W x H x D)	mm	232 x 90 x 232	150 x 222 x 270	191 x 178 x 290	191 x 178 x 290	166 x 178 x 398/ 198 x 221 x 398	
	inch	9.13 x 3.54 x 9.13	5.9 x 8.74 x 10.63	7.5 x 7.01 x 11.42	7.5 x 7.01 x 11.42	6.54 x 7.01 x 15.67/ 7.8 x 8.7 x 15.67	
Weight	kg	3.24	4.4	5.6	5.6	6.3 / 8	
	lb	7.14	9.7	12.3	12.3	13.9 / 17.6	

✓: supported, -: not supported, △: optional

# Industrial Computer Chassis



Model Name		IPC-6606/6608	IPC-7132	IPC-5120/7120	IPC-6025	IPC-5122	IPC-7130 / IPC-7130L	IPC-7220	
Form Factor Support		PICMG 1.0/1.3 Full-size SBC	ATX / Micro ATX	Micro ATX / ATX	PICMG 1.0/1.3 Full-size SBC	Micro ATX	ATX / Micro ATX	ATX / Micro ATX	
Drive Bay	Slim Optical Drive	-	-	- / -	-	1	-	-	
	2.5"	-	-	-	-	-	-	-	
	3.5"	External	1 / 1	1	1 / 1	1	1	2 ( hot-swap ) / 2	1
		Internal	1 / 1	2	1 / 1	1	1	1 / 1	1
	5.25"	1 / 2	1	1 / 1	-	-	1 / 1	2	
Front I/O	USB	2 / 2	2	Front I/O chassis	2	2	2 / 2	2	
	PS/2	- / -	-	-	-	-	-	-	
Cooling	No. of Fans	1 / 1	1	1 + 1	1	1	1 + 1	1	
	CFM	53 / 85	85	85 / 10	46.6	85	73.8 / 21.2	85	
Power Supply	AC	250W PS/2 300W PS/2 400W PS/2	300W PS/2 400W PS/2	250W Flex ATX 350W Flex ATX	270W Flex ATX 400W Flex ATX	300W PS/2 400W PS/2	300W PS/2 400W PS/2 500W PS/2	300W PS/2 400W PS/2	
	AC Redundant	-	-	-	-	-	350W Mini RPS 500W Mini RPS	350W Mini RPS 500W Mini RPS	
	DC	-	-	-	-	-	-	-	
No. of Slots for add-on cards		5 / 7	7	4 / 7	4	4	7	7	
No. of Full-size Cards		6 / 8	7	-	5	-	7	7	
Passive Backplane Options	PICMG 1.0	✓	-	-	✓	-	-	-	
	PICMG 1.3	✓	✓	-	✓	-	-	-	
Intelligent System Module		-	-	-	✓	✓	✓/-	✓	
Dimensions (W x H x D)	mm	173 x 254 x 396/ 173 x 315 x 410	200 x 330 x 430	320 x 164 x 316.5/ 380 x 164 x 316.5	111 x 212 x 420	157 x 360 x 340	200 x 320 x 480	200 x 320 x 480	
	inch	6.8 x 10 x 15.6 / 6.8 x 12.4 x 16.1	7.9 x 13 x 16.9	12.6 x 6.5 x 12.5/ 15 x 6.5 x 12.5	4.4 x 8.3 x 16.5	6.2 x 14.2 x 13.4	7.9 x 12.6 x 18.9	7.9 x 12.6 x 18.9	
Weight	kg	9 / 11	9.96	6.54 / 7.01	4.7	6.5	12.8	14	
	lb	19.8 / 24.2	21.93	14.42 / 15.45	10.3	14.3	28.2	30.8	

✓: supported, -: not supported, Δ: optional

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# Industrial Computer Chassis



Model Name		1U Rackmount	2U Rackmount				4U Rackmount		
		ACP-1010	IPC-603	ACP-2000	ACP-2010/2320	ACP-2020	IPC-510	IPC-610-L/ IPC-611	IPC-631
Form Factor Support		PICMG 1.0/1.3 Full-Size SBC ATX/MicroATX	ATX/MicroATX	PICMG 1.0/1.3 Full-Size SBC	ATX/MicroATX	ATX / MicroATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	ATX/Micro-ATX
Drive Bay	Slim Optical Drive	1	1	1	-/1	1	-	-	1
	2.5"	1 x 3.5" or 2 x 2.5"	-	-	-	2 external (optional hot-swap module ) 2 internal	-	-	4 (2 external optional hot-swap)
	3.5"	Hot-swap	-	-	-	- / 2 (SATA)	-	-	-
		External	1	-	2	1 / -	-	1	1
		Internal	1 x 3.5" or 2 x 2.5"	1	-	2	-	1	-
5.25"	-	-	-	1 / -	-	3	3	-	
Front I/O	USB	2	Front I/O chassis	2	2	2 (USB 3.0)	2	2	Front I/O chassis
	PS/2	-	-	1	1	-	1	-	-
Cooling	No. of Fans	2 (MB), 4 (BP)	2	2	2 / 3	1	1	1	2
	CFM	2 x 24 (MB) / 3 x 24 + 1 x 15 (BP)	2 x 47	2 x 47	2 x 47 / 2 x 47 + 1 x 28	41	77	85	2 x 82
Power Supply	AC	250W Flex ATX 300W Flex ATX	350W Flex ATX	250W PS/2 300W PS/2 400W PS/2 500W PS/2	250W Flex ATX 300W Flex ATX	350W Flex ATX	250W PS/2 300W PS/2 400W PS/2	250W PS/2 300W PS/2	500W PS/2
	AC Redundant	-	-	300W 1+1 RPS	250W 1+1	500W 2U redundant	-	350W Mini RPS 500W Mini RPS	500W Mini RPS
	DC	-	-	300W 48V	-	-	-	-	-
No. of Slots		MB: 1 BP: 3	3	6	3 / 3	7	14	15	7
No. of Full-size Cards <sup>Note</sup>		MB: 0 BP: 2	0	4	3 / 3	7	8	11	0
Passive Backplane Options	PICMG 1.0	✓	-	✓	-	-	✓	✓	-
	PICMG 1.3	✓	-	✓	-	-	✓	✓	-
Intelligent System Module		-	-	✓	✓	✓	-	-	-
Dimensions (W x H x D)	mm	480 x 44 x 497	482 x 88 x 308	482 x 88 x 451	482 x 88 x 480	482 x 177 x 348	482 x 177 x 446	482 x 177 x 480	482 x 177 x 348
	inch	19 x 1.7 x 19.6	19 x 3.46 x 12.1	19 x 3.5 x 17.8	19 x 3.5 x 18.9	19 x 7.0 x 13.7	19 x 7 x 17.6	19 x 7 x 18.9	19 x 7.0 x 13.7
Weight	kg	8	6.4	11.5	10.7/11.7	8	10.7	14.5	8
	lb	17.6	14.1	25.3	23.5/25.7	17.6 lb	23.5	31.9	17.6

Note: Depending on system configuration. Board component or CPU cooler mechanical interference might reduce supported full-size card number.

✓: supported, -: not supported, △: optional

# Industrial Computer Chassis



Model Name		4U Rackmount								6U Rackmount	
		IPC-610-H	ACP-4020	ACP-4D00	ACP-4000	ACP-4010/ ACP-4320	ACP-4340	ACP-4360	IPC-623	IPC-622	
Form Factor Support		PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG1.3 Half-size SBC ATX/Micro-ATX	PICMG 1.3/PCI Half-size SBC	PICMG1.0/1.3 Full-size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full-size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG 1.0/1.3 Full size SBC	PICMG 1.0/1.3 Full size SBC	
Drive Bay	Slim Optical Drive	-	1	-	-	-	1	1	-	-	
	2.5"	-	1 (Internal)	-	-	-	1 (Internal)	-	-	-	
	3.5"	Hot-swap	-	-	-	-	- / 2 (SATA)	4 (SATA)	6 (SATA)	-	-
		External	1	2	1 / each node	1	1 / -	-	1	1	-
		Internal	-	-	-	-	1 / -	-	-	1	2
5.25"	3	-	-	3	2	-	-	3	4		
Front I/O	USB	2	2 (USB 3.0)	2 (USB 2.0) + 2 (USB 3.0) / each node	2	4 / 2	2 (USB 3.0)	2	-	2	
	PS/2	1	-	-	1	-	-	-	-	-	
Cooling	No. of Fans	2	2	1 / each node	2	2 / 2	2	3	3	4	
	CFM	2 x 85	2 x 53	1 x 58 per node	2 x 85	2 x 85/ 1 x 74 + 1 x 28	1 x 74 + 1 x 56	1 x 114 + 2 x 47	3 x 114	4 x 58	
Power Supply	AC	300W PS/2 400W PS/2 500W PS/2	300W PS/2 400W PS/2 500W PS/2	250W Flex ATX 300W Flex ATX	300W PS/2 400W PS/2 500W PS/2	300W PS/2 400W PS/2 500W PS/2	400W PS/2 500W PS/2 700W PS/2	400W PS/2 500W PS/2 700W PS/2	400W 500W	400W PS/2 500W PS/2 700W PS/2	
	AC Redundant	350W Mini RPS 500W Mini RPS	-	-	350W Mini RPS 500W Mini RPS	350W Mini RPS 500W Mini RPS 750W Mini RPS	500W Mini RPS	350W Mini RPS 500W Mini RPS	570W 2+1	500W Mini RPS 750W Mini RPS	
	DC	300W 48V	300W 48V	-	300W 48V	-	-	-	-	-	
No. of Slots		15	15	6 / each node	15	15 / 15	15	15	20	20	
No. of Full-size Cards <sup>Note</sup>		11	0	0	11	15 / 10	11	8	20	20	
Passive Backplane Options	PICMG 1.0	✓	-	✓ (PCI BP only)	✓	✓	✓	✓	✓	✓	
	PICMG 1.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Intelligent System Module		-	✓	✓	✓	✓	✓	✓	-	✓	
Dimensions (W x H x D)	mm	482 x 177 x 479	482 x 177 x 348	430 x 177 x 350	482 x 177 x 479	482 x 177 x 479	482 x 177 x 478	482 x 177 x 501	482 x 177 x 657	482 x 266 x 464	
	inch	19 x 7 x 18.9	19 x 7.0 x 13.7	19 x 7.0 x 13.8	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7.0 x 18.8	19 x 7.0 x 19.8	19 x 7 x 26	19 x 10.5 x 18.3	
Weight	kg	15	8.5	15	15.2	16.6/17.6	12.5	19	26	30	
	lb	33	18.7	33	33.5	36.5/38.7	27.5	41.8	57	66	

Note: Depending on system configuration. Board component or CPU cooler mechanical interference might reduce supported full-size card number.

✓: supported, -: not supported, Δ: optional

- 1  
Software and Industry Solutions
- 2  
Industrial Server
- 3  
Intelligent System
- 4  
Intelligent HMI and Monitors
- 5  
Automation Computers and Controllers
- 6  
Industrial Communication
- 7  
Remote I/O Modules
- 8  
Industrial I/O and Video Solutions

# IPC-3012

## Compact Chassis for PICMG 1.3 Half Size SHB



### Features

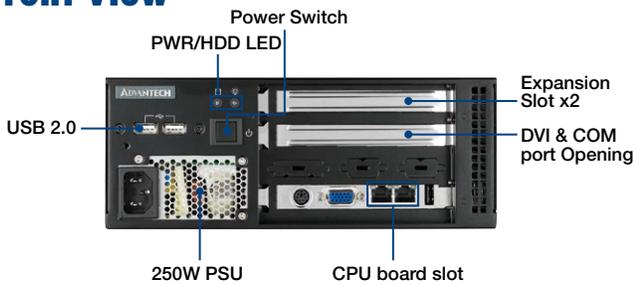
- Compact chassis with two front expansion slots
- Shockproof drive bay for two 2.5" HDDs
- Equipped with 80 plus FLEX 250W power supply
- Thumb-screw for top cover easy opening
- Built-in Intrusion switch function
- Bidirectional to mount chassis on wall or workbench

CE FCC

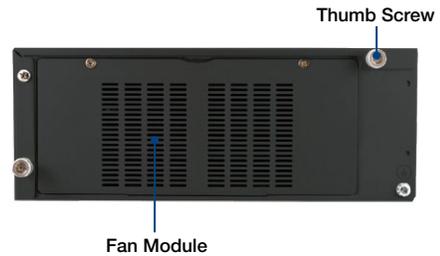
### Specifications

Disk Drive Bay	2.5"	External -	Internal 2
Cooling	Fan Air Filters	2 (6 cm/27 CFM) Yes	
Front I/O interface	USB	2	
Miscellaneous	LED Indicators Control	Power, HDD Power Switch	
System Monitoring		Chassis intrusion switch	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Vibration (5-500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	232 x 90 x 232 mm (9.13" x 3.54" x 9.13")	
	Weight	3.24 kg (7.14 lb)	

### Front View



### Rear View

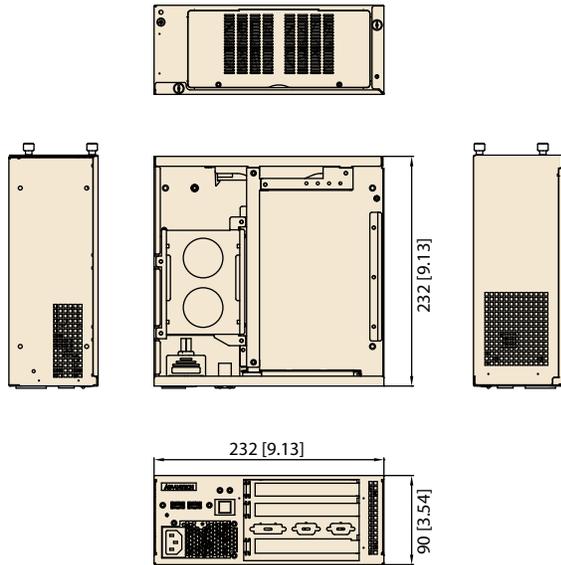


### Inside View



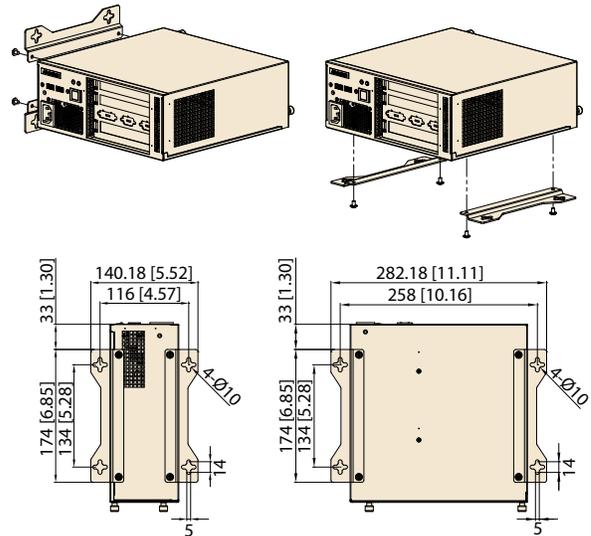
## Dimensions

Unit: mm [inch]



## Installation

Unit: mm [inch]



## Ordering Information

Part Number	Description
IPC-3012-25ZE	With 250W Power supply 96PS-A250WFX-2, with ATX switch

## Backplane Options

Part Number	Description
PCE-3B03A-00A1E	3 Slots PICMG1.3BP, PCIe x16*1, PCIe x4*1
PCE-3B03-01A1E	3 Slots PICMG1.3BP, PCIe x16*1, 32-Bit/33 MHz PCI*1

## Optional Accessories

Part Number	Description
1750006419	27.72 CFM, system fan 60 x 60 x 13 mm
1990005760T00B	Filter cover
1960053207N001	1.5U CPU cooler for one add-on card applied
1960053065N001	1U CPU cooler for two add-on cards applied

# IPC-3026

## Quiet Compact Chassis for Half-size SHB/SBC



### Features

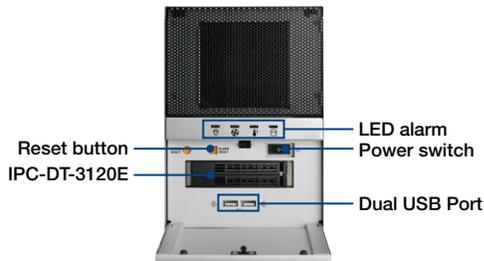
- Supports 6-slot PICMG 1.3/1.0 backplane
- Shockproof drive bay for one 3.5" HDD
- Supports two 2.5" HDDs by hot-swap tray
- LED indicators for system fault detection
- Lockable front door prevents unauthorized access
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

### Quiet Specifications

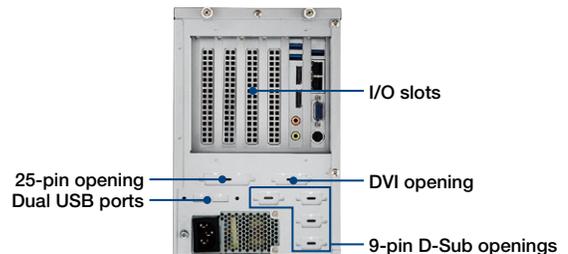
CE FCC

Disk Drive Bay	3.5"	External 1	Internal -
Cooling	Fan	1 (9 cm 44.6 CFM)	
	Air Filters	Yes	
I/O Interface	USB	2 (Front accessible)	
Miscellaneous	LED Indicators	Power, HDD, Temp, Fan	
	Front Panel	Reset button, Power switch	
	Rear Panel	Reserved four 9-pin D-Sub openings, 25-pin opening, DVI opening, dual USB ports	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5-500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	150 x 222 x 270 mm ( 5.9" x 8.74" x 10.63")	
	Weight	4.4 kg (9.7 lb)	

### Front View

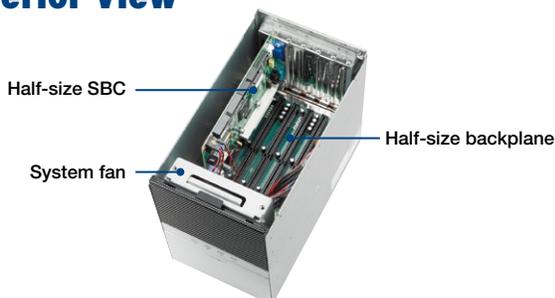


### Rear View



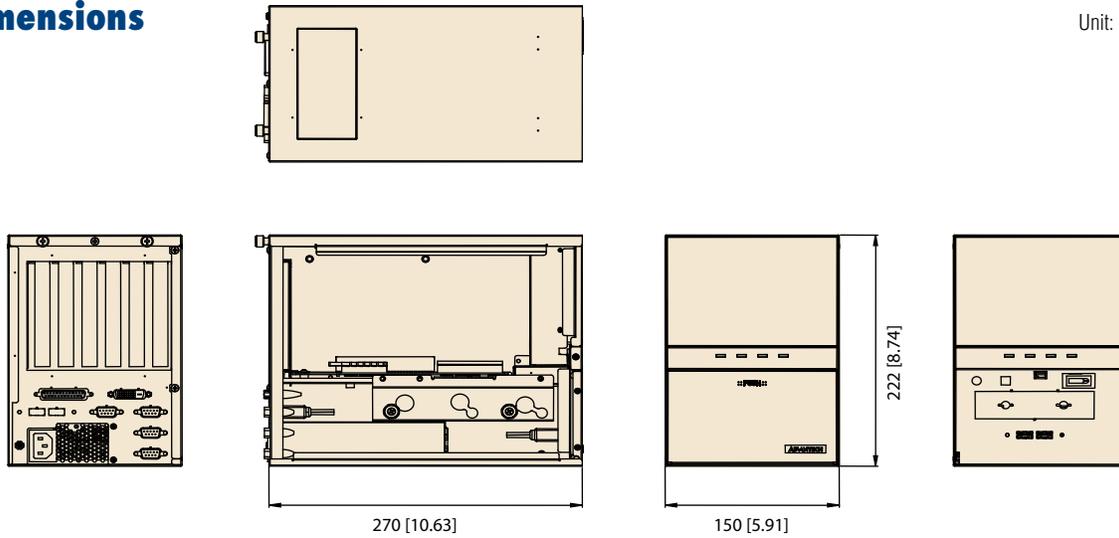
Note: Hot swap drive bay module should be bought separately.

### Interior View

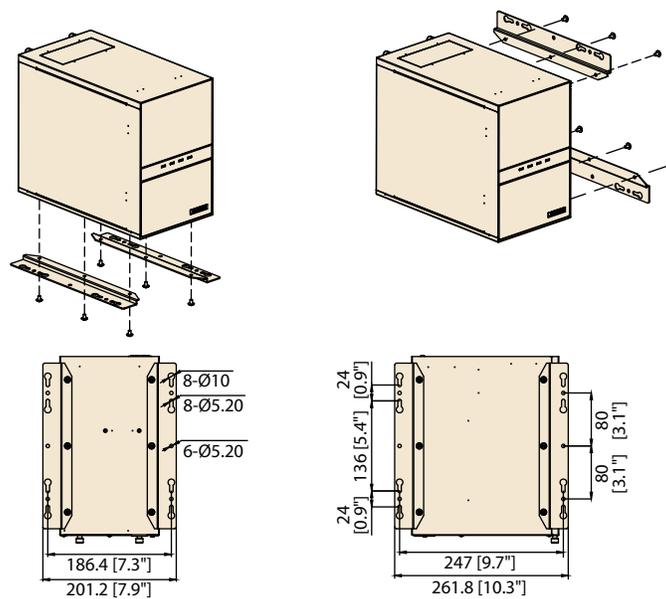


## Dimensions

Unit: mm [inch]



## Installation



## Ordering Information

Part Number	Power Supply	Wattage	Type	Input
IPC-3026BP-15ZE	96PS-A150WFX-1	150W	Single	AC 100 ~ 240 V ( full range )

## Optional Accessories

Ordering P/N	Description
IPC-DT-3120E	Mobile rack for dual 2.5" SATA HDDs with a 3.5" drive bay occupancy

## Backplane Options

Part Number	ISA	PCI	PClex16	PClex8	PClex4	PClex1	PICMG
<b>PICMG 1.0</b>							
PCA-6106-0B2E	5	-	-	-	-	-	1
PCA-6105P5-0B2E	-	4	-	-	-	1	
<b>PICMG 1.3</b>							
PCE-3B03-00A1E	-	-	1	-	1	-	1
PCE-3B06-00A1E	-	-	1	-	-	4	1
PCE-3B06-02A1E	-	2	1	-	-	2	1
PCE-3B06-03A1E	-	3	1	-	-	1	1

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# IPC-6806

## 6-Slot Desktop/Wallmount Compact Chassis for Full-/Half-size Slot SBC



### Features

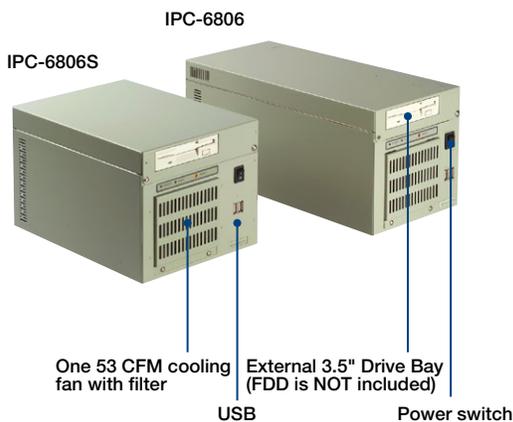
- Three models with different sizes to support various industrial applications
  - IPC-6806S supports 6-slot PICMG 1.0/1.3 backplane
  - IPC-6806 supports 6-slot PICMG 1.0 backplane
  - IPC-6806W supports 6-slot PICMG 1.0/1.3 backplane
- Supports 6-slot backplanes
- Streamlined filtered airflow

CE FCC

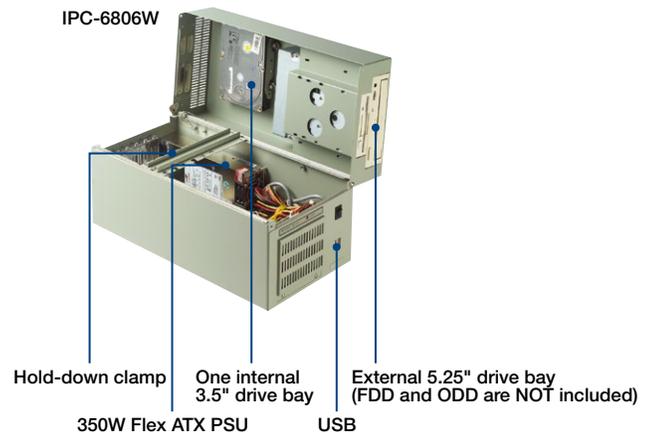
### Specifications

Model Name		IPC-6806S	IPC-6806	IPC-6806W
CPU Card Form Factor		Half-size PICMG 1.0/1.3	Full-size PICMG 1.0	Full-size PICMG 1.0/1.3
Drive Bay	5.25"	-	-	1
	External 3.5"	1 (no support for IPC-DT-3120E)	1	1
	Internal 3.5"	1	1	1
Cooling	Fan	1 (9cm / 53 CFM)	1 (9cm / 53 CFM)	1 (9cm / 58 CFM)
	Air Filter	Yes	Yes	Yes
Front I/O Interface	USB 2.0	2	2	2
Miscellaneous	LED Indicators	Power and HDD		
	Control	Power switch and system reset buttons		
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)		Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms		2 G
	Shock	10 G (with 11 ms duration, half sine wave)		
	Physical Characteristics	Dimensions (W x H x D)	191 x 178 x 290 mm (7.5" x 7.01" x 11.42")	166 x 178 x 398 mm (6.54" x 7.01" x 15.67")
	Weight	5.6 kg (12.3 lb)	6.3 kg (13.9 lb)	8 kg (17.6 lb)

### Front View



### Inside View

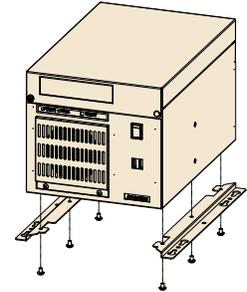
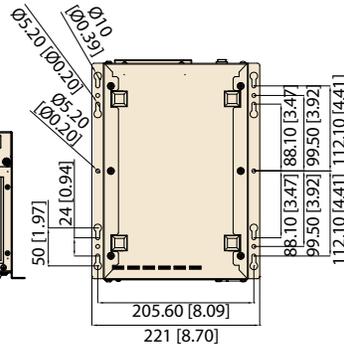
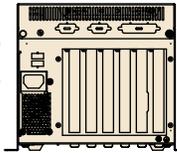
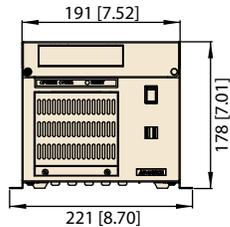
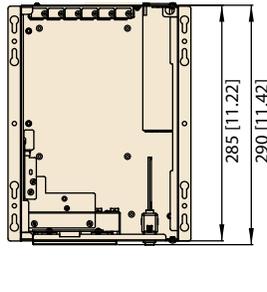


## Dimensions

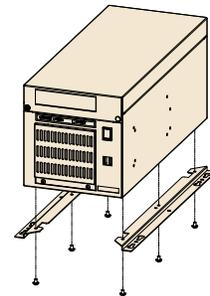
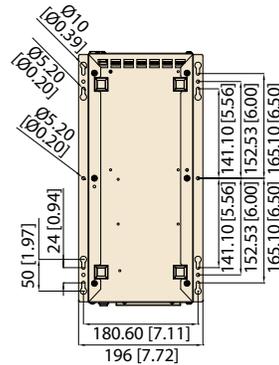
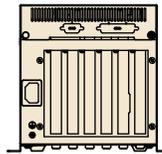
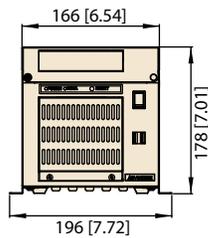
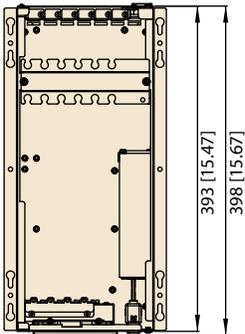
## Installation

Unit: mm [inch]

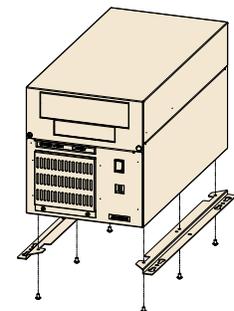
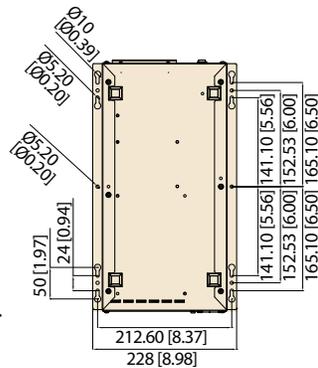
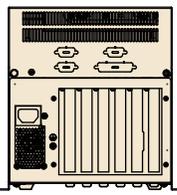
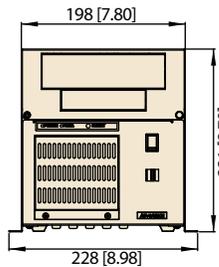
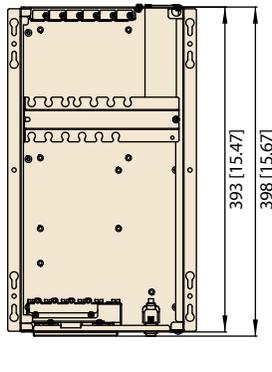
### IPC-6806S



### IPC-6806



### IPC-6806W



## Ordering Information

Part Number	Color	CPU Card Form Factor	Power Supply Wattage	Switch
<b>IPC-6806S Series</b>				
IPC-6806S-25CE	Gray	PICMG 1.0 Half-size	250W	AT
<b>IPC-6806 Series</b>				
IPC-6806-25DE	Gray	PICMG 1.0 Full-size	250W	ATX
<b>IPC-6806W Series</b>				
IPC-6806W-35CE	Gray	PICMG 1.0/1.3 Full-size	350W	AT

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# IPC-6806S-D

## 6-Slot Desktop/Wallmount Compact Chassis for Half-size Slot SBC



### Features

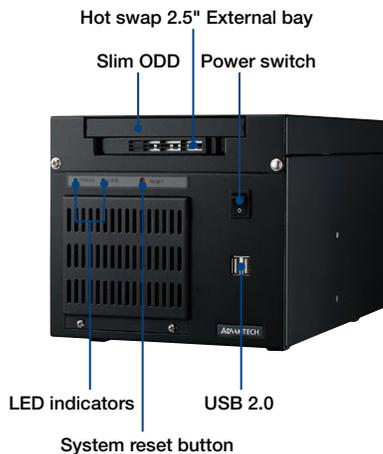
- One Hot-swap 2.5" drive bay
- Two front-accessible USB 2.0 ports
- Supports 6-slot PICMG 1.3/1.0 backplane
- Easily maintained system fan and filter

CE FCC

### Specifications

Model Name	IPC-6806S	
CPU Card Form Factor	Half-size	
Drive Bay	External Slim ODD port	1
	Internal 3.5"	1
	Hot-Swap drive bay	1 (only for HDD thickness with 9.6 mm / SAS not supported)
Cooling	Fan	1 (9cm / 53 CFM)
	Air Filter	Yes
Front I/O Interface	USB 2.0	2
Miscellaneous	LED Indicators	Power and HDD
	Control	Power switch and system reset buttons
Environment	Temperature	Operating: 0 ~ 40 °C (32 ~ 104 °F) Non-Operating: -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing 10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms 2 G
	Shock	10 G (with 11 ms duration, half sine wave)
	Physical Characteristics	Dimensions (W x H x D) Weight

### Front View



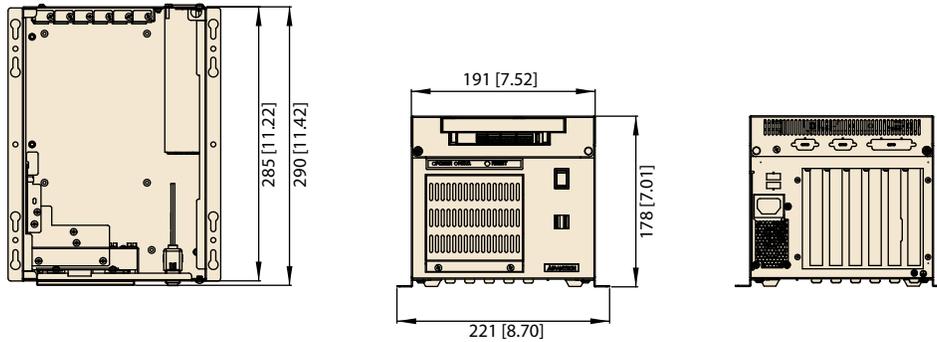
### Inside View



# IPC-6806S-D

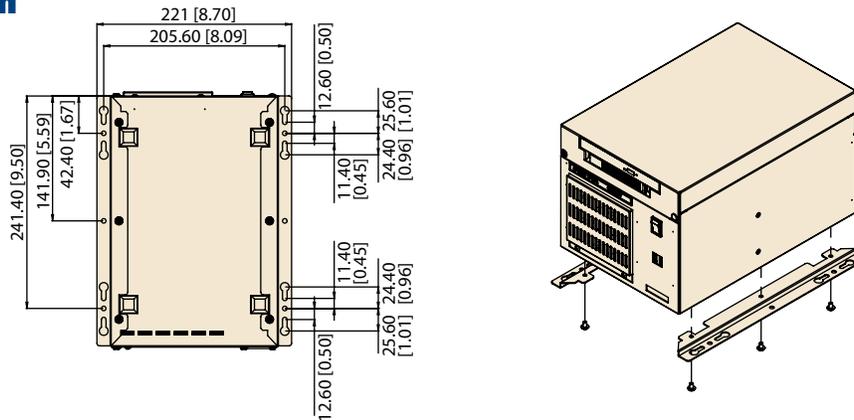
## Dimensions

Unit: mm [inch]



## Installation

Unit: mm [inch]



## Ordering Information

Part Number	Color	CPU Card Form Factor	Power Supply Wattage	Backplane	Switch
IPC-6806S-25DE	Black	Half-size	250W	-	AT

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# IPC-6606 / 6608

## 6/8-Slot Desktop/Wallmount Chassis



### Features

- Supports 6/8-slot PICMG 1.0 / PICMG 1.3 backplane
- Shockproof drive bay for 5.25" ODD and 3.5" HDD
- Two front access USB ports
- Bidirectional to mount chassis on wall or workbench
- Easily-maintained system fan and filter

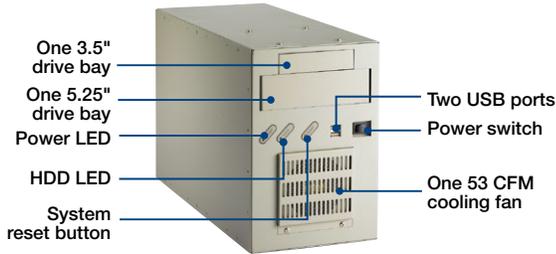
CE FCC

### Specifications

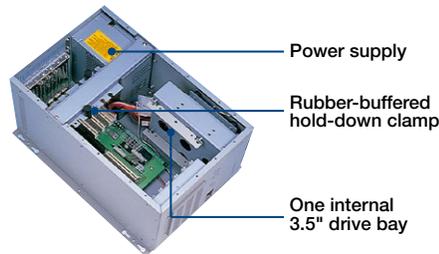
Model Name		IPC-6606	IPC-6608
Drive Bay	5.25"	1	2
	3.5"	2 (1 front-accessible, 1 internal)	1
Front I/O Interface	USB 2.0	2	2
Cooling	Fan	1 (9 cm / 53 CFM)	1 (12 cm / 85 CFM)
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power and HDD	
	Control	Power switch and reset button	
Environment		Operating	
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
Physical Characteristics	Dimensions (W x H x D)	174 x 254 x 396 mm (6.9" x 10" x 15.6")	174 x 315 x 410 mm (6.9" x 12.4" x 16.1")
	Weight	9 kg (19.8 lb)	11 kg (24.2 lb)

### Front View

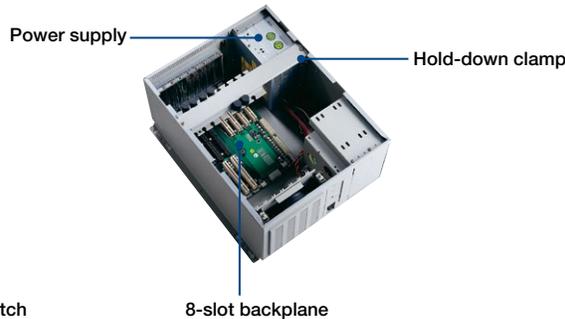
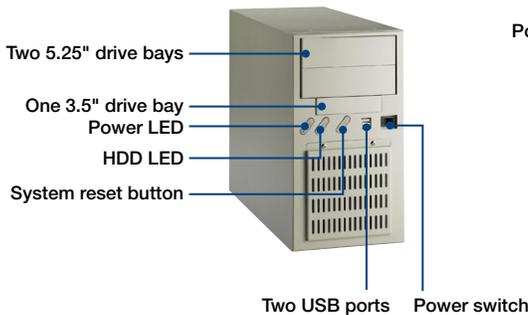
#### IPC-6606



### Inside View



#### IPC-6608



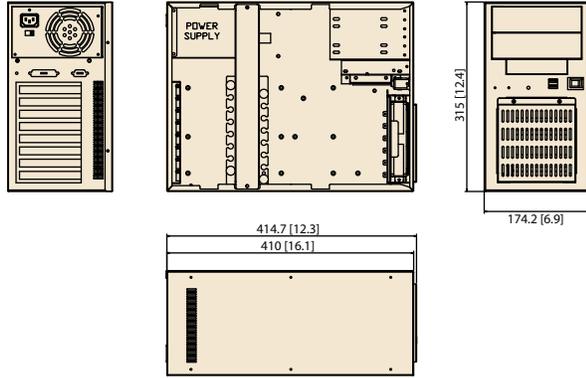
# IPC-6606/6608

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

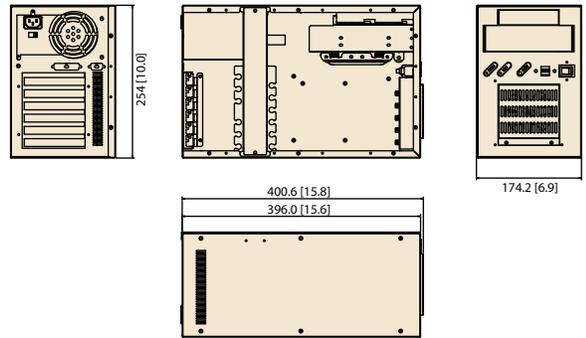
## Dimensions

Unit: mm [inch]

### IPC-6606



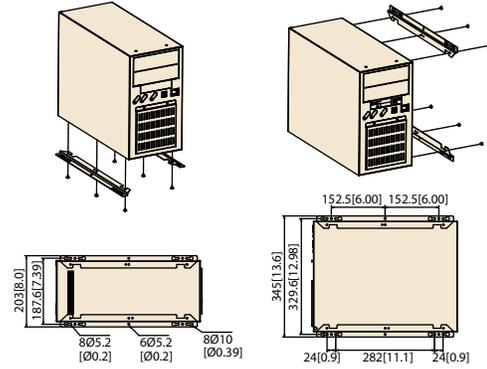
### IPC-6608



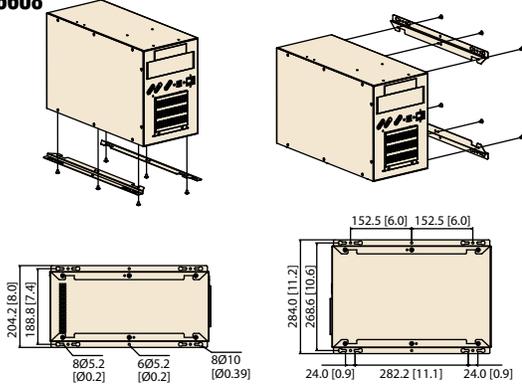
## Installation

Unit: mm [inch]

### IPC-6606



### IPC-6608



## Ordering Information

Part Number	Power Supply	Wattage	Backplane	Switch
<b>IPC-6606</b>				
IPC-6606BP-25BE	PS8-250ATX-ZE	250W	-	AT
IPC-6606BP-30CE	PS8-300ATX-ZBE	300W	-	ATX
IPC-6606P3-25BE	PS8-250ATX-ZE	250W	PCA-6106P3-0D2E	AT
IPC-6606P3-30CE	PS8-300ATX-ZBE	300W	PCA-6106P3-0D2E	ATX
<b>IPC-6608</b>				
IPC-6608BP-25BE	PS8-250ATX-ZE	250W	-	ATX
IPC-6608BP-30CE	PS8-300ATX-ZBE	300W	-	ATX

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

# IPC-7132

## Cost-effective Wallmount Chassis for ATX/uATX Motherboard



### Features

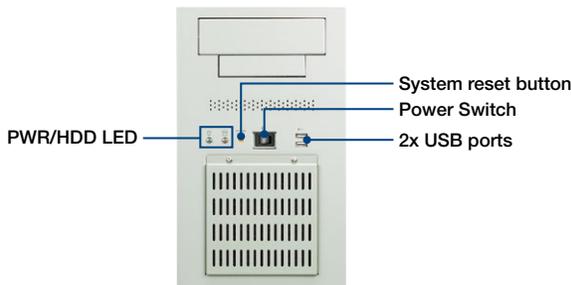
- Supports ATX/uATX motherboard
- Shockproof drive bay for one 5.25" ODD and three 3.5" HDDs
- Thumb-screw for top cover easy opening
- Bidirectional option to mount chassis on wall or workbench
- Two front access USB ports

CE FCC

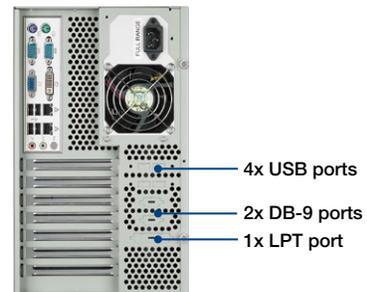
### Specifications

		External	Internal
Disk Drive Bay	3.5"	1	2
	5.25"	1	-
Cooling	Fan	1 (12 cm/85 CFM)	
	Air Filters	Yes	
Front I/O interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, HDD	
	Control	Power Switch, System Reset Button	
	Rear panel	4x USB, 2x DB-9, 1x LPT port	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Vibration (5-500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
	Dimensions (W x H x D)	200 x 330 x 430 mm (7.9" x 13" x 16.9")	
Physical Characteristics	Weight	9.96 kg (21.93 lb)	

### Front View



### Rear View



### Inside View



Easy-to-maintain cooling fan



# IPC-5120 / 7120

## Desktop/Wallmount Chassis with front I/O Interfaces for ATX/mATX Motherboard



IPC-5120 ▲

IPC-7120 ▲

CE FCC

### Features

- With front I/O interface and four to seven expansion slots
- Shockproof drive bay for one 5.25" ODD and two 3.5" HDDs
- LED indicators for power status and HDD activity
- Supports four to seven half-size add-on cards
- Suitable form factor : IPC-5120 for Micro-ATX MB , IPC-7120 for ATX MB

### Specifications

		External	Internal
Drive Bay	5.25"	1	-
	3.5"	1	1
Cooling	Fans	1 (12 cm / 85 CFM) + 1 (4 cm / 10 CFM)	
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power status and HDD activity	
	Control	Power switch and system reset button	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	IPC-5120: 320 x 164 x 316.5 mm (12.6" x 6.5" x 12.5") IPC-7120: 380 x 164 x 316.5 mm (15" x 6.5" x 12.5")	
	Weight	IPC-5120: 6.54 kg (14.42 lb) IPC-7120: 7.01 kg (15.45 lb)	

### Front View

#### IPC-5120



### Inside View



Easy-to-maintain fan filter



Shock-resistant drive bay for holding an internal 3.5" HDD

#### IPC-7120



Plug ring-lock securely fastens the power cord



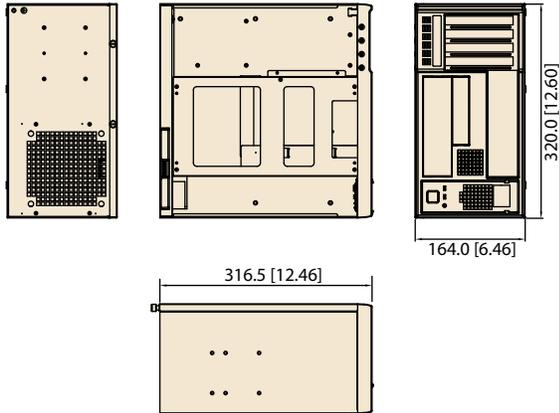
User-friendly mechanical design for installing an add-on card

# IPC-5120/7120

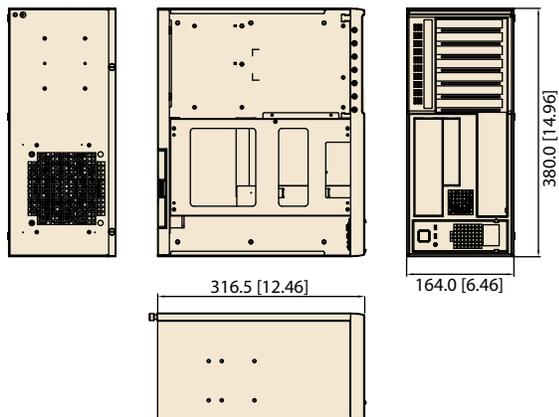
## Dimensions

Unit: mm [inch]

### IPC-5120



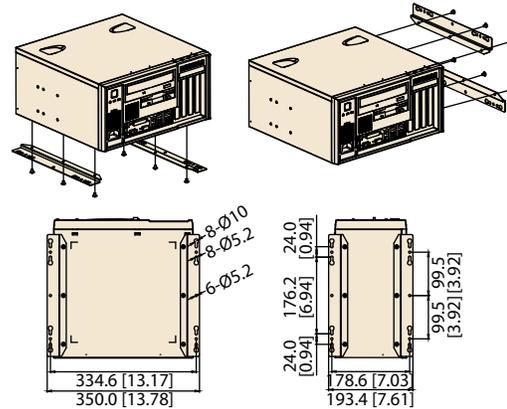
### IPC-7120



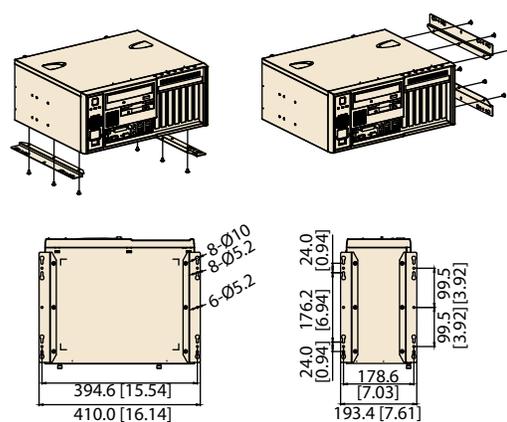
## Installation

Unit: mm [inch]

### IPC-5120



### IPC-7120



## Ordering Information

Part Number	Power Supply	Wattage	Switch
<b>IPC-5120 Series</b>			
IPC-5120-25CE	PS8-250FATX-XE	250W	ATX
IPC-5120-35CE	PS8-350FATX-XE	350W	ATX
<b>IPC-7120 Series</b>			
IPC-7120-25CE	PS8-250FATX-XE	250W	ATX
IPC-7120-35CE	PS8-350FATX-XE	350W	ATX

## Power Supply Specification

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-250FATX-XE	Bronze	250W	Single	AC 100-240V (full range)
PS8-350FATX-XE	Bronze	350W	Single	AC 100-240V (full range)

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# IPC-6025

## 5-Slot Desktop/Wallmount Chassis with Scalability as 5U Quad-System Solution



### Features

- Front handle for easy withdraw in rackmount carrier
- Lockable front door prevents unauthorized access
- Shockproof drive bay for two 3.5" HDDs
- LED indicators for system fault detection
- Optional rackmount carrier for quad-system solution
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

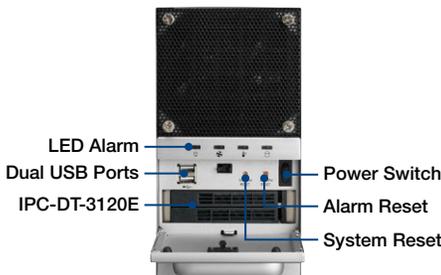


CE FCC

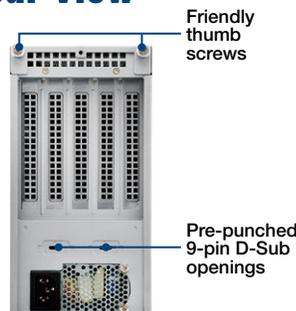
### Specifications

Drive Bay	3.5"	External 1	Internal 1
Cooling	Fan	1 (9 cm / 46.6 CFM)	
	Air Filters	Yes	
Front I/O Interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, fan, temperature, HDD	
	Control	Power switch and system reset buttons	
	Rear Panel	Reserved Two 9-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	111 x 212 x 420 mm (4.4" x 8.3" x 16.5")	
	Weight	4.7 kg (10.3 lb)	

### Front View



### Rear View

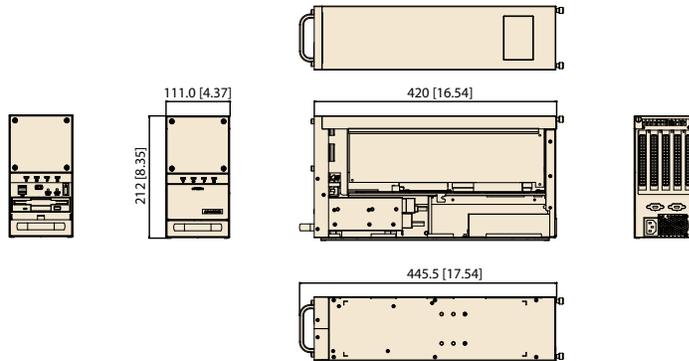


4 IPC-6025 combined as a 5U quad-system rackmount IPC

Note: Hot swap drive bay module should be bought separately.

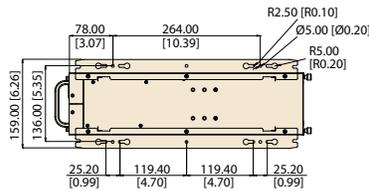
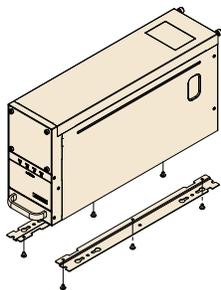
## Dimensions

Unit: mm [inch]



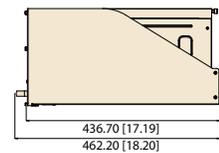
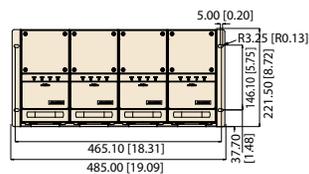
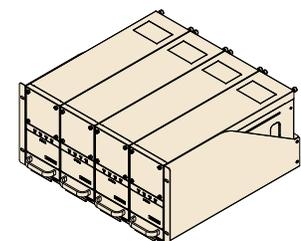
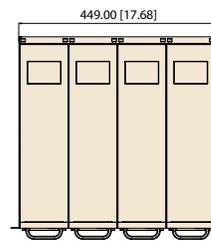
## Installation

### Single System



### Quad System

Unit: mm [inch]



## Ordering Information

Part number	Power Supply	80 Plus Grade	Wattage	Type	Input	Switch type
IPC-6025BP-27ZE	96PS-A270WFX	White	270W	Single	AC 100 – 240V (Full Range)	ATX Switch
IPC-6025BP-40ZE	96PS-A400WFX-2	Gold	400W	Single	AC 100 – 240V (Full Range)	ATX Switch

## Optional Accessories

Ordering P/N	Description
9892602501E	Rackmount carrier for Quad System solution
IPC-DT-3120E	Mobile rack for dual 2.5" SATA HDDs

## Backplane Options

Model	PICMG 1.3/1.0	PCIe	PCI-X	PCI	ISA	PCI/ISA
<b>PCE-5000 Series</b>						
PCE-5B04-20B1E	PICMG 1.3	1 (PCIe x 16)	2	-	-	-
PCE-5B05-02A1E	PICMG 1.3	1 (PCIe x 16) 1 (PCIe x 4)	-	2	-	-
PCE-5B05-03A1E	PICMG 1.3	1 (PCIe x 16)	-	3	-	-
<b>PICMG 1.0</b>						
PCA-6105P3-5A1E	PICMG 1.0	-	-	2	1	1

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# IPC-5122

## Desktop/Wallmount Chassis for MicroATX Motherboard



### Features

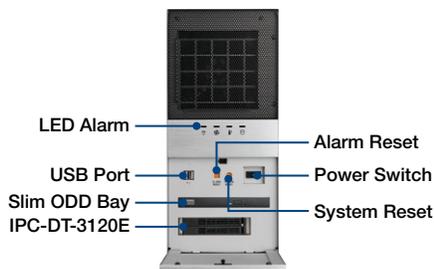
- Shockproof drive bay for slim ODD and 3.5" or 2.5" HDD
- Lockable front door prevents unauthorized access
- LED indicators for system fault detection
- Easy-to-maintain system fan and reusable air filter
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

### Quiet Specifications

CE FCC

		External	Internal
Drive Bay	Slim Optical Drive	1	-
	3.5"	1	1
Cooling	Fan	1 (12 cm / 85 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2 ( Front accessible)	
Miscellaneous	LED Indicators	Power, HDD, fan and temperature	
	Control	Power switch, alarm reset and system reset buttons	
	Rear Panel	Six 9-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	
	Shock	10 G (with 11 ms duration, half sine wave)	
	Dimensions (W x H x D)	157 x 360 x 340 mm (6.2" x 14.2" x 13.4")	
Physical Characteristics	Weight	6.5 kg (14.3 lb)	

### Front View



### Inside View



### Rear View



Note: Hot swap drive bay module and Slim ODD should be bought separately.



Easy-open door

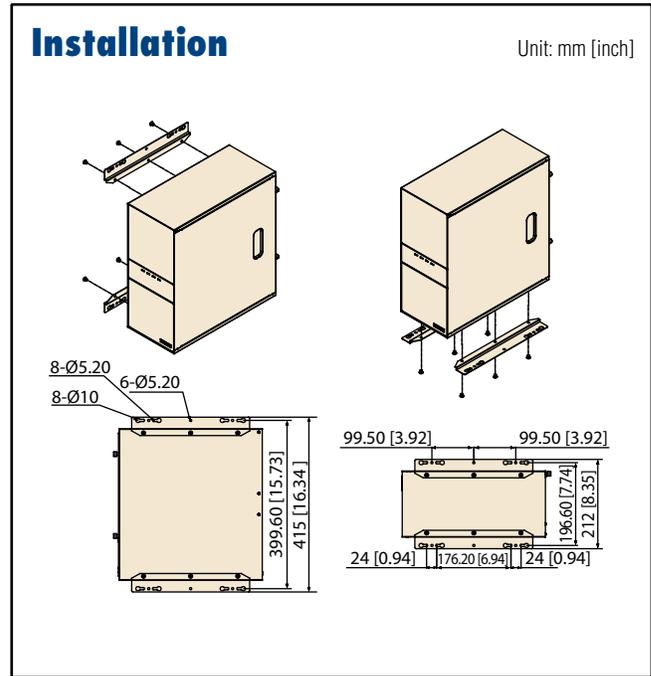
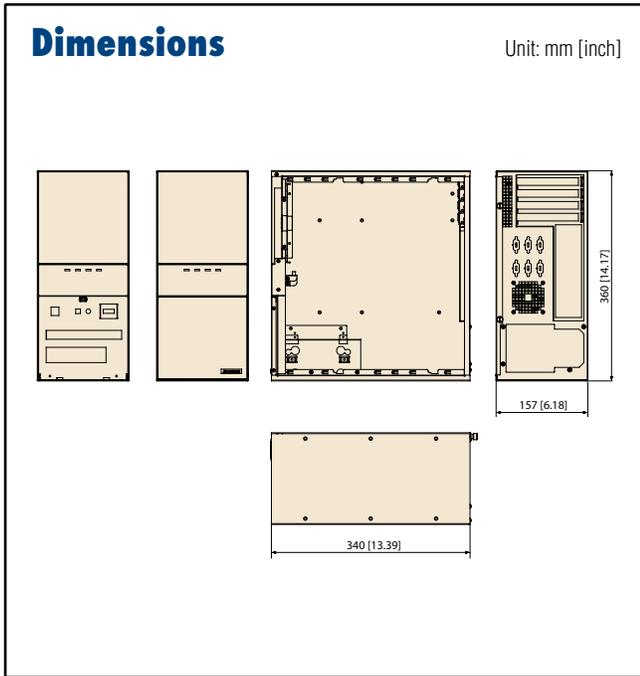


Gently press the hook to pull the air filter out



# IPC-5122

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions



## Ordering Information

Part Number	Description
IPC-5122-00XE	Without power supply, with ATX switch

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays

## Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100-240V (full-range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100-240V (full-range)

# IPC-7130 / 7130L

## Desktop/Wallmount Chassis for ATX/MicroATX Motherboard with Dual Hot-Swap 3.5" Drive Bays



IPC-7130    ▲    IPC-7130L    ▲

### Features

- Shockproof drive bays - One 5.25", one internal 3.5", and two hot-swap 3.5" trays for IPC-7130 / two 3.5" HDD device trays for IPC-7130L
- Lockable front door prevents unauthorized access
- LED indicators for system fault detection
- Bidirectional to mount chassis on the wall or workbench
- Built-in Intelligent System Module enabling whole system fan control and remote manageability (IPC-7130)

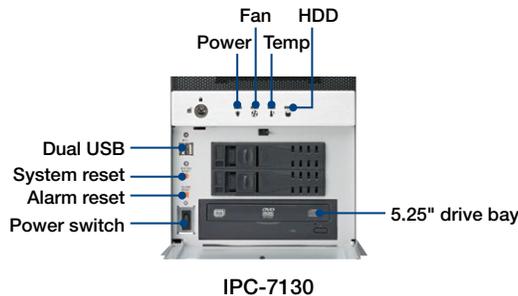
### Quiet Specifications

CE FCC

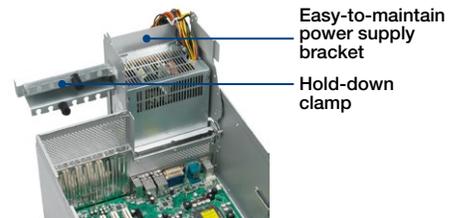
		External	Internal
Disk Drive Bay	5.25"	1/1	-/-
	3.5"	-/2	1/1
	Hot-Swap	2/- (SATA)	-
Cooling	Fan	1 (12 cm/73.8 CFM) + 1 (6 cm/21.2 CFM) / 1 (12 cm/73.8 CFM)	
	Air Filters	Yes	
I/O Interface	USB 2.0	2 (Front accessible)	
Miscellaneous	LED indicators	IPC-7130	IPC-730L
	Control	Power, fan, temperature, HDD	Power, HDD
Intelligent System Module Remote Monitoring		Power, Alarm reset, System reset	Power, System reset
		CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.) (This feature only enabled in IPC-7130)	
Environment	Temperature	Operating	Non-operating
		0 ~ 40 °C (32 ~ 122 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	
	Vibration (5-500 Hz)	0.5 Grms	
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	200 x 320 x 480 mm (7.9" x 12.6" x 18.9")	
	Weight	12.8 kg (28.2 lb)	

### Front View

### Inside View



IPC-7130



Easy-to-maintain power supply bracket  
Hold-down clamp



IPC-7130L



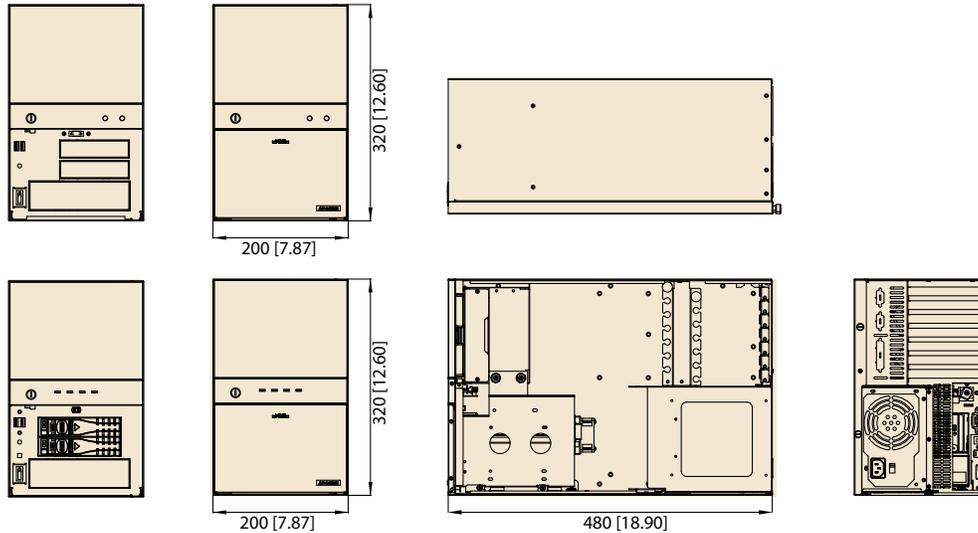
Easy-to-maintain reusable fan filter

# IPC-7130/7130L

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

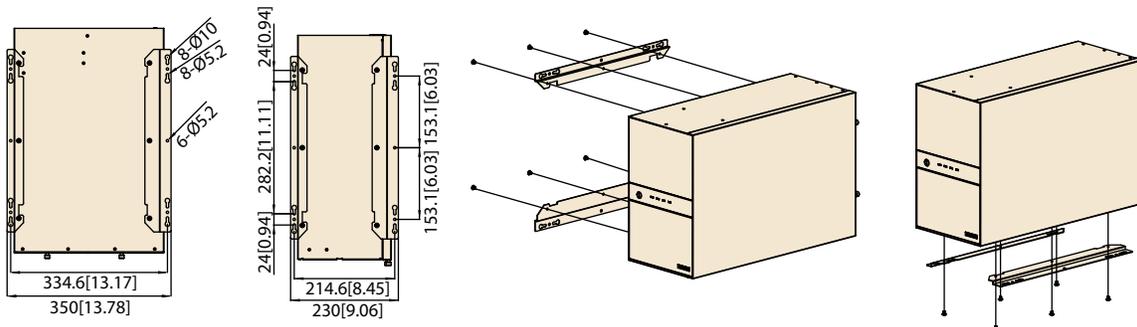
## Dimensions

Unit: mm [inch]



## Installation

Unit: mm [inch]



## Ordering Information

Part number	Power supply	Switch type
<b>IPC-7130 series</b>		
IPC-7130-00XE	NA	ATX
IPC-7130-50ZE	PS8-500ATX-ZE	ATX
<b>IPC-7130L series</b>		
IPC-7130L-00XE	NA	ATX
IPC-7130L-30ZE	PS8-300ATX-ZE	ATX

## Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240V (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240V (full range)
RPS8-500ATX-XE	Bronze	500W	1+1 Redundant	AC 100 ~ 240V (full range)

## Optional Accessories

Part Number	Description
1750006045	73.84 CFM, System fan 120 x 120 x 25 mm
1750006376	21.22 CFM, HDD fan 60 x 60 x 13 mm

# IPC-7220

## Desktop/wallmount Chassis for ATX/mATX Motherboard



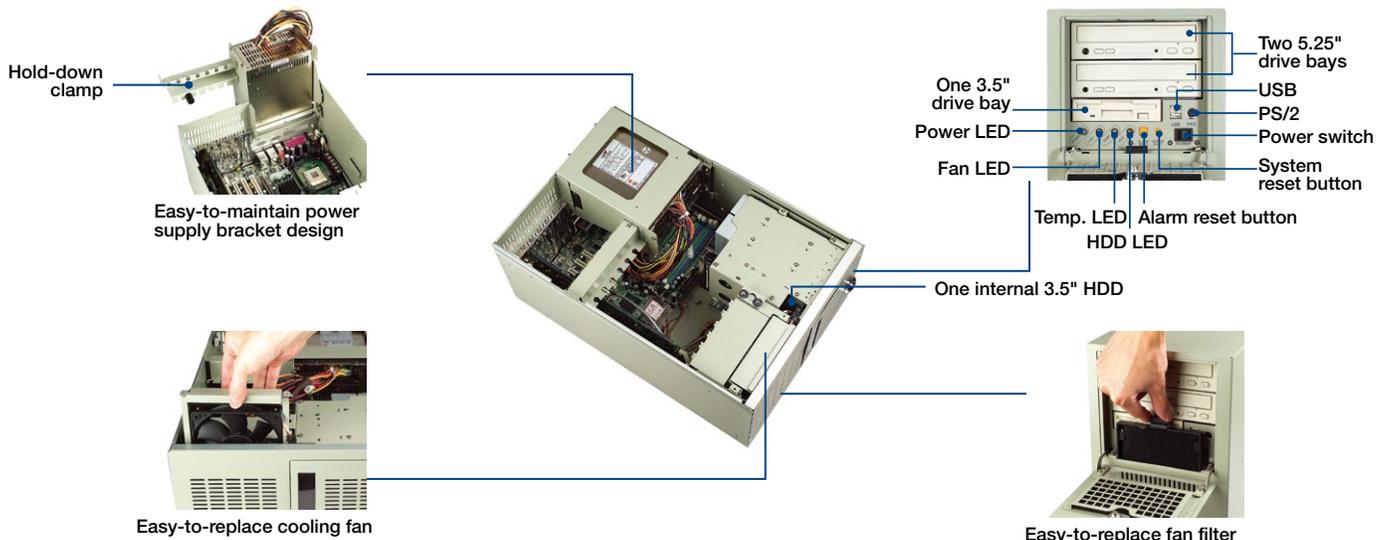
### Features

- Two 5.25" and two 3.5" shock-resistant drive bays
- Lockable front door to prevent unauthorized access
- LED indicators and alarm notification for system fault detection
- Easy-to-maintain system fan and air filter
- Low noise system fan
- Built-in Intelligent System Module enables whole system fan control and remote manageability

### Quiet Specifications

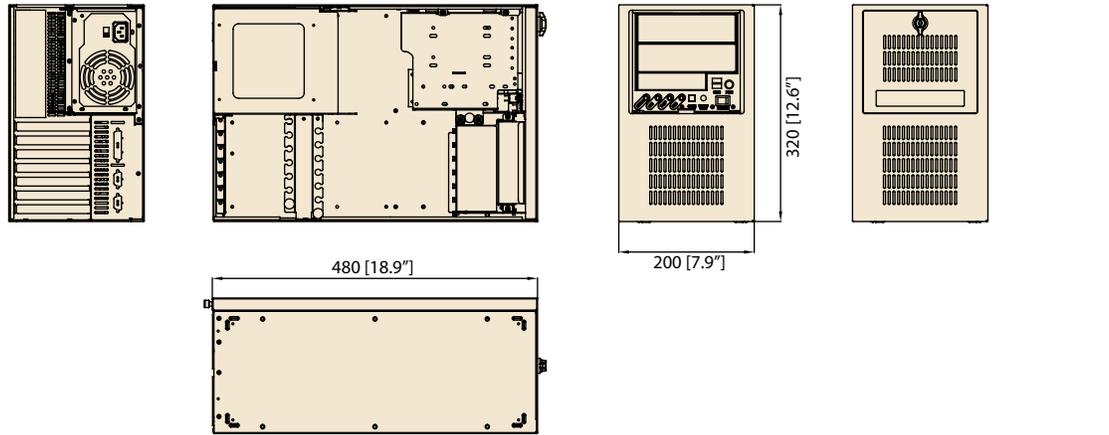
CE FCC

		External	Internal
Drive Bay	5.25"	2	-
	3.5"	1	1
Cooling	Fan	1 (12 cm / 85 CFM)	
	Air Filters	2 (one 7 x 12 cm and one 12 x 12 cm)	
	Smart Fan	System fan speed referring to chassis thermal sensor, or CPU temperature (Available with selected Advantech MBs/CPU cards)	
Front I/O Interface	USB 2.0	2	
	PS/2	PS/2 keyboard and mouse, or PS/2 keyboard depends on the enclosed motherboard	
Miscellaneous	LED Indicators	Power, HDD, temperature and fan	
	Control	Power switch, system reset and alarm reset buttons	
	Rear Panel	Reserved Two 9-pin D-Sub openings, one LPT opening	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environmental	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	200 x 320 x 480 mm (7.9" x 12.6" x 18.9")	
	Weight	14 kg (30.8 lb)	

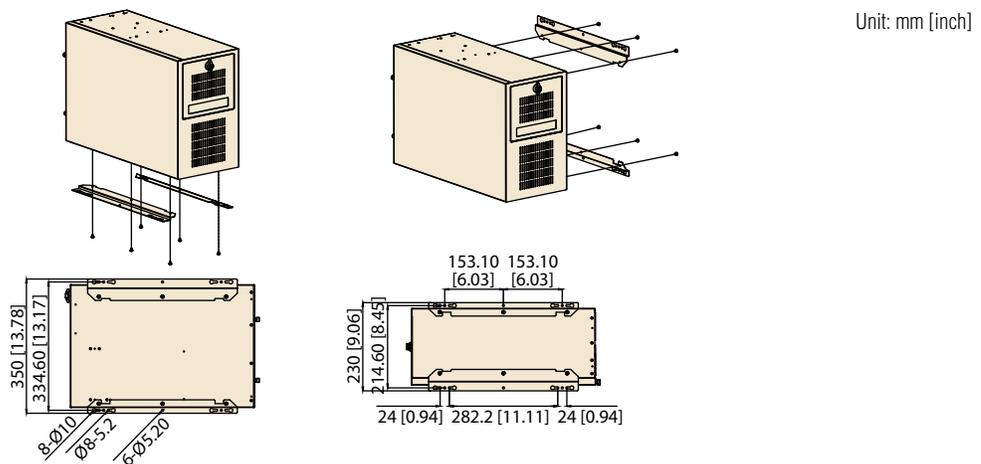


# IPC-7220

## Dimensions



## Installation



## Ordering Information

Part number	Power Supply	Wattage	Switch Type
IPC-7220-30BE	PS8-300ATX-ZBE	300W	ATX
IPC-7220-40BE	PS8-400ATX-ZE	400W	ATX

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 2.5" or 3.5" SATA HDD trays

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# ACP-1010

## 1U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard



### Features

- Supports full-size SHB/SBC or ATX/MicroATX motherboards
- LED indicators for power, HDD, temperature, fan, LAN1 and LAN2
- Supports up to 2 expansion slots in BP version, and 1 expansion slot via riser card in MB version
- Supports both 250W/350W Flex ATX/PFC power supplies

CE FCC

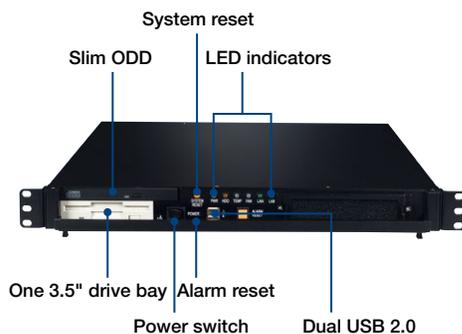
### Specifications

		External	Internal
Driver bay	Slim Optical Disk Drive	1	-
	3.5"	1	1*
	2.5"	-	2*
Cooling	Fan	BP: 4 (4 cm/24 CFM x 3 + 15 CFM x 1) MB: 2 (4 cm/24 CFM each)	
Front I/O Interface	USB 2.0	2	
Miscellaneous	Notification LEDs	System: Power, HDD, Temperature, Fan, LAN1 and LAN2	
	Control	Power switch, system reset & alarm reset button	
	Rear panel	One 9-pin D-Sub opening	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 Grms
	Shock	10 G (with 11 ms duration, half sine wave)	
	Physical Characteristics	Dimensions (W x H x D)	480 x 44 x 497 mm (19" x 1.7" x 19.6")
	Weight	8 kg (17.6 lb)	

\* Internal driver bay can choose 1 x 3.5" or 2 x 2.5"

\* ACP-1010 supports up to CPU 65W under 35 °C for thermal concern.

### Front View



### Back View



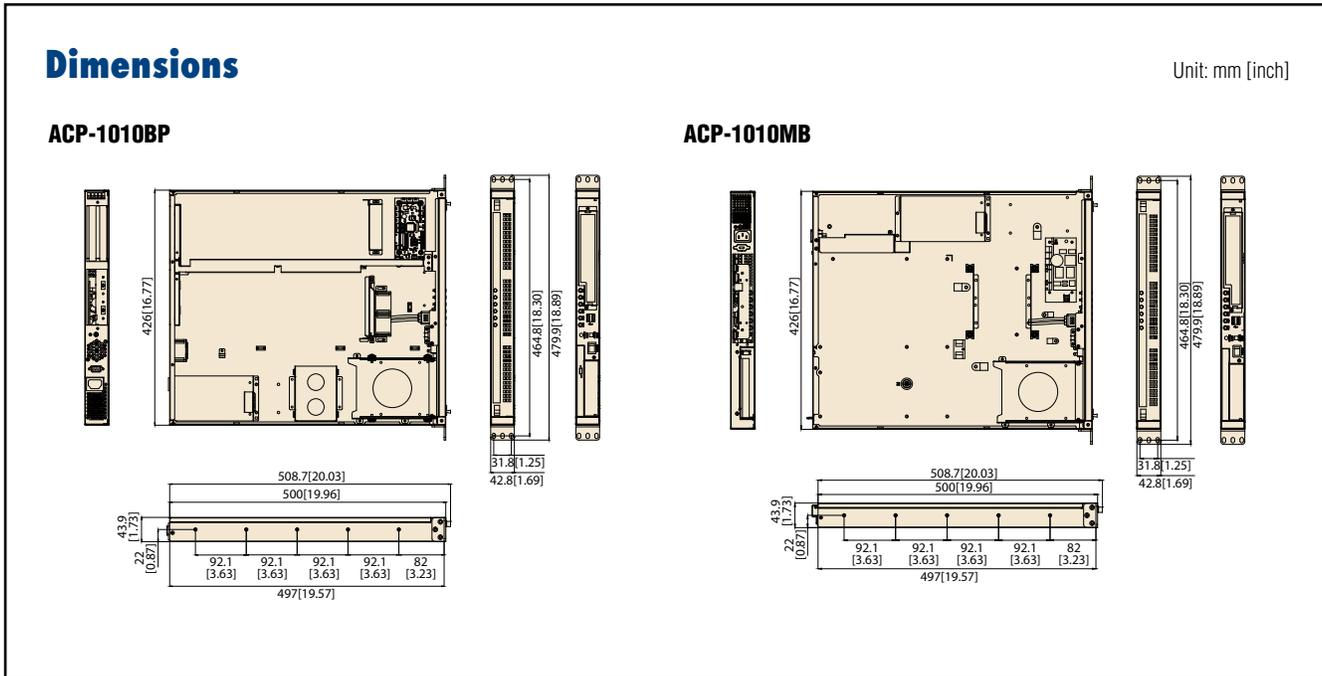
ACP-1010BP



ACP-1010MB

# ACP-1010

- 1  
Software and Industry Solutions
- 2  
Industrial Server
- 3  
Intelligent System
- 4  
Intelligent HMI and Monitors
- 5  
Automation Computers and Controllers
- 6  
Industrial Communication
- 7  
Remote I/O Modules
- 8  
Industrial I/O and Video Solutions



## Ordering Information

Part Number	Description
<b>Backplane Version</b>	
ACP-1010BP-00BE	BP version W/O PSU
<b>Motherboard Version</b>	
ACP-1010MB-00BE	MB version W/O PSU

\*ACP-1010MB does not support AIMB-763, 542, 562 and 564 because the height of the audio connector is over 1U.

## Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part Number	80 Plus Bronze	Wattage	Type	Input
PS8-250FATX-XE	Bronze	250W	Single	AC 100 ~ 240 V (full range)
PS8-350FATX-XE	Bronze	350W	Single	AC 100 ~ 240 V (full range)

## Spare Parts

Part Name	Description
2130007889S000	Filter 170 x 32 x 5 mm for ACP-1010

## Optional Accessories

Part Name	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin ( for slim ODD )
<b>I/O shield</b>	
1960055954T000	I/O shield for AIMB-701/781/782/581
1960048353T000	I/O shield for AIMB-767/769/780/566/580

## Backplane Options

Part Name	Slot	CPU Card
<b>PICMG 1.3</b>		
PCE-5B03V-01A1E	One CPU, one PCIe x16, one PCI (32-bit/33MHz)	PCE-5000 Series
PCE-5B03V-00A1E	One CPU, one PCIe x16, one PCIe x4	
PCE-7B03V-01A1E	One CPU, one PCIe x8, one PCI	PCE-7000 Series
PCE-7B03V-00A1E	One CPU, two PCIe x8	
<b>PICMG 1.0</b>		
989K610302E (PCA-6103P2V-0A2E)	One CPU, 2 PCI (320bit/33MHz)	PICMG 1.0 Full-Size SBC

# IPC-603

## 2U 3-Slot Rackmount Chassis for ATX/MicroATX Motherboard with Front I/O



### Features

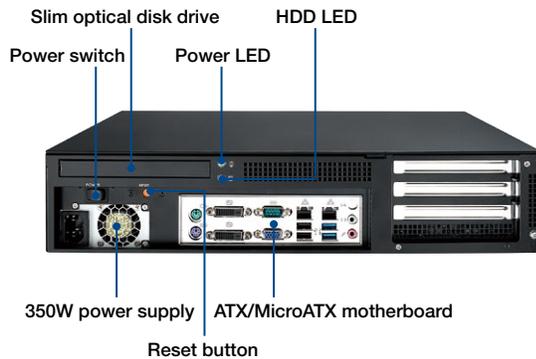
- Front I/O, short depth 2U chassis (308 mm)
- Shockproof drive for slim ODD and one 3.5" HDD
- Equipped with 350W single power supply
- Easy-to-replace air filters

CE FCC

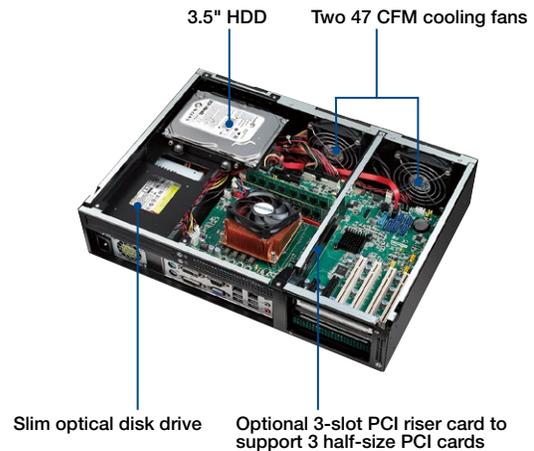
### Specifications

Drive Bay	Slim Optical Disk Drive	External	Internal
	3.5"	1	-
Cooling	Fan	2 (8 cm/47 CFM each)	
	Air Filters	3 (85 x 80 mm)	
Miscellaneous	Notification LEDs	Power & HDD activity	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 308 mm (19" x 3.46" x 12.1")	
	Weight	6.4 kg (14.1 lb)	

### Front View

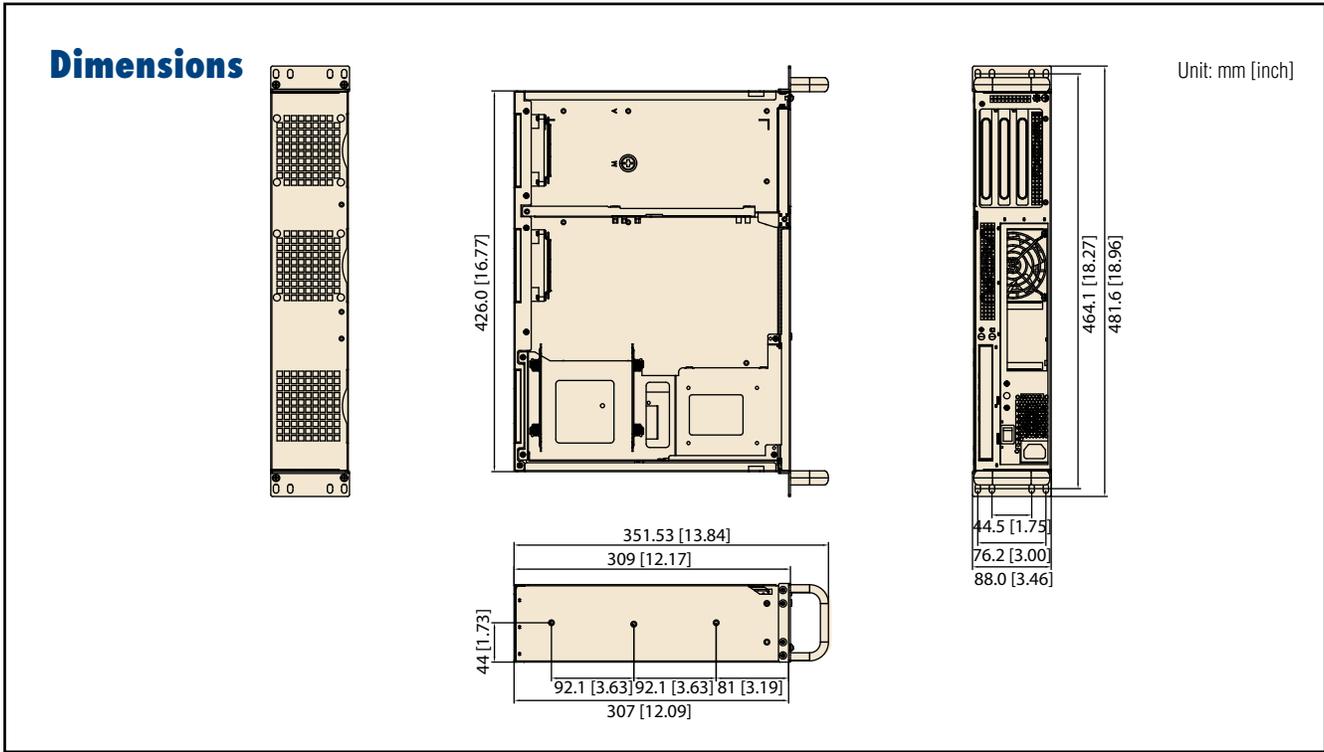


### Inside View



# IPC-603

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions



## Ordering Information

Part Number	Power Supply	Wattage	Type	Input
IPC-603MB-35BE	PS8-350FATX-XE	350W	Single	AC 100 ~ 240 V full range

## Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)

## Spare Parts

Part Number	Description
2130004795S000	Fan filter 80 x 85 x 5 mm

# ACP-2000

## 2U 6-Slot Rackmount Chassis with Front USB and PS/2 Interfaces



PICMG 1.0

PICMG 1.3

### Features

- 2U rackmount chassis supports up to 6 cards
- Butterfly backplane design
- Front-accessible USB and PS/2 connectors
- 250W / 300W AC ATX and DC power supply options
- Two 40 CFM cooling fans with air filter
- Lockable front door prevents unauthorized access
- System alarm notification by front LED indicators
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

CE FCC

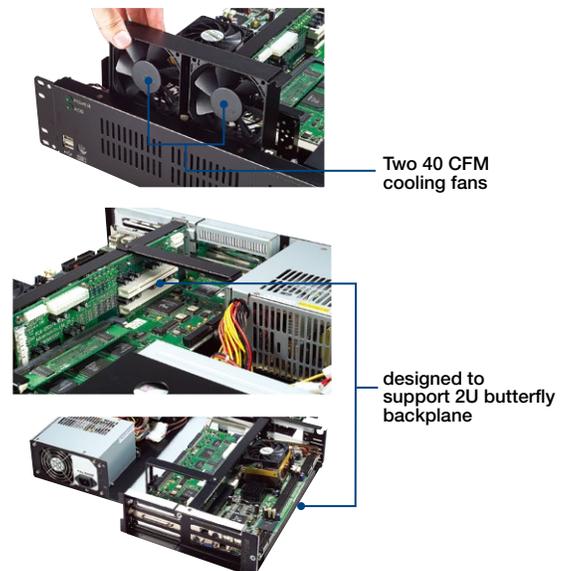
### Specifications

		External	Internal
Drive Bay	Slim Optical Disk Drive	1	-
	3.5"	2	-
	5.25"	-	-
Cooling	Fan	2 (8 cm / 47 CFM each)	
	Air Filter	Yes	
Front I/O Interface	USB	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power and HDD activity; fan and temperature	
	Rear Panel	One 9-pin D-Sub opening	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.) (This feature only enabled in ACP-2000)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	0.5 Grms	
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 451 mm (19" x 3.5" x 17.8")	
	Weight	11.5 kg (25.3 lb) / 11.3 kg (24.9 lb)	

### Front View

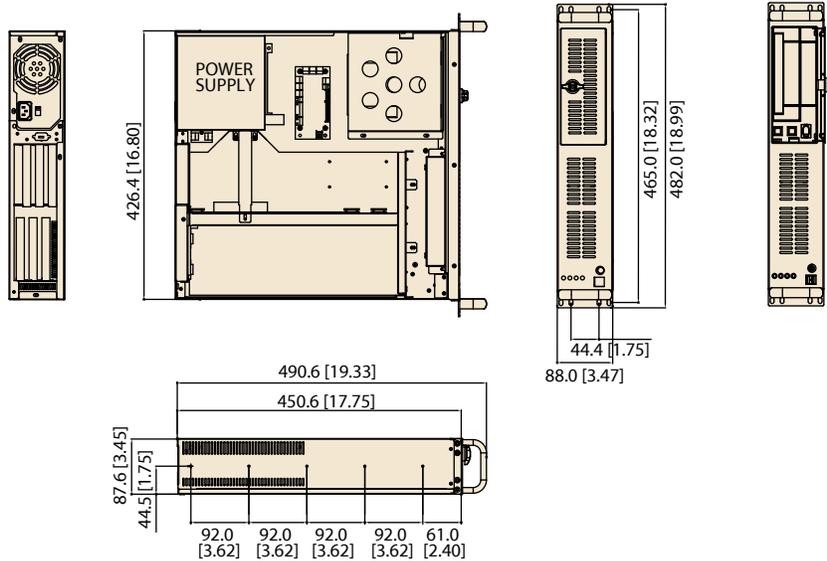


### Inside View



## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply	Backplane
<b>PICMG 1.0</b>		
ACP-2000P4-00BE	Without power supply, with ATX switch	989K610512E (PCA-6105P4V)
<b>PICMG 1.3</b>		
ACP-2000EBP-00BE	Without power supply, with ATX switch	-

## Optional Accessories

Part Number	Description
1950000869N002	P4 card cage
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays

## Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240 V (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 V (full range)
PS-300ATX-DC48E	-	300W	Single	DC -48 V
RPS-300ATX-ZE	-	300W	(1+1) Redundant	AC 100 ~ 240 V (full range)

## Spare Parts

Part Number	Description
2130006189S000	Filter behind the door 156 x 45 x 5 mm
1990001949	Filter in the front of the fans 165 x 58 mm

# ACP-2010 / 2320

## 2U Rackmount Chassis for ATX/ MicroATX Motherboard with Low-Profile Rear Bracket Option



### Features

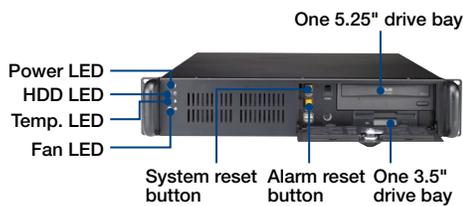
- LED indicators and audible alarm notification for system fault detection
- ACP-2010: One 5.25" and three 3.5" shock-resistant drive bays
- ACP-2320: One Slim optical disk drive, two internal 3.5" drives and dual hot-swap SATA HDD trays
- Various riser card options to support three full-size PCI or PCIe cards for expansion
- Supports 250W /350W single power supply
- Reusable and washable air filters
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

CE FCC

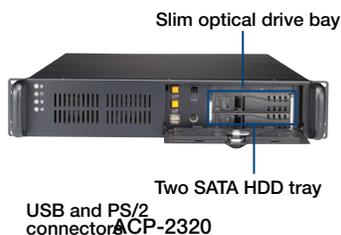
### Specifications

		External	Internal
Drive Bay	Slim Optical Disk Drive	- / 1	-
	5.25"	1 / 0	-
	3.5"	1 / 2	2 / 2
	Hot Swap	- / 2 (Compatible with 3.5" or 2.5" devices)	-
Cooling	Fan	2 (8 cm /47 CFM each) / 2 (8 cm /47 CFM each) + 1 (6 cm /28 CFM) for SATA storage unit	
	Air Filters	Yes	
	Smart Fan	System fan speed referring to chassis thermal sensor, or CPU temperature (Available with selected Advantech MBs/CPU cards)	
Front I/O Interface	USB 2.0	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan	
	Rear Panel	Two 9-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/system fan speed, CPU/system temperature, motherboard voltage (only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with your local Advantech rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	
	Shock	10 G (with 11 ms duration, half sine wave)	
	Dimensions (W x H x D)	482 x 88 x 480 mm (19" x 3.46" x 18.9")	
Physical Characteristics	Weight	10.7 kg (23.5 lb) / 11.7 kg (25.7 lb)	

### Front View

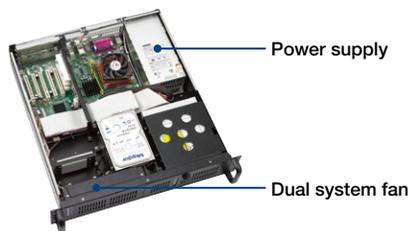


ACP-2010

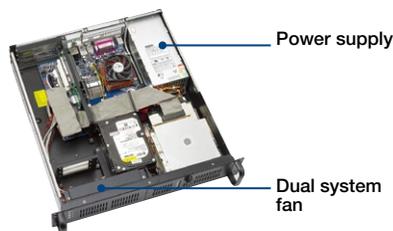


ACP-2320

### Inside View



ACP-2010



ACP-2320

### Rear View



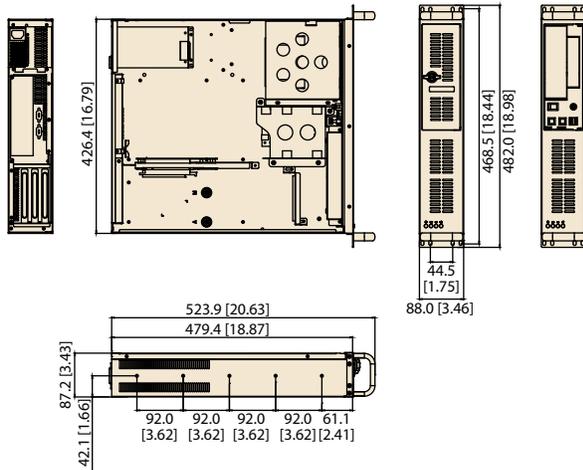
Rear I/O bracket for low profile add-on cards



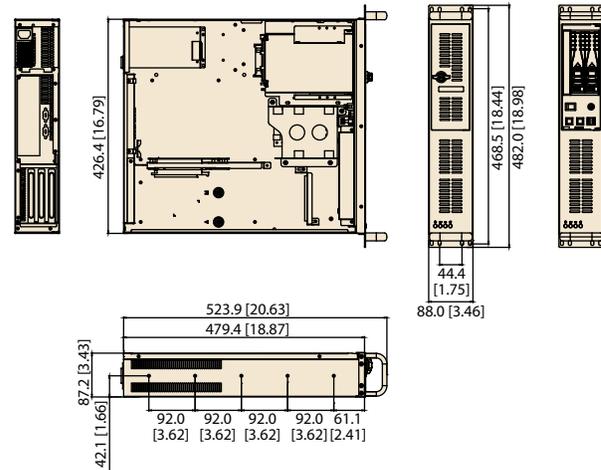
## Dimensions

Unit: mm [inch]

### ACP-2010



### ACP-2320



## Ordering Information

Part Number	Power Supply	Wattage	Switch type
ACP-2010MB-25CE	PS8-250FATX-XE	250W	ATX
ACP-2010MB-35CE	PS8-350FATX-XE	350W	ATX
ACP-2320MB-25CE	PS8-250FATX-XE	250W	ATX
ACP-2320MB-35CE	PS8-350FATX-XE	350W	ATX

## Spare Parts

Part Number	Description
9662132020E	Black mobile HDD tray
1990007986S000	Filter behind the door 156 x 45 x 5 mm
1990001949	Filter in the front of the fans 168 x 58 mm

## Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
<b>Rear I/O panel kit for low-profile add-on cards</b>	
1939000361	Screws (should purchase 7 pcs)
1960074850T000	I/O bracket (should purchase 7 pcs)
1960019475T201	Rear panel for low-profile

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# ACP-2020

## 2U Rackmount Short Depth Chassis for ATX and mATX Motherboard



### Features

- 398 mm short depth 2U rackmount chassis
- Supports ATX and mATX form factor single processor motherboard
- Two Internal 2.5" drive bay and two "hot-swap or external" drive bay
- Supports 80 Plus single 350W or 500W redundant power supply
- Front-accessible system fan without opening top cover for easy maintenance
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

CE FCC

### Specifications

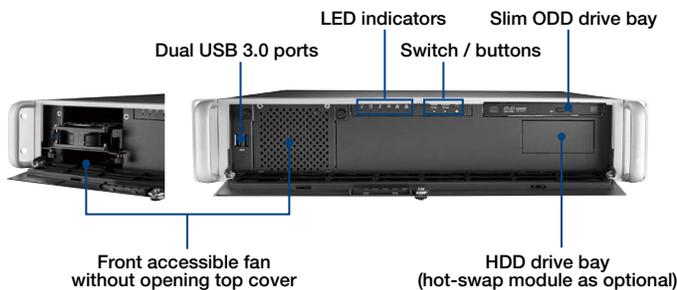
		External	Internal
Drive Bay	Slim Optical Drive	1	-
	2.5"	2 (hot-swap tray module as optional)*	2
Cooling	Fan	1 (8 cm/41CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Two 9-pin D-Sub	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/System temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enabled these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 398 mm (18.96" x 3.46" x 15.67")	
	Weight	8.6 kg (18.96 lbs)	

The USB 3.0 ports do not operate if the motherboard has no on-board USB 3.0 box header.

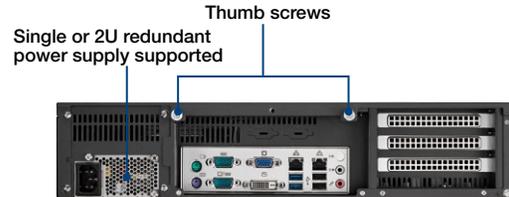
\* ACP-2020 2.5" drive bay, both default internal and hot-swap tray module support 2.5" HDD with thickness less than 14.7mm.

\* The hot-swap module only accepts 2.5" SATA HDD/SSD

### Front View



### Rear View

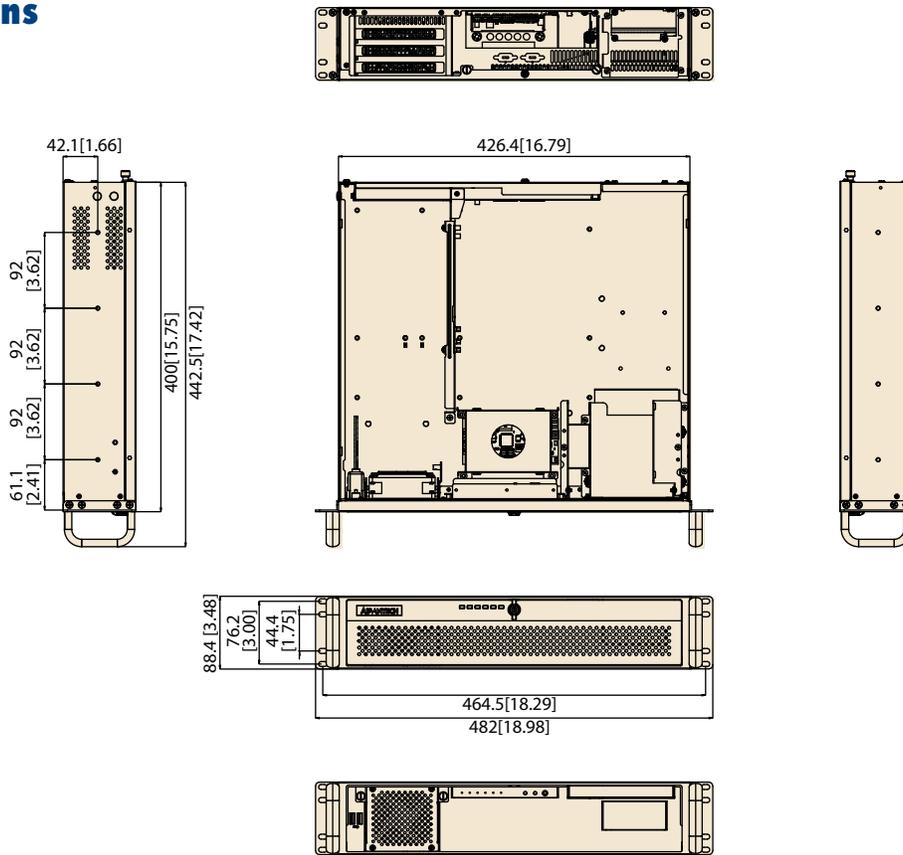


### Top View



## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power supply	80 Plus grade	Power supply type	Wattage	Switch
ACP-2020MB-35ZE	PS8-350FATX-XE	Bronze	Single	350W	ATX
ACP-2020MB-50RE	RPS8-500U2-XE	Bronze	1+1 redundant	500W	ATX

Suggest using CPU cooler 1960052651N021, max. CPU TDP 84W.

## Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
1990021407T000	Door filter
98R1310010E	2.5" SATA Hot-swap module
<b>Rear I/O panel kit for low-profile add-on cards</b>	
1939000361	Screws (should purchase 7 pcs)
1960074850T000	I/O bracket (should purchase 7 pcs)
1960019475T201	Rear panel for low-profile

# IPC-510

## Economical 4U Rackmount Chassis with Front-Accessible USB and PS/2 Interfaces



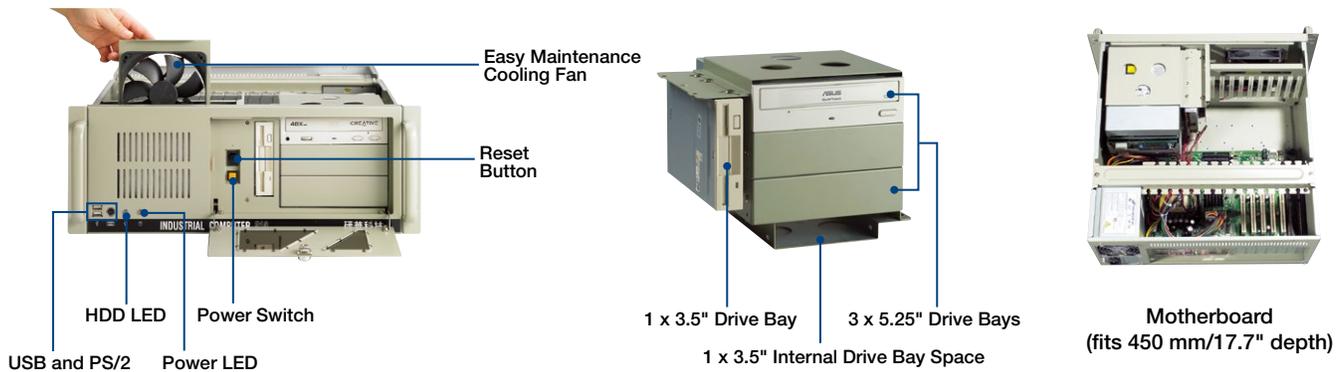
### Features

- Most cost-effective rackmount chassis
- Supports PS/2 single power supply
- Easy-to-install front-accessible drive bays hold 3 x 5.25" and 2 x 3.5" drives (1 x front-accessible and 1 x internal)
- Front-accessible USB and PS/2 interfaces

CE FCC

### Specifications

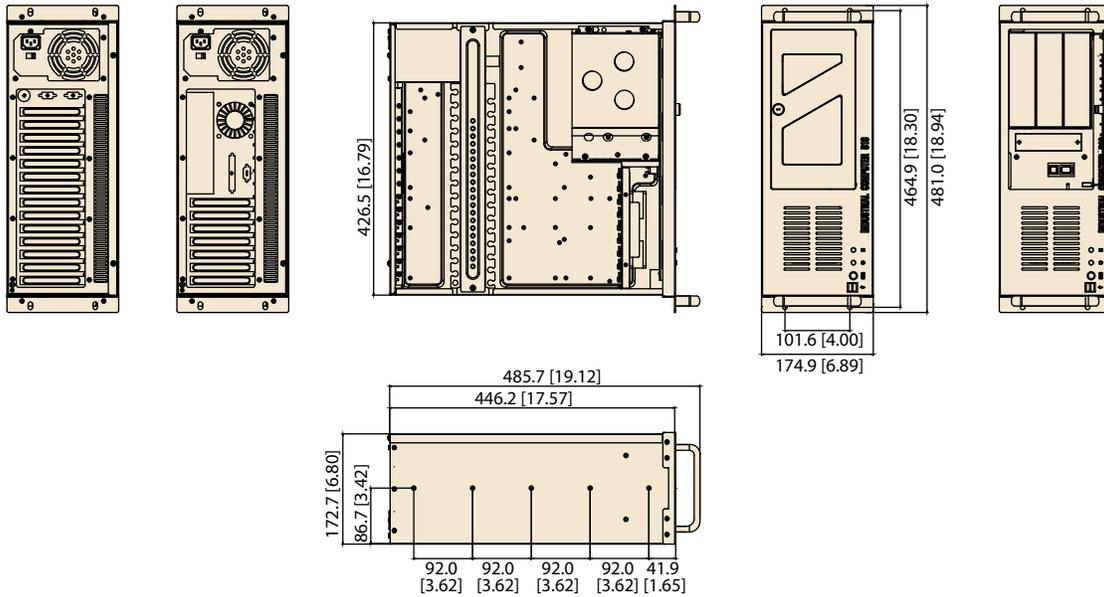
Drive Bay	5.25"	External	3	Internal	-
	3.5"		1		1
Cooling	Fan		1 (12 cm/77 CFM)		
	Air Filter		Yes		
Front I/O	USB		2		
	PS/2		1		
Miscellaneous	LED Indicators		Power and HDD activity		
	Rear Panel		Backplane version: 2 x 9-pin D-Sub openings Motherboard version: 1 x 9-pin D-Sub and 1 x 68-pin SCSI openings		
Environment	Temperature	Operating	0 ~ 40 °C (32 ~ 104 °F)	Non-Operating	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity		10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)		1 Grms		2 G
	Shock		10 G (with 11 ms duration, half sine wave)		
	Physical Characteristics	Dimensions (W x H x D)	481 x 175 x 446 mm (19 x 7 x 17.6")		
	Weight	10.7 kg (23.5 lb)			



Black Version

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Color	Power Supply	Wattage	Switch Type
<b>Backplane Version</b>				
IPC-510BP-30CE	Beige	PS8-300ATX-ZBE	300W	ATX
IPC-510BP-30ZCE	Black	PS8-300ATX-ZBE	300W	ATX
IPC-510BP-40ZCE	Black	PS8-400ATX-ZE	400W	ATX
<b>Motherboard Version</b>				
IPC-510MB-30CE	Beige	PS8-300ATX-ZBE	300W	ATX
IPC-510MB-40CE	Beige	PS8-400ATX-ZE	400W	ATX
IPC-510MB-30ZCE	Black	PS8-300ATX-ZBE	300W	ATX
IPC-510MB-40ZCE	Black	PS8-400ATX-ZE	400W	ATX

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting one 3.5" drive bay into two 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting two 5.25" drive bays into three 3.5" SATA HDD trays

## Spare Parts

Part Number	Description
2130018002T000	Fan filter 120 x 100 x 15 mm

# IPC-610-L/ IPC-611

## 4U 15-Slot Rackmount Chassis with Front-Accessible Fan



IPC-610-L

### Features

- Supports an ATX motherboard or a backplane with up to 15 slots
- Shock-resistant disk drive bay design holds up to three 5.25" and one 3.5" disk drives
- Special hold-down clamp design with rubber cushions protects the cards from shocks and vibrations
- Power and HDD activity notification improves system availability
- Front-accessible air filter for easy system maintenance
- Lockable front door prevents unauthorized access

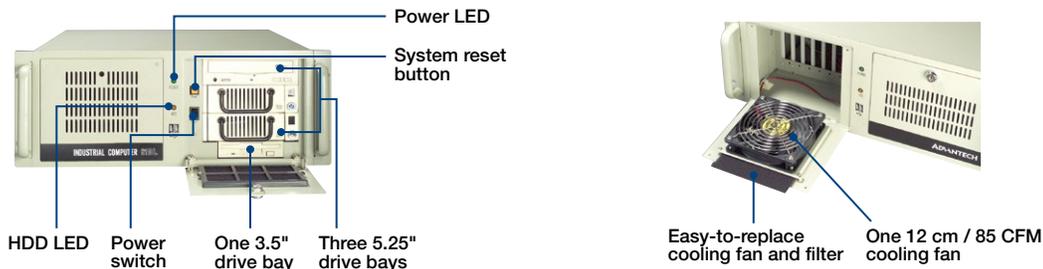
CE FCC

### Specifications

Drive Bay	3.5"	External	1
	5.25"		3
Cooling	Fan		1 (12 cm / 85 CFM)
	Air Filter		Yes
Miscellaneous	LED Indicators	Power and HDD activity	
	Control	Power switch and system reset button	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub & one 25-pin D-sub openings	
Environment	Temperature	Operating	Non-Operating
	Humidity	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Vibration (5 ~ 500 Hz)	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Shock	1 Grms	2 G
Physical Characteristics	Color / Logo	IPC-610-L: Beige / Advantech Logo IPC-611: Black / No Logo	
	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7" x 18.9")	
	Weight	14.5 kg (31.9 lb) / 14.2 kg (31.2 lb)	

### Front View

#### IPC-610-L



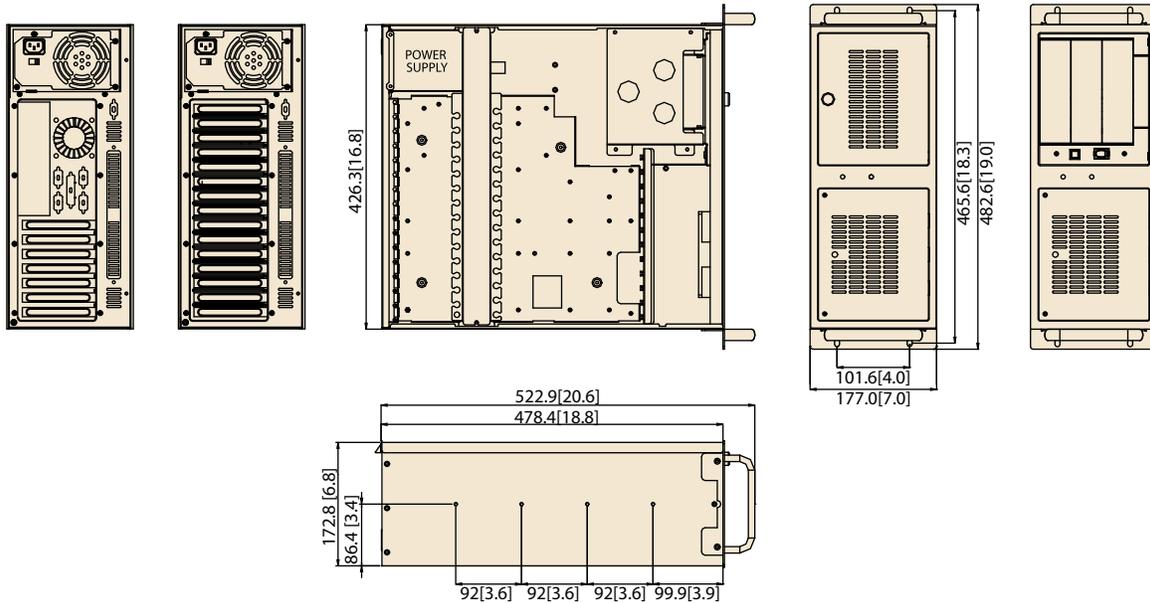
#### IPC-611



## IPC-610-L / IPC-611

### Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

### Ordering Information

Part Number	Power Supply	Wattage	Switch type
<b>Backplane Version</b>			
IPC-610BP-00LBE	-	-	ATX
IPC-610BP-50LBE	PS8-500ATX-ZE	500W	ATX
IPC-611BP-00XBE	-	-	ATX
<b>Motherboard Version</b>			
IPC-610MB-00LBE	-	-	ATX
IPC-610MB-40LBE	PS8-400ATX-ZE	400W	ATX
IPC-611MB-00XBE	-	-	ATX

### Optional Accessories

Part Number	Description
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

### Spare Parts

Part Number	Description
2130006149S000	Fan filter 127 x 127 x 5 mm
2130004802S000	Door filter 142 x 97 x 5 mm

### Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-250ATX-ZE	Bronze	250W	Single	AC 100 ~ 240 (full range)
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240 (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240 (full range)
RPS8-500ATX-XE	Bronze	500W	1+1 Redundant	AC 100 ~ 240 (full range)

# IPC-631

## 4U Front I/O Short Depth Rackmount Chassis for ATX/MicroATX Motherboard

**NEW**



### Features

- All I/O ports, buttons, LEDs, drive bays, AC inlet located on the front side
- 350mm short depth
- Supports ATX/Micro ATX MB with CPU TDP up to 120W
- Built-in 500W single or redundant power supply
- Optional module for dual hot-swap 2.5" drive bays for RAID 0, 1
- PWM controlled smart fan generating low noise

CE FCC

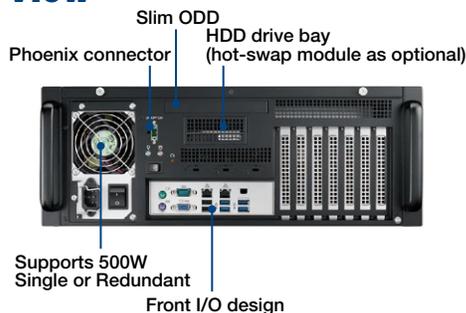
### Specifications

		External	Internal
Drive Bay	Slim Optical Drive Bay	1	-
	2.5"	2 (hot-swap tray module as optional)*	2
Cooling	Fan	2 (12cm/82 CFM)	
	Air Filter	Yes	
Front I/O Interface	Phoenix front PW-ON	1	
	COM	3	
Miscellaneous	LED Indicators	Power, HDD	
	Control	Power switch, System reset	
System Monitoring		Chassis intrusion switch	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 348 mm (19" x 7.0" x 13.7")	
	Weight	8 kg (17.6 lb)	

\* IPC-631 2.5" drive bay, both default internal and hot-swap tray module, support 2.5" HDD with thickness less than 14.7mm.

\* The hot-swap module only accepts 2.5" SATA HDD/SSD

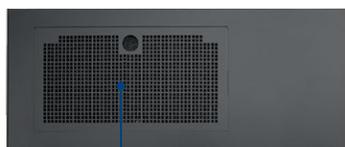
### Front View



### Inside View



### Rear View



Easy Maintenance Fan Filter (Dual 12cm Fans Inside)

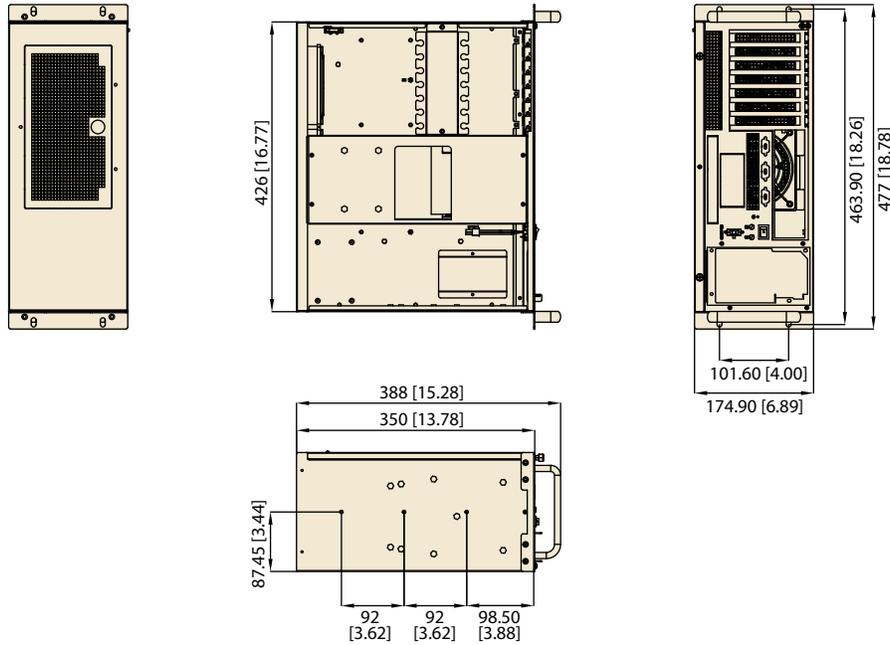


Optional SATA hot-swap tray module 98R1310010E

# IPC-631

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power supply P/N	80 Plus grade	Power supply type	Wattage	Switch type
IPC-631MB-50ZE	PS8-500ATX-ZE	Bronze	Single	500W	ATX
IPC-631MB-50RE	RPS8-500ATX-XE	Bronze	1+1 redundant	500W	ATX

## Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
98R1310010E	2.5" SATA Hot-swap module
2130017444T000	Door filter

# IPC-610-H

## 4U Rackmount Chassis with Visual Alarm Notification



### Features

- 4U rackmount chassis supports up to 15 add-on cards
- Shock-resistant disk drive bay design holds up to three 5.25" and one 3.5" disk drives
- Front accessible USB & PS/2 interfaces for easy data transfer
- Dual front-accessible filtered cooling fans provide optimized and streamlined airflow
- Front LEDs indicate power status, and HDD activity
- Lockable front door prevents unauthorized access
- Supports 80 plus single power supply or redundant power supply up to 500W

CE FCC

### Specifications

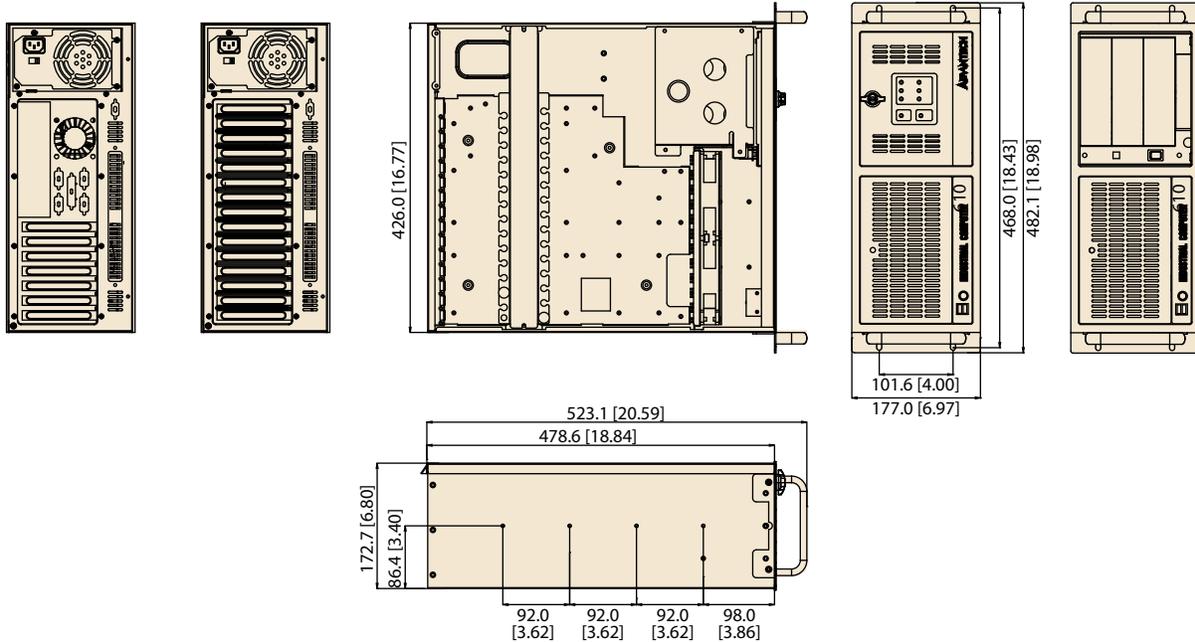
Drive Bay	3.5"	External	1
	5.25"		3
Cooling	Fan		2 (12 cm / 85 CFM each)
	Air Filter		Yes
Front I/O Interface	USB		2
	PS/2		1
Miscellaneous	LED Indicators		Power, HDD, and power voltage status
	Rear Panel		Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub & one 25-pin D-sub openings
Environment	Temperature	Operating	Non-Operating
	Humidity	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Vibration (5 ~ 500 Hz)	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Shock	1 Grms	2 G
Physical Characteristics	Dimensions (W x H x D)		10 G (with 11 ms duration, half sine wave)
	Weight		482 x 177 x 479 mm (19" x 7" x 18.9") 15 kg (33 lb)



# IPC-610-H

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply	Switch Type
<b>Backplane Version</b>		
IPC-610BP-30HBE	PS8-300ATX-ZBE	ATX
IPC-610BP-40HBE	PS8-400ATX-ZE	ATX
IPC-610BP-50HBE	PS8-500ATX-ZE	ATX
<b>Motherboard Version</b>		
IPC-610MB-30HBE	PS8-300ATX-ZBE	ATX
IPC-610MB-40HBE	PS8-400ATX-ZE	ATX
IPC-610MB-50HBE	PS8-500ATX-ZE	ATX

## Optional Accessories

Part Number	Description
1700006916	ATX 24P/20P + 4P + 15P 60cm (connecting from power supply to LED board)
1700006917	Two Mini DIN (connect to MB) / 6P (connect to front I/O board) PS2 KB/Mouse cable
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

\* If users use AIMB-763 or 3rd party motherboard, they need to purchase 1700006915 or 1700006916 for the front voltage LEDs to function normally. And they also need to purchase 1700006917 to make front PS/2 function normally.

## Spare Parts

Part Number	Description
2130006147S000	Door filter 97.6 x 36.6 x 5 mm
2130004803S000	Fan filter 115 x 195 x 5 mm

# ACP-4020

## 348mm Depth 4U Rackmount Chassis for Half-size SBC or ATX Motherboard



### Features

- 4U rackmount chassis, only 348 mm depth
- Supports 14-slot BP for half-size SBC or ATX/MicroATX motherboard
- Shock-resistant disk drive bay holds one internal 2.5", and two front-accessible 3.5" drives, plus one slim optical disk drive
- Dual front USB 3.0 ports
- Front-accessible system fan without opening top cover for easy maintenance
- LED indicators and alarm notification for system fault detection
- Smart fan speed control
- Built-in Intrusion switch function
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

### Quiet Specifications

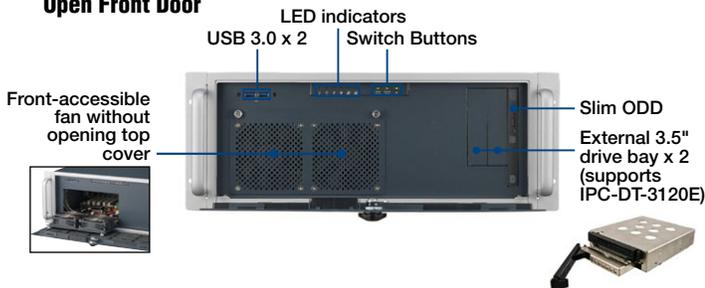
CE FCC

		External	Internal
Drive Bay	Slim ODD	1	-
	3.5"	2	-
	2.5"	-	1
Cooling	Fan	2 (9 cm / 53 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub and one 25-pin D-Sub openings	
System Monitoring		Chassis intrusion switch	
Intelligent System Module Remote Monitoring		CPU/System fan speed, CPU/System temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
	Dimensions (W x H x D)	482 x 177 x 348 mm (19" x 7.0" x 13.7")	
Physical Characteristics	Weight	8.5 kg (18.7 lb)	

The USB 3.0 ports do not operate if the motherboard has no on-board USB 3.0 box header.

### Front View

#### Open Front Door

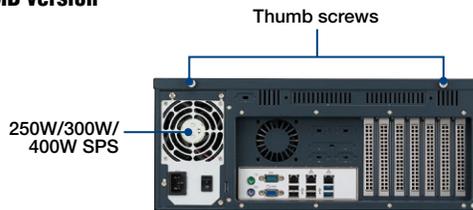


### Inside View

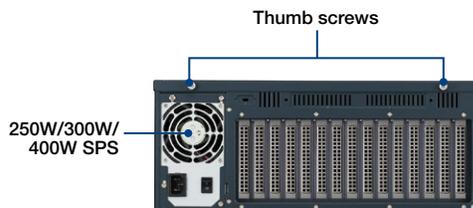


### Rear View

#### MB version



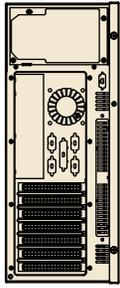
#### BP version



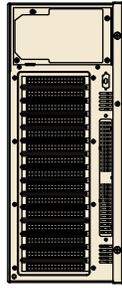
# ACP-4020

## Dimensions

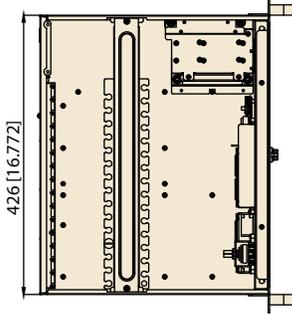
Unit: mm [inch]



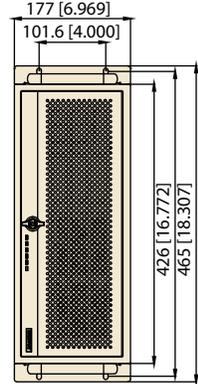
MB version



BP version



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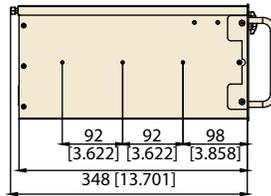


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360.9 [14.209]

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply	Wattage	Switch type
<b>Backplane Version</b>			
ACP-4020BP-25ZE	PS8-250ATX-ZE	250W	ATX
ACP-4020BP-30ZE	PS8-300ATX-ZBE	300W	ATX
ACP-4020BP-40ZE	PS8-400ATX-ZE	400W	ATX
<b>Mother board Version</b>			
ACP-4020MB-25ZE	PS8-250ATX-ZE	250W	ATX
ACP-4020MB-30ZE	PS8-300ATX-ZBE	300W	ATX
ACP-4020MB-40ZE	PS8-400ATX-ZE	400W	ATX

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Drive bay module converting 1 3.5" to 2 hot-swap 2.5"
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)

# ACP-4D00

## Dual-Node 350mm Depth 4U Chassis for Half-size Slot SBC



### Features

- Dual nodes, 350mm depth design for easy maintenance and space saving
- Supports PICMG 1.3 or PCI half-size slot SBC
- Supports 6-slot backplane, 3 available slots per node
- Supports two front USB 3.0 ports each node
- Supports 250W or 350W Flex ATX PSUs

### Specifications (Each Node)

Drive Bay	3.5"	External	Internal
		1	-
Cooling	Fan	1 (9 cm / 58 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2	
	USB 3.0	2	
Miscellaneous	LED Indicators	Power On/Off, HDD Action, Fan Status, Temperature Status	
	Front Buttons	System Reset, Alarm Reset, Power Switch	
	Real Panel	2 COM/VGA, 1 PRT Semi-Piercing Openings	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	2 Grms
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	430 x 177 x 350 mm (19" x 7" x 13.8")	
	Weight	15.0 kg	

### Front and Back Views

Thumb Screws to Fix The Sub-System in the Cage



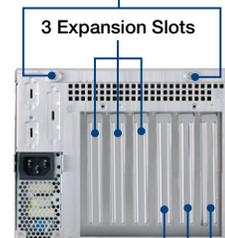
Dual Nodes Design

Easy Maintenance Fan



Front LEDs

Thumb Screws to Fix The Top Lid

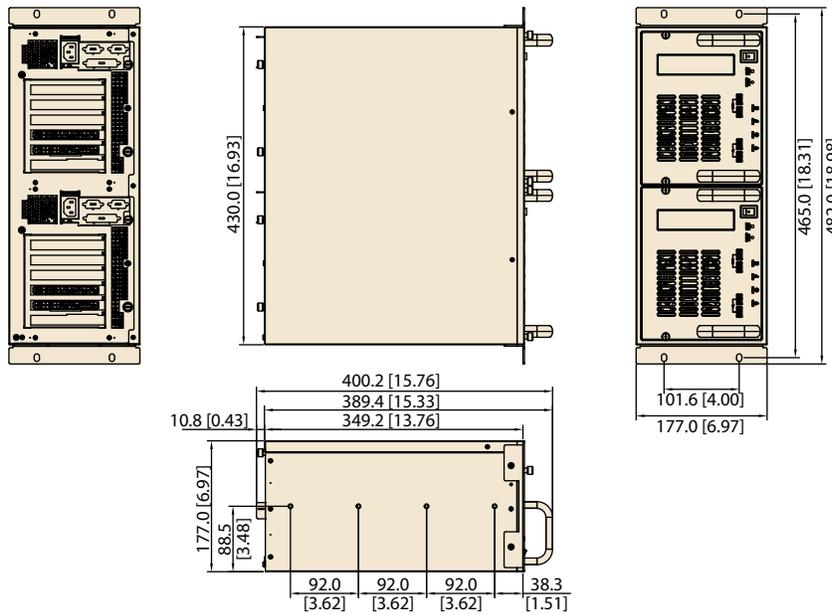


Slots Occupied by CPU Card and CPU Cooler

# ACP-4D00

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Description
ACP-4D00BP-00XE	4U dual node chassis without BP, power supply

## Power Supply Options

Part Number	80 Plus Grade	Specifications	
		Wattage	Input
PS8-250FATX-XE	80 Plus Bronze	250W	AC 100 ~ 240 V (full range)
PS8-350FATX-XE	80 Plus Bronze	350W	AC 100 ~ 240 V (full range)

## Supported Backplanes

Part Number	CPU Card Slot	PCIe Slot	PCI
PCE-3B03-00A1E	PICMG 1.3	1 PCIe x 16 1 PCIe x 4	-
PCE-3B06-00A1E	PICMG 1.3	1 PCIe x 16 4 PCIe x 1	-
PCE-3B06-03A1E	PICMG 1.3	1 PCIe x 16 1 PCIe x 1	3
PCA-6105P5-0B2E	PCI	-	4

## Optional Accessories

Part Number	Description
1960053207N001	1.5U CPU cooler for 3 available expansion slots
IPC-DT-3120E	Drive bay module converting 1 3.5" to 2 hot-swap 2.5"
989K008734	Bracket to fix two 2.5" devices in a 3.5" drive bay
9680006905	Slide rail for ACP-4D00

\* The 1.5U CPU cooler 1960053207N001 is for LGA 1155/1150 socket CPUs, it is thin enough to leave 3 available expansion slots on the backplane.

# ACP-4000

## Quiet 4U Rackmount Chassis with Visual & Audible Alarm Notification



### Features

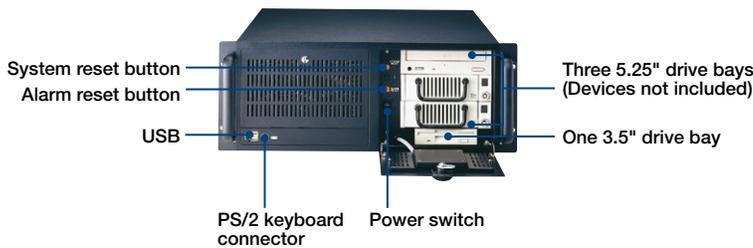
- Supports either an ATX motherboard or PICMG backplane with up to 15 slots
- Shock-resistant disk drive bay design holds up to three 5.25" and one 3.5" disk drives
- LED indicators and alarm notification for system fault detection
- Low noise system fans
- Built-in Intelligent System Module enables whole system fan control and remote manageability

### Quiet Specifications

CE FCC

Drive Bay	3.5"	External	1
	5.25"		3
Cooling	Fan		2 (12 cm / 85 CFM each)
	Air Filter		Yes
Front I/O Interface	USB 2.0		2
	PS/2		1
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, and power voltage status	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub & one 25-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating	0 ~ 40 °C (32 ~ 104 °F)
	Humidity		Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Vibration (5 ~ 500 Hz)		10 ~ 95% @ 40 °C, non-condensing
	Shock		10 ~ 95% @ 40 °C, non-condensing 2 G
Physical Characteristics	Dimensions (W x H x D)	10 G (with 11 ms duration, half sine wave)	
	Weight	482 x 177 x 479 mm (19" x 7" x 18.9") 15.2 kg (33.5 lb)	

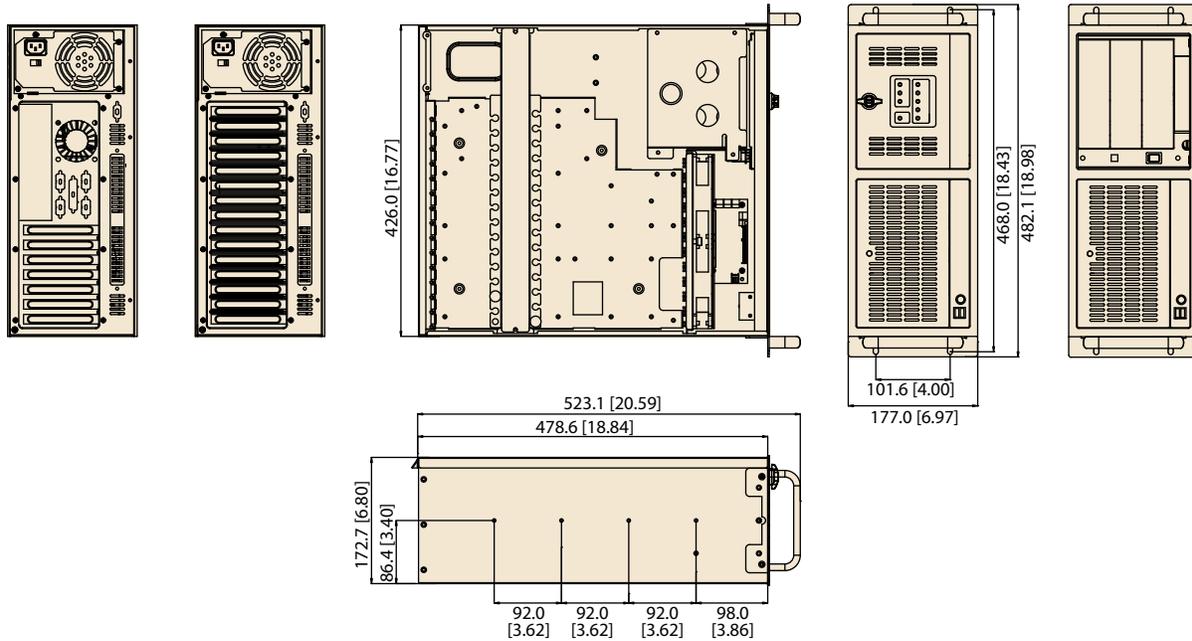
### Front View



# ACP-4000

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply	Wattage	Switch type
<b>Backplane Version</b>			
ACP-4000BP-30CE	PS8-300ATX-ZBE	300W	ATX
ACP-4000BP-40CE	PS8-400ATX-ZE	400W	ATX
ACP-4000BP-50CE	PS8-500ATX-ZE	500W	ATX
<b>Mother board Version</b>			
ACP-4000MB-30CE	PS8-300ATX-ZBE	300W	ATX
ACP-4000MB-40CE	PS8-400ATX-ZE	400W	ATX
ACP-4000MB-50CE	PS8-500ATX-ZE	500W	ATX
ACP-4000MB-50RCE	RPS8-500ATX-XE	500W (1+1) redundant	ATX

## Optional Accessories

Part Number	Description
1700006915	ATX 24P/20P + 4P + 8P 60cm cable (connecting from power supply to alarm board)
1700006917	Two Mini DIN (connect to MB) / 6P (connect to front I/O board) PS2 KB/Mouse cable
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

\* If users use AIMB-763 or 3rd party motherboard, they need to purchase 1700006915 or 1700006916 for the front voltage LEDs to function normally. And they also need to purchase 1700006917 to make front PS/2 function normally.

\* If users use ASMB-822, they need to purchase 1700006915 for the front voltage LEDs to function normally.

## Spare Parts

Part Number	Description
2130006147S000	Door filter 97.6 x 36.6 x 5 mm
2130004803S000	Fan filter 115 x 195 x 5 mm

# ACP-4010

## Quiet 4U Rackmount Chassis for ATX/CEB/EEB Motherboard or Full-size SHB/SBC with Dual System Support



### Features

- Supports either an ATX/CEB/EEB single/dual processors motherboard or a PICMG backplane with up to 15 slots
- Supports one or two systems in a single chassis
- Shock-resistant disk drive bay design holds up to two 5.25" and two 3.5" disk drives
- LED indicators and alarm notification for system fault detection
- Low noise system fans
- Built-in Intelligent System Module enables whole system fan control and remote manageability

### Quiet Specifications

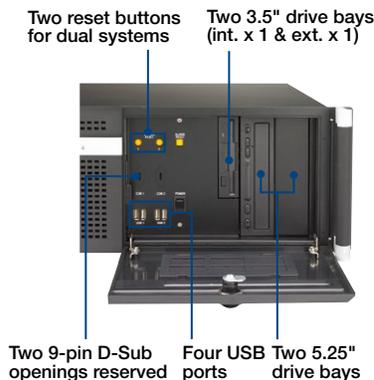
CE FCC

Drive Bay	5.25"	External	2	Internal	-
	3.5"		1		1
Cooling	Fan	2 (12 cm /85 CFM each)			
	Air Filter	Yes			
Front I/O Interface	USB 2.0	4			
	9-pin D-Sub	2 (Reserved)			
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2			
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub and one 25-pin D-sub openings			
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)				
Environment	Temperature	Operating	0 ~ 40 °C (32 ~ 104 °F)		
	Humidity		-20 ~ 60 °C (-4 ~ 140 °F)		
	Vibration (5 ~ 500 Hz)		10 ~ 85% @ 40 °C, non-condensing		
	Shock		10 ~ 95% @ 40 °C, non-condensing		
Physical Characteristics	Dimensions (W x H x D)	10 G (with 11 ms duration, half sine wave)			
	Weight	2 G			
		482 x 177 x 479 mm (19" x 7.0" x 18.9")			
		16.6 kg (36.5 lb)			

\*Installation of all 15 full-size cards will sacrifice the two 3.5" disk drive bays.

\*While an EEB motherboard is installed in the chassis, only one 3.5" and two 5.25" disk drive bays are available.

### Front View

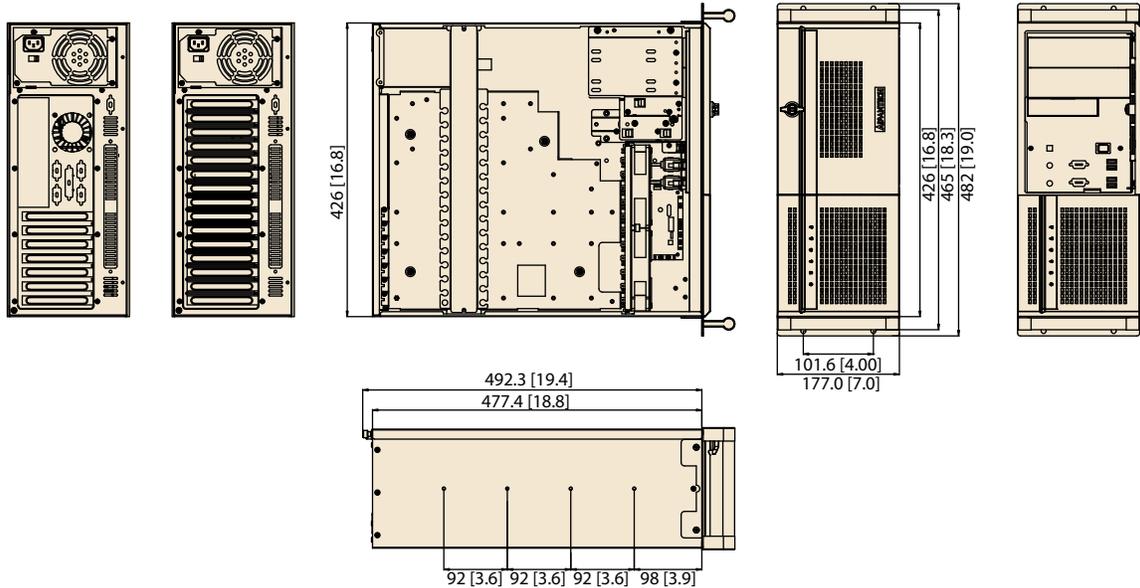


### Inside View



## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Model Name	Description
<b>Backplane Version</b>	
ACP-4010BP-00BE	Without PSU with ATX switch
<b>Motherboard Version</b>	
ACP-4010MB-00BE	Without PSU with ATX switch

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

## Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240 V (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 V (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240 V (full range)
RPS8-500ATX-XE	Bronze	500W	1+1 Redundant	AC 100 ~ 240 V (full range)
RPS8-750ATX-XE	Gold	750W	1+1 Redundant	AC 100 ~ 240 V (full range)

## Spare Parts

Part Number	Description
1990001299	Fan filter 95 x 130 mm
1990001298	Door filter 150 x 68 mm

# ACP-4320

## Quiet 4U Rackmount Chassis with Dual Hot-Swap SATA HDD Trays



### Features

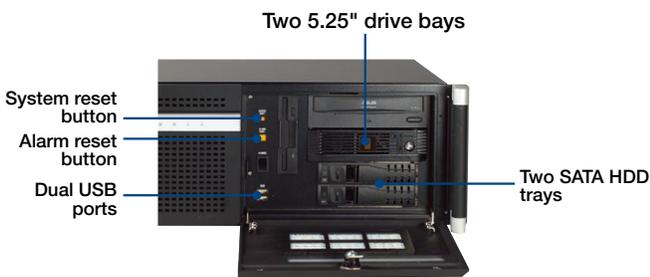
- Supports either an ATX motherboard or a PICMG backplane with up to 15 slots
- Supports dual SATA hot-swap HDD trays
- LED indicators and alarm notification for system fault detection
- Low noise system fans
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

### Quiet Specifications

CE FCC

		External	Internal
Driver Bay	5.25"	2	-
	3.5"	1 SATA Tray	-
	Hot Swap	2 (compatible with 3.5" or 2.5" devices)	-
Cooling	Fan	1 (12 cm/74 CFM) + 1 (6cm / 28 CFM)	
	Air Filter	Yes	
	Smart Fan	System fan speed referring to chassis thermal sensor, or CPU temperature (Available with selected Advantech MBs/CPU cards)	
Front I/O Interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1 and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub opening and one 25-pin D-sub opening	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/system temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating - 20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C , non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10G ( with 11 ms duration, half sine wave )	
	Dimension (W x H X D)	482 x 177 x 479 mm (19" x 7.0" x 18.9")	
Physical Characteristics	Weight	17.6 kg (38.7lb)	

### Front View



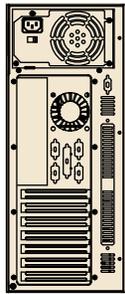
### Inside View

Easy-to-maintain system fan

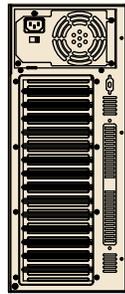


## Dimensions

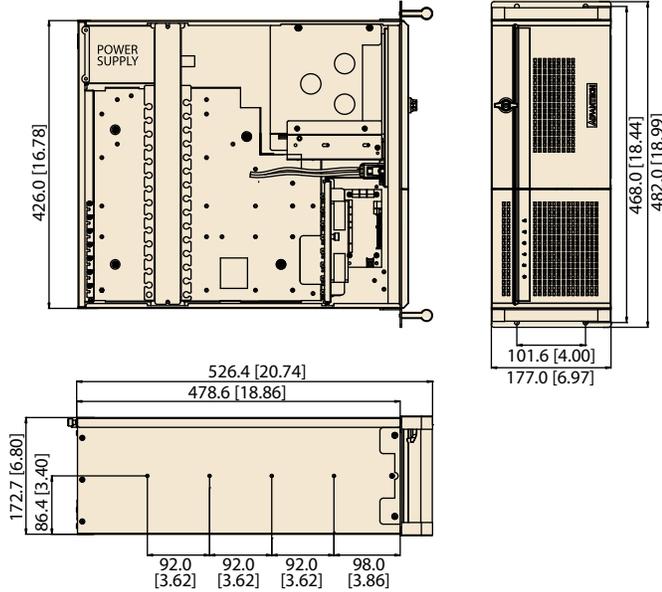
Unit: mm [inch]



MB version



BP version



- 1** Software and Industry Solutions
- 2** Industrial Server
- 3** Intelligent System
- 4** Intelligent HMI and Monitors
- 5** Automation Computers and Controllers
- 6** Industrial Communication
- 7** Remote I/O Modules
- 8** Industrial I/O and Video Solutions

## Ordering Information

Part number	Power supply	Wattage	Switch type
<b>Backplane version</b>			
ACP-4320BP-25BE	PS8-250ATX-ZE	250W	ATX
ACP-4320BP-40BE	PS8-400ATX-ZE	400W	ATX
ACP-4320BP-50BE	PS8-500ATX-ZE	500W	ATX
<b>Motherboard version</b>			
ACP-4320MB-25BE	PS8-250ATX-ZE	250W	ATX
ACP-4320MB-40BE	PS8-400ATX-ZE	400W	ATX
ACP-4320MB-50BE	PS8-500ATX-ZE	500W	ATX

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays
1700007351	M Cable SATA 7P/SATA 7P 40CM C=R 90/180

When choosing ASMB-781, ASMB-782, ASMB-820, ASMB-823 for system mother board, 2pcs right-angle SATA cable (PN: 1700007351) are necessary for hot-swap driver bay.

## Spare Parts

Part Number	Description
1990001299	Fan filter 95 x 130 mm
1990001298	Door filter 150 x 68 mm

# ACP-4340

## 4U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard with 4 Hot Swap Drive Trays



### Features

- Supports a PICMG backplane with up to 14 slots or an ATX/Micro-ATX motherboard
- Shock-resistant disk drive bay holds four hot-swap 3.5" and 2.5" SATA disk trays, one slim optical disk drive, and one 2.5" internal drive
- Dual front USB 3.0 ports
- Front-accessible system fan without opening top cover for easy maintenance
- LED indicators and alarm notification for system fault detection
- Smart fan speed control
- Built-in Intrusion switch function
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

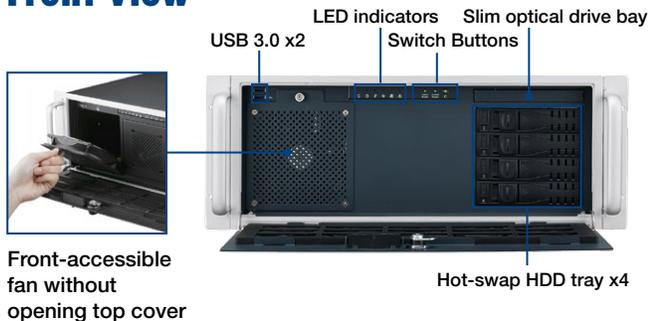
### Quiet Specifications

CE FCC

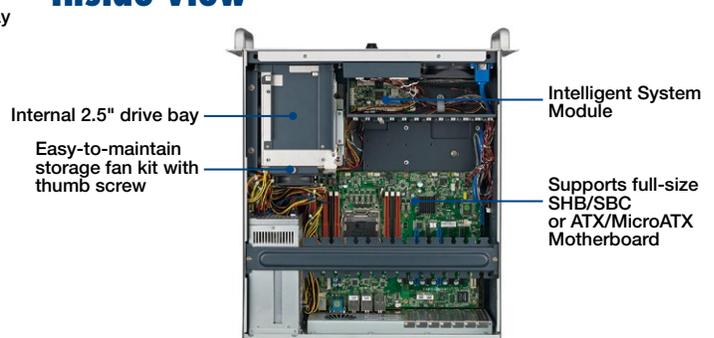
		External	Internal
Drive Bay	Slim Optical Drive Bay	1	-
	3.5"	-	-
	2.5"	-	1
	Hot Swap	4 (Compatible with 3.5" or 2.5" devices)	-
Cooling	Fan	1 (12 cm /74 CFM) + 1 (8 cm/56 CFM) for SATA storage unit	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub and one 25-pin D-Sub openings	
System Monitoring		Chassis intrusion switch	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/system temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	1 Grms	
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7.0" x 18.8")	
	Weight	12.5 kg (27.5 lb)	

The USB 3.0 ports do not operate if the motherboard has no on-board USB 3.0 box header.

### Front View



### Inside View



### Rear View

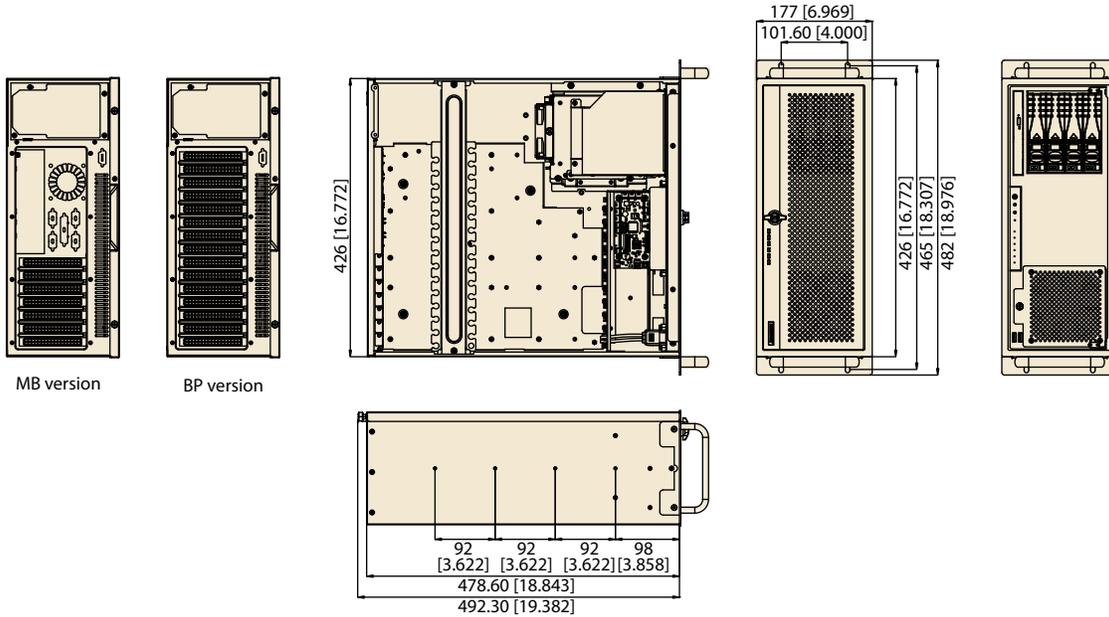


\*Note: Backplane, SBC, motherboard, and power supply are not included.

# ACP-4340

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply	Wattage	Switch type
<b>Backplane Version</b>			
ACP-4340BP-40ZE	PS8-400ATX-ZE	400W	ATX
ACP-4340BP-50ZE	PS8-500ATX-ZE	500W	ATX
ACP-4340BP-70ZE	PS8-700ATX-ZE	700W	ATX
ACP-4340BP-50RE	RPS8-500ATX-XE	500W (1+1 Redundant)	ATX
<b>Mother board Version</b>			
ACP-4340MB-40ZE	PS8-400ATX-ZE	400W	ATX
ACP-4340MB-50ZE	PS8-500ATX-ZE	500W	ATX
ACP-4340MB-70ZE	PS8-700ATX-ZE	700W	ATX
ACP-4340MB-50RE	RPS8-500ATX-XE	500W (1+1 Redundant)	ATX

## Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
98R1434000E	ACP-4340 fan kit for multi GPU card

## Spare Parts

Part Number	Description
98R2132000E	Black mobile HDD tray
1990021256T000	Door filter

# ACP-4360

## 4U Rackmount Chassis with 6 Hot-Swap SATA Trays for RAID



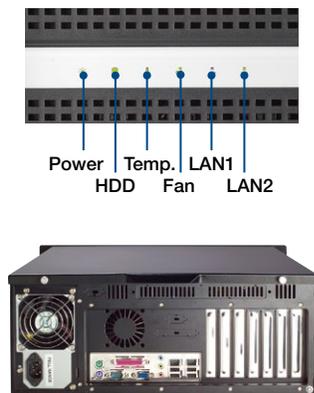
### Features

- Supports up to 6 SATA HDDs
- Support ATX/uATX motherboard
- Supports one slim optical disk drive and one 3.5" device or internal HDD
- LED indicators for LAN connectivity and alarm notification for redundant power supply, HDD activity, system fan and in-chassis temperature
- Reusable, front-accessible filters for easy maintenance

CE FCC

### Specifications

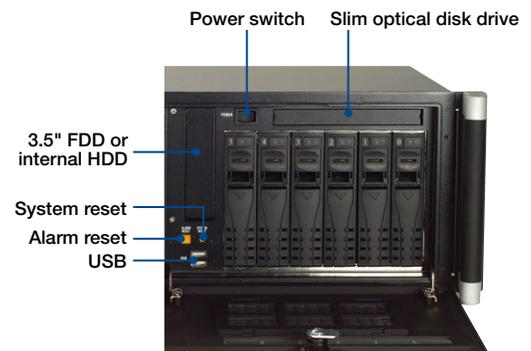
Drive Bay	External		
	Slim Optical Drive (Front-accessible)	1	
	3.5" Hot Swap	1	
Cooling	Fan	6 (Compatible with 3.5" or 2.5" devices)	
	Air Filter	1 (12 cm / 114 CFM) + 2 (8 cm / 47 CFM each) for SATA storage unit	
	USB	Yes	
Front I/O Interface	USB	2	
	LED Indicators	System: Power, HDD (for IDE drives only), fan, temperature, LAN1 and LAN2	
	Rear Panel	SATA HDD trays: HDD power and activity Five 9-pin D-Sub and one 25-pin D-Sub openings	
Environment	Operating	Non-Operating	
	Temperature	0 ~ 40° C (32 ~ 104° F)	-20 ~ 60° C (-4 ~ 140° F)
	Humidity	10 ~ 85% @ 40° C, non-condensing	10 ~ 95% @ 40° C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 501 mm (19" x 7" x 19.8")	
	Weight	19.0 kg (41.8 lb)	



Rear view



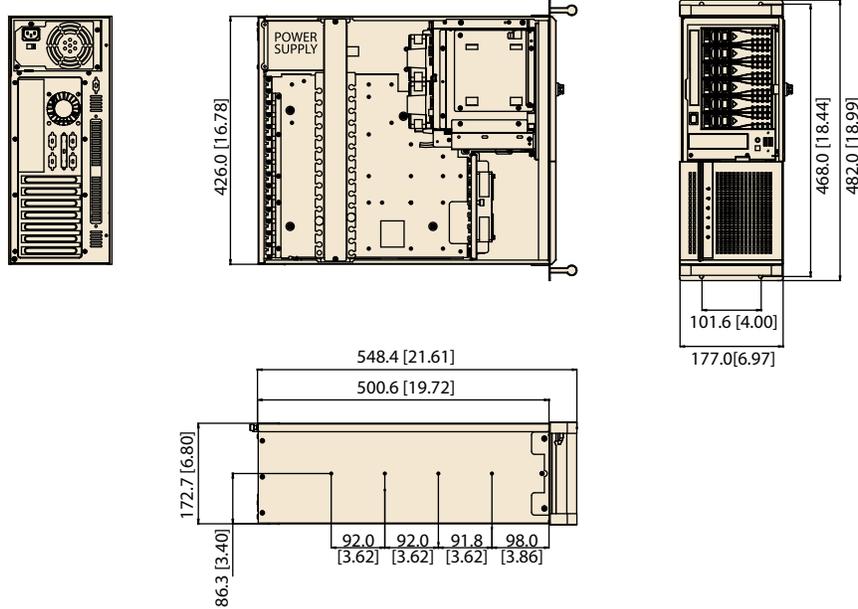
Easy-to-maintain system fan



Six hot-swappable SATA HDD trays

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply
ACP-4360MB-00XBE	Without power supply, with ATX switch

## Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)

## Power Supply Options

Part Number	Specifications	
	Watts	Input
PS8-400ATX-ZE	400W	AC 100 ~ 240 V (full range)
PS8-500ATX-ZE	500W	AC 100 ~ 240 V (full range)
PS8-700ATX-ZE	700W	AC 100 ~ 240 V (full range)
RPS8-500ATX-XE (1+1 redundant)	500W	AC 100 ~ 240 V (full range)

## Spare Parts

Part Number	Description
1990001299	Fan filter 95 x 130 mm
1990001298	Door filter 150 x 68 mm
9662700022E	Black 3.5" mobile HDD tray

# IPC-623

## 4U 20-Slot Rackmount Chassis with Multi-System and Front-Accessible Redundant Power Supply



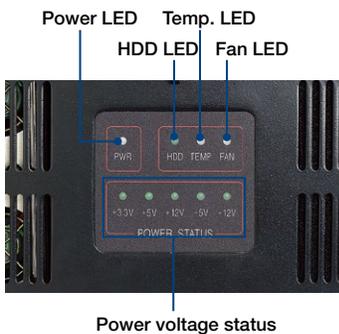
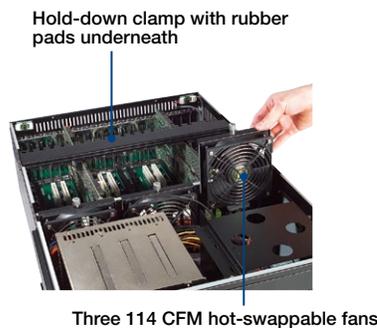
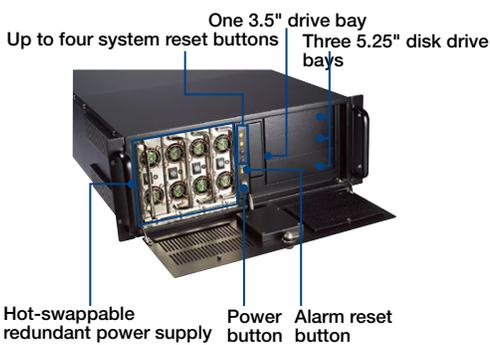
### Features

- 4U rackmount chassis supports up to 4 multi-systems
- Front-accessible redundant power supply
- Shockproof disk drive bay design can hold up to three front-accessible 5.25" and one 3.5" disk drives, and one internal 3.5" HDD
- Three 12 cm / 114 CFM ball-bearing cooling fans
- Front LEDs and audible alarm notifications for system power status, fan operation, HDD status, and in-chassis temperature monitoring
- Dual top cover designed for easy maintenance
- Five easily replaceable air filters provide good airflow

CE FCC

### Specifications

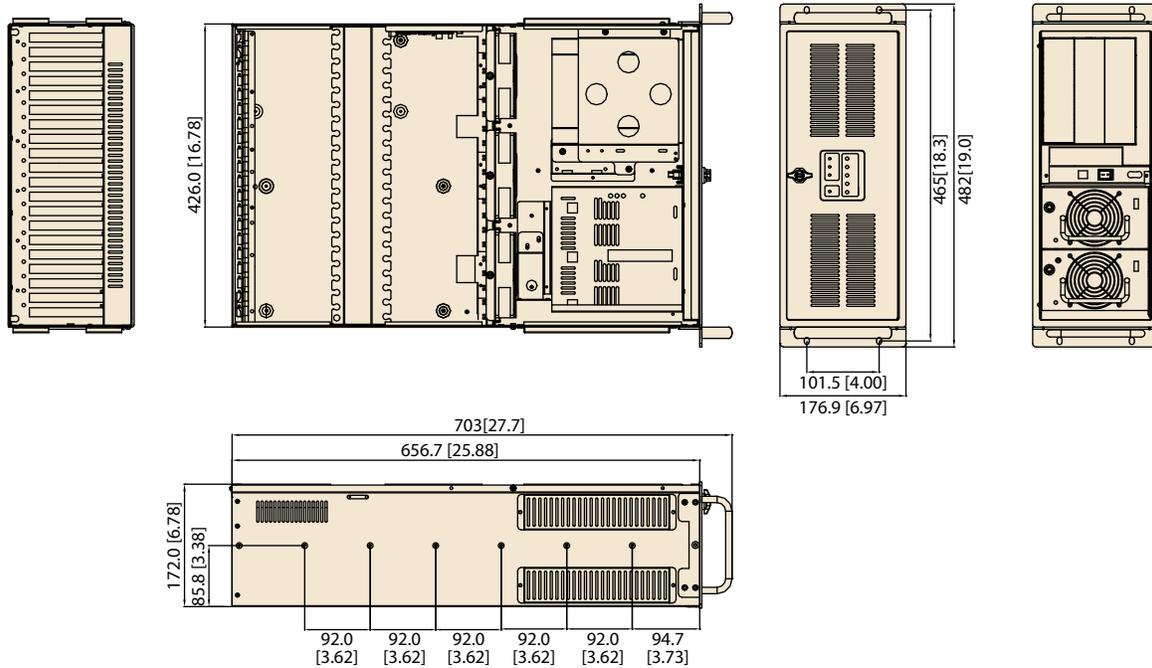
		External	Internal
Drive Bay	3.5"	1	1
	5.25"	3	-
Cooling	Fan	3 (12 cm / 114 CFM each)	
	Air Filter	4 (200 x 45 mm) + 1 (128 x 95 mm)	
Miscellaneous	LED Indicators	Power, HDD, fan, temperature, and power voltage status	
	Control	Power switch, system reset (reserve 3 more for quad-system) and alarm reset buttons	
	Hold-down Clamp	Hold-down clamp with rubber pad underneath and accessory rubber cushions	
Environment	Temperature	Operating 0 ~ 40 °C (32 ~ 104 °F)	Non-Operating -20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Dimensions (W x H x D)	482 x 177 x 657 mm (19" x 7" x 26")	
Physical Characteristics	Weight	26 kg (57 lb)	



# IPC-623

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Power Supply
IPC-623BP-00XBE	Barebone chassis for single power supply
IPC-623BP-00RBE	Barebone chassis for redundant power supply

## Power Supply Options

Part Number	Specifications	
	Watts	Input
96PS-A400WPS2-2 (Single)	400W (ATX, PFC)	AC 100 ~ 240 V (full range)
96PS-A500WPS2-2 (Single)	500W (ATX, PFC)	AC 115 ~ 240 V (full range)
96PSR-A460WOTH-2 (1+1 redundant)	460W (ATX, PFC)	AC 100 ~ 240 V (full range)

## Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays
1700002459	Reset button with wire

## Spare Parts

Part Number	Description
2130004799S000	Side filter 45 x 200 x 6 mm
2130004800S000	Door filter 130 x 95 x 6 mm

# IPC-622

## 6U 20-Slot Rack-mount Short Depth Chassis with Redundant Power Supply



### Features

- 6U rackmount chassis supports PICMG 1.0/1.3 20 slots backplane
- Supports Mini-redundant power supply up to 750W
- LED indicators and audible alarm notification for system fault detection
- Four 9 cm / 53 CFM ball-bearing system fans for excellent cooling
- Front accessible fan filters for easy maintenance
- Lockable front door prevents unauthorized access
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

CE FCC

### Specifications

Drive Bay	5.25"	Front-accessible	Internal
	3.5"	4	-
Cooling	Fan	4 (9 cm / 58 CFM each)	2
	Air Filter	Yes (Front accessible)	
Front I/O Interface	USB	2 (default) and reserve up to 4 sets of dual USB ports in the front	
Miscellaneous	LED Indicators	Power, HDD, fan, temperature and power voltage status	
	Control	Power switch, system reset (reserve 3 more for quad-system) and alarm reset buttons	
	Rear Panel	Four 9-pin D-sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment	Temperature	Operating	Non-Operating
	Humidity	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Vibration (5 ~ 500 Hz)	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Shock	0.5 Grms	1 G
Physical Characteristics	Dimensions (W x H x D)	482 x 266 x 465 mm (19" x 10.5" x 18.3")	
	Weight	30.0 kg (66 lb)	

### Front view



Four 53-CFM cooling fans  
 Easy-to-replace fan filter

### Inside View



Max. 20-slot backplane

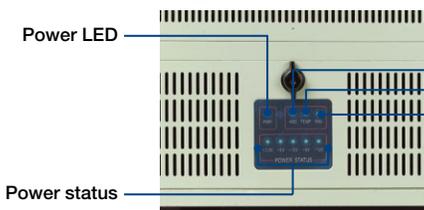
### Rear View



Rear vents for better airflow  
 Slot brackets with ventilation holes

Reserved Four 9-pin D-sub openings

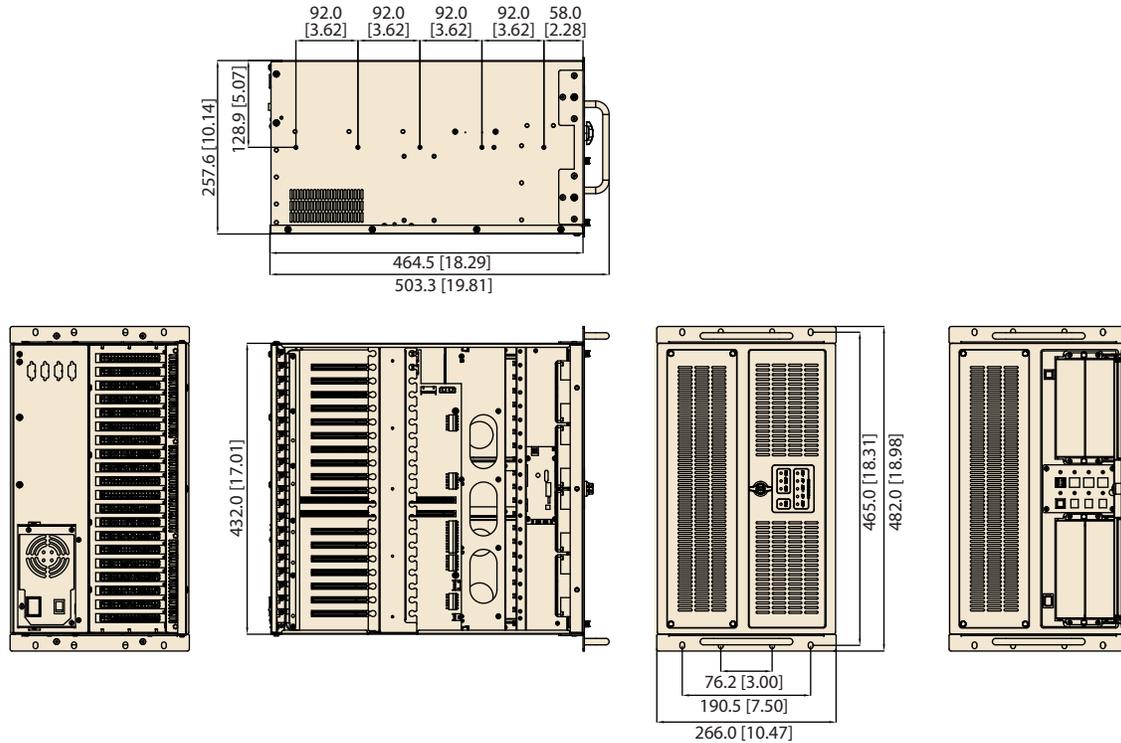
Single power supply up to 700W or mini-redundant power supply up to 750W



HDD LED  
 Temp. LED  
 Fan LED

## Dimensions

Unit: mm [inch]



- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

## Ordering Information

Part Number	Description
IPC-622BP-00DE	W/O power supply, with AT switch

## Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240V (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240V (full range)
PS8-700ATX-ZE	Bronze	700W	Single	AC 100 ~ 240V (full range)
RPS8-500ATX-XE (1+1 redundant)	Bronze	500W	1+1 Redundant	AC 100 ~ 240V (full range)
RPS8-750ATX-XE (1+1 redundant)	Gold	750W	1+1 Redundant	AC 100 ~ 240V (full range)

## Optional Accessories

Part Number	Description
1700002444	Reset button with wire
1700007032	Dual USB connector with wire
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

## Spare Parts

Part Number	Description
2130004802S000	Door filter 142 x 97 x 5 mm
2130004804S000	Fan filter 382 x 93 x 5 mm

# 4U CompactPCI® Chassis



Model		MIC-3106				MIC-3111				MIC-3121			
Backplane	slot	System x 1, Peripheral x 2 CompactPCI® peripheral slot x 2				System x 1, Peripheral x 7 CompactPCI® peripheral slot x 7				System x 1, Peripheral x 7 CompactPCI® peripheral slot x 7			
	bus	32-bit/33 MHz PCI bus				32-bit/33 MHz PCI bus				32-bit/33 MHz PCI bus			
	V (I/O)	+3.3 V/+5 V (selectable)				+3.3 V/+5 V (selectable)				+3.3 V/+5 V (selectable)			
Cooling	FAN	1 Blower on Top (Max. 2.47CFM/FAN) 1 Fan on Bottom (Max.18 CFM/FAN)				2 Blowers on Top (Max. 2.47CFM/FAN) 1 Fan on Bottom (Max.18 CFM/FAN)				2 Blowers on Top (Max. 2.47CFM/FAN) 1 Fan on Bottom (Max.18 CFM/FAN)			
	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range				AC 100 ~ 240 V @ 50 ~ 60 Hz, full range				AC 100 ~ 240 V @ 50 ~ 60 Hz, full range			
Power Supply	Output	ATX 180W PSU				ATX 180W PSU				ATX 300W PSU			
		+3.3V	+5V	+12V	-12V	+3.3V	+5V	+12V	-12V	+3.3V	+5V	+12V	-12V
	Max Load	14A	16A	14A	0.5A	14A	16A	14A	0.5A	16A	19A	11A	0.3A
	Min Load	0.3A	0.3A	0.3A	0A	0.3A	0.3A	0.3A	0A	0A	0.5A	0.1A	0A
	Dimensions (W x H x D)	134 x 177 x 238 mm (5.27" x 6.96" x 9.37")				234 x 177 x 258 mm (9.21" x 6.96" x 9.37")				482 x 177 x 310 mm (18.97" x 6.96" x 12.2")			
Environment	Temperature	Operating		Non-operating		Operating		Non-operating		Operating		Non-operating	
		0 ~ 50 °C (32 ~ 122 °F)		-20 ~ 60 °C (-4 ~ 138 °F)		0 ~ 50 °C (32 ~ 122 °F)		-20 ~ 60 °C (-4 ~ 138 °F)		0 ~ 50 °C (32 ~ 122 °F)		-20 ~ 60 °C (-4 ~ 138 °F)	
	Humidity	10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing	
	Vibration	2Grms				2Grms				2Grms			
	Shock	10G				10G				10G			
Reliability	MTBF	Backplane	FAN module			Backplane	FAN module			Backplane	FAN module		
		800,000 hours / 50,000 hours @ 40 °C / 10,000 hours @ 80% load				800,000 hours / 50,000 hours @ 40 °C / 10,000 hours @ 80% load				800,000 hours / 50,000 hours @ 40 °C / 10,000 hours @ 80% load			
Regulatory	Conformance	RoHS, CE, FCC, UL, CCC				RoHS, CE, FCC, UL, CCC				RoHS, CE, FCC, UL, CCC			
Compliance	Standards	PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification				PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification				PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification			

✓: supported, -: not supported, Δ: optional

# 3U CompactPCI® Peripheral Cards



Model		MIC-3714	MIC-3716	MIC-3720	MIC-3723
Form Factor		3U	3U	3U	3U
Main Function		-	-	-	-
Bus	PCI	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz
Power Consumption	TDP	13W	13W	6.7W	12W
Environment	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)			
	non-operating temperature	-20 ~70 °C (-4~ 158 °F)			
	Humidity	95 % @ 40 °C, non-condensing (Operating)			
		95 % @ 60 °C, non-condensing (Non-operating)			
	Vibration	2Grms	2Grms	2Grms	2Grms
	Shock	-	-	-	-
Altitude	-	-	-	-	
Regulatory	Conformance	FCC Class A, CE, RoHS			
Operating System	Compatibility	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10
Compliance	Standards	PICMG 2.0 R3.0 PICMG 2.1 R2.0			



Model		MIC-3753	MIC-3756	MIC-3758	MIC-3761	MIC-3780
Form Factor		3U	3U	3U	3U	3U
Main Function		-	-	-	-	-
Bus	PCI	32-bit/33 MHz				
Power Consumption	TDP	3.5W	6W	8.3W	4W	8.5W
Environment	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)				
	non-operating temperature	-20 ~70 °C (-4~ 158 °F)				
	Humidity	95 % @ 40 °C, non-condensing (Operating)				
		95 % @ 60 °C, non-condensing (Non-operating)				
	Vibration	2Grms	2Grms	2Grms	2Grms	2Grms
	Shock	-	-	-	-	n/a
Altitude	-	-	-	-	n/a	
Regulatory	Conformance	FCC Class A, CE, RoHS				
Operating System	Compatibility	WinXP, Win 7/8/10				
Compliance	Standards	PICMG 2.0 R3.0 PICMG 2.1 R2.0				

✓: supported, - : not supported, Δ: optional

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# Advantech CompactPCI®

## Introduction



### Features

- Commercial standard PCI chips provide high performance at a low price
- Up to 8 slots in one bus segment. Expandable using PCI-to-PCI bridge chips
- Eurocard form factor
- Airtight, high density, 2 mm pin-and-socket connectors
- Front loading and removal
- Vertical card orientation for better cooling
- Staged power pins for hot-swap capability
- Excellent shock and vibration characteristics

### Introduction

Engineers have been trying to apply high-performance, low-cost PC technologies to critical applications such as telecommunications and industrial automation for quite some time. Unfortunately, the characteristics of desktop PC technologies do not readily lend themselves to critical applications where high serviceability, vibration & shock resistance, and good ventilation are required. CompactPCI may be the answer.

#### What is CompactPCI?

CompactPCI is a small, rugged, high-performance industrial computer architecture based on the standard PCI bus specification. It was developed by the PCI Industrial Computers Manufacturers Group (PICMG) in late 1994, and is ideal for embedded applications.

Three important technologies form the core of CompactPCI: PCI local bus, Eurocard mechanics, and airtight pin-and-socket connectors.

#### PCI Local Bus

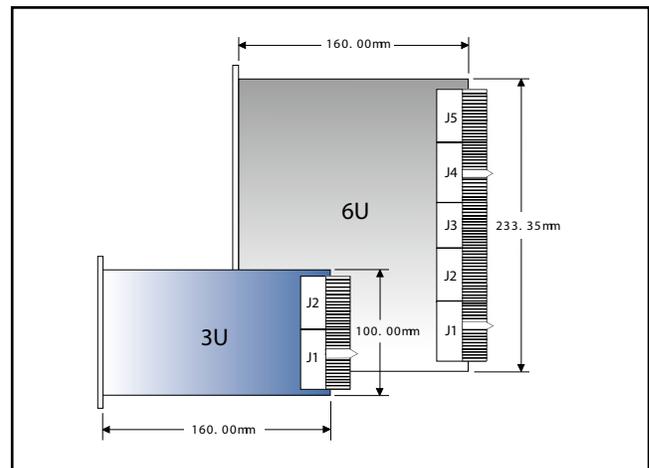
PCI stands for Peripheral Component Interconnect. It was published by Intel® in 1992, and soon became popular in commercial PC designs. It is a high-performance, processor-independent data bus, and most importantly, it is very inexpensive. The PCI local bus specification defines two data widths: 32-bit and 64-bit operating at a speed up to 66 MHz. This provides theoretical throughput up to 264 MB/s at 32-bit or 528 MB/s at 64-bit. Most computer systems and operating systems support the PCI bus. For example, Pentium, Alpha, PowerPC, Windows, Unix, and MacOS. Because PCI components are manufactured in large quantities, they are inexpensive and readily available. With these advantages, the PCI bus is very suitable for high speed computing and high speed data communication applications.

#### Eurocard Mechanics

Eurocard is an industrial-grade packaging standard popularized by VMEbus. CompactPCI allows the use of 3U and 6U Eurocards. The dimensions of a 3U CompactPCI board are 160 mm deep x 100 mm high, while the dimensions of a 6U CompactPCI board are 160 mm deep x 233.35 mm high. The front panels of CompactPCI boards are IEEE 1101.1 and IEEE 1101.10 compliant, and may include optional EMC gaskets to minimize electromagnetic interference. Typically, the front panel contains I/O connectors, LED indicators, and switches. CompactPCI also supports rear panel I/O, which is compliant with IEEE 1101.11. Rear panel I/O is popular for telecommunication equipment because of its easy-to-maintain characteristics. If all the wiring is done on rear transition boards (passive boards), the front CompactPCI boards (active boards), which may require maintenance, are "clean" without any connected wiring. The front CompactPCI boards can then simply be replaced without the need for rewiring.

### Airtight Pin-and-Socket Connectors

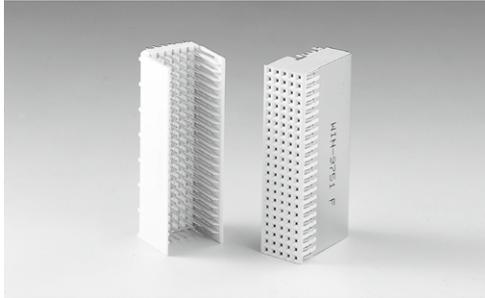
CompactPCI uses airtight, high-density pin-and-socket connectors as specified in the IEC-1076 international standard. These 2 mm "hard metric" connectors have low inductance and controlled impedance, which reduce signal reflections caused by the high speed PCI bus. They enable CompactPCI systems to have up to eight slots in one bus segment.



**Eurocard Form Factor**

The CompactPCI specification defines five connectors, designated as J1 through J5. The 3U CompactPCI board has two connectors labeled J1 and J2, while the 6U CompactPCI board has five connectors labeled J1 through J5. J1 and J2 are defined identically on both 3U and 6U CompactPCI boards, so 3U and 6U CompactPCI boards are electrically interchangeable.

## Advantech CompactPCI®



**Pin-and-Socket Connector**

### CompactPCI® versus Conventional Industrial PCs

#### Serviceability

Replacement of a card from a conventional industrial PC system is always time-consuming. Users need to unfasten the chassis cover, disconnect all wiring from the card, replace the card, reconnect the wiring, and refasten the chassis cover. It is a process prone to error because there can be internal cabling between cards and peripheral devices, and it is necessary to remove all cabling before a card can be replaced. The serviceability of conventional industrial PC systems is not as simple and fast as CompactPCI systems.

CompactPCI is designed to be a front loading and removable system. The replacement of a CompactPCI board is very simple, with no need to remove the chassis cover. In addition, if the I/O is cabled through the back of the system, the front CompactPCI boards are "clean" without any connected wiring, and the replacement of a CompactPCI board is quick and easy. The maintenance time can be reduced from a matter of hours (conventional industrial PCs) to a matter of minutes, yielding a lower Mean Time To Repair (MTTR).



**3U Dual System CompactPCI® Enclosure for 3U Cards**



**4U 8-Slot CompactPCI Enclosure**

#### Vibration and Shock Resistance

Conventional industrial PCs do not provide reliable and secure support for peripheral cards in the system. Cards inside conventional industrial PCs are screwed down at one point only, and the top and bottom card edges are not supported by guide rails. Therefore, the connecting edge of a card is prone to shift under shock and vibration.

CompactPCI boards are firmly mounted in the system. Guide rails support the top and bottom edges of the boards. Front panel retaining mechanisms securely lock the front panel to the surrounding mechanical frame. The connecting edge of the board is held tightly in place by the pin-and-socket connectors. With all four sides of the board firmly held in place, it is much less prone to suffer loss of electrical contact in high vibration and shock environments.

#### Ventilation

Conventional industrial PC systems cannot provide regular airflow paths, resulting in uneven cooling within the chassis. Airflow is blocked by backplanes, card brackets, and disk drives. Cooling air cannot circulate over all the cards, and hot air is not immediately forced out of the chassis. Electronic devices and circuit boards deteriorate because of these cooling related problems: warped circuit boards, bad connections, broken traces, and shortened component lives.

CompactPCI systems provide clear paths for airflow over all active, heat-producing boards in the system. Cooling air easily flows through the spaces between cards, and carries heat out of the spaces. A fan system can be integrated at the bottom of the boards to provide forced air to each slot. CompactPCI systems are therefore much less susceptible to cooling problems because of the even cooling pattern inherent in their mechanical design.

### The Complete Offering for Mission-Critical Applications

The MIC-3000 series is an industrial CompactPCI solution which features front-end access, high shock and vibration tolerance characteristics, automatic cooling system, fault resilient and hot swappable capabilities. These features make MIC-3000 the most reliable PC-based computing platform, for mission-critical applications. Advantech leverages 3U CompactPCI as the industrial high-end computing platform, providing Pentium 4-grade CPU modules, 8-slot chassis, high-speed I/O and serial communication modules, to become a total solution provider for industrial CompactPCI solutions. Target applications include military defense, transportation, traffic control, test and measurement (T&M) and critical data acquisition & control markets.

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# MIC-3106

# MIC-3111

4U CompactPCI® with 2 Peripheral Slots

4U CompactPCI® with 7 Peripheral Slots



## Features

- 4U CompactPCI supports 2 or 7 peripheral slots
- High performance or low power consumption CPU selectable
- Lockable power on/off switch prevents inadvertent access
- 40dB Ultra low system noise for working environments
- Easy-accessible cooling fan and air filter for system maintenance
- Robust design, Anti-Vibration up to 2G with SSD

## Introduction

The MIC-3106 and 3111 are Advantech's latest IPC's and the first to use the CompactPCI standard. CompactPCI is an open standard that gives users the flexibility to add the components that they need. The small footprint of MIC-3106 and 3111 makes it the smallest CPCI system available and offers either 2 or 7 expansion slots to give users the flexibility to build the system they require. For improved access and configuration, the MIC-3106 and 3111 are front accessible and the highly reliable nature of CompactPCI makes it the perfect choice for industrial applications. The three available models in the MIC-3106 and 3111 offer a choice of either high power or low power CPUs and therefore a range of prices to suit the requirements of specific companies.

## Specifications

		MIC-3106	MIC-3111
Power Supply	Power Type	ATX	ATX
	Input Voltage	100 ~ 240 V <sub>AC</sub>	100 ~ 240 V <sub>AC</sub>
	Wattage	180W	180W
	ON/OFF Switch	Lockable Toggle Switch	Lockable Toggle Switch
Backplane	System Slot	1, on the right	1, on the right
	Peripheral Slot	2 Slots	7 Slots
	PCI Bus	32-bit 33MHz	32-bit 33MHz
Physical	Dimensions (W x H x D)	134 x 177 x 238 mm (5.27" x 6.96" x 9.37")	234 x 177 x 258 mm (9.21" x 6.96" x 9.37")
	Weight (kg)	4.33 Kg	6.14 Kg
Environment	Temperature	Operating	0 ~ 50 °C
		Non-Operating	-20 ~ 60 °C
	Humidity (non-condensing)	Operating	10 ~ 85% @ 40 °C
		Non-Operating	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	Operating	2Grms (without HDD)
		Non-Operating	2G
	Shock (11ms)	Operating	10G
Non-Operating		30G	
Compliance	Regulatory	CE, FCC, CCC, UL, RoHS	CE, FCC, CCC, UL, RoHS
	Compliance	PICMG 2.0 Rev. 3.0	PICMG 2.0 Rev. 3.0

## Ordering Information

Part Number	Description
MIC-3106-00-AE	Modular Industrial Chassis 4U, 2 slots, w/ 180W
MIC-3111-00-AE	Modular Industrial Chassis 4U, 7 slots, w/ 180W
MIC-3106-L1-AE	4U, 2 slots, w/ 180W, MIC-3325N
MIC-3106-L2-AE	4U, 2 slots, w/ 180W, MIC-3325D
MIC-3106-H1-AE	4U, 2 slots, w/ 180W, MIC-3328 w/ 3217UE
MIC-3111-L1-AE	4U, 7 slots, w/ 180W, MIC-3325N
MIC-3111-L2-AE	4U, 7 slots, w/ 180W, MIC-3325D
MIC-3111-H1-AE	4U, 7 slots, w/ 180W, MIC-3328 w/ 3217UE
MIP-3104-AE	MIC-3100 PCI Hybrid Box
MIC-3106-H2-AE	4U, 2 slots, w/ 180W, MIC-3328 w/ 3517UE
MIC-3111-H2-AE	4U, 7 slots, w/ 180W, MIC-3328 w/ 3517UE

## Optional Accessories

Part Number	Description
1990024035N000	Fan filter 130 x 10 x 12 mm <sup>3</sup> (for MIC-3106)
1990024034N000	Fan filter 230 x 10 x 10 mm <sup>3</sup> (for MIC-3111)
1750002440	Bottom side fan 60 x 60 x 13 mm <sup>3</sup>
1750007398-01	Top side blower 51 x 51 x 15 mm <sup>3</sup>
1960064154N001	4HP bracket cover
1960064193N001	Wall Mount Kit for MIC-3106
1960064192N001	Wall Mount Kit for MIC-3111
1960064183N001	Table Mount for MIC-3106
1960064184N001	Table Mount for MIC-3111

## CPU Options

L1	Processor	CPU	Intel Atom N455, 1.66GHz
		Memory	2 GB Onboard
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	3 x Type A
Serial		2 x RS-232, DB9 connector	
PS/2	1		
Operating System	Windows	XP, XPE, 7	
L2	Processor System	CPU	Intel Atom D525, 1.8GHz
		Memory	2GB On board
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	3 x Type A
Serial		2 x RS-232, DB9 connector	
PS/2	1		
Operating System	Windows	XP, XPE, 7	

H1	Processor	CPU	Intel 3rd Gen. Core i3-3217UE, 1.6GHz
		Memory	4GB On board
		Storage	1 x CFast 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	2 x Type A
Serial		2 x RS-232, RJ45 connector	
PS/2	1		
Operating System	Windows	XP, 7	
H2	Processor	CPU	Intel 3rd Gen. Core i7-3517UE, 1.7 GHz
		Memory	4GB On board
		Storage	1 x CFast 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connectors
		USB 3.0	2 x Type A
Serial		2 x RS-232, RJ45 connector	
PS/2	1		
Operating System	Windows	XP, 7	

## PCI Hybrid Box

MIP-3104			
Backplane	CPCI interface to chassis	1 for chassis	
	PCI Slot	4 Slots	
	PCI Slot Power (4 Slot)	12V @ 2.4A, -12V @ 0.8A, +5V @ 7.5A, +3.3V @ 10A	
Physical	Dimensions (W x H x D)	142 x 131 x 213 mm (5.59" x 5.15" x 8.38")	
	Weight (g)	725	
	Temperature	Operating	0-50 °C
		Non-operating	-20-60 °C
	Humidity (non-condensing)	Operating	10-85% @40 °C
		Non-operating	10-95% @40 °C
	Vibration (5-500 Hz)	Operating	1 Grms (with MIC-3100 chassis)
		Non-operating	1G
Shock (11 ms)	Operating	10G (with MIC-3100 chassis)	
	Non-operating	30G	
Compliance	Regulatory	CE, FCC	
	Compliance	PICMG 2.0 Rev. 3.0	



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# MIC-3121

## 4U CompactPCI® with 7 Peripheral Slots



### Features

- 4U height rackmount CompactPCI supports 7 peripheral slots
- Optional 4-slot PCI hybrid box for flexible configuration
- Selectable high performance or low power consumption CPU
- Lockable power on/off switch prevents accidental access
- Very low noise cooling fan for quiet environments
- Easily-accessible cooling fan and air filter for system maintenance
- All front-accessible connectors/cables for easy wall mounting



### Introduction

The MIC-3121 CompactPCI is Advantech's new generation IPC to meet the CompactPCI standard; it offers a 4U height rackmount platform, with compact features, and is the most compact device in its price range. The MIC-3121 measures 482 x 177 x 310 mm, which is the standard 4U height rackmount CPCI system. With seven CPCI expansion slots or three CPCI expansion slots plus an optional four slot PCI hybrid box, users have the flexibility to configure their own system. With all these features the MIC-3121 is an open platform with a front access modular design, and high reliability which makes it the perfect choice for industrial applications where high availability matters.

The MIC-3121 has two levels of CPU choice. One is the Intel Core i3-3217UE CPU for high performance applications, and the other is the Intel Atom N455 CPU which is the most cost effective for low power consumption applications.

### Specifications

Power Supply	Power Type	ATX
	Input Voltage	100-240 V <sub>AC</sub>
	Wattage	300W
	On/Off Switch	Lockable Toggle Switch
Backplane	System Slot	1 on the right
	Peripheral Slot	7 slots
	PCI Bus	32-bit 33 MHz
Dimensions (W x H x D)	482 x 177 x 310 mm (18.97" x 6.96" x 12.2")	
Weight (kg)	9.65 Kg	
Temperature	Operating	0-50 °C
	Non-operating	-20-60 °C
Humidity (non-condensing)	Operating	10-85% @ 40 °C
	Non-operating	10-95% @ 40 °C
Vibration (5-500 Hz)	Operating	2Grms (without HDD)
	Non-operating	2G
Shock (11ms)	Operating	10G
	Non-operating	30G
Certification	CE, FCC, CCC, UL, RoHS	
Compliance	PICMG 2.0 Rev. 3.0	

### Ordering Information

Part Number	Description
MIC-3121-00-AE	Modular Industrial Chassis 4U, 7 slots, w/ 300W
MIC-3121-L1-AE	4U, 7 slots, w/ 300W, MIC-3325N
MIC-3121-L2-AE	4U, 7 slots, w/ 300W, MIC-3325D
MIC-3121-H1-AE	4U, 7 slots, w/ 300W, MIC-3328 w/ 3217UE
MIP-3104-AE	MIC-3100 PCI Hybrid Box
MIC-3121-H2-AE	4U, 7 slots, w/ 300W, MIC-3328 w/ 3517UE

### Optional Accessories

Part Number	Description
1990024038N000	Fan filter 430 x 10 x 10 mm3 (for MIC-3121 only)
1750002440	Bottom side fan 60 x 60 x 13 mm3
1750007398-01	Top blower 51 x 51 x 15 mm3
1960064154N001	4HP bracket cover
1960064155N001	8HP bracket cover

## CPU Options

L1	Processor	CPU	Intel Atom N455, 1.66GHz
		Memory	2GB Onboard
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
Ethernet		2 x 10/100/1000 Mbps, RJ45 connector	
USB 2.0		3 x Type A	
Serial		2 x RS-232, DB9 connector	
PS/2		1	
Operating System		Windows	XP, XPE, 7
L2	Processor System	CPU	Intel Atom D525, 1.8GHz
		Memory	2GB On board
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
Ethernet		2 x 10/100/1000 Mbps, RJ45 connector	
USB 2.0		3 x Type A	
Serial		2 x RS-232, DB9 connector	
PS/2		1	
Operating System		Windows	XP, XPE, 7

H1	Processor	CPU	Intel 3rd Gen. Core i3-3217UE, 1.6GHz
		Memory	4GB On board
		Storage	1 x CFAST 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
Ethernet		2 x 10/100/1000 Mbps, RJ45 connector	
USB 2.0		2 x Type A	
Serial		2 x RS-232, RJ45 connector	
PS/2		1	
Operating System		Windows	XP, 7
H2	Processor	CPU	Intel 3rd Gen. Core i7-3517UE, 1.7 GHz
		Memory	4GB On board
		Storage	1 x CFAST 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
Ethernet		2 x 10/100/1000 Mbps, RJ45 connectors	
USB 3.0		2 x Type A	
Serial		2 x RS-232, RJ45 connector	
PS/2		1	
Operating System		Windows	XP, 7

## PCI Hybrid Box

MIP-3104			
Backplane	CPCI interface to chassis	1 for chassis	
	PCI Slot	4 Slots	
	PCI Slot Power (4 Slot)	12V @ 2.4A, -12V @ 0.8A, +5V @ 7.5A, +3.3V @ 10A	
Physical	Dimensions (W x H x D)	142 x 131 x 213 mm (5.59" x 5.15" x 8.38")	
	Weight (g)	725	
	Temperature	Operating	0-50 °C
		Non-operating	-20-60 °C
	Humidity (non-condensing)	Operating	10-85% @40 °C
		Non-operating	10-95% @40 °C
	Vibration (5-500 Hz)	Operating	1 Grms (with MIC-3100 chassis)
		Non-operating	1G
Shock (11 ms)	Operating	10G (with MIC-3100 chassis)	
	Non-operating	30G	
Compliance	Regulatory	CE, FCC	
	Compliance	PICMG 2.0 Rev. 3.0	



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# MIC-3328

## 3rd Generation Intel® Core™ Processor 3U CompactPCI® PlusIO Card



### Features

- Supports 3rd Generation Intel® Core™ processor
- Intel® QM77 Platform Controller Hub
- 4 or 8GB DDR3-1600 soldered SDRAM with ECC
- Triple independent display support
- Optional 8GB SATA NAND Flash on board
- 2.5" SATA-II SSD, CFast, XMC on 8HP version
- Two 10/100/1000 Mbps ports, 2 USB 3.0 ports, 1 VGA port on front panel (4HP)
- Two COM ports, 2 Display ports, 1 PS/2 port (8HP)
- Supports CompactPCI PlusIO
- PICMG2.0, R3.0 , PICMG2.1, R2.0, PICMG2.30 compliant

### Introduction

Advantech's MIC-3328 is a 3U CompactPCI PlusIO CPU blade based on the Intel® 3rd generation Core™ processor family. Based on latest 22nm process technology these processors support up to four cores / eight threads at up to 2.5GHz and up to 6M last level cache. With Intel® HD Graphics(Gen7,DX11,OCL1.1) integrated into the CPU, the MIC-3328 can serve applications demanding high performance, high resolution video output on up to three independent display interfaces. Latest DDR3 DRAM up to 8GB running at 1600MT/s complement the powerful processor with high performance, ECC protected onboard memory.

MIC-3328's design for reliability includes using a soldered processor, DRAM and flash storage for enhanced shock and vibration tolerance make it an ideal choice for workstation workloads in harsh environments and mission/business-critical applications such as military, transportation, test & measurement and traffic control.

MIC-3328 uses the Intel® QM77 PCH, which provides extensive I/O support such as USB3.0, PCI Express gen.2 and SATA-III ports.

The MIC-3328 PlusIO J2 supports interfaces such as 4 PCI Express x1 gen. 2 links for IO extension, one GbE for computer to computer multiprocessing, three SATA for Hard drives and RAID systems as well as 4 USB ports for wireless interfaces and legacy interface replacement.

For more information about CompactPCI PlusIO and Serial offerings from Advantech or information on how this new platform can help you to gain competitive advantages, please contact your Advantech representative.

### Specifications

Processor System	CPU	Intel® 3rd Generation Core™ i7 up to 2.5 GHz (6MB L2 cache) 1.7G, 3517UE, 17w / 2.5G,3555LE, 25w/ 2.1G, 3612QE, 35w
	Platform Controller Hub	Intel® QM77
	BIOS	Customized AMI Aptio UEFI BIOS
CompactPCI Interface	J1 Connector	32-bit PCI local bus (33MHz)
	J2 Connector	CompactPCI PlusIO / RTM
Memory	Technology	DDR3-1600MHz SDRAM, dual channel with ECC support
	Max. Capacity	8GB
	Soldered/socket	Soldered
Graphics	Chipset	Integrated in Intel® CPU
	Resolution	VGA 2048 x 1536 pixels with 32-bit color at 75 Hz Display port 2560 x 1600 at 60 Hz
Ethernet	Controller	3 x i210AT
	Interface	10/100/1000 Mbps
	I/O Connector	RJ-45 x 2 (front panel), RJ-45 x 1 (RTM / PlusIO)
Storage	IDE	1 x CFast Socket on 8HP
	SATA	1 x optional SATA NAND Flash on 4HP,1x Internal SATA connector on 8HP version
Front I/O	VGA	DB15 Port
	Ethernet	2 x 10/100/1000 Mbps RJ-45
	USB 3.0	2 x Type A
	8HP XTM	8HP-1: 2x RJ45 RS232, 2x Display port, 1x PS/2 port 8HP-2: XMC (PClex8 gen.3) front IO
PlusIO / RTM interface (4HPJ2 interface)	PCIE	4 x PClex1 Gen 2 (one PClex1 is routed to Mini-PCle socket on board for wireless LAN using)
	SATA	2 x SATA-II (one SATA-II is designed as half size mSATA socket on board), 1 x SATA-III
	RJ45	1 GbE based on i210AT
	USB 2.0	4 ports

## Specifications (Cont.)

RIO (8HP)	8HP-1 J2 interface	1 x PS/2 is mutually exclusive with PS/2 on 8HP front panel by BOM control. It required a special 8HP board to work. The special 8HP board is on request by customer 2 x COM default setting is RS232, RS422/485 could be set by the switch on 8HP board (Total 4 COM ports on 8HP and its RIO) 2 x DisplayPort is switchable from front panel by switch on 8HP board
Watchdog Timer	Supervision	0 ~ 255s, 1s step, generate reset signal
Operating System	Compatibility	Microsoft Windows XP Professional, Windows 7, Windows server 2008, VxWorks 6.9, Linux Redhat 6.1
Power Requirement	Configuration	CPU TDP 17w/25w/35w, 8HP with RIO
	Consumption	23.42W/ 33.12W /43.91W
Physical	PCB Dimensions (L x H)	4HP or 8HP, 160.00 x 100.00 mm (6.30" x 3.95")
	Weight	0.62kg w. AL Heatsink ,0.9kg w. Cu Heatsink including XTM
Environment	Temperature	Operating: 0 ~ 60 °C (32 ~ 140 °F) Non-operating: - 40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95% @ 40 °C (non condensing) 95% @ 60 °C (non-condensing)
	Shock	10 G, 11ms, each axis three times 30 G, 11ms, each axis three times
	Vibration	2Grms (5~500Hz, with CFast on 8HP) Sine 2 Grms, 30mins each axis (5 ~ 500 Hz)
Regulatory	Conformance	FCC, Class A, CE, RoHS
Compliance	Standard	PICMG 2.0 Rev. 3.0, PICMG 2.1 R2.0, PICMG2.30 PlusIO compatible

## Supported CPU Configurations

Intel® CPU Model Number	# Cores	Freq.	Cache	Memory Types	CPU TDP
I3 3120ME	2	2.4GHz	3 MB L2 Cache	DDR3-1600	35W
I7 3517UE	2	1.7 GHz	4 MB L2 Cache	DDR3-1600	17W
I7 3555LE	2	2.5GHz	4 MB L2 Cache	DDR3-1600	25W
I7 3612QE	4	2.1GHz	6 MB L2 Cache	DDR3-1600	35W

## Ordering Information

System board	Front panel							On board Features				
	LAN (RJ45)	LAN (M12)	USB3.0	VGA	COM RJ45	COM DB9	Displayport	PS/2	CPU	Memory	SATA CFast/HDD	Slot Width
MIC-3328B1-D1E	2		2	1	2		2	1	I7 3555LE	8GB	2	2
MIC-3328C2-D1E	-	2	2	1	-	1	-	-	I7 3612QE	8GB	2	2
MIC-3328D1-D1E	2		2	1	2		2	1	I3 3120ME	4GB	2	2
MIC-3328B1-D3E	2		2	1	2		2	1	I7 3555LE	8GB	2	2

## Ordering Information

Model Number	Configuration
MIC-3328B1-D1E	MIC-3328, 3555LE, 8G RAM, w/ 8HP-1, 2 DP, 2 COM, PS/2, Support PlusIO
MIC-3328C2-D1E	MIC-3328, 3612QE, 8G RAM, VGA, USB,w/ 8HP-3, 2 M12 LAN, 1 DB9 COM
MIC-3328D1-D1E	MIC-3328, i3120ME, 4G RAM, w/8HP-1, 2DP, 2COM, PS/2
MIC-3328B1-D3E	MIC-3328, 3555LE, 8G RAM, w/8HP-1, 2DP, 2COM, PS/2

For other CPU blade SKU,chassis and RIO, please contact your Advantech sales representative.

## Related Products

Model Number	Configuration
MIC-3955A2-S1E	4port RS for RIO application 3U CPCI
MIC-3527A2-S2E	4port RS RIO for MIC-3955A2-S1E 3U CPCI
MIC-3955A1-S1E	4-port RS-232/422/485
MIC-3716/3-AE	3U 250kS/s,16-bit,16-ch multifunction Card
MIC-3756-BE	3U CPCI 64-ch Isolated DI/O Card
MIC-3680/3-AE	2-port CAN Card
MIC-3022AE	3U single system CPCI enclosure, with 400W ATX PSU
MIC-3022PAE	3U single system CPCI PlusIO enclosure, with 400W ATX PSU
MIC-3022CE	3U enclosure,8slots,32-bit/33 MHz/66 MHz,250W CPCI PSU
MIC-3022PCE	3U enclosure, w/ CPCI PlusIO BP, 300W CPCI PSU
MIC-3954-AE	3U CPCI-Serial card with dual mini-PCIe slot and SIM slot
MIC-3953-AE	3U CPCI PMC Carrier board
MIC-3958A1-S1E	4 port RJ45 LAN board

- 1 Software and Industry Solutions
- 2 Industrial Server
- 3 Intelligent System
- 4 Intelligent HMI and Monitors
- 5 Automation Computers and Controllers
- 6 Industrial Communication
- 7 Remote I/O Modules
- 8 Industrial I/O and Video Solutions

# MIC-3329

## Quad-Core Intel® Atom™ Processor 3U CompactPCI® Card



### Features

- Supports Intel® Atom™ Processor E3826/E3827/E3845
- Supports up to 4GB DDR3L-1333 soldered ECC memory
- Optional extension module on 8HP and RIO for VGA, LAN, USB, PS/2, Audio, COM ports
- Supports fanless application with optimized heatsink design
- Designed to meet EN50121-4 and EN50155 for railway applications
- PICMG2.0 R3.0, PICMG2.1 R.0 Compliant

Fully Compliant with  
**EN 50121-4**

Fully Compliant with  
**EN 50155**

RoHS  
compliant  
product

CE FCC cULus

## Introduction

The Advantech MIC-3329 is based on Intel® Atom™ technology, previously codenamed Baytrail and is designed to provide balanced performance and power efficiency. The MIC-3329 is a 3U CompactPCI® processor blade designed for dual-core Intel® Atom E3826/E3827 and quad-core Intel® Atom E3845 processors, and up to 4GB soldered DDR3L-1066/1333 ECC memory. It is available in single and dual slot form factor, offering a range of I/O functionality by XTM (8HP) & Rear I/O extensions.

Front panel I/O on the single slot (4HP) provides 2 x RJ45 GbE ports (Switchable with RIO 4HP), 1 x VGA port (Switchable with RIO 4HP), 1 x USB2.0 port and 1 x USB3.0 port.

Front panel I/O on the second layer (XTM) provides 2 x COM ports (RS232/422/485), 1 x PS/2 KB/MS and 1 x Audio ports or 2 x M12 GbE ports, 1 x COM ports (RS232/422/485).

The MIC-3329 provides an ideal solution for transportation, railway and factory automation applications. Its robust design from a layout and thermals perspective allows it to meet or exceed EN50155 and EN50121-4 using a very low TDP selection of 7W/8W/10W processors.

Its low power consumption and industrial SoC features make the MIC-3329 a perfect fit for all fanless system applications.

## Specifications

Processor System	CPU	Intel® Atom™ Processor E3826/E3827/E3845
	Max Speed	Up to 2MB L2 Cache, 1.91 GHz
	BIOS	2 x AMI 8 MByte SPI flash
Memory	Technology	Single Channel DDR3L 1066/1333 MHz with ECC
	Max. Capacity	Up to 4GB on board
Compact PCI Interface	J1 Connectors	32bit/33MHz PCI local bus
	J2 Connector	RTM
	Mode	System Master/Drone (Stand alone)
Ethernet	Controller	Intel® WG1210 SLJXR Gigabit Ethernet Controller
	Interface	PCIe 1.0 x 1, 10/100/1000 Base TX Ethernet
	I/O Connector	2 x RJ45 to 4HP front (Switchable with RIO 4HP); 2 x M12 Coded to 8HP front
Graphics	Chipset	Integrated in processor
	I/O Connector	1 x VGA to 4HP front (Switchable with RIO 4HP)
	Resolution	1 x VGA 2560 x 1600, 60Hz
Storage	Mode	SATA-II
	Channels	Option 1: 1 x SATA connector and 1x Cfast connector on 8HP Option 2: 1 x SATA connector on 8HP and 1 x Cfast socket on RTM (Switchable with NAND flash, upon request)
Front I/O	USB	1 x US2.0 type A, 1 x USB3.0 type A
	VGA	1 x VGA (Switchable with RIO)
	LAN	2 x 10/100/1000Mbps on RJ45 (Switchable with RIO)
	Front Panel LEDs	x 1 blue/yellow for Hot Swap/HDD, x 1 green for Power, and x 1 green for Master/Drone mode
	8HP (XTM)	Option 1: 2 x DB9 COM; 1 x PS/2; 1 x Audio Line in/out Option 2: 1 x DB9 COM; 2 x M12 X-coded GbE
	Buttons	System reset button

## MIC-3329

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- 6** Industrial Communication
- 7** Remote I/O Modules
- 8** Industrial I/O and Video Solutions

To RTM	USB	2 x US2.0 type A,
	VGA	1 x VGA (Switchable with front)
	LAN	2 x 10/100/1000Mbps on RJ45 (Switchable with front)
	8HP (XTM)	2 x COM port on DB9 (RS232/422/485)
BIOS	Boot Options	SATA, USB, network (PXE)
Watchdog Timer	Output	Local reset
	Interval	Programmable 1s ~ 255s
Operating System	Compatibility	Windows7, Windows8.1, Linux, CentOS6.6
Physical	Dimension & Weight	3U/ 4HP&8HP: 100mm x 160 mm
Environment	Temperature	Operating: -40 ~ 60° C (-40 ~ 140° F) Fanless Non-operating: -40 ~ 85° C (-40 ~ 185° F)
	Humidity	95 % @ 40° C, non-condensing 95 % @ 60° C, non-condensing
	Vibration	2Grms (X,Y,Z 1H/axis, w/o HDD) 2G
	Shock	30 G, 11ms, each axis three times
	Conformance	FCC Class A, CE, RoHS EN50121-4, EN50155
Compliance	Standards	PICMG2.0 R3.0, PICMG2.1 R.0

### Supported CPU Configurations

Intel® CPU Model Number	# Cores	Freq.	Cache	Memory Types	CPU TDP
Intel® Atom™ Processor E3826	2	1.46GHz	1 MB L2 Cache	DDR3L-1066	7W
Intel® Atom™ Processor E3827	2	1.75GHz	1 MB L2 Cache	DDR3L-1333	8W
Intel® Atom™ Processor E3845	4	1.91GHz	2 MB L2 Cache	DDR3L-1333	10W

### Ordering Information

	Front/Rear Panel						On Board Features				
	4HP RJ45 LAN(1)	USB2.0	USB3.0	VGA (2)	CPU	8HP XTM M12 LAN	COM	Audio	PS/2	SATA Conn.	Cfast Socket
<b>P/N List</b>	<b>Front Board</b>										
MIC-3329A1-D2E	2	1	1	1	E3826	2	1	NA	NA	1	1
MIC-3329C1-D2E	2	1	1	1	E3845	2	1	NA	NA	1	1
MIC-3329B1-D1E	2	1	1	1	E3827	NA	2	1	1	1	NA
MIC-3329C1-D1E	2	1	1	1	E3845	NA	2	1	1	1	NA
<b>P/N List</b>	<b>RIO Board</b>										
MIC-3329R1-D1E	2	2	NA	1		NA	2	NA	NA	NA	1

Notes:  
\*(1)(2) are switchable between front and rear boards.\*On board NAND flash is requested by customer.

### Related Products

Peripheral board	Description
MIC-3955	4 or 8-port RS232/422/485 communication card, with RIO support
MIC-3958	3U CPCI 4/2 port RJ45 or M12 X-Code Gigabit Ethernet Card, with RIO support
MIC-3022	3U or 4U enclosure for 3U cards, with RIO support

**Front Board**

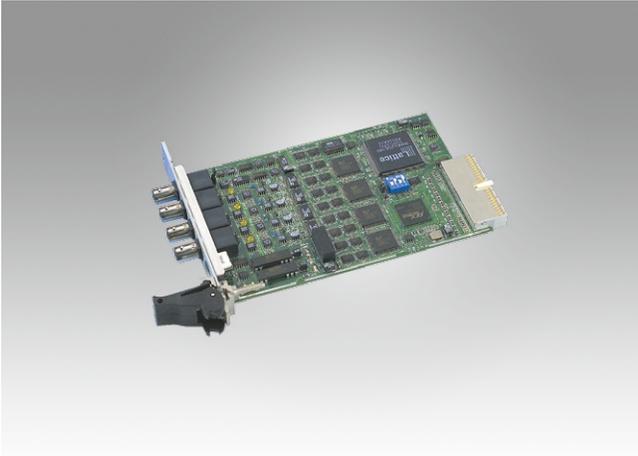


**RIO Board**



# MIC-3714 MIC-3716

**30 MS/s, 12-bit, Simultaneous 4-ch  
Analog Input 3U CompactPCI® Card**  
**250 kS/s, 16-bit, 16-ch Multifunction  
3U CompactPCI® Card**



MIC-3714/3

CE FCC



MIC-3716/3

CE

## Specifications

### Analog Input

- **Channels** 4 single-ended channels
- **Resolution** 12 bits
- **Max. Sampling Rate** 30 MS/s (Only in FIFO 32k)
- **FIFO Size** 32,768 samples/ch
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 50 Ω/1 MΩ/jumper selectable, 100 pF
- **Sampling Modes** Software, pacer, post-trigger, pre-trigger, delay-trigger, about-trigger
- **Input Range (V)** ±5, ±2.5, ±1, ±0.5

### General

- **Bus Type** CompactPCI
- **I/O Connectors** 4 x BNC connector (for AI)  
1 x PS/2 connector (for ext. colock and trigger)
- **Dimensions (L x H)** 160 x 100 mm (6.3" x 3.9") with 3U bracket
- **Power Consumption** Typical: +3.3 V @ 550 mA, +5 V @ 150 mA,  
+12 V @ 600 mA  
Max.: +3.3 V @ 850 mA, +5 V @ 200 mA,  
+12 V @ 700 mA
- **Operating Temperature** 0 ~ 70 °C (32~158 °F)
- **Storage Temperature** -20 ~ 85 °C (-4 ~ 185 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- **Certification** CE, FCC

## Ordering Information

- **MIC-3714/3-AE** 3U, 30 MS/s Simultaneous 4-ch Analog Input Card
- **ADAM-3909-AE** DB-9 Wiring Terminal for DIN-rail Mounting
- **PCL-10901-3E** PS2 to DB-9 wiring cable, 3 m
- **PCL-1010B-1E** BNC to BNC wiring cable, 1 m

## Specifications

### Analog Input

- **Channels** 16 single-ended, 8 differential, or combination
- **Resolution** 16 bits
- **Max. Sampling Rate** 250 kS/s
- **FIFO Size** 1024 samples/ch
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 100 MΩ/10 pF (Off); 100 MΩ/100 pF (On)
- **Sampling Modes** Software, pacer, or external
- **Input Range**

<b>Bipolar</b>	±10	±5	±2.5	±1.25	±0.625
<b>Unipolar</b>	-	0 - 10	0 - 5	0 - 2.5	0 - 1.25
<b>Accuracy (% of FSR ±1LSB)</b>	0.15	0.03	0.03	0.05	0.1

### Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** Static update
- **Output Range**

<b>Internal Reference</b>	<b>Bipolar</b>	±5, ±10
	<b>Unipolar</b>	0 - 5, 0 - 10
<b>External Reference</b>		0 - +x V @ +x V (-10 ≤ x ≤ 10) -x - +x V @ +x V (-10 ≤ x ≤ 10)

- **Slew Rate** 20 V/μs
- **Driving Capability** ±20 mA
- **Output Impedance** 0.1 Ω max.
- **Operation Mode** Single output
- **Accuracy** Relative: ±1LSB

### Digital Input/Output

- **Channels** 16, 5V/TTL
- **Input Voltage** Logic 0: 0.4 V max.  
Logic 1: 2.4 V min.
- **Output Voltage** Logic 0: 0.4 V max.  
Logic 1: 2.7 V min.
- **Output Capability** Sink: 0.4 V max. @ +8 mA  
Source: 2.4 V min. @ -0.4 mA
- **Counter/Timer**
- **Channels** 3
- **Compatibility** 5 V/TTL
- **Resolution** 16 bits
- **Max. Input Frequency** 1 MHz
- **Reference Clock** Internal: 10 MHz  
External Clock Frequency: 10 MHz  
External Voltage Range: TTL (Low: 0.8, High: 2 V)

### General

- **PICMG Compliance** CompactPCI V2.0, R. 2.1 Hot-Swap V2.1, R. 2.0
- **Bus Type** CompactPCI
- **I/O Connector Type** 68-pin SCSI-II female
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- **Power Consumption** Typical: +5 V @ 850 mA, +12 V @ 600 mA  
Max.: +5 V @ 1 A, +12 V @ 700 mA
- **Certification** CE

## Ordering Information

- **MIC-3716/3-AE** 3U, 250 kS/s, 16-bit, 16-ch High-Resolution Multifunction Card
- **PCLD-8710-AE** Industrial Wiring Terminal Board with CJC circuit for DIN-rail Mounting, (cable not included)
- **PCL-10168-1E/2E** 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- **ADAM-3968-AE** 68-pin SCSI-II Wiring Terminal Board for DIN-rail Mounting

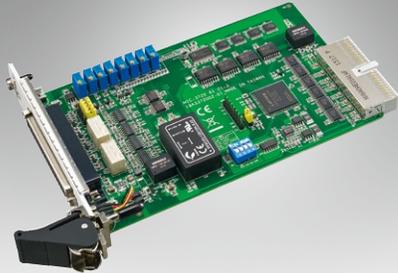
# MIC-3720

# MIC-3723

## 12-bit, 4-ch Isolated Analog Output Universal CompactPCI® Card

## 16-bit, 8-ch Analog Output 3U CompactPCI® Card

**NEW**



MIC-3720



### Specifications

#### Analog Output

- Channels: 4 isolated
- Resolution: 12 bits
- Output Rate: Static update
- Output Range:

Bipolar (V)	±5, ±10
Unipolar (V)	0 ~ 5, 0 ~ 10
Current Loop (mA)	0 ~ 20, 4 ~ 20 (software programmable)

- Slew Rate: 2.5 V/μs @ ±10 V  
1.5 V/μs @ ±5 V, 0 ~ 10 V  
0.7 V/μs @ 0 ~ 5 V
- Isolation Protection: 2,500 V<sub>DC</sub>
- Driving Capability: 5 mA
- Operation Modes: Software polling
- Accuracy: Relative: ±1 LSB; Differential  
Non-Linearity: ±1 LSB (monotonic)

#### General

- Bus Type: CompactPCI
- I/O Connectors: 1 x DB37 female connector
- Dimensions (L x H): 175 mm x 100 mm (6.9" x 3.9")
- Power Consumption: 5 V @ 350 mA (typical), 500 mA (max.)  
12 V @ 200 mA (typical), 350 mA (max.)
- Operating Temperature: 0 ~ 60 °C (32 ~ 140 °F)
- Storage Temperature: -20 ~ 70 °C (-4 ~ 158 °F)
- Storage Humidity: 5 ~ 95% RH, non-condensing

### Ordering Information

- MIC-3720-AE: 12-bit, 4-ch Isolated AO Universal CompactPCI Card

#### Accessories

- PCL-10137-1E: DB37 Cable, 1 m
- PCL-10137-2E: DB37 Cable, 2 m
- PCL-10137-3E: DB37 Cable, 3 m
- ADAM-3937-AE: DB37 DIN-rail Wiring Board



MIC-3723/3



### Specifications

#### Analog Output

- Channels: 8
- Resolution: 16 bits
- Output Rate: Static update
- Output Range: (V, software programmable)

Internal Reference	Unipolar	±10 V
	Current Loop	0 ~ 20 mA, 4 ~ 20 mA

- Slew Rate: 20 V/μs
- Driving Capability: 5mA
- Output Impedance: 0.1 Ω max.
- Operation Modes: Single output, synchronized output

#### Digital Input/Output

- Channels: 16, 5V/TTL
- Input Voltage: Logic 0: 0.8 V max.  
Logic 1: 2.0 V min.
- Output Voltage: Logic 0: 0.5 V max. @ 24 mA  
Logic 1: 2.4 V min. @ -15 mA
- Output Capability: Sink: 0.5 V max. @ 24 mA  
Source: 2.4 V min. @ -15 mA

#### General

- PICMG Compliance: CompactPCI V2.0, R 2.1  
Hot-Swap V2.1, R 2.0
- Bus Type: CompactPCI
- I/O Connector Type: 68-pin SCSI-II female
- Dimensions (L x H): 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- Power Consumption: Typical: 5 V @ 850, 12 V @ 600 mA
- Certification: CE

### Ordering Information

- MIC-3723/3-AE: 3U CompactPCI 16-bit, 8-ch non-isolated analog output card
- PCL-10168-1E: 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- PCL-10168-2E: 68-pin SCSI-II Wiring Terminal Board for DIN-rail mounting

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# MIC-3753 MIC-3756 MIC-3758



72-CH Digital I/O 3U CompactPCI® Card

64-ch Isolated Digital I/O CPCI Card

128-CH Isolated Digital I/O 3U CompactPCI® Card



MIC-3753R/3

MIC-3753/3



MIC-3756



MIC-3758/3



## Specifications

### Digital Input

- Channels 72 (shared with output)
- Compatibility 5 V/TTL
- Input Voltage Logic 0: 0.8 V max.  
Logic 1: 2.0 V min.
- Interrupt Capable Ch. 6 (2 for each C port)

### Digital Output

- Channels 72 (shared with input)
- Compatibility 5 V/TTL
- Output Voltage Logic 0: 0.44 V max. @ 24 mA  
Logic 1: 3.76 V min. @ 24 mA
- Output Capability Sink: 0.44 V max. @ 24 mA  
Source: 3.76 V min. @ 24 mA

### General

- PICMG Compliance CompactPCI V2.0, R 2.1  
Hot-Swap V2.1, R 2.0
- Bus Type CompactPCI
- I/O Connectors 1 x 78-pin D-type female connector
- Dimensions (L x H) 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- Power Consumption Typical: +5 V @ 400 mA  
Max.: +5 V @ 0.7 A
- Operating Temperature 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- Operating Humidity 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- Storage Temperature -20 ~ 70 °C (-4 ~ 158 °F)
- Certifications CE

## Ordering Information

- MIC-3753/3-A1E 3U CompactPCI 72-ch Digital I/O card
- MIC-3753R/3-AE 3U CompactPCI 72-ch Digital I/O card with Rear I/O support
- PCL-10178-1E DB-78 cable assembly, 1 m
- ADAM-3978-AE DB-78 wiring terminal for DIN-rail mounting

## Specifications

### Isolated Digital Input

- Channels 32
- Input Voltage Logic 0: 3 V max.  
Logic 1: 10 V min. (50 V max.)
- Interrupt Capable 2 (DI00, DI16)
- Isolation Protection 2,500 V<sub>DC</sub>
- Opto-Isolator Response 100 µs
- Input Current 24 V<sub>DC</sub> @ 4.40 mA (typical)

### Isolated Digital Output

- Channels 32
- Output Type Sink (NPN)
- Isolation Protection 2,500 V<sub>DC</sub>
- Output Voltage 5 ~ 40 V<sub>DC</sub>
- Sink Current 200 mA max./channel
- Opto-Isolator Response 25 µs

### General

- Bus Type CompactPCI
- I/O Connectors 1 x 78-pin D-type female connector
- Dimensions (L x H) 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- Power Consumption Typical: 5 V @ 285 mA  
Max: 5 V @ 475 mA
- Operating Temperature 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- Operating Humidity 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- Storing Temperature -20 ~ 80 °C (-4 ~ 158 °F)
- Certifications CE

## Ordering Information

- MIC-3756-BE 3U 64-channel isolated digital I/O Card

### Accessories

- PCL-10178-1E DB-78 cable assembly, 1 m
- ADAM-3978-AE DB-78 wiring terminal for DIN-rail mounting

## Specifications

### Isolated Digital Input

- Channels 64
- Input Voltage Logic 0: 2.5 V max.  
Logic 1: 5 V min. (25 V max)
- Interrupt Capable Ch. 64
- Isolation Protection 2,500 V<sub>DC</sub>
- Opto-Isolator Response 50 µs
- Input Resistance 3 kΩ

### Isolated Digital output

- Channels 64
- Output Type Sink (NPN)
- Isolation Protection 2500 V<sub>DC</sub>
- Output Voltage 5 ~ 40 V<sub>DC</sub>
- Sink Current 90 mA max./Channel
- Opto-isolator Response 50 µs

### General

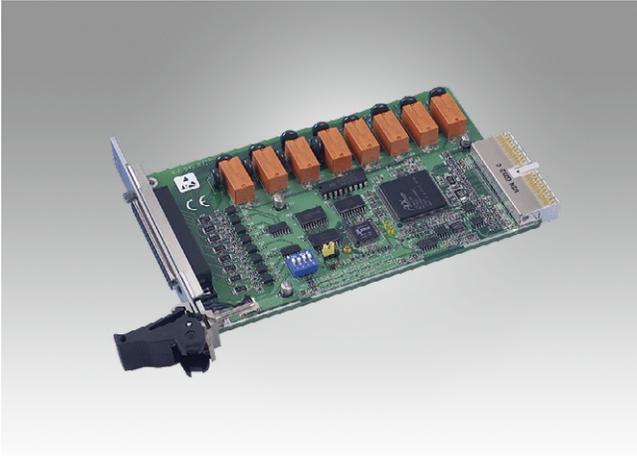
- Bus Type CPCI bus spec. 2.1 compliant
- I/O Connectors 1 x MINI-SCSII HDRA-E100 Female
- Dimensions (L x H) 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- Power Consumption Typical: +5 V @ 800 mA, +3.3 V @ 600 mA  
Max: +5 V @ 1 A, +3.3 V @ 1 A
- Operating Temperature 0 ~ 60 °C (32 ~ 140 °F) (IEC 68-2-1,2)
- Storage Temperature -20° ~ 70 °C (-4° ~ 158 °F)
- Storage Humidity 5 ~ 95% (IEC 68-2-3) non-condensing

## Ordering Information

- MIC-3758/3-AE 3U CompactPCI 128-ch isolated Digital I/O card
- PCL-101100S-1E 100-pin SCSI Cable, 1 m
- ADAM-39100-BE 100-pin SCSI wiring terminal, DIN-rail mounting

# MIC-3761 MIC-3780

## 8-CH Relay & 8-CH Isolated Digital Input 3U CompactPCI® Card 8-CH, 16-bit Counter/Timer 3U CompactPCI® Card



MIC-3761/3



MIC-3780/3



### Specifications

#### Isolated Digital Input

- Channels 8
- Input Voltage Logic 0: 3 V max.  
Logic 1: 10 V min.  
(50 V max.)
- Input Current\* 10 V<sub>DC</sub> 1.6 mA (typical)  
12 V<sub>DC</sub> 1.9 mA (typical)  
24 V<sub>DC</sub> 4.1 mA (typical)  
48 V<sub>DC</sub> 8.5 mA (typical)  
50 V<sub>DC</sub> 8.9 mA (typical)
- Interrupt Capable Ch. ID0 ~ ID7
- Isolation Protection 2,500 V<sub>DC</sub>
- Overvoltage Protection 70 V<sub>DC</sub>
- Opto-Isolator Response 25 µs
- Input Resistance 560 Ω

#### Relay Output

- Channels 8
- Relay Type SPDT  
(4 Form A, and 4 Form C)
- Contact Rating 3 A @ 250 V<sub>AC</sub> or  
3 A @ 24 V<sub>DC</sub>
- Relay on Time 15 ms max.
- Relay off Time 5 ms max.
- Life Span Mechanical  
2 x 10<sup>7</sup> ops. min.  
Electrical  
2 x 10<sup>8</sup> ops. min. (contact rating)
- Resistance 1 GΩ min. (at 500 V<sub>DC</sub>)

#### General

- PICMG Compliance CompactPCI V2.0, R 3.0  
Hot-Swap V2.1, R 2.0, R 2.1
- Bus Type CompactPCI
- I/O Connectors 1 x 37-pin D-type female connector
- Dimensions (L x H) 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- Power Consumption Typical: +5 V @ 220 mA  
Max.: +5 V @ 750 mA
- Certification CE

### Ordering Information

- MIC-3761/3-AE 3U 8-ch Relay Actuator and 8-ch Isolated D/I Card
- PCL-10137-1E/2E/3E DB-37 cable assembly, 1, 2 and 3 m
- ADAM-3937-BE DB-37 Wiring Terminal for DIN-rail Mounting
- PCLD-780-BE Universal Screw Terminal Board

### Specifications

#### Digital Input

- Channels 8
- Compatibility 5 V/TTL
- Input Voltage Logic 0: 0.8 V max.  
Logic 1: 2.4 V min.
- Interrupt Capable Ch. 1 (channel 0)

#### Digital Output

- Channels 8
- Compatibility 5 V/TTL
- Output Voltage Logic 0: 0.5 V max. @ 24 mA  
Logic 1: 2.4 V min. @ -15 mA  
Sink: 0.5 V max. @ 24 mA  
Source: 2.4 V min. @ -15 mA
- Output Capability

#### Counter/Timer

- Channels 8 (independent)
- Resolution 16 bits
- Compatibility 5 V/TTL
- Max. Input Frequency 20 MHz
- Reference Clock Internal: 20 MHz
- Counter Modes 12 (programmable)
- Interrupt Capable Ch. 8

#### General

- PICMG Compliance CompactPCI V2.0, R 3.0  
Hot-Swap V2.1, R 2.0
- Bus Type CompactPCI V2.1
- I/O Connectors 68-pin SCSI-II female
- Dimensions (L x H) 160 x 100 mm (6.3" x 3.9") with 3U Bracket
- Power Consumption Typical: +5 V @ 900 mA  
Max: +3.3 V @ 1.2 A
- Operating Temperature 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- Storage Temperature -20 ~ 70 °C (-4 ~ 158 °F)
- Relative Humidity 5 ~ 95 % RH non-condensing (refer to IEC 68-2-3)
- Certification CE, FCC Class A

### Ordering Information

- MIC-3780/3-A1E 3U Compact PCI 8-ch, 16 bit counter/timer card
- PCL-10168-1E/2E 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- ADAM-3968-AE 68-pin SCSI-II Wiring Terminal Board for DIN-rail mounting

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# Power Supplies

## 80 Plus PS/2 Single Power Supplies



Part Number	PS8-250ATX-ZE	PS8-300ATX-ZBE	PS8-400ATX-ZE	PS8-500ATX-ZE	PS8-700ATX-ZE
Form Factor	PS/2	PS/2	PS/2	PS/2	PS/2
Wattage	250W	300W	400W	500W	700W
80 Plus Grade	Bronze	Bronze	Bronze	Bronze	Bronze
Input Range	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>
Output Range	+3.3V @ 20 A +5 V @ 21 A +12 V1 @ 16 A +12 V2 @ 16 A -12 V @ 0.3 A -5 V @ 0.3A +5 Vsb @ 2.5 A	+3.3V @ 11.12 A +5 V @ 13.2 A +12 V @ 7.64 A +12 VCPU @ 8 A -12 V @ 0.1 A -5V @ 0.05 A +5 Vsb @ 1.39 A	+3.3V @ 21 A +5 V @ 20 A +12 V1 @ 16 A +12 V2 @ 16 A -12 V @ 0.5 A -5V @ 0.3 A +5 Vsb @ 3 A	+3.3V @ 24 A +5 V @ 20 A +12 V1 @ 16 A +12 V2 @ 16 A -12 V @ 0.5 A -5V @ 0.3 A +5 Vsb @ 3 A	+3.3V @ 24 A +5 V @ 30 A +12 V1 @ 16 A +12 V2 @ 16 A +12 V3 @ 16 A +12 V4 @ 16 A -12 V @ 0.5 A -5V @ 0.5 A +5 Vsb @ 4 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")
Safety	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC, BSMI	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC
Compatible Chassis	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619, HPC-5000	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619, HPC-7442	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619, IPC-631, HPC-7442	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619 HPC-7442

## PS/2 DC Power Supplies



Model Name	PS-300ATX-DC48E
Wattage	300W
Input Range	72 ~ 36 V <sub>DC</sub> , 15 A
Outputs	+5 V @ 30 A (0.3 A min) +3.3 V @ 28 A (0.3 A min) +12 V @ 15 A (0.2 A min) -12 V @ 0.8 A, -5 V @ 0.3 A, +5 Vsb @ 2 A
MTBF (hrs)	100,000 @ 25° C
Dimensions (W x H x D)	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")
Safety	UL, TUV, CB, CCC
Compatible Chassis	ACP-2000, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360, IPC-602, IPC-610

# Power Supplies

## 80 Plus 1U/2U Single Power Supplies



Part Number	PS8-500U2-XE	96PS-A700W1U
Form Factor	2U	1U
Wattage	500W	700W
80 Plus Grade	Bronze	Bronze
Input Range	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>
Output Range	+3.3V @ 20 A, +5 V @ 20 A +12 V1 @ 16 A, +12 V1 @ 16 A +12 V3 @ 16 A, -12 V @ 0.5A +5 Vsb @ 3 A	+3.3V @ 24 A, +5 V @ 30 A +12 V1 @ 16 A, +12 V2 @ 16 A +12 V3 @ 16 A, +12 V4 @ 16 A -12V @ 0.5 A, +5 Vsb @ 4 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	70 x 100 x 240 mm (2.75" x 3.93" x 9.44")	40 x 100 x 250 mm (1.57" x 3.93" x 9.84")
Safety	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC
Compatible Chassis	HPC-7242, HPC-7282, HPC-7320, HPC-8316	HPC-7320, HPC-7400, HPC-8316

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## 80 Plus Flex ATX Power Supplies



Part Number	PS8-250FATX-XE	PS8-350FATX-XE
Form Factor	Flex ATX	Flex ATX
Wattage	250W	350W
80 Plus Grade	Bronze	Bronze
Input Range	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>
Output Range	+3.3V @ 12 A +5 V @ 14 A +12 V @ 18 A -12 V @ 0.3 A +5 Vsb @ 2.5 A	+3.3V @ 16 A +5 V @ 16 A +12 V1 @ 18 A +12 V2 @ 18 A -12 V @ 0.3A +5 Vsb @ 3 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	81.5 x 40.5 x 150 mm (3.2" x 1.59" x 5.9")	81.5 x 40.5 x 150 mm (3.2" x 1.59" x 5.9")
Safety	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC, BSMI
Compatible Chassis	ACP-1010/ACP-1320, ACP-2010/ACP-2320, ACP-4D00, IPC-3012, IPC-6806S, IPC-6806S-D, IPC-6806, IPC-5120, IPC-7120	ACP-1010/ACP-1320, ACP-2010/ACP-2320, ACP-4D00, IPC-603, IPC-3012, IPC-6806S, IPC-6806S-D, IPC-6806, IPC-5120, IPC-7120, ACP-2020

# Power Supplies

## 80 Plus Redundant Power Supplies



Part Number	RPS8-500ATX-XE	RPS8-750ATX-XE	RPS8-500U2-XE
Form Factor	Mini Redundant	Mini Redundant	2U Redundant
Wattage	500W 1+1	750W 1+1	500W 1+1
80 Plus Grade	Gold	Gold	Bronze
PMBus	Ver. 1.2	Ver. 1.2	-
Input Range	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>	90 ~ 264 V <sub>AC</sub>
Output Range	+3.3V @ 20 A +5 V @ 20 A +12 V1 @ 16 A +12 V2 @ 16A +12 V3 @ 16A -5 V @ 0.3 A -12 V@ 0.5 A +5 Vsb @3 A	+3.3V @ 24 A +5 V @ 30 A +12 V @ 60.9 A -12 V@ 0.5 A +5 Vsb @ 4 A	+3.3V @ 20 A +5 V @ 25 A +12 V @ 40.2 A -12 V@ 0.5 A +5 Vsb @3.52 A
MTBF (hrs)	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	150 x 84 x 190 mm (5.9" x 3.3" x 7.48")	150 x 84 x 200 mm (5.9" x 3.3" x 7.87")	85 x 86.6 x 217 mm (3.34" x 3.4" x 8.54")
Safety	CE , FCC, UL, CB, TUV, CCC, KC	CE , FCC, UL, CB, TUV, CCC, KC	CE , FCC, UL, CB, TUV, CCC, KC
Compatible Chassis	IPC-7130, IPC-7130L, IPC-7220, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-622, HPC-7442, IPC-631	ACP-4000, ACP-4010, IPC-622, HPC-7442	HPC-7242, HPC-7282, HPC-7320, HPC-8316, ACP-2020
Single Module Part Number	96PSRM-A500W1U-2	96PSRM-A750W1U	96PSRM-A500WFX

✓: supported, -: not supported, △: optional

# CPU Coolers

## Intel® LGA1150/1151/1155/1156



Model Name	1960049408N001	1960047831N001	1960052651N021	1960047669N001
Thermal Dispatch Performance	Intel LGA1156/1155/1150/1151 84W	Intel LGA1156/1155/1150/1151 95W	Intel LGA 1156/1155/1150/1151 80W	Intel LGA1156/1155/1150/1151 95W
Fan	-	7 cm/35.5CFM 5400+/- 10% RPM	6 cm/28.77 CFM 5800 +/- 10% RPM	8 cm/57.5 CFM 4500+/- 10% RPM
Heatsink Material	Copper	Copper	Aluminum	Aluminum & Copper heart
Heatsink Dimensions	85 x 85 x 26 mm (3.35" x 3.35" x 1.02")	83 x 83 x 39.26 mm (3.27" x 3.27" x 1.54")	90x 90x 68 mm (3.54" x 3.54" x 2.68")	90 x 90 x 35 mm (3.54" x 3.54" x 1.38")
Dimensions	-	83 x 83 x 55.73mm (3.27" x 3.27" x 2.17")	90x 90x 68 mm (3.54" x 3.54" x 2.68")	120 x 120 x 77 mm (4.72" x 4.72" x 3.03")
Weight	611 g	582 g	417g	500 g
Minimum Chassis Height	1U	2U	2U/4U	4U
Recommended Chassis	ACP-1010 HPC-7140/7180	Backplane version of chassis	Motherboard/ backplane version of chassis	Motherboard version of chassis
Supported Boards	AIMB-580/701/780/781/782/784; PCE-5125/5126/5127/7127/5026 ASMB-584/585/781/782/784/785	AIMB-580/581/582; PCE-5125/5126/5127/ 5026/7127/5128/7128	AIMB-705/785 PCE-5029/5129/7129/3029/4129 ASMB-584/585/781/782/784/785	AIMB-580/581/582/701/780/ 781/782/784



Model Name	1960053065N001	1960053207N001
Thermal Dispatch Performance	Intel LGA1155/1150/1151 55W Up to Core i3	Intel LGA1155/1150/1151 65W Up to Core i7
Fan	77 x 75 x 15.4 mm/11.83 CFM 5500+/- 10% RPM	9 cm/45.09 CFM 4400 +/- 10% RPM
Heatsink Material	Copper	Aluminum & Copper
Heatsink Dimensions	84 x 84 x 13 mm (3.32" x 3.32" x 0.51")	92.9 x 92.2 x 46 mm (3.67" x 3.67" x 1.82")
Dimensions	84 x 84 x 28 mm (3.32" x 3.32" x 1.11")	92.9 x 92.2 x 46 mm (3.67" x 3.67" x 1.82")
Weight	382g	250g
Minimum Chassis Height	1U	1.5U
Recommended Chassis	IPC-3026, IPC-3012	IPC-3026, IPC-3012
Supported Board	PCE-3026/3028/3029/4128/4129 AIMC-3200/3201/3420/3421/3202/3422	PCE-3026/3028/3029/4128/4129 AIMC-3200/3420/3201/3421/3202/3422

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# CPU Coolers

## Intel® Xeon® LGA2011



Part number	1960055362N001	1960065684N001	1960063011N001	1960063011N011	1960065593N001	1960065591N001	1960057226N001
Thermal Dispatch Performance	Up to 145W	Up to 160W	Up to 135W	Up to 120W	Up to 135W	Up to 135W	Up to 95W
Fan	6cm / 38.8CFM 6800 ± 10% RPM	9cm/108.08CFM 5000 ± 10% RPM	6cm/50.40CFM 9000± 10% RPM	6cm/50.40CFM 9000+/- 10% RPM(Puller Fan)	-	-	-
Heatsink Material	Aluminum Fins & Cu Block with 3 Heat Pipes	Aluminum Fins & Copper base with 3 Heat Pipes	Aluminum fins soldered Copper base with Heatpipe	Aluminum fins soldered Copper base with Heatpipe	Copper with vapor chamber	Copper with vapor chamber	Aluminum fins soldered Copper base with Heatpipe
Heatsink Dimensions (L x W x H)	90.0 x 90.0 x 63.9 mm (3.54" x 3.54" x 2.51")	88.2 x 88.2 x 112.15 mm (3.47" x 3.47" x 4.41")	107 x 70 x 64.0 mm (4.21" x 2.75" x 2.51")	107 x 70 x 64.0 mm (4.21" x 2.75" x 2.51")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	90 x 90 x 25.5 mm (3.54" x 3.54" x 1")
Dimensions	90.0 x 90.0 x 65.6 mm (3.54" x 3.54" x 2.58")	88.2 x 88.2 x 112.15 mm (3.47" x 3.47" x 4.41")	94.0 x 70.0 x 64.0 mm (3.7" x 2.75" x 2.51")	94.0 x 70.0 x 64.0 mm (3.7" x 2.75" x 2.51")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	90 x 90 x 25.5 mm (3.54" x 3.54" x 1")
Weight	413g	583g	319g	319g	405g	385g	197g
Minimum Chassis Height	2U	4U	2U	2U	1U	1U	1U
Supported Boards	ASMB-823/913/920/923	ASMB-823/913/920/923	ASMB-822/922/813	PCE-9228	ASMB-822/813 & 922 (For CPU1)	ASMB-922 (For CPU0)	ASMB-823/913/920/923
Remark	Square Type	Square Type	Narrow Type	Narrow Type	Narrow Type	Narrow Type	Square Type

## Intel® Xeon® LGA3647



Part number	1960081603N001	1960081155N001
Thermal Dispatch Performance	Up to 205W	Up to 165W
Fan	6 cm/50.4 CFM 9000 ± 10% RPM	-
Heatsink Material	Aluminum Stack Fin & CU Block with heatpipe	Aluminum Stack Fin & CU Block with Heatpipe
Heatsink Dimensions (L x W x H)	108 x 78 x 64 mm (4.25" x 3.07" x 2.51")	107.75 x 78 x 25.5 mm (4.24" x 3.07" x 1")
Dimensions	108 x 78 x 64 mm (4.25" x 3.07" x 2.51")	107.75 x 78 x 25.5 mm (4.24" x 3.07" x 1")
Weight	464g	257.6g
Minimum Chassis Height	2U	1U
Supported Boards	ASMB-815/825/925/975	ASMB-815/825/925/975
Remark	Narrow Type	Narrow Type

# Accessories

## Slide Rail



- For 1U rackmount chassis**
- 26" P/N: 9680009153
  - Maximum acceptable load: 25kg
  - 1 pair included



- For 2U and higher rackmount chassis**
- 26" P/N: 9680006905
  - Maximum acceptable load: 45kg
  - 1 pair included

## Industrial Disk Tray/Bay



- IPC-DT-5121/  
IPC-DT-5121B**
- Shockproof industrial hard disk drive tray with cooling fan and optional front USB and PS/2 interfaces**
- Accepted Device: 1 x 3.5" HDD (only for 9.5mm thickness)
  - Cooling Fan: 1 x 4 cm
  - Color (Codes): Gray (414U), Black (4C2X)
  - Dimensions (W x H x D): 148.5 x 42.6 x 171 mm<sup>3</sup> (5.84" x 1.67" x 6.73")



- 989K008733**
- A frame to securely fix a 3.5" HDD in a 5.25" drive bay**
- Accepted Device: 3.5" HDD x 1



- IPC-DT-3120E**
- Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD/SSD trays**
- Accepted Device: 2 x 2.5" SATA HDD/SSD (only for HDD/SSD thickness less than 9.6 mm)
  - Dimensions (W x H x D): 101.6 x 25.4 x 139 mm<sup>3</sup> (4" x 1" x 5.47")



- 989K008734**
- A frame to securely fix two 2.5" HDDs/SSDs in a 3.5" drive bay**
- Accepted Device: 2.5" SATA HDD/SSD x 2 (only for HDD thickness less than 9.6 mm)



- 9892200013E**
- Module to convert a 5.25" drive bay to a slim ODD and a 3.5" drive bay**
- Accepted Device: 3.5" device x 1, slim ODD x 1



- 96RACK-5SS-CAGE-CR**
- Mobile rack for converting one 5.25" drive bay to four 2.5" SAS/SATA HDD/SSD trays**
- Accepted Device: 2.5" SAS/SATA HDD/SSD x 4
  - Dimension (W x H x D): 146 x 41 x 170 mm<sup>3</sup> (5.74" x 1.61" x 6.69")



- IPC-DT-5230E**
- Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays**
- Accepted Device: 3.5" SATA HDD x 3 or 2.5" SATA HDD/SSD x 3
  - Cooling Fan: 1 x 8 cm
  - Dimensions (W x H x D): 146.5 x 86 x 225 mm<sup>3</sup> (5.76" x 3.38" x 8.85")



- 96RACK-5-SS-CR-B2**
- Mobile rack for converting one 5.25" drive bay to one slim ODD and two 2.5" SAS/SATA HSS/SSD trays**
- Accepted Device : slim ODD x 1 , 2.5" SAS/SATA HDD/SSD x 2
  - Dimension (W x H x D): 146 x 41.3 x 170 mm<sup>3</sup> (5.74" x 1.62" x 6.69")

## Add-on Card Hold Down Kit



- 98RKBTOS09E**
- Add-on card hold down kit (short)**
- Bracket Q'ty of each kit : 5 pcs
  - For PCI add-on card with height 72.3mm ~ 87.3mm and PCIe add-on card with height 81.7mm ~ 91.8mm



- 98RKBTOS10E**
- Add-on card hold down kit (long)**
- Bracket Q'ty of each kit : 5 pcs
  - For PCI add-on card with height 54.8mm ~ 75.7mm and PCIe add-on card with height 59.3mm ~ 80.2mm

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# Accessories

## USB Cables



Part Number	1700008461	1700003195	1700002204	1700014398	1700020277-01
Description	USB 2.0 cable with 4 ports	USB 2.0 cable with 2 ports	USB 2.0 cable with 2 ports	USB 2.0 cable with 4 ports	USB 3.0 cable with 2 ports
Cable Length	30.5 cm (12.01")	17.5 cm (6.89")	27 cm (11.92")	30.5 cm (12.01")	30 cm (11.81")
Remark	For ATX/Micro-ATX MB, full-sized SBC			For half-sized SBC	For ATX/Micro-ATX MB, full/half-sized SBC

## SATA Cables



Part Number	96CB-SATAPOWER-6P2	1700022749-11	1700019381	1700007351	1700003194
Description	SATA power cable for slim ODD	SATA power cable for HDD/SSD	SATA data cable (right angle)	SATA data cable (right angle)	SATA data cable
Cable Length	10 cm (3.94")	10 cm (3.94")	55 cm (21.65")	40 cm (15.75")	60 cm (23.62")
Remark	Big 4 P to SATA power cable for Slim ODD	Big 4 P to SATA power cable for HDD/SSD	SATA data cable with 1 right angle and 1 vertical connectors	SATA data cable with 1 right angle and 1 vertical connectors	SATA data cable with vertical connectors with locks

## COM and Printer Ports Cables



Part Number	1701092300	1701090401	1700020294-01	1700008762
Description	COM cable with 2 ports	COM cable with 1 port	Printer (Parallel) port cable	COM cable with 2 ports
Cable Length	28.5 cm (11.22")	40 cm (15.75")	42.0 cm (16.54")	22.5 cm (8.86")
Remark	For ATX/Micro-ATX MB, full-sized SBC		For ATX/Micro-ATX MB, full-sized SBC	For half-sized SBC

# Accessories

## Video Cables



Part Number	PCE-DP10-00A1E	1700021831-01	1700008822-11
Description	Display port cable	DP to DVI port cable	DVI to DVI port cable
Cable Length	25 cm (9.84")	30 cm (11.81")	30 cm (11.81")
Remark	Video cable for converting on board DP connector to external DP port supporting DP 1.1a/1.2 signaling	Video cable for converting on board DP connector to external DVI-D port	Video cable for converting on board DVI connector to external DVI-D port

## Other Cables



Part Number	1700006915	1700006916	1700024754-01
Description	Cable for ACP-4000MB front LED board	Cable for IPC-610MB-H front LED board	Power cable for GPU card
Cable Length	60 cm (23.62")	60 cm (23.62")	10 cm (3.93")
Remark	For those Advantech motherboards with VOLT1 connector too far away from the chassis LED board		2*B4P Molex power connector to 6+2P PCIe power cable for GPU card

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