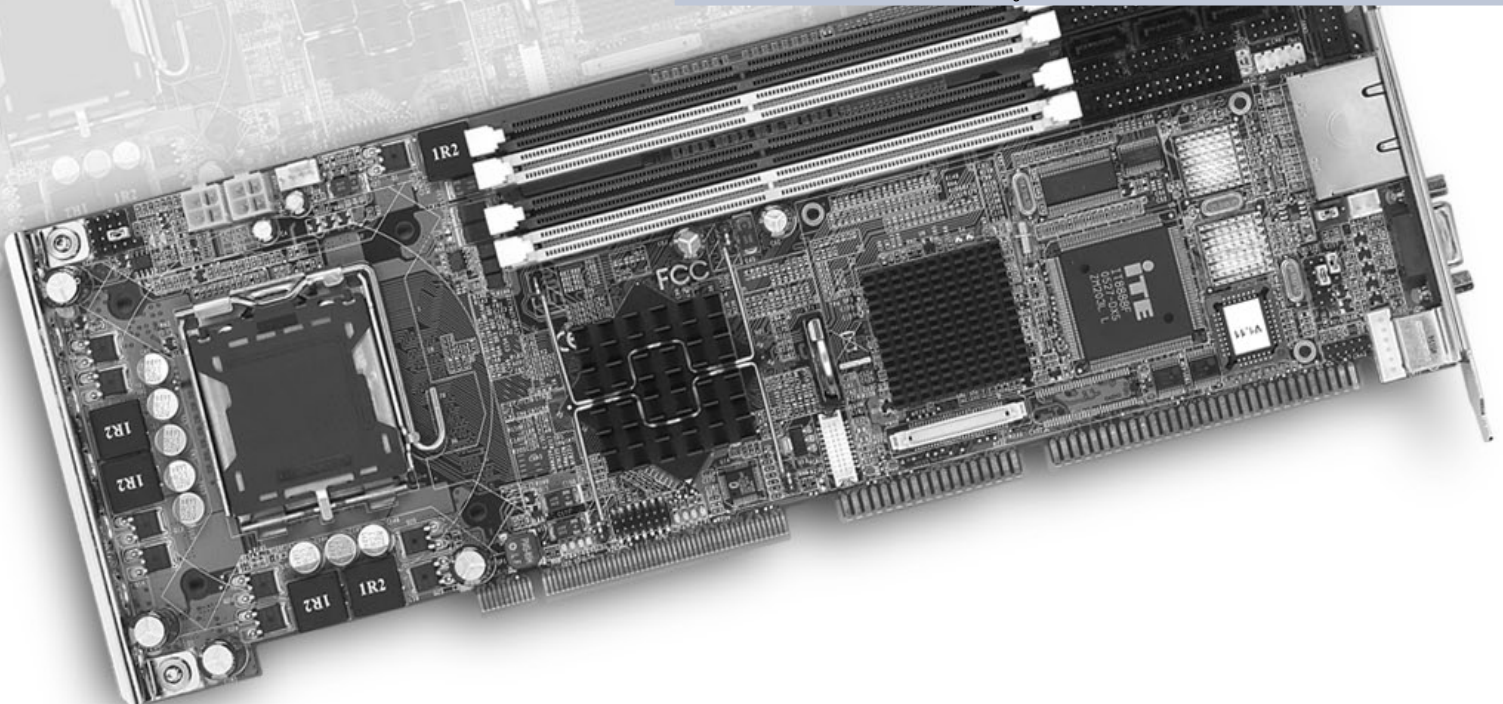
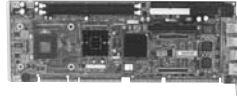


Full-sized CPU Cards

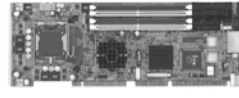
Selection Guide		21-2
Pentium M/Celeron M PICMG Single Board Computer		
PCA-6189	Socket 479 Pentium® M/Celeron® M Processor Card with 64-bit PCI-X/VGA/Dual GbE LAN	21-4
Dual Xeon PICMG Single Board Computer		
PCA-6289	Socket 604 Dual Xeon®/LV Xeon Processor Card with VGA/Dual GbE LAN	21-6
Pentium 4/Celeron D/Celeron PICMG Single Board Computer		
PCA-6190	LGA775 Pentium® 4/Celeron® D Processor Card with VGA/Dual GbE LAN/DVI	21-8
PCA-6188	Socket 478 Pentium® 4/Celeron® D/ Celeron Processor Card with 64-bit PCI-X/VGA/Dual GbE LAN	21-10
PCA-6187-A2	Socket 478 Pentium® 4/Celeron® D/Celeron Processor Card with VGA/Dual GbE LAN/SCSI	21-12
PCA-6186-B	Socket 478 Pentium® 4/Celeron® D/Celeron Processor Card with VGA/Dual GbE LAN	21-14
PCA-6184-B	Socket 478 Pentium® 4/Celeron® D/Celeron Processor Card with VGA/Dual FE LAN	21-16
Pentium III/Celeron PICMG Single Board Computer		
PCA-6181	Socket 370 Pentium® III/Celeron® Processor (Tualatin) Card with VGA/Dual FE LAN/SCSI	21-18
PCA-6180-B	Socket 370 Pentium® III/Celeron® Processor (Tualatin) Card with VGA/Dual FE LAN/SCSI	21-19
PCA-6003	Socket 370 Pentium® III/Celeron® Processor (Tualatin) Card with VGA/FE LAN/LCD	21-20
PCA-6178-C	Socket 370 Pentium® III/Celeron® Processor Card with VGA/FE LAN/SCSI	21-21
Ultra Low Voltage/Low-power PICMG Single Board Computer		
PCA-6002-B	Ultra Low Voltage Celeron® (Tualatin) Processor Card with VGA/Dual FE LAN	21-22
PCA-6004-A2	Low Voltage VIA C3 LP 800 MHz Card with VGA/FE LAN/LCD	21-23



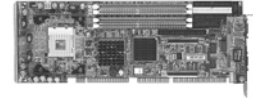
Full-sized CPU Cards



PCA-6189



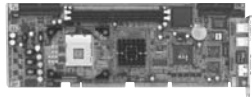
PCA-6190



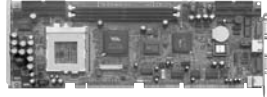
PCA-6187-A2

Selection Guide

Specifications		Pentium M/Celeron M PICMG Single Board Computer	Dual Xeon PICMG Single Board Computer	Pentium 4/Celeron D/Celeron PICMG Single Board Computer		
		PCA-6189	PCA-6289	PCA-6190	PCA-6188-A2	PCA-6187-A2
Processor System	CPU	Intel Pentium M/Celeron M Socket 479	Dual Intel Xeon LV/Xeon	Intel Pentium 4/Celeron D LGA775	Intel Pentium 4/Celeron D/Celeron Socket 478	Intel Pentium 4/Celeron D/Celeron Socket 478
	Max. Speed	2.10/1.50 GHz	3.2 GHz	3.8/3.06 GHz	3.4/3.06/2.8 GHz	3.4/3.06/2.8 GHz
	Max. L2 Cache	1 MB, 2 MB/ 512 KB, 1 MB	512 KB	1 MB, 2 MB/ 256 KB	256 KB, 512 KB, 1 MB/ 256 KB/128, 256 KB	256 KB, 512 KB, 1 MB/ 256 KB/128, 256 KB
	Chipset	Intel 855GME + 6300ESB	Intel E7501 + ICH3-S + P64H2	Intel 915GV + ICH6	Intel 875P + 6300ESB	Intel 865GV + ICH5
Bus	BIOS	Award 4 Mbit FWH	Award 8 Mbit FWH	Award 8 Mbit FWH	Award 4 Mbit FWH	Award 4 Mbit FWH
	FSB	400 MHz	400/533 MHz	533/800 MHz	400/533/800 MHz	400/533/800 MHz
	PCI	64-bit/33/66 MHz PCI/ 66 MHz PCI-X	64-bit/66 MHz PCI	PCI 32-bit/33 MHz; 2 PCI-E x1 for LAN chip	64-bit/33/66 MHz PCI/ 66 MHz PCI-X	32-bit/33 MHz
Graphic	ISA	HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive)
	Controller	Chipset integrated	ATI Rage XL	Chipset integrated	ATI Mobility Radeon 9600 Pro (AGP 8X)	Chipset integrated
	VRAM	Shared system memory up to 64 MB	8 MB frame buffer memory	Shared system memory up to 128 MB	64 MB DDR SDRAM	Shared system memory up to 64 MB
Ethernet	LCD	LVDS/DVI	-	DVI	LVDS/DVI	-
	Interface	10/100Base-T or 10/100/1000Base-T	10/100/1000Base-T	10/100/1000Base-T	10/100/1000Base-T	10/100Base-T or 10/100/1000Base-T
	Controller	Intel 82541/82551	Intel 82545EM x 2	Broadcom BCM5721 x 2	Intel 82547/82541	Intel 82547/82541, Intel 82562 (FE)
	Connector	RJ-45 x 2	-	-	RJ-45 x 2	RJ-45 x 2
SCSI	Disable from BIOS	Yes	-	-	Yes	Yes
	Interface	Ultra 160	-	Ultra 160	-	Ultra 160
	Controller	Adaptec AIC-7899	-	Adaptec AIC-7899	-	Adaptec AIC-7899
Memory	Max. Data Transfer Rate	160 MB/s	-	160 MB/s	-	160 MB/s
	Channel	2	-	2	-	2
	Technology	DDR 200/266/333 with ECC support	Dual channel DDR 200/266	Dual channel DDR2 400/533	Dual channel DDR 266/333/400 with ECC support	Dual channel DDR 266/333/400 SDRAM
SATA	Max. Capacity	2 GB	8 GB	4 GB	4 GB	4 GB
	Socket	184-pin DIMM x 2	184-pin x 4	240-pin x 4	184-pin DIMM x 4	184-pin DIMM x 4
EIDE	Max. Data Transfer Rate	150 MB/s	-	150 MB/s	150 MB/s	150 MB/s
	Channel	2	-	4	2	2
I/O Interface	Mode	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33
	Channel	2 (Max. four devices)	2 (Max. four devices)	1 (Max. two devices)	2 (Max. four devices)	2 (Max. four devices)
	USB	4 (USB 2.0 compliant)	4 (USB 1.1)	8 (USB 2.0)	4 (USB 2.0 compliant)	6 (USB 2.0 compliant)
	Serial	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)
	Parallel	1 (SPP/EPP/ECP)	1 (EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)
	FDD	1	1	1	1	1
	PS/2	1	1	1	1	1
	LAN	1 (for VE, VG versions) 2 (for G2, F versions)	2	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)	1 (for VE, VG versions) 2 (for G2, F versions)
Watchdog Timer	OBS (hardware monitor)	Yes	-	-	Yes	Yes
	Output	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset
Miscellaneous	Interval	Programmable, 1~255 sec/min	Programmable, 1 ~ 256 sec.	Programmable, 1, 2, 4, 8, ...256 sec.	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
	Audio (require PCA-AUDIO-00A1)	Yes	Yes	Yes	Yes	Yes
	Advantech SNMP-1000-B	Yes	Yes	Yes	Yes	Yes
Solid State Disk		Compact Flash socket (Compact Flash Type I/II)	IDE Flash Disk	IDE Flash Disk	IDE Flash Disk	IDE Flash Disk
Reference Page		21-8	21-6	21-4	21-10	21-12



PCA-6186-B



PCA-6003



PCA-6004

Pentium 4/Celeron D/Celeron PICMG Single Board Computer		Pentium III/Celeron PICMG Single Board Computer				Ultra Low Voltage/Low-power PICMG Single Board Computer	
PCA-6186-B	PCA-6184-B	PCA-6181	PCA-6180-B	PCA-6003	PCA-6178-C	PCA-6002-B	PCA-6004-A2
Intel Pentium 4/Celeron D/Celeron Socket 478	Intel Pentium 4/Celeron D/Celeron Socket 478	Intel Pentium III/Celeron (Tualatin) Socket 370	Intel Pentium III/Celeron (Tualatin) Socket 370	Intel Pentium III/Celeron (Tualatin) Socket 370	Intel Pentium III/Celeron Socket 370	Intel Celeron (Ultra Low Voltage)	VIA C3 EBGA (Low-power)
3.06/3.06/2.8 GHz 256, 512 KB/ 256 KB/128, 256 KB	3.06/3.06/2.8 GHz 256, 512 KB/ 256 KB/128, 256 KB	1.4 GHz/1.2 GHz 128, 256, 512 KB	1.4 GHz/1.3 GHz 256, 512 KB/128, 256 KB	1.4 GHz/1.3 GHz 256, 512 KB/128, 256 KB	1.0 GHz/1.1 GHz 256 KB/128 KB	650/400 MHz 256 KB	800 MHz L1: 128 KB; L2: 64 KB
Intel 845GV + ICH4	Intel 845E + ICH2	VIA Apollo Pro 133T (694T + 686B)	Intel 815E + ICH2	VIA Apollo PLE 133T (VT8601 + 686B)	Intel 440BX	Intel 815E + ICH2	VIA Apollo PLE 133T (VT8601 + 686B)
Award 4 Mbit FWH 400/533 MHz	Award 4 Mbit FWH 400/533 MHz	Award 2 Mbit FWH 66/100/133 MHz	Award 4 Mbit FWH 66/100/133 MHz	Award 2 Mbit FWH 66/100/133 MHz	Award 2 Mbit FWH 66/100 MHz	Award 4 Mbit FWH 100 MHz	Award 2 Mbit Flash 133 MHz
32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz
HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive) optional	HISA (ISA high drive)	HISA (ISA high drive)	HISA (ISA high drive) optional
Chipset integrated	ATI RAGE Pro 128 4XL (AGP 4X)	ATI RAGE Pro 128 4XL (AGP 4X)	Chipset integrated	Chipset integrated	ATI RAGE XL (AGP 2X)	Chipset integrated	Chipset integrated
Shared system memory 8-64 MB	32 MB SDRAM	32 MB SDRAM	Shared system memory up to 11 MB	Shared system memory up to 8 MB	8 MB	Shared system memory up to 11 MB	Shared system memory up to 8 MB
-	-	-	-	Optional 18-bit TFT LCD support	-	-	Optional 18-bit TFT LCD support
10/100Base-T or 10/100/1000Base-T	10/100Base-T	10/100Base-T	10/100Base-T	10/100Base-T	10/100Base-T	10/100Base-T	10/100Base-T
Intel 82562/82551, Intel 82540 (GbE)	Intel 82559 x 2	Realtek 8139C x 2	Intel 82562/82559	Realtek 8139C	Intel 82559	Intel 82562/82551	Realtek 8139C
RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45	RJ-45	RJ-45 x 2	RJ-45
Yes for FE LAN NO for GbE	Yes	Yes	Yes	Yes	No	Yes	Yes
-	-	Ultra 160	Ultra 160	-	Ultra2 wide	-	-
-	-	Adaptec AIC-7899	Adaptec AIC-7892	-	Symbios SYM53C895	-	-
-	-	160 MB/s	160 MB/s	-	80 MB/s	-	-
-	-	2	1	-	1	-	-
DDR 200/266/333	DDR 200/266 with ECC support	PC-133/100 with ECC support	PC-133/100	PC-133/100	PC-100 with ECC support	PC-133/100	PC-133/100
2 GB	2 GB	1.5 GB	512 MB	1 GB	768 MB	512 MB	1 GB
184-pin DIMM x 2	184-pin DIMM x 2	168-pin DIMM x 3	168-pin DIMM x 3	168-pin DIMM x 2	168-pin DIMM x 3	168-pin DIMM x 2	168-pin DIMM x 2
-	-	-	-	-	-	-	-
ATA 100/66/33	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33	ATA 33	ATA 100/66/33	ATA 100/66/33
2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)
6 (USB 2.0 compliant)	4 (USB 1.1 compliant)	4 (USB 1.1 compliant)	4 (USB 1.1 compliant)	2 (USB 1.1 compliant)	2 (USB 1.1 compliant)	4 (USB 1.1 compliant)	2 (USB 1.1 compliant)
2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)
1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP)
1	1	1	1	1	1	1	1
1 (for LV, VE, VG versions)	1 (for L, V, VE versions)	1 (for L, V, VE, ES versions)	2	1	1	1 (for VE version)	1
2 (for E2 versions)	2 (for E2 version)	2 (for E2, F versions)	1 (for E, ES versions)	1 (or VE, H versions)	1 (for VE, F versions)	2 (for E2 version)	2 (for E2 versions)
1 (for VE, VG versions)	1 (for VE version)	1 (for VE, ES versions)	2 (for E2, F versions)	1 (for VE, H versions)	1 (for VE, F versions)	1 (for VE versions)	1 (for VE, H versions)
2 (for E2, G2 versions)	2 (for E2 version)	2 (for E2, F versions)	2 (for E2, F versions)	2 (for E2, F versions)	2 (for E2, F versions)	2 (for E2 versions)	2 (for E2 versions)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset
Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 63 sec.	Programmable, 1 ~ 255 sec./min	Programmable, 1 ~ 63 sec.	Programmable, 1 ~ 63 sec.	Programmable, 1 ~ 255 sec./min	Programmable, 1 ~ 63 sec.
Yes	Yes	No	No	Yes	No	Yes	Yes
Yes	Yes	Yes	No	Yes	No	Yes	Yes
IDE Flash Disk	IDE Flash Disk	IDE Flash Disk	IDE Flash Disk	IDE Flash Disk	M-systems' DOC 2000 (144 MB)	Compact Flash socket (Compact Flash Type I/II)	IDE Flash Disk
21-14	21-16	21-18	21-19	21-20	21-21	21-22	21-23

18
IPC Pre-Configured Systems

19
Industrial Motherboard

20
Industrial Motherboard Chassis

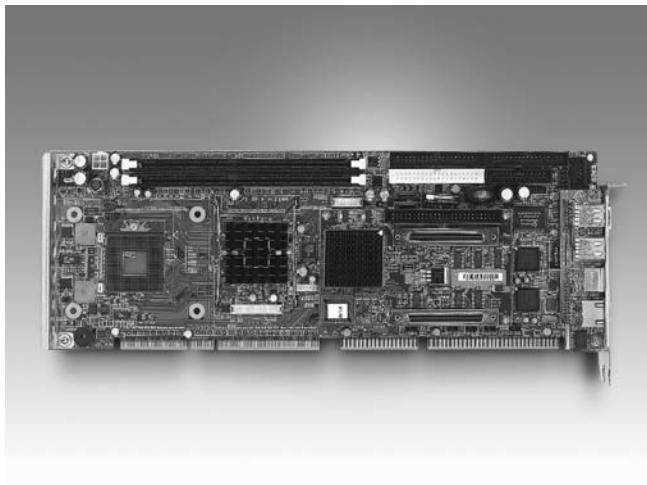
21
Full-sized CPU Cards

22
Industrial Computer Chassis

23
Industrial Computer Peripherals

PCA-6189

Socket 479 Pentium® M/Celeron® M Processor Card with 64-bit PCI-X/VGA/ Dual GbE LAN



Features

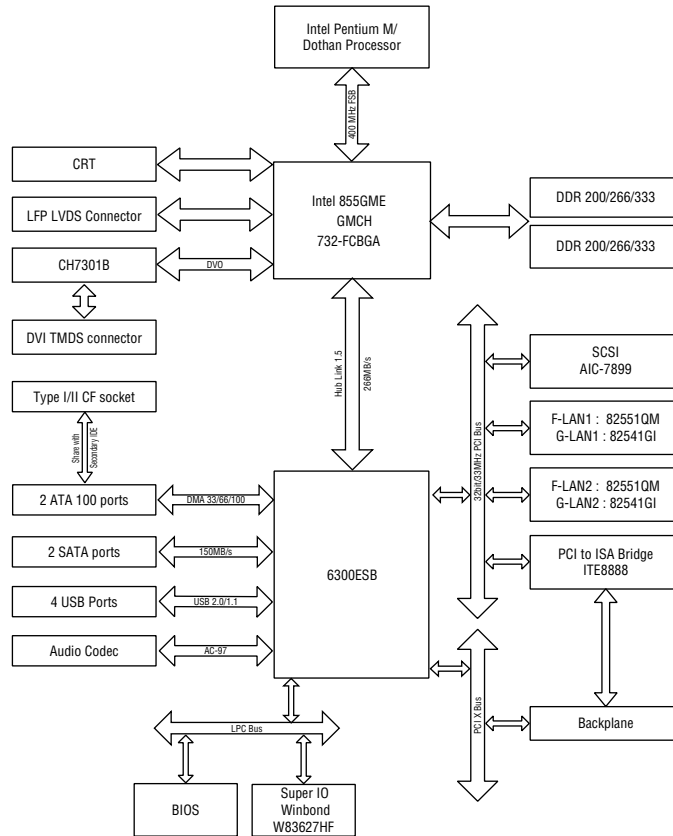
- Intel® 855GME chipset 400 MHz FSB
- Supports two DIMMs DDR 200/266/333 SDRAM
- Supports up to two devices with software Serial ATA RAID 0,1
- Onboard Adaptec AIC-7899 dual channel Ultra 160 SCSI up to 160 MB/s
- Onboard integrated VGA controller, supports dual display
- LVDS and DVI panel support
- 64-bit/66 MHz PCI-X
- Supports 10/100/1000Base-T Ethernet
- Optional fanless solution with onboard ultra low voltage Celeron® M processor at 1.0 GHz



Specifications

	CPU	Intel Pentium® M	Intel Celeron M	Intel ULV Celeron M (on board)
Processor System	Max. Speed	2.1 GHz and above (400 FSB)	1.5 GHz and above (400 FSB)	1.0 GHz (400FSB)
	L2 Cache	1 MB/2 MB	512 KB/1 MB	512 KB
	Chipset	Intel 855GME + 6300ESB		
	BIOS	Award 4 Mbit FWH		
	Front Side Bus	400 MHz		
Bus	PCI	64-bit/33/66 MHz PCI, 66 MHz PCI-X		
	ISA	HiSA (ISA high drive), no DMA support		
Memory	Technology	One channel DDR 200/266/333 MHz with ECC support		
	Max. Capacity	2 GB		
	Socket	184-pin DIMM x 2		
Graphic	Controller	Chipset integrated VGA controller		
	VRAM	Dynamically shared system memory, 8 ~ 64 MB		
	Video Output	1 VGA port, 2048 x 1536, up to 75 Hz 1 LVDS connector, dual channel from 25 MHz to 112 MHz 1 DVI connector, 2048 x 1536 at 75 Hz		
Ethernet	Interface	10/100Base-T; 10/100/1000Base-T (optional)		
	Controller	LAN 1: Intel 82551QM (FE); Intel 82541GI (GbE) LAN 2: Intel 82541GI (GbE)		
	Connector	RJ-45 x 2		
SCSI	Interface	Ultra 160		
	Controller	Adaptec AIC-7899		
	Max. Data Transfer Rate	160 MB/s		
SATA	Channel	2		
	Max. Data Transfer Rate	150 MB/s		
EIDE	Mode	ATA 100/66/33		
	Channel	2 (Max. 4 devices)		
I/O Interface	USB	Max. 4 (USB 2.0 compliant)		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
	PS/2	1		
Watchdog Timer	Output	Interrupt, system reset		
	Interval	Programmable, 1 ~ 255 sec.		
Miscellaneous	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)		
	Solid State Disk	Compact Flash socket (Type I / II), shared with secondary IDE		
Power Requirement	Typical	Intel Pentium M 1.8 GHz with 400 MHz FSB, 512 MB DDR 333 SDRAM		
		+5 V	-5 V	+12 V -12 V
		3.29 A	0.01 A	1.45 A 0.01 A
Environment		Operating		Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed		-20 ~ 70 °C (-40 ~ 158 °F)
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")		

Block Diagram



- 18**
IPC Pre-Configured Systems
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Industrial Motherboard
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Industrial Motherboard Chassis
- 21**
Full-sized CPU Cards
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Industrial Computer Chassis
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Industrial Computer Peripherals

Ordering Information

Part Number	Processor	Fast Ethernet LAN	Gigabit LAN	SCSI
PCA-6189VE-00A1	-	Single	-	-
PCA-6189VG-00A1	-	-	Single	-
PCA-6189G2-00A1	-	-	Dual	-
PCA-6189F-00A1	-	-	Dual	Yes
PCA-6189VE-C1A1	ULV Celeron M 1.0 GHz	Single	-	-

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1700071000	Serial ATA HDD data cable	X 2
1703150102	Serial ATA HDD power cable	X 2
170304015K	ATX 12 V power converter cable	X 1
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
1700000821	DVI cable	X 1
1960001631	Low profile CPU cooler	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Bracket View



PCA-6189VE-00A1
PCA-6189VG-00A1
PCA-6189VE-C1A1



PCA-6189G2-00A1
PCA-6189F-00A1

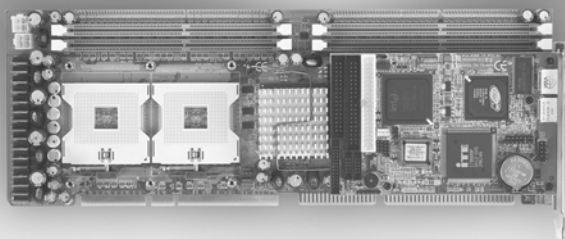
Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-AUDIO-00A1	Audio extension module
1700000182	SCSI cable with terminator (125 cm)

PCA-6289

Socket 604 Dual Xeon®/LV Xeon Processor Card with VGA/Dual GbE LAN

NEW



Features

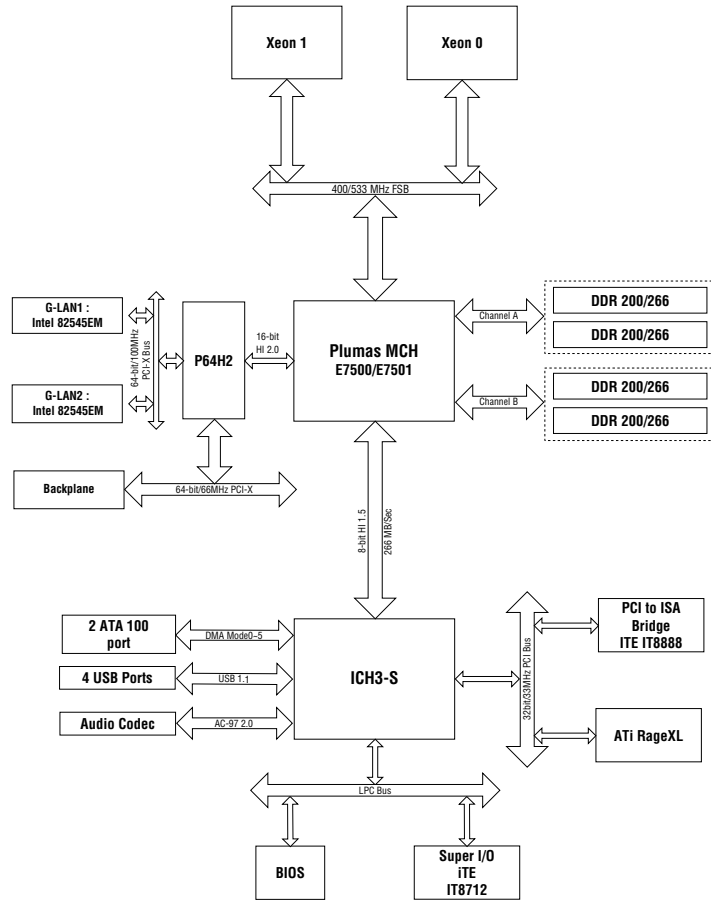
- Support single/dual socket 604 Intel® Xeon®/LV Xeon processors up to 3.2 GHz
- Dual Channel DDR 200/266 SDRAM up to 8 GB
- Intel E7501 chipset 400/533 MHz FSB
- Onboard ATI Rage XL with 8 MB frame buffer memory
- 64-bit, 66 MHz PCI-X
- Supports 10/100/1000Base-T Ethernet
- 4 USB 1.1 ports
- Low-profile customized CPU cooler included

CE FCC

Specifications

Processor System	CPU	Single/Dual Intel Xeon/LV Xeon processors Note: Always use the left CPU socket for single Xeon processor operation			
	Max. Speed	3.2 GHz			
	L2 Cache	512 KB			
	L3 Cache	2 MB			
	Chipset	Intel E7501 + ICH3-S + P64H2			
	BIOS	Award 8 Mbit FWH			
Bus	Front Side Bus	400/533 MHz			
	PCI	64 bit/66 MHz PCI-X			
Memory	ISA	HISA (ISA high drive)			
	Technology	Dual channel DDR 200/266 MHz (Registered/ECC DIMMs only)			
	Max. Capacity	8 GB			
Graphic	Socket	184-pin DIMM x 4			
	Controller	ATI Rage XL			
	VRAM	8 MB frame buffer memory			
Ethernet	Video Output	15 pin CRT connector x 1			
	Interface	10/100/1000 Base-T			
	Controller	Dual Intel 82545EM (Gigabit)			
EIDE	Connector	RJ45 with LED connector x 2			
	Mode	ATA 100/66/33			
I/O Interface	Channel	2 (Max. 4 devices)			
	USB	Max. 4 (USB 1.1 compliant), 2 ports on board			
	Serial	2 (RS-232)			
	Parallel	1 (EPP/ECP)			
	FDD	1			
Watchdog Timer	PS/2	1			
	Output	Interrupt, system reset			
Miscellaneous	Interval	Programmable 1, 2, 4, 8,...256 sec			
	Audio Output	AC-97 audio interface			
Power Requirement	Typical	Dual Xeon 3.06 G		Dual LV Xeon 2.4 G	
		+5 V	+12 V	+5 V	+12 V
Environment		10 A	13.5 A	8.5 A	7.5 A
	Operating	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed		Non-Operating	
Physical Characteristics	Temperature	-20 ~ 80 °C (-40 ~ 176 °F)			
	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")			

Block Diagram



- 18 IPC Pre-Configured Systems
- 19 Industrial Motherboard
- 20 Industrial Motherboard Chassis
- 21 Full-sized CPU Cards
- 22 Industrial Computer Chassis
- 23 Industrial Computer Peripherals

Ordering Information

Part Number	VGA (PCI)	Gigabit LAN
PCA-6289G2-00A1	Yes	Dual

Bracket View



PCA-6289G2-00A1

Packing List

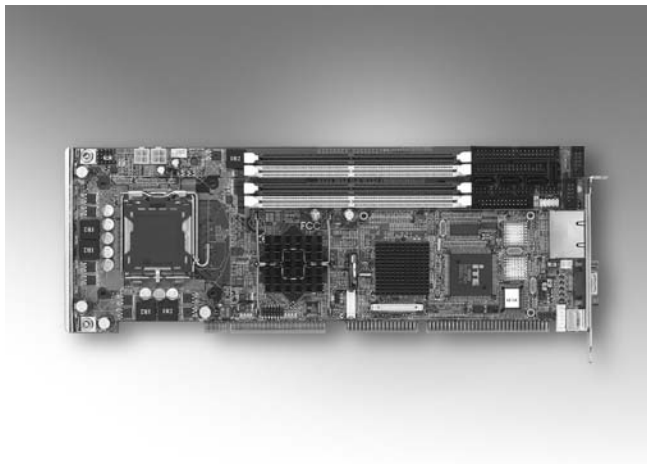
Part Number	Description	Quantity
-	PCA-6289 Dual Xeon/LV Xeon processor-based single board computer	X 1
-	Dual CPU cooler set	X 1
-	PCA-6289 startup manual	X 1
-	CD with driver utility and manual (in PDF format)	X 1
-	FDD cable	X 1
-	Ultra ATA 33/66/100 HDD cables	X 2
-	Y cable for PS/2 mouse/keyboard	X 1
-	Printer/COM port cable kit	X 1
-	COM port cable kit	X 1
-	180 mm AUX power cable	X 2

Suggested System Configurations

System	Chassis	Backplane	Power Supply
2U	ACP-2000X3-00X	-	PS-400ATX-ZB
4U	ACP-4000BP-00X	PCA-6113P7X PCA-6114P12X-A1	PS-400ATX-ZB PS-500ATX-Z
5U	ACP-5260BP-46R	PCA-6115QP2X-A1 PCA-6119P16X	-
7U	ACP-7000BP-46R ACP-7000BP-57N ACP-7000BP-81N	PCA-6115QP2X-A1 PCA-6119P16X	-

PCA-6190

LGA775 Pentium® 4/Celeron® D Processor Card with VGA/Dual GbE LAN/DVI



Features

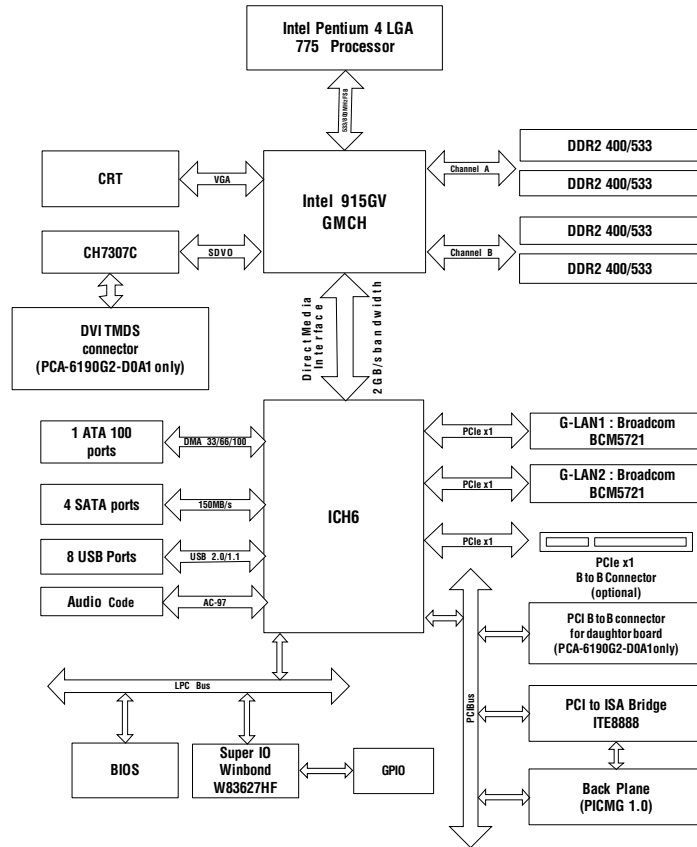
- Intel® 915GV (Grantsdale-GV) chipset 533/800 MHz FSB
- Supports dual channel DDR2 400/533 SDRAM
- Supports up to 4 Serial ATA devices
- 8 USB 2.0 ports
- 2 PCI-Express x 1 for LAN chip
- Supports DVI interface (PCA-6190G2-D0A1 only)
- 14-pin General Purpose I/O interface as 8-bit programmable Digital I/O or port80 function
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup

CE FCC

Specifications

Processor System	CPU	Intel Pentium 4 (Prescott)	Intel Celeron D		
	Max. Speed	3.8 GMz (800 FSB)	3.06 GHz (533 FSB)		
	L2 Cache	2 MB/1 MB	256 KB		
	Chipset	Intel® 915GV + ICH6			
	BIOS	Award 4 Mbit FWH			
	Front Side Bus	533/800 MHz			
Bus	PCI	PCI 32 bit/33 MHz ; 2 PCIe x1 for LAN chip			
	ISA	HISA (ISA high drive)			
Memory	Technology	Dual Channel DDR2 400/533 SDRAM			
	Max. Capacity	4 GB			
	Socket	240-pin DIMM x 4			
Graphic	Controller	Chipset integrated VGA controller			
	VRAM	Dynamically shared system memory up to 128 MB			
Ethernet	Interface	10/100/1000 Base-T			
	Controller	LAN 1: Broadcom BCM 5721 LAN 2: Broadcom BCM 5721			
	Connector	RJ-45 x 2			
SCSI (optional)	Interface	Ultra 160			
	Controller	Adaptec AIC-7899			
	Max. Data Transfer Rate	160 MB/Sec.			
	Channel	2			
SATA	Max. Data Transfer Rate	150 MB/Sec.			
	Channel	4			
EIDE	Mode	ATA 100/66/33			
	Channel	1 (Max 2 devices)			
I/O Interface	USB	Max. 8 (USB 2.0 compliant, 480 Mbps, 4 ports and 4 connectors)			
	Serial	2 (RS-232)			
	Parallel	1 (SPP/EPP/ECP)			
	FDD	1			
	PS/2	1			
Watchdog Timer	Output	Interrupt, system reset			
	Interval	Programmable, 1 ~ 255 sec.			
Miscellaneous	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)			
	Typical	Pentium 4 3.4 GHz (800 MHz FSB), 2 x 512 MB, 2 x 256 MB DDR2 533 SDRAM			
Power Requirement		+5 V	-5 V	+12 V	-12 V
		6.64 A	0.01 A	12.59 A	0.01 A
Environment		Operating		Non-Operating	
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed		-20 ~ 70 °C (-40 ~ 158 °F)	
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")			

Block Diagram



Ordering Information

Part Number	VGA	DVI	Gigabit LAN
PCA-6190VG-00A1	Yes	--	Single
PCA-6190G2-00A1	Yes	--	Dual
PCA-6190G2-D0A1	Yes	Yes	Dual

Bracket View



PCA-6190VG-00A1



PCA-6190G2-00A1
PCA-6190G2-D0A1

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 1
1700071000	Serial ATA HDD data cable	X 4
1703150102	Serial ATA HDD power cable	X 4
170304015K	ATX 12 V power converter cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1
1700000719	USB cable with 4 ports	X 2
1701092300	Dual COM port cable kit (for G2-00A1 and G2-D0A1)	X 1
1700000821	DVI Cable (G2-D0A1 only)	X 1

Accessories

Part Number	Description
PCA-AUDIO-00A1	Audio extension module
1700000182	SCSI cable with terminator (125 cm)
1750000332	CPU cooler for LGA775 Pentium 4 processor up to 3.8 GHz (115 w), for 2U or higher chassis
1750000334	CPU cooler for LGA775 Pentium 4 processor up to 3.8 GHz (115 w), for 4U or higher chassis

18
IPC Pre-Configured Systems

19
Industrial Motherboard

20
Industrial Motherboard Chassis

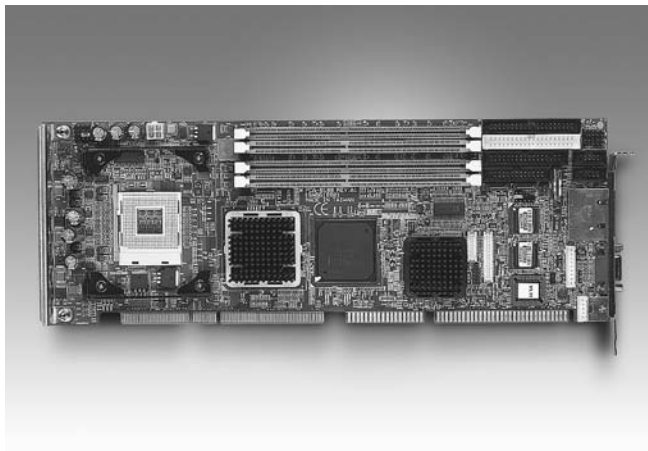
21
Full-sized CPU Cards

22
Industrial Computer Chassis

23
Industrial Computer Peripherals

PCA-6188

Socket 478 Pentium® 4/Celeron® D/ Celeron Processor Card with 64-bit PCI-X/VGA/Dual GbE LAN



Features

- Supports up to 2 Serial ATA devices
- Supports Dual Channel DDR 266/333/400 SDRAM
- Intel® 875P chipset 400/533/800 MHz FSB
- Supports up to two devices with software Serial ATA RAID 0,1
- Onboard AGP 8X ATi Mobility™ Radeon® 9600 Pro VGA controller, 64 MB DDR SDRAM integrated
- Supports dual display, LVDS and DVI
- PCI-X 64-bit @ 66 MHz
- Supports 10/100/1000Base-T Ethernet
- 4 USB 2.0 ports
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup data

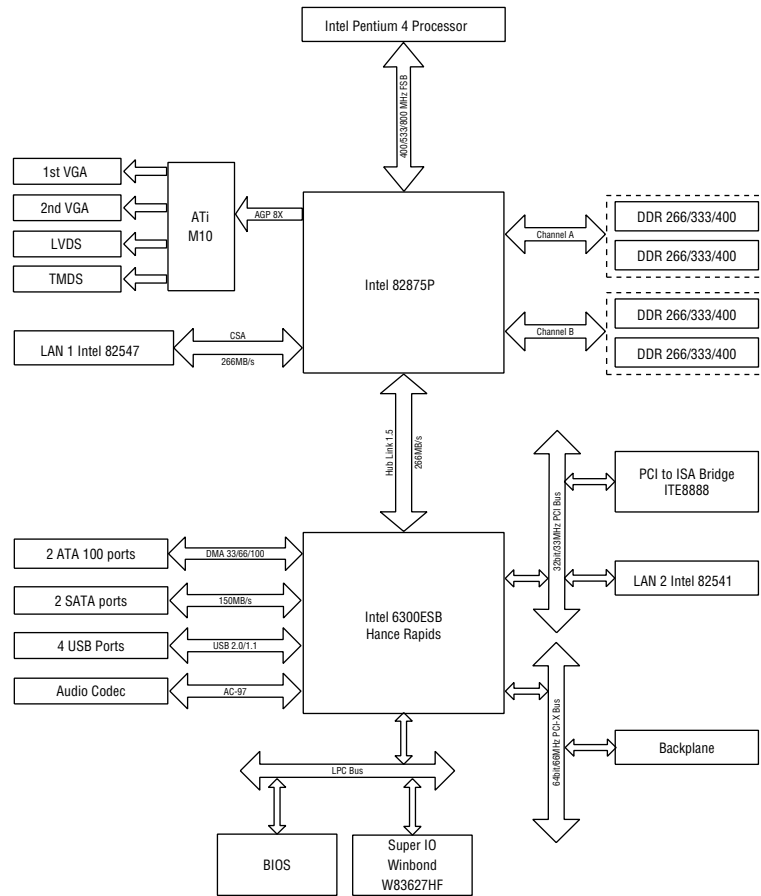


Specifications

Processor System	CPU	Intel Pentium® 4	Intel Celeron® D	Intel Celeron	
	Max. Speed	3.06 GHz (533 FSB), 3.4 GHz (800 FSB) * Vcore 1.75 V CPU (Willamette) not supported		3.06 GHz 2.8 GHz	
	L2 Cache	256 KB/ 512 KB/ 1 MB	256 KB	128/256 KB	
	Chipset	Intel 875P + 6300ESB			
	BIOS	Award 4 Mbit FWH			
	Front Side Bus	400/533/800 MHz			
Bus	PCI	64-bit/33/66 MHz PCI, 66 MHz PCI-X			
	ISA	HISA (ISA high drive), no DMA support			
Memory	Technology	Dual Channel DDR 266/333/400 SDRAM with ECC support			
	Max. Capacity	4 GB			
	Socket	184-pin DIMM x 4			
Graphic	Controller	ATi Mobility Radeon 9600 Pro (AGP 8X)			
	VRAM	64 MB DDR SDRAM integrated			
	Video Output	1 CRT1, 2048 x 1536, up to 200 Hz vertical rate			
		1 CRT2, 2048 x 1536, up to 200 Hz vertical rate 1 LVDS, dual 115MHz interface, 2048 x 1536 @ 60 Hz 1 DVI, 1600 x 1200 @ 60 Hz, 165 MHz			
Ethernet	Interface	10/100/1000Base-T			
	Controller	LAN 1: Intel 82547GI (Gigabit, CSA) LAN 2: Intel 82541GI (Gigabit)			
	Connector	RJ-45 x 2			
SATA	Max. Data Transfer Rate	150 MB/s			
	Channel	2			
EIDE	Mode	ATA 100/66/33			
	Channel	2 (Max. 4 devices)			
I/O Interface	USB	Max. 4 (USB 2.0 compliant)			
	Serial	2 (RS-232)			
	Parallel	1 (SPP/EPP/ECP)			
	FDD	1			
	PS/2	1			
Watchdog Timer	Output	Interrupt, system reset			
	Interval	Programmable 1 ~ 255 sec.			
Miscellaneous	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)			
Power Requirement	Typical	Intel Pentium 4 3.06 GHz with 533 MHz FSB, 1 GB DDR 333 SDRAM			
		+5 V	-5 V	+12 V	-12 V
		7.32 A	0.01 A	7.68 A	0.07 A
Environment	Temperature	Operating		Non-Operating	
		0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed		-20 ~ 70 °C (-40 ~ 158 °F)	
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")			

* ATi Mobility Radeon 9600 Pro doesn't support Windows 98

Block Diagram



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IPC Pre-Configured Systems
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Industrial Motherboard Chassis
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Full-sized CPU Cards
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Industrial Computer Chassis
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Industrial Computer Peripherals

Ordering Information

Part Number	Fast Ethernet LAN	Gigabit LAN
PCA-6188VG-00A2	-	Single
PCA-6188G2-00A2	-	Dual

Bracket View



PCA-6188VG-00A1



PCA-6188G2-00A1

Packing List

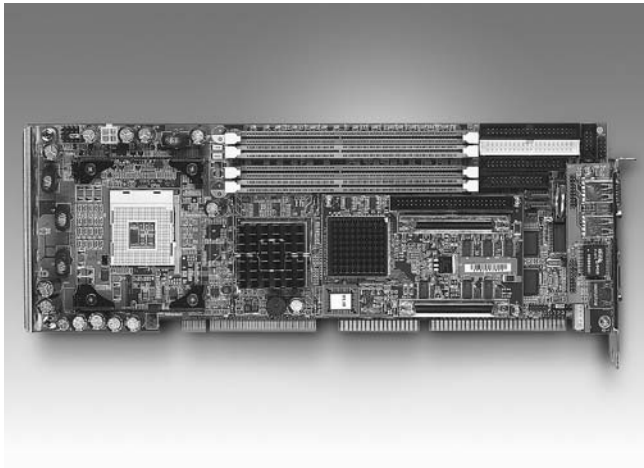
Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1700071000	Serial ATA HDD data cable	X 2
1703150102	Serial ATA HDD power cable	X 2
170304015K	ATX 12 V power converter cable	X 1
1701260305	Printer + COM cable	X 1
1700100170	2 USB ports extension cable kit	X 2
1700060202	Y cable for PS/2 mouse & keyboard	X 1
1700000259	2nd VGA cable	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1
1701092300	Dual COM port cable kit	X 1
1700000821	DVI cable	X 1
1700000784	Video Cable (S/Composite terminal)	X 1

Accessories

Part Number	Description
1750000242	CPU cooler for Pentium 4 processor up to 2.5 GHz (70 W), for 1U chassis
1750000257	CPU cooler for Pentium 4 processor up to 3.2 GHz (89 W), for 2U or higher chassis
PCA-AUDIO-00A1	Audio extension module
1700000410	DVI port cable kit

PCA-6187-A2

Socket 478 Pentium® 4/Celeron® D/Celeron Processor Card with VGA/Dual GbE LAN/SCSI



Features

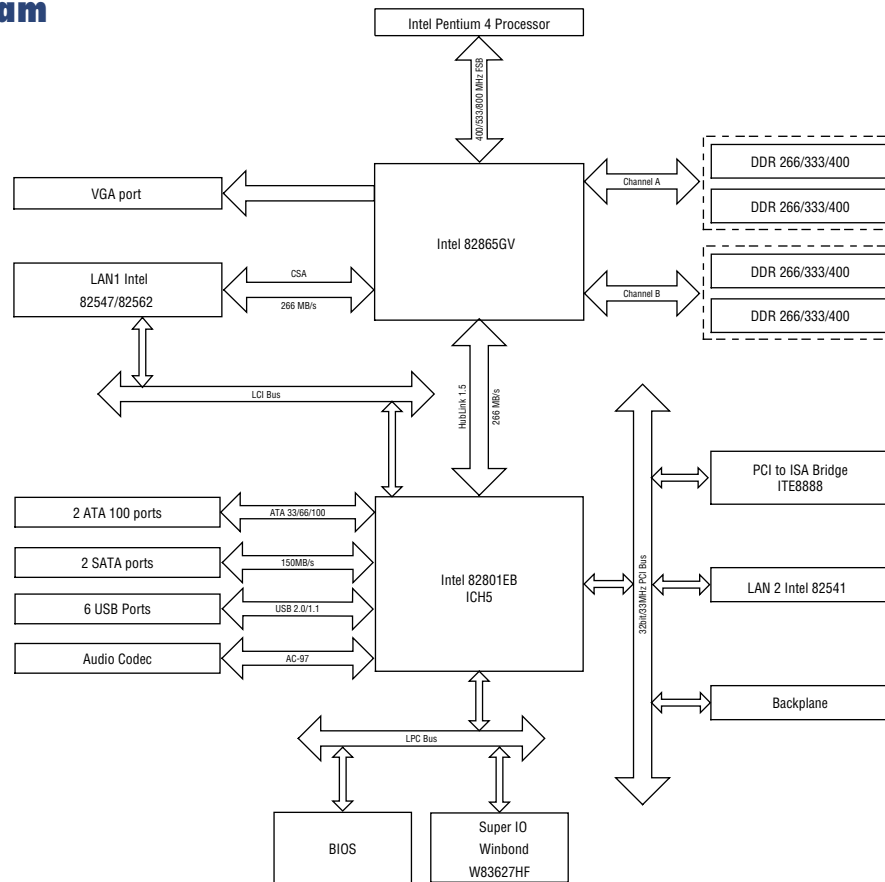
- Supports up to 2 Serial ATA devices
- Supports Dual Channel DDR 266/333/400 SDRAM
- Onboard Adaptec AIC-7899 dual channel Ultra160 SCSI up to 160 MB/s
- Intel® 865GV chipset 400/533/800 MHz FSB
- Onboard integrated VGA controller, shared memory architecture
- Supports 10/100Base-T Ethernet or 10/100/1000Base-T Ethernet
- 6 USB 2.0 ports
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup



Specifications

Processor System	CPU	Intel Pentium® 4	Intel Celeron® D	Intel Celeron
	Max. Speed	3.06 GHz (533 FSB) 3.4 GHz (800 FSB) * Vcore 1.75 V CPU (Willamette) not supported	3.06 GHz	2.8 GHz
	L2 Cache	256 KB/ 512 KB/ 1 MB	256 KB	128/256 KB
	Chipset	Intel 865GV + ICH5		
	BIOS	Award 4 Mbit FWH		
	Front Side Bus	400/533/800 MHz		
Bus	PCI	32-bit/33 MHz		
	ISA	HISA (ISA high drive)		
Memory	Technology	Dual Channel DDR 266/333/400 SDRAM		
	Max. Capacity	4 GB		
	Socket	184-pin DIMM x 4		
Graphic	Controller	Chipset integrated VGA controller		
	VRAM	Dynamically shared system memory, 8 ~ 64 MB		
Ethernet	Interface	10/100Base-T; 10/100/1000Base-T (optional)		
	Controller	LAN 1: Intel 82562EZ (FE); Intel 82547GI (Gigabit, CSA) LAN 2: Intel 82541GI (Gigabit)		
	Connector	RJ-45 x 2		
SCSI	Interface	Ultra 160		
	Controller	Adaptec AIC-7899		
	Max. Data Transfer Rate	160 MB/s		
SATA	Channel	2		
	Max. Data Transfer Rate	150 MB/s		
EIDE	Channel	2		
	Mode	ATA 100/66/33		
I/O Interface	Channel	2 (Max. 4 devices)		
	USB	Max. 6 (USB 2.0 compliant), 4 ports on board for G2, F versions		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
	PS/2	1		
Watchdog Timer	Output	Interrupt, system reset		
	Interval	Programmable, 1 ~ 255 sec.		
Miscellaneous	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)		
Power Requirement	Typical	Pentium 4 3.0 GHz (800 MHz FSB), 4 x 512 MB DDR 400 SDRAM		
		+5 V -5 V +12 V -12 V 6.53 A 0.1 A 4.6 A 0.2 A		
Environment	Operating		Non-Operating	
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed		-20 ~ 70 °C (-40 ~ 158 °F)
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")		

Block Diagram



- 18 IPC Pre-Configured Systems
- 19 Industrial Motherboard
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- 21 Full-sized CPU Cards
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- 23 Industrial Computer Peripherals

Ordering Information

Part Number	VGA	Fast Ethernet LAN	Gigabit LAN	SCSI
PCA-6187VE-00A2	Yes	Single	-	-
PCA-6187VG-00A2	Yes	-	Single	-
PCA-6187G2-00A2	Yes	-	Dual	-
PCA-6187F-00A2	Yes	-	Dual	Yes

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1700071000	Serial ATA HDD data cable	X 2
1703150102	Serial ATA HDD power cable	X 2
170304015K	ATX 12 V power converter cable	X 1
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Bracket View



PCA-6187VE-00A2
PCA-6187VG-00A2



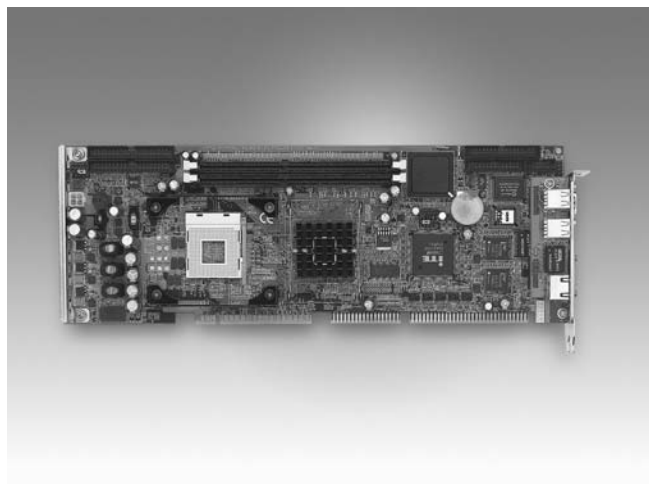
PCA-6187G2-00A2
PCA-6187F-00A2

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-USB4-00A1	USB extension module with 4 ports (only for VE, VG versions)
1750000242	CPU cooler for Pentium 4 processor up to 2.5 GHz (70 W), for 1U chassis
1750000257	CPU cooler for Pentium 4 processor up to 3.2 GHz (89 W), for 2U or higher chassis
PCA-AUDIO-00A1	Audio extension module
1700000182	SCSI cable with terminator (125 cm)
2070000128	Embedded Windows XP Kit

PCA-6186-B

Socket 478 Pentium® 4/Celeron® D/Celeron Processor Card with VGA/Dual GbE LAN/



Features

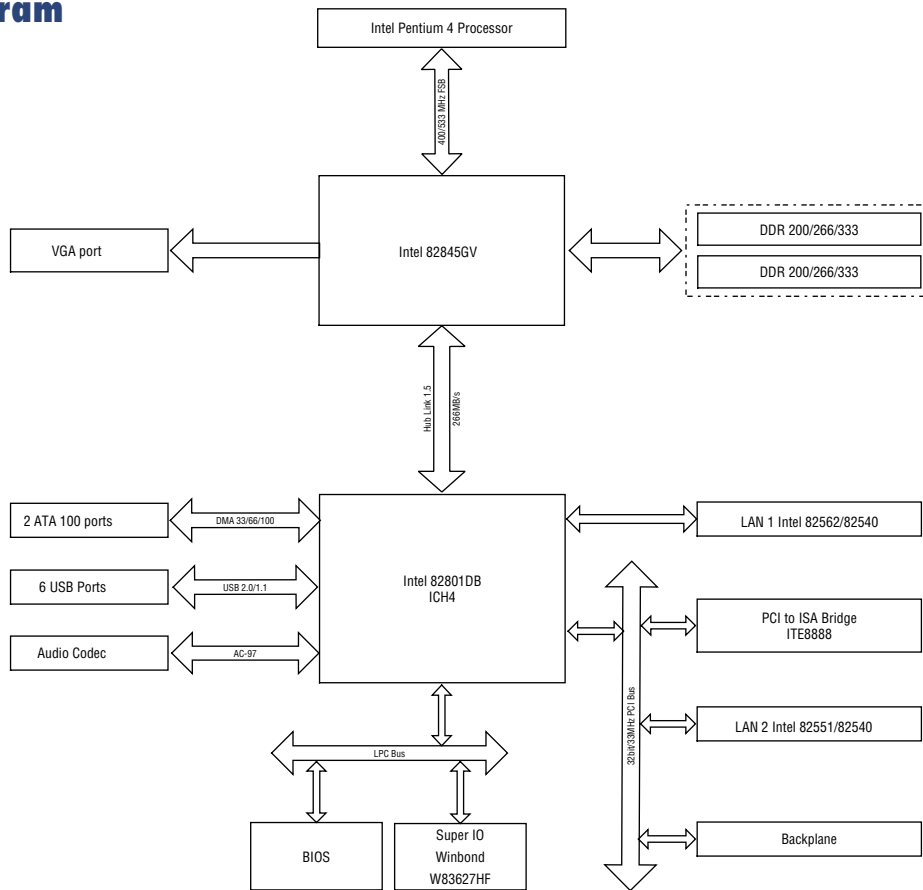
- Socket 478 Pentium® 4/Celeron® D/Celeron up to 3.06/3.06/2.8 GHz
- Supports Intel® Hyper-Threading technology
- Intel 845GV chipset 400/533 MHz FSB
- Onboard integrated VGA controller, shared memory architecture
- Supports dual 10/100Base-T Ethernet or dual 10/100/1000Base-T Ethernet
- 6 USB 2.0 ports
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup



Specifications

Processor System	CPU	Intel Pentium 4	Intel Celeron D	Intel Celeron
	Max. Speed	3.06 GHz	3.06 GHz	2.8 GHz
	L2 Cache	256/512 KB	256 KB	128 KB
	Chipset	Intel 845 GV + ICH4		
	BIOS	Award 4 Mbit FWH		
Bus	Front Side Bus	400/533 MHz		
	PCI	32-bit/33 MHz		
Memory	ISA	HISA (ISA high drive)		
	Technology	DDR 200/266/333 SDRAM		
	Max. Capacity	2 GB		
Graphic	Socket	184-pin DIMM x 2		
	Controller	Chipset integrated VGA controller		
Ethernet	VRAM	Dynamically shared system memory 8 ~ 64 MB		
	Interface	10/100Base-T; 10/100/1000Base-T (optional)		
	Controller	LAN 1: Intel 82562 (FE); Intel 82540 (Gigabit) LAN 2: Intel 82551 (FE); Intel 82540 (Gigabit)		
EIDE	Connector	RJ-45 x 2		
	Mode	ATA 100/66/33		
I/O Interface	Channel	2 (Max. 4 devices)		
	USB	Max. 6 (USB 2.0 compliant), 4 ports onboard for E2, G2 versions		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
Watchdog Timer	PS/2	1 (for LV, VE, VG, G2 versions), 2 (for E2 version)		
	Output	Interrupt, system reset		
Miscellaneous	Interval	Programmable, 1 ~ 255 sec.		
	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)		
Power Requirement	Typical	Pentium 4 2.8 GHz 533 MHz, DDR 333 1 GB x 2		
	+5 V	-5 V	+12 V	-12 V
Environment	3.23 A	0.1 A	4.64 A	0.2 A
	Operating		Non-Operating	
Physical Characteristics	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed	-20 ~ 70 °C (-4 ~ 158 °F)	
	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")		

Block Diagram



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- 19 Industrial Motherboard
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Ordering Information

Part Number	VGA	Fast Ethernet LAN	Gigabit LAN
PCA-6186LV-00B1	Yes	-	-
PCA-6186VE-00B1	Yes	Single	-
PCA-6186E2-00B1	Yes	Dual	-
PCA-6186VG-00B1	Yes	-	Single
PCA-6186G2-00B1	Yes	-	Dual

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard (LV, VE, VG, G2 versions only)	X 1
9689000068	Jumper pack	X 1
1962159010	Single slot bracket (E2, G2 versions only)	X 1
-	Startup manual	X 1
-	Utility CD	X 1
170304015K	ATX 12 V power converter cable	X 1

Bracket View



PCA-6186LV-00B1



PCA-6186VE-00B1
PCA-6186VG-00B1



PCA-6186E2-00B1



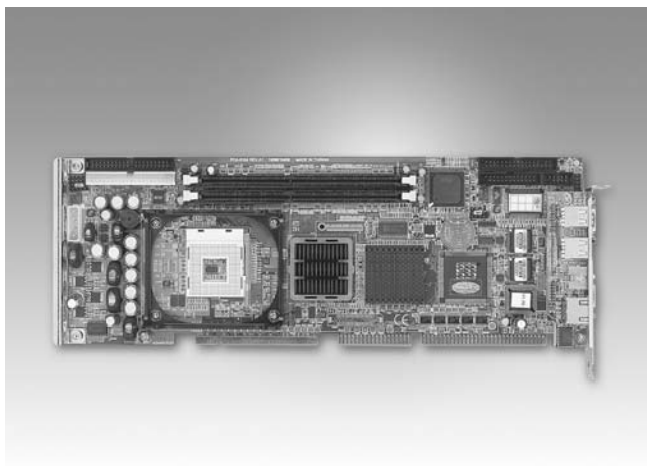
PCA-6186G2-00B1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-USB4-00A1	USB extension module with 4 ports (only for LV, VG, VE versions)
1750000242	CPU cooler for Pentium 4 processor up to 2.5 GHz (70 W), for 1U chassis
1750000257	CPU cooler for Pentium 4 processor up to 3.2 GHz (89 W), for 2U or higher chassis
PCA-AUDIO-00A1	Audio extension module
2070000127	Embedded Windows XP Kit

PCA-6184-B

Socket 478 Pentium® 4/Celeron® D/Celeron Processor Card with VGA/Dual FE LAN



Features

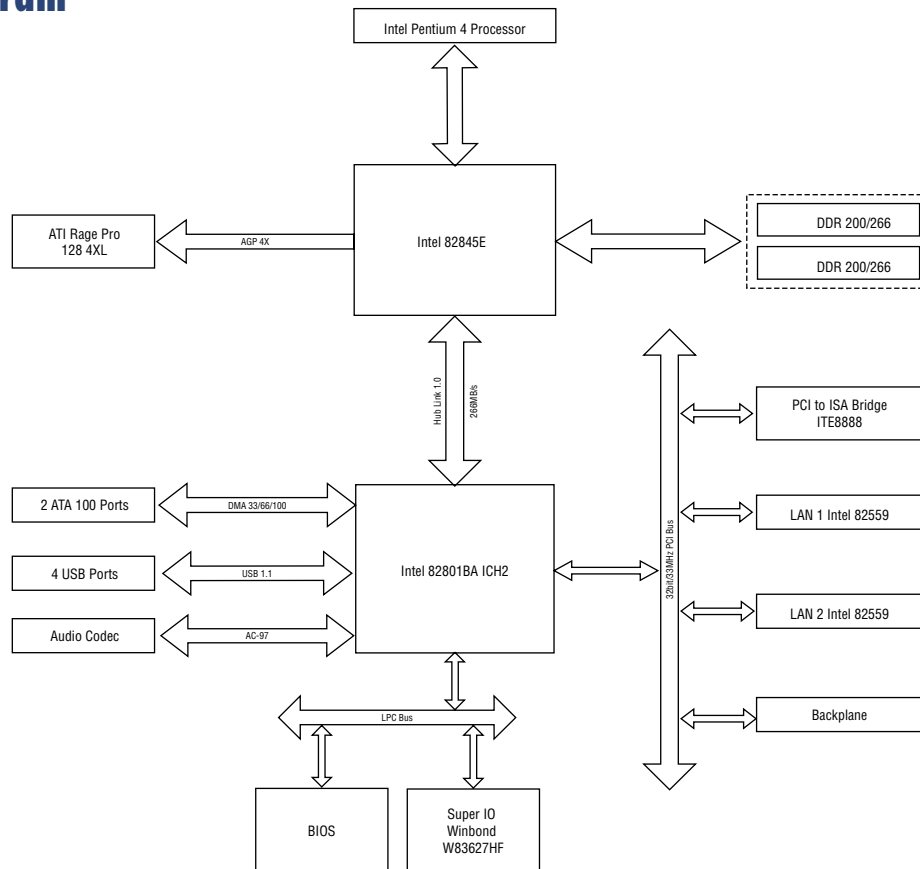
- Socket 478 Pentium® 4/Celeron® D/Celeron up to 3.06/3.06/2.8 GHz
- Supports both 0.13 & 0.09 micron CPU
- Supports Intel® Hyper-Threading technology
- Intel 845E chipset 400/533 MHz FSB
- Onboard high performance AGP 4X VGA with 32 MB SDRAM
- Supports dual 10/100Base-T Ethernet
- AC-97 Audio Interface
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup



Specifications

Processor System	CPU	Intel Pentium 4	Intel Celeron D	Intel Celeron	
	Max. Speed	3.06 GHz	3.06 GHz	2.8 GHz	
	L2 Cache	256/512 KB	256 KB	128 KB	
	Chipset	Intel 845E + ICH2			
	BIOS	Award 4 Mbit FWH			
	Front Side Bus	400/533 MHz			
Bus	PCI	32-bit/33 MHz			
	ISA	HISA (ISA high drive)			
Memory	Technology	DDR 200/266 SDRAM with ECC support			
	Max. Capacity	2 GB			
	Socket	184-pin DIMM x 2			
Graphic	Controller	ATI RAGE Pro 128 4XL (AGP 4X)			
	VRAM	32 MB SDRAM			
Ethernet	Interface	10/100Base-T			
	Controller	LAN 1: Intel 82559 LAN 2: Intel 82559			
	Connector	RJ-45 x 2			
EIDE	Mode	ATA 100/66/33			
	Channel	2 (Max. 4 devices)			
I/O Interface	USB	Max. 4 (USB 1.1 compliant), 4 ports onboard for E2 version			
	Serial	2 (RS-232)			
	Parallel	1 (SPP/EPP/ECP)			
	FDD	1			
	PS/2	1 (for L, V, VE versions), 2 (for E2 version)			
Watchdog Timer	Output	Interrupt, system reset			
	Interval	Programmable, 1 ~ 255 sec.			
Miscellaneous	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)			
Power Requirement	Typical	Pentium 4 2.8 GHz with 533 MHz FSB, 512 MB DDR 333 SDRAM			
		+5 V	-5 V	+12 V	-12 V
		3.77 A	0.64 A	7.1 A	0.56 A
Environment		Operating		Non-Operating	
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed		-20 ~ 70 °C (-4 ~ 158 °F)	
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")			

Block Diagram



- 18**
IPC Pre-Configured Systems
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Industrial Motherboard
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Industrial Motherboard Chassis
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Full-sized CPU Cards
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Industrial Computer Chassis
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Industrial Computer Peripherals

Ordering Information

Part Number	VGA (AGP)	LAN
PCA-6184V-00B1	Yes	-
PCA-6184VE-00B1	Yes	Single
PCA-6184E2-00B1	Yes	Dual
PCA-6184L-00B1	-	-

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard (only for V, VE versions)	X 1
9689000068	Jumper pack	X 1
-	Single slot bracket (E2 versions only)	X 1
-	Startup manual	X 1
-	Utility CD	X 1
170304015K	ATX 12 V power converter cable	X 1

Bracket View



PCA-6184V-00B1



PCA-6184VE-00B1



PCA-6184E2-00B1



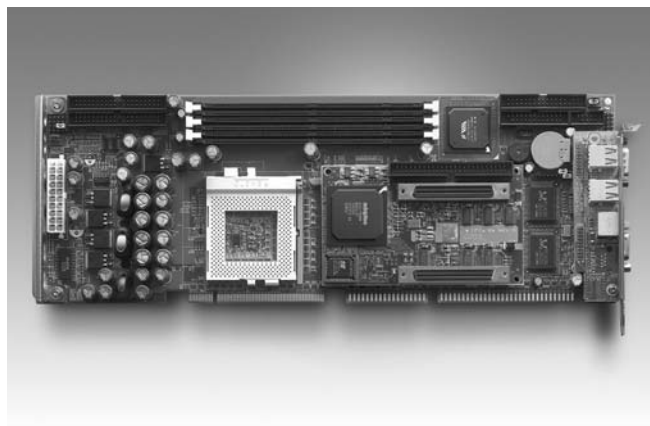
PCA-6184L-00B1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-USB4-00A1	USB extension module with 4 ports (only for V, VE versions)
1750000242	CPU cooler for Pentium 4 processor up to 2.5 GHz (70 W), for 1U chassis
1750000257	CPU cooler for Pentium 4 processor up to 3.2 GHz (89 W), for 2U or higher chassis
PCA-AUDIO-00A1	Audio extension module
PCA-DVI-00A1	DVI port module
PCA-DVIE-00A1	DVI port module with single LAN port
2070000141	Embedded Windows XP Kit

PCA-6181

Socket 370 Pentium® III/Celeron® Processor (Tualatin) Card with VGA/ Dual FE LAN/SCSI



Features

- Socket 370 Intel® Pentium® III/Celeron® up to 1.4 GHz
- VIA Apollo Pro 133T 66/100/133 MHz FSB
- Onboard high performance AGP 4X VGA with 32 MB SDRAM
- Supports dual 10/100Base-T Ethernet, Realtek 8139C controller
- Onboard Adaptec AIC-7899 dual channel Ultra160 SCSI up to 160 MB/s
- CMOS automatic backup and restore to prevent accidental loss of BIOS setup data

Specifications

Processor System	CPU	Intel Pentium III	Intel Celeron
	Max. Speed	1.4 GHz	1.2 GHz
	L2 Cache	256/512 KB	128/256 KB
	Chipset	VIA Apollo Pro133T	
	BIOS	Award 2 Mbit Flash	
Bus	Front Side Bus	66/100/133 MHz	
	PCI	32-bit/33 MHz	
Memory	ISA	HISA (ISA high drive)	
	Technology	PC-133/100 SDRAM with ECC support	
	Max. Capacity	1.5 GB	
Graphic	Socket	168-pin DIMM x 3	
	Controller	ATI RAGE Pro 128 4XL (AGP 4X)	
Ethernet	VRAM	32 MB SDRAM	
	Interface	10/100Base-T	
	Controller	RTL8139C x 2	
SCSI	Connector	RJ-45 x 2	
	Interface	Ultra160	
	Controller	Adaptec AIC-7899	
EIDE	Max. Data Transfer Rate	160 MB/s	
	Channel	2	
I/O Interface	Mode	ATA 100/66/33	
	Channel	2 (Max. 4 devices)	
	USB	Max. 4 (USB 1.1 compliant), 4 ports onboard for E2, F versions	
	Serial	2 (RS-232)	
	Parallel	1 (SPP/EPP/ECP)	
Watchdog Timer	FDD	1	
	PS/2	1 (for L, V, VE, ES versions), 2 (for E2, F versions)	
Power Requirement	Output	Interrupt, system reset	
	Interval	Programmable, 1 ~ 63 sec.	
Environment	Typical	Pentium III 1 GHz, 256 MB SDRAM	
	Temperature	+5 V 6.8 A	+12 V 0.4 A
Physical Characteristics	Operating	Non-Operating	
	Dimensions (W X D)	0 ~ 60 °C (32 ~ 140 °F)	-20 ~ 70 °C (-4 ~ 158 °F)

Ordering Information

Part Number	VGA (AGP)	SCSI	LAN
PCA-6181L-00A1	-	-	-
PCA-6181V-00A1	Yes	-	-
PCA-6181VE-00A1	Yes	-	Single
PCA-6181E2-00A1	Yes	-	Dual
PCA-6181ES-00A1	Yes	Yes	Single
PCA-6181F-00A1	Yes	Yes	Dual

Bracket View



PCA-6181L-00A1



PCA-6181V-00A1



PCA-6181VE-00A1

PCA-6181ES-00A1



PCA-6181E2-00A1

PCA-6181F-00A1

Packing List

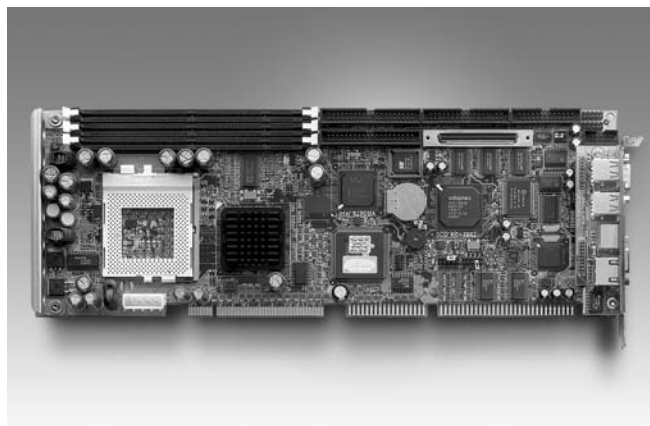
Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard (only for L, V, VE, ES versions)	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-USB4-00A1	USB extension module with 4 ports (only for V, VE, ES versions)
1700000182	SCSI cable (125 cm) with terminator
1759254100	CPU cooler for Pentium III processor up to 1.26 GHz, for 1U chassis
PCA-DVI-00A1	DVI port module
PCA-DVIE-00A1	DVI port module with single LAN port

PCA-6180-B

Socket 370 Pentium® III/Celeron® Processor (Tualatin) Card with VGA/
Dual FE LAN/SCSI



Features

- Socket 370 Pentium® III/Celeron® up to 1.4 GHz
- Intel® 815E (B) 66/100/133 MHz FSB
- Onboard integrated VGA controller, shared system memory architecture
- Supports dual 10/100Base-T Ethernet
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup data

Specifications

Processor System	CPU	Intel Pentium III	Intel Celeron
	Max. Speed	1.4 GHz	1.3 GHz
	L2 Cache	256/512 KB	128/256 KB
	Chipset	Intel 815E	
	BIOS	Award 4 Mbit FWH	
Bus	Front Side Bus	66/100/133 MHz	
	PCI	32-bit/33 MHz	
	ISA	HISA (ISA high drive)	
Memory	Technology	PC-133/100 SDRAM	
	Max. Capacity	512 MB	
	Socket	168-pin DIMM x 3	
Graphic	Controller	Chipset integrated VGA controller	
	VRAM	Dynamically shared system memory	
Ethernet	Interface	10/100Base-T	
	Controller	LAN 1: Chipset Built-in MAC with external PHY (Intel 82562) LAN 2: Intel 82559	
	Connector	RJ-45 x 2	
SCSI	Interface	Ultra160	
	Controller	Adaptec AIC-7892	
	Max. Data Transfer Rate	160 MB/s	
EIDE	Channel	1	
	Mode	ATA 100/66/33	
	Channel	2 (Max. 4 devices)	
I/O Interface	USB	4 onboard (USB 1.1 compliant)	
	Serial	2 (RS-232)	
	Parallel	1 (SPP/EPP/ECP)	
	FDD	1	
	PS/2	2 (for mouse and keyboard, Y cable included)	
Watchdog Timer	Output	Interrupt, system reset	
	Interval	Programmable, 1 ~ 255 sec.	
Power Requirement	Typical	Pentium III 866 MHz, 128 MB SDRAM	
		+5 V +12 V -12 V	
		6 A 0.4 A 0.1 A	
Environment	Temperature	Operating 0 ~ 60 °C (32 ~ 140 °F)	Non-Operating -20 ~ 70 °C (-4 ~ 158 °F)
	Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")

Ordering Information

Part Number	VGA	SCSI	LAN
PCA-6180E-00B1	Yes	-	Single
PCA-6180E2-00B1	Yes	-	Dual
PCA-6180ES-00B1	Yes	Yes	Single
PCA-6180F-00B1	Yes	Yes	Dual

Bracket View



PCA-6180E-00B1
PCA-6180ES-00B1



PCA-6180E2-00B1
PCA-6180F-00B1

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700000450	ATX-to-PS/2 power cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

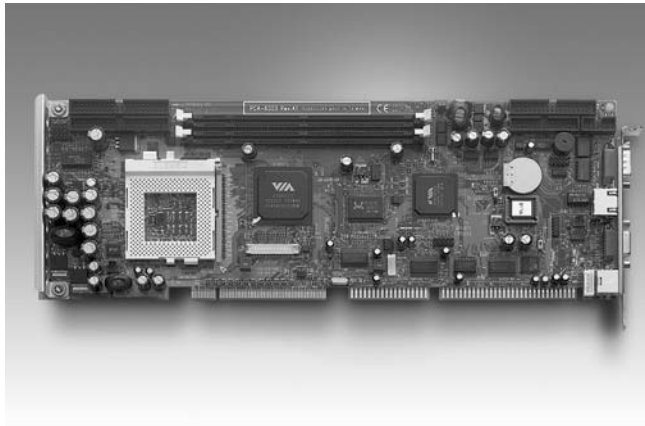
Accessories

Part Number	Description
1700100170	USB cable with 2 ports
1700000182	SCSI cable (125 cm) with terminator
1759254100	CPU cooler for Pentium III processor up to 1.26 GHz, for 1U chassis
2070000142	Embedded Windows XP Kit

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PCA-6003

Socket 370 Pentium® III/Celeron® Processor (Tualatin) Card with VGA/FE LAN/LCD



Features

- Cost-effective Socket 370 SBC with full features
- Pentium® III up to 1.4 GHz, Celeron® up to 1.3 GHz
- VIA Apollo PLE133T chipset, supports 66/100/133 MHz FSB
- Two DIMM Sockets for SDRAM up to 1 GB
- Onboard AGP/VGA
- Onboard 10/100Base-T networking controller
- Optional ISA high drive (HISA)

Specifications

Processor System	CPU	Intel® Pentium III	Intel Celeron
	Max. Speed	1.4 GHz	1.3 GHz
	L2 Cache	256/512 KB	128/256 KB
	Chipset	VIA Apollo PLE133T	
	BIOS	Award 2 Mbit Flash	
Bus	Front Side Bus	66/100/133 MHz	
	PCI	32-bit/33 MHz	
Memory	ISA	HISA (ISA high drive), only for PCA-6003H-00A1	
	Technology	PC-133/100 SDRAM	
	Max. Capacity	1 GB	
Graphic	Socket	168-pin DIMM x 2	
	Controller	Chipset integrated VGA controller	
	VRAM	Shared system memory up to 8 MB	
	LCD	Optional 18-bit TFT LCD support	
Ethernet	Interface	10/100Base-T	
	Controller	RTL8139C	
	Connector	RJ-45	
EIDE	Mode	ATA 100/66/33	
	Channel	2 (Max. 4 devices)	
I/O Interface	USB	Max. 2 (USB 1.1 compliant)	
	Serial	2 (RS-232)	
	Parallel	1 (SPP/EPP)	
	FDD	1	
	PS/2	1 (for mouse and keyboard, Y cable included)	
Watchdog Timer	Output	Interrupt, system reset	
	Interval	Programmable, 1 ~ 63 sec.	
Miscellaneous	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)	
	Typical	Pentium III 1 GHz, 256 MB SDRAM	
Power Requirement		+5 V	+12 V
		6.8 A	0.4 A
Environment		Operating	Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F)	-20 ~ 70 °C (-4 ~ 158 °F)
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")	

Ordering Information

Part Number	HISA	VGA	LAN	LCD
PCA-6003V-00A1	-	Yes	-	-
PCA-6003VE-00A1	-	Yes	Yes	-
PCA-6003H-00A1	Yes	Yes	Yes	Yes

Bracket View



PCA-6003V-00A1



PCA-6003VE-00A1
PCA-6003H-00A1

Packing List

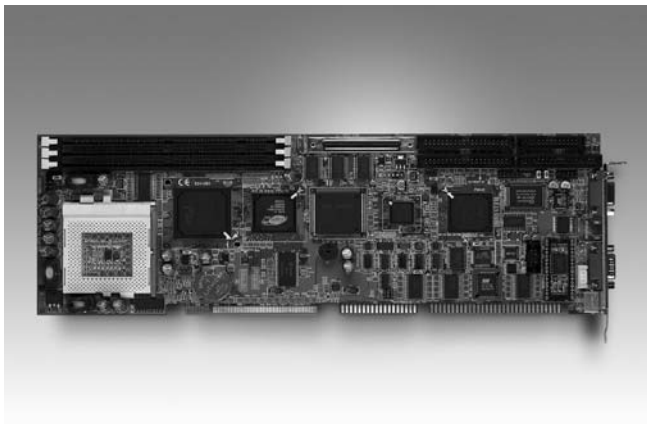
Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-AUDIO-00A1	Audio extension module
1759254100	CPU cooler for Pentium III processor up to 1.26 GHz, for 1U chassis
2070000140	Embedded Windows XP Kit

PCA-6178-C

Socket 370 Pentium® III/Celeron® Processor Card with VGA/FE LAN/SCSI



Features

- Socket 370 Pentium® III/Celeron® up to 1.0 GHz/1.1 GHz
- Intel® 440BX chipset 66/100 FSB
- Onboard high performance AGP 2X VGA with 8 MB SDRAM
- Supports 10/100Base-T Ethernet
- Onboard Symbios SYM53C895 Ultra2 SCSI up to 80 MB/s
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup data

Specifications

Processor System	CPU	Intel Pentium III	Intel Celeron	
	Max. Speed	1.0 GHz	1.1 GHz	
	L2 Cache	256 KB	128 KB	
	Chipset	Intel 440BX		
	BIOS	Award 2 Mbit Flash		
Bus	Front Side Bus	66/100 MHz		
	PCI	32-bit/33 MHz		
	ISA	HISA (ISA high drive)		
Memory	Technology	PC-100 SDRAM with ECC support		
	Max. Capacity	768 MB		
	Socket	168-pin DIMM x 3		
Graphic	Controller	ATI RAGE XL (AGP 2X)		
	VRAM	8 MB		
Ethernet	Interface	10/100Base-T		
	Controller	Intel 82559		
	Connector	RJ-45		
SCSI	Interface	Ultra2 wide		
	Controller	Symbios SYM53C895		
	Max. Data Transfer Rate	80 MB/s		
	Channel	1		
EIDE	Mode	ATA 33		
	Channel	2 (Max. 4 devices)		
I/O Interface	USB	Max. 2 (USB 1.1 compliant)		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
	PS/2	1 (for mouse and keyboard, Y cable included)		
Watchdog Timer	Output	Interrupt, system reset		
Miscellaneous	Interval	Programmable, 1 ~ 63 sec.		
	Solid State Disk	M-systems' DOC 2000 (144 MB)		
Power Requirement	Typical	Pentium III 700 MHz, 192 MB SDRAM		
		+5 V	+12 V	-12 V
		5.2 A	0.4 A	0.1 A
Environment	Temperature	Operating	Non-Operating	
		0 ~ 60 °C (32 ~ 140 °F)	-20 ~ 70 °C (-4 ~ 158 °F)	
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")		

Ordering Information

Part Number	VGA (AGP)	SCSI	LAN
PCA-6178L-00C1	-	-	-
PCA-6178V-00C1	Yes	-	-
PCA-6178VE-00C1	Yes	-	Yes
PCA-6178VS-00C1	Yes	Yes	-
PCA-6178F-00C1	Yes	Yes	Yes

Bracket View



Packing List

Part Number	Description	Quantity
1759212600	CPU fan	X 1
1700340640	FDD cable	X 1
1701400607	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700000450	ATX-to-PS/2 power cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
1700000182	SCSI cable (125 cm) with terminator

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IPC Pre-Configured Systems

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Industrial Motherboard

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Industrial Motherboard Chassis

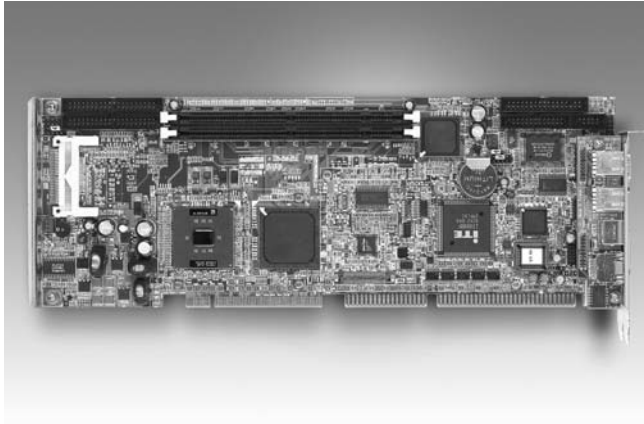
21
Full-sized CPU Cards

22
Industrial Computer Chassis

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Industrial Computer Peripherals

PCA-6002-B

Ultra Low Voltage Celeron® (Tualatin)
Processor Card with VGA/Dual FE LAN



Features

- Onboard Ultra Low Voltage Celeron® (Tualatin)
- Fanless operation
- Intel® 815E 100 MHz FSB
- Onboard integrated VGA controller, shared memory architecture
- Supports dual 10/100Base-T Ethernet, Intel 82551QM/82562ET controller
- CMOS automatic backup and restore to prevent accidental loss of BIOS setup data
- Supports Type I/II CompactFlash

Specifications

Processor System	CPU	Celeron (Tualatin)			
	Max. Speed	400/650 MHz			
	L2 Cache	256 KB			
	Chipset	Intel 815E + ICH2			
	BIOS	Award 4 Mbit FWH			
	Front Side Bus	100 MHz			
Bus	PCI	32-bit/33 MHz			
	ISA	HISA (ISA high drive)			
Memory	Technology	PC-133/100 SDRAM			
	Max. Capacity	512 MB			
	Socket	168-pin DIMM x 2			
Graphic	Controller	Chipset integrated VGA controller			
	VRAM	Dynamically shared system memory			
Ethernet	Interface	10/100Base-T			
	Controller	LAN 1: Chipset Built-in MAC with external PHY (Intel 82562ET) LAN 2: Intel 82551QM			
	Connector	RJ-45 x 2			
EIDE	Mode	ATA 100/66/33			
	Channel	2 (Max. 4 devices)			
I/O Interface	USB	Max. 4 (USB 1.1 compliant), 4 ports onboard for E2 version			
	Serial	2 (RS-232)			
	Parallel	1 (SPP/EPP/ECP)			
	FDD	1			
	PS/2	1 (for VE version), 2 (for E2 version)			
Watchdog Timer	Output	Interrupt, system reset			
	Interval	Programmable, 1 ~ 255 sec.			
Miscellaneous	Solid State Disk	CompactFlash socket (Type I/II)			
	Typical	Celeron 650 MHz, 256 MB SDRAM			
Power Requirement	+5 V	-5 V	+12 V	-12 V	
	3.4 A	0.1 A	0.2 A	0.2 A	
Environment	Temperature	Operating		Non-Operating	
		0 ~ 60 °C (32 ~ 140 °F)		-20 ~ 70 °C (-4 ~ 158 °F)	
Physical Characteristics	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")			

Ordering Information

Part Number	Processor	VGA (AGP)	LAN
PCA-6002VE-00B1	Celeron 400 MHz	Yes	Single
PCA-6002E2-00B1	Celeron 400 MHz	Yes	Dual
PCA-6002VE-03B1	Celeron 650 MHz	Yes	Single
PCA-6002E2-03B1	Celeron 650 MHz	Yes	Dual

Bracket View



PCA-6002VE-00B1
PCA-6002VE-03B1



PCA-6002E2-00B1
PCA-6002E2-03B1

Packing List

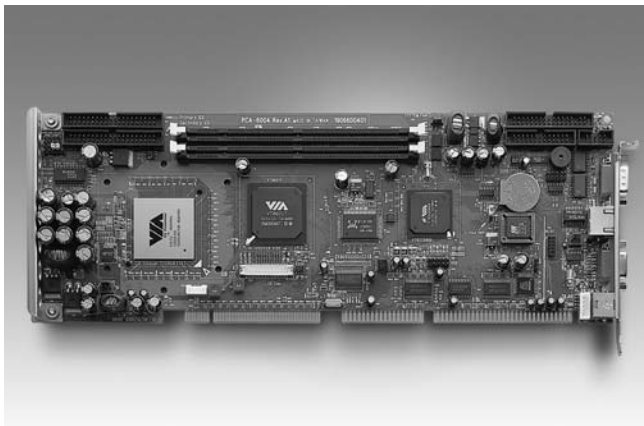
Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard (only for VE version)	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-USB4-00A1	USB extension module with 4 ports (only for VE version)

PCA-6004-A2

Low Voltage VIA C3 LP 800 MHz Card with VGA/FE LAN/LCD



Features

- Embedded low voltage C3 800 MHz CPU
- Fanless operation (external cooling required)
- VIA Apollo PLE133T chipset, 133 MHz FSB
- Dual DIMM sockets for SDRAM up to 1 GB
- Onboard AGP/VGA
- Onboard 10/100Base-T networking controller
- Optional ISA high drive (HISA)

Specifications

Processor System	CPU	VIA Low Voltage C3 EBGA		
	Max. Speed	800 MHz		
	L2 Cache	L1 128 KB, L2 64 KB		
	Chipset	VIA Apollo PLE133T + 686B		
	BIOS	Award 2 Mbit Flash		
Bus	Front Side Bus	133 MHz		
	PCI	32-bit/33 MHz		
Memory	ISA	HISA (ISA high drive), only for PCA-6004H-00A1		
	Technology	PC-133/100 SDRAM		
	Max. Capacity	1 GB		
Graphic	Socket	168-pin DIMM x 2		
	Controller	Chipset integrated VGA controller		
	VRAM	Shared system memory up to 8 MB		
Ethernet	LCD	Optional 18-bit TFT LCD support		
	Interface	10/100Base-T		
	Controller	RTL8139C		
EIDE	Connector	RJ-45		
	Mode	ATA 100/66/33		
I/O Interface	Channel	2 (Max. 4 devices)		
	USB	2 (USB 1.1 compliant)		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP)		
	FDD	1		
Watchdog Timer	PS/2	1 (for mouse and keyboard, Y cable included)		
	Output	Interrupt, system reset		
Miscellaneous	Interval	Programmable, 1 ~ 63 sec.		
	Audio Output	AC-97 audio interface (requires an audio extension module P/N: PCA-AUDIO-00A1)		
Power Requirement	Typical	128 MB SDRAM		
		+5 V	-5 V	+12 V
		3.1 A	0.1 A	0.1 A
				-12 V
Environment				0.2 A
	Temperature	Operating		Non-Operating
Physical Characteristics		0 ~ 60 °C (32 ~ 140 °F)		-20 ~ 70 °C (-4 ~ 158 °F)
	Dimensions (W X D)	338 x 122 mm (13.3" x 4.8")		

Ordering Information

Part Number	HISA	VGA	LAN	LCD
PCA-6004V-00A2	-	Yes	-	-
PCA-6004VE-00A2	-	Yes	Yes	-
PCA-6004H-00A2	Yes	Yes	Yes	Yes

Bracket View



PCA-6004V-00A2



PCA-6004VE-00A2
PCA-6004H-00A2

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	X 1
1701400452	IDE HDD cable	X 2
1701260305	Printer + COM cable	X 1
1700060202	Y cable for PS/2 mouse & keyboard	X 1
9689000068	Jumper pack	X 1
-	Startup manual	X 1
-	Utility CD	X 1

Accessories

Part Number	Description
1700100170	USB cable with 2 ports
PCA-AUDIO-00A1	Audio extension module

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