

# PCA-6189 Full-sized PCI/ISA-bus socket 479 Pentium® M/Celeron® M processor-based CPU card

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## Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

- 1 PCA-6189 Pentium® M / Celeron® M processor-based single board computer
- 1 PCA-6189 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 FDD cable p/n: 1700340640
- 2 Ultra ATA 66/100 HDD cables p/n: 1701400452
- 2 Serial ATA HDD data cable p/n: 1700071000
- 2 Serial ATA HDD power cable p/n: 1703150102
- 1 ATX 12V power converter cable p/n: 170304015K
- 1 Printer (parallel) port & COM port cable kit p/n: 1701260305
- 1 Y cable for PS/2 keyboard and PS/2 mouse (only for V/VE/VG versions) p/n: 1700060202
- 1 DVI cable p/n:1700000821
- 1 Two USB port cable p/n: 1700100170
- 1 Heat sink + Fan p/n:1960001631
- Warranty card

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Note: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: [www.adobe.com/products/acrobat/readstep2.html](http://www.adobe.com/products/acrobat/readstep2.html)

For more information about this and other Advantech products, please visit our website at:

<http://www.advantech.com>

<http://www.advantech.com/nc>

For technical support and service, please visit our support website at:

<http://service.advantech.com.tw/eservice/>

This manual is for the PCA-6189 series rev. A1.

Part No. 2002618910  
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1st Edition  
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## Specifications

### Standard SBC Functions

- **CPU:** Intel® socket 479 Pentium® M, 2.0 GHz and up; Celeron® M, 1.5 GHz and up, FSB 400 MHz
- **BIOS:** Award 4 Mbit Flash memory BIOS
- **Chipset:** Intel 855GME + 6300ESB
- **System Memory:** Two 184-pin DIMM sockets accept up to 2 GB DDR 266/333 SDRAM (PC 2100/2700)
- **SATA/IDE interface:** Supports up to two independent Serial ATA hard drives (up to 150 MB/s) with software RAID 0 or 1 functions and two IDE hard disk drives or four enhanced IDE devices. BIOS enabled/disabled
- **FDD interface:** Supports up to two FDDs
- **Solid State Disk:** Compact Flash® socket (Type I / II), shared with secondary IDE
- **Serial ports:** Two serial RS-232 ports
- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
- **Keyboard/mouse connector:** Supports one standard PS/2 keyboard and mouse
- **Watchdog timer:** 255 timer intervals
- **USB (2.0):** Maximum up to four Universal Serial Bus ports

### VGA Interface

- **Chipset:** Intel 855GME integrated
- **Interface:** Intel® Extreme Graphics Architecture
- **Display memory:** Share system memory up to 64 MB, BIOS selectable
- **Resolution:** Up to 1800 x 1440 @ 85 Hz
- **VGA port:** 2048 x 1536, up to 75 Hz
- **LVDS connector:** Dual channel from 25 MHz to 112 MHz
- **DVI connector:** 2048 x 1536

### Ethernet Interface

- **Chipset:**
- **LAN1:** Intel 82551QM(FE); Intel 82541GI(GbE)
- **LAN2:** Intel 82541GI(GbE)
- **Connection:** On-board RJ-45 connector x 2

### SCSI Interface

- **Chipset:** Adaptec AIC7899, provides dual channel Ultra 160 SCSI interface

### Mechanical and Environmental

- **Dimensions (L x W):** 338 x 122 mm
- **Power supply voltage:** +5 V ± 12 V
- **Power requirements:** Typical : +5 V: 6.53 A, +12 V: 4.57 A (Intel Pentium® M 1.8 GHz with 400 MHz FSB, 512MB DDR 333 SDRAM)
- **Operating temperature:** 0 ~ 60° C (depending on CPU)
- **Weight:** 0.5 kg (weight of board)

## Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below lists the function of each of the jumpers and connectors.

Label	Function
J1	CMOS clear
J2	Watchdog timer output selection

Label	Function
CN1	Primary IDE connector
CN2	Secondary IDE connector
CN3	Floppy drive connector
CN4	Parallel port
CN6	USB port (share with CN32)
CN7	VGA connector
VCN2	LVSD connector
VCN3	DVI connector
CN8	Ethernet connector 1
CN9	Serial port: COM1
CN10	Serial port: COM2
CN11	PS/2 keyboard and mouse connector
CN12	External keyboard connector
CN13	Reserved
CN14	CPU FAN connector
CN16	Power LED
CN17	External speaker
CN18	Reset connector
CN19	HDD LED connector
CN20	ATX feature connector
CN21	ATX soft power switch
CN22	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
CN27	Extension I/O board connector
CN28	Extension I/O board connector
CN29	SM BUS Connector
CN30	Extension PCI connector (for SCSI daughter board)
CN43	AC97 Link connector
CN44	CF Socket (On Back Side)
SA0	Serial ATA0
SA1	Serial ATA1
ATX1	ATX 12V Auxiliary power connector
VP1	LCD inverter power connector

### Extension I/O board

Daughter board 1	
CN31	USB port 0, 1
CN32	USB port 2, 3
CN34	Ethernet connector 2

### SCSI Daughter Board Connectors

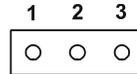
CN1	Channel A 68-pin Ultra 160 SCSI connector
CN2	Channel B 68-pin Ultra 160 SCSI connector
CN3	Channel B 50-pin Ultra Wide SCSI connector

### On Board Switch

S1,S2	USB connector (CN6 or CN32) selection switch
SW1	PCI bus selection switch

### J1: CMOS clear function

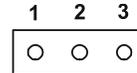
Pins	Result
1-2 (closed)	Keep CMOS data*
2-3 (closed)	Clear CMOS



\*default setting

### J2: Watchdog timer output option

Closed pins	Result
1-2	IRQ11
2-3	System reset *

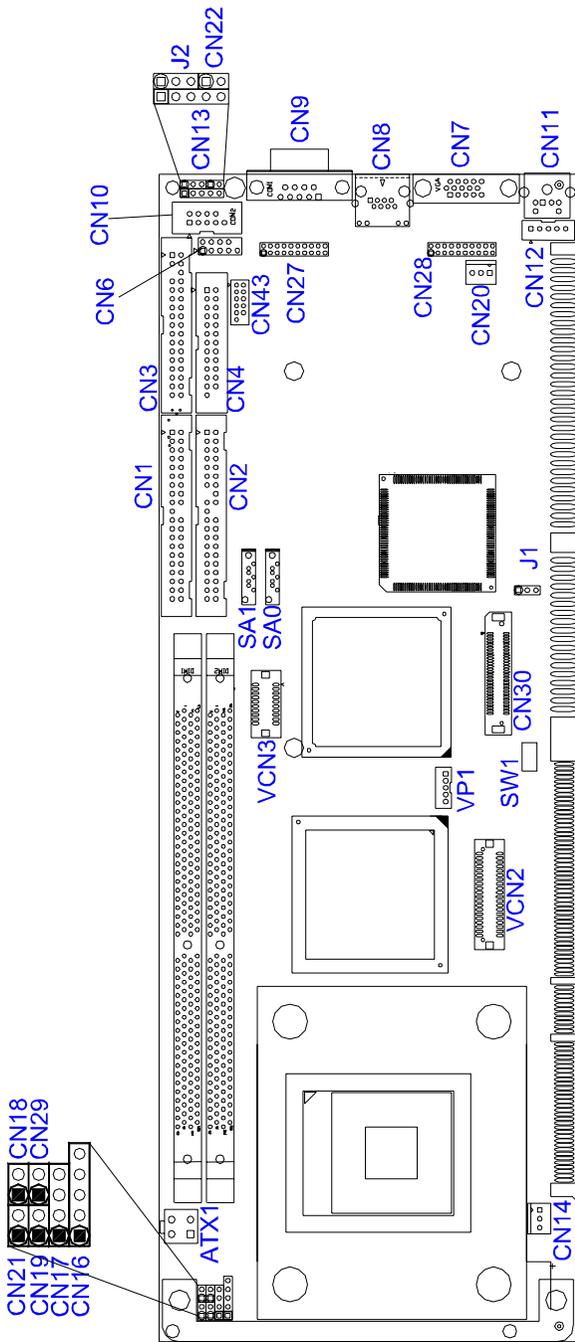


## Software Installation

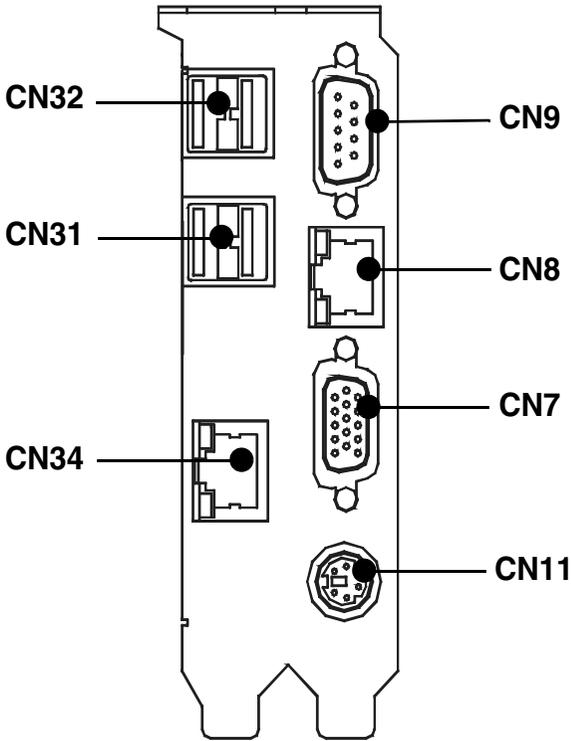
- The CD disc contains a driver installer program that will lead you through the installation of various device drivers needed to take full advantage of your CPU card.

## Caution

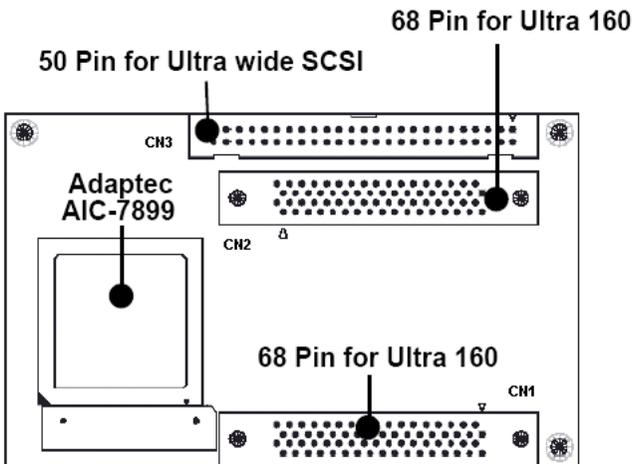
The computer is provided with a battery-powered Real-time Clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.



**Board Layout: Jumper and Connector Locations**



*Extension I/O connector*



*SCSI daughter board*

## Important Safety Information

### SAFETY INSTRUCTIONS

# FCC

*This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:*

- 1. This device may not cause harmful interference, and*
- 2. This device must accept any interference received, including interference that may cause undesired operation*

*This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense. The user is advised that any equipment changes or modifications not expressly approved by the party responsible for compliance would void the compliance to FCC regulations and therefore, the user's authority to operate the equipment.*

#### **CAUTION!!**

***There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.***