PCA-6187 Full-sized PCI/ISA-bus socket 478 Pentium®4/Celeron®processor-based CPU card

Packing List

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

- 1 PCA-6187 Pentium ® 4/Celeron processor-based single board computer

- 1 PCA-6187 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 Two USB port cable (optional)   p/n: 1700100170

- 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

For more information on 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-6187 series Rev. A1.

Specifications

Standard SBC Functions

- **CPU:** Intel® socket 478 Celeron® (Northwood) 2.0~2.6 GHz,
- Pentium® 4 (Northwood) up to 3.2 GHz, FSB 400/533/800 MHz; suppports Intel Hyper-Threading technology. CPU with 1.75V core voltage (Willamete) not supported.
- **BIOS:** Award 4 Mb Flash memory BIOS
- **Chipset:** Intel 865G with ICH5
- **System Memory:** Dual Channel; Four 184-pin DIMM sockets accepts up to 4 GB DDR 266/333/400 SDRAM (PC 2100/2700/3200)
- **SATA/IDE interface:** Supports up to two independent Serial ATA hard drives (up to 150MB/s) and two IDE hard disk drives or four enhanced IDE devices. BIOS enabled/disabled.
- **FDD interface:** Supports up to two FDDs
- **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 level timer intervals
- **USB (2.0):** Maximum up to six Universal Serial Bus ports

VGA Interface

- **Chipset:** Intel 865G integrated
- **Interface:** Intel® Extreme Graphics Architecture
- **Display memory:** Share system memory up to 64 MB, BIOS selectable
- **Resolution:** up to 1800x1440 @ 85Hz

Ethernet Interface

- **Chipset:**
- Single 10/100Base-T: Intel 82562EZ
- Dual 10/100Base-T: Intel 82562EZ and Intel 82551QM (PCI)
- Single 10/100/1000Base-T:Intel 82547GI (CSA)
- Dual 10/100/1000Base-T: Intel 82547GI (CSA) and Intel 82541GI (PCI)
- **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 : +5V:6.53A, +12V:4.57A (Intel Pentium® 4 3.0GHz with 800MHz FSB, 512MB DDR 400 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 4, 5
CN7	VGA connector
CN8	Ethernet connector 1
CN9	Serial port: COM1
CN10	Serial port: COM2
CN11	PS/2 keyboard and mouse connector
CN12	External keyboard connector
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
SA0	Serial ATA0
SA1	Serial ATA1
ATX1	ATX 12V Auxiliary power connector

Extension I/O board

Daughter board 1	
CN31	USB port 0, 1
CN32	USB port 2, 3
CN33	PS/2 mouse connector
CN34	Ethernet connector 2

SCSI Daughter Board Connectors

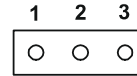|	
CN50	68-pin Ultra 160 SCSI Connector
CN51	68-pin Ultra 160 SCSI Connector
CN52	50-pin Ultra Wide SCSI Connector

J1: CMOS clear function

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

```
 1    2    3
 O    O    O
```
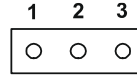
*default setting

J2: Watchdog timer output option

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

```
 1    2    3
 O    O    O
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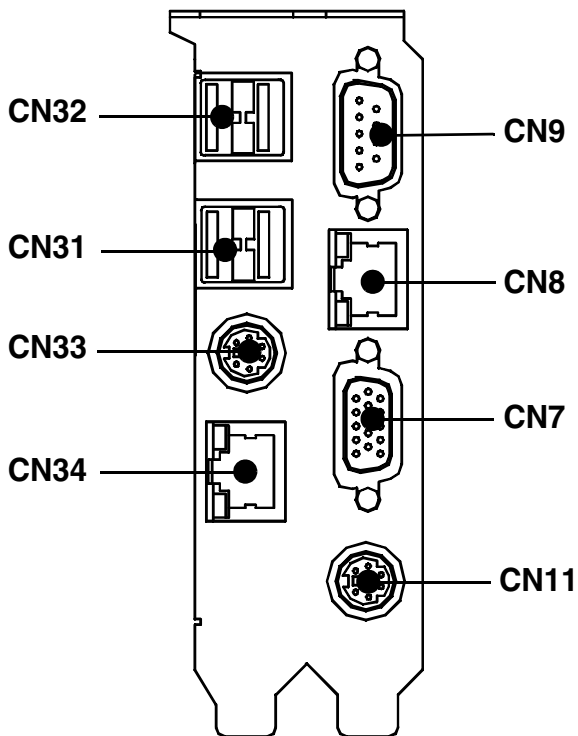
Software Installation

• 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
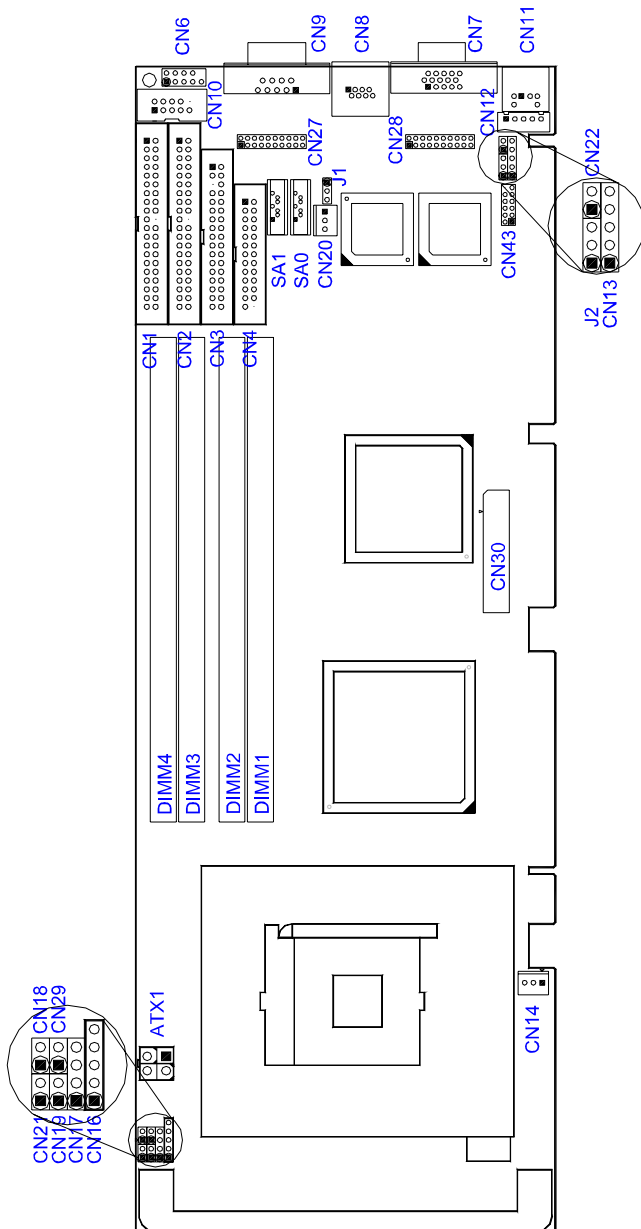
Board Layout: Jumper and Connector Locations

Extension I/O connector