PCA-6188 Full-sized PCI/ISA-bus socket 478 Pentium®4/Celeron®processor-with ATI M10 VGA chip CPU card

Packing List

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

- 1 PCA-6188 Pentium ® 4/Celeron processor-based single board computer
- 1 PCA-6188 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 Dual COM port cable kit   p/n: 1701092300
- 1 Y cable for PS/2 keyboard and PS/2 mouse   p/n: 1700060202
- 2 Two USB port cable   p/n: 1700100170
- 1 VGA cable   p/n:1700000259
- 1 DVI cable   p/n:1700000821
- 1 Video Cable(S / Composite terminal)   p/n:1700000784
- 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-6188 series Rev. A1.

Specifications

Standard SBC Functions

- **CPU:** Intel® socket 478 Celeron® (Northwood) 2.0~2.8 GHz, Pentium® 4 (Northwood/Prescott) up to 3.4 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 875P with 6300ESB
- **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 four Universal Serial Bus ports

VGA Interface

- **Chipset:** ATi Mobility Radeon 9600 Pro (AGP 8X)
- **Interface:** AGP 8X
- **Display memory:** 64MB DDR SDRAM integrated
- **Video Output :**

CRT1, 2048 x 1536, up to 200Hz vertical rate

CRT2, 2048 x 1536, up to 200Hz vertical rate

1 LVDS, dual 115MHz interface, 2048 x 1536@60Hz,
1 DVI, 1600 x 1200@60Hz, 165MHz 2

Ethernet Interface

- **Chipset:**
- 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

Mechanical and Environmental

- **Dimensions (L x W):** 338 x 122 mm
- **Power supply voltage:** +5 V ± 12 V
- **Power requirements:** Typical : +5V:7.32A, +12V:7.68A (Intel Pentium® 4 3.06GHz with 533MHz FSB, 1GB 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 0, 1
CN7	VGA connector
VCN2	VGA-2 connector
VCN4	LVDS connector
VCN5	DVI connector
CN10	Serial port: COM2 (10-pin connector)
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
CN23	Serial port:COM1 (10-pin connector)
CN24	2 LAN ports
CN29	SM BUS Connector
CN43	AC97 Link connector
CN63	USB port 2,3
SA0	Serial ATA0
SA1	Serial ATA1
ATX1	ATX 12V Auxiliary power connector

J1: CMOS clear function

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

1   2

*default setting

J2: Watchdog timer output option

Closed pins	Result

J2: Watchdog timer output option

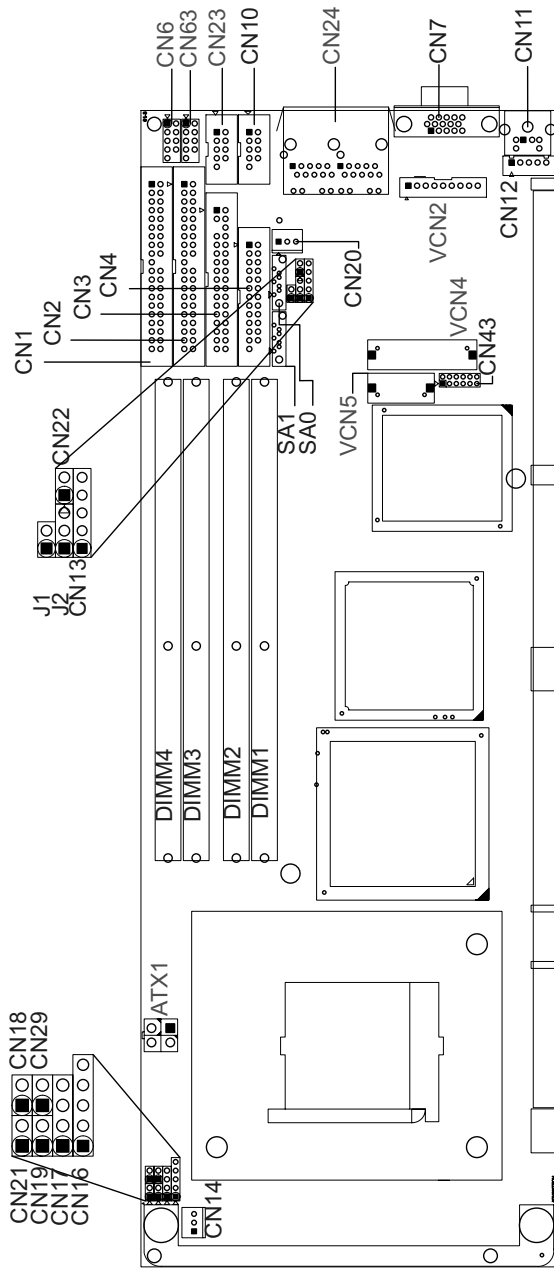| 1-2	IRQ11
2-3	System reset *

1   2   3
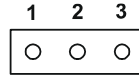
Software Installation

- 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