

PCA-6190 Full-sized PCA/ISA-bus LGA775 Pentium® 4/Celeron® D Processor Card with VGA/Dual Gigabit LAN/HISA/DVI (800 MHz FSB)

Packing List

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

- 1 PCA-6190 Pentium® 4/Celeron® D processor-based single board computer
- 1 PCA-6190 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 FDD cable p/n: 1700340640
- 1 Ultra ATA 66/100 HDD cables p/n: 1701400452
- 4 Serial ATA HDD data cables p/n: 1700071000
- 4 Serial ATA HDD power cables 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 (G2-00A1 and G2-D0A1 only) p/n: 1701092300
- 1 Y cable for PS/2 keyboard and PS/2 mouse p/n: 1700060202
- 2 USB cable with 4 ports p/n: 1700000719
- 1 DVI cable (PCA-6190G2-D0A1 only) p/n: 1700000821
- 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/Prodindex/acrobat/read-step.html (Acrobat is a trademark of Adobe).

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

<http://www.advantech.com>

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

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

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

This manual is for the PCA-6190 series Rev. A1

Part No. 2002619010
Printed in Taiwan

1st Edition
September 2005

Specifications

Standard SBC Functions

- **CPU:** Intel LGA 775 Celeron D up to 3.06 GHz, Pentium 4 up to 3.8 GHz, FSB 533/800 MHz.
- **BIOS:** Award 4 Mb Flash memory BIOS
- **Chipset:** Intel 915GV with ICH6
- **System Memory:** Up to 4 GB; four 240-pin DIMM sockets. Supports dual channel DDRII 400/533 SDRAM. Note: Due to the inherent limitations of PC architecture, the system canNOT fully detect 4 GB RAM capacity when 4 GB RAM is installed.
- **SATA/IDE Interface:** Four on-board serial ATA connectors with data transmission rate up to 150 MB/Sec and supporting Advanced Host controller interface (AHCI) technology. One IDE hard disk drives or two enhanced IDE devices. Supports PIO mode 4 (16.67MB/s data transfer rate) and ATA 33/66/100 (33/66/100MB/s data transfer rate.) BIOS enabled/disabled.
- **FDD interface:** Supports one FDD
- **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):** Supports up to eight USB 2.0 ports with the two USB 2.0 cable kits included

VGA/LCD Interface

- **Chipset:** Chipset integrated VGA controller
- **Display memory:** Dynamically shared system memory up to 128 MB.
- **Resolution:** Up to 2048x1536@ 85 MHz refresh

Ethernet Interface

- **Controller:** Broadcom BCM5721
 - Single 10/100/1000Base-T:Broadcom BCM5721
 - Dual 10/100/1000Base-T: Broadcom BCM5721 X 2
- Note: PCA-6190VG-00A1 uses on-board LAN2 controller

Mechanical and Environmental

- **Dimensions (L x W):** 338 x 122 mm
- **Power supply voltage:** +5 V ± 12 V
- **Power requirements:** Maximum: +5V:6.64A, +12V:12.59A (Intel Pentium4 3.4GHz with 800MHz FSB, 2 X256 MB, 2 X 512 MB DDRII 533 SDRAM)
- **Operating temperature:** 0 ~ 60° C (depending on CPU)
- **Weight:** 0.5 kg (weight of board)

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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.

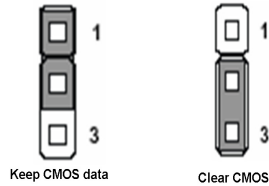
J1: CMOS clear function

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

Label	Function
CN1	Primary IDE connector
CN3	FDD connector, Supports 360K/1.2M/720K/1.44M FDD x 2
CN4	Parallel port, Parallel port x 1, supports SPP/EPP/ECP mode
CN6	USB port 1,2
CN7	VGA connector
CN8	Ethernet connector 1
CN9	Serial port: COM1; RS232 (D-sub 9-pin connector)
CN10	Serial port: COM2; RS232 (9-pin connector)
CN11	PS/2 keyboard and mouse connector Cable length: 20 meters
CN12	External keyboard connector (6-pin)
CN13	Infrared connector
CN16	Power LED
CN17	External speaker
CN18	Reset connector
CN19	HDD LED connector
CN20	ATX feature connector
CN21	ATX soft power switch (PS_ON)
CN22	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
CN29	SM bus connector
CN24	2 LAN ports
CN30	SCSI daughterboard
CN43	AC97 Audio connector
CN63	USB ports 3,4
CN64	Case Open
CN65	Front Panel LAN indicator connector
CN66	USB port 5,6
CN67	USB port 7,8
CN68	CPU FAN connector (4-pin)
CN91	Serial port: COM1; RS232 (9-pin connector)
CN93	GPIO pin header (SMD pitch-2.0 mm)
SA0	Serial ATA0
SA1	Serial ATA1
SA2	Serial ATA2
SA3	Serial ATA3
ATX1	ATX 12V Auxiliary power connector (for CPU)
VCN1	DVI connector (DF13-20DP-1.25mm TMDS)

J1: CMOS clear function

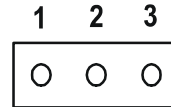
Pins	Result
1-2 (closed)	Keep CMOS data*
2-3 (short)	Clear CMOS



*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.

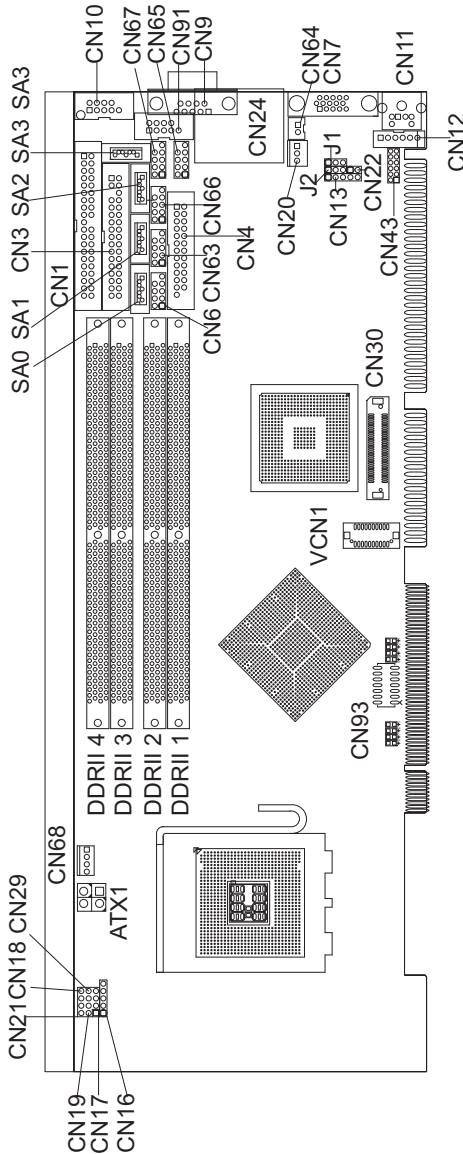
Caution

The computer is supplied 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.

Safety Information

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



Board Layout: Jumper and Connector Locations