

PCA-6010 PICMG 1.0 Full-sized Intel® LGA775 Processor Card with VGA/Dual Gigabit LAN

Startup Manual

Packing List

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

- 1 PCA-6010 Intel® LGA775 processor-based single board computer
- 1 PCA-6010 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 FDD cable p/n: 1700340640
- 1 Ultra ATA 66/100 IDE cables p/n: 1701400452
- 2 Serial ATA HDD data cable p/n: 1700003194
- 2 Serial ATA HDD power cable p/n: 1703150102
- 1 Printer (parallel) port & COM port cable kit p/n: 1701260305
- 1 Y cable for PS/2 keyboard and PS/2 mouse p/n: 1700060202
- 1 USB cable with 4 ports p/n: 1700008461
- ATX 12 V power converter cable p/n: 170304015K
- Jumper pack p/n: 9689000068
- User Note for Full-Size CPU card p/n: 2002721020
- User Note for LGA775 CPU
- Warranty card

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

Note1: For detailed contents of PCA-6010, please refer to information on the enclosed CD-ROM (in PDF format). Acrobat Reader is required to view any PDF file.

Note2: Acrobat Reader can be downloaded at: www.adobe.com/Products/acrobat/readstep2.html (Acrobat is a trademark of Adobe.)

Note3: PCA-6010 must use a proprietary CPU cooler, we strongly recommend purchasing it from Advantech (p/n: 1750000332).

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

<http://www.advantech.com>

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

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

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

This manual is for the PCA-6010 series Rev. A1

Part No. 2002601012

3rd Edition
August 2012

Specifications

Standard SBC functions

- **CPU:**

Intel Core® 2 Duo Desktop Processor	Long-term supported P/N: E7400, E6400
Intel Pentium® Dual-Core Desktop Processor	E4300, E2160
Intel Celeron® Processor 400	Celeron 440
Intel Pentium D Processor	Pentium 4 651/551
Intel Pentium 4 Processor	Celeron D 352/341
Intel Celeron D Processor	
- **BIOS:** Award® SPI 8 Mb Flash memory BIOS
- **Chipset:** Intel 945GC with ICH7
- **System memory:** Dual Channel; Two 240-pin DIMM sockets accepts up to 4 GB DDR2 533/667 SDRAM
- **SATA/IDE interface:** Supports up to four SATA2 HDD (300 MB/s) ; Support two IDE devices. The IDE port may be altered to a Type II CF socket.
- **FDD interface:** Supports up to two FDDs
- **Serial ports:** Two serial RS-232 ports
- **Parallel port:** One SPP/EPP/ECP parallel port
- **Keyboard/mouse connector:** One standard PS/2 keyboard/mouse connector and one external 6-pin header
- **Watchdog timer:** 255 level timer intervals
- **USB (2.0):** 8 Universal Serial Bus ports on board

VGA Interface

- **Chipset:** Intel 945GC integrated
- **Display memory:** Shared with 224 MB system memory
- **Video Output:** Up to 2048 x 1536 @ 75 Hz refresh

Ethernet Interface

- **Chipset:** LAN 1/2: Intel® 82574L
- **Connection:** Onboard RJ-45 connector

Mechanical and Environmental

- **Dimensions (L x W):** 338 x 122 mm
- **Power supply voltage:** +5 V ~ ±12 V
- **Power requirements:**
 - Configuration 1:*
 - CPU: Intel Core 2 Duo processor E4300 (1.8 G, 65 W)
 - Memory: 2 DDR2 667 MHz 4 GB DIMMs
 - Test program: Intel Max power 100% + BurnIn Test 4.0 +5 V @ 5.19 A, +12 V @ 3.85 A, +3.3 V @ 0A, +5 VSB @ A, -12 V @ 0A, -5 V @ 0A
 - Configuration 2:*
 - CPU: Intel P4 processor 670 (3.8 G, 115 W)
 - Memory: 2 DDR2 667 MHz 4 GB DIMMs
 - Test program: Intel Max power 100% + BurnIn Test 4.0 +5 V @ 4.85 A, +12 V @ 12.45 A, +3.3 V @ 0A, +5 VSB @ 0.07 A, -12 V @ 0A, -5 V @ 0A
- **Operating temperature:** 0 ~ 60° C (depending on CPU)
- **Weight:** 0.5 kg (weight of board)

Jumpers and Connectors

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

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

Connectors	
Label	Function
IDE1	IDE connector
FDD1	Floppy drive connector
LPT1	Parallel port
VGA1	VGA connector
COM1	Serial port: COM1; RS232 (9-pin D-sub)
COM2	Serial port: COM2; RS-232 (10-pin Box Header)
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard/mouse connector
JIR1	Infrared connector
CPUFAN1	CPU1 FAN connector
JFP1	Power and Reset Button connector
JFP2	HDD LED/Speaker connector
JFP3	Power LED and keyboard lock connector
JOBS1	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
LAN1	LAN RJ45 connector
HDAUD1	HD Audio connector
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
LANLED1	LAN1 LED connector
USB12	Two USB port pin headers
USB34	Two USB port pin headers
USB56	Two USB port pin headers
USB78	Two USB port pin headers
DIMMA1	Memory connector channel A
DIMMB2	Memory connector channel B
LPC1	Low pin count connector
DVI1	Optional
SPI1	BIOS SPI Interface
JCASE1	Case open

Jumpers

Label	Function
CMOS1	CMOS clear
JWDT1	Watchdog timer output selection

CMOS1: CMOS clear function

Closed Pins	Result
1-2	Keep CMOS data *
2-3	Clear CMOS

* default setting



JWDT1: Watchdog timer output option

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

* default setting



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 Advantech. Discard used batteries according to manufacturer's instructions.



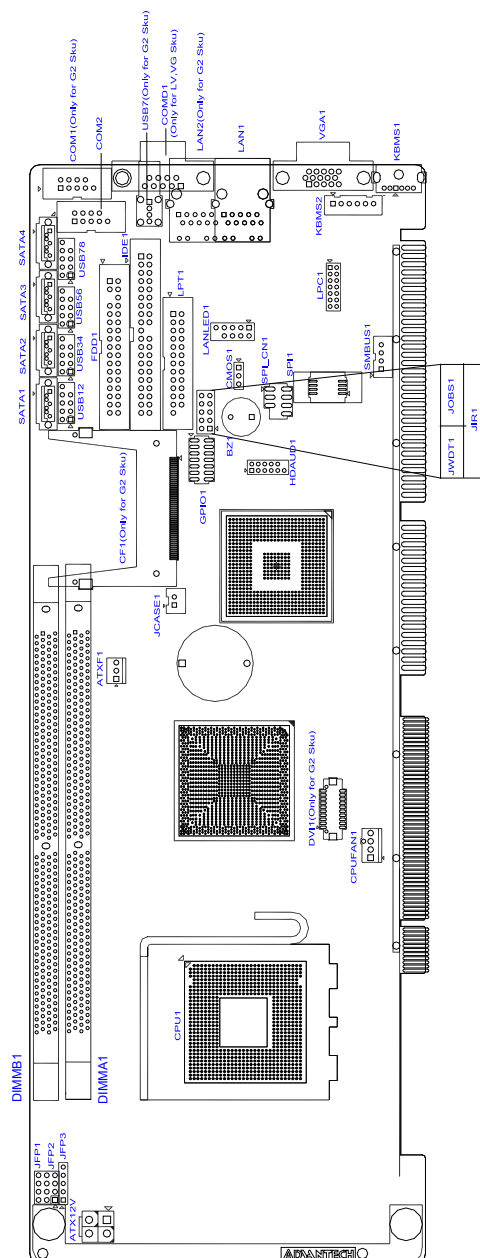
Safety Information

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Board Layout

The locations of all connectors and jumpers:



Board Layout: Jumper and Connector Location