![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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ADVANTECH

PCA-6011 PICMG 1.0 Full-sized Intel® LGA775 Processor Card with VGA/DVI/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-6011 Intel® LGA775 processor-based single board computer
- 1 PCA-6011 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 Ultra ATA 66/100 IDE cables   p/n: 1701400452
- 2 Serial ATA HDD data cable   p/n: 1700003194
- 1 Serial ATA HDD power cable   p/n: 1700022749-11
- 1 Printer & COM port cable kit   p/n: 1701260305
- 1 Y cable for PS/2 keyboard   p/n: 1700060202
  and PS/2 mouse
- 1 USB cable with 4 ports   p/n: 1700008461-11
- 1 Jumper pack   p/n: 9689000068
- 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-6011, 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-6011 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-6011 series Rev. A1

Specifications

Standard SBC functions

- **CPU:**   (Long-term support)

Intel Core® 2 Quad Processor	Q9400
Intel Core® 2 Duo Processor	E8400, E7400, E6400, E4300
Intel Pentium® Processor	E5300

- **BIOS:** AMI® SPI 16 Mb Flash memory BIOS
- **Chipset:** Intel 82G41 with ICH7/ICH7R
- **System memory:** Dual Channel; Two 240-pin DIMM sockets accepts up to 8 GB DDR3 800/1066/1333 SDRAM
- **SATA/IDE interface:** Supports up to four SATA2 HDD (300 MB/s) ; Support two IDE devices.
- **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 82G41 integrated
- **Display memory:** Shared with 353 MB system memory
- **Video Output:** Up to 2048 x 1536 @ 75 Hz refresh

Ethernet Interface

- **Chipset:** Intel® 82583V
- **Connection:** Onboard RJ-45 connector

Mechanical and Environmental

- **Dimensions (L x W):** 338 x 122 mm (13.3" x 4.8")
- **Power supply voltage:** +5 V, ±12 V
- **Power requirements:**
  Configuration 1:
  - CPU: Intel Core 2 Quad processor Q9400 (2.66 GHz, 95W)
  - Memory: 2 DDR3 1066 MHz 4 GB DIMMs
  - Test program: Intel Max power 100% + BurnIn Test 4.0 +5 V @ 4.04 A, +12 V @ 5.14 A, +3.3 V @ 0A, +5 VSB @ 0.17 A, -12 V @ 0A, -5 V @ 0A

  Configuration 2:
  - CPU: Intel Core 2 Duo processor E8400 (3.0 GHz, 65W)
  - Memory: 2 DDR3 1066 MHz 4 GB DIMMs
  - Test program: Intel Max power 100% + BurnIn Test 4.0 +5 V @ 3.4 A, +12 V @ 3.63 A, +3.3 V @ 0A, +5 VSB @ 0.15 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
DVI1	DVI connector (DVI cable is required, P/N 1700008822-11)
COM12	RS232 serial ports connector
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard/mouse connector
JIR1	Infrared connector
JOBS1	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
CPUFAN1	CPU1 FAN connector
JFP1	Power and Reset Button connector
JFP2	HDD LED/Speaker connector
JFP3	Power LED and keyboard lock connector
LAN1	LAN RJ45 connector
LANLED1	LAN1 LED connector
HDAUD1	HD Audio connector
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
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
SPI1	BIOS SPI Interface
JCASE1	Case open
ATX12V1	Power connector
ATXF1	ATX power connector
GPIO1	GPIO connector

Jumpers and Connectors (Cont.)

SMBUS1	SMBUS connector

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.
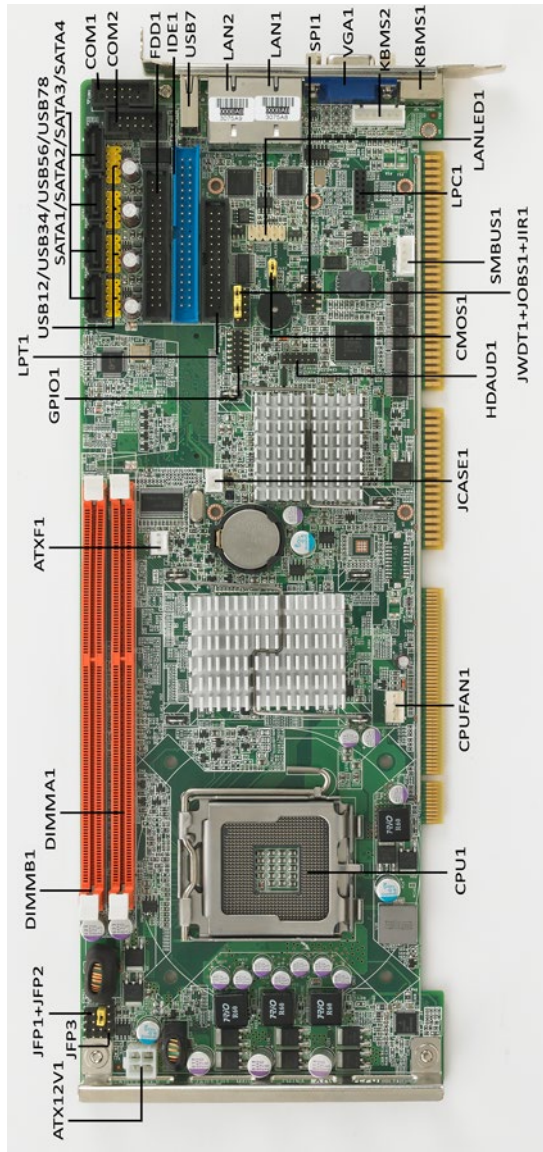
Safety Information

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:

Figure 1: Board Layout: Jumper and Connector Location