

PCE-5120 LGA775 Intel® Pentium® D / Pentium® 4 / Celeron® D Processor Card with PCI Express / IPMI / VGA / Dual Gigabit LAN

Packing List

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

- 1 PCE-5120 Dual Intel® Pentium® D/Pentium® 4/ Celeron® D processor-based single board computer
- 1 PCE-5120 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
- 2 Serial ATA HDD data cable p/n: 1700071000
- 2 Serial ATA HDD power cable p/n: 1703150102
- 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
- 1 CPU cooler p/n: 1750000400
- 1 USB cable with 4 ports p/n: 1700002314
- Warranty card

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

Note 1: For detailed contents of the PCE-5120, please refer to the enclosed CD-ROM (in PDF format).

Note 2: 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 PCE-5120 series Rev. A1.

Part No. 2002512010 1st. Edition
Printed in Taiwan July 2006

Specifications

Standard SBC Functions

- **CPU:** Supports Intel® LGA 775 Pentium® D/ Pentium® 4/ Celeron® D processors up to 3.2/3.8/3.06 GHz, FSB 533/800 MHz.
- **BIOS:** Award® 4 Mb Flash memory BIOS
- **Chipset:** Intel® 945G with ICH7R
- **System Memory:** Dual Channel; Four 240-pin DIMM sockets accepts up to 4 GB DDR2 533/667 SDRAM
- **Note:** Due to inherent limitations of the PC architecture, the system may not fully detect 4 GB RAM if 4 GB RAM is installed.
- **SATA/IDE interface:** Supports up to four independent SATA2 hard drives (up to 300MB/s) with software RAID 0, 1, 5, 10 functions; supports up to one IDE hard disk drives, or two enhanced IDE devices. The IDE port may be altered to a Type II CF socket.
- **FDD interface:** Supports up to two FDDs
- **Serial ports:** Four serial RS-232 ports; COM2 can be configured to RS-232/422/485 thru pin header
- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
- **Keyboard/mouse connector:** Supports one standard PS/2 keyboard and mouse connector and one external 6-pin pin header.
- **Watchdog timer:** 255 level timer intervals
- **USB (2.0):** Four Universal Serial Bus ports to Backplane and four ports on board

VGA Interface

- **Chipset:** Intel® 945G integrated
- **Display memory:** Shared with 224 MB system memory
- **Video Output:** Up to 2048 x 1536 @ 75 Hz refresh
- **External Card:** PCI Express X16 Graphic Card interface to back plane

Ethernet Interface

- **Chipset:**
 - LAN1: Intel 82573V (PCIe GbE)
 - LAN2: Intel 82573V (PCIe GbE)
- **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:**
 - CPU: Intel® Pentium® D 3.2 GHz/2M/800/130W
 - MEMORY: DDR2 667 MHz 1 GB x 4
 - Test program, Intel Max power 100% + BurnIn Test 4.0
 - +12V 15 A
 - +5V 2 A
 - +3.3V 20 A
 - +5VSB 0.7 A
 - 12V 0 A
 - 5V 0 A
- **Operating temperature:** 0 ~ 55 °C (depending on CPU)
- **Weight:** 0.5 kg (weight of board)

Connectors and Jumpers

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

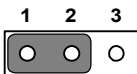
Label	Function
IDE1	Primary IDE connector
FDD1	Floppy drive connector
LPT1	Parallel port
VGA1	VGA connector
COM1	Serial port:COM1 (9-pin connector)
COM2	Serial port:COM2 (9-pin connector)
COM3	Serial port:COM3 (9-pin connector)
COM4	Serial port:COM4 (9-pin connector)
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard/mouse connector
JIR1	Reserved
CPUFAN1	CPU1 FAN connector
JFP1	Power and Reset Button connector
JFP2	HDD LED/SNMP SMBus/Speaker connector
JFP3	Power LED and keyboard lock connector
JOBS1	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
LAN1	Giga LAN RJ45 connector
LAN2	Giga LAN RJ45 connector
AC97	AC'97 Link connector
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
LANLED1	LAN1 and LAN2 LED connector
BMC1	BMC connector
USB12	Two USB port pin headers
USB34	Two USB port pin headers
EXPC11	HIROSA Extended PCI connector (Optional)

Jumpers

Label	Function
CMOS1	CMOS clear
JWDT1	Watchdog timer output selection
JSETCOM2	COM2 RS232/422/485 selection

CMOS1: CMOS clear function

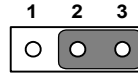
Closed Pins	Result
1-2	Keep CMOS data*
2-3	Clear CMOS



* default setting

JWDT1: Watchdog timer output option

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

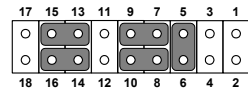


* default setting

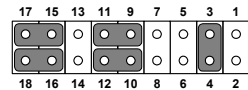
JSETCOM2: COM2 RS232 / 422 / 485 selection

COM2 Port Function Jumper Configuration

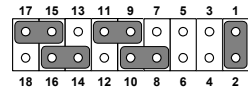
RS-232*



RS-422



RS-485



* 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 the manufacturer. Discard used batteries according to manufacturer's instructions

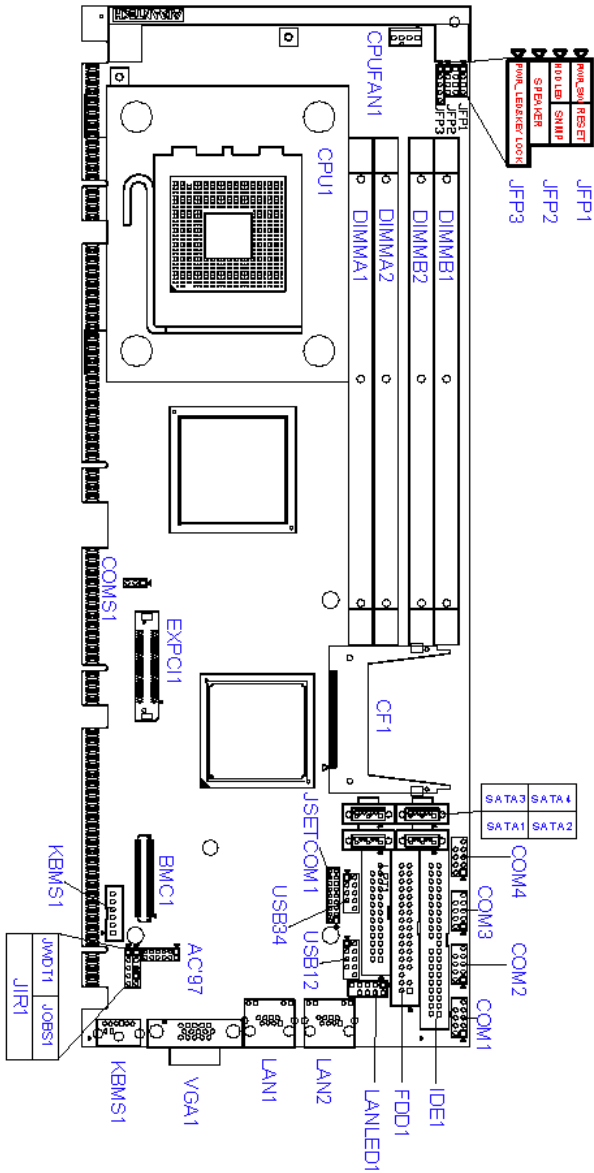
Safety Information

This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Board Layout

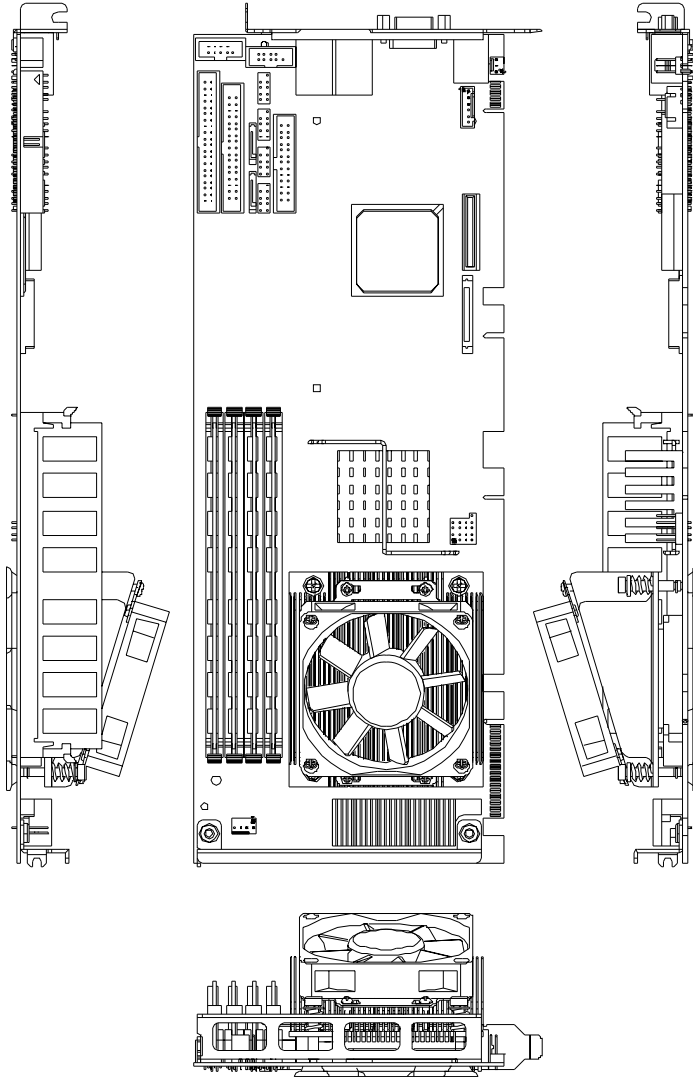
The location of all connectors and jumpers:



Board Layout: Jumper and Connector Location

CPU Cooler Installation

Please ensure that the CPU cooler included with the PCE-5120 is installed as follows:



CPU Cooler Installation