

PCE-5125 LGA1156 Intel® Core™i7/i5/i3/ Pentium®/ Xeon® PICMG 1.3 Single Host Board with (ECC) DDR3 / Dual GbE LAN Startup Manual

Packing List

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

- 1 PCE-5125 PICMG 1.3 Single Host Board
- 1 PCE-5125 startup manual P/N: 2002512510
- 1 CD with utility P/N: 2062512500
- 1 user note for full-sized CPU card P/N: 2002721020
- 2 Serial ATA HDD data cables P/N: 1700003194
- 2 Serial ATA HDD power cables P/N: 1703150102
- 1 COM + printer ports cable kit P/N: 1701260305
- 1 4-port USB cable kit P/N: 1700008461
- Keyboard and mouse Y cable P/N: 1700060202
- 1 jumper package P/N: 9689000068
- 1 warranty card P/N: 2190000902

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

- Note 1:** For detailed contents of PCE-5125, please refer to information on 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/Products/acrobat/readstep2.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://service.advantech.com.tw/support/>

This manual is for the PCE-5125 Series Rev. A1.

Part No. 2002512510 1st Edition,
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Specifications

General

- LGA1156 Intel® Core™ i7/i5/i3/Pentium®/Xeon®
- BIOS: AMI 64 Mb SPI BIOS
- Chipset: Intel® Q57 (QG2 SKU) and 3450 (WG2 SKU) Chipset
- System memory:
 - WG2 SKU: Up to 8 GB in two 240-pin DIMM sockets. Supports dual-channel DDR3 800/1066/1333 MHz SDRAM WITH or WITHOUT ECC function
 - QG2 SKUs: Up to 8 GB in two 240-pin DIMM sockets. Supports dual-channel DDR3 800/1066/1333 MHz SDRAM WITHOUT ECC function
- SATA interface: Supports up to six independent SATA2 hard drives (up to 300 MB/s) with software RAID 0, 1, 5, 10 functions

Note: PCE-5125 does NOT support IDE port.

- FDD interface: One FDD port
- Serial ports: Two RS 232 with pin Headers
- 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 header
- Watchdog timer: 255 level timer intervals
- USB (2.0): Nine ports on the CPU card, four ports on the backplane
- GPIO: One programmable 8-bit GPIO pin-header

VGA Interface

- Chipset: Intel® HD Graphics (Only the Core™ i5 6XX, Core™ i3 and Pentium® processors have Intel® HD Graphics embedded)
- 1 GB maximum shared memory with 2 GB and above system memory installed

Ethernet Interface

- Chipset supports:
 - LAN 1: Intel® 82578DM for all SKUs
 - LAN 2: Intel® 82583V for QG2 SKU; Intel® 82574L for WG2 SKU
- Connection: On-board RJ-45 connector x 2

Specifications

Mechanical and Environmental

- **Dimensions:** (L x W): 338 x 122 mm
- **Power supply voltage:** +3.3 V, +5 V, +12 V
- **Power requirements:**
 CPU: Processor: Intel® Core™ i7 860;
 Memory: 2 DDR3 1333 MHz 2 GB DIMMs
 Voltage: +12 V, +5 V, +3.3 V, +5 VSB, -12 V, -5 V
 Current: 6.78 A, 4.06 A, 2.72 A, 0.43 A, 0, 0
 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.

Connectors	
Label	Function
FDD1	FDD connector
LPT1	Parallel port, Parallel port x 1, supports SPP/EPP/ECP mode
LAN1	Intel® 82578DM for all SKUs
LAN2	Intel® 82583V for QG2 SKU; Intel® 82574L for WG2 SKU
VGA1	VGA connector
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard/mouse connector
COM1	Serial port: COM1; RS-232 (9-pin Box Header)
COM2	Serial port: COM2; RS-232 (Box Header)
JIR1	Infrared connector
JFP3 (Keyboard Lock and Power LED)	Power LED
	Suspend: Fast flash (ATX/AT)
	System On: ON (ATX/AT)
	System Off: OFF (AT)
JFP2	External speaker / SATA HDD LED connector
	Power Switch / Reset connector
JCASE1	Case Open
CPUFAN1	CPU FAN connector (4-pin)
LANLED1	LAN1/2 LED extension connector
HDAUD1	HD audio extension module connector

Jumpers and Connectors

USB34	USB port 3, 4
USB56	USB port 5, 6
USB78	USB port 7, 8
USB9	USB port 9
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
SATA5	Serial ATA5
SATA6	Serial ATA6
CPU1	CPU Socket
DIMMA1	Memory connector channel A
DIMMB1	Memory connector channel B
GPIO1	GPIO pin header (SMD pitch-2.0 mm)
MINIPCIE1/2	Mini PCIe socket
LPC1	COM port module expansion pin-header

Jumpers and Connectors

Jumpers

Label	Function
JCMOS1	CMOS clear
JWDT1	Watchdog timer output selection
JOBS1	HW Monitor Alarm

CMOS1: CMOS clear function

Closed Pins	Result
1-2	Keep CMOS data ()
2-3	Clear CMOS



H/W monitor alarm (JOBS1)

Function	Jumper Setting
Closed	Enable OBS alarm
Open	Disable OBS alarm



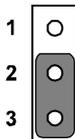
Closed



Open

JWDT1: Watchdog timer output option

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



Software Installation

The drivers for the PCE-5125 are located on the software installation CD. Please click through the folder and follow the screen instructions to install them.

Caution! The computer is supplied with a battery-powered realtime 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.



Declaration of Conformity

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

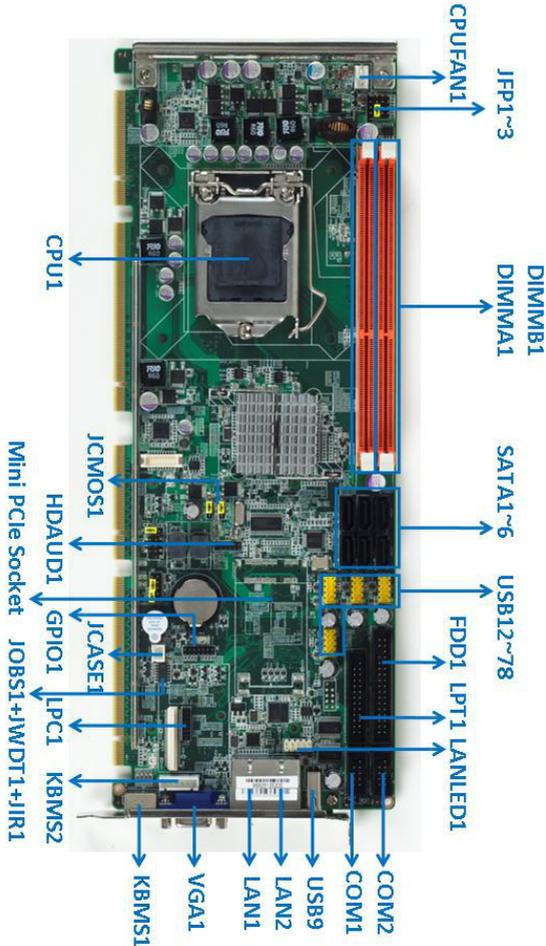


Figure 1: Board Layout: Jumper and Connector Locations