ADVANTECH

PCE-7214 Dual Socket 771 Intel® Quad / Dual-Core Xeon® Processor Card with PCIe / VGA / Dual GbE / FSB 1333 MHz Startup Manual

Packing List

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

- 1 PCE-7214 Dual Intel® Xeon® / LV Xeon® processor-based single board computer
- 1 PCE-7214 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 FDD cable P/N: 1700340640
- 2 Ultra ATA 66/100 HDD cables   P/N: 1701400452
- 2 Serial ATA HDD data cable   P/N: 1700003194
- 2 Serial ATA HDD power cable   P/N: 1703150102
- 1 Printer & COM port cable kit   P/N: 1701260305
- 1 Dual USB cable kit   P/N: 1700008461
- 1 Y cable for PS/2 KB & MS   P/N: 1700060202
- 1 Jumper Pack   P/N: 9689000068
- 1 User note for full-sized CPU card
- 1 Warranty card

Necessary Accessory (not included in the package)

- Xeon CPU Cooler for 110W TDP CPU (CPU Cooler Option 1)   P/N: 1750000282
- Low Profile Xeon CPU Cooler for 55W TDP CPU (CPU Cooler Option 2)   P/N: 1750001660

Note: Purchasing PCE-7214's proprietary CPU cooler(s) from Advantech is a must. Other brands of CPU coolers are NOT compatible with PCE-7214.

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

Note1: For detailed contents of PCE-7214, please refer to information on the enclosed CD-ROM (in PDF format).

Note2: Acrobat Reader is required to view any PDF file.

Standard SBC functions

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-7214 series Rev. A1

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Specifications

- **CPU:** Dual LGA771 socket Intel® Quad-Core / Dual-Core Xeon® / LV Xeon® processors with FSB 1333 MHz
- **BIOS:** AMI Flash BIOS (32 Mbit SPI Flash Memory)
- **Chipset:** Intel® E5100 MCH plus ICH7R I/O Hub
- **System memory:** Up to 32 GB in four 240-pin DIMM sockets. Supports Dual-channel DDR2 533/667 MHz ECC Registered DIMMs
- **SATA/EIDE hard disk drive interface:** Supports up to 6 independent Serial ATA hard drives (up to 300 MB/s) with software RAID 0, 1, 5, 10 as well as one IDE port (maximum 2 devices).
- **FDD interface:** Supports up to two FDDs
- **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):** 12 USB 2.0 ports, 8 ports on the CPU card, 4 ports on the backplane.

VGA Interface

- **Chipset:** XGI Volari Z11
- **Interface:** PCIe x 1
- **Display memory:** 64 MB frame buffer memory on chip
- **Video Output:** 1600 x 1200 at 70 Hz VGA output; 15 pin D-Sub connector x 1

Ethernet Interface

- **Chipset:**
- **Dual 10/100/1000 Mbps:** LAN 1: Intel 82566DM; LAN 2: Intel 82573V
- **Connection:** Onboard RJ-45 connector x 2

Mechanical and Environmental

- **Dimensions (L x W):** 338 x 122 mm
- **Power supply voltage:** +5 V, + 12 V, 3.3 V, +5 VSBY
- **Power consumption:**
  CPU: Two Intel® Xeon® 2.0 GHz / 4M/ 1333 MHz FSB / 65W TDP
  MEMORY: Four DDR2 2GB

  Test program: Intel Max power 100% + BurnIn test 4.0

  +12 V: 9.7 A

  +5 V: 7.4 A

  +3.3 V: 2.5 A

  +5 VSB: 0.71 A

  -12 V: 0 A

  -5 V: 0 A
- **Operating temperature:** 0 ~ 60° 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)
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard/mouse pin header
JIR1	Infrared port pin header
CPUFAN1	CPU1 FAN connector
CPUFAN2	CPU2 FAN connector
JFP1	Power and Reset Button connector
JFP2	HDD LED / SNMP(SM bus) / Speaker connector
JFP3	Power LED and keyboard lock connector
JOBS1	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
LAN12	Dual Giga LAN RJ45 connector with Transformer
HDAUD1	High Definition audio interface connector
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
SATA5	Serial ATA5
SATA6	Serial ATA6
USB12	Two USB port pin headers
USB34	Two USB port pin headers
USB56	Two USB port pin headers
USB78	Two USB port pin headers
LANLED1	LAN1 and LAN2 LED connector
GPIO1	GPIO header

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	Reserved
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 the manufacturer. Discard used batteries according to manufacturer's instructions
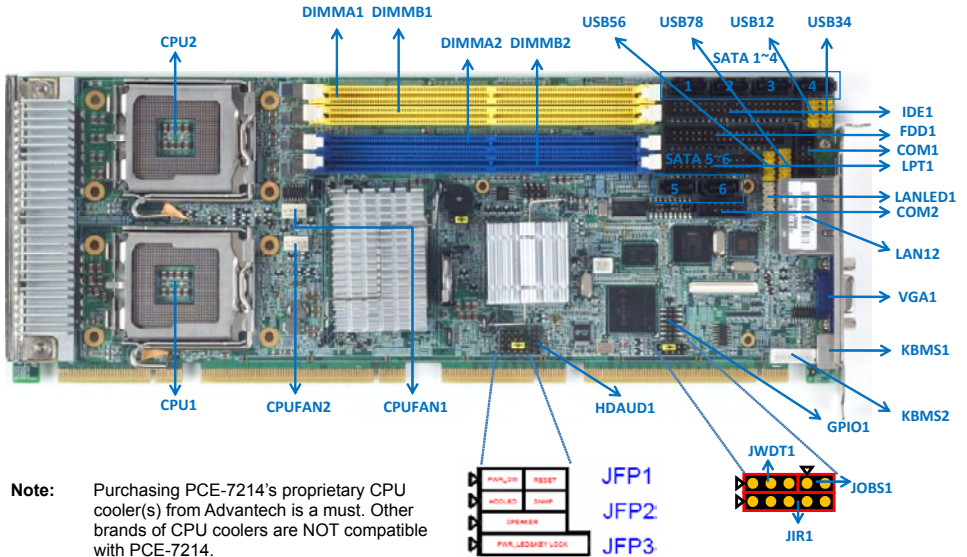
Safety Information

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.

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

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