ADVANTECH

PCI-7020 PCI Half-size Intel® LGA775 Processor Card with VGA/Single Gigabit Startup Manual

Packing List

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

- 1 PCI-7020 Intel® LGA775 processor-based single board Computer
- 1 PCI-7020 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 Power cable 12P / Big 4P x 2   p/n: 1700006196
- 1 Dual COM cable 2.0mm pitch   p/n: 1700008762
- 1 Serial ATA HDD data cable   p/n: 1700003194
- 1 Serial ATA HDD power cable   p/n: 1703150102
- 1 Printer port cable 2.0mm pitch   p/n: 1700002223
- 1 Y cable for PS/2 keyboard and PS/2 mouse   p/n: 1700060202
- 1 USB cable with 4 ports   p/n: 1700014398
- ATX feature cable   p/n: 1700002343
- 1 Jumper pack   p/n: 9689000002
- CPU cooler   p/n: 1960035861N000
- Warranty card

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

Note1: For detailed contents of PCI-7020, 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: PCI-7020 CPU cooler (p/n:1960035861N000), It must use the CPU thermal design power lower than 65 Watt.

Specifications

Standard SBC functions

- **CPU:**

Intel Core® 2 Duo Processor	(Long-term support)
Intel Pentium® Dual-Core Processor	E7400, E6400,
Intel Celeron® 400 Processor	E4300, E2160,
Intel Pentium® D Processor	Celeron 440
Intel Pentium® 4 Processor	
Intel Celeron® D Processor	

  Note: Please use the CPU that thermal design power lower than 65 Watt.

- **BIOS:** Award® SPI 8 Mb Flash memory BIOS
- **Chipset:** Intel 945GC with ICH7/ICH7R
- **System memory:** Dual Channel; Two SODIMM sockets accepts up to 4 GB DDR2 533/667 MHz SDRAM
- **SATA interface:** Supports three SATA2 HDD (300 MB/s) ; supports S/W RAID 0, 1 (LV sku has NO S/W RAID)
- **Serial ports:** Two basic RS-232 ports (can add optional four-port module, adjustable to RS-232/422/485)
- **Parallel port:** One 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):** 2 ports on rear I/O, 4 ports on board by 2.00 mm pitch box header

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:** Intel® 82574L
- **Connection:** Onboard RJ-45 connector

Mechanical and Environmental

- **Dimensions (L x W):** 185 x 122 mm (7.28" x 4.8")
- **Power supply voltage:** +5 V ~ ±12 V
- **Power requirements:**
  - CPU: Intel Core 2 Duo processor E7400 (2.8 GHz, 65 W)
  - Memory: 2 DDR2 667 MHz 4 GB DIMMs
  - Test program: Intel Max power 100% + BurnIn Test 4.0 +5 V @ 4.86 A, +12 V @ 4.38 A, +3.3 V @ 0A, +5 VSB @ 0.39 A, -12 V @ 0A, -5 V @ 0A
- **Operating temperature:** 0 ~ 60° C (depending on CPU)
- **Weight:** 0.185 kg (0.4 lbs) (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
LPT1	Parallel port
VGA1	VGA connector
CF1	CF socket
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	CPU 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	LAN LED connector
HDAUD1	HD Audio connector
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
USB12	Two USB port pin headers
USB34	Two USB port pin headers
USB5	USB connector
USB6	USB connector
DIMMA1	Memory connector channel A
DIMMB1	Memory connector channel B
LPC1	Low pin count connector
SPI1	BIOS SPI Interface
JCASE1	Case open
DVI1	DVI connector (only for F sku)

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.
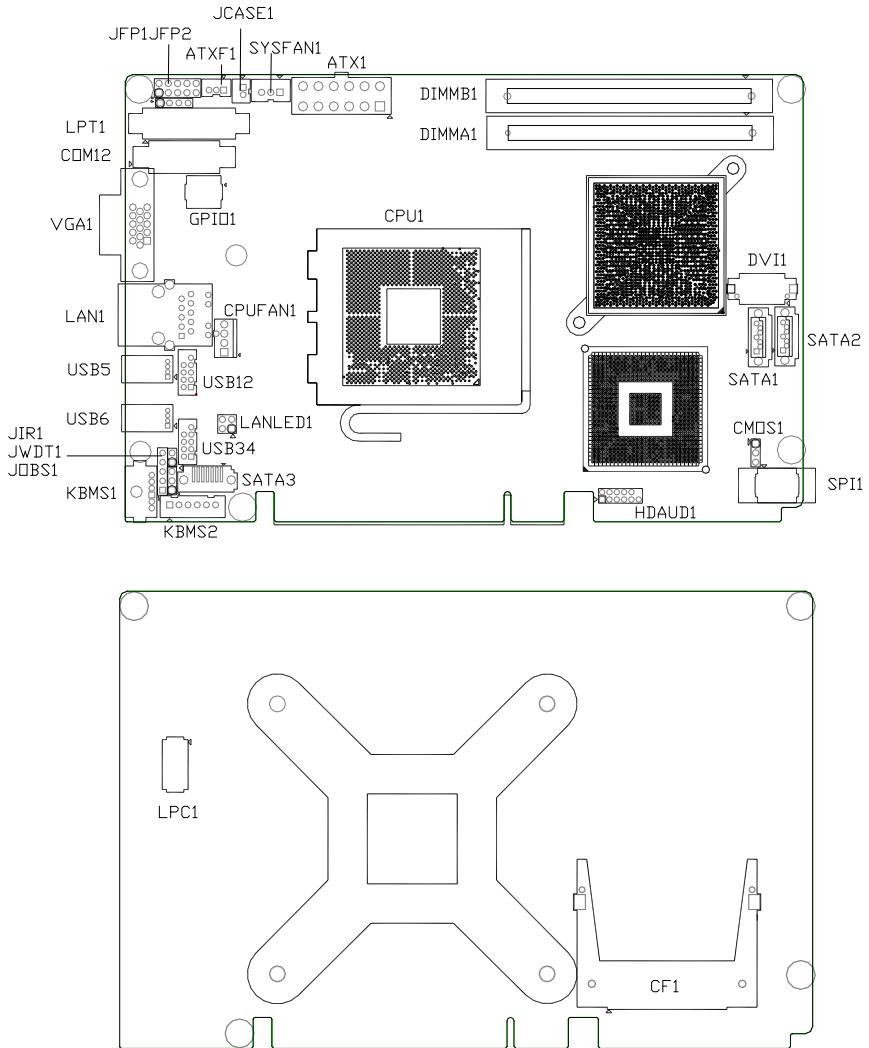
Safety Information

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