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ADVANTECH

PCI-7030 PCI Half-size Intel® ATOM™ N270 1.6GHz FSB533MHz with Dual GbE LAN/LVDS/DVI/2 SATA/6 COM (2 COMs on board, plus 4 COMs by module)

Startup Manual

Packing List

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

- 1 PCI-7030 PCI Half-sized Intel® ATOM™ N270 1.6GHz processor-based single board Computer
- 1 PCI-7030 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 Power cable p/n: 1700000265
- 1 FDD cable (600 mm) p/n: 1701340603
- 1 EIDE (HDD) cable p/n: 1701400452
- 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: 1700008887
- ATX feature cable p/n: 1700002343
- 1 Jumper pack p/n: 9689000002
- Warranty card

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

Note1: For detailed contents of PCE-7030, 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.)

For more information on this and other Advantech products, please visit our website at:

http://www.advantech.com

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For technical support and service, please visit our support website at:

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This manual is for the PCI-7030 series Rev. A1

Part No. 2002703010 1st Edition
July 2009

Specifications

Standard SBC functions

- **CPU:** Intel® ATOM™ N270 processor 1.6 GHz on board
- **BIOS:** Award® SPI 8 Mb Flash memory BIOS
- **Chipset:** Intel 945GSE with ICH7M
- **System memory:** Single Channel; One SODIMM sockets **accepts up to 2 GB DDR2 400/533 MHz SDRAM**
- **IDE interface:** One channel, supports Ultra ATA 100/66/33 and One CF slot
- **SATA interface:** Supports two SATA1 HDD (150 MB/s);
- **Serial ports:** Two dedicated serial RS-232 ports on board, plus four ports RS-232 or RS-422/485 w/Autoflow control by module
- **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:** 1 min or 1 sec, Max 65535 min or 65535 sec intervals
- **USB (2.0):** 6 Universal Serial Bus ports on board for VG sku; 5 for G2 sku.

VGA Interface

- **Chipset:** Intel 945GSE integrated
- **Display memory:** Shared with 224 MB system memory
- **Video Output:**
  - VGA mode: Supports up to QXGA 2048 x 1536 pixels with 32-bit color @ 75 Hz
  - LVDS mode: Supports 18/36-bit up to UXGA 1600 x 1200
- **DVI mode:** Maximum pixel lock of 400 MHz up to 2048 x 1536 resolutions @ 75 Hz

Ethernet Interface

- **Chipset:** Dual G-LAN : Intel® 82574L Chipset
- **Connection:** Onboard RJ-45 connector (1 for VG sku; 2 for G2 sku)

Mechanical and Environmental

- **Dimensions (L x W):** 185 x 122 mm (7.3" x 4.8")
- **Power supply voltage:** +5 V, +12 V, 5 Vsb
- **Power requirements:**
  +12 V @ 0.31 A , +5 V @ 2.19 A , +3.3 V @ 0 A ,+5 Vsb @ 0.04 A , +2 V @ 0 A
  Measuring the maximum current value with system under maximum load (ATOM 1.6G + DDR2 533 / 2G)
- **Operating temperature:** 0 ~ 60° C (32 ~ 140° F) (operation humidity: 40°C @85% RH Non-Condensing)
- **Weight:** 0.365kg (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.

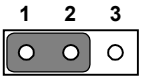
The table below lists the function of each of the connectors and jumpers.

Connectors	
Label	**Function**
JFP1(1-2)	HDD LED connector
JFP1(3-4)	Power LED connector
JFP1(5-6)	Suspend LED connector
JFP1(7-8)	Reset connector
JFP1(9-10)	ATX soft power switch
JFP2(1-2)	FAN fail LED Connector
JFP2(3-4)	Thermal fail LED Connector
JIR1	IR connector
IDE1	IDE connector
CF1	CF Socket
FDD1	FDD connector
LPT1	Parallel port
USB12	USB port 1,2
USB34	USB port 3,4
USB5	USB port 5
SATA1	Serial ATA1
SATA2	Serial ATA2
COM12	Serial Port: COM1 COM2
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard and mouse connector
VGA1	VGA connector
LAN1	Dual Gigabit Ethernet connector
ATXF1	ATX feature connector
ATX1	ATX power connector
CPUFAN1	CPU FAN connector (3-pin)
SYSFAN1	System FAN connector (3-pin)
HDAUD1	High Definition audio connector
GPIO1	GPIO pin header
BT1	RTC battery connector
DVI1	DVI connector
LPC1	LPC connector
SPI_CN1	SPI flash programming connector
U16	SPI flash socket
SMBUS1	SM BUS connector
LVDS1	LVDS connector
INV1	Inverter connector

Jumpers	
Label	**Function**
CMOS1	CMOS clear
JLVDS1	LVDS voltage selection
JWDT1	Watchdog timer output selection

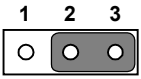
CMOS1: CMOS clear function	
Closed Pins	**Result**
1-2	Keep CMOS data *
2-3	Clear CMOS

* default setting



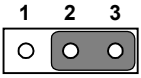
JLVD1: LCD Power 3.3 V/5 V Selector	
Closed Pins	**Result**
1-2*	3.3 V*
2-3	5 V

* 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

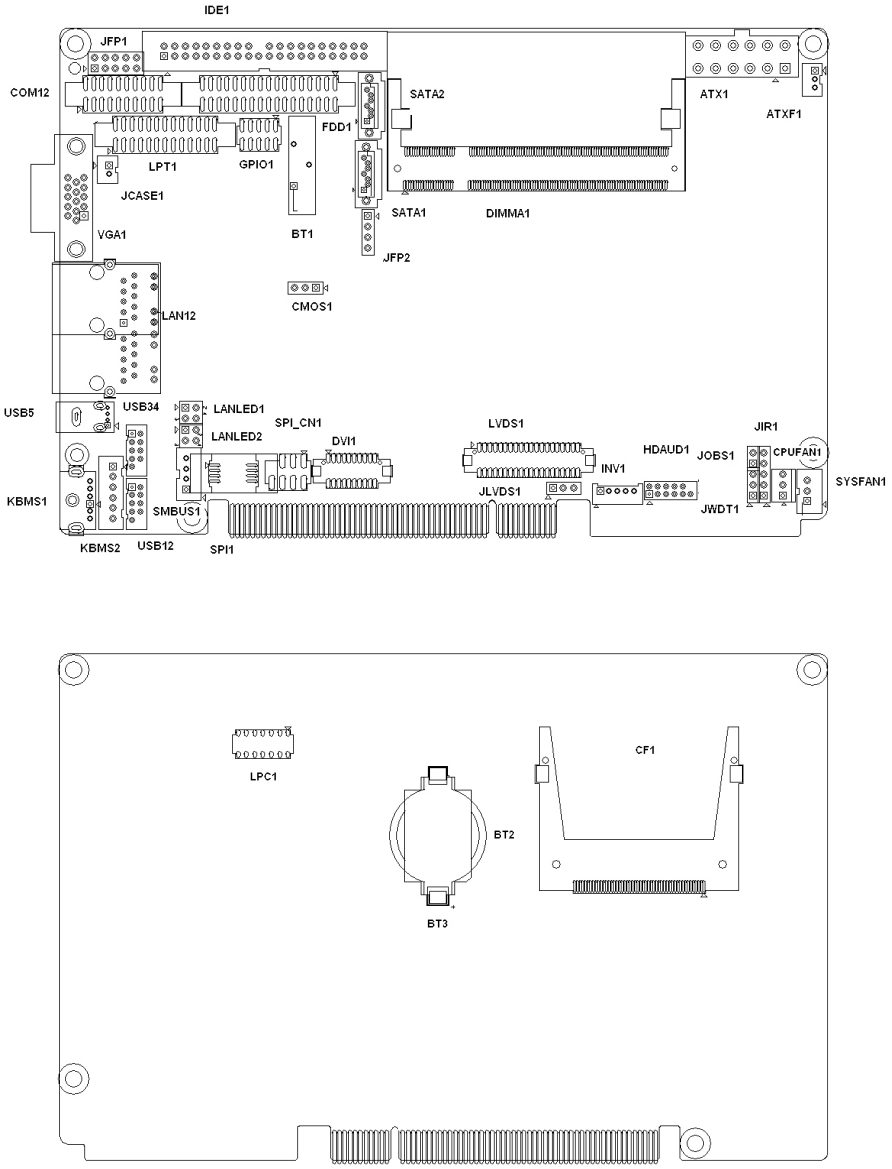
Caution! The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by Advantech. Discard used batteries according to manufacturer's instructions.

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 Locations

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