ADVANTECH

PCE-5128/7128 LGA1155 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. 1 x PCE-5128/7128 PICMG 1.3 Single Host Board
2. 1 x PCE-5128/7128 startup manual
3. 1 x CD with utility   P/N: 2066512800
4. 1 x User note for full-sized CPU card
         P/N: 2002721020
5. 2 x Serial ATA HDD data cables   P/N: 1700003194
6. 2 x Serial ATA HDD power cables P/N: 1703150102
7. 1 x COM + printer ports cable kit P/N: 1701260305
8. 1 x 4-port USB cable kit   P/N: 1700008461
9. Keyboard and mouse Y cable   P/N: 1700060202
10. 1 x Jumper package   P/N: 9689000068
11. 1 x 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-5128/7128, please refer to user manual in the enclosed CD-ROM (in PDF format).

Note 2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: get. adobe.com/reader (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://support.advantech.com.tw/support/default. aspx

This manual is for the PCE-5128/7128 Series Rev. A1.

Part No. 2006512800   1st Edition,
Printed in China   August 2013

Specifications

General

- LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Xeon®
- **BIOS:** AMI 128 Mb SPI BIOS
- **Chipset:**
  - PCE-7128: Intel C226
  - PCE-5128: Intel Q87
- **System memory:**
  - PCE-7128: Supports dual channel DDR3 1333/1600 8GB per DIMM with ECC; Max. capacity is up to 16GB
  - PCE-5128: Supports dual channel DDR3 1333/1600 8GB per DIMM without ECC; Max. capacity is up to 16GB
- **SATA ports:** PCE-5128/7128: Support 6 SATA3.0 with Raid 0, 1, 5, 10.
- **Note 1:** SATA3.0: 600MB/sec; SATA2.0:300MB/sec
- **Note 2:** PCE-5128/7128 does NOT support any IDE ports
- **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:** PCE-5128/7128: 9*USB2.0 (Pin-header*4+USB Type A*1+, 4 on backplane)
- **USB 3.0:** PCE-5128/7128: 3*USB3.0 (Pin-Header*2+Rear*1)
- **GPIO:** One programmable 8-bit GPIO pin-header

VGA Interface

- **Chipset:** Intel® HD Graphics
- Shared system memory is subject to OS

Ethernet Interface

- **Chipset supports:**
  - LAN 1: Intel® I217LM
  - LAN 2: Intel I211(PCE-5128); Intel I210AT(PCE-7128)v
- **Connection:** 2 on-board RJ-45 connector with LED indicators

Mechanical and Enviromental

- **Dimensions:** (L x W): 338 x 122 mm
- **Power supply voltage:** +12 V, +5 V, +3.3 V, +5 VSB
- **Power requirements:**
  CPU: Processor: Intel® Core™ i7-4770S;
  Memory: 2 DDR3 1600 MHz 8 GB DIMMs
  Voltage: +12 V, +5 V, +3.3 V, +5 VSB, -12 V, -5 V
  Current: 4.02 A, 1.36 A, 0.81A, 0.09A, 0A, 0A
  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
LPT1	Parallel port, Parallel port x 1, supports SPP/EPP/ECP mode
LAN1	Intel® I217LM
LAN2	Intel® I211(PCE-5128); Intel® I210AT(PCE-7128)
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 (9-pin 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 (ATX/AT)
JFP2	External speaker / SATA HDD LED connector
JFP1	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
USB12	USB port 1, 2
USB3	USB port 3
USB4	USB port 4
USB56	USB port 5, 6
USB78	USB port 7, 8
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)
LPC1	COM port module expansion pin-header

Jumpers	
Label	Function
JCMOS1	CMOS clear
JME1	Clear ME data
JWDT1	Watchdog timer output selection
JOBS1	HW Monitor Alarm

JCMOS1/JME1: Clear CMOS/ME data	
Closed Pins	Result
1-2	Keep CMOS/ME data (Default)
2-3	Clear CMOS/ME data

Closed   Open

H/W monitor alarm (JOBS1)	
Function	Jumper Setting
Closed	Enable OBS alarm (Default)
Open	Disable OBS alarm
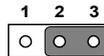
JWDT1: Watchdog timer output option	
Closed Pins	Result
1-2	Reserved
2-3	System reset (Default)
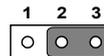
JERP1: Deep Sleep S5	
Closed Pins	Result
1-2	Enabled
2-3	Disabled (Default)

Software Installation

The drivers for the PCE-5128/7128 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 conditons:

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
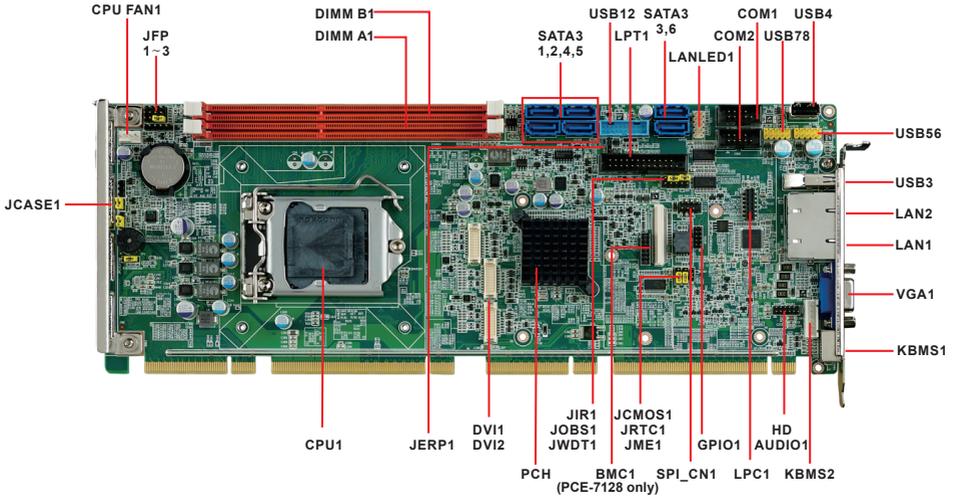
Figure 1: Board Layout: Jumper and Connector Locations