ADVANTECH

PCE-3029/PCE-4129 LGA1151 Intel® Xeon, Core™ i7/i5/i3/Celeron®/Pentium® PICMG1.3 Half-size System Host Board with DDR4 / Dual GbE LAN
Startup Manual

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

1. 1 PCE-3029 or 4129 PICMG 1.3 System Host Board
2. 1 CD with utility
3. 1 PCE-3029/PCE-4129 start-up manual
4. 1 Serial ATA HDD data cable
5. 1 Serial ATA HDD power cable
6. 1 2-port COM cable kit
7. 1 4-port USB 2.0 cable kit
8. 1 2-port USB 3.0 cable kit
9. 1 1-port LPT cable kit
10. Power converter (Connecting from peripheral power connector on power supply to PWR1 on board)
11. 1 Keyboard and mouse Y cable
12. 1 Jumper package
13. 1 Warranty card

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

Note 1: For detailed contents of PCE-3029/PCE-4129, please refer to information on the enclosed CD-ROM (in PDF format).

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-3029/PCE-4129 Series Rev. A1.

Specifications

General
- **CPU:** LGA1151-socket Core i7/i5/i3, Pentium and Xeon E3-1200v5 series processors
Note: Only PCE-4129 supports Intel Xeon processors.
- **L2 Cache:** Please refer to CPU specification for detailed information.
- **BIOS:** AMI SPI BIOS (128 Mb SPI)
- **System Chipset:** Intel C236 (PCE-4129); Intel H110 (PCE-3029)
- **System memory:**
  - PCE-4129: Up to 32 GB in two 260-pin SO-DIMM sockets. Supports dual-channel DDR4 1866/2133 SDRAM WITH or WITHOUT ECC function.
  - PCE-3029: Up to 32 GB in two 260-pin SO-DIMM sockets. Supports dual-channel DDR4 1866/2133 SDRAM WITHOUT ECC function.
- **SATA hard disk drive interface:** PCE-3029 supports three SATA 3.0 ports without RAID function, and PCE-4129 supports four SATA 3.0 ports with SW RAID 0,1,5,10.
- **Serial ports:** Two RS-232 serial ports
- **Parallel port:** 1, supports EPP/SPP/ECP mode
- **Keyboard/mouse connector:** Supports 1 external 6-pin header
- **Watchdog timer:** Programmable 1~255 sec
- **USB:** USB 3.0 x3, USB 2.0 x7
- **GPIO:** 1 programmable 8-bit GPIO pin-header

Display
- **Chipset:** Intel® HD Graphics embedded in the processor.

Ethernet Interface
- Chipset supports:
  - LAN 1: Intel® I219V (PCE-3029) and I219LM (PCE-4129).
  - LAN 2: Intel® I211AT(PCE-3029) and I210AT (PCE-4129).
- Connection: 2 on-board RJ-45 connector with LED indicators

Mechanical and Enviromental
- Dimensions: (L x W): 167.64 x 126.39 mm
- Power supply voltage: +3.3 V, +5 V, +12 V, 5VSB
- Power requirements:
PCE-3029:

Intel Core i7-6700 (3.4GHz), DDR4 2133 8GB *2					
Voltage	12V	5V	3.3V	5VSB	-12V	-5V
Current (A)	4.6	0.01	0.32	0.08	0	0

Specifications (Cont.)

PCE-4129:

E3-1225 v5 (3.30GHz), DDR4 2133 8GB *2					
Voltage	12V	5V	3.3V	5VSB	-12V	-5V
Current (A)	4.6	0.01	0.32	0.08	0	0

- Operating temperature: 0 ~ 60° C (depending on CPU)
- Weight: 0.33 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, supports SPP/EPP/ECP mode
LAN1	PCE-3029: Intel I219V PCE-4129: Intel I219LM
LAN2	PCE-3029: Intel I211AT PCE-4129: Intel I210AT
VGA1	VGA connector
KBMS1	External keyboard/mouse connector
COM12	Box header for RS-232*2
FP1	HDD LED, power LED, SNMP SM_Bus, reset, power on/off
JCASE1	Case open
CPUFAN1	CPU FAN connector (4-pin)
LANLED1	LAN1/2 LED connector
HDAUD1	HD audio extension module connector
USB1	USB port 1 (USB 3.0 port)
USB23	USB port 2, 3 (USB 3.0 port)
USB45	USB port 4, 5 (USB 2.0)
USB67	USB port 6, 7 (USB 2.0)
USB89	USB port 8, 9 (USB 2.0)
USB11	Type A connector on board (USB 2.0)
SATA0	Serial ATA1 (SATA 3.0)
SATA1	Serial ATA2 (SATA 3.0)
SATA2	Serial ATA3 (SATA 3.0)
SATA3	Serial ATA4 (PCE-4129: 3.0)
CPU1	CPU Socket
DIMMA1	Memory connector channel A
DIMMB1	Memory connector channel B
GPIO1	GPIO pin header
LPC1	Low pin count module expansion pin-header
PWR1	12 V, 5 V power connector
DVI1	DVI connector
DP1	Display pin header to stack board (Display type depends on optional stack board)
EXPCIE1	mini PCIe pin header to stack board
MINIPCIE MSATA	M-SATA (default) or mini-PCIe connector (optional for PCE-4129)

Jumpers	
Label	**Function**
JCMOS1	CMOS clear
JWDT1+JOBS1	Hardware monitor alarm+watchdog timer output selection
JME1	Enable ME

JCMOS1: Clear CMOS	
Closed Pins	**Result**
1-2	Keep CMOS (Default)
2-3	Clear CMOS

JOBS1+JWDT1: Hardware monitor alarm+watchdog timer output selection	
Function	**Jumper Setting**
2-3	Enable watchdog timer (Default)
4-5	Enable Hardware monitor alarm (Default)
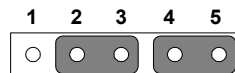
JME1: Enable ME	
Closed Pins	**Result**
1-2	Enable ME (Default)
2-3	Disable ME
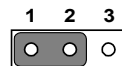
Software Installation

The drivers for the PCE-3029 are located on the software installation CD. Please click through the folder and follow the on 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.
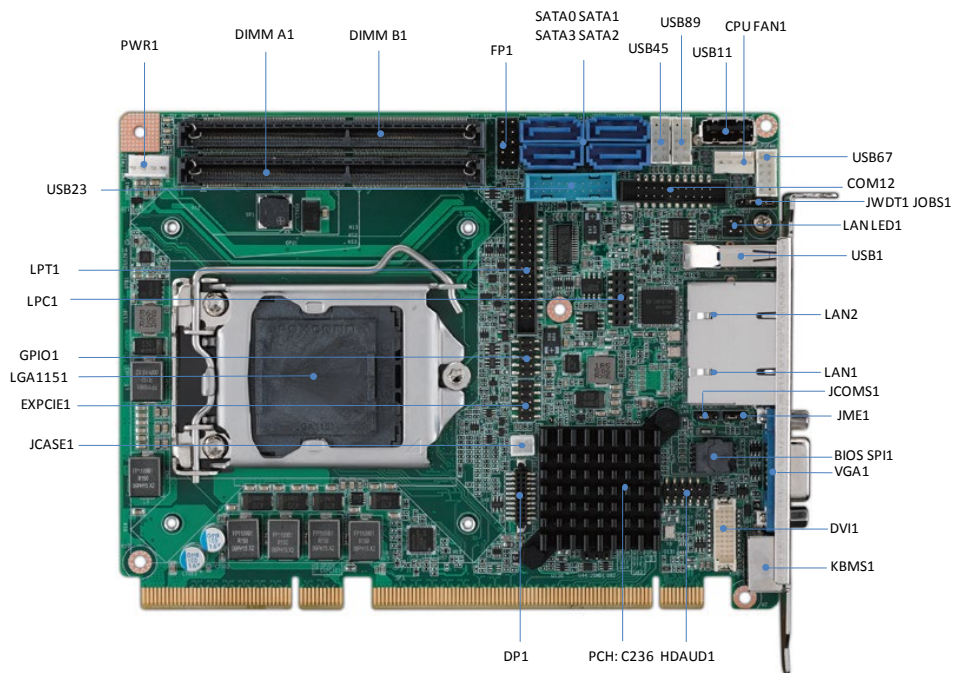
Declaration of Conformity

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.
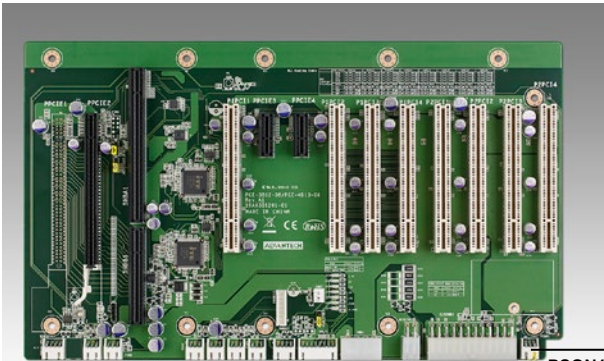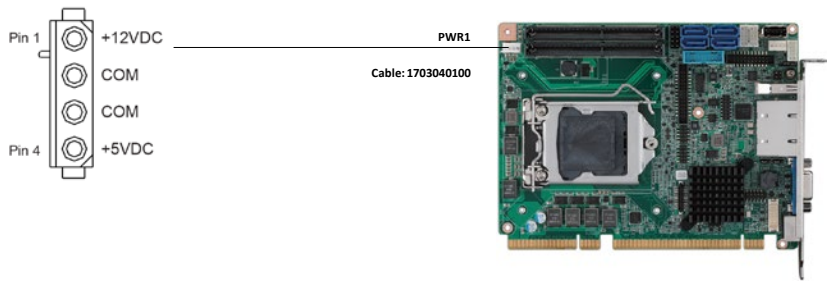
Board Layout

Board Layout: Jumper and Connector Locations

How to Power on PCE-3029/PCE-4129

To power on PCE-3029/PCE-4129 with backplanes, please ensure that below connectors and jumper are correctly connected and chosen.

Pin 1	+12VDC	PWR1
	COM	Cable: 1703040100
	COM	
Pin 4	+5VDC	

PSON1

PSON1: ATX/AT Mode Selection	
Jumper Setting	**Function**
1-2	AT mode
2-3 (Default)	ATX mode