

# PCE-5B12D-04 (PCE-7B13D-04) Backplane: 12 (13) Slot Dual-Segment BP, 2 PICMIG 1.3, 2 (3) PCIe, 8 32-bit PCI Startup Manual

## Packing list

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

- 2 Two Port USB Cable p/n: 1700002204
- PCE-5B12D-04 (PCE-7B13D-04) User Manual
- M4\*6\*0.7 Round Screws (23 pcs) p/n: 1939000410
- 2 years quality warranty card p/n: 2190000902

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

## Specifications

### Standard Functions

- **PICMIG 1.3 slots:**  
PCE-7B13D-04 supports PCE-7xxx CPU boards  
PCE-5B12D-04 supports PCE-5xxx CPU boards
- **PCIe slots:**  
PCE-7B13D-04 supports 1+2 PCIe x 8 slot  
PCE-5B12D-04 supports 1+1 PCIe x 16 slot
- **32-bit PCI:**  
PCE-7B13D-04 supports 4+4 32-bit / 33-MHz PCI slots  
PCE-5B12D-04 supports 4+4 32-bit / 33-MHz PCI slots
- **USB (2.0) support:**  
PCE-7B13D-04 supports 4+4 USB 2.0 ports on back-plane.  
PCE-5B12D-04 supports 4+4 USB 2.0 ports on back-plane.

### Mechanical and Environment

- **Dimensions:** 327.66 x 315.45 mm
- **Power supply voltage:** +12 V, +5 V, -12 V, -5 V, +5 V SBY, +3.3 V
- **Power requirements:** Refer to the CPU Board, add-on Card & Peripherals
- **Operating temperature:** 0 ~ 60° C

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<http://www.advantech.com>

<http://www.advantech.com.tw/Network/>

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

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This manual is for the PCE-5B12D-04 (PCE-7B13D-04) series

Part No. 200K5B1200  
Printed in China

1st Edition  
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## Connectors and Jumpers

This table shows the function of each jumper and connector:

| Connectors    |   |
|---------------|---|
| Label         | Function  |
| SHBA1~SHBD1   | PICMG1.3 CPU board slot                                     |
| SHBA2~SHBD2   | PICMG1.3 CPU board slot                                     |
| PPCIEA1       | PCE-5B12D-04: PCIe x 16 slot<br>PCE-7B13D-04: PCIe x 8 slot |
| PPCIEB1       | PCE-7B13D-04 PCIe x 8 slot                                  |
| PPCIEB2       | PCE-5B12D-04 PCIe x 16 slot<br>PCE-7B13D-04 PCIe x 8 slot   |
| PPCIA1~PPCIA4 | 32 Bit / 33 MHz PCI Bus slot                                |
| PPCIB1~PPCIB4 | 32 Bit / 33 MHz PCI Bus slot                                |
| EATXPWR1      | ATX2.0 24-pin Power Connector                               |
| EATX12V1      | ATX 12V Auxiliary 8-pin Power Connector                     |
| ATX12V1       | ATX 12V 4-pin Power Connector                               |
| PWR3V1~PWR3V2 | 3.3V Auxiliary Power Connector                              |
| VOLT1         | Alarm board / CMM Power Connector                           |
| FAN1~FAN3     | FAN Connector (Flat type)                                   |
| FAN4~FAN7     | FAN Connector (Vertical type)                               |
| FANDEC1       | FAN speed detector Connector                                |
| SMBUSA1       | SMBus Connector for chassis monitor                         |
| SMBUSB1       | SMBus Connector for chassis monitor                         |
| JFPA1         | Power and Reset button Connector                            |
| JFPB1         | Power and Reset button Connector                            |
| IPMBA1        | IPMB Connector  |
| USBA12        | Two USB port pin header                                     |
| USBA34        | Two USB port pin header                                     |
| USBB12        | Two USB port pin header                                     |
| USBB34        | Two USB port pin header                                     |
| PSON2         | 5VSB & PS_ON Pin header                                     |

A12-pin AT PSU requires that the 5VSB & PS\_ON be connected to PSON2 if it is to behave as an ATX PSU.

| Jumpers |                         |
|---------|-------------------------|
| Label   | Function                |
| PSON1   | ATX / AT Mode Selection |

| EATXPWR1 |          |
|----------|----------|
| Pin      | Name     |
| 1        | 3.3 V    |
| 2        | 3.3 V    |
| 3        | GND      |
| 4        | 5 V      |
| 5        | GND      |
| 6        | 5 V      |
| 7        | GND      |
| 8        | Power OK |
| 9        | 5 V SBY  |
| 10       | 12 V     |
| 11       | 12 V     |
| 12       | 3.3 V    |
| 13       | 3.3 V    |
| 14       | -12 V    |
| 15       | GND      |
| 16       | PSON#    |
| 17       | GND      |
| 18       | GND      |
| 19       | GND      |
| 20       | -5 V     |
| 21       | -5 V     |
| 22       | 5 V      |
| 23       | 5 V      |
| 24       | GND      |

| ATX12V1 |      |
|---------|------|
| Pin     | Name |
| 1       | GND  |
| 2       | GND  |
| 3       | 12 V |
| 4       | 12 V |

| EATX12V1 |      |
|----------|------|
| Pin      | Name |
| 1        | GND  |
| 2        | GND  |
| 3        | GND  |
| 4        | GND  |
| 5        | 12 V |
| 6        | 12 V |
| 7        | 12 V |
| 8        | 12 V |

| PWR3V1 & PWR3V2 |      |
|-----------------|------|
| Pin             | Name |
| 1               | 3.3V |
| 2               | 3.3V |
| 3               | 3.3V |
| 4               | GND  |
| 5               | GND  |
| 6               | GND  |

| VOLT1 |         |
|-------|---------|
| Pin   | Name    |
| 1     | 5 V SBY |
| 2     | GND     |
| 3     | GND     |
| 4     | -5 V    |
| 5     | 5 V     |
| 6     | 3.3 V   |
| 7     | -12 V   |
| 8     | 12 V    |

| FAN1~FAN7 |               |
|-----------|---------------|
| Pin       | Name          |
| 1         | GND           |
| 2         | 12 V          |
| 3         | FANIO1~FANIO7 |

| FANDEC1 |        |
|---------|--------|
| Pin     | Name   |
| 1       | FANIO1 |
| 2       | FANIO2 |
| 3       | FANIO3 |
| 4       | FANIO4 |
| 5       | FANIO5 |
| 6       | FANIO6 |
| 7       | FANIO7 |

| SMBUSA1 & SMBUSB1 |          |
|-------------------|----------|
| Pin               | Name     |
| 1                 | 5 V      |
| 2                 | C-SMBBUS |
| 3                 | C-SMBDAT |
| 4                 | GND      |

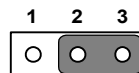
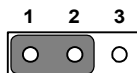
| IPMBA1 |          |
|--------|----------|
| Pin    | Name     |
| 1      | IPMB_CLK |
| 2      | IPMB_DAT |
| 3      | GND      |

| USB A12 & USB B12 |        |
|-------------------|--------|
| Pin               | Name   |
| 1                 | USBV0  |
| 2                 | USBV0  |
| 3                 | USBD0- |
| 4                 | USBD1- |
| 5                 | USBD0+ |
| 6                 | USBD1+ |
| 7                 | GND    |
| 8                 | GND    |
| 9                 | Null   |
| 10                | GND    |

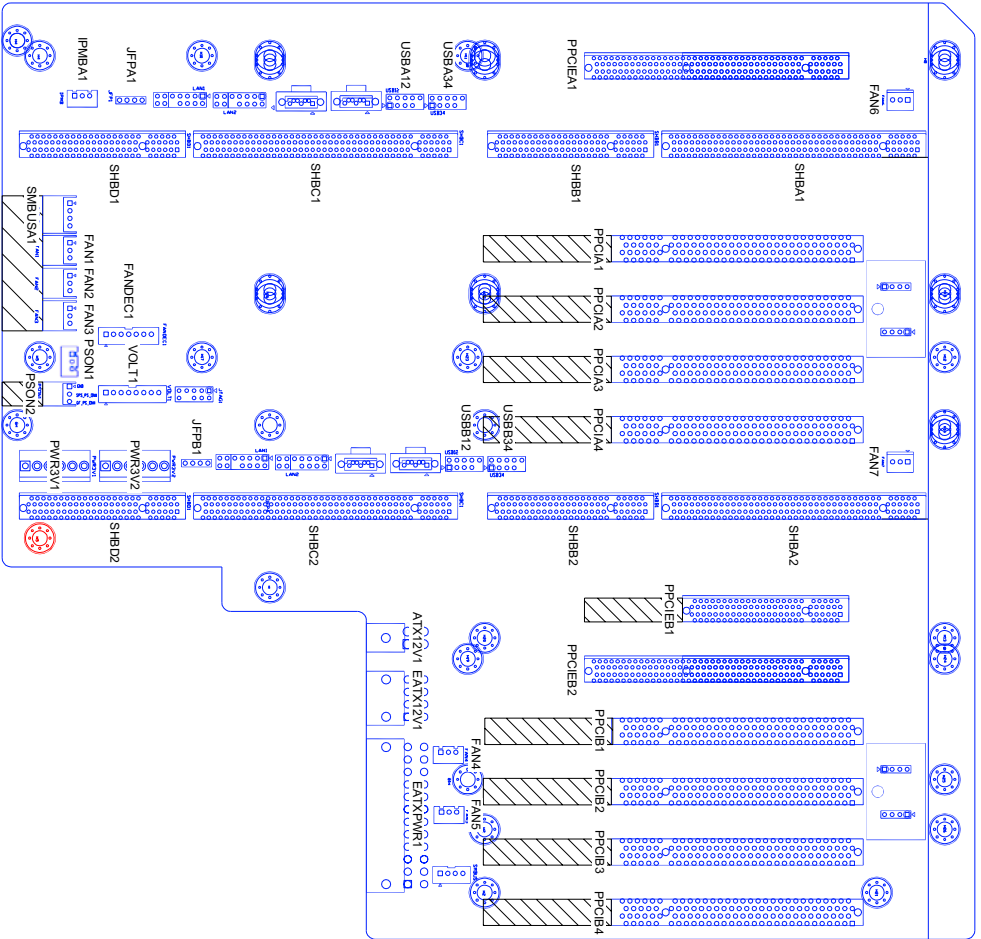
| USB A34 & USB B34 |        |
|-------------------|--------|
| Pin               | Name   |
| 1                 | USBV2  |
| 2                 | USBV2  |
| 3                 | USBD2- |
| 4                 | USBD3- |
| 5                 | USBD2+ |
| 6                 | USBD3+ |
| 7                 | GND    |
| 8                 | GND    |
| 9                 | Null   |
| 10                | GND    |

| PSON1: ATX / AT Mode Selection |          |
|--------------------------------|----------|
| Setting                        | Function |
| 1-2                            | AT Mode  |
| 2-3*                           | ATX Mode |

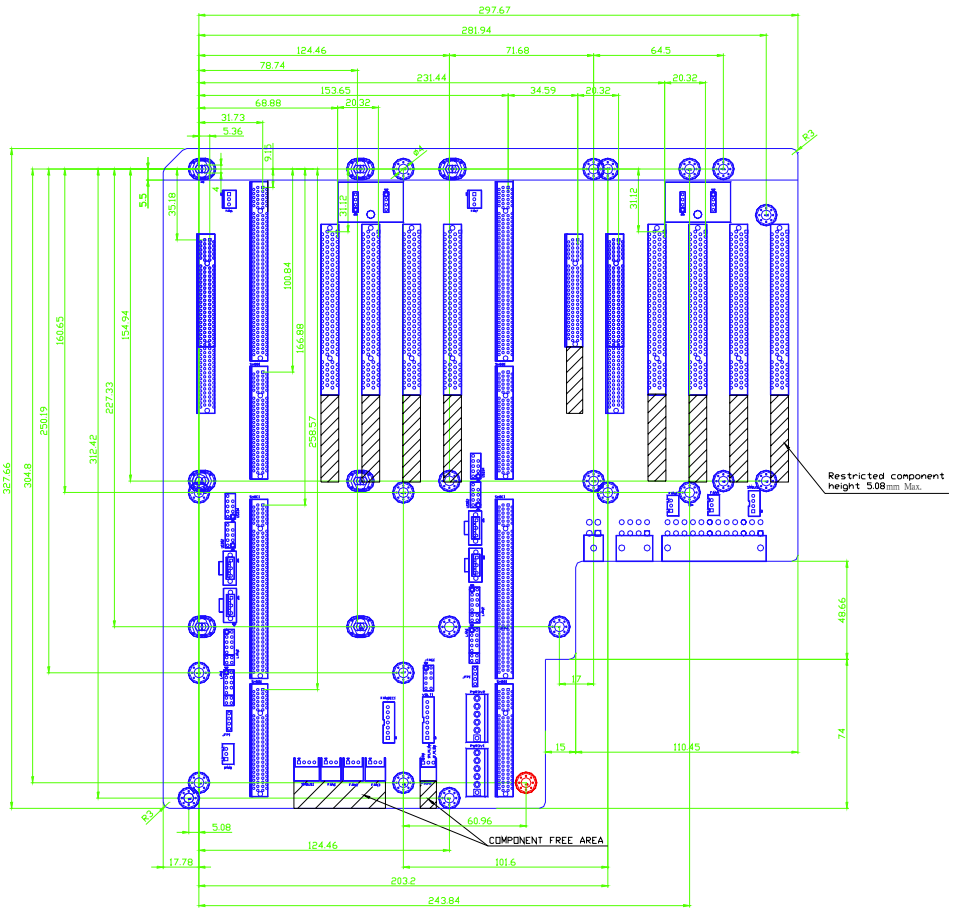
\*: Default



# Locating Connectors and Jumpers

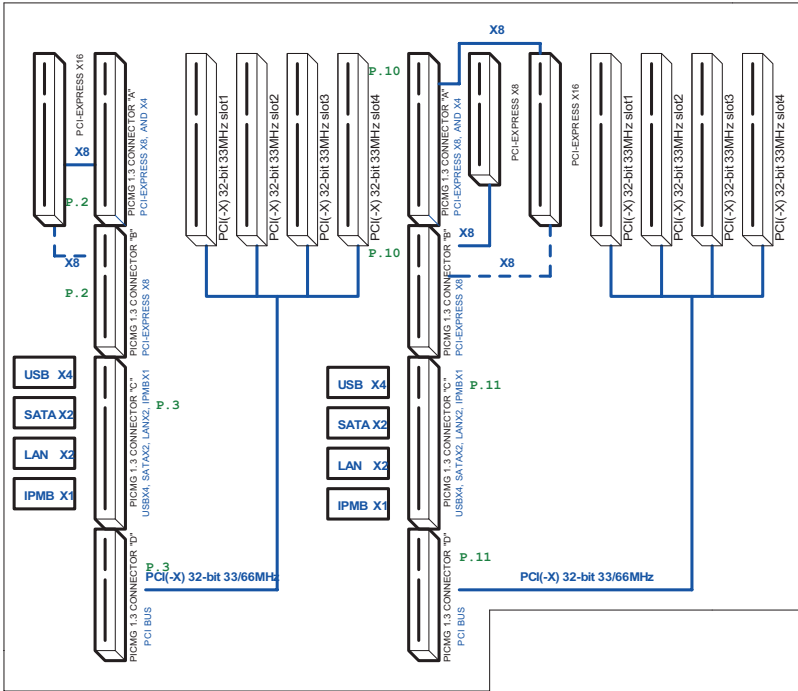


# Board Dimensions



# Board Diagram

PCE-5B12D/7B13D-04 BLOCK DIAGRAM



PICMG\_v1.3 BACKPLANE

## PCI Routing Tables

### PPCIA1~PPCIA4 PCI 32-bit

| PCI Slot | IDSEL   | PCI SLOT INT# to SHBD1 IRQ# Pin Route |       |       |       |
|----------|---------|---------------------------------------|-------|-------|-------|
|          |         | INTA#                                 | INTB# | INTC# | INTD# |
| PPCIA1   | S1_AD31 | IRQB#                                 | IRQC# | IRQD# | IRQA# |
| PPCIA2   | S1_AD30 | IRQC#                                 | IRQD# | IRQA# | IRQB# |
| PPCIA3   | S1_AD29 | IRQD#                                 | IRQA# | IRQB# | IRQC# |
| PPCIA4   | S1_AD28 | IRQA#                                 | IRQB# | IRQC# | IRQD# |

### PPCIB1~PPCIB4 PCI 32-bit

| PCI Slot | IDSEL   | PCI SLOT INT# to SHBD1 IRQ# Pin Route |       |       |       |
|----------|---------|---------------------------------------|-------|-------|-------|
|          |         | INTA#                                 | INTB# | INTC# | INTD# |
| PPCIB1   | S2_AD31 | IRQB#                                 | IRQC# | IRQD# | IRQA# |
| PPCIB2   | S2_AD30 | IRQC#                                 | IRQD# | IRQA# | IRQB# |
| PPCIB3   | S2_AD29 | IRQD#                                 | IRQA# | IRQB# | IRQC# |
| PPCIB4   | S2_AD28 | IRQA#                                 | IRQB# | IRQC# | IRQD# |