

PCE-5B12(7B13)-07 Backplane: 12(13)-slot BP for 14-Slot Chassis, 1 PICMIG 1.3, 4(5) PCIe, 7 32-bit PCI Startup Manual

Packing List

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

- One 2 ports USB cable
- PCE-5B12(7B13)-07 Startup Manual
- M4*6*0.7 Round Screws (20 pieces)
- 2-year quality warranty card

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

Specifications

Standard Functions

- **PICMG 1.3 Slot:**
 - PCE-5B12-07 supports PCE-50XX/51XX/71XX CPU Cards
 - PCE-7B13-07 supports PCE-51XX/71XX CPU Cards
- **PCIe Slots:**
 - PCE-5B12-07: 1 PCIe x16, 3 PCIe x4
 - PCE-7B13-07: 2 PCIe x8, 3 PCIe x4
- **32-bit PCI Slots:**
 - PCE-5B12-07: 7 32-bit/33-MHz PCI
 - PCE-7B13-07: 7 32-bit/33-MHz PCI
- **USB (2.0) support:** Four Universal Serial Bus ports to Backplane

Note: Some add-on cards installed on this backplane may cause CPU card BIOS resource allocation problems, if this occurs please contact Advantech technical support staff for help in solving the problems.

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:

<https://www.advantech.com/support>

This manual is for the PCE-5B12-07(PCE-7B13-07) series.

Part No. 200K5B1212

Printed in China

3rd Edition

February 2023

Specifications (Cont.)

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:** Depends on the CPU board, add-on card & peripherals
- **Operating temperature:** 0 ~ 60°C

Connectors and Jumpers

This table shows the function of each jumper and connector:

Connectors	
Label	Function
SHBA1~SHBD1	PICMG1.3 CPU board slot
PPCIE2	PCIe x 16 slot (only on PCE-5B12-07)
PPCIE1, PPCIE2	PCIe x8 slots (only on PCE-7B13-07)
P1PCIE1~P1PCIE3	PCIe x4 slots
P1PCI1~ P1PCI3	32 Bit/33 MHz PCI bus slots
P2PCI1~P2PCI4	32 Bit, 33/66MHz PCI bus slots
EATXPWR1	ATX2.0 24-pin power connector
EATX12V1	ATX 12V Auxiliary 8-pin power connector
ATX12V1	ATX 12V 4-pin power connector
PWR3V1	3.3V auxiliary power connector
PWR3V2	3.3V auxiliary power connector
VOLT1	Alarm board/CMM power connector
FAN1~7	FAN Connector
FANDEC1	FAN speed detector connector (optional)
SMBUS1~SMBUS3	System management bus (optional)
JFP1	Power and reset button connector
IPMB1	IPMB connector (optional)
USB12	Two USB port pin header
USB34	Two USB port pin header

Connectors and Jumpers (Cont.)

Jumpers

Label	Function
PSON1	ATX/AT mode selection
JPCICK1	Primary 2 PCI bus freq. selection

EATXPWER1

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

Connectors and Jumpers (Cont.)

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

Connectors and Jumpers (Cont.)

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

SMBUS1~SMBUS3

Pin	Name
1	5 V
2	C-SMBBUS
3	C-SMBDAT
4	GND

IPMB1

Pin	Name
1	IPMB_CLK
2	IPMB_DAT
3	GND

USB12

Pin	Name
1	USBV0
2	USBV0
3	USBD0-
4	USBD1-
5	USBD0+
6	USBD1+

Connectors and Jumpers (Cont.)

7	GND
8	GND
9	Null
10	GND

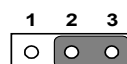
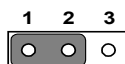
USB34

Pin	Name
1	USBV2
2	USBV2
3	USBD2-
4	USBD3-
5	USBD2+
6	USBD3+
7	GND
8	GND
9	Null
10	GND

PS0N1: ATX/AT Mode Selection

Setting	Function
1-2	AT Mode
2-3*	ATX Mode

* Default

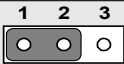
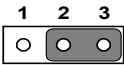


JFP1

Pin	Name
1	VCC
2	PWRBTN
3	RESET#
4	GND

Connectors and Jumpers (Cont.)

JPCICLK1: Primary 2 PCI Bus freq. selection

Jumper setting		Function	LED
1-2 closed pins		33/36 MHz Auto Detect	ON
2-3 closed pins		33 MHz	OFF

Board Layout

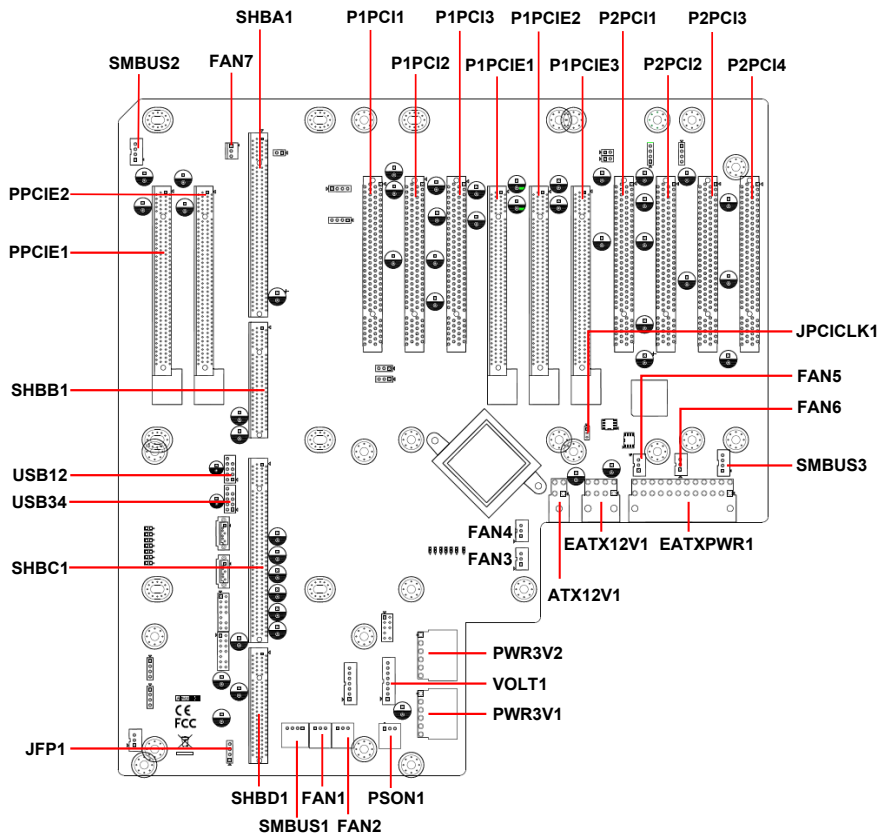


Figure 1: Board Layout

Note: Some add-on cards installed on this backplane may cause CPU card BIOS resource allocation problems, if this occurs please contact Advantech technical support staff for help in solving the problems.

Board Dimensions

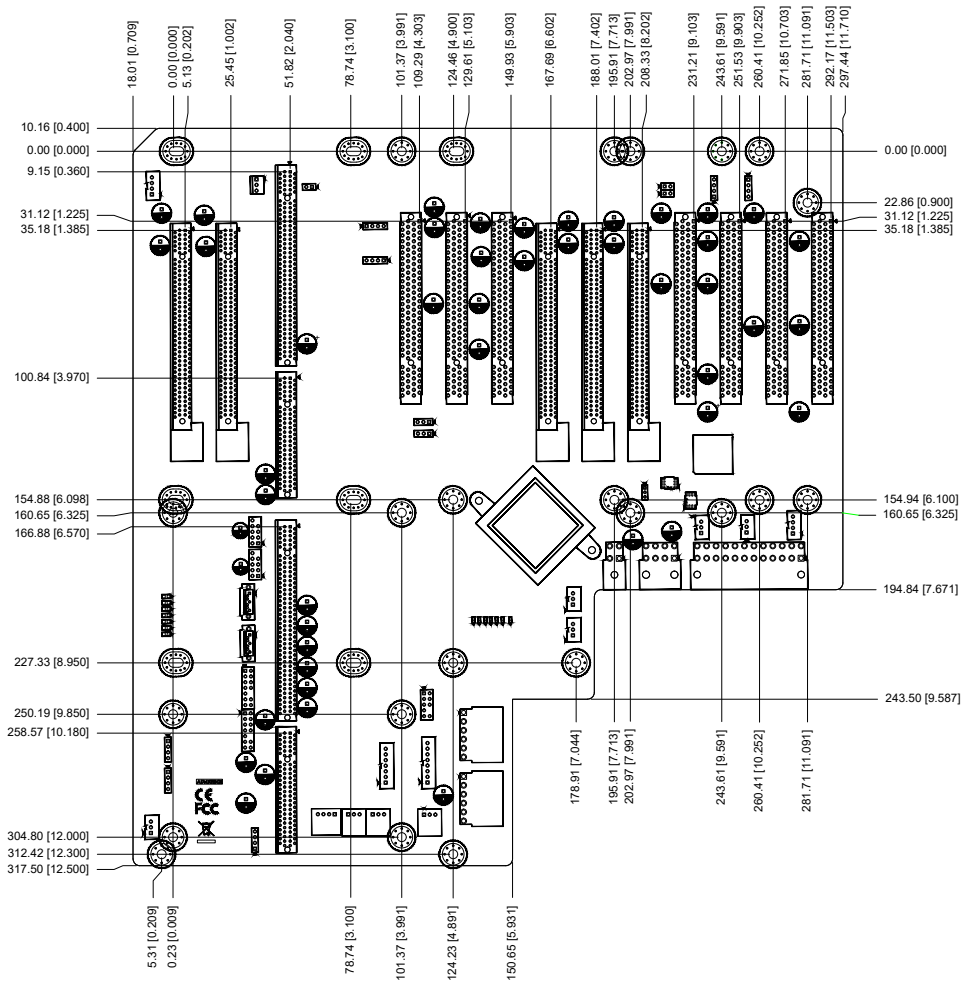


Figure 2: Board Dimensions

Board Diagram

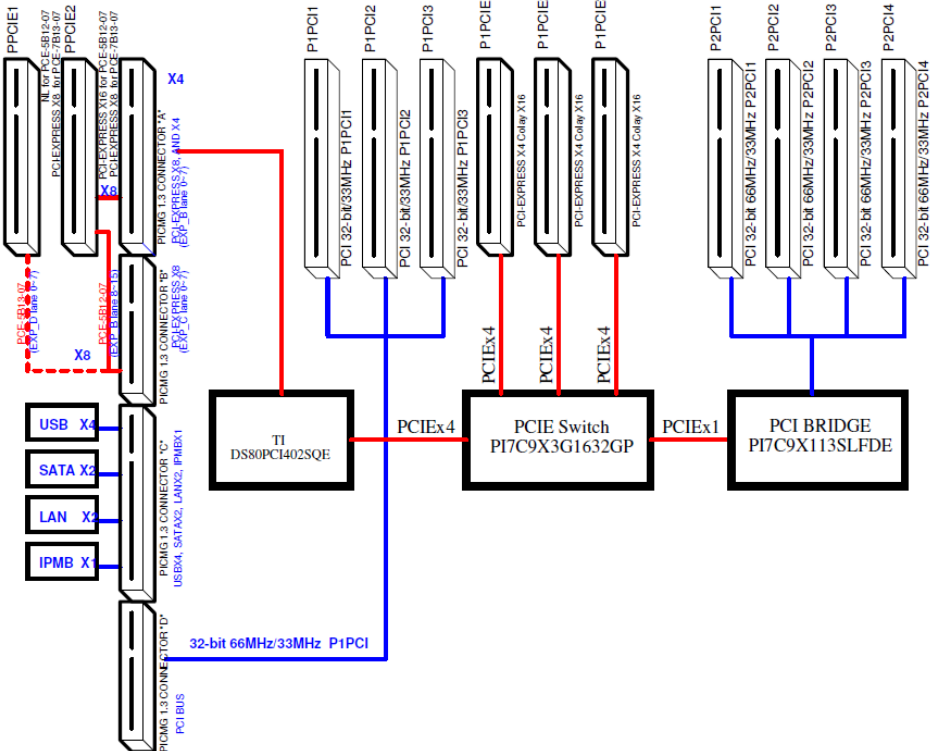


Figure 3: Board Diagram

PCI Routing Table

PCI 32-bit from ICH

PCI Interrupt Pin Route	PCI Slot	P1PCI1	P1PCI2	P1PCI3
	IDSEL	AD31	AD30	AD29
	INTA	INTB	INTC	INTD
	INTB	INTC	INTD	INTA
	INTC	INTD	INTA	INTB
	INTD	INTA	INTB	INTC

PCI 32-bit from PCI Bridge

PCI Interrupt Pin Route	PCI Slot	P2PCI1	P2PCI2	P2PCI3	P2PCI4
	IDSEL	AD20	AD21	AD22	AD23
	INTA	INTA	INTB	INTC	INTD
	INTB	INTB	INTC	INTD	INTA
	INTC	INTC	INTD	INTA	INTB
	INTD	INTD	INTA	INTB	INTC