

PCE-5B06-40A1E (PCE-7B06-40A1E) Backplane: 6-slot BP for 6 slot Chassis, 1 PICMIG 1.3, 1 PCIe, 4 64-bit PCI-X

1. 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-5B06-40A1E (PCE-7B06-40A1E) User Manual p/n: 200K5B0640 1st. ED
- M4*6*0.7 Round Screws p/n: 1939000410 [15 pcs.]
- 2 years quality warranty card p/n: 2190000902

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

Standard Functions

- **PICMIG 1.3 slots:**
PCE-5B06 supports PCE-5xxx CPU boards
PCE-7B06 supports PCE-7xxx CPU boards
- **PCIe slots:**
PCE-5B06 supports one PCIe x16 slot
PCE-7B06 supports 2 PCIe x8 slots
- **64-bit PCI-X:**
Four 64-bit/100MHz PCI-X slots
- **USB (2.0) support:** Four USB 2.0 port pin headers

Mechanical and Environment:

- Dimensions: 327.66 x 142.17 mm
- Power supply voltage: +12V, +5V, -12V, -5V, +3.3V, +5Vsb
- Power requirements: Refer to the CPU Board , add-on Card & Peripherals
- Operating temperature: 0 ~ 60°C
- Weight: 0.3kg (weight of board)

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://www.advantech.com/support>

This manual is for the PCE-5B06-40A1E (PCE-7B06-40A1E) series, Rev. A1.

Part No. 200K5B0640
Printed in China

1st. Edition
Dec 2007

2. Connectors and Jumpers

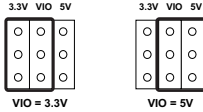
The backplane has a number of connectors and jumpers that allow you to configure your system to suit your application. The table below lists the function of each of the connectors and jumpers.

Connectors

Part Reference	Function
SHBA1~SHBD1	PICMG 1.3 CPU board slot
PPCIE1	PCE-5B06-40A1E: PCIe x 16 slot PCE-7B06-40A1E: PCIe x 8 slot
P1PCIX1~ P1PCIX2	64-bit / 100-MHz PCI-X Bus Slot (Primary 1)
P2PCIX1~ P2PCIX2	64-bit / 100-MHz PCI-X Bus Slot (Primary 2)
EATXPWR1	ATX2.0 24-Pin Power connector
ATX12V1	ATX 12V 4-pin power connector
EATX12V1	ATX 12V Auxiliary 8-pin power connector
PWR3V1	3.3V Auxiliary power connector
VOLT1	Alarm board/CMM Power connector.
FAN1	FAN Connector
FAN2	FAN Connector
FAN3	FAN Connector
FAN4	FAN Connector
FAN5	FAN Connector
FANDEC1	Fan speed detector connector
SMBUS1	SMBus connector for chassis monitor
SMBUS2	SMBus connector for chassis monitor
J11~J12	SMBus source select
JFP1	Power and Reset Button connector
IPMB1	IPMB Connector
USB12	Two USB port pin header
USB34	Two USB port pin header

Jumpers

Label	Function
PS0N1	ATX/AT mode selection
JP1VIO1	P1PCI-X1 and P1PCI-X2 3.3V/5V VIO Selection
JP1VIO2	P2PCI-X1 and P2PCI-X2 3.3V/5V VIO Selection



Label	Function
J2	Primary 1 PCI bus frequency selection
J5	Primary 2 PCI bus frequency selection
J3	Primary 1 PCI/PCI-X bus capability selection
J6	Primary 2 PCI/PCI-X bus capability selection

P1PCIX1, P1PCIX2 PCI-X Bus Capability and Frequency Setting when they are set to PCI-X mode

PCI-X (MHz)	J3	J2
66	(1-2)	PCI-X mode is backward compatible with PCI mode. Please see below for PCI frequency setting when the add-on card has a PCI interface.
100	OPEN	J2 is (2-3): Supports only PCI 33 MHz J2 is (1-2): Supports both PCI 33/66 MHz

E.g.: How to set both P1PCIX1 and P1PCIX2 to 64-bit, 100 MHz PCI-X mode:

J3: OPEN

J2: Both (1-2) and (2-3) are okay, but (1-2) setting is recommended.

P2PCIX1, P2PCIX2 PCI-X Bus Capability and Frequency Setting when they are set to PCI-X mode

PCI-X (MHz)	J6	J5
66	(1-2)	PCI-X mode is backward compatible with PCI mode. Please see below for PCI frequency setting when the add-on card has a PCI interface.
100	OPEN	J5 is (2-3): Supports only PCI 33 MHz J5 is (1-2): Supports both PCI 33/66 MHz

E.g.: How to set both P2PCIX1 and P2PCIX2 to 64-bit, 100 MHz PCI-X mode:

J6: OPEN

J5: Both (1-2) and (2-3) are okay; (1-2) setting is recommended.

P1PCIX1, P1PCIX2 PCI Bus Capability and Frequency Setting when they are set to PCI mode

PCI (MHz)	J3	J2
33	(2-3)	(2-3)
66	(2-3)	(1-2)

E.g.: How to set both P1PCIX1 and P1PCIX2 to 32-bit, 66 MHz PCI mode:

J1: Both (1-2) and (2-3) are okay.

J3: (2-3)

J2: (1-2)

P2PCIX1, P2PCIX2 PCI Bus Capability and Frequency Setting when they are set to PCI mode

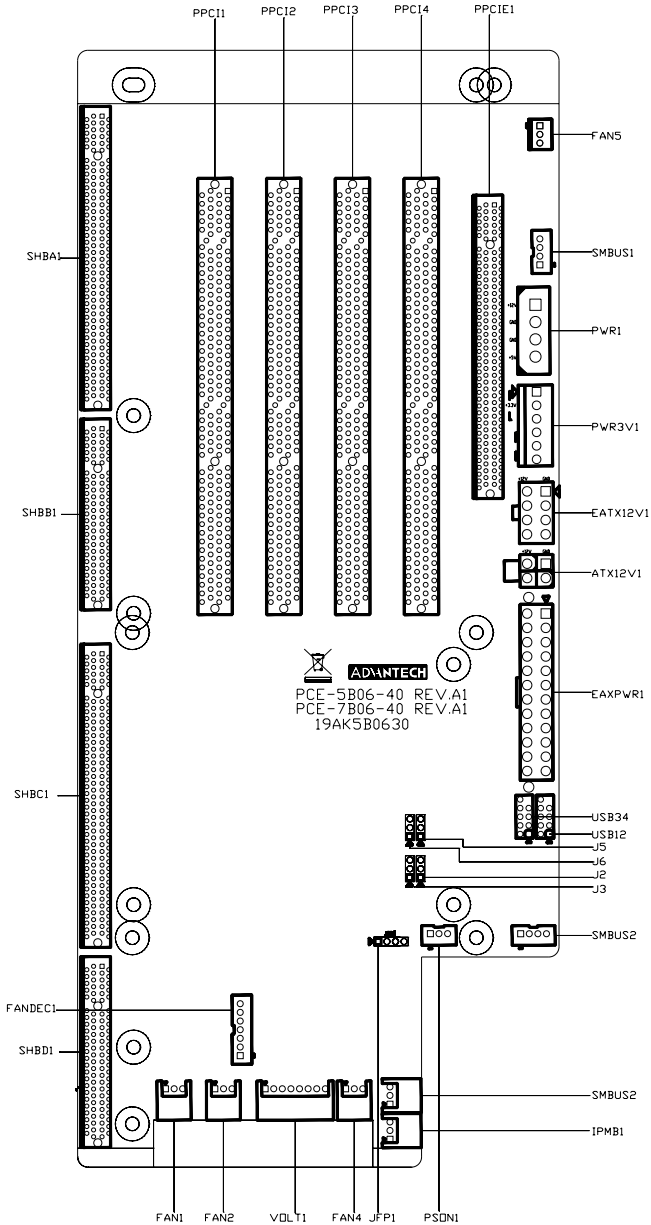
PCI (MHz)	J6	J5
33	(2-3)	(2-3)
66	(2-3)	(1-2)

E.g.: How to set both P1PCIX1 and P1PCIX2 to 32-bit, 33 MHz PCI mode:

J6: (2-3)

J5: (2-3)

3. Board Layout



Board Layout: Jumper and Connector Locations

4. Connector Pin Definitions

EATXPWR1

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

ATX12V1

Pin	Name
1	GND
2	GND
3	12V
4	12V

EATX12V1

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

PWR3V1

Pin	Name
1	3.3V
2	3.3V
3	3.3V
4	GND
5	GND
6	GND

VOLT1

Pin	Name
1	5VSBY
2	GND
3	GND
4	-5V
5	5V
6	3.3V
7	-12V
8	12V

FAN1 - FAN5

Pin	Name
1	GND
2	12V
3	FANIO1~FANIO5

FANDEC1

Pin	Name
1	FANIO1
2	FANIO2
3	FANIO3
4	FANIO4
5	FANIO5
6	N/A
7	N/A

4. Connector Pin Definitions (cont.)

SMBUS1 ~ SMBUS2

Pin	Name
1	5V
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+
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

JFP1

Pin	Name
1	PWRBTN
2	PWRBTN
3	RESET
4	RESET

5. PCI Routing Tables

PCI-X 64-bit

	PCI-X Slot	P1PCIX1	P1PCIX2	P2PCIX1	P2PCIX2
PCI	IDSEL	PA_AD31	PA_AD30	PA_AD31	PA_AD30
Interrupt	INTA	IRQD#	IRQC#	IRQD#	IRQC#
Pin	INTB	IRQA#	IRQD#	IRQA#	IRQD#
Route	INTC	IRQB#	IRQA#	IRQB#	IRQA#
	INTD	IRQC#	IRQB#	IRQC#	IRQB#

6. Jumper Settings

PS0N1: ATX/AT Mode Selection

Jumper Setting	Function
1 - 2 closed pins	AT mode



2 - 3 closed pins ATX mode (default)



JP1VIO1

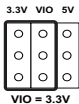
Pin	Name
1	VCC
2	VCC
3	VCC
4	PB_VIO
5	PB_VIO
6	PB_VIO
7	VCC3
8	VCC3
9	VCC3

JP1VIO2

Pin	Name
1	VCC
2	VCC
3	VCC
4	PA_VIO
5	PA_VIO
6	PA_VIO
7	VCC3
8	VCC3
9	VCC3

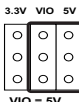
JP1VIO1: Voltage Selection

Jumper Setting	Function
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3.3 V

VIO = 3.3V

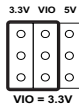


5 V

VIO = 5V

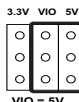
JP1VIO2: Voltage Selection

Jumper Setting	Function
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3.3 V

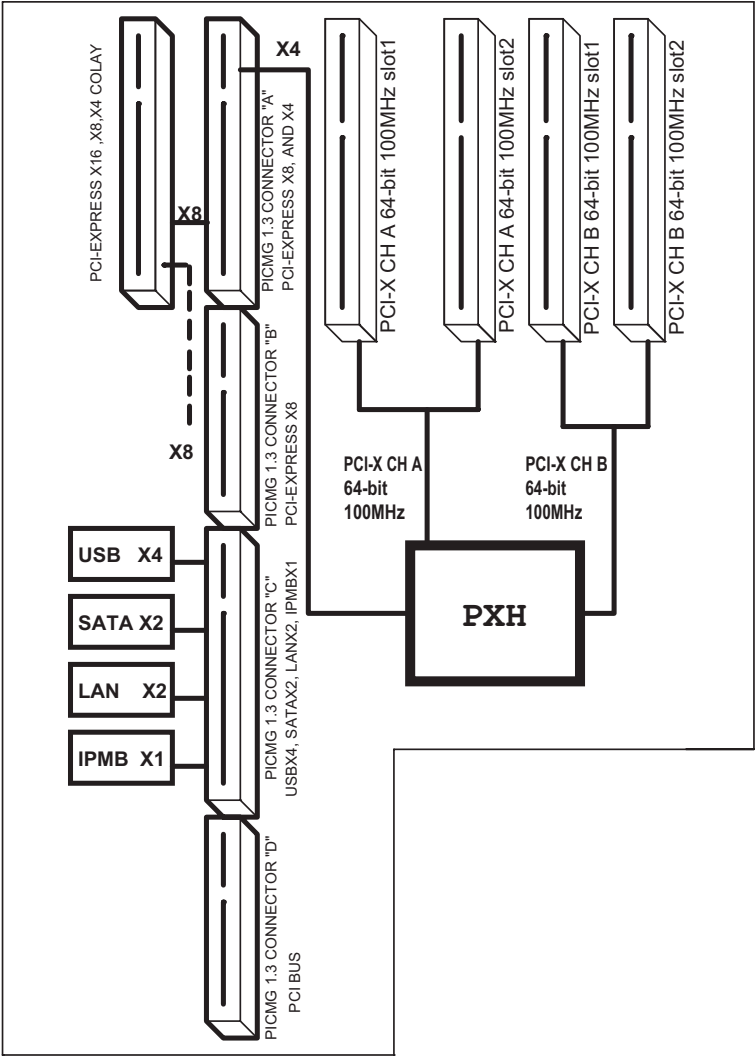
VIO = 3.3V



5 V

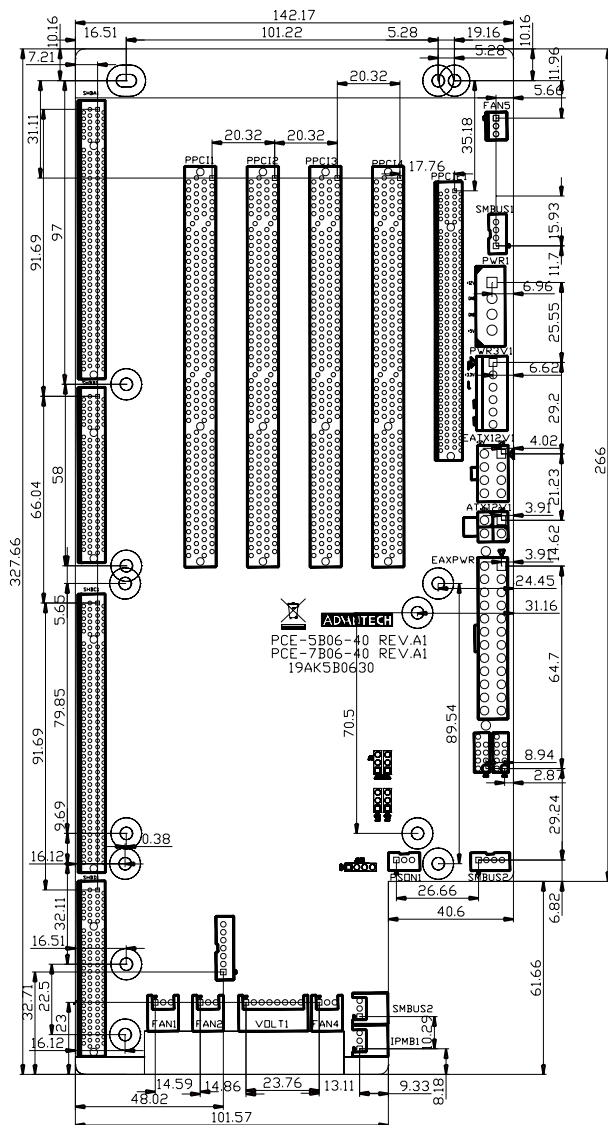
VIO = 5V

7. Board Diagram



Board Diagram

8. Board Dimensions



Board Dimensions (mm)