

PCE-5B18-88B1E (PCE-7B19-88B1E) Backplane: 19 (18)-slot BP for 20-slot Chassis, 1 x PICMIG 1.3, 2 x (1) PCIe, 8 x 64-bit PCI-X, 8 x 32-bit PCI

Startup Manual

Packing List

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

- One 2 Ports USB Cable p/n: 1700002204
- PCE-5B18-88B1E (PCE-7B19-88B1E) Startup Manual
- M4*6*0.7 Round Screws (15pcs) p/n: 1939000410
- 2 Year Quality Warranty Card p/n: 2190000902

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

Specifications

Standard Functions

- **PICMIG 1.3 slots:**
PCE-7B19-88 supports PCE-7xxx CPU boards
PCE-5B18-88 supports PCE-5xxx CPU boards
- **PCIe slots:**
PCE-7B19-88 supports two PCIe x8 slots
PCE-5B18-88 supports one PCIe x16 slot
- **64-bit PCI-X slots:**
Eight 64 Bit / 66 MHz PCI-X slots
- **32-bit PCI slots:**
Eight 32 Bit / 33 MHz PCI slots
Bridge Chip: Pericom PI7C8150BMAE
- **USB (2.0) ports:**
Four Universal Serial Bus ports as pin headers

Mechanical and Environmental

- **Dimensions:** 327.66 x 417 mm
- **Power supply voltage:** +12 V, +5 V, -12 V, -5 V, +3.3 V, +5 VSBY
- **Power requirements:** Refer to the CPU board, add-on card & peripherals
- **Operating temperature:** 0 ~ 60 °C
- **Weight:** 1.7 kg (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://support.advantech.com/>

This manual is for the PCE-5B18-88B1E (PCE-7B19-88B1E) series.

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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 jumpers and connectors:

Connectors	
Part Reference	Function
SHBA1 ~ SHBD1	PICMG 1.3 CPU board slot
PPCIE1	PCE-7B19-88: PCIe x8 slot PCE-5B18-88: Not available
PPCIE2	PCE-7B19-88: PCIe x8 slot PCE-5B18-88: PCIe x16 slot
P1PCIX1 ~ P1PCIX4	64 Bit / 66 MHz PCI-X bus slot (primary 1)
P2PCIX1 ~ P2PCIX4	64 Bit / 66 MHz PCI-X bus slot (primary 2)
PPCI1 ~ PPCI3	32 Bit / 33 MHz PCI-(X) bus slot (primary 3)
SPCI1 ~ SPCI5	32 Bit / 33 MHz PCI-(X) bus slot (secondary)
EATXPWR1	ATX 2.0 power connector
EATPWR1	AT 12-pin power connector
ATX12V1	ATX 12 V auxiliary 4-pin power connector
ATX12V2	ATX 12 V auxiliary 4-pin power connector
EATX12V1	ATX 12 V auxiliary 8-pin power connector
PWR3V1	3.3 V auxiliary power connector
PWR3V2	3.3 V auxiliary power connector
PWR5V1	5 V auxiliary power connector
PWR5V2	5 V auxiliary power connector
VOLT1	Alarm board / CMM power connector
FAN1 ~ FAN7	Fan connectors
FANDEC1	Fan speed detector connector
SMBUS1 ~ SMBUS3	Chassis sensor board connectors
JFP1	Power and reset button connector
IPMB1	IPMB connector
USB12	Two USB port pin header
USB34	Two USB port pin header
PSON2	5VSB and PSON connector for AT power supply



Connectors and Jumpers (Cont.)

Jumpers

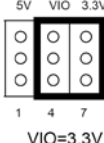
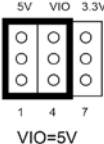
Part Reference	Function
PSON1	ATX / AT mode selection
JP1VIO1	Primary 1 PCI-X bus VIO voltage selection
JP2VIO1	Primary 2 PCI-X bus VIO voltage selection

Jumper Settings

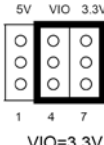
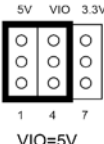
PSON1: ATX / AT Mode Selection

Jumper Setting	Function
	AT Mode
	ATX Mode (Default)

JP1VIO1: Primary 1 PCI-X Bus VIO Voltage Selection

Jumper Setting	VIO
	3.3 V (Default)
	5 V

JP2VIO1: Primary 2 PCI-X Bus VIO Voltage Selection

Jumper Setting	VIO
	3.3 V (Default)
	5 V

Connectors and Jumpers (Cont.)

PCI-X Jumper Setting

Bus Rate / Mode	JPCIXAPA1 JPCIXAPB1	JSEL100A1 JSEL100B1	JM66ENA1 JM66ENB1
PCI 25MHz	(1-2) GND	(1-2) Pull up	(2-3) GND
PCI 33MHz	(1-2) GND	(2-3) GND	(2-3) GND
PCI 50MHz	(1-2) GND	(1-2) Pull up	(1-2) Pull up
PCI 66MHz	(1-2) GND	(2-3) GND	(1-2) Pull up
PCIX 50MHz	(2-3) Pull down	(1-2) Pull up	X (Pull up)
PCIX 66MHz	(2-3) Pull down	(2-3) GND	X (Pull up)
PCIX 100MHz	(open) Pull up	(1-2) Pull up	X (Pull up)
PCIX 133MHz	(open) Pull up	(2-3) GND	X (Pull up)

Note: **X** means “don’t care this pin”
 Open means “don’t need Jumper”

P1PCIX and P2PCIX PCI Bus Rate Indicator

Bus Rate / Mode	D148 D183	D149 D185	D146 D182	D147 D184
PCI 25MHz	OFF	OFF	ON	OFF
PCI 33MHz	OFF	OFF	ON	ON
PCI 50MHz	OFF	OFF	OFF	OFF
PCI 66MHz	OFF	OFF	OFF	ON
PCIX 50MHz	OFF	ON	X	OFF
PCIX 66MHz	OFF	ON	X	ON
PCIX 100MHz	ON	ON	X	OFF
PCIX 133MHz	ON	ON	X	ON

Connector Pin Definitions

EATXPWR1

Pin	Name
1	3.3 V
2	3.3 V
3	GND
4	5 V
5	GND
6	5 V
7	GND
8	PWROK
9	5VSBY
10	12 V

Connectors and Jumpers (Cont.)

11	12 V
12	3.3 V
13	3.3 V
14	-12 V
15	GND
16	PSOEN#
17	GND
18	GND
19	GND
20	-5 V
21	5 V
22	5 V
23	5 V
24	GND

EATPWR1

Pin	Name
1	PWROK
2	5 V
3	12 V
4	-12 V
5	GND
6	GND
7	GND
8	GND
9	-5 V
10	5 V
11	5 V
12	5 V

ATX12V1 ~ ATX12V2

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

Connectors and Jumpers (Cont.)

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	3.3 V
2	3.3 V
3	3.3 V
4	GND
5	GND
6	GND

PWR5V1 ~ PWR5V2

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

Connectors and Jumpers (Cont.)

VOLT1

Pin	Name
1	5VSBY
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

SMBUS1~ SMBUS3

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

Connectors and Jumpers (Cont.)

JFP1

Pin	Name
1	PWRBTN#
2	GND
3	RESET#
4	GND

IPMB1

Pin	Name
1	IPMB_CLK
2	IPMB_DAT
3	GND

USB1

Pin	Name
1	USBV0
2	USBV0
3	USBD0-
4	USBD1-
5	USBD0+
6	USBD1+
7	GND
8	GND
9	Null
10	GND

USB2

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

Connectors and Jumpers (Cont.)

JP1VIO1

Pin	Name
1	5 V
2	5 V
3	5 V
4	PA_VIO
5	PA_VIO
6	PA_VIO
7	3.3 V
8	3.3 V
9	3.3 V

JP2VIO1

Pin	Name
1	5 V
2	5 V
3	5 V
4	PB_VIO
5	PB_VIO
6	PB_VIO
7	3.3 V
8	3.3 V
9	3.3 V

PSON2

Pin	Name
1	PSON#
2	Null
3	5VSBY

PCI & PCIX Routing Tables

Primary 1 PCI-X 64-bit Interrupt Pin Route

PCIX SLOT	IDSEL	INTA	INTB	INTC	INTD
P1PCIX1	PB_AD31	PB_INTD#	PB_INTA#	PB_INTB#	PB_INTC#
P1PCIX2	PB_AD30	PB_INTC#	PB_INTD#	PB_INTA#	PB_INTB#
P1PCIX3	PB_AD29	PB_INTB#	PB_INTC#	PB_INTD#	PB_INTA#
P1PCIX4	PB_AD28	PB_INTA#	PB_INTB#	PB_INTC#	PB_INTD#

Primary 2 PCI-X 64-bit Interrupt Pin Route

PCIX SLOT	IDSEL	INTA	INTB	INTC	INTD
P2PCIX1	PA_AD31	PA_INTD#	PA_INTA#	PA_INTB#	PA_INTC#
P2PCIX2	PA_AD30	PA_INTC#	PA_INTD#	PA_INTA#	PA_INTB#
P2PCIX3	PA_AD29	PA_INTB#	PA_INTC#	PA_INTD#	PA_INTA#
P2PCIX4	PA_AD28	PA_INTA#	PA_INTB#	PA_INTC#	PA_INTD#

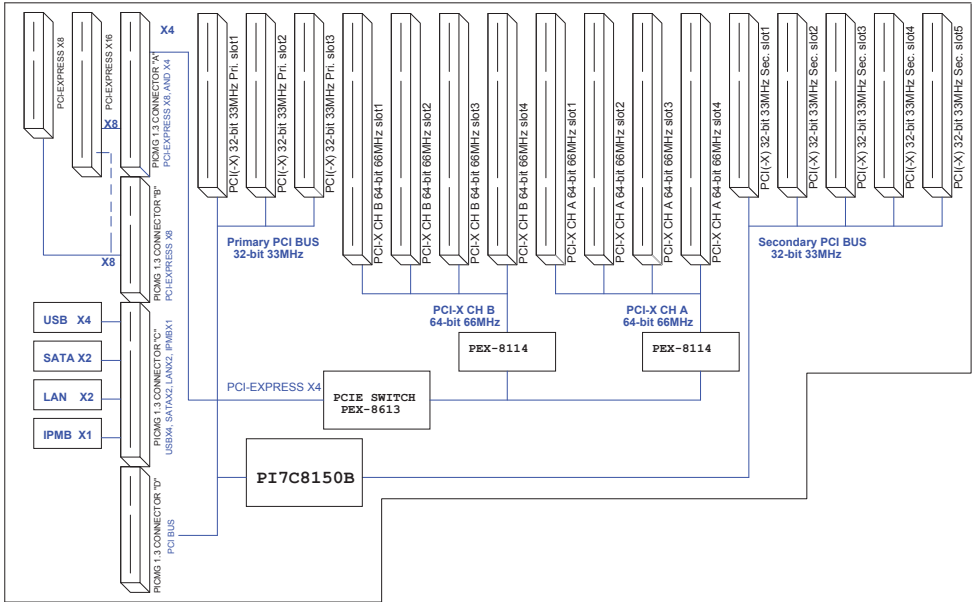
Primary PCI Interrupt Pin Route

PCIX SLOT	IDSEL	INTA	INTB	INTC	INTD
PPCI1	PCI_AD31	PCI_PIRQB#	PCI_PIRQC#	PCI_PIRQD#	PCI_PIRQA#
PPCI2	PCI_AD30	PCI_PIRQC#	PCI_PIRQD#	PCI_PIRQA#	PCI_PIRQB#
PPCI3	PCI_AD29	PCI_PIRQD#	PCI_PIRQA#	PCI_PIRQB#	PCI_PIRQC#
PI7C8150B	PCI_AD28	-	-	-	-

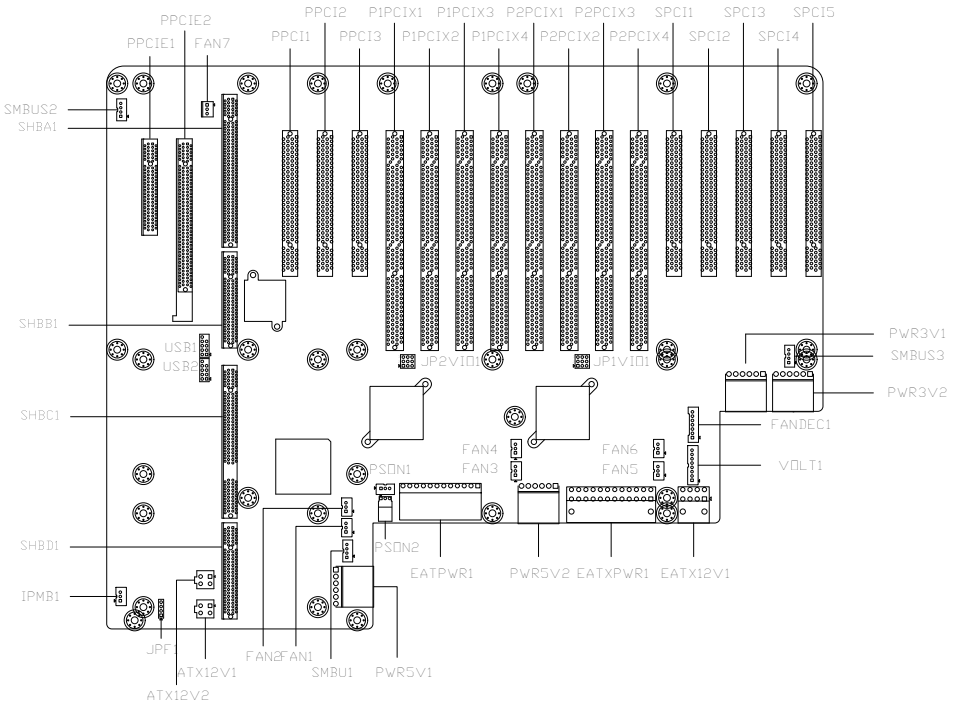
Secondary PCI Interrupt Pin Route

PCIX SLOT	IDSEL	INTA	INTB	INTC	INTD
SPCI1	S_AD20	PCI_PIRQA#	PCI_PIRQB#	PCI_PIRQC#	PCI_PIRQD#
SPCI2	S_AD21	PCI_PIRQB#	PCI_PIRQC#	PCI_PIRQD#	PCI_PIRQA#
SPCI3	S_AD22	PCI_PIRQC#	PCI_PIRQD#	PCI_PIRQA#	PCI_PIRQB#
SPCI4	S_AD23	PCI_PIRQD#	PCI_PIRQA#	PCI_PIRQB#	PCI_PIRQC#
SPCI5	S_AD24	PCI_PIRQA#	PCI_PIRQB#	PCI_PIRQC#	PCI_PIRQD#

Block Diagram



Board Layout



Board Dimensions

