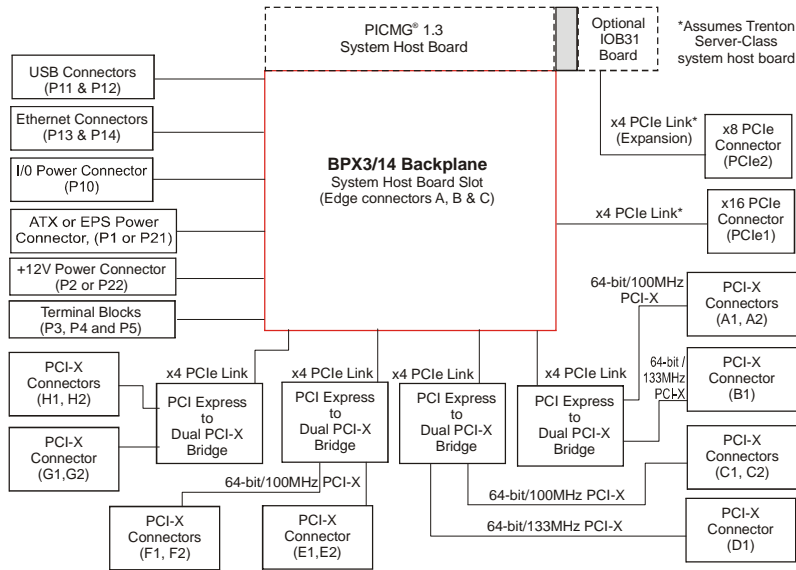




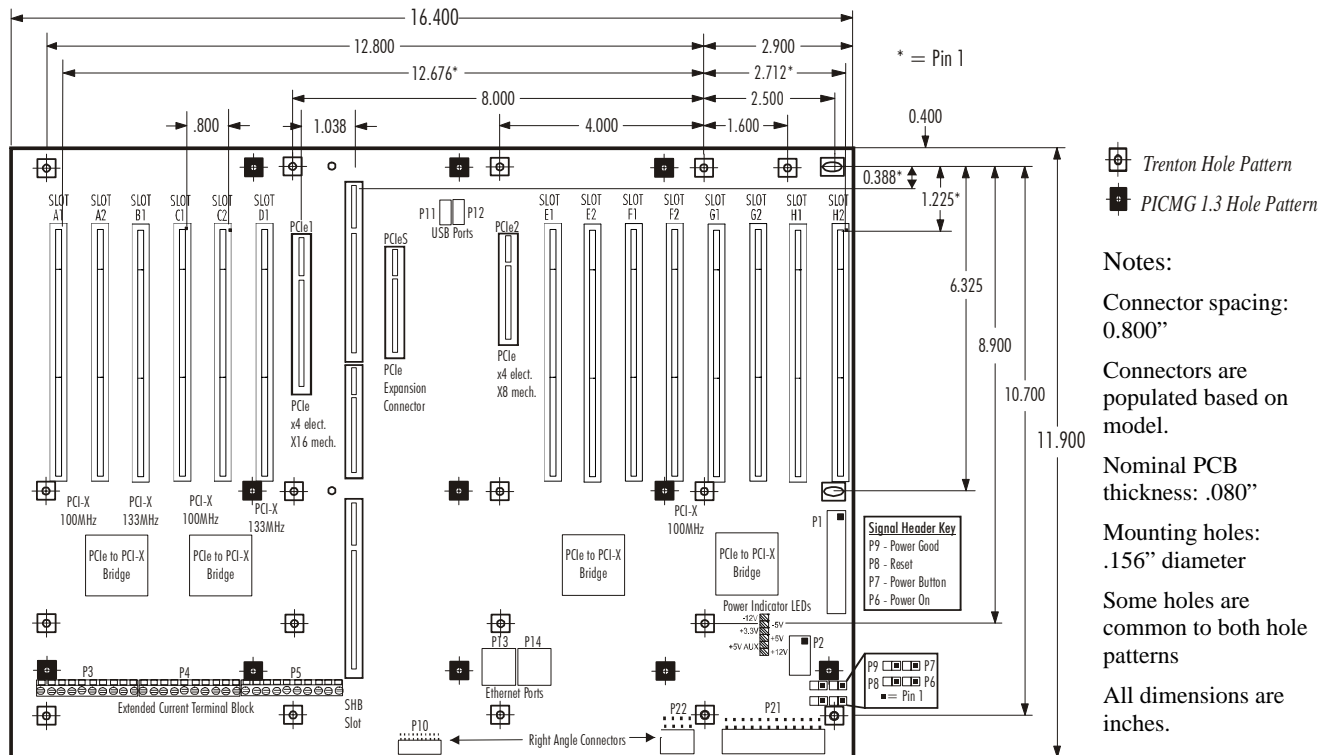
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Technical Information – Jumpers and Connectors BPX3/14 (6467) Server-Class PCI Express Backplane

Block Diagram



Layout Diagram – 6467



Notes:
 *IOB31 Required to provide PCI Express link to PCIE2 slot, **Optional USB and Ethernet connectivity provided by PICMG 1.3 SHB.



BPX3/14 (6467) Configuration Jumper

The setup of the configuration jumper on the backplane is described below. * indicates the default value of the jumper.

NOTE: For the two-position jumper (3-post), “RIGHT” and “LEFT” refer to positioning when the backplane is viewed with the slots at the top end of the backplane.

<u>Jumper</u>	<u>Description</u>
JU4	<p>+5V Auxiliary Voltage</p> <p>Install on the LEFT if +5V auxiliary voltage is provided by the standard +5V supply. This option is used for systems which do not have either an ATX or EPS standard power input. This mode provides the necessary +5V for the SHB’s +5VAUX signal lines. Sleep mode recovery is not supported using non-ATX/EPS power supplies.</p> <p>Install on the RIGHT if +5V auxiliary voltage is provided by a separate +5VAUX signal input pin. This enables the necessary SHB power signaling and allows recovery from sleep mode. This option is used for ATX or EPS standard power supplies. *</p>

BPX3/14 (6467) Connectors

The connectors available on the BPX3/14 vary depending on the version of the backplane you have. Connectors for the 6467-001 (ATX) and 6467-004 (EPS) tabs are defined below.

BPX3/14 (6467-001) Connectors

NOTE: Pin 1 on the connectors is indicated by the square pad on the PCB.

P1 - ATX Power Connector

20 pin dual row header, Molex #39-29-9202

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Gnd	13	Gnd
4	+5V	14	PSO#
5	Gnd	15	Gnd
6	+5V	16	Gnd
7	Gnd	17	Gnd
8	PWRGD	18	-5V
9	+5VAUX	19	+5V
10	+12V	20	+5V

P2 - +12V Power Connector

4 pin mini fit JR, Molex #39-29-3046

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	Gnd	3	+12V
2	Gnd	4	+12V



BPX3/14 (6467-001) Connectors (continued)

- P3 - Terminal Block Connector**
10 position terminal block, Amp #1-796949-0
20 Amps per circuit
- | <u>Pin</u> | <u>Signal</u> |
|------------|---------------|
| 1 | +5V |
| 2 | +5V |
| 3 | +5V |
| 4 | +5V |
| 5 | Gnd |
| 6 | Gnd |
| 7 | +12V |
| 8 | +12V |
| 9 | +12V |
| 10 | +12V |
- P4 - Terminal Block Connector**
10 position terminal block, Amp #1-796949-0
20 Amps per circuit
- | <u>Pin</u> | <u>Signal</u> |
|------------|---------------|
| 1 | Gnd |
| 2 | Gnd |
| 3 | +3.3V |
| 4 | +3.3V |
| 5 | +3.3V |
| 6 | +3.3V |
| 7 | +3.3V |
| 8 | +3.3V |
| 9 | Gnd |
| 10 | Gnd |
- P5 - Terminal Block Connector**
10 position terminal block, Amp #1-796949-0
20 Amps per circuit
- | <u>Pin</u> | <u>Signal</u> |
|------------|---------------|
| 1 | Gnd |
| 2 | Gnd |
| 3 | Gnd |
| 4 | Gnd |
| 5 | Gnd |
| 6 | Gnd |
| 7 | Gnd |
| 8 | Gnd |
| 9 | Gnd |
| 10 | Gnd |
- P6 - Power-On Connector**
2 pin single row header, Amp #640456-2
- | <u>Pin</u> | <u>Signal</u> |
|------------|---------------|
| 1 | PSO# |
| 2 | Gnd |



BPX3/14 (6467-001) Connectors (continued)

P7 - Power Button Connector

2 pin single row header, Amp #640456-2

<u>Pin</u>	<u>Signal</u>
1	PWRBT#
2	Gnd

P8 - Reset Connector

2 pin single row header, Amp #640456-2

<u>Pin</u>	<u>Signal</u>
1	External Reset In (Low Active)
2	Gnd

P9 - Power Good Connector

2 pin single row header, Amp #640456-2

<u>Pin</u>	<u>Signal</u>
1	PWRGD
2	+3.3V

P10 - I/O Power Connector

20 pin right angle dual row header, Molex #87833-2020

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	Gnd	2	+12V
3	IPMB_DA	4	Gnd
5	IPMB_CL	6	+5V
7	SMDAT	8	+5VAUX_IN
9	SMCLK	10	+3.3V
11	PWRBT#	12	PSOIN#
13	Gnd	14	SHB_RST#
15	PWRGD	16	+5VAUX_IN
17	Gnd	18	+5VAUX_IN
19	Gnd	20	-12V

P11 - Universal Serial Bus (USB) Connector

8 pin dual row header, Molex #702-46-0801

(+5V fused with self-resetting fuses)

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+5V-USB0	2	+5V-USB1
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	Gnd-USB0	8	Gnd-USB1

P12 - Universal Serial Bus (USB) Connector

8 pin dual row header, Molex #702-46-0801

(+5V fused with self-resetting fuses)

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+5V-USB2	2	+5V-USB3
3	USB2-	4	USB3-
5	USB2+	6	USB3+
7	Gnd-USB2	8	Gnd-USB3



BPX3/14 (6467-001) Connectors (continued)

P13 - 10/100/1000Base-T Ethernet Connector - LAN 0

8 pin shielded RA RJ-45 connector, Molex #43202-8110

<u>Pin</u>	<u>Signal</u>
1	TRP1+
2	TRP1-
3	TRP2+
4	TRP3+
5	TRP3-
6	TRP2-
7	TRP4+
8	TRP4-

P14 - 10/100/1000Base-T Ethernet Connector - LAN 1

8 pin shielded RA RJ-45 connector, Molex #43202-8110

<u>Pin</u>	<u>Signal</u>
1	TRP1+
2	TRP1-
3	TRP2+
4	TRP3+
5	TRP3-
6	TRP2-
7	TRP4+
8	TRP4-

P19 - System Management Bus Connector

2 pin single row header, Amp #640456-2

<u>Pin</u>	<u>Signal</u>
1	SMB Clock
2	SMB Data

P21 - ATX Power Connector

20 pin right angle mini fit JR, Molex #35318-2020

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Gnd	13	Gnd
4	+5V	14	PSON#
5	Gnd	15	Gnd
6	+5V	16	Gnd
7	Gnd	17	Gnd
8	PWRGD	18	-5V
9	+5VAUX	19	+5V
10	+12V	20	+5V

P22 - +12V Power Connector

4 pin right angle mini fit JR, Molex #35318-0420

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	Gnd	3	+12V
2	Gnd	4	+12V



BPX3/14 (6467-004) Connectors

P1 - EPS Power Connector

24 pin dual row header, Molex #39-29-9243

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	Gnd	15	Gnd
4	+5V	16	PSON#
5	Gnd	17	Gnd
6	+5V	18	Gnd
7	Gnd	19	Gnd
8	PWRGD	20	-5V
9	+5VAUX	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	Gnd

P2 - +12V Power Connector

8 pin mini fit JR, Molex #39-29-3086

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	Gnd	5	+12V
2	Gnd	6	+12V
3	Gnd	7	+12V
4	Gnd	8	+12V

P3 - Power Supply Connector

10 position terminal block, Amp #1-796949-0

20 Amps per circuit

<u>Pin</u>	<u>Signal</u>
1	+5V
2	+5V
3	+5V
4	+5V
5	Gnd
6	Gnd
7	+12V
8	+12V
9	+12V
10	+12V

P4 - Power Supply Connector

10 position terminal block, Amp #1-796949-0

20 Amps per circuit

<u>Pin</u>	<u>Signal</u>
1	Gnd
2	Gnd
3	+3.3V
4	+3.3V
5	+3.3V
6	+3.3V
7	+3.3V
8	+3.3V
9	Gnd
10	Gnd



BPX3/14 (6467-004) Connectors (continued)

P5 - Power Supply Connector

10 position terminal block, Amp #1-796949-0

20 Amps per circuit

Pin Signal

1	Gnd
2	Gnd
3	Gnd
4	Gnd
5	Gnd
6	Gnd
7	Gnd
8	Gnd
9	Gnd
10	Gnd

P6 - Power-On Connector

2 pin single row header, Amp #640456-2

Pin Signal

1	PSO#
2	Gnd

P7 - Power Button Connector

2 pin single row header, Amp #640456-2

Pin Signal

1	PWRBT#
2	Gnd

P8 - Reset Connector

2 pin single row header, Amp #640456-2

Pin Signal

1	External Reset In (Low Active)
2	Gnd

P9 - Power Good Connector

2 pin single row header, Amp #640456-2

Pin Signal

1	PWRGD
2	+3.3V

P10 - I/O Power Connector

20 pin right angle dual row header, Molex #87833-2020

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	Gnd	2	+12V
3	IPMB_DA	4	Gnd
5	IPMB_CL	6	+5V
7	SMDAT	8	+5VAUX_IN
9	SMCLK	10	+3.3V
11	PWRBT#	12	PSO#
13	Gnd	14	SHB_RST#
15	PWRGD	16	+5VAUX_IN
17	Gnd	18	+5VAUX_IN
19	Gnd	20	-12V



BPX3/14 (6467-004) Connectors (continued)

P11 - Universal Serial Bus (USB) Connector

8 pin dual row header, Molex #702-46-0801
(+5V fused with self-resetting fuses)

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+5V-USB0	2	+5V-USB1
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	Gnd-USB0	8	Gnd-USB1

P12 - Universal Serial Bus (USB) Connector

8 pin dual row header, Molex #702-46-0801
(+5V fused with self-resetting fuses)

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+5V-USB2	2	+5V-USB3
3	USB2-	4	USB3-
5	USB2+	6	USB3+
7	Gnd-USB2	8	Gnd-USB3

P13 - 10/100/1000Base-T Ethernet Connector - LAN 0

8 pin shielded RA RJ-45 connector, Molex #43202-8110

<u>Pin</u>	<u>Signal</u>
1	TRP1+
2	TRP1-
3	TRP2+
4	TRP3+
5	TRP3-
6	TRP2-
7	TRP4+
8	TRP4-

P14 - 10/100/1000Base-T Ethernet Connector - LAN 1

8 pin shielded RA RJ-45 connector, Molex #43202-8110

<u>Pin</u>	<u>Signal</u>
1	TRP1+
2	TRP1-
3	TRP2+
4	TRP3+
5	TRP3-
6	TRP2-
7	TRP4+
8	TRP4-

P19 - System Management Bus Connector

2 pin single row header, Amp #640456-2

<u>Pin</u>	<u>Signal</u>
1	SMB Clock
2	SMB Data



BPX3/14 (6467-004) Connectors (continued)

P21 - EPS Power Connector

24 pin right angle dual row header, Amp #794516-1

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	Gnd	15	Gnd
4	+5V	16	PSO#
5	Gnd	17	Gnd
6	+5V	18	Gnd
7	Gnd	19	Gnd
8	PWRGD	20	-5V
9	+5VAUX	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	Gnd

P22 - +12V Power Connector

8 pin right angle mini fit JR, Molex #39-30-0080

<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
1	Gnd	5	+12V
2	Gnd	6	+12V
3	Gnd	7	+12V
4	Gnd	8	+12V

Trenton SHB Optional Backplane I/O Support For the BPX3/14 (6467)

TRENTON SHB	ETHERNET			USB							
	LAN0	LAN1	LAN2	USB0	USB1	USB2	USB3	USB4	USB5	USB6	USB7
NLT/NLI ¹	-	-	n/a	-	-	X	X	n/a	n/a	n/a	n/a
SLT/SLI ¹	-	-	n/a	-	-	X	X	n/a	n/a	n/a	n/a
MCX-series ²	-	-	X	-	-	-	-	X	X	X	X

¹ Requires factory build option.

² LAN2 is a 10/100/1000BASE-T Ethernet interface when using a MCX-series SHB

Note: The letter X indicates an interface connection routed to SHB edge connector C for use on the backplane

Connector Configuration Illustrated For The BPX3/14 (6467)

MODEL#	MODEL NAME	DESCRIPTION
6467-001	BPX3/14-ATX	ATX connectors with three high-current terminal blocks
6467-004	BPX3/14-EPS	EPS connectors with three high-current terminal block

Trenton recommends the EPS configuration for use with SHBs using dual, high-performance Intel® Xeon® processors.