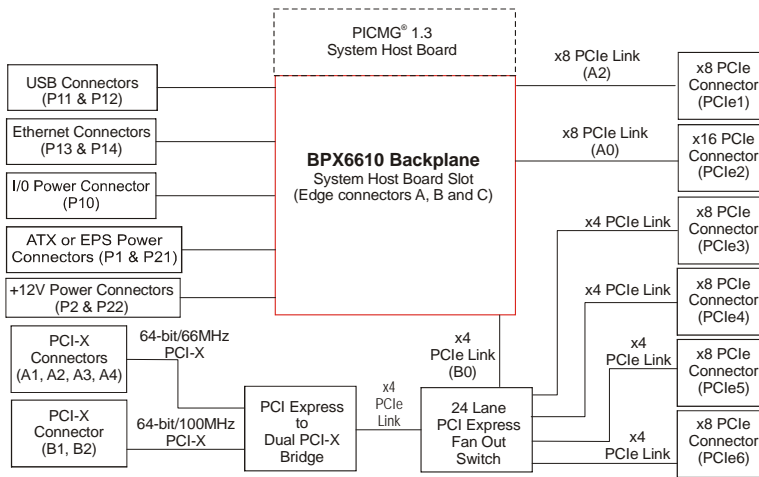




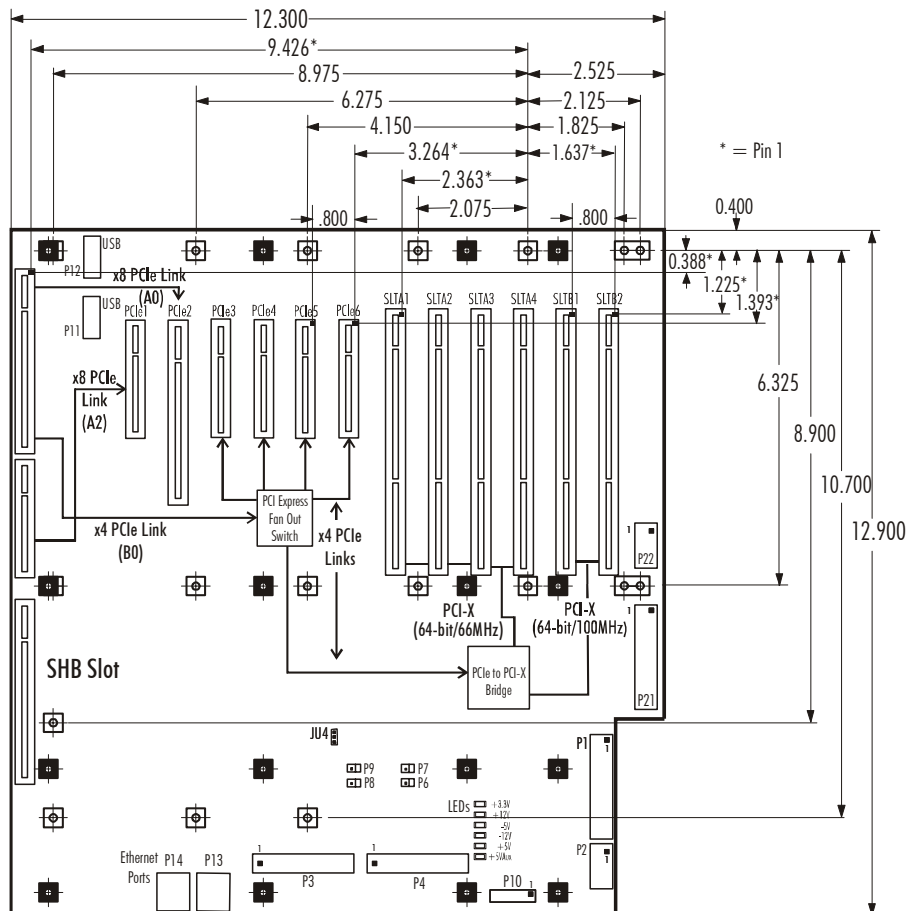
TRENTON Technology Inc.
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Technical Information – Jumpers and Connectors BPX6610 (6610) Server-Class PCI Express Backplane

Block Diagram



Layout Diagram – 6610



- Trenton Hole Pattern
- PICMG 1.3 Hole Pattern

Notes:

**Optional USB and Ethernet connectivity provided by PICMG 1.3 SHB. Not all SHBs support this capability.

Connector spacing: 0.800"

To find the center of a PCI-X/PCI option card connector to the left of the reference dimension hole, add 0.150" to the pin 1 location dimension. To find the center of a PCI Express option card connector and the SHB slot add 0.049" to the pin 1 location dimension.

Nominal PCB thickness: .080"

Mounting holes: .156" diameter

Connectors are populated based on model.

Some holes are common to both hole patterns

All dimensions are inches.



BPX6610 (6610) 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), “TOP” and “BOTTOM” 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	+5V Auxiliary Voltage
	Install on the TOP 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.
	Install on the BOTTOM 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. *

BPX6610 (6610-010) Connectors

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

P1	-	ATX/EPS Power Connector																																																				
		24 pin dual row header, Molex #44206-0007																																																				
		<table border="0"> <thead> <tr> <th><u>Pin</u></th> <th><u>Signal</u></th> <th><u>Pin</u></th> <th><u>Signal</u></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+3.3V</td> <td>13</td> <td>+3.3V</td> </tr> <tr> <td>2</td> <td>+3.3V</td> <td>14</td> <td>-12V</td> </tr> <tr> <td>3</td> <td>Gnd</td> <td>15</td> <td>Gnd</td> </tr> <tr> <td>4</td> <td>+5V</td> <td>16</td> <td>PSON#</td> </tr> <tr> <td>5</td> <td>Gnd</td> <td>17</td> <td>Gnd</td> </tr> <tr> <td>6</td> <td>+5V</td> <td>18</td> <td>Gnd</td> </tr> <tr> <td>7</td> <td>Gnd</td> <td>19</td> <td>Gnd</td> </tr> <tr> <td>8</td> <td>PWRGD</td> <td>20</td> <td>-5V</td> </tr> <tr> <td>9</td> <td>+5VAUX</td> <td>21</td> <td>+5V</td> </tr> <tr> <td>10</td> <td>+12V</td> <td>22</td> <td>+5V</td> </tr> <tr> <td>11</td> <td>+12V</td> <td>23</td> <td>+5V</td> </tr> <tr> <td>12</td> <td>+3.3V</td> <td>24</td> <td>Gnd</td> </tr> </tbody> </table>	<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
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BPX6610 (6610-010) Connectors (continued)

P3 - Terminal Block Connector

10 position terminal block, Phoenix Contract Inc., 19-35-24-2

20 Amps per circuit

<u>Pin</u>	<u>Signal</u>
------------	---------------

1	+3.3V
2	+3.3V
3	+3.3V
4	+3.3V
5	Gnd
6	Gnd
7	Gnd
8	Gnd
9	Gnd
10	Gnd

P4 - Terminal Block Connector

10 position terminal block, Phoenix Contract Inc., 19-35-24-2

20 Amps per circuit

<u>Pin</u>	<u>Signal</u>
------------	---------------

1	+5V
2	+5V
3	Gnd
4	Gnd
5	Gnd
6	Gnd
7	Gnd
8	+12V
9	+12V
10	+12V

P6 - Power-On Connector

2 pin single row header, Amp #640456-2

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

P7 - Power Button Connector

2 pin single row header, Amp #640456-2

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

P8 - Reset Connector

2 pin single row header, Amp #640456-2

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

P9 - Power Good Connector

2 pin single row header, Amp #640456-2

<u>Pin</u>	<u>Signal</u>
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1	PWRGD
2	Gnd



BPX6610 (6610-010) Connectors (continued)

P10 - I/O Power Connector

20 pin dual row header, Molex #87831-2020

<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
9	SMCLK	10	+3.3V
11	PWRBT#	12	PSON#
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

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

8 pin shielded RJ-45 connector, Molex #85508-0001

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



BPX6610 (6610-010) Connectors (continued)

P14 - 10/100/1000Base-T Ethernet Connector - LAN 1
8 pin shielded RJ-45 connector, Molex #85508-0001

<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 - EPS Power Connector
24 pin vertical dual row, Molex #44206-0007

<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

P22 - +12V Power Connector
8 pin vertical dual row, Molex #44206-0005

<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



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Trenton SHB Optional Backplane I/O Support For the BPX6610

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 BPX6610

MODEL#	MODEL NAME	DESCRIPTION
6610-010	BPX6610-RAV	ATX/EPS right-angle and vertical connectors with two high-current terminal blocks