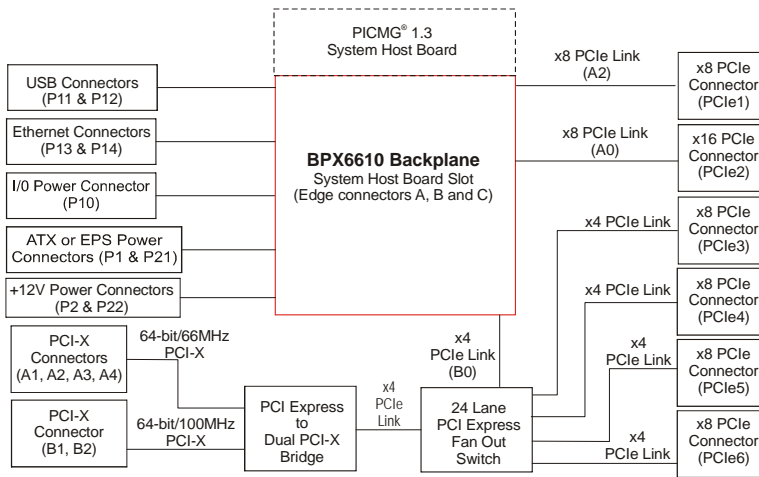




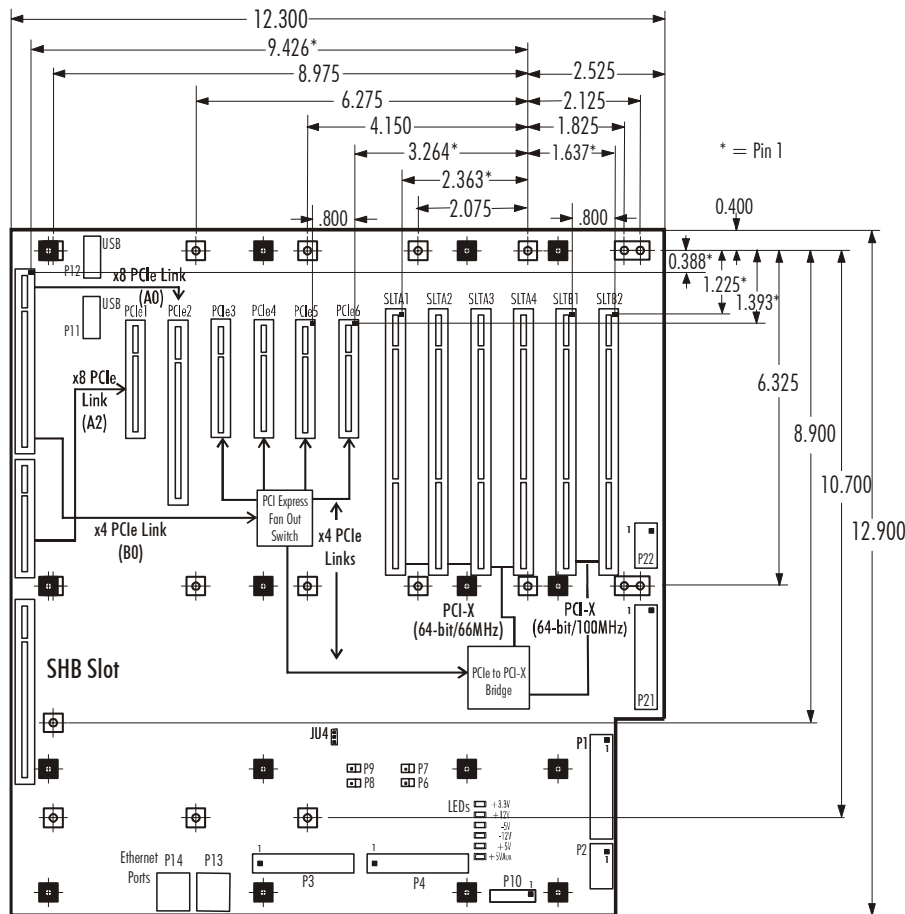
TRENTON Technology Inc.  
 2350 Centennial Drive • Gainesville, Georgia 30504  
 Sales (800) 875-6031 • Phone (770) 287-3100 • Fax (770) 287-3150

## 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>
<b>JU4</b>	<b>+5V Auxiliary Voltage</b>
	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**

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

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<b>P1</b>	-	<b>ATX/EPS Power Connector</b>																																																				
		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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<b>P2</b>	-	<b>+12V Power Connector</b>																																																				
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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>
------------	---------------

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>
------------	---------------

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 <sup>1</sup>	-	-	n/a	-	-	X	X	n/a	n/a	n/a	n/a
SLT/SLI <sup>1</sup>	-	-	n/a	-	-	X	X	n/a	n/a	n/a	n/a
MCX-series <sup>2</sup>	-	-	X	-	-	-	-	X	X	X	X

<sup>1</sup> Requires factory build option.

<sup>2</sup> 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