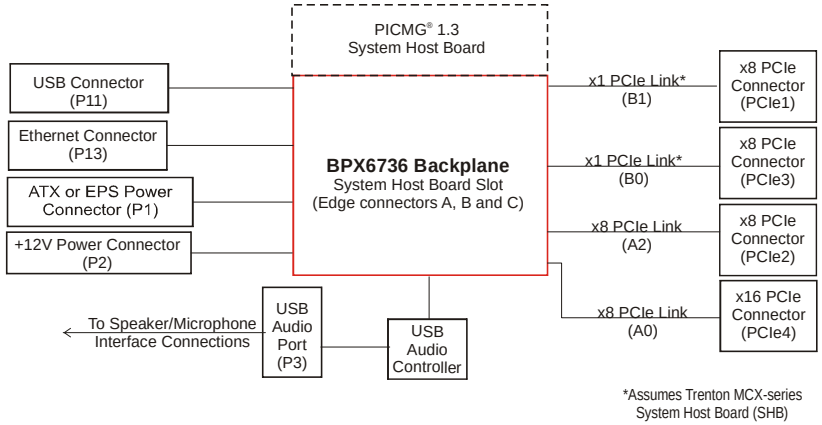
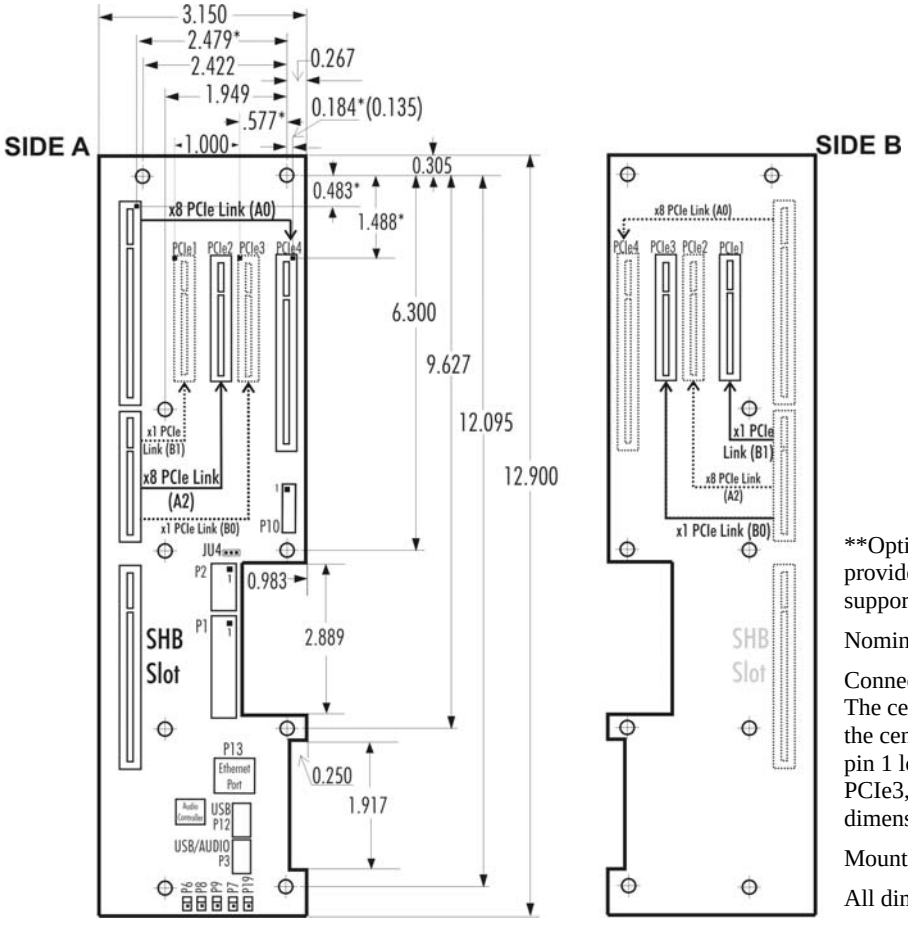
TRENTON Technology Inc.
2350 Centennial Drive • Gainesville, Georgia 30504
Sales (800) 875-6031 • Phone (770) 287-3100 • Fax (770) 287-3150

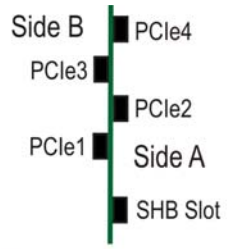
Technical Information – Jumpers and Connectors
BPX6736 (6736) 2U Server-Class PCI Express Backplane

Block Diagram



Layout Diagram – 6736-007 and 6736-027





BPX6736 Backplane
I/O Plate View

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

Nominal PCB thickness: .062”

Connector spacing: 1.000” centers
The center of PCIe4 is noted in parenthesis. To find the center of the SHB connector, add 0.049” to the pin 1 location dimension. To find the center of the PCIe3, subtract 0.049” from the pin 1 location dimension given on Side A.

Mounting holes: .156” diameter

All dimensions are inches.

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

BPX6736 (6736-007 and 6736-027) 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.

Jumper	Description
JU4	**+5V Auxiliary Voltage** 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. 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. *

BPX6736 (6736-007 and 6736-027) Connectors

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

P1 - ATX/EPS Power Connector

24 pin right angle dual row, Molex #39-30-1240

Pin	Signal	Pin	Signal
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 right angle dual row, Molex #39-30-0080

Pin	Signal	Pin	Signal
1	Gnd	5	+12V
2	Gnd	6	+12V
3	Gnd	7	+12V
4	Gnd	8	+12V

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

BPX6736 (6736-007 and 6736-027) Connectors (continued)

P6 - Power-On Connector

2 pin right angle single row header, Molex #22-05-3021

Pin	Signal
1	PSON#
2	Gnd

P7 - Power Button Connector

2 pin right angle single row header, Molex #22-05-3021

Pin	Signal
1	PWRBT#
2	Gnd

P8 - Reset Connector

2 pin right angle single row header, Molex #22-05-3021

Pin	Signal
1	SHB_RST#
2	Gnd

P9 - Power Good Connector

2 pin right angle single row header, Molex #22-05-3021

Pin	Signal
1	PWRGD
2	Gnd

P10 - I/O Power Connector

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

Pin	Signal	Pin	Signal
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
17	GND	18	5VAUX
19	GND	20	-12V

P11 - Universal Serial Bus (USB) Connector

10 pin right angle dual row header, 3M, #N2510-5002UB
(+5V fused with self-resetting fuses)

Pin	Signal	Pin	Signal
1	+5V-USB0	2	+5V-USB1
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	Gnd-USB0	8	Gnd-USB1
9	Chassis Gnd	10	Chassis Gnd

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

BPX6736 (6736-007 and 6736-027) Connectors (continued)

P13 - 10/100/1000Base-T Ethernet Connector - LAN 0 (6736-027 only)

8 pin right angle shielded RJ-45 connector, Molex #43860-0025

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

P19 - SMBUS Connector

2 pin right angle single row header, Molex #22-05-3021

Pin	Signal
1	SMBUS
2	Gnd

P30 - Universal Serial Bus (USB) Audio Connector

10 pin right angle dual row header, 3M, #N2510-5002UB

Pin	Signal	Pin	Signal
1	LineIn Lt.	2	LineIn Rt.
3	Gnd	4	Gnd
5	Mic P	6	Mic In
7	Gnd	8	Gnd
9	Linout Lt.	10	LineOut Rt.

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

BPX6736 Mechanical Clearance Chart – Option Card Slots

TRENTON	PCIe4 CARD LENGTH				PCIe3 CARD LENGTH				PCIe2 CARD LENGTH				PCIe1 CARD LENGTH			
SHB	**Full**	**¾**	**½**	**¼**	**Full**	**¾**	**½**	**¼**	**Full**	**¾**	**½**	**¼**	**Full**	**¾**	**½**	**¼**
NLT/NLI	NR	NR	OK	OK	OK	OK	OK	OK	NR	NR	OK	OK	n/a	n/a	n/a	n/a
SLT/SLI	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	n/a	n/a	n/a	n/a
MCX-series	NR	NR	OK	OK	OK	OK	OK	OK	NR	NR	NR	OK	OK	OK	OK	OK

Note: The letters NR indicates that this card length is Not Recommended for use in the option card slot with the specific Trenton SHB
Note: The letters n/a indicates that the card slot is not available when using this system host board

Trenton Server-Class SHB Optional Backplane I/O Support For the BPX6736

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

[1]Backplane routings of USB interfaces 2 & 3 are factory build options on the NLT/NLI and SLT/SLI and must be ordered to enable backplane audio controller functionality
[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
Note: The letters n/a indicates that the function is not available on this system host board