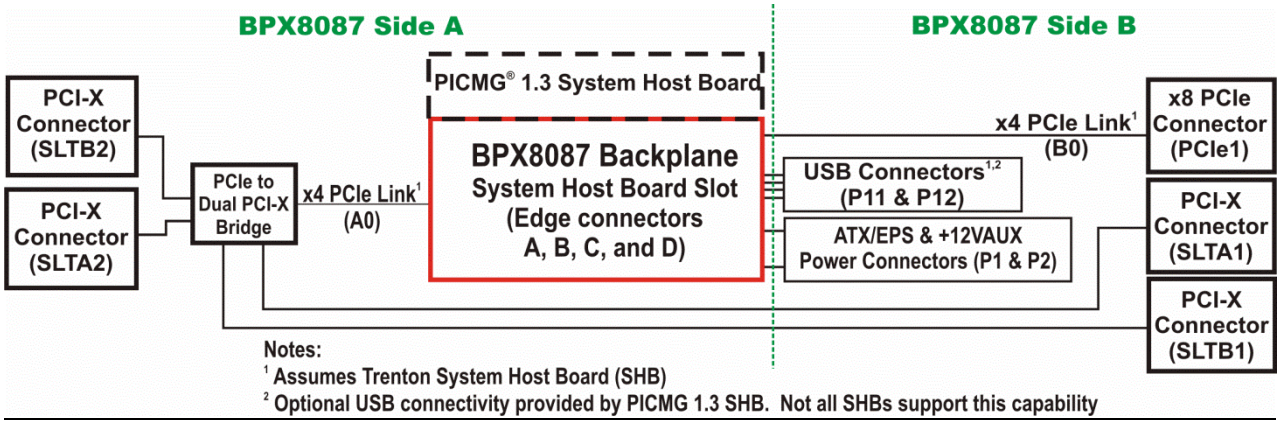
TRENTON Systems, Inc.
2350 Centennial Drive • Gainesville, Georgia 30504
Sales (800) 875-6031 • Phone (770) 287-3100 • Fax (770) 287-3150

Technical Information –Jumpers, Connectors and Status LEDs
BPX8087 (8087) 2U Butterfly PCI-X/PCI Express Backplane

Block Diagram



* The BPX8087 backplane is optimized for use with Trenton's single-processor TSB7053 and TQ9 system host boards. Dual-processor SHBs such as the BXT7059 and JXT6966 as well as the single-processor BXTS7059 and JXTS6966 SHB variations may be used with the BPX8087 backplane; however, SLTA2 is not accessible with these SHBs. SLTB2 may not be usable with certain I/O option cards when using the BXT/BXTS and JXT/JXTS SHBs.

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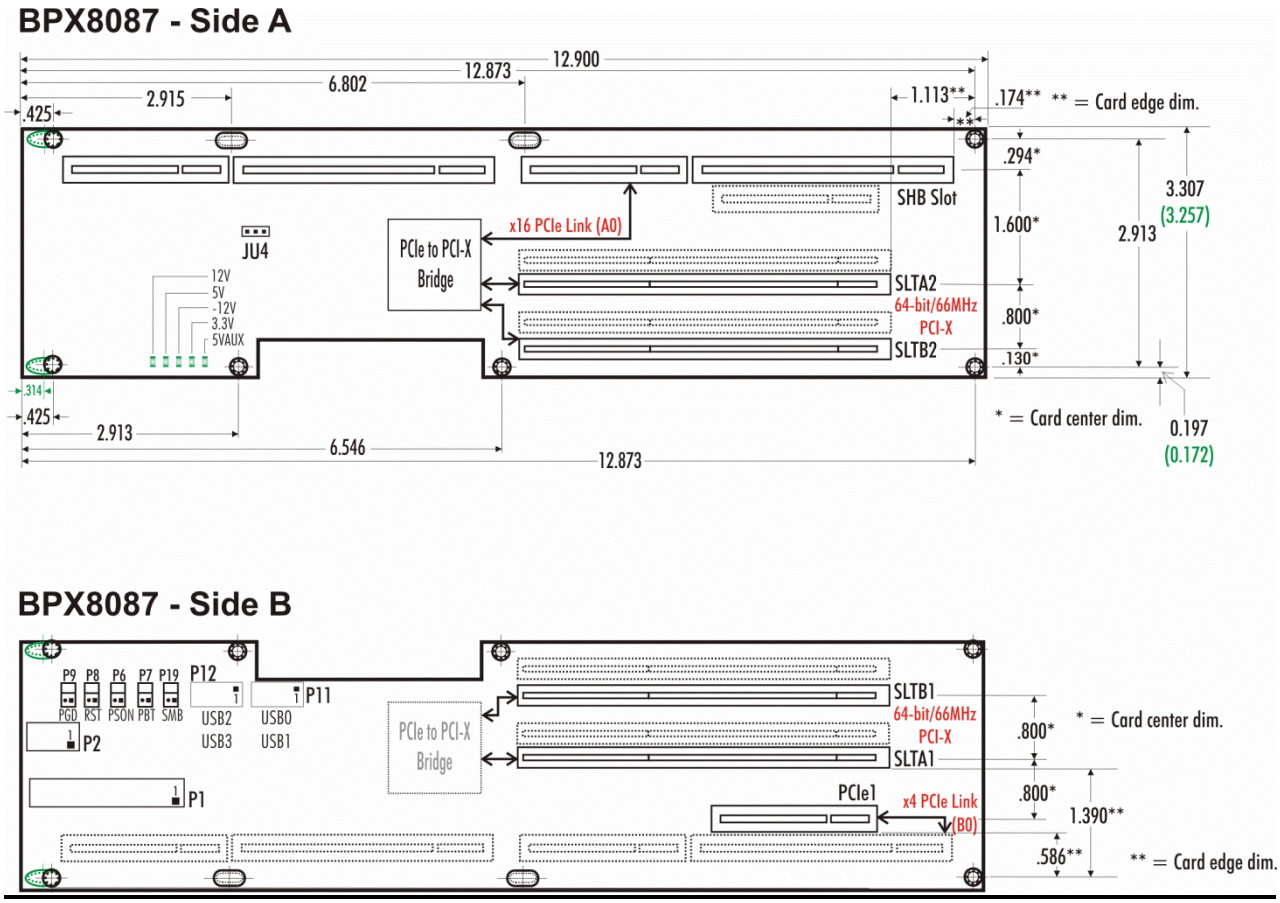
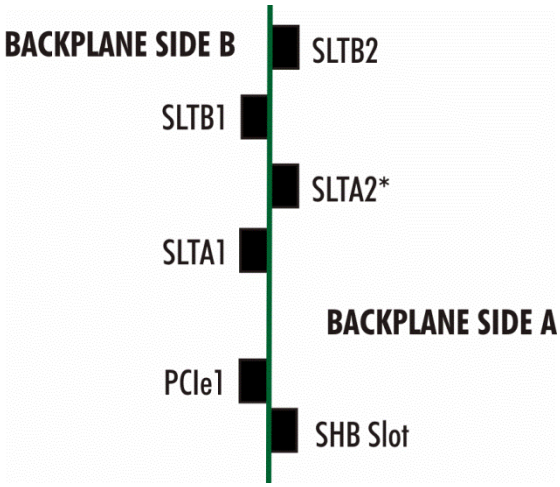
Layout Diagram – 8087-008 – Mounting Hole Pattern



BPX8087 – End View



Notes:

1. **(Backplane revision -001 dimension)**
2. Connector spacing: 0.800”
3. Power connectors shown represents backplane model number 8087-008
4. The nominal backplane thickness is 0.080”; however, the backplane mounting holes are recessed 0.018” on the bottom to provide an effective PCB thickness of 0.062” for use in the chassis design process.
5. Mounting holes: .156” diameter
6. All dimensions are in inches.
7. Optional USB connectivity provided by Trenton SHB. Not all SHBs support these capabilities.
8. *Backplane slot SLTA2 is not accessible when using a BXT7059, BXTS7059, JXT6966 or JXTS6966 SHB in the BPX8087 backplane and SLTB2 may also be inaccessible with certain I/O cards.

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8087-008 Configuration Jumper

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

NOTE: For the JU4 3-pin/two-position jumper, "LEFT" and "RIGHT" refers to positioning when facing backplane side A and the backplane cut-out is at the top.

Jumper	Description
JU4	**+5V Auxiliary Voltage** (3-pin Jumper/Two Position) Install on the RIGHT (i.e. towards the status LEDs) if +5V auxiliary voltage is provided by a separate +5VAUX signal input pin. This option is used for ATX or EPS standard power supplies.* Install on the LEFT (i.e. towards the bridge chip) 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.

*Default position

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8087-008 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	NC
3	Gnd	15	Gnd
4	+5V	16	PSON#
5	Gnd	17	Gnd
6	+5V	18	Gnd
7	Gnd	19	Gnd
8	PWRGD	20	NC
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	8	+12V
2	Gnd	7	+12V
3	Gnd	6	+12V
4	Gnd	5	+12V

P6 - Power-On Connector (PSON)

2 pin vertical single row header, Amp #5-146280-2

Pin	Signal
1	PSON#
2	Gnd

P7 - Power Button Connector (PWRBTN)

2 pin vertical single row header, Amp #5-146280-2

Pin	Signal
1	PWRBT#
2	Gnd

P8 - Reset Connector

2 pin vertical single row header, Amp #5-146280-2

Pin	Signal
1	SHB_RST#
2	Gnd

P9 - Power Good Connector (PWRGD)

2 pin vertical single row header, Amp #5-146280-2

Pin	Signal
1	PWRGD
2	+5V

8087-008 Connectors (continued)

P11 - Universal Serial Bus (USB) Connector[#]
8 pin dual row header, Amp #5103308-1

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

P12 - Universal Serial Bus (USB) Connector[#]
8 pin dual row header, Amp #5103308-1

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

[#]Backplane functionality provided by the system host board

8087-008 Diagnostic LED Functions

LED Reference Designation	Backplane Silkscreen Wording	Function
LED1	5AUX	LED on indicates presence of +5V AUX source voltage. LED off = voltage not detected
LED2	3V	LED on indicates presence of +3.3V source voltage. LED off = voltage not detected
LED3	-12V	LED on indicates presence of -12V source voltage. LED off = voltage not detected
LED4	5V	LED on indicates presence of +5V source voltage. LED off = voltage not detected
LED5	12V	LED on indicates presence of +12V source voltage. LED off = voltage not detected