BPX3/2

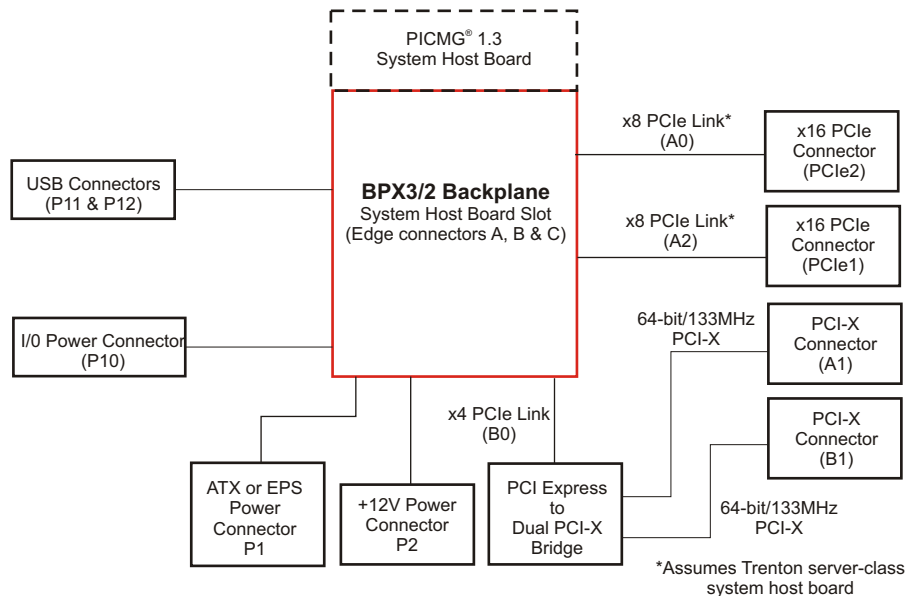## SMALL FORM FACTOR PCI EXPRESS® BACKPLANE

FEATURES

- Small Form Factor (SFF) backplane supports one PICMG® 1.3 server-class system host board
- Two PCI Express® and two PCI-X option card slots
- PCIe card slot configurations: two PCIe x16 mechanical / x8 electrical
- PCI-X card slot configurations: two 64-bit/133MHz
- Optimized for use with Trenton high-performance PICMG 1.3 system host boards
- Four USB 2.0 backplane I/O connections**
- ATX/EPS, +12V AUX vertical and right-angle input power connector configuration options
- Five-year factory warranty
- Made in U. S. A.

TRENTON
Dependable, always.

BLOCK DIAGRAM:

PICMG® 1.3 System Host Board

USB Connectors (P11 & P12)

BPX3/2 Backplane
System Host Board Slot
(Edge connectors A, B & C)

x8 PCIe Link* (A0) — x16 PCIe Connector (PCIe2)

x8 PCIe Link* (A2) — x16 PCIe Connector (PCIe1)

64-bit/133MHz PCI-X — PCI-X Connector (A1)

I/0 Power Connector (P10)

x4 PCIe Link (B0)

PCI-X Connector (B1)

ATX or EPS Power Connector P1

+12V Power Connector P2

PCI Express to Dual PCI-X Bridge

64-bit/133MHz PCI-X

*Assumes Trenton server-class system host board
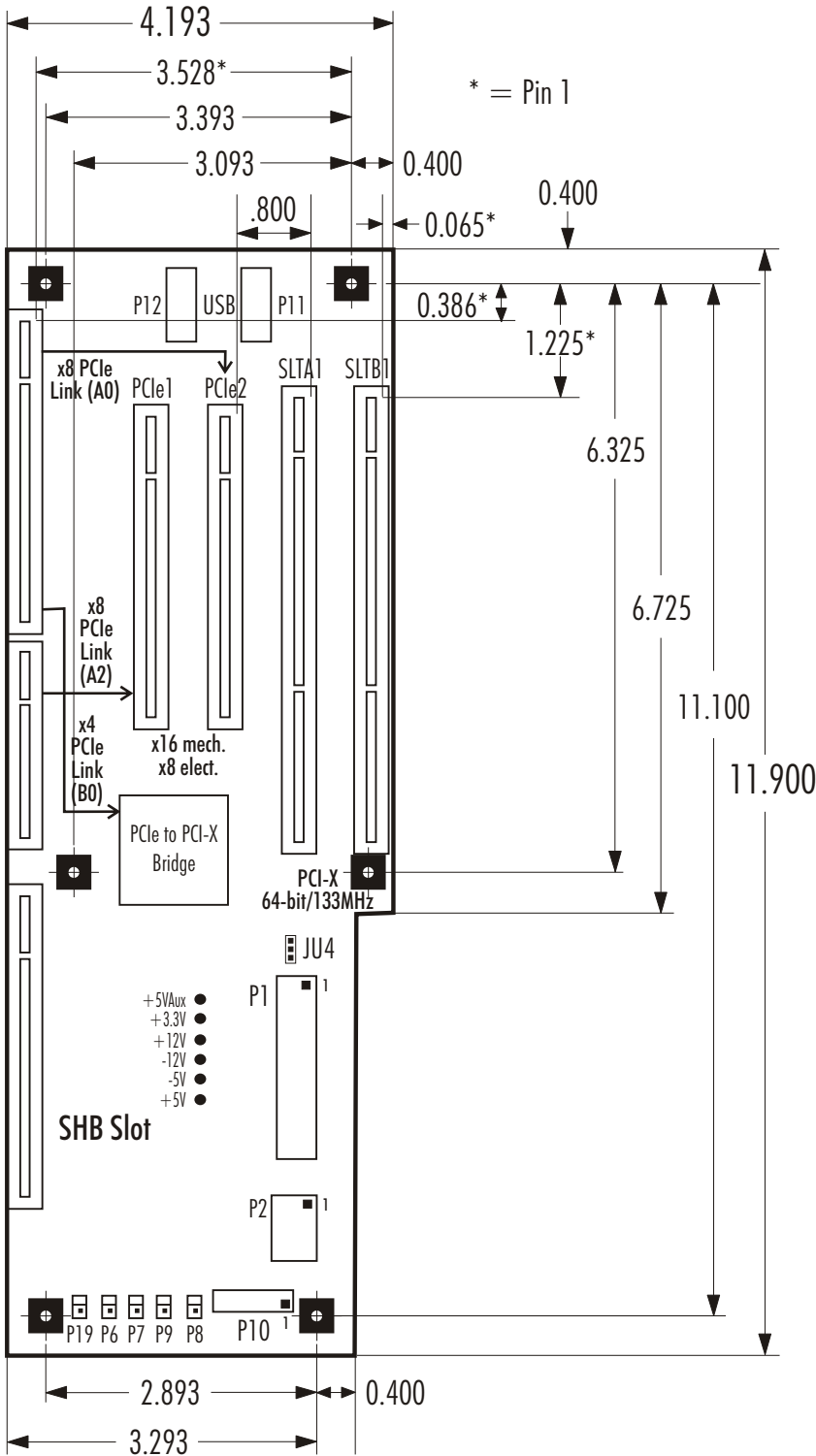
SMALL FORM FACTOR PCI EXPRESS BACKPLANE:

The PCI Express® link design of the Trenton BPX3/2 backplane supports PICMG® 1.3 server-class SHBs. Card slots PCIe1 and PCIe2 are both x16 mechanical slots connected directly to the SHB and driven with x8 PCIe electrical links. The backplane also includes two 64-bit/133MHz card slots connected to the SHB via a x4 PCI Express link and a PCI Express-to-PCI-X bridge chip. The bridge chip ensures secure data communications between the SHB and the PCI-X/PCI cards. The chip also throttles-down the bus interface speed to match any card placed in either slot A1 or B1 that has an interface bus speed less than 133MHz.

APPLICATION EXAMPLES:

A system design that needs a small form factor (SFF) backplane to fit inside a tight location within a machine such as a medical diagnostic unit or a silicon wafer processing machine are typical applications for the BPX3/2 backplane. COTS option card support for up to two PCIe and two PCI-X/PCI cards simultaneously is the ideal application scenario for the Trenton BPX3/2 backplane. The backplane's compact, SFF design offers a good blend of serial PCI Express and parallel PCI-X/PCI interconnect technology that eliminates any service interruptions caused by future technology transitions of COTS option card technology.

BACKPLANE MODEL: BPX3/2

MODEL#	MODEL NAME	DESCRIPTION
6526-007	BPX3/2-CRA	Right-angle ATX/EPS and +12V AUX connectors
6526-008	BPX3/2-CST	Vertical ATX/EPS and +12V AUX connectors

Layout diagram labels:

4.193
3.528*
3.393
3.093
0.400
* = Pin 1
.800
0.400
0.065*
0.400
0.386*
1.225*
6.325
6.725
11.100
11.900

P12 USB P11

x8 PCIe Link (A0) PCIe1 PCIe2 SLTA1 SLTB1

x8 PCIe Link (A2)

x16 mech. x8 elect.

x4 PCIe Link (B0)

PCIe to PCI-X Bridge

PCI-X 64-bit/133MHz

JU4

P1 1

+5VAux
+3.3V
+12V
-12V
-5V
+5V

SHB Slot

P2 1

P19 P6 P7 P9 P8 P10 1

2.893
0.400
3.293

SUGGESTED TRENTON SERVER CLASS PICMG 1.3 SHBs:

DUAL PROCESSOR SYSTEM HOST BOARDS

MCXT   MCXT-E   NLT   SLT

SINGLE PROCESSOR SYSTEM HOST BOARDS

MCXI   NLI   SLI

ENVIRONMENTAL SPECIFICATIONS:#

Operating Temp.: 0° C. to 60° C
Storage Temp.: -20° C. to 70° C
Humidity: 5% to 90%, non-condensing

#Environmental specifications for system host boards / single board computers are usually lower than those of the backplane. Check with your SHB/SBC vendor.

The Trenton BPX3/2 is a lead-free, RoHS compliant backplane.

This backplane is designed to meet worldwide EMI emissions requirements, CE conformity and immunity standards. Contact Trenton for specific standard numbers.

The Trenton BPX3/2 backplane is designed for UL60950 and CAN/CSA C22.2 No. 60950-00.

Engineering Notes:
All power connectors are shown in the layout drawings. The connectors are populated based on model.
Nominal PCB thickness: 0.062"
Connector spacing: .800" centers
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.
Mounting holes: 0.156" diameter
All dimensions are inches.
** Optional USB connectivity provided by the PICMG 1.3 System Host Board. Not all SHBs support this capability.

Product Photo Note: The photo of the 6526 backplane shown on page one is a provided for illustrative purposes only. Actual connector locations are illustrated in the backplane layout drawings and on the Trenton website.

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