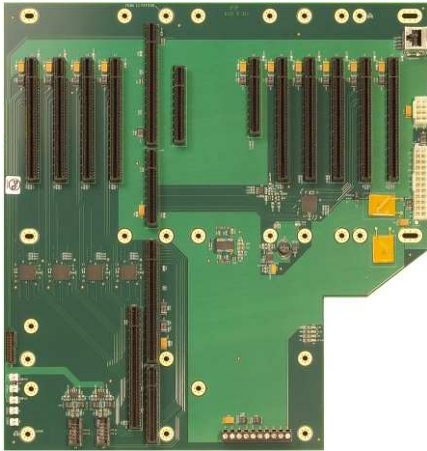


# BPC7041

## PCI EXPRESS GEN 2 BACKPLANE

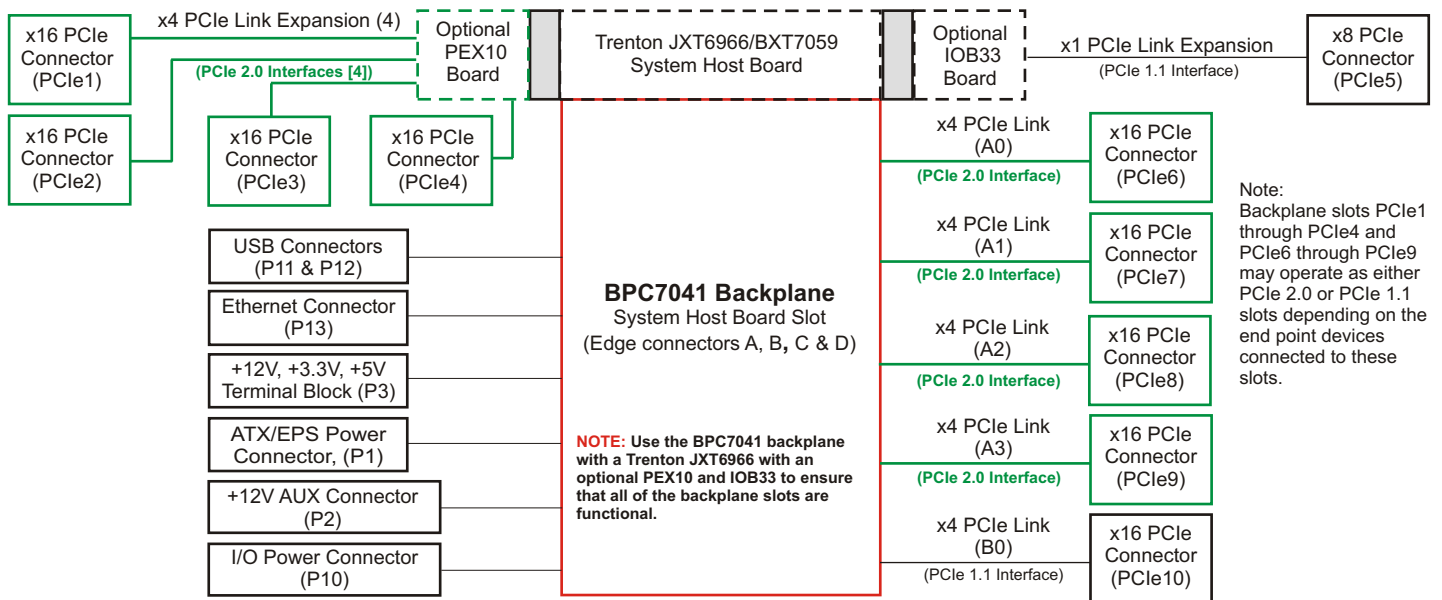


### FEATURES

- 14-slot form factor supports one JXT6966 or BXT7059 system host board
- Doubles the available PCI Express bandwidth between the SBC and the system cards
- Supports PCI Express® Gen 2.0 and Gen 1.1 option cards
- Enables PCI Express® link expansion using the Trenton PEX10 and IOB33 modules
- Nine x16 PCIe mechanical slots plus one x8 slot
- PCIe card slot electrical configuration: Nine (9) PCIe x4 and One (1) PCIe x1
- Automatic PCIe Gen 2 and Gen 1.1 link detection and training
- One 10/100/1000Base-T backplane Ethernet port
- Four USB 2.0 backplane I/O connections
- ATX/EPS, +12V AUX and terminal block input power connectors
- Five-year factory warranty
- Made in U. S. A.



### BLOCK DIAGRAM:



### TEN SLOT PCI EXPRESS GEN 2 BACKPLANE:

Trenton's BPC7041 is a passive backplane with a PCI Express 2.0 link design. The PCIe 2.0 approach doubles the available communication bandwidth between a single board computer and the option cards used in an industrial computer system. The backplane's nine x16 PCIe mechanical option card slots connect directly to the Jasper Forest processors on Trenton's JXT6966 single board computer. The net result is faster SBC to option card communication speeds using x4 PCI Express 2.0 links directly from the CPUs. PCIe links integrated into the CPUs automatically matches an option card's PCI Express link type and speed via the interface's built-in auto-training capability. This SBC and backplane design feature maximizes system flexibility by enabling PCI Express Gen 2.0 or Gen 1.1 option cards with various PCIe electrical interfaces such as x16, x8, x4 and x1 PCIe links. The x8 slot uses a x1 PCIe link to connect to the SBC's Platform Controller Hub (PCH) via an IOB33 module.

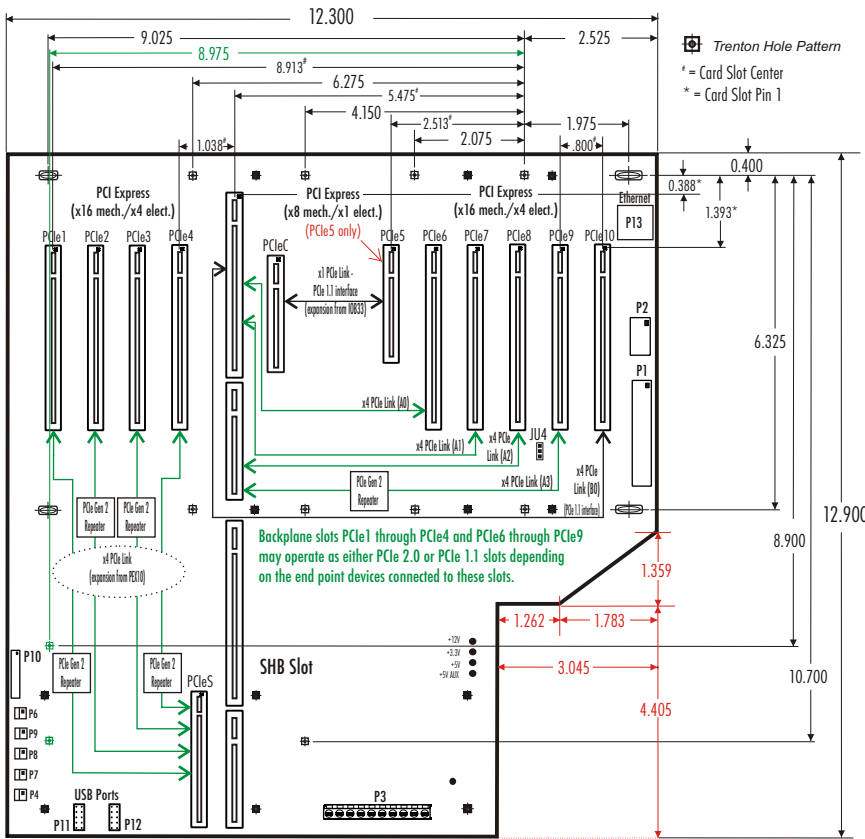
### APPLICATION EXAMPLES:

Any system design that only deploys PCI Express option cards is a good candidate for the BPC7041 backplane. The passive backplane design ensures reliable PCI Express link routings while eliminating bridge and switching devices. Automatically supporting either PCI Express Gen 2.0 or 1.1 cards on the BPC7041 with varying PCIe link constructions builds added scalability into any COTS rackmount computer system. The backplane's smaller 14-slot form factor lends itself well to medical diagnostics, military/aerospace, and communication system designs. The cutout at the lower right corner of the backplane enables the backplane to drop into a variety of computer chassis designs with ease. The BPC7041's ability to support up to ten PCI Express COTS cards, coupled with the advanced PCI Express features on the Trenton JXT6966 SBC enable COTS rackmount computer designs that maximize speed, reliability and system flexibility.

### BACKPLANE MODEL: BPC7041

MODEL#	MODEL NAME	DESCRIPTION
7041-008	BPC7041-CST	ATX/EPS and 12V AUX vertical power connectors and one terminal block

**BPC7041 LAYOUT - TRENTON MOUNTING HOLE PATTERN DIMENSIONS:**



**SUGGESTED TRENTON PICMG 1.3 SYSTEM HOST BOARD:**

**DUAL PROCESSOR SHB**  
**BXT7059**                      **JXT6966**

**ENVIRONMENTAL SPECS.:**

**Operating Temp.:** 0° C to 60° C

**Storage Temp.:** -40° 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.

The Trenton BPC7041 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 the specific standard numbers this product.

The Trenton BPC7041 backplane is designed for UL60950 and CAN/CSA C22.2 No. 60950-00.

**Engineering Notes:**

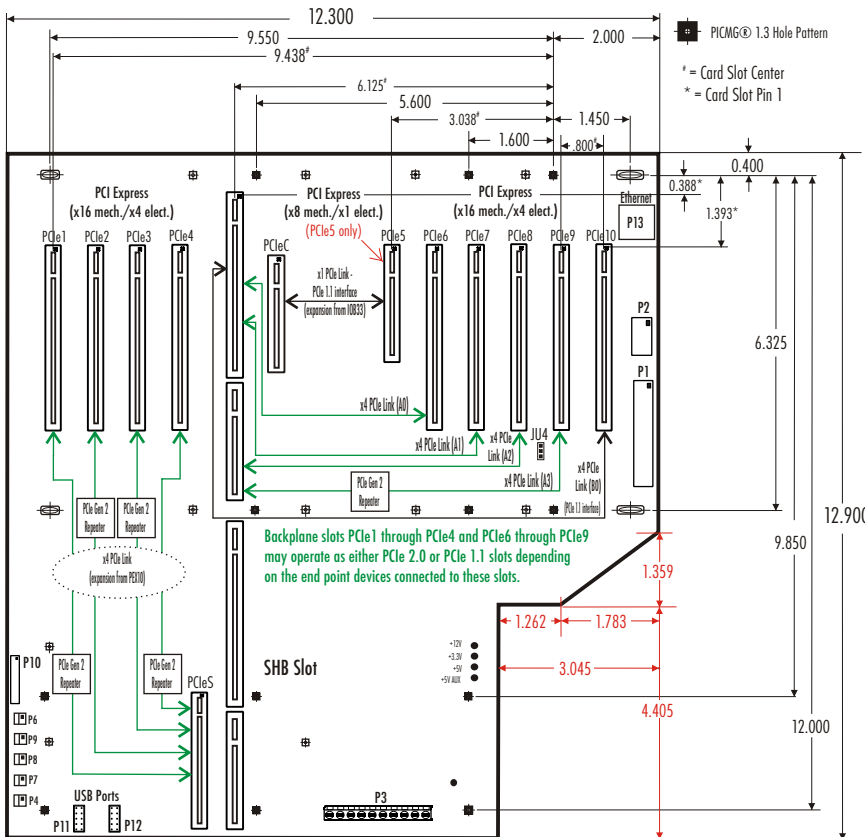
All power connectors are shown in the layout drawings. The connectors are populated based on model.

Mounting holes: 0.156" diameter

Nominal PCB thickness: 0.080"

All dimensions are inches.

**BPC7041 LAYOUT - PICMG 1.3 MOUNTING HOLE PATTERN DIMENSIONS:**



**APPLICATION NOTES:**

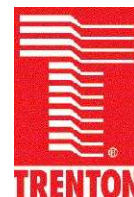
1. A Trenton JXT6966 or BXT7059 with an optional PEX10 and IOB33 must be used with the BPC7041 backplane to ensure that all of the backplane slots are functional. This hardware combination provides all of the necessary PCI Express communication links needed for option card slot functionality.

2. A system's off-board video card must be placed in the PCIe6, PCIe7, PCIe8, PCIe9 or PCIe10 backplane card slot.

*Product Photo Note: The photo of the 7041 backplane shown on page one is provided for illustrative purposes only. Actual connector locations are illustrated in the backplane layout drawings and on the Trenton website.*

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Dependable, always.