BP2S6929



FEATURES

- 20-slot form factor supports up to two $\text{PICMG}^{\circledast}$ 1.3 graphics or server-class system host boards
- Three x16 PCI Express[®] mechanical slots per segment
- Four 64-bit/100MHz PCI-X card slots per segment
- Optimized for use with Trenton high-performance PICMG 1.3 system host boards
- Ideal for cluster computing system applications where processing scalability and system longevity are key requirements
- Used in the Trenton TRC5001 and TRC5002 19" rackmount computers
- Right-angle ATX/EPS and +12V AUX power connector options
- +12V, +5 and +3.3V terminal block connector options
- Five-year factory warranty
- Made in U. S. A.



BLOCK DIAGRAM:



TWO-SEGMENT PCI EXPRESS BACKPLANE:

The PCI Express[®] link design of the Trenton BP2S6929 backplane enables the use of combo, graphics or server-class SHBs without the need of specific build options. Each segment supports either a graphics-class or server-class SHB, three PCI Express (PCIe) and four 64-bit/100MHz PCI-X option card slots. All the PCI Express slots are x16 mechanical slots and each PCIe slot is driven with a x8 PCI Express link. Each backplane segment has right-angle, ATX/EPS and 12V AUX power connectors. The backplane can also be ordered with supplemental terminal blocks for connecting additional + 12V, +3.3V and +5V power.

APPLICATION EXAMPLES:

Cluster computing applications that require the processing capabilities of multiple single or dual processor single board computers working independently in a rugged 4U, 19" rackmount chassis are typical system configurations for the backplane. The combination of PCI-X and PCI Express option card slots maximizes option card flexibility in robust system designs. A few application examples for the two segment backplane include cryptography, aircraft communications and control, missile telemetry, complex fabrication machines used in silicon wafer processing, oil and mineral exploration and automatic toll-booths.

BACKPLANE MODEL: BP2S6929

MODEL#	MODEL NAME	DESCRIPTION
6929-007	BP2S6929-CRA	Graphics-class, Right-angle EPS/ATX and $+12$ VAUX connectors plus Terminal Blocks
6929-009	BP2S6929-RAC	Graphics-class, Right-angle EPS/ATX and $+12V$ AUX connectors only
6929-017	BP2S6929-TRA	Graphics-class, Right-angle EPS/ATX and Terminal Blocks (no $+$ 12V AUX connectors)

TRENTON Systems Inc. · 2350 Centennial Drive, Gainesville, Georgia 30504 · Sales: (800) 875-6031 · Phone: (770) 287-3100 · Fax: (770) 287-3150 E-mail: Sales@TrentonSystems.com · Web: www.TrentonSystems.com

BP2S6929 LAYOUT - TRENTON MOUNTING HOLE PATTERN DIMENSIONS:



BP2S6929 LAYOUT - PICMG 1.3 MOUNTING HOLE PATTERN DIMENSIONS:

16.400 12.000 Ø Mounting hole common to both Trenton & PICMG 1.3 hole patterns 11.600* 9.438 • = PICMG 1.3 mounting hole pattern 8.000 3.200 4.000 = Connector Center Point * = Pin 1 3.600* 1.438* 2.162# ► .800[#] 0.400 ŧ Þ • ◙ -▣ ◙ Ð ۰ Notes: Dotted lines indicate connectors 0.388* SHB SHB 4 1.225 that are populated based on model name Slot Slot 1.393* SITA2 SITRI SITD and number. PCIe3 Mounting holes: 0.156" diameter Nominal PCB thickness: 0.080" 6.325 All dimensions are inches. 9.850 12.000 *NOTE: The photo of the 6929 backplane shown on Ш page one is a provided for illustrative purposes only. x16 mech x16 mech Actual connector locations are illustrated in the x8 elect x8 elect. ٨ backplane layout drawings and on the Trenton website. 12,900 Ø Þ ø • ٠ Ì ٠ 0 x8 PCIe Links PICMG is a registered trademark of the PCI Industrial x8 PCIe Links Computer Manufacturers Group. All other product PCIe to PCI-) PCIe to PCI-X names are trademarks of their respective owners. x4 PCle Bridge PCI Express Bridge PCI Express PCI-X x4 PCle PCI-X (64-bit/100MHz) (64-bit/100MHz) Link Switch Link Switch (BO) Copyright ©2012 by TRENTON Systems, Inc. (B0) ◙ ◙ Ø ٩ All rights reserved x8 PCIe Link (A0) x8 PCle Link (A0) 💷 P10 ••• P1 P8 💷 • ٠ ••• P3 TRENTON ••• P4 P7 💷 P5 LED7 P2 LED9 LED8 P6 💷 🤅 SYSTEMS ◙ नि नि ⊒∎ JU2-4 JU1-4 P9 💷 🖥 🛛 LED3 D IFD2 P1-2 P2-PICMG ٠ 00000000000 0000000000 1 0 ٥

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SUGGESTED TRENTON PICMG

DUAL PROCESSOR SYSTEM HOST BOARDS BXT7059 JXT6966 MCXT NLT SLT

SINGLE PROCESSOR SYSTEM HOST BOARDS

TSB7053 TQ9 TML BXTS7059 JXTS6966 MCXI NLI SLI

ENVIRONMENTAL SPECS.:*

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

900 [#]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 BP2S6929 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 BP2S6929 backplane is designed for UL60950 and CAN/CSA C22.2 No. 60950-00.