

**TRENTON
SYSTEMS**
Rugged Computers

HDB8231
HDEC Series
Backplane

HDEC SERIES LARGE FORMAT BACKPLANE

Two X8 And Sixteen X4 PCIe 3.0 Option Card Slots

Enhance System Design Flexibility

HDEC Series large format backplane supports one dual-processor HDEC Series SHB and up to eighteen PCI Express option cards. All card slots are designed for the Gen3 PCIe electrical interface and are equipped with x16 PCIe mechanical connectors. All sixteen of the HDB8231 backplane slots connected directly to the processors on the system host board. This is ideal for applications that require minimal latency. Two slots feature PCIe x8 electrical interfaces and sixteen slots have a Gen3 PCIe x4 electrical interface.

PRODUCT DETAILS



I/O CONNECTIONS

6-SATA 600, 2-USB3, 4-USB2, 1-serial port, 1-PS/2 keyboard, 1-PS/2 mouse, & 8 fan headers with fan speed monitoring.



PCI EXPRESS 3.0

80 Lanes of PCIe 3.0 provided by the HDEC Series system host board.



OPTION CARD SLOTS

The HDB8231 backplane features two x8 & sixteen x4 PCIe 3.0 option card slots.



www.trentonsystems.com
Visit our website for more info.

Phone: (770) 287-3100

Email: sales@trentonsystems.com

Model Number

HDB8231

Form Factor

HDEC Series large format backplane supports one dual-processor HDEC Series SHB and up to eighteen PCI Express option cards. All card slots are designed for the Gen3 PCIe electrical interface and are equipped with x16 PCIe mechanical connectors. Two of these slots feature PCI Express x8 PCIe electrical interfaces. The backplane's sixteen remaining slots are driven by the SHB with a x4 electrical interfaces.

Mechanical

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.

Size

16.4"(417mm) x 12.9"(328mm) - large format, single segment

Configuration

Two x8 PCI Express, sixteen x4 (all x16 mechanical) slots, and all card slots are PCIe Gen3 capable.\

Note 1: Backplane slots PCIe13 and PCIe14 are x8 slots.

Card Slots

2 – x8 PCI Express 3.0/2.0/1.1 electrical / x16 mech. connectors

16 – x4 PCI Express 3.0/2.0/1.1 electrical / x16 mech. connectors

Agency Approvals & Compliance

Designed for UL60950 and CAN/CSA C22.2 No.60950-00, EN55022:1998 Class B, EN61000-4-2:1995, EN61000-4-3:1997, EN61000-4-4:1995, EN61000-4-5:1995, EN61000-4-6:1996, EN61000-4-11:1994

Power Connectors

- ATX/EPS power source – one right-angle or vertical 24-position ATX/EPS connector
- +12V AUX power source – three right-angle or vertical 8-position connectors
- Terminal block – one four-position terminal block for extended current applications

Indicators

- 6 – SATA/600 system headers
- 2 – USB3 interface system header connections
- 1 – Serial port header
- 4 – USB2 rear chassis access interface ports
- 1 – PS/2 mouse header
- 8 – GPIO signals available via a GPIO system header
- 1 – PS/2 keyboard header
- 1 – JTAG system header
- 1 – JTAG header 8 – System fan headers with built-in fan speed control
- 1 – LED dimmer header
- 2 – System temperature sensor header connections
- 1 – System speaker header
- 4 – ACPI control headers (PSON, PWRBTN, RESET, PWRGD)
- 1 – System keypad header
- 1 – SMBus header
- 1 – Clear CMOS header
- 4 – 3.3V AUX power jumper for the card slots
- 4 – Alarm status headers for the FAN, TEMP, VOLT and ERROR signals

Operating Temperature

0°C to 50°C with standard cooling solution and 350LFM of continuous airflow

Environmental

Airflow: 350LFM continuous airflow

Storage Temp: -40° to 70°C

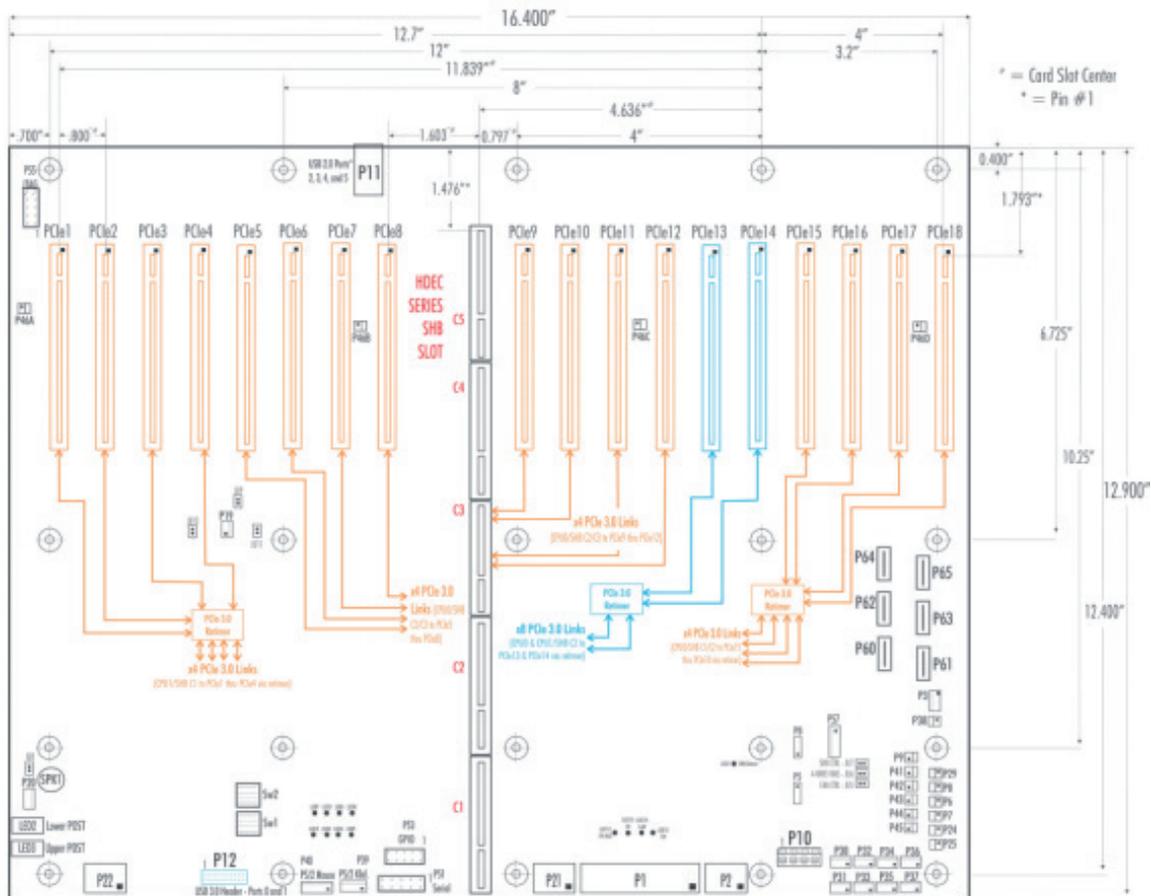
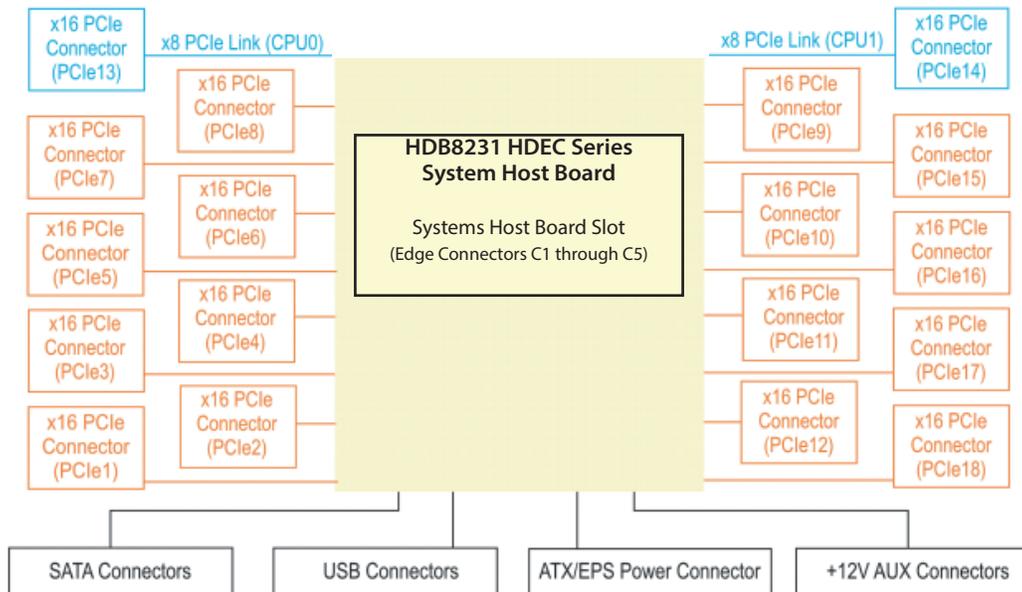
Humidity: 5% to 90% non-condensing

Trenton's HDB8231 is a lead free, RoHS compliant backplane.



BLOCK DIAGRAM

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