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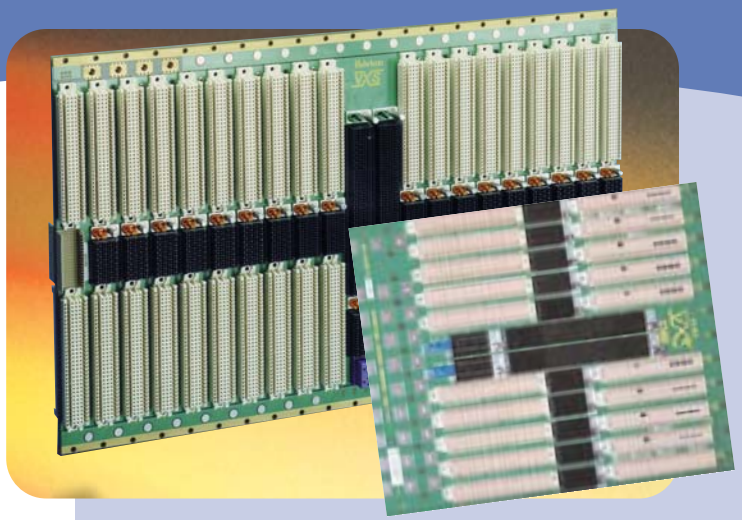
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Find the *Atrenne / Hybricon 7-Slot VXS Backplane* at our website: *Click HERE*

VITA® 41.x VXS Switch Fabric Backplanes

www.hybricon.com



Product Highlights:

- **Compliant to the latest VXS switch fabric VITA standards**
- **Stiffeners placed every two slots ensure board rigidity**
- **20-layer low noise stripline design with outside layers incorporating a chassis ground EMI shield**
- **Custom configurations available**

Product Features:

- Standard versions 8,12, 21 slots
  - 8-slot version features one VITA 41.x switch slot and up to 7 VITA 41.x payload slots; each payload slot connects both links to the one switch slot
  - 21-slot version features two VITA 41.x switch slots and up to 18 VITA 41.x payload slots with 4x links to two switch slots
- High performance, low noise
- Electronic Bus Grant (EBG)
- Compliant to the latest VITA Standards:
  - VITA 41.0 VXS VMEbus Switched Serial Standard
  - VITA 41.10-200x Live Insertion System Requirements For VITA 41 Boards Trial Use Standard
  - ANSI/VITA 1.7-2003 Increased Current Level For 96 Pin & 160 Pin DIN/IEC Connector Standard
  - ANSI/VITA 38-2003 System Management Draft Standard
  - ANSI/VITA 1.1-1997 VME64x Standard as modified by VITA 41.0 (P0/J0 connector and Switch Slots)
  - ANSI/VITA 1.5-2003 2eSST (Source Synchronous Transfer)
- Versions available for:
  - VITA 41.1 VXS InfiniBand™ Protocol Layer Standard
  - VITA 41.2 VXS Serial RapidIO™ Protocol Layer Standard
  - Versions Available for VITA 41.3 VXS Gigabit Ethernet Protocol Standard
  - Versions Available for VITA 41.4 VXS PCI Express Protocol Standard
- Standard versions 8,12,21 slots; custom configurations 2-21 slots
- Hybricon's superior signal integrity built-in - VMEbus tested to 320Mbytes/sec per VITA 1.5 2eSST
- Leverages Hybricon's signal integrity analysis and implementation experience to achieve the highest performance
- Contact Factory for VITA 41.11 rear transition support.

Specifications:

Physical

- 6U Height: 10.317"+0/-.012" (262.05mm+0/-0.3mm)
- Length: 2-slot: 1.561"+0/-.012" (39.64mm+0/-0.3mm)
  - Each additional slot, add .8" (20.32mm)
- Backplane material: FR4
- Construction: 20 layer board

Environmental

- Temperature ranges:
  - Operation: -40°C to 85°C
  - Storage: -40°C to 85°C
- Flammability rating: UL94-V0
- Regulatory: Designed to meet UL,CSA,CE requirements

Electrical

- Connector pitch: 4HP (0.8") spacing
- Signal line resistance < 3 ohms
- Characteristic impedance:
  - VMEbus - 60 ohms ±10%
  - Fabric Links - 100 ohms ±10% differential
- Power Studs: Current rating 50A
- Slot Keying: Keying blocks per VITA 41.0

Switch Slots Connectors:

Fabric Connectors:

- Type RT1 and RT2 high frequency connector
- Molded housing: liquid crystal polymer UL94-V0
- Contacts: Phosphor Bronze
- Contact surface

VMEBus International Trade Association

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VITA is a trademark of the VME International Trade Association.
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Specifications:

Backplane Power Connectors

- #8-32 Power Studs: current rating of 60A per stud, sufficient to support the following currents in each VXS Payload Slot per VITA 1.7:
  GND = 40A/slot +3.3V = 20A/slot +5V = 18A/slot (incl. VPC pins)
  +12V = 2A/slot -12V = 2A/slot +5V Stdby = 2A/slot
  +V1 = 2A/slot -V1 = 2A/slot
  +V2 = 2A/slot -V2 = 2A/slot
- Chassis Ground: #6-32 Power Bug; current rating 18A

VME64x and Payload Slots Connectors:

IEC 61076-4-113, 5 Row DIN style backplane connectors:

- Working current: 2A/pin (VME64x power pins)
- Contact resistance: < 15m ohms
- Insulation resistance: > 10^{12} ohms
- Temperature range: -65°C to 125°C
- Molded housing: liquid crystal polymer
- Contacts: Copper alloy
- Contact surface:
  - Contact zone: selectively gold-plated
  - Termination zone: Tin-plated
  - Press-in zone: Nickel-plate

IEC 1076-4-101, 2mm backplane connector (VME64x Slot J0):

- Plating: gold over palladium nickel finish or equivalent
- Temperature range: -55°C to 125°C
- Mechanical durability: 250 mating cycles
- Contact material: Bronze
- Molded housing: Polyester glass filled acc. UL94V-0
- Insulation resistance: acc. IEC 512-5
  - Signal contact: min. 10^4m ohms
  - Shield contact: min. 10^4m ohms

Fabric Connectors (Payload Slots J0):

- Type RT2 high frequency connector
- Molded housing: liquid crystal polymer UL94-V0
- Contacts: Phosphor Bronze
- Contact surface:
  - Contact zone: selectively gold-plated over nickel
  - Termination zone: Tin-plated
- VMEbus Transmission rate:
  - 320 Mbytes/sec. (peak) for 64 bit transmissions on VMEbus using 2eSST protocol
- Switch Fabric data transmission rate:
  - 32 Gbits/sec full duplex (peak) per slot for 4x VITA 41.1 InfiniBand fabric, total of 576 Gbits/sec for 18 payload slots in 21-slot backplane (at 2.5 Gbps per pair).
  - 40 Gbits/sec full duplex (peak) per slot for 4x VITA 41.2 Serial RapidIO fabric, total of 720 Gbits/sec for 18 payload slots in 21-slot backplane (at 3.125 Gbps per pair).

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Ordering Guide: VITA® 41.x VXS Switch Fabric Backplanes

DESCRIPTION	PART NUMBER
8-SLOT VITA VXS INFINIBAND BACKPLANES 1 VXS switch slot wired to payload slots A & B ports 7 VXS payload slots per VITA 41.1* System management IPMB bus per VITA 38 9-slots wide; 9th slot is used for high current VITA 1.7 power connections	**024-608-0301**
8-SLOT VITA 41.2 VXS SERIAL RAPIDIO 1 VXS switch slot wired to payload slots A & B ports 7 VME64x payload slots per VITA 41.2* System management IPMB bus per VITA 38 9-slots wide; 9th slot is used for high current VITA 1.7 power connections	**024-608-0302**
8-SLOT VITA 41.3 VXS GIGABET ETHERNET 1 VXS switch slot wired to payload slots A & B ports 7 VME64x payload slots per VITA 41.3* System management IPMB bus per VITA 38 9-slots wide; 9th slot is used for high current VITA 1.7 power connections	**024-608-0303**
8-SLOT VITA 41.4 VXS PCI EXPRESS 1 VXS switch slot wired to payload slots A & B ports 7 VME64x payload slots per VITA 41.4* System management IPMB bus per VITA 38 9-slots wide; 9th slot is used for high current VITA 1.7 power connections	**024-608-0304**
12-SLOT VITA VXS INFINIBAND BACKPLANES 2 VXS switch slots 10 VXS payload slots per VITA 41.1 System management per VITA 38	**024-612-0301**
12-SLOT VITA 41.2 VXS SERIAL RAPIDIO 2 VXS switch slots 10 VXS payload slots per VITA 41.2 System management per VITA 38	**024-612-0302**
12-SLOT VITA 41.3 VXS GIGABET ETHERNET 2 VXS switch slots 10 VXS payload slots per VITA 41.3 System management per VITA 38	**024-612-0303**
12-SLOT VITA 41.4 VXS PCI EXPRESS 2 VXS switch slots 10 VXS payload slots per VITA 41.4 System management per VITA 38	**024-612-0304**
21-SLOT VITA VXS INFINIBAND BACKPLANE 2 VXS switch slots 18VXS payload slots 1 VME64x slot per ANSI/VITA 1.1 System management IPMB bus per VITA 38	**024-621-0301**
21-SLOT VITA 41.2 VXS SERIAL RAPIDIO 2 VXS switch slots 18VXS payload slots 1 VME64x slot per ANSI/VITA 1.1 System management IPMB bus per VITA 38	**024-621-0302**
21-SLOT VITA 41.3 VXS GIGABET ETHERNET 2 VXS switch slots 18VXS payload slots 1 VME64x slot per ANSI/VITA 1.1 System management IPMB bus per VITA 38	**024-621-0303**
21-SLOT VITA 41.4 VXS PCI EXPRESS 2 VXS switch slots 18VXS payload slots 1 VME64x slot per ANSI/VITA 1.1 System management IPMB bus per VITA 38	**024-621-0304**

NOTES:
*Both 4X ports A & B on the payload slots are routed to separate ports on the single switch slot (the 7 payload slot A ports are mapped to switch ports 1-7 and the 7 payload slot B ports are mapped to switch ports 8-14 on the switch slot)

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