

XChange3012

3U VPX PCI Express and Gigabit Ethernet Integrated Switch with XMC and Management Support

- ▶ One x4 PCI Express port to each of six VPX cards
- ▶ One 1000BASE-X Ethernet port to each of six VPX cards
- ▶ Two 1000BASE-X Ethernet ports for cascading or two 10/100/1000BASE-T Ethernet port for external I/O
- ▶ Supports one XMC slot with up to a x8 PCI Express Link
- ▶ Supports two 10/100/1000BASE-T and RS-232 XMC I/O
- ▶ Managed switch options via XMC (layer 2 or layer 3)
- ▶ IPv4 and IPv6 unicast routing support



XChange3012

The XChange3012 is a 3U conduction- or air-cooled VPX module that provides both PCI Express and Ethernet switches. The PCIe and Gigabit Ethernet fabrics provide switching for a star topology. The Ethernet fabrics allow VPX cards within the system to communicate and also have access to an outside local area network.

The XChange3012 supports an XMC interface via a PCI Express link capable of supporting up to 8 lanes. Dual 10/100/1000BASE-T rear I/O from the XMC are also routed directly to the XChange3012's Gigabit Ethernet switch. The XChange3012 can optionally support layer 2 or layer 3 management via a XMC 10/100/1000BASE-T interface. XMC RS-232 rear I/O can be brought out the P1 connector.

X-ES

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...Always Fast

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3225 Deming Way, Suite 120 • Middleton, WI 53562

Phone: 608.833.1155 • Fax: 608.827.6171

sales@xes-inc.com • <http://www.xes-inc.com>

Ethernet

- One 10-port Gigabit Ethernet switch
- Six 1000BASE-X VPX interfaces
- Two 10/100/1000BASE-T external interfaces
- Two 10/100/1000BASE-T XMC interfaces
- IPv4 and IPv6 unicast routing support
- Optional layer 2 or layer 3 management via XMC 10/100/1000BASE-T port

PCI Express

- One 32 lane PCIe switch
- One 8 lane XMC interface
- Six 4 lane VPX interfaces

XMC

- One XMC site
- Rear RS-232 I/O routed to P1
- Dual 10/100/1000BASE-T I/O routed to the Ethernet switch

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 1, 3, 5
- Conformal coating available as an ordering option

Physical Specification

- 3U VPX
- Dimensions: 100 mm x 160 mm
- 0.8" or 1.0" pitch

Power Requirements

- Maximum power consumption: 10 W

Supported Ruggedization Level	Level 1	Level 3	Level 5
Cooling Method	Standard Air-Cooled	Rugged Air-Cooled	Conduction-Cooled
Operating Temperature	0 to +55 °C ambient (300 LFM)	-40 to +70 °C (600 LFM)	-40 to +85 °C (board rail surface)
Storage Temperature	0 to +85 °C ambient	-40 to +105 °C ambient	-55 to +105 °C ambient
Vibration	0.002 g ² /Hz, 5 to 2000 Hz	0.04 g ² /Hz (maximum), 5 to 2000 Hz	0.1 g ² /Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	0% to 95% non-condensing	0% to 95% non-condensing	0% to 95% non-condensing

