

XPand6242

Rugged Small Form Factor (SFF) COTS 24-Port 10 Gigabit Ethernet Switch and Router with Cisco IOS-XE®

- ▶ 16 10/100/1000BASE-T Ethernet managed switch ports
- ▶ Eight 10GBASE-T Ethernet managed switch ports
- ▶ Includes two XChange3031 10 Gigabit Ethernet switches with Layer 2 switching
- ▶ Includes one XChange6300 Cisco IOS-XE® Gigabit Ethernet Embedded Services Router
- ▶ Layer 2 switching with extensive IEEE protocol and IETF RFC support
- ▶ Small Form Factor (SFF) sub-½ ATR system
- ▶ Conduction-cooled chassis
- ▶ Integrated 28 VDC power supply
- ▶ MIL-STD-461, MIL-STD-810, and MIL-STD-704F qualifiable*
- ▶ Environmentally sealed
- ▶ Rugged circular connectors with 10 Gigabit Ethernet-rated inserts



XPand6242

The XPand6242 is a Commercial-Off-The-Shelf (COTS) rugged 24-port 10 Gigabit Ethernet switch and router with a compact design that maximizes processing and networking performance while minimizing SWaP. The XPand6242 provides a SWaP-optimized alternative to traditionally larger slot-based systems; it is an actual Small Form Factor (SFF) system based on two COTS XChange3031 3U VPX 10 Gigabit Ethernet switches.

The XChange3031 delivers full wire-speed across all of its ports and supports jumbo frames up to 10 kB. It supports IPv6 and a comprehensive set of IETF RFCs and IEEE protocols. The XChange6300 Cisco IOS-XE® router XMC installed on the XChange3031 provides highly secure data, voice, and video communications to stationary and mobile network nodes.

This fully ruggedized system is designed to meet the rigorous standards of MIL-STD-810 and DO-160, while integrating the latest power-saving and performance-enhancing technology. The heat from the internal conduction-cooled modules is conducted to sidewall heat exchangers, where it is dissipated to an externally attached cold plate. The system includes an integrated 28 VDC power supply and MIL-STD-461 EMI filtering.

*X-ES tests against portions of MIL-STD-461, MIL-STD-810, and MIL-HDBK-704. Please contact factory for details.

X-ES

Extreme Engineering Solutions

*“Fast, Flexible, Customer-Focused
Embedded Solutions”*

Extreme Engineering Solutions

9901 Silicon Prairie Parkway • Verona, WI 53593
Phone: 608.833.1155 • Fax: 608.827.6171
sales@xes-inc.com • <https://www.xes-inc.com>

Physical Characteristics

- Chassis dimensions and weight are dependent on configuration, contact factory for assistance

Ethernet Management Features (Optional)

- Layer 2 switching
- Extensive IEEE protocol and IETF RFC support
- Configuration through CLI or SNMP
- 4 MB packet buffer
- XChange6300 Cisco IOS-XE® Gigabit Ethernet Embedded Services Router XMC

Ethernet Switch Features

- IPv4 and IPv6 support
- Support for jumbo frames up to 10 kB
- Non-blocking, full wire-speed
- IEEE 1588v2 and SyncE support (optional)

First Slot I/O (XChange3031)

- Eight 10/100/1000BASE-T Ethernet ports from the XChange3031 3U VPX Gigabit Ethernet switch to J2
- Four 10GBASE-T Ethernet ports from the XChange3031 3U VPX 10 Gigabit Ethernet switch to J2's high-speed inserts
- One RS-232 port from the XChange3031 to J2

Second Slot I/O (XChange3031 and XChange6300)

- Eight 10/100/1000BASE-T Ethernet ports from the XChange3031 to J3
- Four 10GBASE-T Ethernet ports from the XChange3031 3U VPX 10 Gigabit Ethernet switch to J3's high-speed inserts
- One RS-232 serial port from XChange3031 to J3
- One RS-232 serial port from XChange6300 to J3

Slot-to-Slot Connectivity

- One 40GBASE-KR4 Ethernet port

Power Supply

- Integrated power supply
- MIL-STD-704 28 VDC input voltage support
- MIL-STD-461 EMI filtering

Thermal

- The system is designed and tested to operate in ambient temperatures down to -40°C and extreme high temperatures. Maximum operating temperature is dependent on configuration and usage. Contact X-ES for further information.

