

XChange3019

End of Life

3U VPX 10 Gigabit Ethernet Switch with XMC and Optional Managed Switching and Routing Support

Please contact X-ES Sales

- › Non-blocking, full wire-speed, Ethernet switch
- › XMC mezzanine site for I/O expansion
- › Layer 2 switching and Layer 3 routing management with extensive IEEE protocol and IETF RFC support (optional)
- › VICTORY Infrastructure Switch support (optional)
- › Four 10 Gigabit Ethernet ports
- › Six 10/100/1000BASE-T Gigabit Ethernet ports
- › Ruggedized Enhanced Design Implementation (REDI) per VITA 48
- › Conduction or air cooling
- › IPv4 and IPv6 support
- › Support for jumbo frames up to 12 kB
- › IEEE 1588v2 and SyncE support (optional)
- › NTP, SSH, SNMP, and DHCP server support (optional)
- › NXP (formerly Freescale) QorIQ P1010 Management Processor
- › IPMI support (optional)



XChange3019

The XChange3019 is a conduction- or air-cooled, 3U VPX, 10 Gigabit Ethernet switch module. It provides four 10 Gigabit Ethernet and six 10/100/1000BASE-T Ethernet ports. The XChange3019 delivers full wire-speed across all of its ports and supports jumbo packets up to 12 kB, as well as IPv6, and a comprehensive set of IETF RFCs and IEEE protocols. The XChange3019 also can support compliance with the VICTORY specification as an Infrastructure Switch.

The XChange3019 supports an XMC mezzanine site for I/O expansion. This enables system integrators to reduce the size, weight, and power (SWaP), as well as cost, by combining an I/O expansion module and switch module into a single 3U VPX slot.

When configured as a fully managed Layer 2 switch, support for features such as fast boot, flow control, MAC bridging (IEEE 802.1D), port mirroring, port authentication (IEEE 802.1x), VLANs (IEEE 802.1Q), Quality of Service (QoS), GVRP, MVRP, port and protocol classification (IEEE 802.1v), GARP, MRP, GMRP, MMRP, LACP, RMON, STP, RSTP, MSTP, RPVST+, AgentX, and IGMP are included. When configured as a Layer 3 router, support for Multicast and Unicast Routing features such as DVMRP, IGMP, PIM-DM, PIM-SM, PIM-SSM, MLD, RIP, BGP, OSPFv2/OSPFv3, and VRRP are added.

X-ES

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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>

Ethernet

- Four 10 Gigabit Ethernet ports (1x XAUI, 3x 10GBASE-T)
- Six 10/100/1000BASE-T Gigabit Ethernet ports
- IPv4 and IPv6 support
- Support for jumbo frames up to 12 kB
- Advanced cable open/short detection
- Non-blocking, full wire-speed
- IEEE 1588v2 and SyncE support (optional)

Optional Ethernet Management Features

- Layer 2 switching and Layer 3 routing
- Extensive IEEE protocol and IETF RFC support
- Configuration through CLI or SNMP
- 196 MB packet buffer
- VICTORY Infrastructure Switch support

Management Controller

- NXP (formerly Freescale) QorIQ P1010 Management Processor at up to 800 MHz
- Up to 2 GB DDR3 ECC SDRAM
- Up to 8 GB NAND flash
- Dual-redundant SPI boot flash
- NTP, SSH, SNMP, and DHCP server support (optional)

XMC

- One XMC site
- Subset of J14 XMC I/O routed to P2

Physical Characteristics

- 3U VPX form factor
- Dimensions: 100 mm x 160 mm
- 0.8 in. or 1.0 in. pitch
- VITA 48.2 Type 1 Two-Level Maintenance (2LM) REDI support (optional)

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

Power Requirements

- Power will vary based on configuration and usage. Please consult factory.

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 †	-40 to +70°C ambient †	-40 to +85°C (board rail surface)
Storage Temperature	-40 to +85°C ambient	-55 to +105°C ambient	-55 to +105°C (maximum)
Vibration	0.002 g ² /Hz (maximum), 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	Up to 95% non-condensing	Up to 95% non-condensing	Up to 95% non-condensing

† Contact factory for airflow rate details.

