

# XChange3031

3U VPX 40/10 Gigabit Ethernet Switch with Layer 2 Switching and Optional Layer 3 Routing

- › Non-blocking, full wire-speed Ethernet switch
- › Layer 2 switching with extensive IEEE protocol and IETF RFC support
- › Layer 3 routing when paired with the XChange6300 Cisco IOS-XE® Gigabit Ethernet Embedded Services Router (optional)
- › One 40GBASE-KR4 Ethernet port
- › Six 10GBASE-KR Ethernet ports
- › Four 10GBASE-T Ethernet ports
- › Up to eight 1000BASE-T Ethernet ports
- › Ruggedized Enhanced Design Implementation (REDI) per VITA 48
- › Conduction cooling
- › IPv4 and IPv6 support
- › Support for jumbo frames up to 10 kB
- › IEEE 1588v2 transparent clocking support
- › SSH and SNMP server support
- › XMC site (optional)
- › VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC) (optional)



## XChange3031

The XChange3031 is a conduction-cooled 3U VPX Ethernet switch module. The XChange3031 provides one backplane 40GBASE-KR4 Ethernet port, six backplane 10GBASE-KR Ethernet ports, four backplane 10GBASE-T Ethernet ports, and up to eight backplane 1000BASE-T Ethernet ports.

The XChange3031 delivers full wire-speed across all of its ports and supports jumbo frames up to 10 kB. It also supports IPv6 and a comprehensive set of IETF RFCs and IEEE protocols.

As a fully managed Layer 2 switch, the XChange3031 has support for features such as VLANs (IEEE 802.1Q), LACP, STP, RSTP, PVRST, MSTP, SNMP, flow control, port mirroring, port authentication (IEEE 802.1x), Quality of Service (QoS), ACL, IGMP, and LLDP.

The XChange3031 can also optionally host an XChange6300 Cisco IOS-XE® Gigabit Ethernet Embedded Services Router.



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>

**Ethernet**

- One 40GBASE-KR4 Ethernet port (can be configured as four 10GBASE-KR or four 1000BASE-X)
- Six 10GBASE-KR Ethernet ports (can be configured as six 1000BASE-X)
- Four 10GBASE-T Ethernet ports
- Up to eight 1000BASE-T ports (see block diagram for mezzanine Ethernet port support options)
- IPv4 and IPv6 support
- Support for jumbo frames up to 10 kB
- Non-blocking, full wire-speed
- IEEE 1588v2 transparent clocking support

**XMC**

- One XMC site (available on configurations with integrated mezzanine card)
- J16 RS-232 serial port routed to P1
- One 2500BASE-X Ethernet port, and two 1000BASE-X Ethernet ports from J16 connect to XChange3031 when paired with XChange6300 Embedded Services Router
- Support for up to two 1000BASE-T Ethernet ports from J14 to P2 or the switch (optional)

**Physical Characteristics**

- 3U VPX form factor
- Dimensions: 100 mm x 160 mm
- 0.8 in. or 1.0 in. pitch
- Compliant to the VITA 48.2 Type 1, Two-Level Maintenance (2LM) standard (optional, contact X-ES for details)

**Environmental Requirements**

Contact factory for appropriate board configuration based on environmental requirements.

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

**Power Requirements**

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

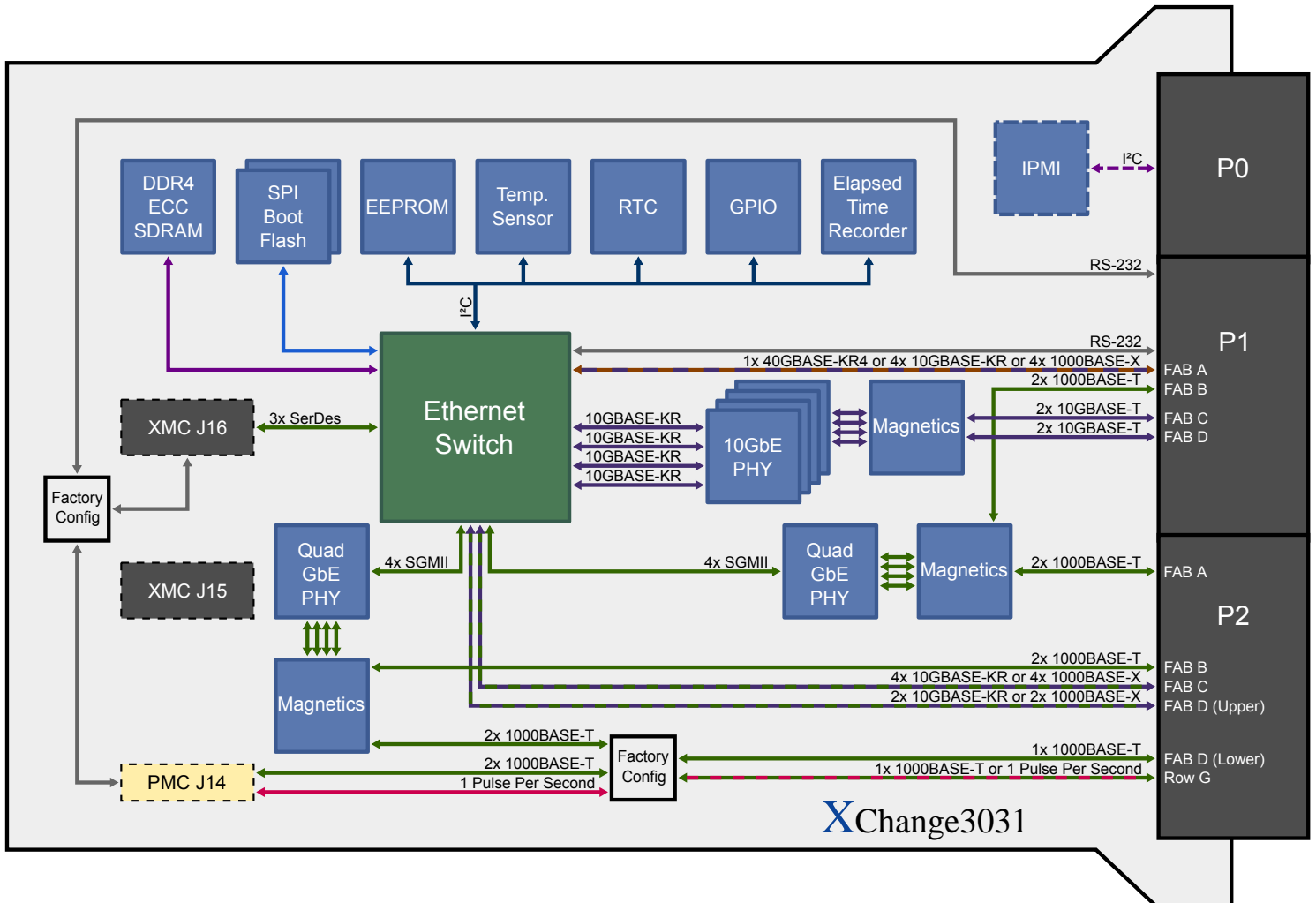
**Ethernet Management Features**

- Layer 2 switching (including VLANs)
- Extensive IEEE protocol and IETF RFC support
- Configuration through CLI or SNMP
- 4 MB packet buffer

**Additional Features**

- VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC) (optional, contact X-ES for details)

<b>Ruggedization Level</b>	<b>Level 5</b>
<b>Cooling Method</b>	Conduction-Cooled
<b>Operating Temperature</b>	-40 to +85°C (board rail surface)
<b>Storage Temperature</b>	-55 to +105°C (maximum)
<b>Vibration</b>	0.1 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz
<b>Shock</b>	40 g, 11 ms sawtooth
<b>Humidity</b>	Up to 95% non-condensing



XChange3031