XChange3012

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

- One x4 PCI Express port to each of six VPX cards
- One 1000BASE-X Ethernet port to each of six VPX cards
- Up to two 1000BASE-X Ethernet ports for cascading
- Up to two 10/100/1000BASE-T Ethernet ports for external I/O
- Supports one XMC site with up to a x8 PCI Express link
- Up to two 10/100/1000BASE-T XMC interfaces
- XMC RS-232 rear I/O

XChange3012

The XChange3012 is a conduction- or air-cooled 3U 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 eight lanes. Dual 10/100/1000BASE-T rear I/O from the XMC can be routed to the XChange3012’s Gigabit Ethernet switch. XMC RS-232 rear I/O can be brought out the P1 connector.
**Compatible OpenVPX™ Switch Slot Profiles**
- MOD3-SWH-6F6U-16.4.1-2
- MOD3-SWH-6F6U-16.4.1-3
- MOD3-SWH-6F6U-16.4.1-10
- MOD3-SWH-6F6U-16.4.1-11
- MOD3-SWH-6F8U-16.4.10-1
- MOD3-SWH-6F8U-16.4.10-2

**Ethernet**
- One 10-port Gigabit Ethernet switch
- Up to eight 1000BASE-X VPX interfaces
- Up to two 10/100/1000BASE-T VPX interfaces
- Up to two 10/100/1000BASE-T XMC interfaces

**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
- Up to two 10/100/1000BASE-T interfaces

**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 in. or 1.0 in. pitch

**Power Requirements**
- Maximum power consumption: 10 W

---

**Ruggedization Level**

<table>
<thead>
<tr>
<th>Ruggedization Level</th>
<th>Level 1</th>
<th>Level 3</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cooling Method</strong></td>
<td>Standard Air-Cooled</td>
<td>Rugged Air-Cooled</td>
<td>Conduction-Cooled</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>0 to +55°C ambient (300 LFM)</td>
<td>-40 to +70°C (600 LFM)</td>
<td>-40 to +85°C (board rail surface)</td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>-40 to +55°C ambient</td>
<td>-55 to +105°C ambient</td>
<td>-55 to +105°C (maximum)</td>
</tr>
<tr>
<td><strong>Vibration</strong></td>
<td>0.002 g²/Hz (maximum), 5 to 2000 Hz</td>
<td>0.04 g²/Hz (maximum), 5 to 2000 Hz</td>
<td>0.1 g²/Hz (maximum), 5 to 2000 Hz</td>
</tr>
<tr>
<td><strong>Shock</strong></td>
<td>20 g, 11 ms sawtooth</td>
<td>30 g, 11 ms sawtooth</td>
<td>40 g, 11 ms sawtooth</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>0% to 95% non-condensing</td>
<td>0% to 95% non-condensing</td>
<td>0% to 95% non-condensing</td>
</tr>
</tbody>
</table>