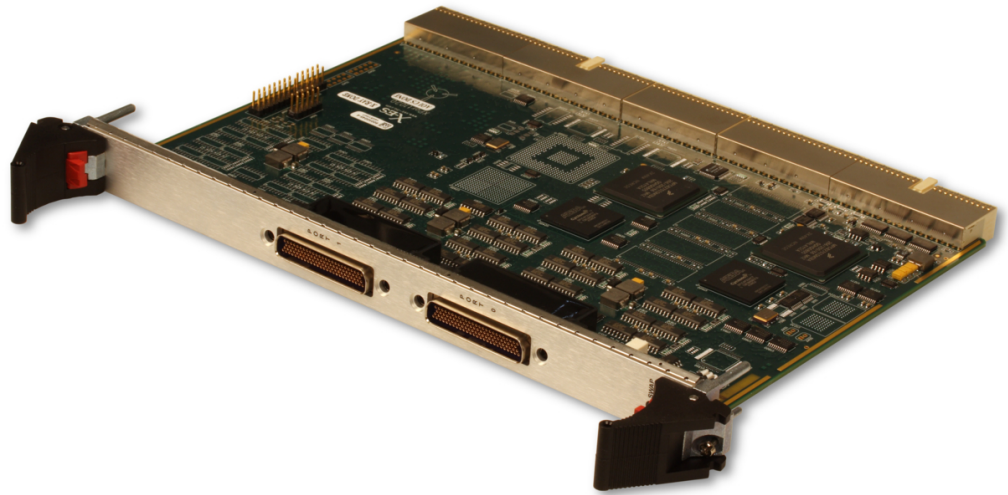


# XPort1020

Freescale MPC8270 Processor-Based Multi-Protocol Twelve-Port Serial 6U cPCI Module

- ▶ Up to three Freescale MPC8270 at up to 300 MHz with integrated PCI
- ▶ Up to 12 SCCs supporting a variety of serial protocols
- ▶ Hot swap support
- ▶ Up to 512 MB SDRAM
- ▶ Up to 128 MB soldered flash
- ▶ 512 kB socketed flash
- ▶ 2 kB SEEPROM
- ▶ Six RS-232 SMC ports
- ▶ Front panel 10/100 Mbps Ethernet and serial ports
- ▶ Two 10/100 Mbps PICMG 2.16 backplane Ethernet ports
- ▶ Optional rear I/O
- ▶ Complies to PICMG 2.1, 2.9
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP



## XPort1020

The XPort1020 is a communications controller targeting high-performance yet low-cost applications. The XPort1020 combines a wide array of supported serial protocols, a broad range of serial interface standards, and a flexible I/O routing structure to pack maximum flexibility into an industry-standard cPCI form factor.

Powered by up to three Freescale MPC8270 (PowerQUICC II™) processors, the XPort1020 implements twelve serial communication ports, each providing a EIA-530-A-compliant signal set. Support for HDLC/SDLC, UART, transparent, and BiSync modes, with NRZ, NRZI, FM0, FM1, Manchester and Differential Manchester encoding is also provided. Coupled with software-configurable support for RS-232, RS-422, RS-423, RS-485, and MIL-STD-188-114, the XPort1020 provides a wide range of serial options.

For a system designer, the XPort1020 will help drive both cost and power consumption down. Because the PCI bridge is integrated on chip and the processors are linked via the 60x bus, the XPort1020 draws less power and costs less than conventional designs based on other processors that require a PCI bridge.

# X-ES

Extreme Engineering Solutions

*...Always Fast*

### Extreme Engineering Solutions

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>

**Processor**

- Up to three Freescale MPC8270 processors
- 300 MHz max processor speed
- 280 Dhrystones at 200 MHz
- Up to 100 MHz 60x bus
- 16 kB L1 instruction/data caches
- 32 kB internal SRAM
- Integrated MMU
- Core-disabled mode
- 32-bit, 66-MHz PCI

**Memory**

- Up to 512 MB SDRAM
- Up to 128 MB surface mount flash
- 2 kB SEEPROM

**Front Panel Connections**

- Optional 10/100 Ethernet port
- Optional RS-232 serial port
- Three 100-pin serial I/O connectors

**Backplane Connections**

- PICMG 2.16 Ethernet
- Twelve optional 7-wire interfaces

**Serial Communication Controller**

- HDLC, UART, transparent, and BiSync modes
- DPLL supporting NRZ, NRZI, FM0, FM1, Manchester, and Differential Manchester
- Independent BRGs for each SCC transceiver
- Optional external custom oscillators

**Software**

- Linux BSP
- Wind River VxWorks BSP
- SCC, SMC, and Ethernet drivers

**Physical Characteristics**

- cPCI form factor

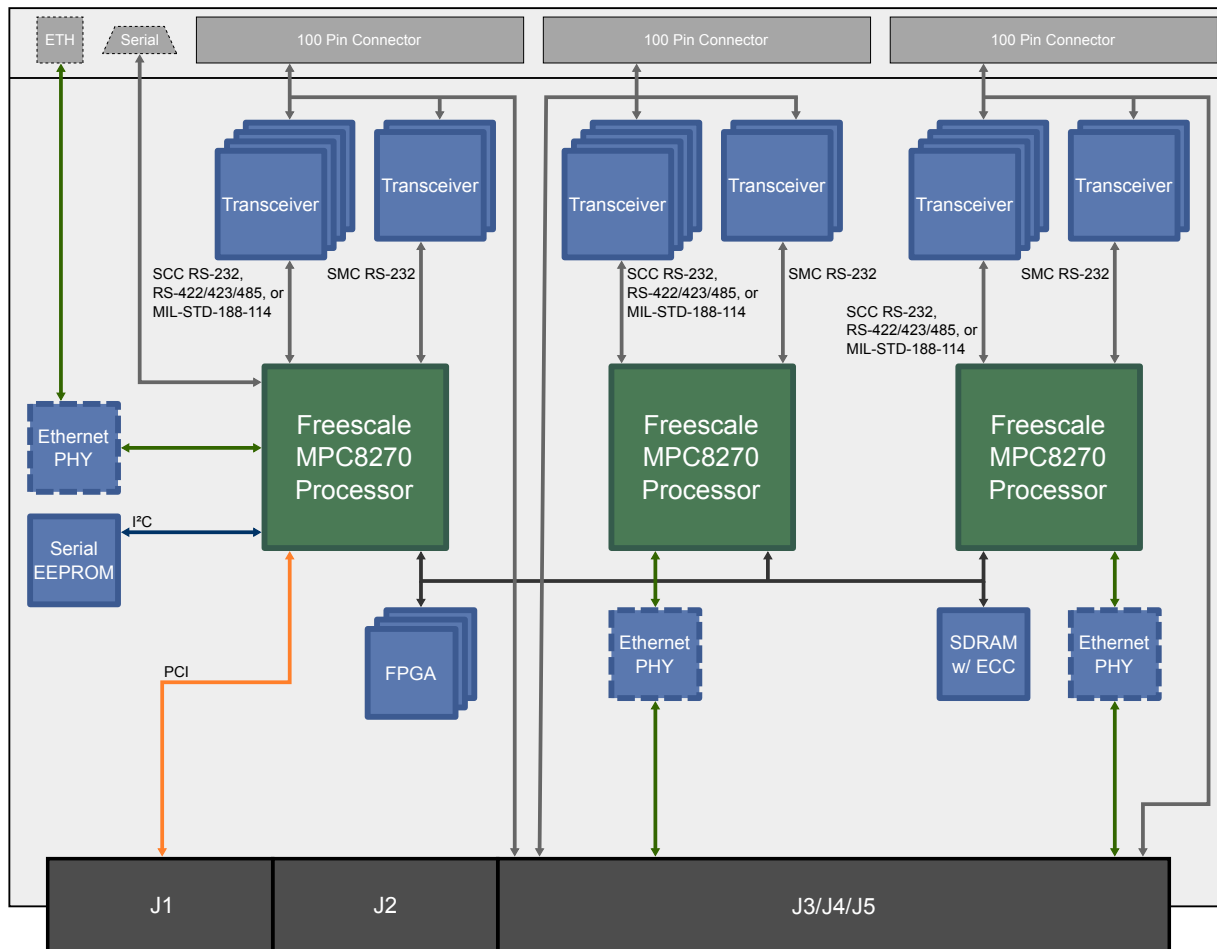
**Environmental Requirements**

- Contact factory for appropriate board configuration based on environmental requirements.
- Supported ruggedization levels (see chart below): 1
  - Conformal coating available as an ordering option

**Power Requirements (Estimate)**

- TBD

<b>Supported Ruggedization Level</b>	<b>Level 1</b>
<b>Cooling Method</b>	Standard Air-Cooled
<b>Operating Temperature</b>	0 to +55 °C ambient (300 LFM)
<b>Storage Temperature</b>	0 to +85 °C ambient
<b>Vibration</b>	0.002 g <sup>2</sup> /Hz, 5 to 2000 Hz
<b>Shock</b>	20 g, 11 ms sawtooth
<b>Humidity</b>	0% to 95% non-condensing



XPort1020

