

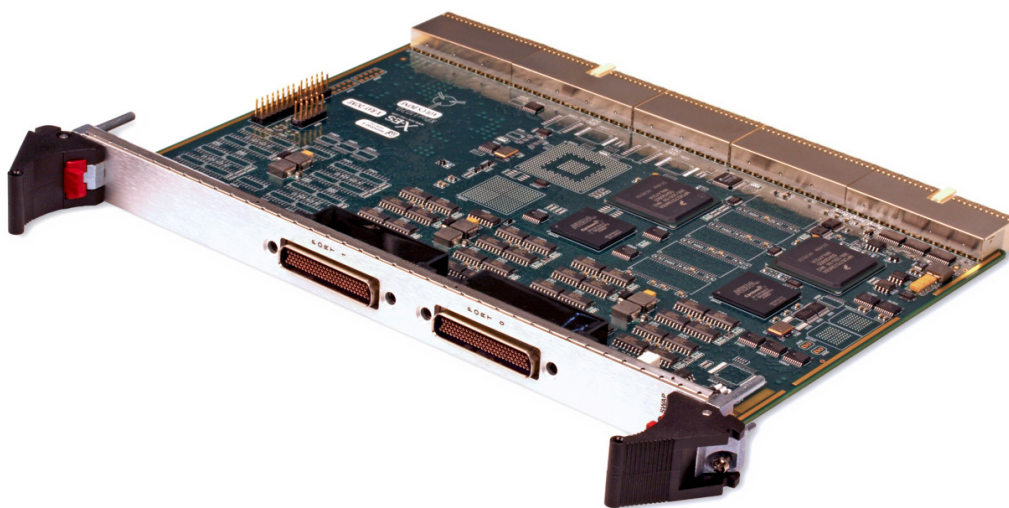
XPort1020

End of Life

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

Please see XPort1005

- ▶ 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
- ▶ Rear I/O (optional)
- ▶ 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 6U 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. Since 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

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

- 10/100 Ethernet port (optional)
- RS-232 serial port (optional)
- Three 100-pin serial I/O connectors

Backplane Connections

- PICMG 2.16 Ethernet
- Twelve 7-wire interfaces (optional)

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
- External custom oscillators (optional)

Software

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

Physical Characteristics

- 6U 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)

- Power-on idle: 3.3 V (1.36 W), 5.0 V (4.87 W)
- Typical operating: 3.3 V (2.22 W), 5.0 V (6.86 W)

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 (300 LFM)	-40 to +70°C (600 LFM)	-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	0% to 95% non-condensing	0% to 95% non-condensing	0% to 95% non-condensing

