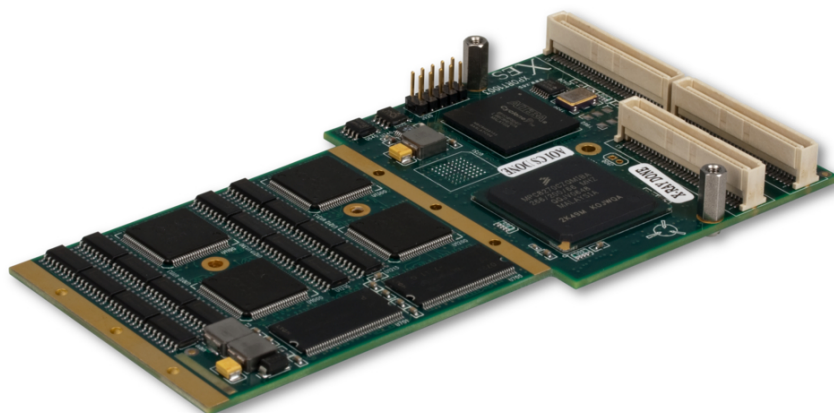


# XPort1003

Freescale MPC8270 Processor-Based Multi-Protocol Four-Port Serial Conduction-Cooled PMC Module

- ▶ Freescale MPC8270 PowerQUICC™ II processors at up to 300 MHz with integrated PCI
- ▶ Four SCCs supporting a broad range of serial protocols
- ▶ Conduction-cooled PMC
- ▶ Up to 64 MB of ECC SDRAM
- ▶ Up to 128 MB of soldered flash
- ▶ 2 kB SEEPROM
- ▶ Two RS-232 SMC ports (optional)
- ▶ Rear panel I/O
- ▶ Wind River VxWorks BSP
- ▶ Linux BSP
- ▶ Microsoft Windows NT/2000/XP driver



## XPort1003

The XPort1003 is an intelligent communications controller targeting high-performance under extreme operating conditions. The XPort1003 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, conduction-cooled PMC module.

Powered by the Freescale MPC8270 (PowerQUICC™ II), the XPort1003 implements four serial communication ports, each providing a reduced EIA-530-A-compatible signal set. It supports HDLC/SDLC, UART, transparent, and BiSync modes, with NRZ, NRZI, FM0, FM1, Manchester and Differential Manchester encoding. Coupled with software-configurable support for RS-232, RS-422, RS-423, RS-485 and MIL-STD-188-114, the XPort1003 provides a wide range of serial options.

The XPort1003 will minimize both the cost and power consumption of your system. Since the PCI bridge is integrated on-chip, the XPort1003 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

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 sales@xes-inc.com • <http://www.xes-inc.com>

**Processor**

- Freescale MPC8270 PowerQUICC™ II
- Embedded PowerPC G2 core
- Up to 300 Mhz
- 280 Dhrystones at 200 Mhz
- 66 MHz 60x bus
- 16 kB instruction and data caches
- 32 kB internal SRAM
- Integrated MMU
- Core disabled operation
- 32-bit/66 MHz PCI

**Memory**

- Up to 64 MB ECC SDRAM
- Up to 128 MB surface-mount flash (optional)
- 2 kB SEEPROM

**Rear Panel I/O**

- Four multi-protocol SCC ports
- Two RS-232 serial ports (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 transmitter and receiver
- 18.432 MHz external oscillator (default)
- Custom frequency external oscillators (optional)

**Serial Interface**

- Drivers software-configurable for RS-232, RS-422, RS-423, RS-485, and MIL-STD-188-114 balanced/unbalanced type 1 and 2 modes
- 10 Mbps max synchronous
- 4 Mbps max asynchronous

**Software**

- SCC and SMC drivers
- Wind River VxWorks BSP
- Linux BSP
- Microsoft Windows NT/2000/XP driver

**Physical Characteristics**

- Conduction-cooled PMC form factor
- Dimensions: 143.75 mm x 74 mm

**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

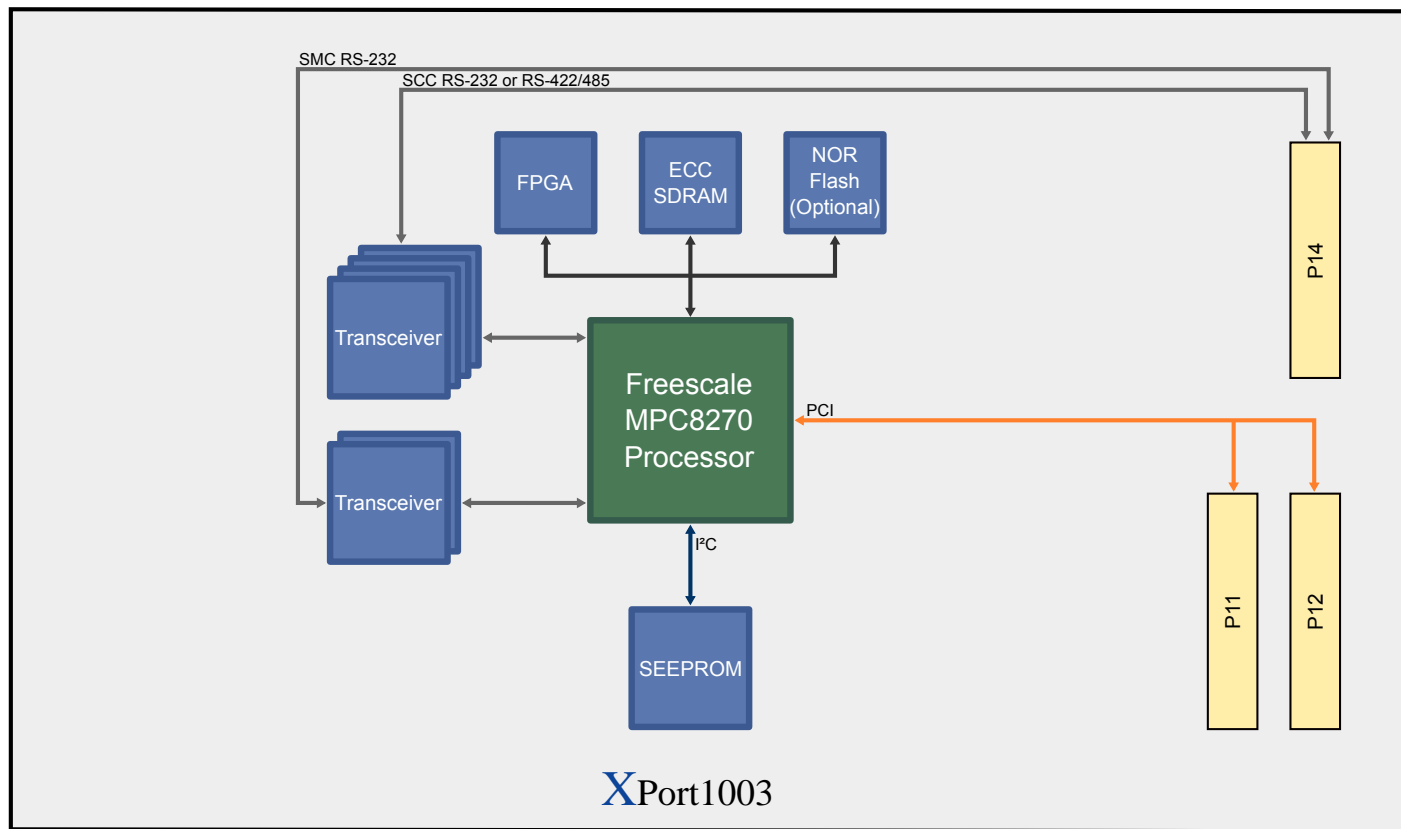
**Ruggedization**

- Conduction-cooled: VITA 47 Class V3 vibration, Class OS2 shock

**Power Requirements**

- +3.3 V, 0.6 A, 1.98 W
- +5.0 V, 0.35 A, 1.75 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 ambient
Vibration	0.002 g <sup>2</sup> /Hz, 5 to 2000 Hz	0.04 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz	0.1 g <sup>2</sup> /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



XPort1003

