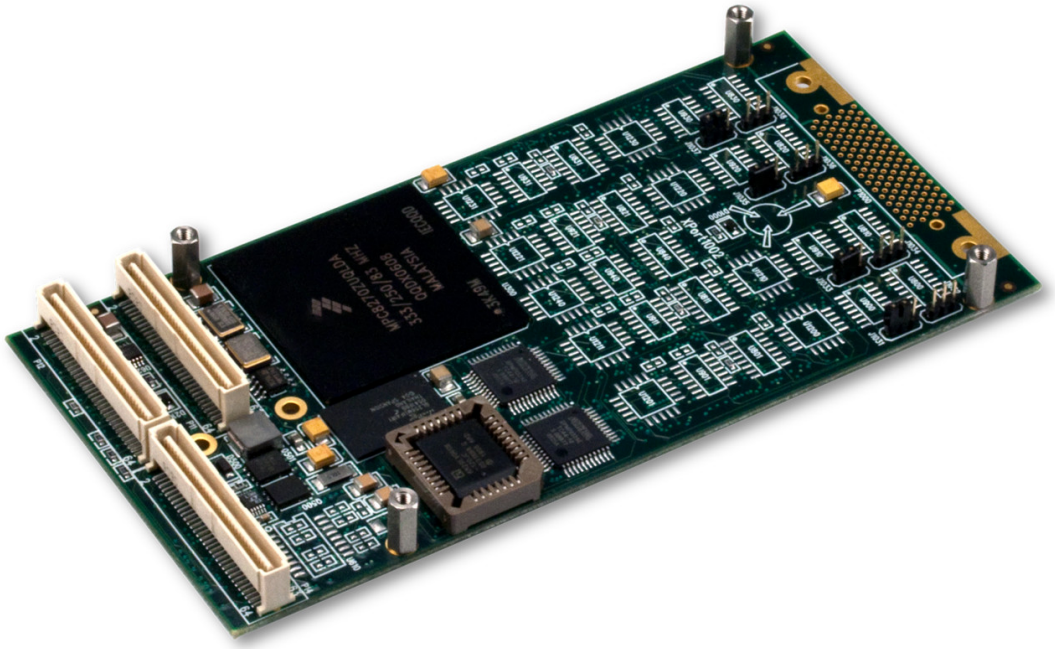
XPort1002

End Of Life

Freescale MPC8270 Processor-Based Four-Port RS-232 or RS-422/485 PMC Module

- Freescale MPC8270 at up to 333 MHz with integrated PCI
- Four SCCs support RS-232 or RS-422/RS-485
- Up to 256 MB SDRAM
- Two RS-232 SMC ports
- Front panel/rear I/O
- Optional digital rear I/O for RTM support
- VxWorks, Linux, Windows, and OSE drivers



XPort1002

The XPort1002 is a high-performance communications controller targeting low-cost applications. The XPort1002 combines an array of supported serial protocols and a flexible I/O routing structure to pack maximum versatility into an industry standard PMC module.

Powered by the MPC8270 (PowerQUICC II), the XPort1002 implements four serial communication ports providing a seven wire signal set (TXD, RXD, RTS, CTS, DCD, TXC, RXC) supporting either RS-232 or RS-422/RS-485 on a per-port basis. The XPort1002 supports HDLC/SDLC, UART, transparent, and BiSync modes, along with NRZ, NRZI, FM0, FM1, Manchester and Differential Manchester encoding. Coupled with support for two RS-232 serial management ports, the XPort1002 provides a wide range of serial options.

For the system designer, the XPort1002 will help drive both cost and power consumption out the system. Because the PCI bridge is integrated on chip, the XPort1002 draws up to 40% less power, and costs up to 30% less than conventional designs based on other processors. The XPort1002 is available in both standard air-cooled (0 to +55°C) and rugged air-cooled (-40 to +70°C) versions.

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

- Freescale MPC8270 processor
- 333 MHz max processor speed
- 855 MIPS at 333 MHz
- 66 MHz 60x bus
- 16 kB L1 instruction/data caches
- 32 kB internal SRAM
- Integrated MMU
- Core-disabled mode

Memory

- Up to 256 MB SDRAM

Serial Communication Controller

- HDLC, UART, transparent, and BiSync modes
- DPLL supporting NRZ, NRZI, FM0, FM1, Manchester, and Differential Manchester
- 10 Mbps max synchronous
- 4 Mbps max asynchronous
- Independent BRGs for each SCC transceiver
- Two optional custom oscillators

Serial Interface

- Four DTE SCC ports supporting RS-232 or RS-422/RS-485
- 7 wire interface (TXD, RXD, RTS, CTS, DCD, TXC, RXC)
- Two DTE SMC ports supporting RS-232
- Two wire interface (TXD, RXD)
- Option to route SCC/SMC digital interface to rear panel for RTM support

Software

- Linux BSP
- Wind River VxWorks BSP
- SCC/SMC Drivers

Physical Characteristics

- PMC form factor
- Dimensions: 149 mm x 74 mm, 10 mm stacking height

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 1, 3
- Conformal coating available as an ordering option

Power Requirements (Estimate)

- 3.3 V, 0.78 A, 2.54 W
- 5 V, 0.06 A, 0.3 W
- +12 V, 0.03 A, 0.36 W

Ruggedization Level	Level 1	Level 3
Cooling Method	Standard Air-Cooled	Rugged Air-Cooled
Operating Temperature	0 to +55°C ambient (300 LFM)	-40 to +70°C (600 LFM)
Storage Temperature	-40 to +85°C ambient	-55 to +105°C ambient
Vibration	0.002 g²/Hz, 5 to 2000 Hz	0.04 g²/Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	30 g, 11 ms sawtooth
Humidity	0% to 95% non-condensing	0% to 95% non-condensing