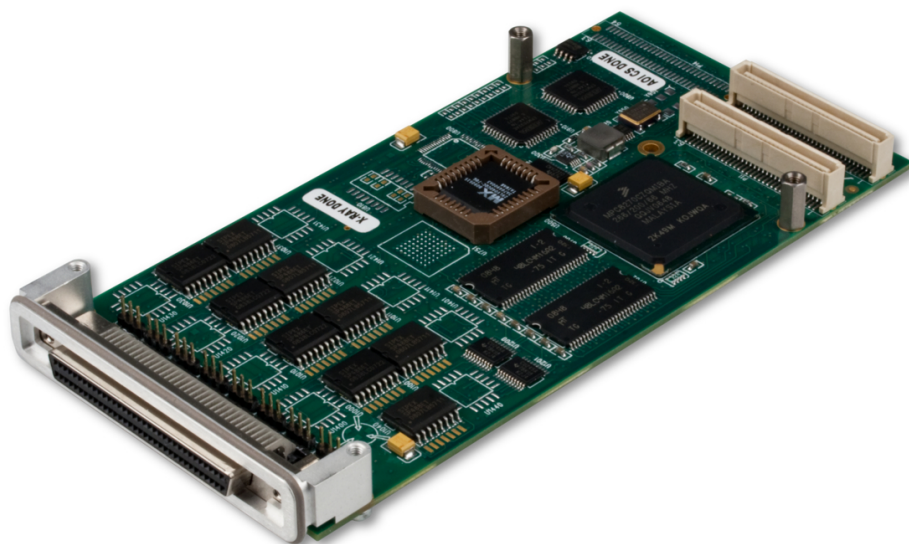


XPort1004

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

- ▶ Freescale MPC8270 PowerQUICC™ II processor at up to 450 MHz with integrated PCI
- ▶ Four SCCs support RS-232 or RS-422/RS-485
- ▶ Up to 256 MB SDRAM
- ▶ Wind River VxWorks BSP
- ▶ Linux BSP



XPort1004

The XPort1004 is high-performance communications controller targeting low-cost applications. The XPort1004 combines a wide array of supported serial protocols and a flexible I/O routing structure to pack maximum flexibility into an industry standard PMC form factor.

Powered by the Freescale MPC8270 (PowerQUICC II) processor, the XPort1004 implements four serial communication ports providing a two wire signal set (TXD, RXD) supporting either RS-232 or RS-422/RS-485 on a per port basis. The XPort1004 supports HDLC/SDLC, UART, transparent and BiSync modes, along with NRZ, NRZI, FM0, FM1, Manchester and Differential Manchester encoding.

The XPort1004 will drive down both cost and power consumption. The PCI bridge is integrated on chip allowing the XPort1004 to draw up to 40% less power and cost up to 30% less than conventional designs based on other processors.

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Processor

- Freescale MPC8270 PowerQUICC II processor
- Embedded PowerPC G2 core
- Up to 450 MHz
- 855 MIPS at 450 MHz
- 66 MHz 60x bus
- 16 kB instruction and data caches
- 32 kB internal SRAM
- Integrated MMU
- Core-disabled mode

Memory

- Up to 256 MB SDRAM

Front Panel I/O

- One rugged 68-pin serial I/O connector

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
- Optional external custom oscillators

Serial Interface

- Four DTE SCC ports supporting either RS-232 or RS-422/RS-485
- Two wire interfaces (TXD, RXD)
- 10 Mbps max synchronous
- 4 Mbps max asynchronous

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)

- 4 W (RS-232 ports)
- 4 W (RS-422/RS-485 ports)

Supported 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	0 to +85 °C ambient	-40 to +105 °C ambient
Vibration	0.002 g ² /Hz, 5 to 2000 Hz	0.04 g ² /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

