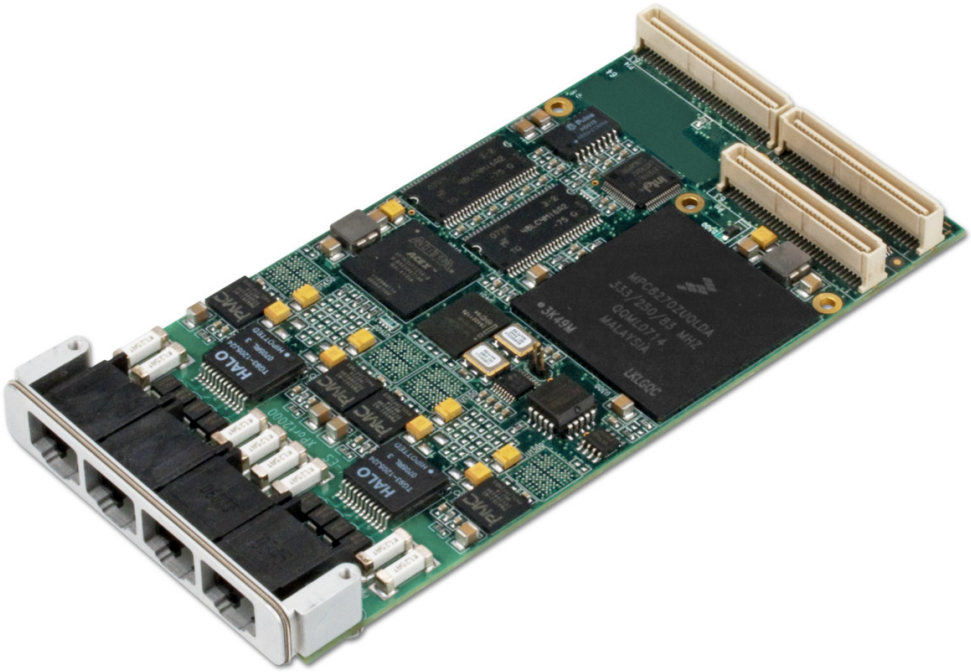
XPort2000

End of Life

NXP PowerQUICC™ II MPC8280-Series Processor-Based Four- or Eight-Port T1/E1/J1 PMC Module Please contact X-ES Sales

- NXP (formerly Freescale) PowerQUICC™ II MPC8270 or MPC8280 at up to 450 MHz with integrated PCI
- Dissipates 2 W at 450 MHz
- Up to eight RJ-45 T1/E1/J1 software-configured interfaces via rear I/O
- Front or rear I/O
- CSU/DSU support
- Up to 256 MB SDRAM with ECC
- 16 MB soldered flash
- ATM over T1/E1 and IMA support (optional)
- RS-232 SMC port
- Back panel 10/100 Mbps Ethernet
- Asterisk software drivers available for Linux
- Wind River VxWorks BSP



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The XPort2000 is an intelligent communications controller targeting high-performance, yet low-cost, communications applications. The XPort2000 supports fully channelized HDLC and transparent protocols over eight software-configured T1/E1/J1 interfaces with CSU/DSU support and optional Signaling System 7 (SS7). The XPort2000 packs maximum performance and flexibility into an industry-standard PMC module form factor. Coupled with X-ES-supplied software, customers can install the XPort2000 on standard VME and cPCI platforms or custom motherboards that support PMC sites.

For the system designer, the XPort2000 will help drive both cost and power consumption down. Since the PCI bridge is integrated on-chip, the XPort2000 requires up to 40% less power and costs up to 30% less than other four-port designs based on other processors. The XPort2000 realizes the full potential of the NXP (formerly Freescale) MPC82xx (PowerQUICC™ II) series by supporting a low-cost MPC8270 four-port solution and a cost-scalable MPC8280 eight-port solution. With the MPC8280, ATM over T1/E1 and Inverse Multiplexing ATM (IMA) can be realized as well. For processor-intensive and power-sensitive solutions, the MPC8270 (4-port solution) or MPC8280 (8-port, IMA solution) are supported, packing in maximum performance for your telecom solutions.

A Wind River VxWorks BSP and driver package are available. X-ES also offers Asterisk support for the XPort2000 through a driver implementing the Zaptel interface on Linux. This allows bridging the Asterisk PXB/VoIP system to a telecom network through a T1/E1 connection.

X-ES
Extreme Engineering Solutions

...Always Fast

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Processor

- NXP (formerly Freescale) PowerQUICC™ II MPC8270 processor for 4-port solution
- NXP (formerly Freescale) PowerQUICC™ II MPC8280 processor for 8-port solution
- NXP (formerly Freescale) PowerQUICC™ II MPC8280 processor for ATM/IMA support
- 450 MHz max processor speed
- 280 Dhrystones at 200 MHz
- 66 MHz 60x bus
- 16 kB L1 instruction/data caches
- 32 kB internal SRAM
- Integrated MMU and FPU
- Core-disabled mode

Memory

- Up to 256 MB SDRAM
- Up to 16 MB surface-mount flash
- 512 kB socketed flash
- 512-byte SEEPROM

Multi-Communication Controller

- HDLC and transparent modes
- 256 total channels
- Independent Tx/Rx clocking per TDM

PM4351 Comet Framer

- T1/E1/J1 interface standards
- Long and short haul LBOs
- 1.544 MHz and 2.048 MHz rates
- Software-configured interface modes
- CSU/DSU

Backplane Connections

- Up to eight T1/E1/J1 line interfaces
- 10/100 Mbps Ethernet port
- RS-232 serial debug port

Software

- Asterisk PBX Linux drivers
- Wind River VxWorks BSP
- MCC, Comet, CSU, SMC, SS7, and Ethernet drivers

Asterisk Support

- Zaptel interface driver
- Four T1/E1 spans
- Linux kernel support
- ISDN primary rate interface
- H.323, SIP, IAX2 VoIP protocol support

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
- Conformal coating available as an ordering option

Power Requirements (Estimate)

- 3.3 V, 1.25 A, 4.13 W
- 5 V, 2.6 mA, 13 mW

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 g²/Hz (maximum), 5 to 2000 Hz	0.04 g²/Hz (maximum), 5 to 2000 Hz	0.1 g²/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