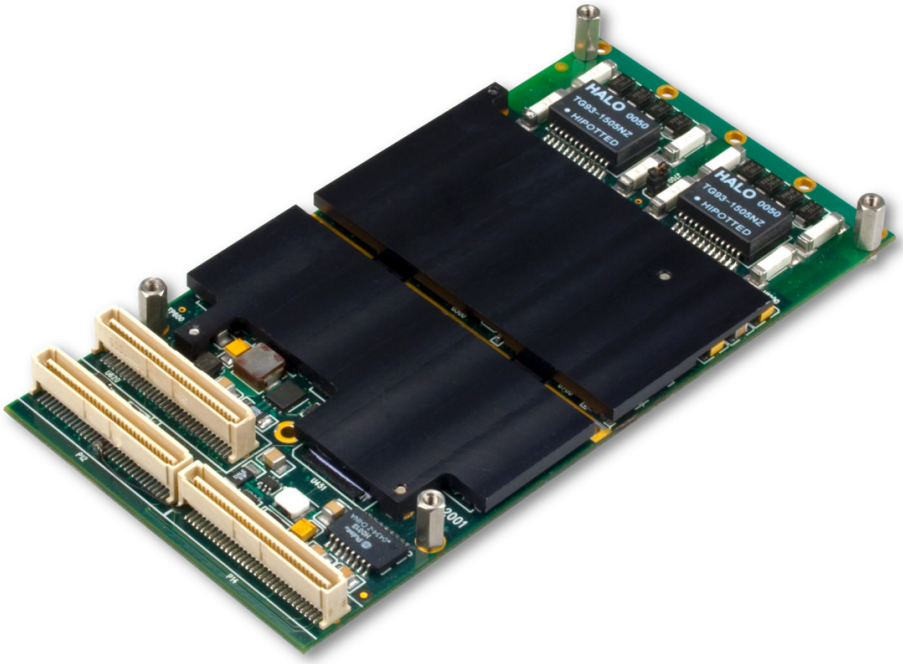
XPort2001

End of Life

NXP PowerQUICC™ II Series MPC8270 Processor-Based Four-Port T1/E1/J1 PrPMC Module

Please contact X-ES Sales

- NXP (formerly Freescale) PowerQUICC™ II MPC8270 at up to 450 MHz with integrated PCI
- Four T1/E1/J1 software-configured interfaces on P14 rear I/O
- 120/96 voice or data channels over four E1/T1 links
- Conduction-cooled mezzanine card without faceplate I/O
- Industrial temperature range from -40°C to +85°C
- CSU/DSU support
- Up to 256 MB SDRAM with ECC
- 16 MB soldered flash
- RS-232 SMC port (optional)
- 10/100 Mbps Ethernet (optional)
- Asterisk software drivers available for Linux
- Wind River VxWorks BSP



XPort2001

The XPort2001 is an intelligent communications controller targeting high-performance yet low-cost communications applications. The XPort2001 supports fully channelized HDLC and transparent protocols over four software-configured T1/E1/J1 interfaces, with CSU/DSU support and optional Signaling System 7 (SS7).

The XPort2001 packs maximum performance and flexibility into an industry-standard conduction-cooled PMC module form factor. Coupled with X-ES supplied software, customers can install the XPort2001 on standard cPCI and VME platforms or custom motherboards that support PMC sites. The XPort2001 can also withstand industrial temperatures, with an operating range of -40°C to +85°C.

The MPC8270 processor core can deliver 885 MIPS of processing power at 450 MHz. Alternatively, the XPort2001 can be configured as a peripheral device for an ultra-low-power solution by disabling the CPU core.

The XPort2001 will help drive both cost and power consumption down. Since the PCI bridge is integrated on chip, the XPort2001 requires up to 40% less power and costs up to 30% less than other four-port designs based on other processors.

A Wind River VxWorks BSP and driver package are available. X-ES also offers Asterisk support for the XPort2001 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
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...Always Fast

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Processor

- NXP (formerly Freescale) PowerQUICC™ II MPC8270 processor
- 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-byte SEEPROM

Multi-Communication Controller

- HDLC and transparent modes
- 128 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 four 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

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):5
- Conformal coating available as an ordering option

Power Requirements (Estimate)

- 3.3 V, 1.16 A, 3.83 W
- 5 V, 0.0026 A, 0.013 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 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