

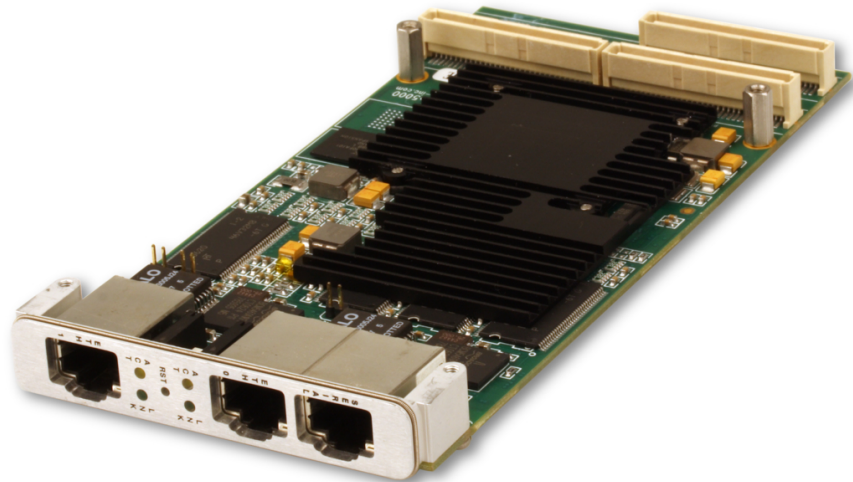
XPedite5000

**Not Recommended
for New Designs**

Freescale MPC8540 PowerQUICC III Processor-Based Dual Gigabit Ethernet PrPMC/XMC Module

Please use XPedite5500

- ▶ Freescale MPC8540 processor at up to 1 GHz
- ▶ 133 MHz, 64-bit PCI-X interface
- ▶ 500 MHz, 8-bit RapidIO
- ▶ Up to 1 GB DDR-266 SDRAM
- ▶ Up to 32 MB soldered flash
- ▶ Two Gigabit Ethernet interfaces
- ▶ 2 UARTs
- ▶ Integrated floating point
- ▶ 256 kB L2 cache
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP



XPedite5000

The XPedite5000 is an intelligent communications controller targeting high-performance yet low-cost applications. Powered by the Freescale MPC8540 (PowerQUICC III™), the XPedite5000 supports two Gigabit Ethernet, IEEE 802.3-compliant interfaces. The XPedite5000 provides two UARTs and eight general purpose pins routed to the backplane connector. Coupled with X-ES supplied software, customers can install the XPedite5000 on standard VME and cPCI platforms, or custom motherboards that support PMC sites.

With the PowerQUICC III's integrated PCI-X, DDR SDRAM, and Ethernet interfaces, the PowerQUICC III offers a highly optimized solution for packet processing and general computing applications. The serial and Gigabit Ethernet interfaces are accessible either through the front panel or P14 I/O.

For performance systems, the XPedite5000 can be used as an XMC in which the 500 MHz, 8-bit RapidIO interface can be used in accordance with VITA 42 in parallel or in substitution of the 133-MHz, 64-bit PCI-X 1.0a, PCI 2.2-compliant interface.

X-ES

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Processor

- Freescale MPC8540
- 1 GHz max processor speed
- 1850 Dhrystones at 800 MHz
- 32 kB L1 instruction/data caches
- 256 kB L2 cache
- Integrated floating point unit
- Integrated MMU
- 333 MHz DDR SDRAM interface
- 500 MHz, 8 bit RapidIO
- 133 MHz PCI-X interface
- Two Gigabit Ethernet controllers
- Two serial controllers
- Two I²C controllers
- 32 kB internal SRAM

Memory

- Up to 32 MB surface mount flash
- 2 kB SEEPROM

XMC

- 500 MHz, 8 bit RapidIO
- IPMI support
- GPIO on user data

Front Panel I/O

- Two Gigabit Ethernet ports
- One RS-232 serial port
- Link and activity LED

Rear I/O

- Two Gigabit Ethernet ports
- Four GPIO pins
- Two RS-232 serial ports

RTC

- M41T00 I²C timekeeper
- 60-hour clock retention

Software

- Linux BSP
- Wind River VxWorks BSP
- Ethernet 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
- Conformal coating available as an ordering option

Power Requirements (Estimate)

- 3.3 V, 4.05 A, 13.35 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 ² /Hz, 5 to 2000 Hz	0.04 g ² /Hz (maximum), 5 to 2000 Hz	0.1 g ² /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

