

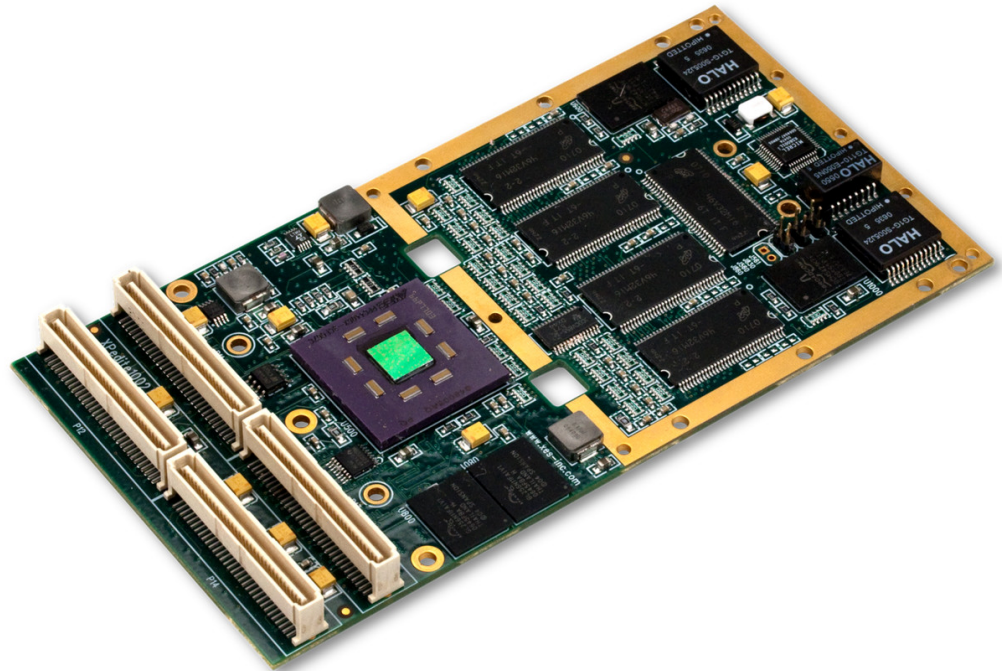
XPedite1002

End Of Life

Applied Micro 440GX PowerPC Processor-Based Conduction-Cooled PrPMC with Dual Gigabit Ethernet

Please see [XPedite5501](#)

- ▶ Applied Micro PowerPC 440GX 533-800 MHz processor
- ▶ Conduction-cooled mezzanine card without faceplate I/O
- ▶ Extended shock and vibration tolerance
- ▶ 133 MHz PCI-X PrPMC and local bus interfaces
- ▶ Up to 256 MB DDR-333 SDRAM
- ▶ Up to 128 MB NOR flash
- ▶ Up to 2 GB NAND flash
- ▶ Two Gigabit Ethernet ports
- ▶ Two RS-232 serial ports
- ▶ Rear I/O
- ▶ Integrated 256 kB SRAM or L2 cache
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP



XPedite1002

The XPedite1002 is a high-performance, conduction-cooled Processor PMC Module (PrPMC) that dissipates less than 7.5 W and is capable of operating at up to 85°C without faceplate I/O. The XPedite1002 is tolerant of extended shock, up to 40 g peak sawtooth for 11 ms, and vibration of 0.1 g²/Hz from 5 Hz to 2000 Hz. A PCI-X PMC interface provides the system designer with ample bandwidth for I/O intensive applications. Two rear panel Ethernet ports provide a flexible I/O interface by auto-negotiating between 10, 100, and 1000 Mbps operation. Ample flash for flash file systems is provided via NAND flash.

The XPedite1002 utilizes the low-power Applied Micro PowerPC 440GX embedded processor. With integrated PCI-X, DDR SDRAM, and Ethernet interfaces, the 440GX offers a highly optimized solution for packet processing and general computing applications. The serial and Gigabit Ethernet interfaces are accessible through P14 I/O.

The XPedite1002 is ideal for PrPMC applications in extended temperature, shock, and vibration environments that require high bandwidth and processing performance. The 440GX processor dissipates only 3 W while operating at 667 MHz and provides 1334 DMIPs of processing power.

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Processor

- Applied Micro PowerPC 440GX
- 800 MHz max processor speed
- 133 MHz PCI-X interface
- 32 kB L1 instruction/data caches
- 256 kB L2 cache/SRAM
- DDR-333 SDRAM interface
- Two Gigabit Ethernet controllers
- Two serial controllers
- Two I²C controllers

Conduction-Cooled

- Dissipates less than 7.5 W
- Operates at up to 85°C without faceplate I/O

Non-Volatile Storage

- Up to 128 MB NOR flash
- Up to 2 GB NAND flash
- 2 kB SEEPROM

Ethernet

- Auto-negotiates between 10/100/1000 Mbps
- Rear I/O

DDR SDRAM

- Up to 256 MB at up to 333 MHz
- 2.6 Gb/s peak bandwidth

Rear I/O

- Two Gigabit Ethernet ports
- One fast Ethernet port
- Two RS-232 serial ports
- One I²C port

Software Support

- Linux BSP
- Wind River VxWorks BSP
- LinuxWorks LynxOS BSP

Physical Characteristics

- PMC form factor
- Dimensions: 143.75 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, 2.27 A, 7.5 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

