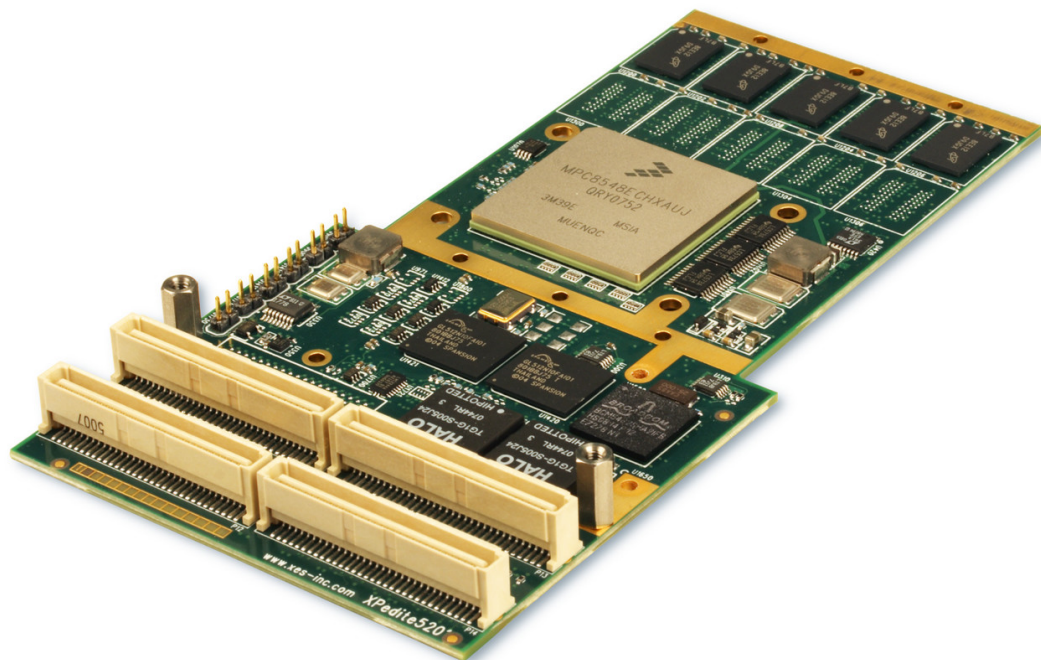


# XPedite5201

Freescale MPC8548E PowerQUICC™ III Processor-Based Conduction-Cooled XMC/PMC Module

- ▶ Freescale MPC8548E PowerQUICC™ III processor at up to 1.333 GHz
- ▶ Conduction-cooled XMC/PMC module
- ▶ 133 MHz, 64-bit PCI-X
- ▶ x8 PCI Express
- ▶ Up to 4 GB DDR2-533 SDRAM
- ▶ 512 kB L2 cache
- ▶ Double-precision FPU
- ▶ Up to 256 MB of soldered NOR flash
- ▶ Up to 4 GB of NAND flash
- ▶ Wind River VxWorks BSP
- ▶ QNX Neutrino BSP
- ▶ Green Hills INTEGRITY BSP
- ▶ Linux BSP



## XPedite5201

The XPedite5201 is a high-performance, conduction-cooled Processor PCI Mezzanine Card (PrPMC)/XMC featuring the Freescale MPC8548E PowerQUICC™ III processor running at up to 1.333 GHz. The onboard PowerQUICC™ III provides integrated 64-bit PCI-X, DDR2-400/533 SDRAM, PCI Express, and two Gigabit Ethernet interfaces, making the XPedite5201 an optimal solution for communications processing and general computing applications alike.

When used as an XMC (VITA 42) module, the x8 PCI Express interface can be used, in parallel or in substitution of the PCI-X interface. With software supplied by Extreme Engineering Solutions, the XPedite5201 can be installed on standard VME and CompactPCI (cPCI) platforms as well as custom motherboards that support PMC sites.

The XPedite5201 provides two Gigabit Ethernet interfaces via the P14 backplane connector.

# X-ES

Extreme Engineering Solutions

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### Extreme Engineering Solutions

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**Processor**

- Freescale MPC8548E PowerQUICC™ III processor
- Embedded PowerPC e500 core at 1.0 to 1.333 GHz
- 3065 MIPS at 1.333 GHz
- 32 kB L1 instruction/data caches
- 512 kB L2 cache
- Double-precision Floating-Point Unit
- Integrated MMU
- DDR2-533 SDRAM interface
- x8 PCI Express
- 133 MHz, 64-bit PCI-X 1.0a interface
- Four 10/100/1000 Mbps, IEEE 802.3-compliant Ethernet controllers
- Two serial controllers
- Two I<sup>2</sup>C controllers

**Memory**

- Up to 4 GB DDR2-533 SDRAM
- Up to 256 MB NOR flash
- Up to 4 GB NAND flash
- 2 kB SEEPROM

**XMC**

- x8 PCI Express (VITA 42.3)
- IPMI FRU support
- GPIO on user data

**RTC**

- M41T00 I<sup>2</sup>C timekeeper
- 60 hour clock retention

**Rear I/O**

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

**Software**

- Wind River VxWorks BSP
- QNX Neutrino BSP
- Green Hills INTEGRITY BSP
- Linux BSP

**Physical Characteristics**

- XMC/PMC conduction-cooled 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, 5
- Conformal coating available as an ordering option

**Power Requirements**

- Maximum power consumption: 13.35 W (with 1.333 GHz processor), 10.5 W (with 1 GHz processor)

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 <sup>2</sup> /Hz, 5 to 2000 Hz	0.04 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz	0.1 g <sup>2</sup> /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

