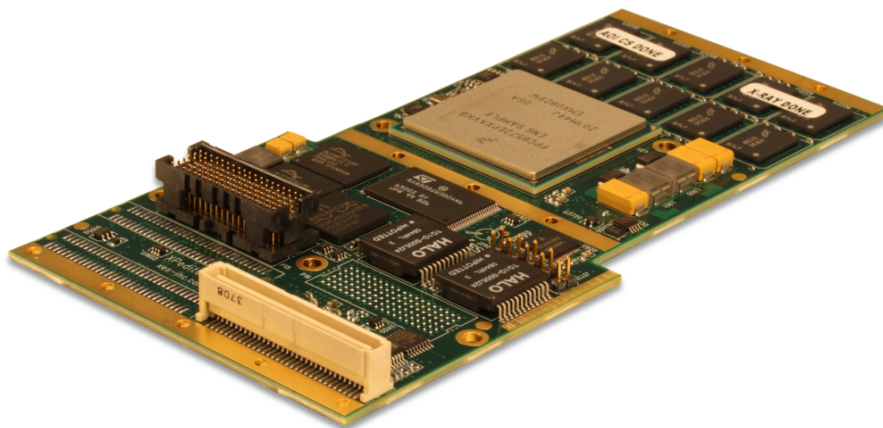


XPedite5301

Freescale Dual-Core MPC8572E PowerQUICC™ III Processor-Based Conduction-Cooled PMC/XMC (PrPMC/PrXMC) Module with Two Gigabit Ethernet Ports

- › Freescale MPC 8572E PowerQUICC III processor with dual PowerPC e500 cores at up to 1.5 GHz
- › Conduction cooling
- › Extended shock and vibration tolerance
- › Two channels of DDR2-667 ECC SDRAM, up to 2 GB (1 GB each)
- › Up to x4 PCI Express or Serial RapidIO interface to P15
- › PCI PrPMC interface
- › Two Gigabit Ethernet ports to P14 or P16
- › Two RS-232/422/485 serial ports to P14 or P16
- › Up to 256 MB of NOR flash (with redundancy)
- › Up to 4 GB of NAND flash
- › Detachable front panel for development
- › Linux LSP
- › Wind River VxWorks BSP
- › QNX Neutrino BSP
- › Green Hills INTEGRITY BSP



XPedite5301

The XPedite5301 is a conduction-cooled XMC single-board computer based on the Freescale MPC8572E PowerQUICC III processor. With dual PowerPC e500 cores running at up to 1.5 GHz, the MPC8572E delivers enhanced performance and efficiency for today's network information processing and other embedded computing applications.

Complementing processor performance, the XPedite5301 features two separate channels of up to 1 GB each of DDR2-800 ECC SDRAM. A software-configurable SERDES interface (PCI Express or Serial RapidIO) to the XMC connector and a conventional PCI interface to the PMC connectors provide ample bandwidth to the MPC 8572E. Two Gigabit Ethernet ports and two RS-232/422/485 ports are routed to P14 or P16 for additional system flexibility. A detachable front panel provides one 10/100/1000 Mbps Ethernet port and one RS-232 serial port for development.

The XPedite5301 provides a high-performance, feature-rich solution for current and future generations of embedded applications. Operating system support packages for the XPedite5301 include Wind River VxWorks, QNX Neutrino, Green Hills INTEGRITY, and Linux 2.6.

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Processor

- Freescale MPC 8572E PowerQUICC III processor
- Dual PowerPC e500 cores at up to 1.5 GHz
- 1 MB of shared L2 cache

Memory

- Two channels of DDR2-800 ECC SDRAM, up to 2 GB (1 GB each)
- Up to 256 MB of NOR flash (with redundancy)
- Up to 4 GB of NAND flash

PrPMC Interface

- 66/33-MHz PCI
- 32-bit bus interface

P15 XMC Interface

- Up to x4 configurable PCI Express or Serial RapidIO

P14/P16 PMC/XMC Interface

- Two 10/100/1000-Mbps Ethernet ports
- Two RS-232/422/485 ports
- 3.3V GPIO

Software Support

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

Physical Characteristics

- Conduction-cooled P/XMC form factor
- Dimensions: 143.75 mm x 74 mm

Environmental Requirements

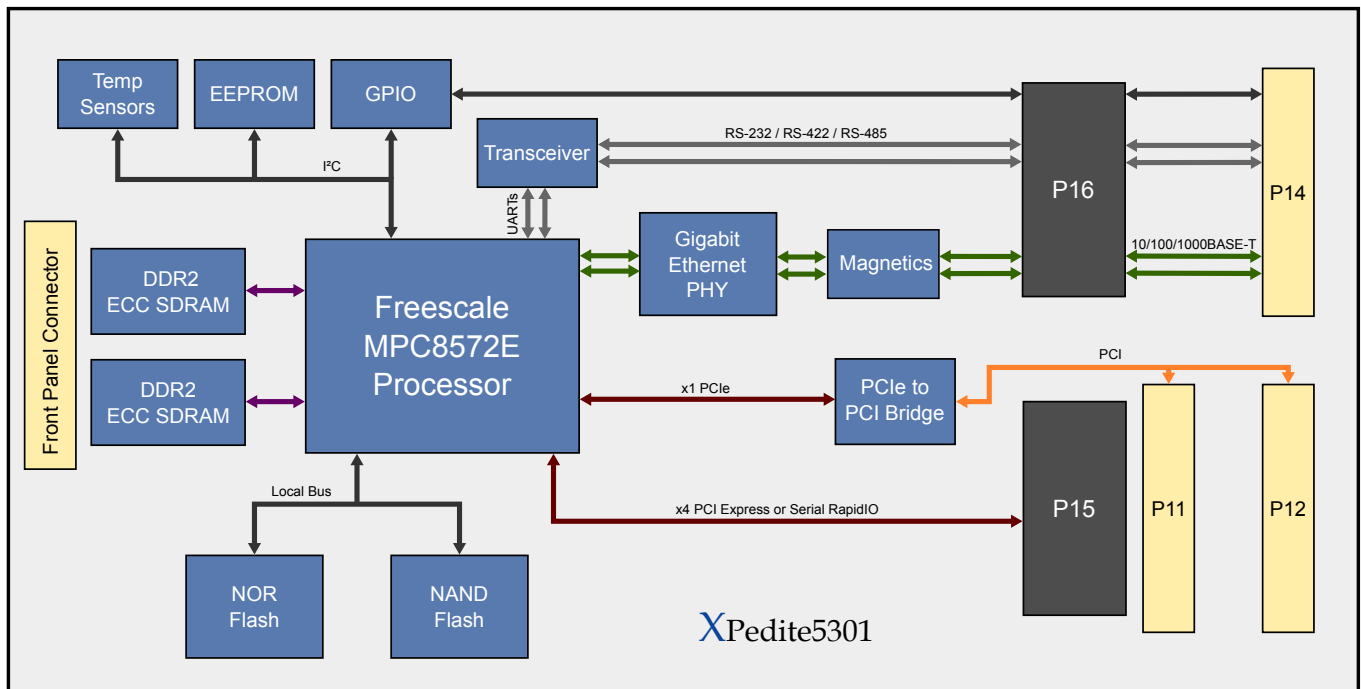
Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): Level 4, Level 5
- Humidity: 0% to 95% non-condensing

Power Requirements

- Maximum power consumption: 32 W (with 1.5-GHz processor), 24 W (with 1.2-GHz processor)

Ruggedization Level	Level 1	Level 2	Level 3	Level 4	Level 5
Cooling Method	Standard Air-Cooled	Extended Air-Cooled	Rugged Air-Cooled	Conduction-Cooled	Conduction-Cooled
Operating Temperature	0 to +55 °C	0 to +65 °C	-40 to +70 °C	-40 to +70 °C	-40 to +85 °C
Vibration	0.002 g ² /Hz	0.002 g ² /Hz	0.04 g ² /Hz	0.1 g ² /Hz	0.1 g ² /Hz
Shock	20 g	20 g	40 g	40 g	40 g
Storage Temperature	-40 to +105 °C	-40 to +105 °C	-55 to +105 °C	-55 to +105 °C	-55 to +105 °C



XPedite5301

