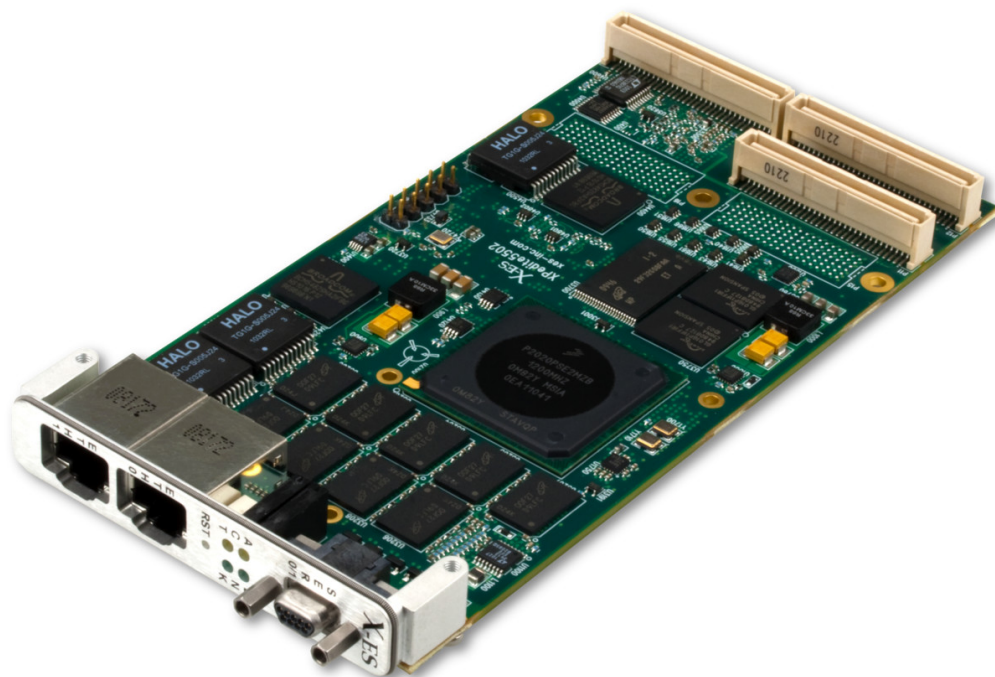


# XPedite5502

## NXP QorIQ P2020 Dual-Core Processor-Based Air-Cooled XMC/PMC Module

- › NXP QorIQ P2020 processor with dual Power Architecture® e500v2 cores at up to 1.2 GHz
- › Alternate NXP QorIQ processors: P1011, P1020, P2010
- › Air-cooled
- › Up to 8 GB of DDR3-800 ECC SDRAM
- › Up to x4 PCI Express or Serial RapidIO
- › PCI PrPMC interface
- › Three Gigabit Ethernet ports
- › Two RS-232/422/485 serial ports
- › One USB 2.0 port
- › Up to 256 MB of NOR flash (with redundancy)
- › Up to 16 GB of NAND flash
- › Linux BSP
- › Wind River VxWorks BSP
- › QNX Neutrino BSP
- › Green Hills INTEGRITY-178 BSP



### XPedite5502

The XPedite5502 is a high-performance, XMC/PrPMC, single board computer supporting NXP (formerly Freescale) QorIQ P1 and P2 processors. With dual Power Architecture® e500v2 cores running at up to 1.2 GHz, the P2020 delivers enhanced performance and efficiency for today's network information processing and other embedded computing applications.

Complementing processor performance, the XPedite5502 features up to 8 GB of DDR3-800 ECC SDRAM. A configurable SerDes interface (PCI Express or Serial RapidIO) to the XMC connector or a conventional PCI interface to the PMC connectors provide ample bandwidth to the P2020. One Gigabit Ethernet port, a USB 2.0 port, and two RS-232/422/485 ports are routed to P14 or P16 for additional system flexibility. The front panel provides easy access to two Gigabit Ethernet ports and two RS-232 serial ports.

The XPedite5502 provides a high-performance, feature-rich solution for current and future generations of embedded applications. Additionally, for customers seeking a maximum power of just 8 W, the XPedite5502 can be built with the NXP QorIQ P1020 processor. Operating system support packages for the XPedite5502 include Wind River VxWorks, QNX Neutrino, Green Hills INTEGRITY-178, and Linux 2.6.



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**Processor**

- NXP (formerly Freescale) QorIQ P2020 processor
- Dual Power Architecture® e500 cores at up to 1.2 GHz
- 512 kB of shared L2 cache

**Alternate Processor Configuration**

- P1011 processor with one Power Architecture® e500v2 core at up to 800 MHz
- P1020 processor with two Power Architecture® e500v2 cores at up to 800 MHz
- P2010 processor with one Power Architecture® e500v2 core at up to 1.2 GHz

**Memory**

- Up to 8 GB DDR3-800 SDRAM
- Up to 256 MB of NOR flash (with redundancy)
- Up to 16 GB of NAND flash

**PrPMC Interface**

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

**P15 XMC Interface**

- x4 PCI Express or Serial RapidIO

**P14/P16 XMC/PMC Interface**

- One 10/100/1000BASE-T Ethernet port
- Two RS-232/422/485 serial ports
- 3.3 V GPIO
- One USB 2.0 port

**Front Panel I/O**

- Two Gigabit Ethernet ports
- Two RS-232 serial ports

**Software Support**

- Linux BSP
- Wind River VxWorks BSP
- QNX Neutrino BSP
- Green Hills INTEGRITY-178 BSP

**Physical Characteristics**

- Air-cooled XMC/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**

- Power will vary based on configuration and usage. Please consult factory.

| 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 g <sup>2</sup> /Hz (maximum), 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                       |

