

XPedite7302

End of Life

Intel® Core™ i7 Processor-Based XMC Module with SecureCOTS™ Support

Please contact X-ES Sales

- › Intel® Core™ i7-610E, -620LE, -620UE, and -660UE processors
- › Dual-core with Hyper-Threading Technology
- › XMC module
- › Conduction cooling
- › Designed with SecureCOTS™ technology to support enhanced security and trusted computing
- › Up to 8 GB of DDR3-1066 ECC SDRAM in two channels
- › 32 MB SPI NOR boot flash
- › 256 MB parallel NOR flash
- › Hardware write protection for flash
- › One x4 PCI Express XMC P15 interface
- › Four x1 PCI Express XMC P15 interfaces
- › Gigabit Ethernet port with integrated magnetics
- › Two RS-422/485 serial ports
- › Wind River VxWorks BSP
- › Linux BSP



XPedite7302

The XPedite7302 is a high-performance, low-power XMC module based on the Intel® Core™ i7 processor and Intel® QM57 chipset. With integrated SecureCOTS™ technology, the XPedite7302 protects data from being modified or observed and provides an ideal solution when stringent security capabilities are required. A SecureCOTS™ feature included is the self-contained and customizable Microsemi Fusion® FPGA, which can configure the PCI Express switch, control and monitor the processor activity, and host custom functions such as data encryption/decryption. Each of the five external PCI Express interfaces and the Gigabit Ethernet port links can be controlled directly by the FPGA. The serial interface allows the FPGA to control what data is passed externally to the CPU system.

The XPedite7302 uses NOR flash exclusively, rather than any NAND-based flash, to further its long-term data retention. Both the SPI NOR flash used for booting firmware and the parallel bus NOR flash are routed through the FPGA to allow for any type of user encryption on the data before it is presented to the CPU system. The parallel bus NOR flash is accessed via PCI with a DMA unit for efficient transfers from the NOR flash to the CPU system's memory.

The XPedite7302 is ideal for high-bandwidth data-processing applications in a secure environment. Wind River VxWorks and Linux Board Support Packages (BSPs) are available.

X-ES

Extreme Engineering Solutions

...Always Fast

Extreme Engineering Solutions

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Processor

- Intel® Core™ i7 processor operating at 2.53, 2.0, 1.06, and 1.33 GHz
- Dual-core with Hyper-Threading Technology
- Intel® QM57 chipset
- Dual-channel integrated memory controller
- 4 MB of shared cache

Memory

- Up to 8 GB of DDR3-1066 ECC SDRAM
- 32 MB SPI NOR boot flash
- 256 MB parallel NOR flash

P15 XMC Interface

- One x4 Gen2 at 2.5 GT/s PCI Express interface
- Four x1 Gen2 at 2.5 GT/s PCI Express interfaces
- One JTAG port
- One I²C port

P16 XMC Interface

- One 10/100/1000BASE-T Ethernet port
- Two RS-422/485 serial ports

Security and Management

- Microsemi Fusion® security FPGA
- Designed with SecureCOTS™ technology to support enhanced security and trusted computing

Software Support

- Wind River VxWorks BSP
- Linux BSP

Physical Characteristics

- XMC form factor
- Dimensions: 149 mm x 74 mm, 10 mm stacking height

Environmental Requirements

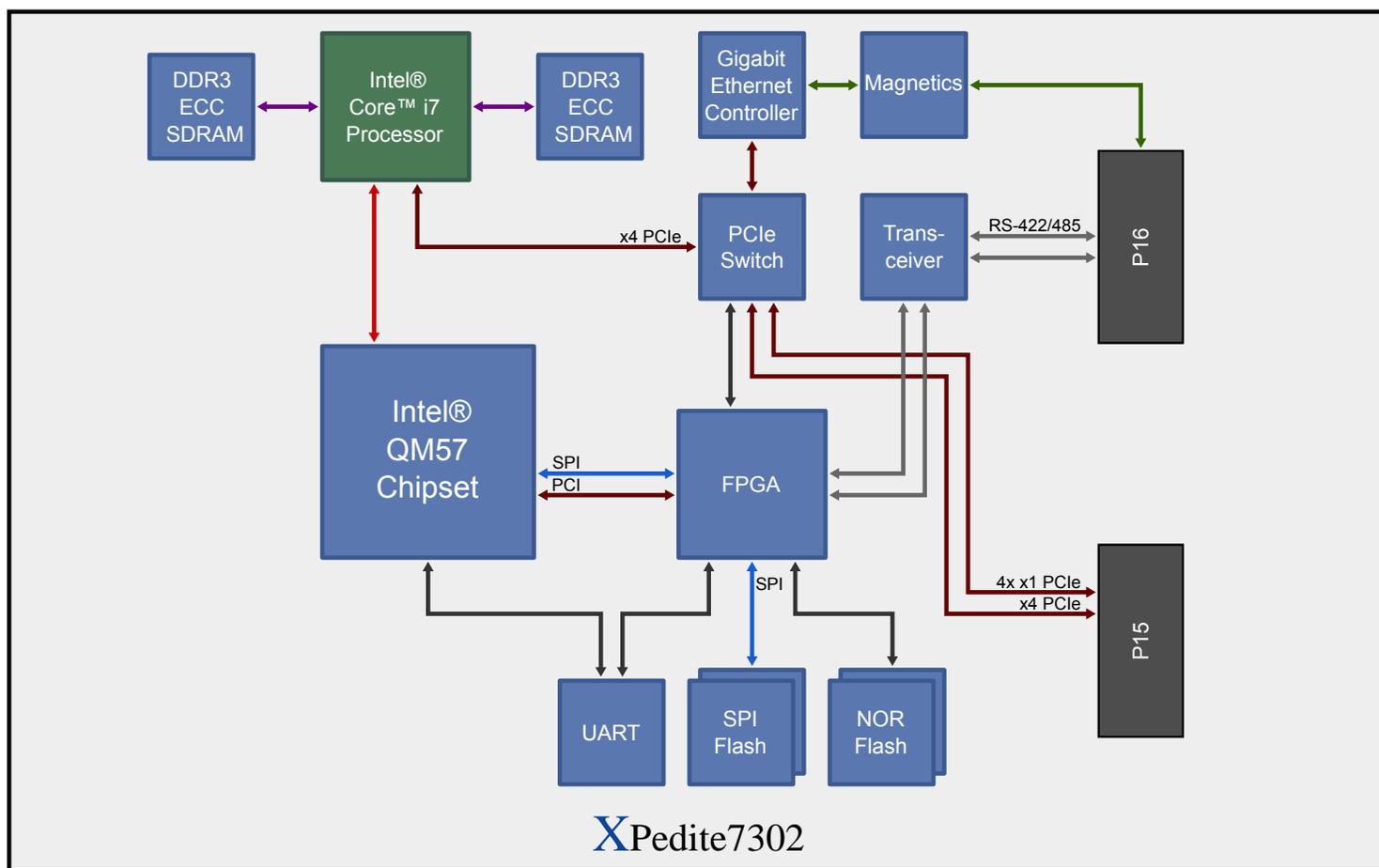
Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 1, 3, 5
- Conformal coating available as an ordering option

Power Requirements

- 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 ² /Hz (maximum), 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



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