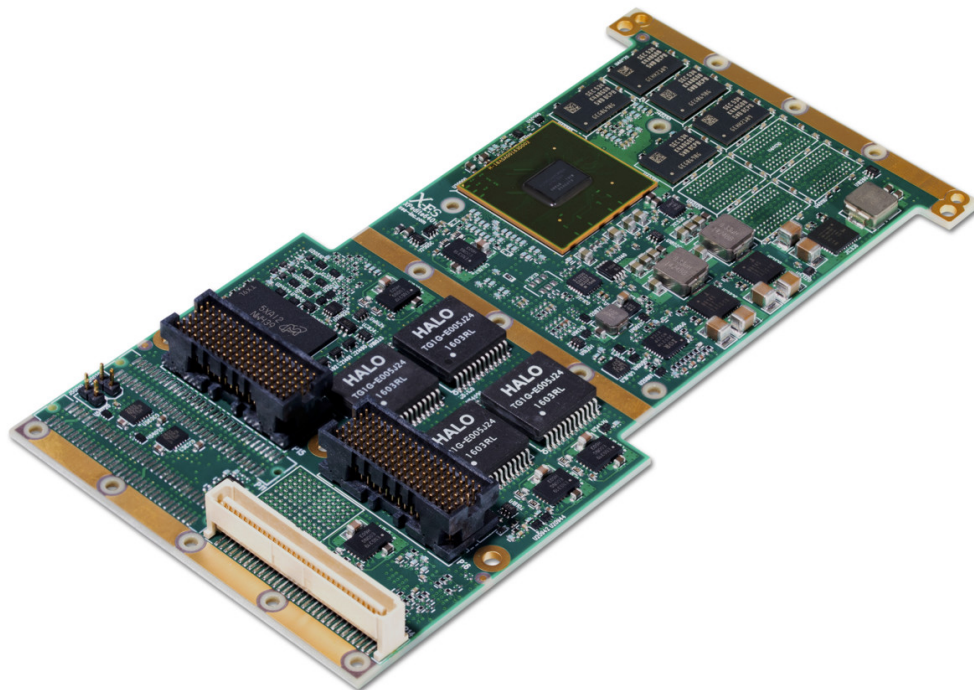


XPedite6401

NXP QorIQ LS10xxA Arm® A53 Core Processor-Based Conduction-Cooled XMC/PrPMC Mezzanine Module

- ▶ NXP QorIQ LS1043A processor with four 64-bit Arm® A53 cores at up to 1.2 GHz
- ▶ 128-bit NEON SIMD engine per core
- ▶ Conduction cooling
- ▶ Up to 8 GB of DDR4 ECC SDRAM
- ▶ Up to 256 MB of NOR flash (with redundancy)
- ▶ Up to 16 GB of NAND flash
- ▶ x1 PCI Express Gen2 interface to P15
- ▶ Up to four 10/100/1000BASE-T Ethernet ports
- ▶ Two RS-232/422/485 serial ports
- ▶ Two USB 2.0 ports
- ▶ One SATA 6 Gb/s port (optional)
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP
- ▶ Green Hills INTEGRITY BSP



XPedite6401

The XPedite6401 is an XMC/PrPMC mezzanine module that supports an NXP QorIQ LS1043A processor with four 64-bit Arm® Cortex-A53 cores operating at up to 1.2 GHz. The LS10xxA processor family delivers excellent networking performance and flexible I/O options in a single System-on-Chip (SoC) design, making it the logical choice for Small Form Factor (SFF) networking and rugged industrial embedded computing applications.

The XPedite6401 supports up to 8 GB of DDR4 ECC SDRAM memory in its default configuration with the LS1043A processor.

The P14 I/O connector allows for two 10/100/1000BASE-T Ethernet ports, two RS-232/422/485 serial ports, and two USB 2.0 ports. Its pinout is identical to many of X-ES' earlier products, providing an easy drop-in upgrade solution for legacy XMC/PrPMC products. The XPedite6401's P16 connector provides access to an array of I/O from the processor, maximizing performance in a small package design. It supports two SGMII ports and one SATA port capable of 6 Gb/s.

The XPedite6401's impressive I/O complements the computing power of the processor and provides ample bandwidth to rapidly move data in and out of the processor. Wind River VxWorks, Linux, and Green Hills INTEGRITY Board Support Packages (BSPs) also are available.

X-ES

Extreme Engineering Solutions

*"Fast, Flexible, Customer-Focused
Embedded Solutions"*

Extreme Engineering Solutions

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Processor

- NXP QorIQ LS1043A processor with four 64-bit Arm® A53 cores at up to 1.2 GHz
- 128-bit NEON SIMD engine per core

Alternate Processor

- NXP QorIQ LS1023A processor with two 64-bit Arm® A53 cores at up to 1.2 GHz

Memory

- Up to 8 GB of DDR4 ECC 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

PMC P14 I/O

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

P15 XMC Interface

- x1 PCI Express Gen2 interface to P15

XMC P16 I/O

- Two RS-232/422/485 serial ports
- One SATA port capable of 6 Gb/s (optional)
- Two 10/100/1000BASE-T Ethernet ports
- Two SGMII ports

Software Support

- Linux BSP
- Wind River VxWorks BSP
- Green Hills INTEGRITY BSP
- QNX Neutrino BSP (contact factory)
- LynuxWorks LynxOS BSP (contact factory)

Physical Characteristics

- Conduction-cooled XMC/PMC form factor
- Dimensions: 149 mm x 74 mm, 10 mm stacking height

Environmental Requirements

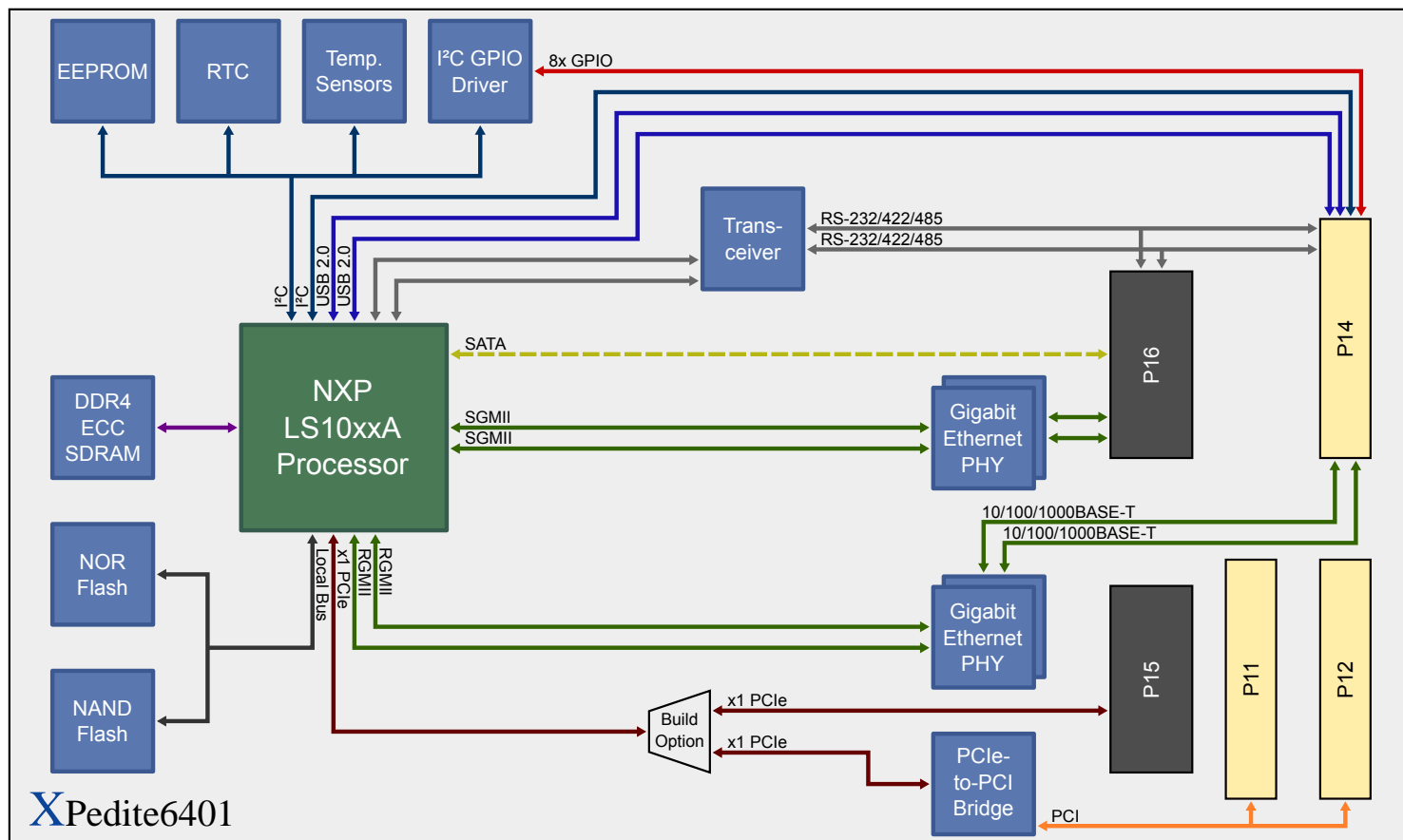
Contact factory for appropriate board configuration based on environmental requirements.

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

Power Requirements

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

Ruggedization Level	Level 5
Cooling Method	Conduction-Cooled
Operating Temperature	-40 to +85°C (board rail surface)
Storage Temperature	-55 to +105°C (maximum)
Vibration	0.1 g ² /Hz (maximum), 5 to 2000 Hz
Shock	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing



XPedite6401