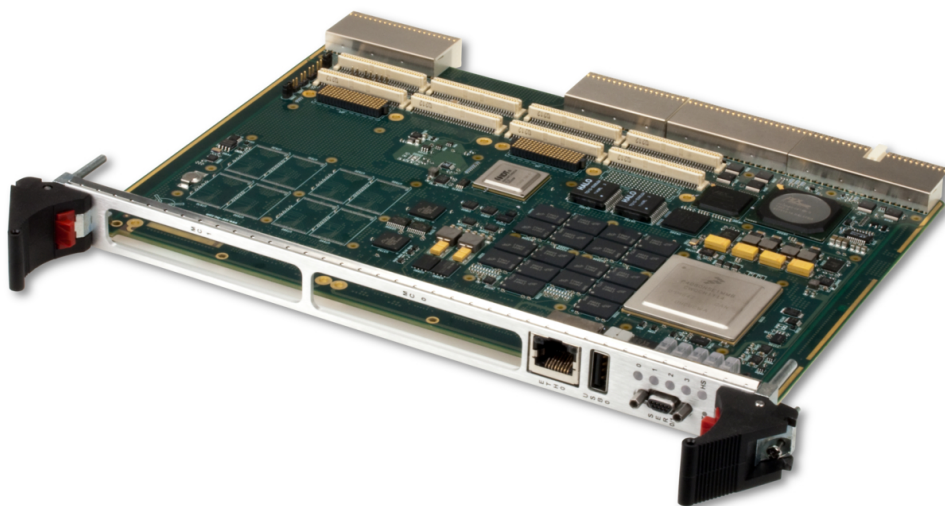


XCalibur1600

Freescale Eight-Core P4080 Processor-Based Conduction- or Air-Cooled 6U cPCI Module

- ▶ Freescale P4080 processor with eight PowerPC e500mc cores at up to 1.5 GHz (alternate processors P4040, P3041, P5010, P5020)
- ▶ 6U CompactPCI module
- ▶ Conduction or air cooling
- ▶ Up to 16 GB of DDR3-1333 ECC SDRAM in two channels
- ▶ Up to 512 MB of NOR flash (with redundancy)
- ▶ Up to 64 GB of CPU NAND flash
- ▶ Up to 128 GB of SATA NAND flash (optional)
- ▶ Three Gigabit Ethernet ports
- ▶ x4 PCI Express to XMC sites
- ▶ Up to four SATA 3.0 Gb/s ports
- ▶ Two USB 2.0 ports
- ▶ Two RS-232/422/485 serial ports
- ▶ XAUI to XMC site
- ▶ Two PrPMC/XMC interfaces
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP
- ▶ Green Hills INTEGRITY-178 tuMP BSP



XCalibur1600

The XCalibur1600 is a high-performance, 6U cPCI, single board computer supporting Freescale QorIQ P3, P4, and P5 processors. With eight Power Architecture e500mc cores running at up to 1.5 GHz, the P4080 delivers enhanced performance and efficiency for today's embedded computing applications.

The P4080 processor brings the raw power of eight e500mc cores running at up to 1.5 GHz and dual-channel DDR3 memory, delivering unparalleled multi-core performance. For applications which are more power conscious, the P3041 processor offers four e500mc cores running at up to 1.5 GHz with a single channel of DDR3 memory, all within a significantly reduced power envelope. Applications requiring the performance of a true 64-bit processor are satisfied by the P5020 processor, which offers dual e500mc cores running at up to 2 GHz and beyond with high-performance floating-point units and dual-channel DDR3 memory. Additional reduced-function processors are available to meet any power and performance budget.

The XCalibur1600 is a powerful, feature-rich solution for the next generation of compute-intensive embedded applications. Wind River VxWorks, Linux, and Green Hills INTEGRITY-178 tuMP Board Support Packages (BSPs) are available.

X-ES

Extreme Engineering Solutions

...Always Fast

Extreme Engineering Solutions

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Processor

- Freescale P4080 processor
- Eight PowerPC e500mc cores at up to 1.5 GHz
- 128 KB L2 cache per core
- 1 MB L3 cache per channel
- IEEE754 Floating Point Unit (FPU) support

Alternate Processor Configurations

- P4040 processor with four PowerPC e500mc cores at up to 1.5 GHz
- P3041 processor with four PowerPC e500mc cores at up to 1.5 GHz
- P5010 processor with one 64-bit PowerPC e5500 core at up to 2 GHz
- P5020 processor with two 64-bit PowerPC e5500 cores at up to 2 GHz

Memory

- Two channels of up to DDR3-1333 ECC SDRAM, up to 16 GB (8 GB each)
- Up to 512 MB of NOR flash (with redundancy)
- Up to 64 GB of CPU NAND flash
- Up to 128 GB of SATA NAND flash (optional)

cPCI

- 66 MHz 64-bit PCI interface to J1 and J2
- PICMG 2.1 (Hot Swap support)
- PICMG 2.3 (PMC I/O to J3 and J5)
- PICMG 2.9 (Dedicated IPMI Controller)
- PICMG 2.16 (Two 10/100/1000BASE-T Ethernet ports)

PrPMC/XMC

- PCI-X (64/32-bit, 100/66 MHz)
- PCI (64/32-bit, 66/33 MHz)
- x4 PCI Express port to J15 and J25 (XMC)
- Two SATA 3.0 Gb/s to XMC J16 (optional)
- XAUI to XMC site (optional)

Front Panel I/O (optional)

- Dual RS-232 serial ports
- Gigabit Ethernet port
- USB 2.0 (optional)
- General-purpose LEDs

Back Panel

- Dual RS-232/485 serial ports
- Two Gigabit Ethernet ports
- Dual SATA 3.0 Gb/s ports
- PMC I/O
- Up to two USB 2.0 ports

IPMI

- Onboard management controller

Software Support

- Linux BSP
- Wind River VxWorks BSP
- Greens Hills INTEGRITY-178 tuMP BSP

Environmental Requirements

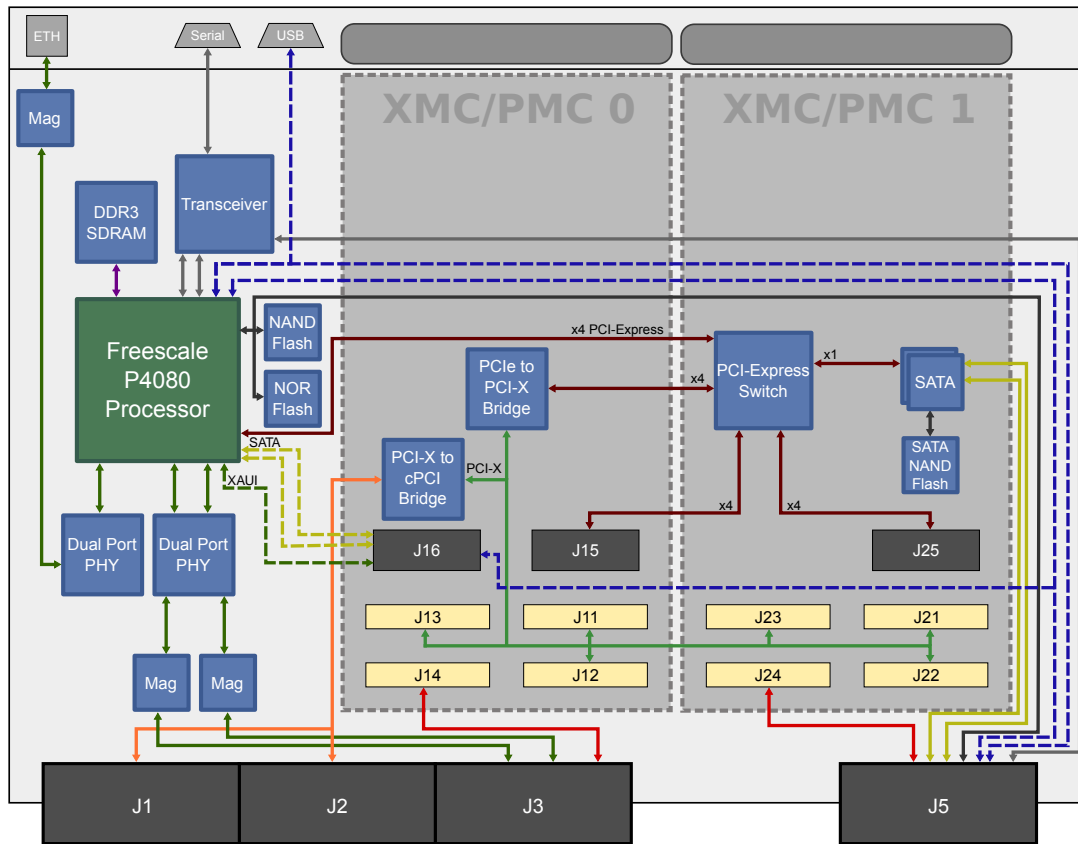
Contact factory for appropriate board configuration based on environmental requirements.

- 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 ambient
Vibration	0.002 g ² /Hz, 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



XCalibur1600

