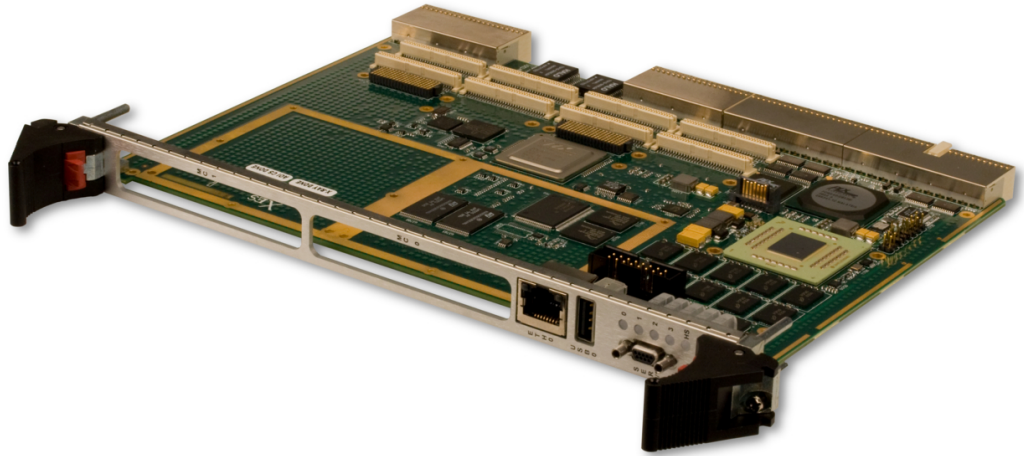


XCalibur1301

Freescale MPC8640D Processor-Based Conduction- or Air-Cooled 6U cPCI Module

- ▶ Freescale MPC8640D processor with dual PowerPC e600 cores at up to 1.25 GHz
- ▶ 6U cPCI module
- ▶ Conduction or air cooling
- ▶ Up to 4 GB DDR2-533 SDRAM per processor in two channels
- ▶ Double-precision FPU
- ▶ Integrated AltiVec Unit
- ▶ Up to 256 MB of NOR flash (with redundancy)
- ▶ Up to 8 GB of NAND flash
- ▶ Four Gigabit Ethernet ports
- ▶ x8 PCI Express to XMC sites
- ▶ Two SATA 3.0 Gb/s ports to J5
- ▶ Three USB 2.0 ports (one configurable to front panel and two to J5)
- ▶ Two RS-232/422/485 serial ports
- ▶ Two PrPMC/XMC interfaces
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP
- ▶ QNX Neutrino BSP
- ▶ Green Hills INTEGRITY BSP



XCalibur1301

The XCalibur1301 is a high-performance 6U CompactPCI single board, multiprocessing, computer that is ideal for ruggedized systems requiring high-bandwidth processing and low power consumption. With dual PowerPC e600 cores running at up to 1.25 GHz, the MPC8640D delivers enhanced performance with AltiVec technology and IEEE 754 dual-precision floating point and offers efficiency for today's network information processing and other embedded computing applications.

The XCalibur1301 provides two separate channels of up to 4 GB DDR2-533 ECC SDRAM, two PrPMC/XMC slots, as well as 256 MB of NOR flash (with redundancy). The XCalibur1301 also supports four Gigabit Ethernet ports, I²C, PMC I/O, XMC I/O, and RS-232/422/485 serial ports out the front panel or J5 connector.

The XCalibur1301 is a powerful, feature-rich solution for the next generation of compute intensive embedded applications. Operating system support for Wind River VxWorks, Green Hills INTEGRITY, QNX Neutrino, and Linux is available.

X-ES

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...Always Fast

Extreme Engineering Solutions

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 Phone: 608.833.1155 • Fax: 608.827.6171
 sales@xes-inc.com • <http://www.xes-inc.com>

Processor

- Freescale MPC8640D processor
- Two PowerPC e600 cores at up to 1.25 GHz
- 1 MB of L2 cache per core
- Integrated AltiVec
- IEEE 754 floating point unit

Memory

- Two channels of DDR2 ECC SDRAM, up to 4 GB
- Up to 8 GB of NAND flash
- Up to 256 MB of NOR flash (with redundancy)
- 16 kB I²C EEPROM

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)

Front Panel

- Two RS-232 serial ports
- One or two Gigabit Ethernet ports
- USB 2.0 port
- General purpose LEDs

Back Panel

- Two RS-232/485 serial ports
- Two PICMG 2.16 Gigabit Ethernet ports
- Two SATA 3.0 Gb/s ports
- PMC I/O
- Two USB 2.0 ports

Software Support

- Linux BSP
- Wind River VxWorks BSP
- QNX Neutrino BSP
- Greens Hills INTEGRITY BSP

Environmental Requirements

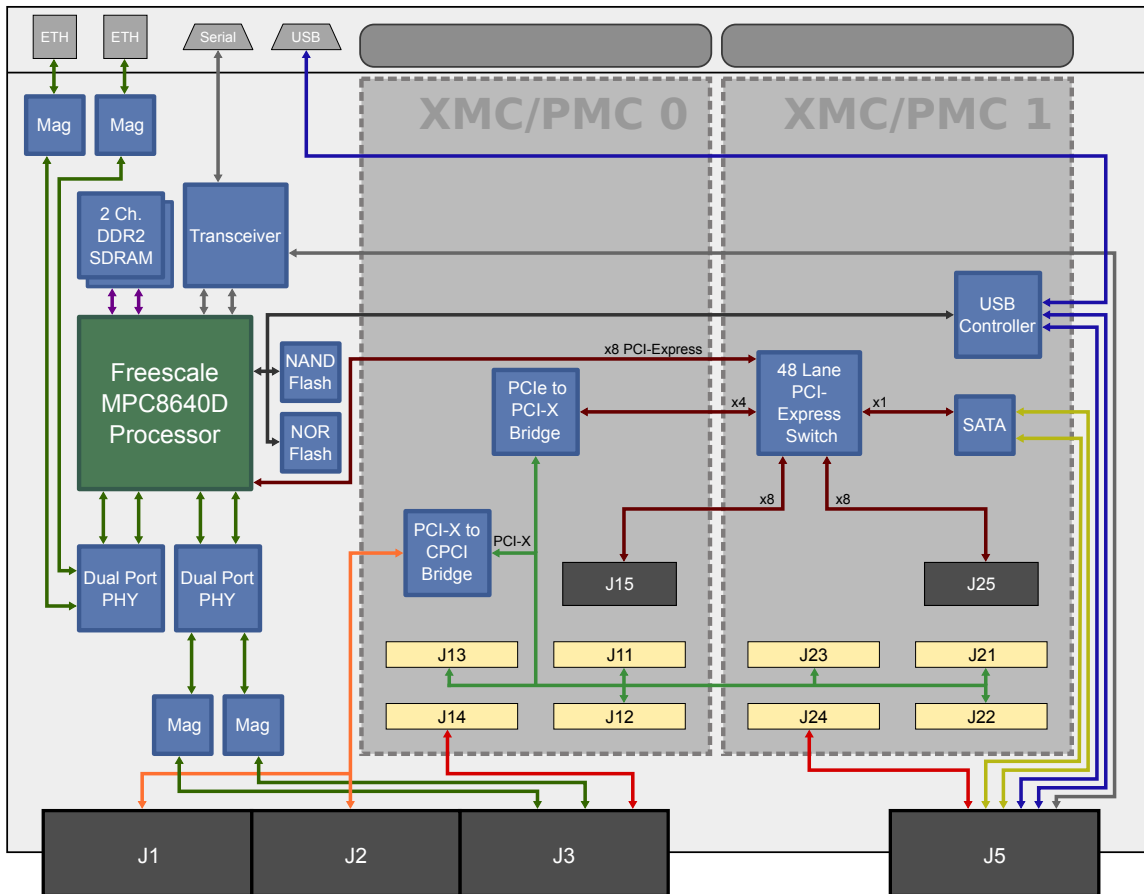
Contact factory for appropriate board configuration based on environmental requirements.

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

Power Requirements

- Power will vary based on CPU frequency and application. Please consult factory.

Supported 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	-40 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



XCalibur1301

