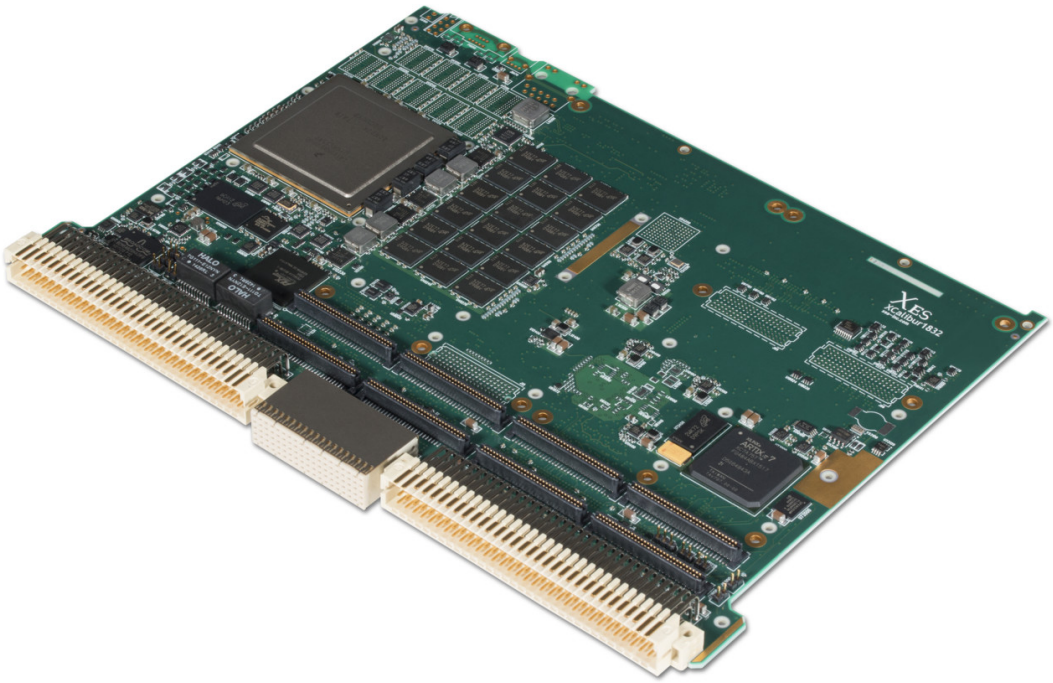
XCalibur1832

NXP 12-Core T4240 Processor-Based Conduction- or Air-Cooled 6U VME Module with Three Gigabit Ethernet Ports

- NXP T4240 processor with 12 dual-threaded Power Architecture® e6500 cores at up to 1.8 GHz (alternate processors T4160 and T4080)
- 6U VME module
- Conduction or air cooling
- Up to 24 GB of up to DDR3-2133 ECC SDRAM in three channels
- Up to 256 MB of NOR flash (with redundancy)
- Up to 32 GB of CPU NAND flash
- Up to three Gigabit Ethernet ports
- Two USB 2.0 ports
- Two RS-232/422/485 serial ports
- One x4 PCI Express port to P0
- One XMC interface
- Two PrPMC interfaces
- Wind River VxWorks BSP
- Linux BSP
- Green Hills INTEGRITY BSP
- QNX Neutrino (contact factory)
- LynuxWorks LynxOS (contact factory)



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The XCalibur1832 is a high-performance, 6U VME, multiprocessing, single board computer supporting NXP (formerly Freescale) QorIQ T4 processors. With 12 dual-threaded Power Architecture® e6500 cores running at up to 1.8 GHz, the T4240 delivers enhanced performance and efficiency for today's embedded computing applications.

The T4240 processor brings the raw power of 12 dual-threaded e6500 cores running at up to 1.8 GHz with three-channel DDR3 memory and one high-performance 128-bit AltiVec unit per core, delivering unparalleled multi-core performance. For applications which are more power conscious, the T4160 processor offers eight dual-threaded e6500 cores and the T4080 processor offers four dual-threaded e6500 cores, both running at up to 1.8 GHz with two-channel DDR3 memory and all within a significantly reduced power envelope.

The XCalibur1832 is a powerful, feature-rich solution for the next generation of compute-intensive embedded applications. Wind River VxWorks, Linux, and Green Hills INTEGRITY Board Support Packages (BSPs) are available.

X-ES
Extreme Engineering Solutions

...Always Fast

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Processor

- NXP (formerly Freescale) QorIQ T4240 processor
- 12 dual-threaded Power Architecture® e6500 cores at up to 1.8 GHz
- 2 MB L2 cache per quad
- 512 kB platform cache per channel (3)
- IEEE 754 Floating-Point Unit (FPU) support
- 128-bit AltiVec engine per core
- Secure Boot capable

Alternate Processor Configurations

- T4080 processor with four dual-threaded Power Architecture® e6500 dual cores up to 1.8 GHz
- T4160 processor with eight dual-threaded Power Architecture® e6500 cores up to 1.8 GHz

Memory

- Up to 24 GB of up to DDR3-2133 ECC SDRAM in three channels
- Up to 256 MB of NOR flash (with redundancy)
- Up to 32 GB of CPU NAND flash

IPMI (Optional)

- Onboard management controller

VME

- VME64 (VITA 1-1994 R2002)
- VME64x (VITA 1.1-1997 R2003)
- 2eSST (VITA 1.5-2003)
- Ethernet on VME64x (VITA 31.1-2003)
- P14 PMC I/O on VME P2 per (VITA 35-2000, P4V2-64ac)
- P24 PMC I/O on VME P2 per (VITA 35-2000, P4V2-46dz)

Front Panel I/O (Optional)

- Two RS-232 serial ports
- One Gigabit Ethernet port
- One USB 2.0 port
- General-purpose LEDs
- Two 10GBASE-T to front panel using I/O mezzanine card

Back Panel

- Two RS-232/422/485 serial ports
- Two Gigabit Ethernet ports
- PMC I/O
- Two USB 2.0 ports
- One x4 PCI Express interface
- Ten discrete GPIO

PrPMC

- PCI-X (64/32-bit, 100/66 MHz)
- PCI (64/32-bit, 66/33 MHz)

Software Support

- Wind River VxWorks BSP
- Linux BSP
- Green Hills INTEGRITY BSP
- Contact factory for availability of QNX Neutrino and LynuxWorks LynxOS (contact factory)

Environmental Requirements

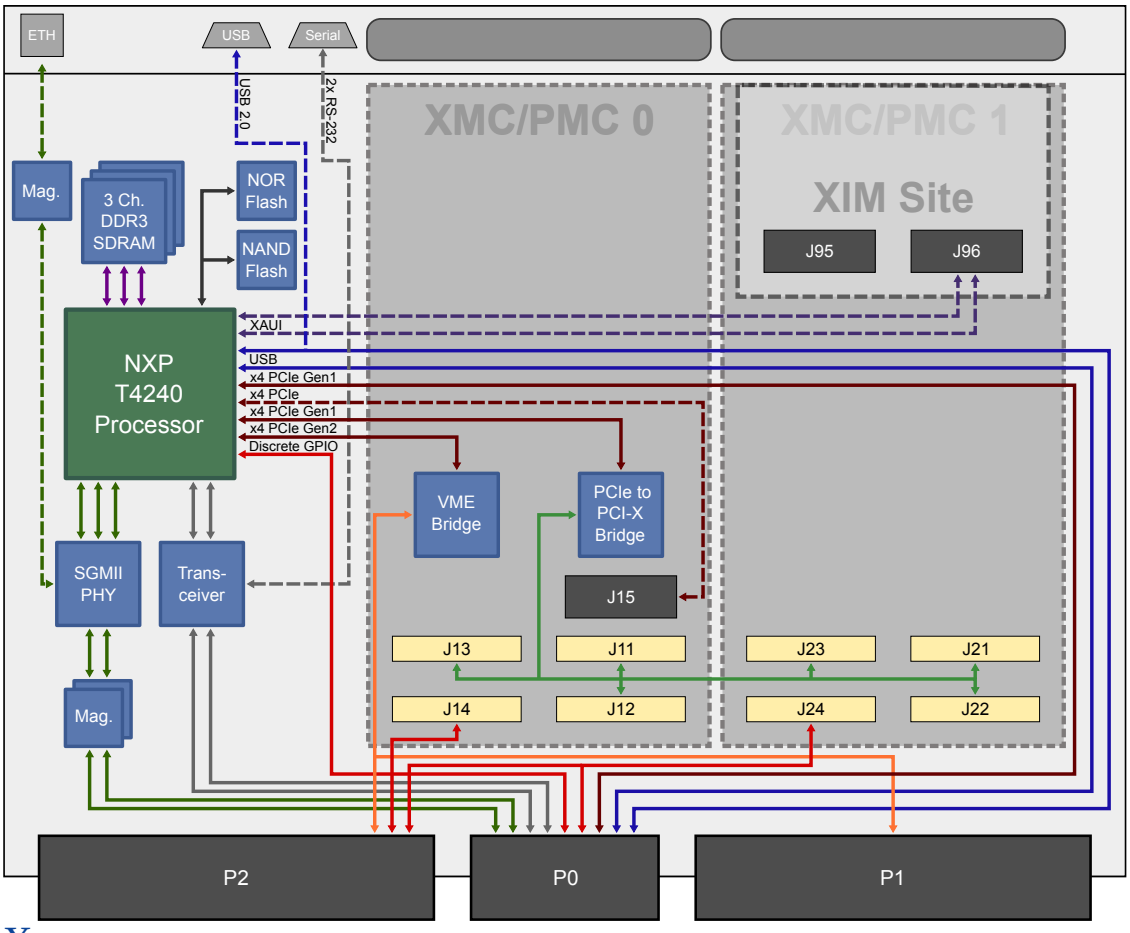
Contact factory for appropriate board configuration based on environmental requirements.

- 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 g²/Hz (maximum), 5 to 2000 Hz	0.04 g²/Hz (maximum), 5 to 2000 Hz	0.1 g²/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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