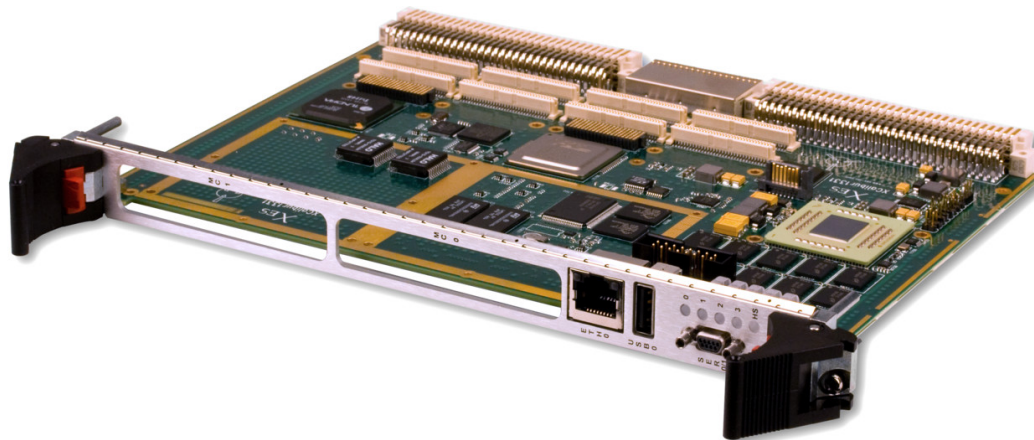# XCalibur1331

End of Life

NXP MPC8640D Processor-Based Conduction- or Air-Cooled 6U VME Module

Please contact X-ES Sales

❱ NXP MPC8640D processor with dual PowerPC e600 cores at up to 1.25 GHz

❱ 6U VME module

❱ Conduction or air cooling

❱ Up to 4 GB DDR2-533 ECC SDRAM in two channels

❱ Up to 256 MB of NOR flash (with redundancy)

❱ Up to 4 GB of NAND flash

❱ Four Gigabit Ethernet ports

❱ Dual-precision Floating-Point Unit (FPU)

❱ Integrated AltiVec unit

❱ x8 PCI Express XMC sites

❱ Two RS-232/422/485 serial ports

❱ Two XMC/PrPMC interfaces

❱ Linux BSP

❱ Wind River VxWorks BSP

❱ QNX Neutrino BSP

❱ Green Hills INTEGRITY BSP

XCalibur1331

The XCalibur1331 is a high-performance, multiprocessing, 6U VME, single board 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 NXP (formerly Freescale) MPC8640D delivers enhanced performance with AltiVec technology and IEEE 754 dual-precision Floating-Point Unit, and it offers efficiency for today's network information processing and other embedded computing applications.

The XCalibur1331 provides up to 4 GB DDR2-533 ECC SDRAM in two separate channels, two XMC/PrPMC slots, as well as 256 MB of NOR flash (with redundancy). The XCalibur1331 also supports four Gigabit Ethernet ports, I²C, XMC I/O, PMC I/O, and up to three serial ports out the front panel and/or P2/P0 connectors.

The XCalibur1331 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

Extreme Engineering Solutions

...Always Fast

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Processor

- NXP MPC8640D processor
- Dual PowerPC e600 cores at up to 1.25 GHz
- 1 MB of L2 cache per core
- Integrated AltiVec unit
- IEEE 754 Floating-Point Unit

Memory

- Up to 4 GB of DDR2 ECC SDRAM in two channels
- Up to 4 GB of NAND flash
- Up to 256 MB of NOR flash (with redundancy)
- 16 kB I²C SEEPROM

XMC/PrPMC

- PCI-X (64/32-bit, 100/66 MHz)
- PCI (64/32-bit, 66/33 MHz)
- x8 PCIe interface to P15 and P25 (XMC)

VME

- VME64 (VITA 1-1994 R2002)
- VME64x (VITA 1.1-1997 R2003)
- 2eSST (VITA 1.5-2003)
- Ethernet on VME64x (VITA 31.1-2003)
- PMC I/O on VME (VITA 35-2000)

Front Panel

- Two RS-232 serial ports
- One Gigabit Ethernet port
- General purpose LEDs

Back Panel

- Two RS-232/422/485 serial ports
- Three Gigabit Ethernet ports
- PMC I/O

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 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

XCalibur1331

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