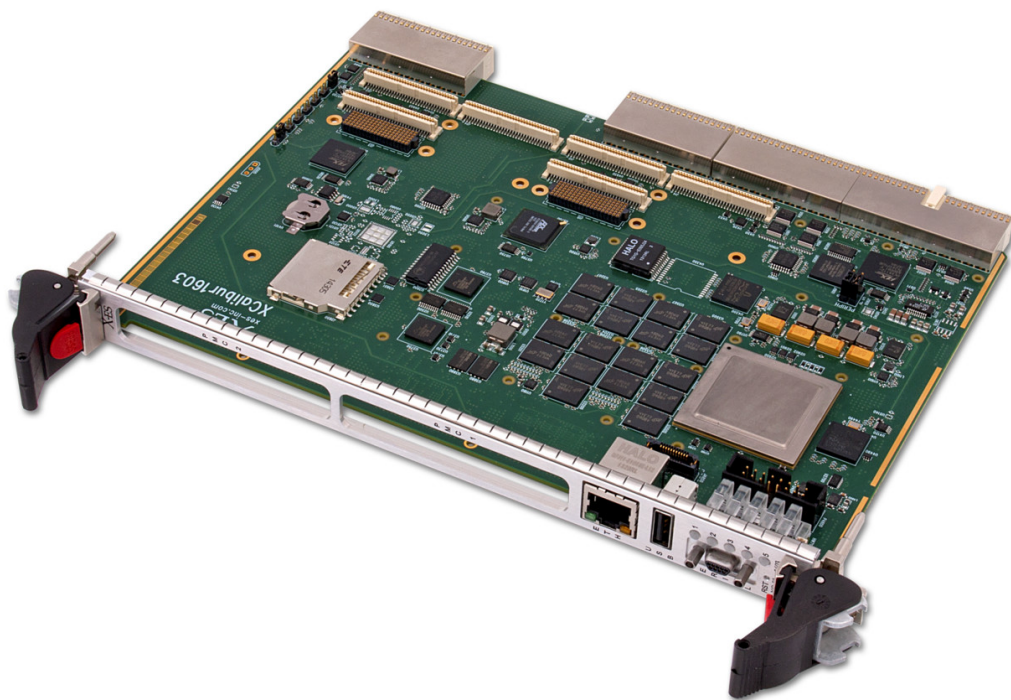


XCalibur1603

NXP QorIQ Eight-Core P4080 Processor-Based Air-Cooled 6U cPCI Module

- ▶ NXP QorIQ P4080 processor with eight Power Architecture® e500mc cores at up to 1.5 GHz
- ▶ Alternate NXP QorIQ processors: P3041, P4040
- ▶ 6U CompactPCI module
- ▶ Air-cooled
- ▶ 8 GB of DDR3 ECC SDRAM in two channels
- ▶ 256 MB of NOR flash (with redundancy)
- ▶ Up to three Gigabit Ethernet ports
- ▶ x1 PCI Express to XMC sites
- ▶ Two USB 2.0 ports
- ▶ Two RS-232 serial ports
- ▶ Two XMC/PrPMC interfaces
- ▶ Real-Time Clock (RTC) with battery backup
- ▶ SD card socket
- ▶ 32 kB FRAM
- ▶ Nexus JTAG header
- ▶ COP JTAG header
- ▶ Linux BSP
- ▶ Wind River VxWorks BSP
- ▶ Green Hills INTEGRITY v11.x BSP



XCalibur1603

The XCalibur1603 is a high-performance, 6U cPCI, single board computer supporting the NXP (formerly Freescale) QorIQ P3 and P4 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. Additional reduced-function processors are available to meet any power and performance budget.

The XCalibur1603 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, and Linux is available.

X-ES

Extreme Engineering Solutions

...Always Fast

Extreme Engineering Solutions

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Processor

- NXP (formerly Freescale) QorIQ P4080 processor
- Eight Power Architecture® e500mc cores at 1.5 GHz
- 128 kB L2 cache per core
- 1 MB L3 cache per channel
- IEEE 754 Floating-Point Unit (FPU) support

Alternate Processor Configurations

- P3041 processor with four Power Architecture® e500mc cores at up to 1.5 GHz
- P4040 processor with four Power Architecture® e500mc cores at up to 1.5 GHz

Memory

- 8 GB of DDR3 ECC SDRAM in two channels (4 GB each)
- 256 MB of NOR flash (with redundancy)
- 32 kB FRAM
- SD card socket (up to 32 GB)

cPCI

- 66 MHz 32-bit PCI interface to J1 and J2
- PICMG 2.3 (PMC I/O to J3 and J5)
- PICMG 2.16 (two 10/100/1000BASE-T Ethernet ports)

XMC/PrPMC

- PCI (32-bit, 66/33 MHz)
- x1 PCI Express port to J15 and J25 (XMC)

JTAG

- Nexus JTAG header (22-pin, Samtec P/N ASP-137969-01)
- COP JTAG header (16-pin, TE P/N 5103309-3)

Front Panel I/O

- One RS-232 serial port
- One Gigabit Ethernet port
- One USB 2.0 port
- General-purpose LEDs

Back Panel I/O

- One RS-232 serial port
- Up to two Gigabit Ethernet ports
- One USB 2.0 port
- PMC I/O

Software Support

- Linux BSP
- Wind River VxWorks BSP
- Greens Hills INTEGRITY v11.x BSP

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 1
- 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 †	-40 to +70°C ambient †	-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 g ² /Hz (maximum), 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

† Contact factory for airflow rate details.

