

XCalibur1903

NXP QorIQ T2080 Processor-Based Conduction or Air-Cooled 6U cPCI Module

- › NXP QorIQ T2080 processor with four dual-threaded e6500 cores at 1.8 GHz
- › 6U CompactPCI module
- › Conduction or air cooling
- › Up to 8 GB DDR3 ECC SDRAM
- › Up to 512 MB of NOR flash (with redundancy)
- › Up to 32 GB of CPU NAND flash
- › NVMe storage (optional)
- › Two 10/100/1000BASE-T Ethernet ports (three ports on air-cooled configurations)
- › x8 PCI Express interface to XMC sites
- › Two SATA ports (optional)
- › Two USB 2.0 ports
- › Two RS-232/422/485 serial ports
- › One 10GBASE-T Ethernet port to front panel using I/O mezzanine card (optional)
- › Two XMC/PrPMC interfaces
- › Wind River VxWorks BSP
- › Linux BSP
- › Green Hills INTEGRITY-178 BSP



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The XCalibur1903 is a high-performance 6U cPCI single board computer supporting an NXP QorIQ T2080 processor. It is a design refresh of the XCalibur1900, intended to update obsolete components while maintaining the same functionality and features.

The XCalibur1903 provides up to 8 GB of DDR3 ECC SDRAM, two XMC/PrPMC slots, and 512 MB of NOR flash (with redundancy). It supports up to three 10/100/1000BASE-T Ethernet ports, PMC I/O, USB 2.0, optional SATA ports capable of 3 Gb/s, and RS-232/422/485 serial ports out backplane connectors. An optional front panel offers 10GBASE-T Ethernet, USB 2.0, and RS-232 serial. An additional 10GBASE-T Ethernet port to front panel using I/O mezzanine card is also optionally supported.

The XCalibur1903 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.



Extreme Engineering Solutions

*“Fast, Flexible, Customer-Focused
Embedded Solutions”*

Extreme Engineering Solutions

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Processor

- NXP QorIQ T2080 processor
- Four dual-threaded e6500 cores at 1.8 GHz
- 2 MB of shared L2 cache

Memory

- Up to 8 GB of DDR3 ECC SDRAM
- Up to 512 MB of NOR flash (with redundancy)
- Up to 32 GB of NAND flash
- NVMe storage (optional)

cPCI

- 66 MHz 32-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)

XMC/PrPMC

- PCI-X (64/32-bit, 100/66 MHz)
- PCI (64/32-bit, 66/33 MHz)
- x8 PCI Express interface to J15 and J25 (XMC)

Front Panel (Optional)

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

Back Panel

- Two RS-232/422/485 serial ports
- Two 10/100/1000BASE-T Ethernet ports
- Two SATA ports capable of 3 Gb/s (optional, contact factory)
- Up to two USB 2.0 ports
- PMC I/O

IPMI

- Onboard management controller

Software Support

- Wind River VxWorks BSP
- Linux BSP
- Green Hills INTEGRITY-178 BSP

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

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

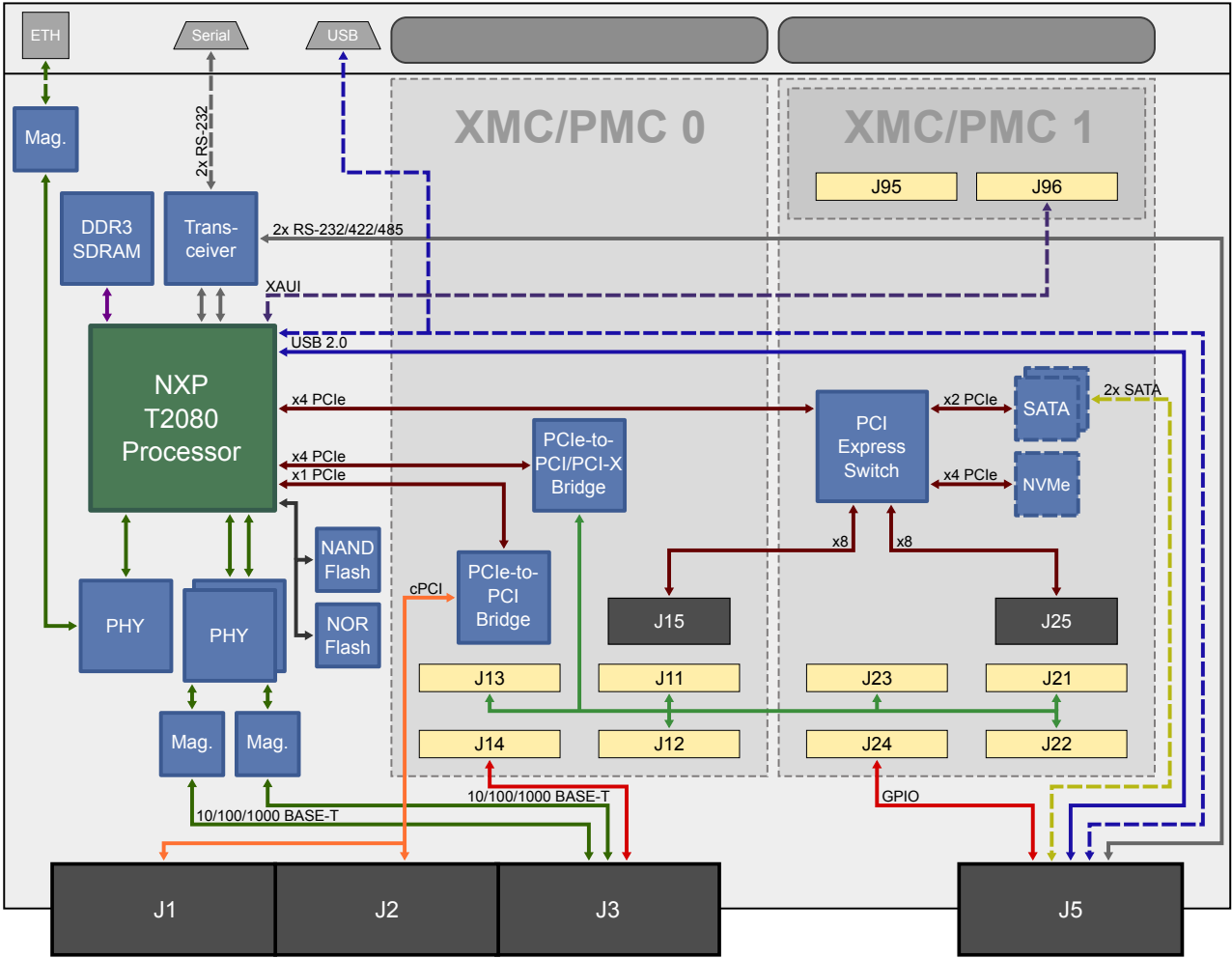
Power Requirements

- Power will vary based on configuration and usage. Please consult factory.

Ruggedization Level

Cooling Method	Level 1	Level 5
Standard Air-Cooled		Conduction-Cooled
Operating Temperature	0 to +55°C ambient †	-40 to +85°C (board rail surface)
Storage Temperature	-40 to +85°C ambient	-55 to +105°C (maximum)
Vibration	0.002 g ² /Hz (maximum), 5 to 2000 Hz	0.1 g ² /Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing	Up to 95% non-condensing

† Contact factory for airflow rate details.



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