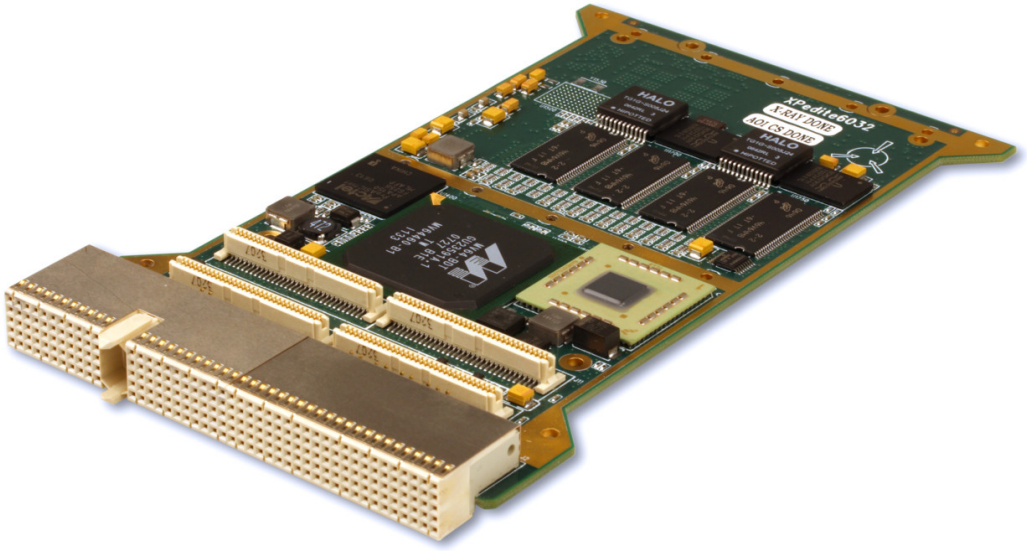
XPedite6032

End of Life

NXP MPC7447A/7448 Processor-Based Conduction- or Air-Cooled 3U cPCI Module

Please contact X-ES Sales

- NXP MPC7447A/7448 processor
- Conduction- or air-cooled 3U cPCI form factor
- One conduction- or air-cooled PCI-X PMC slot
- Extended shock/vibration tolerance
- Up to 512 MB DDR-266 SDRAM
- 128 MB soldered flash
- Two rear I/O Gigabit Ethernet interfaces
- Two RS-232/422 serial ports
- PMC P14 backplane I/O
- Linux BSP
- Wind River VxWorks BSP
- QNX Neutrino BSP
- Green Hills INTEGRITY BSP
- LynuxWorks LynxOS BSP



XPedite6032

The XPedite6032 is a high-performance conduction- or air-cooled 3U CompactPCI (cPCI) module that dissipates less than 18 W and is capable of operating at up to 85°C at the external thermal interface without forced air flow (conduction-cooled version) or up to 55°C ambient air temperature with 300 LFM airflow (air-cooled version). The XPedite6032 can also host one single-width conduction-cooled PMC or standard air-cooled PMC. The XPedite6032 is tolerant of 40 g peak/6 ms half sine shock, random vibration of 0.1 g²/Hz from 50 to 2000 Hz, and swept sinusoidal vibration of 0.06 inch/10 g peak amplitude from 10 to 500 Hz.

The XPedite6032 utilizes the NXP (formerly Freescale) MPC7447A/7448 embedded processor and Marvell Discovery III system controller and provides up to 512 MB DDR-266 SDRAM, up to 128 MB of NOR flash, two RS-232/422 serial ports, a 33/66 MHz cPCI interface and 66/100/133 MHz PCI-X PMC interface. The serial and two Gigabit Ethernet interfaces are accessible through the backplane J2 connector along with a subset of the PMC's P14 I/O. The XPedite6032 can be built as a system or peripheral cPCI module.

The XPedite6032 is ideal for 3U cPCI applications in commercial or extended temperature, shock, and vibration environments that require high-bandwidth and processing performance.

X-ES
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Processor

- NXP (formerly Freescale) MPC7447A/7448
- 1 GHz max processor speed
- 133 MHz bus speed
- 32 kB L1 instruction/data caches
- 512 kB (7447A) / 1 MB (7448) L2 cache

Conduction-Cooled

- Operates at up to 85°C at the external thermal interface

Air-Cooled

- Operates at up to 55°C ambient air temperature with 300 LFM airflow

PCI-X PMC Slot

- Maximum aggregate bandwidth of 1 GB
- Processor PMC (PrPMC) support

Non-Volatile Storage

- Up to 128 MB NOR flash
- 4 kB SEEPROM
- 128 kB NVSRAM

Ethernet

- Two Gigabit Ethernet ports
- Rear I/O

DDR SDRAM

- Up to 512 MB at DDR-266
- 2.6 Gb/s peak bandwidth

Rear I/O

- Two Gigabit Ethernet ports
- Two RS-232/422 serial ports
- Four GPIO pins
- One I²C port

Software

- Linux BSP
- Wind River VxWorks BSP
- QNX Neutrino BSP
- Green Hills INTEGRITY BSP
- LynuxWorks LynxOS BSP

Physical Characteristics

- 3U cPCI form factor
- Dimensions: 100 mm x 160 mm

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 (Estimate)

- 3.3 V, 5.2 A, 17.16 W
- 5 V, 0.05 A, 0.25 W

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