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 Freescale MPC7447A/7448 embedded processor and Marvell Discovery III system controller and provides up to 512 MB DDR-266 SDRAM, up to 128 MB soldered flash, two RS-232/RS-422 serial ports, a 33/66 MHz cPCI interface and 66/100/133MHz 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.
Processor
- 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 EEPROM
- 128 k NVSRAM

Ethernet
- Two Gigabit Ethernet ports
- Rear I/O

DDR SDRAM
- Up to 512 MB at DDR-266
- 2.6 Gbps peak bandwidth

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

Software
- Linux BSP
- Wind River VxWorks BSP
- QNX Neutrino BSP
- Green Hills INTEGRITY BSP
- 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)
- 3.3V, 5.2 A, 17.16 W
- 5V, 0.05 A, 0.25 W

<table>
<thead>
<tr>
<th>Supported Ruggedization Level</th>
<th>Level 1</th>
<th>Level 3</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling Method</td>
<td>Standard Air-Cooled</td>
<td>Rugged Air-Cooled</td>
<td>Conduction-Cooled</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to +55°C ambient (300 LFM)</td>
<td>-40 to +70°C (600 LFM)</td>
<td>-40 to +85°C (board rail surface)</td>
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<tr>
<td>Storage Temperature</td>
<td>-40 to +85°C ambient</td>
<td>-55 to +105°C ambient</td>
<td>-55 to +105°C ambient</td>
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<tr>
<td>Vibration</td>
<td>0.002 g²/Hz, 5 to 2000 Hz</td>
<td>0.04 g²/Hz (maximum), 5 to 2000 Hz</td>
<td>0.1 g²/Hz (maximum), 5 to 2000 Hz</td>
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<tr>
<td>Shock</td>
<td>20 g, 11 ms sawtooth</td>
<td>30 g, 11 ms sawtooth</td>
<td>40 g, 11 ms sawtooth</td>
</tr>
<tr>
<td>Humidity</td>
<td>0% to 95% non-condensing</td>
<td>0% to 95% non-condensing</td>
<td>0% to 95% non-condensing</td>
</tr>
</tbody>
</table>