**XPedite7431**

Intel® Core™ i7 Processor-Based 3U Conduction- or Air-Cooled CompactPCI Module

- Supports 2nd generation Intel® Core™ i7 processors and 3rd generation Intel® Core™ i7 processors
- Dual- or quad-core processor with Intel® Hyper-Threading Technology
- 3U CompactPCI module
- Conduction or air cooling
- Up to 8 GB of DDR3-1600 ECC SDRAM in two channels
- 32 MB of NOR boot flash
- Up to 16 GB of NAND flash
- Configurable as system controller or peripheral
- XMC interface with rear I/O and limited front panel I/O support (contact factory)
- Two 10/100/1000BASE-T Ethernet ports
- One RS-232 serial port
- Front I/O available via plugover module
- Wind River VxWorks BSP
- Linux BSP
- Microsoft Windows drivers
- Green Hills INTEGRITY BSP (contact factory)
- QNX Neutrino BSP (contact factory)
- LynuxWorks LynxOS BSP (contact factory)

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The XPedite7431 is a high-performance, 3U CompactPCI, multiprocessing, single board computer that is ideal for ruggedized systems requiring high bandwidth processing and low power consumption. With the 2nd Generation Intel® Core™ i7 processor, the XPedite7431 delivers enhanced performance and efficiency for today’s network information processing and embedded computing applications.

Complementing processor performance, the XPedite7431 features up to 8 GB of DDR3-1600 ECC SDRAM, XMC support, and up to 16 GB of NAND flash. Two Gigabit Ethernet ports are routed to J2 for additional system flexibility.

The XPedite7431 is a powerful, feature-rich solution for the next generation of compute-intensive embedded applications. Wind River VxWorks and Linux Board Support Packages (BSPs) are available, as well as Microsoft Windows drivers.
Processor
• Quad- or Dual-core Intel® Core™ i7
• Intel® Turbo Boost Technology
• Intel® Hyper-Threading Technology
• AVX instruction set extensions
• Integrated with Intel® QM67 chipset
• Dual-channel integrated memory controller
• Integrated high performance 3D graphics controller

Dual-Core Processor Configurations
• Core™ i7-2655LE: 2.2 GHz, 4 MB cache
• Core™ i7-2610UE: 1.5 GHz, 4 MB cache
• Core™ i7-3555LE: 2.5 GHz, 4 MB cache
• Core™ i7-3517UE: 1.7 GHz, 4 MB cache

Quad-Core Processor Configurations
• Core™ i7-3612QE: 2.1 GHz, 6 MB cache

Memory
• Up to 8 GB of DDR3-1600 ECC SDRAM in two channels
• 32 MB of NOR boot flash
• Up to 16 GB of NAND flash

Software Support
• Wind River VxWorks BSP
• Linux BSP
• Microsoft Windows drivers
• QNX Neutrino BSP (contact factory)
• Green Hills INTEGRITY BSP (contact factory)
• LynuxWorks LynxOS BSP (contact factory)

Physical Characteristics
• 3U conduction- or air-cooled CompactPCI 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):
  - Level 1: Standard Air-Cooled
  - Level 3: Rugged Air-Cooled
  - Level 5: Conduction-Cooled

Power Requirements
• Power will vary based on CPU frequency and application. Please consult factory.

Supported Ruggedization Level

<table>
<thead>
<tr>
<th>Cooling Method</th>
<th>Level 1</th>
<th>Level 3</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<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>
</tr>
<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>
</tr>
<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>
</tr>
<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>