XCalibur4402

Intel® Core™ i7 Processor-Based Conduction- or Air-Cooled 6U CompactPCI Single Board Computer

- Supports 2nd generation Intel® Core™ i7 processors and 3rd generation Intel® Core™ i7 processors
- Dual- or quad-core processor with Intel® Hyper-Threading Technology
- CompactPCI 6U module
- Conduction or air cooling
- Up to 16 GB of DDR3-1600 ECC SDRAM in two channels
- Up to 128 GB of NAND flash
- One front panel serial port
- Dual rear panel Gigabit Ethernet ports
- Four rear panel SATA 3.0 Gb/s ports
- Two PMC/XMC interfaces
- Rear graphics ports
- Complies with PICMG 2.0, 2.1, 2.3, 2.9, 2.16
- Wind River VxWorks BSP
- Linux BSP
- Microsoft Windows drivers
- Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynuxWorks LynxOS BSPs

XCalibur4402

The XCalibur4402 is a high-performance, 6U 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 or 3rd generation Intel® Core™ i7 processor, the XCalibur4402 delivers enhanced performance and efficiency for today’s network information processing and embedded computing applications.

The XCalibur4402 provides up to 16 GB of DDR3-1600 ECC SDRAM in two channels, two PrPMC/PrXMC slots, and up to 128 GB of NAND flash. The XCalibur4402 also supports Gigabit Ethernet, SATA, I²C, USB, PMC I/O, XMC I/O, and DisplayPort graphics out the connectors.

The XCalibur4402 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

**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 16 GB of DDR3-1600 ECC SDRAM in two channels
- Up to 128 GB of NAND flash

**PrPMC**
- PCI-X (32/64-bit, 66/100 MHz)
- PCI (32/64-bit, 33/66 MHz)

**XMC (VITA 42.3)**
- One SATA 6.0 Gb/s port
- x8 Gen2 (5 GT/s) PCI Express
- Intel® High Definition Audio port
- Two USB 2.0 ports

**Front Panel I/O (Optional)**
- One RS-232/485 serial port
- One 10/100/1000BASE-T Ethernet port
- One USB 2.0 port
- General-purpose LEDs

**Security and Management**
- Baseboard Management Controller (IPMI)
- Optional Trusted Platform Module (TPM)
- Non-volatile memory write protection

**Software Support**
- Wind River VxWorks BSP
- Linux BSP
- Microsoft Windows drivers
- Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynuxWorks LynxOS BSPs

**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**
- Power will vary based on CPU frequency and application. Please consult factory.

<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>
</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>

**Back Panel**
- Dual RS-232/485 serial ports
- Two 10/100/1000BASE-T Ethernet ports
- Four SATA 3.0 Gb/s ports
- Two USB 2.0 ports
- DisplayPort

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