The XCalibur4501 is a high-performance 6U CompactPCI single board computer that is ideal for ruggedized systems requiring high-bandwidth processing and low power consumption. With the 5th generation Intel® Core™ i7 Broadwell-H processor, the XCalibur4501 delivers enhanced performance and efficiency for today’s network information processing and embedded computing applications. The XCalibur4501 leverages Intel® Iris™ Pro graphics for graphics-intensive applications and serves as a general-purpose GPU for demanding data processing applications.

The XCalibur4501 provides up to 16 GB DDR3L-1600 ECC SDRAM in two separate channels, two XMC/PrPMC slots, and up to 64 GB of NAND flash. The XCalibur4501 also hosts numerous I/O ports, including Gigabit Ethernet, USB, SATA, graphics, and RS-232/422/485 through the backplane connectors.

The XCalibur4501 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.
Technical Specifications

XCalibur4501

Processor
- 5th generation Intel® Core™ i7 (Broadwell-H)
- 4th generation Intel® Core™ i7 (Haswell)
- Integrated high-performance 3D graphics controller
- Up to Intel® Iris™ Pro Graphics 6200

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

Memory
- Up to 16 GB of DDR3L-1600 ECC SDRAM in two channels
- Up to 64 GB of NAND flash
- 64 MB NOR boot flash
- 64 kB EEPROM

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

Physical Characteristics
- 6U CompactPCI conduction-cooled form factor
- Dimensions: 233 mm x 160 mm

Environmental Requirements
- Contact factory for appropriate board configuration based on environmental requirements.
- Supported ruggedization levels (see chart below): 5
- Conformal coating available as an ordering option
- Thermal performance will vary based on CPU frequency and application

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

Ruggedization Level

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

Contact www.xes-inc.com for availability of Green Hills INTEGRITY, QNX Neutrino, and LynxWorks LynxOS BSPs.