

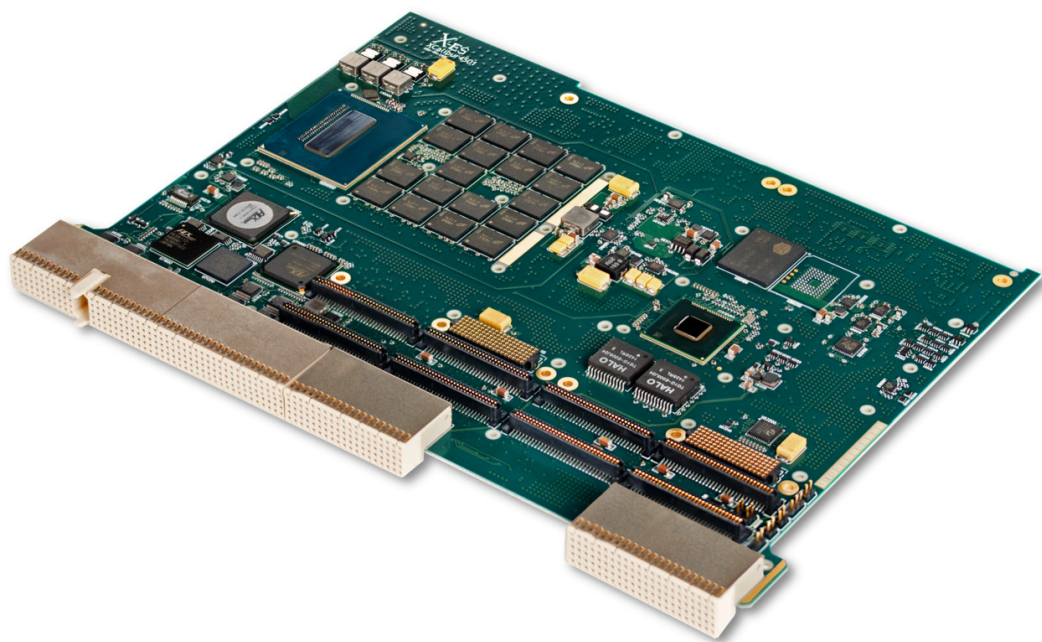
# XCalibur4501

**End of Life**

5th Generation Intel® Core™ i7 Broadwell-H Processor-Based Conduction-Cooled 6U CompactPCI Module

Please contact X-ES Sales

- › Supports 5th generation (Broadwell-H) and 4th generation (Haswell) Intel® Core™ i7 processors
- › 6U CompactPCI module
- › Complies with PICMG 2.0, 2.1, 2.3, 2.9, 2.16
- › Conduction cooling
- › Up to 16 GB DDR3 ECC SDRAM in two channels
- › Up to 64 GB of NAND flash
- › Two Gigabit Ethernet ports
- › Two USB 2.0 high-speed ports
- › Two SATA ports
- › Two RS-232/422/485 serial ports
- › Two XMC/PMC interfaces
- › One HDMI/DVI-D interface
- › Intel® vPro™/AMT support
- › Wind River VxWorks BSP
- › Linux BSP
- › Microsoft Windows drivers
- › Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynuxWorks LynxOS BSPs



## XCalibur4501

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 DDR3 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.

# X-ES

Extreme Engineering Solutions

*...Always Fast*

### Extreme Engineering Solutions

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**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

**Memory**

- Up to 16 GB of DDR3 ECC SDRAM in two channels
- Up to 64 GB of NAND flash
- 64 MB NOR boot flash
- 64 kB EEPROM

**cPCI**

- 33/66 MHz 32-bit PCI interface to J1 and J2
- PICMG 2.1 (Hot Swap support)
- PICMG 2.3 (PMC I/O to P3 and P5)
- PICMG 2.9 (dedicated IPMI controller)
- PICMG 2.16 (two 10/100/1000BASE-T Ethernet ports)

**PrPMC**

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

**XMC (VITA 42.3)**

- x8 PCI Express Gen3-capable

**Rear Panel I/O**

- Two 10/100/1000BASE-T Ethernet ports
- Two SATA ports capable of 3 Gb/s
- Two USB 2.0 ports
- HDMI/DVI-D interface
- Two RS-232/422/485 serial ports
- 3.3 V GPIO signals
- PMC I/O

**Additional Features**

- Non-volatile memory write protection
- Optional Trusted Platform Module (TPM)
- IEEE 1588 support on one Gigabit Ethernet port
- Intel® Active Management Technology (AMT) supported by Intel® vPro™ Technology

**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

**Physical Characteristics**

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

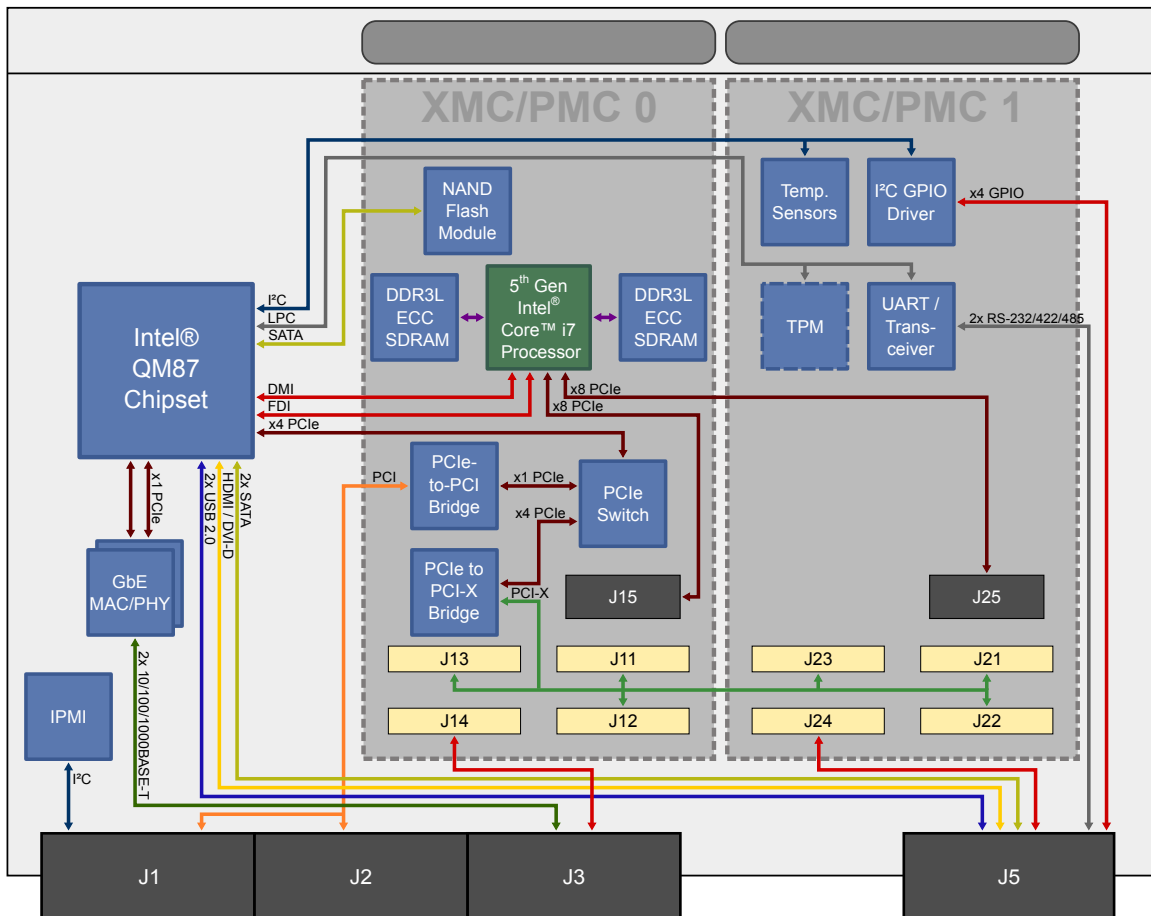
**Environmental Requirements**

- 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.

<b>Ruggedization Level</b>	<b>Level 5</b>
<b>Cooling Method</b>	Conduction-Cooled
<b>Operating Temperature</b>	-40 to +85°C (board rail surface)
<b>Storage Temperature</b>	-55 to +105°C (maximum)
<b>Vibration</b>	0.1 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz
<b>Shock</b>	40 g, 11 ms sawtooth
<b>Humidity</b>	Up to 95% non-condensing



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