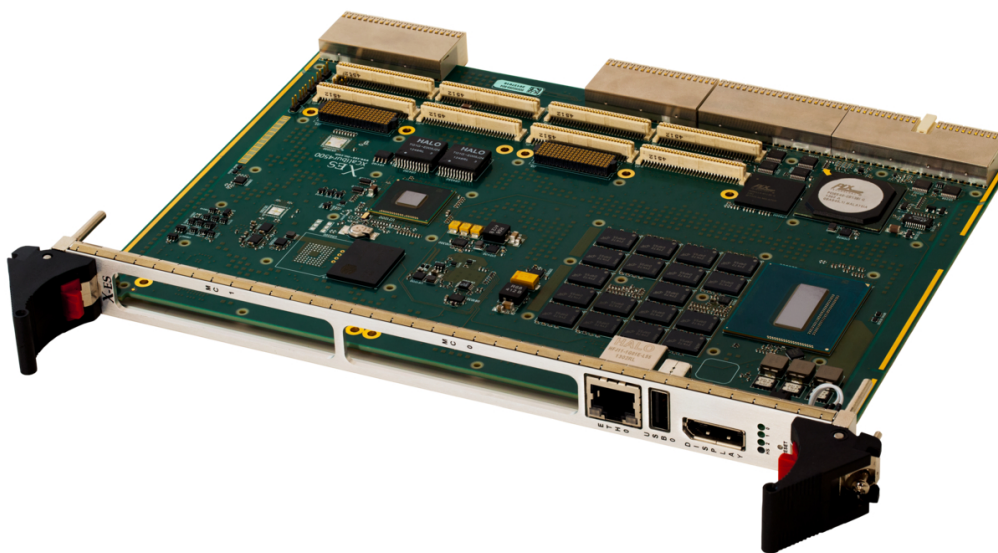


XCalibur4500

4th Generation Intel® Core™ i7 Haswell Processor-Based Conduction- or Air-Cooled 6U CompactPCI Module

- ▶ Supports 4th generation Intel® Core™ i7 processors
- ▶ 6U CompactPCI module
- ▶ Complies with PICMG 2.0, 2.1, 2.3, 2.9, 2.16
- ▶ Conduction or air cooling
- ▶ Up to 16 GB DDR3L-1600 ECC SDRAM in two channels
- ▶ Up to 64 GB of NAND flash
- ▶ Three Gigabit Ethernet ports
- ▶ Three USB 2.0 high-speed ports
- ▶ Four SATA ports
- ▶ Two RS-232/422/485 serial ports
- ▶ Two PMC/XMC interfaces
- ▶ Two HDMI/DVI-D or Dual-Mode DisplayPort interfaces
- ▶ 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



XCalibur4500

The XCalibur4500 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 4th generation Intel® Core™ i7 Haswell processor, the XCalibur4500 delivers enhanced performance and efficiency for today's network information processing and embedded computing applications.

The XCalibur4500 provides up to 16 GB DDR3L-1600 ECC SDRAM in two separate channels, two PrPMC/XMC slots, and up to 64 GB of NAND flash. The XCalibur4500 also hosts numerous I/O ports, including Gigabit Ethernet, USB, SATA, graphics, and RS-232/422/485 through the backplane connectors.

The XCalibur4500 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

- 4th generation Intel® Core™ i7
- Integrated high-performance 3D graphics controller

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

cPCI

- 66 MHz 64-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

Front Panel I/O (Optional)

- Dual-Mode DisplayPort interface
- One 10/100/1000BASE-T Ethernet port
- One USB 2.0 port
- General-purpose LEDs

Rear Panel I/O

- Two 10/100/1000BASE-T Ethernet ports
- Four SATA ports
- Two USB 2.0 ports
- HDMI/DVI-D or Dual-Mode DisplayPort 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 two Gigabit Ethernet ports
- 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- or air-cooled form factor
- Dimensions: 233 mm x 160 mm

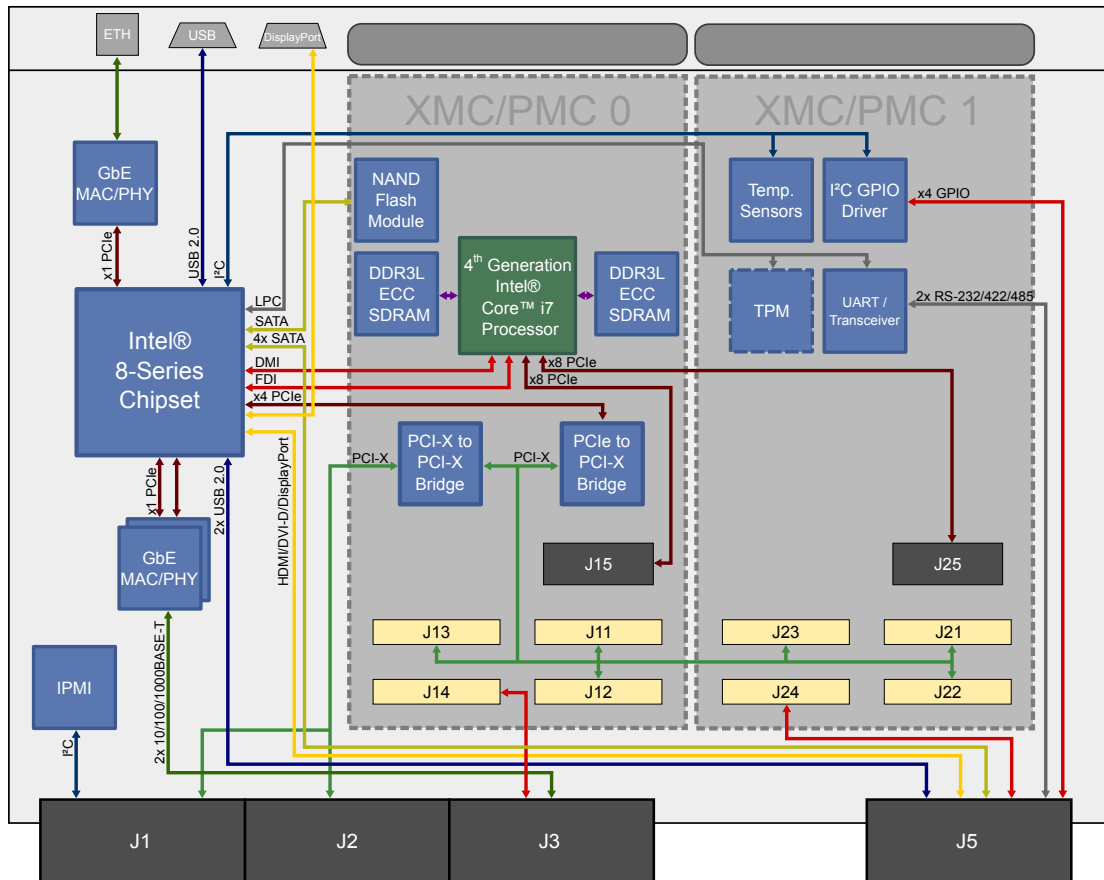
Environmental Requirements

- Contact factory for appropriate board configuration based on environmental requirements.
- Supported ruggedization levels (see chart below): 1, 3, 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	Level 1	Level 3	Level 5
Cooling Method	Standard Air-Cooled	Rugged Air-Cooled	Conduction-Cooled
Operating Temperature	0 to +55°C ambient (300 LFM)	-40 to +70°C (600 LFM)	-40 to +85°C (board rail surface)
Storage Temperature	-40 to +85°C ambient	-55 to +105°C ambient	-55 to +105°C ambient
Vibration	0.002 g ² /Hz, 5 to 2000 Hz	0.04 g ² /Hz (maximum), 5 to 2000 Hz	0.1 g ² /Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	0% to 95% non-condensing	0% to 95% non-condensing	0% to 95% non-condensing



XCalibur4500

