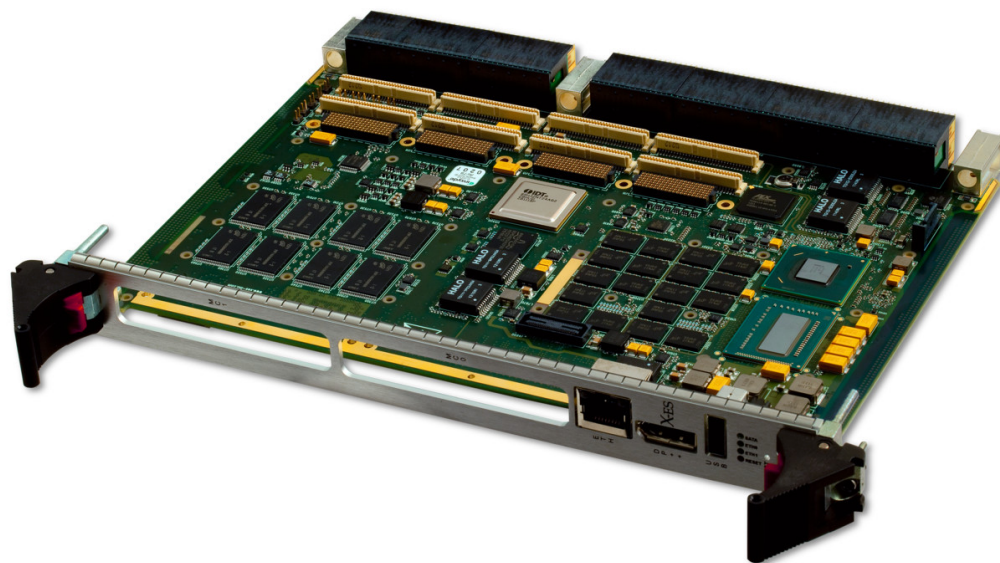


# XCalibur4440

Intel® Core™ i7 Processor-Based Conduction- or Air-Cooled 6U VPX Module

- ▶ Supports 2nd and 3rd generation Intel® Core™ i7 processors
- ▶ Quad- or dual-core processor with Intel® Hyper-Threading Technology
- ▶ 6U VPX module
- ▶ Compatible with multiple VITA 65 OpenVPX™ slot profiles
- ▶ Conduction or air cooling
- ▶ VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- ▶ Up to 16 GB of DDR3-1600 ECC SDRAM in two channels
- ▶ 32 MB of NOR boot flash
- ▶ Up to 256 GB of SATA NAND flash
- ▶ Five Gigabit Ethernet ports (one front panel and four backplane)
- ▶ x4 Gen2 PCI Express lanes from switch to XMC sites
- ▶ Four x4 (or two x8) Gen2 PCI Express lanes from switch to backplane
- ▶ Two graphics ports (Dual-Mode DisplayPort on front panel, DVI-D/HDMI on backplane)
- ▶ Four SATA ports on backplane
- ▶ Five USB 2.0 ports (one to front panel and four to backplane)
- ▶ Two RS-232/422/485 serial ports
- ▶ Wind River VxWorks BSP
- ▶ Linux BSP
- ▶ Microsoft Windows drivers
- ▶ Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynuxWorks LynxOS BSPs



## XCalibur4440

The XCalibur4440 is a high-performance, 6U VPX, multiprocessing, single board computer that is ideal for ruggedized systems requiring high bandwidth processing and low power consumption. With the ability to use 2nd or 3rd generation Intel® Core™ i7 processors, the XCalibur4440 delivers enhanced performance and efficiency for today's network information processing and embedded computing applications.

The XCalibur4440 provides 16 GB of DDR3-1600 ECC SDRAM in two channels, two XMC/PrPMC slots, 32 MB of NOR flash, and up to 256 GB of SATA NAND flash. The XCalibur4440 also supports five Gigabit Ethernet ports, two graphics ports, audio, I<sup>2</sup>C, XMC I/O, PMC I/O, and RS-232/422/485 serial ports out the front panel and/or backplane.

The XCalibur4440 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

3225 Deming Way, Suite 120 • Middleton, WI 53562  
 Phone: 608.833.1155 • Fax: 608.827.6171  
 sales@xes-inc.com • <http://www.xes-inc.com>

**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

**Quad-Core Processor Configurations**

- Core™ i7-3612QE: 2.1 GHz, 6 MB cache
- Core™ i7-3615QE: 2.3 GHz, 6 MB cache

**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

**Memory**

- Up to 16 GB of DDR3-1600 ECC SDRAM in two channels
- 32 MB of NOR flash
- Up to 256 GB of SATA NAND flash
- 16 kB I<sup>2</sup>C EEPROM

**Graphics**

- Integrated high-performance 3D graphics controller
- Dual-Mode DisplayPort interface to front panel
- DVI-D/HDMI to back panel

**PrPMC**

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

**XMC**

- x4 Gen2 PCIe port to J15 and J25

**VPX**

- VITA 46.11 (System Management on VPX)
- OpenVPX™ (VITA 65)
- Four x4 Gen2 PCIe lanes to P1
- Two 1000BASE-BX Ethernet ports to P4
- Two 10/100/1000BASE-T Ethernet ports to P4
- XMC and PMC I/O to P3, P4, P5, P6, mapping P3w1P4-P64s+X12d+X8d

**Front Panel I/O (R1 Level Only)**

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

**Back Panel**

- Two RS-232/422/485 serial ports
- Two 10/100/1000BASE-T Ethernet ports
- Two 1000BASE-BX Ethernet ports
- Four SATA ports capable of 3 Gb/s
- PMC I/O
- Four USB 2.0 ports
- Intel® High Definition Audio port (optional)

**Security and Management**

- Baseboard Management Controller (IPMI)
- VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- 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**

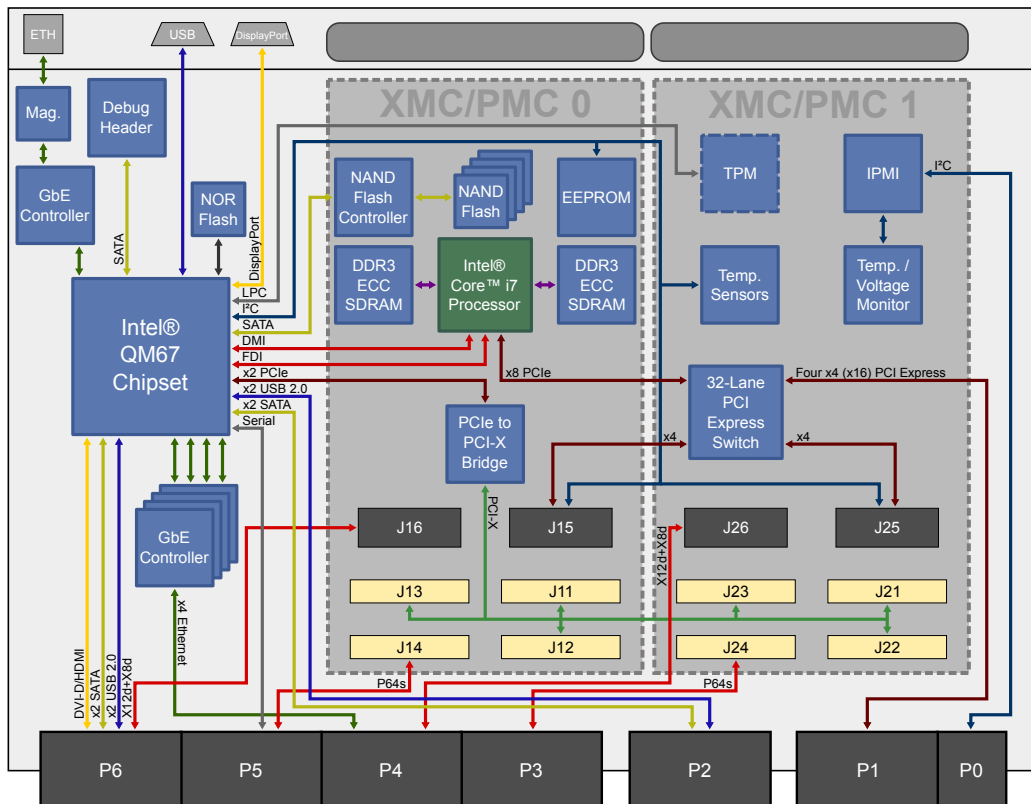
Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 1, 3, 5
- Conformal coating available as an ordering option

**Power Requirements**

- Power will vary based on 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 <sup>2</sup> /Hz, 5 to 2000 Hz	0.04 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz	0.1 g <sup>2</sup> /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



XCalibur4440

