

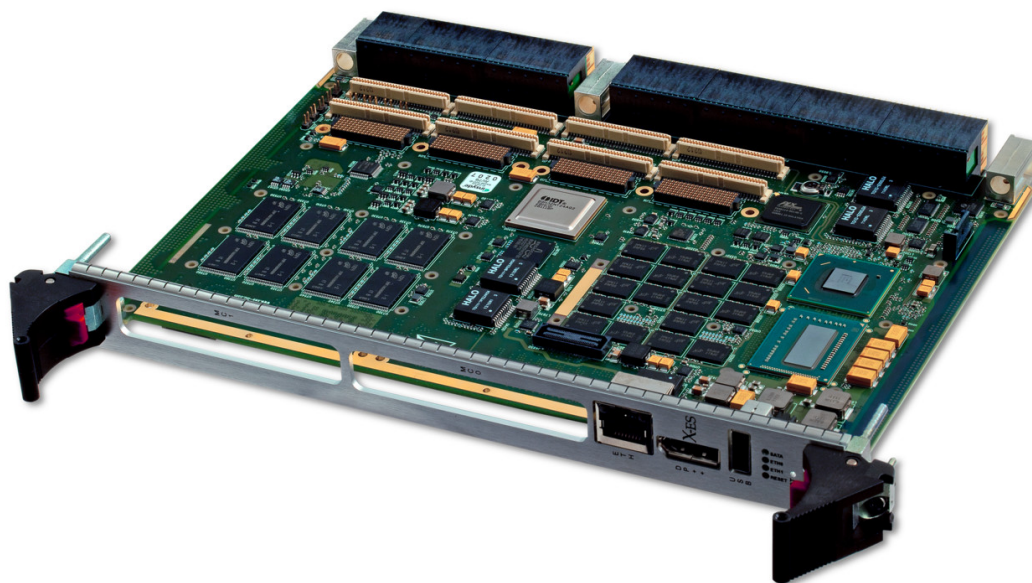
# XCalibur4440

**End of Life**

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

Please contact X-ES Sales

- › Supports 2nd and 3rd generation Intel® Core™ i7 processors
- › Quad- or dual-core processor with Intel® Hyper-Threading Technology
- › 6U VPX module
- › VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- › Compatible with multiple VITA 65 OpenVPX™ slot profiles
- › Conduction or air cooling
- › Up to 16 GB of DDR3 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 PCI Express Gen2 interface from switch to XMC sites
- › Four x4 (or two x8) PCI Express Gen2 interfaces 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 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

9901 Silicon Prairie Parkway • Verona, WI 53593

Phone: 608.833.1155 • Fax: 608.827.6171

sales@xes-inc.com • <https://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 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 PCI Express Gen2 interfaces to J15 and J25

## VPX

- VITA 46.11 (System Management on VPX)
- OpenVPX™ (VITA 65)
- Four x4 PCI Express Gen2 interfaces 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.

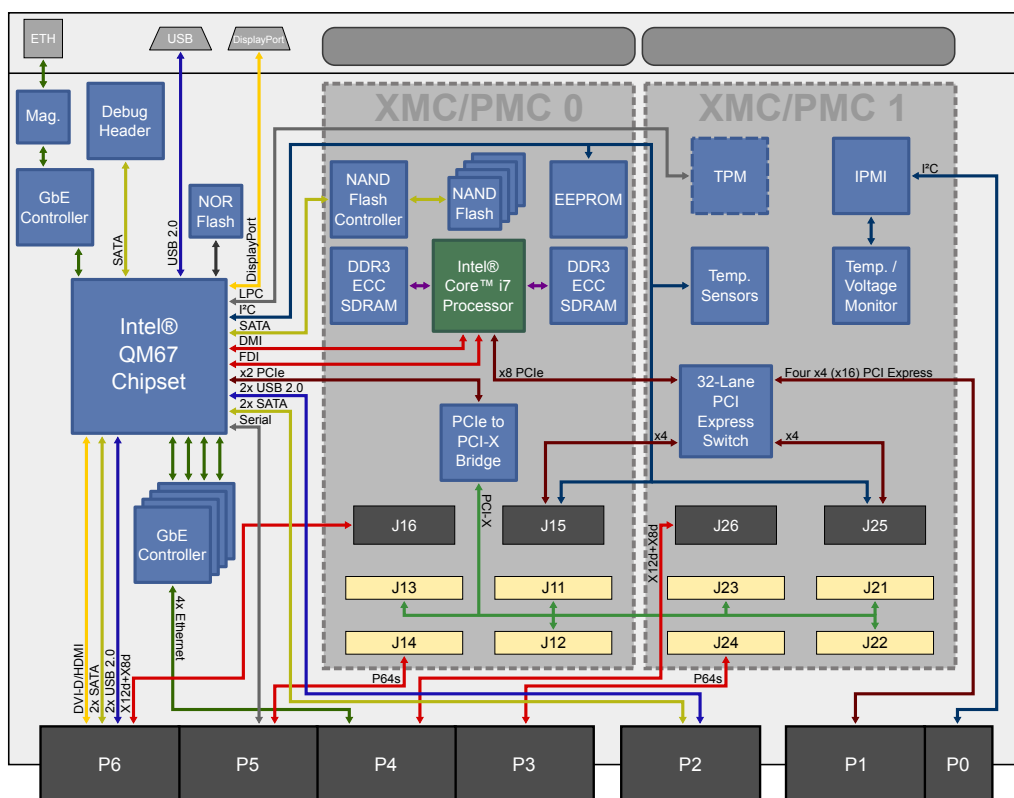
- Supported ruggedization levels (see chart below): 1, 3, 5
- Conformal coating available as an ordering option

## 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 †                             | -40 to +70°C ambient †                          | -40 to +85°C (board rail surface)              |
| Storage Temperature   | -40 to +85°C ambient                             | -55 to +105°C ambient                           | -55 to +105°C (maximum)                        |
| Vibration             | 0.002 g <sup>2</sup> /Hz (maximum), 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                       |

† Contact factory for airflow rate details.



XCalibur4440