

# XPedite7472

3rd Gen Intel® Core™ i7-Based Conduction- or Air-Cooled 3U VPX-REDI Module with SecureCOTS™

- ▶ Supports 3rd generation Intel® Core™ i7 Ivy Bridge processors
- ▶ SecureCOTS™ for secure and trusted processing
- ▶ SmartFusion® FPGA
- ▶ 3U VPX (VITA 46) module
- ▶ Compatible with multiple VITA 65 OpenVPX™ slot profiles
- ▶ Ruggedized Enhanced Design Implementation (REDI) per VITA 48
- ▶ Conduction or air cooling
- ▶ Up to 8 GB of DDR3-1600 ECC SDRAM in two channels
- ▶ Up to 32 GB of NAND flash
- ▶ XMC site with a x8 PCIe interface and rear I/O support
- ▶ PMC site with rear I/O support
- ▶ Two XMC (P16) SATA ports for secure storage
- ▶ Two PCIe Fat Pipe P1 fabric interconnects
- ▶ Two Gigabit Ethernet ports
- ▶ Two SATA ports and two USB 2.0 ports
- ▶ Two HDMI/DVI-D interfaces
- ▶ 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



## XPedite7472

The XPedite7472 is a secure and high-performance, 3U VPX-REDI, single board computer based on the 3rd generation Intel® Core™ i7 Ivy Bridge processor. The XPedite7472 is an optimal choice for computationally heavy applications requiring maximum data and information protection. With integrated SecureCOTS™ technology, the XPedite7472 protects data from being modified or observed and provides an ideal solution when stringent security capabilities are required.

The XPedite7472 includes a customizable SmartFusion® security FPGA, which can control and monitor the Core i7 subsystem, as well as host custom functions such as data encryption. The XPedite7472 also accommodates up to 8 GB of DDR3-1600 ECC SDRAM in two channels and up to 32 GB of secure, onboard, SATA NAND flash.

The XPedite7472 provides numerous I/O interfaces through the backplane connectors, including Gigabit Ethernet ports, USB 2.0 ports, SATA, graphics, and RS-232/422/485 serial ports. The XPedite7472 supports additional expansion from an integrated XMC/PMC site. Both the PMC and XMC sites include I/O mapped directly to the VPX backplane connectors, and the XMC site additionally includes a x8 PCIe connection to the Intel® Core™ i7 processor. Wind River VxWorks and Linux Board Support Packages (BSPs) are available, as well as Microsoft Windows drivers.

# X-ES

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### Extreme Engineering Solutions

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**Processor**

- 3rd generation Intel® Core™ i7
- Intel® Turbo Boost Technology
- Intel® Hyper-Threading Technology
- AVX instruction set extensions
- Integrated high-performance 3D graphics controller

**Memory**

- Up to 8 GB of dual-channel DDR3-1600 ECC SDRAM
- Up to 32 GB of SATA NAND flash
- 32 MB NOR boot flash

**XMC/PMC Site**

- 32-bit, 33 MHz PCI bus (PMC interface)
- x8 PCIe Gen2-capable port (XMC interface)
- Two SATA ports capable of 6 Gb/s (XMC interface)

**Security and Management**

- SmartFusion® security FPGA
- System voltage monitor and power-on/reset control
- SATA NAND quick-erase
- Non-volatile memory write protection
- Environmental sensors (see manual)

**VPX (VITA 46) P0 I/O**

- SmartFusion® I<sup>2</sup>C port

**VPX (VITA 46) P1 I/O**

- x4 PCI Express Gen2-capable Fat Pipe interface to P1.A
- x4 PCI Express Gen2-capable Fat Pipe interface to P1.B
- Two 1000BASE-BX Ethernet ports or one 10/100/1000BASE-T Ethernet port \*
- XMC P16 I/O, mapping P1w9-X12d per VITA 46.9

**VPX (VITA 46) P2 I/O**

- One 10/100/1000BASE-T Gigabit Ethernet port \*
- Two SATA ports capable of 3 Gb/s
- Two USB 2.0 ports
- Two HDMI/DVI-D interfaces
- Two RS-232/422/485 serial ports
- 3.3 V GPIO signals
- Subset of PMC I/O per P2w1-P64s

**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**

- 3U VPX-REDI conduction- or air-cooled form factor

**Environmental Requirements**

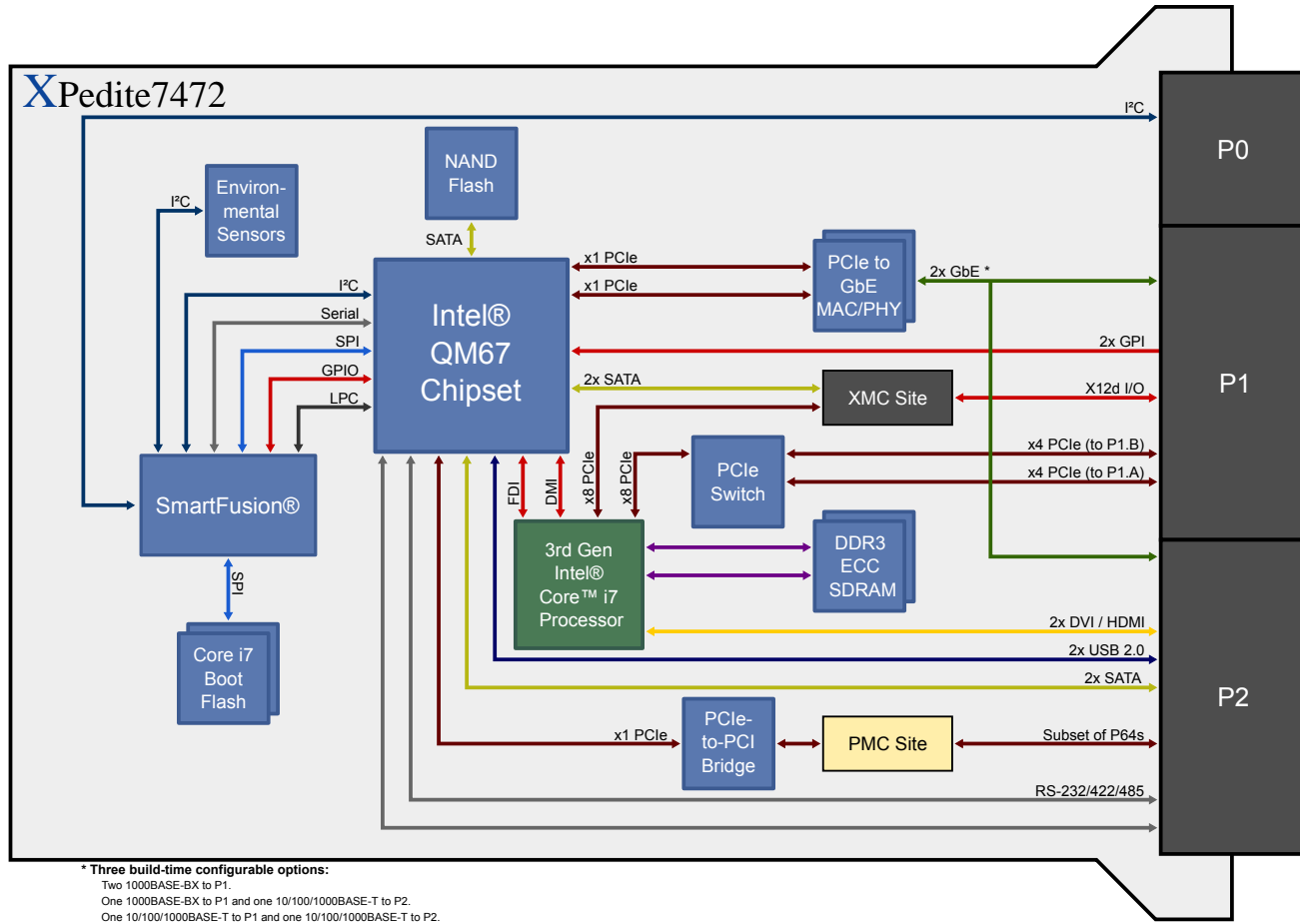
Contact factory for appropriate board configuration based on environmental requirements.

- 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 <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



\* Three build-time configurable options:  
 Two 1000BASE-BX to P1.  
 One 1000BASE-BX to P1 and one 10/100/1000BASE-T to P2.  
 One 10/100/1000BASE-T to P1 and one 10/100/1000BASE-T to P2.

