

XPedite7431

Intel® Core™ i7 Processor-Based 3U Conduction- or Air-Cooled CompactPCI Module

- ▶ Supports 2nd generation Intel® Core™ i7 processors and 3rd generation Intel® Core™ i7 processors
- ▶ Dual- or quad-core processor with Intel® Hyper-Threading Technology
- ▶ 3U CompactPCI module
- ▶ Conduction or air cooling
- ▶ Up to 8 GB of DDR3-1600 ECC SDRAM in two channels
- ▶ 32 MB of NOR boot flash
- ▶ Up to 16 GB of NAND flash
- ▶ Configurable as system controller or peripheral
- ▶ XMC interface with rear I/O and limited front panel I/O support (contact factory)
- ▶ Two 10/100/1000BASE-T Ethernet ports
- ▶ One RS-232 serial port
- ▶ Front I/O available via plugover module
- ▶ Wind River VxWorks BSP
- ▶ Linux BSP
- ▶ Microsoft Windows drivers
- ▶ Green Hills INTEGRITY BSP (contact factory)
- ▶ QNX Neutrino BSP (contact factory)
- ▶ LynuxWorks LynxOS BSP (contact factory)



XPedite7431

The XPedite7431 is a high-performance, 3U CompactPCI, multiprocessing, single board computer that is ideal for ruggedized systems requiring high bandwidth processing and low power consumption. With the 2nd Generation Intel® Core™ i7 processor, the XPedite7431 delivers enhanced performance and efficiency for today's network information processing and embedded computing applications.

Complementing processor performance, the XPedite7431 features up to 8 GB of DDR3-1600 ECC SDRAM, XMC support, and up to 16 GB of NAND flash. Two Gigabit Ethernet ports are routed to J2 for additional system flexibility.

The XPedite7431 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.

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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

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

Quad-Core Processor Configurations

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

Memory

- Up to 8 GB of DDR3-1600 ECC SDRAM in two channels
- 32 MB of NOR boot flash
- Up to 16 GB of NAND flash

J1 cPCI Interface

- 32-bit PCI interface operating at 33 MHz or 66 MHz
- System controller-capable with onboard clocking and arbitration
- Peripheral slot-capable

J2 cPCI Interface

- Two 10/100/1000BASE-T Ethernet ports
- One RS-232 serial port
- Four GPIO signals
- One USB 2.0 port
- HDMI/DVI-D
- XMC I/O

XMC Site

- x8 PCIe port
- Two SATA 6.0 Gb/s ports

Software Support

- Wind River VxWorks BSP
- Linux BSP
- Microsoft Windows drivers
- QNX Neutrino BSP (contact factory)
- Green Hills INTEGRITY BSP (contact factory)
- LynxWorks LynxOS BSP (contact factory)

Physical Characteristics

- 3U conduction- or air-cooled CompactPCI form factor
- Dimensions: 100 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

Power Requirements

- Power will vary based on CPU frequency and application. Please consult factory.

| Supported 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 |

