

XPedite7479

End of Life

3rd Gen Intel® Core™ i7 Processor-Based 3U VPX Module with Full XMC J16 I/O Routing **Please contact X-ES Sales**

- ▶ Supports 3rd generation Intel® Core™ i7 processors
- ▶ Quad- or dual-core processor with Intel® Hyper-Threading Technology
- ▶ 3U VPX (VITA 46) module
- ▶ Compatible with multiple VITA 65 OpenVPX™ profiles
- ▶ Ruggedized Enhanced Design Implementation (REDI) per VITA 48
- ▶ Conduction cooling
- ▶ Up to 8 GB of DDR3 ECC SDRAM in two channels
- ▶ Up to 32 GB of NAND flash
- ▶ XMC interface with full X12d+X8d+X24s rear I/O
- ▶ Two Gen2 Fat Pipe P1 fabric interconnects
- ▶ Two RS-232/422/485 serial ports
- ▶ One HDMI/DVI-D port or Dual-Mode DisplayPort (optional)
- ▶ Optional Trusted Platform Management (TPM)
- ▶ Wind River VxWorks BSP
- ▶ X-ES Enterprise Linux (XEL) BSP
- ▶ Linux BSP
- ▶ Microsoft Windows drivers
- ▶ Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynxWorks LynxOS BSPs



XPedite7479

The XPedite7479 is a high-performance, low-power, 3U VPX-REDI, single board computer based on the 3rd generation Intel® Core™ i7 processor and Intel® QM67 chipset. With two PCI Express Fat Pipe P1 interconnects and two Gigabit Ethernet ports, the XPedite7479 is ideal for the high-bandwidth and processing-intensive demands of today's military and avionics applications. Floating-Point-intensive applications such as radar, image processing, and signals intelligence will benefit from the performance boost provided by the Intel® Advanced Vector Extensions (Intel® AVX).

The XPedite7479 accommodates up to 8 GB of DDR3 ECC SDRAM in two channels to support memory-intensive applications. The XPedite7479 also hosts numerous I/O ports including Gigabit Ethernet, USB 2.0, SATA, Dual-Mode DisplayPort, and two serial ports through the backplane connectors.

The XPedite7479 can be used in either the system slot or peripheral slot of a VPX backplane. Wind River VxWorks, X-ES Enterprise Linux (XEL), 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

- 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

Dual-Core Processor Configurations

- Core™ i7-3555LE: 2.5 GHz, 4 MB cache
- Core™ i7-3517UE: 1.7 GHz, 4 MB cache

Memory

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

Graphics

- Integrated high-performance 3D graphics controller
- One HDMI/DVI-D port or Dual-Mode DisplayPort (optional)

VPX (VITA 46) P0 I/O

- I²C port

VPX (VITA 46) P1 I/O

- x4 PCI Express Fat Pipe interface to P1.A
- x4 PCI Express Fat Pipe interface to P1.B
- Four 1000BASE-X or two 10/100/1000BASE-T Gigabit Ethernet ports
- Up to two SATA ports capable of 3 Gb/s
- Up to two SATA ports capable of 6 Gb/s
- Up to two USB 2.0 ports
- One HDMI/DVI-D port or Dual-Mode DisplayPort (optional)

VPX (VITA 46) P2 I/O

- Two RS-232/422/485 serial ports
- XMC X12d+X8d+X24s I/O

XMC Site

- x8 PCI Express port

Additional Features

- Non-volatile memory write protection
- Optional Trusted Platform Module (TPM)
- IEEE 1588 support on one Gigabit Ethernet port

Software Support

- Wind River VxWorks BSP
- X-ES Enterprise Linux (XEL) 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-cooled form factor
- Dimensions: 100 mm x 160 mm
- 0.8 in. pitch without solder-side cover
- 0.85 and 1.0 in. pitch with solder-side cover

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 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 ² /Hz (maximum), 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 |

† Contact factory for airflow rate details.

