

# XPedite7574

**End of Life**

5th Generation Intel® Core™ i7 Broadwell-H Processor-Based Conduction- or Air-Cooled 3U VPX-REDI Module **Please contact X-ES Sales**

- › Supports 5th generation (Broadwell-H) and 4th generation (Haswell) Intel® Core™ i7 processors
- › 3U VPX (VITA 46) module
- › VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- › OpenVPX™ standards based
- › Ruggedized Enhanced Design Implementation (REDI) per VITA 48
- › Conduction- or air-cooled
- › Up to 8 GB of DDR3 ECC SDRAM in two channels
- › Up to 32 GB of NAND flash
- › XMC interface
- › P2w1-X24s+X8d+X12d XMC I/O mapping
- › Two PCI Express Fat Pipe P1 fabric interconnects
- › Up to three Gigabit Ethernet ports
- › One HDMI/DVI-D or Dual-Mode DisplayPort interface
- › Up to three SATA ports
- › Intel® vPro™/AMT support
- › Wind River VxWorks BSP
- › Linux BSP
- › Microsoft Windows drivers
- › Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynxWorks LynxOS BSPs



## XPedite7574

The XPedite7574 is a high-performance, 3U VPX-REDI, single board computer based on the 5th generation Intel® Core™ i7 Broadwell-H processor. The XPedite7574 maximizes network performance with up to three Gigabit Ethernet interfaces, configured as two 1000BASE-BX/KX (SerDes) ports and one 10/100/1000BASE-T port. An integrated PCI Express switch with Non-Transparent Bridging support enables direct communication with other Intel® processors without the need for a separate switch module within the system, further reducing SWaP-C for the system integrator.

The XPedite7574 provides superior growth and expansion capabilities by including an XMC site with full 10 mm I/O envelope support while maintaining a 0.8 in. VPX slot pitch, providing the system integrator with a plethora of COTS options for additional I/O, storage, or processing while minimizing total system SWaP-C. Additionally, the XPedite7574 provides significant maintenance and diagnostics advantages with optimized Two-Level Maintenance (2LM) metalwork and by enabling the remote configuration and management capabilities of Intel® vPro™ with Intel® Active Management Technology (Intel® AMT) support. The XPedite7574 leverages Intel® Iris™ Pro graphics for graphics-intensive applications and serves as a general-purpose GPU for demanding data processing applications.

The XPedite7574 accommodates up to 8 GB of DDR3 ECC SDRAM in two channels to support memory-intensive applications. The XPedite7574 also hosts numerous I/O ports, including PCI Express, Gigabit Ethernet, USB, SATA, graphics, and RS-232/422/485 through the backplane connectors. 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

- 5th generation Intel® Core™ i7 (Broadwell-H)
- 4th generation Intel® Core™ i7 (Haswell)
- Integrated high-performance 3D graphics controller
- Up to Intel® Iris™ Pro Graphics 6200

## Memory

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

## VPX (VITA 46) P0 I/O

- Two IPMB links

## VPX (VITA 46) P1 I/O

- x4 PCI Express Fat Pipe interface to P1.A
- x4 PCI Express Fat Pipe interface to P1.B
- One 10/100/1000BASE-T Gigabit Ethernet port

## P1 I/O Build Options

- One HDMI/DVI-D or Dual-Mode DisplayPort interface, or three SATA ports capable of 6 Gb/s
- Up to two USB 2.0 ports, or four 3.3 V GPIO, or a combination of one USB 2.0 port and two 3.3 V GPIO
- Two 1000BASE-BX Gigabit Ethernet ports, or one 10/100/1000BASE-T port

## VPX (VITA 46) P2 I/O

- XMC P16 I/O, mapping P2w1-X24s+X8d+X12d per VITA 46.9
- Two RS-232/422/485 serial ports

## XMC Site

- x8 PCI Express Gen3-capable port
- VITA 61 (XMC 2.0) support (optional)

## Additional Features

- Non-volatile memory write protection
- Trusted Platform Module (TPM) 1.2 or 2.0 (optional)
- VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- IEEE 1588 support on two Gigabit Ethernet ports
- Intel® Active Management Technology (AMT) supported by Intel® vPro™ Technology (optional)

## 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
- Dimensions: 100 mm x 160 mm
- 0.8 in. pitch without solder-side cover
- 0.85 in. and 1.0 in. pitch with solder-side cover
- Optional Two-Level Maintenance (2LM) metalwork (1.0 in. pitch)

## Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 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 3	Level 5
Cooling Method	Rugged Air-Cooled	Conduction-Cooled
Operating Temperature	-40 to +70°C ambient †	-40 to +85°C (board rail surface)
Storage Temperature	-55 to +105°C ambient	-55 to +105°C (maximum)
Vibration	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	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing	Up to 95% non-condensing

† Contact factory for airflow rate details.

