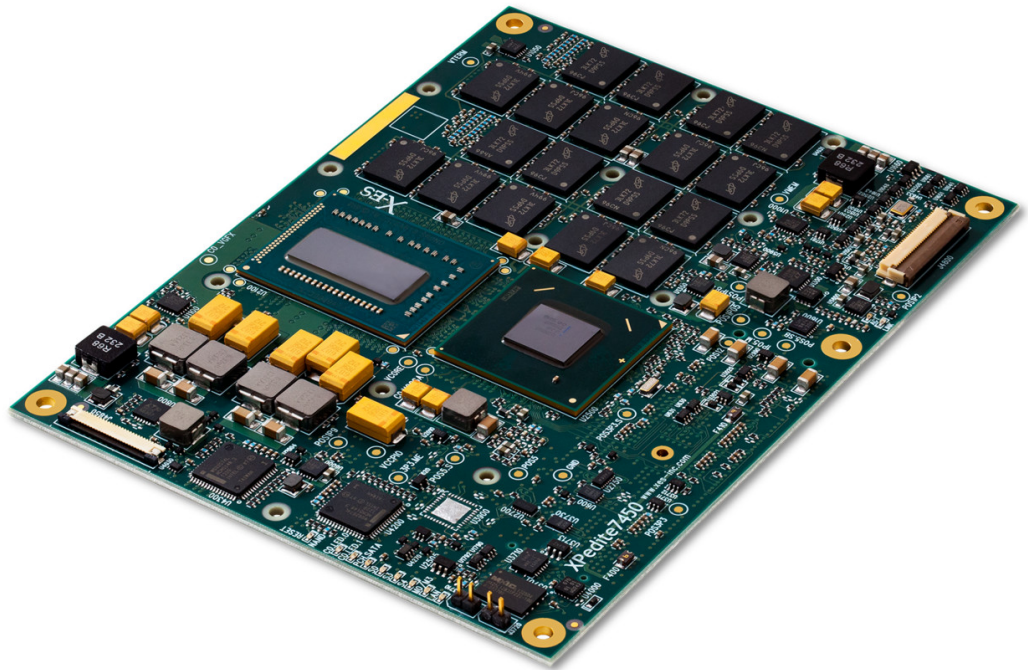


XPedite7450

Intel® Core™ i7 Processor-Based Rugged COM Express® Module

- ▶ Supports 2nd generation and 3rd generation Intel® Core™ i7 processors
- ▶ Quad- or dual-core processor with Intel® Hyper-Threading Technology
- ▶ Standard COM Express® Basic form factor with ruggedization enhancements
- ▶ COM Express® enhanced Type 6 pinout
- ▶ Up to 16 GB of DDR3-1600 ECC SDRAM in two channels
- ▶ Up to 32 GB of NAND flash
- ▶ Two x8 PCI Express ports
- ▶ One x4 PCI Express port
- ▶ Two x1 PCI Express ports
- ▶ Two 10/100/1000BASE-T Gigabit Ethernet ports
- ▶ Four USB 2.0 ports
- ▶ Five SATA ports
- ▶ Two digital display interfaces (DP/DVI/HDMI)
- ▶ One VGA interface
- ▶ Intel® High Definition Audio port
- ▶ Wind River VxWorks BSP
- ▶ Linux BSP
- ▶ Microsoft Windows drivers
- ▶ Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LinuxWorks LynxOS BSPs



XPedite7450

The XPedite7450 is an enhanced, Type 6 COM Express® module based on the 2nd or 3rd generation Intel® Core™ i7 processor and Intel® QM67 chipset. COM Express® provides a standards-based form factor to bring PC processing to a wide range of applications. The XPedite7450 is ideal for the high-bandwidth and processing-intensive requirements of today's commercial, industrial, and military applications. The small footprint and standards-based form factor make the XPedite7450 perfect for portable and rugged environments, while providing an upgrade path for the future.

The XPedite7450 accommodates up to 16 GB of DDR3-1600 ECC SDRAM in two channels to support memory-intensive applications. The XPedite7450 also hosts numerous I/O ports and interfaces, including two Dual-Mode DisplayPort graphics interfaces, one VGA interface, two x8 PCIe links, one x4 PCIe link, two x1 PCIe links, five SATA/eSATA ports, four USB 2.0 ports, HD audio link, LPC bus, SMB, I²C, and RS-232 serial.

The XPedite7450 uses the latest Unified Extensible Firmware Interface (UEFI) BIOS customized with BIT support. Wind River VxWorks and Linux Board Support Packages (BSPs) are available, as well as Microsoft Windows drivers.

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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™ i7-2655LE: 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 DDR3-1600 ECC SDRAM in two channels
- Up to 32 GB of NAND flash

Graphics

- Integrated high-performance 3D graphics controller
- Two digital display interfaces (DP/DVI/HDMI)
- VGA

COM Express®

- Basic form factor (95 mm x 125 mm)
- Enhanced Type 6 pinout
- Replaces LVDS with second Ethernet port and one SATA port capable of 3 Gb/s
- Adds non-volatile write protect
- Adds two external interrupts

Interface

- Four USB 2.0 ports
- Five SATA ports capable of 3 Gb/s
- Intel® High Definition Audio port
- Two x1 Gen2 PCI Express ports
- Two x8 Gen2 PCI Express ports
- One x4 Gen2 PCI Express port
- Two serial ports
- LPC
- SMB
- I²C

Ruggedization and Reliability

- Class III PCB fabrication and assembly
- Soldered DDR3 ECC SDRAM
- Tin whisker mitigation
- Designed and tested for extended solder joint reliability
- Additional mounting holes for rugged and conduction-cooled environments
- BIT support

Security and Management

- 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

Physical Characteristics

- Dimensions: 95 mm x 125 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 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 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

