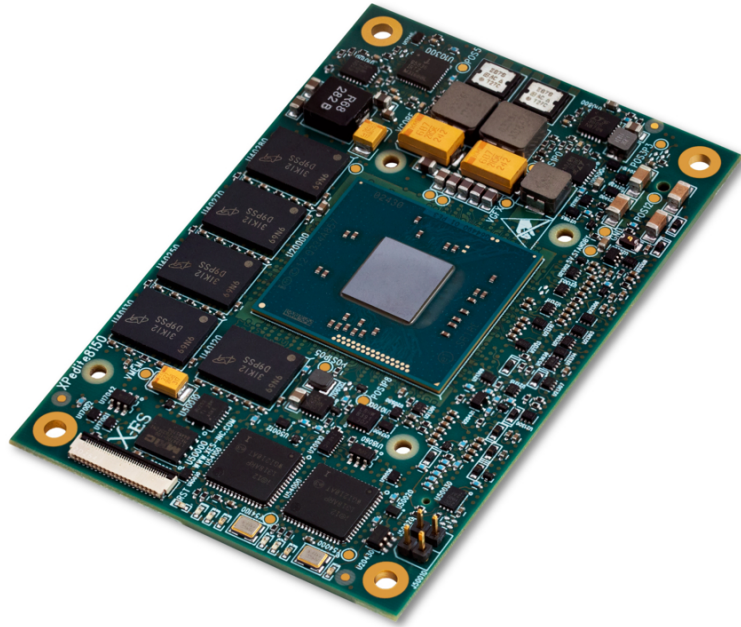


# XPedite8150

Intel® Atom™ Processor-Based Rugged COM Express® Module

- › Supports Intel® Atom™ E3800 family processors (formerly Bay Trail-I)
- › COM Express® Mini form factor with ruggedization enhancements
- › Standard COM Express® enhanced Type 10 pinout
- › Conduction- or air-cooled
- › Extended shock and vibration tolerance
- › Up to 4 GB of DDR3-1333 ECC SDRAM
- › Two x1 PCI Express interfaces
- › Two Gigabit Ethernet ports
- › Two serial ports
- › Four USB 2.0 ports
- › One USB 3.0 port
- › Two SATA 3.0 Gb/s ports
- › Wind River VxWorks BSP
- › Linux BSP
- › One Dual-Mode DisplayPort interface and one Embedded DisplayPort interface
- › Microsoft Windows drivers
- › Contact factory for availability of Green Hills INTEGRITY, QNX Neutrino, and LynxWorks LynxOS BSPs



## XPedite8150

The XPedite8150 is a ruggedized COM Express module that complies with the COM Express Mini form factor (55 mm x 84 mm) and supports an enhanced Type 10 pinout. The ultra-small, standards-based, COM Express form factor brings processing to a wide range of applications. Available in both conduction- and air-cooled versions, the XPedite8150 supports the Intel® Atom™ processor. With up to four cores running at up to 1.91 GHz, the Intel® Atom™ delivers enhanced performance and efficiency for today's network information processing and other embedded computing applications.

The XPedite8150 complements processor performance with up to 4 GB of DDR3-1333 ECC SDRAM. It also hosts numerous I/O ports, including two Gigabit Ethernet ports, two x1 PCIe ports, four USB 2.0 ports, one USB 3.0 port, two SATA 3.0 Gb/s ports, two I<sup>2</sup>C ports, two serial ports, one Dual-Mode DisplayPort interface, one Embedded DisplayPort interface, and a Serial Peripheral Interface (SPI).

The XPedite8150 provides a high-performance, feature-rich solution for current and future generations of embedded applications. Wind River VxWorks and Linux Board Support Packages (BSPs) are available, as well as Microsoft Windows drivers.

# X-ES

Extreme Engineering Solutions

*...Always Fast*

### Extreme Engineering Solutions

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**

- Intel® Atom™ E3800 Family processors (formerly Bay Trail-I)
- Up to four cores

**Memory**

- Up to 4 GB of DDR3-1333 SDRAM

**COM Express®**

- Enhanced Type 10 pinout
- Mini form factor (55 mm x 84 mm)

**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
- Bootloader and OS-level BIT support

**Interface**

- Two 10/100/1000BASE-T ports
- Two SATA 3.0 Gb/s ports
- Two PCIe x1 links
- Four USB 2.0 ports
- One USB 3.0 port
- Two I<sup>2</sup>C interfaces
- Two serial ports
- One Dual-Mode DisplayPort interface
- One Embedded DisplayPort interface
- One Serial Peripheral Interface (SPI)

**Additional Features**

- 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 BSPs

**Environmental Requirements**

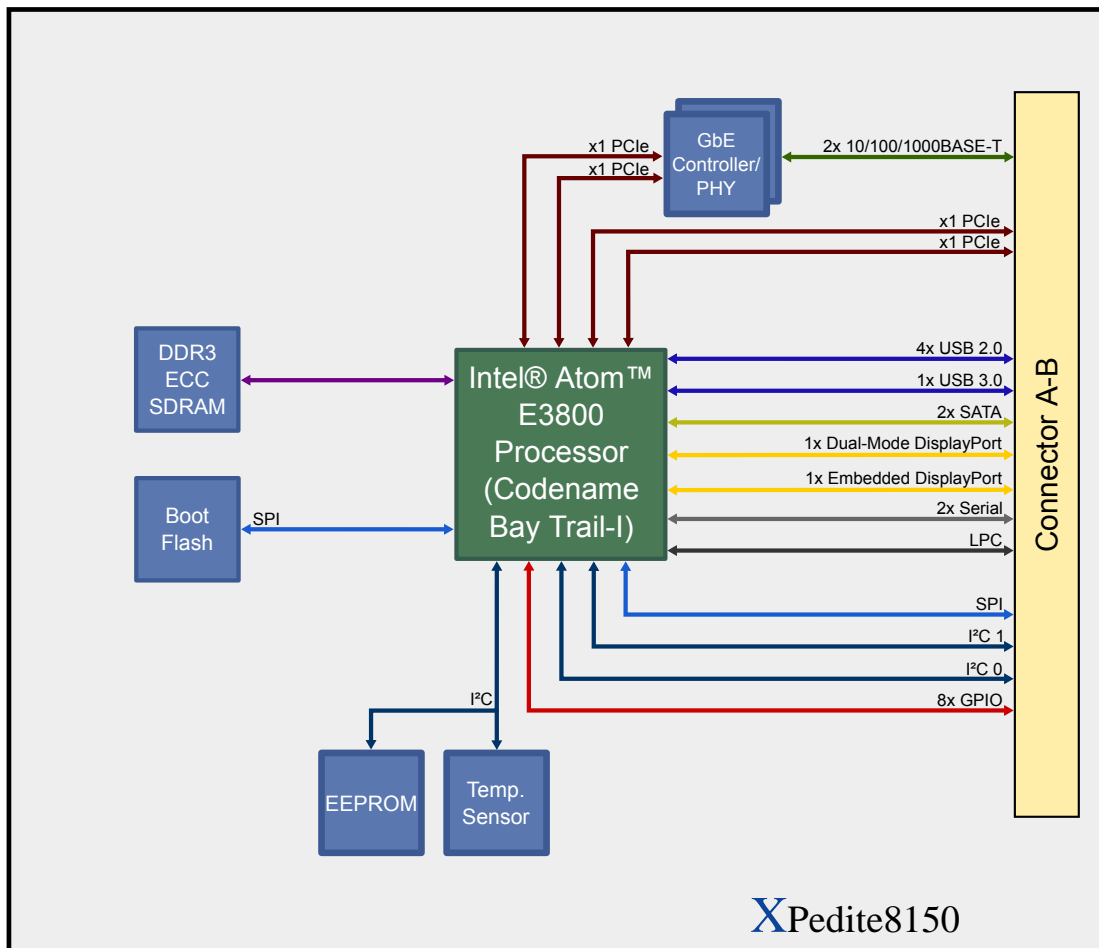
Contact factory for appropriate board configuration based on environmental requirements.

- 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



XPedite8150

