# XPand6103

Rugged and Compact Intel® Core™ i7-Based Fanless Embedded Box PC

- 3rd generation Intel® Core™ i7 processor
- Fanless embedded box PC
- Extremely rugged and reliable design
- Compact and maintenance-free
- IP67-compliant
- Supports a wide voltage range for input power
- Rugged M12 I/O connectors
- Gigabit Ethernet
- CAN Bus
- DisplayPort++ video
- USB 2.0
- RS-232/422 serial
- PCI Express Mini Card expansion slots
- Optional 10GBASE-T 10 Gigabit Ethernet
- -40°C to +70°C operating temperature
- Designed for rugged high performance Industrial PC (IPC) and transportation applications
- Ideal computing platform for autonomous vehicles


## XPand6103

The XPand6103 is a rugged and compact fanless embedded box PC utilizing the Intel® Core™ i7 Processor. The XPand6103 provides a reliable and maintenance-free, high-performance, computing platform ideally suited for environmentally challenging and space-constrained situations. It was specifically designed for rugged, yet processing-intensive, Industrial PC (IPC), vehicle, and rail transportation applications, and it provides an optimal solution for demanding autonomous vehicle computing requirements.

The XPand6103 supports the 3rd generation Intel Core i7 processor by integrating the XPedite7450 rugged COM Express module. The internal 64 GB Slim SATA SSD memory module combines the convenience of high-capacity off-the-shelf storage with the reliability of solid-state non-volatile memory. The standard configuration includes DisplayPort++ video, two Gigabit Ethernet, USB, four CAN bus, and RS-232/422 ports. The system can also be configured to provide up to two 10 Gigabit Ethernet 10GBASE-T interfaces. With three internal PCI Express Mini Card slots and support for two external antennae, the XPand6103 can offer a flexible array of additional I/O options, including WLAN, cellular, and GPS.

The XPand6103 supports a wide input voltage range and complies with the power specifications of SAE J1455, EN50155, ISO-7637-2, MIL-STD-1275, and MIL-STD-704.

Through the implementation of an environmentally sealed and completely rugged design, the XPand6103 can operate under the most demanding IEC61373, EN50155, and MIL-STD-810 shock and vibration requirements, as well as the water-immersion requirements of IP67. The XPand6103 also supports operating temperatures from -40°C to +70°C ambient.

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

## Physical Characteristics

Dimensions do not include connectors

- 2.10 in. (H), 4.88 in. (W), 7.70 in. (L)
- Weighs less than 4 lbs.

## Processor

- Includes XPedite7450 Intel® Core™ i7 ruggedized COM Express module

## Non-Volatile Memory

- 64 GB SLC NAND Slim SATA module
- Optional mSATA configurations for additional storage

## Front Panel I/O

- Two Gigabit Ethernet interfaces
- Four CAN 2.0A- and 2.0B-compliant interfaces
- DisplayPort++ video interface
- RS-232/422 serial interface
- USB 2.0 port
- Additional I/O configurations available with up to three PCI Express Mini Cards
- Optional WLAN, cellular, GPS, and dual 10GBASE-T 10 Gigabit Ethernet configurations

## Power Supply Options

- Supports a wide voltage range for input power
- Meets SAE J1455, EN50155, ISO-7637-2, MIL-STD-1275, and MIL-STD-704

## Environmental

- -40°C to +70°C operating temperature
- -55°C to +105°C storage temperature
- 0.1 g²/Hz (maximum), 1 hour per axis from 5 Hz to 2000 Hz vibration
- 40 g, 11 ms sawtooth shock
- Up to 95% humidity