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 interface
- USB 2.0 port
- RS-232/422 serial
- PCI Express Mini Card expansion slots
- 10GBASE-T 10 Gigabit Ethernet (optional)
- -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.

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Physical Characteristics

Dimensions do not include connectors

- 7.70 in. (L) x 4.88 in. (W) x 2.10 in. (H)
- 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
- mSATA configurations for additional storage (optional)

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