XPand4208

Mil-Flight-Qualified Intel® Core™ i7-Based Multiprocessor 3U OpenVPX™ COTS System

- Sub-½ ATR footprint: 4.88 in. (W), 8.76 in. (L)
- Outer dimensions: 5.88 in. (W), 13.39 in. (L), 7.36 in. (H)
- 3U OpenVPX™-based (VITA 65) architecture
- Two quad-core Intel® Core™ i7 processors
- Intel® Active Management Technology (AMT) support
- Toolless, high-reliability, removable SSD memory modules
- 256-bit AES hardware encryption
- Gigabit Ethernet switched fabric
- Layer 2 managed and Layer 3 routed network fabric (optional)
- XPedite5205 Cisco IOS® secure router XMC (optional)
- Up to 1 TB per module
- Zeroize support
- Eleven external Ethernet ports
- Nine serial ports
- Eight USB ports
- Four isolated GPIO discretes (optional)
- MIL-STD-1553 and ARINC 429 (optional)
- 28 VDC MIL-STD-704 input power
- Qualified to MIL-STD-810F and DO-160F environmental specifications
- Qualified to MIL-STD-461F EMI/EMC specifications

XPand4208

The XPand4208 is a high-performance, expandable, computing and networking platform for environmentally demanding, SWaP-restricted, avionics and vetronics applications. The XPand4208 has been qualified to the rigorous MIL-STD-810F, DO-160F, and MIL-STD-461F environmental and EMI/EMC standards. This feature-rich LRU includes two quad-core Intel® Core™ i7 processors, each capable of operating at up to 2.1 GHz. The XPand4208 provides a number of external I/O interfaces, including eleven Ethernet ports, two DVI ports, eight USB ports, nine serial ports, and optionally, four isolated GPIO discretes.

The internal processor modules communicate with expansion slots via high-throughput x4 PCI Express interfaces. The processor modules communicate with each other, as well as with external devices, over a managed Gigabit Ethernet fabric. The Gigabit Ethernet fabric delivers full wire-speed across all of its ports and supports jumbo packets up to 12 kB. It also supports IPv6, Energy Efficient Ethernet (EEE), and a comprehensive set of IETF RFCs and IEEE protocols. The XPedite5205 Cisco IOS® router XMC can be installed, providing highly secure data, voice, and video communications to stationary and mobile network nodes.

The XPand4208 includes two removable SATA Solid-State Drive (SSD) flash memory modules. The system's toolless, removable SSD implementation has been tested and deployed in the most stressful environmental conditions. These memory modules include 256-bit AES hardware encryption, high-reliability connectors capable of thousands of insertions and extractions, and they include zeroization support.

The XPand4208 can be configured to support Intel's Active Management Technology (AMT), which allows developers and installers to remotely access diagnostic information and perform system maintenance on each processor module via a network connection. This drastically simplifies developing, installing, and upgrading multiprocessor platforms by eliminating the need for separate user-accessible serial ports or keyboard, video, and mouse ports from individual processor modules.

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Processors

- Two XPedite7475 3U OpenVPX™ Intel® Core™ i7-based processor SBCs
- Each SBC includes a quad-core Intel® Core™ i7-based processor
- Each processor can operate at up to 2.1 GHz
- 8 GB of DDR3 SDRAM per processor
- High-throughput x4 PCI Express communication to expansion slots

Ethernet Fabric

- Gigabit Ethernet switched fabric via 3U VPX XChange3013
- Layer 2 managed and Layer 3 routed network fabric (optional)
- XPedite5205 Cisco IOS® secure Router XMC (optional)

External I/O

- Eleven Ethernet interfaces
- Nine serial ports
- Eight USB ports
- Four isolated GPIO discretes (optional)
- MIL-STD-1553 and ARINC 429 (optional)

Removable Memory Modules

- Two XPort6193 SATA Solid-State Drive (SSD) modules
- High-reliability connector
- Toolless insertion and extraction
- Up to 1 TB raw SLC flash per module
- 256-bit AES hardware encryption
- Zeroize support

Testing and Qualification

- MIL-STD-810F and DO-160F environmental
- MIL-STD-461F EMI/EMC

Power Input

- XPm2120 VITA 62 3U VPX power supply
- 28 VDC per MIL-STD-704

Physical Characteristics

- Footprint: 4.88 in. (W), 8.76 in. (L)
- Outer dimensions: 5.88 in. (W), 13.39 in. (L), 7.36 in. (H)