



Press Release

Dave Barker, Marketing Director

(281) 644-0248

dbarker@xes-inc.com

X-ES Shipping World's Smallest, Highest Performance Rugged COM Express Module

Middleton, WI – October 10, 2012 – Extreme Engineering Solutions (X-ES) is shipping [XPedite5650](#), a conduction- or air-cooled Mini COM Express module (55 mm x 84 mm) supporting the Freescale QorIQ P2041 quad-core processor. With a quad-core processor, 4 GB of memory, a ruggedized design, and at less than 7.2 square inches, the XPedite5650 can provide the processing subsystem for a wide range of industrial, communications, and military applications where Size, Weight, and Power (SWaP) are critical.

Designed and tested for the harshest military, aerospace, and industrial environments, the [XPedite5650](#) includes enhancements above and beyond commercial COM Express modules. It provides a rugged and reliable COTS processor mezzanine solution with these benefits:

- Incorporates the same design and manufacturing principles as all X-ES Level 5 rugged products
- Designed and tested for operation from -40 to +85°C
- Includes additional mounting holes for increased structural integrity
- Provides extended shock and vibration capabilities for operation in harsh environments
- Conduction-cooled and air-cooled applications supported by a single design
- Soldered-down memory replaces less rugged/reliable SO-DIMMs
- Utilizes tin-lead manufacturing process to mitigate tin-whisker effects (RoHS-compliant process is also available)
- Provides BIT support

The [XPedite5650](#) is a COM Express mini form factor (55 mm x 84 mm) with an enhanced Type 10 pinout. It supports a Freescale QorIQ P2041 processors with four PowerPC e500mc cores at up to 1.5 GHz, 2 GB or 4 GB of up to DDR3-1333 ECC SDRAM, one x2 and two x1 PCI Express interfaces, two Gigabit Ethernet ports (one 1000BASE-T and one 1000BASE-X), two serial ports, two USB 2.0 ports, and two SATA 3.0 Gb/s ports. Linux, Wind River VxWorks, and Green Hills INTEGRITY BSPs are available. Other RTOS solutions may be available on request.

The [XPedite5650](#) can easily be integrated into a rugged Small Form Factor (SFF) enclosure, the [XPand6000 Series](#), supporting natural conduction or convection cooling. An XPand6000 Series system can be bolted to almost any available surface of a small UAV, ground vehicle, or heavy equipment. In an extremely small and lightweight package weighing as little as 3.5 lbs. and only taking up 72 cubic inches, XPand6000 Series systems combine high-performance processing and application specific I/O added via PMCs/XMCs, such as MIL-STD-1553, CANbus, video input, RS-232/422, GPIO, A/D, and D/A for the most SWaP constrained applications.

For [XPedite5650](#) development, X-ES provides a convenient desktop setup with standard I/O connectors, the [CX-DP](#) development platform. The CX-DP includes all of the functionality of the XPand6000 Series, including support for a COM Express module, a PMC or XMC, and an SSD. It provides basic COM Express I/O via fixed connectors, accessible through the back panel of its ATX chassis, and simply removing the ATX case cover provides access to internal fixed I/O and PIM I/O. X-ES has the tools necessary for customers to be successful with the XPedite5650 whether they are integrating it into their own system or utilizing an X-ES SFF system.

About X-ES — Extreme Engineering Solutions, Inc. (X-ES), a 100% U.S.A.-based company, designs and builds single-board computers, I/O boards, power supplies, backplanes, chassis, and system-level solutions for embedded computing customers. X-ES offers cutting-edge performance and flexibility in design, plus an unparalleled level of customer support and service. For further information on X-ES products or services, please visit our website: www.xes-inc.com or call (608) 833-1155.

Data Sheet: <http://www.xes-inc.com/assets/products/files/XPedite5650-DS.pdf>

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