



# PRESS RELEASE

## **Intel® Xeon D® VPX Modules from X-ES**

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Extreme Engineering Solutions, Inc. (X-ES) introduces the XPedite7670 3U OpenVPX™ REDI single board computer module and its 6U VPX companion, the XCalibur4640, both based on the Intel® Xeon® D (formerly Broadwell-DE) processor family.

### **Intel® Xeon® D Advantages:**

The Intel® Xeon® D is an industry-first, server-class, System-on-Chip (SoC) based on power-efficient 14 nm technology, with support for up to eight Xeon® cores and two channels of ECC memory. The low-power SoC package brings Xeon®-class RAS (Reliability, Availability, and Serviceability) to embedded applications that require operation in the harshest environments.

Dual integrated 10 Gigabit Ethernet ports natively support XAU1/KX4/KR to further enhance I/O capabilities, while reducing SWaP-C concerns. 24 PCI Express (PCIe) 3.0 lanes, eight PCIe 2.0 lanes, six SATA 6 Gb/s ports, four USB 3.0 ports, and four USB 2.0 ports provide many options for system expansion, connectivity, and storage. In addition to multiple 10 Gigabit Ethernet ports, the Xeon D employs a Non-Transparent Bridge for PCIe to enable advanced connectivity options for multiprocessor systems.

Native extended temperature support in the Xeon® D processor eliminates the need for advanced individual unit screening and provides enhanced reliability in extreme environments. Further power savings for embedded processing applications have been achieved by removing lower-priority features, such as graphics support.

### **XPedite7670 3U VPX SBC**

The [XPedite7670](#) is a high-performance, 3U OpenVPX™ REDI, single board computer with support for up to 8 GB of DDR3-1600 ECC SDRAM. The XPedite7670 maximizes network performance and connectivity with two 10 Gigabit Ethernet interfaces configured as XAU1 or 10GBASE-KX4, and four Gigabit Ethernet interfaces configured as two 1000BASE-BX/KX (SerDes) ports and two 10/100/1000BASE-T ports. Local storage of up to 64 GB of SLC NAND flash allows an operating system and application to be installed directly onto the XPedite7670.

A x4 PCIe 3.0 interface, routed to the backplane P1 connector, supports communication with peripheral devices, as well as a Non-Transparent Bridge for direct communication with another processor. This reduces SWaP-C for the system integrator by eliminating the need for a separate switch module in the system. A x8 PCIe 3.0 interface and SATA 6 Gb/s port are routed to the onboard XMC site, allowing for further expansion. The XPedite7670 supports IPMI for system manageability, and integrates a Trusted Platform Module (TPM) for enhanced security.

### **XCalibur4640 6U VPX SBC**

The [XCalibur4640](#) extends the XPedite7670's functionality to a 6U VPX form factor with expanded capabilities. System memory capacity increases to 16 GB of DDR3-1600 ECC SDRAM and local storage increases to 128 GB of SLC NAND flash.

Two additional 10 Gigabit Ethernet interfaces provide a total of four interfaces to the backplane. Sixteen lanes of PCIe 3.0 routed to the backplane can be configured to support multiple peripherals. Four SATA 6 Gb/s ports on the backplane allow for storage expansion in the system. Two XMC/PMC sites, each with a dedicated x8 PCIe 3.0 link, allow for additional expansion options.

The XPedite7670 and XCalibur4640 offer Wind River VxWorks and X-ES Enterprise Linux (XEL) Board Support Packages (BSPs). Boot speed and security are enhanced by the provided coreboot firmware, powered by the Intel® FSP.

**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](http://www.xes-inc.com) or call (608) 833-1155.

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