



PRESS RELEASE

X-ES Introduces XPedite5850 COM Express® Module Featuring Powerful NXP QorIQ T4240 Processor

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Extreme Engineering Solutions (X-ES) is excited to announce the [XPedite5850](#), a ruggedized COM Express® module supporting an enhanced Type 5-based pinout and NXP® (formerly Freescale) QorIQ® T4 processors.

Big Processing Power on a Small Form Factor

Available in both conduction- and air-cooled configurations, the XPedite5850 features the NXP QorIQ T4240 processor with twelve dual-threaded Power Architecture® e6500 cores and includes up to 16 GB of DDR3-1866 ECC SDRAM. All of this power is efficiently packaged into a COM Express® Basic form factor (95 mm x 125 mm), making the XPedite5850 a perfect blend of performance and efficiency for today's embedded computing applications.

NXP QorIQ T-Series processors offer a broad range of solutions from single- to dual-core and multicore devices, featuring up to 24 virtual cores. The T-Series improves on the proven NXP P-Series 45 nm process technology, scaling down to just 28 nm. Feature size reduction and improved power management techniques allow for a power reduction of up to 50%. The T-Series also introduces the e6500 core, a multithreaded 64-bit Power Architecture® core operating at up to 1.8 GHz with an integrated NXP Altivec SIMD engine to provide DSP-level Floating-Point performance.

"NXP believes that the T4240 is the ideal processor for Extreme Engineering's ruggedized COM Express® card", said Toby Foster, Senior Product Marketing Manager in NXP's Digital Networking business. "With its exceptional performance-per-watt characteristics, expansive and flexible I/O integration, and supply longevity guarantees, T4240 enables Extreme Engineering to offer a very compelling small form factor module. NXP sees significant customer demand for COM Express® boards, and is excited that Extreme Engineering will be the first to deliver one based upon T4240."

Highly Customizable Serial Interfaces

The XPedite5850 hosts a large number of I/O ports, making it extremely versatile. The module includes up to four Ethernet ports PHYs (two 10/100/1000BASE-T and two 10GBASE-T Ethernet PHYs), eight SerDes Gigabit Ethernet ports, two XFI 10 Gigabit Ethernet ports, a single x8 PCIe port, a single x4 PCIe port, two SATA ports capable of 3 Gb/s, two USB 2.0 ports, two I²C ports, two serial ports, a Serial Peripheral Interface (SPI) with two chip selects, and IEEE 1588 support.

The XPedite5850's SerDes routing provides simultaneous access to a large number of these signals, connecting nearly all of the SerDes signals directly from the backplane to the processor to allow for many options.

The T4240 processor has 14 PCIe lanes (available in multiple configurations) and two SATA interfaces to the COM Express connector. Some of these lanes also can be converted to SRIO or Interlaken interfaces, depending on the customer's needs. For networking applications, the T4240 SerDes lanes feature eight SGMII/1000BASE-X interfaces and two XFI interfaces to the connector.

X-ES can implement various other connectivity modes too, making the XPedite5850 an extremely versatile module that is well-suited to a variety of tasks.

A High-Performance, Feature-Rich Solution

The XPedite5850 provides a high-performance, feature-rich solution for current and future generations of embedded applications. For customers seeking lower overall power consumption, the XPedite5850 can be designed alternatively with the NXP QorIQ T4160 or T4080 processors.

All of X-ES' NXP T-Series processor-based modules support the [X-ES-modified lightweight NXP hypervisor](#) to facilitate secure partitioning and isolation. The hypervisor may manage multiple virtual machines and partitions, from a single thread on a core to multiple threads and multiple cores. Operating system support packages for the XPedite5850 include Wind River VxWorks, Green Hills INTEGRITY-178, and Linux 2.6.

NXP QorIQ T-Series Across Industry-Standard Form Factors

X-ES is committed to supporting the NXP QorIQ T-Series family of processors across a variety of form factors, including the [3U VPX XPedite5970](#), [6U VME XCalibur1931](#) and [XCalibur1930](#), [6U cPCI XCalibur1900](#), [6U VPX XCalibur1840](#), and the [XMC/PMC XPedite6101](#) and [XPedite6100](#) modules.

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, 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.

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