



PRESS RELEASE

Highly Configurable 6U OpenVPX™ 10 Gigabit Ethernet Switch Enables Dependable, Rapid Switching in 6U Systems

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Extreme Engineering Solutions, Inc. (X-ES) announces the [XChange3100](#), a conduction- or air-cooled, 6U OpenVPX™ 10 Gigabit Ethernet switch module that is capable of supporting various configurations of up to twenty-two 10 Gigabit Ethernet ports, twelve 10/100/1000BASE-T Ethernet ports, and eighty-eight 1000BASE-X Ethernet ports.

Integrated Broadcom Switches for Rapid Data Plane Switching

The XChange3100 was purpose-built to provide the Ethernet switching capability needed for the next generation of 6U systems. It features three Broadcom® BCM56450 Ethernet switches, each including 102.5 Gb/s of non-blocking switching, an on-chip ARM A9-based CPU, an integrated hierarchical traffic manager to reduce overall board complexity and power, and a feature-rich packet processing engine, all within a single 40 nm device.

One Broadcom® switch is connected to the control plane, while the other two Broadcom® switches are utilized for data plane switching. This allows the XChange3100 to provide completely independent control plane and dual data plane switching for use in systems that require network segregation for security or performance. The three switches also can be combined together for communication from the control plane to the data plane.

With up to twenty-two XAUI 10 Gigabit Ethernet interfaces, two 10GBASE-T 10 Gigabit Ethernet interfaces, twelve 10/100/1000BASE-T Ethernet interfaces, and eighty-eight 1000BASE-X SerDes Gigabit Ethernet interfaces, the XChange3100 is capable of switching some of the largest 6U VPX backplanes. Two rugged 10GBASE-SR Ethernet ports offer front panel access to the switch data plane, supplying an optical link directly on-card, instead of requiring it to be converted elsewhere.

Compliance with a Wide Variety of Industry Standards

The XChange3100 is the second generation of X-ES' Katana switch line, which also includes the [XChange3018](#) and [XChange3013](#) 3U VPX switches. All of X-ES' switches include Managed Layer 2 Switching and optional Layer 3 Routing Management support.

Compliance with a variety of VITA 65 OpenVPX™ switch slot profiles allows for easy integration of the XChange3100 into ready-made backplanes. XChange3100 can optionally include VITA 48.2 Type 1 Two-Level Maintenance (2LM) REDI support.

The XChange3100 features a wide variety of configuration options to choose from, depending on your project's requirements. Additional features include extensive IEEE protocol and IETF RFC support, VICTORY Infrastructure Switch support, advanced cable open/short detection, IPv4 and IPv6 support, and a Ruggedized Enhanced Design Implementation (REDI) per VITA 48.

Supported Expansion Modules

The [XPedite5205](#) XMC/PMC Embedded Services Router (ESR) can be installed on the XChange3100, allowing users to augment XChange3100's already rich feature set with the power and security offered by the XPedite5205's included Cisco IOS® software.

The XChange3100 supports IEEE1588v2 transparent clocking and can be combined with the [XPort3200](#) XMC/PMC Grandmaster Clock module, enabling tight synchronization between all devices connected to the switch.

[Contact X-ES](#) today for more information on integrating the XChange3100 6U VPX switch into your application.

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.

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