



## **Calix introduces E3-48 sealed Ethernet Service Access Node**

*Flexible, standards-based Ethernet node uplinks multiple 10 Gbps connections to any Ethernet switch, bringing flexible ring, point-to-point, and daisy-chained topology options to FTTN*

**LAS VEGAS, NV—November 8, 2010—**[Calix, Inc.](#) (NYSE: CALX) today announced the introduction of the E3-48 sealed Ethernet Service Access Node (ESAN) to its [Unified Access portfolio](#) – expanding its [E3 family of sealed ESANs](#) with a powerful new deployment option. The E3-48 sealed ESAN provides communications service providers with new, flexible, standards-based options for offering high bandwidth, advanced very high bit-rate digital subscriber line 2 (VDSL2) services at what Calix believes to be an increasingly strategic point in the evolution of the access network – the remote node. The environmentally hardened and sealed E3-48 combines a low profile, compact form factor with a variety of mounting and powering options to enable extensive deployment flexibility. Fiber-fed with multiple 10 gigabit Ethernet (10GE) feeds capable of connecting to any Ethernet switch in ring, point-to-point, and daisy-chained topologies, the E3-48 ESAN has the capacity to support the increasingly bandwidth-intensive services required in “an all-video world.” A powerful complement to the Calix Unified Access portfolio and the E3 family of sealed ESANs, the E3-48 is optimized for bringing “Fiber Forward” in the access network, allowing communications service providers who are pulling fiber deeper into their networks the capability to deliver broadband speeds in excess of 100 megabits per second (Mbps) per subscriber to areas still saturated with copper plant.

The E3-48, the second member of the E3 family to be introduced, is focused on advanced VDSL2 copper services deployment in low density and remote areas. The E3-48 differs in several ways from the chassis-based [Calix C7 Multiservice Access Platform \(MSAP\)](#) and [E7 Ethernet Service Access Platform \(ESAP\)](#), and from the rack mountable, fixed form factor family of [E5 ESANs](#). The E3-48 is a sealed ESAN VDSL2 delivery vehicle that supports AC and -48VDC powering, and can be easily installed virtually anywhere in the access network – on poles, on walls, in low profile “dog house” enclosures, or even in the basements of multi-dwelling units (MDUs). Additionally, the E3-48 is fiber-fed, supporting up to two standards-based 10GE/1GE uplinks and four GE/2.5GE uplinks, and preparing the access network edge for the high-capacity realities of bandwidth-intensive services like video.

Calix customers are finding the E3-48 sealed ESANs an easy and cost-effective way to meet broadband demands while strategically driving fiber deployment in their networks. With each unit supporting up to

48 VDSL2 subscribers, communications service providers are viewing the E3-48 as a “right-sized” access solution for rapid suburban and urban deployments, capable of being deployed on a “pay-as-you-grow” basis for CAPEX efficiency. Filling an emerging gap created by growing bandwidth demands and the cost realities of deep fiber deployment, the E3s significantly expand the wide breadth of solutions available in the Calix Unified Access portfolio.

“We were looking for a flexible family of access solutions that leveraged the existing copper in our network and were ‘right-sized’ for deployment in both towns and more rural areas in mid-western Ontario,” said Glenn Grubb, general manager at [HuronTel](#) in Ripley, Ontario, Canada. “The E3 family of sealed ESANs enables us to deliver advanced VDSL2 services while operationally snapping-in to our existing ADSL operational model. We have found the E3-12C to be an ideal fit for our more rural deployments, and view the E3-48 as a good option for more densely populated deployment areas. We appreciate the flexibility that the E3 family provides to us, allowing us to deploy on a pay-as-we-grow basis while providing fiber-like speeds over our existing copper.”

The E3-48 supports the same key Ethernet protocols, features, and management functionality as other Calix E-Series platforms, such as a robust Ethernet switching fabric for Layer 2 switching with Layer 3 services. In addition to supporting VDSL2 with ADSL2+ fallback, the E3-48 also supports bonding across VDSL2 and ADSL for future bandwidth flexibility. Two small form factor pluggable plus- (SFP+) based 10 GE uplinks and four GE/2.5GE SFP-based uplinks provide connectivity upstream via point-to-point or ring configurations. Additional units can also be linked via either copper or fiber in a daisy-chained configuration.

E3-48 ESAN features include:

- Two 10GE/1GE uplinks and four GE/2.5GE uplinks with 802.1w rapid spanning tree protocol (RSTP) and 802.3ad link aggregation
- RSTP ring support
- Layer 2 switching and forwarding for deployment simplicity and Layer 3 awareness for scalability and security
- 48 VDSL2 ports with ADSL2+ fallback, including bonding support
- Integrated Internet group management protocol (IGMP) v2 and v3 snooping and proxy for IPTV
- Lifeline voice
- Dynamic host configuration protocol (DHCP) relay and snooping for facilitated network security
- Service prioritization via IEEE 802.1Q virtual local access networks (VLANs) and 802.1p support
- Support for multiple service delivery models, including VLAN per service, VLAN per port, or hybrid

- Full integration with the Calix Management System (CMS) for complete network visibility and management

“Demand for high broadband services continues to increase, but not all communications service providers can necessarily afford to pull fiber to every home,” said John Colvin, vice president of field operations at Calix. “The growing E3 family of sealed ESANs allows service providers to enable the bandwidths necessary to meet the demands of ‘an all-video world’ quickly on a pay-as-you-grow basis in even the most remote parts of the access network. Standards-based and with the flexibility to meet a wide variety of deployment architectures and the capacity to deliver more than 100 Mbps over copper infrastructure, the E3-48 addresses a clear and emerging need – a balance between high performance and the deployment realities of the access network.”

The E3-48 was introduced today at the 2010 Calix User Group Conference, and will be on display at [TelcoTV 2010](#) from November 10-11 at Calix Booth 325 at the Venetian Hotel in Las Vegas, Nevada.

### ***About Calix***

Calix is a leading provider in North America of broadband communications access systems and software for copper- and fiber- based network architectures that enable communications service providers to connect to their residential and business subscribers. Calix has shipped over seven million ports of its Unified Access Infrastructure portfolio to more than 600 North American and international customers, whose networks serve over 40 million subscriber lines in total.

This press release may contain forward-looking statements that are based upon management’s current expectations and are inherently uncertain. Forward-looking statements are based upon information available to us as of the date of this release and we assume no obligation to revise or update any such forward-looking statement to reflect any event or circumstance after the date of this release, except as required by law. Actual results and the timing of events could differ materially from current expectations, based on risks and uncertainties affecting the Company's business. The reader is cautioned not to unduly rely on the forward-looking statements contained in this press release. Additional information on potential factors that could affect Calix’s results and other risks and uncertainties are detailed in its report on Form 10-Q for the fiscal quarter ended September 25, 2010, filed with the SEC on October 22, 2010, available at <http://www.sec.gov>.

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