



Calix launches E3 family of sealed Ethernet Service Access Nodes

New E3-12C sealed ESAN "right-sized" for simplified combo VDSL2 deployments in low density and hard-to-reach locations

PETALUMA, CA—September 7, 2010—[Calix, Inc](#) (NYSE: CALX) today announced the introduction of a new Ethernet Service Access Node (ESAN) family to its [Unified Access portfolio](#) – the [E3 family of sealed ESANs](#) – and the debut of its first family member – the new E3-12C sealed ESAN. An entirely new extension to the widely deployed and field-proven [Calix E-Series platforms](#), the E3 sealed ESANs provide communications service providers with new, flexible options for offering high bandwidth, advanced very high bit-rate digital subscriber line 2 (VDSL2) services at an increasingly strategic point in the evolution of the access network – the remote node. The environmentally hardened and sealed E3 family combines a variety of low profile, compact form factors with a variety of mounting and powering options to enable extensive deployment flexibility. Fiber-Fed with multiple gigabit Ethernet (GE) feeds and ready for an "all-video world," E3 ESANs provide the capacity to support increasingly bandwidth-intensive services and high broadband services uptake. A powerful complement to the Calix Unified Access portfolio, the E3 sealed ESANs are optimized for bringing "Fiber Forward" in the access network, allowing communications service providers who are pulling fiber deeper into their networks to easily deliver near fiber speeds to areas still saturated with copper plant.

The E3-12C, the first E3 family member to be introduced, is focused on advanced combo VDSL2 copper services deployment in low density and remote areas. In contrast with the chassis-based [Calix C7 Multiservice Access Platform \(MSAP\)](#) and [E7 Ethernet Service Access Platform \(ESAP\)](#), and the rack mountable, fixed form factor family of [E5 ESANs](#), the E3 is a sealed ESAN VDSL2 delivery vehicle that supports session initiation protocol (SIP) and H.248 voice protocols, remote 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 E3-12C is fiber-fed, supporting up to two standards-based gigabit Ethernet uplinks and preparing the access network edge for bandwidth-intensive services like video.

Calix customers are finding the E3-12C 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 12 combo VDSL2 subscribers, communications service providers are viewing the E3-

12C as a “right-sized” access solution, 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 are clearly complementary to the Calix Unified Access portfolio, expanding its exceptional breadth of solutions across the access network.

“We were looking for an access solution that was both the right size for rural deployment and allowed us to deliver advanced VDSL2 services while operationally snapping-in to our existing asynchronous digital subscriber line (ADSL) operational model, and we found the E3-12C to be an ideal fit,” said Gary Cantrell, plant superintendent at [Adams Telephone Co-Operative](#) in Golden, Illinois. “We weren’t looking for a cheap remote terminal...we needed a flexible solution that was easy and cost-effective to deploy in remote, rural areas while providing fiber-like speeds over our existing copper. Our goal is to provide advanced broadband services to every member of our community, and with support for VDSL2 with ADSL fallback already integrated, we can leverage the E3 on a pay-as-you-grow basis while strategically pulling ‘Fiber Forward’ into the network.”

Although it is smaller and has a lower combo port count than the other widely-deployed E-Series ESANs, the E3-12C supports the same key Ethernet protocols, features, and management functionality as other 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 E3-12C also supports bonding across VDSL2 and ADSL for future bandwidth flexibility. Two small form factor pluggable- (SFP-) based GE uplinks provide connectivity upstream or in a ring configuration, although the units can be linked via either copper or fiber in a daisy-chained configuration.

Other E3-12C features supported include:

- Dual GE uplink 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
- Integrated Internet group management protocol (IGMP) v2 and v3 snooping for IPTV
- Lifeline voice with native SIP or H.248 conversion
- 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 Calix Management System (CMS) integration for complete network visibility and management

“We believe the new E3 sealed ESAN family to be the only systems in the industry meant for nodal network deployment that were designed from the ‘subscriber in’ as opposed to the ‘network out’ – a

distinction that is demonstrated by its unique combination of low combo port count, remote powering, and high capacity," said Kevin Pope, senior vice president of product development at Calix. "As residential subscribers rapidly move to an 'all-video world' and the communications service provider competitive environment continues to heighten, the ability to deploy broadband solutions quickly on a pay-as-you-grow basis in even the most remote parts of the access network will become increasingly important, as will the ability to react rapidly to increased network capacity driven by higher services demand. With subscriber demand becoming increasingly volatile and unpredictable, we believe that communications service providers planning for the future will value low port counts, like the 12 combo ports introduced today in the E3-12C, to be 'right-sized' for incremental growth, and that the E3 sealed ESANs will fill a clear and emerging need in communications service provider networks and in the Calix Unified Access portfolio."

The E3-12C as well as the entire Calix Unified Access portfolio of fiber access solutions will be on display at the [Fiber to the Home \(FTTH\) Show Conference and Expo](#) September 13-15 at Calix Booth 500 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 500 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 June 26, 2010, filed with the SEC on July 23, 2010, available at <http://www.sec.gov>.

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