



## Calix Revolutionizes FTTN With New E-Series

*Calix E-Series IP Service Edge Nodes Eliminate Over 50 Percent of  
Installed CAPEX Associated with FTTN Builds*

**MARCH 6, 2006, PETALUMA, CA**—Calix today announced the addition of the E-Series IP service edge nodes (SENs) to its portfolio of access solutions. The Calix E5, the first platform in the E-Series line, is vital to service providers plans to deliver more capacity and more innovative information, communication, and entertainment services by reducing subscriber loop-lengths. The Calix E5 is specifically designed to address an area of rising service provider concern: the reduction of total installed CAPEX and ongoing operational costs. Installed CAPEX, which includes all costs associated with the engineering, installation, and deployment of access network elements, is emerging as an important determinant of fiber to the node (FTTN) economic viability. The Calix E5—which eliminates the need for service area interface (SAI) cross-connect upgrades, fits within existing right-of-ways, includes managed remote powering options, and converts POTS to VOIP—reduces installed CAPEX by over 50 percent.

FTTN access networks are rapidly emerging as one of two primary architectures used to deliver greater IP-based service capacity to subscribers—FTTP being the other. The Calix E-Series expands on the company's existing access portfolio, which includes the market-leading C-Series multiservice access and F-Series GPON access solutions, and yields a complete access continuum for service providers. The fiber-ready Calix E5 is also designed to support a smooth transition to FTTP builds. With up to 16 Gigabit Ethernet uplinks and multiple voice termination options, the Calix E5 provides one of the industry's most advanced platforms for FTTN applications.

According to Michael Howard, co-founder and principal analyst at Infonetics Research, "Service providers realize that the ideal FTTN solution is not just a low-cost IP DSLAM. Carrier-qualified, complete FTTN systems must help lower total operating costs while delivering a rich set of advanced IP-based services, and we believe the Calix E-Series product line is just such a scalable, deployable, cost-effective solution."

Designed to pull fiber closer to the subscriber, the Calix E5 is a complete system that includes multiple powering options, compact enclosures, battery backup, integrated cross-connect panels, and advanced cable management features. Low first-cost and linear scalability allows the Calix E5 to address low line-count, early take-rate scenarios as effectively as instances in which broadband take-rates approach 100 percent—a likely eventuality given the heavy push service providers are making on both VOIP and IPTV fronts.

Adds Tom Lillig, development lead for the Calix multiservice over Ethernet (MSOE) market unit, "There are two dominant trends with regard to access network architectures: FTTP, using BPON or GPON, and FTTN, using ADSL2+ and VDSL2. The Calix C-Series and F-Series are very well suited for—and widely deployed in—FTTP builds. We believe the Calix E5 represents the first complete purpose-built FTTN system to fully address all service provider operational requirements."

In addition to unrivaled broadband, the Calix E5 supports multiple voice termination scenarios. In a "DSL overlay" architecture, common to early FTTN initiatives, integrated POTS splitters separate voice traffic for delivery back to the central office (CO) or remote terminal over existing copper pairs. Gigabit Ethernet uplinks transport data and IPTV to either a Calix C7 or any commercial Ethernet switch or router in the CO. Alternatively, the Calix E5 can terminate POTS at the SAI. In this "DSL+POTS combo" model, service providers can simplify physical connectivity at the cross-connect and optionally retire the upstream "feeder" portion of the copper plant. In this configuration, the Calix E5 converts POTS to VOIP using SIP or H.248 signaling for transport over Gigabit Ethernet along with data and IPTV services. At the CO, the voice services can be converted back into a GR-303 TDM voice format or handed off to the network as VOIP, thus speeding the migration to an operationally efficient all-packet network.

### ***Extending the Calix Access Continuum***

Existing Calix C7 outside-plant cabinets range in size from 240 to 2,880 physical copper or fiber network terminations. The new Calix E5 outside plant cabinet is optimized for deployment adjacent to SAI cross-connects, and provides cost-optimized support for 24 to 384 DSL or POTS+DSL combo subscribers. In addition to being optimally sized for the subscriber densities at the SAI cross-connects, the Calix E5 introduces a number of features that are optimized for FTTN application:

1. Up to 16 SFP-pluggable Gigabit Ethernet uplinks for a smooth evolution to future unicast-intensive IPTV service models;
2. VDSL2 with integrated overlay POTS splitters for 24 to 192 subscribers;
3. VDSL2+POTS combo cards that can packetize voice for 24 to 384 subscribers, working with upstream Class 5 TDM switches or VOIP softswitches;
4. VDSL2 technology that automatically falls back to ADSL2+ and ADSL, allowing one line card to service both IPTV and existing high-speed data (HSD) subscribers;
5. Flexible options for local or managed remote powering;
6. Optional integrated cross-connects for up to 1,200 copper pairs;
7. Optional mounting kits supporting pad or pole-mount configurations; and,
8. Compact 2' by 2' by 4' footprint in a GR-487 compliant outdoor cabinet for deployment within existing service provider right-of-ways.

The Calix E5 will be generally available in Q2, 2006. Contact Calix for additional information.

**About Calix**

Calix is the largest telecom equipment supplier focused solely on access solutions for broadband service delivery. Service providers deploy Calix access systems to enable a rich set of information, communication, and entertainment services and to expand their revenue base beyond connectivity. Calix access innovation helps service providers transform their networks from circuit to packet, from narrowband to broadband, and to drive fiber deeper into the network. Calix has deployed its solutions in hundreds of service provider networks throughout North America and has shipped more than two million ports. For more information, visit the Calix website at [www.calix.com](http://www.calix.com).

This press release may contain forward-looking statements that are based upon management's current expectations and involve risks and uncertainties. Forward-looking statements are based upon information available to us as of the date of this press 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. Actual results and the timing of events could differ materially from current expectations. Factors that could cause or contribute to differences include, without limitation, any difficulties encountered in combining the two companies, any difficulties encountered in product deployment, and any changes in customer and consumer needs and preferences.

*For additional information contact:*

*Jeannette Bitz / Engage PR / 510-748-8200 x207 / [jbitz@engagepr.com](mailto:jbitz@engagepr.com)*