

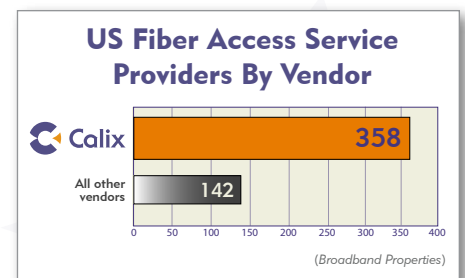
FAST FACTS Fiber Access

Communications service providers are rapidly moving Fiber Forward in their networks, pushing fiber as close to subscribers as possible in order to offer the most advanced, broadband-intensive service experience. Among a variety of fiber access technologies supported by Calix, gigabit passive optical networking (GPON) and Active Ethernet (AE) have emerged as the fiber architectures of choice for residential and business service delivery, and are now often deployed as complementary technologies in the same network.

The timing for moving Fiber Forward has never been better – with interest rates now at or near all-time lows, government support programs likely to undergo major overhaul in the near term, and competition ratcheting up. With over 600 fiber access customers globally, Calix understands the complex issues involved with fiber deployment and has developed a broad range of solutions – including the industry’s largest portfolio of optical network terminals (ONTs) as well as multiple optical line terminals (OLTs) that allow service providers to deploy fiber access technologies efficiently and cost effectively.

FIBER ACCESS PROFILE

- Customers** Over **600 service providers** globally are deploying Calix fiber access solutions.
- More US fiber access independent service providers than all other vendors combined (*Broadband Properties*, October 2010)
 - More than 275 customers deploying IPTV over GPON/AE/DSL
 - More than 150 customers deploying RF video overlay over GPON



FIBER ACCESS SOLUTIONS

The Calix Unified Access portfolio includes an extensive range of standards-based fiber access solutions. All support high density AE and GPON, as well as 10 Gbps Ethernet transport. The industry’s broadest ONT portfolio supports the Calix fiber access systems, with options for single family unit residential, multi-dwelling units, small- and medium-sized businesses (indoor and outdoor models available), and mobile backhaul. Most OLT/ONT combinations also support GPON and Active Ethernet auto-detection, Extended Reach GPON (up to 40 km), line rate gigabit Ethernet support, and Remote ONT Activation (RONTA).

- Calix B6 Ethernet Service Access Nodes (ESANs) – Scalable, chassis-based systems that use distributed intelligence to flexibly deliver advanced fiber access services. Available in three form factors (chassis): single slot (B6-001), six slot (B6-006), and 12 slot (B6-012).
- Calix C7 Multiservice Access Platform (MSAP) – North America’s leading multiservice access platform (MSAP) is an excellent fit for service providers needing to support both copper and fiber in the network. The C7 is available in a 20 slot chassis with 10 Gbps available to each slot, and supports up to 80 GPON ports per shelf.
- Calix E7 Ethernet Service Access Platforms (ESAPs) – High capacity (100 Gbps per slot), low latency access concentrators architected for the future of fiber access. Available in two form factors (chassis): Two slot, 1RU platform (E7-2) that can be modularly deployed as up to 10 platforms yet managed as one IP address, and a 20 slot multi-terabit platform (E7-20) optimized for CO deployment.

PROVEN ADVANCED IP SERVICES SUPPORT

Calix fiber access solutions benefit from field-proven advanced IP services support, and extensive experience in the fiber access market. Calix is the North American market leader in both IPTV and RF video over fiber deployments. Calix also supports SCTE standards-compliant RF Return (RFOG) integrated into specialized SFU, MDU, and business ONTs. RFOG allows the deployment of advanced interactive services such as VOD and is compatible with all major cable headend manufacturers. Calix fiber access solutions support robust voice and business services, with GR-303 and VOIP conversion available at both the ONT and OLT. Selected ONT models support DS1s, PWE3, and Ethernet OAM, while all Calix ONTs support Metro Ethernet business services, certified through the MEF Forum. Calix combines these technologies in fiber access solutions optimized for mobile backhaul, with 24 VDC powered ONTs designed specifically for the interface requirements of wireless base stations, as well as rack- and pole/wall-mounted form factors.

FIBER ACCESS HIGHLIGHTS

Calix 700GX, 700GE, and 2000 families of ONTs provide extensive standards-based innovation:

- Line rate gigabit Ethernet interfaces
- ONTs available that support PWE3 DS1s and/or TDM DS1s (700GX only)
- Ethernet OAM support
- A variety of interfaces and configurations to deliver residential and business services (DS1, POTS, RF video, IPTV, Metro Ethernet services, and mobile backhaul)
- Integrated voice gateways to convert POTS into GR-303, TR-08, GR-57, H.248, MGCP, or SIP interfaces
- Support for GPON and Active Ethernet in the same ONT – utilizing unique Calix auto-detect technology
- Support for extended reach GPON out to 40 km with pluggable optical interface modules
- Support for 1 GHz of RF video
- Support for RF Return (select ONTs) using the SCTE RFOG standard
- ONTs specially designed for business services, MDUs, and mobile backhaul
- ONTs available in rack- and wall-mounted versions and indoor and outdoor models
- Filters that enable ONTs to co-exist in future 10G PON networks

CALIX HIGHLIGHTS

Calix is the leading provider of innovative fiber access platforms and management systems to North American service providers. The Calix Unified Access portfolio allows service providers to deploy virtually any service over fiber and copper at low installation cost, and enables service providers to streamline operations with a single management view and a common user experience for a wide variety of advanced services and protocols. Wireline communications service providers globally rely on the Calix Unified Access portfolio to deliver the services that their residential and business subscribers demand, from copper-based POTS and Specials to advanced interactive multimedia applications delivered over fiber. Calix: Delivering on the promise of fiber.

MSAP



ESAP



ESAN



PREMISES



MANAGEMENT



COMPASS

