

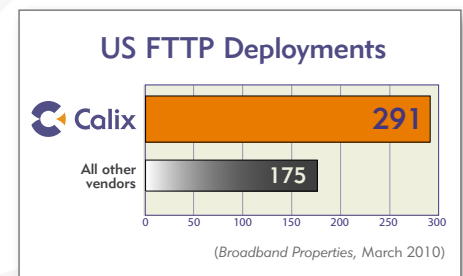
Calix | Optical Network Terminals

FAST FACTS

Optical Network Terminals (ONTs) are often the most important element of a fiber access solution. ONTs are the interface to the subscriber and determine what services can be offered to the home or business. The capital costs of ONTs account for over two-thirds of a service provider's electronics costs for fiber access equipment. Because they are distributed at the endpoints of the network, ONTs are costly to change out. For these reasons ONTs and the outside plant cable infrastructure need to be the most future-proof parts of a fiber access network. Calix has a long history of innovation in ONTs, while adhering to worldwide standards developed by the ITU and IEEE. The Calix ONT portfolio addresses a full range of applications, from single family unit residential and multi-dwelling units, to small- and medium-sized businesses, and the fast growing market for fiber-based mobile backhaul.

ONT PROFILE

- Customers** Over **450 communications service providers** across North and Latin America and the Caribbean are deploying Calix ONTs.
- More US FTTP independent service provider customers than all other vendors combined (*Broadband Properties, March 2010*)
 - More than 150 customers deploying IPTV over GPON/AE/DSL
 - More than 120 customers deploying RF video overlay over GPON



FIBER ACCESS INNOVATOR

Calix offers the broadest ONT portfolio in the industry, reflecting the Calix commitment to ongoing innovation in fiber access. A range of additional ONT features are available based on the service provider's needs: 1 GHz RF video, HPNA over coax, and RF return utilizing an embedded SCTE standard RFOG micronode. Calix offers unique features unmatched in the industry today. All 700GE and 700GX ONTs can auto-detect Active Ethernet and GPON, thereby future-proofing the network against technology obsolescence. All Calix ONTs also offer Remote ONT Activation (RONTA), featuring a unique voice response system that eliminates the need to preprovision ONTs or require coordination between installers and CO.



SINGLE FAMILY UNIT (SFU) RESIDENTIAL

Calix 700GE and 700GX ONTs feature a unique auto-detect technology that enables the ONT to operate in GPON or Active Ethernet mode. The ONT is able to change from one technology to another when it senses that the technology of the OLT has changed. Every 700GE single family unit ONT offers two or four gigabit Ethernet (GE) ports with the intelligence to support multiple VLANs and a variety of IP-over-Ethernet services, as well as two POTS voice ports, which can be provisioned as TDM or VOIP.



MULTI-DWELLING UNIT (MDU) RESIDENTIAL

Calix offers a family of MDU solutions to meet the needs of service providers. Like the Calix SFU ONTs, all Calix MDU ONTs feature auto-detect technology and support both GPON and Active Ethernet. All Calix MDU ONTs offer four GE ports, eight POTS ports (supporting both TDM and VOIP), and four RF video ports. MDU ONTs with four RF video ports all feature an additional high power fifth RF video port of 34.5 dBmV for MDU environments with difficult-to-reach customers.

Depending on the model, service providers may order versions with an additional four GE ports and four RF video ports, supported by an embedded SCTE RFOG micronode to provide RF return. All MDU ports are separately provisioned and can be turned off and on, so that truck rolls are not required for adds, moves, and changes. For design flexibility, MDU ONTs are available in both wall- and rack-mounted units.



BUSINESS AND MOBILE BACKHAUL

Business service applications are among the fastest growing fiber access market segments, particularly for backhaul to mobile base stations. The transition from T1-only based backhaul to a mix of T1 and Ethernet is driving wireless operators to demand fiber to their base stations. Calix offers a variety of ONTs optimized for mobile backhaul that are available in 24 VDC versions so they can be powered from the existing base station power supplies.

Calix has a long history of developing ONT products for business services. These include ONTs that offer 10/100/1000 Ethernet and are compliant with Metro Ethernet Forum (MEF) standards, as well as support for legacy T1s (both TDM and PWE3). Support for PWE3 is offered on the 766GX and 767GX ONTs for customers who wish to move to an all-Ethernet access network. Calix also offers 1 GHz RF video and SCTE RFOG on business ONTs, responding to the increasing interest in offering video as a business service to retailers, hospitality settings, and even office locations. Calix business and mobile backhaul ONTs are available in wall- and rack-mounted versions to make them easy to deploy.

