

# FAST FACTS **Transport and Aggregation**

Transport and aggregation flexibility is a critical component of next generation service delivery networks. The Calix Unified Access Infrastructure can both aggregate and transport different traffic types – IP/Ethernet, SONET, ATM, and TDM – with hardened access platforms and nodes that can be deployed across the service delivery network. The Calix Unified Access Infrastructure allows service providers to meet the needs of virtually any advanced residential and business application, from 10GE transport, to mobile backhaul or MEF E-Line, to IPTV.

## MULTISERVICE, MULTIPROTOCOL

The Calix C7 Multiservice Access Platform (MSAP) delivers industry leading multiservice, multiprotocol transport and aggregation services. The C7 can natively transport SONET, ATM, and Ethernet traffic or it can perform protocol conversion – for example, ATM to IP/Ethernet or TDM voice to VOIP – simplifying service delivery. This critical capability allows service providers to migrate from circuit to packet at a pace that meets their operational requirements.

## MULTISERVICE ETHERNET

The Calix E7 Ethernet Service Access Platform (ESAP) and the E5-400 and B6 Ethernet Service Access Nodes (ESANs) deliver multiservice Ethernet transport and aggregation solutions using advanced Ethernet switching fabrics. The E7, E5-400, and B6 are optimized for non-blocking broadband services delivery across high capacity 10GE, NxGE, and GE transport utilizing ITU G.8032 ERPS / Enhanced EAPS, RSTP, Link Aggregation, and EPS (B6 only). These robust carrier-grade technologies allow jitter and latency sensitive Ethernet business services to be delivered reliably and cost-effectively.



## UNIFIED ACCESS SOLUTIONS

Calix provides an extensible portfolio of high capacity transport and aggregation solutions that are optimized for a wide variety of network, service, and topology requirements. The result: broad deployment flexibility. Furthermore, as networks evolve to increasingly Ethernet-based transport and aggregation, Calix platforms can seamlessly accommodate this transformation, delivering the necessary flexibility for multiservice handoff, interworking, and gateway functions. Topologies supported include:

- Point-to-Point
- Star
- Linear Chain
- Tree
- Ring
- Hybrid

## CALIX PROFILE

Over half of wireline communications service providers across North America are deploying Calix Unified Access Infrastructure, representing over 50 million subscriber lines, with nearly all customers leveraging the carrier grade transport and aggregation functionality of the Calix access portfolio.

MSAP



ESAP



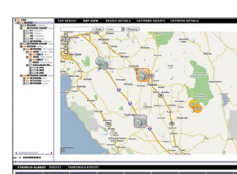
ESAN



PREMISES



MANAGEMENT



COMPASS



## CALIX MULTISERVICE ACCESS PLATFORM (MSAP)

The Calix C7 is a highly integrated multiservice access platform that combines service delivery and transport technologies in a common chassis-based platform. The system allows service providers to deploy Ethernet and IP services with advanced security features. Additionally, depending on a service provider's needs and network migration timeline, the Calix C7 can bridge the gap between circuit, packet, and next generation pure Ethernet service delivery networks. This approach allows the Calix C7 to support virtually any service requirement across a variety of network topologies, delivering carrier grade services to copper and fiber based broadband subscribers.



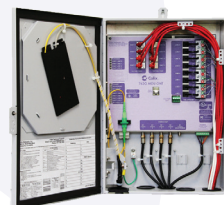
## CALIX ETHERNET SERVICE ACCESS PLATFORM (ESAP)

The Calix E7-2 modular chassis and E7-20 multi-terabit Ethernet Service Access Platforms (ESAP) are designed to meet growing network traffic demands by adding carrier-grade 10 gigabit Ethernet (10GE), link aggregation (NxGE), and gigabit Ethernet (GE) transport and aggregation to the Calix Unified Access Infrastructure. The E7-2 and E7-20 leverage the first standards-based Ethernet kernel built for access – Ethernet eXtensible Architecture (EXA). The EXA Powered E7-2 and E7-20 allow service providers to address bandwidth challenges head-on, with standards-based Ethernet transport and aggregation across the access network, enabling flexible deployment from the CO to the edge of the access network.



## CALIX ETHERNET SERVICE ACCESS NODE (ESAN)

The Calix E5-400 and B6 Ethernet Service Access Nodes (ESANs) are optimized to deliver 10 gigabit Ethernet (10GE), link aggregation (NxGE), and gigabit Ethernet (GE) transport and aggregation to the edge of the Calix Unified Access Infrastructure, further extending carrier-grade service deployment flexibility.



## P-SERIES BUSINESS AND MOBILE BACKHAUL SOLUTIONS

The Calix 74xG, 76xGX/GE, and 78xGE ONTs (rack- or wall-mountable) allow the flexible delivery of 2.5 Gbps GPON, while the 700GX and 700GE ONTs support both GPON and standards-based point-to-point Ethernet / Active Ethernet (AE) from the same ONT. Service providers have found these ONTs well suited for mobile backhaul applications because they lower traditional DS1 service deliver maintenance costs and support for highly reliable DS1 and PWE3 circuits. With a variety of ONT models supporting two to eight DS1 ports and up to four GE ports, Calix offers several mobile backhaul solutions at a fraction of the cost of traditional SONET and carrier Ethernet products.

## UNIFIED ACCESS INFRASTRUCTURE

Service providers can deploy the Calix C7, E7, B6, or E5-400 Unified Access solutions to support standards-based, advanced Ethernet services (10GE, NxGE, GE) as well as traditional TDM services (POTS, Specials, DS3), while delivering high capacity broadband services. With tremendous capacity, flexibility, and field-proven performance, Calix solutions allow service providers to migrate to pure IP over Ethernet and all-fiber networks, efficiently, cost effectively, and at their own pace. In an increasingly competitive service environment, the Calix Unified Access Infrastructure provides the assurance that service providers will have the capability to deliver superior IP services to subscribers over a network optimized for their unique needs and service delivery requirements.