

# Rapid Access

Reliable

## Markets Served

Carriers & Service Providers, Federal, State & Local Government,  
Education, Health Care, Utilities, Private Campuses

### What They're Saying...

"We selected Actelis because it is the leader in the Ethernet over copper space. The choice was made because of the proven robustness of the Actelis solution, and because the hardened switch is able to operate in harsh environments. Equally as important was the ability of the Actelis products to exceed our performance requirements, which provides us long-term investment protection by creating extremely reliable and much higher bit rate pipes."

*Ryan Billeci, Telecommunications Engineer, City of Sacramento*

"Actelis Networks has distinguished itself as the clear leader in this fast emerging market because of the capabilities of its carrier Ethernet over copper platform."

*Prayerna Raina, Research Analyst, Frost & Sullivan*

"Actelis plays an important role in the delivery of COLT's service offerings to our valued customers, enhancing our service coverage and driving forward the availability of carrier-class Ethernet services."

*Dr. Alireza Mahmoodshahi, CTO, COLT*

"Actelis has established a clear lead in this market with a telco-grade product. Ethernet services delivered over copper plant greatly expand the addressable market, can be easily sold and supported by existing carrier organizations, and can be delivered at price-points supporting sustained profitability."

*Michael Kennedy, Managing Partner & Co-founder, Network Strategy Partners, LLC*

"We have tested several solutions and Actelis has outperformed them all, delivering the best performance and reliability over the copper infrastructure. The Actelis platforms allow us to cost-effectively utilize both our existing copper and fiber infrastructure and to increase our service offerings with optical confidence."

*Lorraine Leeming, Vice President of Regional Sales, Frontier*

"Obtaining MEF certification from the MEF's independent test lab, Iometrix, is a validation that Actelis' Carrier Ethernet over Copper™ equipment can deliver advanced carrier Ethernet services."

*Michael Howard, Principle Analyst and Co-Founder of Infonetix Research*

"By teaming with Actelis, Qwest will help more businesses benefit from broadband services without the need to wait for fiber deployment."

*Frank Turek, Sales Engineering Manager, Qwest GSD*

"The reach and reliability of Actelis' technology enables us to extend the advantages and cost benefits of broadband Ethernet services to our core small and medium-size business customers."

*Bill Henke, Director of Enterprise Solutions, Windstream*

**Actelis**  
Networks®  
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**Actelis**  
Networks®

## Actelis Networks® Corporate Profile



# More Bandwidth Less Capital

## About Us

At Actelis Networks® we are committed to ensuring high performance, ease of deployment, and use of our carrier Ethernet products, all backed by our world-class customer service and support. Our products have been field tested and deployed by some of the most discerning service providers and private organizations throughout North America, Europe and Asia. Actelis' Ethernet solutions are currently enabling service providers to meet their bandwidth demands and maximize new revenue opportunities while keeping their network infrastructure expenditures to a minimum.

Actelis Networks Carrier Ethernet over Copper™ solutions exploit the combination of our patented, award-winning EFMplus™ technology with the industry's Ethernet standards, including IEEE 802.3ah Ethernet in the First Mile, to deliver superior high bandwidth Ethernet services over existing copper infrastructure. Our solutions make it possible for both service providers and enterprises to leverage Ethernet's inherent economies of scale to deliver affordable next-generation broadband services. With the help of Actelis' innovative technologies, which leverage our advances in spectral management, service providers can deploy the *Three R's of EFM™*, or what we refer to as increasing the "Rate, Reach and Reliability" of their access services to deliver fiber-like performance over copper.

The alternatives of installing fiber or deploying wireless solutions are often not feasible for cost-effective high-bandwidth services, and this accounts for the vast majority of business premises, mobile base stations and towers, DSLAM cabinets, as well as sites in education, health care, and municipalities. Trenching fiber to these sites is both expensive and time consuming, while wireless alternatives, such as WiMAX, can not deliver on the required bandwidth, Quality of Service (QoS), and Service Level Agreements.

## Act Smart.

Service providers today can leverage their existing copper networks to deliver high-speed broadband Ethernet services with fiber-like quality and resiliency at speeds up to 100 Mbps to those customers who traditionally have been out of reach from fiber-optic networks. Actelis Networks' award-winning EFMplus™ technology empowers existing copper network infrastructure, enabling carriers to extend carrier Ethernet to the 90% of their potential customer base well beyond the reach of current fiber-optic networks, while keeping their network infrastructure expenditures to a minimum.

## Act Now.

We are committed to ensuring only high-performance products that are easy to deploy and backed by superior customer service and support. In fact, as an ISO 9000 certified company, Actelis Networks prides itself on developing, manufacturing and delivering world-class carrier Ethernet products and solutions. Backed by our team of seasoned network sales engineers and customer support representatives, Actelis can quickly turn up a next-generation carrier Ethernet network that will generate new revenues and meet the growing requirements placed on your network.

## Actelis.

Time-tested, field-proven and approved by service providers and enterprises worldwide, as well as MEF, OSMINE, and NEBS Level 3 certified and RUS listed, our carrier Ethernet products have been deployed by service providers and private organizations throughout North and Latin America, Europe and Asia. Actelis Networks' portfolio of carrier Ethernet products can be installed in the central office, in any outside plant environment, and at the customer premises using existing methods and practices. Additionally, our carrier Ethernet over copper solutions comply with global communications standards and have already been deployed across five continents.

## Benefits

- Upsell customers to higher bandwidth without the need for truck rolls
- Universal service availability
- Single solution to integrate into OA&M
- Existing Fiber SLAs on copper even at the edge of service availability — simple change to technical publications, minimal tariff changes
- Universal support for current and future IP services

## The Three R's of EFM™

- Rate :: Delivers more bandwidth to customers than any copper-based solution available
- Reach :: Delivers more services to more customers, covering the entire Carrier Serving Area
- Reliability :: Maintains Service Level Agreements

## Meeting The Demand With Copper

There are more than three billion copper telephone lines embedded throughout the world. Actelis' products energize this existing copper infrastructure to enable high-bandwidth services with minimal operational costs. Actelis Networks Carrier Ethernet over Copper™ solutions allow service providers to simply and cost-effectively meet the demand for broadband by utilizing the existing copper infrastructure. With the ability to provide up to 100 Mbps of high-quality Ethernet, TDM or ATM services to businesses or locations only served by copper, Actelis is enabling telecommunications service providers to expand their broadband service offerings and deliver new revenue-generating broadband services through their existing copper facilities.

## Award-Winning Technology

Actelis Networks platforms transform multiple copper pairs into high-speed broadband links. Designed with standards-based G.SHDSL physical layer technology, Actelis adds its patented EFMplus™ technology to the platforms, enabling the systems to provide far greater rate, reach and reliability compared to other copper-based broadband systems. They carry scalable, symmetrical bandwidth at speeds previously limited to fiber, while complying with established international spectral compatibility standards. With a low Bit Error Rate (BER), minimal delay and high-noise immunity, Actelis EFM platforms can easily meet all Quality of Service requirements, and have the highest available packet throughput efficiency.

## Carrier Ethernet Over Copper Platforms

Available in Point-to-Point or Point-to-Multipoint configurations, Actelis Networks' product family utilizes the existing copper infrastructure to deliver high-quality, high-speed Ethernet or TDM/ATM broadband services to customers' locations even beyond 18,000 feet (5.5km). Actelis' platforms can be deployed within hours—with no need to trench for fiber—enabling service providers and enterprises to immediately begin delivering broadband services without additional infrastructure investments. The Actelis product family combines high-performance hardware and software with simple-to-use Element Management Systems to ensure easy deployments and a rapid return on investment.

Our Ethernet Access Devices enable delivery of high-speed carrier Ethernet services over the existing copper and fiber infrastructure. The Actelis series of ML600 EADs are compact, cost-effective Ethernet in the First Mile (EFM) systems that deliver up to 100 Mbps symmetrical Ethernet traffic at fiber quality over existing copper pairs.

Actelis also has a comprehensive portfolio of carrier-class, standards-based Carrier Ethernet over Copper™ aggregation switching products for central offices, offering service providers a variety of cost-effective aggregation platforms for different network topologies and scenarios. The aggregation switches are all part of our ML series. Utilizing the Actelis' aggregation solutions, service providers can leverage the existing copper infrastructure to deliver up to 100 Mbps Ethernet service per customer while achieving unprecedented rate, reach and reliability on any grade of available copper. The Actelis aggregation switches offer MEF 10 compliant services with advanced bandwidth control and traffic management features. They can seamlessly integrate into service providers Metro Ethernet networks, fully interoperable with any standard Ethernet switch or router, as well as aligned with and certified by the Metro Ethernet Forum (MEF).

## Applications

- Transparent LAN Service
- Private Campus Networks
- Cellular and WiFi Backhaul
- Fast Internet Access
- MDU/MTU
- Voice and Video over IP
- Metro Ethernet Extension
- DSLAM/NGDLC Backhaul
- T1 / E1 Line Replacement

## Our History

Headquartered in Silicon Valley, Calif., Actelis Networks is the world's leading provider of Carrier Ethernet over Copper solutions. For more than a decade we have been helping service providers, enterprises, government agencies and municipalities deliver a fiber-like experience with fiber-like quality over their existing copper-based networks.

Carrier Ethernet over Copper™  
**Ethernet Solutions**