

Actelis Networks

# LRE Replacement System

Carrier Ethernet Over Copper™

## Actelis' Replacement and Upgrade Solution for Cisco LRE Customers

Guaranteeing customers ongoing support with a migration path to higher-speed, next-generation services over their existing copper infrastructure, Actelis Networks® has developed a replacement package for Cisco's withdrawn Catalyst 2950 Long Reach Ethernet (LRE) switch. Cisco announced it will cease support for the Catalyst 2950 in January 2010, requiring their customers to find an alternative solution. The Catalyst 2950 LRE package has been used by many enterprises to connect small offices across their existing network without rewiring, as well as giving service providers a platform for deploying Ethernet services to residential and small office or home office (SOHO) customers. A number of hotels have also used the Cisco LRE over its internal copper wiring to deliver high-speed Internet services.



The Actelis ML620



The Actelis ML130

### The Actelis Solution

Actelis is pleased to deliver a solution that provides even greater rate, reach and reliability, giving LRE customers an easy and economical migration path to higher bandwidth services. Actelis has combined two of its intelligent Ethernet access devices (EADs) for customer premises locations that provide an integrated, out-of-the-box replacement solution. Capable of installation and turn-up within minutes, the CPE component is the Actelis ML620, a fully standards-compliant EAD installed at the end-user site, while aggregation switching is performed by the Actelis ML130, which operates in point-to-multipoint mode to concentrate data traffic back into the central office.

### Compatible with Cisco

This new Actelis LRE bundle is compatible with the Cisco Catalyst, but offers significant advantages in reach, resiliency and manageability, as well as cost of ownership. The Actelis solution will reach locations well beyond the Catalyst's limit of 5,000 feet. Additionally, Actelis has the ability to extend services up to 15 miles, when combined with our XR239 EFM Repeater technology, the only widely deployed standards-based repeater since 2005. It also offers greater resiliency and service continuity by optionally working over multiple copper pairs, protecting against failure of either one, while further increasing potential bandwidth and reach. Customers will also benefit from Actelis' MetaASSIST™ element management software, which allows for easy remote provisioning and management. By making the whole EFM infrastructure easier to manage with fewer technicians needed, the Actelis LRE solution greatly reduces OPEX.

## Highlights

- IEEE 802.3ah Ethernet in the First Mile (EFM) 2Base-TL Solution
- MEF Certified Ethernet Capabilities
- Rapid Service Deployment
- Superior Rate, Reach & Reliability
- Low Delay and Jitter for Voice and Video Transmission
- Worldwide Spectral Compliancy
- NEBS III, FCC, UL, CE
- Environmentally Hardened

## Benefits

- Quick and Easy to Deploy
- Update Communications Platform to Ethernet
- Broadband Extension at Low Cost
- Leverage Existing Network
- CAPEX and OPEX Savings

## Applications

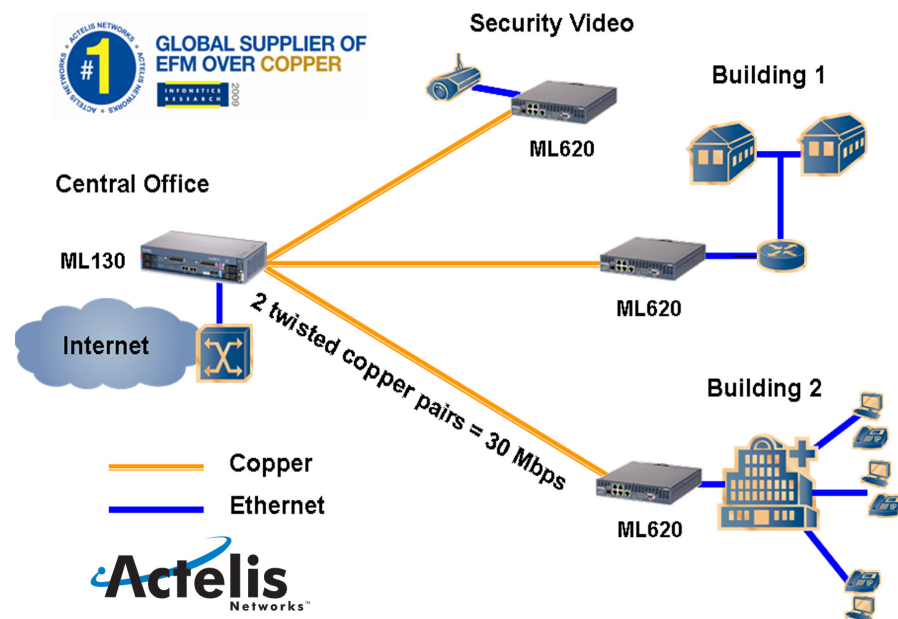
- Campuswide Hi-Speed Interconnect
- Ethernet Service Extension
- Fast Internet Access
- POS Data Backhaul
- Security Systems on Ethernet
- Surveillance Video Backhaul
- Transparent LAN

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## Actelis Provides a Migration Path to More Advanced Ethernet over Copper Technologies

This Actelis bundle provides an upgrade path to future broadband Ethernet over copper services, delivering higher bit rates along with true carrier-class resiliency and traffic management. Actelis enables greater scalability at both the CO and CPE, allowing more copper pairs to be recruited by its bonding techniques. This means each circuit can deliver up to 100 Mbps of symmetric bandwidth over existing copper infrastructure today.

At the CO end, the Actelis system can be scaled to support greater numbers of end users at increasing bandwidths, with the ability to stack multiple Actelis ML130 aggregation switches linked by a single backplane. This enables the CO platform to be expanded by aggregating additional ML130 switches. Each ML130 offers more expansion capabilities, up to 32 twisted pairs, compared to 24 in Cisco's system.



### Campus Ethernet Over Copper Example

Additionally, furthering its carrier-class abilities, the cards on the ML130 are hot swappable, which lessens downtime, speeds up maintenance and reduces OPEX. Hot swappability also allows new technologies to be deployed readily so that rate, reach, and reliability, or what Actelis refers to as *The 3 R's of EFM*™, can all be boosted further in the future without disruption to services.

Actelis brings sophisticated traffic management capabilities spanning the copper network, at both the CPE and CO ends, including advanced traffic classification with the ability to cater separately for the needs of voice, video and data within multiple queues. Support for different customer interfaces, including T1/E1 as well as Ethernet, enables further optimization of Ethernet service delivery over the copper infrastructure.

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