

QuFast SHDSL 600 Rep EFM Repeater - XR239 Carrier Ethernet over Copper™



The Actelis XR239 EFM Repeater is the first repeater for 2Base-TL Ethernet in the First Mile systems. Used with Actelis' Carrier Ethernet over Copper equipment, the repeater extends the reach of high capacity Ethernet to cover over 98% of loop lengths. Repeaters can be linked together and used to extend the reach of Carrier Ethernet over Copper services over 25 miles (40km). The repeaters are fully standard and spectrally compliant.

Actelis' Carrier Ethernet over Copper equipment already delivers the best performance over bonded EFM copper links. Actelis' patented EFM*plus*™ uses advanced signal processing to obtain the greatest rate and reach performance over voice-grade copper cabling. Actelis EFM*plus* delivers up to synchronous 5.7 Mbps per pair, and over 45 Mbps using 8 pair bonded links in excess of one mile (1.6km).

The Actelis XR239 EFM Repeater extends the reach of Carrier Ethernet over Copper by regenerating the signal up to 8 times between the carrier CO and subscriber CPE. The XR239 now extends the distance to over 25 miles (40km). EFM*plus* delivers 5.7 per pair for over a mile. Repeaters enable the full 5.7 Mbps per pair or a full 45 Mbps per 8 pairs for over 10 miles (50kft/15km).

Compliant with global and regional spectral requirements and IEEE 802.3ah EFM standards, the XR239 can be used in Carrier Ethernet in the First Mile networks safely and reliably to significantly extend the reach of Carrier Ethernet services.

Environmentally Hardened for Outside Plant or Indoor Use

The XR239 is designed for deployment in the outside plant or indoors in a standard 239 mechanical enclosure. Within buildings, the repeater can quickly be deployed in existing electrical facilities. For outside plant deployment, the XR239 has an environmentally hardened enclosure that supports a variety of field installations, including cabinet, pole, or building mounts. In either installation, the repeaters are line powered from a remote power feeding unit and have no additional electrical or environmental requirements.

Management – EFM OAM Features

The XR239 is fully IEEE 802.3ah Ethernet in the First Mile compliant. Loopback capabilities allow simple troubleshooting and fault isolation in repeater links. The XR239 EFM Repeater includes functionality that transparently forwards all EFM Operations, Administration and Maintenance (OAM) messages between CPE and CO equipment.

Power Feeding Units

The XR239 EFM Repeater is remotely powered from a power feeding unit. Actelis' PFU-8 can supply power to up to 4 repeaters spans, across 8 pairs, for a total of 16 repeaters.. Should additional repeater spans be required, a second PFU-8 can be installed at the remote end of the link, providing power for an additional 4 repeaters, for a total of 9 spans. The PFU-8 is UL and NEBS level-3 approved and meets the most stringent carrier environmental and safety requirements.

