

ML630R Ethernet Modem

The ML630R Ethernet Modem from Actelis® enable delivery of high-speed carrier Ethernet services over the existing copper infrastructure. The ML630R series is an ideal solution for SOHO and Enterprise customers, offering intelligent, compact bridge/router functionality with advanced service capabilities delivering up to 60 Mbps of symmetrical Ethernet traffic over four bonded pairs and up to 30 Mbps over two bonded pairs.

Available with either two or four copper pairs, the ML630R can be deployed as the CPE in a Point-to-Multi-Point configuration with Actelis' EFM aggregators or in a Point-to-Point configuration. Designed as a green, energy-efficient, and cost-effective CPE, the ML630R offers superior performance, extensive functionality and quiet, fanless operation along with rapid service delivery and complete utilization of the existing network infrastructure.

The ML630R uses G.Shdsl.bis and Ethernet in the First Mile (EFM) technologies to deliver symmetrical rates of up to 15 Mbps/pair with minimal overhead over a bonded logical link that include multiple pairs. Up to four pairs can be bonded together to create a single logical aggregated link utilizing TC-PAM 128 with up to 15 Mbps per pair and up to 60 Mbps over 4 pairs.

Seamless integrating into carrier Ethernet networks, the ML630R platform is interoperable with any standard Ethernet switch, router or hub, and allows assignment of a service/s or a customer per port with rate limitations. Up to four 10/100Base-T Ethernet interfaces are available per ML630R device.

In Point-to-Multi-Point (PTMP) configurations with Actelis ML2300/ML230/ML6916E aggregation powered by Actelis Networks' EFMplus™ technology, the rate, reach and reliability are significantly increased. All ML630R models provide 802.1q VLAN-aware bridging, L2 (Ethernet priority) and L3 (Diff-Serv) classification with six traffic classes.

ML630R integrates rich routing functionality that includes robust firewall security features and Virtual Private Network tunneling.

A web-based friendly GUI-interface can be used for configuring and managing the unit. The ML630R platform can be managed via Actelis' Element Management System, MetaASSIST™ EMS*.



Highlights

- IEEE 802.3ah Ethernet in the First Mile (EFM) 2Base-TL solution
- Up to 15Mbps per pair
- Rapid Service Deployment
- Superior Rate, Reach & Reliability
- Rich Routing Functionality
- UL, CE
- Quiet, Fanless Operation
- Green, Energy-efficient Design

Applications

- Transparent LAN Service
- Leased Lines Replacement
- Fast Internet Access
- Metro Ethernet Extension
- Private Campus Network Intra-Connection

Markets Served

- ILECs, CLECs, IOCs, PTTs, and Alternative Carriers
- Federal, State and Local Government Agencies
- Education, Health Care, Utilities, and Private Campuses

* Future Release



ML630R - ML632R, ML634R

Specifications

Interfaces

Ethernet (Network/User)

- **10/100Base-T:** 4 ports, Connector: RJ45, Auto-MDI

High Speed Link (Bonded Copper Pairs)

- **Protocol:** IEEE 802.3ah 2Base-TL
- **Line code:** ITU-T G.991.2 rev. 2
Supports TCPAM- 16/32/64/128
- **Bandwidth (symmetrical) : 2 modes**
Extended Mode (default): 15 Mbps per pair
Up to 60 Mbps - 4 pairs, up to 30 Mbps - 2 pairs
Standard Mode: Up to 5.7 Mbps per pair
- **Number of Copper Pairs:** 2 or 4 pairs models
Connector: RJ45 with up to 4 pairs
- **Spectral Compliance:** ITU-T G.991.2 (Annex A, B, F, G),

Management (Out-of-Band)

- **Craft:** Local console (RS-232)

Bridging/Routing Features

Bridging

- **Dynamic Bridging:** IEEE 802.1,
- **VLAN Tagging:** IEEE 802.1Q

Quality of Service

- **Classes of Service:** 6
- **Classification:** L2 802.1p/Q priorities
L3 DiffServ

Routing

- IP, TCP, UDP, ARP, RARP support
- DHCP server and client
- DNS server and proxy
- **Static Route, RIP1/ RIP2 dynamic routing, OSPF, BGP**
- **Network Address Translation (NAT/NAPT)**
- VRRP

Management

- **SNMP:** SNMP v3, v2C, v1
 - **Web-based GUI :** HTTP/HTTPS
 - **Local console and Telnet access (Menu driven)**
 - **Secure Access (option):** SSH v2
 - **Password protected management and access control list for administration**
 - **RADIUS & TACACS+ support**
 - **Software upgrade:** FTP/HTTP/HTTPS server
 - **IP addresses:** IPV4 and IPV6*
 - **Time Synchronization:** SNTP v3
 - **Statefull Packet Inspection Firewall**
 - **User Authentication:** Security logging
- #### Applications
- **EMS:** MetaASSIST EMS*

Front Panel Indicators (LEDs)

- PWR (Power)
- STATUS
- (4) LNKx (Link) - One per Ethernet port
- (4) 10/100 - One per Ethernet port
- (1-2) MLPx - One per modem port

Physical

- **Dimensions:**
Height: 40mm (1U),
Depth: 150mm,
Width: 220mm
- **Power DC:** 12 VDC nominal,
Power AC: 90-264 VAC, 47-63 Hz, up to 7W

Environmental

- **Operating Temp:** 0° to +50°C
- **Storage Temp:** -10° to +70°C
- **Relative humidity:** Up to 85%, non-cond.

Regulatory Compliance/Certifications

Safety

- CE LVD Safety, IEC-60950-1, EN 60950-1
- ITU-T K.21 Compliant

CE

- CE mark
- EN 55022, 55024, 61000-3-2, 61000-3-3

Environmental

- ETSI ETS 300 019

* Future Release

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