

## Compact, High-Performance 1U Active Ethernet Aggregation/MDU ONU

- ✓ *High-Performance 1U AE Aggregation/MDU ONU (Active Ethernet Uplinks)*
- ✓ *24-Port Fast Ethernet (RJ45, copper)*
- ✓ *SLMS family member supporting industry-leading multimedia traffic management*
- ✓ *Environmentally Hardened*
- ✓ *Fiber or Copper Fast/Gigabit Ethernet Uplinks with EAPS, RSTP (802.w), or LAG/LACP (802.3ad)*
- ✓ *WebGUI, CLI, SNMP Management*



The Zhone MX-180-LT-TP-RJ45 provides next generation Active Ethernet Aggregation/MDU ONU features in a compact, hardened form-factor that makes it easy and cost-effective to deliver uncompromising triple play services throughout serving area. Models are available with 24 copper Fast Ethernet Ports (RJ45).

This MX family product is designed for easy configuration and management via built-in Web Graphical Interface. It's compact design allows easy deployment in remote cabinets and space constrained central offices.

The MX-180-LT-RJ-45 offers multiple Fast/Gigabit Ethernet uplink interfaces. The Fast/Gigabit Ethernet interfaces on MX family products can be configured as linear, ring, or aggregated links.

Zhone's MX-180-LT-RJ-45 Ethernet solution offers full-rate Fast Ethernet performance for packet-based service delivery. This low-power, fully programmable, high performance solution enables service providers to cost-effectively generate additional revenue through their triple-play offering, including the different iterations of video services emerging in the marketplace. As an end-to-end solution, Zhone offers Fast Ethernet ONTs and CO products to offer high-speed, long reach and low cost solutions for multi-tenant and multi-dwelling unit (MxU), remote terminal and CO deployments.

### **Ease of Management**

MX-180-LT-RJ-45 provides simple yet powerful management facility via embedded Web GUI along with complete NMS integration.

### **Triple Play Services**

MX-180-LT-TP-RJ45 includes high-performance packet switching with advanced IP capabilities to deliver secure, reliable, and efficient voice, data, and video services. Now service providers can offer compelling bundles of multi-line voice, high-speed Internet access, and multi-set IP video (including HDTV) over their existing fiber infrastructure.

MX-180-LT-TP-RJ45 is defined by its ease of use and packet processing/switching capability to support rich triple-play services on each subscriber port.

### **Optical or Copper Transport**

MX-180-LT-TP-RJ45 provides multiple SFP-based Fast/Gigabit Ethernet uplinks, supporting both copper and fiber SFPs, to provide simple cost-effective transport. The FastE/GigE uplink ports allow daisy-chained linear or ring deployments, and on rings the MX-180-LT-TP-RJ45 provides standards-based EAPS support.

### **End-to-End Access Management**

The easy-to-use Zhone Management System (ZMS) provides OSMINE-certified management and provisioning across the access network, from CPE to the Central Office. The MX-180-LT-TP-RJ45 is fully remote managed, allowing carriers to reduce service turn-up intervals, reduce truck rolls, and ultimately, improve customer service.

## Technical Specifications

### Dimensions

- 1.72in H x 17.31in W x 9.06in D
- 4.37cm H x 43.97 cm W x 23.02 cm D

### Weight

- 18lbs (8kg)

### Power

- DC: -43.75V to -62V
- Optional AC and Line Power Supplies

### Interfaces

- Uplink Interfaces:
  - MX-180-LT-TP-RJ45
  - (3) 100/1000Mbps Ethernet (Copper or Fiber) SFP slots
- Subscriber Line Interfaces:
  - (24) 100Mbps Ethernet SFP slots (Copper RJ45)
- Serial craft management interface
- 10/100BT management interface

### Standards Support

- IEEE 802.3 Ethernet
- IEEE 802.1p
- IEEE 802.1Q
- IEEE 802.w
- IEEE 802.3ad

### Protocol Support

- IP host and gateway support
- EAPS RFC3619 support
- RIP v1 (RFC 1058) RIP v2 (RFC 2453)
- DHCP server (RFC 2131, 2132)
- DHCP Relay with Option 82
- Bridging 802.1D support
- VLAN 802.1p/q support
- RSTP 802.w support
- Link Aggregation and LACP 802.3ad support
- Dense / sparse multicast support, IGMPv2
- Integrated access control and content protection
- RADIUS Authentication

### Management

- In-band IP
- Out-band IP over 10/100BT Ethernet or V.24 RS-232 serial for async terminal
- ZMS (Zhone Management System) via SNMP v2c for GUI and CORBA/XML Northbound interface
- Embedded Web Graphical Interface
- Command Line Interface (CLI)

### Operating Requirements

- Operating Temperature: -40°F to 149°F (-40°C to 65°C)
- Storage temperature: -40°F to 158°F (-40°C to 70°C)
- Humidity: Up to 85%, non-condensing
- Altitude: -200ft to 16,500ft (-60m to 5,000m)

## Ordering Information

### Models

MX-180-LT-TP-RJ45	MX LITE 24-PORT FE (RJ45), 3 FE/GE, -48V DC (REQUIRES SFPS)
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### Accessories

XP-AC-SUPPLY	Raptor/MALC XP AC Power Supply, 90-264 VAC, 48 VDC, 150W
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XP-CO-LP-SHELF	Raptor/MALC XP Line Power CO Shelf 40-60VDC IN, +/- 190VDC OUT, w/ 24 channels
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XP-RT-LP-UNIT	Raptor/MALC XP Line Power RT Unit +/- 190VDC IN, 40-60VDC OUT, w/ 5 channels
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