



2609GN-R

FiberLAN Rack-mount GPON ONT

Next generation FiberLAN MDU ONT optimized for desktop and wall-mount installations using Zhone leading-edge GPON technology.

Features & Benefits

- + Supports 2.5Gbps/1.25Gbps (Downstream/Upstream) with integrated GPON WAN interface
- + Eight gigabit multi-rate 10/100/1000M Ethernet interfaces
- + 802.3af, at, and bt PoE++ compliant
- + Up to 240W of PoE power per ONT
- + Enterprise LAN features (802.1x, LLDP)

The Zhone 2609GN-R series GPON ONTs is the next generation of ONTs designed for Enterprise and Hospitality deployments requiring hardened rack-mount or wall-mount installations. The ONT provides customers with 8 x 1GigE LAN ports, all with PoE++ capability, allowing for convenient connections to IP phones, PTZ cameras, wireless access points, and remote switches. Configurable per-port PoE limits help direct power where it is needed. The 2609GN-R LAN ports can be separated into different services allowing the configuration of dedicated ports for IP video and data for one or more business work groups or departments. Unique VLANs may be configured per user to ensure full isolation of each department's data traffic.



The Zhone 2609GN-R includes one SC/APC GPON interface, eight 10/100/1000Base-T ports, all with PoE++ capability allowing for powered connections to IP devices. Configurable per-port PoE limits up to 60W on any port and 240W per system. The 2609GN-R is powered by a nominal 48-56VDC source from a centralized power distribution system that may also provide battery backup. Rack-mount flanges allow ONTs to be installed in a number of different configurations including optional 19" rack-mount units.

Service Scenario

The FiberLAN GPON network consists of an Optical Line Termination (OLT) located in a central location, and a set of Enterprise grade Optical Network Terminals (ONTs). All Ethernet LAN ports can be separated into different services allowing the configuration of dedicated ports for IP video and data for one or more business work groups or departments. Unique VLANs may be configured per user to ensure full isolation of each department's data traffic.

With LLDP-MED support for voice VLAN advertisement, 802.1x authentication, and Zhone's Dynamic VLAN Mapping capability for handling complex sets of packet classification rules, operators can expertly manage traffic on each ONT LAN port to provide optimum customer experiences.

Key Service Attributes

- + FSAN ITU-T G.984 GPON Class B+ compliant
- + Industrial-temperature operation, support of outdoor applications
- + Variable rack-mount and wall-mount installations
- + Eight 1GBase-T Ethernet ports, RJ45 supporting 1Gbps symmetrical services
- + All ports 802.3af, at, and bt PoE++ compliant
- + Support of Radius 802.1x, LLDP
- + IPTV multicast, IGMPv2 and IGMPv3 services
- + Any-port, Any-service data model
- + Traffic management including Q-in-Q tagging, 802.1Q VLANs, multiple subscriber VLANs, per-port rate limiting
- + 802.1p priority bits, DiffServ and priority queues based on services types.
- + OMCI and TR-069/TR-98 management
- + Zhone Universal Service Provisioning (USP), ONT SNMP Client
- + Local Web UI, Zhone CPE Manager feature set
- + +48 VDC power source, option for remote powering and battery backup

2609GN-R FiberLAN Rack-Mount GPON ONT

Product Specifications

Hardware

- Dimensions
 - Width: 10.0" (254mm)
 - Depth: 6.1" (155mm)
- Weight 1.8 LB (0.77 kg)
- 256GByte Flash Memory/128MByte SDRAM (DDR)
- GPON WAN Interface
- Capacity: 2.5Gbps Down/1.25Gbps Up

Interfaces

- WAN: 1 SC/APC port, GPON
- LAN: 8 ports 10/100/1000MBase-T Ethernet (RJ45)
- Power: 1 7-pin Molex connector
- LED Indicators
- Recessed RESET button

GPON

- Class B+ optics, 20km (12.4 miles), reach, max split 64
- Maximum ODN Attenuation, +28.5 dB link budget
- GPON Type B redundancy support
- xPON co-existence filter
- Transmitter, 1310nm, +0.5 to +5 dBm, DBF
- Receiver, 1490nm, -28 dBm, APD/TIA
- Forward Error Correction (FEC) per G.989.3
- Dying Gasp

Ethernet LAN ports

- Auto-MDI-X crossover control
- Auto-Speed or manual selection
- IEEE 802.3af, at, and bt PoE support on all ports
- Max 61.6W PoE load on any port up to 123.2W total
- IEEE 802.3ab 1000Base-T
- IEEE 802.3u 100Base-T
- IEEE 802.3az EEE
- IEEE 802.1x Authentication

Quality of Service

- HW-based internal IEEE 802.1p (CoS)
- Strict Priority (SP)
- 802.1Q(VLAN tag) QoS mapping ToS/CoS
- 8 queues per port
- Classified traffic can be tagged with VLAN ID and Ethernet Priority bit, and can be assigned to priority queues
- Classify packets into different IEEE 802.1p priority queues according to DSCP values (RFC 2475)
- The range of traffic shaping or ratelimit shall be between 64 Kbps to the maximum port rate with 64kbps granularity. The accuracy error shall be less than $\pm 10\%$.
- DSCP IP CoS (RFC 2475)

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Product Specifications

Software Features

- IEEE802.1D and IEEE802.1Q
- Address learning with auto aging- L2/BPDU Filter
- Support 2048 MAC learning addresses
- Multiple T-CONTs/GEM ports per device
- Flexible mapping between GEM port and T-CONT
- Priority queues and scheduling on upstream
- Activation with automatic discovered serial Number and password

IP Routing and Firewall

- DHCP, Static-IP and PPPoE
- NAT/NAPT
- DNS Proxy
- DHCP Server
- UPnP, plug and play

IPv6

- IPv4 and IPv6 Dual-Stack-Lite
- Bridged Mode (transparent pass thru of IPv6 frames)
- IPv6 support of BRouted and PPPoE Bridged VLANs
- DHCPv6 client and server
- Router Advertisement on LAN-side interfaces
- SLAAC for automatic acquisition of WAN-side IPv6 addresses and GW
- CLI, HTTP and TR-069 management via IPv6

Environmental

- Operating Temperature 5~140°F (-15~+60°C)
Ex Temperature
- Storage temperature -40~121°F (-40~85°C)
- Operating humidity 5 to 95% (non-condensing)
- Altitude: -200 to 10,000 feet (-61 to 3,048 m) above sea level

Powering

- DC power, 44-56VDC
- Input power, 250W maximum (6W ONT TYP, 244W PoE)
- Power consumption, ~8W maximum

Management

- ITU-T 984.1/G988 compliant OMCI interface
- CPE Manager Web UI
- CLI over telnet
- SNMP Client
- TR-069, TR-104, TR-98
- Zhone Universal Service Provisioning
- LED indications for status

Compliance

- FCC Part 15 Class B
- ICES-003 Class B
- EN55022, EN55024
- IEC 62368-1
- FDA IEC 60825-1
- RoHS 2015/863/EU

Ordering Information

Model	Description
2609GN-R	1x SC/APC port, GPON (Class B+) 8x 1G RJ45 ports, 802.3af, at, and bt PoE++ compliant 1x 7-pin Molex, 48VDC power input -40 to +65°C
HX-2609GN-R-00	No power supply
HX-26XX_56XX-19-MOUNT	19" Rack-Mount Kit for 26xx-R and 56xx-R FiberLAN ONTs



Zhone Technologies, Inc