



2644GN-R

FiberLAN Rack-mount GPON ONT

Next generation FiberLAN MDU ONT with voice FXS ports optimized for rack-mount and wall-mount installations using Zhone leading-edge GPON technology.

Features & Benefits

- + Supports 2.5Gbps/1.25Gbps (Downstream/Upstream) with integrated GPON WAN interface
- + Four gigabit multi-rate 10/100/1000M Ethernet interfaces
- + Four POTS interfaces compliant to SIP and MGPC telephony standards
- + Enterprise LAN features (802.1x, LLDP)

The Zhone 2644GN-R series GPON ONTs is the next generation of ONTs designed for Enterprise and Hospitality deployments requiring hardened rack-mount or wall-mount installations offer multi-port Ethernet connectivity and voice or fax interfaces. The 2644GN-R GPON ONTs provide customers with four 1GigE LAN ports that 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 2644GN-R includes one SC/APC GPON interface, four 10/100/1000Base-T ports, and four FXS RJ11 voice ports for phone or fax. The ONT supports wire-speed L2 bridging and L3 gateway features, with carrier grade voice services and option for Zhone approved battery backup unit with battery status telemetry. 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 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
- + Four 10/100/1000MBase-T Ethernet ports, RJ45 supporting 1Gbps symmetrical services
- + Four voice ports, FXS interfaces compliant to ANSI or ETSI standards, SIP and MGCP
- + 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 service types.
- + OMCI and TR-069/TR-98 management
- + Zhone Universal Service Provisioning (USP), ONT SNMP Client
- + Local Web UI, Zhone CPE Manager feature set
- + +12 VDC power source, option for battery backup

2644GN-R FiberLAN Rack-Mount GPON ONT

Product Specifications

Hardware

- Dimensions
 - Width: 10.0" (254mm)
 - Depth: 6.1" (155mm)
 - Height: 1.2" (31mm)
- Weight: 1.8 LB (0.77 kg)
- 256MByte Flash Memory
- 512MByte SDRAM (DDR3)
- GPON WAN Interface
- GPON WAN Capacity: 2.5Gbps Down/1.25Gbps Up

Interfaces

- WAN: 1x SC/APC port, GPON
- LAN: 4x ports 10/100/1000MBase-T Ethernet (RJ45)
- Telephone: 4x ports 2-wire RJ11
- Power: 1x 2-pin barrel connector, 1x 2x4 8-pin 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
- G.9805 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 802.3ab 1000Base-T
- IEEE 802.3u 100Base-T
- IEEE 802.3az EEE
- IEEE 802.1x Authentication

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Product Specifications

• Telephone

- SIP (RFC 3261)
- MGCP
- Codec: G.711 (u-law and A-law), G.729B, G726
- RENs per line: 5 maximum
- Drop length: Residential short loop, 152.4 m (500 ft.)
- Output max: 25mA
- Ring voltage: 48Vrms @ 20/25 Hz

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
- Classify traffic with VLAN ID tags and Ethernet Priority bit, and assign to priority queues
- Classify packets into different IEEE 802.1p priority queues according to DSCP values (RFC 2475)
- Traffic shaping range 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)

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 automatically 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: -40 to 149°F (-40 to +65°C)
- Cold Start Temperature: -4 to 149°F (-20 to +65°C)
- Storage Temperature: -40 to 167°F (-40 to +75°C)
- Operating Humidity: 5 to 95% (non-condensing)
- Altitude: -200 to 10,000 feet (-61 to 3,048 m)

Powering

- DC Power: +12 VDC nominal, +10-16 VDC / 1.0A
- Input Power: 90-240VAC, 50/60Hz
- Power Consumption: ~12W maximum

Management

- ITU-T 984.1/G988 compliant OMCI interface
- CPE Manager Web UI
- CLI over Telnet
- SNMP Client
- TR-069, TR-104, TR-098
- Zhone Universal Service Provisioning
- LED indications for status
- LLDP-MED (VLAN support)

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
2644GN-R	1x SC/APC port, GPON (Class B+) 4x 1G RJ45 ports 4x POTS RJ11 ports 1x 2-pin barrel power connector 1x 8-pin barrel, 48VDC BBU power input -40 to +65°C
HX-2644GN-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