zhone

5628XS

## XGS-PON/10G Active Ethernet FiberLAN Desktop ONT

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

Features & Benefits

+ Supports 10Gbps/10Gbps (Downstream/Upstream) with pluggable SFP+ for XGS-PON or 10G Active Ethernet WAN interface
+ Eight gigabit multi-rate 10/100/1000M Ethernet interfaces
+ Two POTS interfaces compliant to SIP and MGPC telephony standards
+ Enterprise LAN features (802.1x, LLDP)
+ Fiber management tray option

The Zhone 5628XS series XGS-PON/10G AE ONTs is the next generation of ONTs designed for Enterprise and Hospitality deployments requiring secure, Ethernet connectivity and voice or fax interfaces with a compact footprint. The 5628XS XGS-PON/10G AE ONTs provide customers with 8x10/100/1000BaseT LAN ports, two POTS interfaces compliant to SIP and MGPC telephony standards. The 5628XS 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 5628XS includes SFP+ cage supporting XGS-PON or 10G Active Ethernet, four 10/100/1000Base-T ports, two 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.
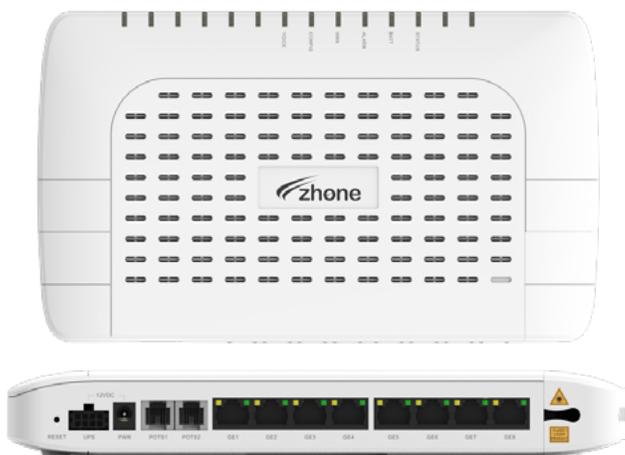
Service Scenario

The FiberLAN XGS-PON 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

+ MSA-compliant SFP+ cage for XGS-PON or 10G Active Ethernet modules
+ Eight 1GBase-T Ethernet ports, RJ45 supporting 1Gbps symmetrical services
+ Two voice ports, FXS interfaces compliant to ANSI and 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
+ +48 VDC power source, option for remote powering and battery backup

5628XS FiberLAN Desktop ONT
Product Specifications

Hardware
- Dimensions
  Width: 9.9" (252mm)
  Depth: 5.8" (148mm)
  Height: 1.50" (38mm)
- Weight: 1.124 LB (0.51 kg)
- 256MB Flash Memory
- 512MB SDRAM (DDR3)
- XGS-PON/10G Active Ethernet WAN Interface
- Capacity:10Gbps Down/10Gbps Up

Interfaces
- WAN: 1x SFP+ cage, XGS-PON/10G Active Ethernet
- LAN: 8x ports 10/100/1000MBase-T Ethernet (RJ45)
- Telephone: 2x ports 2-wire (RJ11)
- Power: 2-pin barrel connector, 2x4 8-pin connector
- LED Indicators
- Recessed RESET button

XGS-PON/10GS
- 1 x10 MSA-compliant SFP+ cage for PON or AE modules (optical transceiver not included)
- XGSPON requires: ITU-T G.9807.1 compliant module. 10Gbps 1270nm burst-mode transmitter and 1577nm continues-mode receiver.
- 10G AE requires: IEEE 802.3ae 10GBaseLR/LW compliant module. 10Gbps 1310 DBF laser transmitter and PIN/TIA receiver.

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

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 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 between 64 kbps to the maximum port rate with 64kbps granularity. The accuracy error shall be less than ±10%.
- DSCP IP CoS (RFC 2475)

5628XS FiberLAN Desktop ONT
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

Software Features
- IIEEE802.1D 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)
- 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)

Powering
- DC power: +12 VDC nominal, +10-16 VDC /1.0A
- Input power: 90-240VAC, 50/60Hz
- 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
- CE Mark
- Safety ETL/Intertek
- IEC 62368-1, UL 62368-1, EN 62368-1
- FDA IEC 60825-1
- RoHS 2015/863/EU

Ordering Information

Model	Description
5628XS	1x SFP+ cage, XGS-PON/10G Active Ethernet
	8x 1G RJ45 ports
	1x 2-pin barrel, 12VDC power connector
	1x 8-pin barrel, 12VDC (BBU) power input with telemetry
	OT: -15°C to +60°C
HX-5628XS-NA HX-5628XS-EU HX-5628XS-UK HX-5628XS-00	North America EU UK No power supply

Interface Unit and Connector Specifications

The following different optical modules are available and can be inserted into the dedicated modules:

Active Ethernet/1.25 Gbps Down/1.25 Gbps Up	
Vendor	**Part Number/Description**
Axcen Photonics	AXGD-1354-0W33 (Tx1310/Rx1310 - 10 km)
Axcen Photonics	AXGD-1254-0583 (Tx1310/Rx1490 - 20 km)
Axcen Photonics	AXGD-3454-0583 (Tx1490/Rx1310 - 20 km)
Axcen Photonics	AXGD-1654-0533 (Tx1310/Rx1550 - 10 km)
Axcen Photonics	AXGD-1654-0583 (Tx1310/Rx1550 - 20 km)
Axcen Photonics	AXGD-3654-0593 (Tx1310/Rx1550 - 40 km)
Axcen Photonics	AXGD-3754-0533 (Tx1550/Rx1310 - 10 km)
Axcen Photonics	AXGD-3754-0583 (Tx1550/Rx1310 - 20 km)
Axcen Photonics	AXGD-3754-0593 (Tx1550/Rx1310 - 40 km)
ECM	BPL-G3523-ID (Tx1310/Rx1550 - 20 km)
ECM	BPL-G3543-ID (Tx1310/Rx1550 - 40 km)
ECM	BPL-G5323-ID (Tx1550/Rx1310 - 20 km)
ECM	BPL-G5343-ID (Tx1550/Rx1310 - 40 km)
ECM	BPL-G5363-ID (Tx1550/Rx1310 - 60 km)
FORMERICAOE	BIDI13492160006 (Tx1310/Rx1490 - 10 km)
FORMERICAOE	TBC-S2CA1-F11 (Tx1310/Rx1490 - 10 km)
FORMERICAOE	BIDI49132160006 (Tx1490/Rx1310 - 10 km)
FORMERICAOE	TBC-S2CD1-F11 (Tx1490/Rx1310 - 10 km)
FORMERICAOE	TBD-S2CB1-K11 (Tx1310/Rx1550 - 40 km)
FORMERICAOE	BIDI15132193006 (Tx1550/Rx1310 - 40 km)
FORMERICAOE	TBD-S2CK1-K11 (Tx1550/Rx1310 - 40 km)
Hisense or Ligent	LTD1302-BH (Tx1310/Rx1310 - 10 km)
OptoMedia	PB4-S4-4603L-I (Tx1550/Rx1310 - 60 km)
PROLABS	SFPGEBX401490 (Tx1490/Rx1550 - 40 km)
PROLABS	SFP-GEBX40-55 (Tx1550/Rx1490 - 40 km)
Titan or TIOPTICS	LS38-C3S-TI-N-D9 (Tx1310/Rx1490 - 10 km)
Titan or TIOPTICS	APSB34123IDL20 (Tx1310/Rx1490 - 20 km)
Titan or TIOPTICS	LS48-C3L-TI-N-B4 (Tx1490/Rx1310 - 10 km)
Titan or TIOPTICS	LS48-C3S-TI-N-D4 (Tx1490/Rx1310 - 10 km)
Titan or TIOPTICS	APSB43123IDL20 (Tx1490/Rx1310 - 20 km)
Titan or TIOPTICS	LS38-C3S-TI-N-D3 (Tx1310/Rx1550 - 10 km)

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Active Ethernet/1.25 Gbps Down/1.25 Gbps Up	
Vendor	**Part Number/Description**
Titan or TIOPTICS	APSB35123IDL20 (Tx1310/Rx1550 - 20 km)
Titan or TIOPTICS	LS38-C3L-TI-N-D3 (Tx1310/Rx1550 - 40 km)
Titan or TIOPTICS	LS38-C3U-TI-N-D3 (Tx1310/Rx1550 - 60 km)
Titan or TIOPTICS	LS48-C3S-TI-N-D5 (Tx1550/Rx1310 - 10 km)
Titan or TIOPTICS	LS48-C3M-TI-N-D5 (Tx1550/Rx1310 - 20 km)
Titan or TIOPTICS	LS48-C3U-TI-N-D5 (Tx1550/Rx1310 - 60 km)
Active Ethernet/10 Gbps Down/10 Gbps Up	
Hisense	LTF2302-BC+ (Tx1270/Rx1330 - 20 km)
Hisense	LTF3202-BC+ (Tx1330/Rx1270 - 20 km)
Hisense	LTF2302-BH+ (Tx1270/Rx1330 - 20 km)
Hisense	LTF3202-BH+ (Tx1330/Rx1270 - 20 km)
Ligent Photonics	LTF2304-BH (Tx1270/Rx1330 - 40 km)
Ligent Photonics	LTF3204-BH (Tx1330/Rx1270 - 40 km)
Ligent Photonics	LTF8502-BH (Tx850/Rx850 - 300 M)
XG-PON1/10 Gbps Down/2.5 Gbps Up	
Hisense	LTF7221-BH+ (Tx1270/Rx1577 - 20 km)
SUNSTAR	D2276R-STHA (Tx1270/Rx1577 - 20 km)
T&W	TW91A6H-CGAL-G95 (Tx1270/Rx1577 - 20 km)
WTD	RTXM166-602 (Tx1270/Rx1577 - 20 km)
XGS-PON/10 Gbps Down/10 Gbps Up	
EZconn Corp.	ETP69966-7SB4-DZ (Tx1270/Rx1577 - 20 km)
EZconn Corp.	ETP69966-7TB4-DZ (Tx1270/Rx1577 - 20 km)
Hisense	LTF7225-BC+ (Tx1270/Rx1577 - 20 km)
Hisense	LTF7225-BH+ (Tx1270/Rx1577 - 20 km)
Hisense	LTF7225-BCA+ (Tx1270/Rx1577 - 20 km)
Hisense	LTF7225-BHA+ (Tx1270/Rx1577 - 20 km)
SUNSTAR	D22799-STHC (Tx1270/Rx1577 - 20 km)
T&W	TW91A9H-HCAL-UPC (Tx1270/Rx1577 - 20 km)
WTD	RTXM166-702 (Tx1270/Rx1577 - 20 km)

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