



## 5225A

### XGS-PON/10GS AnyPON ONT

10 GigE ONT optimized for residential and small-business applications using Zhone leading-edge xPON 10G technology.

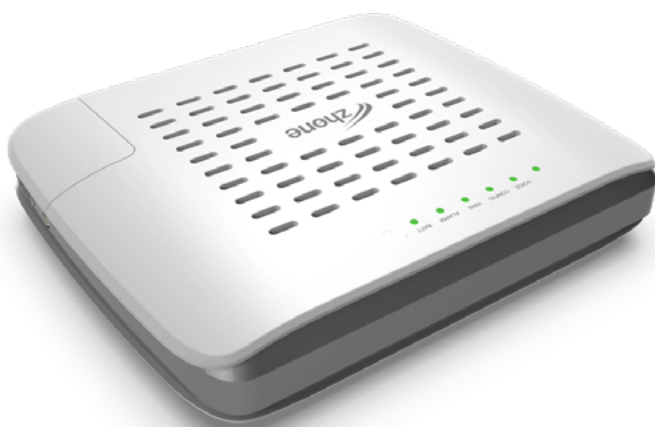
#### Features & Benefits

- + 10 Gbps symmetric throughput (downstream/upstream) via pluggable SFP+ WAN interface
- + 1× 10 Gigabit multi rate Ethernet port supporting 100M / 1G / 2.5G / 5G / 10G
- + 4× Gigabit Ethernet ports supporting 10M / 100M / 1G
- + 2× POTS ports, compliant with SIP and MGCP telephony standards
- + Enterprise-class LAN features (802.1X, LLDP)
- + Optional fiber management tray

The 5225A is the next generation of 10Gbit ONTs designed for advanced triple-play deployments in home and business environments in a compact footprint. The SFP+ based uplink supports both symmetric 10/10 XGSPON and Active Ethernet technologies by simply swapping the optical transceiver.

All Ethernet LAN ports can be used to support any-port-any-service model or separated into different services allowing the configuration of dedicated ports for IP video and data. Unique VLANs may also be configured per user to ensure full isolation of each customer's data traffic.

The 5225A AnyPON ONT provides four 10/100/1000 Base-T, one 100/1000/2.5G/5G/10GBase-T LAN ports, and two FXS RJ11 voice ports on one RJ11 interface. The ONT supports wire-speed L2 bridging and L3 gateway features, with carrier grade voice services with the option for Zhone approved battery backup unit with battery status telemetry.



## Service Scenario

The XGS-PON/10GS network consists of an 10G+ 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

- + XGS-PON ITU-T G.9807.1-compliant interface or 10GS point-to-point Ethernet interface
- + Supports 10Gbps 1270nm burst-mode transmitter and 1577nm continues-mode receiver
- + 1x 10GBase-T Ethernet ports (RJ45) supporting 10Gbps symmetrical services
- + 4x 10/100/1000MBase-T Ethernet ports, RJ45 supporting 1Gbps symmetrical services
- + 2x FXS voice ports compliant to ANSI and ETSI standards, supporting SIP and MGCP
- + Support of Radius 802.1x, LLDP
- + IPTV multicast, including IGMPv2 and IGMPv3
- + 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
- + 12 VDC uninterruptable service power source, option for battery backup

## 5225A XGS-PON/10GS AnyPON ONT

### Product Specifications

#### Hardware

- Dimensions
  - Width: 6.2" (158mm)
  - Depth: 5.9" (150mm)
  - Height: 1.54" (39mm)
- Weight 0.81 LB (0.37 kg)
- 256MByte Flash Memory
- 512MByte SDRAM (DDR3)
- Capacity:10Gbps Down/1oGbps Up

#### Ethernet LAN ports

- Auto-MDI-X crossover control
- Auto-Speed or manual selection
- IEEE 802.3an 10GBase-T
- IEEE 802.3bz 2.5G/5GBase-T
- IEEE 802.3ab 1000Base-T
- IEEE 802.3u 100Base-T
- IEEE 802.3az EEE
- IEEE 802.1x Authentication

#### Interfaces

- WAN: 1x SFP+ cage, xPON or Ethernet
- LAN: 1x 100/1G/2.5G/5G/10GBase-T
- LAN, 4x 10/100/1000MBase-T Ethernet (RJ45)
- Telephone: 1 x 4-wire RJ11 (requires Y-splitter)
- Power:
  - 1x 2-pin barrel connector
  - 1x 2x4 8-pin battery connector
- LED Indicators
- Recessed RESET button

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## Product Specifications

### 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 rate-limit 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)

### 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

- 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

### 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

### Environmental

- Operating Temperature: -4 to 140°F (-20 to +60°C)
- Storage temperature: -40 to 121°F (-40 to +85°C)
- Operating humidity: 5 to 95% (non-condensing)
- Altitude: -200 to 10,000 feet (-61 to 3,048 m)

### Powering

- DC power, 12VDC, 1.5A maximum
- Power adapter:
  - Input: 100-240VAC, 50/60Hz
  - Output: 12VDC, 18W
- Power consumption, ~14W maximum

### 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
<b>5225A</b>	1 x SFP+ cage, xPON and 10GS Ethernet 1x 10G RJ45 port, 802.3at, PoE compliant 4 x 1G RJ45 ports, 802.3at, PoE compliant 1x 12VDC barrel connector, 2-pin power 1x Optional 2x4 Molex Battery-Backup (BBU), 8-pin power Operating Temperature: -20 to +60°C
<b>ZNID-10GS-5225A -NA</b> <b>ZNID-10GS-5225A -EU</b> <b>ZNID-10GS-5225A -UK</b> <b>ZNID-10GS-5225A -00</b>	North America Europe United Kingdom No power supply
<b>XCVR-XGS-SFP+-ONU-IA</b>	XGSPON 10/10G ONU SFP+, 1270NM TX, 1577NM RX SINGLE FIBER SC/APC
<b>XCVR-AE-SFP+-SBD-1270-20KM-IA</b>	ACTIVE ETHERNET 10GB/S SFP+, 1270NM TX, 1330NM RX, 20KM, SINGLE FIBER, LC/UPC



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