

Enabling the
hyper-connected world



5222AE

Advanced 10GE ONT

The first generation of 10 Gigabit G-Series ONT enables subscribers to enjoy bandwidth-intensive multimedia services with leading-edge 10GE technology.

Features & Benefits

- + Supports 10Gbps/10Gbps (Downstream/Upstream) with integrated 10GE WAN interface
- + High-capacity multi-rate 1G/2.5G/5G/10G Ethernet interface
- + Two gigabit multi-rate 10/100/1000M Ethernet interfaces
- + Two POTS interfaces compliant to SIP and MGPC telephony standards
- + USB 3.0
- + Integrated with Zhone Xtreme OEO/SDN-C

The Zhone 5222AE is a high-performance, 10GE compliant Optical Network Terminal (ONT) able to support service provider requirements for high-speed data and voice in a cost-effective design. The ONT is fully compliant with 10G Active Ethernet standards and has integrated, on-board optics supporting 1310nm and 1490nm wavelengths. The 5222AE offers symmetrical data rates of 10Gbps downstream and 10Gbps upstream able to deliver access edge services and full range of residential and business use cases required.

With unique software management features, subscribers can enjoy hyper connected multimedia services faster, easier, and more reliable.

The 5222AE includes one SC/APC 10GE interface, one 1G/2.5G/5G/10G Base-T port, two 10/100/1000 Base-T ports, and two FXS RJ11 voice ports. The ONT supports wire-speed L2 bridging and carrier grade lifeline voice services using a Zhone approved battery backup unit with battery status telemetry.



Service Scenario

The 10GE network consists of an Optical Line Termination (OLT) located at the Central Office, and a set of residential Single-Family Unit (SFU) and Multi Dwelling Unit (MDU) locations with Optical Network Terminals (ONTs). Between them is the optical distribution network (ODN) comprised of fibers, passive optical splitters and couplers.

The 5222AE ONT supports 10 Gigabit symmetrical data using the 10GE standard. Services include High-Speed Internet (HIS), Packet Voice, IPTV, OTT video, and cloud enabled services to multi-media devices.

Key Service Attributes

- + 10G Active Ethernet Point-to-Point compliant
- + One 10GBase-T Ethernet port, RJ45 supporting 10Gbps symmetrical services
- + Two 10/100/1000MBase-T Ethernet ports, RJ45 supporting 1Gbps symmetrical services
- + Two voice ports, FXS interfaces compliant to ANSI and ETSI standards, SIP and MGCP
- + MTU jumbo frame 9216-byte support
- + 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
- + Transparent LAN services, LLDP-MED
- + 12 VDC power adapter, optional uninterruptable service power source with battery backup

5222AE Advanced 10GE ONT Product Specifications

Hardware

- Dimensions
 - Width: 8.5" (216mm)
 - Depth: 5.6" (142mm)
 - Height: 1.4" (35mm)
- Weight 0.81 LB (0.37 kg)
- 256MB Flash Memory
- 512MB SDRAM (DDR3)
- 10GE WAN Interface
- Capacity: 10Gbps Down/10Gbps Up

Interfaces

- WAN: 1x SC/APC port, 10GE
- LAN: 1x 10GBase-T Ethernet (RJ45) & 2x 1000MBase-T Ethernet (RJ45) ports
- Telephone: 2x POTS ports, 2-wire (RJ11)
- USB 3.0
- Power:
 - 1x 2-pin barrel connector
 - 1x 2x4 8-pin battery connector
- LED Indicators
- Power ON/OFF switch
- Recessed RESET button

10G (Active Ethernet)

- SFF Optics, 60km (37 miles) reach
- Transmitter: 1310nm, -2.0 to +8.0 dBm, DFB
- Receiver: 1490nm, -23 dBm, APD/TIA

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

Quality of Service

- HW-based internal IEEE 802.1p (CoS)
- Strict Priority (SP)
- 802.1Q(VLAN tag) QoS mapping ToS/CoS
- DSCP IP CoS (RFC 2475)
- 8 queues per port
- Classified traffic tagging with VLAN ID and Ethernet Priority bit, and priority queue assignment.
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- Traffic Shaping (ratelimit) range: 64 kbps to the maximum port rate with 64kbps granularity. Accuracy error: < ±10%.

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Product Specifications

Telephone

- SIP (RFC 3261)
- MGCP
- Codec: G.711 (u-law and A-law), G.729B, G.726
- 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
- Priority queues and scheduling on upstream
- Activation with automatic discovered serial Number and password
- Dying Gasp

Management

- ITU-T 984.1/G988 compliant OMCI interface
- CPE Manager Web UI
- CLI over telnet
- SNMP Client
- TR-069, TR-104, TR-098

Environmental

- Operating Temperature: 32 to 104°F (0 to +40°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

- Input power: 100-240VAC, 50/60Hz
- DC power: 12VDC, 1.5A maximum
- 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
5222AE	1x SC/APC port, 10GE (FSS) 1x 10G RJ45 port, 2x 1G RJ45 ports 2x POTS RJ11 ports 1x USB 3.0 1x 12VDC barrel connector, 2-pin power 1x 2x4 Molex Battery-Backup (BBU), 8-pin power 0°C to +40°C
HX-5222AE-NA HX-5222AE-EU HX-5222AE-UK HX-5222AE-00	North America Europe United Kingdom No power supply



Zhone Technologies, Inc