

Indoor GPON/GE ONT for Commercial Applications

- ✓ *T1/E1 and Carrier Ethernet Services over Fiber*
- ✓ *Dual Uplink SFP Ports for GPON or GE SFP Transceivers*
- ✓ *Eight T1/E1 Ports*
- ✓ *Eight POTS Ports*
- ✓ *Nine GE Ports with PoE*
- ✓ *Two SFP LAN Ports*
- ✓ *Extended Operating Temperature*
- ✓ *Remote Management: Web GUI, ZMS, CPE Manager, USP, CLI, TR-069*
- ✓ *AC and DC Models*



The zNID 96XX Series ONTs are designed to transport Gb data and T1/E1 circuit emulation services over a GPON or Active Ethernet optical link. Mobile backhaul applications are easily supported with 9 x GE ports and up to 8 x T1/E1 ports.

A variety of T1/E1 clocking modes are supported including Adaptive, Synchronous and Differential to provide accurate clock recovery in a variety of network configurations.

All nine GE ports support up to 30.8W of PoE per port for attached devices. The nine copper LAN ports and the two SFP LAN ports also support Synchronous Ethernet (Sync-E) providing LAN traffic locked to one of several Network Time Reference sources.

The zNID 96XX Series ONTs operate over an extended temperature range, and their 1-U size makes them ideal for unventilated cabinets. An optional hot-swappable fan tray provides additional airflow to improve transport reliability. Voltage and internal temperature monitoring provides alarms when thresholds are exceeded. Up to eight external alarm inputs are supported.

A secondary uplink SFP cage can be installed to provide WAN backup where the zNID 96XX Series ONT will switch to the alternate fiber connection when a facility outage is detected. All customer cabling attaches to the rear of the ONT.

Flexible management means the zNID 96XX Series GPON ONTs may be provisioned using the same intuitive Web interface and CLI as the Zhone 2400, 2600 and 4200 Series ONTs, as well as through the Zhone Network Management System (ZMS), USP (Unified Service Provisioning), or TR-069. Software upgrades and configuration backups can be handled automatically by the ZMS using the CPE Manager feature.

Technical Specifications

Dimensions

- Complete Enclosure
- 1.5 in. H x 10 in. W x 6 in. D
- 3.8 cm H x 25.4 cm W x 15.2 cm D

Weight

- DC Models: 6.2 lbs. (2.8 kg)
- AC Models: 7.4 lbs. (3.4 kg)

Power

- DC Models
- Input Voltage: 48 to -56 VDC
- Max Power: 50W (ONT Only)
- Input Power: 200W max (with 150 PoE load)
- Redundant inputs with voltage sensing
- AC Models
- Input Voltage: 90 to 264 VAC
- Max Power: 50W (ONT Only)
- Input Power: 210W max (with 150 PoE load)
- Redundant inputs with voltage sensing

Operating Requirements

- Temperature (DC models): -40°C to +65°C
(-40°F to +149°F)
- Temperature (AC models): -20°C to +65°C (-4°F to +149°F)

Management

- Web GUI
- ZMS (Zhone Management System) CPE Manager
- CLI
- SNMP
- Tr-069

Regulatory Compliance

- EMC: FCC Part 15 Class A, ICES-003 Class A, EN55022 Class A, EN55024
- Safety: UL60950-1, CSA C22.2 No. 60950-1, EN60950-1
- Network: FCC Part 68, IC CS-03
- RoHS Compliant

Interfaces

- Uplink Ports:
 - dual SFP cages for GPON or AE SFP
 - Transceivers (optics sold separately)
- LAN Ports:
 - 9 x RJ45 10/100/1000Base-T
 - 8 x RJ45 T1/E1
 - 2 x SFP cages
- PoE Power:
 - 30.8W max per port on all 9 ports
 - 150W max, total power available per ONT
- POTS Ports:
 - 4 or 8 FXS ports
- USB Ports:
 - 1x Device port
 - 1x Host port
- 8 External dry-contact Alarm inputs
- 1 Set (NC and NO) external relay-contact Alarm outputs

Standards Support

- RFC 4553 (SAToP)
- RFC 5086 (CESoPSN)
- RFC 2236 (IGMPv2)
- RFC 1631 (NAT)
- RFC 2516 (PPPoE)
- ITU G.8261, G.823, G.824
- ITU G.984.1, G.984.2, G.984.3
- ITU G.703, G.704, G.706
- ITU Y.1413 (MPLS)
- ITU Y.1453, Y.1452 (TDM over IP)
- CTR 12/13 and ETX 30011 (Jitter)
- ANSI T1.403
- AT&T Pub 54016
- IEEE 802.3 Ethernet
- IEEE 802.1p/q VLANs
- IEEE 802.1ad (QnQ)
- IEEE 802.1ag (OAM)
- IEEE 802.3u Fast Ethernet
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z (Gigabit Ethernet)
- IEEE 802.3x (Flow control)

Protocol Support

- DHCP Server, DHCP Client
- IP Routing and Bridging
- NAT
- Virtual LAN bridging (VLAN)
- Firewall and Security
- QoS (CoS 802.1p/q prioritization, ToS IP Precedence, Traffic shaping)
- IPTV (IGMP Multicast, IGMP Snooping)

Ordering Information

ZNID-GPON/GE-9608-00	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, AC. SFP and AC Cord not included
ZNID-GPON/GE-9608-DC	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, redundant DC power inputs
ZNID-GPON/GE-9608-EU	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, AC, CEE 7/7 Euro-style plug. SFP not included
ZNID-GPON/GE-9608-NA	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, AC, NEMA 1-15 NA-style plug. SFP not included
ZNID-GPON/GE-9608-UK	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, AC, BS-1363 UK-style plug. SFP not included
ZNID-GPON/GE-9644-00	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 4 x POTS, 4 x T1/E1, AC. SFP and AC Cord not included
ZNID-GPON/GE-9644-DC	Indoor ONT, GPON/GE Uplink, 9 x GE (PoE), 4 x T1/E1, 4 x POTS, redundant DC power inputs
ZNID-GPON/GE-9644-EU	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 4 x POTS, 4 x T1/E1, AC, CEE 7/7 Euro-style plug. SFP not included
ZNID-GPON/GE-9644-NA	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 4 x POTS, 4 x T1/E1, AC, NEMA 1-15 NA-style plug. SFP not included
ZNID-GPON/GE-9644-UK	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 4 x POTS, 4 x T1/E1, AC, BS-1363 UK-style plug. SFP not included
ZNID-GPON/GE-9688-00	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, 8 x T1/E1, AC. SFP and AC Cord not included
ZNID-GPON/GE-9688-DC	Indoor ONT, GPON/GE Uplink, 9 x GE (PoE), 8 x T1/E1, 8 x POTS, redundant DC power inputs
ZNID-GPON/GE-9688-EU	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, 8 x T1/E1, AC, CEE 7/7 Euro-style plug. SFP not included
ZNID-GPON/GE-9688-NA	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, 8 x T1/E1, AC, NEMA 1-15 NA-style plug. SFP not included
ZNID-GPON/GE-9688-UK	INDOOR ONT, GPON/GE Uplink, 9 x GE w/PoE, 8 x POTS, 8 x T1/E1, AC, BS-1363 UK-style plug. SFP not included
XCVR-GP-B+-1310TX-1490RX-IA	GPON ONU Transceiver, Class B+, 1310nm TX, 1490nm Rx, SC-PC, I-Temp
ZNID-GPON/GE-9500/9600-FANTRAY	Fan Tray Assembly for all 9500 and 9600 ONTs