Indoor GPON/GE ONT for Mobile Backhaul Applications

✓ *T1/E1 and Carrier Ethernet Services over Fiber*

✓ *Dual Uplink SFP Cages for GPON or GE SFPs*

✓ *Eight T1/E1 Ports*

✓ *Nine GE Ports*

✓ *Two SFP LAN Ports*

✓ *Extended Operating Temperature*

✓ *IEEE 1588v2 Timing Recovery*

✓ *Remote Management: Web GUI, ZMS, CPE, Manager, USP, CLI, TR-069*

The zNID 9500 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 9GE ports and up to 8 T1/E1 ports.

A variety of T1E1 clocking modes are supported including Adaptive, Synchronous and Differential to provide accurate clock recovery in a variety of network configurations. The unit will also support IEEE 1588v2 timing recovery.

Reliability

The zNID 9500 Series ONTs operate over an extended temperature range, and their 1-U size makes them ideal for small outdoor pedestals or other weather-proof but unventilated cabinets.

Redundant DC power connections and an optional hot-swappable fan tray improves transport reliability. BBU (Battery Back-Up) alarms are supported. A secondary uplink SFP cage can be populated to provide WAN Backup where the zNID 9500 Series ONT will switch to the alternate fiber port when a facility outage is detected. All customer cabling attaches to the rear of the ONT including timing connections for IEEE 1588v2 clocks.

Management

Flexible management means the zNID 9500 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

- 1-U height
- 19" Rack-mountable

Weight

- 8 lbs. (3.6 kg)

Power

- 48 VDC
- Redundant inputs
- Max Power: 50 W
- 4 BBU Alarms supported

Interfaces

- Uplink Ports:
  - dual SFP cages for GPON or AE SFPs (optics sold separately)
- LAN Ports:
  - 9x RJ45 10/100/1000Base-T
  - 8x RJ45 T1/E1
  - 2x SFP cages
- Timing Ports:
  - 1x RJ45 (1588v2 ToD output)
  - 1x BNC (1PPS clock output)
- USB Ports:
  - 1x Device port
  - 1x Host port

Applicable Standards

- 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)
- IEEE 1588-2008 PTP (1588v2)

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)

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

Operating Requirements

- Temperature: -40°C to +60°C

Ordering Information

ZNID-GPON/GE-9500-DC	Indoor ONT, 9x GE, 1588v2 ToD, redundant DC power inputs
ZNID-GPON/GE-9540-DC	Indoor ONT, 9x GE, 4x T1/E1, 1588v2 ToD, redundant DC power inputs
ZNID-GPON/GE-9580-DC	Indoor ONT, 9x GE, 8x T1/E1, 1588v2 ToD, redundant DC power inputs