ZHONE
Bandwidth Changes Everything™

zNID 2600 Series Indoor GPON ONT
ZNID-GPON-2608T, 2624A, 2624P, 2625A, 2625P, 2628A, 2628P, 2628T, 2644A, 2644P, 2645A, 2645P, 2648A, 2648P, 2648T

GPON ONT for FiberLAN Applications

✓ *Standard ITU G.984 GPON*

✓ *Indoor deployment, but temperature-hardened for harsher environments*

✓ *Extended DC Power Range*

✓ *Triple-Play Services - VoIP, IP Video, HS Internet Access*

✓ *VoIP with CLASS 5 Features*
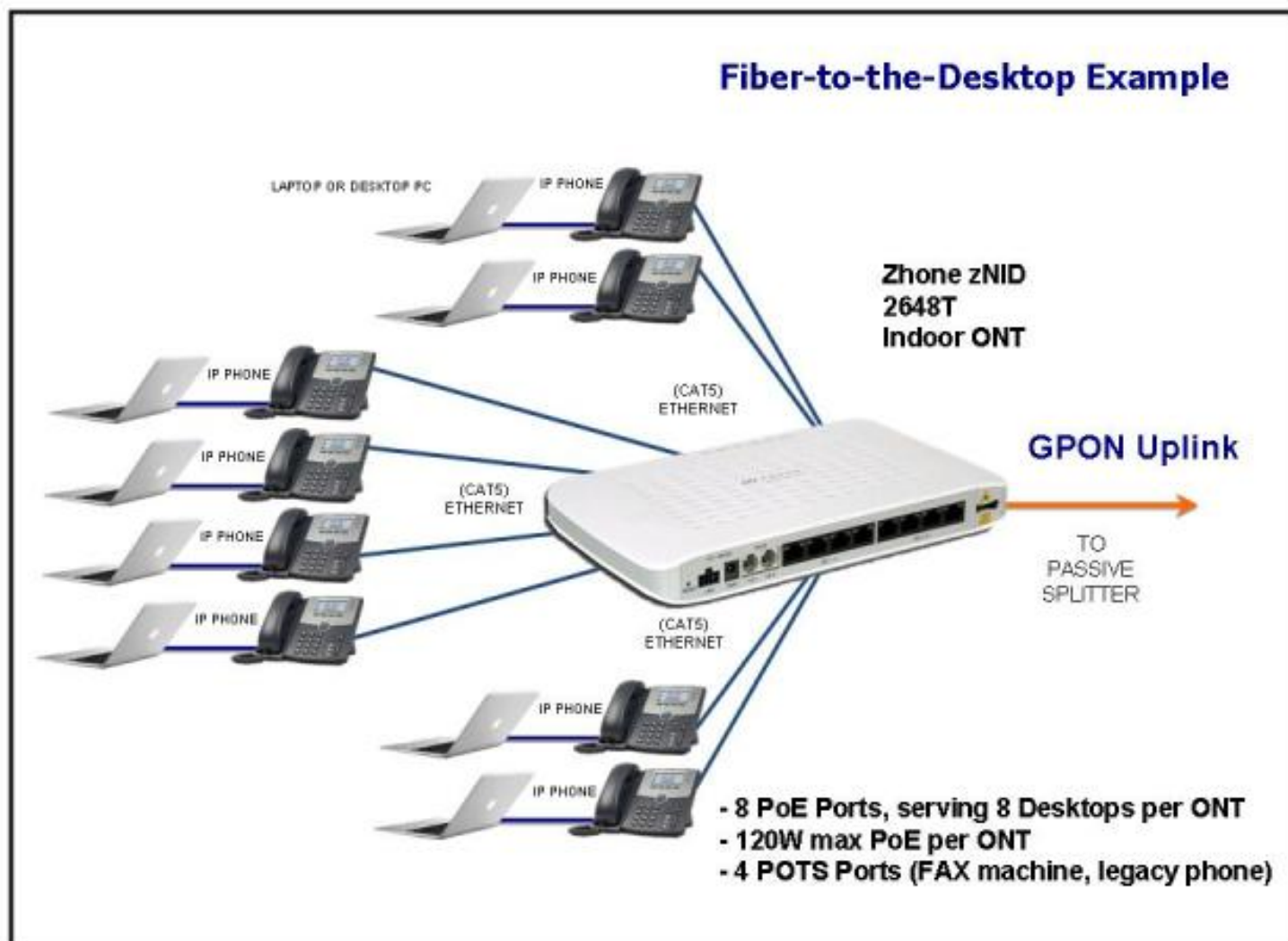
✓ *802.3at PoE*

✓ *RF Video Output Option*

Zhone's indoor 2600 Series GPON ONTs are standards-based CPEs designed for advanced triple-play deployments in enterprise and hospitality environments. These indoor models in Zhone's zNID product line of ONTs provide a lower cost alternative to outdoor ONT solutions while providing unmatched flexibility in deployment.

Especially suited for FiberLAN applications, the 2600 Series GPON ONTs are offered in a variety of models that include an RF Video port, 2 or 4 FXS POTS ports and up to 8 GE LAN ports which can provide PoE power for attached devices such as IP Phones, PTZ cameras, wireless access points, and remote switches. Extended operating temperatures and input voltages allow for creative deployments in areas and applications not possible with other ONTs.

The 2600 Series GPON ONTs provide the same voice features found on the 2400 and 4200 Series ONTs. Both MGCP and SIP are supported for direct connection to a VoIP Softswitch. This flexibility allows the ONTs to work in nearly all Telco networks, with interoperability support for a broad array of Softswitches.

The four or eight GE LAN ports can be separated into different services allowing the configuration of dedicated ports for IP video and data for one or more customers. Unique VLANs may be configured per customer to ensure full isolation of each customer's data traffic.

Fiber-to-the-Desktop Example

LAPTOP OR DESKTOP PC   IP PHONE

IP PHONE

Zhone zNID
2648T
Indoor ONT

IP PHONE

IP PHONE

(CAT5)
ETHERNET

IP PHONE

(CAT5)
ETHERNET

GPON Uplink

IP PHONE

TO
PASSIVE
SPLITTER

(CAT5)
ETHERNET

IP PHONE

IP PHONE

- 8 PoE Ports, serving 8 Desktops per ONT
- 120W max PoE per ONT
- 4 POTS Ports (FAX machine, legacy phone)

The 2600 Series GPON ONTs are ideally suited for Fiber-To-The-Desk applications where attached PoE devices can be powered directly from any or all of the ONT's four or eight PoE GE LAN ports simultaneously. Because up to four POTS ports are also available on the same ONT, legacy FAX machines, modems and analog phones can be conveniently connected.

With its extended power input range of 12 to 54 VDC standard on all 2600 Series ONT models, new Fiber-To-The-Room applications are now possible where a single, centralized 48 VDC supply in a basement or closet can power all of the ONTs in an hotel or apartment complex using existing telephone or ethernet wiring, without suffering excessive IR losses. Delivering high speed data, voice, and television to each room throughout the complex regardless of distance, just became easier.

The temperature-hardened 2600 Series GPON ONTs are also well-suited for harsher environments such as unheated but weatherproof outside enclosures, or mounting under a roof in areas that are not temperature controlled. Other indoor ONTs are not rated to operate in such conditions.

The 2600 Series GPON ONTs can be either wall mounted inside the home or placed freestanding on a desktop, and can use the same optional fiber tray as the 2400 Series ONTs. A variety of battery backup options are available for maintaining lifeline services during AC power outages

Flexible management means the ONTs may be provisioned using the same intuitive Web interface and CLI as the 2400 and 4200 Series ONTs, as well as through GPON-standard OMCI, and the Zhone Network Management System (ZMS) using Unified Service Provisioning (USP). Software upgrades and configuration backups can be handled automatically by the ZMS using the CPE Manager feature. Management using a TR-069 compliant ACS will also be possible.

Zhone provides the complete PON solution: ONT, OLT, splitter, EDFA, RF Transmitters, and cabinet solutions are available from Zhone allowing our customers to buy a complete and fully tested solution from one trusted source.

Technical Specifications

Dimensions

- Complete Enclosure
- 1.5 in. H x 10 in. W x 6.5 in. D
- 3.8 cm H x 25.4 cm W x 16.5 cm D

Weight

- 1.0 - 1.2LB (0.45 - 0.54 kg)

Power

- 12-54 +/6% VDC (non-PoE models)
- 48-54 +/6% VDC (PoE models)
- 100-240 VAC 50/60 Hz (AC Adapter)
- Max Power (ONT only): 20W
- Max PoE Power for attached devices: 120W

Interfaces

- GPON
  - SC/APC connector
  - ITU-T G.984 compliance (at levels down to -25 dBm)
- GPON Tx
  - 1310nm optics
  - DBM (Differential Burst Mode)
  - Upstream data rate: 1.25 Gbps
  - Launch Power: +0.5 to +5.0dBm
- GPON Rx
  - 1490nm optics
  - APD/TIA CW Mode
  - Downstream data rate: 2.5 Gbps
  - Receiver sensitivity: -28dBm
  - Input power overload: -8dBm
  - Input damage level: +5dBm
- RF Video Rx
  - 1550nm optics
  - Usable input power range: -8dBm to +2dBm
  - Input power overload: +2dBm
  - Input damage level: +5dBm
- Ethernet
  - RJ-45 connector
  - 4 or 8 x 10/100/1000 Base-T ports, all of which can support PoE
  - Meets IEEE 802.3 specifications
  - Auto-MDI/MDIX and auto speed supported
- POTS
  - RJ-11 connector
  - 0, 2 or 4 FXS ports
  - 2 Y-adapters included for 4-port models
- RF Video Output Port
  - 1 x F-Type connector
  - RF output impedance: 75 ohms
  - RF output level: 17dBmv minimum
  - RF passband: 47 to 1002 MHz

Standards Support

- GPON
  - ITU-T G.984 compliant (at levels down to -25 dBm)
- PoE
  - 802.3at compliant (30W max per port, 120 W max per ONT)

Voice Support

- SIP (RFC 3261)
- MGCP
- Codec: G.711 (u-law and A-law), G.729B, G726
- DTMF dialing
- 5 REN (total) per ONT
- Echo cancellation
- Voice Activity Detection and Comfort Noise Insertion
- Caller ID, Call Waiting, Call Forwarding, Call Transfer, Three Way Calling, Distinctive Ringing
- G.711 fallback for FAX
- T.30 and T.38 FAX
- DHCP client or static IP configuration

Protocol Support

- GPON
  - Fully ITU-T G.984 compliant framing
  - 32 T-CONTs per device
  - 32 GEM Ports per device
  - Activation with automatic discovered SN and password in conformance with ITU-T G.984.3
  - AES-128 Decryption with key generation and switching
  - FEC (Forward Error Correction)
  - 802.1p mapper service profile on U/S
  - Support for Multicast GEM Port QoS
  - Ethernet bridging/switching per IEEE 802.1d/802.1q
  - Traffic management (priority queuing and traffic shaping)
  - QoS with support for IEEE 802.1p + DSCP VLANS
  - Per port IEEE 802.1q VLAN ID processing
  - VLAN tagging/untagging
  - VLAN Stacking (QinQ)
  - VLAN Switching
  - 802.1x support
- IPTV
  - IGMP v2 Snooping
  - VLAN support
- Layer 2
  - 802.3n flow control
  - Automatic MAC learning and aging
  - Support for up to 4,096 MAC addresses for RG traffic flows
  - Broadcast storm control
- IP Routing and Firewall
  - PPPoE
  - NAT/NAPT
  - port forwarding
  - DHCP Server
  - DNS Proxy

Management

- OMCI
- Web UI
- CLI
- SNMP
- TR-069
- USP (Unified Service Provisioning)

Regulatory Compliance

- CE
- UL
- FCC part B

Operating Requirements

- Temperature: -40°C to +60°C
- Humidity: 5% to 90% RH, non-condensing

Ordering Information

ZNID-GPON-2608T-xx	Indoor GPON ONT, 0xPOTS, 8xGE(PoE); xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2624A-xx	Indoor GPON ONT, 2xPOTS, 4xGE; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2624P-xx	Indoor GPON ONT, 2xPOTS, 4xGE(PoE); xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2625A-xx	Indoor GPON ONT, 2xPOTS, 4xGE, RF Video; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2625P-xx	Indoor GPON ONT, 2xPOTS, 4xGE(PoE), RF Video; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2628A-xx	Indoor GPON ONT, 2xPOTS, 8xGE; xx= 00 (none), NA, UK, EU power supply
ZNID-GPON-2628P-xx	Indoor GPON ONT, 2xPOTS, 4xGE(PoE) + 4xGE; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2628T-xx	Indoor GPON ONT, 2xPOTS, 8xGE(PoE); xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2644A-xx	Indoor GPON ONT, 4xPOTS, 4xGE; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2644P-xx	Indoor GPON ONT, 4xPOTS, 4xGE(PoE); xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2645A-xx	Indoor GPON ONT, 4xPOTS, 4xGE, RF Video; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2645P-xx	Indoor GPON ONT, 4xPOTS, 4xGE(PoE), RF Video; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2648A-xx	Indoor GPON ONT, 4xPOTS, 8xGE; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2648P-xx	Indoor GPON ONT, 4xPOTS, 4xGE(PoE) + 4xGE; xx = 00 (none), NA, UK, EU power supply
ZNID-GPON-2648T-xx	Indoor GPON ONT, 4xPOTS, 8xGE(PoE); xx = 00 (none), NA, UK, EU power supply