



GPON Indoor ONT with Dual-Band 802.11ac WiFi

- ✓ *Standard ITU G.984 GPON*
- ✓ *Triple-Play QoS*
- ✓ *VoIP with CLASS 5 Features*
- ✓ *802.11b/g/n/ac WiFi*
- ✓ *Lightning-fast WiFi speeds*



Introducing the newest mix of style and technology - the Zhone 2400A1 Series Indoor GPON ONT. Dual-band 802.11ac WiFi capability combines with a compact design to bring next-generation connectivity and best-of-class performance to Fiber-to-the-Home deployments.

Five internal high-gain antennas enable two radios (2.4 and 5.8 GHz) WiFi radios to independently connect multiple users and devices simultaneously, including older 802.11b/g/n devices.

The 2400A1 GPON ONT is ideal for providing WiFi coverage in homes, hotel guest and conference rooms facing a variety of laptops and mobile devices.

The 2424A1 GPON ONT provides four 10/100/1000Mbps LAN ports, two FXS Voice ports, and one USB port. The future-proof GPON optics include a WBF (wavelength-blocking filter) for coexistence with Next-Gen-PON ONTs. The four 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 department's data traffic. The 2426A1 GPON ONT adds an 2.4G WiFi. The 2428A1 GPON ONT has the most comprehensive feature set in the 24XXA1 family supporting 4xGE, 2X POTS, 2.4G and 5.8 WiFi.

The supported industry-standard SIP and MGCP VoIP signaling provides reliable voice services. Zhone's experience with packet voice ensures interoperability and support with a large number of soft switches and with the ability to tailor the VoIP solution by selecting from a list of over 30 countries.

Flexible management means the 2400A1 GPON ONT may be provisioned using the same intuitive and easy-to-navigate Web interface and CLI as the Zhone 2400, 2600, 2700, 2800 and 4200 Series ONTs, as well as through GPON-standard OMCI, USP (Unified Service Provisioning), the Zhone Network Management System (ZMS), or using a TR-069 compliant ACS. 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

- 1.0 - 1.2LB (0.45 - 0.54 kg)

Power

- 12VDC, 2.0A max
- 12VDC Power Supply: 100-240VAC, 50/60 Hz, 36W out
- Round barrel-type connector for power input
- 2x4 Molex-type connector for optional BBU power input with alarm reporting

Interfaces

- Network Interface (GPON Uplink)
 - SC/APC connector
 - Full ITU-T G.984 compliance
 - Class B+ optics
 - G.985 wavelength blocking filter
 - GPON Type B redundancy support
- GPON Tx:
 - Upstream data rate 1.25 Gbps
 - 1310 nm optics
 - DFB transmitter
 - Launch Power: +0.5 to +5 dBm
- GPON Rx:
 - Downstream data rate: 2.5 Gbps
 - 1490 nm optics
 - APD/TIA receiver
 - Receiver Sensitivity: -28 dBm
 - Input power overload: -8 dBm
 - Input power damage: +5 dBm
- LAN Ports
 - Four 10/100/1000Base-T LAN ports
 - RJ-45 connectors
 - Auto-MDI-X crossover control
 - Auto-Speed or manual selection
- POTS Ports
 - Two FXS ports
 - RJ-11 connectors
 - 5 REN per line
 - Battery voltage: -48VDC
 - Max loop current: 40mA
 - Ringing voltage: 48Vrms @ 20/25 Hz
- WiFi - 802.11b/g/n:
 - 2.4 GHz band
 - 2x2 MIMO
 - Two +3 dBi internal antennas
 - Channel width: 20 MHz, 40 MHz
 - Max WiFi Connect (Phy) Rates: 54 Mbps (g); 270 Mbps (n)
- WiFi - 802.11a/n/ac:
 - 5 GHz band
 - 3x3 MIMO
 - Three +3 dBi internal antennas
 - Channel width: 20 MHz, 40 MHz, 80 MHz
- USB Ports
 - One USB 2.0 port
 - 3G dongle support for uplink fallback

Wireless Support

- SSIDs: 4 @ 2.4GHz + 4 @ 5.8GHz
- Max number of subscribers: 64 per Radio
- Max 2.4GHz Tx power: 100 mW (all models)
- Max 5.8GHz Tx power: 250 mW (all models)
- Authentication Security: WEP, WPA-PSK, WPA2, WPA2-PSK, 802.1x
- Encryption: WEP (64-bit, 128-bit), AES, TKIP/AES
- WPS modes: push-button, API PIN, STA PIN
- RADIUS Server support
- MAC address filtering
- Access Point and Wireless Bridge modes

Standards Support

- ITU-T G.984 compliant
- IEEE 802.3 Ethernet
- IEEE 802.1p/q VLANs
- IEEE 802.3u Fast Ethernet
- IEEE 802.3ab 1000Base-T

Voice Support

- SIP (RFC 3261)
- MGCP
- Codec: G.711 (u-law and A-law), G.729B, G.726
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- DTMF dialing
- Echo cancellation

Protocol Support

- GPON:
 - Fully ITU-T G.984 compliant framing
 - Dying Gasp support
 - 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 UPS
 - Support for Multicast GEM Port
- QoS:
 - Ethernet bridging/switching per IEEE 802.1d/802.1q
 - Traffic management (priority queuing)
 - QoS with support for IEEE 802.1p + DSCP VLANs
- VLANs:
 - Per port IEEE 802.1Q VLAN ID processing
 - All VLAN IDs supported
 - VLAN tagging/untagging
 - VLAN Stacking (QinQ)
 - VLAN Switching
- IPTV:
 - IGMP v3 Snooping
 - VLAN support
- Layer 2:
 - 802.3n flow control
 - Automatic MAC learning and aging
 - Unlimited # of MAC addresses for OMCI-configured flows
 - Support for up to 4,096 MAC addresses for RG traffic flows
 - Broadcast storm control
 - LLDP-MED
- IP Routing and Firewall:
 - PPPoE
 - NAT/NAPT
 - Port forwarding
 - DHCP Server
 - DNS Server
 - UPnP
- IPv6:
 - IPv4 and IPv6 Dual-Stack-lite
 - Bridged Mode (transparent pass-thru of IPv6 frames)
 - IPv6 Support for BRouted, and PPPoE-Bridged VLANs
 - DHCPv6 client and server
 - Router Advertisement on LAN- side interfaces of BRouted and PPPoE-Bridged VLANs
 - SLAAC for automatic acquisition of WAN-side IPv6 address and Gateway
 - CLI and HTTP management via IPv6 address
 - TR-069 management via IPv6 address

Management

- OMCI
- Web UI
- CLI
- SNMP
- TR-069, TR-104 and TR-98
- USP (Unified Service Provisioning)

Regulatory Compliance

- CE
- UL/CSA
- FCC Part B
- 21 CFR 1040.10, 1040.11
- RoHS 2011/65/EU

Operating Requirements

- Operating Temperature: 0°C to +40°C
- Storage Temperature: -20°C to +85°C
- Relative Humidity: 0 to 95%, non-condensing



Ordering Information

ZNID-GPON-2424A1-xx	Indoor GPON ONT, 4xGE, 2xPOTS; xx = NA, UK, EU power supply options
ZNID-GPON-2426A1-xx	Indoor GPON ONT, 4xGE, 2xPOTS, 2x2 2.4GHz 802.11b/g/n; xx = NA, UK, EU power supply options
ZNID-GPON-2428A1-xx	Indoor GPON ONT, 4xGE, 2xPOTS, 2x2 2.4GHz 802.11b/g/n and 3x3 5.8Ghz 802.11a/n/ac; xx = NA, EU power supply options