

## Enhanced Wall-Plate ONT for secure and uncluttered deployments

- ✓ *Low profile "wall-plate" style*
- ✓ *No exposed fiber or power wiring*
- ✓ *Secure attachment*
- ✓ *AC or DC powering*
- ✓ *PoE and POTS ports*
- ✓ *Optional Dual-Band WiFi and RF Video*



The Zhone 281X Series FiberJACK® GPON ONTs are optimized for Enterprise and Hospitality deployments requiring secure, zero-footprint wideband access. The FiberJACK wall-plate style ONTs offer full RG functionality in a low-profile package that keeps power and fiber connections safely hidden within the wall, preventing loss of service due to accidental disconnection, tampering or theft. Rental Housing (Apartments, Condos), Hospitality (Hotels, Motels, B&Bs), Campus deployments (Dorm rooms, Assisted-Living Facilities, Barracks) and any other type of temporary housing will benefit from this robust and low maintenance ONT.

The Zhone 281X Series FiberJACK GPON ONTs provide customers with one POTS port and two 10/100/1000BaseT LAN ports with PoE capability, allowing for convenient connections to IP phones, switches, and PCs. Configurable per-port PoE limits help direct PoE power where it is needed. Optional RF Video port and/or dual-band WiFi on certain models. Being able to provision the on-board radio for 2.4GHz or 5.0GHz allows the operator to provide full coverage of both frequency bands without needing different ONT models.

All Zhone 281X Series FiberJACK GPON ONTs mount in a standard single-gang wallbox and are available in two powering versions: AC models are wired directly to the 120/240 VAC supply while DC models may be powered via a dedicated CAT5 link from the wiring/powering closet. DC models may also be powered over a 2-wire feed from an in-house 48V distribution system that may also provide battery backup. DC/DC conversion in the ONT ensures that the PoE voltages are presented within spec even when longer 2-wire power feed runs incur significant voltage drops.

Hospitality installations will appreciate the guest-friendly LED indicator modes (Day, Night, Off) on the Zhone 281X Series FiberJACK GPON ONTs. Extensive diagnostics in the ONT (run locally on the ONT or remotely from the NOC) reduce service call disruptions. A silent alarm is triggered upon removal of the ONT faceplate.

With LLDP-MED support for voice VLAN advertisement and Zhone's Dynamic VLAN Mapping capability for handling complex sets of packet classification rules, operators can expertly manage traffic on each ONT LAN port to provide optimum customer experiences. The Zhone 281X Series FiberJACK GPON ONTs comply with standard OMCI definitions, and are manageable at remote sites supporting the full range of FCAPS functions including supervision, monitoring and maintenance.

Flexible management means the Zhone 281X Series FiberJACK GPON ONTs may be provisioned using the same intuitive Web interface and CLI as the Zhone 2400, 2600, 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

- Faceplate:
  - 7 1/8" H x 5 1/2" W x 1 5/16" D
  - 182mm H x 140 mm W x 33mm D
- Base:
  - 2 7/8" H x 1 3/4" W x 1 1/4" D (from wall surface)
  - 71mm H x 45 mm W x 30mm D (from wall surface)

### Weight

- 1.4 LB (0.65 kg)

### Power

- AC Models:
  - 100-240 VAC 50/60 Hz
  - Max Power = 35W (ONT + 15W PoE load)
  - Max Power = 10W (ONT only)
- DC Models:
  - 36 - 56 VDC
  - Max Power = 30W (ONT + 15W PoE load)
  - Max Power = 10W (ONT only)

### Regulatory Compliance

- CE
- UL
- FCC Part 15, Class B
- FDA 21CFR1040
- RoHS-compliant

### Operating Requirements

- Temperature (operating): 0°C to +40°C
- Temperature (storage): -20°C to +85°C
- Humidity: 5% to 95% relative humidity (non-condensing)

### Standards Support

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

### Wireless Support

- 2x2 MIMO
- SSID Support: 4
- Max number of subscribers per SSID: 16
- Maximum WiFi power: 100 mW
- Antennas: dual internal 5dBi gain
- Selectable 2.4 GHz or 5.0 GHz
- WEP, WPA-PSK, WPA2-PSK (AES, TKIP)
- 64 bit and 128 bit WEP support
- MAC address filtering
- 1:1 mapping of SSIDs to VLANs

### Voice Support

- SIP (RFC 3261)
- SIP PLAR
- MGCP
- Codec: G.711 (u-law and A-law), G.729B, G726
- DTMF dialing
- 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 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 support
  - VLAN tagging/untagging
  - VLAN Stacking (QinQ)
  - VLAN Switching
- IPTV
  - IGMP v2 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

### Management

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

## Interfaces

### ■ GPON

- SC/APC connector
- Full ITU-T G.984 compliance
- 1310nm Tx (Upstream)
- 1490nm Rx (Downstream)
- Tx Line Rate: 1.25 Gbps
- Tx Launch Power: +0.5 to +5 dBm
- Rx Line Rate: 2.5 Gbps
- Rx Receiver Sensitivity: -28 dBm
- Rx Input Power Overload: -8 dBm
- Dying gasp support

### ■ RF Video Rx (optional)

- 1550nm optics
- Linear Operating Range -8 dBm to +2 dBm
- Input Overload Level: +2 dBm
- Input Damage Level: +5 dBm

### ■ RF Video Output Port (optional)

- 1 x F-Type coax connector
- RF output impedance: 75 ohms
- RF passband: 47 to 870 MHz
- RF output level: 17dBmv minimum

### ■ WiFi (optional)

- Dual-band WiFi
- User selectable 2.4GHz (802.11b/g/n) or 5.0GHz (802.11a/n)
- 2x2 MIMO antennas

### ■ Controls and Indicators

- ONT Power On/Off (slide switch under the faceplate)
- ONT Reset (recessed push-button switch)
- LED Indicator Mode (push-button switch)
- LED indicators for WiFi, Voice, WAN, Alarm, and Status

### ■ Ethernet

- RJ-45 Jacks
- 2 x 10/100/1000 Base-T ports
- Meets IEEE 802.3 specifications
- Auto-MDI/MDIX and auto speed supported
- Per-port Link/Activity, Speed, and PoE status indicators
- PoE support on all ports
- Max 15W PoE load per ONT (AC and DC models)

### ■ POTS

- RJ-11 connector
- 1 FXS port
- 5 REN

## Ordering Information

ZNID-GPON-2813P-WAC	FiberJACK Indoor GPON ONT, 2 x GE w/PoE, 1 x POTS, RF Video, AC Powered
ZNID-GPON-2813P-WDC	FiberJACK Indoor GPON ONT, 2 x GE w/PoE, 1 x POTS, RF Video, DC Powered
ZNID-GPON-2814P-WAC	FiberJACK Indoor GPON ONT, 2 x GE w/PoE, 1 x POTS, Dual-Band WiFi, AC Powered
ZNID-GPON-2814P-WDC	FiberJACK Indoor GPON ONT, 2 x GE w/PoE, 1 x POTS, Dual-Band WiFi, DC Powered
ZNID-GPON-2815P-WAC	FiberJACK Indoor GPON ONT, 2 x GE w/PoE, 1 x POTS, Dual-Band WiFi, RF Video, AC Powered
ZNID-GPON-2815P-WDC	FiberJACK Indoor GPON ONT, 2 x GE w/PoE, 1 x POTS, Dual-Band WiFi, RF Video, DC Powered