

GigaPoint®

GP4201XH



The Calix GP4201XH optical network terminal is an outdoor, XGS-PON service delivery terminal that provides broadband connectivity to the subscriber. This high-performance terminal features one 10 Gigabit Ethernet (GE) interface and three Gigabit Ethernet interfaces delivering IPTV video and data services. Two voice lines supporting carrier-grade VoIP are also available. Connecting a Calix GigaSpire or GigaPro system to the LAN port of the GP4201XH allows for the delivery of a sensational Wi-Fi subscriber experience. Decoupling the broadband demarcation from the premises system provides more flexibility and reduces costs.

OUTDOOR HIGH-SPEED CONNECTIVITY

The GigaPoint GP4201XH ONT is designed to terminate an XGS-PON fiber link originated from a Calix E-Series platform. The GP4201XH ONT is designed to operate in a wide range of temperatures, contained in an outdoor rated enclosure at the subscriber's location and provides industry-standard 10GE and GE interfaces for direct connectivity to customer premises equipment.

The GP4201XH ONT enables subscribers to receive broadband data, IPTV, and VoIP on a single fiber. At the ONT, the optical signal is converted to the appropriate electrical signals for transmission over the premises existing twisted pair and CAT5 cables.

The GP4201XH is easy to install, activate, and maintain. Innovative software management tools allow the service provider to quickly configure, activate and upgrade ONTs from a remote location.

Extensive troubleshooting capabilities, remote software downloads, and easy-to-use service

profile menus ensure that services are delivered and GP4201XH ONTs are maintained without needless truck rolls and hardware upgrades.

SmartActivate simplifies installation and turn-up by using a laptop or phone to configure and activate the ONT at the premises. The craftsman can install and turn up an ONT without assistance from the central office or use of special equipment.

Calix outdoor ONTs are hardened to withstand a full range of outdoor temperatures. When placed outside, the ONT is housed in an environmentally sealed enclosure that protects it from the elements. For an indoor installation, the ONT can be mounted on a bracket specially designed for wall-mount and structured wiring enclosure applications.

Outdoor and indoor installations use a 120 Volt, 60 Hz AC UPS that provides battery backup of lifeline POTS in local AC power loss. Battery charge and battery life are monitored and reported through the Calix SMx application.

KEY ATTRIBUTES

Standards-based Full-Service Access Network (FSAN), ITU-T XGS-PON compliant

One 10 Gigabit Ethernet (GE) interface

- Symmetrical bandwidth for residential IPTV and data services
- Multi-rate 10/100/1000/2500/5G/10 G BASE-T Ethernet, auto-negotiating

Three 1 Gigabit Ethernet (GE) interfaces

- Symmetrical 1 Gbps bandwidth for residential IPTV and data services
- Multi-rate 10/100/1000 BASE-T Ethernet, auto-negotiating

Two voice lines

- Carrier grade SIP

Supports multiple data service profiles

Traffic management and Quality of Service (QoS)

- 802.1Q VLANs
- 802.1p service prioritization
- Q-in-Q tagging
- Multiple VLANs
- Rate limiting
- DiffServ
- Pre-defined QoS on service type

IPTV, IGMPv2, and IGMPv3

- IGMP Snooping and Proxy
- IGMP Fast Leaves

Complete Operations, Administration, Maintenance, and Provisioning (OAM&P) support via SMx

Indoor and outdoor applications

- Outdoor installation features a small, environmentally hardened enclosure that withstands the rigors of the outside plant environment; Telcordia GR-49 compliant
- Indoor installation offers a range of mounting options including: the standard enclosure for added security and protection; a wall-mount bracket for indoor cabinets and indoor wall mounts; a multi-ONT enclosure that houses up to four ONTs and can be used for indoor or outdoor applications

Lifeline service power source with in-home battery backup and alarm monitoring

SERVICES SUPPORTED

Calix GP4201XH ONTs deliver high-speed data, POTS, and IPTV

- Supports voice, video, and data services on a single fiber
- Voice: Two VOIP lines
- Video: IPTV—supports IGMP multicasting and proxy
- Data: One 1000/2500/10G BASE-T and three 10/100/1000 BaseT Ethernet ports

SPECIFICATIONS

Mechanical - Outdoor Enclosure

- Height: 12 in (30.48 cm)
- Width: 10 in (25.4 cm)
- Depth: 4 in (10.16 cm)
- Outdoor installed height: 50–60 in (1.3 to 1.5 m) above ground
- Installed weight: 5 lbs. (2.27 kg)

Recommended Outdoor Clearance

- Left side: 12 in (30.48 cm)
- Right side: 6 in (15.24 cm)
- Front: 36 in (91.44 cm) standing room
- Rear: None

Pon Characteristics

- Max. split: 128 XGS-PON
- Maximum Optical Distribution Network (ODN) Attenuation: XGS 29 dB
- Optical Receiver: 1577 nm: -28 dBm to -9 dBm
- Optical Transmitter: 1270 nm: +4 to +9 dBm

Interfaces

- Telephony: Binding post
- Data/IPTV: 10/100/1000/2500/5G/10G BaseT Ethernet ports, RJ-45 connectors
- PON: Single 9/125 μm (single mode) fiber, SC/APC connector, minimum 50 dB return loss
- Power: Screw-down plug

Telephony

- General: Carrier Grade SIP, H.248, MGCP VoIP
- Number of lines: 2
- RENs per line: 5 maximum

- RENs per unit: 10 maximum
- Subscriber premises—physical connection: 22 or 24 AWG to twisted pair binding posts; premises isolating RJ-11 test jack (one per line)
- Drop length: Maximum 500 feet (305 m) using 26 AWG wire
- Input impedance: 600 Ohms
- DS0 Output: 23.5 to 25 mA
- Ring Voltage: 55 VAC

Environmental

- Operating temperature: Indoor ambient temperature -40 to 149°F (-40 to 65° C) w/o solar load, Outdoor ambient temperature with Calix enclosure -40 to 114° F, (-40 to 46° C) plus solar load
- Rate of change in operating temperature: 15°F (8.3° C) per hour maximum
- Shipping and storage temperature: -40 to 140° F (-40 to 60° C)
- Operating/storage relative humidity: 0 to 95 % non-condensing
- Altitude: -200 to 10,000 feet (-61 to 3,048 m) above sea level
- Misc: Salt fog resistant; wind-driven rain protection; anti-dust enclosure

Data

- Drop length: 10G 180 feet (55 m) using CAT6 cable, 328 feet (100) using CAT6A/7 cable; all other rates: 328 feet (100 m) maximum using CAT5e cable
- Auto MDI/MDIX crossover
- Traffic Management and QOS: 802.1Q VLAN; 802.1P Voice, Video, Data and Management

- Priorities; Q-in-Q tagging; Per-Port Rate Shaping; Rate Limiting
- MTU: 9600 Bytes

Power

- Screw-down terminal block plugs for 7-wire alarms and power interface

Certification and Compliance

- Emissions: FCC Part 15 Class B, IC ICES-003 Class B, CISPR24 and CISPR35
- Safety: UL 62368 and UL 1697 approved, CE Mark
- Telcordia: GR-1089, GR-49
- IEEE: 802.3, 802.3AB, 802.3U, 802.1P, 802.1Q, 802.3bz

Residential Battery Backup

- Residential battery backup source (local): UPS mounted at subscriber's home
- Power termination: Maximum length of 70 feet (21.3 m) DC power and alarm cable with seven 16/24 AWG conductors connected to a UPS
- Input voltage: 12 VDC (nominal)
- Input voltage range: 10.5 to 14.4 VDC
- Input current: 750 mA (nominal)
- Battery backup time rated capacity: 8 hours based on Telcordia GR-909 calculation methods using recommended UPS. Contact Calix for recommended UPS.

ORDERING INFORMATION

Order Code	Description
System	
100-05884	GP4201XH ONT, 2 POTS, 1 10GE, 3 GE
Accessories	
100-01578	SFU ONT Enclosure with Splice Tray
100-01580	SFU ONT Enclosure with Splice Tray and Primary Protection
100-01579	SFU ONT Enclosure with OptiTap Adaptor
100-01581	SFU ONT Enclosure with OptiTap Adaptor and Primary Protection
100-01409	SFU ONT Wall Mount Bracket
Optional UPS and Indoor Powering Options*	
100-05499	UPS SFU Outdoor 12V 7.2AH 30W
100-03826	UPS SFU CYBP27U Indoor 12V 7.2AH 27W - 2-prong Type A Floating
100-03828	UPS SFU CYBP27U Indoor 12V 7.2AH 24W - 3-prong Type B Grounded
100-05565	UPS SFU Indoor 12V 20AH 30W, Audible Alarm R2
100-00988	UPS to ONT Power Cable - Calix Type I 18/22 AWG, 1000FT Spool
100-01314	UPS to ONT Power Cable - Calix Type II 16/24 AWG, 1000FT Spool
100-05666	Power Adapter CPA6 12V 3Amp - AM Type B -3 ft AC cable

*GP4201XH does not ship with any power supply or outdoor enclosures. The ONT can be used with various UPS systems sold separately.

Note: Calix believes the information in this publication to be accurate as of publication date and is not responsible for error. Product Specifications are subject to change without notice.