

GPON HGU ONT 4GE+2POTS+WiFi

AP224C Series



- ITU-T G.984 compliant
- 4 × auto-adapting GE ports
- 2 × POTS ports
- 1 × CATV output
- 802.11 n/b/g WiFi port
- Remote management
- Web-based GUI
- Auto-negotiation and MDI/MDIX
- Supports H.248, MGCP, and SIP protocols
- FTTH, FTTB, FTTO, PON + EOC
- Broadband internet, VoIP, IPTV, VOD, IP camera, WiFi

AP224C GPON HGU ONT is a GPON optical network unit designed to meet the requirements of broadband access networks. It is ideal for FTTH/FTTO applications to provide data, voice, and video services based on a GPON network.

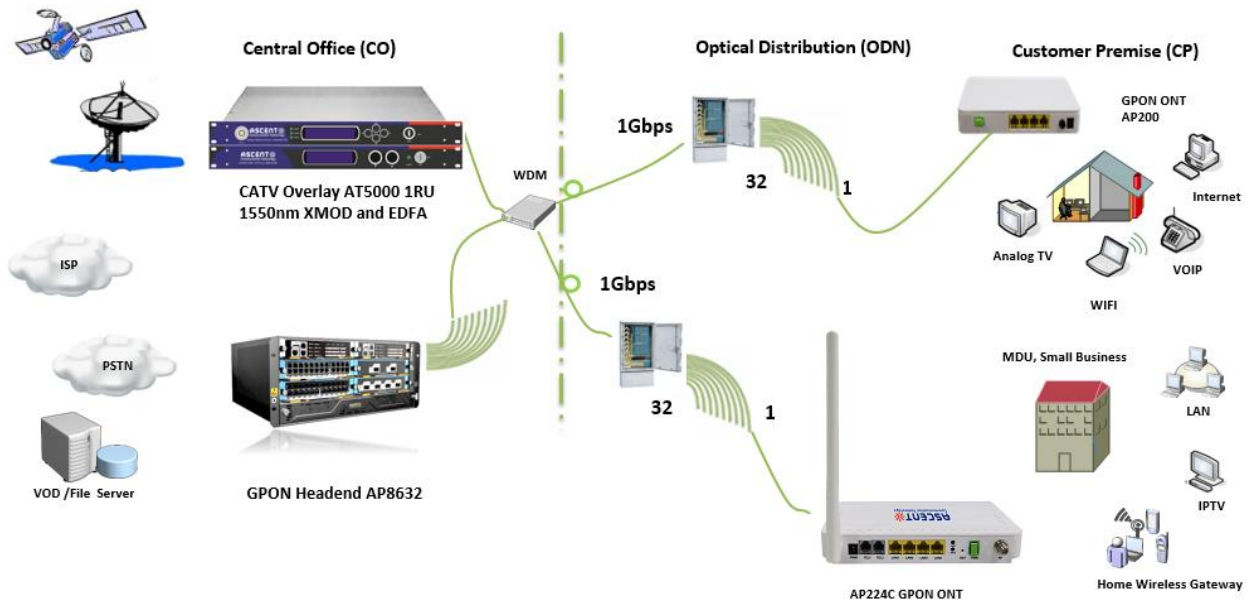
AP224C GPON ONT meets the ITU-T G.984 GPON standard and delivers higher bandwidth and higher efficiency using larger variable-length packets. It provides two POTS ports, four GE auto-adapting Ethernet ports, one CATV output, and one 802.11 n/b/g Wi-Fi port. It features high-performance forwarding capabilities to ensure excellent experience with VoIP, internet, and HD video services. AP224C provides a perfect terminal solution and future-oriented service supporting capabilities for FTTH deployment.

AP224C offers efficient packaging of user traffic, with frame segmentation allowing higher quality of service (QoS) for delay-sensitive voice and video communications traffic. AP200C series GPON ONT provides the reliability and performance expected for business services and are an attractive way to deliver residential services. GPON enables Fiber to The Home (FTTH) deployments economically resulting to accelerated growth worldwide.

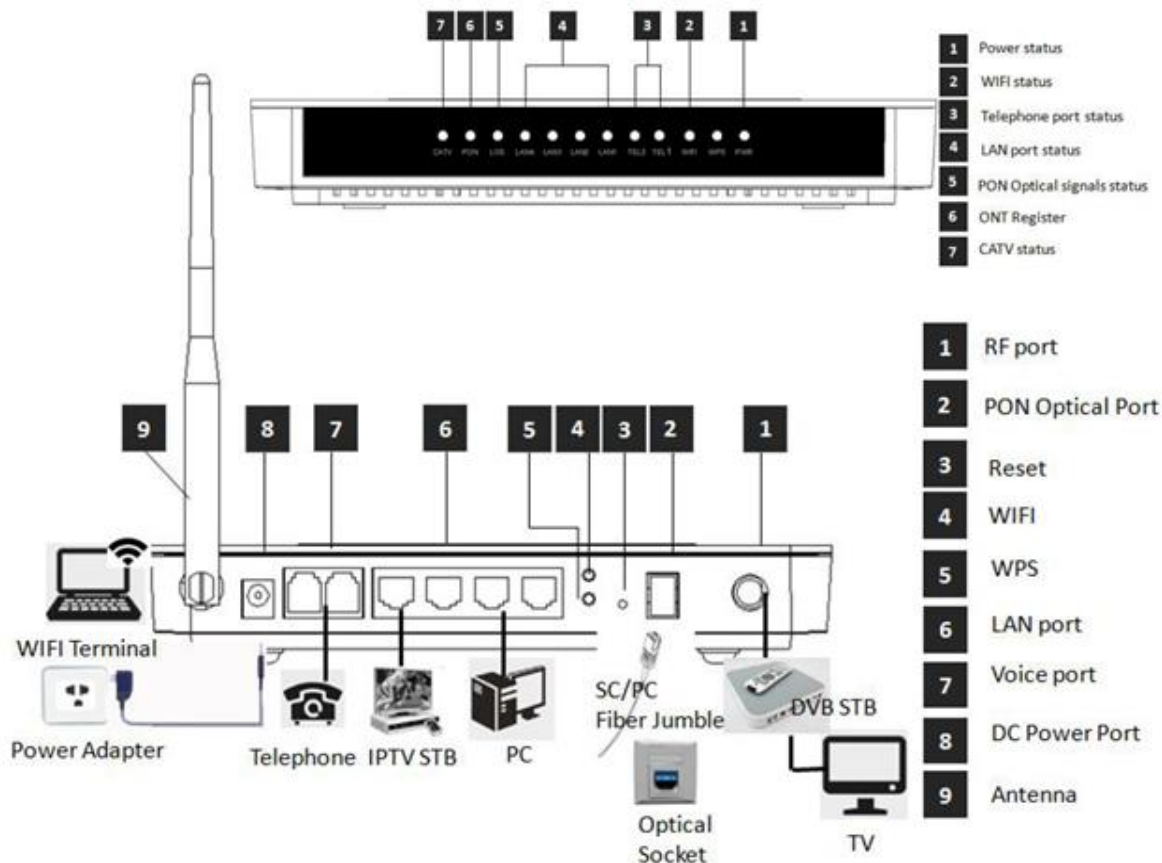
Key Features

- Fully compatible with ITU-T G.984
- Supports two POTS ports
- Supports four GE auto-adapting Ethernet ports
- Supports one CATV output
- Supports one 802.11 n/b/g WiFi port
- Supports OMCI and TR069 for remote management
- Web-based GUI for local management
- Supports auto-negotiation and MDI/MDIX
- Supports Ethernet interface rate, working mode and flows control
- Supports loopback at UNI
- Supports packet filtering and anti-illegal message attack protection
- Supports performance statistics of Ethernet lines
- Supports VLAN tagged label processing, traffic classification and packet filtering, STP/RSTP etc.
- Supports DHCP Option60 reporting the location information of the Ethernet interface
- Supports PPPoE+ for accurate subscriber identification
- Supports H.248, MGCP, and SIP protocols
- Supports IGMP snooping
- Supports AES-128 encryption
- CATV can be turned on/off remotely through RF output

Application Diagram



Product Interface



Specifications

Interface

Uplink Interface	1 × GPON port, FSAN G.984.2 standard, class B+ Downstream data rate: 2.488 Gbps Upstream data rate: 1.244 Gbps SC/PC single mode fiber 28 dB link loss and 30 km distance with 1: 128
CATV Interface	1 × RF output Female F-type connector
Ethernet Interface	4 × 10/100/1000M auto-negotiation RJ45 ports Full duplex / half-duplex RJ45, auto-MDI/MDI-X 100 m transmission distance
POTS Port	2 × RJ11 with 3REN Max 1 km distance Balanced ring, 55V RMS
Power Supply Port	12 V DC input

Performance Parameters

PON Optical Parameters	Wavelength: Tx 1310 nm, Rx1490 nm Tx optical power: 0 to 5 dBm Rx sensitivity: -27 dBm Saturation optical power: -8 dBm Connector type: SC Optical fiber: 9/125 μm single-mode fiber
Data Transmission Parameters	PON throughput: Downstream 2.488 Gbit/s Upstream 1.244 Gbit/s Ethernet: 1000 Mbps Packet loss ratio: <1*10E-12 Latency: <1.5 ms
Business Capability	Layer 2 wire speed switching Supports VLAN TAG/UNTAG, VLAN conversion Supports port-based speed limitation Supports priority classification Supports broadcast storm control Support link detection

Network Management

Management Mode	Standard compliant OMCI interface as defined by ITU-T G.984.4 Supports TR069 and WEB management
Management Function	Status monitor, configuration management, alarm management, log management

Physical Features

Shell	Plastic casing
Power	External 12V 1A AC/DC power supply adapter Power consumption: <9W
Dimensions (L × W × H)	200 mm × 140 mm × 33mm 0.5 kg
Environmental Specifications	Operating temperature: 0 to +45°C Storage temperature: -40 °C to +85°C Operating humidity: 10 % to 90 % (non-condensing) Storage humidity: 10 % to 90 % (non-condensing)

CATV

Wavelength	1100-1600nm
Optical Return Loss	>45dB
Input Optical Power	-18 dBm to 0 dBm
RF Frequency	47MHz~1000MHz
RF Output Level	78 dBμV (@-12 dBm to -2 dBm @ 85 MHz)
CNR	>41 dB (@-10 dBm @ DS22 Channel)
CSO	>60 dBc (@ -10 dBm @ DS22 Channel)
CTB	>60 dBc (@-10 dBm@DS22 Channel)
RF Output Return Loss	>12 dB
RF Impedance	75 Ω
AGC Function	Supported

WIFI Features

- IEEE 802.11n compliant, 2.4 GHz
- Full IEEE 802.11b/g legacy compatibility with enhanced performance
- Two-stream spatial multiplexing up to 300 Mbps PHY data rates
- Supports multi-SSID (Maximum 4 SSIDs)
- Supports automatic channel selection
- Supports SSID hiding
- Supports 64/128 bit WEP, 802.1x, WPA, and WPA2 for wireless security

WIFI Specifications

Standard	IEEE802.11b/g/n
Frequency	2.400 ~ 2.500 GHz
Wireless Data Rate	IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n: up to 200 Mbps
Modulation Schemes	802.11g: 64QAM, 16QAM, QPSK, BPSK, DSSS 802.11b: CCK, DQPSK, DBPSK HT20: 64 QAM, 16QAM, QPSK, BPSK
Channel	13 × channels, configurable to meet the standard of USA, Canada, Japan, and China
RF Receiver Sensitivity	802.11b: -96 dBm @ 1 Mbps; -93 dBm @ 2 Mbps; -91dBm @ 5.5 Mbps; -88 dBm @ 11 Mbps 802.11g: -90 dBm @ 6 Mbps; -89 dBm @ 9 Mbps; -89 dBm @ 12 Mbps; -867 dBm @ 18 Mbps; -83 dBm @ 24 Mbps; -79 dBm @ 36 Mbps; -75 dBm @ 48 Mbps; -75 dBm @ 54 Mbps 802.11n: -96 dBm @ 1 Mbps; -88dBm @ 11 Mbps; -90dBm@6Mbps; - 75dBm@54Mbps; -86dBm @ m0/20MHz; -69dBm @ m15/20MHz;
RF Tx Power	•TX power out B mode @ 11 Mbps: 18 dBm +/- 2 • TX power out G mode @ 54 Mbps: 16 dBm +/- 2 • TX power 11n mode @ HT20: 16 dBm +/-2
Encryption Mode	64-bit, 128-bit WEP, AES, TKIP, WPA, WPA2, 802.1x
Transmission Distance	100 m indoors coverage area 300 m outdoors coverage area (varies depending on actual environment)

Ordering Information

Item	Description
AP201C-GE-00-0-S-2	AP200C GPON ONT 1x GE (1.25G US, 2.5G DS), 1xGE, Single Fiber, SC/PC, external power supply adapter
AP204C-GE-00-0-S-2	AP200C GPON ONT 1x GE (1.25G US, 2.5G DS), 4xGE, Single Fiber, SC/PC, external power supply adapter
AP204C-GE-00-N-S-2	AP200C GPON ONT 1x GE (1.25G US, 2.5G DS), 4xGE, WIFI, Single Fiber, SC/PC, external power supply adapter
AP224C-GE-00-N-S-2	AP200C GPON ONT 1x GE (1.25G US, 2.5G DS), 4xGE, 2xVOIP, WIFI, Single Fiber, SC/PC, external power supply adapter
AP224C-GE-TV-N-S-1	AP200C GPON ONT 1x GE (1.25G US, 2.5G DS), 4xGE, 2xVOIP, CATV RF, WIFI, Single Fiber, SC/APC, external power supply adapter

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