

GP1806-4G Series

Commercial XG-PON
HGU



Product Overview

BDCOM GP1806-4G series is an intelligent home gateway terminal product launched by BDCOM for multi-service converged networks. It integrates wireless and voice functionalities. It is compatible with the ITU-T G.987.3, G.988, G.989 standards, ensuring excellent interoperability and operability. It can achieve seamless interconnection with OLT from leading industry manufacturers.

Product Characteristics

Superior Access Performance

Supports downstream 10Gbps/upstream 2.5Gbps PON transmission rates. Combined with OLT devices, it achieves a high split ratio of up to 1:256, extending network coverage up to 20KM.

Secure Service Carrying Capacity

With over 30 years of professional R&D expertise, BDCOM has developed targeted technologies including VLAN, port isolation, ACL, QoS, security filtering, and storm control. These ensure secure business carrying capacity for the ONU product.

Refined Service Control Capability

Supports DBA (Dynamic Bandwidth Allocation) and Rate-Limit features, providing an advanced dynamic bandwidth allocation mechanism and precise bandwidth limiting capabilities. This ensures that all users can share the 10Gbps (XG-PON network) bandwidth resources more efficiently. Additionally, it supports QoS (Quality of Service) functionality, enabling reliable service quality and ensuring prioritization and quality of service for different types of network traffic and applications.

Extensive Control Functions

Supports the ITU-T defined standard OMCI, which includes configuration, alarm, performance monitoring, fault isolation, and security management. Also supports the BDCOM defined proprietary OMCI, enabling more advanced service control in conjunction with our OLT.



10Gbps downlink
2.5Gbps uplink



Multi-service design



The splitting ratio
ups to 1:256

Product Characteristics

Seamless Interoperability

Complies with ITU-T G.987.3, G.988, G.989 and the China communication industry standard GB/T 39577-2020 for 10Gbit/s passive optical networks (XG-PON), BDCOM GP1806-4G ensures excellent interoperability and operability. It allows for seamless interconnection with leading industry OLT devices and enables hybrid networking, minimizing network deployment costs.

Advanced Green Energy-Saving Technology

Incorporates BDCOM's advanced "GreenTouch" architecture and high-performance chip technology, achieving deep energy efficiency and low carbon footprint, ensuring environmentally-friendly operations.

Model Lists

GP1806-4GA

XG-PON WiFi6 Home
Gateway Unit(HGU)



- 1-Port XG-PON(SC/UPC)
- 4-Port Gigabit RJ45
- 1-Port USB2.0
- 3000Mbps WiFi6

GP1806-4GVA

XG-PON WiFi6 Voice Home
Gateway Unit(HGU)



- 1-Port XG-PON(SC/UPC)
- 4-Port Gigabit RJ45
- 1-Port POTS(FXS)
- 1-Port USB2.0
- 3000Mbps WiFi6

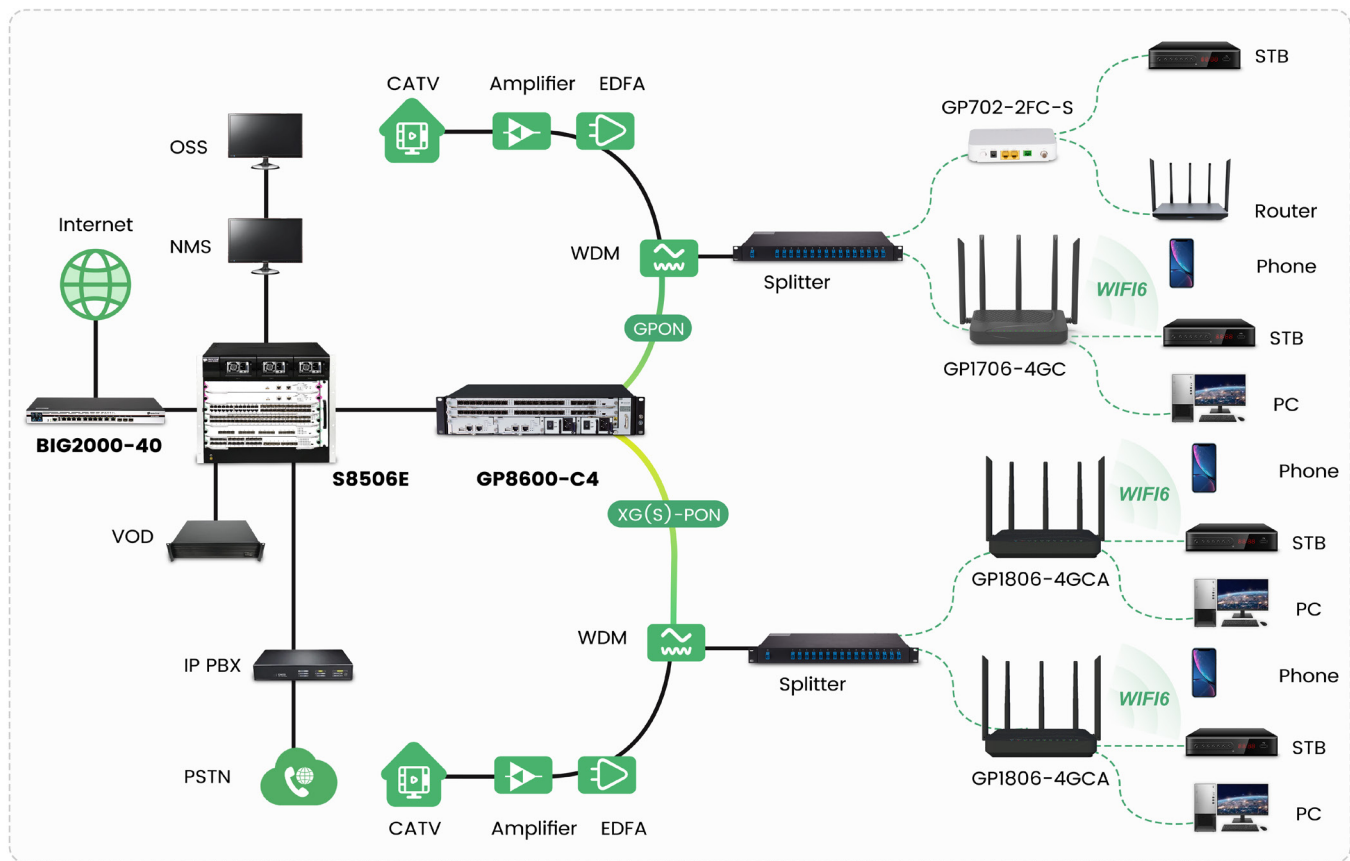
GP1806-4GCA

XG-PON WiFi6 CATV Home
Gateway Unit(HGU)



- 1-Port XG-PON(SC/APC)
- 4-Port Gigabit RJ45
- 1-Port RF(British System)
- 1-Port USB2.0
- 3000Mbps WiFi6

Application Diagram



System Performance

Item	GP1806-4GA	GP1806-4GVA	GP1806-4GCA
UNI port	4×GE	4×GE	4×GE
	-	1×FXS	1×British RF
	WiFi6 external 5 antennas	WiFi6 external 5 antennas	WiFi6 external 5 antennas
	1 USB	1 USB	1 USB
PON port	Transmission rate: Downlink 10Gbps/uplink 2.5Gbps Network Coverage Radius: 20 kilometers Receiver Sensitivity: ≤-28dBm Transmit Optical Power: 0.5~5dBm		
	SC/UPC	SC/UPC	SC/APC
	Standards ITU-T G.987.3, G.988, G.989 GB/T 39577-2020 10Gbit/s Passive Optical Networks (XG-PON)		
Data Forwarding	Routing Mode, Bridging Mode, and Routing+Bridging Hybrid Mode		
DNS	DNS Relay		
DHCP	DHCP server		
VLAN	Port-based VLAN IEEE 802.1Q VLAN		
Multicast	IGMP Snooping, CTC-defined dynamic multicast, MLD Snooping, Full-Routing Multicast		
VoIP	-	SIP	-
CATV	-	-	AGC: -10 ~ +2dBm; Output level≥70dbuv
WiFi	802.11b/g/n/ac/ax 2x2 2.4GHz: 575Mbps 2x2 5GHz: 2400Mbps Supports Multiple SSID and SSID hidden		

Technical Specifications

QoS

- Backpressure Flow Control (Half-Duplex)
- IEEE 802.3x Flow Control (Full-Duplex)
- Preventing Head-of-Line Blocking
- IEEE 802.1p, CoS
- 4 Priority Queues per Port
- WR, SP, and FIFO
- Port Rate Limiting

Reliability

- Loop Detection
- Dying-Gasp
- Type B Dual Homing Protection

Management Configuration

- HTTP, Telnet, TR069, OMCI
- Software Upgrade through TFTP, WEB, HTTP, TR069, and OLT

Dimensions (WxDxH)

- 185*135*36mm (excluding antennas)

Heat dissipation

- Extended use (24 hours) does not result in performance degradation or damage due to device overheating or deformation.

Environment requirements

- Operating environment: 0°C~45°C; 10%~90% non-condensing
- Input rated voltage: DC12V/1.5A (external adapter)
- Power: less than 20W

Security

- Port MAC Address Limitation
- Port Protection
- Port Storm Suppression

Ordering Information

Model	Description
GP1806-4GA	10G WiFi ONU with 1-port XG-PON (SC/UPC), 4-port GE, 1 USB, external 5 antennas (WiFi6 3000M), plastic casing, DC 12V/1.5A external adapter.
GP1806-4GVA	10G WiFi ONU with 1-port XG-PON (SC/UPC), 4-port GE, 1-port POTS, 1 USB, external 5 antennas (WiFi6 3000M), plastic casing, DC 12V/1.5A external adapter.
GP1806-4GCA	10G WiFi ONU with 1-port XG-PON (SC/UPC), 4-port GE, 1-Port RF, 1 USB, external 5 antennas (WiFi6 3000M), plastic casing, DC 12V/1.5A external adapter.