



GP5801-02

Pizza Box GPON OLT

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Product Overview

The GP5801-02 is a highly integrated, medium-capacity GPON OLT designed for carriers, ISPs, enterprises, and campus applications. It complies with ITU-T G.984/G.988 technical standards, offering excellent openness, strong compatibility, high reliability, and comprehensive software features. It is widely applicable in network construction for FTTH access by carriers, government and enterprise campuses, and campus networks.

The GP5801-02 is a compact 1U-height device, making it easy to install and maintain while saving valuable space. Leveraging industry-leading technology, it offers an efficient GPON solution with optimized bandwidth utilization and robust Ethernet service support, enabling operators to deliver reliable service quality to users. The device also supports mixed networking with various types of ONUs, significantly reducing costs for operators.

Product Highlight

- Rich Layer 2/3 switching features and Flexible management methods
- Support multiple link redundancy protocols such as STP/RSTP/LACP
- Support RIP、OSPF
- Support Power redundancy backup, Modular power supply

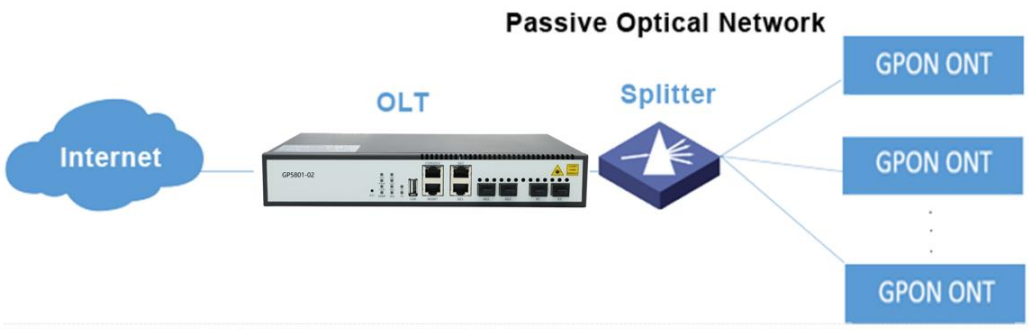
Device Brief Information



GP5801-02
· 2 * GPON port · 2 * 10/100/1000M Base-T · 2 * 1000M Base-X SFP/2*10GE SFP+ · AC: 100～240V, 47/63Hz; · DC: 12V · Size：265 * 180 * 40mm

Solution Display

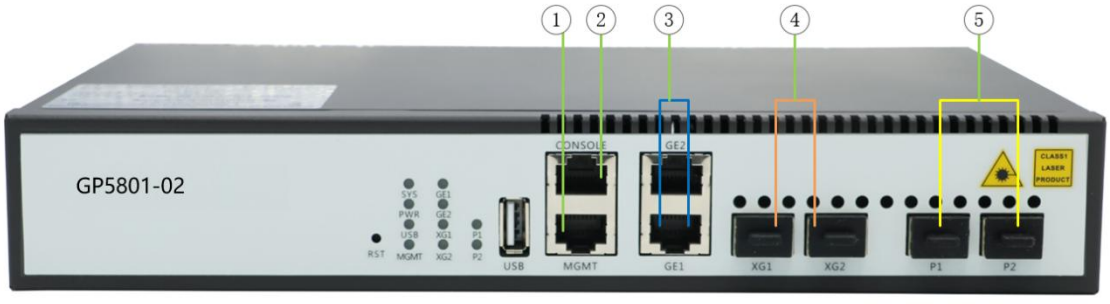
The GPON system usually consists of the OLT at the office side, the ONU and the ODN at the user side, and adopts a point-to-multipoint network structure. The ODN consists of single-mode optical fibers and passive optical devices such as optical splitters and optical connectors. It provides the optical transmission medium for the physical connection between the OLT and ONU.Implement FTTX service deployment application.



Hardware Specification

Attributes	GP5801-02
Interface	2 * GPON port; 2 * 10/100/1000M Base-T; 2*1000M Base-X SFP/2*10GE SFP+; Dual power supply optional
Exchange Capacity	51.5Gbps
Packet Forwarding Rate	59.7Mpps
Memory and Storage	Memory: 512MB; Storage: 32MB
MAC Address	16K
Packet Buffer	12Mbit
Management Port	1*Console Port; 1*Management Port
PON	1:128 maximum splitting ratio
Weight	≤2kg
Fan	2*Fixed Fans
Power	AC: 100～240V, 47/63Hz; DC: 12V
Power Consumption	≤30W
Dimensions (W *D *H)	270mm*180mm*44mm
Environment Temperature	Working Temperature：-10℃～55℃ Storge Temperature：-40℃～70℃
Environment Humidity	Operating Humidity: 10%～95% (non-condensing) Storage Humidity: 10%～95% (non-condensing)
Environment Friendly	China RoHs,、EEE

Panel view



① Out-of-band management port ② Console Port ③ 10/100/1000M Ethernet port

④ 1G/10G Base-X SFP/SFP+ ⑤ GPON Port

LEDs Operating Status

The operation status of GP5801-02 can be determined by using the front LED. The panel LED indicator will display the status of each interface. The meaning of LED is shown in the following table.

LEDs/Buttons	Color	Function	Description	
SYS	Green	System running status	Green OFF	The device is not running or power off.
			Green Flash	The device is running normally.
MGMT	Green	Port status	ON	The link is properly connected (link up) and in action
			OFF	The link is interrupted (link down).
USB	Green	Port status	ON	The USB flash drive peripheral is inserted.
			OFF	None USB flash drive external insert.
PWR	Green	Power status	ON	The AC/DC power module is normal.
			OFF	The AC/DC power module faulty or unavailable.
GE	Green	Port status	ON	The link is properly connected (link up) and in action
			OFF	The link is interrupted (link down).
1G/10G SFP	Green	Port status	ON	The link is properly connected (link up) and action
			OFF	The link is interrupted (link down).
PON 1~2	Green	PON port status	ON	At least one ONU has been successfully registered.
			OFF	No ONU has been successfully registered.
RST	N/A	Reset button	Long press on the RST button for to restart the equipment.	

Plug-In Units

The device has a built-in power template ， Two PSUs are possible to be mounted into rear of the chassis and it can be DC or AC type of PSU. The power supply unit (PSU) feeds the proper power voltage to the base board of OLT.
The below shows the electrical characteristics of the OLT:



Characteristic	GP5801-02

Nominal DC power supply	DC: 12V/2.5A
Nominal AC power supply	AC: 100～240V; 47/63Hz
AC Rated power of power supply	30W
DC Rated power of power supply	30W

FAN Unit

The device has built-in fan units. The number of fan units varies according to the chassis structure.

Characteristic	FAN
GP5801-02	2*FAN

Software Specification

Attributes	GP5801-02
PON	Support ITU-T G.984/G.988 standards Supports a physical differential distance of 20KM and a logical distance of 60KM Supports maximum 1:128 spectral ratio Support standard OMCI management functionality Support private OMCI management function (requires ONT from our company) Supports compatibility with ONT of any brand Support batch upgrade of ONT
VLAN	Support 4K VLAN Support VLAN based on port, MAC and protocol
MAC	32K Mac address Support static MAC address setting Support black hole MAC address filtering Support port MAC address limit
Ring Network Protocol	Support STP/RSTP/MSTP Support Loopback-detection port loopback detection
Port Control	Support two-way bandwidth control Support port storm suppression Support 9K Jumbo ultra-long frame forwarding
Port Aggregation	Support static link aggregation Support dynamic LACP Each aggregation group supports a maximum of 8 ports
Mirroring	Support port mirroring
ACL	Support standard and extended ACL Support ACL policy based on time period Provide flow classification and flow definition based on IP header information such as source/destination MAC address, VLAN, 802.1p, ToS, DSCP, source/destination IP

	address, L4 port number, protocol type, etc.
QoS	Support flow rate limiting function based on custom business flow Supports mirroring and redirection functions based on custom business flows Support priority marking based on custom service flow, support 802.1P, DSCP priority Remark capability Support port-based priority scheduling function, support queue scheduling algorithms such as SP/WRR/SP+WRR
VLAN	Support 4K VLAN Support VLAN based on port, MAC and protocol Support dual Tag VLAN, port-based static Q-in-Q and flexible Q-in-Q
Safety	Support user hierarchical management and password protection Support Radius&TACACS+ authentication Support MAC address learning limit, support black hole MAC function Support port isolation Support broadcast message rate suppression Support IP Source Guard Support ARP flood suppression and ARP spoofing protection
Layer3 Routing	Support ARP learning and aging Support static route Support dynamic route RIP/OSPF
System management	CLI、Telnet、WEB、SNMP V1/V2/V3、SSH2.0 Support FTP, TFTP file upload and download Support SNTP Support LLDP neighbor device discovery protocol Support Ping and Traceroute

Connector Specifications

The OLT provides standardized interfaces, thus facilitating rapid and trouble-free integration into the existing network infrastructures.

PON Interfaces
The OLT contains 2 GPON interface ports for SFP modules and below table is available.
GPON module list.

1	SFP GPON OLT -. Wavelength: 1490nm/1310nm / Distance: 20km / Mode: single mode -. Connector: SC/PC / Data rate: 2.488Gbit/s (Up), 1.25Gbit/s (Down) -. Core type: Single Core / Operating Temperature: 0 °C ~ 70 °C

Network Interfaces
The OLT optical interface ports for SFP/SFP+ modules and below table is available SFP/SFP+ module list.

Index	SFP/SFP+ Module Description
1	- Wavelength: 850 nm / Distance: 550 m / Mode: multi-mode - Connector: LC / Data rate: 1.25Gbit/s / Core type: Dual Core

	- Operating Temperature: 0 °C - 70 °C
2	-. Wavelength: 1310nm / Distance: 5km / Mode: single-mode -. Connector: LC / Data rate: 1.25Gbit/s / Core type: Dual Core -. Operating Temperature: 0 °C – 70 °C
3	- Wavelength: 1310 nm / Distance: 10 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0 °C – 70 °C
4	- Wavelength: 1310 nm / Distance: 15 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0 °C – 70 °C
5	- Wavelength: 1310 nm / Distance: 20 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0 °C - 70 °C
6	- Wavelength: 1310 nm / Distance: 40 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0 °C - 70 °C
7	- Wavelength: 850nm / Distance: 300m / Mode: Multimode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70 °C - 10GBASE-SR (10G)
8	- Wavelength: 850nm / Distance: 300m / Mode: Multimode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70 °C - 1000BASE-SX (1G), 10GBASE-SR (10G)
9	- Wavelength: 1310nm / Distance: 10Km / Mode: Single mode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70 °C - 10GBASE-LR (10G)
10	- Wavelength: 1550nm / Distance: 40Km / Mode: Single mode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70 °C - 10GBASE-ER (10G)
11	- Wavelength: 1310nm / Distance: 70Km / Mode: Single mode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70 °C - 10GBASE-ZR (10G)

Purchase Info

Model Number	Description
GP5801-02	2 * GPON port; 2 * 10/100/1000M Base-T; 2*1000M Base-X SFP/2*10GE SFP+; Dual power supply optional（AC+DC）;