



Focuscom



GP5900-02

Pizza Box 10G XG(S)-PON OLT

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Product Overview

GP5900-02 OLT is a highly integrated, large-capacity XG(S)-PON OLT for operators, ISPs, enterprises, and campus applications. The product follows the ITU-T G.987/G.988 technical standard, and can be compatible with two modes of XG/XGS at the same time.

The asymmetric system (up 2.5Gbps, down 10Gbps) is called XGPON, and the symmetric system (up 10Gbps, down 10Gbps) is called XGSPON. The product has good openness, strong compatibility, high reliability and complete software functions, together with the optical Network unit (ONU), it can provide users with broadband, voice, video, surveillance and other comprehensive service access. It can be widely used in operators' FTTH access, government and enterprise park access, campus network access, ETC. XG(S)-PON OLT provides higher bandwidth. In application scenarios, service configuration and O&M completely inherit GPON.

GP5900 is only 1U in height, easy to install and maintain, and save space. Supports mixed networking of different types of ONUs, which can save a lot of costs for operators.

Product Highlight

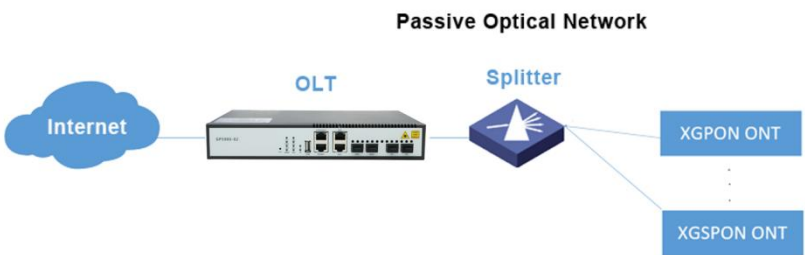
- Comply with ITU-T 987/G.988 technical standards, with good connectivity capabilities
- Pon port can support XGPON/XGSPON
- Rich Layer 2/3 switching features and Flexible management methods
- Support multiple link redundancy protocols such as FlexLink/STP/RSTP/MSTP/LACP
- Support RIP、 OSPF
- Support Power redundancy backup
- Support ONT power failure alarm

Device Brief Information

	GP5900-02 • 2*XG(S)-PON port • 2*1000M Base-X SFP/2*10GE SFP+ • 2*10/100/1000M Base-T • size: 265mm * 180mm * 40mm • AC: 100 ~ 240V 47/63Hz; • DC: 12V/2.5A;
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Solution Display

The XG-PON 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.



Hardware Specification

Attributes	GP5900-02
Interface	2*XG(S)-PON port, 2*1000M Base-X SFP/2*10GE SFP+, 2*10/100/1000M Base-T
Exchange Capacity	128Gbps
Forwarding Rate	95.232Mpps
Memory and Storage	DRAM: 256MB; Flash:32MB
MAC Address	16K
Packet Buffer	12Mbit
Management Port	Console, MGMT
PON	Comply with ITU-T G.987/G.988 standard; Wavelength of XGPON: 1577nm downstream, 1270nm upstream;
	XGPON: Downstream - 9.95328Gbps, Upstream - 2.48832Gbps. XGSPON: Downstream - 9.95328Gbps, Upstream - 9.95328Gbps;
	XGPON supports a maximum distance of 20KM logical distance, 20KM physical distance, and 20KM differential distance;
	PON port total 1:128 Maximum spectral ratio,
	Standard OMCI management function; Open to any brand of ONT; ONU batch software upgrade; PON module adapts to standard 20PIN SFP+ package module
Environment Temperature	Working Temperature: -10°C ~ 55°C Storage temperature: -40°C ~ 70°C
Environment Humidity	Relative Humidity: 5%~95%, non-condensing
Environment Friendly	RoHS
Weight	≤2kg
Fan	2*Fixed Fans
Power	AC: 100 ~ 240V, 47/63Hz; DC: 12V
Power Consumption	≤30W
Dimensions(W*D*H)	270mm*180mm*40mm

Product Interface



Label	Connector Type	Connector Description
1G/10G 1-2	SFP/SFP+	Connect to external uplink equipment
XGSPON 1-2	SFP+	XGS-PON service port
MGMT	RJ45	The out-band management port
CONSOLE	RJ45	The software debug port

LEDs Operating Status

The operation status of GP5900-02 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.
PWR	Green	Power status	ON	The AC/DC power module is normal.
			OFF	The AC/DC power module faulty or unavailable.
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	Insert USB flash drive
			OFF	No USB flash drive is inserted
GE 1-2	Green	Port status	ON	The link is properly connected (link up) and in action

			OFF	The link is interrupted (link down).
1G/10G1-2	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 OLT has two built-in Power modules. Two Power Supply Unit (PSU) power ports, AC power connectors, and DC power connectors are fixed on the rear panel. The two power modules provide redundant power for the system.

The below shows the electrical characteristics of the OLT



Characteristic	GP5900-02
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 OLT rear panel provides 2 fixed fan packs with air flowing from the side inlet to the rear outlet.

Characteristic	GP5900-02
FAN	8000 RPM adjustable fan

Software Specification

Attributes	GP5900-02
PON	Support N1/N2/E2 XG-PON or XGS-PON optical module SN / SN + Password ONU authentication ONU optical power monitoring Rogue ONU detection
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
MAC	16K 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 ERPS Ethernet ring network protection protocol 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 Support stream 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 IEEE 802.1X authentication 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/BGP/ISIS
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
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Connector Specifications

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

PON Interfaces

The OLT contains 8 XGS-COMBO PON interface ports for SFP+ modules and below table is available .
XGS COMBO PON module list.

1	XGS- PON OLT SFP+ . 20 PIN DFB . Single fiber bi-directional data links with downstream 9.953Gbps . Single fiber bi-directional data links with upstream 9.953G/2.488Gbps . 0 to 70°C operating case temperature . SFP+ package with SC Receptacle connector . High power 1577nm EML transmitter . High sensitivity 1270nm APD-TIA . Support 20km transmission distance with SMF . RoHS compliance
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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
GP5900-02	2*XG(S)-PON port, 2*1000M Base-X SFP/2*10GE SFP+ 2*10/100/1000M Base-T



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