

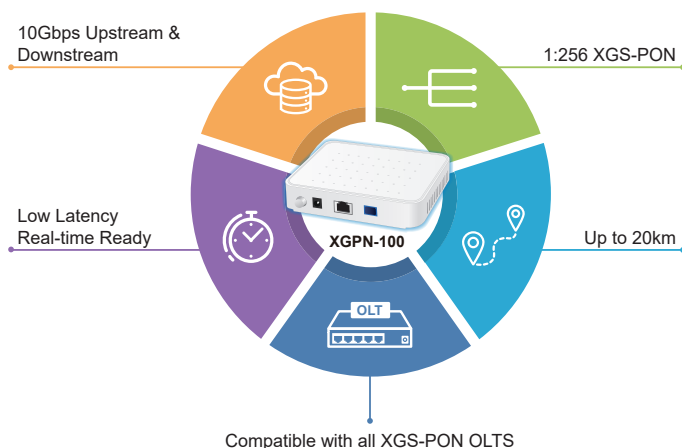
## XGS-PON SFU ONT with 1-Port 10GbE



### Superior Access Performance

PLANET XGPN-100 is a high-performance XGS-PON Single Family Unit (SFU) designed to provide ultra-fast fiber broadband connectivity. With 10Gbps symmetrical transmission speeds, it seamlessly integrates with XGS-PON Optical Line Terminals (OLTs) to deliver high-speed, low-latency, and future-ready networking for residential and enterprise applications. Designed for maximum efficiency and extended coverage, it ensures reliable connectivity across various deployment scenarios.

- Blazing-fast 10Gbps upstream and downstream for next-generation broadband access
- Seamless OLT compatibility, supporting XGS-PON deployments with ease
- 1:256 high split ratio, optimizing network capacity and scalability
- Extended 20km coverage range, perfect for FTTH and enterprise networks
- Low latency and stable connections ensure seamless real-time applications



### Delivering High-speed Fiber Connectivity for ISP and Enterprise Networks

The XGPN-100 features one 10Gbps XGS-PON fiber port and one 10G RJ45 Ethernet port, making it an ideal solution for high-bandwidth applications in both residential and business environments. Whether used for FTTH, enterprise networking, or small business operations, the XGPN-100 ensures seamless ultra-high-speed data transfer with minimal latency.

### XGS-PON Port

- One SC/UPC type XGS-PON port
- Up to 10Gbps upstream and 10Gbps downstream
- Maximum distance of up to 20km
- Compliant with ITU-T G.987.3, G.988, G.989
- LED indicators for link status

### Ethernet

- 802.1Q VLAN and QoS
- IGMP snooping and IGMP proxy
- MLD snooping and MLD proxy
- IPv4/IPv6 protocol

### Physical Hardware

- One 10GBASE-T RJ45 port backward compatible with 100/1G/2.5GBASE-T

### Features

- Multiple operation modes: routing, bridging, and hybrid (routing and bridging)
- Half-duplex backpressure flow control
- Head-of-Line blocking prevention mechanism
- Dynamic Bandwidth Allocation (DBA)
- WR, SP, and FIFO queue scheduling algorithms
- Layer 2/3/4 classification rules
- IEEE 802.3x flow control
- QoS with 8 priority queues
- Port rate limiting

### Security

- IEEE 802.1x authentication
- Port storm suppression
- MAC/IP/Port filtering
- URL and domain name filtering
- DHCP snooping
- DDoS protection
- Port mapping

### Perfectly Designed for Fiber-to-the-Premises (FTTP) Applications

Built with a 10Gbps fiber interface, the XGPN-100 can support various optic types for WAN connectivity and can extend network coverage up to 20km over fiber connections. Its high-speed 10G Ethernet port enables direct connection to high-performance networking devices, such as servers, enterprise routers, and high-speed workstations, ensuring a smooth and reliable network experience.

With advanced QoS features, the XGPN-100 can efficiently handle bandwidth-intensive applications, including IPTV, cloud computing, online gaming, and real-time video streaming, while ensuring optimal traffic prioritization and load balancing.

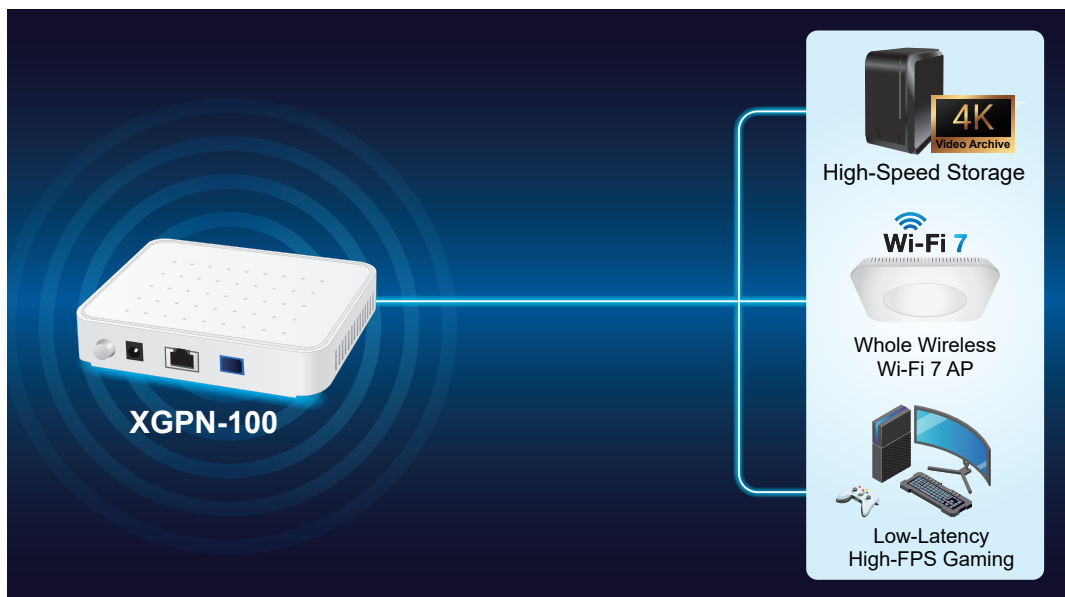
### 10G Ethernet Port for High-Bandwidth Network Integration

As modern businesses and households demand multi-gigabit connectivity, the XGPN-100 provides a 10G RJ45 port that supports full 10GbE speeds. This allows users to connect directly to high-speed networking equipment, such as NAS, gaming consoles, and external 802.11ax (Wi-Fi 6) or future 802.11be (Wi-Fi 7) access points via Ethernet, delivering superior data transmission speeds and signal quality.

By leveraging standard Cat 6A cables, users can achieve 10Gbps network speeds without costly fiber upgrades, making it a cost-effective and high-performance solution for next-generation networking needs.

### Management

- Web, TELNET, TR-069, and OMCI for remote management
- OAM (Operations, Administration, and Maintenance)
- TFTP/Web/TR-069/OLT firmware upgrade
- Syslog, NTP, DHCP relay, and option 82



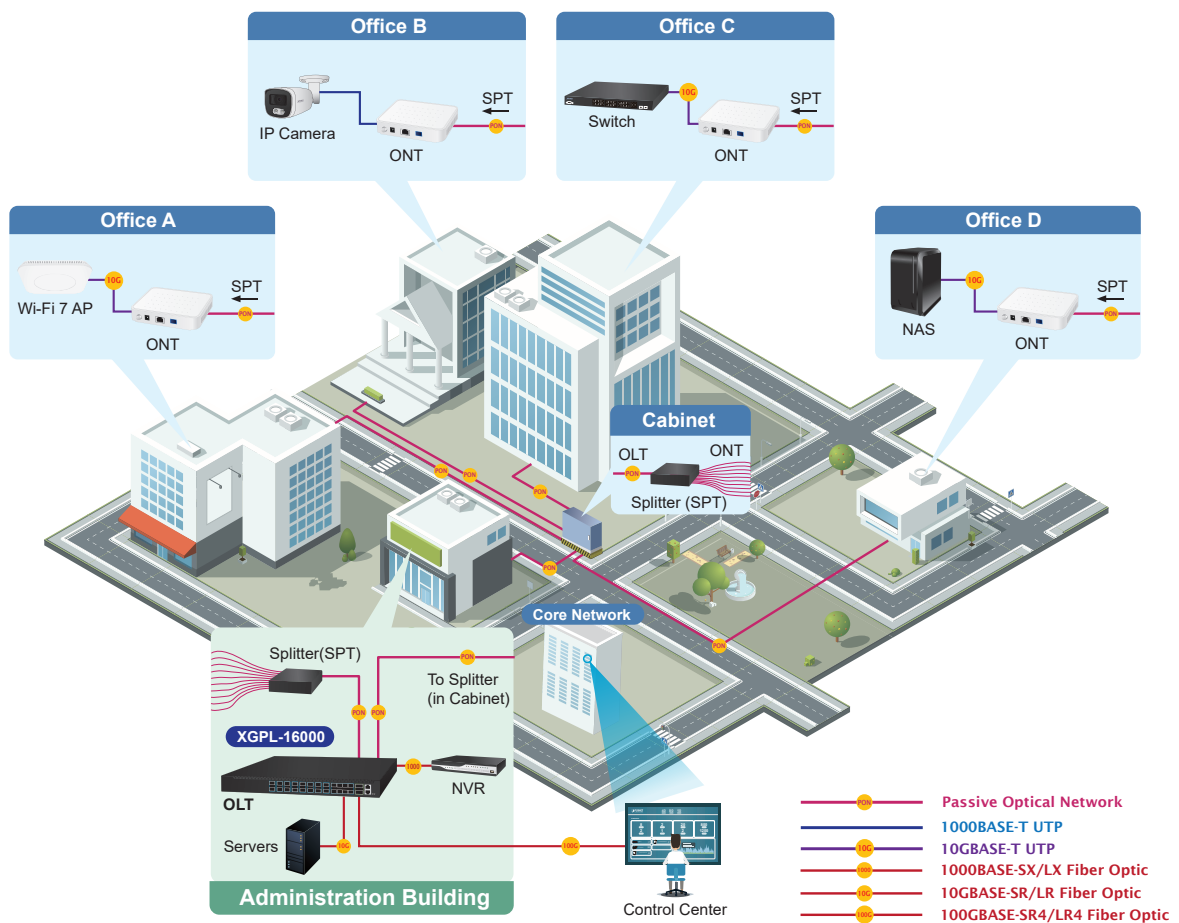
## Applications

### High-Performance XGS-PON SFU for Business-Class Connectivity

The XGPN-100 is a compact and high-speed XGS-PON SFU (Single Family Unit) designed for enterprise and commercial deployments requiring symmetric 10Gbps bandwidth. Equipped with a 10G Ethernet port, it provides a dedicated fiber uplink for a wide range of applications, including IP surveillance aggregation, office Wi-Fi backhaul, NAS access, and high-throughput workstation connectivity.

When deployed alongside the XGPL-16000 OLT, the XGPN-100 enables reliable and efficient service delivery across business districts, multi-unit buildings, and distributed commercial environments. Its plug-and-play form factor makes it ideal for system integrators and enterprise IT teams seeking simplified, scalable fiber rollout.

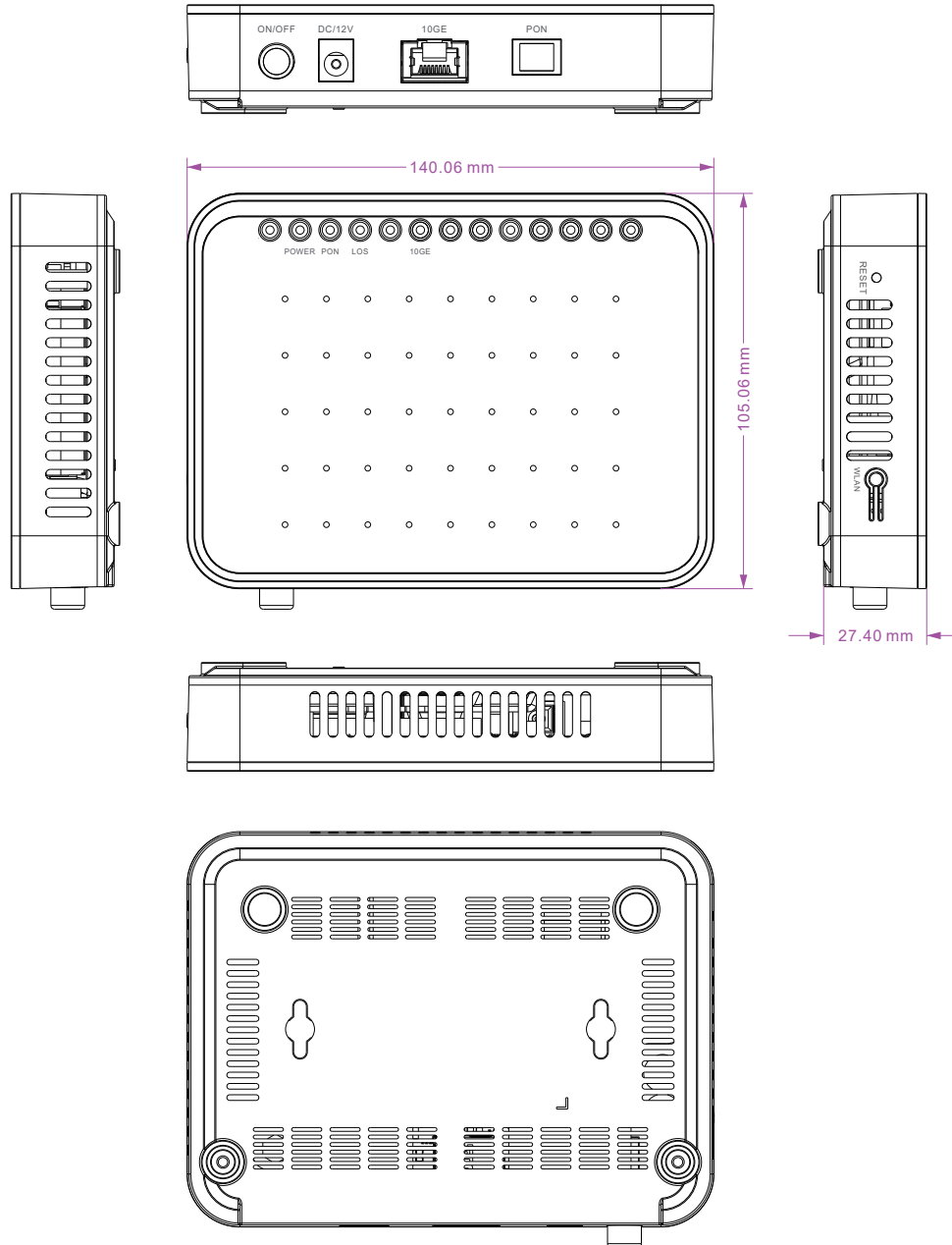
## PLANET XGS-PON Solution for Business Deployments



## Specifications

Products	XGPN-100
<b>Hardware Specifications</b>	
UNI Port	1 x 10GBASE-T RJ45 port backward compatible with 100/1G/2.5G/5GBASE-T
PON Port	Transmission rate: Downlink 10Gbps/uplink 10Gbps Network Coverage Radius: 20 kilometers Receiver Sensitivity: ≤-28dBm Transmit Optical Power: 0.5~5dBm Optical interface type: SC/UPC
Reset Button	Press for about 15 seconds to reset the device to factory default
Thermal Fan	Fanless
LED Indicators	PWR (Green) PON (Green) LOS (Red) 10GE (Green)
Installation	Desktop installation or wall mounting
Power Requirements	12V AC, 1A max.
Power Consumption	6W max.
Weight	236g
Dimensions (WxDxH)	140.06 x 105.06 x 27.4mm
Enclosure	Plastic
Heat Dissipation	Extended use of up to 24 hours does not result in performance degradation or damage due to device overheating or deformation.
<b>Router Features</b>	
Data Forwarding	Routing mode, bridging mode, and hybrid mode (routing and bridging)
DNS	DNS Relay
DHCP	DHCP server
VLAN	Port-based VLAN IEEE 802.1Q VLAN
Multicast	IGMP snooping IGMP proxy MLD snooping MLD proxy
QoS	Backpressure flow control (Half-duplex) IEEE 802.3x flow control (Full-duplex) Head-of-Line blocking prevention mechanism IEEE 802.1p, CoS 8 priority queues per port WR, SP, and FIFO queue scheduling algorithms Port rate limiting
Reliability	Loop detection function Dying gasp function Type B dual-homing protection
Security	Port protection Firewall: MAC/IP/Port/URL/Domain name filtering DDoS protection Port storm suppression Port mapping
Management Configuration	Supports multiple management methods: Web, TELNET, TR069, OMCI, and OAM Firmware upgrade via TFTP/WEB/TR069/OLT
<b>Standards Conformance</b>	
Standards	ITU-T G.987.3, G.988, G.989 Supports China Communications Industry Standard GB/T 43699-2024 "Access Network Technical Requirements for 10Gbit/s Symmetrical Passive Optical Network (XGS-PON)" IEEE 802.1Q, VLAN
<b>Environment Specifications</b>	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 60 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

## Dimensions



**Dimensions (W x D x H): 140.06 x 105.06 x 27.4 mm**

## Ordering Information

XGPN-100	XGS-PON SFU ONT with 1-Port 10GbE
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## Related Products

XGPL-16000	16-Port XGS-PON OLT with 8-Port 10G SFP+ + 2-Port 100G QSFP28
XGPN-400AXV	XG-PON HGU with 4-Port GbE, 3000Mbps 802.11AX Wireless and 1-Port FXS

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**XGPN-100**