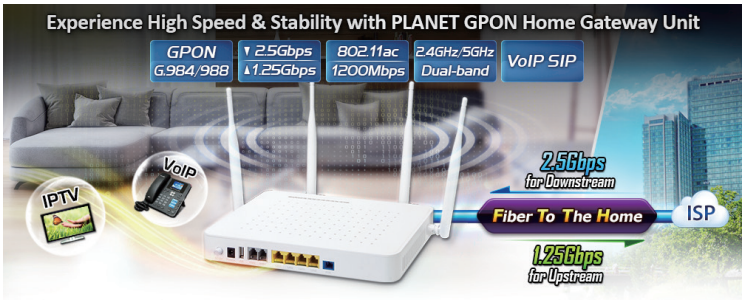
xPON HGU with 4-Port GbE, 1200Mbps 802.11ac Wireless and 2-Port FXS (1 x USB)

Delivering High-Demand Service Connectivity for ISP/Triple Play Devices

PLANET GPN-400ACV is a **GPON/EPON Wi-Fi ONU** (optical network unit) equipped with one xPON port, four 10/100/1000Mbps RJ45 LAN ports and two FXS RJ11 interfaces. It is also a high-end IEEE 802.11ac/n standard multi-terminal product. It provides residential and office users with the ideal solution for sharing an ultra high-speed fiber optic broadband connection. When functioning with PLANET xPON Optical Network Terminal (OLT) GPL-8000, the GPN-400ACV provides highly-effective xPON solutions for FTTH network.



Perfectly Designed for Fiber to the Home Applications

PLANET GPN-400ACV is a fiber to the home (FTTH) broadband access equipment type. With built-in 1.25Gbps xPON fiber interface, the GPN-400ACV supports different optic types for WAN and the distance can be up to 20km through the fiber connection. It can handle multiple high-throughput services such as IPTV, on-line gaming, VoIP and Internet access, and keep the bandwidth usage smoothly via its QoS features. Thus, with advantages of high reliability and scalability, the GPN-400ACV can further be applied in the network of SOHO (small office or home office) or small businesses that provide high-performance access services.

xPON

- 1 x SC/UPC type xPON port
- Up to 1.25Gbps upstream and 2.5Gbps downstream
- Up to 20km
- Supports 128-bit triple churning algorithm

Ethernet

- Supports 802.1Q VLAN, QoS
- Supports broadcast storm protection
- Supports bandwidth control
- Supports IGMP snooping/proxy
- Supports IPv4/IPv6

VoIP

- Supports G.711 a/u law, G.723, G.729 code/decode
- Supports T.38 (G.711 Fax pass-through)
- Supports SIP/H.248/MGCP

Wireless

- Up to 1200Mbps bandwidth
- Compatible with 802.11b/g/n/ac
- Compatible to equipment working on 2.4GHz & 5GHz

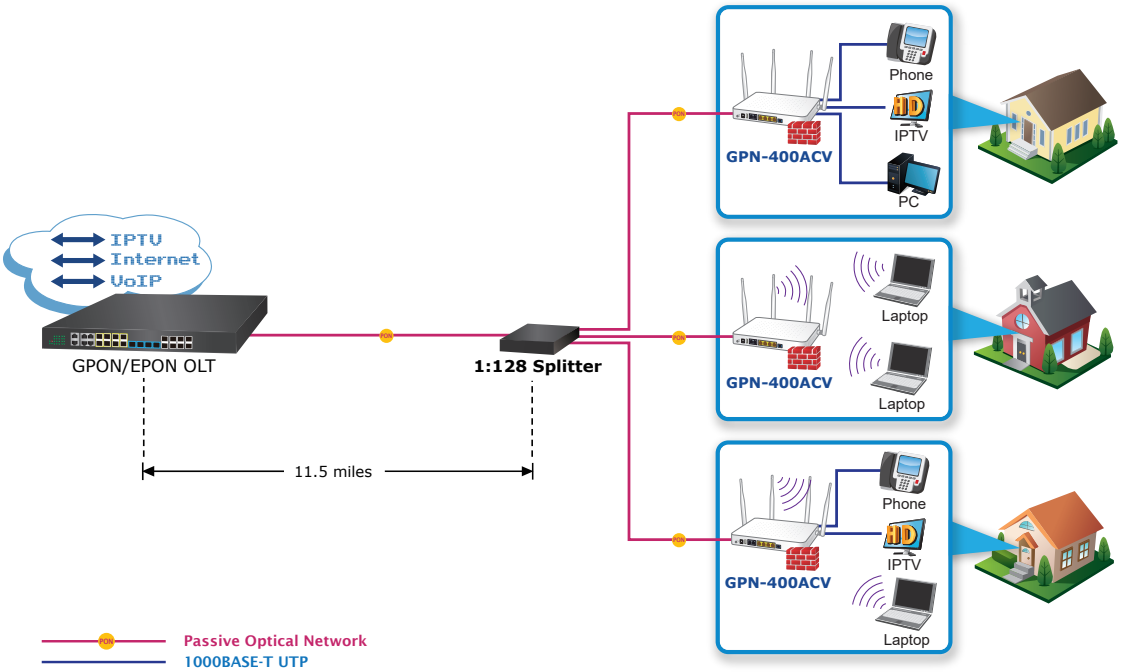
Physical Hardware

- 4 x 10/100/1000Mbps Gigabit Ethernet port
- 2 x FXS port
- 2 x 5dBi 2.4GHz and 2 x 5dBi 5GHz antenna

Features

- Dynamic Bandwidth Allocation (DBA) support
- Enhanced IGMP feature
- Supports Layer 2/3/4 classification rules
- Supports IEEE 802.3x flow control

Fiber To The Home



High-Speed 802.11ac Wireless

PLANET GPN-400ACV Wireless Broadband Router supports IEEE 802.11a/b/g/n/ac standard, dual band, and Gigabit LAN and WAN, thus providing the wireless speed of **867Mbps** in the 5GHz frequency band and **300Mbps** in the 2.4GHz frequency band at the same time. With its outstanding stability of high-speed wireless transmission and enhanced reliability, the GPN-400ACV can provide users with excellent multimedia streaming through their mobile devices anywhere, anytime in the home and office.

Gigabit LAN Throughput Boosts Network Traffic

Improving communication speed is one of the major requirements of today's Gigabit local area networks. With throughput up to 10 times faster than the existing 100Mbps solution, the GPN-400ACV fully employs the full functionality of the 802.11ac wireless standards, eliminating the bottleneck of the transmission speed of the megabit wired type. Using the GPN-400ACV to connect your desktop, NAS, media player and game console guarantees extremely high throughput and excellent signal quality.

Standard Compliance with FXS Port

The GPN-400ACV provides two FXS ports that can easily integrate with general voice over IP system. The GPN-400ACV makes it simple for the enterprise featuring voice and data system or expanding voice system to new locations. It helps you to save money on long-distance calls; for example, the remote users can dial in through a Unified VoIP Communication System just like an extension call but no long-distance call charge would occur.

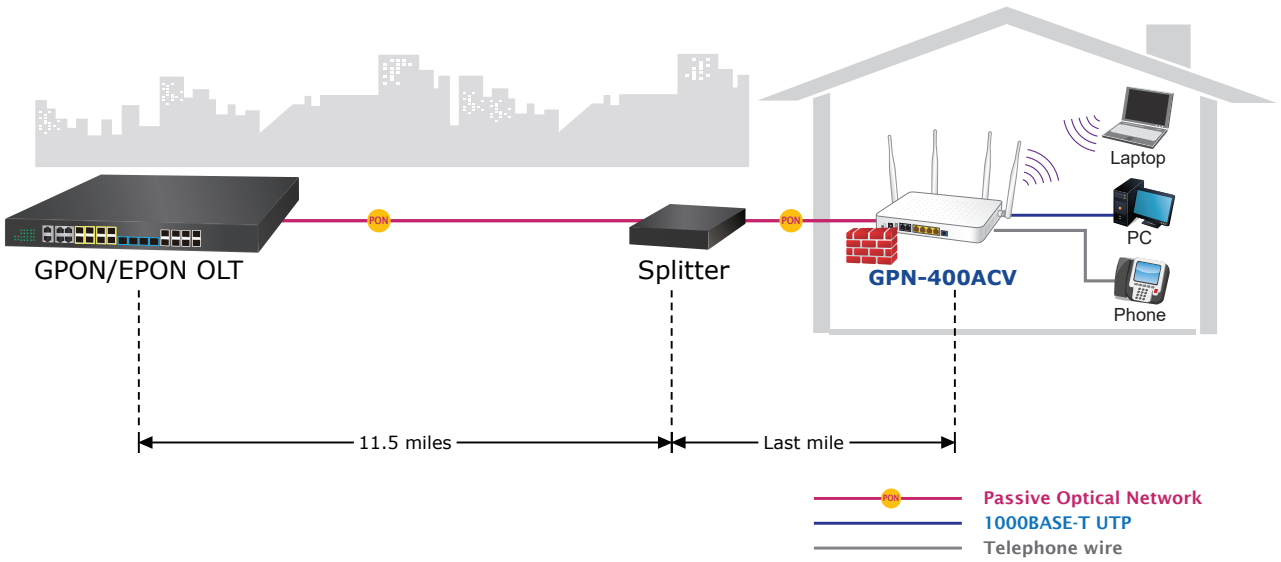
IPv6/IPv4 Dual Stack Capability

With fully supporting both IPv4 and IPv6 protocols, the GPN-400ACV can work with the original IPv4 network structure and also support the new IPv6 network structure now and in the future. As more network devices are growing and the need for larger addressing and higher security becomes critical, the GPN-400ACV is the best choice for ISPs to build the IPv6 FTTx edge service to connect with the IPv6 network.

Applications

High Scalability and Flexibility in Multiple Applications

PLANET GPN-400ACV provides ultra high-speed Internet connection with PLANET OLT (GPL-8000/EPL-4000) via new xPON technology. The upstream and downstream transmission speed provided is up to 1.25Gbps and its maximum distance can be 20km. Through the PON technology, the GPN-400ACV can receive and deliver high-speed voice, data and video services. It offers competitive advantages including a long-term life expectancy of the fiber infrastructure, lower operating costs from the reduction of "active" components, easy Installation and maintenance, and most importantly, offering a much greater and more stable bandwidth. The GPN-400ACV is the perfect solution working with PLANET OLT GPL-8000 and EPL-4000 to offer benefits of cost-effectiveness, scalability and flexibility to network deployment.



Specifications

Product		GPN-400ACV
Hardware Specifications		
Interfaces	PON Port	1 x xPON Port, SC/UPC
	Ethernet Port	4 x 10/100/1000T RJ45
	FXS Port	2 x RJ11 Port
	USB Port	1 x USB 2.0 Port Type A, 5V 500mA
Antenna		Gain: 2.4GHz: 2 x 5dBi external antenna 5GHz: 2 x 5dBi external antenna
Button		1 x Power ON/OFF button 1 x reset button (Press for about 10 seconds to reset the device to factory default.) 1 x WLAN enable/disable button 1 x LED on/off button
Dimensions (W x D x H)		230 x 140 x 34.9 mm
Weight		500g
Power Input		12V DC, 1.5A
Power Consumption		15W
PON Specifications		
Transmission Speed		Downstream: 2.5 Gbps Upstream: 1.25 Gbps
Optic Wavelength		TX: 1310mm RX:1490mm
Optical Receive Sensitivity		< -28 dBm
Optical Tx Power		0.5~5 dBm
Wireless Interface Specifications		
Standard		IEEE 802.11ac 5GHz IEEE 802.11a/n 5GHz IEEE 802.11b/g/n 2.4GHz
Frequency Band		Simultaneous 2.4GHz and 5GHz
Modulation Type		802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11b: DSSS (DBPSK / DQPSK / CCK)
Data Transmission Rates		2.4GHz up to 300Mbps 5GHz up to 867Mbps
Channel		**2.4GHz:** FCC (America): 2.412~2.462GHz (11 Channels) ETSI (Europe): 2.412~2.472GHz (13 Channels) **5GHz:** 5.180-5.560GHz, 5.745-5.805GHz (up to 16 channels) *The actual channels in application will vary depending on the regulation in different regions and countries.
Channel Width		802.11ac: 20/40/80MHz 802.11n: 20/40MHz
Max. RF Power / EIRP		2.4GHz: < 20dBm 5GHz: < 20dBm
Receive Sensitivity		2.4GHz: 11n [20M] mode: -67 11n [40M] mode: -64 11n [20M] MCS0: -85 11n [20M] MCS1:-82 11n [20M] MCS2: -80 11n [20M] MCS3: -77 11n [20M] MCS4: -73 11n [20M] MCS5: -69 11n [20M] MCS6: -68 11n [20M] MCS7: -67
		11n [40M] MCS0:-82 11n [40M] MCS1:-79 11n [40M] MCS2:-77 11n [40M] MCS3:-74 11n [40M] MCS4:-70 11n [40M] MCS5:-66 11n [40M] MCS6:-65 11n [40M] MCS7:-64

Receive Sensitivity	5GHz: 11n [20M] MCS0: -82 11n [20M] MCS1: -79 11n [20M] MCS2: -77 11n [20M] MCS3: -74 11n [20M] MCS4: -70 11n [20M] MCS5: -66 11n [20M] MCS6: -65 11n [20M] MCS7: -64 11n [20M] MCS8: -59 11n [20M] MCS9: -57 11n [40M] MCS0: -79 11n [40M] MCS1: -76 11n [40M] MCS2: -74 11n [40M] MCS3: -71 11n [40M] MCS4: -67 11n [40M] MCS5: -63 11n [40M] MCS6: -62 11n [40M] MCS7: -61 11n [40M] MCS8: -56 11n [40M] MCS9: -54	 11ac [80M] MCS0: -76 11ac [80M] MCS1: -73 11ac [80M] MCS2: -71 11ac [80M] MCS3: -68 11ac [80M] MCS4: -64 11ac [80M] MCS5: -60 11ac [80M] MCS6: -59 11ac [80M] MCS7: -58 11ac [80M] MCS8: -53 11ac [80M] MCS9: -51 11ax [160M] MCS0: -73 11ax [160M] MCS1: -70 11ax [160M] MCS2: -68 11ax [160M] MCS3: -65 11ax [160M] MCS4: -61 11ax [160M] MCS5: -57 11ax [160M] MCS6: -56 11ax [160M] MCS7: -55 11ax [160M] MCS8: -50 11ax [160M] MCS9: -48
Wireless Management Features		
Encryption Security	■ WEP (64/128-bit) encryption security ■ WPA-Personal / WPA2-Personal (TKIP/AES) ■ Mixed WPA / WPA2-PSK	
Wireless Security	Provides wireless LAN ACL (Access Control List) filtering Wireless URL filtering Enables/Disables SSID broadcast	
Wireless Advanced	WMM (Wi-Fi multimedia): 802.11e wireless QoS Provides wireless statistics	
Max. Supported Clients	2.4GHz wireless: 32 5GHz wireless: 32	
Router Features		
Internet Connection Type	Shares data and Internet access for users, supporting the following Internet accesses: ■ DHCP ■ Static IP ■ PPPoE	
Firewall	NAT/NAPT firewall, SPI firewall Built-in NAT server which supports Port Forwarding and DMZ Built-in firewall with URL filtering, and MAC address filtering	
LAN	Built-in DHCP server supporting static IP address distribution Supports packet statistics	
USB Sharing	Samba	
System Management	Web-based (HTTP) management interface Remote management (WAN Access Control) Supports UPnP, DDNS SNTP synchronization System log	
VoIP Protocols and Standard		
Standard	T.38 (G.711 Fax pass-through)	
Voice Codec	G.711A/G.711U/G.723/G.729	
Voice Standard	VAD (Voice Activity Detection) CNG (Comfort Noise Generation)	
Environment Specifications		
Temperature	Operating temperature: 0 ~ 45 degrees C Storage temperature: -40 ~ 85 degrees C	
Humidity	Operating Humidity: 10 ~ 85% non-condensing Storage Humidity: 5 ~ 95% non-condensing	

Standards Conformance	
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3x flow control and back pressure IEEE 802.11ac (2T2R, up to 867Mbps) IEEE 802.11n (2T2R, up to 300Mbps)

Ordering Information

GPN-400ACV	xPON HGU with 4-Port GbE, 1200Mbps 802.11ac Wireless and 2-Port FXS (1 x USB)

Related Products

GPL-8000	2-PON-Port GPON OLT with Uplink 2 1000BASE-X SFP Slots
GPN-100	GPON SFU ONT with 1 GbE Interface
EPL-SPT-8	GPON Splitter (1 x 8 PLC Splitter, Wavelength 1260 ~ 1650 nm)
EPL-SPT-32	GPON Splitter (1 x 32 PLC Splitter, Wavelength 1260 ~ 1650 nm)
EPL-SPT-64	GPON Splitter (1 x 64 PLC Splitter, Wavelength 1260 ~ 1650 nm)

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