

# Wi-Fi 6 AX1800 Dual Band VPN Security Router



## Powerful Wi-Fi 6 and VPN Security Solution

**Wi-Fi 6** or **802.11ax** is the latest generation of wireless networking technology and offers more capacity, efficiency and performance for advanced connectivity. With Wi-Fi 6 technology, it creates tremendous worldwide opportunities for e-business and information sharing but also brings advanced network security issues for businesses. The demand for information security and wireless connection has become the primary concern for the enterprises.

To fulfill this demand, PLANET has launched the all-in-one **VR-300W6** and **VR-300PW6** Wireless VPN Security Routers that carry several main categories across your network security deployments:

- **Wi-Fi 6 technology**
- **Cybersecurity**
- **SPI firewall security protection,**
- **Policy auditing (content filtering, VPN tunnel and MAC/IP filtering)**
- **AP controller**
- **Captive portal, RADIUS**
- **Easy management (Setup Wizard, DHCP Server and Dashboard).**

Furthermore, its **Dual-WAN Failover**, **Outbound Load Balance** and **High-Availability** features can improve the network efficiency while the web-based interface provides friendly and consistent user experience.



## Highlights

- Dual-WAN failover and Dual-WAN load balancing
- Complies with IEEE 802.11ax and IEEE 802.11a/b/g/n/ac standards
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- Stateful Packet Inspection (SPI) firewall and content filtering
- Blocks DoS/DDOS attack, port range forwarding
- High Availability, AP Controller, Captive Portal and RADIUS
- IPv6, SNMP, PLANET DDNS and Universal Network Management System
- Compliant with the IEEE 802.3at PoE+ with PD alive check/schedule management (VR-300PW6)

## Hardware

- 5 10/100/1000BASE-T RJ45 ports (VR-300W6)
- 5 10/100/1000BASE-T RJ45 ports with 4-port IEEE 802.3at PoE+ injector function (VR-300PW6)
- 1 undefined Ethernet port (LAN/WAN) for Dual-WAN function
- 1 USB 3.0 port for system configuration backup and restoration
- 2 5dBi wireless antennas
- Reset button
- Desktop installation or rack mounting

## RF Interface Characteristics

- Features 2.4GHz (802.11b/g/n/ax) and 5GHz (802.11a/n/ac/ax) concurrent dual band for carrying high load traffic
- 2T2R MIMO technology for enhanced throughput and coverage
- Provides multiple adjustable transmit power control
- High speed up to 1.8Gbps (600Mbps for 2.4GHz and 1200Mbps for 5GHz) wireless data rate

## IP Routing Feature

- Static Route
- Dynamic Route
- OSPF

## Firewall Security

- Cybersecurity
- Stateful Packet Inspection (SPI) firewall
- Blocks DoS/DDoS attack
- Content Filtering
- MAC Filtering and IP Filtering
- NAT ALGs (Application Layer Gateway)

### Wireless 11ax Brings Excellent Data Link Speed

The VR-300W6 and VR-300PW6 are designed with high power amplifier and two highly-sensitive antennas which provide stronger signal and excellent coverage even in the wide-ranging or bad environment. With adjustable transmit power option, the administrator can flexibly reduce or increase the output power for various environments, thus reducing interference to achieve maximum performance. Equipped with the next-generation Wi-Fi 6 (802.11ax) wireless network standard, the total bandwidth reaches **1800Mbps**, and the 2-stream transmission technology improves the transmission efficiency of multiple devices, making AR/VR/IoT applications smoother.

Equipped with the next-generation Wi-Fi 6 (802.11ax) wireless network standard, the VR-300W6 and VR-300PW6 extend the 802.11n 40MHz channel binding to 80MHz+80MHz and the implementation of 1024-QAM modulation where higher transmitting/receiving rates go up to 1800Mbps in 2.4GHz and 5GHz less interference frequency band and the 4-stream transmission technology improves the transmission efficiency of multiple devices, making AR/VR/IoT applications smoother. In addition, the VR-300W6 and VR-300PW6 are equipped with Gigabit LAN port to eliminate the restriction of 100Mbps Fast Ethernet wired connection to let users fully enjoy the high speed provided by wireless. The IEEE 802.11ax also optimizes MU-MIMO (Multi-User MIMO) mechanism to serve multiple devices simultaneously.

### WPA3 Next Generation Security for Your WLAN Solution

WPA3 is the next generation Wi-Fi security technology that provides the most advanced security protocol to the market. WPA3 makes your connection more secure by preventing hackers from easily cracking your password no matter how simplified the password is. WPA3 can also provide more reliable password-based authentication, so it can better protect the security of individual users.

\* VR-300W6 and VR-300PW6 only support WPA3-Personal.

### Wi-Fi Deployments and Authentication with Simplified Management

The VR-300W6 and VR-300PW6 provide a built-in AP Controller, Captive Portal, RADIUS and a DHCP server to facilitate small and medium businesses to deploy secure employee and guest access services without any additional server. The VR-300W6 and VR-300PW6 can offer a secure Wi-Fi network with easy installation for your business.



- Blocks SYN/ICMP Flooding

### VPN Features

- IPSec/Remote Server (Net-to-Net, Host-to-Net), GRE, PPTP Server, L2TP Server, SSL Server/Client (Open VPN)
- Max. Connection Tunnel Entries: 60 VPN tunnels,
- Encryption methods: DES, 3DES, AES, AES-128/192/256
- Authentication methods: MD5, SHA-1, SHA-256, SHA-384, SHA-512

### Networking

- Outbound load balancing
- Failover for dual-WAN
- High Availability
- Captive Portal
- RADIUS Server/Client
- Static IP/PPPoE/DHCP client for WAN
- DHCP server/NTP client for LAN
- Protocols: TCP/IP, UDP, ARP, IPv4, IPv6
- Port forwarding, QoS, DMZ, IGMP, UPnP, SNMPv1,v2c, v3
- MAC address clone
- DDNS: PLANET DDNS, Easy DDNS, DynDNS and No-IP

### Power over Ethernet (VR-300PW6)

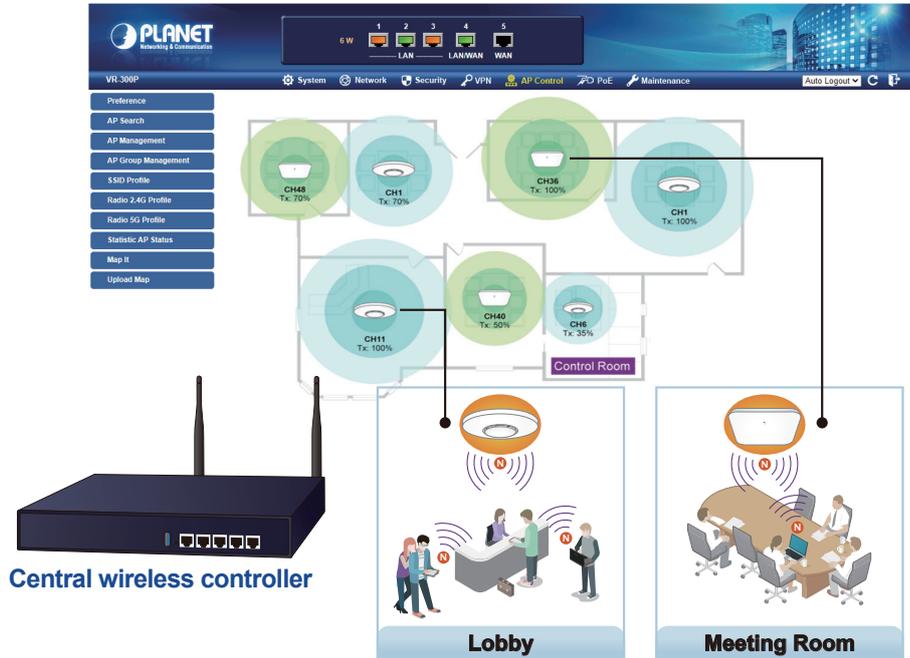
- Complies with IEEE 802.3at Power over Ethernet Plus, end-span PSE
- Backward compatible with IEEE 802.3af Power over Ethernet
- Up to 4 ports of IEEE 802.3af / 802.3at devices powered
- Supports PoE power up to 36 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- PoE management
  - Total PoE power budget control
  - Per port PoE function enable/disable
  - PoE port power feeding priority
  - Per PoE port power limitation
  - PD classification detection
  - PD alive check

### Others

- Setup wizard
- Dashboard for real-time system overview
- Supported access by HTTP or HTTPS
- Auto reboot
- PLANET NMS System and Smart Discovery Utility for deployment management
- Planet CloudViewer App for real-time monitoring

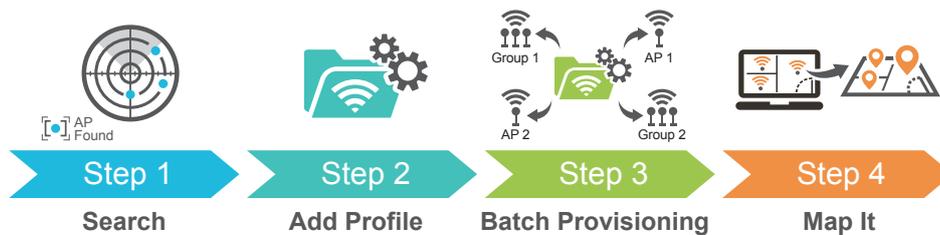
Centralized Remote Control of Managed APs\*

The VR-300W6 and VR-300PW6 provide centralized management of PLANET Smart AP series via a user-friendly Web GUI. It's easy to configure AP for the wireless SSID, radio band and security settings. With a four-step configuration process, different purposes of wireless profiles can be simultaneously delivered to multiple APs or AP groups to minimize deployment time, effort and cost.



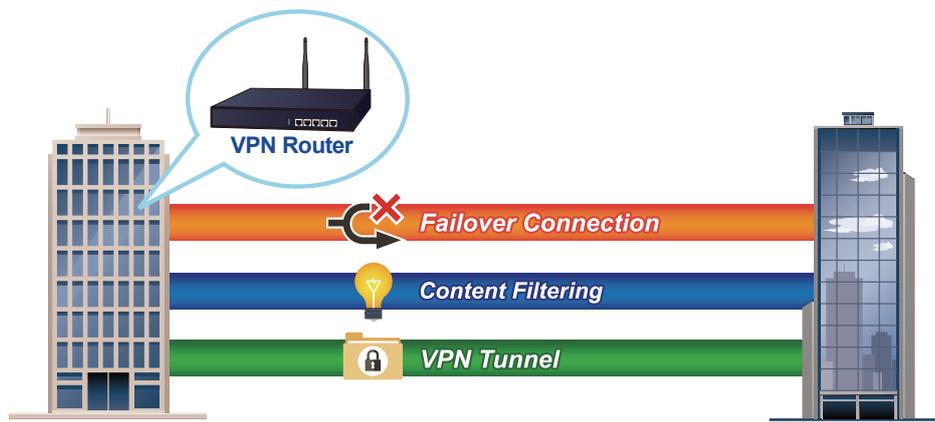
For example, to configure multiple Smart APs of the same model, the VR-300W6 and VR-300PW6 allow clustering them to a managed group for unified management. According to requirements, wireless APs can be flexibly expanded or removed from a wireless AP group at any time. The AP cluster benefits bulk provision and bulk firmware upgrade through single entry point instead of having to configure settings in each of them separately.

Simplified Cluster Management with 4 Steps



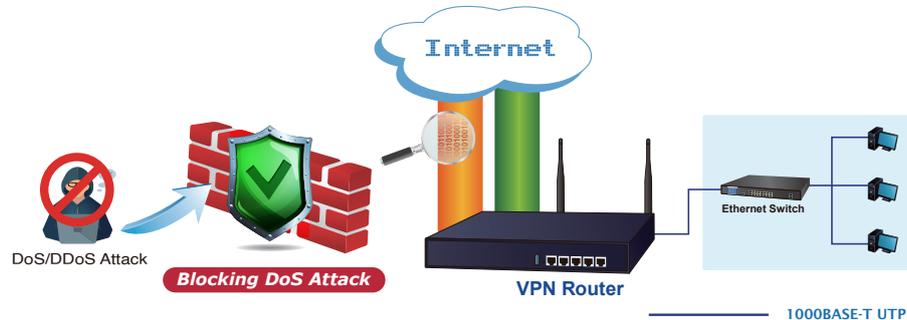
Ideal High-Availability VPN Security Router Solution for SMBs

The VR-300W6 and VR-300PW6 provide complete data security and privacy for accessing and exchanging the most sensitive data, built-in IPSec VPN function with DES/3DES/AES encryption and MD5/SHA-1/SHA-256/SHA-384/SHA-512 authentication, and GRE, SSL, PPTP and L2TP server mechanism. The full VPN capability in the VR-300PW6 makes the connection secure, more flexible, and more capable.



### Excellent Ability in Threat Defense

The VR-300W6 and VR-300PW6 are built-in SPI (stateful packet inspection) firewall and DoS/DDoS attack mitigation functions provide high efficiency and extensive protection for your network. Thus, virtual server and DMZ functions can let you set up servers in the Intranet and still provide services to the Internet users.



### Cybersecurity Network Solution to Minimize Security Risks

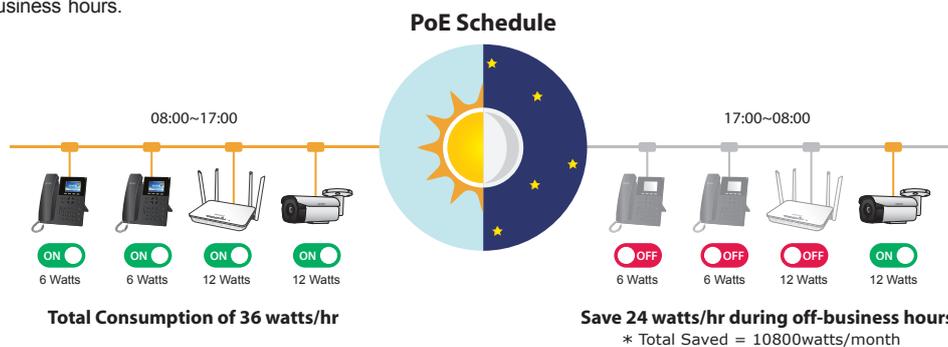
The cybersecurity feature included to protect the switch management in a mission-critical network virtually needs no effort and cost to install. For efficient management, the VR-300W6 and VR-300PW6 are equipped with HTTPS web and SNMP management interfaces. With the built-in web-based management interface, the VR-300W6 and VR-300PW6 offer an easy-to-use, platform independent management and configuration facility. The VR-300W6 and VR-300PW6 support SNMP and they can be managed via any management software based on the standard SNMP protocol.

### Built-in Unique PoE Functions for Powered Devices Management

The VR-300PW6 is capable of having a maximum of up to 120 watts of power output and can deliver up to 36W for each port. It also features the following special PoE management functions:

#### PoE Schedule

Under the trend of energy savings worldwide and contributing to environmental protection, the VR-300PW6 can effectively control the power supply besides its capability of giving high watts power. The "PoE schedule" function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs or enterprises save power and budget. It also increases security by powering off PDs that should not be in use during non-business hours.



#### Scheduled Power Recycling

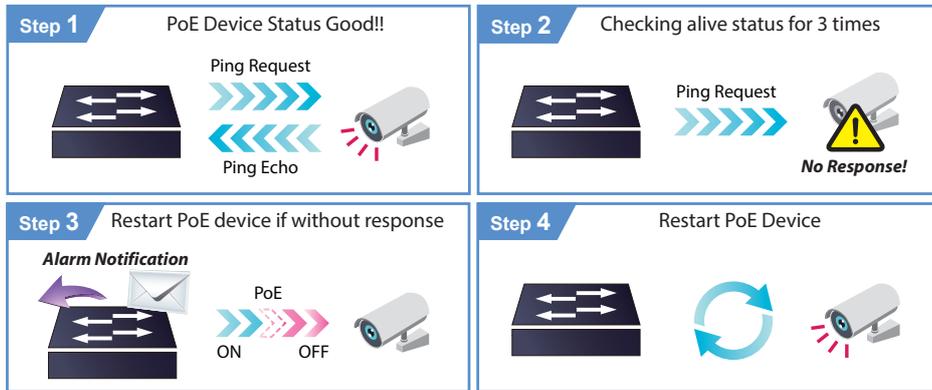
The VR-300PW6 allows each of the connected PoE IP cameras or PoE wireless access points to reboot at a specific time each week. Therefore, it will reduce the chance of IP camera or AP crash resulting from buffer overflow.



**PD Alive Check**

The VR-300PW6 can be configured to monitor connected PD status in real time via ping action. Once the PD stops working and responding, the VR-300P will resume the PoE port power and bring the PD back to work. It will greatly enhance the network reliability through the PoE port resetting the PD's power source and reducing administrator management burden.

## PD Alive Check



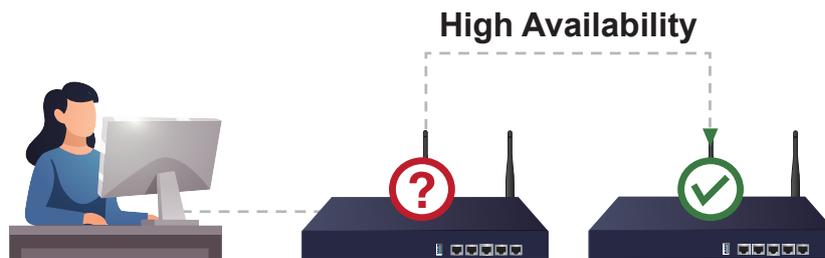
**PoE Usage Monitoring**

With PoE usage monitoring, it can show the PoE loading of each port, total PoE power usage and system status, such as overload, low voltage, over voltage and high temperature. User can obtain detailed information about the real-time PoE working condition of the VR-300PW6 directly.

## Applications

**Improving Network Efficiency**

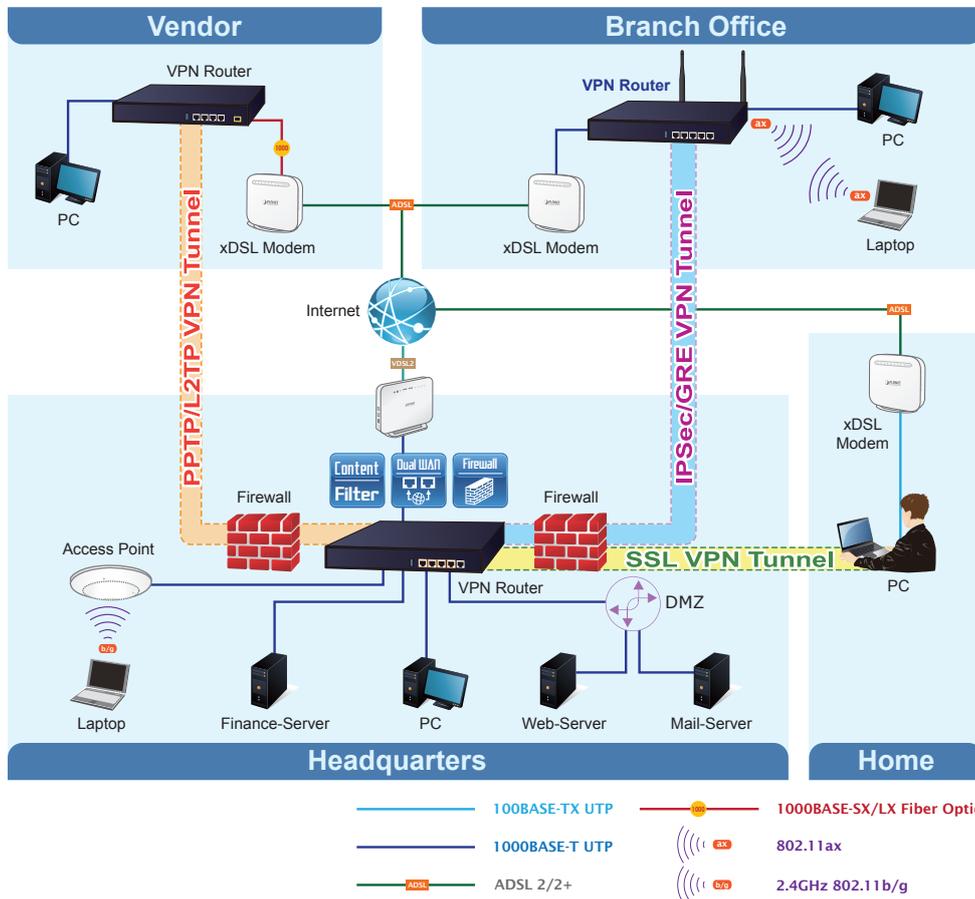
It is applicable to the small-scale sector (from 60 to 100 people), using a 13-inch desktop design, with five Gigabit ports (WAN/LAN). It provides higher performance with all Gigabit Ethernet interfaces which offer faster speeds for your network applications. The Gigabit user-defined interfaces flexibly fulfill the network requirement nowadays, and the High-Availability and Dual-WAN interfaces enable the VR-300W6 and VR-300PW6 to support outbound load balancing and WAN fail-over features.



Furthermore, the VR-300W6 and VR-300PW6 can connect dual IPv4/v6 WANs with up to two different ISPs and support many popular security features including Content Filtering to block specific URL feature that can automatically resolve the IP address corresponding to all. Users' network can be easily managed by just typing the URL of the websites like Facebook, YouTube and Yahoo.

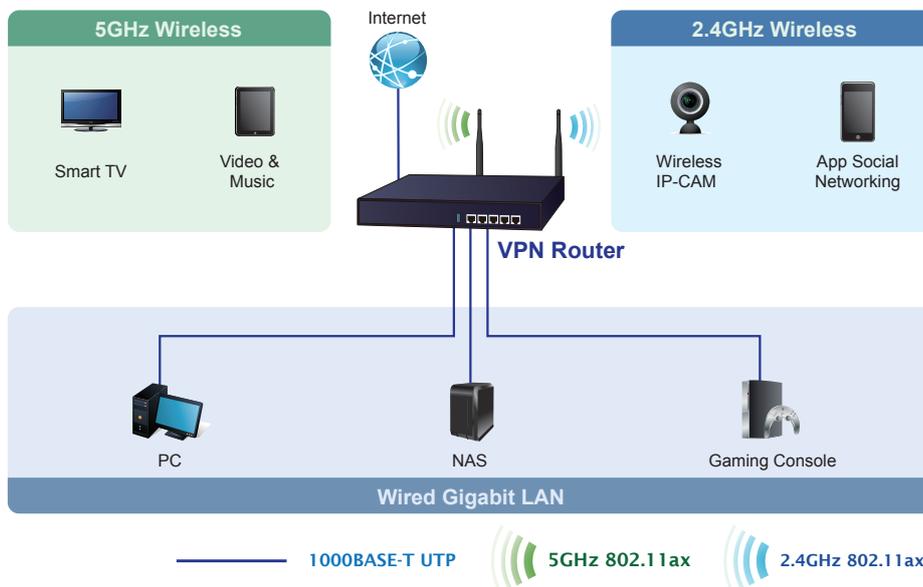


The VR-300W6 and VR-300PW6 both have link redundancy, MAC/IP filtering, outbound load balancing, QoS and many more functions to make the entire network system better. It creates a stable and qualified VPN security connection for many important applications such as VoIP, video conferencing and data transmission. The VR-300W6's and VR-300PW6's economical price with complete network security management features make it an inevitable choice for the next-generation office network load balancer.



**Extremely High-speed and Dual-band Capabilities Make Wi-Fi Transmission More Powerful**

The VR-300W6 and VR-300PW6 deliver the Dual Band technology to avoid signal interference and ensure the best Wi-Fi performance. It allows you to check e-mail and surf the Internet via the 2.4GHz band and simultaneously watch High-Definition (HD) video or any other multimedia application via 5GHz band. Moreover, the Gigabit Ethernet ports of the VR-300W6 and VR-300PW6 offer ultra-fast wired connections that utilize the maximum wireless bandwidth; therefore, users will have real wireless speed over 100Mbps. With outstanding stability of high-speed wireless transmission, the VR-300W6 and VR-300PW6 can provide users with excellent experience in multimedia streaming with your mobile devices anywhere, anytime.



## Specifications

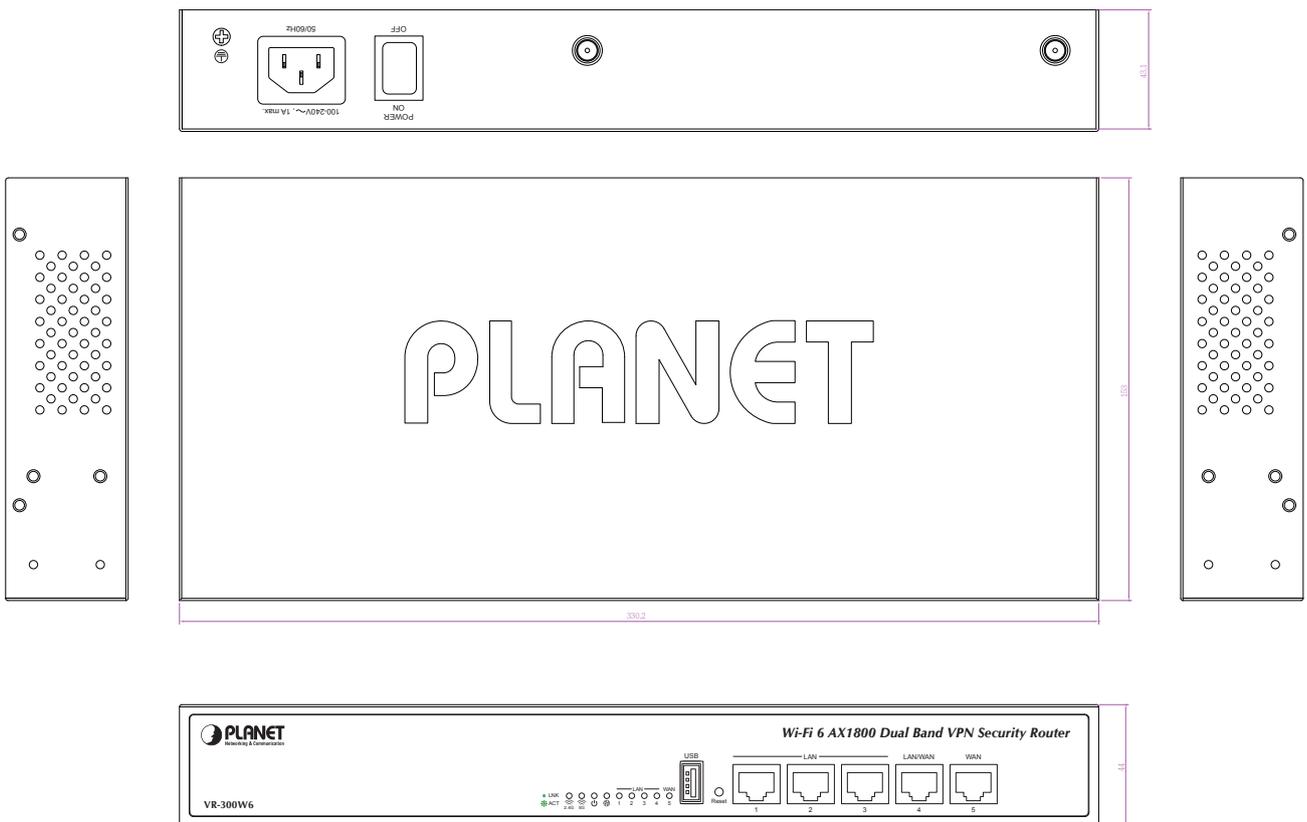
Model	VR-300W6	VR-300PW6
<b>Hardware Specifications</b>		
Ethernet	5 10/100/1000BASE-T RJ45 Ethernet ports including: 3 LAN ports (Ports 1 to 3) 1 LAN/WAN port (Port 4) 1 WAN port (Port 5)	
Antennas	2 external 5dBi, 2.4GHz/5GHz dual-band SMA antennas	
USB Port	1 USB 3.0 port for system configuration backup and restoration	
Reset Button	Reset to factory default	
Thermal Fan	fanless	1
LED Indicators	PWR (Green) Internet (Green) LAN/WAN (Green) 2.4G (Green) 5G (Green)	PWR (Green) Internet (Green) LAN/WAN (Green) 2.4G (Green) 5G (Green) PoE-in-Use LED (Amber)
Installation	Desktop installation or rack mounting	
Power Requirements	100~240V AC, 50/60Hz, auto-sensing	
Power Consumption / Dissipation	Max.8 watts/ 27.3 BTU	Max.133 watts/ 453.8 BTU
Weight	1.7kg	1.7kg
Dimensions (W x D x H)	330 x 155 x 43.5 mm, 1U height	
Enclosure	Metal	
<b>Power over Ethernet</b>		
PoE Standard	-	IEEE 802.3af / 802.3at PoE+ PSE
PoE Power Supply Type	-	End-span
PoE Power Output	-	Per port 52V DC, 36 watts (max.)
Power Pin Assignment	-	1/2 (+), 3/6 (-)
PoE Power Budget	-	120 watts (max.) @ 25 degrees C 100 watts (max.) @ 50 degrees C
Max. Number of Class 4 PDs	-	4
PoE Management	-	PD Alive Check Scheduled Power Recycling PoE Schedule PoE Usage Monitoring
<b>Wireless</b>		
Standard	IEEE 802.11a/n/ac/ax 5GHz IEEE 802.11g/b/n/ax 2.4GHz	
Band Mode	2.4G & 5G concurrent mode	
Frequency Range	2.4GHz	America FCC: 2.412~2.462GHz Europe ETSI: 2.412GHz~2.472GHz
	5GHz	5.15GHz ~5.875GHz
Operating Channels	2.4GHz	America FCC: 1~11 Europe ETSI: 1~13
	5GHz	<b>America FCC:</b> Non-DFS: 36, 40, 44, 48, 149,153,157,161,165 DFS: 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 <b>Europe ETSI:</b> Non-DFS: 36, 40, 44, 48 DFS: 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 5GHz channel list will vary in different countries according to their regulations.
Channel Width	20MHz, 40MHz, 80MHz	
Data Transmission Rates	Transmit: 600 Mbps* for 2.4 GHz and 1200 Mbps* for 5 GHz Receive: 600 Mbps* for 2.4 GHz and 1200 Mbps* for 5 GHz <b>*The estimated transmission distance is based on the theory. The actual distance will vary in different environments.</b>	

Transmission Power	<p>11b: 23dbm+/- 1.5dbm @11Mbps          11g: 20dbm+/- 1.5dbm @54Mbps          11g/n: 20dBm +/- 1.5dbm @MCS7, HT20          17dBm@MCS7,HT40          11a: 19.5dBm +/- 1.5dbm @54Mbps          11a/n: 19.5dBm+/- 1.5dbm @MCS7, HT20          17dBm@MCS7, HT40          11ac HT20: 20+/-1.5dBm @MCS8          11ac HT40: 17+/-1.5dBm @MCS9          11ac HT80: 14.5+/-1.5dBm @MCS9          11ax HT20: 20+/-1.5dBm @MCS9          11ax HT40: 17 +/- 1.5dBm @MCS9          11ax HT80: 14.5 +/- 1.5dBm @MCS11</p>
Encryption Security	<p>WEP (64/128-bit) encryption security          WPA / WPA2 (TKIP/AES)          WPA-PSK / WPA2-PSK (TKIP/AES) / WPA3-PSK (TKIP/AES)          802.1x Authenticator</p>
Wireless Advanced	<p>Wi-Fi Multimedia (WMM)          Auto channel selection          Wireless output power management          MAC address filtering</p>
<b>Security Service</b>	
Firewall Security	<p>Cybersecurity          Stateful Packet Inspection (SPI)          Blocks DoS/DDoS attack</p>
ALG (Application Layer Gateway)	SIP, RTSP, FTP, H.323, TFTP
NAT	<p>Port forwarding          DMZ Host          UPnP</p>
Content Filtering	<p>MAC filtering          IP filtering          Web filtering</p>
Bandwidth Management	<p>Outbound load balancing          Failover for dual-WAN          QoS (Quality of Service)</p>
<b>VPN</b>	
VPN Function	<p>IPSec/Remote Server (Net-to-Net, Host-to-Net)          GRE          PPTP Server          L2TP Server          SSL Server/Client (Open VPN)</p>
VPN Tunnels	Max. 60
VPN Throughput	Max. 60Mbps
Encryption Methods	DES, 3DES, AES or AES-128/192/256 encryption
Authentication Methods	MD5/SHA-1/SHA-256/SHA-384/SHA-512 authentication algorithm
<b>Networking</b>	
Operation Mode	Routing mode
Routing Protocol	Static Route, Dynamic Route (RIP), OSPF
VLAN	802.1q Tag-based, Port-based, Multi-VLAN
Multicast	IGMP Proxy
NAT Throughput	Max. 900Mbps
Outbound Load Balancing	Supported algorithms: Weight
Protocol	IPv4, IPv6, TCP/IP, UDP, ARP, HTTP, HTTPS, NTP, DNS, PLANET DDNS, PLANET Easy DDNS, DHCP, PPPoE, SNMPv1/v2c/v3,
Key Features	<p>HA (High Availability)          Captive Portal          RADIUS Server/Client          AP Control</p>
<b>Management</b>	
Basic Management Interfaces	<p>Web browser          SNMP v1, v2c          PLANET Smart Discovery utility/UNI-NMS supported</p>

Secure Management Interfaces	SSHv2, TLSv1.2, SNMP v3
System Log	System Event Log
Others	Setup wizard Dashboard System status/service Statistics Connection status Auto reboot Diagnostics
<b>Standards Conformance</b>	
Regulatory Compliance	CE, FCC
<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)

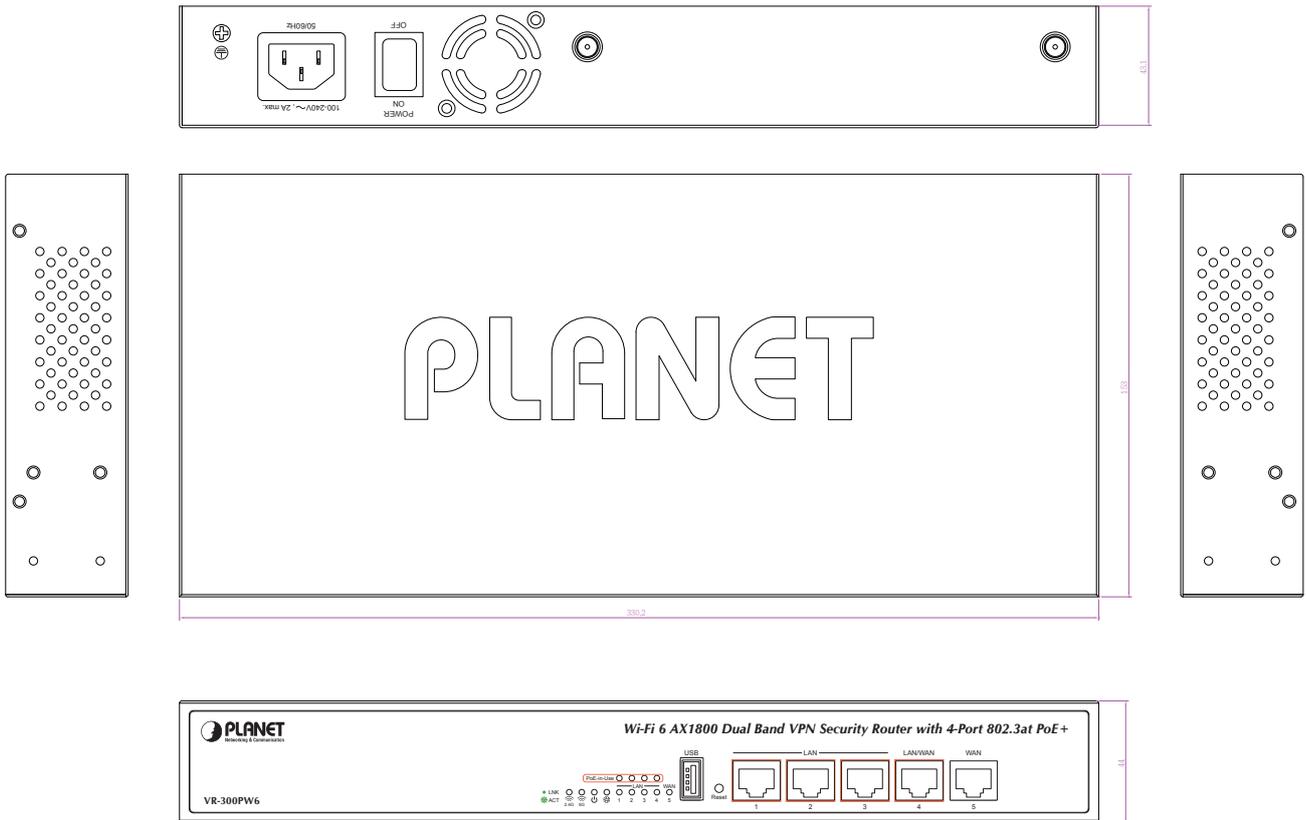
## Dimensions

VR-300W6



Unit: mm

VR-300PW6



Unit: mm

## Ordering Information

VR-300W6	Wi-Fi 6 AX1800 Dual Band VPN Security Router
VR-300PW6	Wi-Fi 6 AX1800 Dual Band VPN Security Router with 4-Port 802.3at PoE+

## Related Products

VR-300	Enterprise 5-Port 10/100/1000T VPN Security Router
VR-300P	Enterprise 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T VPN Security Router
VR-300W5	Wi-Fi 5 AC1200 Dual Band VPN Security Router
VR-300PW5	Wi-Fi 5 AC1200 Dual Band VPN Security Router with 4-Port 802.3at PoE+
VR-100	5-Port 10/100/1000T VPN Security Router
IVR-100	Industrial 5-Port 10/100/1000T VPN Security Gateway
VR-300W6A	Wi-Fi 6 AX2400 2.4GHz/5GHz VPN Security Router
VR-300PW6A	Wi-Fi 6 AX2400 2.4GHz/5GHz VPN Security Router with 4-Port 802.3at PoE+
ICG-2510W-LTE	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T
ICG-2510WG-LTE	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T
VCG-1500WG-LTE	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX
WGR-500-4PV	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+ and LCD Touch Screen
WGR-500-4P	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+
WGR-500	Industrial 5-Port 10/100/1000T Wall-mount Gigabit Router
VCG-1500WG-LTE	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX
WGR-500-4PV	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+ and LCD Touch Screen
WGR-500-4P	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+
WGR-500	Industrial 5-Port 10/100/1000T Wall-mount Gigabit Router

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VR-300W6/VR-300PW6