Industrial 5-Port 10/100/1000T + 802.11ax Wi-Fi VPN Security Gateway

Highlights

- Complies with IEEE 802.11ax and IEEE 802.11a/b/g/n/ac standards
- Dual-WAN function
- 1 USB 3.0 port for system configuration backup and firmware upgrade
- 2 x DI/DO and 1 serial port (RS485) for Modbus applications
- 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
- Planet NMS controller system and CloudViewer app supported
- -45 to 75 degrees C operating temperature; DIN-rail and fanless designs

Hardware

- **4 x 10/100/1000BASE-T** RJ45 LAN ports, auto-negotiation, auto MDI/MDI-X
- **1 x 10/100/1000BASE-T** RJ45 WAN port, auto-negotiation, auto MDI/MDI-X
- **1 x** 3-pin terminal block (RS485)
- **1 x** reset button
- **1 x** USB 3.0 port

RF Interface Characteristics

- Features 2.4GHz (802.11b/g/n/ax) and 5GHz (802.11a/n/ac/ax) 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 or 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

Powerful Wi-Fi 6 Industrial VPN Security Solution

PLANET has launched the IVR-300W 802.11ax Wi-Fi VPN Security Gateway for demanding applications. It features five Ethernet ports (4 LANs and 1 WAN), **IEEE 11ax Wi-Fi** capability, serial port (**RS485**), and DI and DO interfaces. Incorporating **SD-WAN** function, it can greatly increase WAN optimization for multiple WAN links to be managed. Furthermore, its **Dual-WAN Failover** and **Outbound Load Balance** features can improve the network efficiency while the web-based interface provides friendly and user experience.

It's ideal for the harsh environment as it can operate stably at temperatures from **-40** to **75 degrees C**. Its compact IP30 metal case allows either DIN-rail or wall mounting for efficient use of cabinet space.

Wireless 11ax Brings Excellent Data Link Speed

The IVR-300W is designed with high power amplifier and 2 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. The IEEE 802.11ax also optimizes MU-MIMO (Multi-User MIMO) mechanism to serve multiple devices simultaneously.

Ideal VPN Security Gateway Solution for Factories and Transportations

The IVR-300W provides 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 IVR-300W makes the connection secure, more flexible, and more capable.

Industrial VPN Security Gateway

Failover Connection

Content Filtering

VPN Tunnel
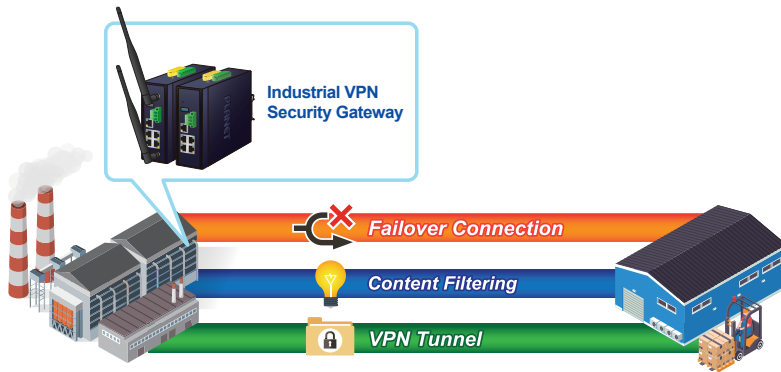
Centralized Remote Control of Managed APs

The IVR-300W provides 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, wireless profiles for different purposes can be simultaneously delivered to multiple APs or AP groups to minimize deployment time, effort and cost.

Central AP Controller

Lobby

Meeting Room
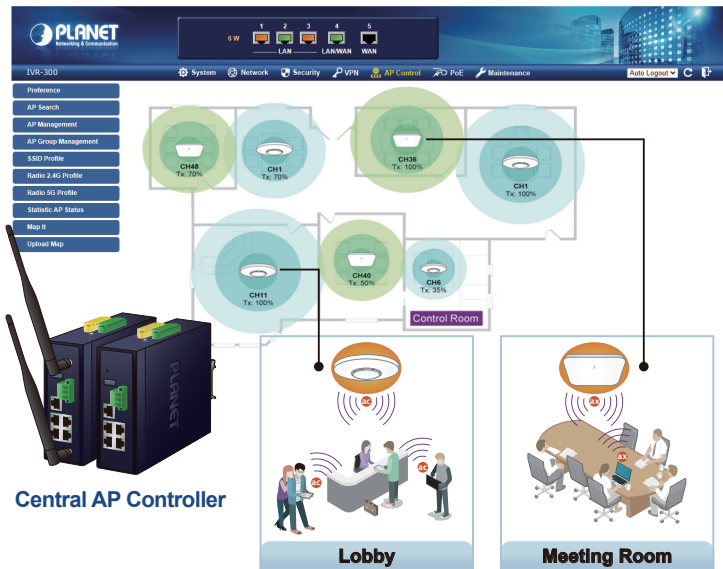
- Content Filtering
- MAC Filtering and IP Filtering
- NAT ALGs (Application Layer Gateway)
- Blocks SYN/ICMP Flooding

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 for Ethernet WANs
- Auto-failover between Ethernet WANs network
- High Availability
- Captive Portal
- RADIUS Server
- 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

Others
- Setup wizard
- Dashboard for real-time system overview
- Support for HTTP or HTTPS
- Auto reboot
- PLANET NMS System and Smart Discovery Utility for deployment management
- PLANET CloudViewer app for real-time monitoring
- Configuration backup and restoration via remote/USB port
- Firmware upgrade via remote/USB port

For example, to configure multiple smart APs of the same model, the IVR-300W allows 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

Step 1	Step 2	Step 3	Step 4
Search	Add Profile	Batch Provisioning	Map It
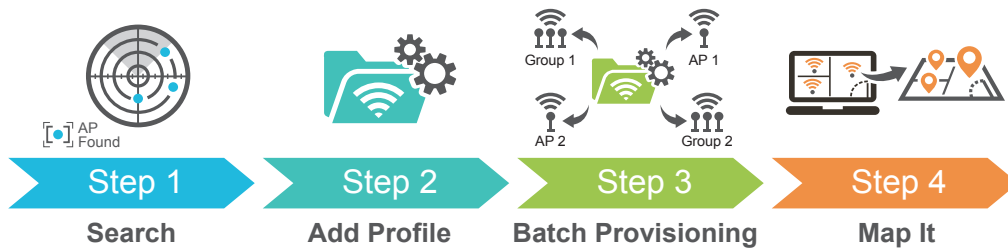
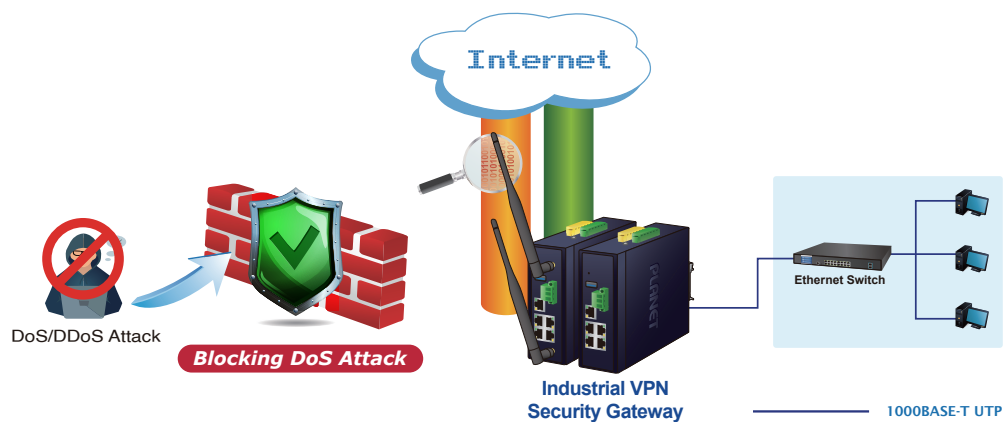*Wi-Fi Deployments and Authentication with Simplified Management*

The IVR-300W also provides 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 IVR-300W can offer a secure Wi-Fi network with easy installation for your business.

Captive Portal

Free Wi-fi

Name

E-mail

OK

Excellent Ability in Threat Defense

The IVR-300W has built-in SPI (stateful packet inspection) firewall and DoS/DDoS attack mitigation functions to 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.

Internet

DoS/DDoS Attack

Blocking DoS Attack

Ethernet Switch

Industrial VPN Security Gateway

1000BASE-T UTP

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 IVR-300W is equipped with HTTPS web and SNMP management interfaces. With the built-in web-based management interface, the IVR-300W offers an easy-to-use, platform independent management and configuration facility. The IVR-300W supports SNMP and it can be managed via any management software based on the standard SNMP protocol.

### *Cost-effective Solution for RS485 to Ethernet Application*

The IVR-300W provides a feature that can convert the Serial RS485 communication to IP networking. Ethernet signal allows two types of segments to connect easily, efficiently and inexpensively. The solution helps users and SIs save expenses as there is no need to replace the existing serial equipment and software system.

Convert Serial Communication to IP Networking
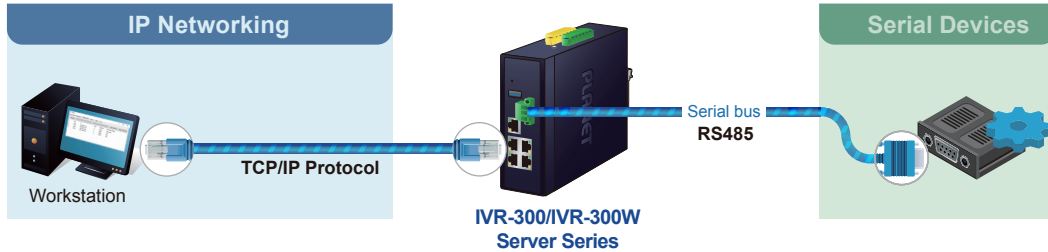
Convenient and Reliable Redundant Power System

To facilitate transportation and industrial-level applications, the IVR-300W provides an integrated power solution with a wide range of voltages (9~54V DC) for worldwide operability. It also provides dual-redundant, reversible polarity 9~54V DC power supply inputs for high availability applications.
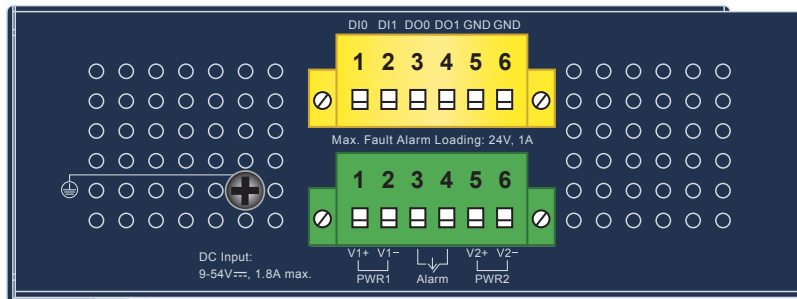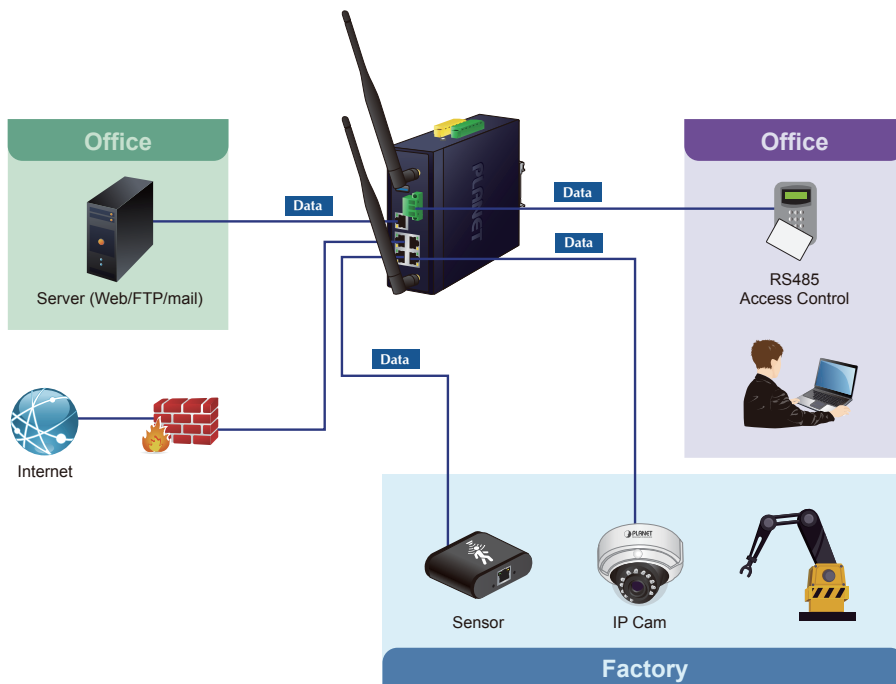

Applications

Ideal VPN Security Gateway

PLANET IVR-300W can work as a VPN security gateway in an industrial application for a company that has a factory and many different divisions. With IPSec/GRE/PPTP/L2TP/SSL VPN solutions, the IVR-300W installed at the headquarters provides branches, vendors, and mobile workers with secure data communication no matter how long the distance would be.

The IVR-300W connects dual WANs with up to two different ISPs. It creates a stable and qualified VPN connection for many important applications such as VoIP, video conferencing and data transmission.

Specifications

Product	IVR-300W
Hardware Specifications	
Copper Ports	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)
Serial Interface	1 x 3-pin terminal block for RS485
USB Port	1 USB 3.0 port
DI & DO Interfaces	2 Digital Input (DI): Level 0: -24V~2.1V (±0.1V) Level 1: 2.1V~24V (±0.1V) Input Load to 24V DC, 10mA max. 2 Digital Output (DO): Open collector to 24V DC, 100mA max.
Connector	Removable 6-pin terminal block for power input Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2
Reset Button	< 5 sec: System reboot > 5 sec: Factory default
Enclosure	IP30 metal case
Installation	DIN-rail, desktop, wall-mounting
LED Indicators	System: P1 (Green) P2 (Green) Alarm (Red) I/O (Red) Ethernet Interfaces (Ports 1-4 and WAN Port): 1000 LNK/ACT (Green) 10/100 LNK/ACT (Amber) Wi-Fi: 2.4G (Green) 5G (Green)
Dimensions (W x D x H)	50 x 135 x 135 mm
Weight	773g
Power Requirements – DC	9~54V DC, 1.8A
Power Consumption	Max. 3.8 watts/12.95 BTU (No Loading) Max.15.6 watts/53.19 BTU (Full loading)
Wireless	
Standard	IEEE 802.11a/n/ac/ax 5GHz IEEE 802.11g/b/n/ax 2.4GHz
Band Mode	2.4G & 5G concurrent mode
Antenna	5 dBi external antennas with SMA connectors for Wi-Fi
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: America FCC: Non-DFS: 36, 40, 44, 48, 149,153,157,161,165 DFS: 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 Europe ETSI: 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 may 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 ***The estimated transmission distance is based on the theory. The actual distance may vary in different environments.**

Transmission Power	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
Encryption Security	WEP (64/128-bit) encryption security WPA / WPA2 (TKIP/AES) WPA-PSK / WPA2-PSK (TKIP/AES) / WPA3-PSK (TKIP/AES) 802.1x Authenticator
Wireless Advanced	Wi-Fi Multimedia (WMM) Auto channel selection Wireless output power management MAC address filtering
Advanced Functions	
VPN	IPSec/Remote Server (Net-to-Net, Host-to-Net) GRE PPTP Server L2TP Server SSL Server/Client (Open VPN)
VPN Tunnels	Max. 60
VPN L2 TP Throughput	Max. 135Mbps
Encryption Methods	DES, 3DES, AES or AES-128/192/256 encrypting
Authentication Methods	MD5/SHA-1/SHA-256/SHA-384/SHA-512 authentication algorithm
Management	
Basic Management Interfaces	Web browser SNMP v1, v2c PLANET Smart Discovery utility and NMS controller supported
Secure Management Interfaces	TLSv1.2, SNMP v3
System Log	System Event Log
Others	Setup wizard Dashboard System status/service Statistics Connection status Auto reboot Diagnostics
Standards Conformance	
Regulatory Compliance	CE, FCC
Environment	
Operating	Temperature: -40 ~ 75 degrees C Relative humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative humidity: 5 ~ 90% (non-condensing)

Dimensions

Top View

Front View

Side View

Rear View

Bottom View
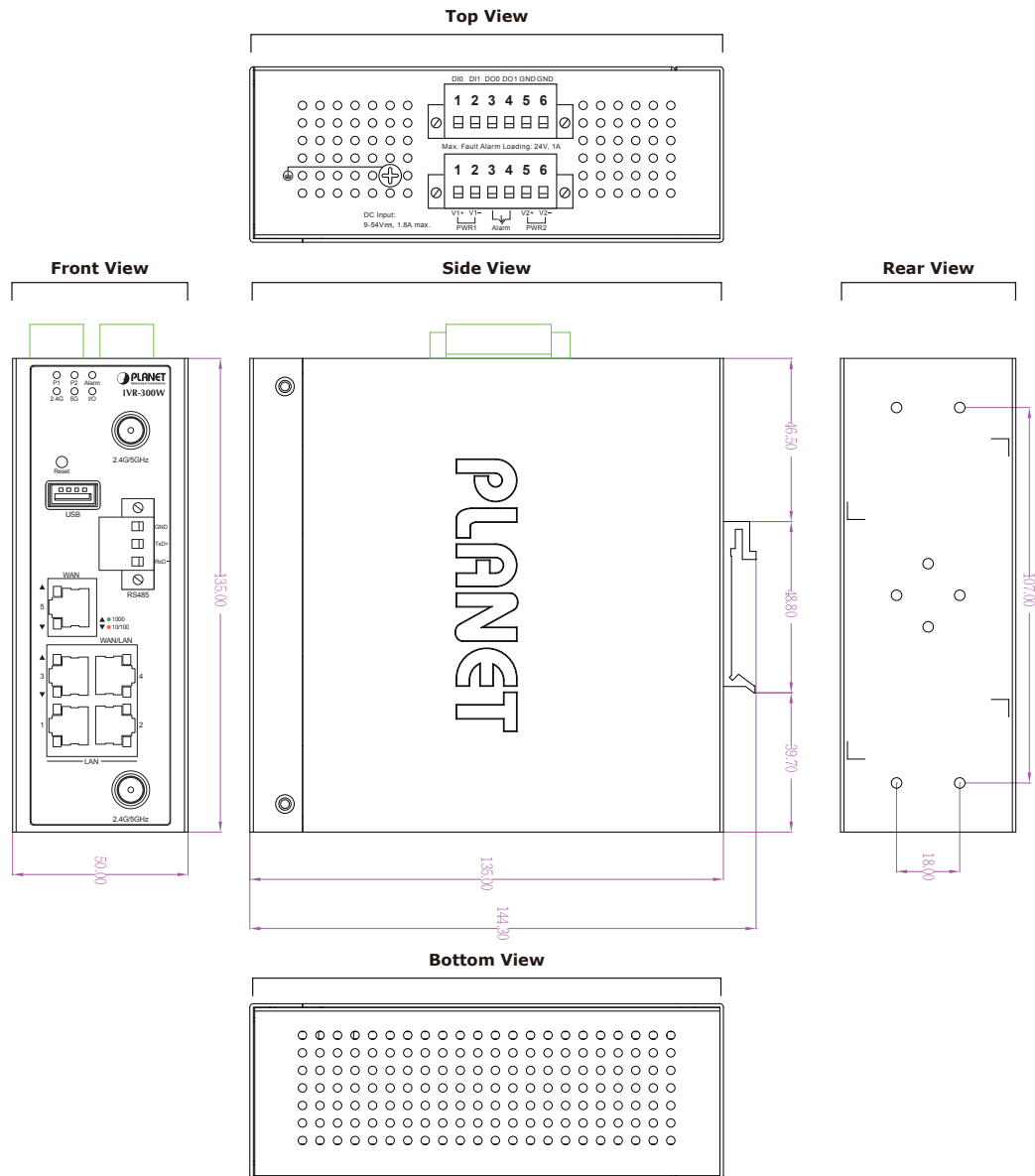
Ordering Information

IVR-300W	Industrial 5-Port 10/100/1000T + 802.11ax Wi-Fi VPN Security Gateway

Related Products

ICG-2515-NR	Industrial 5G NR Cellular Gateway with 5-Port 10/100/1000T
IVR-100	Industrial 5-Port 10/100/1000T VPN Security Gateway
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

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