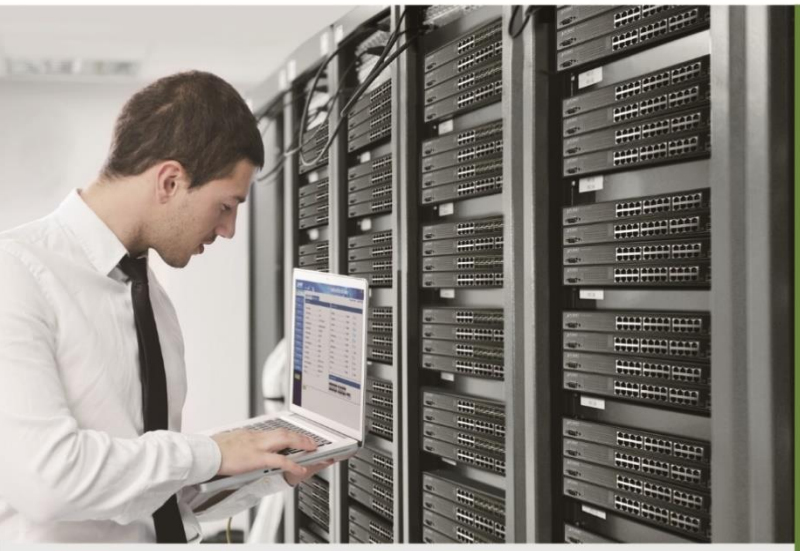
PLANET
Networking & Communication

User's Manual

Industrial 5-Port 10/100/1000T VPN Security Gateway

►IVR-100 & IVR-300 Series



www.PLANET.com.tw

Copyright

Disclaimer

PLANET Technology does not warrant that the hardware will work properly in all environments and applications, and makes no warranty and representation, either implied or expressed, with respect to the quality, performance, merchantability, or fitness for a particular purpose.

PLANET has made every effort to ensure that this User's Manual is accurate; PLANET disclaims liability for any inaccuracies or omissions that may have occurred. Information in this User's Manual is subject to change without notice and does not represent a commitment on the part of PLANET. PLANET assumes no responsibility for any inaccuracies that may be contained in this User's Manual. PLANET makes no commitment to update or keep current the information in this User's Manual, and reserves the right to make improvements and/or changes to this User's Manual at any time without notice.

If you find information in this manual that is incorrect, misleading, or incomplete, we would appreciate your comments and suggestions.

FCC Compliance Statement

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CE mark Warning

The is a class A device, In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

WEEE

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Trademarks

The PLANET logo is a trademark of PLANET Technology. This documentation may refer to numerous hardware and software products by their trade names. In most, if not all cases, these designations are claimed as trademarks or registered trademarks by their respective companies.

Revision

User's Manual of PLANET Industrial 5-Port 10/100/1000T VPN Security Gateway

Model: IVR-100, IVR-300, IVR-300W, IVR-300FP

Rev.: 1.2 (June, 2023)

Part No. EM-IVR-100_IVR-300 Series_v1.2

Table of Contents

Chapter 1. Product Introduction

Thank you for purchasing PLANET Industrial Security Gateway, IVR-100 and IVR-300 series. The descriptions of these models are as follows

IVR-100	Industrial 5-Port 10/100/1000T VPN Security Gateway
IVR-300	Industrial 5-Port 10/100/1000T VPN Security Gateway with Redundant Power
IVR-300W	Industrial 5-Port 10/100/1000T + 802.11ax Wi-Fi VPN Security Gateway
IVR-300FP	Industrial 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T + 1-Port 1000X SFP VPN Security Gateway

"**VPN Gateway**" mentioned in the manual refers to the above models.

1.1 Package Contents

The package should contain the following:

Model / Item	IVR-100	IVR-300	IVR-300W	IVR-300FP
VPN Gateway	x 1	x 1	x 1	x 1
Quick Installation Guide	x 1	x 1	x 1	x 1
Wall-mount Kit	x 1	x 1	x 1	x 1
RJ45 Dust Cap	x 5	x 5	x 5	x 5
SFP Dust Cap				x 1
CloudViewer QIG	x 1	x 1	x 1	x 1
RS485 3-pin Terminal Block	-	x 1	x 1	x 1
Dual band Wi-Fi Antenna	-	-	x 2	-
Antenna Dust Cap	-	-	x 2	-

Note	If any of the above items are missing, please contact your dealer immediately.

1.2 Overview

Powerful Industrial VPN Security Solution

PLANET has launched the IVR-100 and IVR-300 Series Security Gateway for demanding applications. It features **five Ethernet ports** (4 LANs and 1 WAN), IEEE **11ax Wi-Fi** capability (for IVR-300W), **one Fiber port** (for IVR-300FP), **RS485 serial port** (for IVR-300 series), 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.

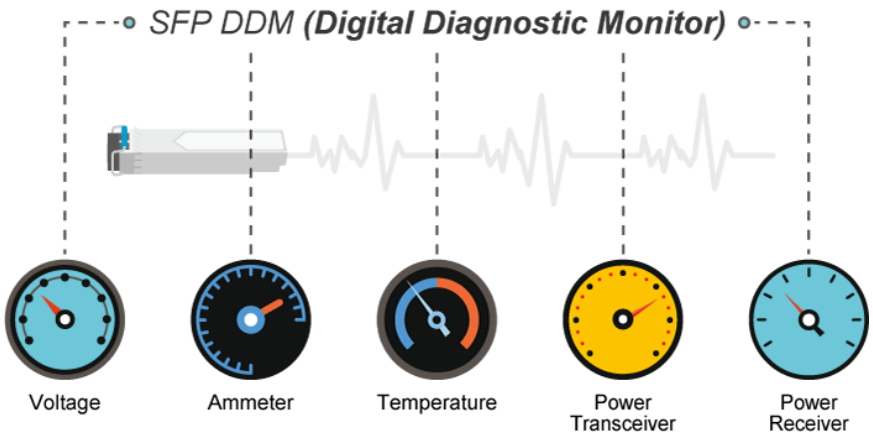
It's ideal for the harsh environment as it can operate stably at temperatures from **-40** to **75 degrees C**. Its compact **IP30** metal case allows either DIN-rail or wall mounting for efficient use of cabinet space.

Flexible WAN interface Enables Extension of Network Deployment (For IVR-300FP)

The IVR-300FP provides both copper and fiber connectors for WAN interface. With one SFP slot, it supports fiber extension for FTTX application. It allows the administrator to flexibly choose the suitable SFP transceiver according to the transmission distance required to extend the network efficiently. The distance can be extended from 550 meters to 2 kilometers (multi-mode fiber) and 10/20/30/40/50/60/70/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications to uplink to backbone switch and monitoring center in long distance.

Intelligent SFP Diagnosis Mechanism (For IVR-300FP)

The IVR-300FP supports SFP-DDM (digital diagnostic monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.



Built-in Unique PoE Functions for Powered Devices Management (For IVR-300FP)

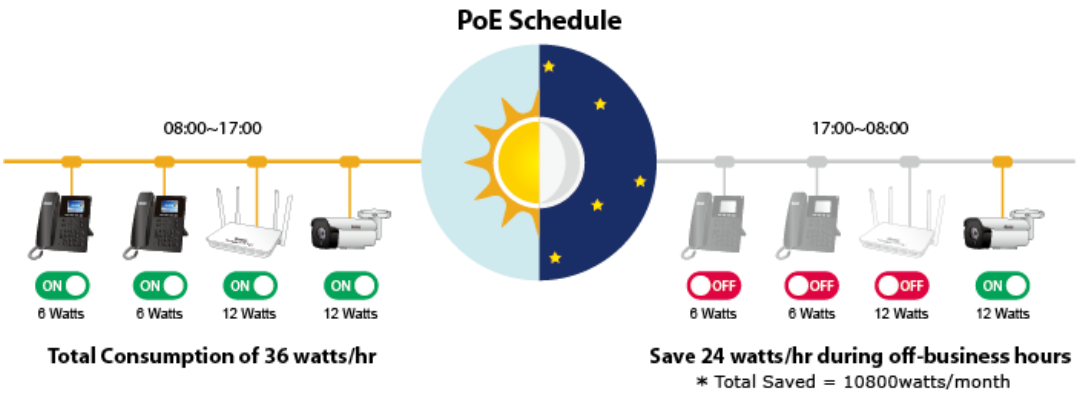
The IVR-300FP is capable of having a maximum of up to 120 watts of power output and can deliver up to 36W for each port. It also features the following special PoE management functions.

PoE Usage Monitoring (For IVR-300FP)

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 IVR-300FP directly.

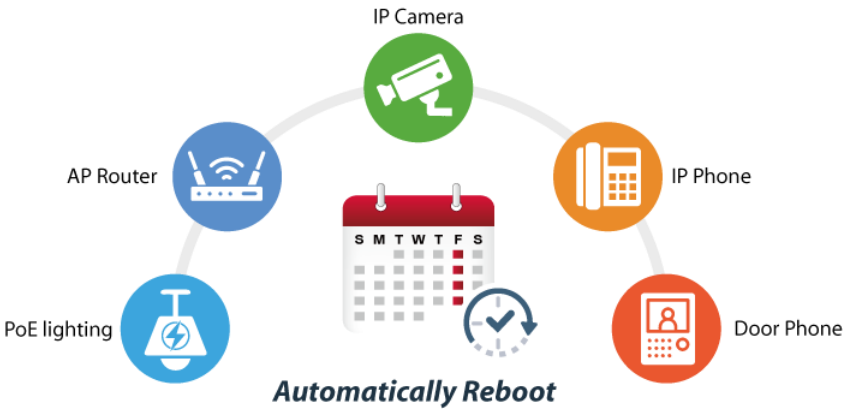
PoE Schedule (For IVR-300FP)

Under the trend of energy saving worldwide and contributing to environmental protection, the IVR-300FP 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.



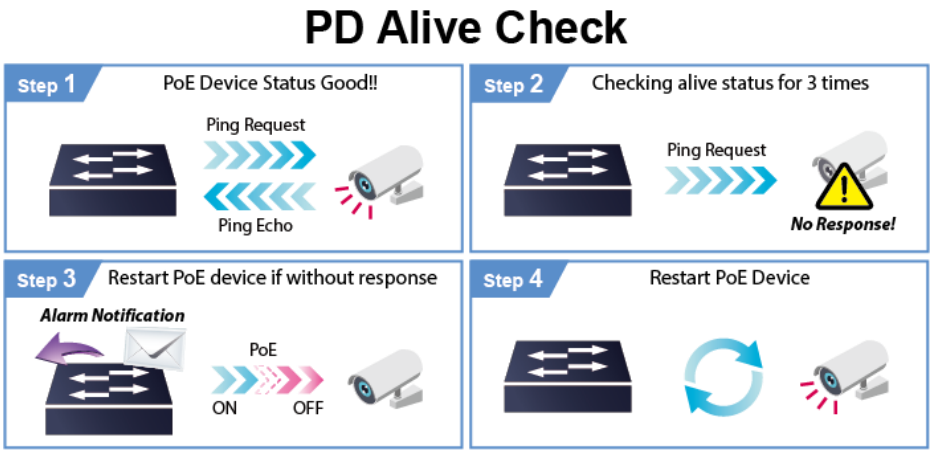
Scheduled Power Recycling (For IVR-300FP)

The IVR-300FP 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 (For IVR-300FP)

The IVR-300FP can be configured to monitor connected PD status in real time via ping action. Once the PD stops working and responding, the IVR-300FP 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.

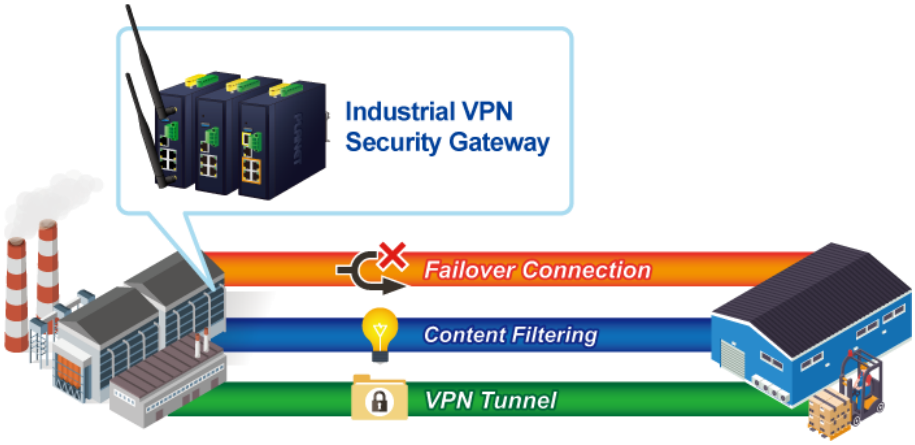


Wireless 11ax Brings Excellent Data Link Speed (For IVR-300W)

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.

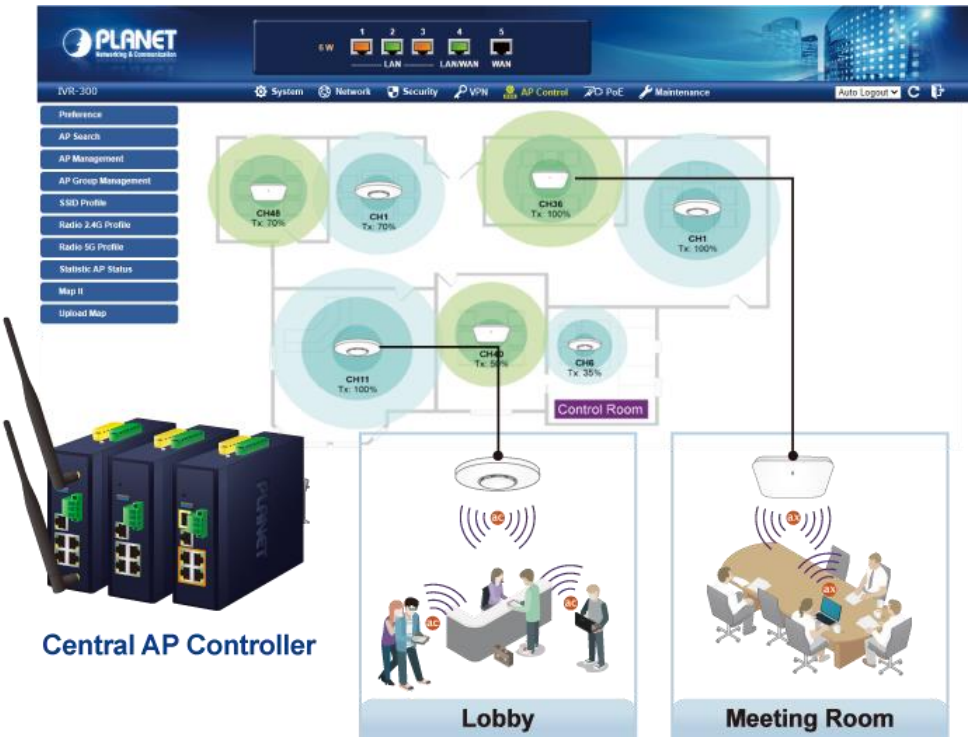
Ideal VPN Security Gateway Solution for Factories and Transportations

The IVR-100 and IVR-300 Series 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-100 and IVR-300 Series makes the connection secure, more flexible, and more capable.

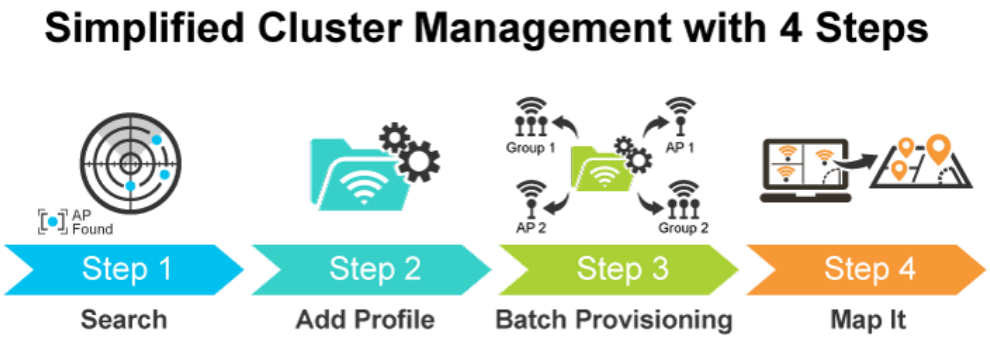


Centralized Remote Control of Managed APs

The IVR-100 and IVR-300 Series 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.



For example, to configure multiple smart APs of the same model, the IVR-100 and IVR-300 Series 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.



Wi-Fi Deployments and Authentication with Simplified Management (for IVR-300 Series)

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

Excellent Ability in Threat Defense

The IVR-100 and IVR-300 Series 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.

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-100 and IVR-300 Series are equipped with HTTPS web and SNMP management interfaces. With the built-in web-based management interface, the IVR-100 and IVR-300 Series offers an easy-to-use, platform independent management and configuration facility. IVR-100 and IVR-300 Series supports SNMP and it can be managed via any management software based on the standard SNMP protocol.

Maximizing Work Efficiency with PLANET SD-WAN Gateway

PLANET IVR-100 and IVR-300 Series incorporated in SD-WAN (software-defined wide area network) function can greatly increase WAN optimization for multiple WAN links to be managed. With SD-WAN, users can connect any application across all available network connections at every site. It improves application performance and provides a high-quality user experience for increasing business productivity and reducing IT costs.

Cost-effective Solution for RS-485 to Ethernet Application (for IVR-300 Series.)

The IVR-100 and IVR-300 Series provides a feature that can convert the Serial RS-485 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.

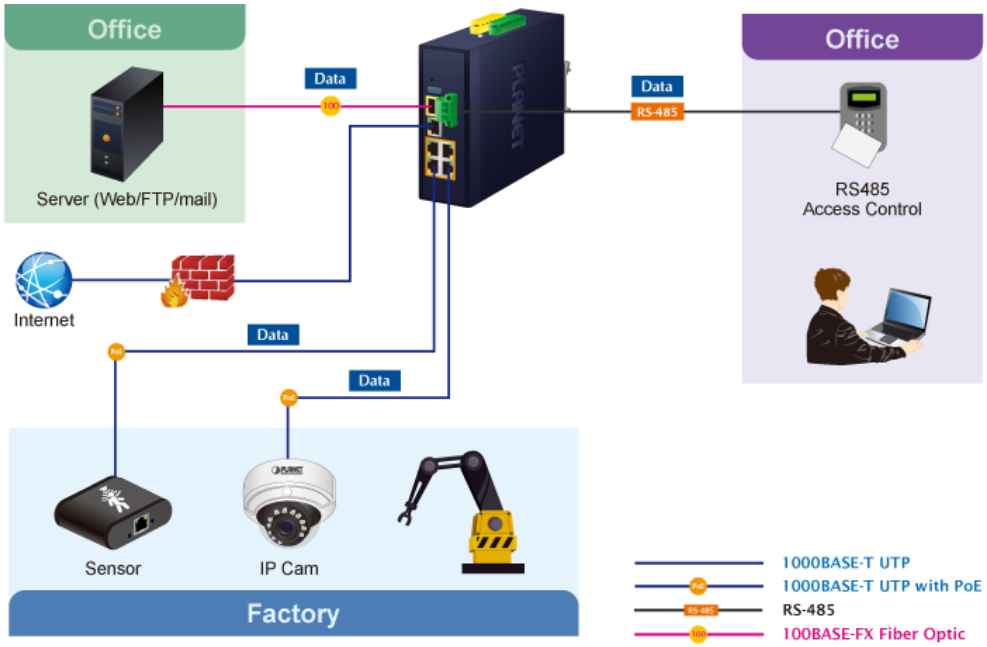
Convenient and Reliable Redundant Power System

To facilitate transportation and industrial-level applications, the IVR-100 and IVR-300 Series provides an integrated power solution with a wide range of voltages (9~54V DC) for worldwide operability, and the IVR-300FP provides an integrated power solution with 48~54V DC voltages. It also provides dual-redundant, reversible polarity DC power supply inputs for high availability applications.

Ideal VPN Security Gateway

PLANET IVR-100 and IVR-300 Series 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-100 and IVR-300 Series installed at the headquarters provides branches, vendors, and mobile workers with secure data communication no matter how long the distance would be.

The IVR-100 and IVR-300 Series 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.



1.3 Features

➢ Hardware

- 4 x 10/100/1000BASE-T RJ45 LAN ports (for IVR-100 and IVR-300/IVR-300W)
- 4 x 10/100/1000BASE-T RJ45 LAN ports with 4-port IEEE 802.3at PoE+ injector function (for IVR-300FR)
- 1 1000BASE-X SFP slot for WAN/LAN interface(for IVR-300FR)
- 1 10/100/1000BASE-T RJ45 WAN/LAN port
- Dual-WAN failover and Dual-WAN load balancing
- 1 USB 3.0 port for system configuration backup and firmware upgrade
- 1 reset button
- 1 3-pin terminal block (RS485) (for IVR-300 Series)
- 2 x DIDO (for IVR-300 Series)

➢ Power over Ethernet (for IVR-300FP)

- 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

➢ RF Interface Characteristics (for IVR-300W)

- 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

Industrial Case and Installation

- IP30 metal case
- Solid DIN-rail, wall-mount or side wall-mount design
- Supports 6KV DC Ethernet ESD protection
- Fault alarm for power input failure
- DC redundant power with reverse polarity protection
- -40 to 75 degrees C operating temperature

IP Routing Feature

- Static Route
- Dynamic Route (RIPv1/v2)

Firewall Security

- Cybersecurity
- Stateful Packet Inspection (SPI) firewall
- Blocks DoS/DDoS attack
- Content filtering
- MAC/IP filtering
- Blocks SYN/ICMP flooding
- NAT ALGs (Application Layer Gateway)

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 network WANs
- 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

1.4 Product Specifications

Product		IVR-100	IVR-300	IVR-300W	IVR-300FP
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)			
Fiber Port		-	-	-	1 1000BASE-X SFP slot including 1 WAN/LAN port (Port 6)
USB Port		1 USB 3.0 port			
Wireless Connector		-	-	Two RP-SMA female connectors	
Wireless Antenna		-	-	Two 5 dBi external antennas	
Serial Interface		-	1 x 3-pin terminal block for RS485		
DI 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.		
DO Interfaces		-	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			
Dimensions (W x D x H)		50 x 87.5 x 135 mm	50 x 135 x 135 mm		
Weight		530g	712g	773g	765g
Power Requirements – DC		9~54V DC, 1.0A	9~54V DC, 1.8A	9~54V DC, 1.8A	48~54V DC, 3A
Power Consumption	No Loading	Max. 3.8 watts/ 12.97 BTU	Max. 3.7 watts/ 12.61 BTU	Max. 3.8 watts/ 12.95 BTU	Max. 7.56 watts/ 25.8 BTU
	Full Loading	Max. 9 watts/ 30.71 BTU	Max. 8.7 watts/ 29.66 BTU	Max.15.6 watts/ 53.19 BTU	Max. 127 watts/ 433.34 BTU

LED Indicators	**System:** P1 (Green) P2 (Green) Fault (Red) **Per 10/100/1000 RJ45 Ports (Ports 1-4 and WAN Port):** 1000 LNK/ACT (Green) 10/100 LNK/ACT (Amber)	**System:** P1 (Green) P2 (Green) Alarm (Red) I/O (Red) **Per 10/100/1000 RJ45 Ports (Ports 1-4 and WAN Port):** 1000 LNK/ACT (Green) 10/100 LNK/ACT (Amber)	**System:** P1 (Green) P2 (Green) Alarm (Red) I/O (Red) **Per 10/100/1000 RJ45 Ports (Ports 1-4 and WAN Port):** 1000 LNK/ACT (Green) 10/100 LNK/ACT (Amber) **Wi-Fi:** 2.4G (Green) 5G (Green)	**System:** P1 (Green) P2 (Green) Alarm (Red) I/O (Red) **Per 10/100/1000 RJ45 Ports (Ports 1-4):** LNK/ACT (Green) PoE-in-Use (Amber) **Per 10/100/1000 RJ45 Ports (Ports 5):** LNK/ACT (Green) 1000 LNK (Amber) **Per 1000BASE-X SFP Interfaces (Port 6):** LNK/ACT (Green)
Security Service				
Firewall Security	Cybersecurity Stateful Packet Inspection (SPI) Blocks DoS/DDoS attack			
ALG (Application Layer Gateway)	SIP, RTSP, FTP, H.323, TFTP			
NAT	Port forwarding DMZ Host UPnP			
Content Filtering	MAC filtering IP filtering Web filtering			
Bandwidth Management	Outbound load balancing Failover for dual-WAN QoS (Quality of Service)			
Firewall Security	Cybersecurity Stateful Packet Inspection (SPI) Blocks DoS/DDoS attack			
Advanced Functions				

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	HA (High Availability) Captive Portal RADIUS Server/Client AP Control	
VPN		
VPN	IPSec/Remote Server (Net-to-Net, Host-to-Net) GRE PPTP Server L2TP Server SSL Server/Client (Open VPN)	
VPN Tunnels	Max. 60	Max. 60
VPN Throughput	Max. 60Mbps	Max. 108Mbps
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 Configuration backup and restoration via remote/USB port Firmware upgrade via remote/USB port
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)

■ Power of Ethernet Specification for IVR-300FP

Model	**IVR-300FP**
Wireless	
PoE Standard	IEEE 802.3af / 802.3at PoE+ PSE
PoE Power Supply Type	End-span
PoE Power Output	Per port 54V DC, 35 watts (max.)
Power Pin Assignment	1/2 (+), 3/6 (-)
PoE Power Budget	120 watts (max.)
Max. Number of Class 4 PDs	4
PoE Management	PD Alive Check Scheduled Power Recycling PoE Schedule PoE Usage Monitoring

■ Wireless Specification for IVR-300W

Model		**IVR-300W**
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

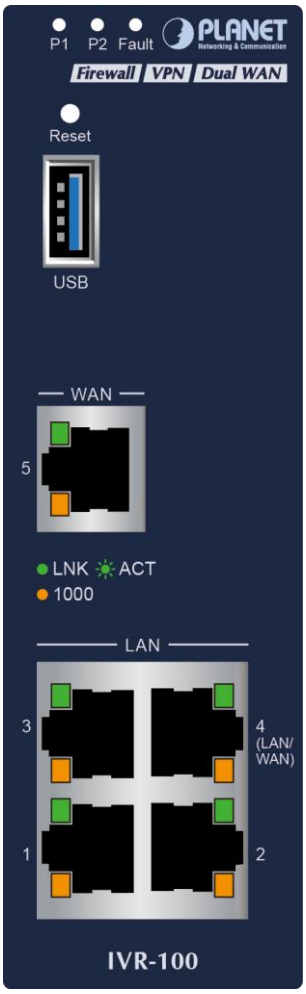
	5GHz	America FCC: Non-DFS: 36, 40, 44, 48, 149,153,157,161,165 DFS: 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 Europe ETSI: Non-DFS: 36, 40, 44, 48 DFS: 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 5GHz channel list may vary in different countries according to their regulations.
Channel Width		
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

Chapter 2. Hardware Introduction

2.1 Physical Descriptions

2.1.1 Front View

IVR-100 Front Panel

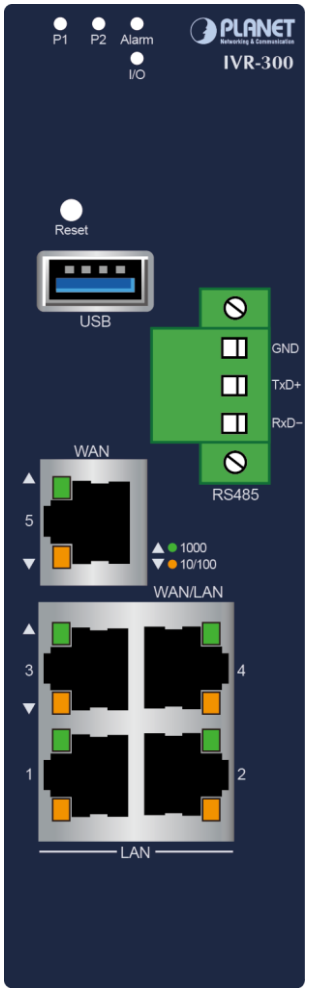


LED	Color	Function	
P1	Green	Lights to indicate DC power input 1 has power.	
P2	Green	Lights to indicate DC power input 2 has power.	
Fault	Red	Lights to indicate the either power or port fail	
1000 LNK/ACT	Green	Lights	Indicates the link through that port is successfully established at 1000Mbps
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.
100 LNK/ACT	Amber	Lights	Indicates the link through that port is successfully established at 100Mbps.
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.

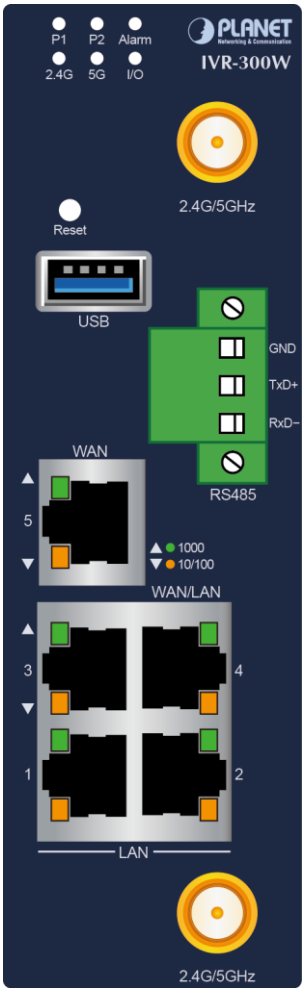
Ports	
USB Port	USB 3.0 port for system configuration backup and restoration.
Reset Button	Power on the device and press the reset button for less than 5 seconds to reboot it or over 5 seconds to restore it to factory default settings.
Gigabit Ports 1-3	It is a LAN port for connecting to a switch.
Gigabit Port 4	Default is LAN port. It can be defined as LAN port or WAN port.
Gigabit Port 5	It is a WAN port for connecting to a perimeter gateway.

IVR-300 series Front Panel

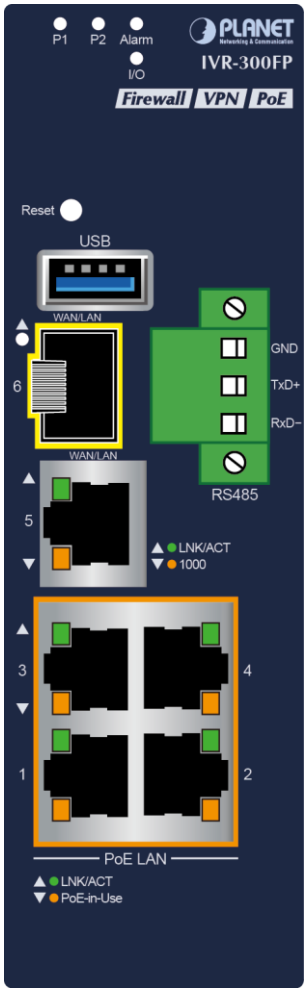
IVR-300



IVR-300W



IVR-300FP



LED Definition:

- **System:**

LED	Color	Function
P1	Green	Lights to indicate DC power input 1 has power.
P2	Green	Lights to indicate DC power input 2 has power.
Alarm	Red	Lights to indicate the either power or port fail
I/O	Red	Indicate Condition of Digital Input or Digital Output has triggered.
2.4G	Green	Lights up when 2.4G Wi-Fi service is enabled (for IVR-300W)
5G	Green	Lights up when 5G Wi-Fi service is enabled (for IVR-300W)

- **Interface:**

IVR-300/IVR-300W

Per 10/100/1000Mbps RJ45 Port (Ports 1 to 5)

LED	Color	Function	
1000 LNK/ACT	Green	Lights	Indicates the link through that port is successfully established at 1000Mbps
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.
100 LNK/ACT	Amber	Lights	Indicates the link through that port is successfully established at 100Mbps.
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.

IVR-300FP

Per 10/100/1000Mbps RJ45 Port (Ports 1 to 4)

LED	Color	Function	
10/1001000 LNK/ACT	Green	Lights	Indicates the link through that port is successfully established at 1000Mbps
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.
PoE-In-use	Amber	Lights	Indicates the port is providing DC in-line power.
		Off	Indicates the connected device is not a PoE PD.

10/100/1000Mbps RJ45 WAN/LAN Port (Port 5)

LED	Color	Function	
10/100/1000 LNK/ACT	Green	Lights	Indicates that the port is operating at 1000Mbps, 100Mbps or 10Mbps.
		Blinks	Indicates that the switch is actively sending or receiving data over that port.
1000 LNK	Amber	Lights	Indicates the port is operating at 1000Mbps
		Blinks	Indicates that the Switch is actively sending or receiving data over that

1000BASE-X SFP WAN/LAN Port (Port 6)

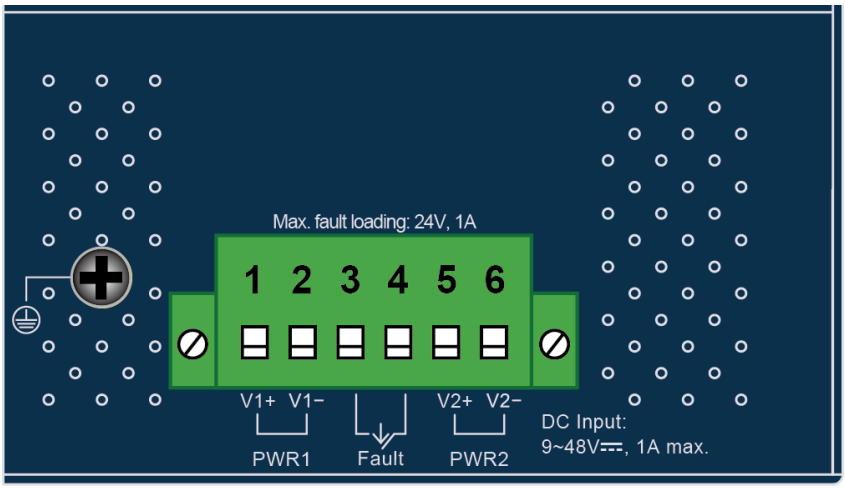
LED	Color	Function	
1000 LNK/ACT	Green	Lights	Indicates the port is operating at 1000Mbps.
		Blinks	Indicates that the switch is actively sending or receiving data over that port.

Ports	
USB Port	USB 3.0 port for system configuration backup and restoration.
Reset Button	Power on the device and press the reset button for less than 5 seconds to reboot it or over 5 seconds to restore it to factory default settings.
Serial Interface	1 x 3-pin terminal block for RS485
Gigabit Ports 1-3	It is a LAN port for connecting to a switch.
Gigabit Port 4	Default is LAN port. It can be defined as LAN port or WAN port. (for IVR-300/IVR-300W)
Gigabit Port 5	Default is WAN port. It is a WAN port for connecting to a perimeter gateway. (for IVR-300/IVR-300W) It can be defined as LAN port or WAN port. (for IVR-300FP)
SFP Port 6	(for IVR-300FP) Default is LAN port. It can be defined as LAN port or WAN port.

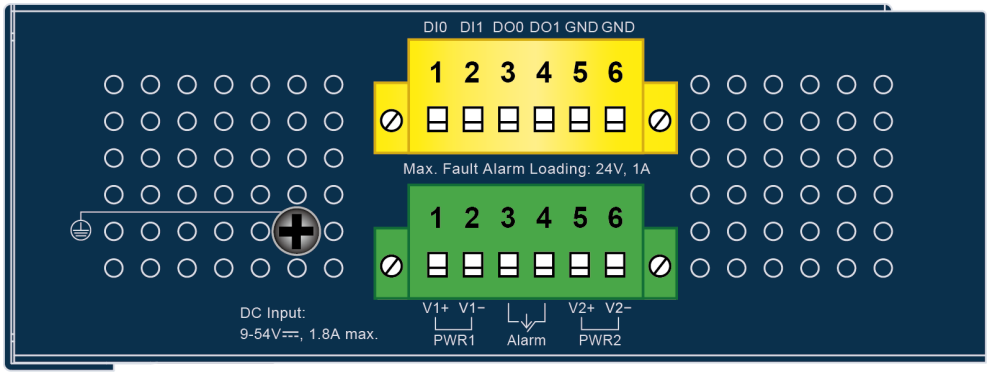
2.1.2 Top View

The upper panel of the Industrial Gateway consists of one terminal block connector within two DC power inputs.

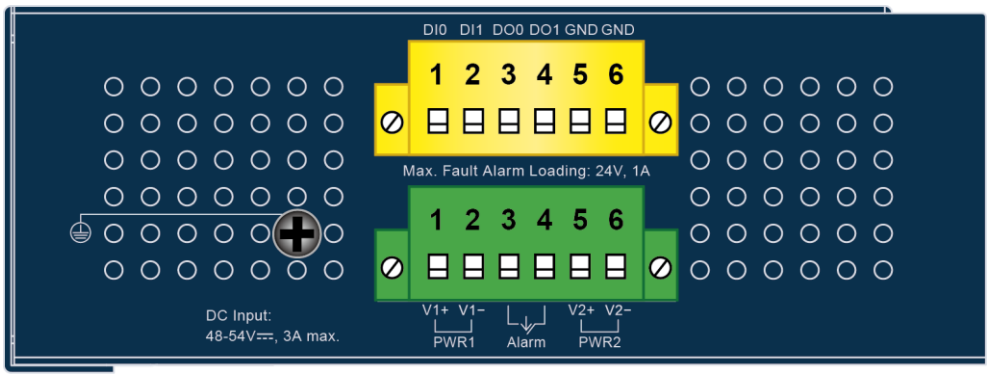
IVR-100 Top View



IVR-300/IVR-300W Top View



IVR-300FP Top View

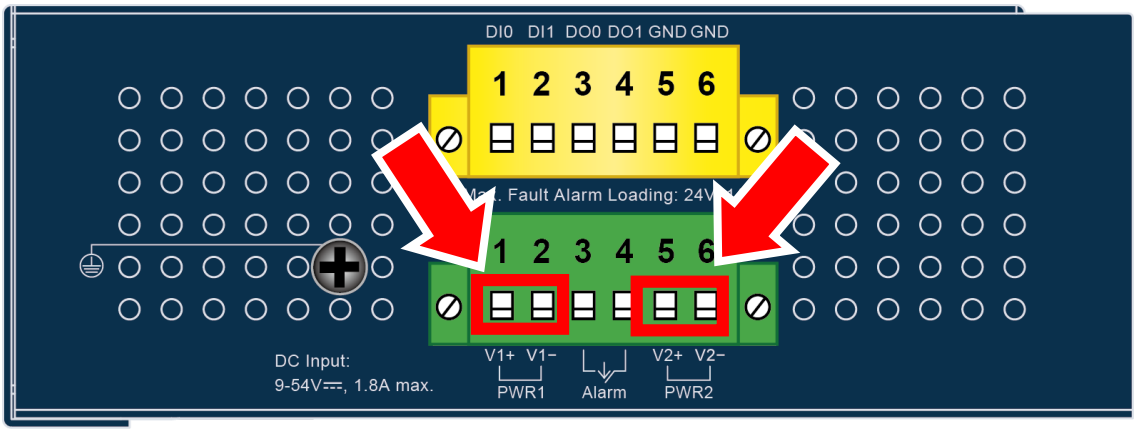


2.1.3 Wiring the Power Inputs

The 6-contact terminal block connector on the top panel of Industrial Gateway is used for two DC redundant power inputs. Please follow the steps below to insert the power wire.

When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

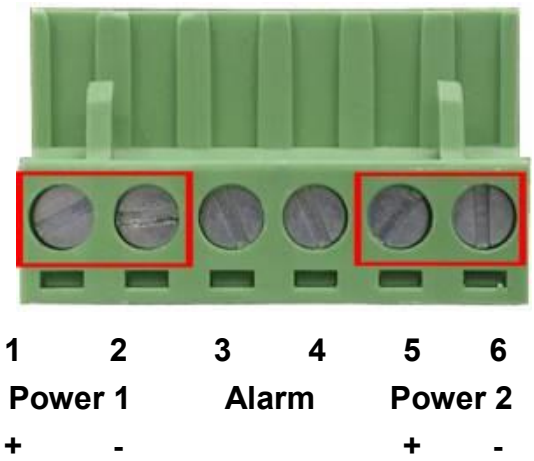
1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or 5 and 6 for POWER 2.v



Note

To avoid damage, please use the Industrial Gateway under its specification.

2. Tighten the wire-clamp screws for preventing the wires from loosening.



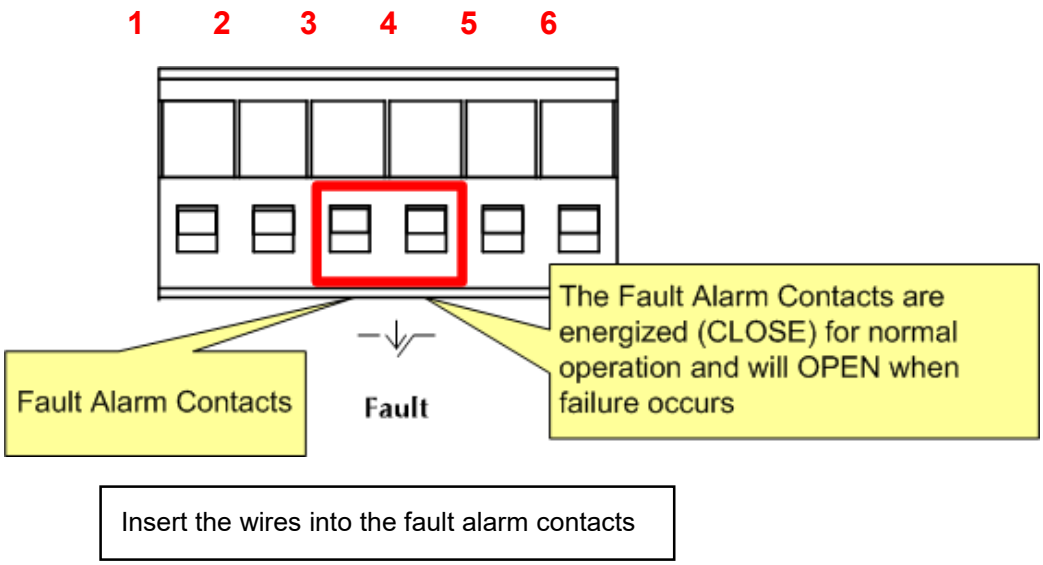
Note

The wire gauge for the terminal block should be in the range from **12** to **24** AWG.

PWR1 and PWR2 must provide the **same DC voltage** while operating with dual power input.

2.1.4 Wiring the Fault Alarm Contact

The fault alarm contacts are in the middle of the terminal block connector as the picture shows below. Inserting the wires, the Industrial Gateway will detect the fault status of the power failure and then forms an open circuit. The following illustration shows an application example for wiring the fault alarm contacts.

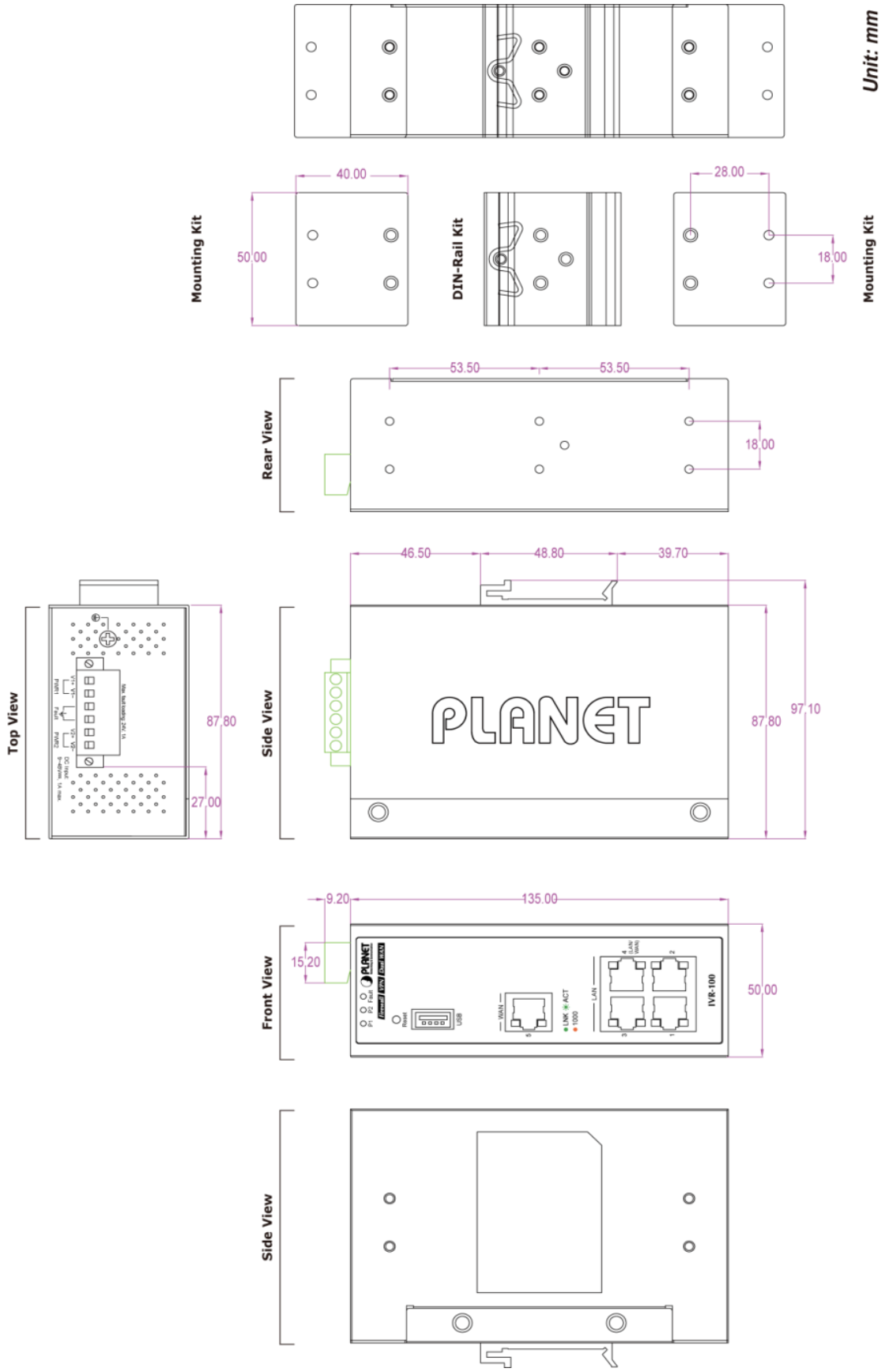


Note

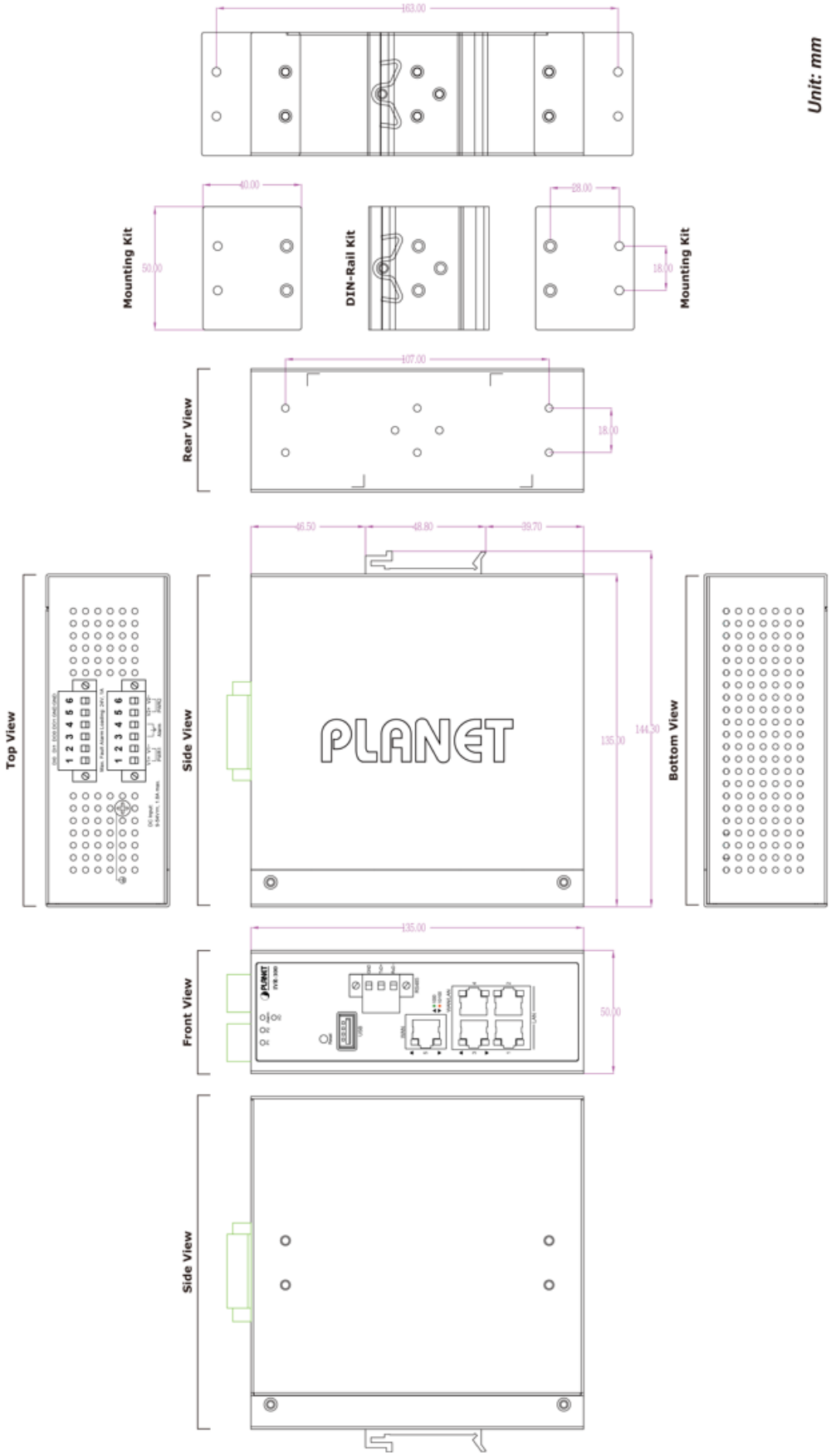
1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. Alarm relay circuit accepts up to 24V, max. 1A currents.

2.1.5 Dimensions

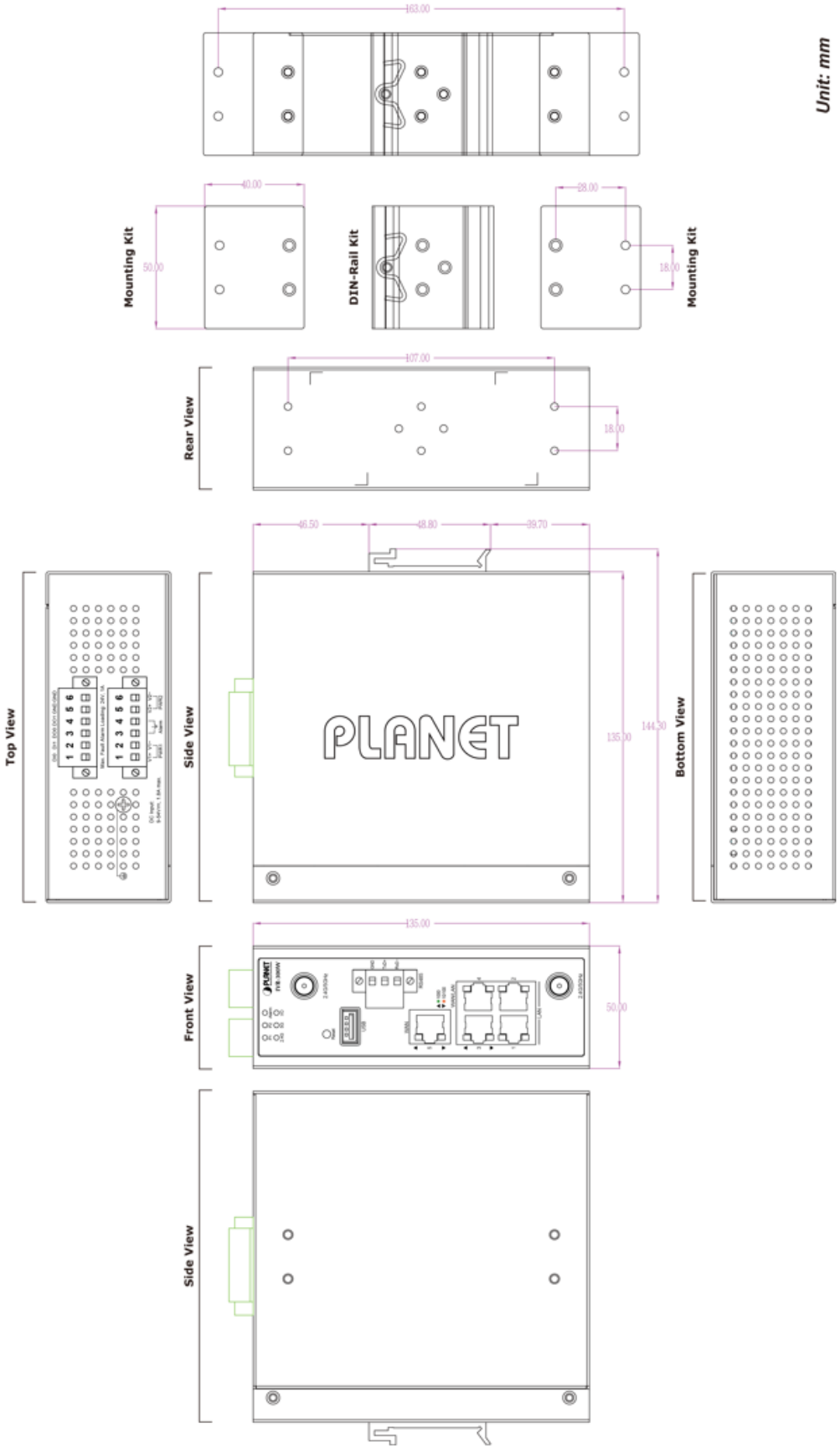
IVR-100 Dimensions



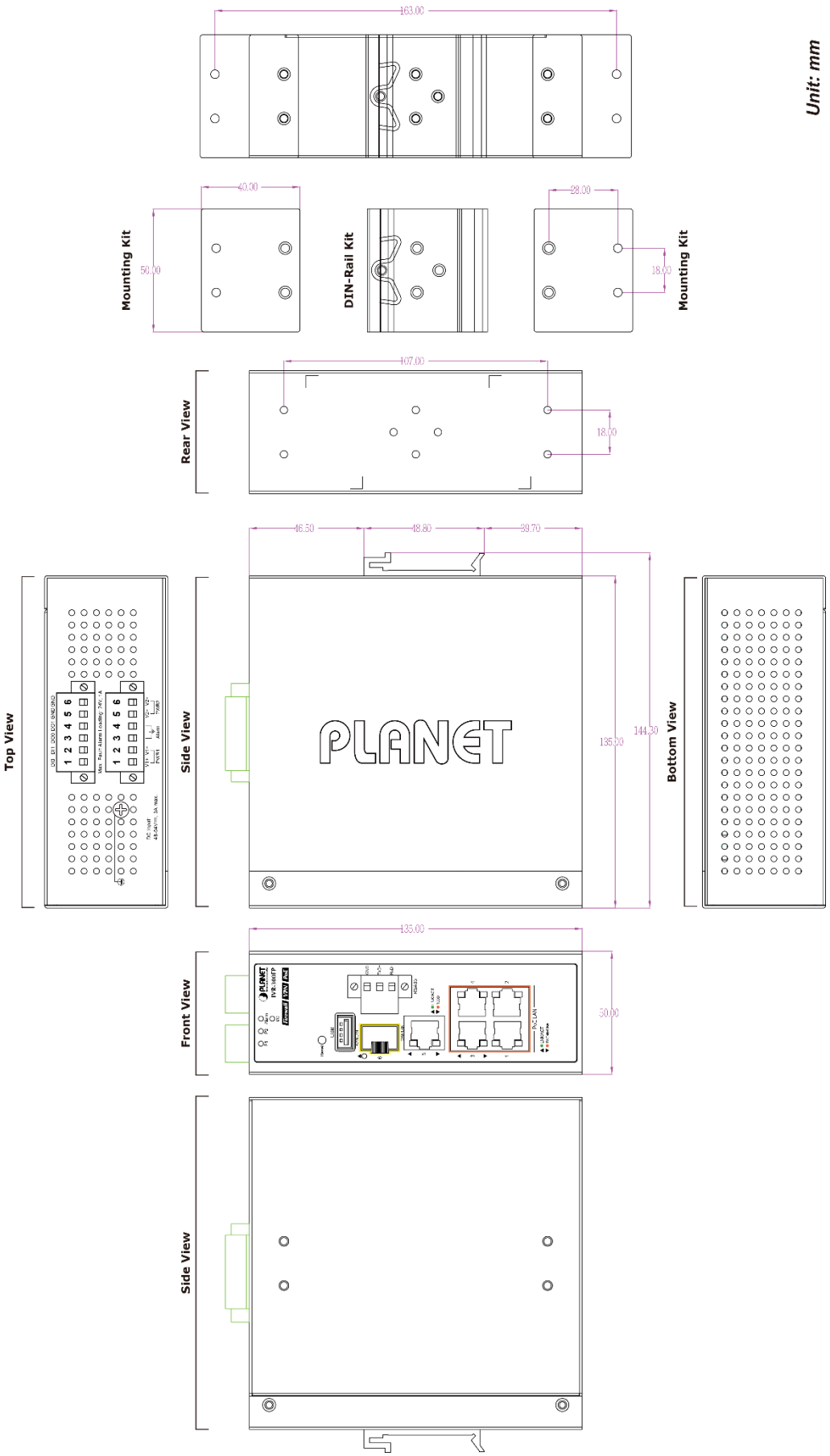
IVR-300 Dimensions



IVR-300W Dimensions



IVR-300W Dimensions



2.2 Hardware Installation

This section describes how to install the Industrial Gateway. There are three methods to install the Industrial Gateway -- DIN-rail mounting, wall mounting and side wall mounting. Basic knowledge of networking is assumed.

Please read the following sections and perform the procedures in the order being presented.

(The device shown on this chapter is just a representation of the said device.)

2.2.1 DIN-rail Mounting

Step 1: Lightly slide the DIN-rail into the track.

Step 2: Check whether the DIN-rail is tightly on the track.

Step 3: Connect your device to hub / switch.

A. Connect one end of a standard network cable to the LAN port (port 1) of the device.

B. Connect the other end of the cable to the hub / switch.

Note

The UTP Category 5, 5e or 6 network cabling with RJ45 tips is recommended.

Step 4: Connect your device to internet.

A. Connect one end of a standard network cable to the WAN port (port 5) of the device.

B. Connect the other end of the cable to the LAN port of ISP network device (such as a modem).

Note

If there is only one line connected to the outer network in your network environment, it is suggested that you use WAN port (port 5).

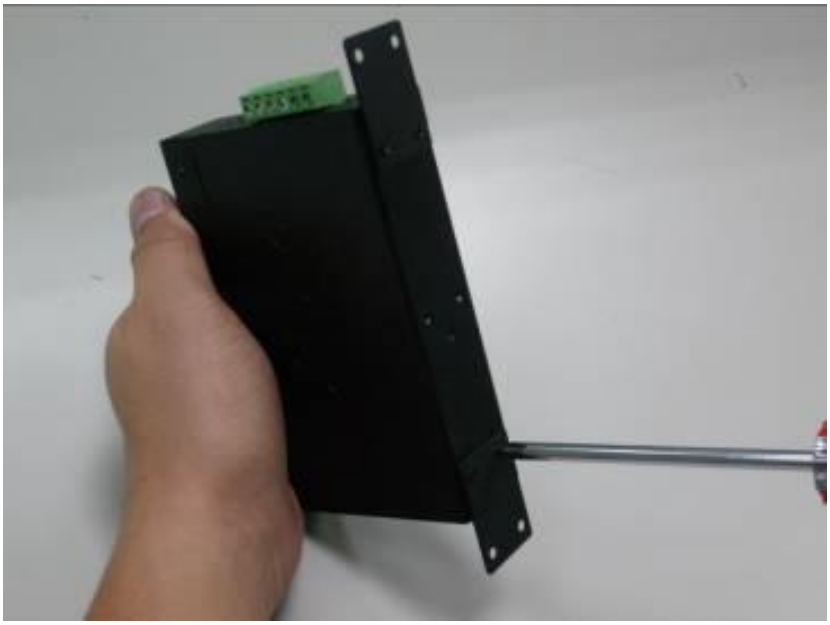
Step 5: Power on the device. When the device receives power, the Power LED should remain solid Green.

2.2.2 Wall Mount Plate Mounting

To install the Industrial Gateway on the wall, please follow the instructions below.

Step 1: Remove the DIN-rail from the Industrial Gateway. Use the screwdriver to loosen the screws to remove the DIN-rail.

Step 2: Place the wall-mount plate on the rear panel and use the screwdriver to screw the wall mount plate tightly on the Industrial Gateway.



Step 3: Use the hook holes at the corners of the wall mount plate to hang the Industrial Gateway on the wall.

Step 4: To remove the wall mount plate, reverse the steps above.

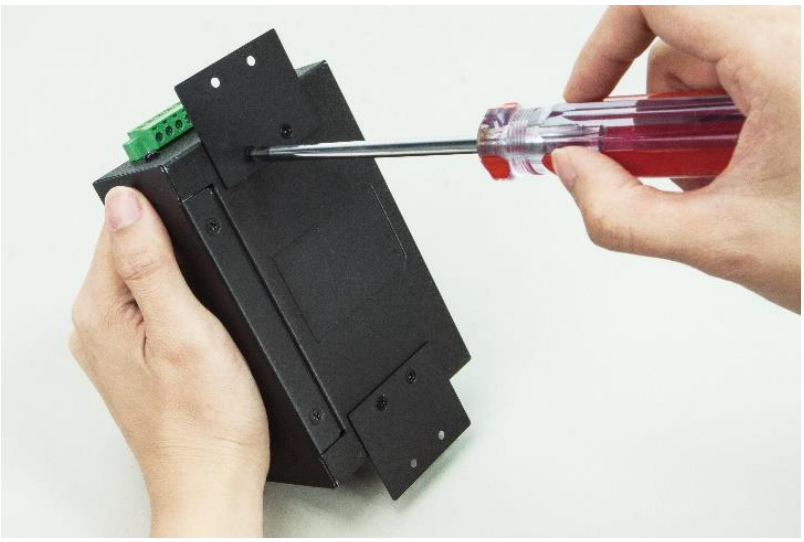
Step 5: Proceed with Steps 3, 4 and 5 in Section 2.2.1 DIN-rail Mounting to connect the network cabling and power on the device.

2.2.3 Side Wall Mount Plate Mounting

To install the Industrial Gateway on the wall, please follow the instructions below.

Step 1: Remove the DIN-rail from the Industrial Gateway. Use the screwdriver to loosen the screws to remove the DIN-rail.

Step 2: Place the wall-mount plate on the side panel and use the screwdriver to screw the wall mount plate tightly on the Industrial Gateway.



Step 3: Use the hook holes at the corners of the wall mount plate to hang the Industrial Gateway on the wall.

Step 4: To remove the wall mount plate, reverse the steps above.

Step 5: Proceed with Steps 3, 4 and 5 in Section 2.2.1 DIN-rail Mounting to connect the network cabling and power on the device.

2.2.4 Wi-Fi Antenna Installation

(For IVR-300W only)

Step 1: Fasten the two dual-band antennas to the antenna connectors on the front panel of the IVR-300W.

Step 2: You can bend the antennas to fit your actual needs.

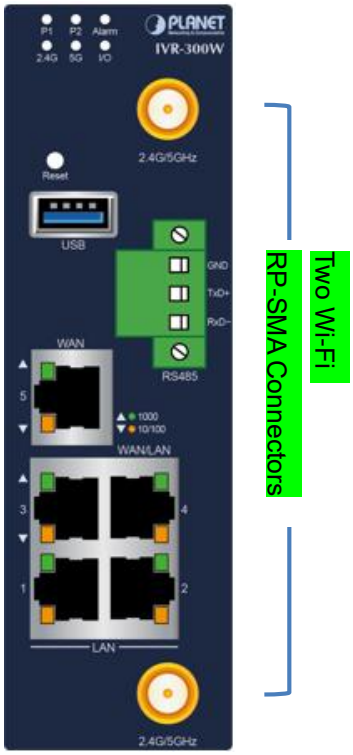


Figure 2-2: IVR-300W Front Panel

Chapter 3. Preparation

Before getting into the device's web UI, user has to check the network setting and configure PC's IP address.

3.1 Requirements

User is able to confirm the following items before configuration:

1. Please confirm the network is working properly; it is strongly suggested to test your network connection by connecting your computer directly to ISP.
2. Suggested operating systems: Windows 7 / 8 / 10.
3. Recommended web browsers: IE / Firefox / Chrome.

3.2 Setting TCP/IP on your PC

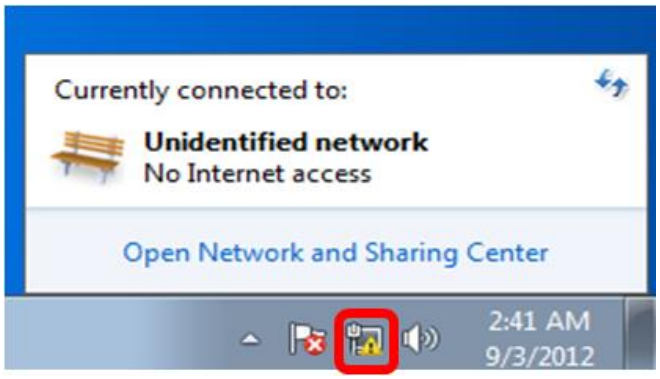
The default IP address of the VPN Gateway is 192.168.1.1, and the DHCP Server is on. Please set the IP address of the connected PC as DHCP client, and the PC will get IP address automatically from the VPN Gateway.

Please refer to the following to set the IP address of the connected PC.

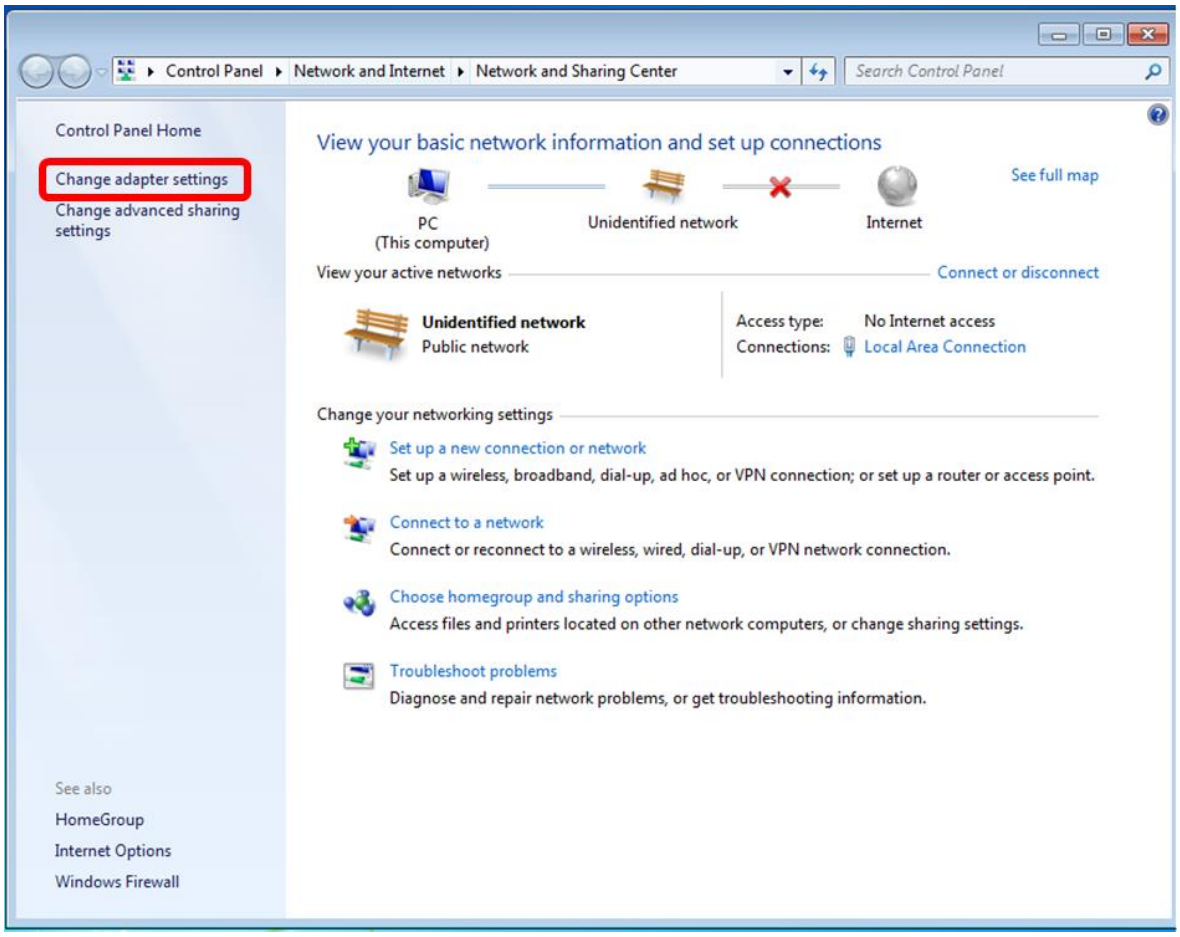
3.2.1 Windows 7/8

If you are using Windows 7/8, please refer to the following:

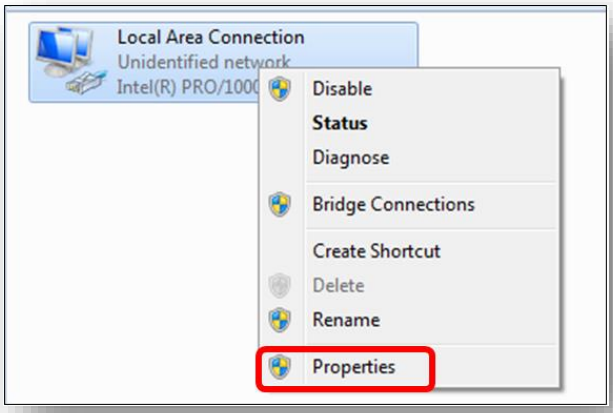
1. Click on the network icon from the right side of the taskbar and then click on "Open Network and Sharing Center".



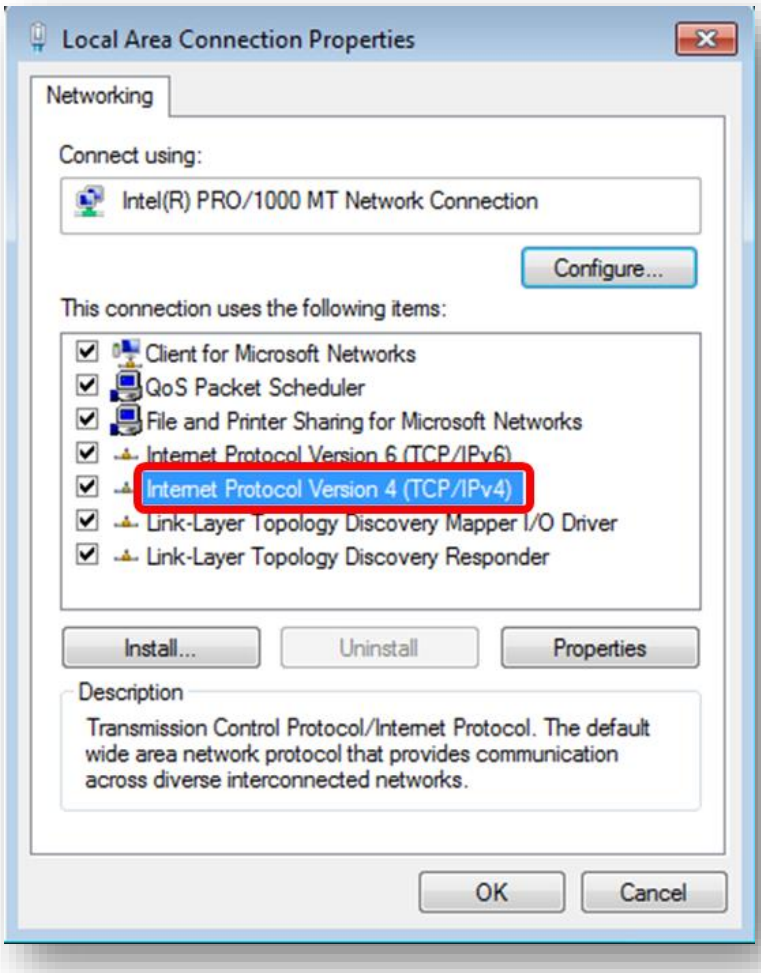
2. Click "**Change adapter settings**".



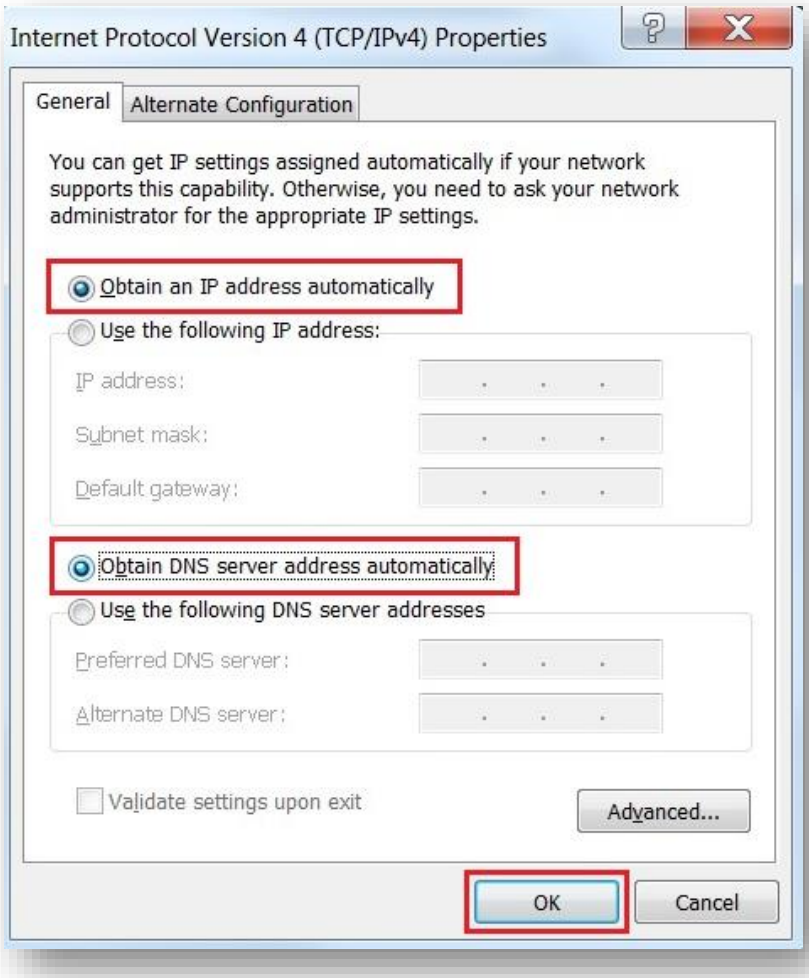
3. Right-click on the Local Area Connection and select Properties.



4. Select Internet Protocol Version 4 (TCP/IPv4) and click Properties or directly double-click on Internet Protocol Version 4 (TCP/IPv4).



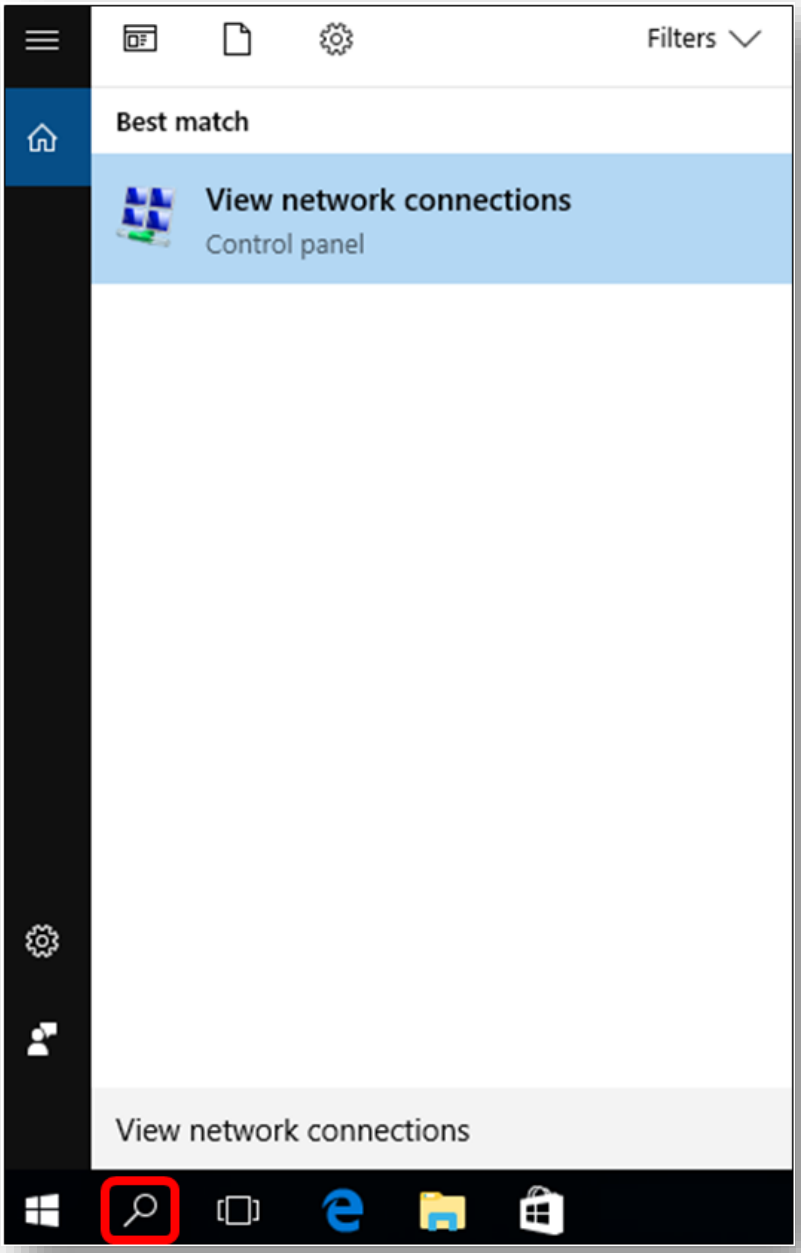
5. Select "**Use the following IP address**" and "**Obtain DNS server address automatically**", and then click the "**OK**" button.



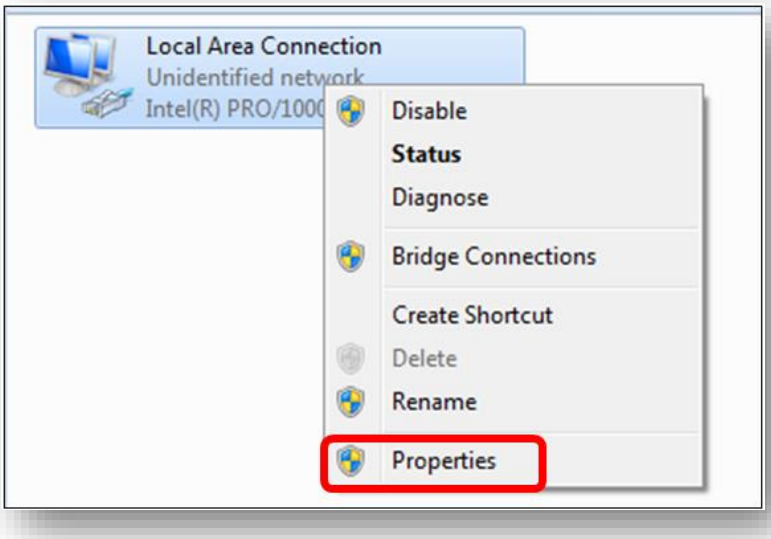
3.2.2 Windows 10

If you are using Windows 10, please refer to the following:

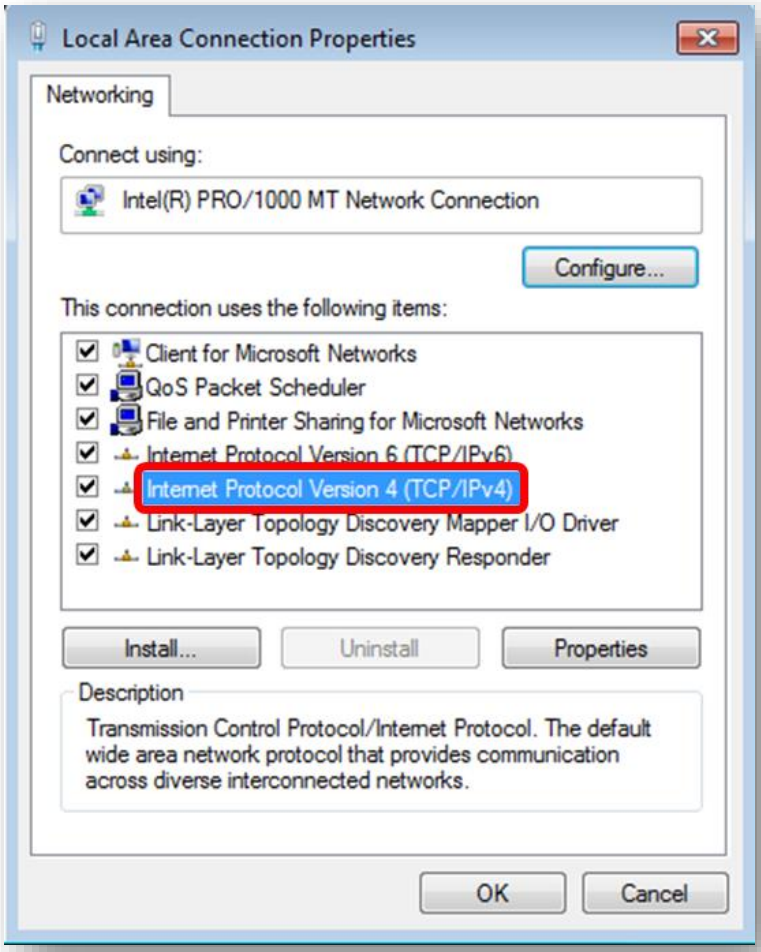
1. In the search box on the taskbar, type "View network connections", and then select View network connections at the top of the list.



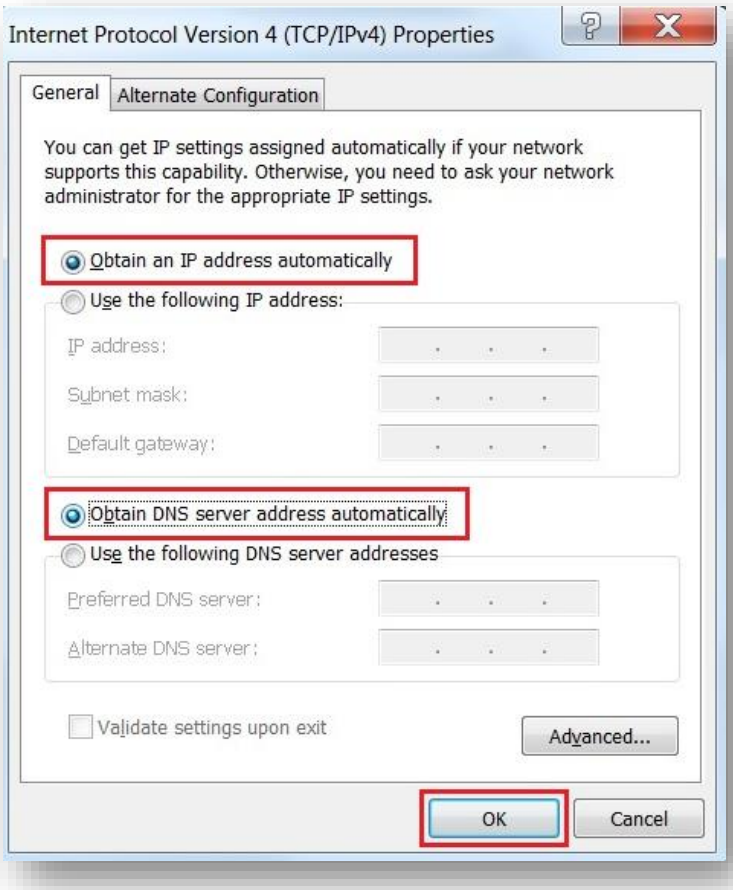
2. Right-click on the Local Area Connection and select Properties.



3. Select Internet Protocol Version 4 (TCP/IPv4) and click Properties or directly double-click on Internet Protocol Version 4 (TCP/IPv4).



4. Select "**Use the following IP address**" and "**Obtain DNS server address automatically**", and then click the "**OK**" button.



3.3 Planet Smart Discovery Utility

For easily listing the Gateway in your Ethernet environment, the search tool -- Planet Smart Discovery Utility -- is an ideal solution.

The following installation instructions are to guide you to running the Planet Smart Discovery Utility.

1. Download the Planet Smart Discovery Utility in administrator PC.
2. Run this utility as the following screen appears.

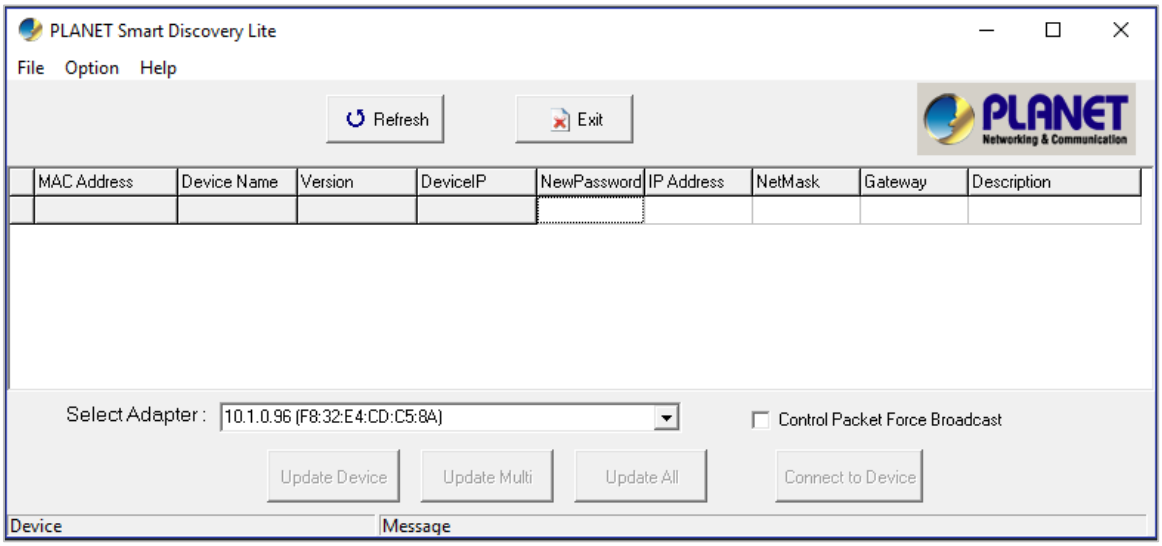


Figure: Planet Smart Discovery Utility Screen

If there are two LAN cards or above in the same administrator PC, choose a different LAN card by using the **"Select Adapter"** tool.

3. Press the **"Refresh"** button for the currently connected devices in the discovery list as the screen shows below:

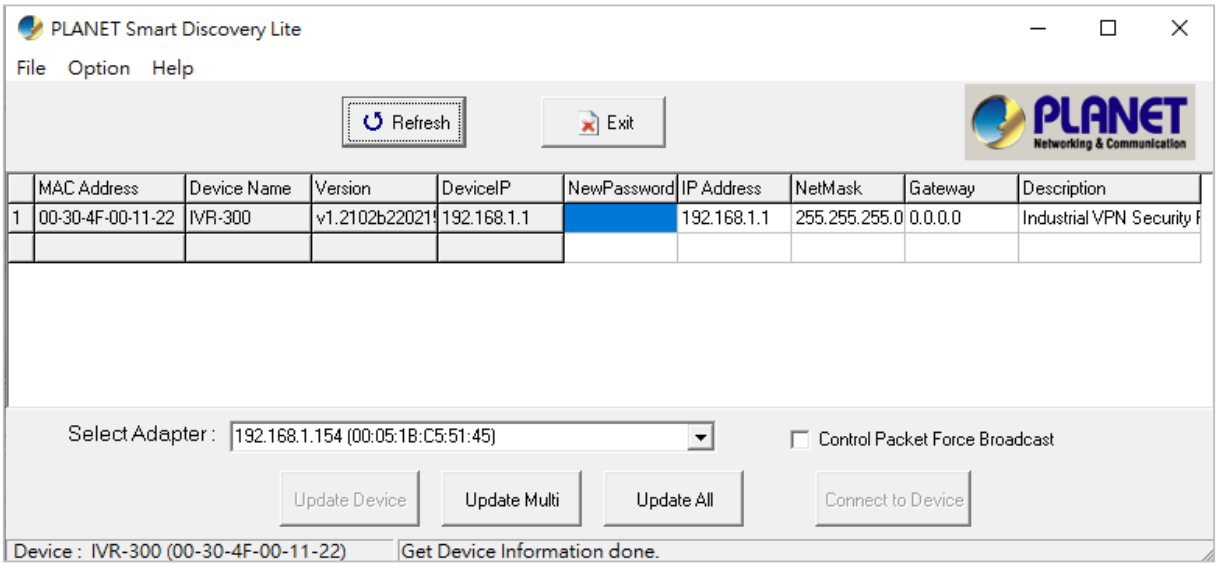


Figure: Planet Smart Discovery Utility Screen

1. This utility shows all necessary information from the devices, such as MAC address, device name, firmware version, and device IP subnet address. It can also assign new password, IP subnet address and description to the devices.

2. After setup is completed, press the "**Update Device**", "**Update Multi**" or "**Update All**" button to take effect. The functions of the 3 buttons above are shown below:
   - **Update Device**: use current setting on one single device.
   - **Update Multi:** use current setting on choose multi-devices.
   - **Update All:** use current setting on whole devices in the list.

   The same functions mentioned above also can be found in "**Option**" tools bar.

3. To click the "**Control Packet Force Broadcast**" function, it allows you to assign a new setting value to the device under a different IP subnet address.

4. Press the "**Connect to Device**" button and the Web login screen appears.

Press the "**Exit**" button to shut down the Planet Smart Discovery Utility.

Chapter 4. Web-based Management

This chapter provides setup details of the device's Web-based Interface.

4.1 Introduction

The device can be configured with your Web browser. Before configuring, please make sure your PC is under the same IP segment with the device.

4.2 Logging in to the VPN Gateway

Refer to the steps below to configure the VPN Gateway:

Step 1. Connect the IT administrator's PC and VPN Gateway's LAN port (port 1) to the same hub / switch, and then launch a browser to link the management interface address which is set to **http://192.168.1.1** by default.

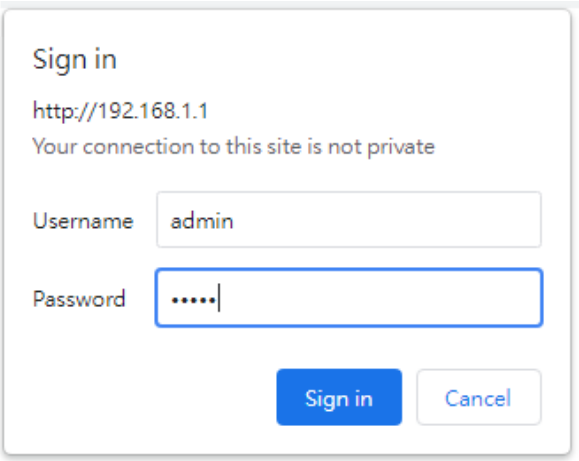
> Note
>
> The DHCP server of the VPN Gateway is enabled. Therefore, the LAN PC will get IP from the VPN Gateway. If user needs to set IP address of LAN PC manually, please set the IP address within the range between 192.168.1.2 and 192.168.1.254 inclusively, and assigned the subnet mask of 255.255.255.0.

Step 2. The browser prompts you for the login credentials. (Both are **"admin**" by default.)

Default IP address: **192.168.1.1**
Default user name: **admin**
Default password: **admin**
Default 2.4GHz SSID: **PLANET_2.4G (for IVR-300W)**
Default 5GHz SSID: **PLANET_5G (for IVR-300W)**

> Note
>
> Administrators are strongly suggested to change the default admin and password to ensure system security.

Web Login Screen as below:



Please follow the wizard to do the first-time account modification.

The password must contain 8~31 characters, including upper case, lower case, numerals and other symbols

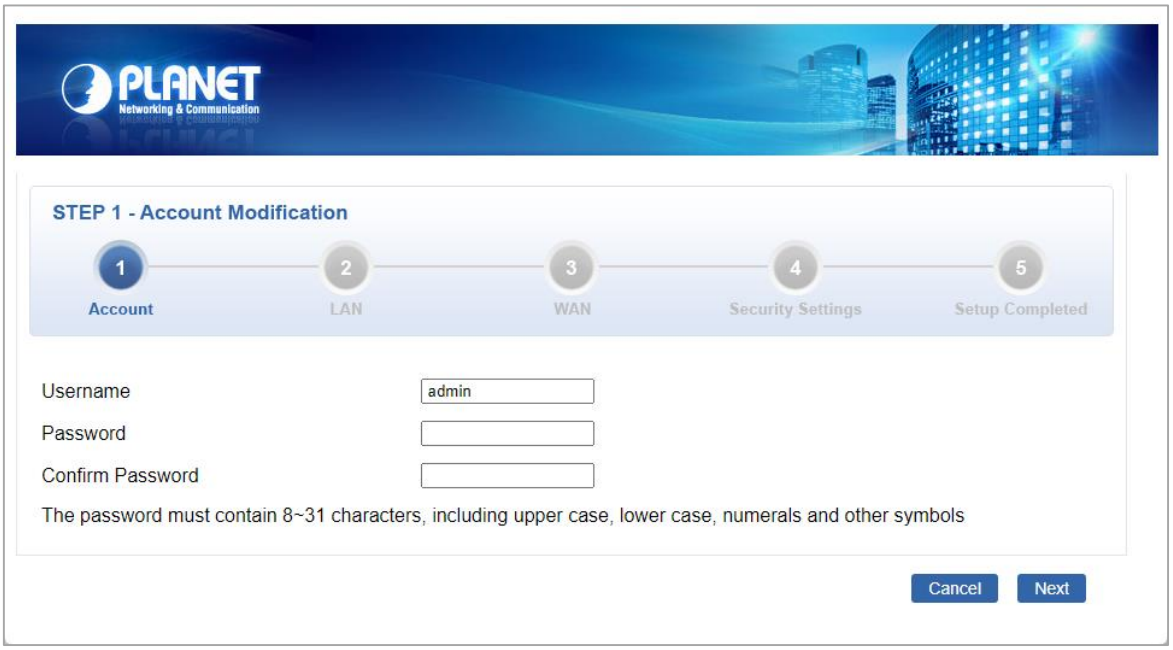


Figure 4.2-1 Account Modification

After modifying the new account and password, the main screen appears as shown below:

Figure 4.2-2 Web Main Screen

Now, you can use the Web management interface to continue the Security Gateway management or manage the Security Gateway by console interface. Please refer to the user's manual for more.

Administrators are strongly suggested to change the default password and Wi-Fi SSID on the first login to safeguard system security.

Note

1. For security reason, **please change and memorize the new password after this first setup**.
2. Only accept command in lowercase letter under web interface.

4.3 Main Web Page

After a successful login, the main web page appears. The web main page displays the web panel, main menu, function menu, and the main information in the center as shown below

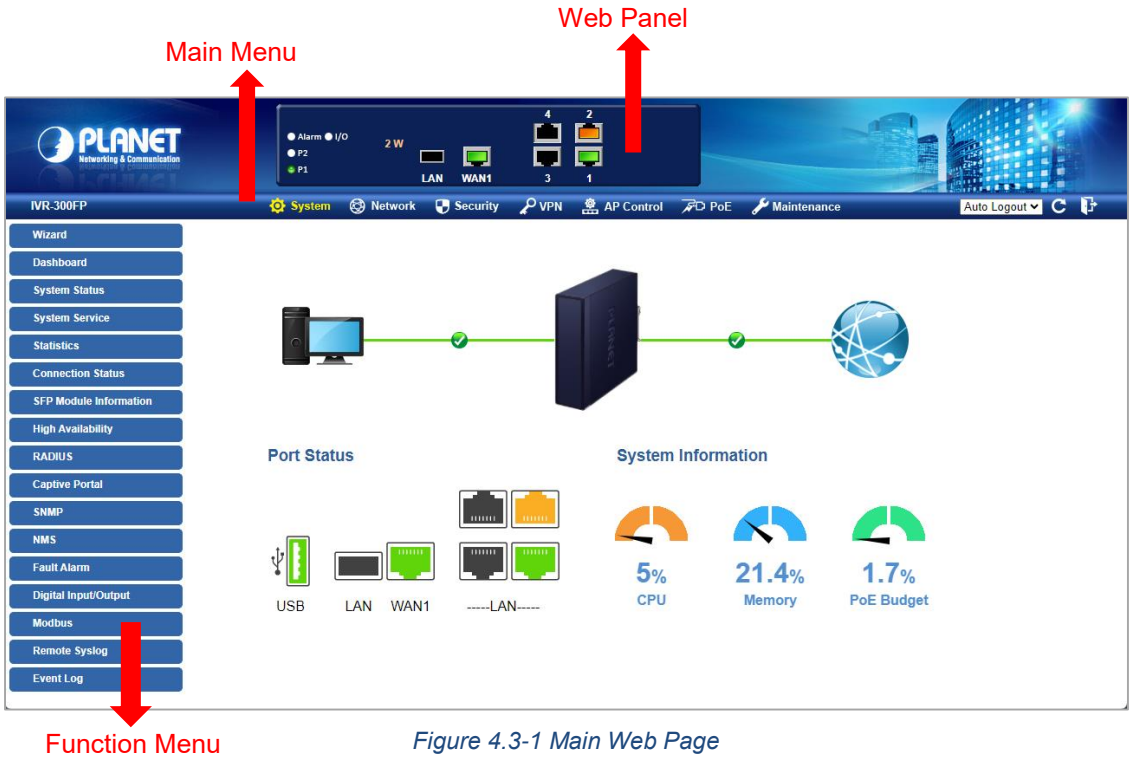


Figure 4.3-1 Main Web Page

■ Web Panel

The web panel displays the device's ports as shown below.

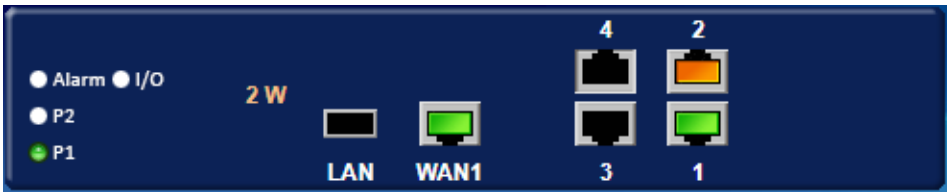


Figure 4.3-2 Web Panel

Object	Icon	Function
Ethernet port		To indicate the port without the RJ45 plug-in.
		To indicate network data is sending or receiving.
		To indicate the PoE is in use. (IVR-300FP only)
PoE Consumption	2 W	To indicate the current PoE consumption. (IVR-300FP only)
SFP port		To indicate the port with the Fiber plug-in. (IVR-300FP only)
		To indicate network data is sending or receiving (IVR-300FP only)

Main Menu

The main menu displays the product name, function menu, and main information in the center. Via the Web management, the administrator can set up the device by selecting the functions those listed in the function menu and button as shown below.

Figure 4.3-3 Function Menu

Object	Description
System	Provides System information of the Gateway.
Network	Provides WAN, LAN and network configurations of the Gateway.
Security	Provides Firewall and security configurations of the Gateway.
VPN	Provides VPN configuration of the Gateway.
AP Control	Provides AP Control configuration of the VPN Security Gateway
PoE	Provides PoE Management configuration of industrial wall-mount Gigabit router. (IVR-300FP only)
Wireless	Provides wireless configuration of the VPN Security Gateway (IVR-300W only)
Maintenance	Provides firmware upgrade and setting file restore/backup configuration of the Gateway.

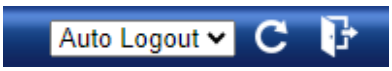


Figure 4.3-4 Function Button

Object	Description
	Click the "**Refresh button**" to refresh the current web page.
	Click the "**Logout button**" to log out the web UI of the Gateway.

4.4 System

Use the System menu items to display and configure basic administrative details of the Gateway. The System menu as shown below provides the following features to configure and monitor system.

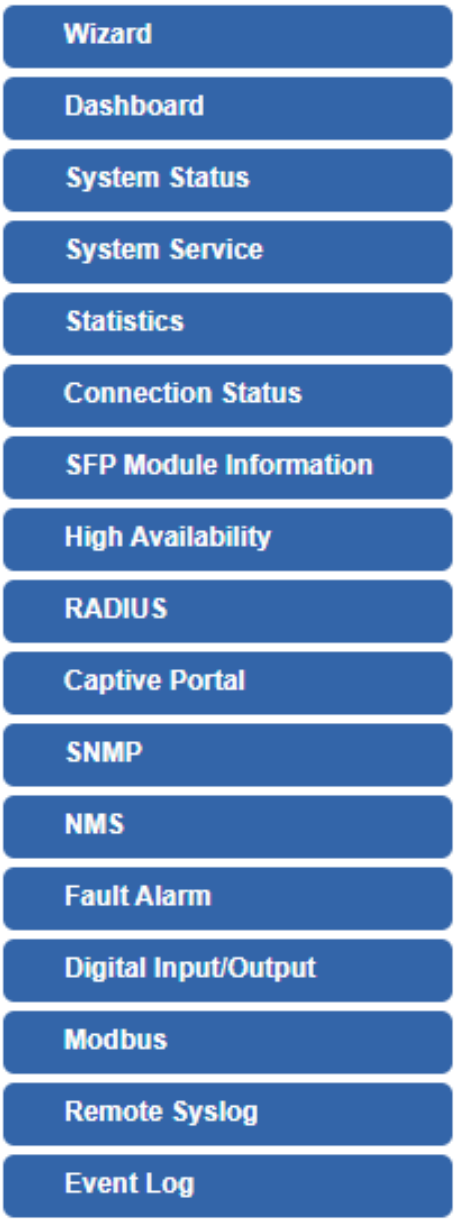


Figure 4.4-1 System Menu

Object	Description
Wizard	The Wizard will guide the user to configuring the Gateway easily and quickly.
Dashboard	The overview of system information includes connection, port, and system status.
System Status	Display the status of the system, Device Information, LAN and WAN.
System Service	Display the status of the system, Secured Service and Server Service
Statistics	Display statistics information of network traffic of LAN and WAN.
Connection Status	Display the DHCP client table and the ARP table
SFP Module Information	Display the physical or operational status of an SFP module via the SFP Module Information page (IVR-300FP only)
High Availability	Enable/Disable High Availability on VPN Security Gateway
RADIUS	Enable/Disable RADIUS on VPN Security Gateway
Captive Portal	Enable/Disable Captive Portal on VPN Security Gateway
SNMP	Display SNMP system information
NMS	Enable/Disable NMS on VPN Security Gateway
Fault Alarm	One relay output for power failure. Alarm relay current carry ability
Digital Input/Output	Digital Input/Output Control Configuration page
Modbus	Configure the Modbus TCP Mode on this page
Remote Syslog	Enable Captive Portal on VPN Security Gateway
Event Log	Display Event Log information

4.4.1 Wizard

The Wizard will guide the user to configuring the Gateway easily and quickly. There are different procedures in different operation modes. According to the operation mode you switch to, please follow the instructions below to configure the Gateway via **Setup Wizard** as shown below

Figure 4.4-2 Setup Wizard

Step 1: Account Modification

Set up the Username and Password for the Account Modification as shown below.

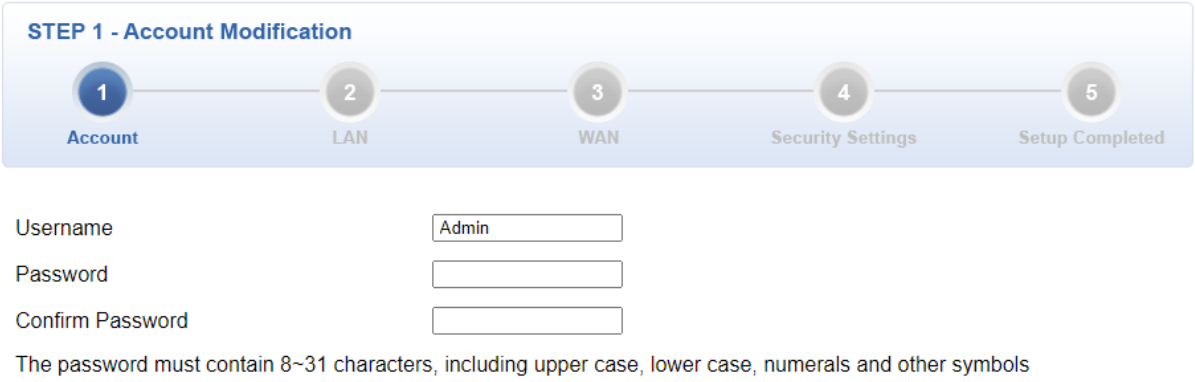


Figure 4.4-3 Account Modification

Step 2: LAN Interface

Set up the IP Address and Subnet Mask for the LAN interface as shown below.

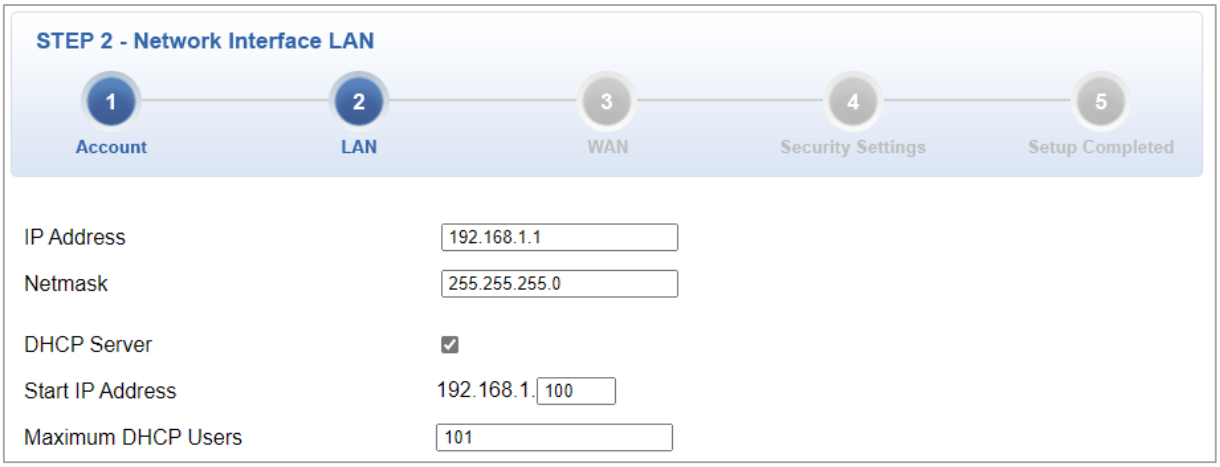


Figure 4.4-4 Setup Wizard – LAN Configuration

Object	Description
IP Address	Enter the IP address of your VPN Security Gateway The default is 192.168.1.1.
Subnet Mask	An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.
DHCP Server	By default, the DHCP Server is enabled. If user needs to disable the function, please uncheck the box.
Start IP Address	By default, the start IP address is 192.168.1.100. Please do not set it to the same IP address of the VPN Security Gateway
Maximum DHCP Users	By default, the maximum DHCP users are 101, which means the VPN Security Gateway will provide DHCP client with IP address from 192.168.1.100 to 192.168.1.200 when the start IP address is 192.168.1.100.
Next	Press this button to the next step.
Cancel	Press this button to undo any changes made locally and revert to previously saved values.

Step 3: WAN Interface

The VPN Security Gateway supports two access modes on the WAN side as shown in below.

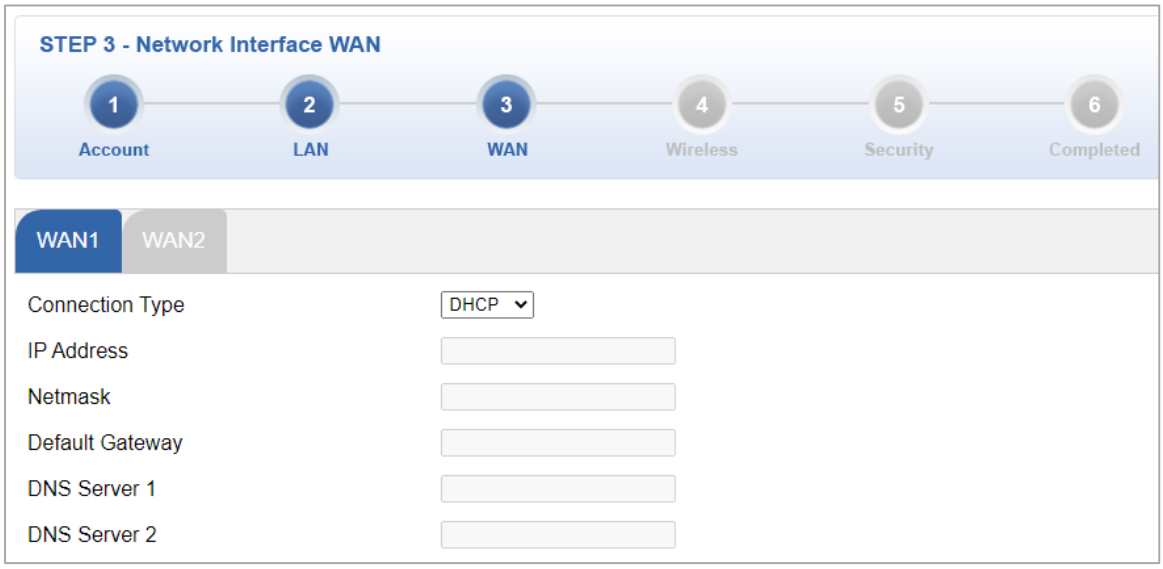


Figure 4.4-5 Setup Wizard – WAN Configuration (IVR-100/IVR-300/IVR-300W)

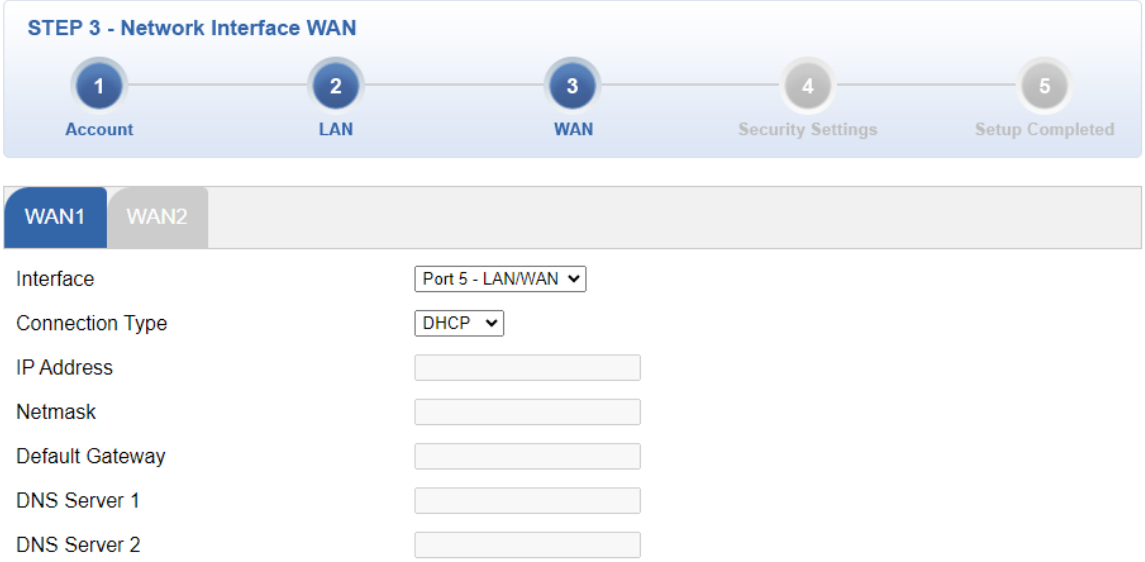


Figure 4.4-6 Setup Wizard – WAN Configuration (IVR-300FP Only)

Mode 1 -- Static IP

Select **Static IP Address** if all the Internet port's IP information is provided to you by your ISP. You will need to enter the **IP Address**, **Netmask**, **Default Gateway** and **DNS Server** provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The VPN Security Gateway will not accept the IP address if it is not in this format. The setup is shown below.

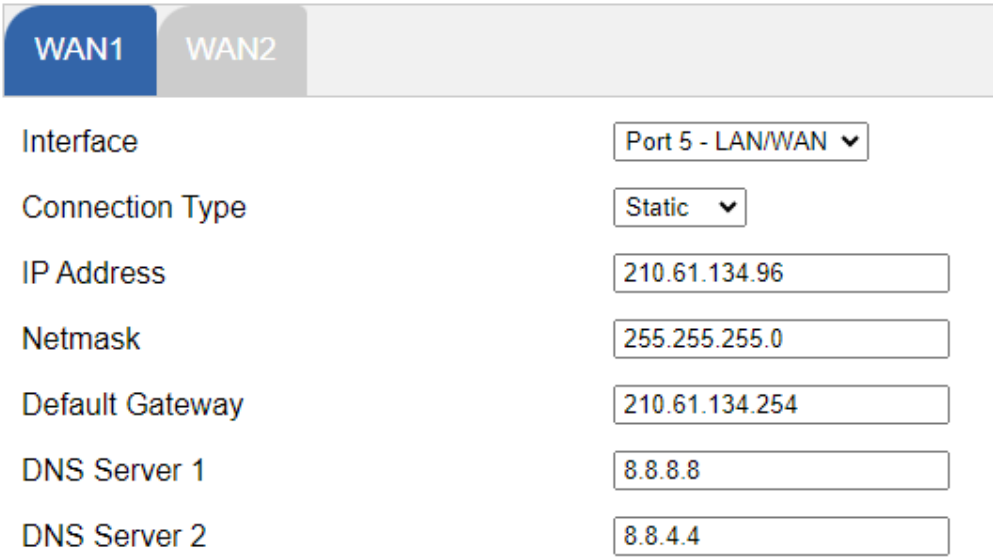


Figure 4.4-7 WAN Interface Setup – Static IP Setup

Object	Description
IP Address	Enter the IP address assigned by your ISP.
Netmask	Enter the Netmask assigned by your ISP.
Default Gateway	Enter the Gateway assigned by your ISP.
DNS Server	The DNS server information will be supplied by your ISP.
Next	Press this button for the next step.
Previous	Press this button for the previous step.
Cancel	Press this button to undo any changes made locally and revert to previously saved values.

Mode 2 -- DHCP Client

Select DHCP Client to obtain IP Address information automatically from your ISP. The setup is shown below.

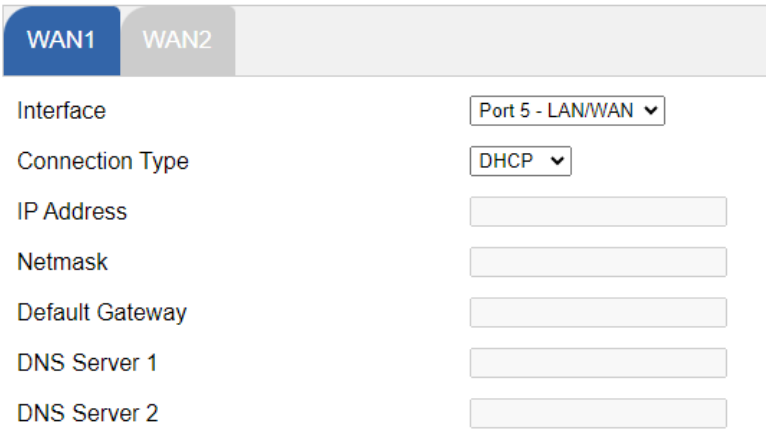


Figure 4.4-8 WAN Interface Setup – DHCP Setup

Step 4: Wireless Setting

(For IVR-300W only)

Set up the Wireless Settings as shown below.

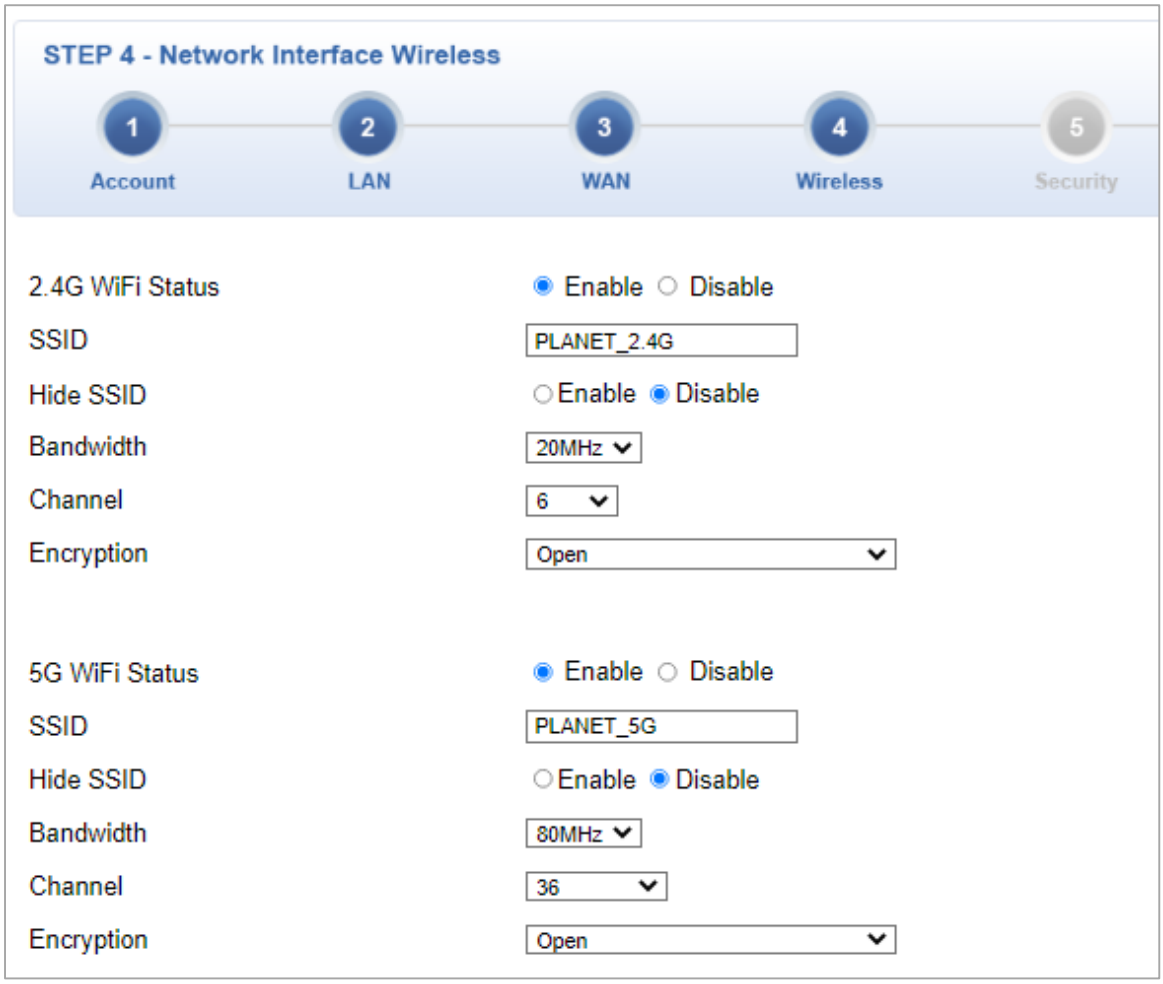


Figure 4.4-9 Setup Wizard – Wireless Setting

Object	Description
2.4G Wireless Status	Allows user to enable or disable 2.4G Wi-Fi
Wireless Name (SSID)	It is the wireless network name. The default 2.4G SSID is "PLANET_2.4G"
Hide SSID	Allows user to enable or disable SSID
Bandwidth	Select the operating channel width, "**20MHz**" or "**40MHz**"
Channel	It shows the channel of the CPE. Default 2.4GHz is channel 6.
Encryption	Select the wireless encryption. The default is "**Open**"
Wi-Fi Multimedia	Enable/Disable WMM (Wi-Fi Multimedia) function

Object	Description
5G Wireless Status	Allows user to enable or disable 5G Wi-Fi
Wireless Name (SSID)	It is the wireless network name. The default 5G SSID is “PLANET_5G”
Hide SSID	Allows user to enable or disable SSID
Bandwidth	Select the operating channel width, “**20MHz**” or “**40MHz**” or “**80MHz**”
Channel	It shows the channel of the CPE. Default 5GHz is channel 36.
Encryption	Select the wireless encryption. The default is “**Open**”
Wi-Fi Multimedia	Enable/Disable WMM (Wi-Fi Multimedia) function

Step 5: Security Setting

Set up the Security Settings as shown the setup is shown below.

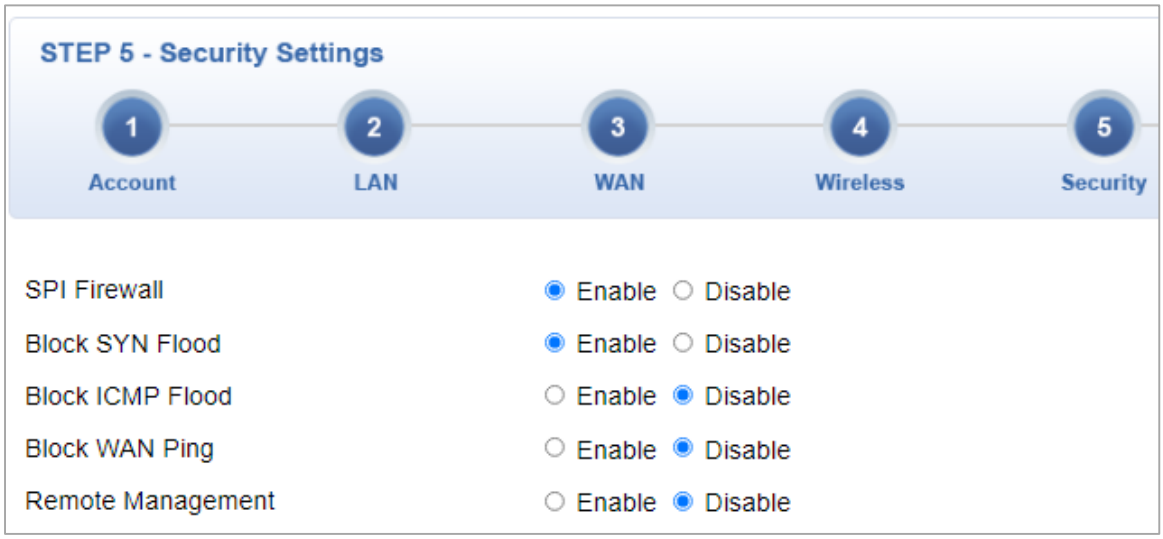


Figure 4.4-10 Setup Wizard – Security Setting

Object	Description
SPI Firewall	The SPI Firewall prevents attack and improper access to network resources. The default configuration is enabled.
Block SYN Flood	SYN Flood is a popular attack way. DoS and DDoS are TCP protocols. Hackers like to use this method to make a fake connection that involves the CPU, memory, and so on. The default configuration is enabled.

Block ICMP Flood	ICMP is kind of a pack of TCP/IP; its important function is to transfer simple signal on the Internet. There are two normal attack ways which hackers like to use, Ping of Death and Smurf attack. The default configuration is disabled.
Block WAN Ping	Enable the function to allow the Ping access from the Internet network. The default configuration is disabled.
Remote Management	Enable the function to allow the web server access of the Gateway from the Internet network. The default configuration is disabled.

Step 6: Setup Completed

The page will show the summary of LAN, WAN and Security settings. The setup is shown below.

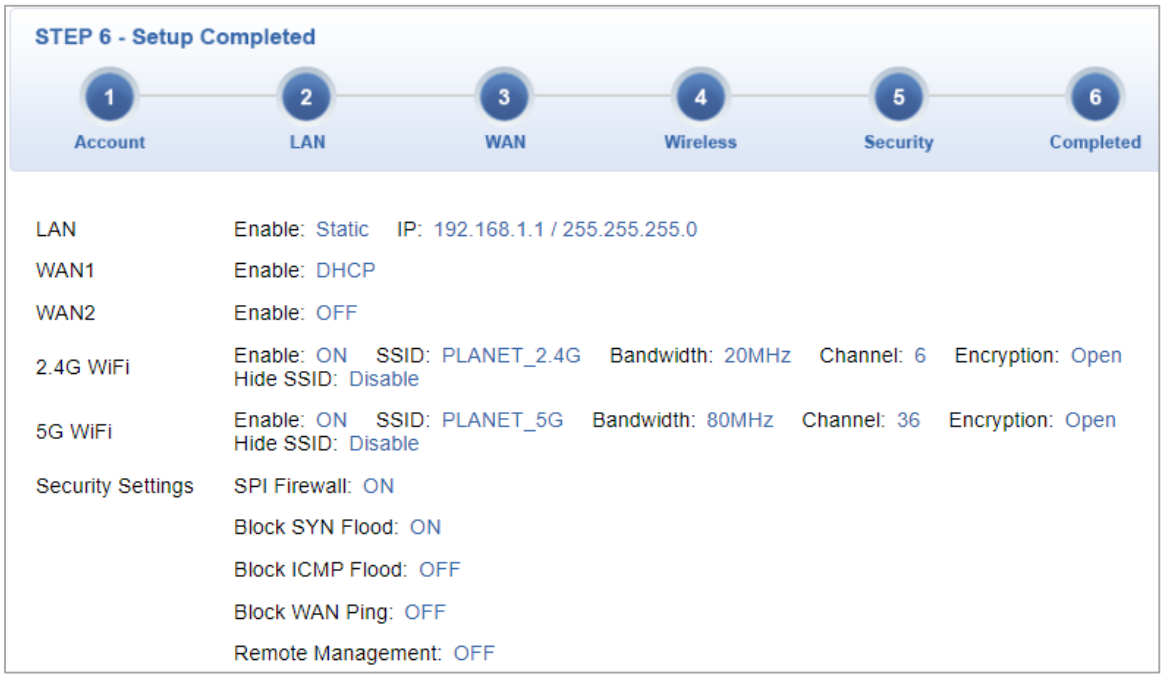


Figure 4.4-11 Setup Wizard – Setup Completed

Object	Description
Finish	Press this button to save and apply changes.
Previous	Press this button for the previous step.

4.4.2 Dashboard

The dashboard provides an overview of system information including connection, port, and system status. The setup is shown below.

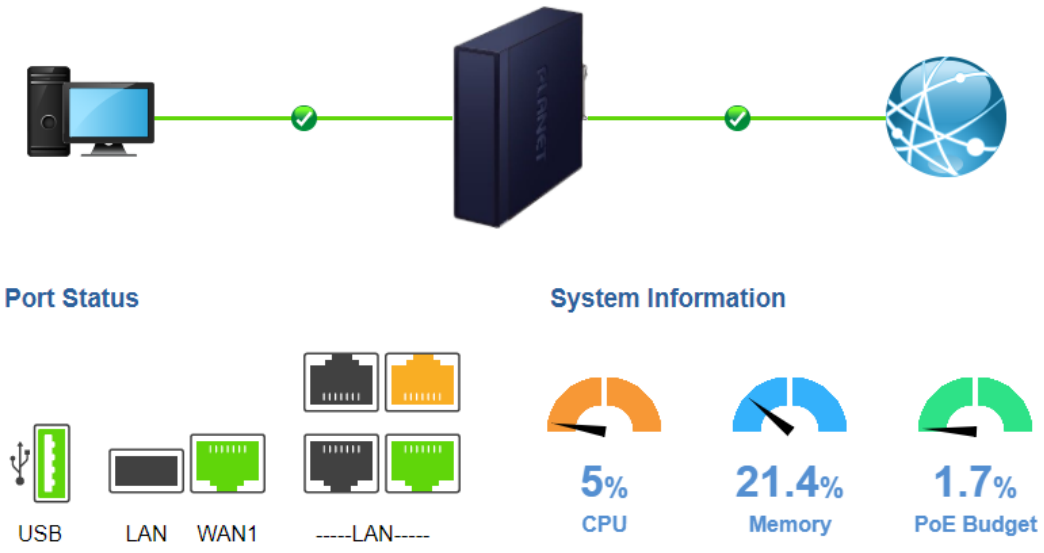


Figure 4.4-12 Dashboard

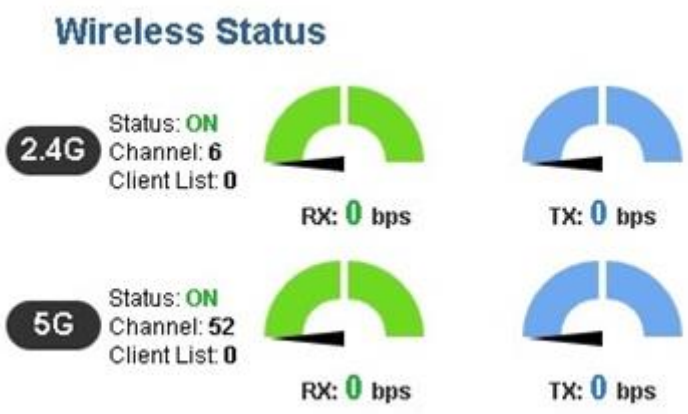


Figure 4.4-13 Dashboard - Wireless

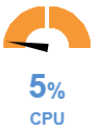
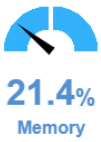
WAN/LAN Connection Status

Object	Description
	The status means WAN is connected to Internet and LAN is connected.
	The status means WAN is disconnected to Internet and LAN is connected.
	The status means WAN is connected to Internet and LAN is disconnected.

Port Status

Object	Description
	Ethernet port is in use.
	Ethernet port is not in use.
	Ethernet port is PoE-in-use (IVR-300FP Only)
	USB port is in use.
	USB port is not in use.

System Information

Object	Description
	Display the CPU loading
	Display the memory usage
	Display the PoE Budget

Wireless Status

Object	Description
	Wireless is in use.
	Wireless is not in use.

4.4.3 Status

This page displays system information as shown below.

Device Information	
Model Name	IVR-300
Firmware Version	v1.2102b220215
Current Time	2022-04-22 Friday 16:16:32
Running Time	0 day, 07:31:16
Power Status	PWR1:ON, PWR2:OFF
Alarm Status	Normal
DI and DO Status	Normal

WAN1	
MAC Address	00:30:4F:00:11:23
Connection Type	DHCP
Display Name	WAN1
IP Address	
Netmask	
Default Gateway	

LAN	
MAC Address	00:30:4F:00:11:22
IP Address	192.168.1.1
Netmask	255.255.255.0
DHCP Service	Enable
DHCP Start IP Address	192.168.1.100
DHCP End IP Address	192.168.1.200
Max DHCP Clients	101

Figure 4.4-14 Status

For IVR-300W Only

2.4GHz WiFi	
Status	ON
SSID	PLANET_2.4G
Channel	6
Encryption	Open
MAC Address	A8:F7:E0:00:30:5A

5GHz WiFi	
Status	ON
SSID	PLANET_5G
Channel	36
Encryption	WPA2 Personal (TKIP+AES)
MAC Address	A8:F7:E0:87:85:5D

Figure 4.4-15 Status –Wireless (IVR-300W)

4.4.4 System Service

This page displays system service information as shown below.

Service

#	State	Service	Detail
1	Enabled	DHCP Service	DHCP Table: 1
2	Disabled	DDNS Service	Not enabled
3	Enabled	SNMP Service	
4	Disabled	Quality of Service	
5	Disabled	High Availability	
6	Disabled	RADIUS Service	
7	Disabled	Captive Portal	

Figure 4.4-16 System Service – Server Service

Secured Service

#	State	Service	Detail
1	Enabled	Cybersecurity	TLS 1.2, TLS 1.3
2	Enabled	SPI Firewall	
3	Disabled	MAC Filtering	(Active / Maximum Entries) 0 / 32
4	Disabled	IP Filtering	(Active / Maximum Entries) 0 / 32
5	Disabled	Web Filtering	(Active / Maximum Entries) 0 / 32
6	Disabled	IPSec VPN Server	(Active / Maximum Tunnels) 0 / 16
7	Disabled	GRE	(Active / Maximum Tunnels) 0 / 5
8	Disabled	PPTP	(Active / Maximum Tunnels) 0 / 91
9	Disabled	SSL VPN	(Active / Maximum Tunnels) 0 / 100
10	Disabled	L2TP	(Active Tunnels) 0

Figure 4.4-17 System Service – Secured Service

4.4.5 Statistics

This page displays the number of packets that pass through the VPN Security Gateway on the WAN and LAN. The statistics are shown below.

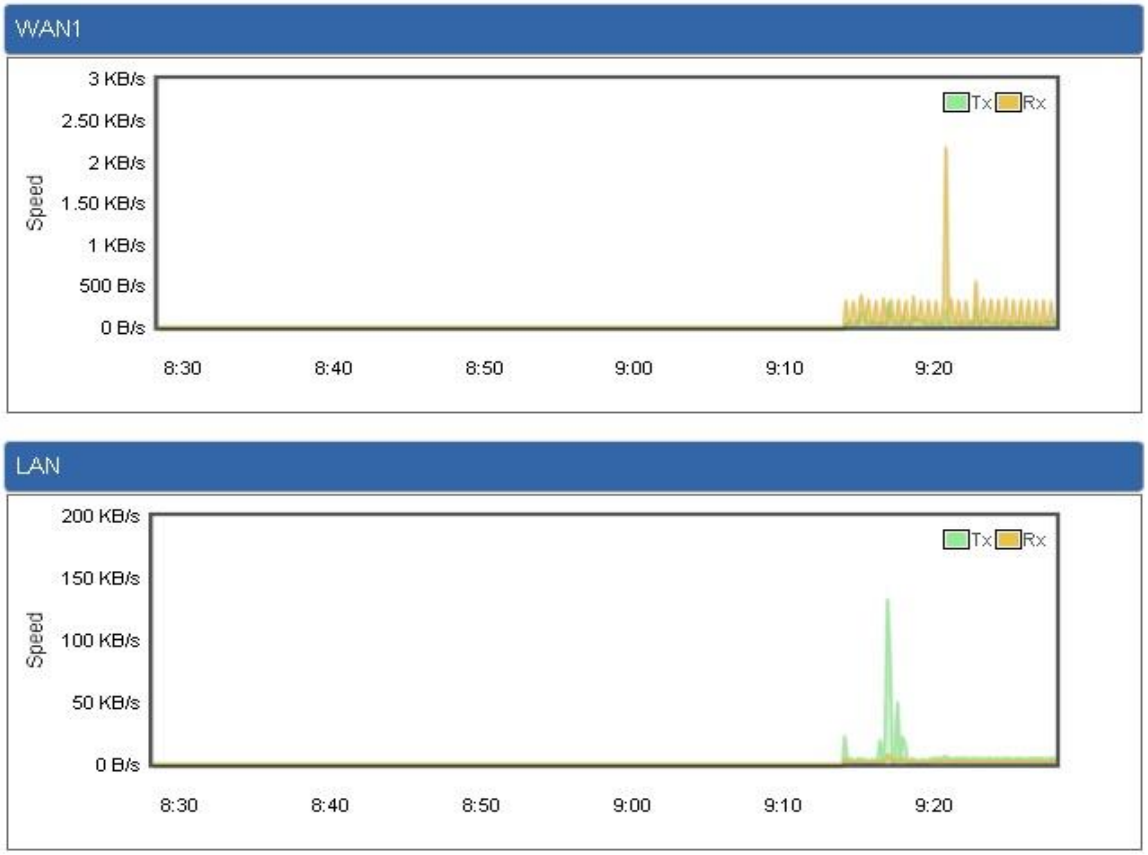


Figure 4.4-18 Statistics

4.4.6 Connection Status

The page will show the DHCP Table and ARP Table. The status is shown below.

DHCP Table

Name	IP Address	MAC Address	Expiration Time
ENM	192.168.1.154	00:05:1b:c5:51:45	Sat Apr 23 15:39:34 2022

ARP Table

IP Address	MAC Address	ARP Type
192.168.1.154	00:05:1b:c5:51:45	dynamic

Figure 4.4-19 Connection Status

4.4.7 SFP Module Information

This page shows the operational status, such as the transceiver type, speed, wavelength, optical output power, optical input power, temperature, laser bias current and transceiver supply voltage in real time. The SFP Module Information page is shown below.

SFP Module Information

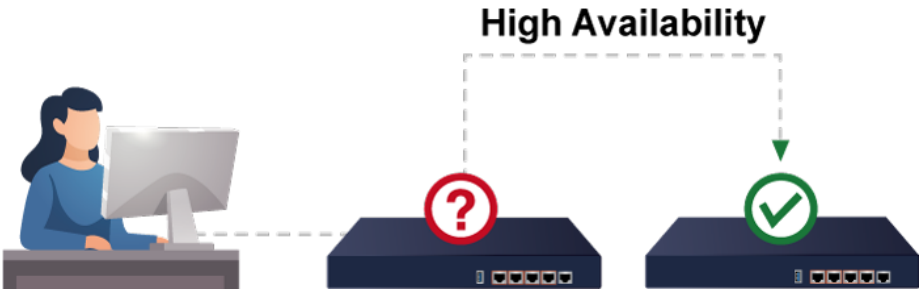
Type	Speed	Wave Length(nm)	Distance(m)	Temperature(C)	Voltage(V)	Current(mA)	Tx power(dBm)	Rx power(dBm)
1000Base-LX	1000-Base	1310	10000	39.0588	3.3112	18.9760	-6.3451	-36.9897

Figure 4.4-20 SFP Module Information

Object	Description
Type	Display the type of current SFP module; the possible types are: ■ 1000BASE-SX ■ 1000BASE-LX
Speed	Display the speed of current SFP module; the speed value or description is obtained from the SFP module. Different vendors' SFP modules might show different speed information.
Wave Length (nm)	Display the wavelength of current SFP module; the wavelength value is obtained from the SFP module. Use this column to check if the wavelength values of two nodes match while the fiber connection fails.
Distance (m)	Display the support distance of current SFP module; the distance value is obtained from the SFP module.
Temperature (C) – SFP DDM Module Only	Display the temperature of current SFP DDM module; the temperature value is gotten from the SFP DDM module.
Voltage (V) – SFP DDM Module Only	Display the voltage of current SFP DDM module; the voltage value is gotten from the SFP DDM module.
Current (mA) – SFP DDM Module Only	Display the ampere of current SFP DDM module; the ampere value is gotten from the SFP DDM module.
TX power (dBm) – SFP DDM Module Only	Display the TX power of current SFP DDM module; the TX power value is gotten from the SFP DDM module.
RX power (dBm) – SFP DDM Module Only	Display the RX power of current SFP DDM module; the RX power value is gotten from the SFP DDM module.

4.4.8 High Availability

High Availability (HA) is a redundant system that two IVR VPN Security Gateways can be set up in a master/slave configuration. The master VPN Security Gateway provides the Internet connection but, in the case of hardware or WAN connectivity failure, the slave (backup) VPN Security Gateway automatically takes over Internet connection. It provides redundant hardware and software that make the system available despite failures.



The page will show the High Availability configuration. The High Availability page is shown below.

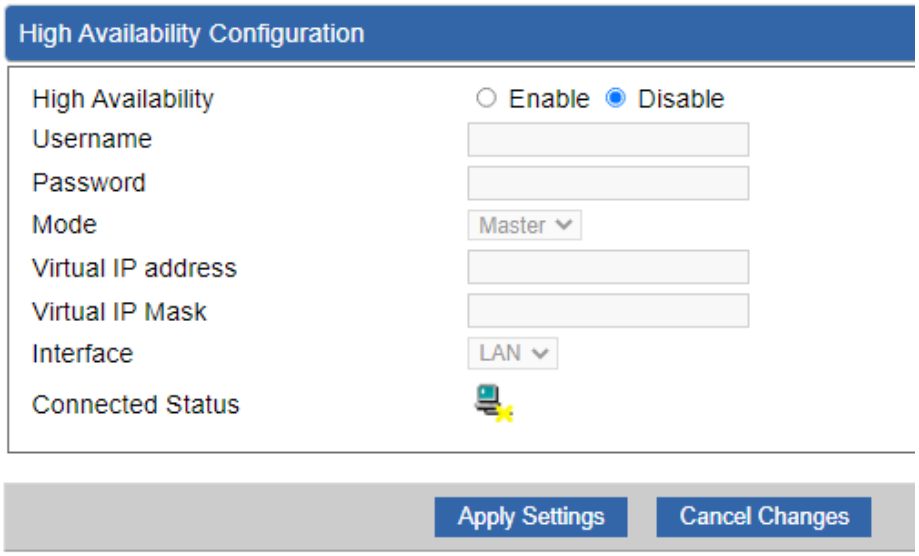
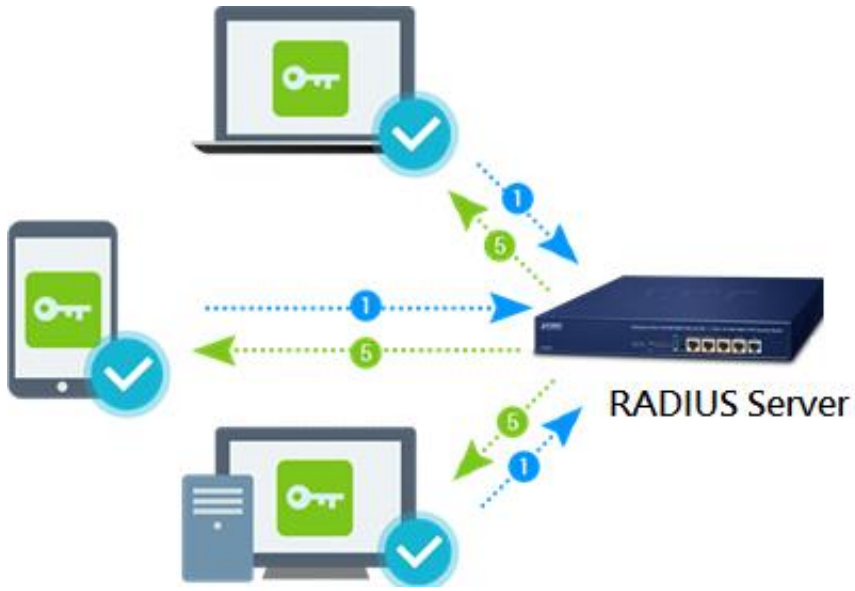


Figure 4.4-21 High Availability

Object	Description
High Availability	Disable or enable the High Availability function. The default configuration is disabled.
Username	Create the username for the HA.
Password	Create the password for the HA.
Mode	Choose Master or Slave role.
Virtual IP Address	Assign an IP address as a virtual IP.
Virtual Mask	Assign a mask address as a virtual mask.
Interface	Use interface.
Connection Status	Display the HA status.

4.4.9 RADIUS

Remote Authentication Dial-In User Service (RADIUS) is a security authentication client/server protocol that supports authentication, authorization and accounting.



The **RADIUS Server** page is shown below.

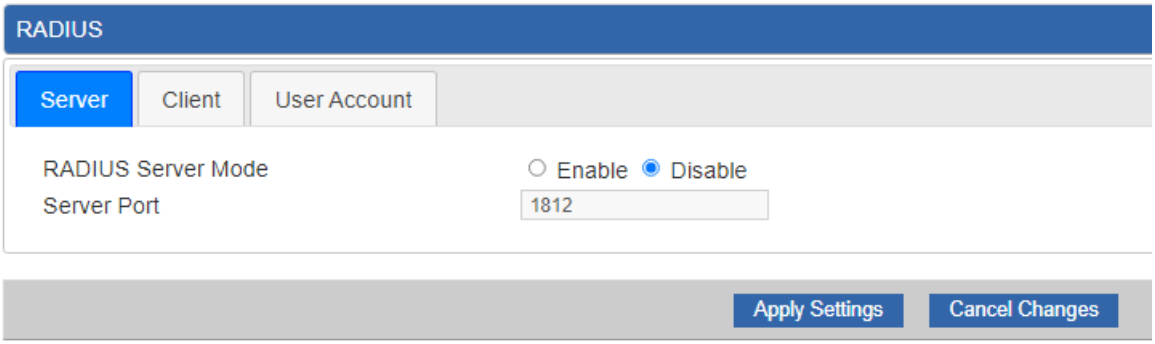


Figure 4.4-22 RADIUS Server

Object	Description
RADIUS	Disable or enable the RADIUS function. The default configuration is disabled.
Server Port	UDP port number for authentication

The **RADIUS client** page is shown below.

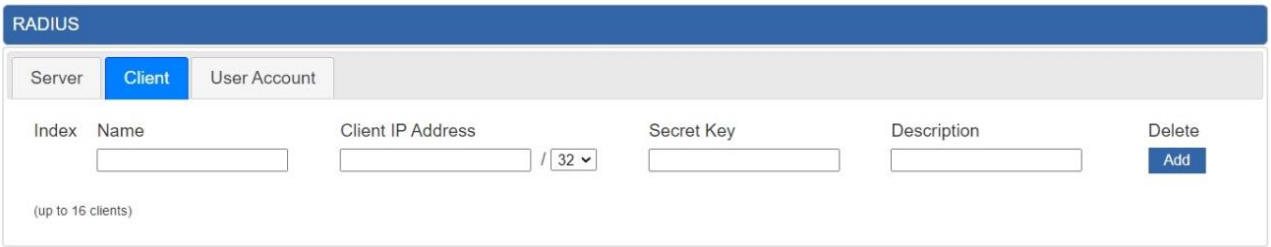


Figure 4.4-23 RADIUS Client

Object	Description
Name	Describe client's name
Client IP address	Describe client's IP address
Secret Key	The RADIUS server and client share a secret key that is used to authenticate the messages sent between server and client.
Description	Describe client's information

4.4.10 Captive Portal

Captive portal service gives the ability to organize a public (or guest) Wi-Fi zone with user authorization. A captive portal is the authorization page that forcibly redirects users who connect to the public network before accessing the Internet.

The Captive portal page is shown below.

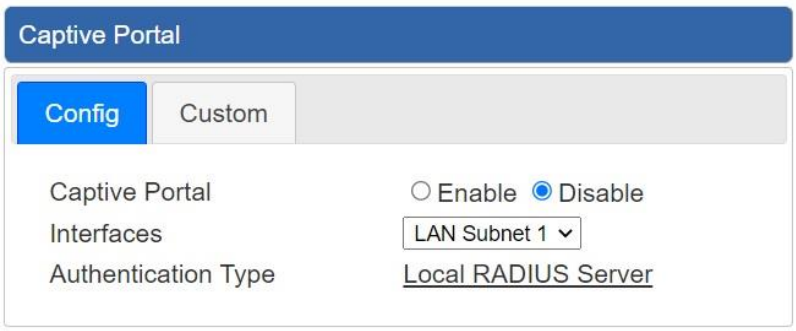


Figure 4.4-24 Captive Portal

Object	Description
Captive portal	Disable or enable the Captive portal function. The default configuration is disabled.
Interface	Choose subnet interface ■ LAN Subnet 1 ■ LAN Subnet 2 ■ LAN Subnet 3 ■ LAN Subnet 4
Authentication Type	Support local RADIUS server

4.4.11 SNMP

This page provides SNMP setting as shown below.

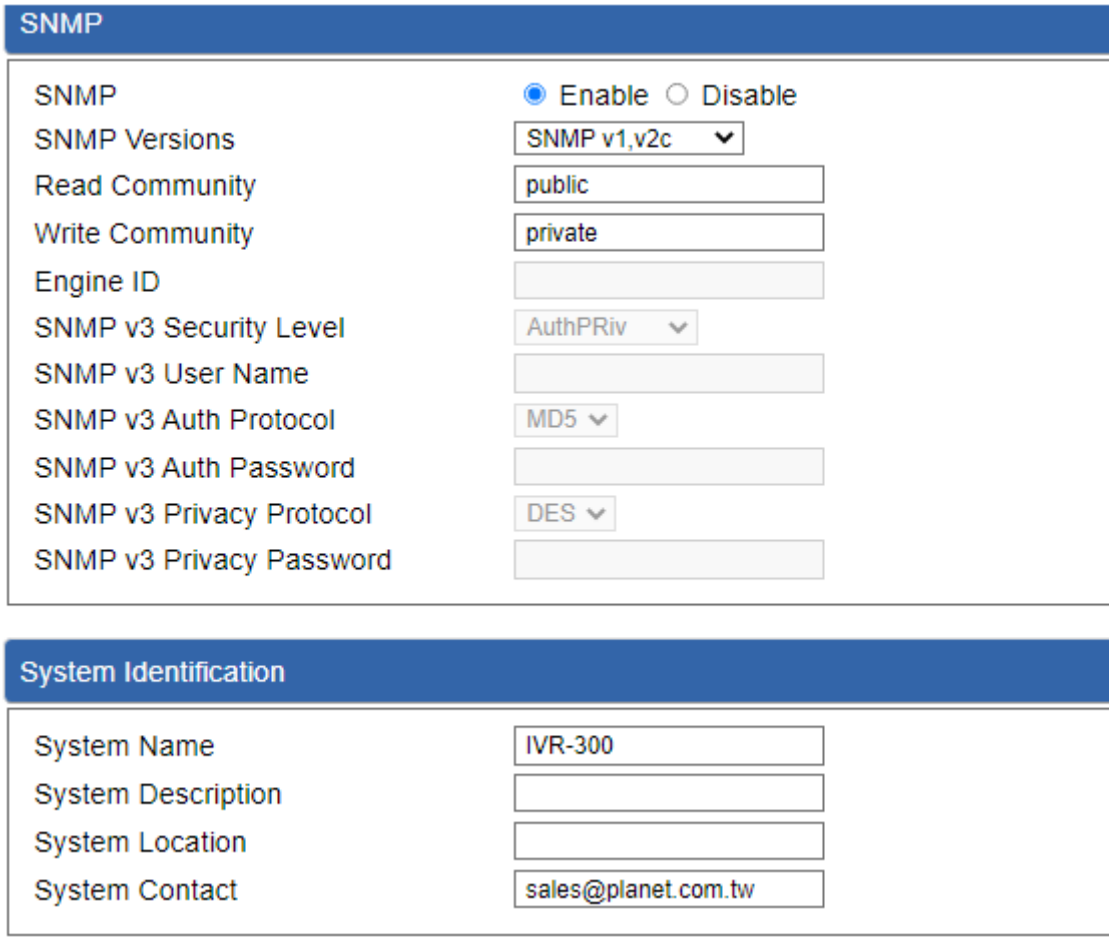


Figure 4.4-25 SNMP Configuration Page

Object	Description
Enable SNMP	Disable or enable the SNMP function. The default configuration is enabled.
Read/Write Community	Allows entering characters for SNMP Read/Write Community of the VPN Security Gateway
System Name	Allows entering characters for system name of the VPN Security Gateway
System Location	Allows entering characters for system location of the VPN Security Gateway
System Contact	Allows entering characters for system contact of the VPN Security Gateway
Apply Settings	Press this button to save and apply changes.
Cancel Changes	Press this button to undo any changes made locally and revert to previously saved values.

4.4.12 NMS

The IVR series can support both **NMS controller** and **CloudViewer** Sever for remote management.

PLANET's NMS Controller is a Network Management System that can monitor all kinds of deployed network devices, such as managed switches, media converters, routers, smart APs, VoIP phones, IP cameras, etc., compliant with the SNMP Protocol, ONVIF Protocol and PLANET Smart Discovery utility. The CloudViewer is a free networking service just for PLANET products. This service provides simplified network monitoring and real-time network status. Working with PLANET CloudViewer app, user can easily check network status, device information, and port and PoE statuses from Internet.

NMS Configuration screen appears as shown below.

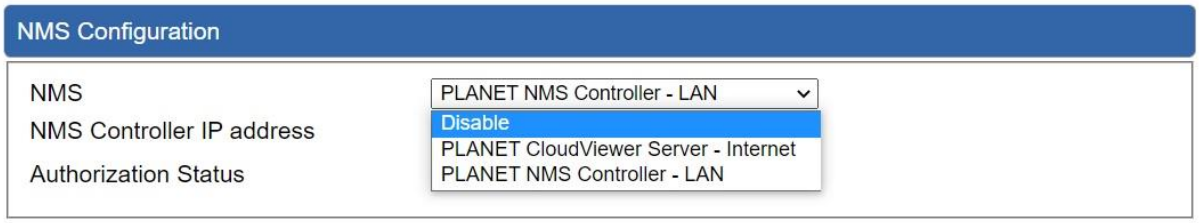


Figure 4.4-26 NMS Configuration Page

The NMS Controller – LAN Configuration screen appears as shown below.

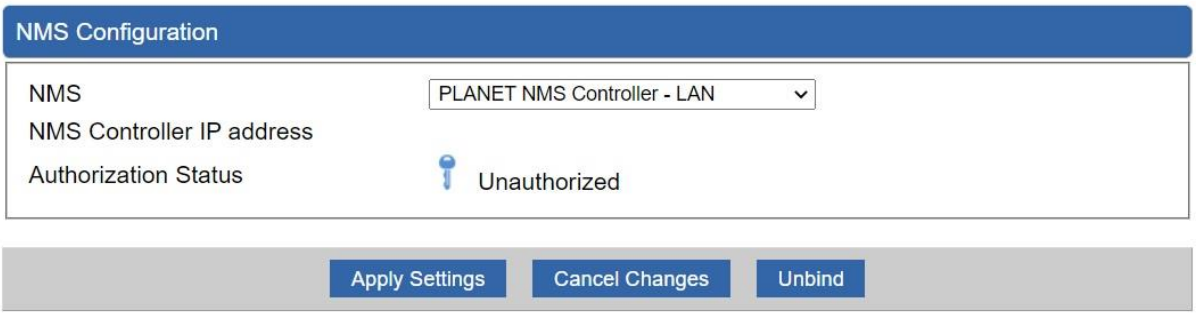


Figure 4.4-27 NMS Controller – LAN Configuration Page

Object	Description
• **NMS Controller IP address**	The IP address of NMS Controller
• **Authorization Status**	Indicate the authorization status of the switch to NMS Controller

The CloudViewer Server – Internet screen appears as shown below.

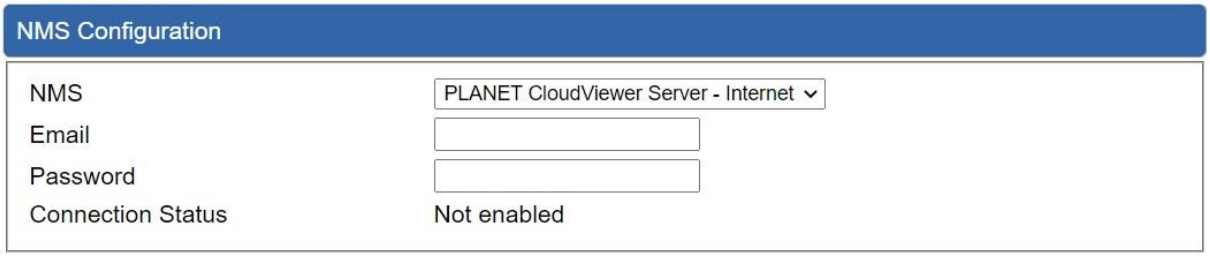
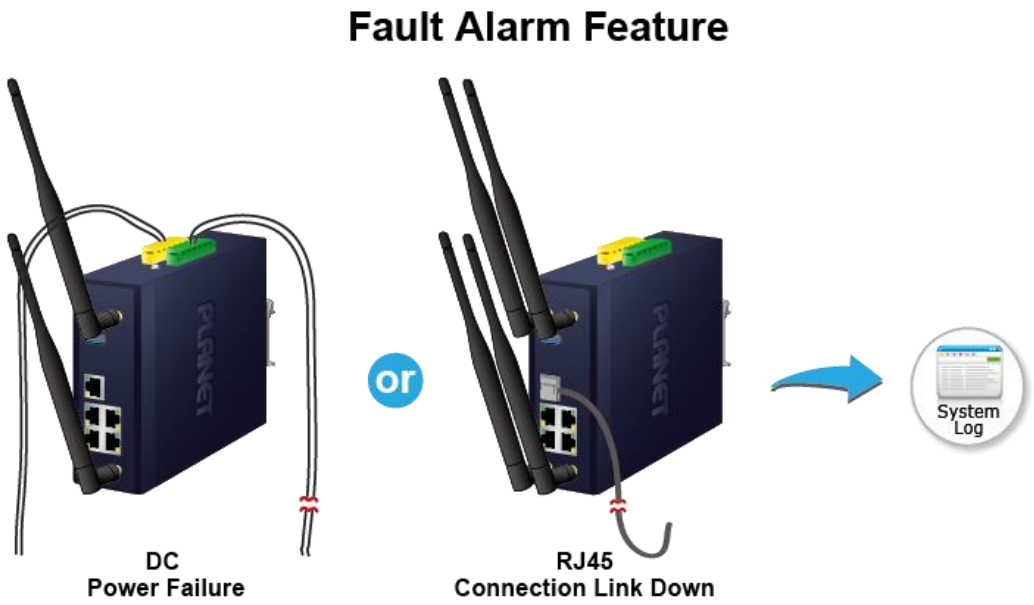


Figure 4.4-28 CloudViewer Server – Internal Configuration Page

Object	Description
• **Email**	The email registered on CloudViewer Server
• **Password**	The password of your CloudViewer account
• **Connection Status**	Indicate the status of connecting CloudViewer Server

4.4.13 Fault Alarm

The IVR series supports a Fault Alarm feature which can alert the users when there is something wrong with the device. With this ideal feature, the users would not have to waste time finding where the issue is. It will help to save time and human resource.



This page provides fault alarm setting as shown below.

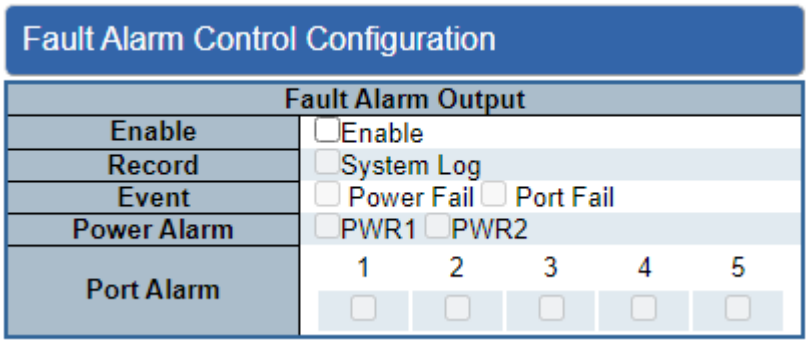
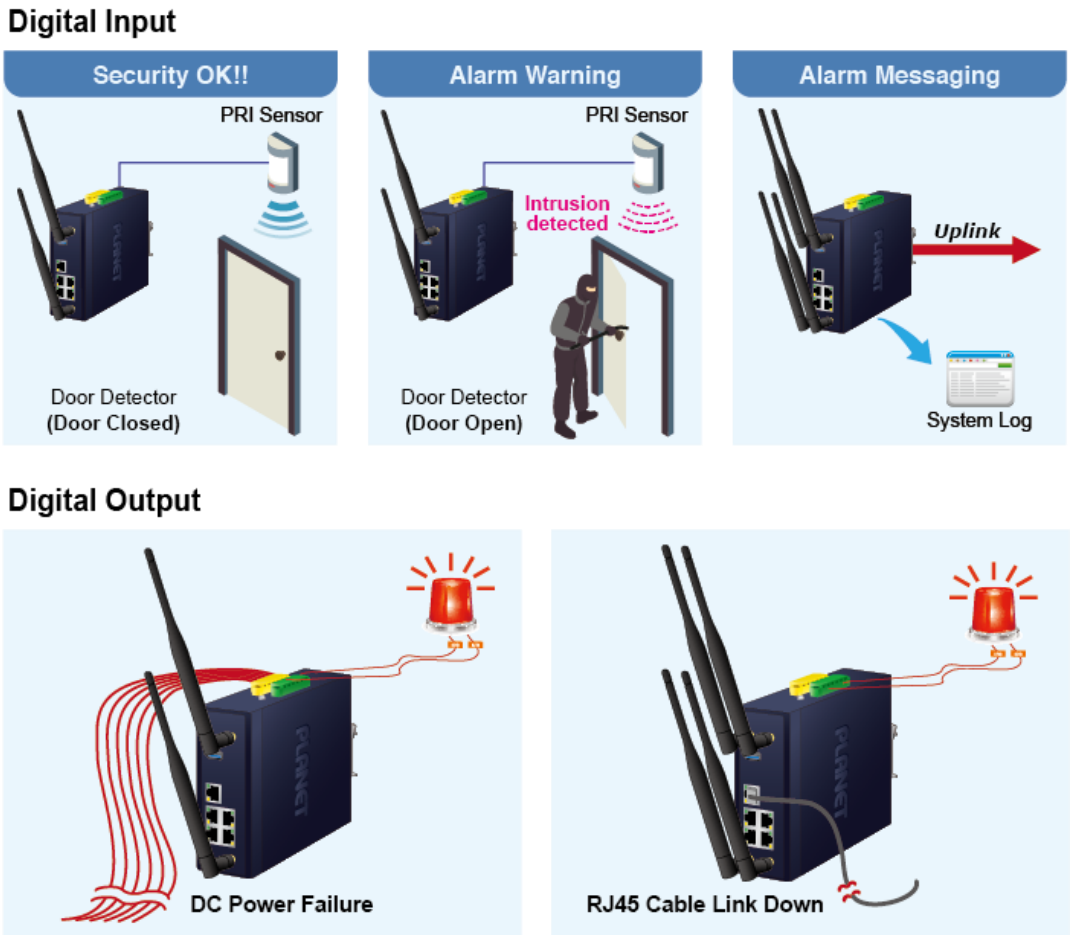


Figure 4.4-29 Fault Alarm

Object	Description
• **Enable**	Controls whether Fault Alarm is enabled.
• **Record**	Controls whether Record is sending System log or SMS.
• **Event**	Controls whether Port Failure or Power Failure or both is/are detected.
• **Power Alarm**	Controls whether faulty PWR1 or faulty PWR2 or both is/are detected.
• **Port Alarm**	Controls which port or all is/are detected for fault.

4.4.14 Digital Input / Output

The IVR-300/IVR-300W supports Digital Input and Digital Output on its upper panel. This external alarm enables users to use Digital Input to detect and log external device status (such as door intrusion detector), and send event alarm to the administrators. The Digital Output could be used to alarm the administrators if the IVR-300/IVR-300W port shows link down, link up or power failure.



This page provides Digital Input / Output setting as shown below.

Digital Input/Output Control Configuration

Digital Input 0		Digital Input 1	
Enable	☐Enable	Enable	☐Enable
DI Condition	High to Low	DI Condition	High to Low
Event Description		Event Description	
Action	☐System Log	Action	☐System Log

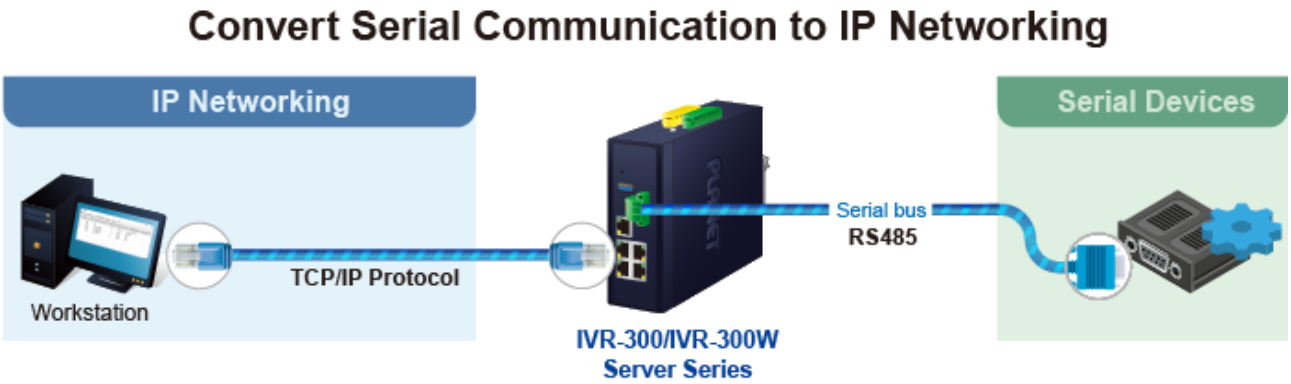
Digital Output 0		Digital Output 1	
Enable	☐Enable	Enable	☐Enable
Action	☐ Power Fail ☐ Port Fail ☐ DI 0 ☐ DI 1	Action	☐ Power Fail ☐ Port Fail ☐ DI 0 ☐ DI 1
DO Condition	High to Low	DO Condition	High to Low
Power Alarm	☐PWR1 ☐PWR2	Power Alarm	☐PWR1 ☐PWR2
Port Fail Alarm	1 2 3 4 5	Port Fail Alarm	1 2 3 4 5

Figure 4.4-30 Digital Input / Output

Object	Description
• **Enable**	Check the Enable checkbox to enable Digital Input / output function. Uncheck the Enable checkbox to disable Digital input / output function.
• **Condition**	**As Digital Input:** Allows user to select High to Low or Low to High. This means a signal received by system is from High to Low or from Low to High. It will trigger an action that logs a customized message or issue the message from the switch. **As Digital Output:** Allows user to select High to Low or Low to High. This means that when the switch is power-failed or port-failed, the system will issue a High or Low signal to an external device such as an alarm.
• **Event Description**	Allows user to set a customized message for Digital Input function alarm.
• **Action**	**As Digital Input:** Allows user to record alarm message to System log, syslog or issues out via SNMP Trap or SMTP. By default, SNMP Trap and SMTP are disabled. Please enable them first if you want to issue alarm message via them. **As Digital Output:** Allows user to monitor an alarm from port failure, power failure, Digital Input 0 (DI 0) and Digital Input 1(DI 1) which mean if Digital Output has detected these events, then Digital Output would be triggered according to the setting of Condition.
• **Power Alarm**	Allows user to choose which power module that needs to be monitored.
• **Port Alarm**	Allows user to choose which port that needs to be monitored.

4.4.15 Modbus

The IVR-300/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.



This page provides Modbus Configuration setting as shown below.

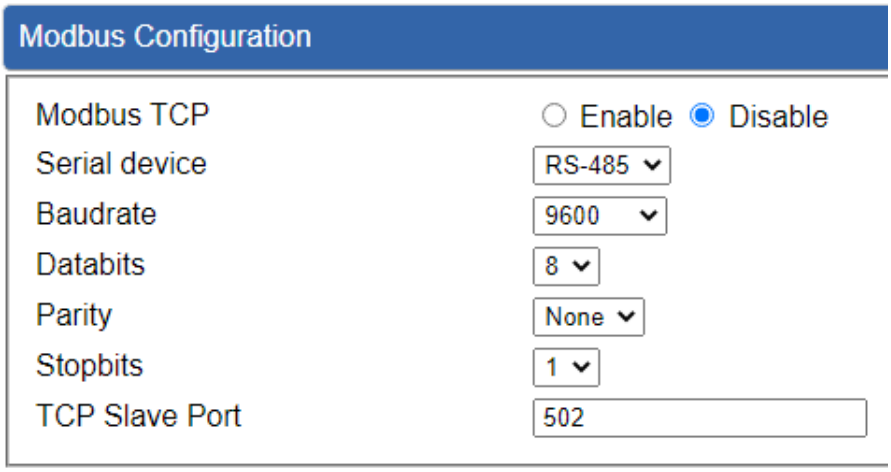


Figure 4.4-31 Modbus Configuration

Object	Description
• **Modbus TCP**	Indicates the Modbus TCP mode operation. Possible modes are: **Enabled**: Enable Modbus TCP mode operation. **Disabled**: Disable Modbus TCP mode operation.
• **Serial device**	Set up the Modbus Serial device to RS-485
• **Baudrate**	Select the Modbus Baudrate to 300 ~ 115200
• **Databits**	Set up the Modbus Databits to 8
• **Parity**	Set up the Modbus Parity to None, Odd or Even
• **Stopbits**	Set up the Modbus Stopbits to 1 or 2
• **TCP Slave Port**	Set up the Modbus TCP Slave Port.

4.4.16 Remote Syslog

This page provides remote syslog setting as shown below.

Figure 4.4-32 Remote Syslog Configuration

Object	Description
• **Enable**	Controls whether remote syslog is enabled
• **Syslog Server IP**	Indicates the IPv4 host address of syslog server
• **Port Destination**	Configure port for remote syslog

4.5 Network

The Network function provides WAN, LAN and network configuration of the VPN Security Gateway as shown below.

Figure 4.5-1 Network Menu

Object	Description
Priority	Allows setting priority of WAN interface.
WAN	Allows setting WAN interface.
WAN Advanced	Allows setting WAN Advanced settings.
LAN	Allows setting LAN interface.
Multi-Subnet	Allows setting Multi-Subnet1 ~ Subnet4 interface.
VLAN	Disable or enable the VLAN function. The default configuration is disabled.
UPnP	Disable or enable the UPnP function.

	The default configuration is disabled.
Routing	Allows setting Route.
RIP	Disable or enable the RIP function. The default configuration is disabled.
OSPF	Disable or enable the OSPF function. The default configuration is disabled.
IGMP	Disable or enable the IGMP function. The default configuration is disabled.
IPv6	Allows setting IPv6 WAN interface.
DHCP	Allows setting DHCP Server.
DDNS	Allows setting DDNS and PLANET DDNS.
MAC Address Clone	Allows setting WAN MAC Address Clone.

4.5.1 Priority

This page provides SD WAN priority setting as shown below.

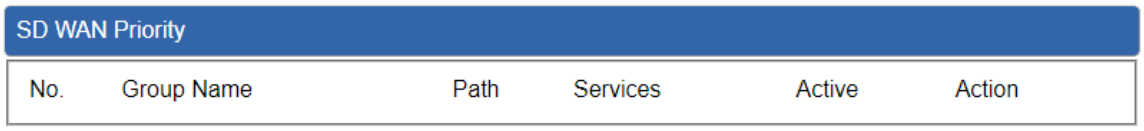


Figure 4.5-2 SD WAN Priority List

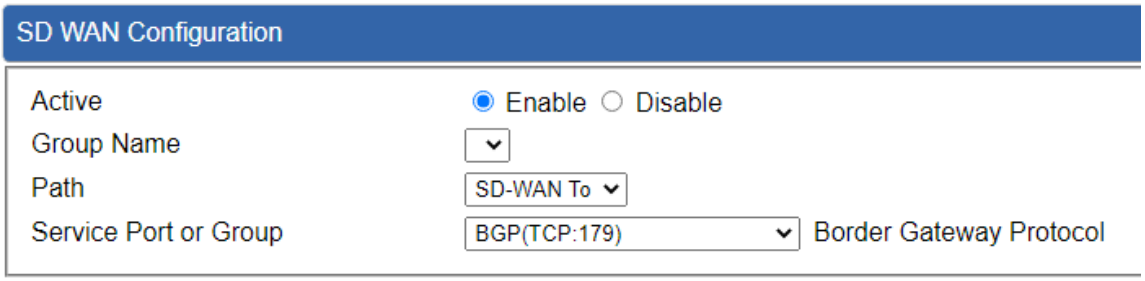


Figure 4.5-3 SD WAN Configuration

Object	Description
Active	■ Enable / Disable the Active
Group Name	■ Setting the Group Name.
Path	■ Setting the SD-WAN To / To SD-WAN
Service Port or Group	■ Setting the Service Port or Group Border Gateway Protocol

4.5.2 WAN

This page is used to configure the parameters for Internet network which connects to the WAN port of the VPN Security Gateway as shown below. Here you may select the access method by clicking the item value of WAN access type.

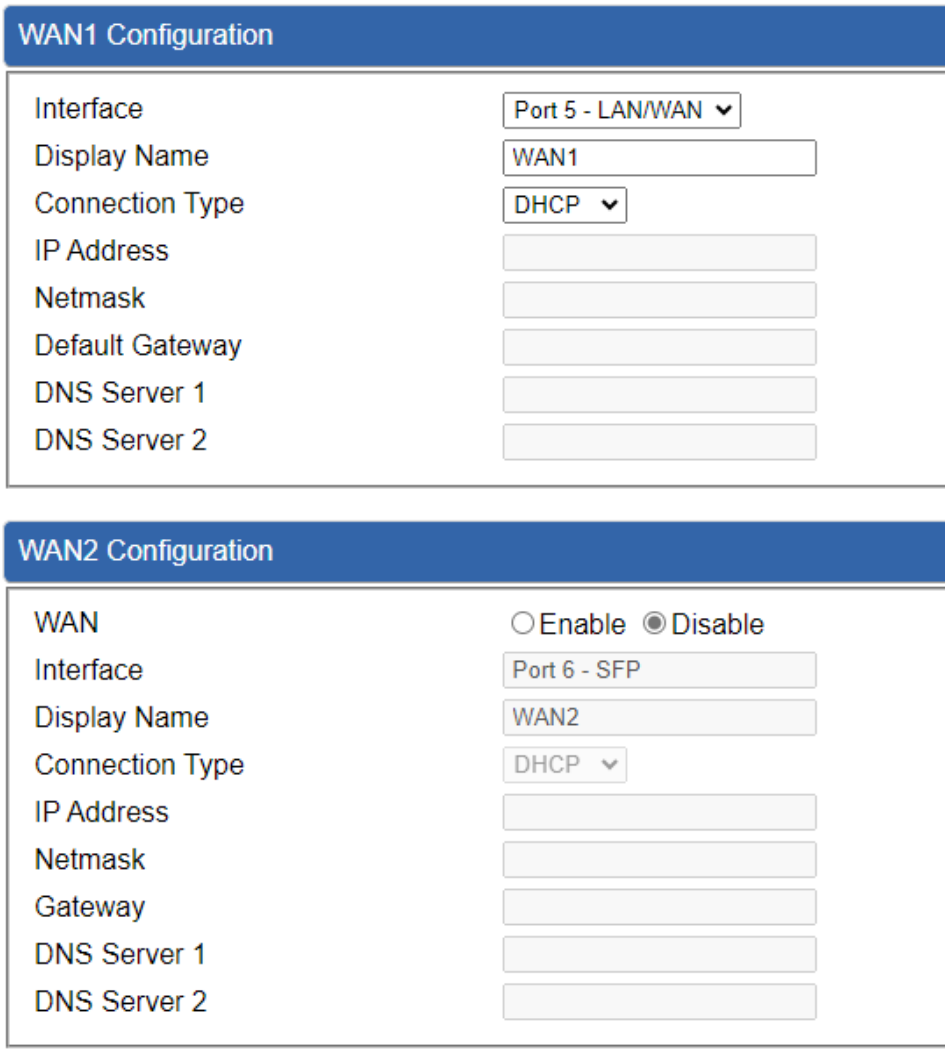


Figure 4.5-4 WAN Configuration

Object	Description	
WAN Access Type	Please select the corresponding WAN Access Type for the Internet, and fill out the correct parameters from your local ISP in the fields which appear below.	
	Static	Select Static IP Address if all the Internet ports' IP information is provided to you by your ISP (Internet Service Provider). You will need to enter the IP address, Netmask, Gateway, and DNS Server provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The VPN Security Gateway will not accept the IP address if it is not in this format. **IP Address** Enter the IP address assigned by your ISP. **Netmask** Enter the Subnet Mask assigned by your ISP. **Gateway** Enter the Gateway assigned by your ISP. **DNS Server** The DNS server information will be supplied by your ISP.
	DHCP	Select DHCP Client to obtain IP Address information automatically from your ISP.

Note	WAN IP, whether obtained automatically or specified manually, should NOT be on the same IP net segment as the LAN IP; otherwise, the VPN Security Gateway will not work properly. In case of emergency, press the hardware-based "Reset" button.

4.5.3 WAN Advanced

This page is used to configure the advanced parameters for Internet area network which connects to the WAN port of your VPN Security Gateway as shown below. Here you may change the setting for Load Balance Weight, Detect Interval, Detect Linkup Threshold, etc.

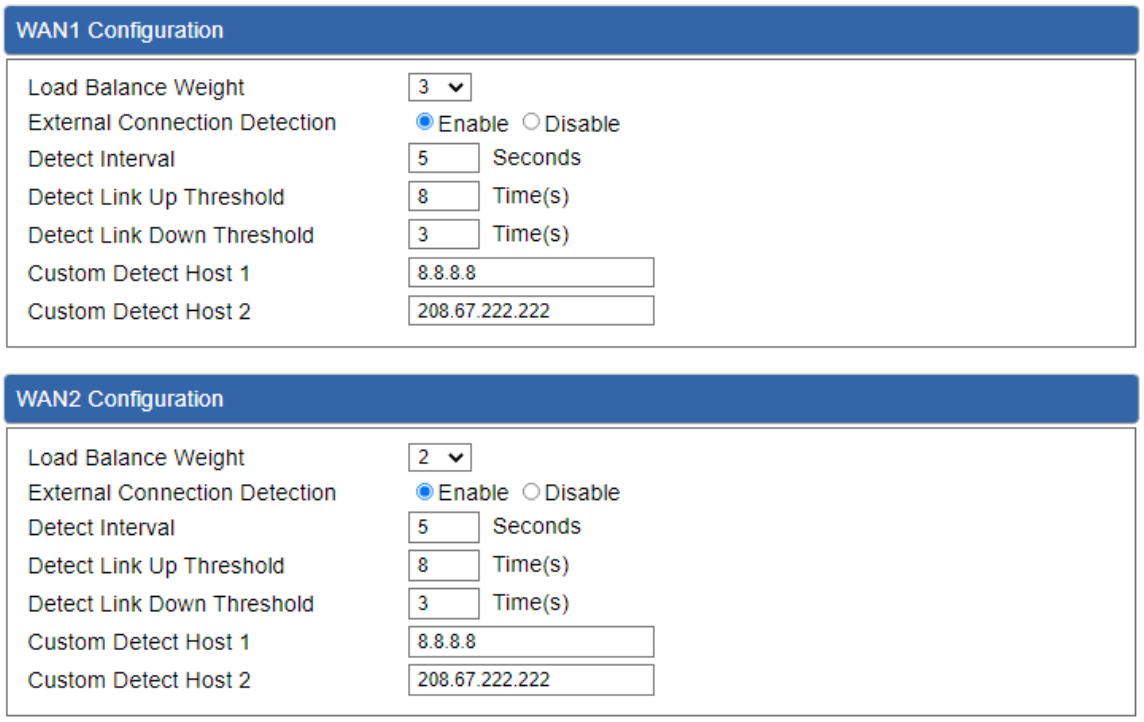


Figure 4.5-5 WAN Advanced Configuration

Object	Description
Load Balance Weight	Load Balance Weight allows you to set a relative weight (from 1 - 10) for each WAN port.
External Connection Detection	Enable to detect the status of WAN connection.
Detect Interval	Set the detect interval as you need. The recommended value is 5 (default).
Detect Link Up Threshold	Set the times for detecting link up. The recommended value is 8 (default).
Detect Link Down Threshold	Set the times for detecting link down. The recommended value is 3 (default).
Custom Detect Host	The host is used to check whether the internet connection is alive or not.

4.5.4 LAN

This page is used to configure the parameters for local area network which connects to the LAN port of your VPN Security Gateway as shown below. Here you may change the settings for IP address, subnet mask, DHCP, etc.

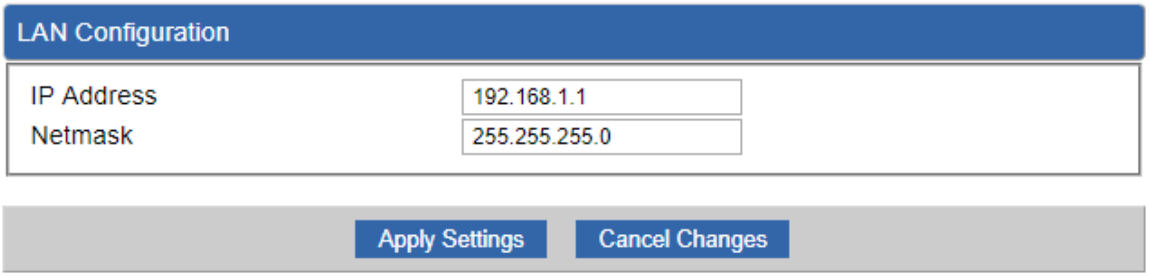


Figure 4.5-6 LAN Configuration

Object	Description
IP Address	The LAN IP address of the VPN Security Gateway and default is **192.168.1.1**.
Net Mask	Default is **255.255.255.0**.

4.5.5 Multi-Subnet

This page provides multi-subnet setting as shown below.

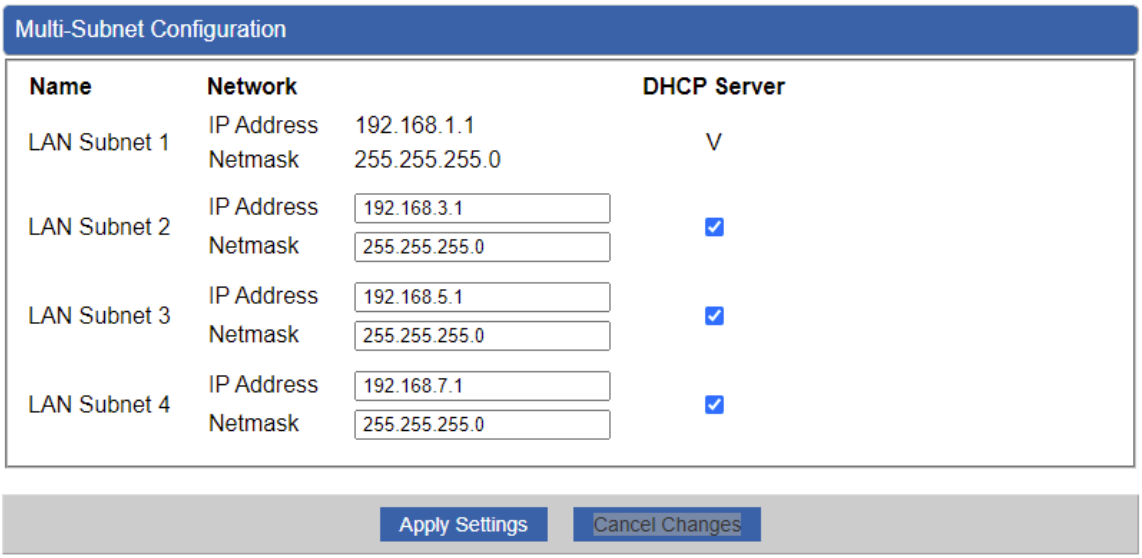


Figure 4.5-7 Multi-Subnet Configuration

4.5.6 VLAN

Please refer to the following sections for the details as shown below.

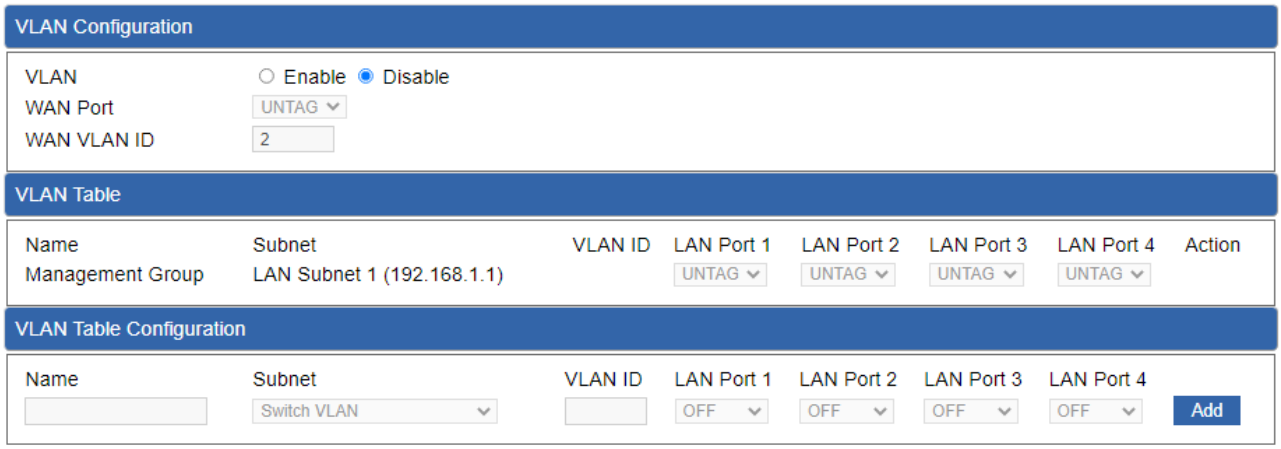


Figure 4.5-8 VLAN Configuration

4.5.7 UPnP

Please refer to the following sections for the details as shown below.

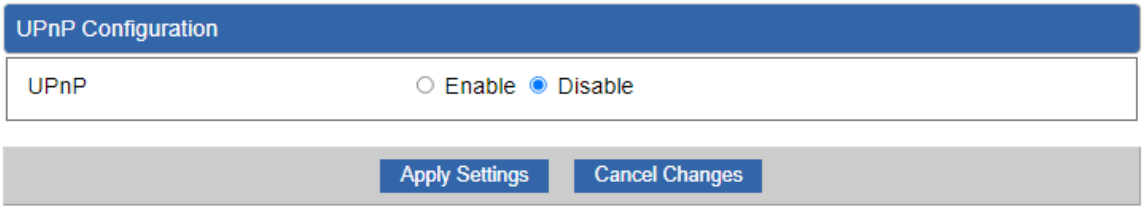


Figure 4.5-9 UPnP Configuration

4.5.8 Routing

Please refer to the following sections for the details as shown below.

Routing config list

Number	Type	Destination	Netmask	Gateway	Interface	Comment	Action

Current Routing table in the system

Number	Destination	Netmask	Gateway	Interface
1	0.0.0.0	0.0.0.0	192.168.0.180	LOCAL
2	0.0.0.0	0.0.0.0	192.168.1.18	WAN1
3	0.0.0.0	0.0.0.0	192.168.1.19	WAN2
4	192.168.0.0	255.255.255.0	0.0.0.0	LAN
5	192.168.1.0	255.255.255.0	0.0.0.0	WAN1
6	192.168.1.0	255.255.255.0	0.0.0.0	WAN2

Add Route

Figure 4.5-10 Routing Table Configuration

Add a routing rule

Type	Host
Destination	
Netmask	255.255.255.255 /32
Gateway	
Interface	LAN
Comment	

Apply Settings Cancel Changes

Figure 4.5-11 Routing Setup

Routing tables contain a list of IP addresses. Each IP address identifies a remote VPN Security Gateway (or other network gateway) that the local VPN Security Gateway is configured to recognize. For each IP address, the routing table additionally stores a network mask and other data that specifies the destination IP address ranges that remote device will accept.

Object	Description
Type	There are two types: Host and Net. When the Net type is selected, user does not need to input the Gateway.
Destination	The network or host IP address desired to access.
Net Mask	The subnet mask of destination IP.
Gateway	The gateway is the router or host's IP address to which packet is sent. It must be the same network segment with the WAN or LAN port.
Interface	Select the interface that the IP packet must use to transmit out of the router when this route is used.
Comment	Enter any words for recognition.

4.5.9 RIP

Please refer to the following sections for the details as shown below.

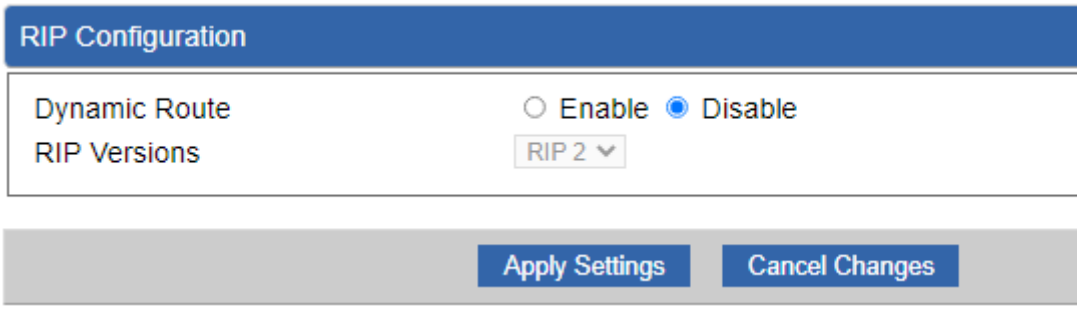


Figure 4.5-12 RIP Configuration

4.5.10 OSPF

Please refer to the following sections for the details as shown below.

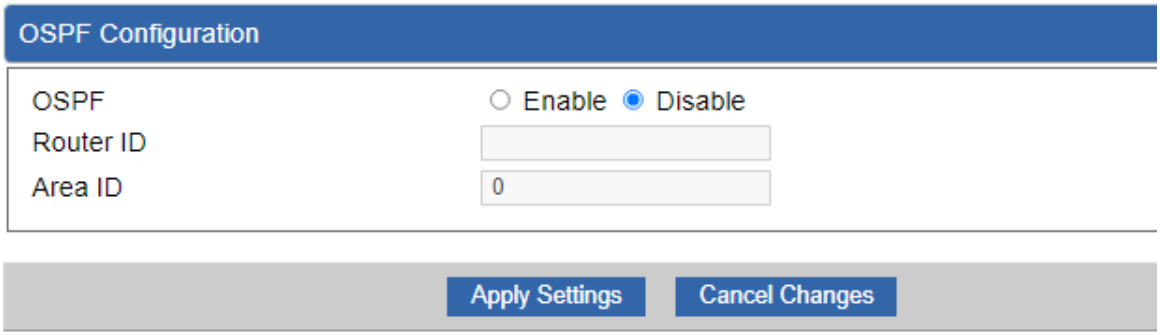


Figure 4.5-13 OSPF Configuration

4.5.11 IGMP

Please refer to the following sections for the details as shown below.

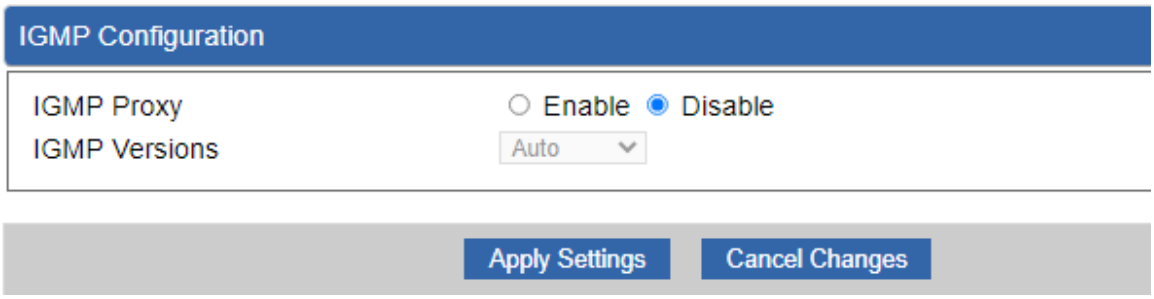


Figure 4.5-14 IGMP Configuration

4.5.12 IPv6

This page is used to configure parameter for IPv6 internet network which connects to WAN port of the VPN Security Gateway as shown below. It allows you to enable IPv6 function and set up the parameters of the VPN Security Gateway's WAN. In this setting you may change WAN connection type and other settings.

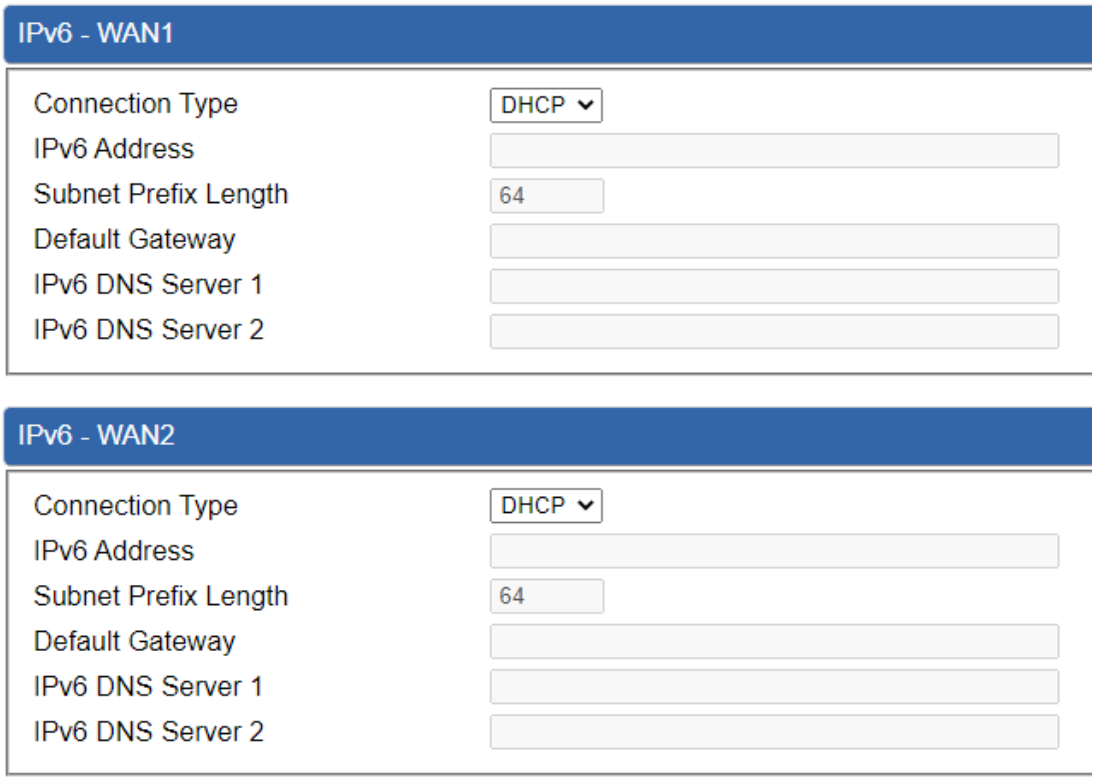


Figure 4.5-15 IPv6 – WAN Configuration

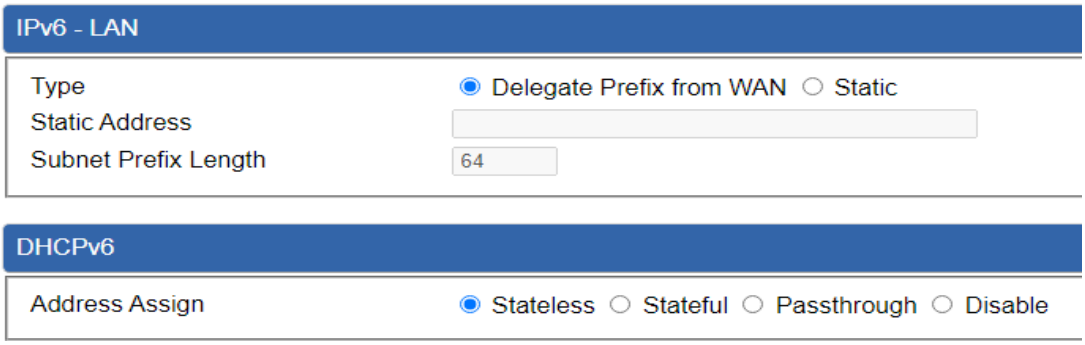


Figure 4.5-16 IPv6 – LAN Configuration

Object	Description
Connection Type	Select IPv6 WAN type either by using DHCP or Static.
IPv6 Address	Enter the WAN IPv6 address.
Subnet Prefix Length	Enter the subnet prefix length.
Default Gateway	Enter the default gateway of the WAN port.

4.5.13 DHCP

The DHCP service allows you to control the IP address configuration of all your network devices. When a client (host or other device such as networked printer, etc.) joins your network it will automatically get a valid IP address from a range of addresses and other settings from the DHCP service. The client must be configured to use DHCP; this is something called "automatic network configuration" and is often the default setting. The setup is shown below.

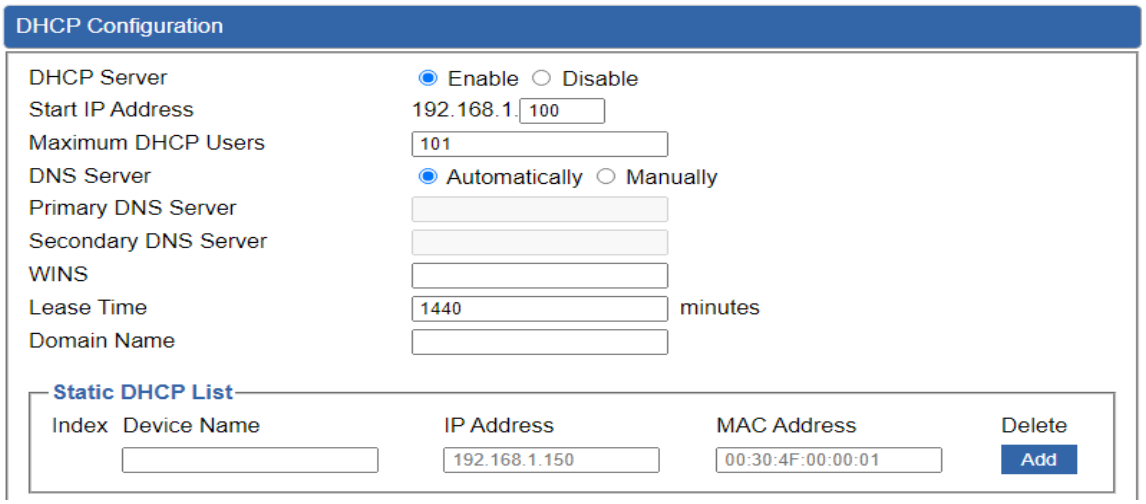


Figure 4.5-17 DHCP Configuration

Object	Description
DHCP Service	By default, the DHCP Server is enabled, meaning the VPN Security Gateway will assign IP addresses to the DHCP clients automatically. If user needs to disable the function, please set it as disable.
Start IP Address	By default, the start IP address is 192.168.1.100. Please do not set it to the same IP address of the VPN Security Gateway
Maximum DHCP Users	By default, the maximum DHCP users are 101, meaning the VPN Security Gateway will provide DHCP client with IP address from 192.168.1.100 to 192.168.1.200 when the start IP address is 192.168.1.100.
Set DNS	By default, it is set as Automatically, and the DNS server is the VPN Security Gateway's LAN IP address. If user needs to use specific DNS server, please set it as Manually, and then input a specific DNS server.
Primary/Secondary	Input a specific DNS server.
WINS	Input a WINS server if needed.
Lease Time	Set the time for using one assigned IP. After the lease time, the DHCP client will need to get new IP addresses from the VPN Security Gateway Default is 1440 minutes.
Domain Name	Input a domain name for the VPN Security Gateway Default is Planet.

4.5.14 DDNS

The VPN Security Gateway offers the DDNS (Dynamic Domain Name System) feature, which allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (named by yourself) and a dynamic IP address, and then your friends can connect to your server by entering your domain name no matter what your IP address is. Before using this feature, you need to sign up for DDNS service providers such as **PLANET DDNS (**http://www.planetddns.com**)** and set up the domain name of your choice.

PLANET DDNS website provides a free DDNS (Dynamic Domain Name Server) service for PLANET devices. Whether the IP address used on your PLANET device supporting DDNS service is fixed or dynamic, you can easily connect the devices anywhere on the Internet with a meaningful or easy-to-remember name you gave. PLANET DDNS provides two types of DDNS services. One is **PLANET DDNS** and the other is **PLANET Easy DDNS** as shown below.

PLANET DDNS

For example, you've just installed a PLANET IP camera with dynamic IP like 210.66.155.93 in the network. You can name this device as “Mycam1” and register a domain as Mycam1.planetddns.com at PLANET DDNS (http://www.planetddns.com). Thus, you don't need to memorize the exact IP address but just the URL link: Mycam1.planetddns.com.

PLANET Easy DDNS

PLANET Easy DDNS is an easy way to help user to get your Domain Name with just one click. You can just log in to the Web Management Interface of your devices, say, your VPN Security Gateway, and check the DDNS menu and just enable it. You don’t need to go to http://www.planetddns.com to apply for a new account. Once you enabled the Easy DDNS, your PLANET Network Device will use the format PLxxxxxx where xxxxxx is the last 6 characters of your MAC address that can be found on the Web page or bottom label of the device. (For example, if the VPN Security Gateway’s MAC address is A8-F7-E0-81-96-C9, it will be converted into pt8196c9.planetddns.com)

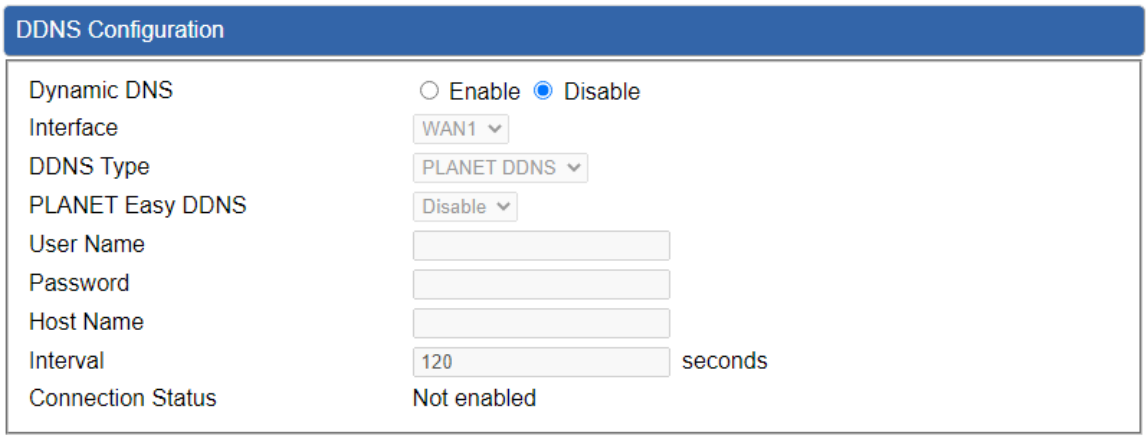


Figure 4.5-18 DDNS Configuration

Object	Description
DDNS Service	By default, the DDNS service is disabled. If user needs to enable the function, please set it as enable.
Interface	User is able to select the interface for DDNS service. By default, the interface is WAN 1.
DDNS Type	There are three options: 1. PLANET DDNS: Activate PLANET DDNS service. 2. DynDNS: Activate DynDNS service. 3. NOIP: Activate NOIP service. Note that please first register with the DDNS service and set up the domain name of your choice to begin using it.
Easy DDNS	When the PLANET DDNS service is activated, user is able to select to enable or disable Easy DDNS. When this function is enabled, DDNS hostname will appear automatically. User doesn't go to http://www.planetddns.com to apply for a new account.
User Name	The user name is used to log into DDNS service.
Password	The password is used to log into DDNS service.
Host Name	The host name as registered with your DDNS provider.
Interval	Set the update interval of the DDNS function.
Update Status	Show the connection status of the DDNS function.

4.5.15 MAC Address Clone

Clone or change the MAC address of the WAN interface. The setup is shown below.

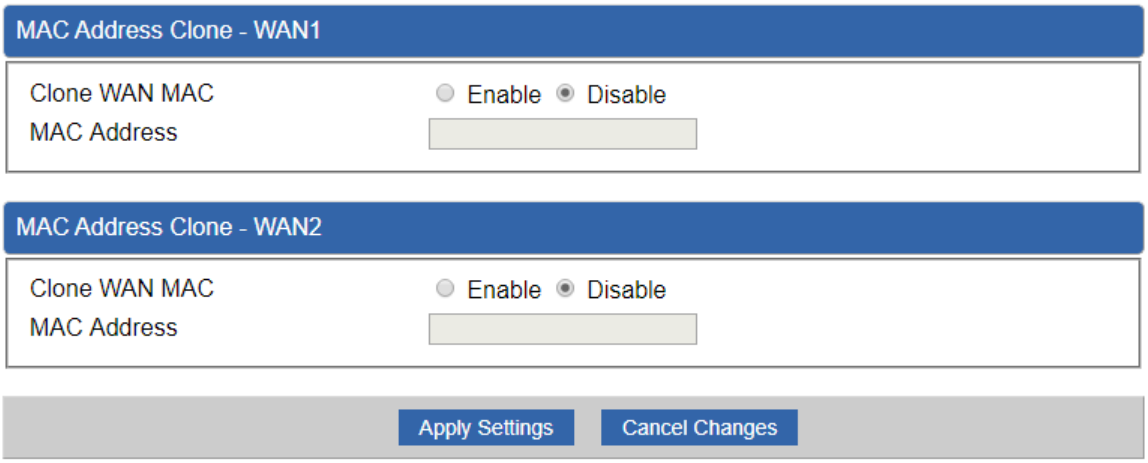


Figure 4.5-19 MAC Address Clone for WAN

Object	Description
Clone WAN MAC	Set the function as enable or disable.
MAC Address	Input a MAC Address, such as A8:F7:E0:00:06:62.

4.6 Security

The Security menu provides Firewall, Access Filtering and other functions as shown below. Please refer to the following sections for the details.

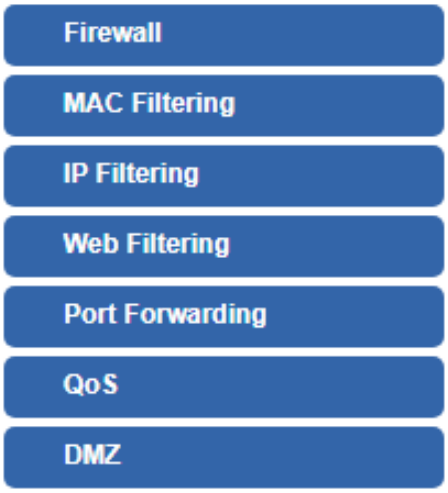


Figure 4.6-1 Security menu

Object	Description
Firewall	Allows setting DoS (Denial of Service) protection as enable.
MAC Filtering	Allows setting MAC Filtering.
IP Filtering	Allows setting IP Filtering.
Web Filtering	Allows setting Web Filtering.
Port Range Forwarding	Allows setting Port Forwarding.
QoS	Allows setting QoS.
DMZ	Allows setting DMZ.

4.6.1 Firewall

A "Denial-of-Service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service. The VPN Security Gateway can prevent specific DoS attacks as shown below.

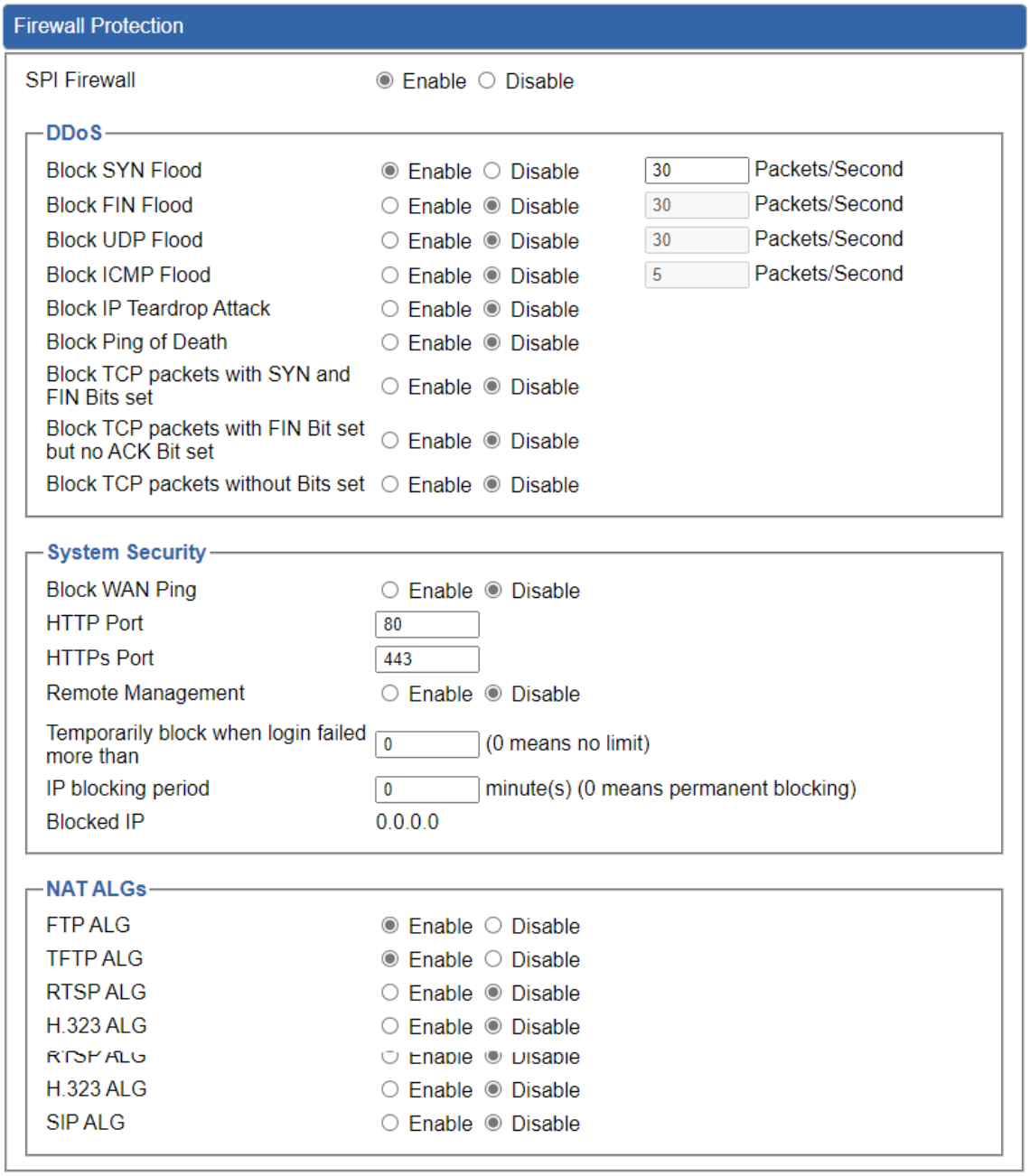


Figure 4.6-2 Firewall

Object	Description
SPI Firewall	The SPI Firewall prevents attack and improper access to network resources. The default configuration is enabled.
Block SYN Flood	SYN Flood is a popular attack way. DoS and DDoS are TCP protocols. Hackers like to use this method to make a fake connection that involves the CPU, memory, and so on. The default configuration is enabled.
Block FIN Flood	If the function is enabled, when the number of the current FIN packets is beyond the set value, the VPN Security Gateway will start the blocking function immediately. The default configuration is disabled.
Block UDP Flood	If the function is enabled, when the number of the current UPD-FLOOD packets is beyond the set value, the VPN Security Gateway will start the blocking function immediately. The default configuration is disabled.
Block ICMP Flood	ICMP is kind of a pack of TCP/IP; its important function is to transfer simple signal on the Internet. There are two normal attack ways which hackers like to use, Ping of Death and Smurf attack. The default configuration is disabled.
IP TearDrop	If the function is enabled, the VPN Security Gateway will block Teardrop attack that is targeting on TCP/IP fragmentation reassembly codes.
Ping Of Death	If the function is enabled, the VPN Security Gateway will block Ping of Death attack that aims to disrupt a targeted machine by sending a packet larger than the maximum allowable size causing the target machine to freeze or crash.
Block WAN Ping	Enable the function to allow the Ping access from the Internet network. The default configuration is disabled.
Remote Management	Enable the function to allow the web server access of the VPN Security Gateway from the Internet network. The default configuration is disabled.

4.6.2 MAC Filtering

Entries in this table are used to restrict certain types of data packets from your local network or Internet through the VPN Security Gateway Use of such filters can be helpful in securing or restricting your local network as shown below.

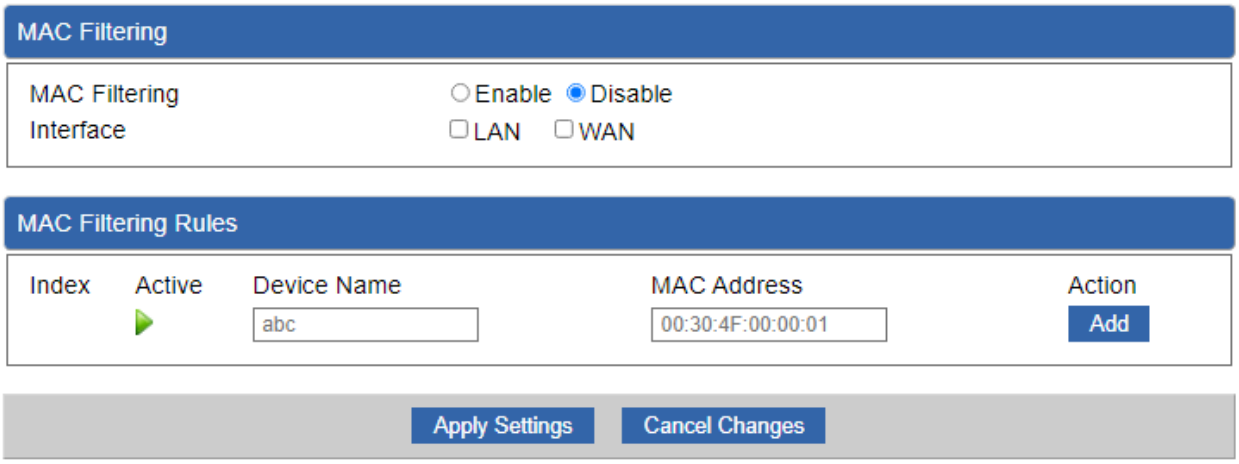


Figure 4.6-3 MAC Filtering Configuration

Object	Description
Enable MAC Filtering	Set the function as enable or disable. When the function is enabled, the VPN Security Gateway will block traffic of the MAC address on the list.
Interface	Select the function works on LAN, WAN or both. If you want to block a LAN device's MAC address, please select LAN, vice versa.
MAC Address	Input a MAC address you want to control, such as A8:F7:E0:00:06:62.
Add	When you input a MAC address, please click the "Add" button to add it to the list.
Remove	If you want to remove a MAC address from the list, please click on the MAC address, and then click the "Remove" button to remove it.
Remove All	If you want to remove all MAC addresses from the list, please click the "Remove All" button to remove all.

4.6.3 IP Filtering

IP Filtering is used to deny LAN users from accessing the public IP address on internet as shown below. To begin blocking access to an IP address, enable IP Filtering and enter the IP address of the web site you wish to block.

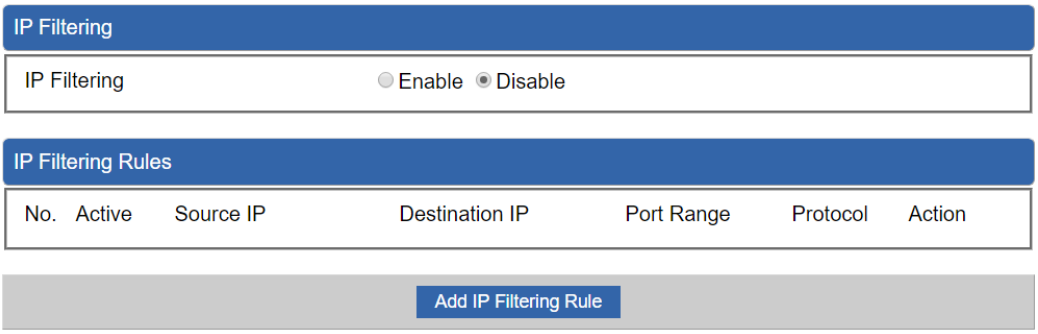


Figure 4.6-4 IP Filtering Configuration

Object	Description
IP Filtering	Set the function as enable or disable.
Add IP Filtering Rule	Go to the Add Filtering Rule page to add a new rule.

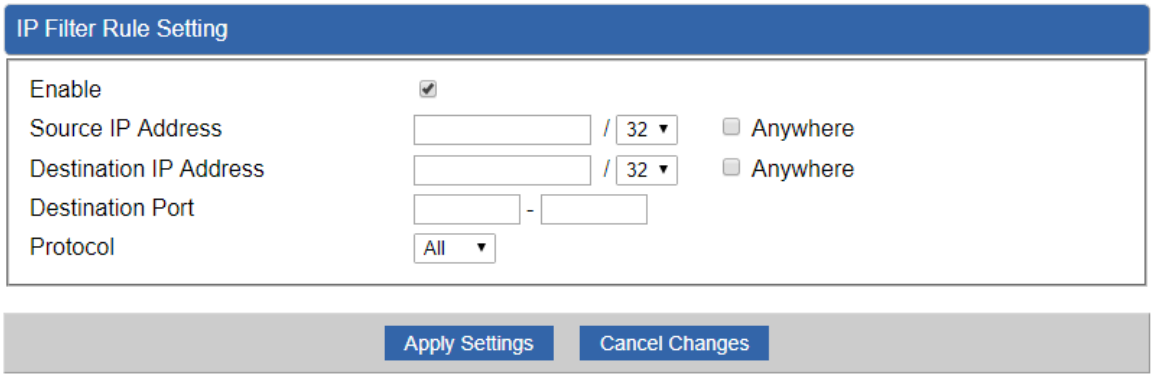


Figure 4.6-5 IP Filter Rule Setting

Object	Description
Enable	Set the rule as enable or disable.
Source IP Address	Input the IP address of LAN user (such as PC or laptop) which you want to control.
Anywhere (of source IP Address)	Check the box if you want to control all LAN users.
Destination IP Address	Input the IP address of web site which you want to block.
Anywhere (of destination IP Address)	Check the box if you want to control all web sites, meaning the LAN user can't visit any web site.
Destination Port	Input the port of destination IP Address which you want to block. Leave it as blank if you want to block all ports of the web site.
Protocol	Select the protocol type (TCP, UDP or all). If you are unsure, please leave it to the default all protocol.

4.6.4 Web Filtering

Web filtering is used to deny LAN users from accessing the internet as shown below. Block those URLs which contain keywords listed below.

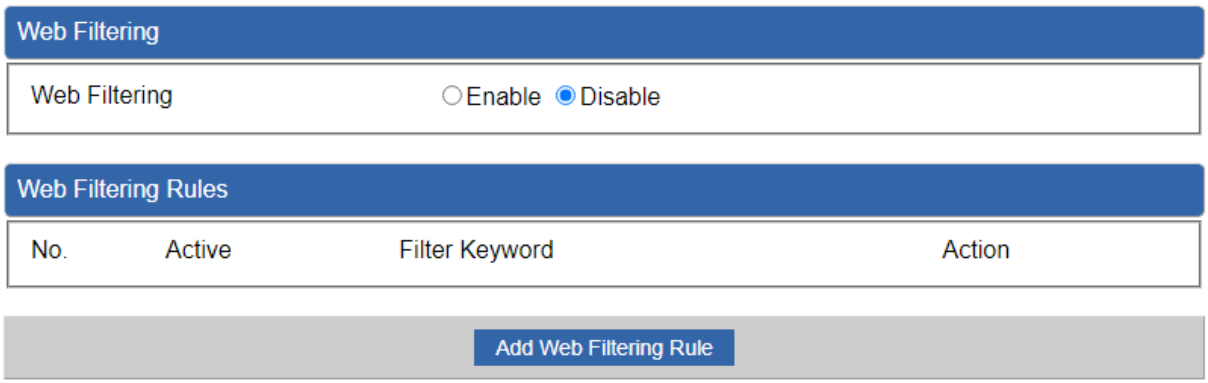


Figure 4.6-6 Web Filtering Configuration

Object	Description
Web Filtering	Set the function as enable or disable.
Add Web Filtering Rule	Go to the Add Web Filtering Rule page to add a new rule.

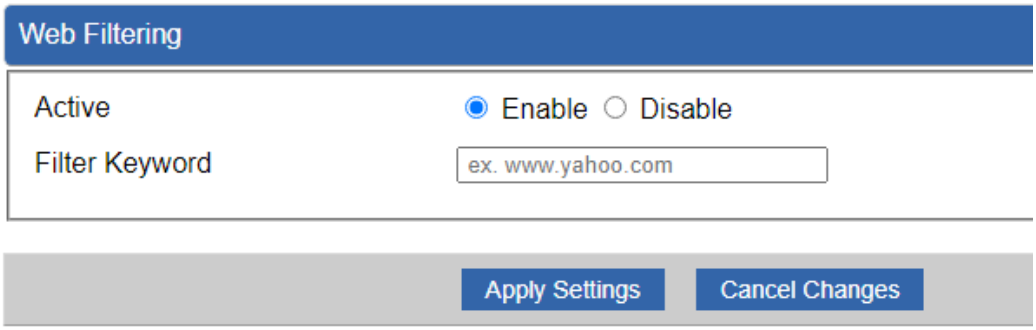


Figure 4.6-7 Web Filtering Rule Setting

Object	Description
Active	Set the rule as enable or disable.
Filter Keyword	Input the URL address that you want to filter, such as www.yahoo.com.

4.6.5 Port Forwarding

Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT firewall as shown below. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your VPN Security Gateway's NAT firewall.

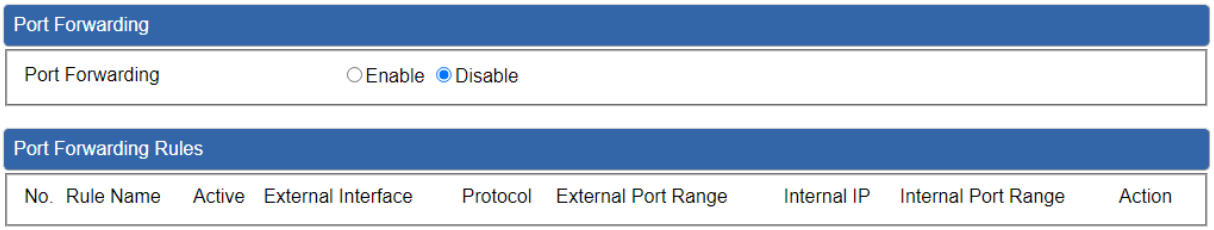


Figure 4.6-8 Port Forwarding Configuration

Object	Description
Port Forwarding	Set the function as enable or disable.
Add Port Forwarding Rule	Go to the Add Port Forwarding Rule page to add a new rule.

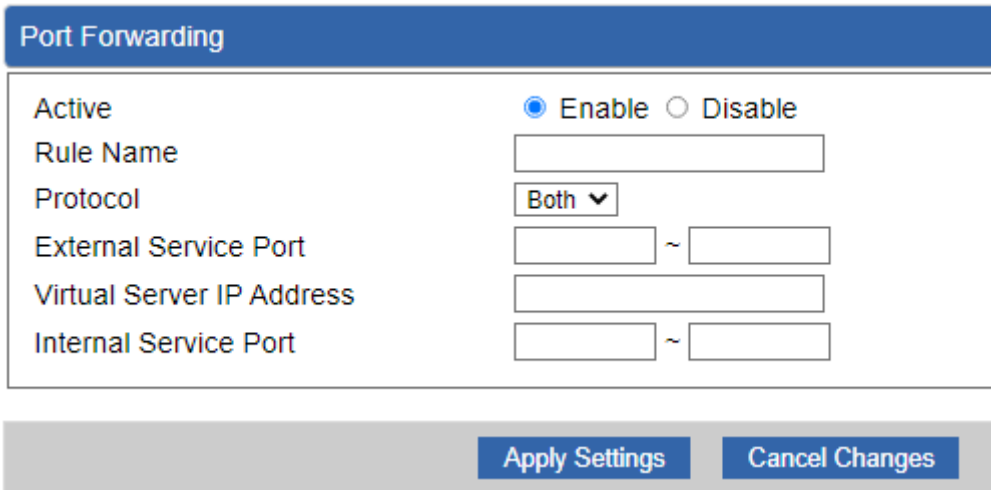


Figure 4.6-9 Port Forwarding Rule Setting

Object	Description
Rule Name	Enter any words for recognition.
Protocol	Select the protocol type (TCP, UDP or both). If you are unsure, please leave it to the default both protocols.
External Service Port	Enter the external ports you want to control. For TCP and UDP services, enter the beginning of the range of port numbers used by the service. If the service uses a single port number, enter it in both the start and finish fields.
Virtual Server IP Address	Enter the local IP address.
Internal Service Port	Enter local ports you want to control. For TCP and UDP Services, enter the beginning of the range of port numbers used by the service. If the service uses a single port number, enter it in both the start and finish fields.

4.6.6 QoS

Please refer to the following sections for the details as shown below.

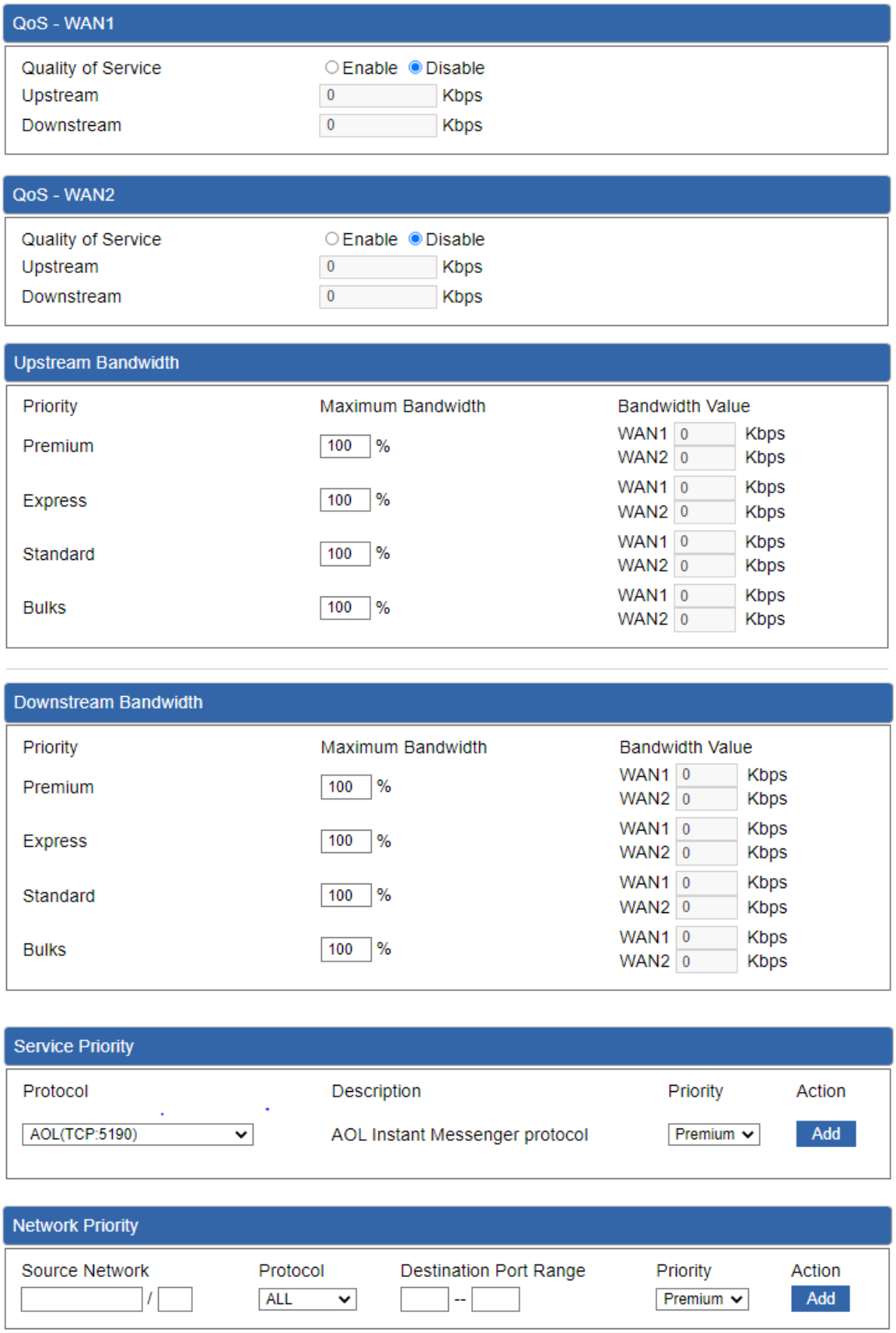


Figure 4.6-10 QoS Configuration

4.6.7 DMZ

A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network as shown below. Typically the DMZ host contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.

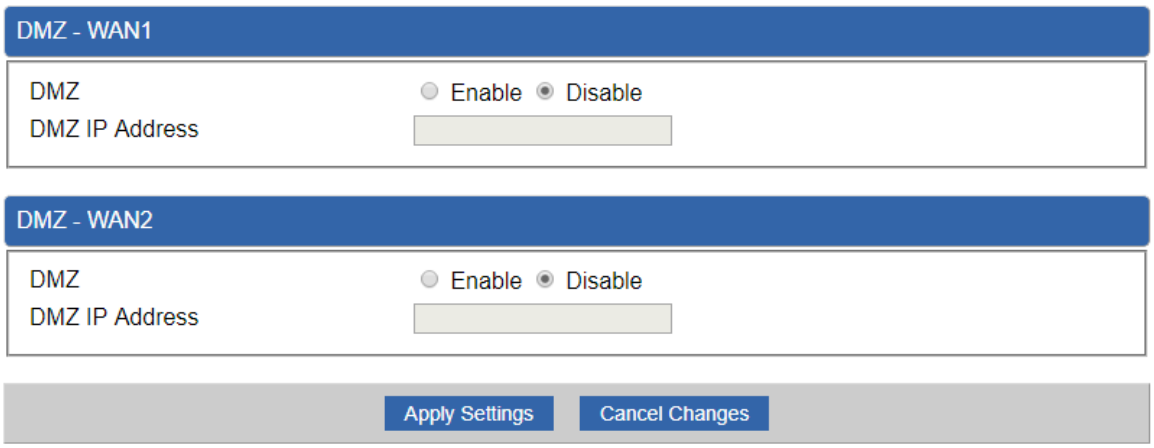
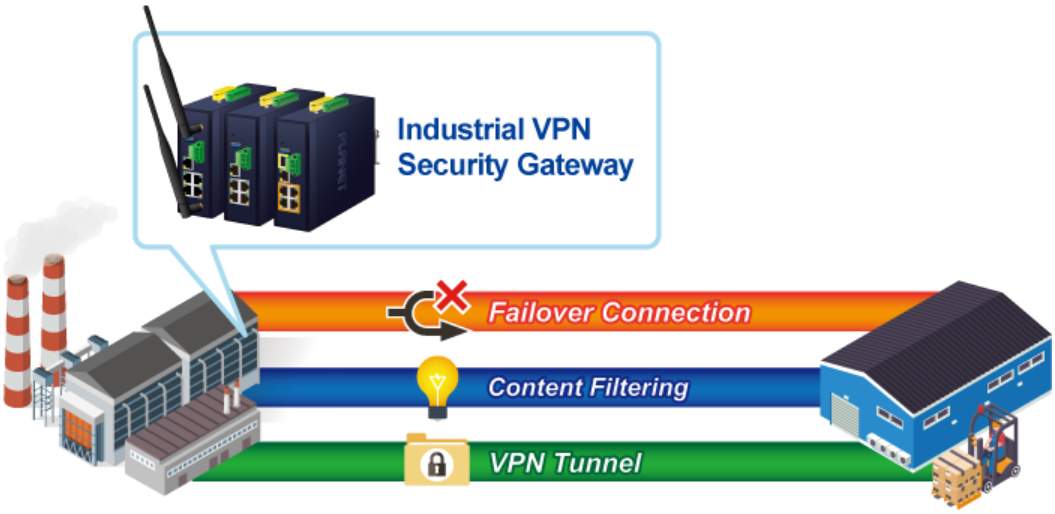


Figure 4.6-11 DMZ Configuration

Object	Description
DMZ	Set the function as enable or disable. If the DMZ function is enabled, it means that you set up DMZ at a particular computer to be exposed to the Internet so that some applications/software, especially Internet/online game can have two way connections.
DMZ IP Address	Enter the IP address of a particular host in your LAN which will receive all the packets originally going to the WAN port/Public IP address above.

4.7 VPN

To obtain a private and secure network link, the **VPN** (Virtual Private Network) Security Gateway is capable of establishing VPN connections. When used in combination with remote client authentication, it links the business' remote sites and users, conveniently providing the enterprise with an encrypted network communication method. By allowing the enterprise to utilize the Internet as a means of transferring data across the network, it forms one of the most effective and secure options for enterprises to adopt in comparison to other methods.



The VPN menu provides the following features as shown below.

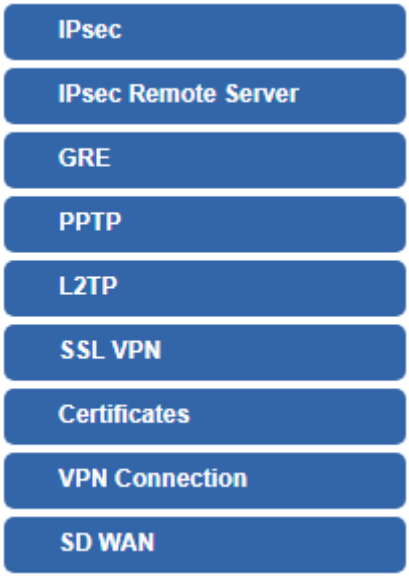


Figure 4.7-1 VPN Menu

Object	Description
IPsec	Allows setting IPsec function.
IPsec Remote Server	Disable or enable the IPsec Remote Server function. The default configuration is disabled.
GRE	Allows setting GRE function.
PPTP	Allows setting PPTP function.
L2TP	Allows setting L2TP function.
SSL VPN	Allows setting SSL VPN function.
Certificates	Download System CA Certificate
VPN Connection	Allows checking VPN Connection Status.

4.7.1 IPSec

IPSec (IP Security) is a generic standardized VPN solution. IPSec must be implemented in the IP stack which is part of the kernel. Since IPSec is a standardized protocol it is compatible to most vendors that implement IPSec. It allows users to have an encrypted network session by standard **IKE** (Internet Key Exchange). We strongly encourage you to use IPSec only if you need to because of interoperability purposes. When IPSec lifetime is specified, the device can randomly refresh and identify forged IKE's during the IPSec lifetime.

This page will allow you to modify the user name and passwords as shown below.

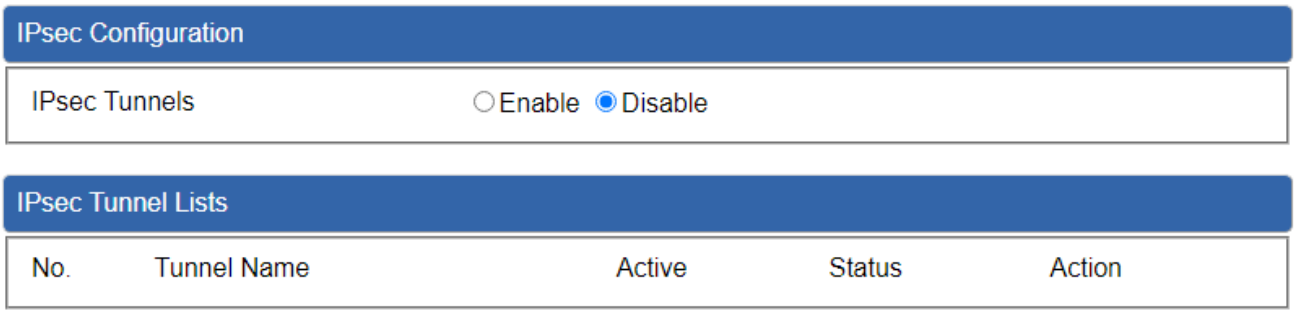
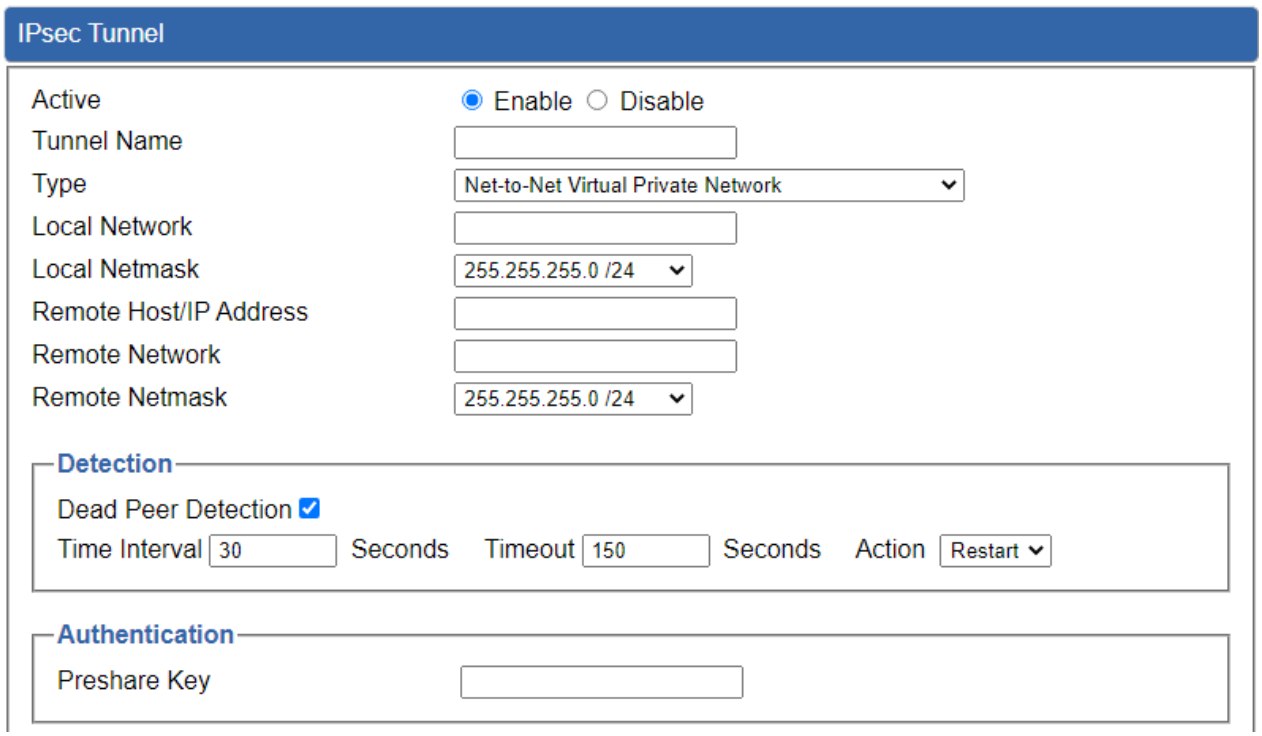


Figure 4.7-2 IPsec Configuration

Object	Description
Add IPSec Tunnel	Go to the Add IPSec Tunnel page to add a new tunnel.



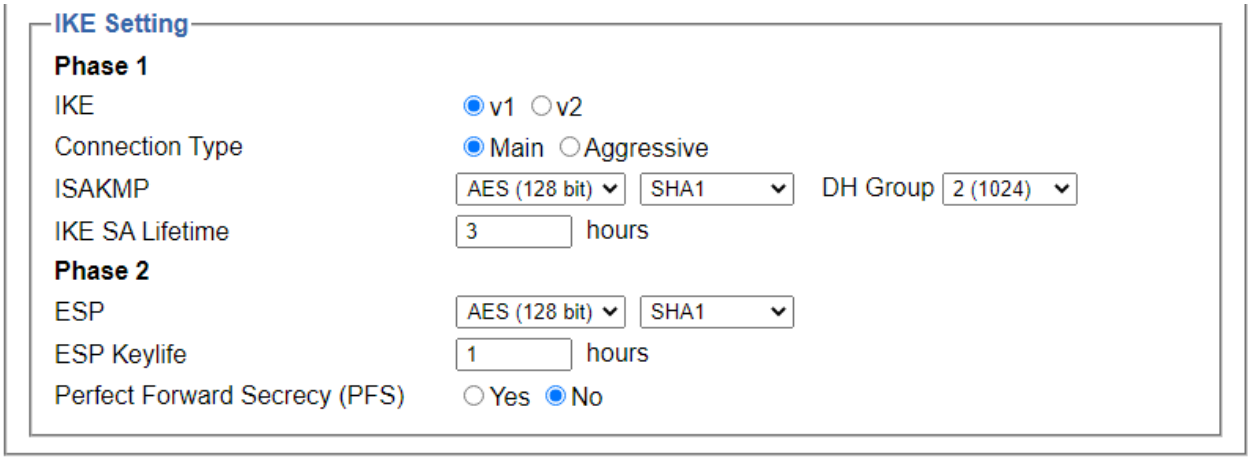


Figure 4.7-3 IPSec Tunnel

Object	Description
IPSec Tunnel Enable	Check the box to enable the function.
Tunnel Name	Enter any words for recognition.
Interface	This is only available for host-to-host connections and specifies to which interface the host is connecting. 1. WAN 1. 2. WAN 2.
Local Network	The local subnet in CIDR notation. For instance, "192.168.1.0”.
Local Netmask	The netmask of this VPN Security Gateway
Remote IP Address	Input the IP address of the remote host. For instance, "210.66.1.10”.
Remote Network	The remote subnet in CIDR notation. For instance, "210.66.1.0”.
Remote Netmask	The netmask of the remote host.
Dead Peer Detection	Set up the detection time of **DPD** (Dead Peer Detection). By default, the DPD detection’s gap is 30 seconds, over 150 seconds to think that is the broken line. When VPN detects opposite party reaction time, the function will take one of the actions: “Hold” stand for the system will retain IPSec SA, "Clear" stand for the tunnel will clean away and waits for the new sessions, "Restart" will delete the IPSec SA and reset VPN tunnel.
Preshare Key	Enter a pass phrase to be used to authenticate the other side of the tunnel. Should be the same as the remote host.
IKE	Select the IKE (Internet Key Exchange) version.
Connection Type	1. Main. 2. Aggressive.

ISAKMP	It provides the way to create the SA between two PCs. The SA can access the encoding between two PCs, and the IT administrator can assign to which key size or Preshare Key and algorithm to use. The SA comes in many connection ways. 1. **AES**: All using a 128-bit, 192-bit and 256-bit key. AES is a commonly seen and adopted nowadays. 2. **3DES**: Triple DES is a block cipher formed from the DES cipher by using it three times. It can achieve an algorithm up to 168 bits. 3. **SHA1**: The SHA1 is a revision of SHA. It has improved the shortcomings of SHA. By producing summary hash values, it can achieve an algorithm up to 160 bits. 4. **SHA2**: Either 256, 384 or 512 can be chosen 5. **MD5 Algorithm**: MD5 processes a variably long message into a fixed-length output of 128 bits. 6. **DH Group**: Either 1, 2, 5, 14, 15, 16, 17, or 18 can be chosen.
IKE SA Lifetime	You can specify how long IKE packets are valid.
ESP	It offers AES, 3 DES, SHA 1, SHA2, and MD5. 1. **AES**: All using a 128-bit, 192-bit and 256-bit key. AES is a commonly seen and adopted nowadays. 2. **3DES**: Triple DES is a block cipher formed from the DES cipher by using it three times. It can achieve an algorithm up to 168 bits. 3. **SHA1:** The SHA1 is a revision of SHA. It has improved the shortcomings of SHA. By producing summary hash values, it can achieve an algorithm up to 160 bits. 4. **SHA2**: Either 256, 384 or 512 can be chosen. 5. **MD5 Algorithm**: MD5 processes a variably long message into a fixed-length output of 128 bits.
ESP Keylife	You can specify how long ESP packets are valid.
Perfect Forward Secrecy (PFS)	Set the function as enable or disable.

4.7.2 IPsec Remote Server

This section assists you in setting the IPsec Remote Server Configuration as shown below.

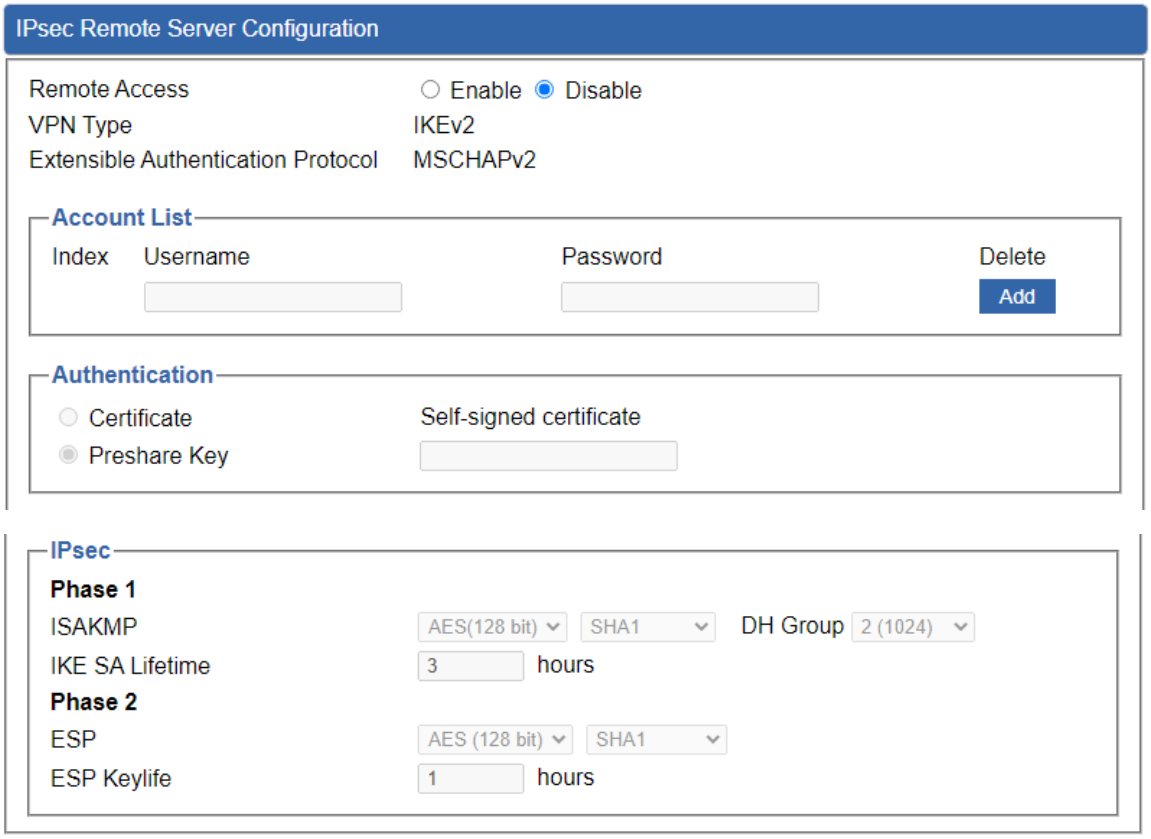


Figure 4.7-4 IPsec Remote Server Configuration

4.7.3 GRE

This section assists you in setting the GRE Tunnel as shown below.

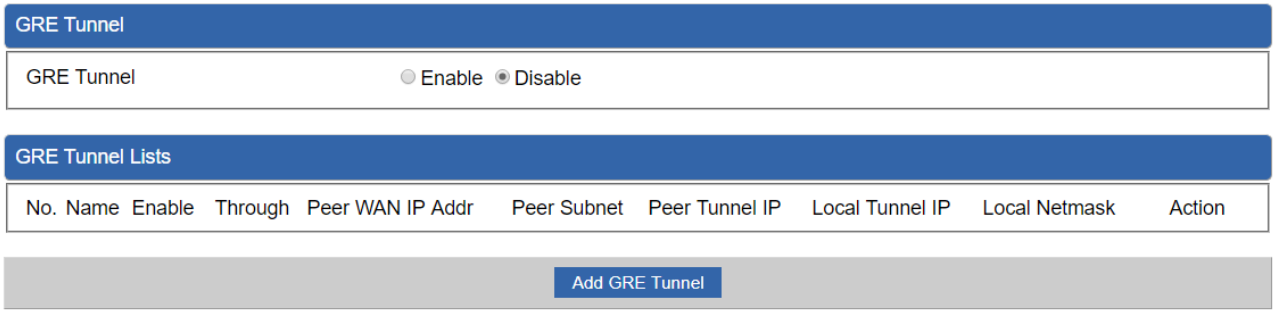


Figure 4.7-5 GRE Tunnel

Object	Description
GRE Tunnel	Set the function as enable or disable.
Add GRE Tunnel	Go to the Add GRE Tunnel page to add a new tunnel.

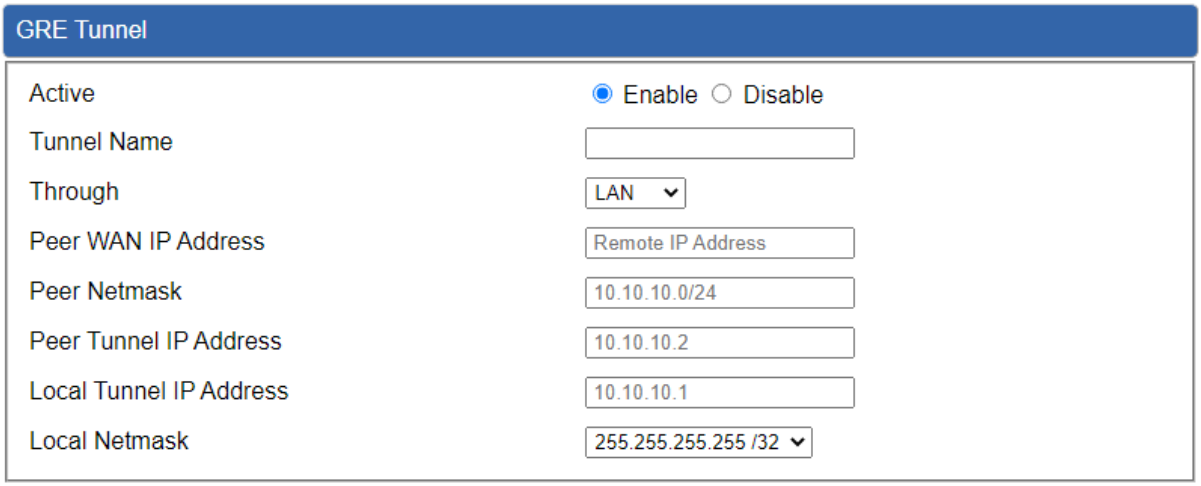


Figure 4.7-6 GRE Tunnel Configuration

Object	Description
Active	Check the box to enable the function.
Tunnel Name	Enter any words for recognition.
Through	This is only available for host-to-host connections and specifies to which interface the host is connecting. 1. LAN. 2. WAN 1. 3. WAN 2.
Peer WAN IP Address	Input the IP address of the remote host. For instance, "210.66.1.10”.
Peer Netmask	The remote subnet in CIDR notation. For instance, "210.66.1.0/24”.
Peer Tunnel IP Address	Input the Tunnel IP address of remote host.
Local Tunnel IP Address	Input the Tunnel IP address of remote host.
Local Netmask	Input the Tunnel IP address of the VPN Security Gateway

4.7.4 PPTP

Use the IP address and the scope option needs to match the far end of the PPTP server; its goal is to use the PPTP channel technology, and establish Site-to-Site VPN where the channel can have equally good results from different methods with IPSec. The PPTP server is shown in Figure 4-8-6.

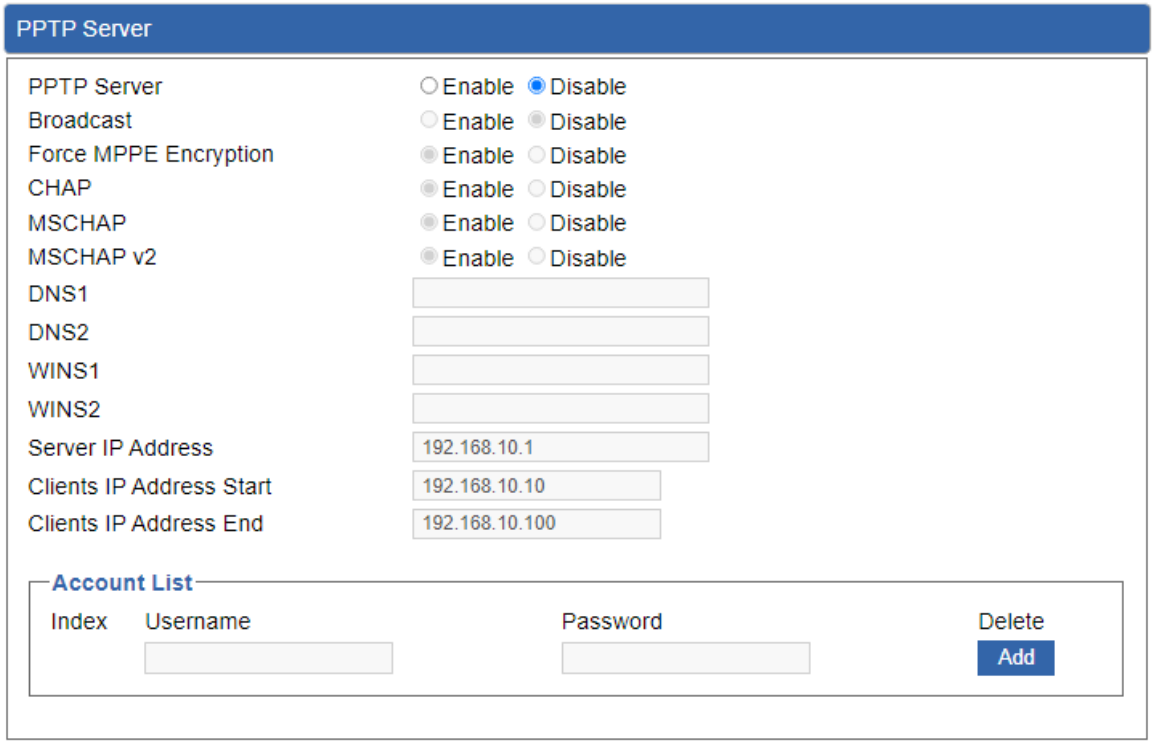


Figure 4.7-7 PPTP Server Configuration

Object	Description
PPTP Server	Set the function as enable or disable.
Broadcast	Enter any words for recognition.
Force MPPE Encryption	Set the encryption as enable or disable.
CHAP	Set the authentication as enable or disable.
MSCHAP	Set the authentication as enable or disable.
MSCHAP v2	Set the authentication as enable or disable.
DNS	When the PPTP client connects to the PPTP server, it will assign the DNS server IP address to client.
WINS	When the PPTP client connects to the PPTP server, it will assign the WINS server IP address to client.
Server IP Address	Input the IP address of the PPTP Server. For instance, "192.168.10.1”.
Clients IP Address (Start/End)	When the VPN connection is established, the VPN client will get IP address from the VPN Server. Please set the range of IP Address. For instance, the start IP address is "192.168.10.10”, the end IP address is "192.168.10.100”.
User and Password	Create the username and password for the VPN client.

4.7.5 L2TP

This section assists you in setting the L2TP Server as shown below.

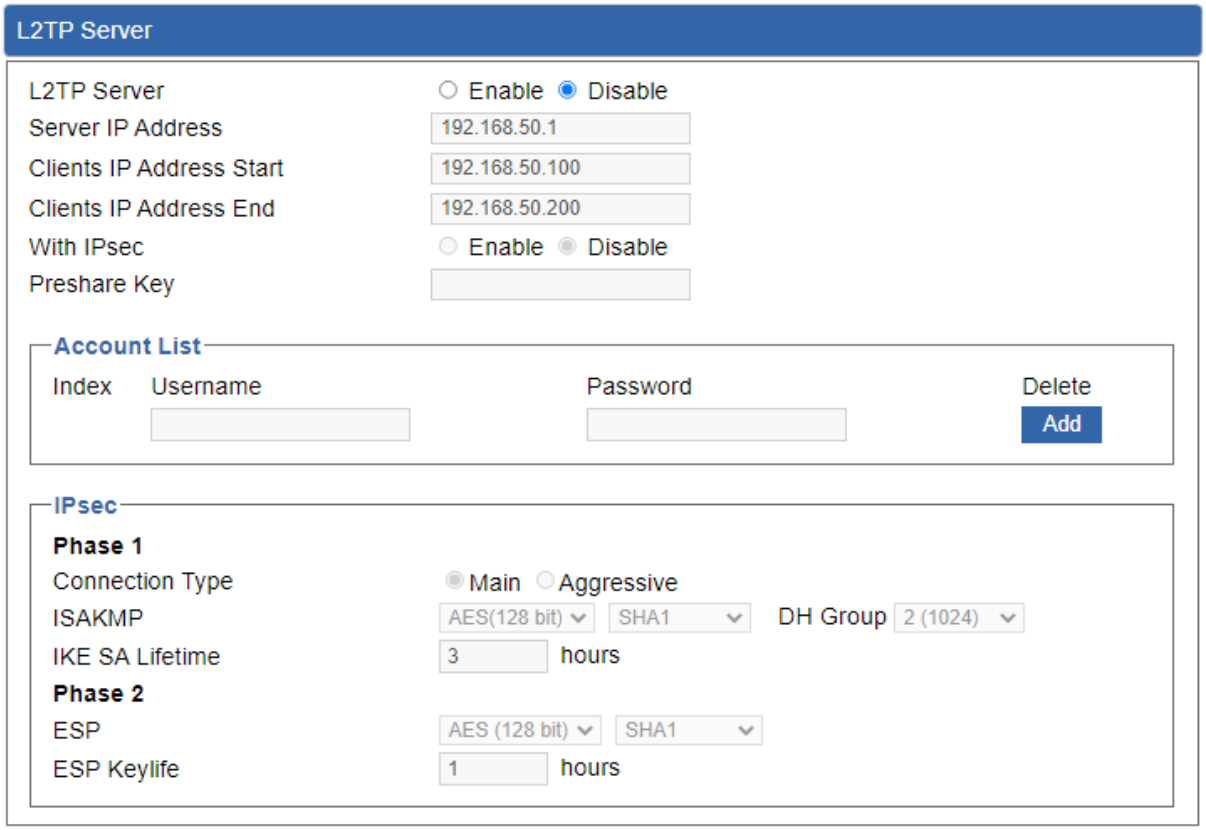


Figure 4.7-8 L2TP Server Configuration

Object	Description
L2TP Server	Set the function as enable or disable.
Server IP Address	Input the IP address of the L2TP Server. For instance, "192.168.50.1”.
Clients IP Address (Start/End)	When the VPN connection is established, the VPN client will get IP address from the VPN Server. Please set the range of IP Address. For instance, the start IP address is "192.168.50.100”, the end IP address is "192.168.50.200”.
With IPsec	Set the function as enable to make the L2TP work with IPsec encryption.
Preshare Key	Enter a pass phrase.
User and Password	Create the username and password for the VPN client.
Connection Type	1. Main. 2. Aggressive.
ISAKMP	It provides the way to create the SA between two PCs. The SA can access the encoding between two PCs, and the IT administrator can

Object	Description
	assign to which key size or Preshare Key and algorithm to use. The SA comes in many connection ways. 1. AES: All using a 128-bit, 192-bit and 256-bit key. AES is a commonly seen and adopted nowadays. 2. 3DES: Triple DES is a block cipher formed from the DES cipher by using it three times. It can achieve an algorithm up to 168 bits. 3. SHA1: The SHA1 is a revision of SHA. It has improved the shortcomings of SHA. By producing summary hash values, it can achieve an algorithm up to 160 bits. 4. SHA2: Either 256, 384 or 512 can be chosen. 5. MD5 Algorithm: MD5 processes a variably long message into a fixed-length output of 128 bits. 6. DH Group: Either 1, 2, 5, 14, 15, 16, 17, or 18 can be chosen.
IKE SA Lifetime	You can specify how long IKE packets are valid.
ESP	It offers AES, 3 DES, SHA 1, SHA2, and MD5. 1. AES: All using a 128-bit, 192-bit and 256-bit key. AES is a commonly seen and adopted nowadays. 2. 3DES: Triple DES is a block cipher formed from the DES cipher by using it three times. It can achieve an algorithm up to 168 bits. 3. SHA1: The SHA1 is a revision of SHA. It has improved the shortcomings of SHA. By producing summary hash values, it can achieve an algorithm up to 160 bits. 4. SHA2: Either 256, 384 or 512 can be chosen. 5. MD5 Algorithm: MD5 processes a variably long message into a fixed-length output of 128 bits.
ESP Keylife	You can specify how long ESP packets are valid.

4.7.6 SSL VPN

This section assists you in setting the SSL Server as shown below.

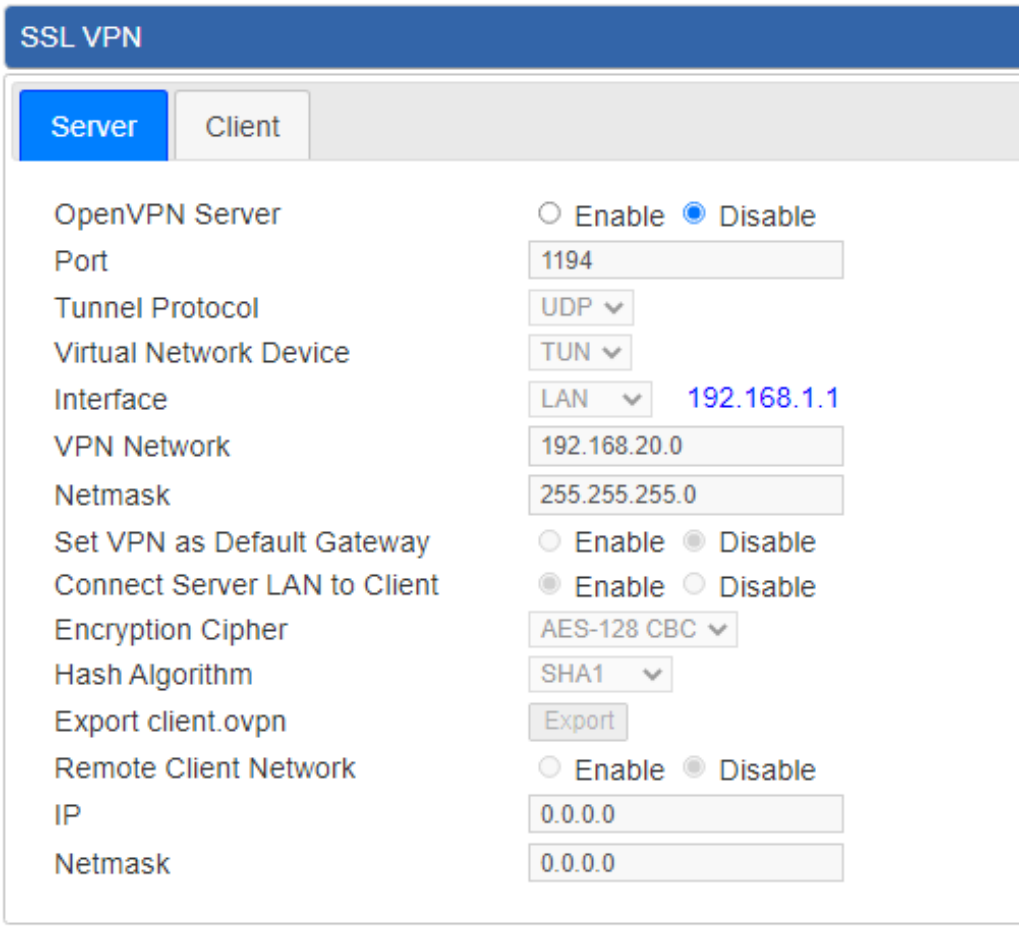


Figure 4.7-9 SSL Server Configuration

Object	Description
SSL VPN Server	Set the function as enable or disable.
Port	Set a port for the SSL Service. Default port is 1194.
Tunnel Protocol	Set the protocol as TCP or UDP.
Virtual Network Device	Set the Virtual Network Device as TUN or TAP.
Interface	User is able to select the interface for SSL service using.
VPN Network	The VPN subnet in CIDR notation. For instance, "192.168.20.0”.
Network Mask	The netmask of the VPN.
Encryption Cipher	There are four encryption types: None, AES-128 CBC, AES-192 CBC or AES-256 CBC.
Hash Algorithm	There are five types of Hash Algorithm: None, SHA1, SHA1, SHA512 or MD5.
Export client.ovpn	Export a configuration for the SSL client. User is able to upload it to VPN client (such as Open VPN software).

4.7.7 Certificates

This page shows the VPN System Certificates status as shown below.

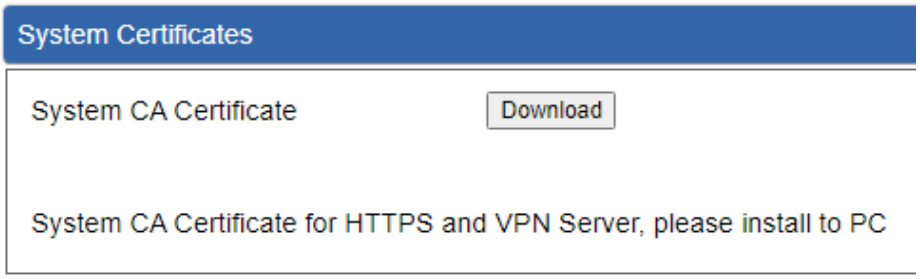


Figure 4.7-10 System Certificates

4.7.8 VPN Connection

This page shows the VPN connection status as shown below.

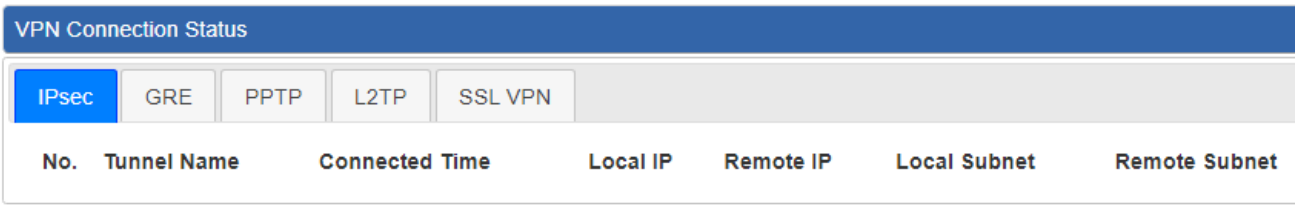


Figure 4.7-11 VPN Connection Status

Object	Description
VPN Connection Status	Click the IPSec/GRE/…/SSL VPN bookmark to check the current connection status.

4.7.9 SD WAN

This page shows the SD WAN Configuration status as shown below.

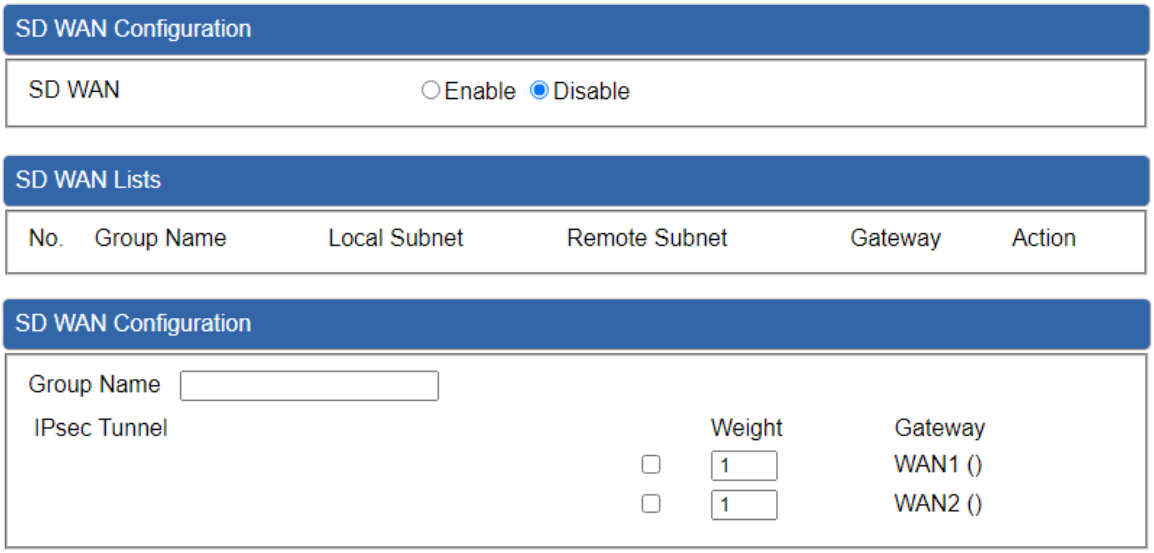
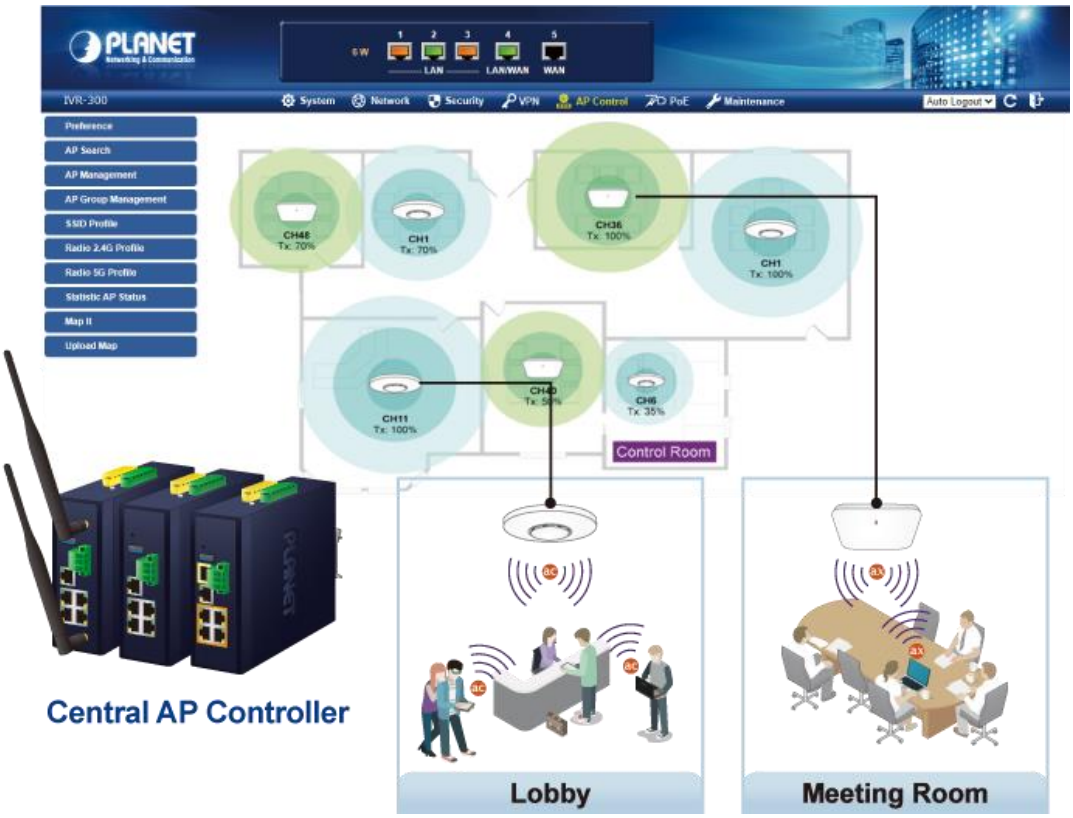


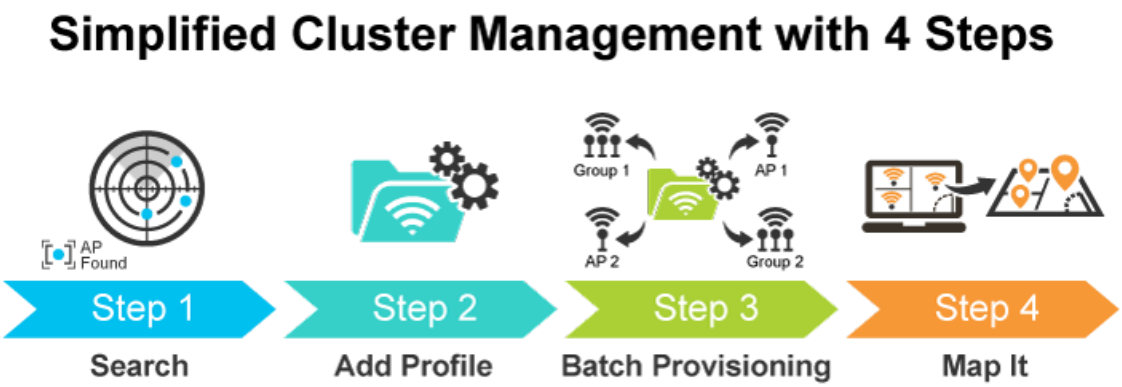
Figure 4.7-12 SD WAN Configuration

4.8 AP Control

The IVR-300/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.



For example, to configure multiple smart APs of the same model, the IVR-300/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.



The AP Control menu provides the following features for managing the system as shown below.

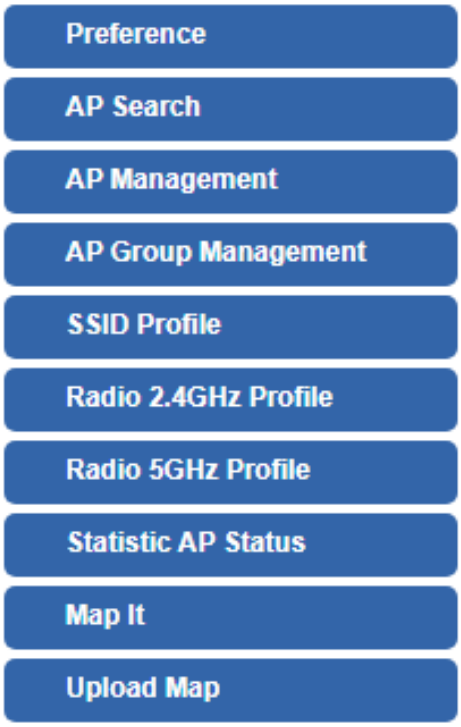


Figure 4.8-1 AP Control Menu

Object	Description
Preference	Edit region, RO community, RW community
AP Search	Search APs in the same domain
AP Management	Config APs IP Address, Subnet Mask, SSID and Radio Profiles
AP Group Management	Grouping same model AP
SSID Profile	Setup SSID Profile
Radio 2.4GHz Profile	Setup Radio 2.4GHz Profiles
Radio 5GHz Profile	Setup Radio 5GHz Profiles
Statistics AP Status	Show the status of managed APs
Map It	Edit the map of AP location and coverage
Upload Map	Search APs in the same domain

4.8.1 Preference

On this page, you can choose the device region of FCC or ETSI. Then edit RO community and RW community for public or private use. Select Apply or Reset. This screenshot is as shown below.

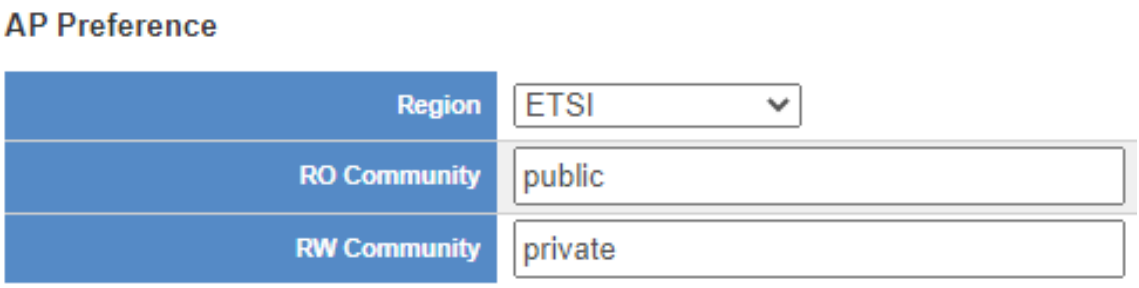


Figure 4.8-2 AP Preference

Note: Device of FCC and device of ETIS cannot be shown at the same time.

4.8.2 AP Search

On this page, you can add new APs in your AP Control System.

Steps to follow:

Step 1. Press the **Search** button to discover PLANET devices.

Step 2. After waiting for a while, choose which AP you want to add.

Step 3. Press the **Apply** button to finish addition.

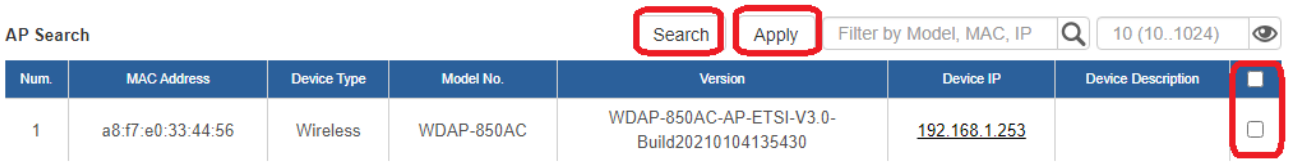


Figure 4.8-3 AP Search of AP Controller

Note: When using AP Search, the AP's IP Address must be the same as WS-Series Switch IP domain.

4.8.3 AP Management

On this page, you can manage your APs, including checking AP online status, configuring AP (IP address, Mask, SSID and Radio profile), rebooting AP, firmware update, and deleting AP in the AP Control system.

Figure 4.8-4 AP Management of AP Controller

Status:

Object	Description
	Connection status: online, offline, Wi-Fi disabled
	In progress: action in progress
	Finished/Successful: action finished and successful.
	Failed: action failed.

Action:

Object	Description
	Setting: edit setting and allocate profile to AP
	Link: link to the AP's web page
	Firmware Update: Upgrade AP's firmware
	Reboot: Reboot the AP
	Delete: Delete the AP from the control list LED Control: Control the AP's LED.
	Mouse-click in a sequential order: LED blink-> LED off-> LED on

Note

To configure multiple APs at one time, select multiple APs and then choose one of the action icons on the top of the page. The "**Link**" action is not allowed for multiple APs.

> **Note**
> When the setup of AP is done, you need to press the **Apply** button to complete the setup.

4.8.4 AP Group Management

On the AP Group Management page, you can create AP group and control one or more AP groups.

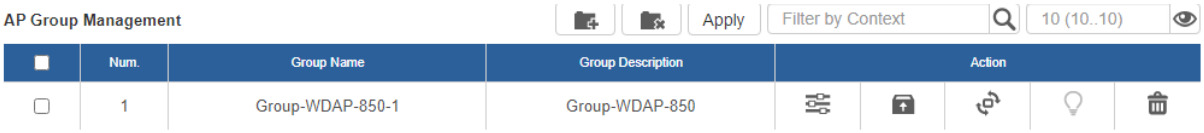


Figure 4.8-5 AP Group Management of AP Controller

Action:

Object	Description
	Add new group: Click it to add an AP group.
	Delete selected item: Click it to delete the selected AP group.

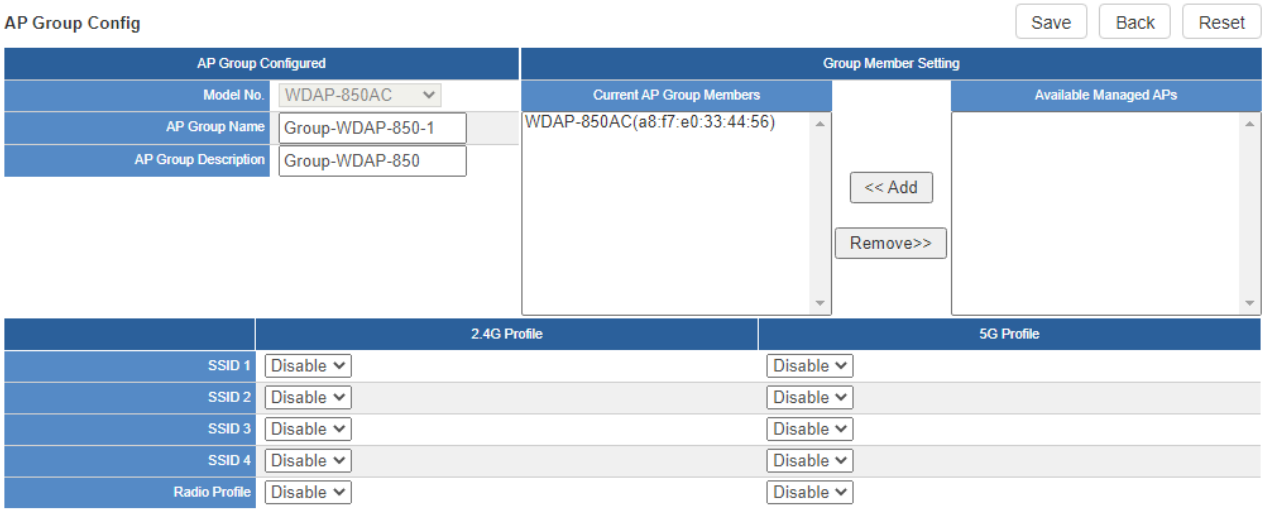


Figure 4.8-6 AP Group Config of AP Controller

▪ Create Group:

1. Select AP Model No. you want to Add
2. Type AP Group Name and AP Group Description.
3. Select AP you want to add in group member setting area and press the Add button.
4. Select AP Group SSID profile and Radio Profile.
5. Press the Apply button to finish create AP group.

Note

To do profile provisioning to multiple AP groups at one time, select multiple AP groups, and then click the "**Apply**" button.

The "**Link**" action is not allowed for multiple APs or AP group.

4.8.5 SSID Profile

On the SSID profile configuration page, enter the value that you preferred and then click "**Apply**" to save the profile.

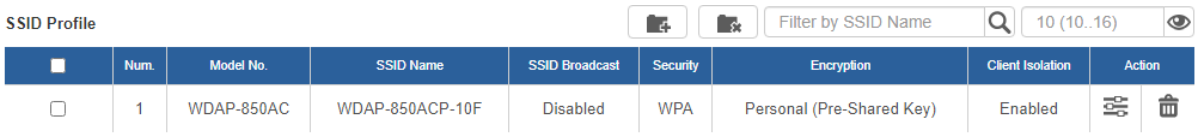


Figure 4.8-7 SSID Profile of AP Controller

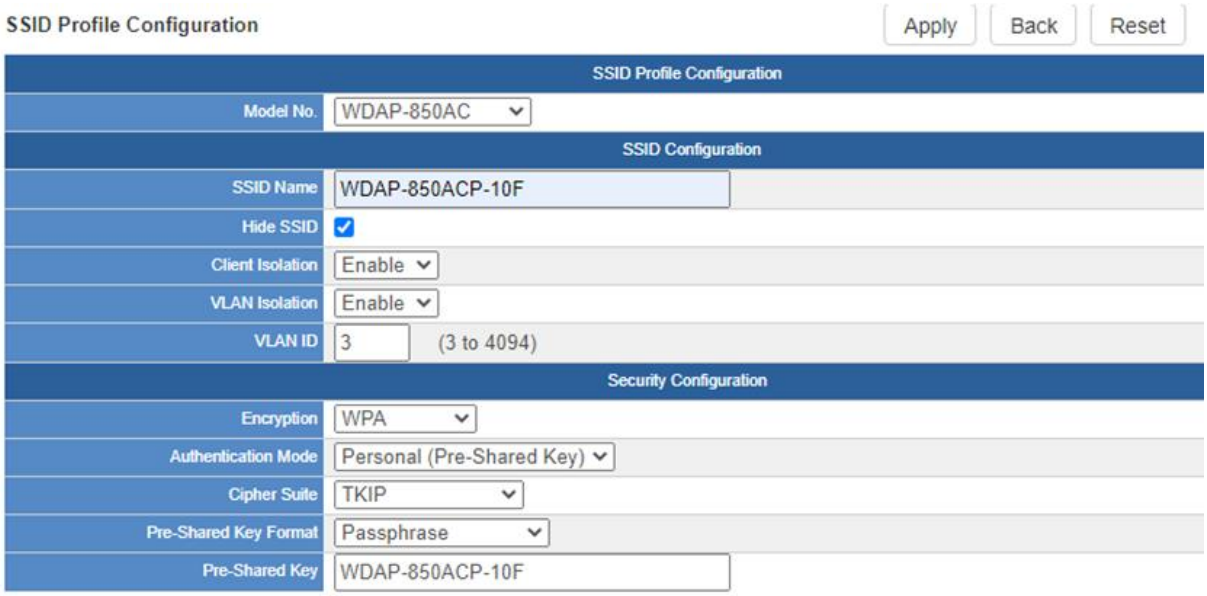


Figure 4.8-8 SSID Profile Configuration of AP Controller

Action:

Object	Description
	Add new profile: Click it to add a new profile.
	Delete selected item: Click it to delete the selected profile.
	Edit: Click it to edit the profile.
	Delete: Click it to delete the single profile.

4.8.6 Radio 2.4GHz Profile

On the Radio profile configuration page, enter the value that you preferred and then click "**Apply**" to save the profile.

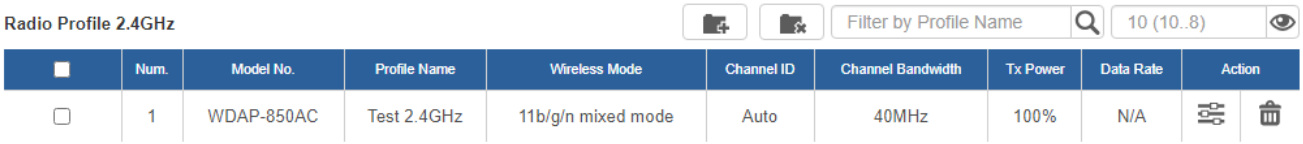


Figure 4.8-9 2.4GHz Radio Profile of AP Controller

Action:

Object	Description
	Add new profile: Click it to add a new profile.
	Delete selected item: Click it to delete the selected profile.
	Edit: Click it to edit the profile.
	Delete: Click it to delete the single profile.

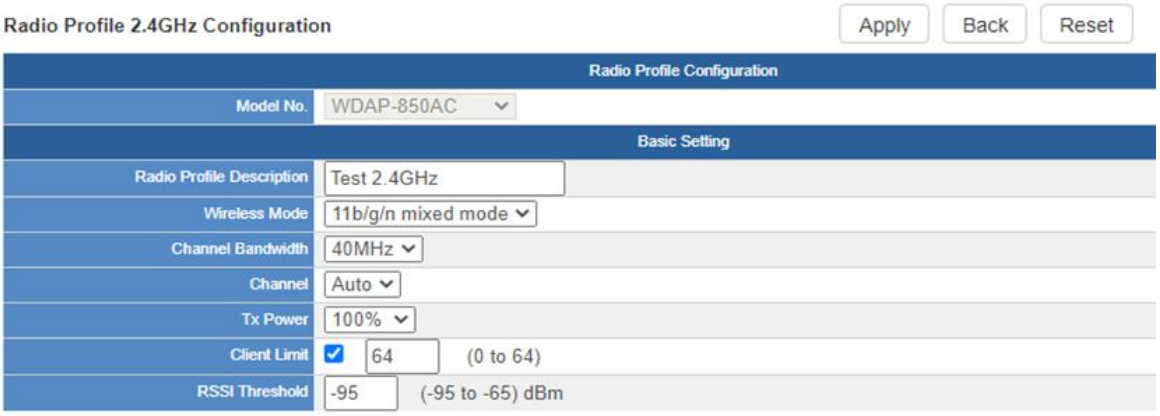


Figure 4.8-10 2.4GHz Radio Profile Configuration of AP Controller

Action:

Object	Description
Apply Button:	Click this button to save the settings.
Back Button:	Click this button to return to the previous page.
Reset Button:	Click this button to reset all fields to default value.

Note

Strongly suggest you to keep the values as default except the fields like Channel, Network Mode, Channel Bandwidth, Tx Power, IAPP, and Tx/Rx to prevent any unexpected error or impact on the performance.

Note

WMM Capable is not allowed to be disabled.

4.8.7 Radio 5GHz Profile

On the Radio profile configuration page, enter the value that you preferred and then click "**Apply**" to save the profile.

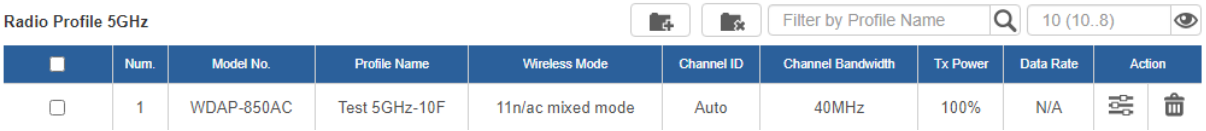


Figure 4.8-11 5 GHz Radio Profile of AP Controller

Action:

Object	Description
	Add new profile: Click it to add a new profile.
	Delete selected item: Click it to delete the selected profile.
	Edit: Click it to edit the profile.
	Delete: Click it to delete the single profile.

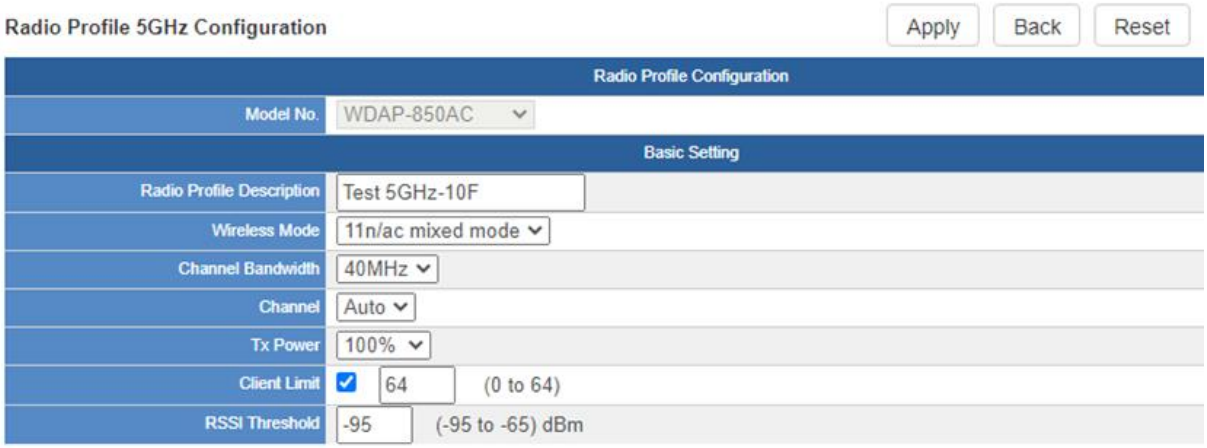


Figure 4.8-12 5 GHz Radio Profile Configuration of AP Controller

Action:

Apply Button: Click this button to save the settings.

Back Button: Click this button to return to the previous page.

Reset Button: Click this button to reset all fields to default value.

Note

1. Strongly suggest you to keep the values as default except the fields like Channel, Network Mode, Channel Bandwidth, Tx Power, IAPP, and Tx/Rx to prevent any unexpected error or impact on the performance.
2. WMM Capable is not allowed to be disabled.

4.8.8 Statistics AP Status

On this page, you can observe the current configuration of all managed APs.

Num.	Status	MAC Address	IP Address	Model No.	Name	firmware	AP Group	2.4GHz SSID Profile	5GHz SSID Profile	2.4GHz Radio Profile	5GHz Radio Profile
1		a8:f7:e0:46:2e:38	192.168.0.102	WDAP-C7200E		WDAP-C7200E-AP-FCC-V3.0-Build20200321122005					
2		a8:f7:e0:3c:5f:ab	192.168.0.101	WNAP-C3220E		WNAP-C3220E-AP-FCC-V3.0-Build20200422115453			N/A		N/A

Figure 4.8-13 Statistics AP Status of AP Controller

Filter: You can filter the AP list by entering the keyword in the field next to the magnifier icon. The keyword should be in any context that belongs to the fields of this page.

4.8.9 Map It

On this page you can add managed APs to the actual position against the floor map. This is convenient to user to view and adjust the actual deployment by reference to its real transmission power and channel allocation.

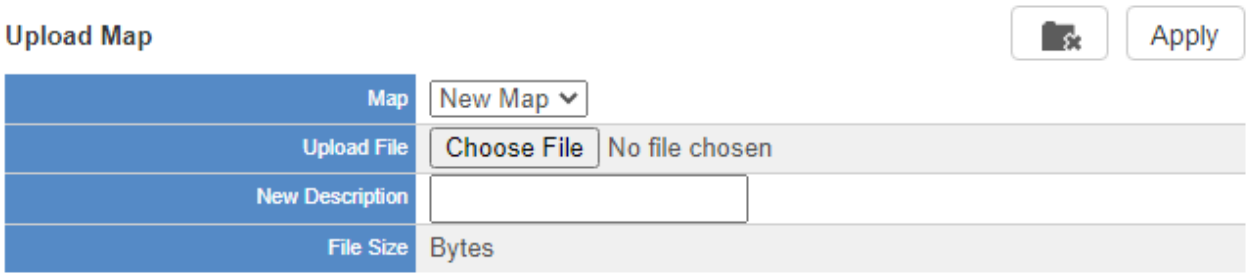


Figure 4.8-14 Upload Map page

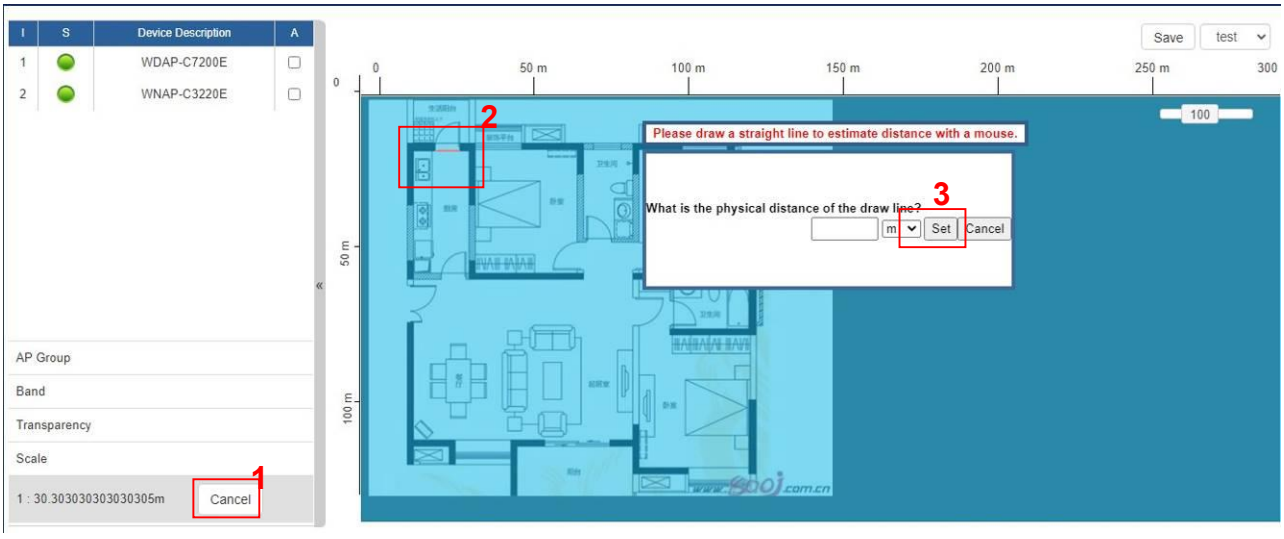


Figure 4.8-15 the simulator page of the wireless signal strong of AP

1. Click "**Scale**" to start to reset the map scale.
2. Press the set button to draw a line on the map. Fill its physical distance in the blank and press Set or Cancel. For example, in the graph below, set the door width to 0.8 m

Note

You need to upload map image first before bringing managed APs to the actual position.

4.8.10 Upload Map

On this page, the system allows you to upload your floor map to the system.

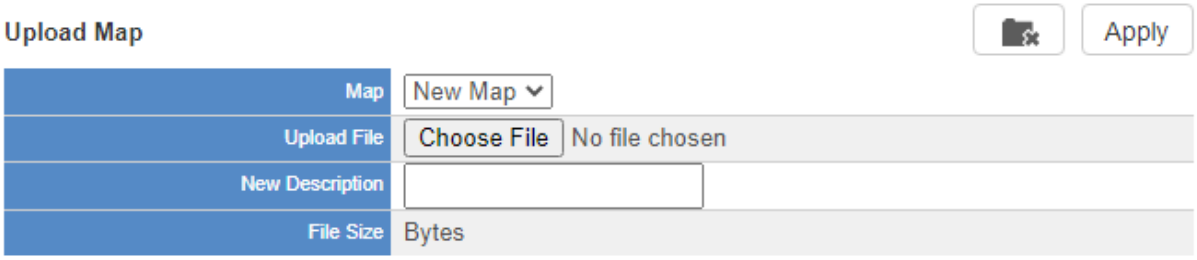


Figure 4.8-16 Upload Map page

Note

The system allows user to upload up to 10 floor maps.

4.9 Wireless

(For IVR-300W Only)

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.

The Wireless menu provides the following features as shown below.

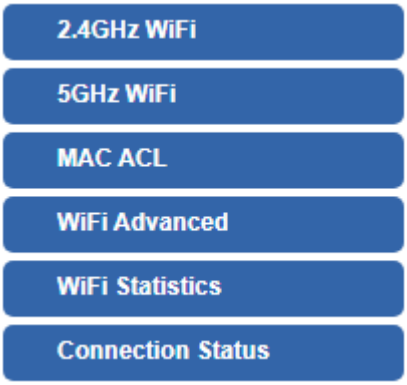


Figure 4.9-1 Wireless Menu

Object	Description
2.4GHz Wi-Fi	Allow to configure 2.4GHz Wi-Fi.
5GHz Wi-Fi	Allow to configure 5GHz Wi-Fi.
MAC ACL	Allow configure MAC ACL.
Wi-Fi Advanced	Allow to configure advanced setting of Wi-Fi.
Wi-Fi Statistics	Display the statistics of Wi-Fi traffic.
Connection Status	Display the connection status.

4.9.1 2.4GHz WiFi

This page allows the user to define 2.4GHz WiFi as shown below.

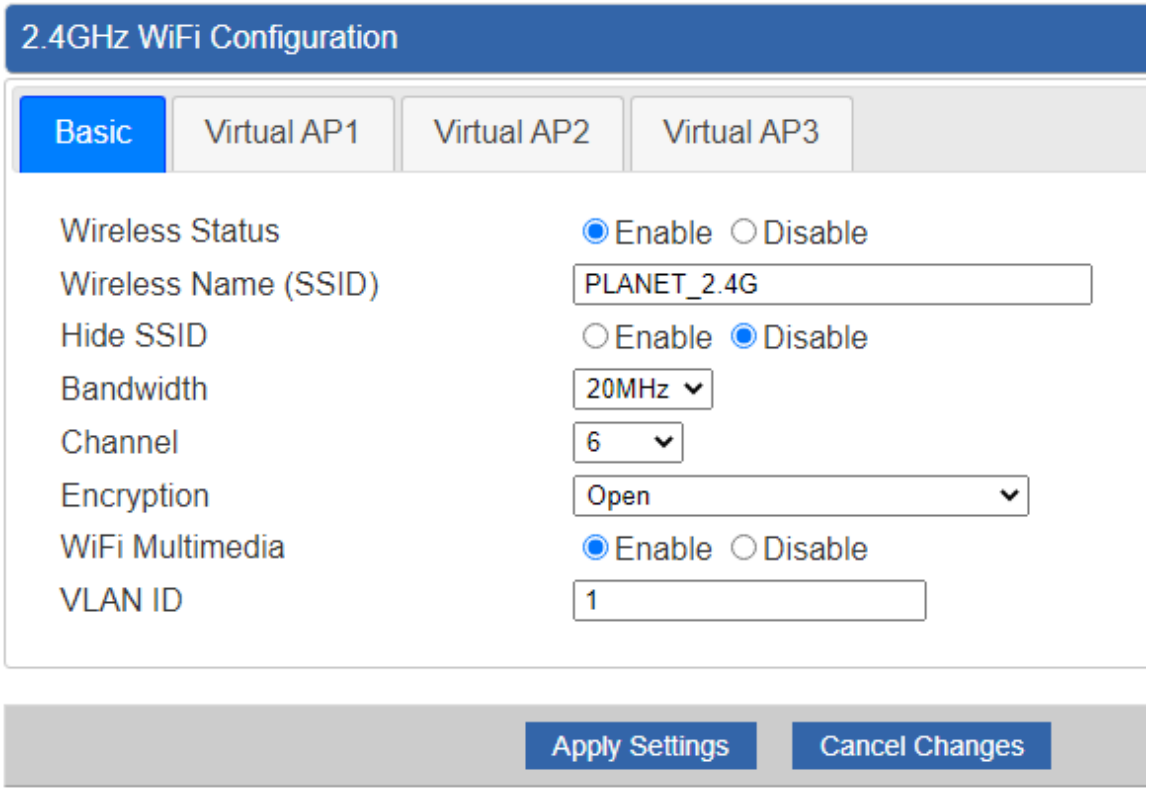


Figure 4.9-2 2.4GHz WFI Configuration

Object	Description
2.4GHz WFI	Allows user to enable or disable 2.4GHz Wi-Fi
2.4GHz WFI	It is the wireless network name. The default 2.4GHz SSID is "PLANET_2.4G"
2.4GHz WFI	Allows user to enable or disable SSID
2.4GHz WFI	Select the operating channel width, "**20MHz**" or "**40MHz**"
2.4GHz WFI	It shows the channel of the CPE. Default 2.4GHz is channel 6.
2.4GHz WFI	Select the wireless encryption. The default is "**Open**"
2.4GHz WFI	Enable/Disable WMM (Wi-Fi Multimedia) function

4.9.2 5GHz WiFi

This page allows the user to define 5GHz Wi-Fi as shown below.

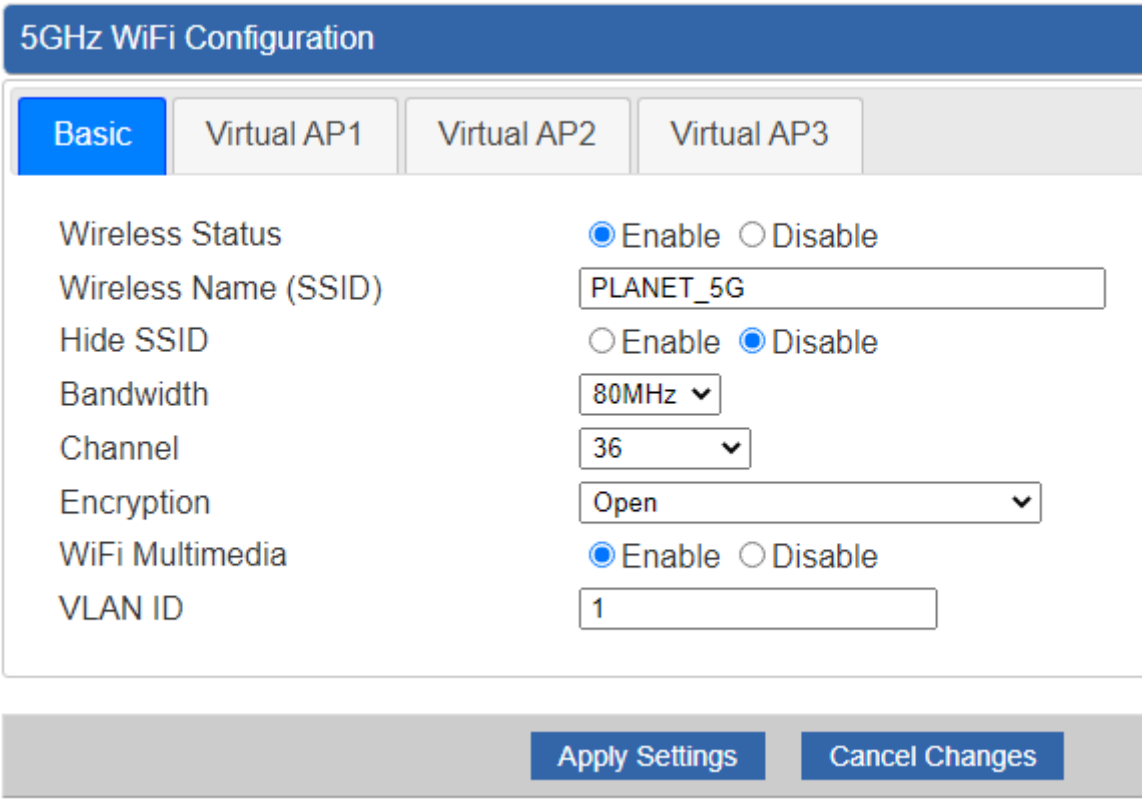


Figure 4.9-3 5 GHz WFI Configuration

Object	Description
Wireless Status	Allows user to enable or disable 5GHz Wi-Fi
Wireless Name (SSID)	It is the wireless network name. The default 5GHz SSID is "PLANET_5G"
Hide SSID	Allows user to enable or disable SSID
Bandwidth	Select the operating channel width, "**20MHz**" or "**40MHz**" or "**80MHz**"
Channel	It shows the channel of the CPE. Default 5GHz is channel 36.
Encryption	Select the wireless encryption. The default is "**Open**"
Wi-Fi Multimedia	Enable/Disable WMM (Wi-Fi Multimedia) function

4.9.3 MAC ACL

This page provides MAC ACL configuration as shown below.

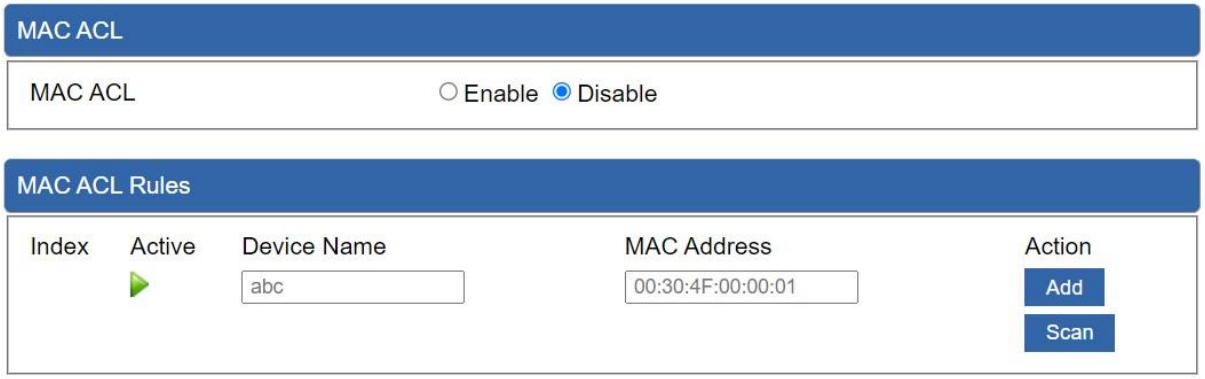


Figure 4.9-4 MAC ACL Configuration

Object	Description
Active	Allows the devices to pass in the rule
Device Name	Set an allowed device name
MAC Address	Set an allowed device MAC address
Add	Press the "**Add**" button to add end-device that is scanned from wireless network and mark them
Scan	Connect to client list

4.9.4 Wi-Fi Advanced

This page allows the user to define advanced setting of Wi-Fi as shown below.

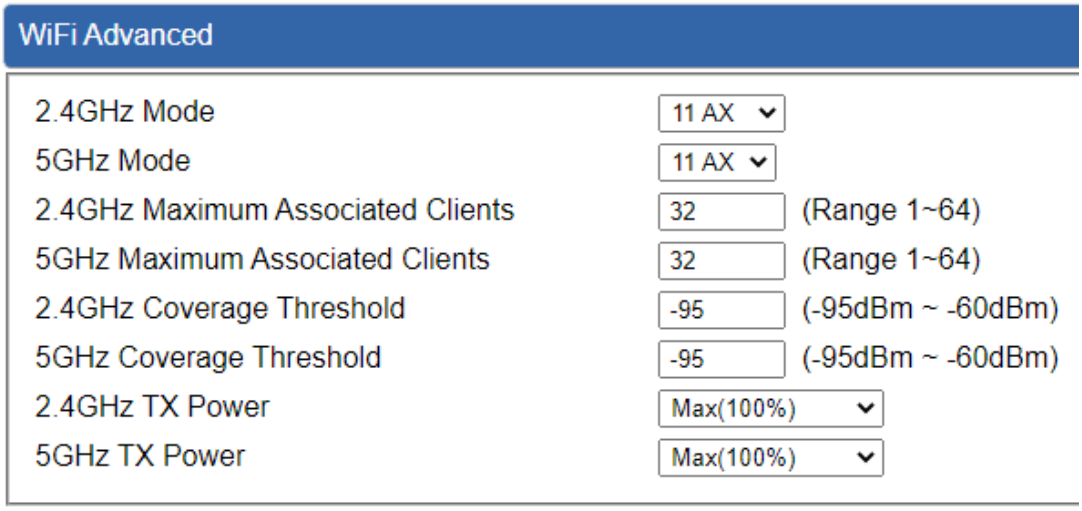


Figure 4.9-5 Wi-Fi Advanced Configuration

Object	Description
2.4GHz Mode	11AC: Select 802.11B/G or 802.11N/G 11AX: Select 802.11B/G or 802.11N/G or 802.11AX
5GHz Mode	11AC: Select 802.11A or 802.11AN or 802.11AC 11AX: Select 802.11A or 802.11AN or 802.11AC or 802.11AX
2.4GHz Maximum Associated Clients	The maximum users are 64.
5GHz Maximum Associated Clients	The maximum users are 64.
2.4GHz Coverage Threshold	The coverage threshold is to limit the weak signal of clients occupying session. The default is -90dBm.
5GHz Coverage Threshold	The coverage threshold is to limit the weak signal of clients occupying session. The default is -90dBm.
2.4G TX Power	The range of transmit power is **Max (100%)**, **Efficient (75%)**, **Enhanced (50%), Standard (25%)** or **Min (15%)**. In case of shortening the distance and the coverage of the wireless network, input a smaller value to reduce the radio transmission power
5G TX Power	The range of transmit power is **Max (100%)**, **Efficient (75%)**, **Enhanced (50%), Standard (25%)** or **Min (15%)**. In case of shortening the distance and the coverage of the wireless network, input a smaller value to reduce the radio transmission power.

4.9.5 Wi-Fi Statistics

This page displays Wi-Fi statistics as shown below.

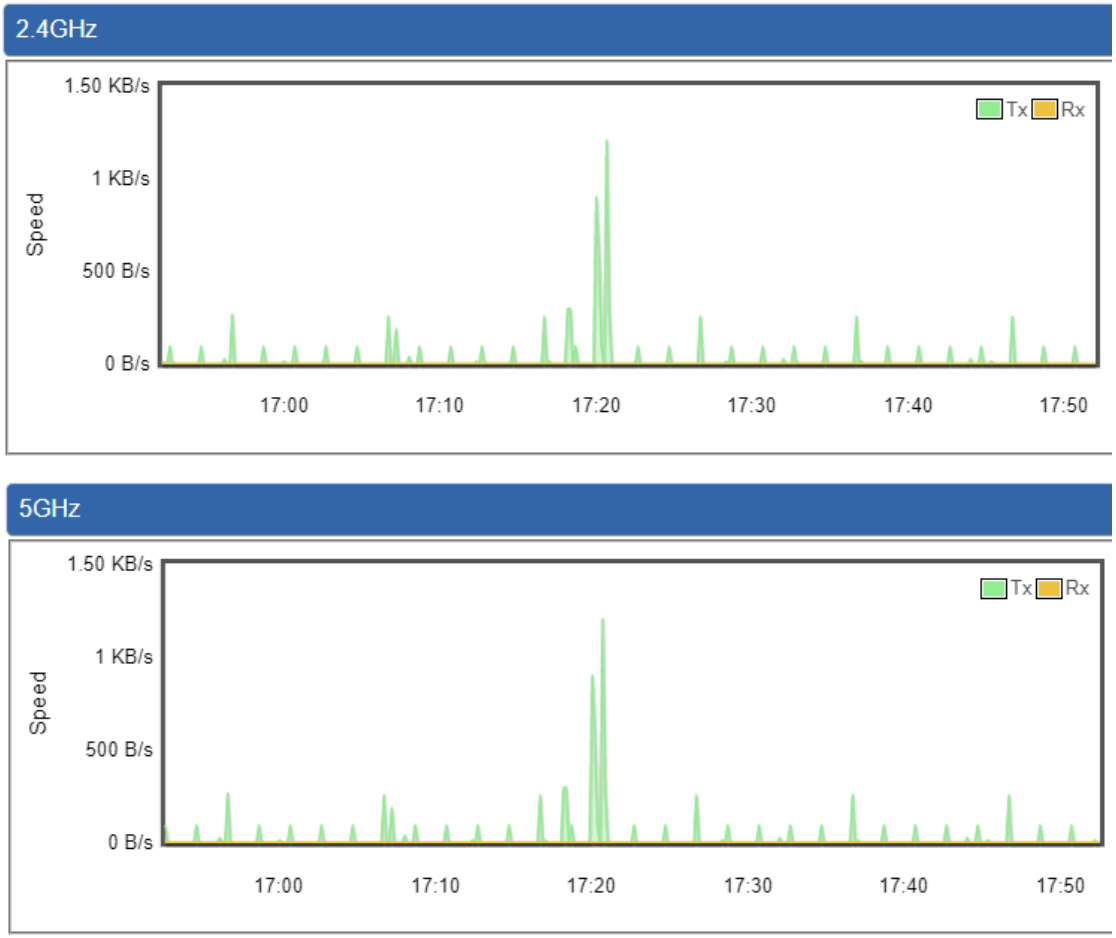


Figure 4.9-6 Wi-Fi Statistics

4.9.6 Connection Status

This page shows the host names and MAC address of all the clients in your network as shown below.

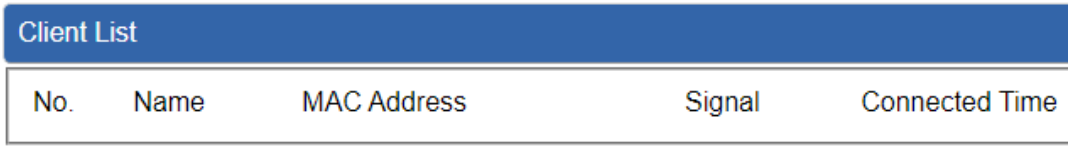


Figure 4.9-7 Connection Status

Object	Description
Name	Display the host name of connected clients.
MAC Address	Display the MAC address of connected clients.
Signal	Display the connected signal of connected clients.
Connected Time	Display the connected time of connected clients.

4.10 Power over Ethernet

(For IVR-300FP Only)

The PoE menu provides the following features for managing the system.

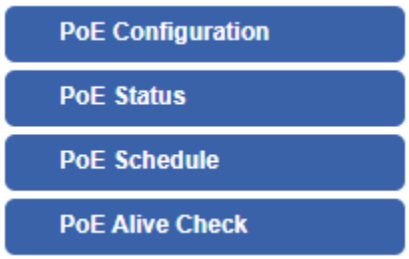


Figure 4.10-1 PoE Menu

Object	Description
PoE Configuration	Allows to centralize management of PoE power for PDs.
PoE Status	Displays the current PoE usage.
PoE Schedule	Allows centralizing management of PoE power for providing schedule.
PD Alive Check	Allows centralizing management of PoE power for checking PDs alive.

4.10.1 PoE Configuration

This section allows the user to inspect and configure the current PoE configuration setting.

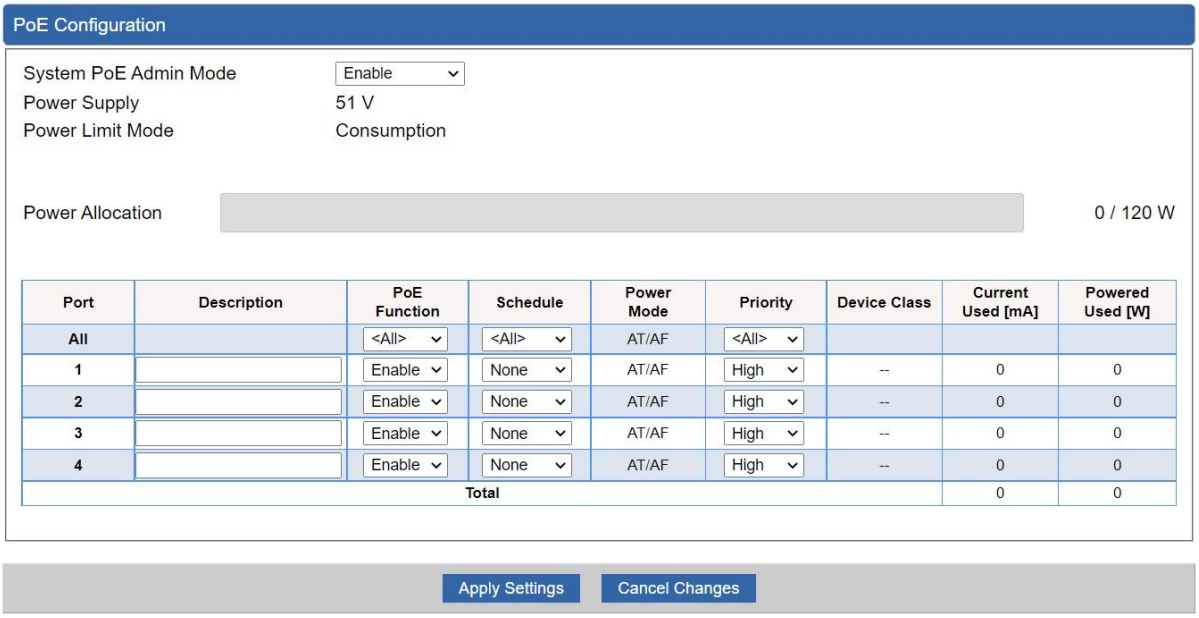


Figure 4.10-2 PoE configuration

Object	Description
• **System PoE Admin Mode**	Allows user to enable or disable PoE function. It will cause all of PoE ports to supply or not to supply power.
• **PoE Function**	There are three modes for PoE mode. ■ **Enable**: enable PoE function.. ■ **Disable**: disable PoE function. ■ **Schedule: enable PoE function in schedule mode.**
• **Schedule**	Indicates the scheduled profile mode. Possible profiles are: ■ **Profile1** ■ **Profile2** ■ **Profile3** ■ **Profile4**
• **Priority**	The Priority represents PoE ports priority. There are three levels of power priority named **Low**, **High** and **Critical**. The priority is used in case the total power consumption is over the total power budget. In this case, the port with the lowest priority will be turned off, and power for the port of higher priority will be offered.
• **Device Class**	Displays the class of the PD attached to the port, as established by the classification process. Class 0 is the default for PDs. The PD is powered based on PoE Class level if the system is working in Classification mode. The PD will return to Class 0 to 4 in accordance with the maximum power
• **Current Used [mA]**	The **Power Used** shows how much current the PD currently is using.
• **Powered Used [W]**	The **Power Used** shows how much power the PD currently is using.

4.10.2 PoE Status

This section provides per port PoE status.

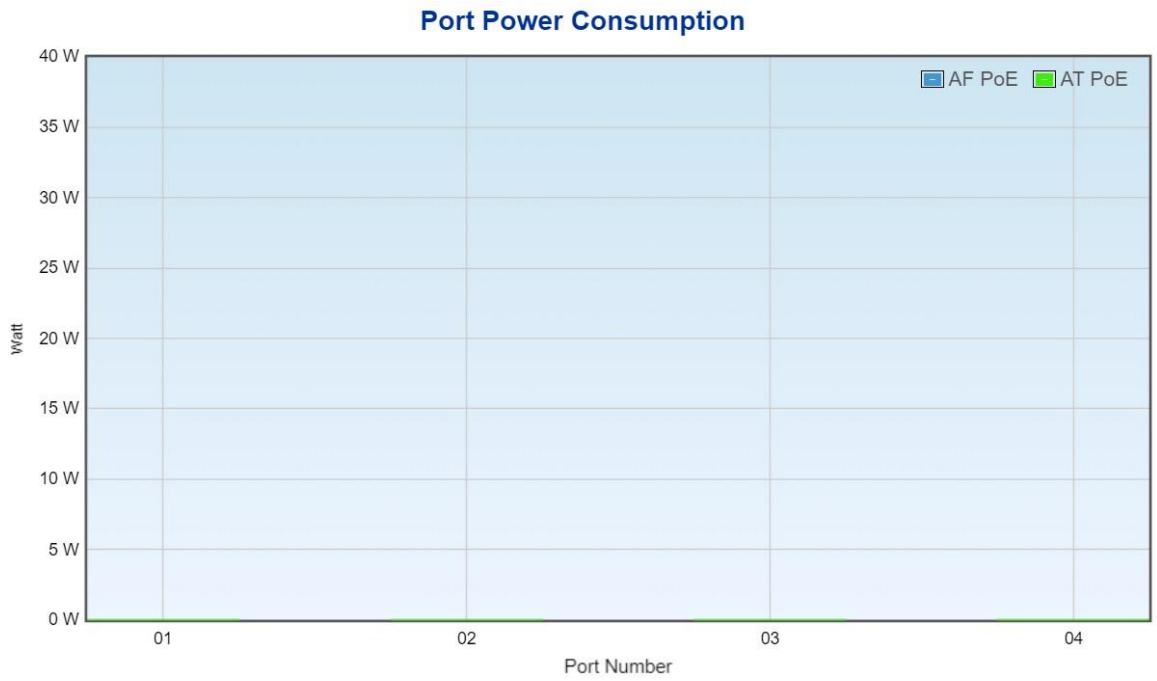
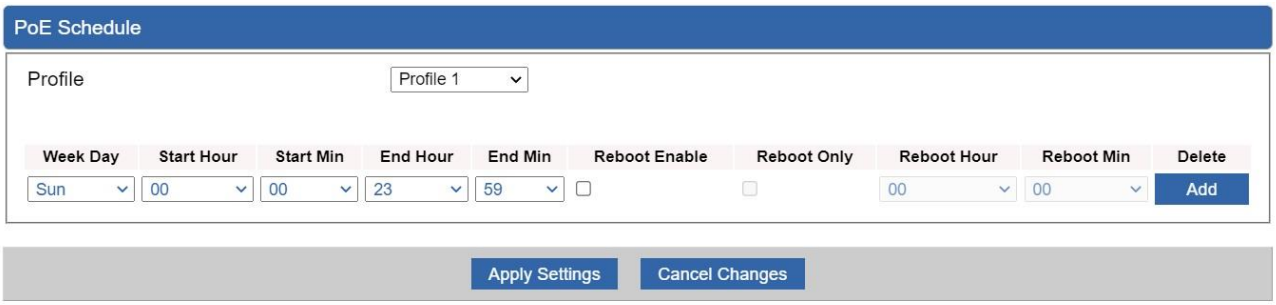


Figure 4.10-3 Port Power Consumption

4.10.3 PoE Schedule

This page allows the user to define PoE schedule and scheduled power recycling.

Please press the **Add New Rule** button to start setting PoE Schedule function. You have to set PoE schedule to profile and then go back to PoE Port Configuration, and select "**Schedule**" mode from per port "**PoE Mode**" option to enable you to indicate which schedule profile could be applied to the PoE port.



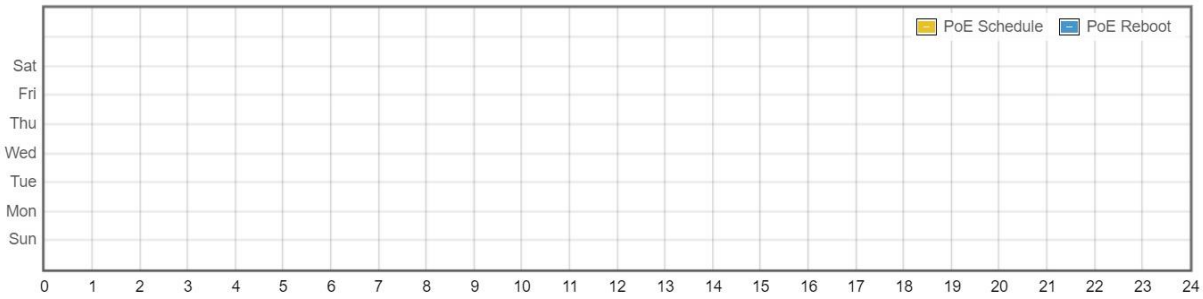


Figure 4.10-4 PoE schedule Configuration

Object	Description
• **Profile**	Set the schedule profile mode. Possible profiles are: **Profile1** **Profile2** **Profile3** **Profile4**
• **Week Day**	Allows user to set week day for defining PoE function by enabling it on the day.
• **Start Hour**	Allows user to set what hour PoE function does by enabling it.
• **Start Min**	Allows user to set what minute PoE function does by enabling it.
• **End Hour**	Allows user to set what hour PoE function does by disabling it.
• **End Min**	Allows user to set what minute PoE function does by disabling it.
• **Reboot Enable**	Allows user to enable or disable the whole PoE port reboot by PoE reboot schedule. Please note that if you want PoE schedule and PoE reboot schedule to work at the same time, please use this function, and don't use **Reboot Only** function. This function offers administrator to reboot PoE device at an indicated time if administrator has this kind of requirement.
• **Reboot Only**	Allows user to reboot PoE function by PoE reboot schedule. Please note that if administrator enables this function, PoE schedule will not set time to profile. This function is just for PoE port to reset at an indicated time.
• **Reboot Hour**	Allows user to set what hour PoE reboots. This function is only for PoE reboot schedule.
• **Reboot Min**	Allows user to set what minute PoE reboots. This function is only for PoE reboot schedule.

4.10.4 PD Alive Check

The VPN Router can be configured to monitor connected PD's status in real-time via ping action. Once the PD stops working and without response, the PoE Switch is going to restart PoE port power, and bring the PD back to work. It will greatly enhance the reliability and reduces administrator management burden.

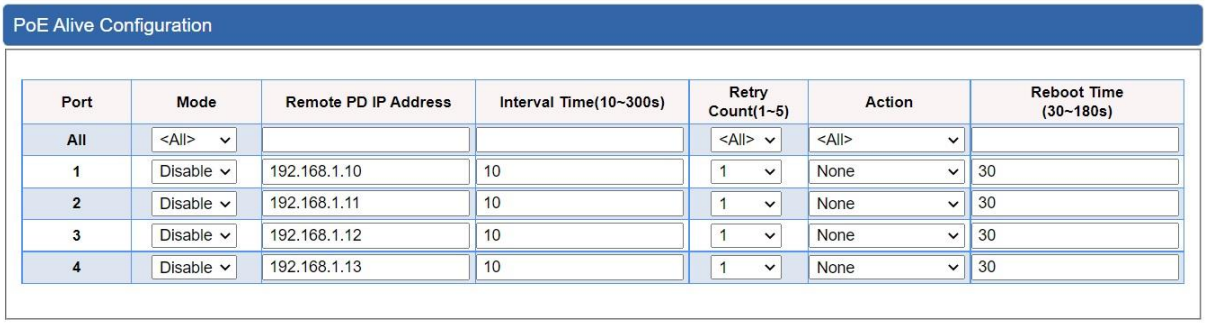


Figure 4.10-5 PoE Alive Configuration

Object	Description
• **Mode**	Allows user to enable or disable per port PD Alive Check function. By default, all ports are disabled.
• **Remote PD IP Address**	This column allows user to set PoE device IP address for system making ping to the PoE device. Please note that the PD's IP address must be set to the same network segment with the PoE Switch.
• **Interval Time (10~300s)**	This column allows user to set how long system should issue a ping request to PD for detecting whether PD is alive or dead. Interval time range is from 10 seconds to 300 seconds.
• **Retry Count (1~5)**	This column allows user to set the number of times system retries ping to PD. For example, if we set count 2, it means that if system retries ping to the PD and the PD doesn't response continuously, the PoE port will be reset.
• **Action**	Allows user to set which action will be applied if the PD is without any response. The PoE Switch Series offers the following 3 actions: ■ **PD Reboot:** It means system will reset the PoE port that is connected to the PD. ■ **PD Reboot & Alarm:** It means system will reset the PoE port and issue an alarm message via Syslog. ■ **Alarm:** It means system will issue an alarm message via Syslog.
• **Reboot Time (30~180s)**	This column allows user to set the PoE device rebooting time as there are so many kinds of PoE devices on the market and they have a different rebooting time. The PD Alive-check is not a defining standard, so the PoE device on the

	market doesn't report reboot done information to the PoE Switch. Thus, user has to make sure how long the PD will take to finish booting, and then set the time value to this column. System is going to check the PD again according to the reboot time. If you are not sure of the precise booting time, we suggest you set it longer.

4.11 Maintenance

The Maintenance menu provides the following features for managing the system as shown below.

Figure 4.11-1 Maintenance Menu

Object	Description
Administrator	Allows changing the login username and password.
Date & Time	Allows setting Date & Time function.
Save/Restore Configuration	Export the VPN Security Gateway's configuration to local or USB sticker. Restore the VPN Security Gateway's configuration from local or USB sticker.
Firmware Upgrade	Upgrade the firmware from local or USB storage.
Reboot / Reset	Reboot or reset the system.
Auto Reboot	Allows setting auto-reboot schedule.
Diagnostics	Allows you to issue ICMP PING packets to troubleshoot IP.

4.11.1 Administrator

To ensure the VPN Security Gateway's security is secure, you will be asked for your password when you access the VPN Security Gateway's Web-based utility. The default user name and password are "**admin**". This page will allow you to modify the user name and passwords as shown below.

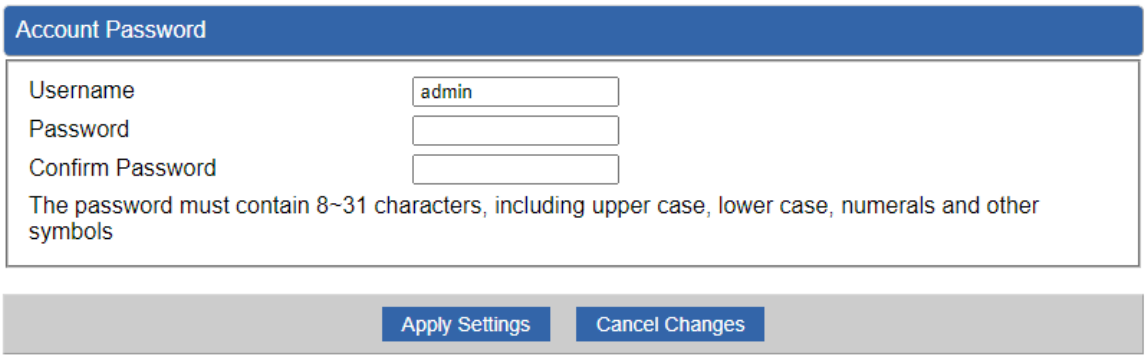


Figure 4.11-2 Account and Password Setting page

Object	Description
Username	Input a new username.
Password	Input a new password.
Confirm Password	Input password again.

4.11.2 Date and Time

This section assists you in setting the system time of the VPN Security Gateway. You are able to either select to set the time and date manually or automatically obtain the GMT time from Internet as shown below.

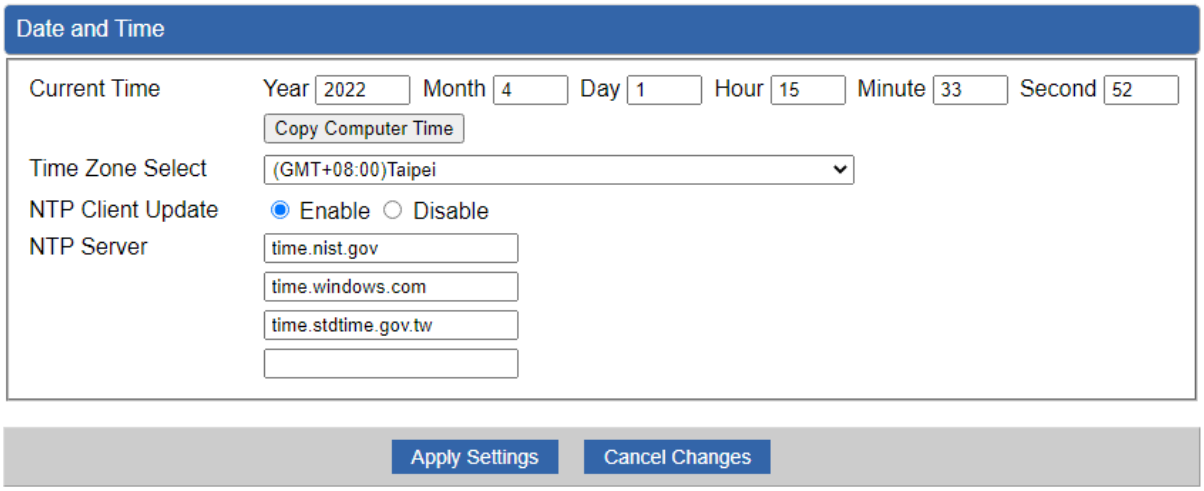


Figure 4.11-3 Date and Time setting page

Object	Description
Current Time	Show the current time. User is able to set time and date manually.
Time Zone Select	Select the time zone of the country you are currently in. The VPN Security Gateway will set its time based on your selection.
NTP Client Update	Once this function is enabled, VPN Security Gateway will automatically update current time from NTP server.
NTP Server	User may use the default NTP sever or input NTP server manually.

4.11.3 Saving/Restoring Configuration

This page shows the status of the configuration. You may save the setting file to either USB storage or PC and load the setting file from USB storage or PC as shown below.

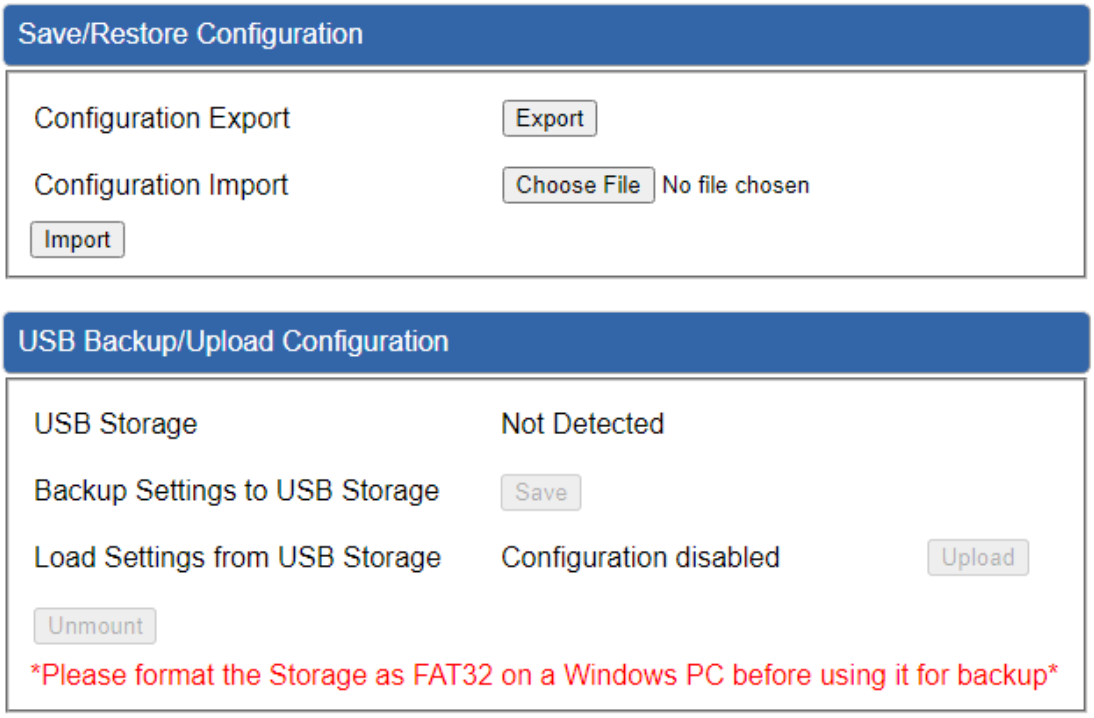


Figure 4.11-4 Saving/Restoring Configuration

■ Save Setting to PC

Object	Description
Configuration Export	Press the Export button to save setting file to PC.
Configuration Import	Press the Choose File button to select the setting file, and then press the Import button to upload setting file from PC.

■ Save Setting to USB Storage

Object	Description
USB Storage	The status of USB storage.
Backup Settings to USB Storage	Press the Save button to save setting file to USB storage.
Load Settings from USB Storage	Press the Upload button to upload setting file from USB storage.
Unmount	Before removing the USB storage from the VPN Security Gateway, please press the Umount button first.

4.11.4 Firmware Upgrade

This page provides the firmware upgrade function as shown below.

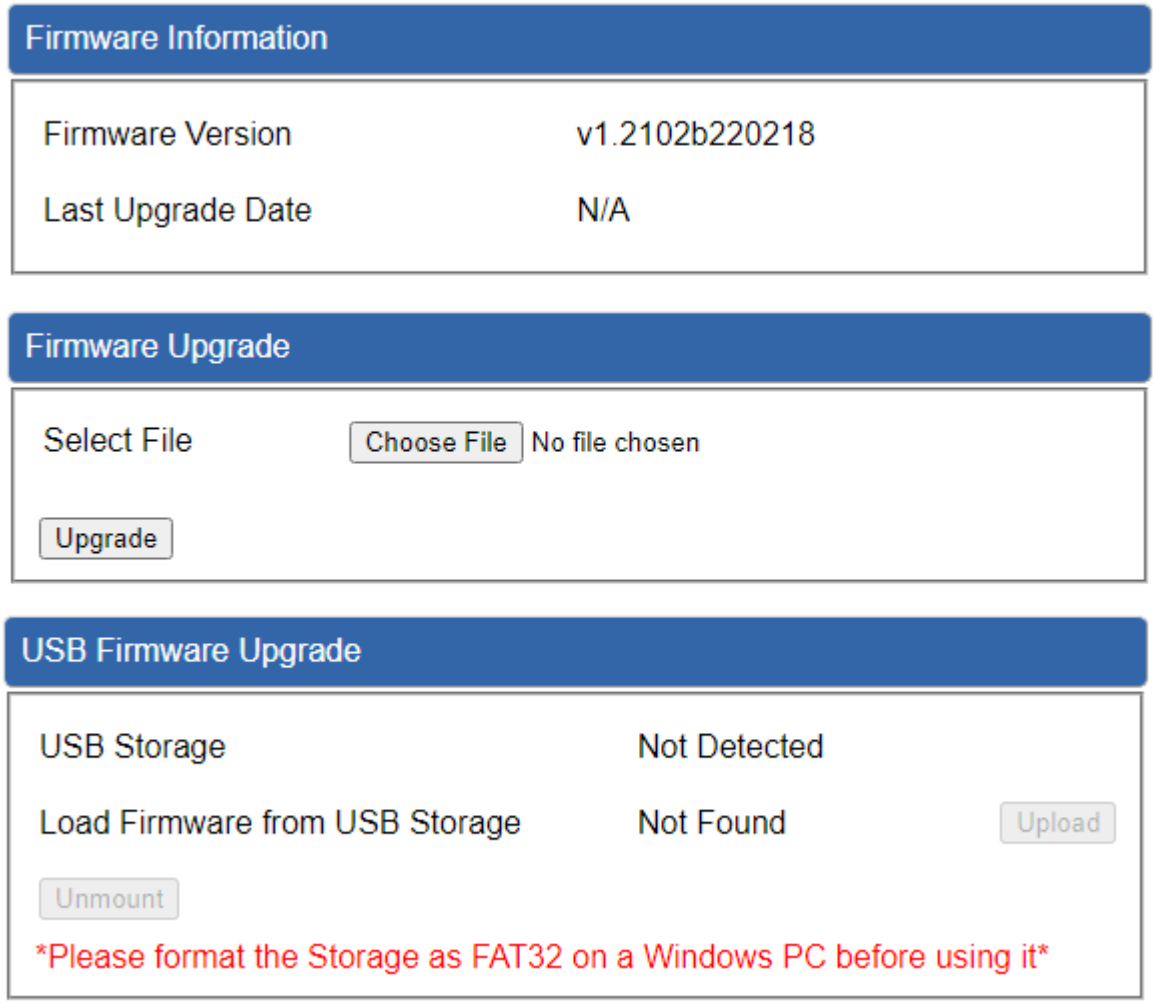


Figure 4.11-5 Firmware Upgrade page

Object	Description
Choose File	Press the button to select the firmware.
Upgrade	Press the button to upgrade firmware to system.

4.11.5 Reboot / Reset

This page enables the device to be rebooted from a remote location. Once the Reboot button is pressed, users have to re-log in the Web interface as shown below.

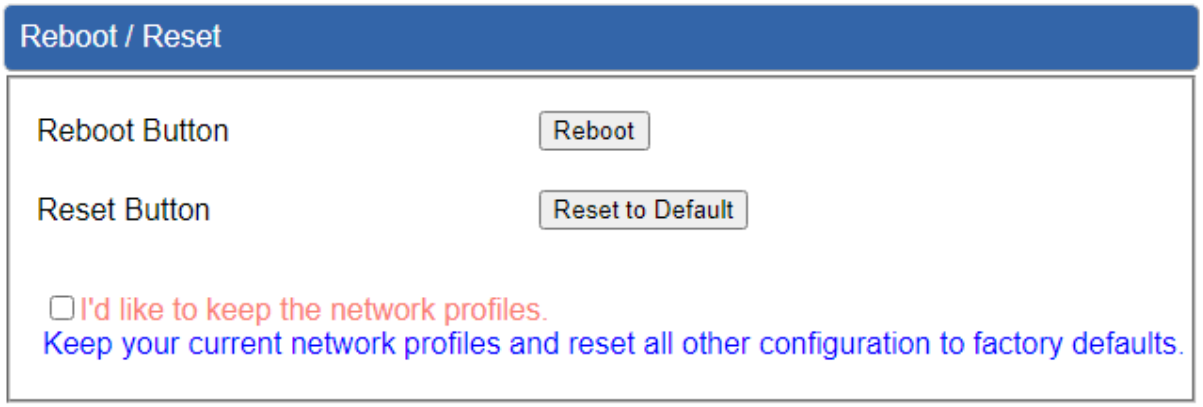


Figure 4.11-6 reboot/reset page

Object	Description
Reboot	Press the button to reboot system.
Reset to Default	Press the button to restore all settings to factory default settings.
I'd like to keep the network profiles.	Check the box and then press the Reset to Default button to keep the current network profiles and reset all other configurations to factory defaults.

4.11.6 Auto Reboot

This page enables the device to be Auto Rebooted on a Daily basis or based or Selected Week Day. The Web interface is shown below.

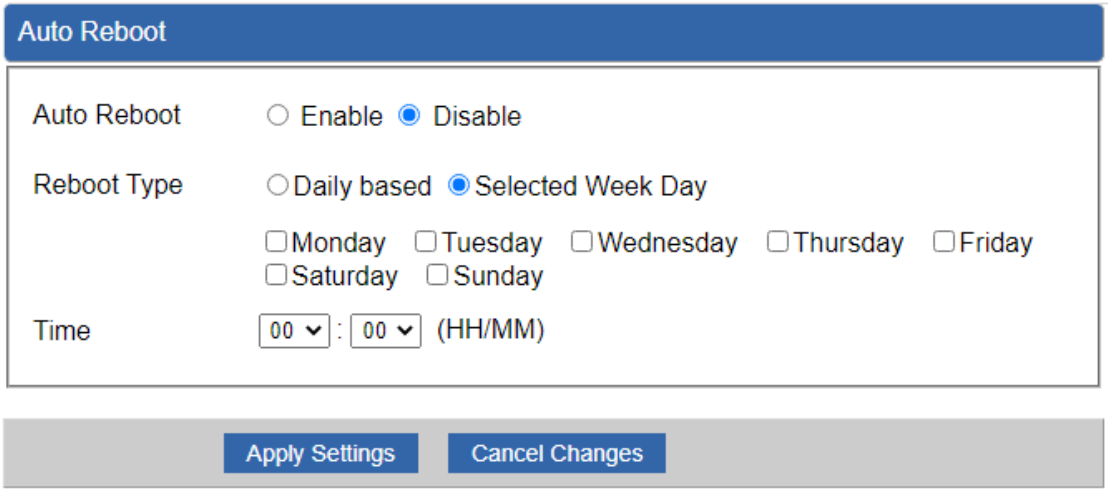


Figure 4.11-7 Auto Reboot Configuration

4.11.7 Diagnostics

The page allows you to issue ICMP PING packets to troubleshoot IP connectivity issues. After you press "Ping", ICMP packets are transmitted, and the sequence number and roundtrip time are displayed upon reception of a reply. The Page refreshes automatically until responses to all packets are received, or until a timeout occurs as shown below.

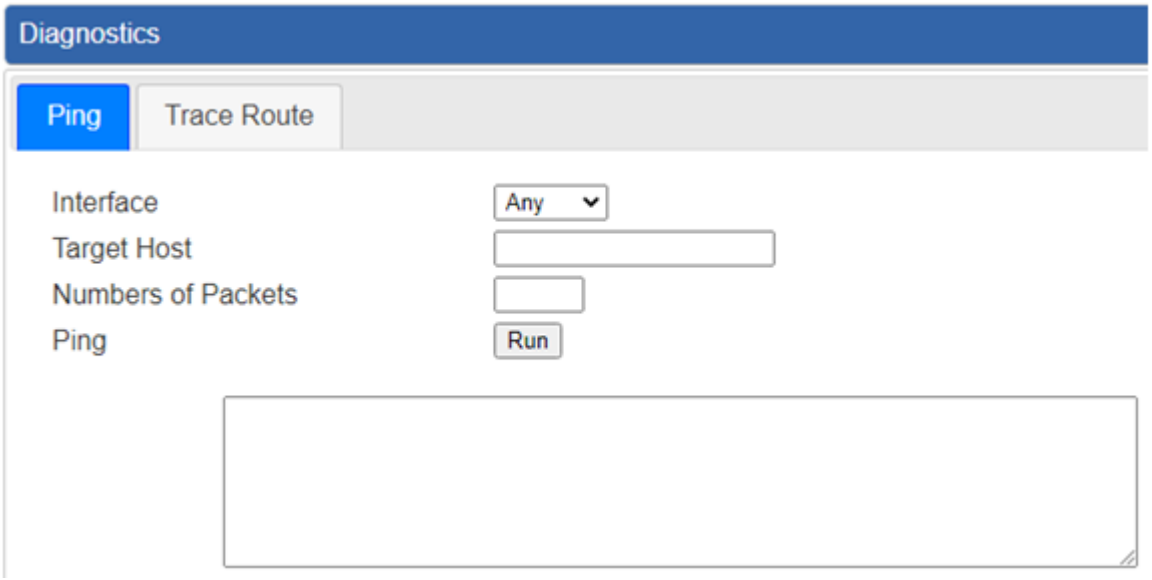


Figure 4.11-8 Diagnostics page

Object	Description
Interface	Select an interface of the VPN Security Gateway
Target Host	The destination IP Address or domain.
Number of Packets	Set the number of packets that will be transmitted; the maximum is 100.
Ping	The time of ping.

Note

Be sure the target IP address is within the same network subnet of the VPN Security Gateway, or you have to set up the correct gateway IP address.

Appendix A: DDNS Application

Configuring PLANET DDNS steps:

Step 1: Visit DDNS provider's web site and register an account if you do not have one yet. For example, register an account at http://planetddns.com

Step 2: Enable DDNS option through accessing web page of the device.

Step 3: Input all DDNS settings.