

Quick User Guide NMS-1000V



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OVERVIEW

Overview

➤ Main Features:

| | |
|---------------------|---|
| Dashboard | Providing the at-a-glance view of system, device summary, traffic, PoE network status |
| Wizard setup | Easy to use step-by-step guidance |
| Node Discovery | To detect PLANET managed devices available and allow AP grouping to accelerate AP management |
| Topology Viewer | A topology of network devices compliant with SNMP, ONVIF, Smart Discovery and LLTD Protocol |
| Event Reports | The status of a network can be reported via network alarm and system log |
| Alarm System | Popup alerts and email alerts for the administrator via the SMTP server |
| Batch Provisioning | Enabling multiple APs to be configured and upgraded at one time by using the designated profile |
| Coverage Heat Map | Real-time signal coverage of APs on the user-defined floor map to optimize Wi-Fi field deployment |
| Customized Profile | Allowing the creation and maintenance of multiple wireless profiles |
| Auto Provisioning | Multi-AP provisioning with one click |
| Cluster Management | Simplifying high-density AP management |
| Zone Plan | Optimizing AP deployment with actual signal coverage |
| Authentication | Built-in RADIUS server seamlessly integrated into the enterprise network |
| User Control | Allowing on-demand account creation and user-defined access policy |
| Scalability | Free system upgrade and AP firmware bulk upgrade capability |
| Maximum Scalability | 50 floor maps, 1024 nodes, 128 AP groups, 128 SSID profiles, 1024 managed APs, 20,000 clients, 20,000 RADIUS user accounts, 50 RADIUS user groups and 1024 RADIUS clients |

Overview

➤ Network Management Characteristics

- Built-in DHCP server
- Built-in RADIUS server
- SSL secure access
- Web-based GUI management interface
- SNMP v1, v2c, and v3 management
- Supports PLANET DDNS/Easy DDNS

➤ Industrial-grade Physical Hardware

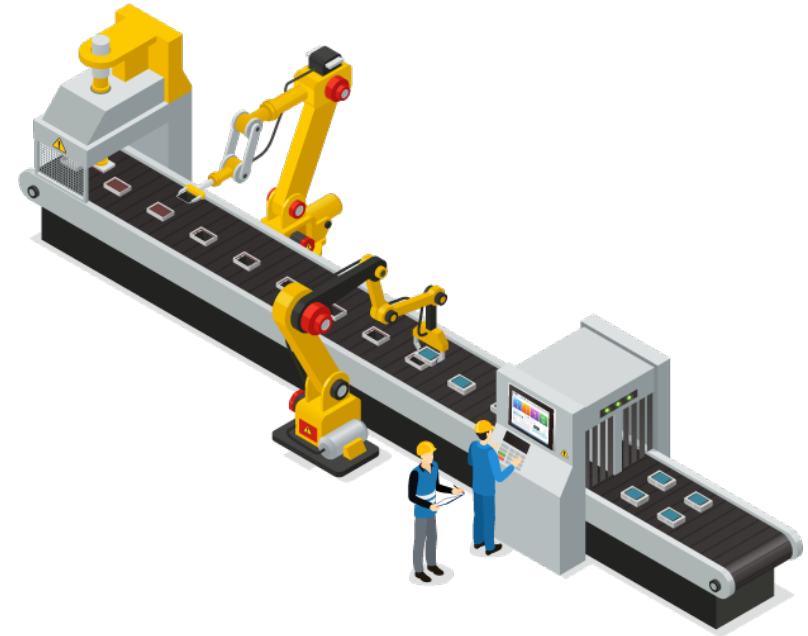
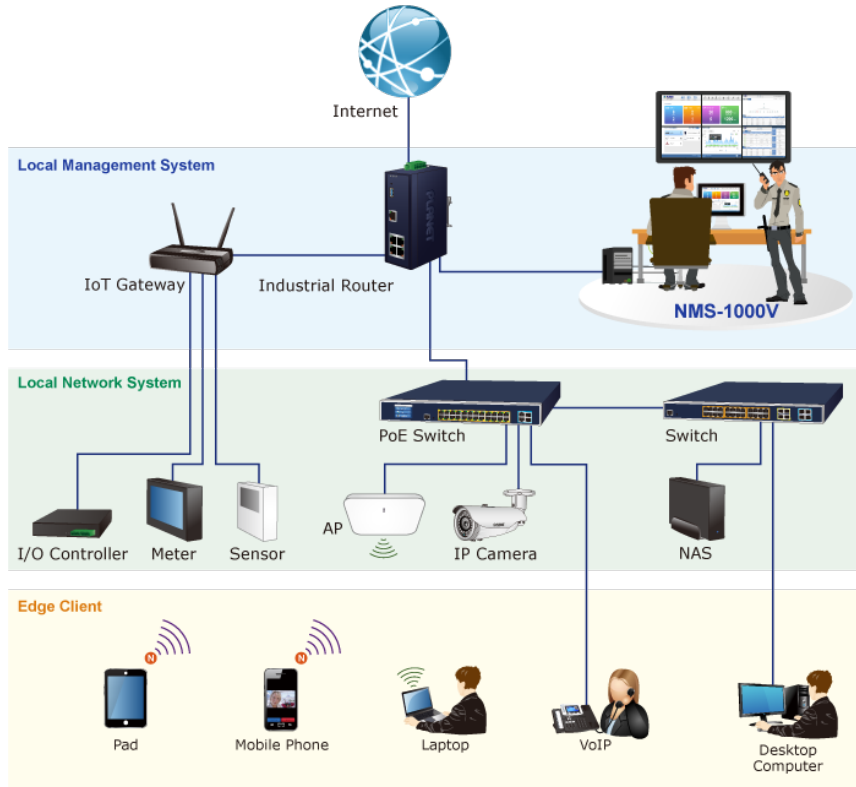
- 2 10/100/1000BASE-T Gigabit Ethernet RJ45 ports
- 2 USB 3.0 ports for configuration backup and restoration
- 1 audio line out (reserve)
- 1 HDMI interface
- 2 DB-9 COM1,COM2 (reserved)
- 1 3-pin DC power input terminal
- 1 2-pin connector for power on/off button (reserve)
- VESA (100 x 100) panel mount

➤ Physical Specifications

| | | |
|--|--|------------------------------------|
| Storage | 2.5" 32G SATA3 HDD | |
| Touch LCD Size | NMS-1000V-12: 12.1" TFT-LCD | NMS-1000V-10: 10.1" TFT-LCD |
| Touch Type | Resistive Touch Window Projected Capacitive Touch | |
| Display Resolution | NMS-1000V-12: 1024 x 768 | NMS-1000V-10: 1280 x 800 |
| Display Luminance (cd/m ²) | NMS-1000V-12: 500 | NMS-1000V-10: 350 |
| Display Viewing Angle (H°/V°) | NMS-1000V-12: 160(H)/140(V) | NMS-1000V-10: 160(H)/160(V) |
| Display Contrast | NMS-1000V-12: 700:1 | NMS-1000V-10: 800:1 |
| Display Backlight Lifetime (hrs.) | NMS-1000V-12: 30,000 hrs. | NMS-1000V-10: 40,000 hrs. |
| Light Transmission (%) | Resistive Touch Window: over 80% Projected Capacitive Touch: over 90% | |
| Dimensions (W x D x H) | NMS-1000V-12: 319 x 51.7 x 245 mm | NMS-1000V-10: 285 x 49 x 189 mm |
| Weight | NMS-1000V-12: 2.9 kg | NMS-1000V-10: 2 kg |
| Enclosure | Aluminum Die-casting Chassis | |
| Power Requirements | DC IN 9~36V 60W adapter 12V 5A with terminal block AC 100~240V, 2.0A, 60~50Hz. | |

APPLICATIONS

Applications



BEFORE FIRST LOGIN

Front & Rear Panels

◆ Front Panel

Power LED(Green)



Front & Rear Panels

◆ Back Panel



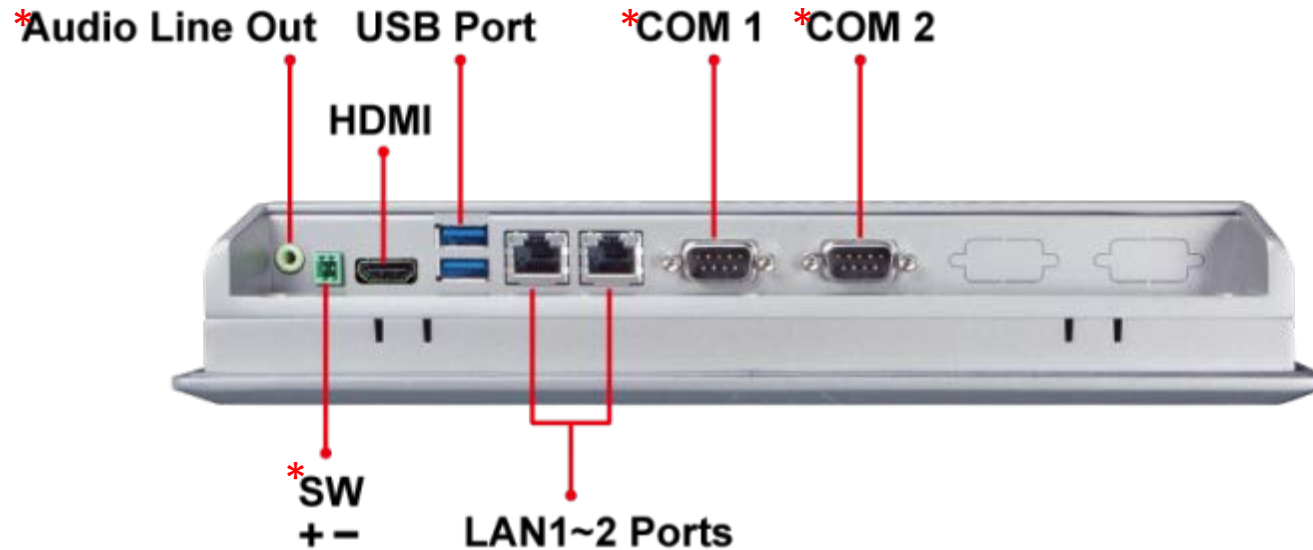
9-36V DC IN



*Just connect NMS-1000V DC IN to turn on system.

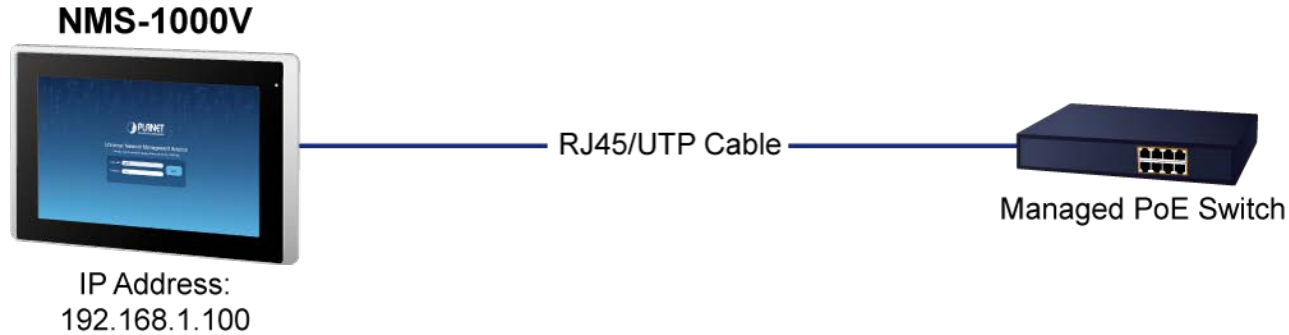
Front & Rear Panels

◆ Bottom Panel



*.Function reserved

Device Setting



Switch: Log in to the Switch's Web User Interface and refer to the picture below to enable the SNMP and LLDP function as shown in Figures 1 and 2.

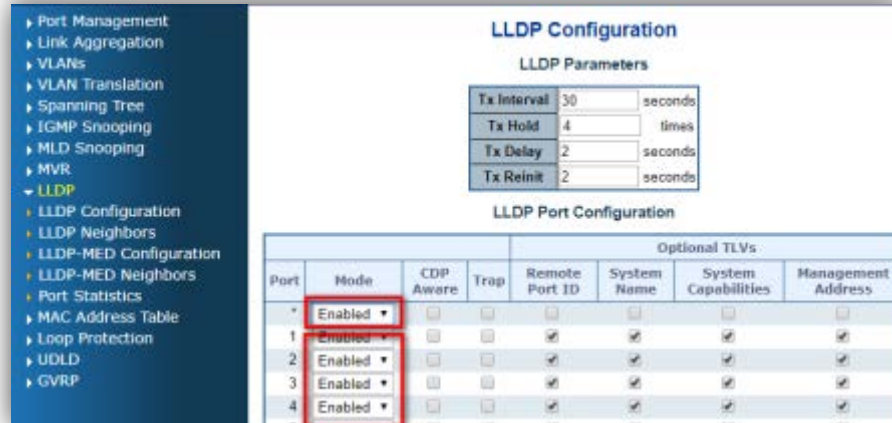
AP: Log in to the AP's Web User Interface and refer to Figure 3 below to configure the AP to "Managed AP". Then, click "Apply Change". To support SNMP AP, enable the SNMP function.

IP Cam: The ONVIF function is enabled by default.

Device Setting



(Figure 1)



(Figure 2)

Device Setting

| | |
|-------------------------|--|
| Setup Menu: | Operation Mode |
| > Operation Mode | AP Operation mode configuration is used to configure the managed AP administrative mode. |
| > Setup Wizard | |
| > WLAN1 (5 GHz) | <input type="radio"/> Standalone AP In Mode Standalone AP , the AP acts as an individual AP in the network, and you manage it by using the Administrator Web User Interface (UI), or SNMP. |
| > WLAN2 (2.4 GHz) | <input checked="" type="radio"/> Managed AP In Mode Managed AP , the AP is part of the PLANET Wireless AP controller System, and you manage it by using the WAPC Wireless Switch. |
| > TCP / IP Settings | <input type="checkbox"/> AP Controller IP Address <input type="text" value="0.0.0.0"/> |
| > Management | |
| > Logout | |

(Figure 3)

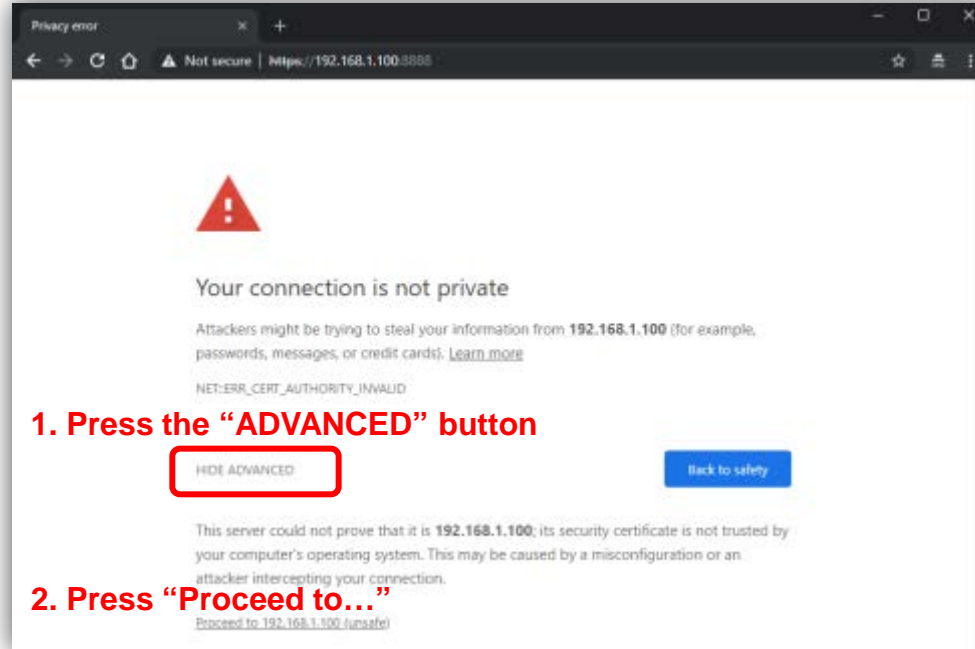
Logging in NMS

- ◆ Username: admin
- ◆ Password: admin



Remote Logging in NMS

- ◆ Open Chrome/Firefox to log in the NMS.(Default IP: <https://192.168.1.100:8888>)
- ◆ Please use Chrome/Firefox to get fully supported. (UI Resolution [1280 x 768](#))



SETUP WIZARD

Account Modification

Steps to modifying account:

- ◆ 1. Please key in a new account, except using "admin"
- ◆ 2. New Password must include at least 1*[a~z], 1*[A~Z], 1*[0~9], 1*[~, !, @, ..., w/o "?"] and must contain at least 8 characters.

Account Modification

| Configuration | |
|-----------------|----------|
| User Name | admin123 |
| Password | 1qaz!QAZ |
| Retype Password | |

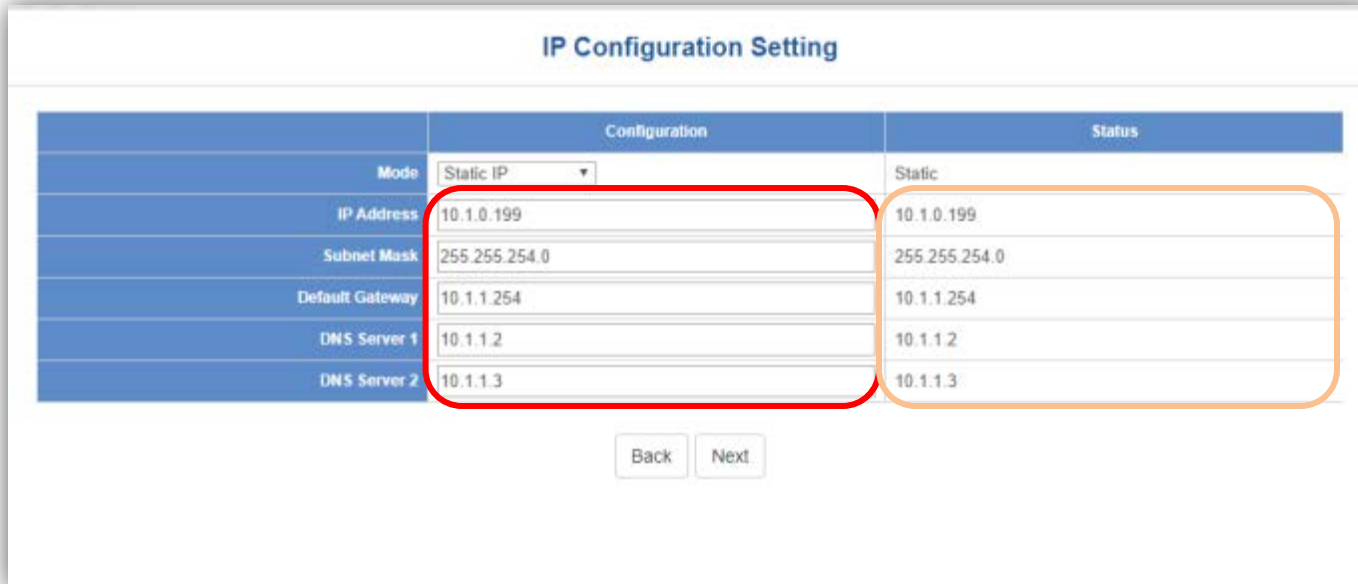
*Please key in a new account, except using "admin"
New Password must be included at least 1*[a~z], 1*[A~Z], 1*[0~9], 1*[~, !, @, ..., w/o "?"]

Next

IP Configuration Setting

- ◆ 1. Select “Static IP” or ” DHCP Client” for IP configuration setting.
- ◆ 2. IP status is shown in real time.

*If you want to use the SMTP Alarm function, you must at least enter one DNS server.



| | Configuration | Status |
|-----------------|---------------|---------------|
| Mode | Static IP | Static |
| IP Address | 10.1.0.199 | 10.1.0.199 |
| Subnet Mask | 255.255.254.0 | 255.255.254.0 |
| Default Gateway | 10.1.1.254 | 10.1.1.254 |
| DNS Server 1 | 10.1.1.2 | 10.1.1.2 |
| DNS Server 2 | 10.1.1.3 | 10.1.1.3 |

Back Next

SNMP Preference Setting

- ◆ 1. Select Region for AP Control (ETSI or FCC).
- ◆ 2. And enter the RO/RW Community for AP's SNMP.

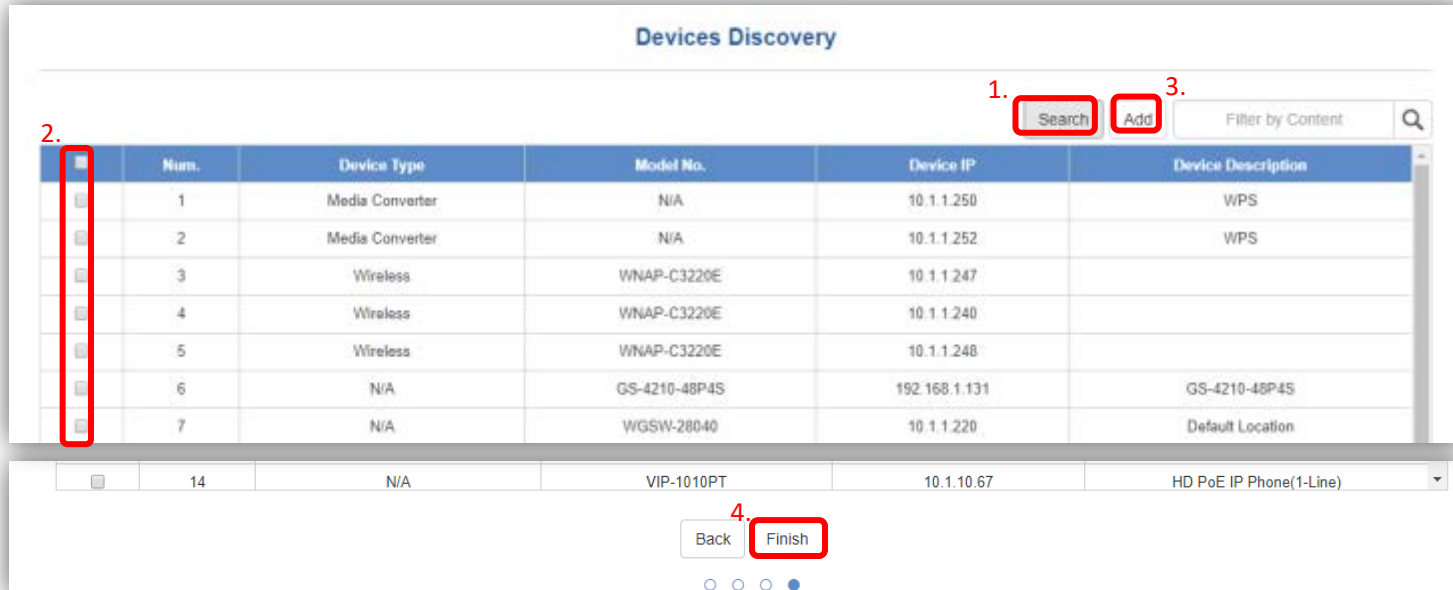
SNMP Preference Setting

| | | Configuration |
|--------------|--------------------------------------|---------------|
| Region * | <input type="text" value="ETSI"/> | |
| RO Community | <input type="text" value="public"/> | |
| RW Community | <input type="text" value="private"/> | |

*Select Region for AP Control (ETSI or FCC)

Devices Discovery

- ◆ 1. Press the Search button to discover PLANET devices.
- ◆ 2. Give a check to a box and press the “Add” button to add a device to the NMS system.
- ◆ 3. Press the Finish button to leave the Wizard mode and finish the start-up setting.



Devices Discovery

1. Search Add Filter by Content

| Num. | Device Type | Model No. | Device IP | Device Description |
|------|-----------------|---------------|---------------|--------------------|
| 1 | Media Converter | N/A | 10.1.1.250 | WPS |
| 2 | Media Converter | N/A | 10.1.1.252 | WPS |
| 3 | Wireless | WNAP-C3220E | 10.1.1.247 | |
| 4 | Wireless | WNAP-C3220E | 10.1.1.240 | |
| 5 | Wireless | WNAP-C3220E | 10.1.1.248 | |
| 6 | N/A | GS-4210-48P4S | 192.168.1.131 | GS-4210-48P4S |
| 7 | N/A | WGSW-28040 | 10.1.1.220 | Default Location |

2. 14 N/A VIP-1010PT 10.1.10.67 HD PoE IP Phone(1-Line)

4. Back Finish

MAIN UI INTRODUCTION

Home Page - Dashboard UI Structure



The dashboard home page is structured as follows:

- A:** Header area containing the PLANET logo, summary statistics (40 Device(s), 80 Client(s), 10 Group(s)), and a navigation menu with icons for Home, Location, Traffic, Settings, Refresh, System Settings, Global, Tools, and Power.
- B:** Main dashboard area containing four summary cards: Switch (8 Online, 2 Offline), Router (2 Online, 1 Offline), Wireless AP (20 Online, 0 Offline), and PoE (800 Total Usage, 1200 Total Budget).
- C:** The four summary cards mentioned in B.
- D:** Device Type Summary section, including a Zero Filter toggle (ON) and a table of device counts:

| Device Type | Count |
|-----------------------|-------|
| Switch | 7 |
| IP Camera | 20 |
| Unknown | 2 |
| Industrial Automation | 3 |
| Wireless(AP) | 5 |
- E:** History Graph section showing a Traffic graph for PoE over a 1-day period. A tooltip for 3/4/2020 12:35:30 PM shows Rx: 32.5 Mbps and Tx: 8.3 Mbps.
- F:** Footer area containing the copyright notice: Copyright © PLANET Technology Corporation. All rights reserved. and a chat icon.

Main Dashboard - Description

| Item | Description | Remarks |
|------|----------------------------|---|
| A | Device Status Summary | <ol style="list-style-type: none"> 1. Roughly shows the system status: Current devices online (total online), clients (total active clients), device groups (total groups) 2. Click the PLANET Logo to connect to PLANET Web site. |
| B | System Menu | <p>From left to right:</p> <ol style="list-style-type: none"> 1. Dashboard: Provides the whole system view and wireless network status 2. Domain: Discovery / Device List / Topology View / Event / syslog page 3. Advanced Graph: future feature 4. AP Control: 1. Preference, 2. Profiles, 3. Control, 4. Map It and 5. Statistics 5. Refresh 6. System Configuration: Alert configuration, Date and Time, Interface, IP, Account, Wizard setting 7. Network Services: 1. Planet DDNS, 2. DHCP Server, 3. SMPT, 4. SNMP Agent, and 5. RADIUS Service, 8. Maintenance: System upgrade, backup and restoration, factory default, system setting. 9. Exit: Click to opt for the logout, reboot or shutting down of the system |
| C | Local Site Information | <ol style="list-style-type: none"> 1. Switch status, 2. Router status, 3. Access Point status and 4. Total PoE status, <p>*Click Device type button to filter each type of device via device list.</p> |
| D | Device Type Summary | Show the real-time total quantity of devices under different types |
| E | History Graph | Show the history graph of WAN traffic / total PoE usage and budget |
| F | Popup Alert Message Window | Open to show the system event instantly |

DASHBOARD INTRODUCTION

Dashboard - Local Site Information

- **Local Site Information:** In this area, you can view 1. Switch, 2. Router , 3. Access Point online/off status and 4. Total PoE usage and budget status.
- Click Router “>” button to see the WAN real-time traffic throughput of Mbps, Kbps... . Click Router “<” button to go back to status.



Dashboard (Home)

- Click the Device type button to filter each type device via device list.

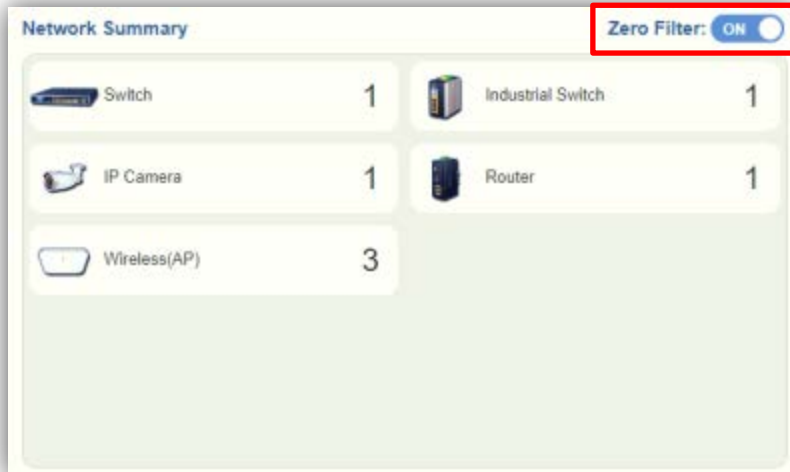



| Status | Group | MAC Address | Device Type | Model No. | Version | IP Address | Device Description | Authorization Status | Action |
|--------|-------|-------------------|-------------------|---------------|---------------|---------------|----------------------------|----------------------|-------------------------------|
| Online | | a8:f7:e0:62:31:80 | Industrial Switch | IGS-5225-8P48 | v3.440b200331 | 192.168.1.160 | IE L2+ Managed PoE+ Switch | Online | [Refresh] [Refresh] [Refresh] |
| Online | | a8:f7:e0:65:ed:e1 | Switch | GS-4210-8P26 | v2.308b200330 | 192.168.1.148 | L2/L4 Managed PoE Switch | Online | [Refresh] [Refresh] [Refresh] |

- **Switch:** Click the “Switch Button” to filter the type of Switch, Industrial Switch, and Media Converter.
- **Router:** Click to “Router Button” to filter the type of Router.
- **Wireless AP:** Click the “Wireless AP Button” filter the type of Wireless (AP).

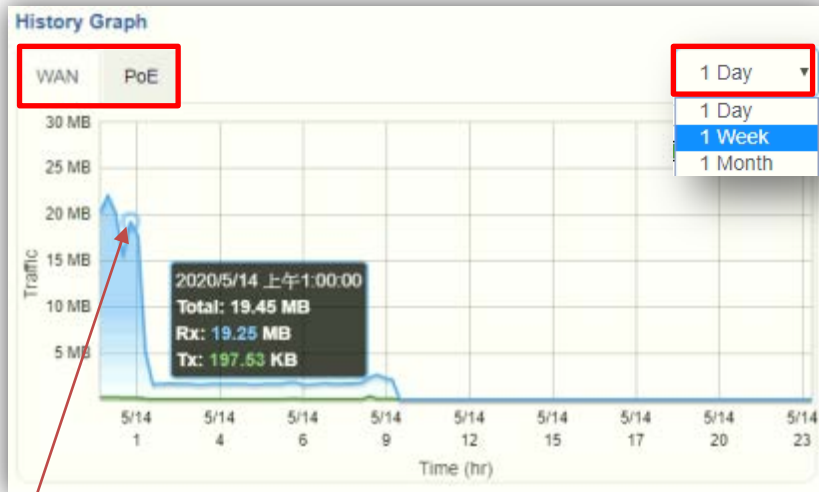
Dashboard - Device Type Summary

- **Device Type Summary** : Show the real-time total quantity of devices under different types.
- **Open the “Zero Filter Button”** to filter the 0 quantity of devices type not shown. If this function is closed, you can see all types that NMS can manage.
- Click the Device type button to filter each type of device via device list.



Dashboard - History Graph

- **History Graph:** Show the history graph of WAN traffic / total PoE usage and budget.
- Press the “WAN” or “PoE” sheet button to change the type of history graph. Press the “Interval Button” to change the interval for day, week, or month. Then you can see the WAN traffic / total PoE usage and budget.



*Moving finger or mouse cursor on graph can let you see the detailed information.

FOOTER INTRODUCTION

Footer - Popup Alert Message

- **Popup Alert Message** : Click the “Message” icon (No. 1) to show the last 30 system events in popup window.
- The last event will be shown on the top page; press the “X” icon (No. 2) to close each message.



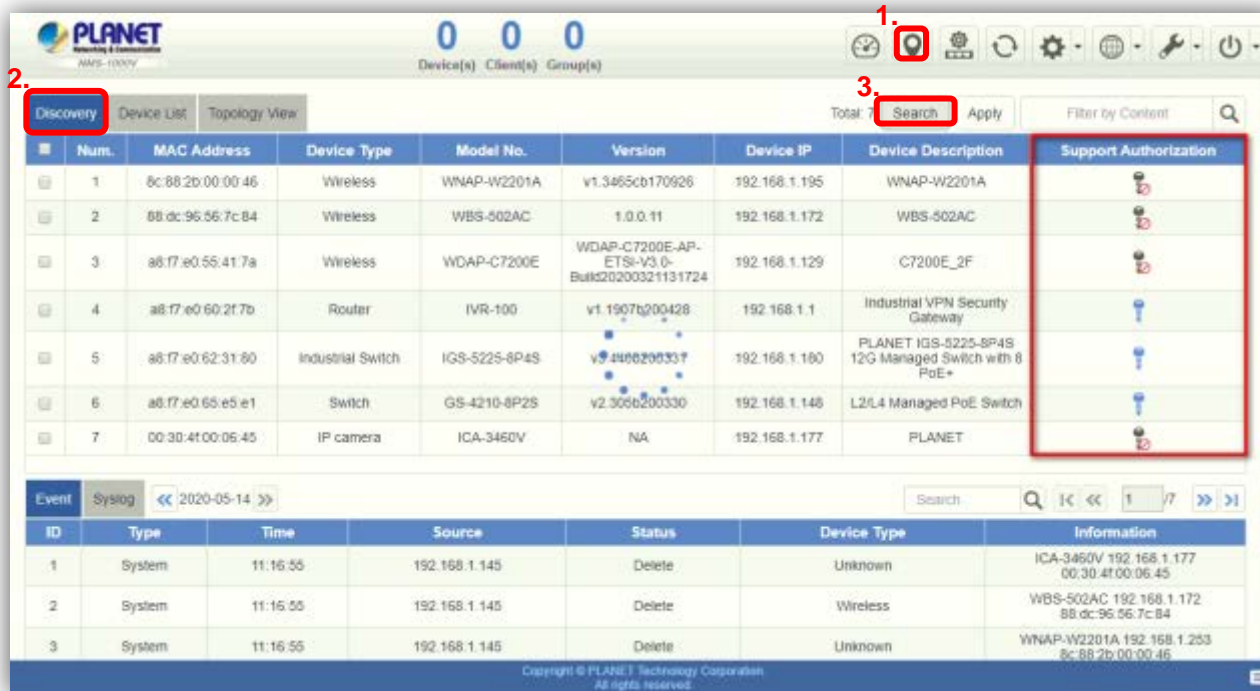
The screenshot displays the PLANET network management interface. The main dashboard shows three large status cards for Switch, Router, and Wireless AP, each with '0' devices online and '0' offline. Below these is a 'Network Summary' section with a 'Zero Filter' set to 'OFF' and a 'History Graph' showing WAN and PoE traffic. A popup window titled 'Alert Message' is open on the right, displaying a list of system events. The top event is highlighted, and a red box labeled '2.' points to the 'X' icon in the top right corner of the popup, used for closing the message. Another red box labeled '1.' points to a message icon in the bottom right corner of the main interface, used for opening the popup.

| Time | Status | Device Type | Information |
|----------|------------|-------------------|---|
| 10:05:00 | Connect | Industrial Switch | IGS-5225-SP4S 192.168.1.180 a8-f7-e0-62-31-80 |
| 09:18:00 | Disconnect | Industrial Switch | IGS-5225-SP4S 192.168.1.180 a8-f7-e0-62-31-80 |
| 09:18:00 | Connect | Industrial Switch | IGS-5225-SP4S 192.168.1.180 a8-f7-e0-62-31-80 |
| 09:18:00 | Disconnect | Industrial Switch | IGS-5225-SP4S 192.168.1.180 a8-f7-e0-62-31-80 |

SYSTEM MENU - DOMAIN




Discovery

- ◆ Press the “Domain” icon (No. 1) , and then press Discovery (No. 2) and Search (No. 3) to find the managed APs and continue other settings.



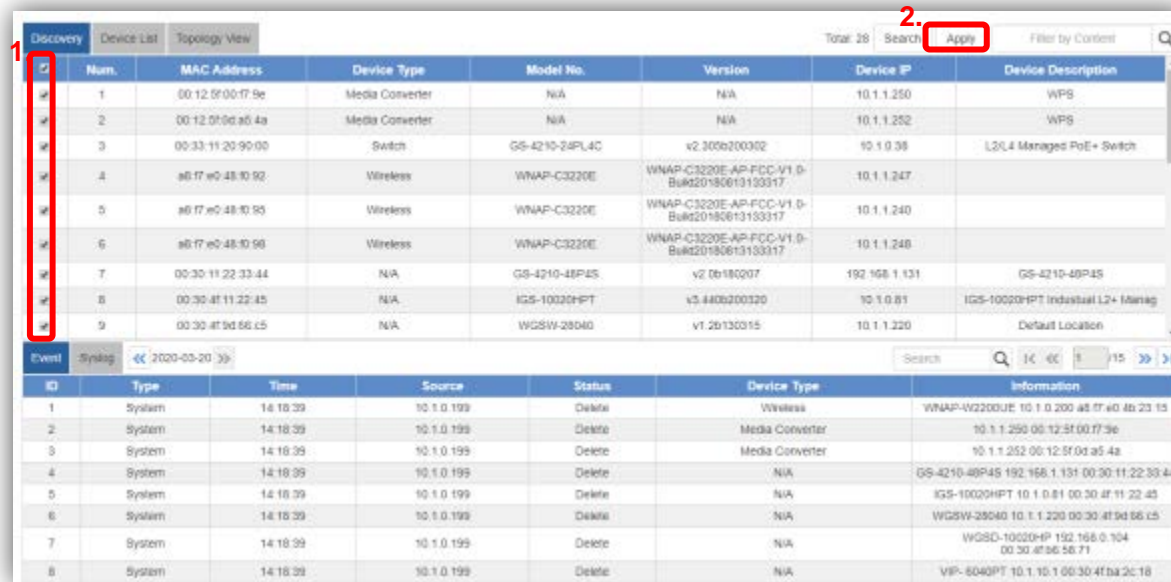
| Num. | MAC Address | Device Type | Model No. | Version | Device IP | Device Description | Support Authorization |
|------|-------------------|-------------------|---------------|---|---------------|---|-----------------------|
| 1 | 8c:8b:2b:00:00:46 | Wireless | WNAP-W2201A | v1.3465cb170926 | 192.168.1.195 | WNAP-W2201A | Not supported |
| 2 | 88:dc:96:56:7c:84 | Wireless | WBS-502AC | 1.0.0.11 | 192.168.1.172 | WBS-502AC | Not supported |
| 3 | a8:f7:e0:55:41:7a | Wireless | WDAP-C7200E | WDAP-C7200E-AP-ETSI-V3.0-Bulk20200321131724 | 192.168.1.129 | C7200E_2F | Not supported |
| 4 | a8:f7:e0:60:2f:7b | Router | IVR-100 | v1.1907b200428 | 192.168.1.1 | Industrial VPN Security Gateway | Supported |
| 5 | a8:f7:e0:62:31:80 | Industrial Switch | IGS-5225-8P4S | v3.4868200331 | 192.168.1.180 | PLANET IGS-5225-8P4S 12G Managed Switch with 8 PoE+ | Supported |
| 6 | a8:f7:e0:65:e5:e1 | Switch | GS-4210-8P2S | v2.3006200330 | 192.168.1.148 | L2/L4 Managed PoE Switch | Supported |
| 7 | 00:30:4f:00:05:45 | IP camera | ICA-3450V | NA | 192.168.1.177 | PLANET | Not supported |

➤ **Support Authorization:** If the devices support MQTT protocol, the status will show “Blue Key”.

| Key | Status |
|---|--------------------------|
|  | Supported |
|  | Not supported |
|  | Managed by the other NMS |

Adding Devices to List

- Select devices (No. 1) by checking the boxes, and then press the “Apply” icon (No. 2) to add devices to management list.



The screenshot shows a network management interface with two main sections. The top section is a table for device discovery, and the bottom section is an event log.

Discovery Table:

| Num. | MAC Address | Device Type | Model No. | Version | Device IP | Device Description |
|------|-------------------|-----------------|----------------|--|---------------|-----------------------------------|
| 1 | 00:12:5f:00:17:9e | Media Converter | N/A | N/A | 10.1.1.250 | WPS |
| 2 | 00:12:0f:6d:a5:4a | Media Converter | N/A | N/A | 10.1.1.252 | WPS |
| 3 | 00:33:11:20:90:00 | Switch | GS-4210-24PL4C | v2.300b200302 | 10.1.0.38 | L2/L4 Managed PoE+ Switch |
| 4 | a6:17:e0:48:10:92 | Wireless | WNAP-C3220E | WNAP-C3220E-AP-FCC-V1.0-Bulk20190613193317 | 10.1.1.247 | |
| 5 | a6:17:e0:48:10:95 | Wireless | WNAP-C3220E | WNAP-C3220E-AP-FCC-V1.0-Bulk20190613193317 | 10.1.1.240 | |
| 6 | a6:17:e0:48:10:98 | Wireless | WNAP-C3220E | WNAP-C3220E-AP-FCC-V1.0-Bulk20190613193317 | 10.1.1.248 | |
| 7 | 00:30:11:22:33:44 | N/A | GS-4210-48P4S | v2.0b180207 | 192.168.1.131 | GS-4210-48P4S |
| 8 | 00:30:4f:11:22:45 | N/A | IGS-10020HPT | v3.440b200320 | 10.1.0.81 | IGS-10020HPT Industrial L2+ Manag |
| 9 | 00:30:4f:9d:66:c5 | N/A | WGSW-28040 | v1.2b130315 | 10.1.1.220 | Default Location |

Event Log Table:

| ID | Type | Time | Source | Status | Device Type | Information |
|----|--------|----------|------------|--------|-----------------|---|
| 1 | System | 14:18:39 | 10.1.0.199 | Delete | Wireless | WNAP-VG200UE 10.1.0.200 a5:17:e0:4b:23:15 |
| 2 | System | 14:18:39 | 10.1.0.199 | Delete | Media Converter | 10.1.1.250 00:12:5f:00:17:9e |
| 3 | System | 14:18:39 | 10.1.0.199 | Delete | Media Converter | 10.1.1.252 00:12:0f:6d:a5:4a |
| 4 | System | 14:18:39 | 10.1.0.199 | Delete | N/A | GS-4210-48P4S 192.168.1.131 00:30:11:22:33:44 |
| 5 | System | 14:18:39 | 10.1.0.199 | Delete | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 6 | System | 14:18:39 | 10.1.0.199 | Delete | N/A | WGSW-28040 10.1.1.220 00:30:4f:9d:66:c5 |
| 7 | System | 14:18:39 | 10.1.0.199 | Delete | N/A | WGSW-10020HP 192.168.0.104 00:30:4f:9d:66:c5 |
| 8 | System | 14:18:39 | 10.1.0.199 | Delete | N/A | VF-6040PT 10.1.10.1.00:30:4f:ba:2c:18 |

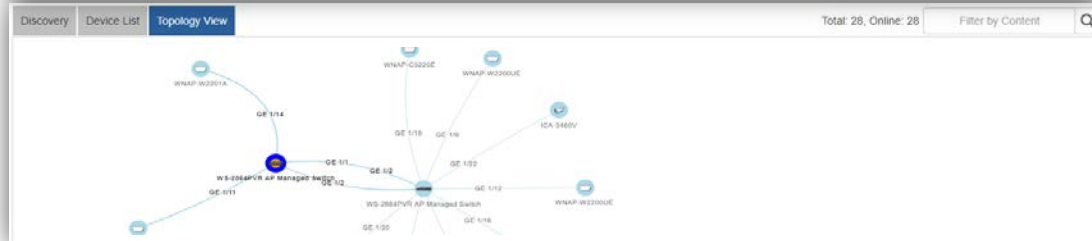
Device List and Topology View

- ◆ Press “Device List” to see the device status.
- ◆ Press “Topology View” to see the domain network topology after one minute.
- ✧ If you do not see the topology, please check devices to enable SNMP and LLDP function.

| Discovery | Device List | Topology View | Total: 7, Online: 7 | | | | | Filter by Content | | |
|--------------------------|--------------------------------------|---------------|---------------------|-------------------|--|-----------------|---------------|----------------------------|----------------------|--------|
| ☑ | Status | Group | MAC Address | Device Type | Model No. | Version | IP Address | Device Description | Authorization Status | Action |
| <input type="checkbox"/> | ● | | 00:30:4f:00:05:45 | IP camera | ICA-3460V | N/A | 192.168.1.177 | PLANET | | |
| <input type="checkbox"/> | ● | | 58:dc:96:56:7c:84 | Wireless | WBS-502AC | 1.0.0.11 | 192.168.1.172 | WBS-502AC | | |
| <input type="checkbox"/> | ● | | 8c:88:2b:00:00:46 | Wireless | WNAP-W2201A | v1.3465cb170926 | 192.168.1.195 | WNAP-W2201A | | |
| <input type="checkbox"/> | ● | | a8:f7:e0:55:41:7a | Wireless | WDAP-C7200E-AP-ETSI-V3.0-5uk8202003211317-24 | | 192.168.1.129 | C7200E_2F | | |
| <input type="checkbox"/> | ● | | a8:f7:e0:60:2f:7b | Router | IVR-100 | v1.19076200428 | 192.168.1.1 | PLANET IVR-100 VPN Gateway | | |
| <input type="checkbox"/> | ● | | a8:f7:e0:62:31:80 | Industrial Switch | IGS-5225-6P4S | v3.440b200331 | 192.168.1.180 | IE L2+ Managed PoE+ Switch | | |
| <input type="checkbox"/> | ● | | a8:f7:e0:55:e5:e1 | Switch | GS-4210-6P2S | v2.305b200330 | 192.168.1.148 | L2/L4 Managed PoE Switch | | |

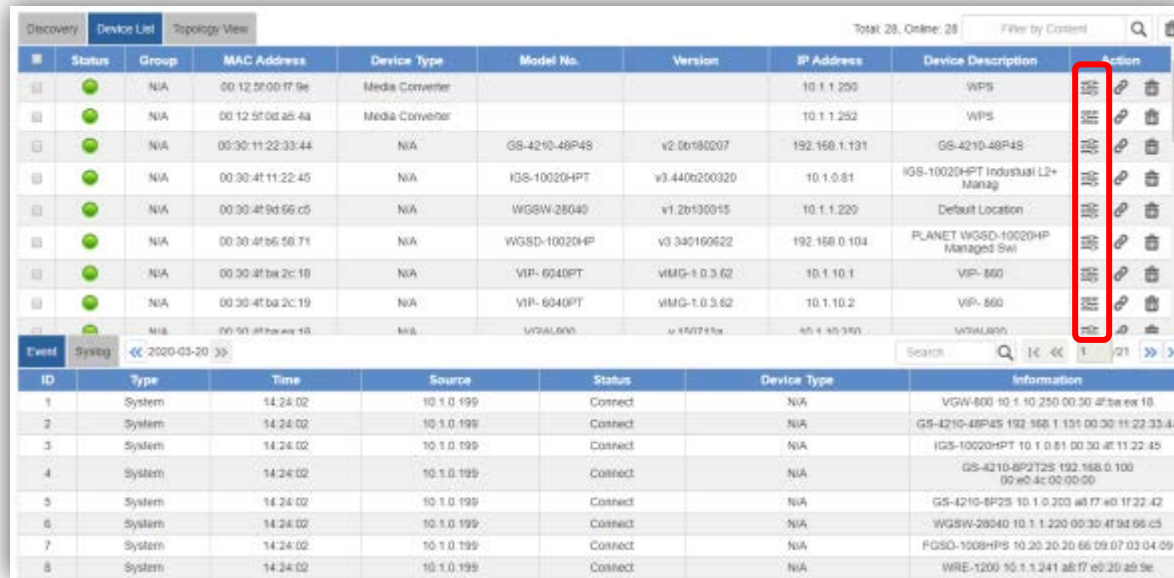
- **Authorization Status:** If the devices support MQTT protocol and are managed currently with NMS, the authorization status will show “Green Key”.

| Key | Status |
|-----|--------------------------|
| | Managed |
| | Not supported |
| | Managed Fail |
| | Managed by the other NMS |



Device Identification

- ◆ Press the “Identification” icon to modify the device description, type, and web protocol information.

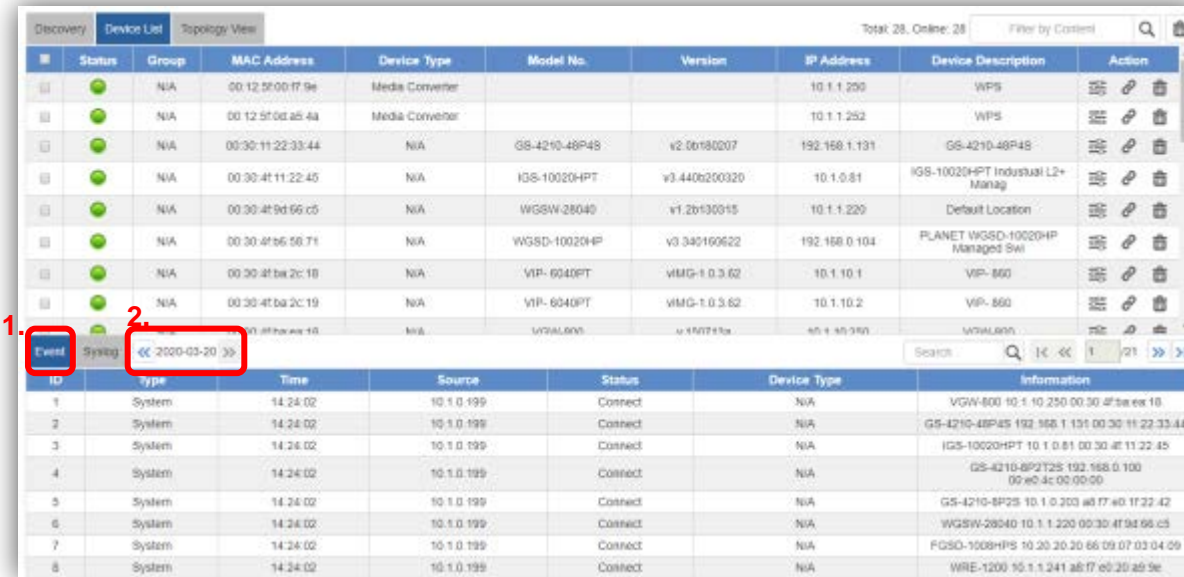


| Status | Group | MAC Address | Device Type | Model No. | Version | IP Address | Device Description | Action |
|--------|-------|-------------------|-----------------|---------------|---------------|---------------|-----------------------------------|--------|
| ● | N/A | 00:12:5f:00:17:9e | Media Converter | | | 10.1.1.200 | WPS | [Icon] |
| ● | N/A | 00:12:5f:00:a5:4a | Media Converter | | | 10.1.1.252 | WPS | [Icon] |
| ● | N/A | 00:30:11:22:33:44 | N/A | GS-4210-48P4S | v2.00180207 | 192.168.1.131 | GS-4210-48P4S | [Icon] |
| ● | N/A | 00:30:4f:11:22:45 | N/A | IGS-10020HPT | v3.440b200320 | 10.1.0.81 | IGS-10020HPT Industrial L2+ Manag | [Icon] |
| ● | N/A | 00:30:4f:9d:66:c5 | N/A | WGSW-28040 | v1.2b130315 | 10.1.1.220 | Default Location | [Icon] |
| ● | N/A | 00:30:4f:56:50:71 | N/A | WGSD-10020HP | v3.340160622 | 192.168.0.104 | PLANET WGSD-10020HP Managed Swi | [Icon] |
| ● | N/A | 00:30:4f:ba:2c:10 | N/A | VIP-6040FT | VMG-1.0.3.62 | 10.1.10.1 | VIP-660 | [Icon] |
| ● | N/A | 00:30:4f:ba:2c:19 | N/A | VIP-6040FT | VMG-1.0.3.62 | 10.1.10.2 | VIP-660 | [Icon] |
| ● | N/A | 00:90:af:ba:2c:10 | N/A | WV6000 | v.1.0.0.1.0 | 10.1.10.300 | WV6000 | [Icon] |

| ID | Type | Time | Source | Status | Device Type | Information |
|----|--------|----------|------------|---------|-------------|--|
| 1 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | VGW-600 10.1.10.250 00:30:4f:3a:ee:10 |
| 2 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | GS-4210-48P4S 192.168.1.131 00:30:11:22:33:44 |
| 3 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 4 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | GS-4210-8P2T2S 192.168.0.100 00:e0:4c:00:00:00 |
| 5 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | GS-4210-8P2S 10.1.0.203 a8:17:40:1f:22:42 |
| 6 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | WGSW-28040 10.1.1.220 00:30:4f:3a:ee:c5 |
| 7 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | FGSD-1008HPS 10.20.20.20 66:09:07:03:04:09 |
| 8 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | WRE-1200 95.1.1.241 a8:17:e0:20:a9:9e |

System Event

- ◆ Press the “Event” icon (No. 1) to see the full system event by day.
- ◆ Press the “<<” & “>>” icon (No. 2) to select daily report.

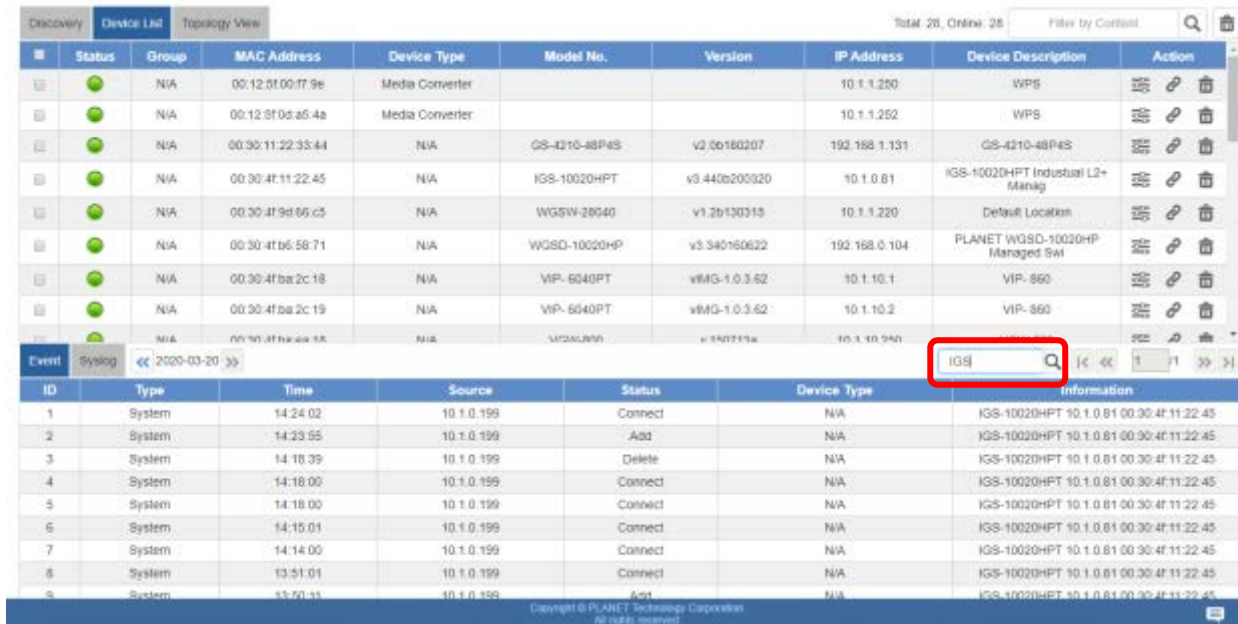


The screenshot displays the Planet network management interface. At the top, there are tabs for 'Discovery', 'Device List', and 'Topology View'. Below these is a table of devices with columns for Status, Group, MAC Address, Device Type, Model No., Version, IP Address, Device Description, and Action. A red box labeled '1' highlights the 'Event' icon in the bottom left corner. Another red box labeled '2' highlights the date selection controls, showing '2020-03-20'.

| ID | Type | Time | Source | Status | Device Type | Information |
|----|--------|----------|------------|---------|-------------|--|
| 1 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | VGW-600 10.1.10.250 00:30:4f:ba:ee:10 |
| 2 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | GS-4210-48P4S 192.168.1.131 00:30:11:22:33:44 |
| 3 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 4 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | GS-4210-8P2T2S 192.168.0.100 00:e0:4c:00:00:00 |
| 5 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | GS-4210-8P2S 10.1.0.203 a8:17:40:1f:22:42 |
| 6 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | WGSW-28040 10.1.1.220 00:30:4f:9d:66:c5 |
| 7 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | FGSD-1008HPS 10.20.20.20 66:09:07:03:04:09 |
| 8 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | WRE-1200 10.1.1.241 a8:17:e0:20:a9:9e |

System Event

- ◆ Use “search” to choose the information you want by entering the key word.



The screenshot displays a network management interface with two main sections: a device list and a system event log.

Device List Table:

| Status | Group | MAC Address | Device Type | Model No. | Version | IP Address | Device Description | Action |
|--------|-------|-------------------|-----------------|---------------|---------------|---------------|-----------------------------------|---------|
| ● | N/A | 00:12:0f:00:17:9e | Media Converter | | | 10.1.1.250 | WPS | [Icons] |
| ● | N/A | 00:12:0f:00:a5:4a | Media Converter | | | 10.1.1.252 | WPS | [Icons] |
| ● | N/A | 00:30:11:22:33:44 | N/A | GS-4210-48P4S | v2.00180207 | 192.168.1.131 | GS-4210-48P4S | [Icons] |
| ● | N/A | 00:30:4f:11:22:45 | N/A | IGS-10020HPT | v3.440b200320 | 10.1.0.81 | IGS-10020HPT Industrial L2+ Manag | [Icons] |
| ● | N/A | 00:30:4f:9d:66:c5 | N/A | WGSW-28040 | v1.2b130315 | 10.1.1.220 | Default Location | [Icons] |
| ● | N/A | 00:30:4f:b6:58:71 | N/A | WQSD-10020HP | v3.340160622 | 192.168.0.104 | PLANET WQSD-10020HP Managed Swi | [Icons] |
| ● | N/A | 00:30:4f:ba:2c:18 | N/A | VIP-6040PT | vBMG-1.0.3.62 | 10.1.10.1 | VIP-860 | [Icons] |
| ● | N/A | 00:30:4f:ba:2c:19 | N/A | VIP-6040PT | vBMG-1.0.3.62 | 10.1.10.2 | VIP-860 | [Icons] |
| ● | N/A | 00:30:4f:ba:2c:18 | N/A | VIP-6040PT | v1.00111111 | 10.1.10.250 | | [Icons] |

System Event Log Table:

Event: Syslog | 2020-03-20

| ID | Type | Time | Source | Status | Device Type | Information |
|----|--------|----------|------------|---------|-------------|--|
| 1 | System | 14:24:02 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 2 | System | 14:23:55 | 10.1.0.199 | Add | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 3 | System | 14:18:39 | 10.1.0.199 | Delete | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 4 | System | 14:18:00 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 5 | System | 14:18:00 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 6 | System | 14:15:01 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 7 | System | 14:14:00 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 8 | System | 13:51:01 | 10.1.0.199 | Connect | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |
| 9 | System | 13:50:11 | 10.1.0.199 | Not | N/A | IGS-10020HPT 10.1.0.81 00:30:4f:11:22:45 |

The search box in the event log is highlighted with a red box and contains the text "IGS".

Syslog Server

- ◆ Press the “Syslog” icon (No. 1) to see the full syslog by day (Open the devices remote syslog function.).
- ◆ Press the “<<” & “>>” icon (No. 2) to select daily report.
- ◆ Press the “Drop-down” menu (No. 3) to select severity and device ID.



The screenshot shows the Syslog Server interface. At the top, there is a navigation bar with the following elements:

- A button labeled "Syslog" (No. 1).
- Navigation arrows: "<<" and ">>" (No. 2), with the date "2019-07-05" in between.
- Two dropdown menus: "Severity: Any" and "Device: Any" (No. 3).
- Page navigation: "<<" and ">>" arrows, and a page number "1/21".
- A search box with a magnifying glass icon.

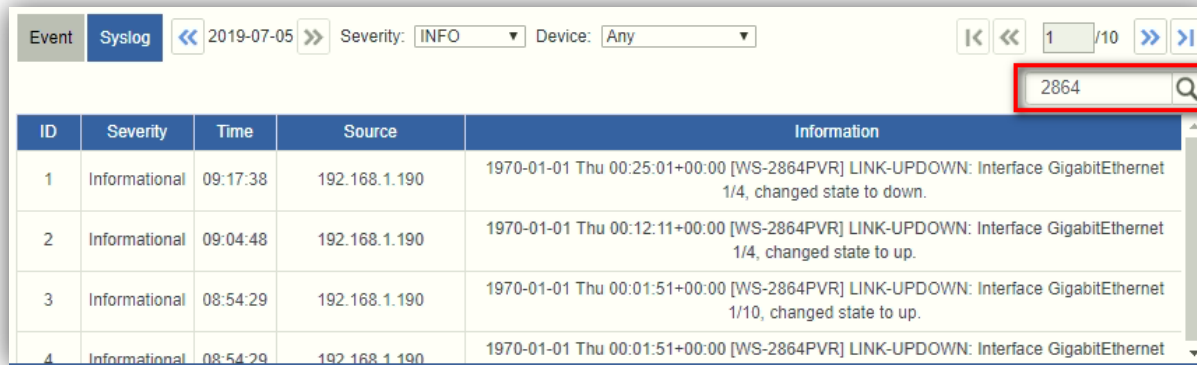
Below the navigation bar is a table with the following columns: ID, Severity, Time, Source, and Information.

| ID | Severity | Time | Source | Information |
|----|---------------|----------|--|---|
| 1 | Informational | 09:17:38 | 192.168.1.190 (PLANET WS-2864PVR AP Managed Switch) | 1970-01-01 Thu 00:25:01+00:00 [WS-2864PVR] LINK-UPDOWN: Interface GigabitEthernet 1/4, changed state to down. |
| 2 | Informational | 09:05:02 | 192.168.1.50 | 1970-01-01 Thu 00:00:38+00:00 [GS-5220-8P2T2X] SYS-BOOTING: Switch just made a cold boot. |
| 3 | Informational | 09:05:02 | 192.168.1.50 | 1970-01-01 Thu 00:00:40+00:00 [GS-5220-8P2T2X] LINK-UPDOWN: Interface GigabitEthernet 1/2, changed state to up. |

Total: 14

Syslog Server

- ◆ Use **Search** to choose the information you want by entering the key word.

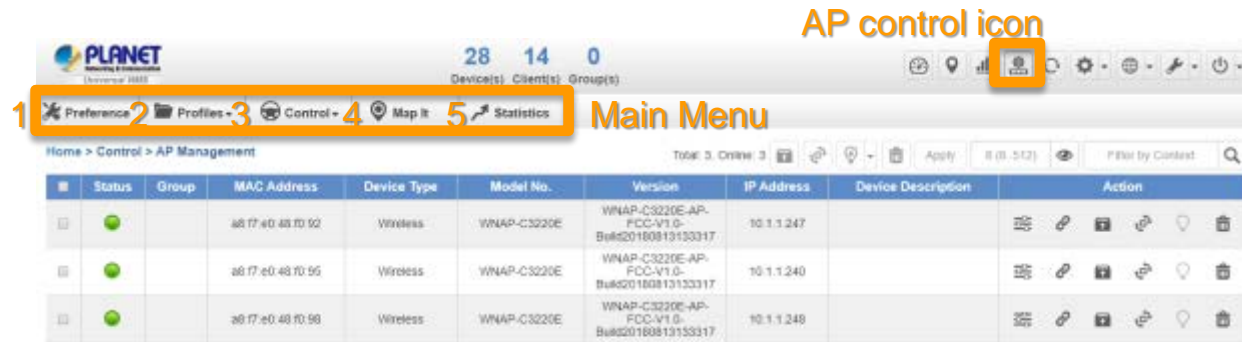


The screenshot shows a Syslog Server interface. At the top, there are navigation controls including a date selector set to '2019-07-05', a severity filter set to 'INFO', and a device filter set to 'Any'. On the right, there are page navigation buttons and a page indicator '1 / 10'. A search bar is highlighted with a red box, containing the text '2864'. Below the search bar is a table with the following columns: ID, Severity, Time, Source, and Information.

| ID | Severity | Time | Source | Information |
|----|---------------|----------|---------------|---|
| 1 | Informational | 09:17:38 | 192.168.1.190 | 1970-01-01 Thu 00:25:01+00:00 [WS-2864PVR] LINK-UPDOWN: Interface GigabitEthernet 1/4, changed state to down. |
| 2 | Informational | 09:04:48 | 192.168.1.190 | 1970-01-01 Thu 00:12:11+00:00 [WS-2864PVR] LINK-UPDOWN: Interface GigabitEthernet 1/4, changed state to up. |
| 3 | Informational | 08:54:29 | 192.168.1.190 | 1970-01-01 Thu 00:01:51+00:00 [WS-2864PVR] LINK-UPDOWN: Interface GigabitEthernet 1/10, changed state to up. |
| 4 | Informational | 08:54:29 | 192.168.1.190 | 1970-01-01 Thu 00:01:51+00:00 [WS-2864PVR] LINK-UPDOWN: Interface GigabitEthernet |

SYSTEM MENU- AP CONTROL

AP Control UI – Structure & Description



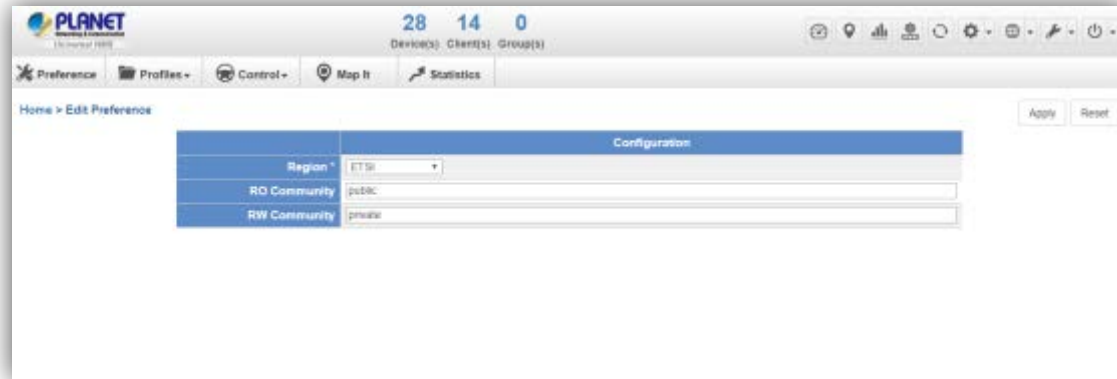
AP control icon

Main Menu

| Status | Group | MAC Address | Device Type | Model No. | Version | IP Address | Device Description | Action |
|--------|-------|-------------------|-------------|-------------|---|------------|--------------------|---------|
| ● | | a8 17:e0 48 70 92 | Wireless | WNAP-C3220E | WNAP-C3220E-AP-FCC-V1 0-Bus20180813153317 | 10.1.1.247 | | [Icons] |
| ● | | a8 17:e0 48 70 96 | Wireless | WNAP-C3220E | WNAP-C3220E-AP-FCC-V1 0-Bus20180813153317 | 10.1.1.240 | | [Icons] |
| ● | | a8 17:e0 48 70 98 | Wireless | WNAP-C3220E | WNAP-C3220E-AP-FCC-V1 0-Bus20180813153317 | 10.1.1.248 | | [Icons] |

| Item | Description | Remarks |
|------|-------------|---|
| 1 | Preference | Edit region, RO community, RW community |
| 2 | Profiles | Set up SSID, Radio (2.4G, 5G) Profiles |
| 3 | Control | AP and AP group management |
| 4 | Map It | Edit the map of AP location and coverage |
| 5 | Statistics | Show the statuses of managed APs and active clients |

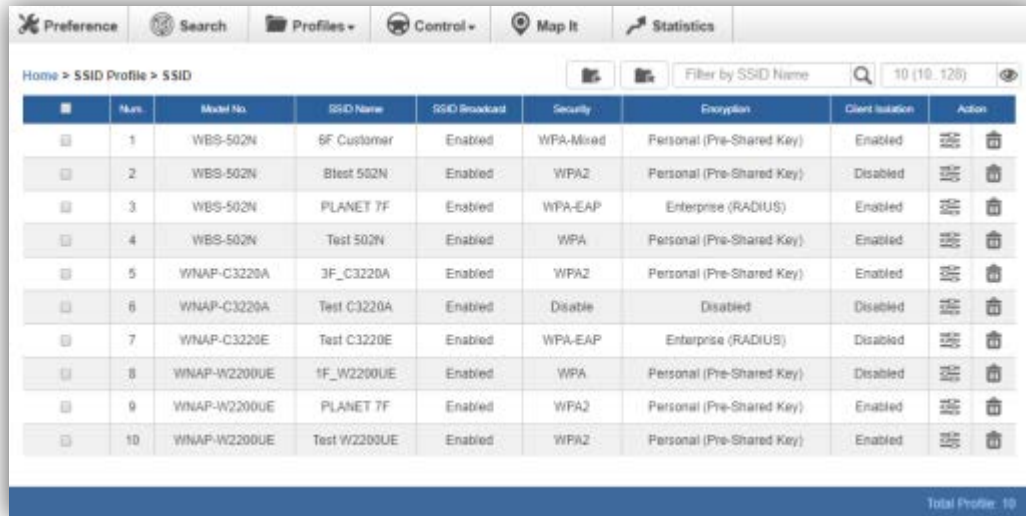
Main Menu – Preference



[Preference]

- **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.
- Noted: Device of FCC and device of ETIS cannot be shown at the same time.

Main Menu – Profiles

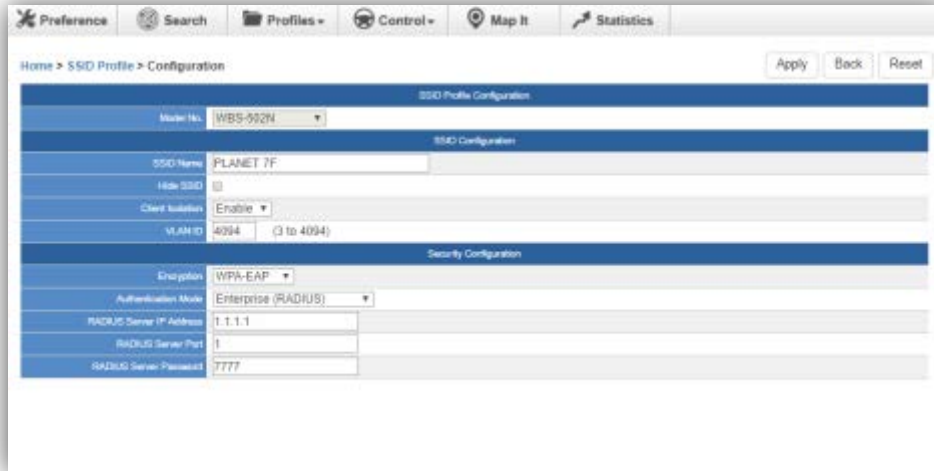


| Menu | Model No. | SSID Name | SSID Broadcast | Security | Encryption | Client Isolation | Action |
|------|--------------|--------------|----------------|-----------|---------------------------|------------------|-----------------|
| 1 | WBS-502N | 5F Customer | Enabled | WPA-Mixed | Personal (Pre-Shared Key) | Enabled | [Edit] [Delete] |
| 2 | WBS-502N | Btest 502N | Enabled | WPA2 | Personal (Pre-Shared Key) | Disabled | [Edit] [Delete] |
| 3 | WBS-502N | PLANET 7F | Enabled | WPA-EAP | Enterprise (RADIUS) | Enabled | [Edit] [Delete] |
| 4 | WBS-502N | Test 502N | Enabled | WPA | Personal (Pre-Shared Key) | Enabled | [Edit] [Delete] |
| 5 | WNAP-C3220A | 3F_C3220A | Enabled | WPA2 | Personal (Pre-Shared Key) | Enabled | [Edit] [Delete] |
| 6 | WNAP-C3220A | Test C3220A | Enabled | Disable | Disabled | Disabled | [Edit] [Delete] |
| 7 | WNAP-C3220E | Test C3220E | Enabled | WPA-EAP | Enterprise (RADIUS) | Disabled | [Edit] [Delete] |
| 8 | WNAP-W2200UE | 1F_W2200UE | Enabled | WPA | Personal (Pre-Shared Key) | Disabled | [Edit] [Delete] |
| 9 | WNAP-W2200UE | PLANET 7F | Enabled | WPA2 | Personal (Pre-Shared Key) | Enabled | [Edit] [Delete] |
| 10 | WNAP-W2200UE | Test W2200UE | Enabled | WPA2 | Personal (Pre-Shared Key) | Enabled | [Edit] [Delete] |





[Profiles]

- **Profiles:** On this page, you can create the SSID and 2.4GHz/5GHz profiles for further AP provisioning.
- **SSID Profiles:** Click the “Add new profile” button to add a new SSID profile.
- **Radio Profiles:** Click the “Add new profile” button to add a new 2.4GHz radio profile or 5GHz radio profile.
- You can create up to 32 profiles for each type of profiles (SSID, 2.4G radio, 5G radio).

Main Menu – Profiles



[SSID Profile Configuration]

- On the SSID profile configuration page, enter the value that you preferred and then click “Apply” to save the profile.
-  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.
- Filter: You can filter the search result by entering the keywords in the field next to the magnifier icon. The keywords include: SSID Name

Main Menu – 3/Profiles



The screenshot shows a web interface for configuring a radio profile. At the top, there is a navigation bar with icons for Preference, Search, Profiles, Control, Map It, and Statistics. Below this, the breadcrumb path is 'Home > Radio Profile > 2.4GHz > Configuration'. The main content area is titled 'Radio Profile Configuration' and contains several sections:

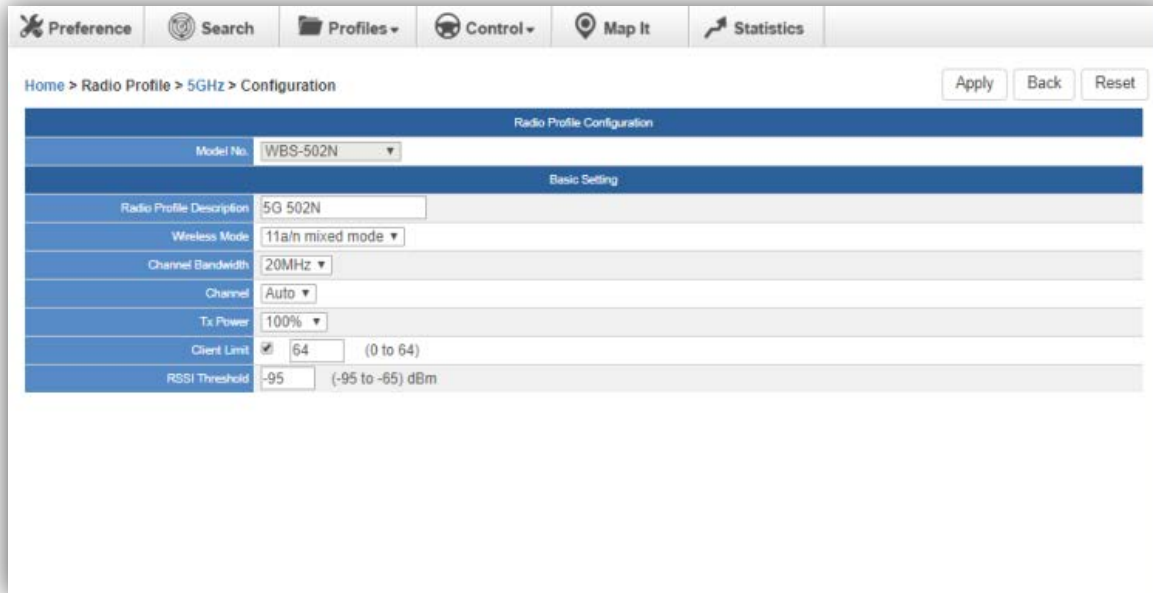
- Model No.:** WNAF-C3220A
- Basic Setting:**
 - Radio Profile Description:** Test-2 4G c3220A
 - Wireless Mode:** 11b/g/n mixed mode
 - Channel Bandwidth:** 40MHz
 - Channel:** Auto
 - MCS:** Auto
 - Tx Power:** 100%

At the top right of the configuration area, there are three buttons: 'Apply', 'Back', and 'Reset'.

[2.4GHz Radio Profile Configuration]

- On the Radio profile configuration page, enter the value that you preferred and then click “Apply” to save the profile.
- Apply: Click this button to save the settings.
- Back: Click this button to return to the previous page.
- Reset: Click this button to reset all fields to default value.

Main Menu – 3/Profiles



The screenshot shows a web interface for configuring a 5GHz radio profile. The breadcrumb navigation is "Home > Radio Profile > 5GHz > Configuration". The interface is divided into two sections: "Radio Profile Configuration" and "Basic Setting".

| Radio Profile Configuration | |
|-----------------------------|----------|
| Model No. | WBS-502N |

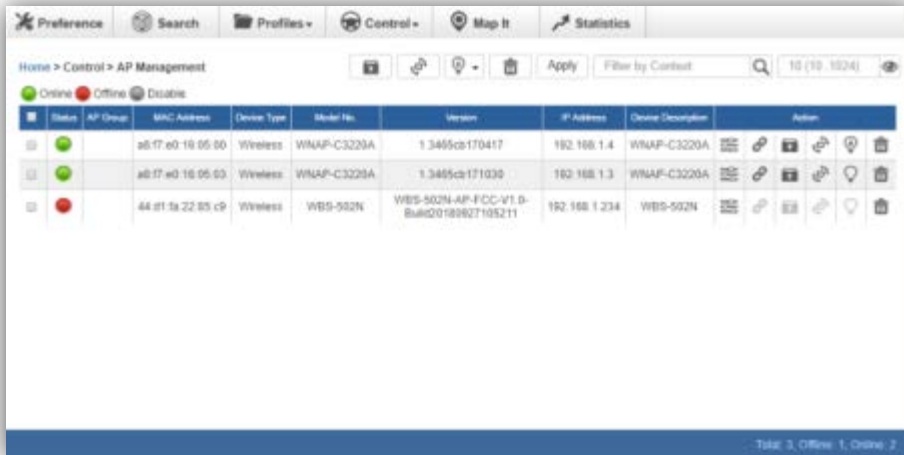
| Basic Setting | |
|---------------------------|--|
| Radio Profile Description | 5G 502N |
| Wireless Mode | 11a/n mixed mode |
| Channel Bandwidth | 20MHz |
| Channel | Auto |
| Tx Power | 100% |
| Client Limit | <input checked="" type="checkbox"/> 64 (0 to 64) |
| RSSI Threshold | -95 (-95 to -65) dBm |

Remarks:

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.

[5GHz Radio Profile Configuration]

Main Menu – Control




| Status | AP Group | MAC Address | Device Type | Model No. | Version | IP Address | Device Description | Action |
|---------|----------|-------------------|-------------|-------------|---|---------------|--------------------|---------|
| Online | | a8:17:e0:18:05:00 | Wireless | WNAP-C3220A | 1.3485cb170417 | 192.168.1.4 | WNAP-C3220A | [Icons] |
| Online | | a8:17:e0:18:05:03 | Wireless | WNAP-C3220A | 1.3485cb171030 | 192.168.1.3 | WNAP-C3220A | [Icons] |
| Offline | | 44:01:5a:22:85:c9 | Wireless | WBS-502N | WBS-502N-AP-FCC-V1.0-Build0108027105211 | 192.168.1.234 | WBS-502N | [Icons] |


[Control - AP Management]

- **Control:** On this page, the system allows you to control the AP or AP group with specific actions.
- **AP Management:** Go to this page to control single AP or multiple APs.
- **AP Group Management:** Go to this page to create multiple APs as a group or control AP group.
- **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 like AP Group, MAC Address, Model, Version, IP Address, and Name.
- **Apply:** Click this button to apply the setting. The profile setting will not take effect until you click the “Apply” button on the Control’s main page.


Main Menu – Control

➤ Status:

 Connection status: online, offline, Wi-Fi disabled

 In progress: action in progress

 Finished/Successful: action finished and successful.


 Failed: action failed.


➤ Remarks:


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.

➤ Action:


 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

Main Menu – Control



➤ Procedure of configuring AP's setting:

1. Edit the basic AP Information.
2. Click the “Clone >>” button if you want to use the same IP configuration as the previous LAN settings. Otherwise, please enter the preferred LAN setting.
3. If there are already profiles created, you can designate the SSID profile and Radio profile to this AP. You can do this step later once AP's basic setting is done

[AP Configuration]

- On the AP Group Configuration page, you can create an AP group with the same model of AP.
- Save: Click this button to save the group/setting.
- Back: Click this button to return to the previous page.
- Reset: Click this button to reset all fields to default value.
- Remarks: The system allows to create up to 32 AP groups.

Main Menu – Control





| Num | Group Name | Group Description | Action |
|-----|------------|-------------------|--|
| 1 | 2260UE G | 2260UE Group | [Icons: Add, Delete, Link, Heart, Refresh] |
| 2 | c3220a 01 | c3220A GROUP | [Icons: Add, Delete, Link, Heart, Refresh] |

[3/Control - AP Group Management]

➤ Remarks:

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.

- On the AP Group Management page, you can create AP group and control one or more AP groups.
-  Add new group: Click it to add an AP group.
-  Delete selected item: Click it to delete the selected AP group.
- Apply: Click this button to apply the setting. The profile setting will not take effect to a group until you click the “Apply” button.

Main Menu – Control

Home > Control > AP Management

Online Offline Discable

| Status | AP Group | MAC Address | Model | Version | IP Address | Name | Action |
|--------|-----------------|-------------------|--------------|----------------|---------------|---------------|--------|
| | | a8:f7:e0:1e:1f:dd | WDAP-W7200AC | ttp-170406 | 192.168.0.119 | Wi-Fi_11ac_AP | |
| | | a8:f7:e0:16:05:09 | WNAP-W2201A | 1.3465cb170407 | 192.168.0.101 | WNAP-W2201A | |
| | | a8:f7:e0:1e:1f:d1 | WDAP-W7200AC | ttp-170406 | 192.168.0.105 | Wi-Fi_11ac_AP | |
| | Ceiling-mount_1 | a8:f7:e0:00:01:00 | WNAP-C3220A | 1.3465cb170406 | 192.168.0.102 | WNAP-C3220A | |
| | Ceiling-mount_1 | a8:f7:e0:16:05:00 | WNAP-C3220A | 1.3465cb170406 | 192.168.0.103 | WNAP-C3220A | |

➤ Procedure of profile provisioning to AP groups:

1. Select the AP group.
2. Click the “Apply” button.
3. Go to “3/Control-> AP Management” to check whether the status is becoming “In progress”. Wait until the status comes “Online”.

➤ Action:

- Setting: Edit setting and allocate profile to group
- Firmware Update: Upgrade AP group’s firmware
- Reboot: Reboot the AP group
- Delete: Delete the AP group from the control list
- LED Control: Control the AP group’s LED.

Mouse-click in a sequential order:

LED blink-> LED off-> LED on

Main Menu – Map It

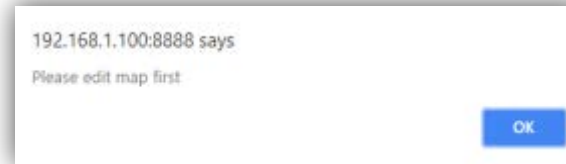


[Map It]

- **Map It:** On this page, the system allows you to upload your floor map to the system and 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.
- The system allows user to upload up to 10 floor maps.

*Please use mouse to use this function.

- A system message will prompt to remind you to edit map first if there is no other map available in the system. Click “OK” to continue.

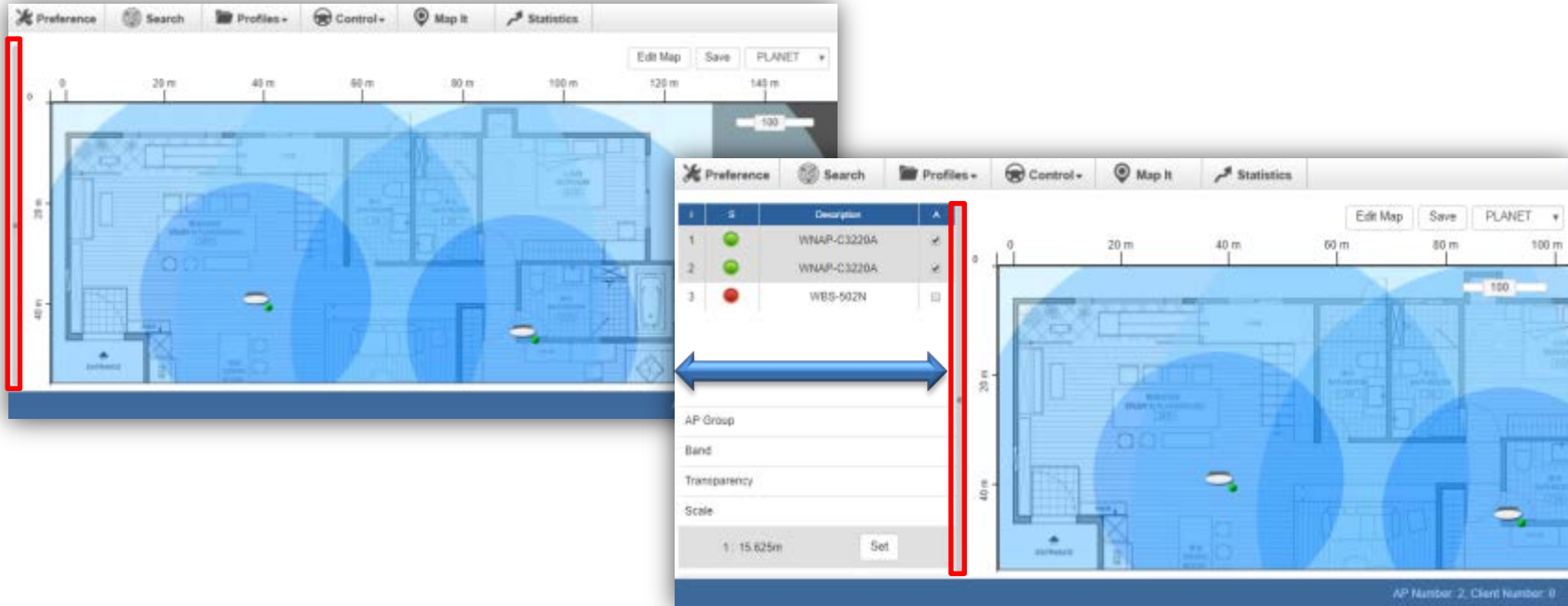


- On the Edit Map page, click “Choose File” and enter the map’s description. Then click “Apply” to upload the map.



Main Menu – Map It

- After finishing map uploading, you can click the sidebar at the left-side of the window to expand the AP list.



The screenshot displays the PLANET software interface. The main window shows a floor plan map with three Access Points (APs) and their coverage areas. A sidebar on the left is expanded to show a list of APs. A red box highlights the sidebar area in both views. A blue double-headed arrow indicates the transition between the two states.

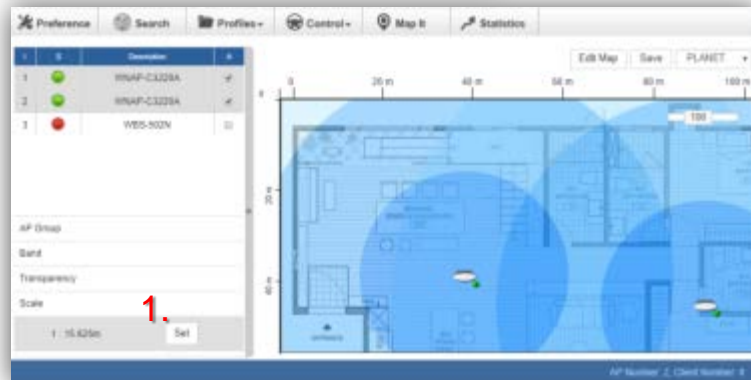
| # | S | Description | ✓ |
|---|---|-------------|---|
| 1 | ● | WNAP-C3220A | ✓ |
| 2 | ● | WNAP-C3220A | ✓ |
| 3 | ● | WBS-502N | ☐ |

AP Group
Band
Transparency
Scale
1: 15.625m Set

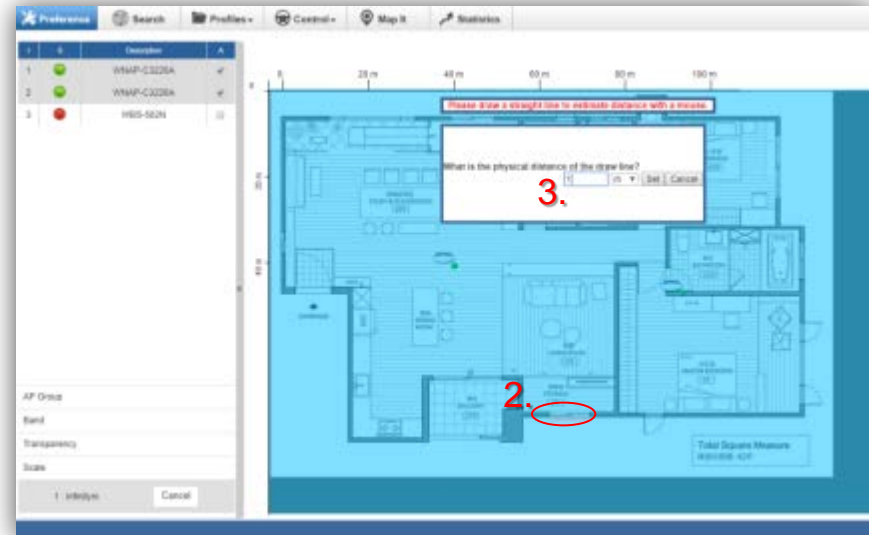
AP Number: 2, Client Number: 0

Main Menu – Map It

- Setting Scale: 1. Click “Scale” to start to reset the map scale.



- 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.

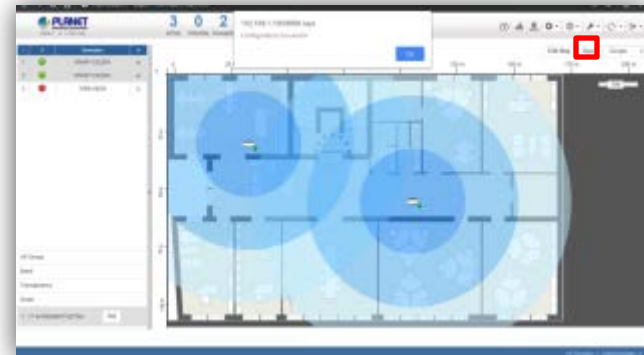


Main Menu – Map It

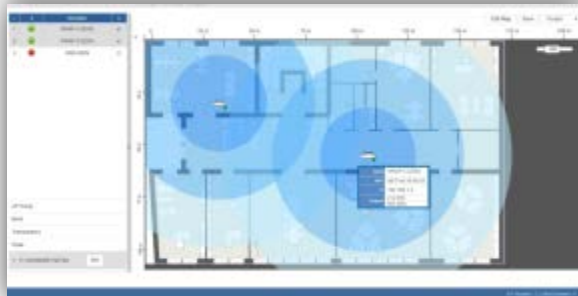
- Drag and drop the AP onto the map or select multiple APs by clicking the checkbox.



- Once the allocation is done, click “Save” to save the setting.

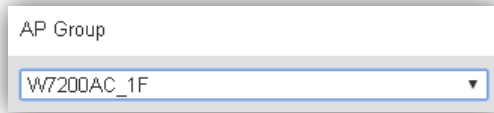


- To upload more maps or edit current map, click the “Edit Map” button to re-enter the Edit Map page.

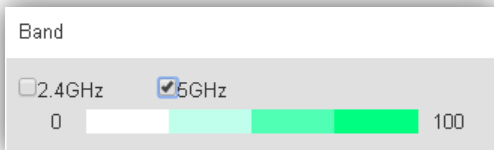
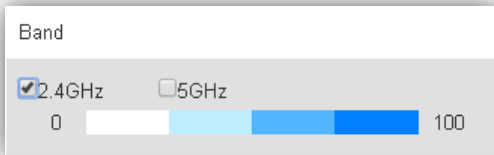


Main Menu – Map It

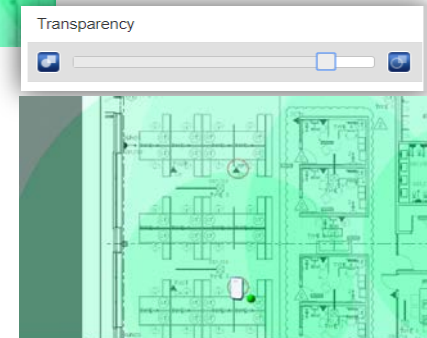
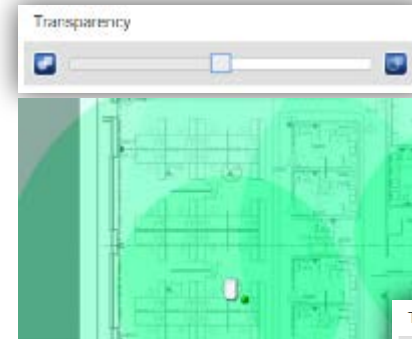
- The lower-left side area provides map control options.
- AP Group: To filter the managed APs shown on the map, the selected AP group is displayed.



- Band: Select “2.4GHz” to show APs with 2.4GHz frequency or select “5GHz” to show APs with 5GHz frequency.



- Transparency: Slide the bar to adjust the transparency of the map.



Main Menu – Statistics



| AP ID | MAC Address | IP Address | SSID | Channel | Power | Mode | AP Group | 2.4GHz SSID Profile | 5GHz SSID Profile | 2.4GHz PoE Profile | 5GHz PoE Profile |
|-------|-------------------|---------------|------------|------------|---|------|----------|---------------------|-------------------|--------------------|------------------|
| 1 | ad 07 ad 18 05 08 | 192.168.1.4 | SNAP-C023A | SNAP-C023A | 1.3485cd170417 | | | N/A | | | N/A |
| 2 | ad 07 ad 18 05 03 | 192.168.1.3 | SNAP-C023A | SNAP-C023A | 1.3485cd171930 | | | N/A | | | N/A |
| 3 | 44 01 54 22 05 15 | 192.168.1.214 | WIS-502H | WIS-502H | 8800-8826-AP-FC0-471.9 Base021808827106271 | | | N/A | Event 502H | N/A | 50 502H |

[Statistics – Managed APs]

- Managed APs: On this page, you can observe the current configuration of all managed Map APs.
- 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.



| Client MAC Address | IP Address | AP SSID | Band | Tx Rate | Rx Rate | Tx Packets | RSSI (dBm) |
|--------------------|-------------------|------------|--------|---------|---------|------------|------------|
| 48 9e 26 82 42 3f | 48 9e 26 82 42 3f | Test C023A | 2.4GHz | 62724 | 99036 | 300 | 59 |

[Statistics – Active Clients]

- Active Clients: On this page, you can observe the statuses of all associated clients including traffic statistics, transmission speed and RSSI signal strength.
- Filter: You can filter the search result by entering the keywords in the field next to the magnifier icon. The keywords include MAC Address, IP Address, SSID and Band.

SYSTEM MENU – REFRESH

System Menu – Refresh

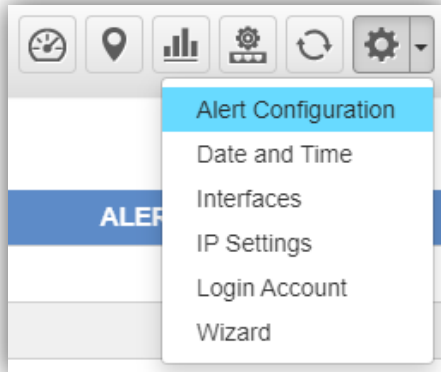


[System Menu – Refresh]

- **Refresh:** The page content will be updated every 1 minute automatically by default. If you require the system to update immediately, you may click “Manually” to refresh the page content.

SYSTEM MENU - SYSTEM CONFIGURATION

System Menu – System Configuration



[System Menu – System Configuration]

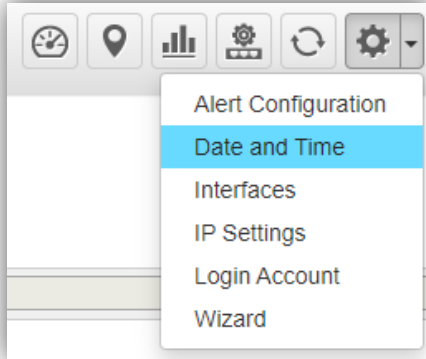
- **Alert Configuration:** On this page, you can configure the system event notice enable or disable by Popup Alert Message and SMTP function.
- After configuration is done, click “Apply” to apply the setting.

Home > Alert Configuration Apply Reset

| | ENABLE | ALERT_MESSAGE | SMTP |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| System Start | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| System Shutdown | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| System Reboot | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| System Firmware Upgrade Successful | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| System Firmware Upgrade Fail | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Add Device | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Delete Device | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Device Connect | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Device Disconnect | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Device Set Profile | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Device Profiles Setting Done | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Management Device Profiles Setting Failed | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Web Login | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

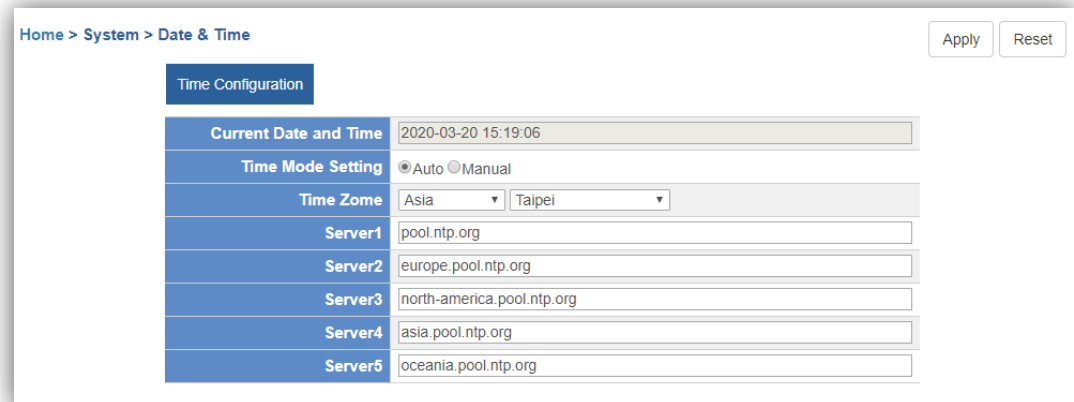
[Alert Configuration]

System Menu – System Configuration



[System Menu – System Configuration]

- **Date and Time:** On this page, you can configure the Date and Time by NTP server or manual setting.
- After configuration is done, click “Apply” to apply the setting.

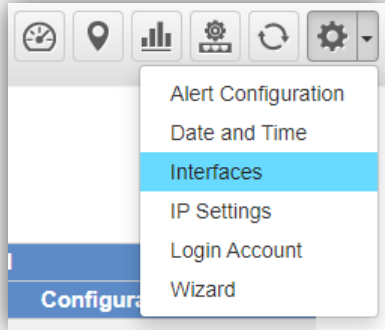


A screenshot of the 'Date & Time' configuration page. The breadcrumb path is 'Home > System > Date & Time'. In the top right corner, there are 'Apply' and 'Reset' buttons. The page title is 'Time Configuration'. The configuration fields are as follows:

| | |
|-----------------------|--|
| Current Date and Time | 2020-03-20 15:19:06 |
| Time Mode Setting | <input checked="" type="radio"/> Auto <input type="radio"/> Manual |
| Time Zone | Asia <input type="text"/> Taipei <input type="text"/> |
| Server1 | pool.ntp.org |
| Server2 | europa.pool.ntp.org |
| Server3 | north-america.pool.ntp.org |
| Server4 | asia.pool.ntp.org |
| Server5 | oceania.pool.ntp.org |

[Date and Time configuration]

System Menu – System Configuration



- **Interface:** On the PORT page, you can see each Port status and you can configure the speed for down, auto, 10/100 Mbps HDX/FDX, and 1GMbps FDX on the Port Statistics page.
- Click “Apply” to apply the setting.

[System Menu – System Configuration]

| Port Configuration | | Port Statistics | | |
|--------------------|----------------------|--------------------------------------|-----------|---------------|
| Port | Port Description | Link | Speed | |
| | | | Current | Configuration |
| 1 | <input type="text"/> | ● | Down | Auto ▾ |
| 2 | <input type="text"/> | ● | 1Gbps FDX | Auto ▾ |

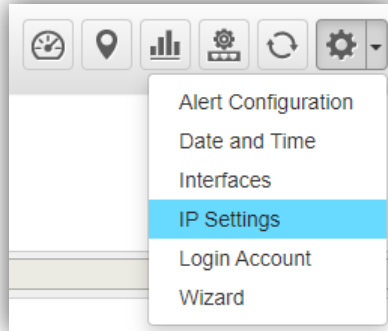
[Port Settings]

System Menu – System Configuration

| Port | Packets | | Bytes | | Errors | | Drops | |
|------|----------|-------------|-----------|-------------|----------|-------------|----------|-------------|
| | Received | Transmitted | Received | Transmitted | Received | Transmitted | Received | Transmitted |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 478835 | 169696223 | 156746461 | 23195 | 0 | 420366 | 5201 | 0 |

[Port Statistics information]

System Menu – System Configuration



- **IP Settings:** On this page, you can configure the static ID of SAPC or choose it as DHCP client.
- After configuration is done, click “Apply” to apply the setting. The window will prompt you to change network setting that will cause the system to restart.

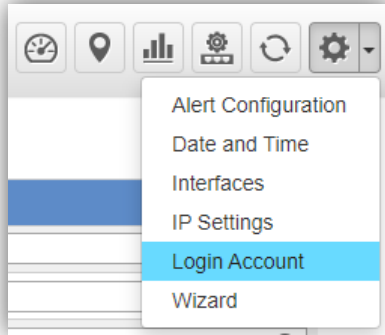
[System Menu – System Configuration]

Home > System > IP Settings Apply Reset

| | Configuration | Status |
|-----------------|---------------|---------------|
| Mode | Static IP ▾ | Static |
| IP Address | 10.1.0.199 | 10.1.0.199 |
| Subnet Mask | 255.255.254.0 | 255.255.254.0 |
| Default Gateway | 10.1.1.254 | 10.1.1.254 |
| DNS Server 1 | 10.1.1.3 | 10.1.1.3 |
| DNS Server 2 | 10.1.1.4 | 10.1.1.4 |

[IP Settings]

System Menu – System Configuration



[System Menu – System Configuration]

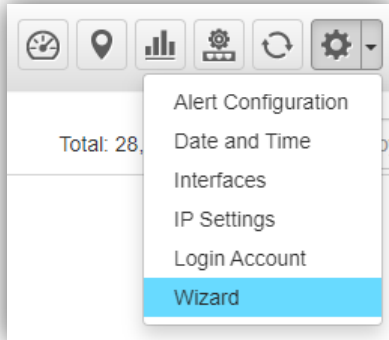
- **Login Account:** On this page, you can modify the login user name and password.
- Enter the new user name and new password directly in the corresponding fields, and then click “Apply” to apply the setting. The login window will be prompted to ask you to enter the new account to re-log in the system.

A screenshot of the 'Edit User' configuration page. The breadcrumb trail is 'Home > System > Edit User'. The page has 'Apply' and 'Reset' buttons in the top right. The main content is a 'Configuration' table with three rows: 'User Name' with the value 'admin123', 'Password' with a masked input field, and 'Retype Password' with another masked input field. Below the table, there is a note: '*Please key in a new account, except using "admin" New Password must be included at least 1*[a~z], 1*[A~Z], 1*[0~9], 1*[~, !, @, ...] and must contain at least 8 character.'

[Login Account]

- ◆ *Please key in a new account, except using "admin"
- ◆ New Password must include at least 1*[a~z], 1*[A~Z], 1*[0~9], 1*[~, !, @, ...] and must contain at least 8 characters.

System Menu – System Configuration

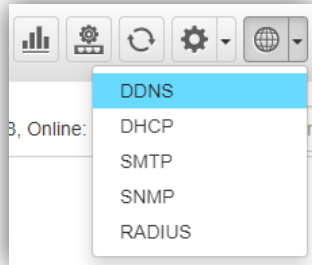


- **Wizard:** Select Wizard for setup wizard again.

[System Menu – System Configuration]

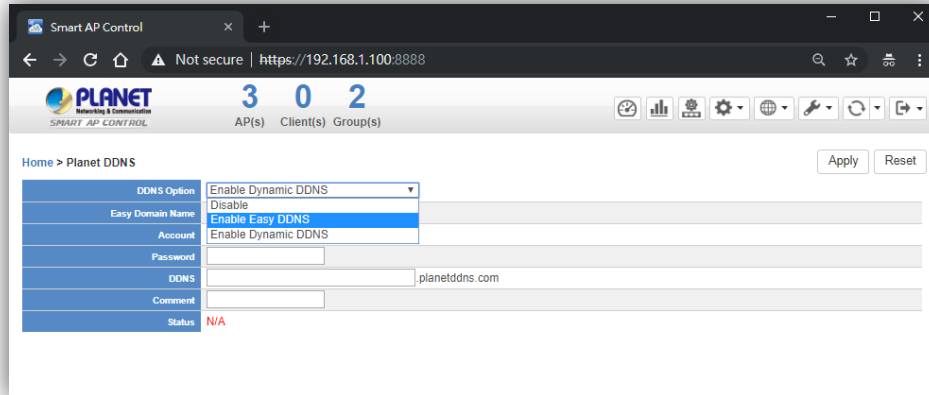
SYSTEM MENU - NETWORK SERVICES

System Menu – Network Services



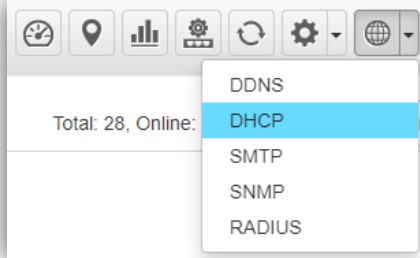
[System Menu – DDNS]

- **Network Services:** On this page, you can set up DDNS, DHCP, SMTP, SNMP, and RADIUS of the system.
- **DDNS:** Click “DDNS” to use PLANET Easy DDNS services or Dynamic DDNS. (Supports PLANET DDNS/Easy DDNS)
- Click “Apply” to apply the setting.

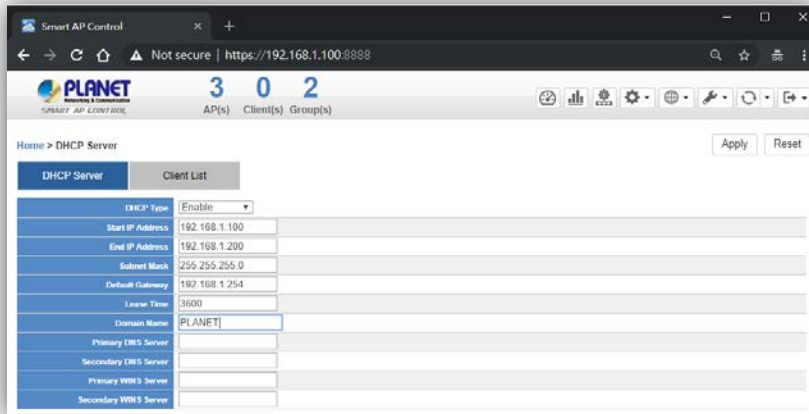


[DDNS Setting]

System Menu – Network Services



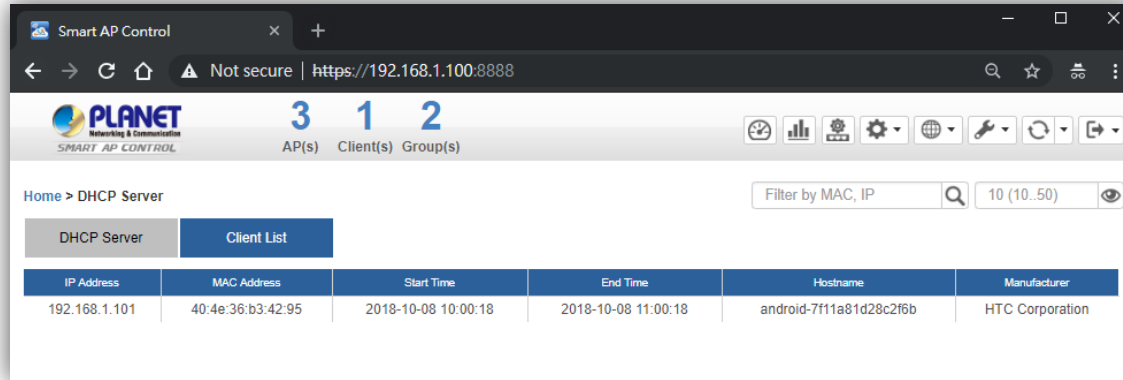
[System Menu – DHCP]



[DHCP Setting]

- **Network Services:** On this page, you can set up DDNS, DHCP, SMTP, SNMP, and RADIUS of the system.
- **DHCP:** On the DHCP Server page, choose “Enable” to use DHCP server service. On Client list page, you can see the Client detailed information.
- Click “Apply” to apply the setting.

System Menu – Network Services

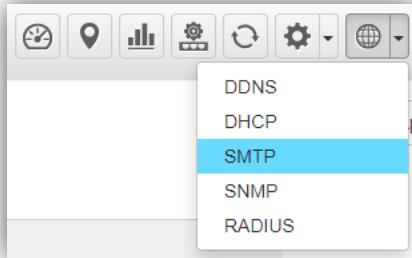


The screenshot displays the Smart AP Control web interface. The browser address bar shows the URL `https://192.168.1.100:8888`. The interface includes a navigation menu with 'Home > DHCP Server'. Below this, there are two tabs: 'DHCP Server' and 'Client List', with 'Client List' being the active tab. A search filter is set to 'Filter by MAC, IP' with a value of '10 (10..50)'. The main content area shows a table with the following data:

| IP Address | MAC Address | Start Time | End Time | Hostname | Manufacturer |
|---------------|-------------------|---------------------|---------------------|-------------------------|-----------------|
| 192.168.1.101 | 40:4e:36:b3:42:95 | 2018-10-08 10:00:18 | 2018-10-08 11:00:18 | android-7f11a81d28c2f6b | HTC Corporation |

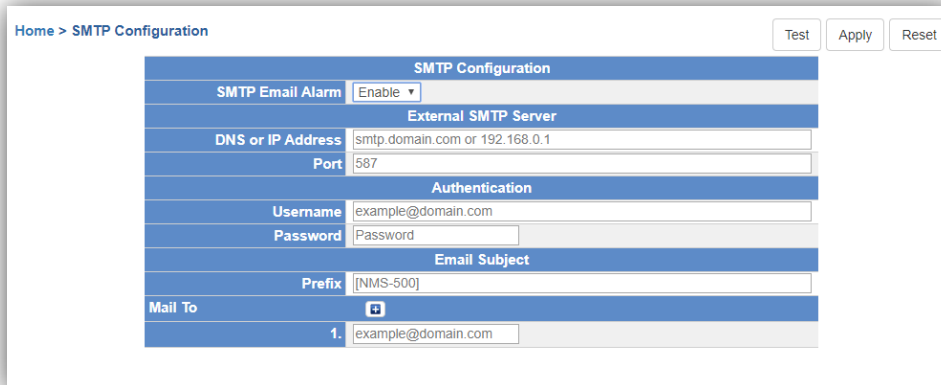
[Client List Information]

System Menu – Network Services



[System Menu – SMTP]

- **Network Services:** On this page, you can set up DDNS, DHCP, SMTP, SNMP, and RADIUS of the system.
- **SMTP:** On the SMTP page, choose “Enable” to use SMTP service.
- Click “Apply” to apply the setting.

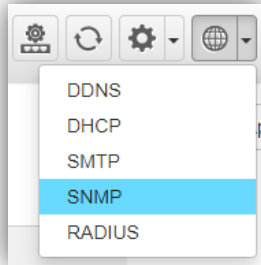


The image shows the 'SMTP Configuration' page in a web interface. The breadcrumb is 'Home > SMTP Configuration'. There are three buttons at the top right: 'Test', 'Apply', and 'Reset'. The configuration is organized into several sections:

- SMTP Configuration:** SMTP Email Alarm is set to 'Enable'.
- External SMTP Server:** DNS or IP Address is 'smtp.domain.com or 192.168.0.1' and Port is '587'.
- Authentication:** Username is 'example@domain.com' and Password is 'Password'.
- Email Subject:** Prefix is '[NMS-500]'.
- Mail To:** A list with one entry: '1. example@domain.com'.

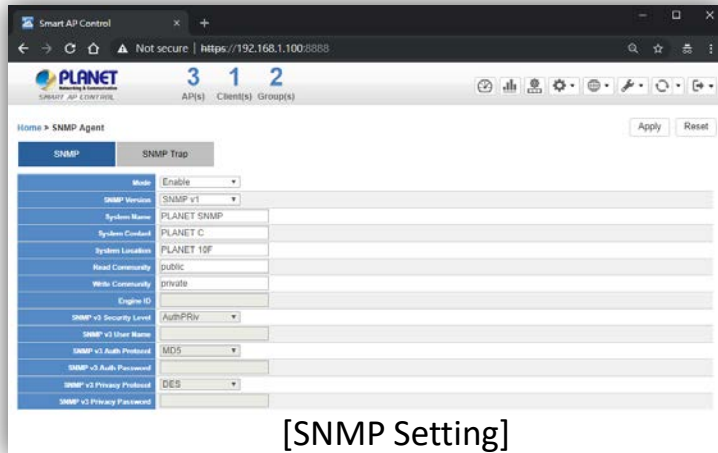
[SMTP Setting]

System Menu – Network Services



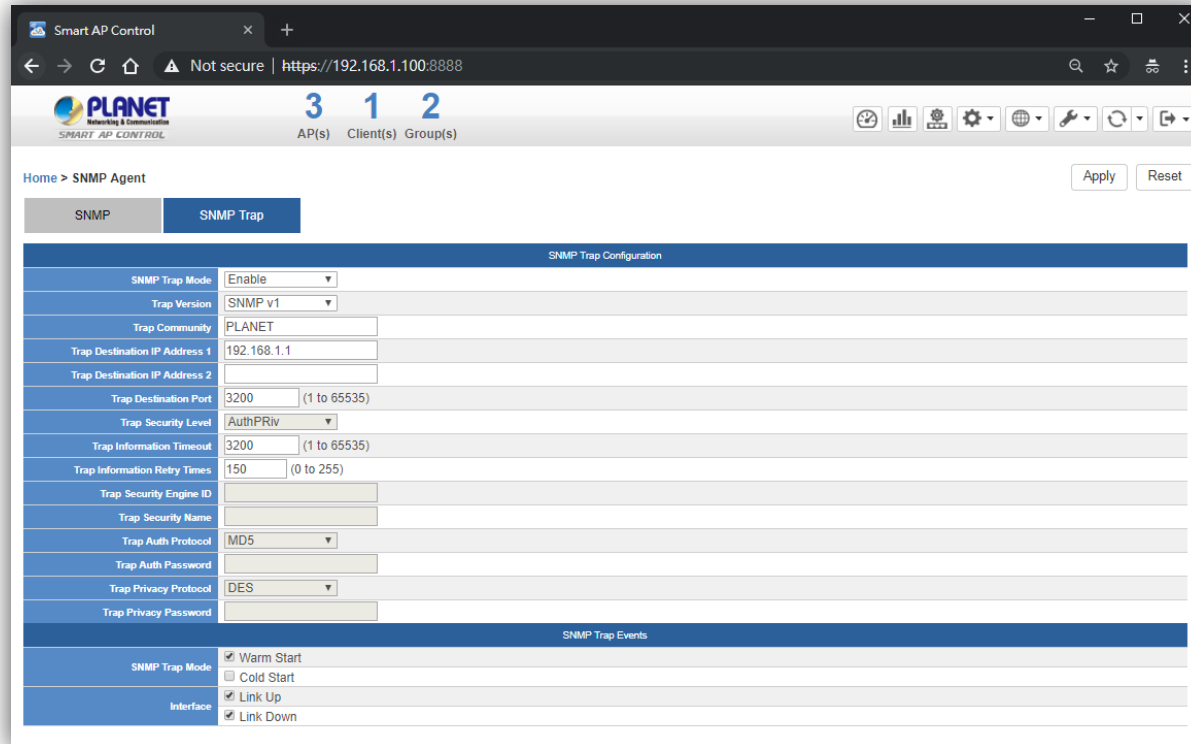
[System Menu – SNMP]

- **Network Services:** On this page, you can set up DDNS, DHCP, SMTP, SNMP, and RADIUS of the system.
- **SNMP:** On the SNMP Agent page, choose “Enable” to use SNMP v1, v2c, v3 service. On the SNMP Trap page, you can set up the SNMP Trap Configuration.
- Click “Apply” to apply the setting.



[SNMP Setting]

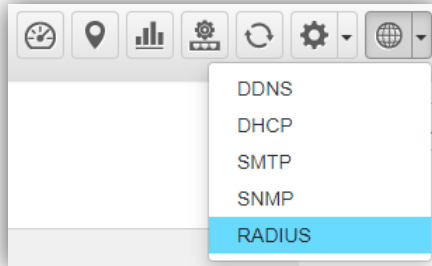
System Menu – Network Services



The screenshot shows the 'Smart AP Control' web interface. The browser address bar displays 'https://192.168.1.100:8888'. The top navigation bar includes the PLANET logo, a status bar showing '3 AP(s)', '1 Client(s)', and '2 Group(s)', and a set of utility icons. The main content area is titled 'Home > SNMP Agent' and contains two tabs: 'SNMP' and 'SNMP Trap'. The 'SNMP Trap' tab is active, displaying the 'SNMP Trap Configuration' section. This section includes various settings such as 'SNMP Trap Mode' (set to 'Enable'), 'Trap Version' (set to 'SNMP v1'), 'Trap Community' (set to 'PLANET'), and 'Trap Destination IP Address 1' (set to '192.168.1.1'). Below this is the 'SNMP Trap Events' section, which has checkboxes for 'Warm Start', 'Cold Start', 'Link Up', and 'Link Down', all of which are currently checked.

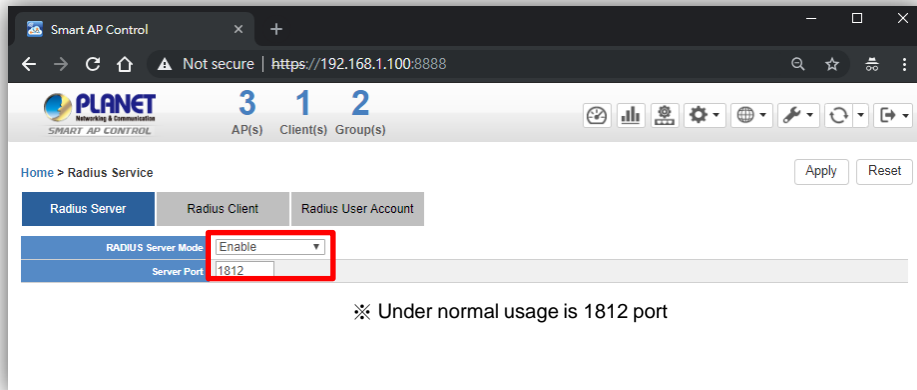
[SNMP Trap Configuration]

System Menu – Network Services



[System Menu – RADIUS]

- **Network Services:** On this page, you can set up DDNS, DHCP, SMTP, SNMP, and RADIUS of the system.
- **RADIUS:** On the RADIUS page, choose “Enable” to use RADIUS service. On RADIUS Client page and RADIUS User Account page, you can see the detailed information of them.
- Click “Apply” to apply the setting.

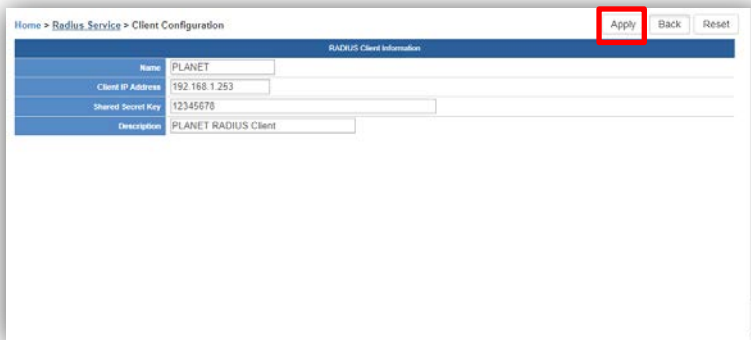


[RADIUS Setting]

System Menu – Network Services



[System Menu – RADIUS Client]



The screenshot shows the 'RADIUS Client Information' form. The form has the following fields:

| RADIUS Client Information | |
|---------------------------|----------------------|
| Name | PLANET |
| Client IP Address | 192.168.1.253 |
| Shared Secret Key | 12345678 |
| Description | PLANET RADIUS Client |

At the top right of the form, there are three buttons: 'Apply', 'Back', and 'Reset'. The 'Apply' button is highlighted with a red box.

[RADIUS Client Setting]



- **Add Radius Client Configuration:** On this page, you can set up Name, Client IP, Shared Secret Key, and Description of the system.
- Click “Apply” to apply the setting.
- **AP RADIUS Setup:** You should go to AP’s Web UI to RADIUS page to set up Radius Server IP, Password and Server Port (1812), and enable the function.

System Menu – Network Services

Home > Radius Service

Filter by Name 10 (10..1024)

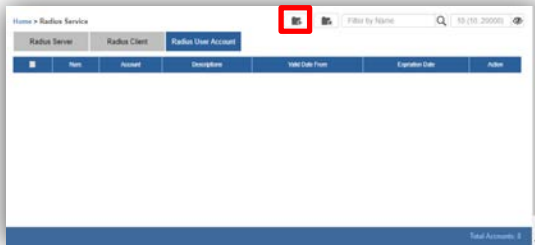
Radius Server Radius Client Radius User Account

| | Num. | Name | Client IP Address | Secret Key | Description | Action |
|--------------------------|------|--------|-------------------|------------|----------------------|---|
| <input type="checkbox"/> | 1 | PLANET | 192.168.1.253 | 12345678 | PLANET RADIUS Client |   |

Total Clients: 1

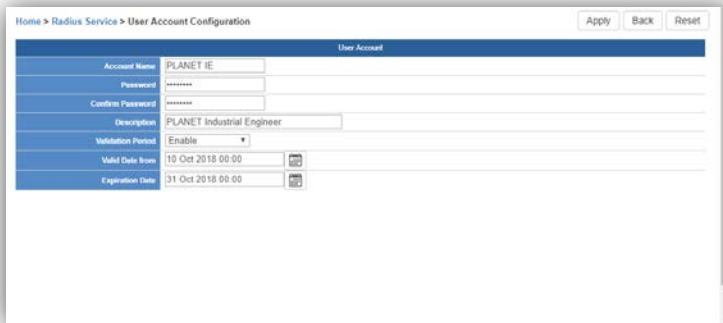
[RADIUS Client Setting Finished]

System Menu – Network Services



[System Menu – RADIUS]

- **Add RADIUS User Account:** On this page, you can set up Account Name, Password, Description, and Validation Period information of the system.
- Click “Apply” to apply the setting.





[RADIUS User Account Setting]

System Menu – Network Services

Home > Radius Service

Radius Server Radius Client **Radius User Account**

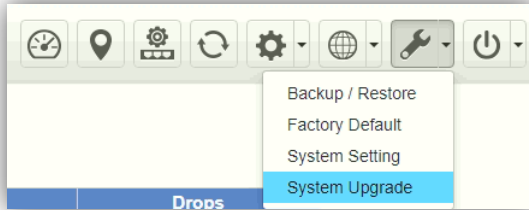
| <input type="checkbox"/> | Num. | Account | Description | Valid Date From | Expiration Date | Action |
|--------------------------|------|-----------|----------------------------|-------------------|-------------------|---|
| <input type="checkbox"/> | 1 | PLANET IE | PLANET Industrial Engineer | 10 Oct 2018 00:00 | 31 Oct 2018 00:00 |   |

Total Accounts: 1

[RADIUS User Account Setting Finished]

SYSTEM MENU - MAINTENANCE

System Menu – Maintenance



[System Menu – Maintenance]

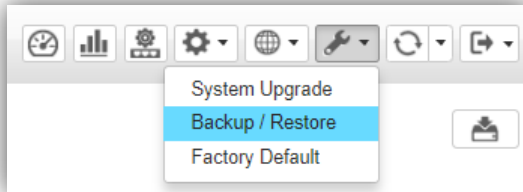


[System Upgrade]

- **System Upgrade:** On this page, you can upgrade the system to the latest version with new patch.
- Click “Choose File” to designate the system patch file for upgrade. Then, click the upgrade icon at the upper-right corner to start the system upgrade.
- Please regularly check PLANET official website for the system upgrade file.

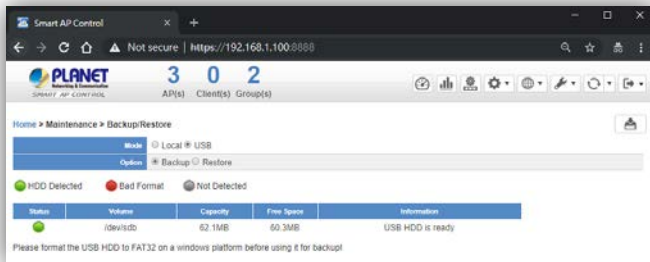
*Remote login must be used for the NMS-1000V to do firmware upgrade.

System Menu – Maintenance

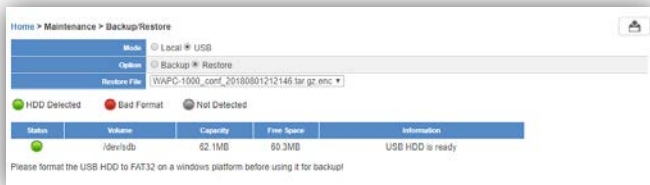


[System Menu – Maintenance]

- **Backup/Restore:** On this page, you can back up and restore the system profiles with the system file (*.tar.gz.enc).
- Click “backup” to start backing up the system profiles file in HDD or USB.
- Use the “Choose File” button to choose the right system profiles file and click “restore” to start restoring the system.
- Please use the system default file name to restore system, or it may fail.

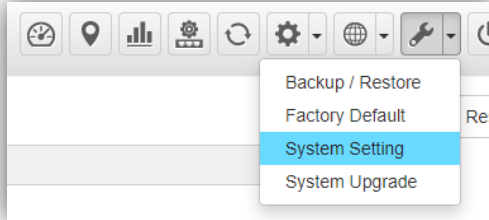


[Backup]



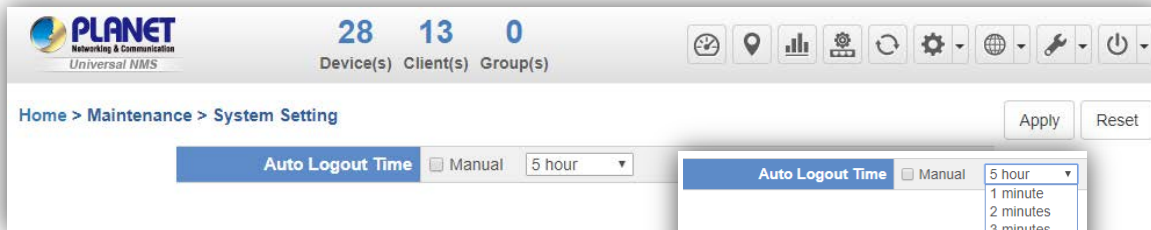
[Restore]

System Menu – Maintenance



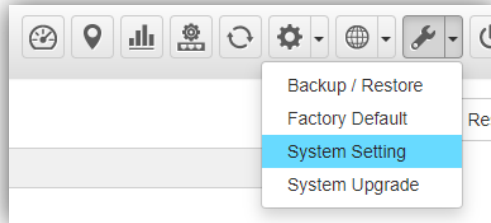
- **System Setting:** Click “System Setting” to set up Logout Time for manual or selection tree.

[System Menu – Maintenance]



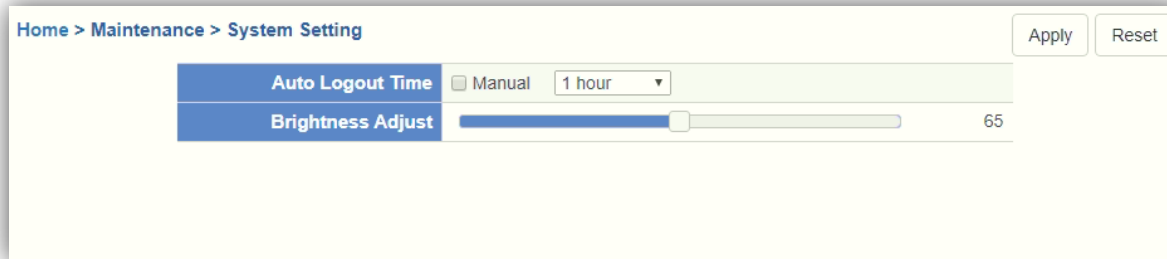
[Auto Logout Time]

System Menu – Maintenance



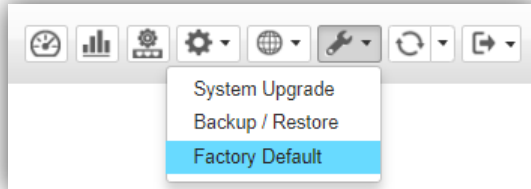
- **System Setting:** Click “System Setting” to adjust the Brightness of touch screen.

[System Menu – Maintenance]



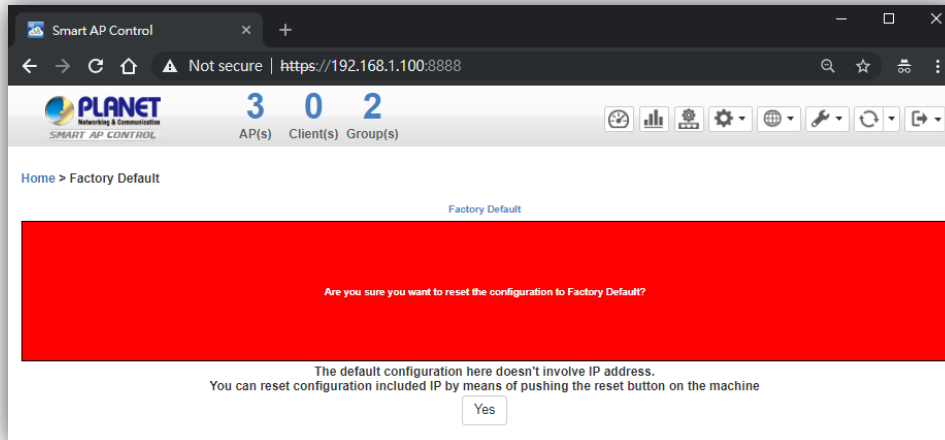
[Brightness Adjust]

System Menu – Maintenance



- **Factory Default:** Click “Factory Default” to reset the system to factory default. Once clicked, the warning window will prompt you to reset system to default.

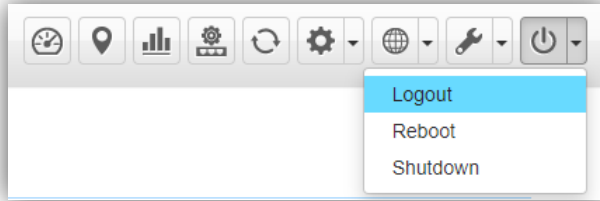
[System Menu – Factory Default]



[Factory Default Warning]

SYSTEM MENU - EXIT

System Menu – Exit



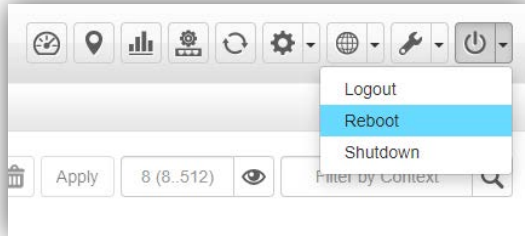
[System Menu – Logout]

- **Exit:** On this page, you can log out, reboot, or shut down the system.
- **Logout:** Click “Logout” to log out the system.
- Once clicked, the login window will prompt you to re-log in the system.



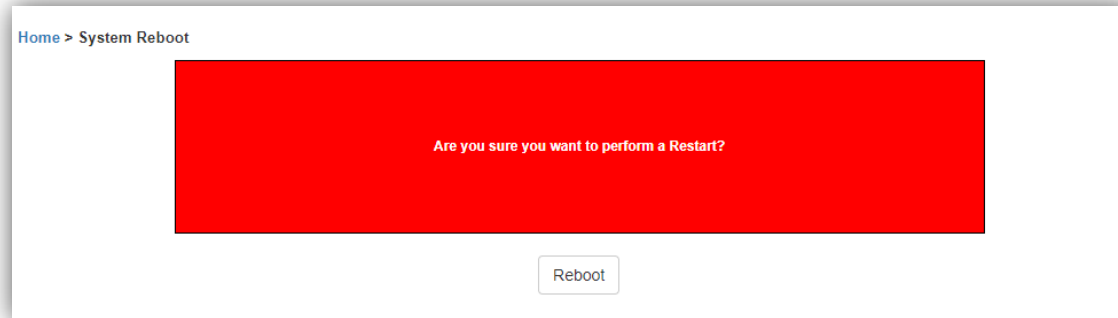
[Login Window]

System Menu – Exit



[System Menu – Reboot]

- **Logout:** On this page, you can log out, reboot, or shut down the system.
- **Reboot:** Click “Reboot” to restart the system.
- **Shutdown:** Click “Shutdown” to close the system and shut down the MV.
- Once clicked, the warning window will prompt you to reboot or shut down the system.



[Reboot Warning]

HDMI OUTPUT

HDMI Output

- **HDMI Output:** NMS-1000V-12 and NMS-1000V-10 support HDMI Output function.
- ※ Please follow the steps below to make sure this function works correctly.
 - 1 · Open NMS-1000 to log in page.
 - 2 · Make sure the TV or Screen supports **resolutions of 1024 x 768** for best optimization.
 - 3 · Connect NMS-1000V and TV or Screen with HDMI cable.



APPENDIX

Appendix – MQTT Devices Support List

| Item | Switch | The Latest Firmware version | Industrial Switch | The Latest Firmware version |
|------|------------------|--|-------------------|--|
| 1 | GS-4210-8P2S | GS-4210-8P2S_v2.305b200330.bix | IGS-10020HPT | IGS10020HPT_V3_v3.440b200331.mfi |
| 2 | GS-4210-8P2T2S | GS-4210-8P2T2S_v2.305b200330.bix | IGS-10020PT | IGS10020PT_V3_v3.440b200331.mfi |
| 3 | GS-4210-48T4S | GS-4210-48T4S_v2.305b200330.bix | IGS-12040MT | IGS12040MT_v2.440b200331.mfi |
| 4 | GS-4210-48P4S | GS-4210-48P4S_v2.305b200330.bix | IGS-20160HPT | IGS20160HPT_v2.440b200331.mfi |
| 5 | GS-4210-24T2S | GS-4210-24T2S_v2.305b200330.bix | IGS-20040MT | IGS20040MT_v2.440b200331.mfi |
| 6 | GS-4210-16T2S | GS-4210-16T2S_v2.305b200330.bix | IGS-10020MT | IGS10020MT_v3.440b200331.mfi |
| 7 | GS-4210-24P(L)4C | GS-4210-24P4C_v2.305b200330.bix | IGS-5225-8P4S | IGS52258P4S_v3.440b200331.mfi |
| 8 | GS-4210-24P2S | GS-4210-24P2S_v3.305b200331.bix | IGS-5225-8P2T2S | IGS52258P2T2S_v2.440b200331.mfi |
| 9 | GS-4210-16P4C | GS-4210-16P4C_v2.305b200331.bix | IGS-5225-4UP1T2S | IGS52254UP1T2S_v4.440b200331.mfi |
| 10 | GS-4210-16P2S | GS-4210-16P2S_v2.305b200331.bix | IGS-5225-4P2S | IGS52254P2S_v1.440b200331.mfi |
| 11 | | | IGS-5225-4T2S | IGS52254T2S_v2.440b200331.mfi |
| Item | Router | The Latest Firmware version | Industrial Router | The Latest Firmware version |
| 1 | VR-100 | VR-100_v1.1907b200326.bin | IVR-100 | IVR-100_v1.1907b200326.bin |
| Item | NMS | The Latest Firmware version | Industrial NMS | The Latest Firmware version |
| 1 | NMS-500 | NMS-500_v1.0b200514 | NMS-1000V-12 | NMS-1000V-12_v1.0b200514 |
| 2 | | | NMS-1000V-10 | NMS-1000V-10_v1.0b200514 |

Appendix – Wireless (AP) Support List

| Item | Wireless AP | The Latest Firmware version |
|------|--------------|--|
| 1 | WDAP-W7200AC | V1.3465cb171030 |
| 2 | WDAP-C7200AC | V1.3465cb171030 |
| 3 | WNAP-C3220A | V1.3465cb171030 |
| 4 | WNAP-W2201A | V1.3465cb171030 |
| 5 | WDAP-W705E | WDAP-W750E-AP-V3.0*feature in future |
| 6 | WNAP-W2200UE | WNAP-W2200UE-AP-V1.0 |
| 7 | WDAP-C7200E | WDAP-C7200E-AP-V1.0 |
| 8 | WNAP-C3220E | WNAP-C3220E-AP-V1.0 |
| 9 | WBS-202N | WBS-202N-AP-V1.0 |
| 10 | WDAP-702AC | WDAP-702AC-V1.0 |
| 11 | WBS-502AC | WBS-502N-AP-V1.0 |
| 12 | WAP-252N | WAP-252N-AP-V1.0 |
| 13 | WBS-502N | WBS-502N-AP-V1.0 |
| 14 | WDAP-802AC | WDAP-802AC-AP-V1.0 |
| 15 | WAP-552N | WAP-552N-AP-V1.0 |
| 16 | WBS-200N | WBS-200N-V1.0 |
| 17 | WAP-200N | WAP-200N-V1.0 |
| 18 | WAP-500N | WAP-500N-V1.0 |
| 19 | WDAP-512AC | WDAP-512AC-AP-V3.0*feature in future |

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THANK YOU