# Comprehensive Centralized Wireless AP Management Solution



# **Optimizing Wireless Network within Minutes**



Indoor Managed Access Points Outdoor Managed Access Points Industrial Managed Access Points







# Centralized Wireless LAN Management via Network Management System



Designed for large-scale wireless network in smart cities, such as hotels, shopping malls, SMBs, buildings and any public area, PLANET's Centralized Wireless LAN Management Solution can centrally manage up to 1,02,400 indoor and outdoor wireless APs via PLANET's Universal Network Management System (UNI-NMS) or DDNS cloud portal.

# **Efficient AP Positioning**

With the simplified Cluster AP management including Multi SSIDs, Zone Plan and Google Map, the administrator can automatically discover, configure, monitor and locate all the managed APs without configuring each AP one by one, thus greatly optimizing the wireless network performance.



# Comprehensive and User-friendly AP Control

PLANET's Centralized Wireless LAN Management Solution provides the browser-based dashboard and graphical data analysis to show the administrator valuable wireless network information at a glance. Moreover, the Wireless Controllers come with an intuitive color touch LCD or LCD control that help the administrator to monitor APs and wireless network in real time.



## Create an Ultra-speed & Efficient Wi-Fi 6 Environment

PLANET IAP-2400AX Industrial 5GHz 802.11ax 2400Mbps Wireless Access Point supporting MU-MIMO, OFDMA, beamforming and BSS coloring provides a maximum wireless speed of 2400Mbps in the 5GHz band, ensuring a more secure and robust connectivity with the adoption of Wi-Fi 6 technology. 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 industrial space.



# Wireless AP Management Solution

PLANET Wireless AP Management Solution offers multiple ways of central AP management with Hardware AP Controller, Software AP Controller and Firmware AP Controller. The solution enables you to control up to 1,024,00 APs in different indoor or outdoor locations at the same time. Featuring the friendly floor plan, dashboard and graphical statistic functions through one single browser-based web user interface, the administrator can easily discover, configure, update and monitor all the managed APs.

# Hardware AP Controller

#### **UNC-NMS**

#### Universal Network Management Central Controller with LCD

- · Centrally manages up to 100 sites with up to 100,000 nodes spread
- Central provisioning and remotely controls over each managed
- · With encryption length of 2048 bits and SHA-265 algorithm for enhanced protection
- Physical site map viewing and logical topology view of network
- Alert popup message and e-mail alarm notification
  Top 10-site events, history comparison graph and critical event chart for analyzing network status



#### **NMS-500**

#### Enterprise-class Universal Network Management Controller

- · Auto discovery of up to 512 devices via web interface
- · Central provisioning and remotely controls over each managed device
- · A topology view of network devices by LLDP protocol
- · SMTP alarm and syslog for managed devices in real-time status
- Smart AP Controller up to 512 APs
- · Easy deployment with map positioning
- · Dashboard and chart design for all information in one
- · Console/Telnet command line interface
- Supports PLANET DDNS/Easy DDNS







#### NMS-1000V-10

#### Universal Network Management Controller with LCD Touch Screen (10")

- · Stylish TFT-LCD touch screen display and aluminum die-cast front bezel and chassis
- · Auto discovery of up to 1024 devices via web interface
- Central provisioning and remotely control over each managed device
- A topology view of network devices by LLDP protocol
- · All-new dashboard for monitoring traffic and PoE usage
- · Setup Wizard, alert popup message and e-mail alarm notification
- Supports PLANET DDNS/Easy DDNS



#### NMS-1000V-12

#### Universal Network Management Controller with LCD Touch Screen (12")

- · Stylish TFT-LCD touch screen display and aluminum die-cast front bezel and chassis
- · Auto discovery of up to 1024 devices via web interface
- Central provisioning and remotely control over each managed device
- A topology view of network devices by LLDP protocol
- All-new dashboard for monitoring traffic and PoE usage
- Setup Wizard, alert popup message and e-mail alarm notification
- Supports PLANET DDNS/Easy DDNS









#### WS-2864PVR

#### Wireless AP Managed Switch with 24-Port 802.3at PoE + 4-Port 10G SFP+ + Touch LCD

- · AP discovery up to 64 managed APs
- · 24 built-in 802.3at PoE+ ports to directly manage AP power control
- · AP/PD alive check for operating status diagnostics
- · 400-watt PoE budget
- 4 10G SFP+ uplink interfaces (2.5G Supported)
- · IPv6/IPv4 Layer 3 static routing
- · 2.4-inch color LCD touch screen with management functions



#### WS-1032P/WS-1224P

#### Wireless AP Managed Switch with 8-Port 802.3at PoE

- · AP discovery up to 32/24 managed APs
- Eight built-in 802.3at PoE+ ports to directly manage AP power control
- · AP/PD alive check for operating status diagnostics
- 120-/240-watt PoE budget
- 2 10G SFP+ uplink interfaces (2.5G Supported)-WS-1032P











#### VR-300 series

#### Enterprise 5-Port 10/100/1000T VPN Security Router

- · Dual-WAN failover and load balancing
- · Static Packet Inspection (SPI) firewall and blocks DoS/DDoS attack
- · Full security with Cybersecurity, VLAN, NAT, DMZ, Static/Dynamic routing, and IP/MAC/Port filtering
- Multiple VPN with IPSEC, OpenVPN, PPTP, L2TP, GRE and VPN Failover
- PLANET UNI-NMS, Easy DDNS and Wireless AP Management
  Wi-Fi compliant IEEE 802.11b/g/n/ac/ax dual-band for mobile client connectivity (VR-300W6/VR-300W6A)
- Compliant with IEEE 802.3af/at PoE interface and PoE management (VR-300P)





#### IVR-300 series

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

- · Dual-WAN failover and load balancing
- Static Packet Inspection (SPI) firewall and blocks DoS/DDoS attack
- · Full security with Cybersecurity, VLAN, NAT, DMZ, Static/Dynamic routing, and IP/MAC/Port filtering
- Multiple VPN with IPSEC, OpenVPN, PPTP, L2TP, GRE and VPN Failover
  PLANET UNI-NMS, Easy DDNS and Wireless AP Management
- · Wi-Fi compliant IEEE 802.11b/g/n/ax dual-band for mobile client connectivity (IVR-300W)
- Compliant with IEEE 802.3af/at PoE interface and PoE management (IVR-300P)
- -40 to 75 degrees C operating temperature and fanless design







#### Industrial 5G NR Cellular Gateway with 5-Port 10/100/1000T

- · Global 5G NR(NSA/SA)/4G LTE network with dual SIM design for cellular network redundancy
- 4 10/100/1000T LAN ports and 1 10/100/1000T WAN port
- 2 DI, 2 DO and 1 RS485 port for Modbus applications
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- Full security with VLAN, NAT, DMZ, routing, firewall and IP/MAC/port filtering
- · PLANET NMS controller system and CloudViewer app supported
- · DC 9 to 54V redundant power

WAN

- · -40 to 75 degrees C operating temperature
- IP30 metal case with DIN-rail or wall-mount design



#### **ICG-2515W-NR**

#### Industrial 5G NR Cellular Wireless Gateway with 5-Port 10/100/1000T

- · Global 5G NR(NSA/SA)/4G LTE network with dual SIM design for cellular network redundancy
- Concurrent dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (1200Mbps)
- 4 10/100/1000T LAN ports and 1 10/100/1000T WAN port
  2 DI, 2 DO and 1 RS485 port for Modbus applications
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- Full security with VLAN, NAT, DMZ, routing, firewall and IP/MAC/port filtering
- PLANET NMS controller system and CloudViewer app supported
- DC 9 to 54V redundant power
- · -40 to 75 degrees C operating temperature
- IP30 metal case with DIN-rail or wall-mount design













# Smart AP Control

AP Management Just Got Easier, More User-friendly & More Usable



Topology

Dashboard

Floor Map



Color Touch LCD



Touch Panel



Simplified Cluster Management with 4 Steps

# Software AP Controller

#### **UNI-NMS-LITE**

- AP auto-discovery
- · Controls up to 100 APs
- · Central provisioning and cluster management
- · Easy deployment with map positioning
- · Real-time AP status monitoring
- Profile creation and maintenance
- · VM-based control, cross platforms
- · Free license fee









# **Enterprise Wi-Fi Networking Solution**

PLANET enterprise PoE access points feature the latest 802.11ax wireless technology, advanced management functions and superior encryption standard yet cost-effectiveness. Meeting today's demand for advanced performance and security, PLANET enterprise PoE access points include multiple SSIDs, WPA/WPA2/WPA3, RADIUS MAC authentication and so forth. It is the perfect choice for homes, SOHOs, hotels, and offices to allow you to check e-mail and surf the Internet via the 2.4GHz band and simultaneously watch highdefinition (HD) video or any other multimedia application via the 5GHz band.

# **Enterprise Wireless Access Points**

#### WDAP-C1800AX

Dual Band 802.11ax 1800Mbps Ceiling-mount Wireless Access Point w/802.3at PoE+ & 2 10/100/1000T LAN Ports

- · Supports MU-MIMO, OFDMA and seamless roaming, beam forming, BSS coloring
- Simultaneous dual-band connectivity at 2.4GHz 600Mbps and 5GHz 1200Mbps
- · Backward compatible with IEEE 802.11 a/b/g/n/ac
- · Supports IPv6 and port VLAN
- · Supports captive portal and RADIUS Server/Client
- Centrally managed by PLANET NMS controller and PLANET CloudViewer app



#### WDAP-C7210E

1200Mbps 802.11ac Wave 2 MU-MIMO Dual Band Ceiling-mount Wireless AP

- · Simultaneous dual-band connectivity at 2.4GHz 300Mbps and 5GHz 900Mbps
- · Supports 11ac Wave 2 MU-MIMO and seamless roaming
- Supports IPv6 and port VLAN
- Supports captive portal and RADIUS server/client
- · Multiple Operation Modes for various applications: Wireless AP, Repeater and Gateway Mode
- · Centrally managed by PLANET NMS controller and PLANET CloudViewer app



















#### WDAP-W1800AXU

Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point w/802.3at PoE+ and Type C USB

- · Supports MU-MIMO, OFDMA, seamless roaming, beamforming and BSS coloring
- Simultaneous dual-band connectivity at 2.4GHz 600Mbps and 5GHz 1200Mbps
- · Supports IPv6 and port VLAN
- Supports captive portal and RADIUS Server/Client
- · USB Type C, 5V DC, 0.5A output
- Centrally managed by PLANET NMS controller and PLANET CloudViewer app





# WDAP-W1200AC

Dual Band 802.11ac 1200Mbps Wave 2 In-wall Wireless Access Point

- Simultaneous dual-band connectivity at 2.4GHz 300Mbps and 5GHz
- · Supports 11ac Wave 2 MU-MIMO and seamless roaming
- Supports IPv6 and port VLAN
- · Supports captive portal and RADIUS server/client
- · Multiple Operation Modes for various applications: Wireless AP, Repeater and Gateway Mode
- · Centrally managed by PLANET NMS controller and PLANET CloudViewer app

























# **Outdoor Wireless LAN Solutions**

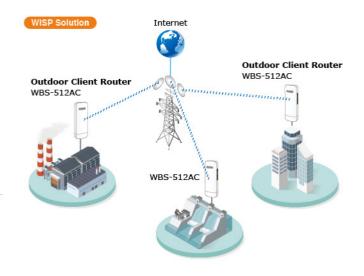
# **WISP Solution**

Compared with the traditional ISP provider that offers wired Internet service, PLANET WISP solution provides more elastic, more effective and low-cost wireless Internet service, and no limitation of place, be it a small residence or campus.



#### Outdoor CPE/Client

PLANET Outdoor Wireless Solution supports multiple wireless communication connectivities (AP, Client CPE, WDS PtP, WDS PtMP, Repeater, Universal Repeater and WISP) suitable for various application requirements and thus it helps users to easily build a wireless network and extend the wireless range of the existing wireless network.



## **Outdoor Wi-Fi LAN Solution**

It provides small and medium businesses or SOHO with wireless LAN data transmission solution. It features a wireless point to point/multiple point to multiple point bridge, general data transmission and media transmission like surveillance monitoring between buildings. It is suitable for wide-ranging connectivities.





# 5GHz and 2.4GHz 802.11ax/ac Wireless Outdoor Solutions

PLANET Outdoor Wireless Solution provides higher transmission power, longer distance, and better performance than standard outdoor wireless access points. It is equipped with various antennas and multiple adjustable transmission output power controllers which are quite suitable for longer distance and widely open space applications.

# Dual-band 802.11a/b/g/n/ac Wireless Outdoor CPEs

#### WDAP-1800AX

# 1800Mbps 802.11ax MU-MIMO Dual Band Outdoor AP

- · Supports MU-MIMO, OFDMA, seamless roaming, beamforming and BSS coloring
- Simultaneous dual-band connectivity at 2.4GHz 600Mbps and 5GHz 1200Mbps
- Backward compatible with IEEE 802.11 a/b/g/n/ac
- Supports IPv6 and port VLAN
- 20KV surge protection for wire cable interface
- Centrally managed by PLANET NMS controller and PLANET CloudViewer app











#### WDAP-850AC

#### 1200Mbps 802.11ac Wave 2 MU-MIMO Dual Band Outdoor AP

- · Simultaneous 2.4GHz (Wi-Fi access) and 5GHz (backhaul) wireless
- · Gigabit wire and Wave 2 1200Mbps wireless connectivity (dual-band)
- · 4 built-in N-type (F) antenna connectors
- · 802.1Q VLAN mapping multiple SSIDs
- · Ground terminal design
- 802.3at Power over Ethernet
- Centrally managed by PLANET AP Controller Series (NMS Series, WS Series, VR-300 & IVR-300 Series )













#### WBS-512AC

# 5GHz 802.11ac 900Mbps Outdoor Wireless CPE

- 5GHz 11ac Wi-Fi speed up to 900Mbps Wave 2.0, MU-MIMO
- · Built-in 14dBi directional antenna for PtP connection
- · Multiple operation modes: AP, Gateway, Repeater, WDS, WISP
- Supports multiple VLANs mapping to multiple SSIDs
- · "One-click PtP" to establish connection easily
- Centrally managed by PLANET AP Controller Series (NMS Series, WS Series, VR-300 & IVR-300 Series)









# 802.11ax Dual-band Wireless Router

#### WDRT-1800AX

#### Dual Band 802.11ax 1800Mbps Wireless Gigabit Router

- · Compliant with IEEE 802.11a/b/g/n/ac/ax dual band 1800Mbps wireless technology
- Equipped with all Gigabit RJ45 ports, 1 WAN port and 4 LAN ports
- · Supports OFDMA, MU-MIMO, beamforming, BSS coloring
- · Supports WPS, NTP, and TR069
- Supports guest networkSupports Wi-Fi EasyMesh













#### ICG-2515-NR/ICG-2515F-NR

#### Industrial 5G NR Cellular Gateway with 5-Port 10/100/1000T

- · Global 5G NR(NSA/SA)/4G LTE network with dual SIM design for cellular network redundancy
- 4 10/100/1000T LAN ports and 1 10/100/1000T WAN port
- 2 DI, 2 DO and 1 RS485 port for Modbus applications
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- Full security with VLAN, NAT, DMZ, routing, firewall and IP/MAC/ port filtering
- PLANET NMS controller system and CloudViewer app supported
- · DC 9 to 54V redundant power
- · -40 to 75 degrees C operating temperature
- · IP30 metal case with DIN-rail or wall-mount design
- · 1 1000 BASE-X SFP Slot for WAN/LAN interface (ICG-2515F-NR)





#### ICG-2515W-NR/ICG-2515FW-NR

#### Industrial 5G NR Cellular Wireless Gateway with 5-Port 10/100/1000T

- · Global 5G NR(NSA/SA)/4G LTE network with dual SIM design for cellular network redundancy
- 4 10/100/1000T LAN ports and 1 10/100/1000T WAN port
- 2 DI, 2 DO and 1 RS485 port for Modbus applications
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- · Full security with VLAN, NAT, DMZ, routing, firewall and IP/MAC/port
- · PLANET NMS controller system and CloudViewer app supported
- · DC 9 to 54V redundant power
- -40 to 75 degrees C operating temperature
- · IP30 metal case with DIN-rail or wall-mount design
- 1 1000 BASE-X SFP Slot for WAN/LAN interface (ICG-2515FW-NR)















## VCG-1500WG-LTE

#### Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX

- 4 10/100TX LAN ports and 1 10/100TX WAN port
- · Industrial power with wide DC voltage power supply design
- · One SIM slot and one 4G LTE antenna for network connection
- Supports Wi-Fi 802.11 b/g/n for mobile client connectivity
- GPS antenna allows to detect the location via sat nav system · Supports GRE, PPTP, IPSec and L2TP
- Supports NAT, DMZ, MAC/Application/IP filter and static routing
- Supports DHCP server/client, PPPoE, static IP and DDNS
- · -25 to 65 degrees C operating temperature
- Supports CMS and SNMP for remote management



#### ICG-2510W-LTE

#### Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T

- · 5-port Gigabit Ethernet, build in redundancy protocol-VRRP
- 2 DI/DO and 1 serial port (RS232 or RS485) for Modbus applications
- · Dual module SIM for network load balancing and redundancy
- · WiFi compliance IEEE 802.11b/g/n/ac dual-band for mobile client connectivity
- Multiple VPN with IPSEC, OpenVPN, PPTP, L2TP, GRE and VPN Failover
- Full security with VLAN, NAT, DMZ, Static routing, Firewall and IP/MAC/
- · Supports CMS for remote management
- -35 to 70 degrees C operating temperature and fanless design









#### ICG-2510WG-LTE

#### Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T

- · 5-port Gigabit Ethernet, build in redundancy protocol-VRRP
- 2 DI/DO and 1 serial port (RS232 or RS485) for Modbus applications
- Dual module SIM for network load balancing and redundancy
- · WiFi compliance IEEE 802.11b/g/n/ac dual-band for mobile client connectivity
- · GPS antenna allows to detect the location via sat nav system
- · Multiple VPN with IPSEC, OpenVPN, PPTP, L2TP, GRE and VPN Failover
- Full security with VLAN, NAT, DMZ, Static routing, Firewall and IP/MAC/Port filtering
- · Supports CMS for remote management
- · -35 to 70 degrees C operating temperature and fanless design









# **Wireless Antennas and Cable Accessories**

To commit the wireless long-distance connectivity, PLANET Wireless LAN Solution also provides a variety of Antennas, Cables and other Accessories for 2.4GHz and 5GHz band applications where more RF gain power is required to increase the convergence of the installations wirelessly.

The antennas include unidirectional antenna and omni-directional antenna to meet the need of different environments. The omni-directional antenna is ideal to install in a central base-station in a point to multi-point wireless application, and unidirectional antennas are designed for long distance.

To keep the wireless device free from lightning induced surges that travel on the coaxial transmission lines, PLANET also provides the arrestor guarding the wireless equipment from damage that could cause your previous network resources to break down.

#### **Flat Panel Antennas**



#### **ANT-FP14AD**

14dBi Flat Panel Dual Polarization Antenna



#### ANT-FP18A

18dBi Flat Panel Antenna



#### **ANT-FP14D**

14dBi Flat Panel Dual Polarization Antenna



#### ANT-FP18

18dBi Flat Panel Directional Antenna

## **Omni-directional Antennas**



#### **ANT-OM8**

8dBi Omni-directional Antenna



#### ANT-OM15

15dBi Omni-directional Antenna



#### ANT-OM5D-KIT

Dual Band Omni-directional Antenna 4/7dBi



#### ANT-OM10A

10dBi Omni-directional Antenna

## **Cables & Others**



#### **WL-LTNA**

2.4/5GHz Lightning Arrester (N-male to N-female)



#### WL-NM-0.6

0.6m N-male (male pin) to N-male (male pin) Cable

## **Sector Antennas**



#### **ANT-SE17AD**

2x2 MIMO 5GHz 17dBi Sector Antenna