Industrial 5G NR Outdoor Unit (ODU) with 1-port Gigabit PoE PD



Powerful 5G NR Industrial Outdoor Network Solution

PLANET has launched the FWA-2100-NR Outdoor Gateway, a groundbreaking connectivity solution. Harnessing advanced **5G NR** technology and a unique **dual-cellular WAN**, it delivers lightning-fast and stable network access in any environment. **Dual Nano SIM** slots offer carrier flexibility, and with an **IP68 rating**, it excels in durability for diverse settings, including outdoor use. Whether in remote rural areas, bustling construction sites, or suburban homes, the WAW Gateway shines. Its high-speed Gigabit Ethernet LAN port ensures superior network performance. Embrace a new era of connectivity with WAW Gateway that brings to you stability, speed, and flexibility at your fingertips, especially tailored for outdoor environments.



Automatic Failover between 5G NR and Dual WAN

The FWA-2100-NR, featuring a dual nano SIM slot for 5G NR, ensures continuous Internet access through failover capabilities between two distinct 5G signals. With the flexibility to define priority for the dual 5G SIM connections, the FWA-2100-NR provides flexible connectivity options. In case of a primary WAN interface failure, the secondary interface promptly restores the connection, ensuring seamless and uninterrupted connectivity.

Highlights

- Global 5G NR (NSA/SA)/4G LTE network with dual Nano SIM design for cellular network redundancy
- Complies with IEEE 802.11n and IEEE 802.11b/g/n standards (for configuration)
- One 1000BASE-T Ethernet for LAN interface
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- Stateful packet inspection (SPI) firewall and content filtering
- Blocks DoS/DDOS attack, port range forwarding
- High Availability, AP Controller, Captive Portal and RADIUS
- Planet NMS controller system and CloudViewer app supported
- -20 to 60 degrees C operating temperature

Hardware

- **1 x 10/100/1000BASE-T** RJ45 LAN port, auto-negotiation, auto MDI/MDI-X
- **2 x Nano** SIM card slots
- **1 x** reset button

Cellular Interface

- Supports multi-band connectivity with 5G NR (NSA/SA), LTE-FDD, LTE-TDD, and WCDMA
- LED indicators for connection status

RF Interface Characteristics

- Features 2.4GHz (802.11b/g/n) band for configuration
- 1T1R MIMO technology for simple wireless connection

IP Routing Feature

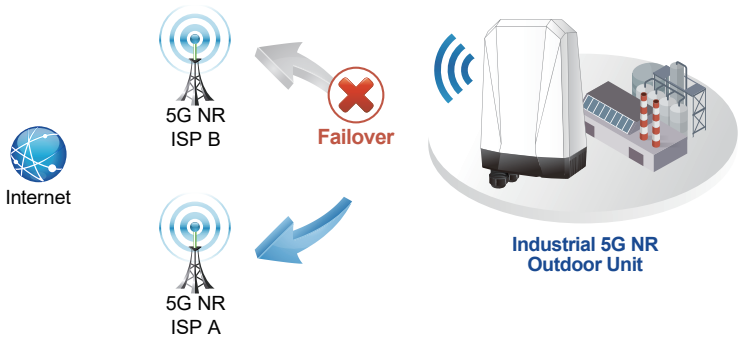
- Static Route
- Dynamic Route
- OSPF

Firewall Security

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

VPN Features

- IPSec/Remote Server (Net-to-Net, Host-to-Net), GRE, PPTP Server, L2TP Server, SSL Server/Client (Open VPN)

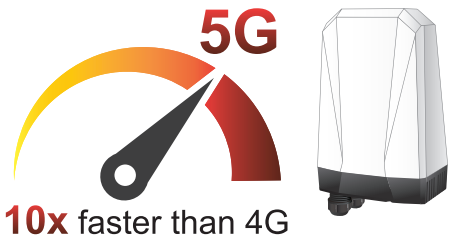


*Ultra-Fast 4G/5G Network**

The FWA-2100-NR supports 5G NR DL speed of 2.4 Gbps higher than 4G LTE DL speed of 1 Gbps. The wide spectrum bandwidth accelerates internet speeds and reduces network latency for premium and time-sensitive connectivity services. The FWA-2100-NR also supports multi-band connectivity including LTE FDD/TDD, WCDMA and GSM for a wide range of applications.

*The real 5G NR/4G LTE data rate is dependent on local service provider.

Up to download speed **2.4 Gbps**



- Max. Connection Tunnel Entries: 30 VPN tunnels,
- Encryption methods: DES, 3DES, AES, AES-128/192/256
- Authentication methods: MD5, SHA-1, SHA-256, SHA-384, SHA-512

Networking

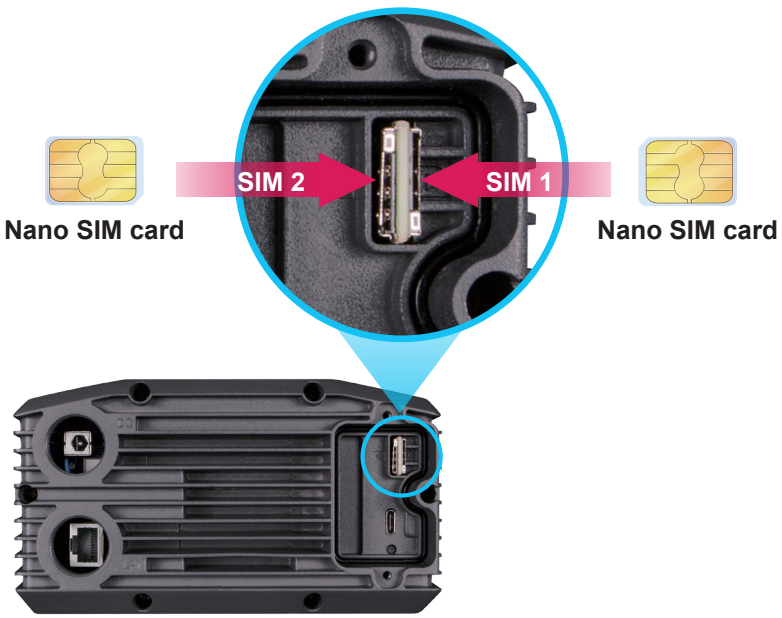
- High Availability
- Captive Portal
- RADIUS Server/Client
- Static IP/PPPoE/DHCP client for WAN
- DHCP server/NTP client for LAN
- Protocols: TCP/IP, UDP, ARP, IPv4, IPv6
- Port forwarding, QoS, DMZ, IGMP, UPnP, SNMPv1,v2c, v3
- MAC address clone
- DDNS: PLANET DDNS, Easy DDNS, DynDNS and No-IP

Others

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

Dual SIM Design

To enhance reliability, the FWA-2100-NR is equipped with dual nano SIM slots that support failover and roaming over to ensure uninterrupted connectivity for mission-critical cellular communications. It provides a more flexible and easier way for users to create an instant network sharing service via 5G-NR in public places like transportations, outdoor events, etc.

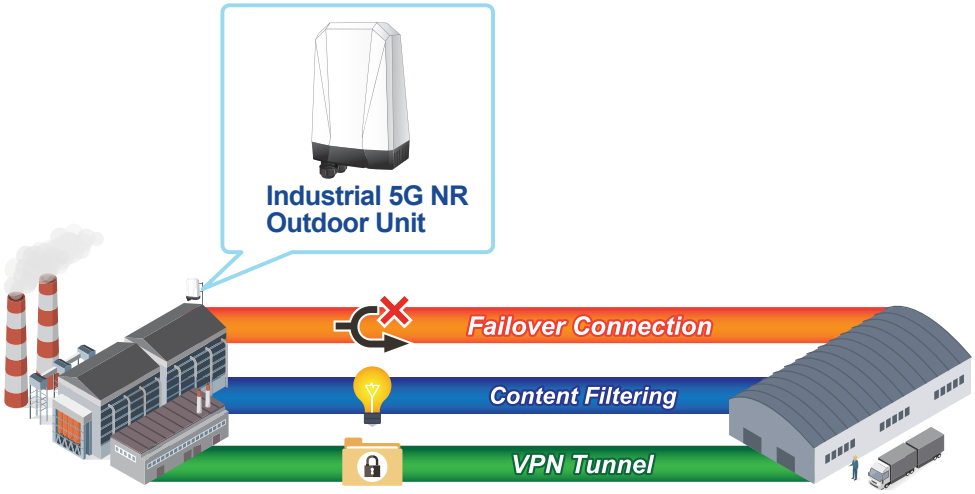


GPS Included

The FWA-2100-NR is equipped with global positioning system feature. It adopts 5G-NR technology to incorporate multiple global navigation systems (GPS/GLONASS/BeiDou/Galileo/QZSS). It helps to position location of cellular gateway based on a network of satellites that continuously transmits necessary data. More signals transmitted from more satellites can triangulate its location on the ground, meaning any location can be easily tracked.

Ideal High-Availability VPN Security Router Solution for Industrial Environment

The FWA-2100-NR provides complete data security and privacy for accessing and exchanging the most sensitive data, built-in IPSec VPN function with DES/3DES/AES encryption and MD5/SHA-1/SHA-256/SHA-384/SHA-512 authentication, and GRE, SSL, PPTP and L2TP server mechanism. The full VPN capability in the FWA-2100-NR makes the connection secure, more flexible, and more capable.

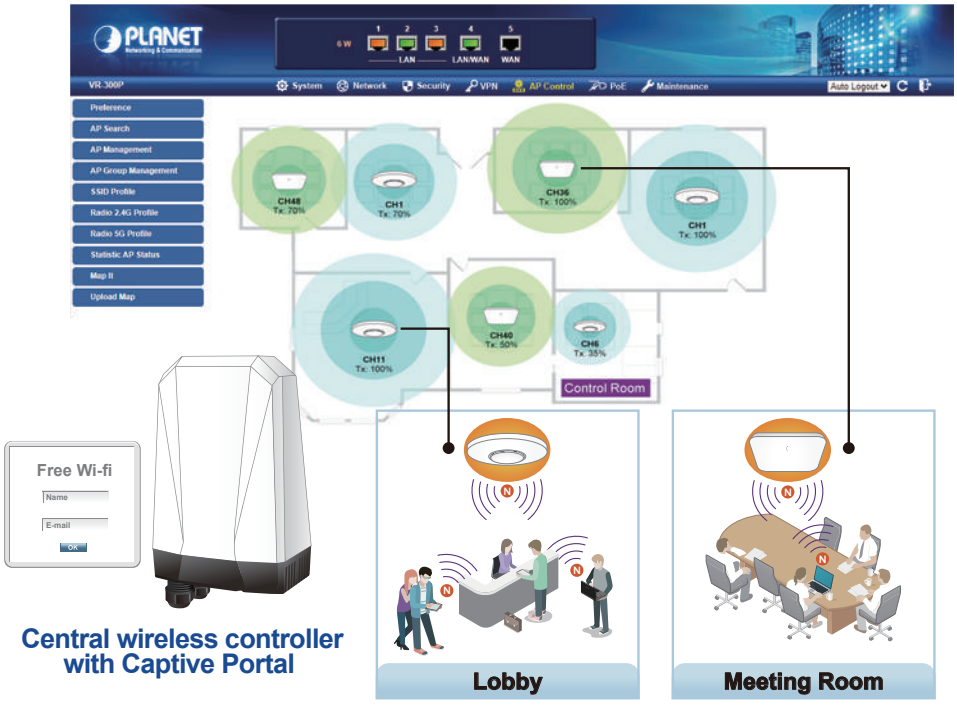


Wi-Fi Deployments and Authentication with Simplified Management

The FWA-2100-NR also provides a built-in AP Controller, Captive Portal, RADIUS and a DHCP server to facilitate small and medium businesses to deploy secure employee and guest access services without any additional server. The FWA-2100-NR can offer a secure Wi-Fi network with easy installation for your business.

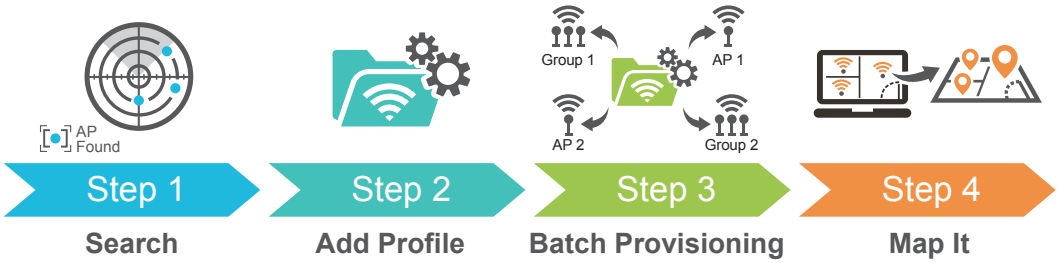
Centralized Remote Control of Managed APs

The FWA-2100-NR provides centralized management of PLANET Smart AP series via a user-friendly Web GUI. It's easy to configure AP for the wireless SSID, radio band and security settings. With a four-step configuration process, wireless profiles for different purposes can be simultaneously delivered to multiple APs or AP groups to minimize deployment time, effort and cost.



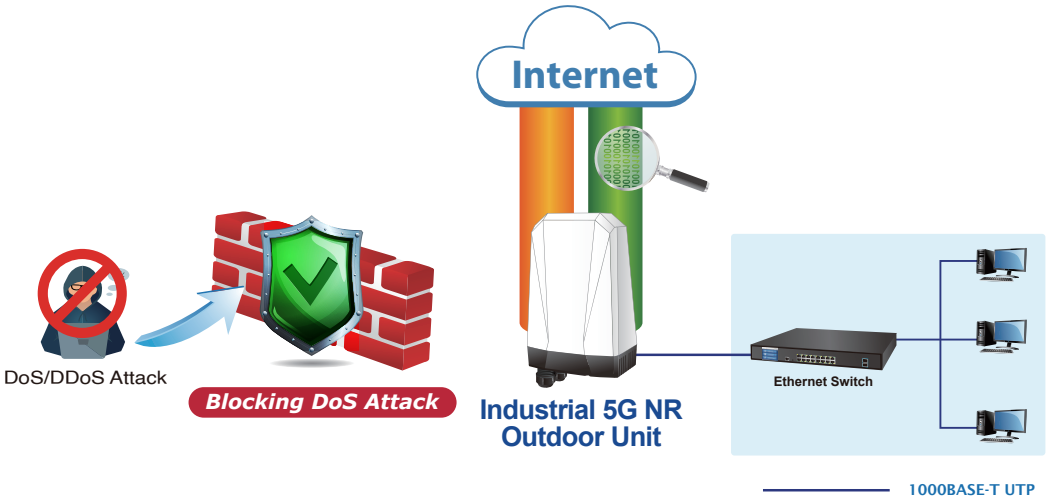
For example, to configure multiple Smart APs of the same model, the FWA-2100-NR allows clustering them to a managed group for unified management. According to requirements, wireless APs can be flexibly expanded or removed from a wireless AP group at any time. The AP cluster benefits bulk provision and bulk firmware upgrade through single entry point instead of having to configure settings in each of them separately.

Simplified Cluster Management with 4 Steps



Excellent Ability in Threat Defense

The FWA-2100-NR has built-in SPI (stateful packet inspection) firewall and DoS/DDoS attack mitigation functions to provide high efficiency and extensive protection for your network. Thus, virtual server and DMZ functions can let you set up servers in the Intranet and still provide services to the Internet users.



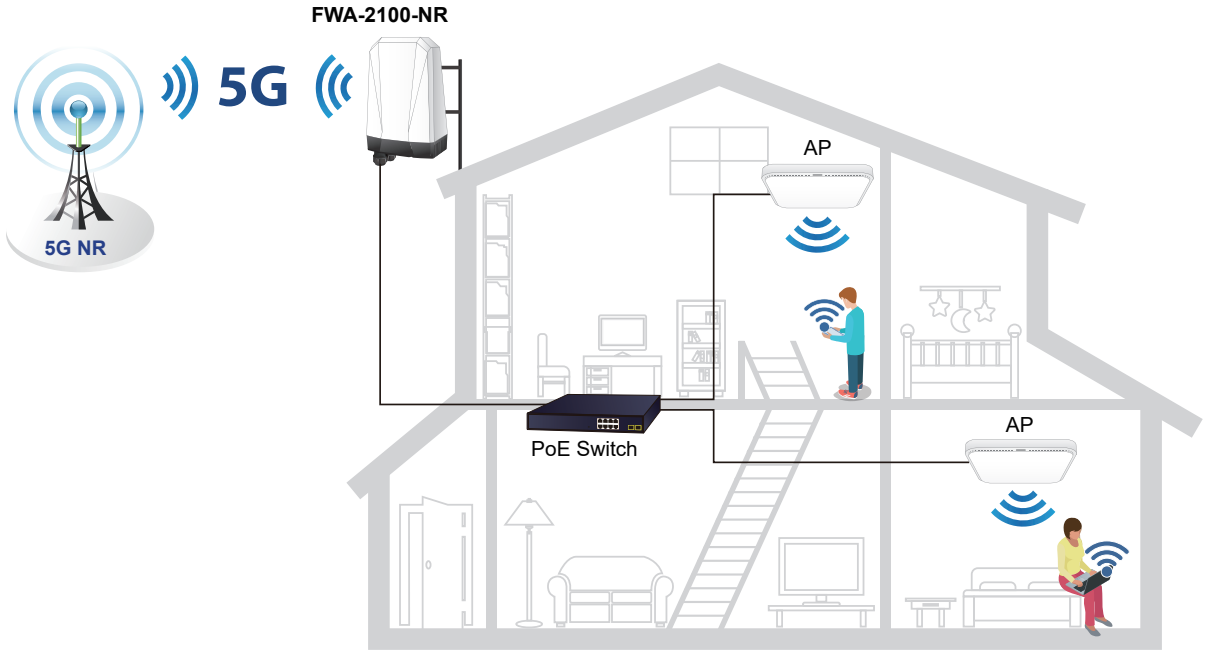
Cybersecurity Network Solution to Minimize Security Risks

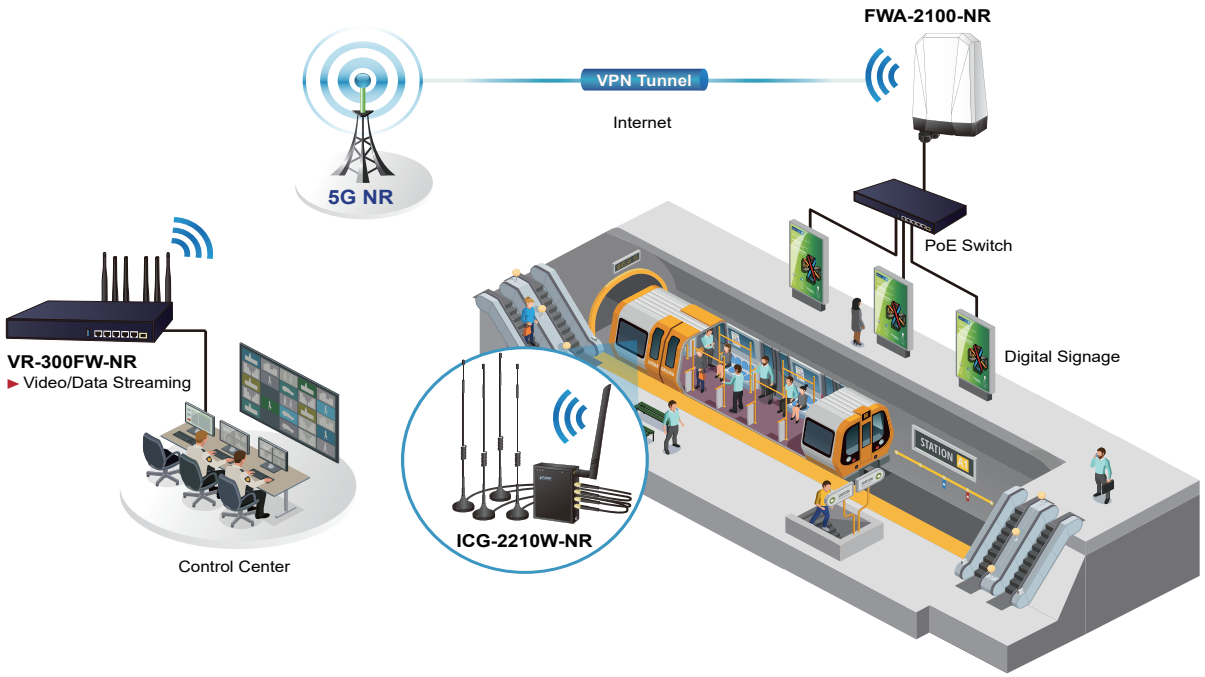
The cybersecurity feature included to protect the switch management in a mission-critical network virtually needs no effort and cost to install. For efficient management, the FWA-2100-NR is equipped with HTTPS web and SNMP management interfaces. With the built-in web-based management interface, the FWA-2100-NR offers an easy-to-use, platform independent management and configuration facility. The FWA-2100-NR supports SNMP and it can be managed via any management software based on the standard SNMP protocol.

Applications

5G NR Cellular Communication Solution

PLANET FWA-2100-NR adopts 5G NR cellular technology and thus breaks the 100m limitation of RJ45 transmission. To avoid data loss affected by an unexpected breakdown connection on the part of ISP, the FWA-2100-NR provides dual SIM card slots and failover functions and advanced features like VLAN, VPN, Modbus, and network management to cover more applications.





Specifications

Product	FWA-2100-NR
Hardware Specifications	
Ethernet	1 10/100/1000BASE-T RJ45 Ethernet LAN port
SIM Interface	2 Nano SIM card slots
Cellular Antenna	3 dBi internal antennas
Reset Button	< 5 sec: System reboot > 5 sec: Factory default
Enclosure	IP68 rating
Installation	Wall hanging / pole mounting
LED Indicators	System: PWR (**Blue**) Ethernet LNK/ACK (**Blue**) Wi-Fi (**Blue**) 4G/5G: 5G (**Blue**) 4G LTE/ 3G (**Amber**) Cellular Signal: Excellent/Good (**Blue**) Normal/bad (**Amber**)
Dimensions (W x D x H)	150 x 100 x 240 mm
Weight	1020 g
Power Requirements – DC	48V DC IN, 0.5A, IEEE 802.3at PoE+ or 12V DC IN, 1.5A
Power Consumption	18 W / 61.42 BTU
Multi Band Support	
5G NR Module	EAU: Sub-6: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n76/n77/n78/n79 LTE-FDD: B1/B3/B5/B7/B8/B20/B28/B32 LTE-FDD: B38/B40/B41/B42/B43 WCDMA: B1/B5/B8 NA: Sub-6: n2/n5/n7/n12/n14/n25/n30/n48/n41/n70/n66/n71/n77/n78 LTE FDD: B2/B4/B5/B7/B12/B13/B29/B30/B66/B71 LTE TDD: B41/B46(LAA)/B48
GNSS	GPS L1+L5 dual bands/GLONASS/BeiDou/Galileo/QZSS
Data Transmission Throughput	2.4Gbps (DL)/500Mbps (UL) for NR 1Gbps (DL)/200Mbps (UL) for LTE 42Mbps (DL)/5.76Mbps (UL) for HSPA+
Wireless	
Standard	IEEE 802.11g/b/n 2.4GHz
Band Mode	2.4G Only
Frequency Range	2.4GHz America FCC: 2.412~2.462GHz Europe ETSI: 2.412GHz~2.472GHz
Operating Channels	2.4GHz America FCC: 1~11 Europe ETSI: 1~13
Channel Width	20MHz
Data Transmission Rates	Transmit: 72 Mbps* Receive: 72 Mbps* *The estimated transmission distance is based on the theory. The actual distance will vary in different environments.
Transmission Power	11b: 23dbm+/- 1.5dbm @11Mbps 11g: 20dbm+/- 1.5dbm @54Mbps 11g/n: 20dBm +/- 1.5dbm @MCS7, HT20
Encryption Security	WEP (64/128-bit) encryption security WPA / WPA2 (TKIP/AES) WPA-PSK / WPA2-PSK (TKIP/AES) WPA3 personal 802.1x Authenticator

Wireless Advanced	Wi-Fi Multimedia (WMM) Auto channel selection Wireless output power management MAC address filtering
Wireless AP Management	
Maximum Managed APs	128
Maximum AP Groups	10
Maximum APs per AP Group	128
Wireless Encryption/Security	WEP encryption security WPA Personal / Enterprise (TKIP / AES) WPA2 Personal / Enterprise (TKIP / AES) WPA3 Personal Enterprise Class 802.1x
AP Auto Discovery	Supports AP auto discovery
SSID/RF Profile	Allows multiple wireless profiles creation and maintenance
Cluster Management	Allows AP grouping for bulk provisioning and batch upgrading
Bulk AP Provisioning	Supports bulk AP provisioning with user-defined profiles
Bulk AP Firmware Upgrade	Supports bulk AP firmware upgrade
Coverage Heat Map	Enables real signal coverage of managed AP reflecting on the uploaded zone maps
Status Monitoring	Real-time traffic statistics reporting of AP and activated clients
Graphical Statistics	Real-time and historical visibility of traffic flow [2]
Profile Backup/Restoration	Provides SSID, radio profile backup/restoration
SSIDs-to-VLANs Mapping	Allows to configure SSIDs-to-VLANs mapping in supported APs
Supported Access Point Models[1]	
Indoor AP	IAP-1800AX IAP-2400AX WDAP-C3000AX [2] WDAP-C7210E(V2) WDAP-C1800AX(V2) WDAP-W1800AXU WDAP-C7210E WDAP-W1200E WDAP-C7200E WDAP-W750E WNAP-C3220E WNAP-W2200UE
Outdoor AP	WDAP-3000AX [2] WDAP-1800AX WDAP-850AC WDAP-802AC WBS-512AC WBS-502N WBS-202N WAP-552N WAP-252N WDAP-702AC WBS-502AC WBS-500N WBS-200N WAP-500N WAP-200N
Remarks	[1] The supported AP models may be changed after a firmware upgrade. [2] The AP model will be support after a firmware update in the future.
Advanced Functions	
VPN	IPSec/Remote Server (Net-to-Net, Host-to-Net) GRE PPTP Server L2TP Server SSL Server/Client (Open VPN)
VPN Tunnels	Max. 30
VPN Throughput	Max. 50Mbps
Encryption Methods	DES, 3DES, AES or AES-128/192/256 encrypting

Authentication Methods	MD5/SHA-1/SHA-256/SHA-384/SHA-512 authentication algorithm
Management	
Basic Management Interfaces	Web browser SNMP v1, v2c PLANET Smart Discovery utility and NMS controller supported
Secure Management Interfaces	SSHv2, TLSv1.2, SNMP v3
System Log	System Event Log
Others	Setup wizard Dashboard System status/service Statistics Connection status Auto reboot Diagnostics
Standards Conformance	
Regulatory Compliance	CE
Environment	
Operating	Temperature: -20 ~ 60 degrees C Relative humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative humidity: 5 ~ 90% (non-condensing)

Ordering Information

FWA-2100-NR	Industrial 5G NR Outdoor Unit (ODU) with 1-port Gigabit PoE PD

Related Products

ICG-2515-NR	Industrial 5G NR Cellular Gateway with 5-Port 10/100/1000T
ICG-2515W-NR	Industrial 5G NR Cellular Wireless Gateway with 5-Port 10/100/1000T
IVR-100	Industrial 5-Port 10/100/1000T VPN Security Gateway
ICG-2510WG-LTE	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T
VCG-1500WG-LTE	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX
WGR-500-4PV	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+ and LCD Touch Screen
WGR-500-4P	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+
WGR-500	Industrial 5-Port 10/100/1000T Wall-mount Gigabit Router

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