Industrial 5G NR Compact Cellular Wireless Gateway with 2-Port 10/100/1000T



Powerful 5G NR and Wi-Fi 5 Industrial Network Solution

PLANET ICG-2210W-NR is an industrial-grade wireless cellular gateway for demanding mobile applications. Packed with cutting-edge features, including **5G NR (New Radio)** technology, dual WAN, and two micro SIM slots, it goes further with dual high-speed **Gigabit Ethernet LAN** ports and **WAN/LAN** ports, **802.11ac Wi-Fi** capability, and serial **RS232/RS485** communication interface. With a compact design, the ICG-2210W-NR is perfect for confined spaces or vehicular applications. The addition of ICG-2210W-NR failover ensures uninterrupted connectivity in dynamic environments. Tailored for versatility, it excels in harsh industrial environments and vehicular systems. Whether in tight quarters, mobile setups, or challenging industrial settings, the ICG-2210W-NR gateway ensures seamless and reliable connectivity. Its adaptability, coupled with advanced features, makes it the ideal solution for compact spaces and demanding applications.



Automatic Failover between 5G NR and Wired WAN

The ICG-2210W-NR boasts Gigabyte Ethernet wired WAN and 5G NR interfaces with seamless failover capabilities, ensuring continuous Internet access. It provides the flexibility to prioritize between 5G NR and wired WAN connections. In case of a primary WAN interface failure, the secondary interface swiftly restores the connection, ensuring uninterrupted connectivity at all times.

Highlights

- 5G NR (NSA/SA)/4G LTE network with dual micro SIM design for cellular network redundancy
- Automatic failover between 5G NR and Gigabit WAN
- Complies with IEEE 802.11ac and IEEE 802.11a/b/g/n/ac standards
- 1 serial port (RS485) for Modbus applications and 1 serial port (RS232)
- 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
- -40 to 75 degrees C operating temperature; DIN-rail and fanless designs

Hardware

- **1 x 10/100/1000BASE-T** RJ45 WAN/LAN port, auto-negotiation, auto MDI/MDI-X
- **1 x 10/100/1000BASE-T** RJ45 LAN ports, auto-negotiation, auto MDI/MDI-X
- **4 x** 5G NR antennas
- **2 x** micro SIM card slots
- **1 x** 2dBi Wi-Fi antennas
- **1 x** reset button

Cellular Interface

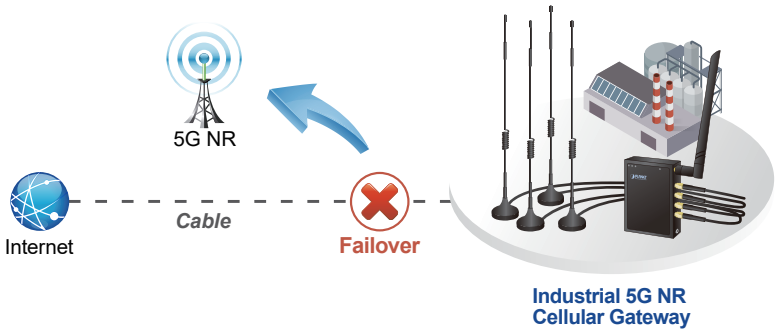
- Supports multi-band connectivity with 5G NR (NSA/SA), LTE-FDD, LTE-TDD, and WCDMA
- Built-in SIM and broadband backup for network redundancy
- Four detachable antennas for 5G NR connection
- LED indicators for connection status

RF Interface Characteristics

- Features 2.4GHz (802.11b/g/n) and 5GHz (802.11a/n/ac) dual band for carrying high load traffic
- 1T1R MIMO technology for enhanced throughput and coverage
- Provides multiple adjustable transmit power control
- High-speed wireless data rate of up to 600Mbps (150Mbps for 2.4GHz or 433Mbps for 5GHz)

IP Routing Feature

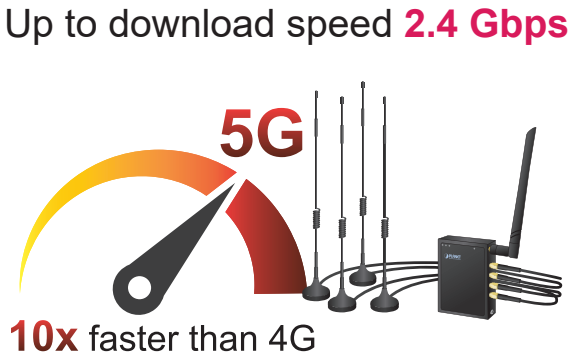
- Static Route
- Dynamic Route
- OSPF



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

The ICG-2210W-NR supports 5G NR DL speed of 2.4 Gbps faster 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 ICG-2210W-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.



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)
- 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

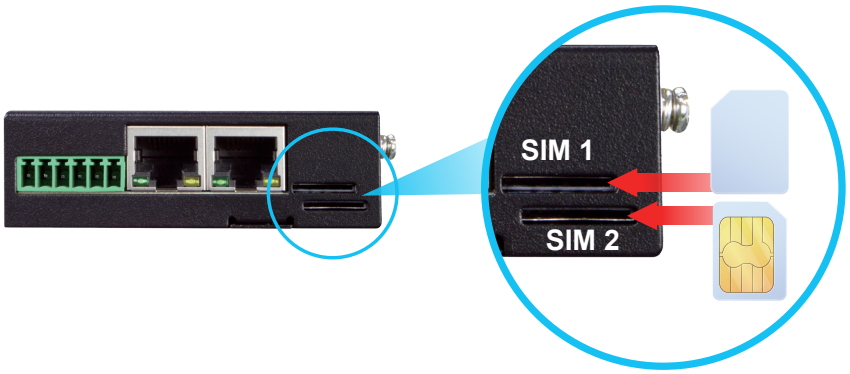
- Outbound load balancing for Ethernet WANs
- Auto-failover between Ethernet WANs and cellular network
- Static IP/PPPoE/DHCP client for WAN
- DHCP server/NTP client for LAN
- Protocols: TCP/IP, UDP, ARP, IPv4, IPv6
- Port forwarding, QoS, DMZ, IGMP, UPnP, SNMPv1,v2c, v3
- MAC address clone
- DDNS: PLANET DDNS, Easy DDNS, DynDNS and No-IP

Others

- Supported access by HTTP or HTTPS
- Auto reboot

Dual SIM Design

To enhance reliability, the ICG-2210W-NR is equipped with dual micro 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.

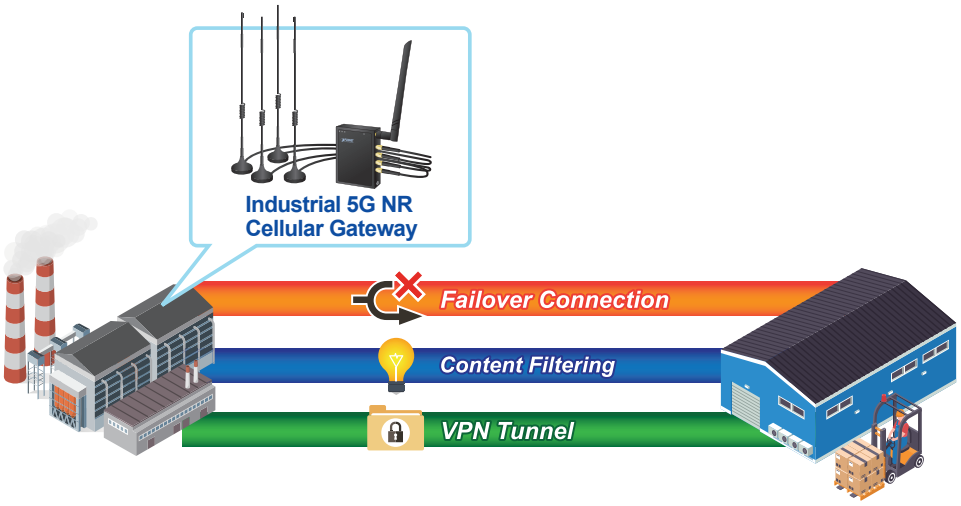


Wireless 11ac Brings Excellent Data Link Speed

PLANET ICG-2210W-NR, adopting the IEEE 802.11ac Wave 2 standard, provides a high-speed transmission of power and data, meaning two remote nodes in the **5GHz** frequency band can be bridged. The **2.4GHz** wireless connection can also be used simultaneously.

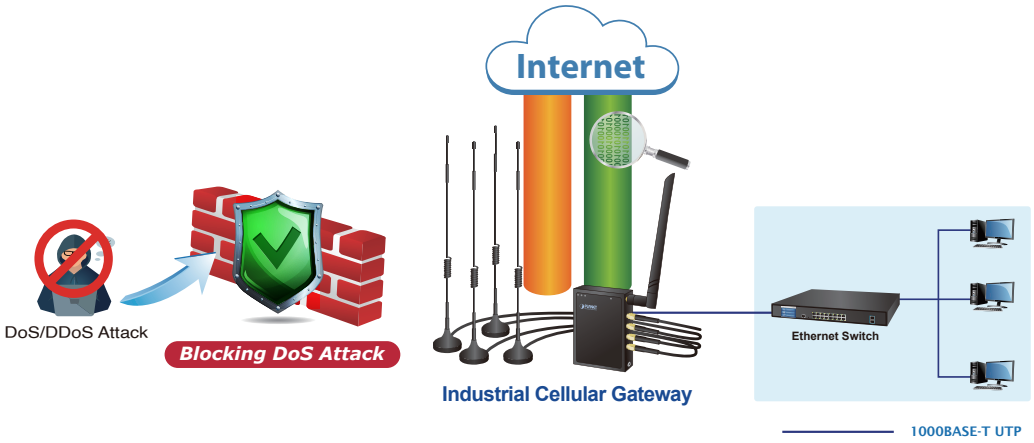
Ideal High-Availability VPN Security Router Solution for Industrial Environment

The ICG-2210W-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 ICG-2210W-NR makes the connection secure, more flexible, and more capable.



Excellent Ability in Threat Defense

The ICG-2210W-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.



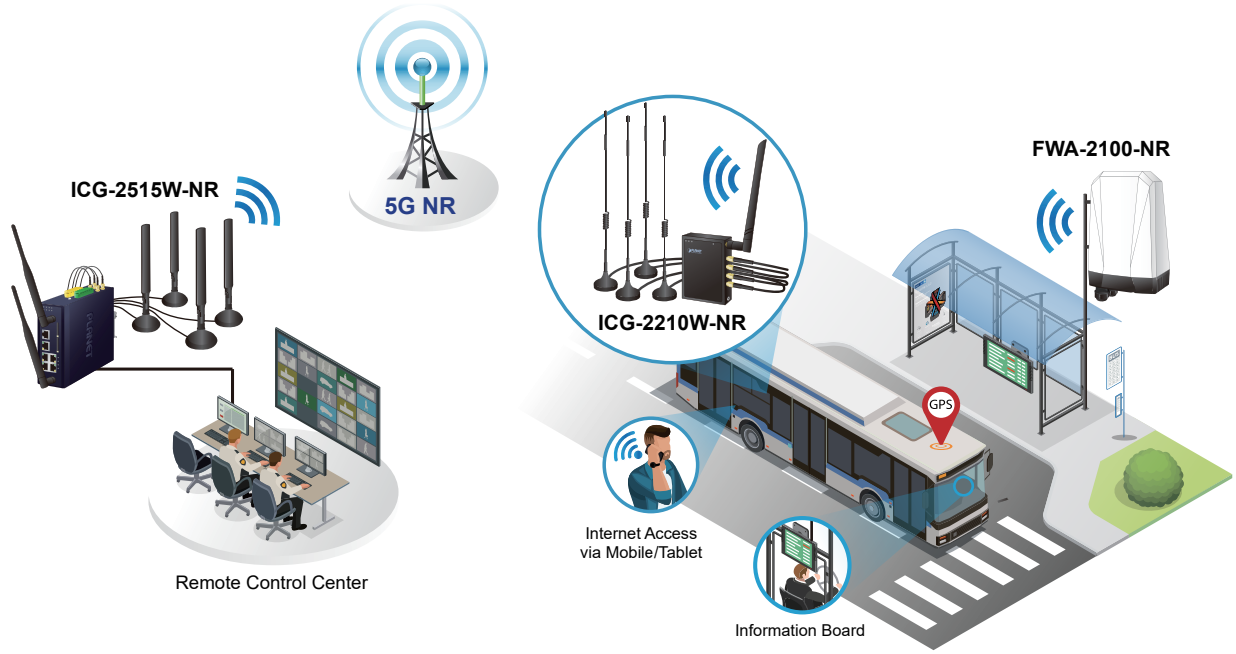
Cybersecurity Network Solution to Minimize Security Risks

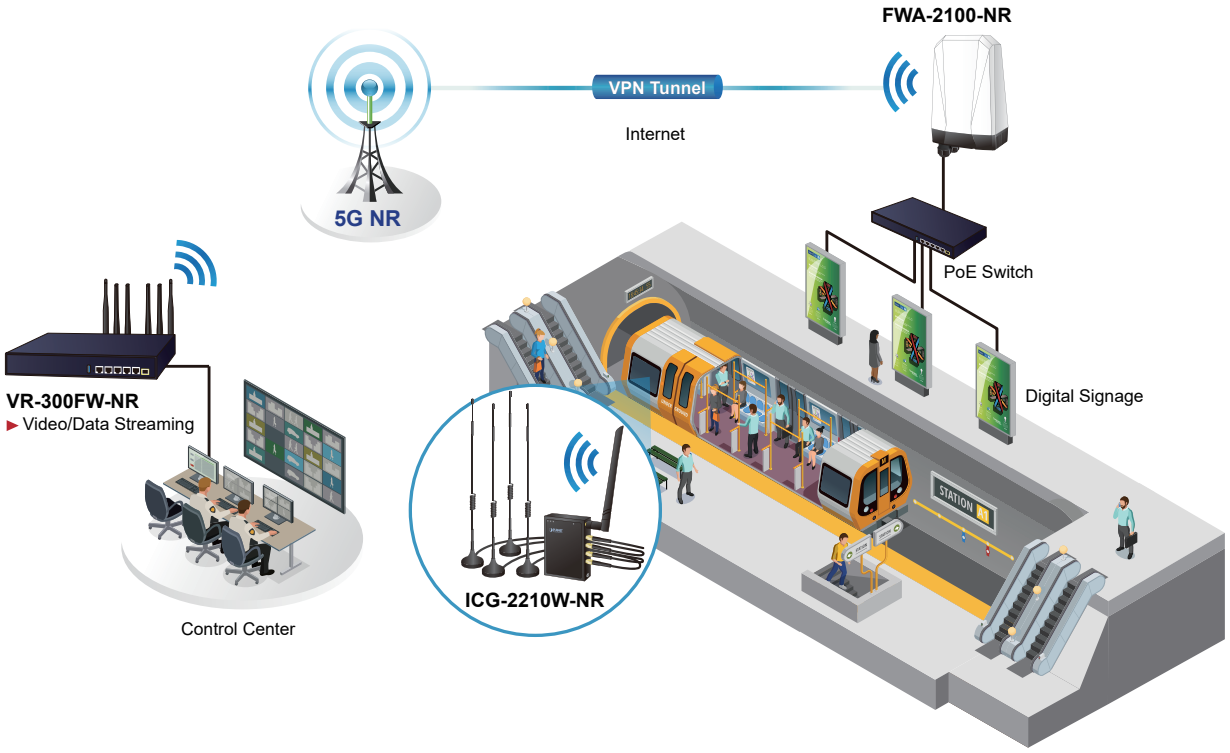
The cybersecurity feature included to protect the switch management in a mission-critical network virtually needs no effort and cost to install. For efficient management, the ICG-2210W-NR is equipped with HTTPS web and SNMP management interfaces. With the built-in web-based management interface, the ICG-2210W-NR offers an easy-to-use, platform independent management and configuration facility. The ICG-2210W-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 ICG-2210W-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 ICG-2210W-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	ICG-2210W-NR	
Hardware Specifications		
ESD Protection	2 10/100/1000BASE-T RJ45 Ethernet ports including 1 LAN port 1 WAN/LAN port	
Serial Interface	1 RS232 and 1 RS485	
SIM Interface	2 micro SIM card slots	
Cellular Antenna	5 dBi external antennas with SMA connectors for 5G-NR	
Reset Button	< 5 sec: System reboot > 5 sec: Factory default	
Enclosure	IP30 metal case	
Installation	DIN rail, wall-mounting	
LED Indicators	System: PWR (Green) SYS (Green) Internet LNK/ACK(Green) Wi-Fi (Green)	
Dimensions (W x D x H)	76 x 23.5 x 106 mm	
Weight	285 g	
Power Requirements – DC	9~36V DC DC IN	
Power Consumption	5.72 W / 19.51 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	
Data Transmission Throughput	2.4Gbps (DL)/500Mbps (UL) for NR 1Gbps (D L)/200Mbps (UL) for LTE 42Mbps (DL)/5.76Mbps (UL) for HSPA+	
Wireless		
Standard	IEEE 802.11a/n/ac 5GHz IEEE 802.11g/b/n 2.4GHz	
Band Mode	2.4G & 5G concurrent mode	
Operating Channels	2.4GHz	America FCC: 2.412~2.462GHz Europe ETSI: 2.412GHz~2.472GHz
	5GHz	5.15GHz ~5.875GHz
	2.4GHz	America FCC: 1~11 Europe ETSI: 1~13
	5GHz	America FCC: Non-DFS: 36, 40, 44, 48, 149,153,157,161,165 Europe ETSI: Non-DFS: 36, 40, 44, 48, DFS: 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 5GHz channel list may vary in different countries according to their regulations.
Channel Width	20MHz, 40MHz, 80MHz	
Data Transmission Rates	Transmit: 150 Mbps* for 2.4 GHz and 433 Mbps* for 5 GHz Receive: 150 Mbps* for 2.4 GHz and 433 Mbps* for 5 GHz *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 17dBm@MCS7,HT40 11a: 19.5dBm +/- 1.5dbm @54Mbps 11a/n: 19.5dBm+/- 1.5dbm @MCS7, HT20 17dBm@MCS7, HT40 11ac HT20: 20+/-1.5dBm @MCS8 11ac HT40: 17+/-1.5dBm @MCS9 11ac HT80: 14.5+/-1.5dBm @MCS9
Encryption Security	WEP (64/128-bit) encryption security WPA / WPA2 (TKIP/AES) WPA-PSK / WPA2-PSK (TKIP/AES) 802.1x Authenticator
Wireless	Wi-Fi Multimedia (WMM)
Advanced	Auto channel selection Wireless output power management MAC address filtering
Advanced Functions	
VPN	■ IPSec/Remote Server (Net-to-Net, Host-to-Net) ■ GRE ■ PPTP Server ■ L2TP Server ■ SSL Server/Client (Open VPN)
VPN Tunnels	Max. 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
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: -40 ~ 75 degrees C Relative humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative humidity: 5 ~ 90% (non-condensing)

Ordering Information

ICG-2210W-NR	Industrial 5G NR Compact Cellular Wireless Gateway with 2-Port 10/100/1000T

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
XT-925A	2-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Media Converter

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