

# RansNet UA-800NR

5G | Wi-Fi 6 | IoT | SD-WAN

An Industrial Grade 5G Wireless Router  
Engineered for Universal Access



RansNet UA-800NR is a general purpose Industrial grade 5G router, using advanced 5G and Software-Defined-WAN (SD-WAN) technologies with a central orchestration platform, to offer an end-to-end secure Fixed Wireless Access solution to connect enterprise branch offices, retail outlets, AIoT devices and Industrial 4.0 applications.

Equipped with dedicated 5G module and dual SIM slots, the UA-800 provides resilient and high-speed Wireless Wide-Area-Network (WWAN) backhaul, to reliably connect vehicles, robotics or IoT devices to central application servers, at highest possible speed and lowest latency. This global version model supports all mainstream providers frequency bands, and automatically connects to 5G NSA/SA or LTE, whichever is available with best performance. Its "Gigabit LTE" (Cat19) and 5G carrier aggregation capabilities produce maximum wireless bandwidth, making it an ideal choice to transit from 4G to 5G era, with absolute investment protection.

The Qualcomm-powered appliance comes with Gigabit Ethernet and 802.11ax Wi-Fi, producing up to 1Gbps firewall throughput and up to 800Mbps VPN throughput (IPSec AES-256). Installed with RansNet OS, the UA-800NR supports full SD-WAN features, to guarantee security and end-to-end application performance, at minimum operational overheads.

The UA-800NR offers a compact, lightweight design with a metal casing, suitable for general industrial or enterprise applications using 5G as Fixed Wireless Access.

## Key features

- Dedicated 5G module. Support 5G NSA/SA/LTE and NR-CA, auto switch
- Worldwide 5G NR, LTE-A, UMTS/HSPA(+) and GSM/GPRS/EDGE coverage
- Integrated Wi-Fi 6, GPS, Bluetooth and Z-Wave\* for LAN/IoT devices
- Gigabit Ethernet ports for extended local network connectivity
- Multi-WAN for link balancing and auto failover between fixed and 4G/5G
- Stateful firewall for perimeter defense
- Network Access Control for endpoint security and identity management
- VPN for data encryption and transport security over the air
- Dynamic routing and traffic steering for application performance
- Built-in MQTT broker\* for IoT support
- Zero-Touch-Provisioning for easy deployment
- SD-WAN orchestration for central configuration and monitoring



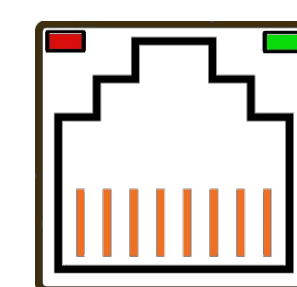
5G NR Sub-6 Bands  
NSA/SA, NR-CA



DL: LTE Cat 19  
UL: LTE Cat 18



802.11b/g/n/ax  
Wi-Fi 6



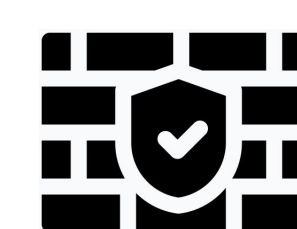
Gigabit Ethernet  
WAN and LAN



Multi-constellation  
GNSS



MQTT Broker \*



Stateful Firewall



Multi-protocol VPN  
(IPSec/GRE/VXLAN)



Software-Defined  
Wide Area Network

Hardware Specifications

Processor	Qualcomm Quad-Core (IPQ6010)
Memory (Flash, RAM)	64MB, 1GB RAM
Firewall throughput	1Gbps
VPN throughput	600Mbps (IPSec with AES-256 encryption)
Concurrent devices	Up to 200
Concurrent connections	Up to 500,000
Multi-WAN	YES (Fixed line + 5G/4G + Wi-Fi as WAN)
Gigabit Ethernet	5 x GE (RJ45) (All ports are configurable as either WAN or LAN)
Console	1 x RJ45, Baud Rate 115200bps

5G/LTE/Wi-Fi Specifications

5G Modem	Quectel RM520 Series (Qualcomm Snapdragon x62)
SIM Card Slot	Dual SIM Active/Standby (UA-800NR1) or Active/Active (UA-800NR2)
5G/NR Bands	5G NSA: n1/3/5/7/8/20/28/38/40/41/71/75/76/77/78 5G SA: n1/3/5/7/8/20/28/38/40/41/71/75/76/77/78
5G/NR peak data rate (theoretical)	NSA data rate: DL 3.4Gbps, UL 550Mbps SA data rate: DL 2.4Gbps, UL 900Mbps
4G/LTE Bands	FDD: B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 TDD: B34/38/39/40/41/42/43/48
4G/LTE peak data rate (theoretical)	DL 1.6 Gbps (Cat 19) UL 200 Mbps (Cat 18)
Wi-Fi Standard	802.11b/g/n/ax, 2 x 2 MU-MIMO OFDMA AP and STA mode (Wi-Fi as WAN)
Wi-Fi peak data rate (theoretical)	Up to 1.49Gbps
Antenna Connectors	4x SMA Cellular Connectors 2x RP-SMA Wi-Fi Antenna Connectors

Physical Specification

Power Input Options	Screw Jack: 12V – 56V DC
Power Consumption	< 12W
MTBF (hours)	200,000 @ 25°C 100,000 @ 50°C 50,000 @ 70°C
Dimensions (WxDxH, mm)	195 x 150 x 30
Weight	< 1kg
Humidity	15% – 95% (non-condensing)
Operating temperature	-30°C to 70°C
Certification and tests	FCC, CE, IP30
Package Content	1 x UA-800NR 2 x Wi-Fi Antennas 4 x Dipole 5G Antennas 1 x 12V DC Power Adapter
Warranty	1-Year Limited Warranty

\* Under development

Network and Security Features

IPv4, IPv6	✓
DHCP services (client and server)	✓
MQTT broker (mosquitto)*	✓
VLAN/Trunking (IEEE 802.1q)	✓
Ethernet bridging (IEEE 802.1d)	✓
Bonding/EtherChannel/LACP (IEEE 802.3ad)	✓
High Availability (VRRP)	✓
Static and Dynamic routing (OSPF/BGP)	✓
Policy-Based Routing (PBR)	✓
SNMP, NetFlow, OpenFlow, Syslog, iperf3	✓
DNS and FQDN filtering	✓
Stateful Firewall, NAT, SNAT, DNAT, Port Forwarding	✓
Access logging for security audit and compliance	✓
SD-Branch Orchestration and Monitoring	✓
Cloud or on-premise gateway deployment	✓
Cloud or on-premise orchestration (mfusion)	✓
Zero-touch provisioning	✓
Multi-VPN protocols: WireGuard, SSL, IPSec, L2TPv3, GRE, DMVPN	✓
Multiple VPN modes: L2VPN, L3VPN, Remote Access	✓
Multiple VPN topologies: Hub-and-Spoke, Spoke-to-Spoke, or Mesh	✓
VXLAN with BGP EVPN	✓
Auto SD-WAN VPN and routing provisioning	✓
Template based configuration and monitoring	✓
Application-based Traffic-shaping	✓
Performance-based traffic steering	✓
Dynamic VLAN assignment based on device or user identity (NAC)	✓
Super-tenant multi-role based dashboard access	✓
Real-time device and SD-WAN topology update	✓
Alert on device/link failures or thresholds	✓
Extensive dashboard customization	✓
Customizable scheduled reporting	✓