

NB2800-N2Wac-G

Vehicle Router with 5G + WLAN-ac + 2x GbE + GNSS + E-Mark

High-performance and modular mobile router for wireless Internet access in vehicles.



Keyfeatures

Mobile / Cellular	1x 5G-NR, LTE-A Pro, UMTS
SIM	4x Micro SIM
WiFi / WLAN	1x Dual-band IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients in Access Point Mode
Ethernet	2x Gigabit Ethernet
Power	12 VDC to 48 VDC, Ignition Sense
Positioning	Multi-GNSS
Operation Temperature	-25 °C to +70 °C
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates
Compliance	CE (RED), Vehicle (UNECE-R10, UNECE-R118), ITxPT optional
Modularity	Extensions on request

Product description

The NB2800 provides in-vehicle wireless Internet access.

Applications

- Passenger Infotainment
- CCTV
- Ticketing
- Smart Traffic
- Emergency Services

Specifications

Mobile / Cellular	Standard	1x Multimode 5G-NR, LTE-A Pro, UMTS 5G - NR n1, n2, n3, n5, n7, n8, n12*, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79 2014/53/EU (RED): n1, n3, n7, n8, n20, n28, n38, n40, n77, n78 4G - LTE-A Pro B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29DL, B30, B32, B34, B38, B39, B40, B41, B42, B43*, B46(LAA), B48(CRS), B66, B71 2014/53/EU (RED): B1, B3, B7, B8, B20, B28, B38, B40 3G - DC-HSPA+/UMTS B1, B2, B3, B4, B5, B6, B8, B9, B19 2014/53/EU (RED): B1 (2100), B3 (1800), B8 (900) 5G NR Modes Sub-6 FDD and TDD LTE Category Cat. 20 up to 7CA MIMO 4x4 MIMO in 5G-NR support on n1, n2 n3, n7, n25, n38, n40, n41, n48, n66, n77, n78, n79 and LTE B1, B2, B3, B4, B7, B25, B30, B38, B39, B40, B41, B42, B43, B46, B48, B66 Antenna ports 4 Power Class 23dBm (Power Class 3) Data rate down / up (max) up to 5.5 Gbps DL / 2.7 Gbps UL Operation Mode 5G Core SA and NSA operations 3GPP 4G/5G Rel. 15, 3G HSPA+ Rel. 18 FCC ID RI7FN980 Voice - Region Europe, Middle East and Africa (EMEA), on request: North America (NA), Asia and Pacific (APAC) * future Module Firmware release
Region		Europe, Middle East and Africa (EMEA)
Connectors		4x FAKRA D-coded male
SIM		4x Micro SIM - 3FF

WiFi / WLAN	Standard	2x WLAN 2.4/5 GHz a/b/g/n/ac (Wi-Fi 5) Wireless standard IEEE 802.11a/b/g/n/ac (Wi-Fi 5) Frequency 2.4/5 GHz Diversity 2x2 MIMO Data rate (max) 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz) Modes Client or access point (up to 100 clients) FCC ID TK4WLE600VX
	Connector	4x FAKRA I-coded male
Ethernet	Standard	2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps
	Connector	2x RJ45
Positioning	Standard	1x Multi-GNSS Receiver BeiDou, Galileo, GLONASS, GPS gpsOne Gen 9 Antennas Active or passive Sensitivity Up to -161 dBm CEP (Circular Error Probability) <2m (Open sky conditions. Standalone) Min Update Rate 1Hz Services Standalone
	Connector	1x FAKRA C-coded male
USB	Standard	1x USB 3.0 Host
	Connector	1x Type A
Serial, Fieldbus	Protocol	1x RS-232 Protocol EIA-232 Signals TX, RX Signal level High > 5 VDC, low < -5 VDC Bit rate Up to 115 200 Bit/s
	Connector	1x Terminal block header 5 mm
System	Core	1.3 GHz dual-core, 1 GB RAM, 4 GB flash
	Module Slots	2x miniPCle (PCle + USB), 2x miniPCle (USB)
Software	Features	NetModule Router Software (supported features depending on product variant) Package The standard software package includes an intuitive user interface, covering all modern routing protocols and enables efficient mass deployment. General Fail-safe update (FOTA), upgrade via USB, HTTP(S), (S)FTP or TFTP, remote CLI & WebGUI, RADIUS authentication, Simple Certificate Enrollment Protocol (SCEP), Hardware- und Software Watchdog Remote Management Manage and monitor devices with SNMP V1/V2/V3, Netmodule vendor MIB, telnet, SSH, or HTTP/HTTPS Cellular Networking Multi-SIM / eSIM support (optional license), multi-APN support, signal strength monitoring, dedicated bearers, CSFB/VoLTE calls (optional license) Wireless LAN Access Point, Client Mode, Mesh Point or Dual Modes (Mesh Access Point / Access Point - Client), WLAN Pseudo-Bridge Client Mode: Multiple Client SSID Profile, Encryption: Open, WEP, WPA1/2/3-Personal, WPA1/2/3-Enterprise. Fast Roaming: Fast BSS Transition (802.11r), PreAuthentication, Protected Management Frames (802.11w) AP Mode: Multi-SSIDs (up to 8) Encryption: Open WPA1/2/3-Personal, WPA1/2/3-Enterprise Fast Roaming: Fast BSS Transition (802.11r), PreAuthentication, DFS support Protected Management Frames (802.11w) Client Tracking, Band Steering, Hide SSID broadcasting, Isolate Clients, Accounting, Short guard Intervall Mesh Mode (802.11s): Encryption: None, SAE. Gateway announcements Link Management Link prioritization, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision, Services DHCP Client/Server, DNS Caching Server, Email, SMS Service, NTP Client/Server, SNTP Server, DynDNS, SSH Server, SNMP Agent, HTTP/HTTPS/FTP Server, IPv6 for WAN, 802.1x over Ethernet, MQTT Broker Voice Gateway (SIP, Call Routing, Audio with optional license) Coovachilli Hotspot Routing Destination, policy, multipath, mobile-IP, OSPF, BGP, multicast, TCP-MSS clamping, bridging discovery protocols LLDP, CDP, SONMP, EDP, FDP, IRDP, VRRP, STP/RSTP, VRRP, VLAN, PPPoE, VXLAN VPN OpenVPN, IPsec (IKEv1 and IKEv2), PPTP, GRE, L2TP, CSD dial-in, Certificate revocation service Firewall Stateful firewall, connection tracking, NAT, NAPT, masquerading, bridge filtering, Adress translation (based on SRC and DST ports) Encryption supporting password protected PKCS12 files, integrated random certificate key generator, "Let's encrypt" certificate, ECC (Certificates with Elliptic Cryptography) Quality of Service Diffserv, SFQ, HTB, Priority-based Queuing, Netflow (Softflow) Programmability SDK Troubleshooting Logging, Ping, Traceroute, Tcpdump, Speed-test
	Licenses	GNSS Enabled service GNSS location service Server with JSON-, NMEA stream

Power	Input Voltage	12, 24, 48 VDC Nominal voltages 12, 24, 48 VDC Absolute voltages 12 VDC to 48 VDC (-25 % / +25 %) Ignition sense Input with delayed shutdown
	Ignition Sense	Yes
	Connector	1x Terminal block header 5 mm
	Consumption	20 W (max)
Mounting		Bracket
Dimensions	W x H x D	Width 164/190 mm x height 58 mm x depth 139.5 mm
Weight		800 g
Environment	Operating Temperature	-25°C to +70°C
	Ingress Protection Level	IP40
MTBF		230'000 h / 26.3 years, according SN29500 at environmental temperature 40 °C
Certifications	Compliance Domain	CE according to 2014/53/EU (RED), Vehicle according to UNECE-R10, UNECE-R118 Vehicle
Order Code		NB2800-N2Wac-G