

NB2800-NLWac-GV

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

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



Keyfeatures

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|------------------------------|--|
| Mobile / Cellular | 1x 5G-NR, LTE-A Pro, UMTS 1x LTE-A Pro, UMTS |
| SIM | 4x Micro SIM |
| WiFi / WLAN | 1x IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients im 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, n3, n7, n8, n20, n28, n38, n40, n77, n78
4G - LTE-A Pro B1, B3, B7, B8, B20, B28, B38, B40
3G - DC-HSPA+/UMTS 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, n3, n7, n38, n40, n77, n78 and LTE B1, B3, B7, B38, B40
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 R17FN980

Voice -

Region Europe, Middle East and Africa (EMEA), on request: North America (NA), Asia and Pacific (APAC)

1x Multimode LTE, UMTS, GSM for EMEA

4G - LTE B1, B3, B7, B8, B20, B28A

3G - DC-HSPA+/UMTS B1 (2100), B3 (1800), B8 (900)

2G - GSM/GPRS/EDGE B3 (1800), B8 (900)

Category LTE Cat 4

Antenna ports 2x2 MIMO

Data rate down / up (max) 150 Mbps / 50 Mbps

Voice CSFB, VoLTE (with optional Software License)

FCC ID -

Region

Connectors

SIM

Europe, Middle East and Africa (EMEA)

6x FAKRA D-coded male

4x Micro SIM - 3FF

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| WiFi / WLAN | Standard | <p>1x 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</p> |
| | Connector | 2x FAKRA I-coded male |
| Ethernet | Standard | <p>2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps</p> |
| | Connector | 2x RJ45 |
| Positioning | Standard | <p>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</p> |
| | Connector | 1x FAKRA C-coded male |
| USB | Standard | 1x USB 3.0 Host |
| | Connector | 1x Type A |
| Serial, Fieldbus | Protocol | <p>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</p> |
| | Connector | 1x Terminal block header 5 mm |
| System | Core | 1.3 GHz dual-core, 1 GB RAM, 4 GB flash |
| | Module Slots | 2x miniPCIe (PCIe + USB), 2x miniPCIe (USB) |
| Software | Features | <p>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, SNMP 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</p> |
| | Licenses | <p>GNSS Enabled service GNSS location service Server with JSON-, NMEA stream</p> |

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| 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-NLWac-GV |