

NB2810-LpWacGd2Cm-ViFlx

Vehicle Router with LTE-A Pro + WLAN-ac + 2x GbE-M12 +GNSS-DR + 2x CAN-passive + Virtualization +FMS2IP + ITxPT + E-Mark

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



Keyfeatures

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| Mobile / Cellular | 1x LTE-A Pro, UMTS |
| SIM | 4x Micro SIM |
| WiFi / WLAN | 1x IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients in Access Point Mode |
| Ethernet | 2x Gigabit Ethernet M12 |
| Serial / Fieldbus | 2x CAN passive (read access only) with FMS to IP Gateway |
| Power | 12 VDC to 48 VDC, Ignition Sense |
| Positioning | Multi-GNSS with Dead Reckoning |
| Operation Temperature | -25 °C to +70 °C |
| Software | Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, LXC Virtualization, FSM2IP, free updates |
| Compliance | CE (RED), Vehicle (UNECE-R118), ITxPT |
| Modularity | Extensions on request |

Product description

The NB2810 provides in-vehicle wireless Internet access.

Applications

- Fleet Management
- Passenger WiFi
- Passenger Infotainment
- Ticketing
- CCTV
- Telematics

Specifications

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| Mobile / Cellular | Standard | 1x Multimode LTE-A Pro, UMTS 4G - LTE Advanced Pro B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B38, B39, B40, B41, B42, B43, B48 (CBRS), B66, B71 2014/53/EU (RED): B1, B3, B7, B8, B20, B28, B38, B40 3G - DC-HSPA+/UMTS B1, B2, B4, B5, B6, B8, B9, B19 2014/53/EU (RED): B1, B8 Category LTE Cat 12 Antenna ports 2x2 MIMO Data rate down / up (max) 600 Mbps / 150 Mbps 3GPP 4G Rel. 12, 3G DC-HSPA+ Voice - FCC ID RI7LN920 Region Europe, Middle East and Africa (EMEA), North America (NA), Asia and Pacific (APAC) |
| | Region | Europe |
| | Connectors | 2x FAKRA D-coded male |
| | SIM | 4x Micro SIM - 3FF |
| WiFi / WLAN | Standard | 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 |
| | Connector | 2x FAKRA I-coded male |

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| Ethernet | Standard | 2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps |
| | Connector | 2x M12 X-coded female |
| Positioning | Standard | 1x Multi-GNSS with Automotive Dead Reckoning Receiver BeiDou, Galileo, GLONASS, GPS/QZSS 72-channel u-blox M8 engine 3 concurrent GNSS channels Integrated motion sensors Antennas Active or passive Accuracy Up to 2.5 m CEP Sensitivity Up to -160 dBm Services Standalone, assisted GPS 3D Dead Reckoning Data server with JSON, NMEA data stream |
| | 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 2x CAN Protocol Controller Area Network V2.0B (ISO 11898) Signals CANH, CANL Signal level High > 2.75 V, low < 2.0 V Frames/s Up to 8000 Frames/s Isolation 1500 VDC Termination No internal bus termination Bus access Passive - read access only Optional: Active - read and write access on request (Productoption-2Cn) |
| | Connector | 1x Terminal block header 3.5 mm (screw locking), 1x M12 A-coded female |
| Extended Storage | | 1 TB SSD Capacity 1 TB Technology SSD Data Application data such as logs, media content, ... |
| System | Core | 1.3 GHz dual-core, 1 GB RAM, 4 GB flash |
| | Module Slots | 2x miniPCIe (PCIe + USB), 2x miniPCIe (USB) |

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| Software | Features | <p>NetModule Router Software (supported features depending on product variant)</p> <p>Package The standard software package includes an intuitive user interface, covering all modern routing protocols and enables efficient mass deployment.</p> <p>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</p> <p>Remote Management Manage and monitor devices with SNMP V1/V2/V3, Netmodule vendor MIB, telnet, SSH, or HTTP/HTTPS</p> <p>Cellular Networking Multi-SIM / eSIM support (optional license), multi-APN support, signal strength monitoring, dedicated bearers, CSFB/VoLTE calls (optional license)</p> <p>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</p> <p>Link Management Link prioritization, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision,</p> <p>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</p> <p>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</p> <p>VPN OpenVPN, IPsec (IKEv1 and IKEv2), PPTP, GRE, L2TP, CSD dial-in, Certificate revocation service</p> <p>Firewall Stateful firewall, connection tracking, NAT, NAPT, masquerading, bridge filtering, Adress translation (based on SRC and DST ports)</p> <p>Encryption supporting password protected PKCS12 files, integrated random certificate key generator, "Let's encrypt" certificate, ECC (Certificates with Elliptic Cryptography)</p> <p>Quality of Service Diffserv, SFQ, HTB, Priority-based Queuing, Netflow (Softflow)</p> <p>Programmability SDK</p> <p>Troubleshooting Logging, Ping, Traceroute, Tcpdump, Speed-test</p> |
| | Licenses | <p>GNSS,</p> <p>Enabled service GNSS location service Server with JSON-, NMEA stream ITxPT,</p> <p>Enabled services Inventory, Time, FMS2IP (requires -F option), Vehicle2IP (requires -F option), Location (requires -G option)</p> <p>Standard ITxPT software compliance LXC virtualization,</p> <p>Enabled service Linux Container (LXC) environment to integrate customer specific applications, isolated from the router functionalities FMS2IP</p> <p>Enabled services Automatic translation of CAN messages into IP datagrams according to FMS Standard.</p> <p>Services FMStoIP, VEHICLEtoIP</p> <p>Compliance According to ITxPT</p> |
| Power | Input Voltage | <p>12, 24, 48 VDC</p> <p>Nominal voltages 12, 24, 48 VDC</p> <p>Absolute voltages 12 VDC to 48 VDC (-25 % / +25 %)</p> <p>Ignition sense Input with delayed shutdown</p> |
| | Ignition Sense | Yes |
| | Connector | 1x Terminal block header 3.5 mm (screw locking) |
| | 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 | | 170'000 h / 19.4 years, according SN29500 at environmental temperature 40 °C |
| Scope of delivery | | Device, General safety instructions, Terminal block |
| Certifications | Compliance | CE according to 2014/53/EU (RED), Vehicle according to UNECE-R10, UNECE-R118, ITxPT (hardware compliance requires adapter cables) |
| | Domain | Vehicle |
| Order Code | | NB2810-LpWacGd2Cm-ViFlx |