

NB2810-NWac2CmDf-GViFlx

Vehicle Router with 5G + WLAN-ac + 2x GbE-M12 + 2x CAN-passive + 1 TB SSD + GNSS + Virtualization + FMS2IP + ITxPT + 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 IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients in Access Point Mode
Ethernet	2x Gigabit Ethernet M12
Serial / Fieldbus	1x CAN passive (read access only) with FMS to IP Gateway
Extended Storage	1 TB SSD
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, 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

Mobile / Cellular	Standard	<p>1x Multimode 5G-NR, LTE-A Pro, UMTS</p> <p>5G - NR n1, n3, n7, n8, n20, n28, n38, n40, n77, n78</p> <p>4G - LTE-A Pro B1, B3, B7, B8, B20, B28, B38, B40</p> <p>3G - DC-HSPA+/UMTS B1 (2100), B3 (1800), B8 (900)</p> <p>5G NR Modes Sub-6 FDD and TDD</p> <p>LTE Category Cat. 20 up to 7CA</p> <p>MIMO 4x4 MIMO in 5G-NR support on n1, n3, n7, n38, n40, n77, n78 and LTE B1, B3, B7, B38, B40</p> <p>Antenna ports 4</p> <p>Power Class 23dBm (Power Class 3)</p> <p>Data rate down / up (max) up to 5.5 Gbps DL / 2.7 Gbps UL</p> <p>Operation Mode 5G Core SA and NSA operations</p> <p>3GPP 4G/5G Rel. 15, 3G HSPA+ Rel. 18</p> <p>FCC ID R17FN980</p> <p>Voice -</p> <p>Region Europe, Middle East and Africa (EMEA), on request: North America (NA), Asia and Pacific (APAC)</p>
	Region	Europe, Middle East and Africa (EMEA)
	Connectors	4x FAKRA D-coded male
	SIM	4x Micro SIM - 3FF
WiFi / WLAN	Standard	<p>1x WLAN 2.4/5 GHz a/b/g/n/ac (Wi-Fi 5)</p> <p>Wireless standard IEEE 802.11a/b/g/n/ac (Wi-Fi 5)</p> <p>Frequency 2.4/5 GHz</p> <p>Diversity 2x2 MIMO</p> <p>Data rate (max) 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz)</p> <p>Modes Client or access point (up to 100 clients)</p> <p>FCC ID TK4WLE600VX</p>
	Connector	2x FAKRA I-coded male

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 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 2x CAN Protocol Controller Area Network V2.0B (ISO 11898) Signals CANH, CANL Signal level High > 2.75 V, low < 2.0 V Bit rate Up to 1 Mbps Isolation 1500 VDC Termination No internal bus termination Bus access Passive - read access only Active - read and write access on request (option -Cn)
	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)

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 LLDAP, 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
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-NWac2CmDf-GVIFix