

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	2x 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	
		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 R17FN980
		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	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
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 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 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 ITxPT, Enabled services Inventory, Time, FMS2IP (requires -F option), Vehicle2IP (requires -F option), Location (requires -G option) Standard ITxPT software compliance LXC virtualization, Enabled service Linux Container (LXC) environment to integrate customer specific applications, isolated from the router functionalities FMS2IP Enabled services Automatic translation of CAN messages into IP datagrams according to FMS Standard. Services FMStoIP, VEHICLEtoIP Compliance According to ITxPT
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 Connector Consumption	Yes 1x Terminal block header 3.5 mm (screw locking) 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-GViFlx