NB2810-LpWacGd2Cm-ViFIx

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

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
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

Mobile / Cellular	Standard	1x Multimode LTE-A Pro, UMTS **4G – LTE Advanced Pro** B1, B3, B7, B8, B20, B28, B38, B40 **3G - DC-HSPA+/UMTS** 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), on request: North America (NA), Asia and Pacific (APAC)
	Region	Europe, Middle East and Africa (EMEA)
	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
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
		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**	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	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-LpWacGd2Cm-ViFIx |