

NB2800-N2L-G

Fahrzeug-Router mit 5G +2xLTE +2xGbE +GNSS +E-Mark

Leistungstarker und modularer Mobilfunk-Router für drahtlosen Internetzugang im Fahrzeug.



Hauptmerkmale

Mobilfunk	1x 5G-NR, LTE-A Pro, UMTS 2x LTE, UMTS, GSM
SIM	4x Micro SIM
Ethernet	2x Gigabit Ethernet
Speisung	12 VDC bis 48 VDC, Zündungserkennung
Ortung	Multi-GNSS
Betriebstemperatur	-25 °C bis +70 °C
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, freie Updates
Konformität	CE (RED), Fahrzeug (UNECE-R10, UNECE-R118), ITxPT optional
Modularität	Erweiterungen auf Anfrage

Produktbeschreibung

Der NB2800 bietet drahtlosen Internetzugang im Fahrzeug.

Anwendungen

- Passagier-Infotainment
- Videoüberwachung
- Fahrkartensysteme
- Intelligenter Verkehr
- Blaulichtorganisationen

Spezifikation

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

Operations Modes 5G Core SA and NSA operations

3GPP 4G/5G Rel. 15, 3G HSPA+ Rel. 8

FCC ID R17FN980

Voice -

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

* future module firmware release

2x 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 (mit optionaler Software-Lizenz)

FCC ID -

Region Europe

Europe

8x FAKRA D-coded male

4x Micro SIM - 3FF

Region

Connectors

SIM

Ethernet	Standard	2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps
	Connector	2x RJ45
Positioning	Standard	1x Multi-GNSS Receiver BeiDou, Galileo, GLONASS, GPS gpsOne Gen 9 Antennas Active or passive Tracking Sensitivity Up to -161 dBm CEP (Circular Error Probability) < 2m (CEP 50), (Open sky conditions, Horizontal) 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
	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	NetModule Router Software 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, LZTP, 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/GPS Services Server with JSON-, NMEA stream
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	Ja
	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 Ingress Protection Level	-25°C to +70°C IP40
MTBF		247'090 h / 28.2 years, according SN29500 at environmental temperature 40 °C
Lieferumfang		Device, General safety instructions, Terminal block
Certifications	Compliance Domain	CE according to 2014/53/EU (RED), Vehicle according to UNECE-R10, UNECE-R118 Vehicle
Order Code		NB2800-N2L-G