

NB2810-NWac2CmDf-GViFlx

Fahrzeug-Router mit 5G-NR + WLAN-ac + 2x GbE-M12 + 2x CAN-passiv + 1 TB SSD + GNSS + Virtualisierung + FMS2IP + ITxPT + E-Mark

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



Hauptmerkmale

| | |
|-----------------------------|--|
| Mobilfunk | 1x 5G, LTE-A Pro, UMTS |
| SIM | 4x Micro SIM |
| WiFi / WLAN | 1x IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients im Access Point Mode |
| Ethernet | 2x Gigabit Ethernet M12 |
| Serial / Fieldbus | 2x CAN passiv (Lesezugriff) mit FMS zu IP Gateway |
| Erweiterter Speicher | 1 TB SSD |
| Power | 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, LXC Virtualisierung, FSM2IP, freie Updates |
| Konformität | CE (RED), Fahrzeug (UNECE-R10, UNECE-R118), ITxPT |
| Modularität | Erweiterungen auf Anfrage |

Produktbeschreibung

Der NB2810 bietet drahtlosen Internetzugang im Fahrzeug.

Anwendungen

- Flottenmanagement
- Passagier-WLAN
- Passagier-Infotainment
- Fahrkartensysteme
- Videoüberwachung
- Telematik

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

Europe, Middle East and Africa (EMEA)

Region

Connectors

SIM

4x FAKRA D-coded male

4x Micro SIM - 3FF

| | | |
|-------------------------|---------------------|---|
| WiFi / WLAN | Standard | <p>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</p> |
| | Connector | 2x FAKRA I-coded male |
| Ethernet | Standard | <p>2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps</p> |
| | Connector | 2x M12 X-coded female |
| Positioning | Standard | <p>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</p> |
| | Connector | 1x FAKRA C-coded male |
| USB | Standard | 1x USB 3.0 Host |
| | Connector | 1x Type A |
| Serial, Fieldbus | Protocol | <p>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</p> |
| | Connector | 1x Terminal block header 3.5 mm (screw locking), 1x M12 A-coded female |
| Extended Storage | | <p>1 TB SSD Capacity 1 TB Technology SSD Data Application data such as logs, media content, ...</p> |
| System | Core | 1.3 GHz dual core, 1 GB RAM, 4 GB flash |
| | Module Slots | 2x miniPCle (PCle + USB), 2x miniPCle (USB) |

| | | |
|-----------------------|---------------------------------|---|
| Software | Features | <p>NetModule Router Software</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/GPS,</p> <p>Services Server with JSON-, NMEA stream</p> <p>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</p> <p>LXC virtualization,</p> <p>Enabled service Linux Container (LXC) environment to integrate customer specific applications, isolated from the router functionalities</p> <p>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 | Ja |
| | 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 |
| Lieferumfang | | 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-NWac2CmDf-GViFlx |