

NB2800 5G Vehicle Router

High-Performance Wireless Router with up to two 5G-NR, WLAN, Gigabit Ethernet, SSD Storage, GNSS, ITxPT and E-Mark

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Product Information NB2800-N
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Product Description

The NB2800 provides in-vehicle wireless Internet access. The router can be equipped with up to two 5G-NR, LTE Advanced Pro or LTE modules that can be bundled, two WiFi access points with the latest IEEE 802.11ac (Wi-Fi 5) standard, GNSS for location, 2 Gigabit Ethernet ports and up to 1 TB of internal storage capacity. Thanks to the integrated ignition detection, the NB2800 can remain switched on even after the vehicle has been switched off. This allows the safe completion of all tasks.

The router meets the UNECE-R10 (E-Mark) and UNECE-R118 regulations. This, combined with its numerous features and high performance, makes it the ideal device for applications such as Passenger WiFi, Passenger Information and Voice Communication.

The software is based on well proven components including an embedded Linux operating system and a powerful communication protocol suite. Customer specific software extensions may be implemented via a sophisticated SDK or Linux containers (LXC).

Keyfeatures

Mobile / Cellular	1 - 2x 5G-NR, LTE-A-Pro, UMTS
SIM	4x Micro SIM
WiFi / WLAN	1 - 2x Dual-band IEEE 802.11ac (Wi-Fi 5)
Ethernet	2x Gigabit Ethernet
Extended Storage	Up to 1 TB SSD
Power	12 VDC to 48 VDC Ignition Sense
Positioning	Multi-GNSS with Dead Reckoning
Temperature	-25 °C to +70 °C
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, LXC, SDK, free updates
Compliance	CE (RED), UKCA (RER), Vehicle (UNECE-R10, UNECE-R118), ITxPT
Modularity	Extensions on request

Applications

- Passenger WiFi
- Passenger Infotainment
- CCTV
- Voice Communication
- eMobility

Specifications

1 - 2x Mobile / Cellular (optional)

Multimode 5G-NR, LTE, UMTS 5G-NR

n1, n3, n7, n8, n20, n28, n38, n40, n41, n77, n78

4G - LTE

B1, B3, B7, B20, B28, B34, B38, B40, B42, B43

3G - DC-HSPA+/UMTS

B1, B3, B8

Specification

Cat. 20 up to 7CA

MIMO 4x4 MIMO in 5G support on n1, n3, n7 and LTE B1, B3, B7, B40, B42, B43 up to 5.5 Gbps DL / 2.7 Gbps UL
5G NR Modes Sub-6 FDD and TDD
5G Core SA and NSA operations
3GPP LTE/5G Rel. 15, 3G HSPA+ Rel. 18

Region

EMEA (APAC or NA on request)

Connector

4 - 8x FAKRA I-coded or SMA female

1 - 2x WiFi / WLAN (optional)

Standard

IEEE 802.11a/b/g/n/ac (Wi-Fi 5)
Dual-band 2.4/5 GHz
2x2 MIMO

Bit rate (max)

300 Mbps 2.4 GHz, 866 Mbps 5 GHz

Modes

Client or Access Point (max. 100 Clients)

Connector

2 - 4x FAKRA I-coded or SMA female

2x Ethernet

Standard

1000Base-TX, Auto MDIX

Speed

10 / 100 / 1000 Mbps

Connector

2x RJ45

1x USB

USB 3.0 Host Port

Connector

1x Type A

Positioning (optional)

GNSS Receiver (depending on model)

BeiDou, Galileo, GLONASS, GPS/QZSS, optional with Dead Reckoning

Sensitivity

Up to -167 dBm, up to 2.5m CEP

Antennas

Active or passive

Connector

1x FAKRA C-coded or SMA female

1x Serial, Fieldbus

Protocol

RS-232

Signals

TX, RX

Bit rate

Up to 115 200 Bit/s

Connector

1x Terminal block header 5 mm

1x Module Option

Options

RS-232I, RS-485I, CAN, Audio, PTT, IBIS, Digital I/Os

Connector

1x RJ45

System

Core

1.3 GHz dual-core, 1 GB RAM, 4 GB flash

Extended Storage (optional)

Up to 1TB SSD

Power

Nominal Input voltages

12, 24, 48 VDC (-25 % / +25 %)

Maximal Power Consumption

20 W

Ignition Sense

Input with delayed shutdown

Connector

1x Terminal block header 5 mm

Other

Mounting

Bracket (wall mounting)

Dimensions

Width 164/190 mm x height 58 mm x depth 139.5 mm

Weight

ca. 800 g

Environment

Operating Temperature

-25 °C to +70 °C (depending on model)

Ingress Protection Level

IP40

MTBF

170'000 h / 19.4 years - 230'000 h / 26.3 years (depending on product variant), according SN29500 at environmental temperature 40 °C

RF Configuration, FMS2IP

300440,

Software

Features

Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates

Licenses (optional)

Voice Gateway, OpenVPN- and DynDNS Server, GNSS, LXC Virtualization, E-Mark, ITxPT, Enhanced

RF Configuration, FMS2IP

Certifications

Compliance

CE according to 2014/53/EU (RED), UKCA according to Radio Equipment Regulations 2017 No. 1206 (RER), Vehicle according to UNECE-R10, UNECE-R118, ITxPT (optional)

Ordering options

Contact our sales team for our standard models, options or project specific adaptations