

# NB2800 5G Vehicle Router

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 Product Information NB2800-N  
 Errors reserved

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



## Keyfeatures

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

## 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 1TB 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).

## 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), Vehicle according to UNECE-R10, UNECE-R118, ITxPT (optional)

### Ordering options

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