

# NB2800 Vehicle Router

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 Product Information NB2800  
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High-Performance Wireless Router with Multiple LTE Advanced, WLAN, Gigabit Ethernet, SSD Storage, GNSS, ITxPT and E-Mark



## Keyfeatures

|                          |   |
|--------------------------|---|
| <b>Mobile / Cellular</b> | 1 - 4x LTE Advanced, UMTS, GSM  |
| <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<br>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 multiple LTE Advanced 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).

## Applications

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

## Specifications

### 1 - 4x Mobile / Cellular (optional)

#### Multimode LTE, UMTS and GSM 4G - LTE

B1 (2100), B3 (1800), B5 (850),  
B7 (2600), B8 (900), B20 (800)

#### 3G - DC-HSPA+/UMTS

B1 (2100), B2 (1900), B5 (850),  
B8 (900)

#### 2G - GSM/GPRS/EDGE

B2 (1900), B3 (1800), B5 (850),  
B8 (900)

#### LTE Specification

LTE Cat 4, 2x2 MIMO  
DL 150 Mbps / UL 50 Mbps

#### Voice

CSFB

#### Region

EMEA (APAC or NA on request)

OR

#### Multimode LTE Advanced, UMTS 4G - LTE

B1 (2100), B2 (1900), B3 (1800),  
B4 (AWS), B7 (2600), B12 (700ac),  
B13 (700c), B20 (800DD), B5 (850),  
B25 (1900), B26 (850), B29 (700),  
B41 (TDD2500), B30 (WCS)

#### 3G - DC-HSPA+/UMTS

B1 (2100), B2 (1900), B3 (1800),  
B4 (1700), B5 (850), B8 (900)

#### LTE Specification

LTE Cat 6, 2x2 MIMO  
DL 300 Mbps / UL 50 Mbps

#### Region

EMEA, NA (APAC on request)

#### Connector

2 - 8x FAKRA D-coded or SMA female

#### SIM

4x Micro SIM - 3FF

### 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 1 Mbps

#### 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 1 TB SSD

### Power

#### Nominal Input voltages

12, 24, 48 VDC (-25 % / +20 %)

#### 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. 1200 g

### Environment

#### Operating Temperature

-25 °C to +70 °C

#### 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

### 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)

#### Standards

EN 300328, EN 300440,  
EN 301489-1, EN 301489-17, EN 301511,  
EN 301893, EN 301908-2, EN 302502,  
EN 55032, EN 61000-6-2,  
EN 61000-6-3, EN 50121-3-2, EN 62311,  
EN 62368-1, EN 55035, EN 301908-1  
EN 301489-52, UNECE-R10,  
UNECE-R118

### Ordering options

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