HIRSCHMANN
A **BELDEN** BRAND

NET MODULE

NB2800 Vehicle Router

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

Keyfeatures

Mobile / Cellular	1 - 4x LTE Advanced, UMTS, GSM
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

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).

Specifications

1 - 4x Mobile / Cellular (optional)
Multimode LTE, UMTS and GSM
4G – LTE
B1, B3, B7, B8, B20, B28

3G - DC-HSPA+/UMTS
B1, B3, B8

2G - GSM/GPRS/EDGE
B3, B8

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

Voice
CSFB, VoLTE (with optional License)

Region
EMEA

1 - 3x Mobile / Cellular
Multimode LTE Advanced Pro, UMTS
4G – LTE
B1, B3, B7, B8, B20, B28, B38, B40

3G - DC-HSPA+/UMTS
B1, B8

LTE Specification
LTE Cat 12, 2x2 MIMO
DL 600 Mbps / UL 150 Mbps

Region
EMEA, (APAC or NA on request)

Connector
2 - 6x 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 115 100 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 1 TB 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

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), 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