

NG800 Automotive Gateway

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Product Information NG800
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Modular connectivity platform for telematic applications with LTE, WLAN, Bluetooth, Ethernet, CAN, GNSS and IP69K housing



Product Description

With the ongoing digitalization in everyday life, the demand for multifunctional connectivity in vehicles of all kinds is also growing rapidly. The multifunctional automotive gateway NG800 in an IP69K housing is suitable for use in harsh environments and provides the necessary robust communication between on-board vehicle equipment and cloud applications.

For wireless communication, the NG800 integrates an LTE modem, an eUICC-capable SIM chip, WiFi 802.11a/b/g/n (Wi-Fi 4), GNSS with dead reckoning, IMU and Bluetooth Low Energy. Via a Molex CMC 48-pin connector, wired interfaces such as CAN, Fast Ethernet, Automotive Ethernet or RS-232 can be connected.

The software is based on proven components like an embedded Linux and a powerful communication protocol suite as well as VPN technologies like OpenVPN. Customer-specific software extensions can be implemented via a sophisticated SDK.

The NG800 is also the winner of the Red Dot Award 2019: «Form and function enter into a convincing symbiosis with the IoT gateway. Thus NG800 also sets aesthetic accents in a technical environment».

Key Features

Mobile / Cellular	1x LTE, UMTS, GSM
SIM	1x eSIM Chip 1x Micro SIM (on request)
WiFi / WLAN	1x Dual-band IEEE 802.11a/b/g/n (Wi-Fi 4) 1x Bluetooth Low Energy
Ethernet	2x Automotive Ethernet 1x Fast Ethernet
Serial / Fieldbus	2x CAN passive
Positioning	Multi-GNSS with Dead Reckoning
Temperature	-40 °C to +75 °C (+85 °C extended)
Environment	IP69K
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, eUICC SIM profile update, free updates
Compliance	CE (RED), Vehicle (UN ECE R10, UN ECE R118)
Modularity	Extensions on request

Applications

- Agriculture
- Telematics
- Fleet Management
- Emergency Services
- eMobility
- Mining
- Oil & Gas
- Tracking
- Smart Traffic

Specifications

1x Mobile / Cellular

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, NA on request)

Connector

2x FAKRA D-coded

SIM

1x eSIM Chip
1x Micro SIM - 3FF

1x WiFi / WLAN

Standard

IEEE 802.11a/b/g/n (Wi-Fi 4) +
Bluetooth Low Energy combo

Dual-band 2.4/5 GHz
2.4 GHz 2x2 MIMO, 5 GHz SISO

Bit rate (max)

144 Mbps 2.4 GHz, 150 Mbps 5 GHz

Modes

Client or Access Point (max. 10 Clients)

Connector

2x FAKRA I-coded

3x Ethernet

1x Fast Ethernet
2x Automotive Ethernet - BroadR

Standard

100Base-TX, Auto MDIX
100Base-T1 (BroadR-Reach)

Speed

10 / 100 Mbps

Connector

1x CMC-48 header

Positioning

GNSS Receiver

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

Sensitivity

Up to -160 dBm, up to 2.5m CEP

Antennas

Active or passive

Connector

1x FAKRA C-coded

Serial, Fieldbus

Protocol

1x RS-232

Signals

TX, RX

Bit rate

Up to 1 Mbps

Protocol

2x CAN V2.0B (ISO 11898)

Signals

CANH, CANL

Bit rate

Up to 1 Mbps

Bus access

Passive - read access only on request

Connector

1x CMC-48 header

1x Module Option

Application specific interfaces can be
realized on the extension module.

The modules interfaces via SPI, I2C,
GPIO, SIM, USB, RMII to the host CPU
and has access to 24 pins on the CMC-
48 connector.

System

1 GHz single core, 512 MB RAM,
8 GB flash

Power

Nominal Input voltages

12 VDC, 24 VDC

Maximal Power Consumption

10 W

Ignition Sense

Input with delayed shutdown

Connector

1x CMC-48 header

Other

Mounting

Brackets

Dimensions

Width 200 mm x height 40 mm x depth
120 mm

Environment

Operating Temperature

-40 °C to +75 °C (+85 °C extended)

Ingress Protection Level

IP69K

MTBF

296'000 h / 33.8 years, according
SN29500 at environmental
temperature 40 °C

Software

Features

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

Licenses (optional)

Voice Gateway, LXC Virtualization,
OpenVPN- and DynDNS Server,
Enhanced RF Configuration

Certifications

Compliance

CE according to 2014/53/EU (RED),
Vehicle according to UN ECE R10, UN
ECE R118

Ordering options

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