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NET MODULE

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

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
Environment	IP69K, Vibration, Shock
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, eUICC SIM profile update, free updates
Compliance	CE (RED), UKCA (RER), Vehicle (UNECE-R10, UNECE-R118)
Modularity	Extensions on request

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».

Applications

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

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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 (on request)

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 115 200 Bit/s

Protocol
2x CAN V2.0B (ISO 11898)

Signals
CANH, CANL

Bit rate
Up to 1 Mbps

Bus access
Passive - read access only
Active - read and write access (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 (9-36 VDC)

Average Power Consumption
7 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

Ingress Protection Level
IP69K

Vibration
According to ISO 16750-3 (road vehicles), IEC 60068-2-64 (24 h)

Shock
According to ISO 16750-3 (road vehicles), IEC 60068-2-27 (60 shocks)

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), UKCA according to Radio Equipment Regulations 2017 No. 1206 (RER), Vehicle according to UNECE-R10, UNECE-R118

Ordering options

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

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