NET MODULE

NG800-LWWtGd2Br2Cm

Automotive Gateway with LTE + WLAN + BT/BLE + ETH + 2x ETH-Auto + 2x CAN-passive + GNSS-DR + eUICC + IP69K

Modular automotive gateway for telematics applications.

Keyfeatures

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	1x RS-232 console, 2x CAN passive (read access only)
Positioning	Multi-GNSS with Dead Reckoning
Operation Temperature	-40 °C to +75 °C (+85 °C extended)
Environment	IP69K dust & water protection, vibration & shock (ISO 16750-3)
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, eUICC SIM Profile Update, free updates
Compliance	CE (RED), Vehicle (UNECE-R10, UNECE-R118)
Modularity	Extensions on request

Product description

The multifunctional automotive gateway in an IP69K housing is suitable for harsh environments and provides the necessary robust communication between on-board vehicle equipment and cloud applications.

Applications

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

Specifications

Mobile / Cellular	Standard	1x Multimode LTE, UMTS, GSM for EMEA
		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)
		Category LTE Cat 4
		Antenna ports 2x2 MIMO
		Data rate down / up (max) 150 Mbps / 50 Mbps
		Voice CSFB
		FCC ID XPYTOBYL210
	Region	Europe, Middle East and Africa (EMEA)
	Connectors	2x FAKRA D-coded male
	SIM	1x eSIM Chip, 1x Micro SIM - 3FF (on request)
WiFi / WLAN	Standard	1x Dual-band WLAN 2.4/5 GHz a/b/g/n (Wi-Fi 4) + BT 4.2 combo
		Wireless standard IEEE 802.11a/b/g/n (Wi-Fi 4)
		Bluetooth 4.2, Bluetooth Low Energy
		Frequency 2.4/5 GHz
		Antenna ports 2x2 MIMO
		Data rate (max) 144 Mbps 2.4 GHz 2x2 MIMO, 150 Mbps 5 GHz SISO
		Modes Client or access point (up to 10 clients)
		FCC ID Z64-WL18DBMOD
	Connector	2x FAKRA I-coded male

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Ethernet	**Standard**	1x Fast Ethernet **Ethernet standard** 100BASE-TX, Auto MDIX **Speed** 10/100 Mbps 2x Automotive Ethernet - BroadR **Ethernet standard** 100BASE-T1 (BroadR-Reach) **Speed** 10/100 Mbps
	Connector	1x CMC-48 header
Positioning	**Standard**	1x Multi-GNSS with Automotive Dead Reckoning **Receiver** BeiDou, Galileo, GLONASS, GPS/QZSS 72-channel u-blox M8 engine 3 concurrent GNSS channels Integrated motion sensors **Antennas** Active or passive **Accuracy** Up to 2.5 m CEP **Sensitivity** Up to –160 dBm **Services** Standalone, assisted GPS 3D Dead Reckoning Data server with JSON, NMEA data stream
	Connector	1x FAKRA C-coded male
Serial, Fieldbus	**Protocol**	1x RS-232 **Protocol** EIA-232 **Signals** TX, RX **Signal level** High > 5 VDC, low < -5 VDC **Bit rate** Up to 1 Mbps 2x CAN-passive **Protocol** Controller Area Network V2.0B (ISO 11898) **Signals** CANH, CANL **Signal level** High > 2.75 V, low < 2.0 V **Bit rate** Up to 1 Mbps **Bus access** Passive - read access only
	Connector	1x CMC-48 header
System	**Core**	1000 MHz single core, 512 MB RAM, 8 GB flash
	Module Slots	1x Extension Module
Software	**Features**	NetModule Router Software **Package** The standard software package includes an intuitive user interface, covering all modern routing protocols and enables efficient mass deployment. **General** Fail-safe update (FOTA), upgrade via USB, HTTP(S), (S)FTP or TFTP, remote CLI & WebGUI, RADIUS authentication, Simple Certificate Enrollment Protocol (SCEP), logging **Remote Management** Manage and monitor devices with SNMP, telnet, SSH, or HTTP/HTTPS **Cellular Networking** Multi-SIM / soft-SIM support, multi-APN support, signal strength monitoring, dedicated bearers, GSM/CSFB calls **Wireless LAN** Client or Access Point mode, multi client support, multi / hidden SSID, WPA-PSK/WPA2-PSK, WPA-RADIUS, WPA-EAP-TLS, IEEE 802.11w, RADIUS accounting, CAPWAP **Link Management** Link prioritisation, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision **Network Services** DHCP Client, DNS server, email, SMS service, NTP Client, NTP server, DynDNS, SSH server, SNMP agent, HTTP/HTTPS/FTP server, voice gateway, SIP call routing, coovachilli hotspot **Routing** Destination, policy, multipath, mobile-IP, OSPF, BGP, TCP-MSS clamping, STP/RSTP, bridging, LLDP, CDP, SONMP, EDP, FDP, IRDP, VRRP, VLAN, PPPoE **VPN** OpenVPN, IPsec, PPTP, GRE, CSD dial-in **Firewall** Stateful firewall, connection tracking, NAPT, masquerading, bridge filtering
	Licenses	GNSS, **Enabled service** GNSS location service Server with JSON-, NMEA stream eUICC **Enabled services** Remote eUICC SIM profile update with static profile management. **Standard** According to the remote subscriber provisioning standardized by GSMA in SGP.21 and 22 and validated according to SGP.23.
Power	**Input Voltage**	12, 24 VDC **Nominal voltages** 12, 24 VDC **Absolute voltages** 9 VDC to 36 VDC **Power Management** Various power modes and wake-up sources (on request)
	Ignition Sense	Yes
	Connector	1x CMC-48 header
	Consumption	7 W (average), 10 W (max), power down state < 2 mA @ 24 VDC
Mounting		Bracket
Dimensions	**W x H x D**	Width 200 mm x height 40 mm x depth 120 mm

Weight		520 g

Environment	**Operating Temperature**	-40°C to +75°C
	Ingress Protection Level	IP69K – Dust-tight, protected against close-range high pressure, high temperature spray downs
	Vibration	ISO 16750-3 (road vehicles), IEC 60068-2-64 (24 h)
	Shock	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

Certifications	**Compliance**	CE according to 2014/53/EU (RED), Vehicle according to UNECE-R10 and UNECE-R118
	Domain	Vehicle

Order Code		NG800-LWWtGd2Br2Cm