

# NG800-LWWtGd2Br2Cm

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

Modular automotive gateway for telematics applications.



## Keyfeatures

<b>Mobile / Cellular</b>	1x LTE, UMTS, GSM
<b>SIM</b>	1x eSIM chip + 1x Micro SIM (on request)
<b>WiFi / WLAN</b>	1x Dual-band IEEE 802.11a/b/g/n (Wi-Fi 4), 1x Bluetooth Low Energy
<b>Ethernet</b>	2x Automotive Ethernet, 1x Fast Ethernet
<b>Serial / Fieldbus</b>	1x RS-232 console, 2x CAN passive (read access only)
<b>Positioning</b>	Multi-GNSS with Dead Reckoning
<b>Operation Temperature</b>	-40 °C to +75 °C
<b>Environment</b>	IP69K dust & water protection, vibration & shock (ISO 16750-3)
<b>Software</b>	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, eUICC SIM Profile Update, free updates
<b>Compliance</b>	CE (RED), Vehicle (UNECE-R10, UNECE-R118)
<b>Modularity</b>	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

<b>Mobile / Cellular</b>	<b>Standard</b>	1x Multimode LTE, UMTS, GSM for EMEA <b>4G - LTE</b> B1 (2100), B3 (1800), B5 (850), B7 (2600), B8 (900), B20 (800) <b>3G - DC-HSPA+/UMTS</b> B1 (2100), B2 (1900), B5 (850), B8 (900) <b>2G - GSM/GPRS/EDGE</b> B2 (1900), B3 (1800), B5 (850), B8 (900) <b>Category</b> LTE Cat 4 <b>Antenna ports</b> 2x2 MIMO <b>Data rate down / up (max)</b> 150 Mbps / 50 Mbps <b>Voice</b> CSFB (with optional Software License) <b>FCC ID</b> XPTYOBYL210
	<b>Region</b>	Europe, Middle East and Africa (EMEA)
	<b>Connectors</b>	2x FAKRA D-coded male
	<b>SIM</b>	1x eSIM Chip, 1x Micro SIM - 3FF (on request)
<b>WiFi / WLAN</b>	<b>Standard</b>	1x Dual-band WLAN 2.4/5 GHz a/b/g/n (Wi-Fi 4) + BT 4.2 combo <b>Wireless standard</b> IEEE 802.11a/b/g/n (Wi-Fi 4) Bluetooth 4.2, Bluetooth Low Energy <b>Frequency</b> 2.4/5 GHz <b>Antenna ports</b> 2x2 MIMO <b>Data rate (max)</b> 144 Mbps 2.4 GHz 2x2 MIMO, 150 Mbps 5 GHz SISO <b>Modes</b> Client or access point (up to 10 clients) <b>FCC ID</b> Z64-WL18DBMOD
	<b>Connector</b>	2x FAKRA I-coded male

<b>Ethernet</b>	<b>Standard</b>	1x Fast Ethernet <b>Ethernet standard</b> 100BASE-TX, Auto MDIX <b>Speed</b> 10/100 Mbps 2x Automotive Ethernet - BroadR <b>Ethernet standard</b> 100BASE-T1 (BroadR-Reach) <b>Speed</b> 10/100 Mbps
	<b>Connector</b>	1x CMC-48 header
<b>Positioning</b>	<b>Standard</b>	1x Multi-GNSS with Automotive Dead Reckoning <b>Receiver</b> BeiDou, Galileo, GLONASS, GPS/QZSS 72-channel u-blox M8 engine 3 concurrent GNSS channels Integrated motion sensors <b>Antennas</b> Active or passive <b>Accuracy</b> Up to 2.5 m CEP <b>Sensitivity</b> Up to -160 dBm <b>Services</b> Standalone, assisted GPS 3D Dead Reckoning Data server with JSON, NMEA data stream
	<b>Connector</b>	1x FAKRA C-coded male
<b>Serial, Fieldbus</b>	<b>Protocol</b>	1x RS-232 <b>Protocol</b> EIA-232 <b>Signals</b> TX, RX <b>Signal level</b> High > 5 VDC, low < -5 VDC <b>Bit rate</b> Up to 115 200 Bit/s 2x CAN-passive <b>Protocol</b> Controller Area Network V2.0B (ISO 11898) <b>Signals</b> CANH, CANL <b>Signal level</b> High > 2.75 V, low < 2.0 V <b>Bit rate</b> Up to 1 Mbps <b>Bus access</b> Passive - read access only
	<b>Connector</b>	1x CMC-48 header
<b>System</b>	<b>Core</b>	1000 MHz single core, 512 MB RAM, 8 GB flash
	<b>Module Slots</b>	1x Extension Module
<b>Software</b>	<b>Features</b>	NetModule Router Software (supported features depending on product variant) <b>Package</b> The standard software package includes an intuitive user interface, covering all modern routing protocols and enables efficient mass deployment. <b>General</b> Fail-safe update (FOTA), upgrade via USB, HTTP(S), (S)FTP or TFTP, remote CLI & WebGUI, RADIUS authentication, Simple Certificate Enrollment Protocol (SCEP), Hardware- und Software Watchdog <b>Remote Management</b> Manage and monitor devices with SNMP V1/V2/V3, Netmodule vendor MIB, telnet, SSH, or HTTP/HTTPS <b>Cellular Networking</b> Multi-SIM / eSIM support (optional license), multi-APN support, signal strength monitoring, dedicated bearers, CSFB/VoLTE calls (optional license) <b>Wireless LAN</b> Access Point, Client Mode, Mesh Point or Dual Modes (Mesh Access Point / Access Point - Client), WLAN Pseudo-Bridge Client Mode: Multiple Client SSID Profile, Encryption: Open, WEP, WPA1/2/3-Personal, WPA1/2/3-Enterprise. Fast Roaming: Fast BSS Transition (802.11r), PreAuthentication, Protected Management Frames (802.11w) AP Mode: Multi-SSIDs (up to 8) Encryption: Open WPA1/2/3-Personal, WPA1/2/3-Enterprise Fast Roaming: Fast BSS Transition (802.11r), PreAuthentication, DFS support Protected Management Frames (802.11w) Client Tracking, Band Steering, Hide SSID broadcasting, Isolate Clients, Accounting, Short guard Intervall Mesh Mode (802.11s): Encryption: None, SAE. Gateway announcements <b>Link Management</b> Link prioritization, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision, <b>Services</b> DHCP Client/Server, DNS Caching Server, Email, SMS Service, NTP Client/Server, SNTP Server, DynDNS, SSH Server, SNMP Agent, HTTP/HTTPS/FTP Server, IPv6 for WAN, 802.1x over Ethernet, MQTT Broker Voice Gateway (SIP, Call Routing, Audio with optional license) Coovachilli Hotspot <b>Routing</b> Destination, policy, multipath, mobile-IP, OSPF, BGP, multicast, TCP-MSS clamping, bridging discovery protocols LLDP, CDP, SONMP, EDP, FDP, IRDP, VRRP, STP/RSTP, VRRP, VLAN, PPPoE, VXLAN <b>VPN</b> OpenVPN, IPsec (IKEv1 and IKEv2), PPTP, GRE, L2TP, CSD dial-in, Certificate revocation service <b>Firewall</b> Stateful firewall, connection tracking, NAT, NAPT, masquerading, bridge filtering, Adress translation (based on SRC and DST ports) <b>Encryption</b> supporting password protected PKCS12 files, integrated random certificate key generator, "Let's encrypt" certificate, ECC (Certificates with Elliptic Cryptography) <b>Quality of Service</b> Diffserv, SFQ, HTB, Priority-based Queuing, Netflow (Softflow) <b>Programmability</b> SDK <b>Troubleshooting</b> Logging, Ping, Traceroute, Tcpdump, Speed-test
	<b>Licenses</b>	GNSS, <b>Enabled service</b> GNSS location service Server with JSON-, NMEA stream eUICC <b>Enabled services</b> Remote eUICC SIM profile update with static profile management. <b>Standard</b> According to the remote subscriber provisioning standardized by GSMA in SGP.21 and 22 and validated according to SGP.23.

<b>Power</b>	<b>Input Voltage</b>	12, 24 VDC <b>Nominal voltages</b> 12, 24 VDC <b>Absolute voltages</b> 9 VDC to 36 VDC <b>Power Management</b> Various power modes and wake-up sources (on request)
	<b>Ignition Sense</b>	Yes
	<b>Connector</b>	1x CMC-48 header
	<b>Consumption</b>	7 W (average), 10 W (max), power down state < 2 mA @ 24 VDC
<b>Mounting</b>		Bracket
<b>Dimensions</b>	<b>W x H x D</b>	Width 200 mm x height 40 mm x depth 120 mm
<b>Weight</b>		520 g
<b>Environment</b>	<b>Operating Temperature</b>	-40°C to +75°C
	<b>Ingress Protection Level</b>	IP69K - Dust-tight, protected against close-range high pressure, high temperature spray downs
	<b>Vibration</b>	ISO 16750-3 (road vehicles), IEC 60068-2-64 (24 h)
	<b>Shock</b>	ISO 16750-3 (road vehicles), IEC 60068-2-27 (60 shocks)
<b>MTBF</b>		296'000 h / 33.8 years, according SN29500 at environmental temperature 40 °C
<b>Certifications</b>	<b>Compliance Domain</b>	CE according to 2014/53/EU (RED), Vehicle according to UNECE-R10 and UNECE-R118 Vehicle
<b>Order Code</b>		NG800-LWWtGd2Br2Cm