HIRSCHMANN

NET MODULE

NG800-LWWtGd2Br2Cn

Automotive Gateway with LTE + WLAN + BLE + ETH + 2x ETH-Auto + 2x CAN-active + 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 active (read and write access)
Positioning	Multi-GNSS with Dead Reckoning
Operation Temperature	-40 °C to +75 °C
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 (with optional Software License)
		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 115 200 Bit/s
		2x CAN-active
		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 Active - read and write access
	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 (supported features depending on product variant)
		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), Hardware- und Software Watchdog
		Remote Management Manage and monitor devices with SNMP V1/V2/V3, Netmodule vendor MIB, telnet, SSH, or HTTP/HTTPS
		Cellular Networking Multi-SIM / eSIM support (optional license), multi-APN support, signal strength monitoring, dedicated bearers, CSFB/VoLTE calls (optional license)
		Wireless LAN 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
		Link Management Link prioritization, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision,
		Services 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
		Routing 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
		VPN OpenVPN, IPsec (IKEv1 and IKEv2), PPTP, GRE, L2TP, CSD dial-in, Certificate revocation service
		Firewall Stateful firewall, connection tracking, NAT, NAPT, masquerading, bridge filtering, Adress translation (based on SRC and DST ports)
		Encryption supporting password protected PKCS12 files, integrated random certificate key generator, "Let's encrypt" certificate, ECC (Certificates with Elliptic Cryptography)
		Quality of Service Diffserv, SFQ, HTB, Priority-based Queuing, Netflow (Softflow)
		Programmability SDK
		Troubleshooting Logging, Ping, Traceroute, Tcpdump, Speed-test
	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.

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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-LWWtGd2Br2Cn

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