

# NB2800-LWacCm-GFlx

Vehicle Router with LTE + WLAN-ac + 2x GbE + CAN-passive + GNSS + FMS2IP + ITxPT + E-Mark

High-performance and modular mobile router for wireless Internet access in vehicles.



## Keyfeatures

<b>Mobile / Cellular</b>	1x LTE, UMTS, GSM
<b>SIM</b>	4x Micro SIM
<b>WiFi / WLAN</b>	1x Dual-band IEEE 802.11a/b/g/n/ac, 100 Clients in Access Point Mode
<b>Ethernet</b>	2x Gigabit Ethernet
<b>Serial / Fieldbus</b>	1x CAN passive (read access only) with FMS to IP Gateway
<b>Power</b>	12 VDC to 48 VDC, Ignition Sense
<b>Positioning</b>	Multi-GNSS
<b>Operation Temperature</b>	-25 °C to +70 °C
<b>Software</b>	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, FMS2IP, free updates
<b>Compliance</b>	CE (RED), Vehicle (UN ECE R10, R118), ITxPT
<b>Modularity</b>	Extensions on request

## Product description

The NB2800 provides in-vehicle wireless Internet access.

## Applications

- eMobility
- Telematics
- Fleet Management
- 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>Datarate down / up (max)</b> 150 Mbps / 50 Mbps <b>Voice</b> CSFB <b>FCC ID</b> XPYTOBYL210
	<b>Region</b> <b>Connectors</b> <b>SIM</b>	Europe, Middle East and Africa (EMEA) 2x FAKRA D-coded male 4x Micro SIM - 3FF
<b>WiFi / WLAN</b>	<b>Standard</b>	1x Dual-band WLAN 2.4/5 GHz a/b/g/n/ac <b>Wireless standard</b> IEEE 802.11a/b/g/n/ac <b>Frequency</b> 2.4/5 GHz <b>Diversity</b> 2x2 MIMO <b>Datarate (max)</b> 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz) <b>Modes</b> Client or access point (up to 100 clients) <b>FCC ID</b> TK4WLE600VX
	<b>Connector</b>	2x FAKRA I-coded male
<b>Ethernet</b>	<b>Standard</b>	2x Gigabit Ethernet <b>Ethernet standard</b> 1000BASE-T, Auto MDIX <b>Speed</b> 10/100/1000 Mbps
	<b>Connector</b>	2x RJ45

<b>Positioning</b>	<b>Standard</b>	<p>1x Multi-GNSS  <b>Receiver</b> BeiDou, Galileo, GLONASS, GPS/QZSS  72-channel u-blox M8 engine  3 concurrent GNSS channels  <b>Antennas</b> Active or passive  <b>Accuracy</b> Up to 2.5 m CEP  <b>Sensitivity</b> Up to -167 dBm  <b>Services</b> Standalone, Assisted GPS  Data server with JSON, NMEA data stream</p>
	<b>Connector</b>	1x FAKRA C-coded male
<b>USB</b>	<b>Standard</b>	1x USB 3.0 Host
	<b>Connector</b>	1x Type A
<b>Serial, Fieldbus</b>	<b>Protocol</b>	<p>1x RS-232  <b>Protocol</b> EIA-232  <b>Signals</b> TX, RX  <b>Signal level</b> High &gt; 5 VDC, low &lt; -5 VDC  <b>Bit rate</b> Up to 1 Mbps  1x CAN  <b>Protocol</b> Controller Area Network V2.0B (ISO 11898)  <b>Signals</b> CANH, CANL  <b>Signal level</b> High &gt; 2.75 V, low &lt; 2.0 V  <b>Bit rate</b> Up to 1 Mbps  <b>Isolation</b> 1500 VDC  <b>Termination</b> No internal bus termination  <b>Bus access</b> Passive - read access only  Active - read and write access on request (option -C)</p>
	<b>Connector</b>	1x Terminal block header 5 mm, 1x RJ45
<b>System</b>	<b>Core</b>	1.3 GHz dual-core, 1 GB RAM, 4 GB flash
	<b>Module Slots</b>	2x miniPCIe (PCIe + USB), 2x miniPCIe (USB)
<b>Software</b>	<b>Features</b>	<p>NetModule Router Software  <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 &amp; WebGUI, RADIUS authentication, Simple Certificate Enrollment Protocol (SCEP), logging  <b>Remote Management</b> Manage and monitor devices with SNMP, telnet, SSH, or HTTP/HTTPS  <b>Cellular Networking</b> Multi-SIM / soft-SIM support, multi-APN support, signal strength monitoring, dedicated bearers, GSM/CSFB calls  <b>Wireless LAN</b> 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  <b>Link Management</b> Link prioritisation, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision  <b>Network Services</b> 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  <b>Routing</b> Destination, policy, multipath, mobile-IP, OSPF, BGP, TCP-MSS clamping, STP/RSTP, bridging, LLDP, CDP, SONMP, EDP, FDP, IRDP, VRRP, VLAN, PPPoE  <b>VPN</b> OpenVPN, IPsec, PPTP, GRE, CSD dial-in  <b>Firewall</b> Stateful firewall, connection tracking, NAT, masquerading, bridge filtering</p>
	<b>Licenses</b>	<p>GNSS  <b>Enabled service</b> GNSS location service  Server with JSON-, NMEA stream  FMS2IP  <b>Enabled services</b> Automatic translation of CAN messages into IP datagrams according to FMS Standard.  <b>Services</b> FMStoIP, VEHICLEtoIP  <b>Compliance</b> According to ITxPT  ITxPT  <b>Enabled services</b> Inventory, FMS2IP, Vehicle2IP, location, time  <b>Standard</b> ITxPT software compliance</p>
<b>Power</b>	<b>Input Voltage</b>	<p>12, 24, 48 VDC  <b>Nominal voltages</b> 12, 24, 48 VDC  <b>Absolute voltages</b> 12 VDC to 48 VDC (-25 % / +20 %)  <b>Ignition sense</b> Input with delayed shutdown</p>
	<b>Ignition Sense</b>	Yes
	<b>Connector</b>	1x Terminal block header 5 mm
	<b>Consumption</b>	20 W (max)
<b>Mounting</b>		Bracket
<b>Dimensions</b>	<b>W x H x D</b>	Width 164/190 mm x height 58 mm x depth 139.5 mm

<b>Weight</b>		1200 g
<b>Environment</b>	<b>Operating Temperature</b>	-25°C to +70°C
	<b>Ingress Protection Level</b>	IP40
<b>MTBF</b>		230'000 h / 26.3 years, according SN29500 at environmental temperature 40 °C
<b>Certifications</b>	<b>Compliance</b>	CE according to 2014/53/EU (RED), Vehicle according to UN ECE R10, UN ECE R118, ITxPT (Hardware compliance requires adapter cables)
	<b>Domain</b>	Vehicle
<b>Order Code</b>		NB2800-LWacCm-GF1x