NB2800-2LWacDf-GVi

Vehicle Router with 2x LTE + WLAN-ac + 2x GbE + 1 TB SSD + GNSS + Virtualization + E-Mark

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

Keyfeatures

Mobile / Cellular	2x LTE, UMTS, GSM
SIM	4x Micro SIM
WiFi / WLAN	1x IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients in Access Point Mode
Ethernet	2x Gigabit Ethernet
Power	12 VDC to 48 VDC, Ignition Sense
Extended Storage	1 TB SSD
Operation Temperature	-25 °C to +70 °C
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, LXC Virtualization, free updates
Compliance	CE (RED), Vehicle (UNECE-R10, UNECE-R118), ITxPT optional
Modularity	Extensions on request

Product description

The NB2800 provides in-vehicle wireless Internet access.

Applications

- Emergency Services
- Fleet Management
- Passenger Infotainment
- Ticketing
- eMobility
- Telematics
- CCTV
- Smart Traffic

Specifications

Mobile / Cellular	Standard	2x Multimode LTE, UMTS, GSM for EMEA
		4G – LTE B1, B3, B7, B8, B20, B28A
		3G - DC-HSPA+/UMTS B1 (2100), B3 (1800), B8 (900)
		2G - GSM/GPRS/EDGE B3 (1800), B8 (900)
		Category LTE Cat 4
		Antenna ports 2x2 MIMO
		Data rate down / up (max) 150 Mbps / 50 Mbps
		Voice CSFB, VoLTE (with optional Software License)
		FCC ID -
	Region	Europe, Middle East and Africa (EMEA)
	Connectors	4x FAKRA D-coded male
	SIM	4x Micro SIM - 3FF

WiFi / WLAN	Standard	1x WLAN 2.4/5 GHz a/b/g/n/ac (Wi-Fi 5)
		Wireless standard IEEE 802.11a/b/g/n/ac (Wi-Fi 5)
		Frequency 2.4/5 GHz
		Diversity 2x2 MIMO
		Data rate (max) 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz)
		Modes Client or access point (up to 100 clients)
		FCC ID TK4WLE600VX
	Connector	2x FAKRA I-coded male

Ethernet	Standard	2x Gigabit Ethernet
		Ethernet standard 1000BASE-T, Auto MDIX
		Speed 10/100/1000 Mbps
	Connector	2x RJ45

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Positioning	**Standard**	1x Multi-GNSS **Receiver** BeiDou, Galileo, GLONASS, GPS gpsOne Gen 9 **Antennas** Active or passive **Tracking Sensitivity** Up to -160 dBm **Services** Standalone
	Connector	1x FAKRA C-coded male
USB	**Standard**	1x USB 3.0 Host
	Connector	1x Type A
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
	Connector	1x Terminal block header 5 mm
Extended Storage		1 TB SSD **Capacity** 1 TB **Technology** SSD **Data** Application data such as logs, media content, …
System	**Core**	1.3 GHz dual-core, 1 GB RAM, 4 GB flash
	Module Slots	2x miniPCIe (PCIe + USB), 2x miniPCIe (USB)
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 LXC virtualization **Enabled service** Linux Container (LXC) environment to integrate customer specific applications, isolated from the router functionalities
Power	**Input Voltage**	12, 24, 48 VDC **Nominal voltages** 12, 24, 48 VDC **Absolute voltages** 12 VDC to 48 VDC (-25 % / +25 %) **Ignition sense** Input with delayed shutdown
	Ignition Sense	Yes
	Connector	1x Terminal block header 5 mm
	Consumption	20 W (max)
Mounting		Bracket
Dimensions	**W x H x D**	Width 164/190 mm x height 58 mm x depth 139.5 mm

Weight		800 g

Environment	**Operating Temperature**	-25°C to +70°C
	Ingress Protection Level	IP40

MTBF		170'000 h / 19.4 years, according SN29500 at environmental temperature 40 °C

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

Order Code		NB2800-2LWacDf-GVi