

NB3800-LWacAm-GV

Railway Router with 2x LTE + WLAN-ac + 5x ETH + Audio-mono + GNSS + Voice + EN50155

Railway approved, modular onboard communication platform for future proof IP solutions.



Keyfeatures

Mobile / Cellular	1x LTE, UMTS, GSM
SIM	4x Mini SIM
WiFi / WLAN	1x Dual Band IEEE 802.11a/b/g/n/ac, 100 Clients in Access Point Mode
Ethernet	2x Gigabit Ethernet, 3x Fast Ethernet
Voice	1x Analog Audio (mono)
Power	24 VDC to 48 VDC
Positioning	Multi-GNSS
Temperature Range	-40 °C to +70 °C, EN 50155 class OT4/ST0
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, Voice Gateway, SDK, free updates
Compliance	CE (RED), Railway (EN50155, EN45545), ITxPT optional
Modularity	Extensions on request

Product description

The powerful NB3800, with its equipment, rail approvals and interfaces to on-board electronics, is ideal for applications such as fleet management, voice communication or passenger infotainment.

Applications

- Fleet Management
- Passenger Infotainment
- Ticketing
- CCTV
- Voice Communication

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 Datarate down / up (max) 150 Mbps / 50 Mbps Voice CSFB FCC ID XPTYOBYL210
	Region	Europe, Middle East and Africa (EMEA)
	Connectors	2x TNC female
	SIM	4x Mini SIM - 2FF

WiFi / WLAN	Standard	1x Dual-band WLAN 2.4/5 GHz a/b/g/n/ac Wireless standard IEEE 802.11a/b/g/n/ac Frequency 2.4/5 GHz Diversity 2x2 MIMO Datarate (max) 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz) Modes Client or access point (up to 100 clients) FCC ID TK4WLE600VX
	Connector	2x TNC female

Ethernet	Standard	2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps 3x Fast Ethernet Ethernet standard 100BASE-TX, Auto MDIX Speed 10/100 Mbps
	Connector	2x M12 X-coded female, 3x M12 D-coded female

Positioning	Standard	1x Multi-GNSS Receiver BeiDou, Galileo, GLONASS, GPS/QZSS 72-channel u-blox M8 engine 3 concurrent GNSS channels Antennas Active or passive Accuracy Up to 2.5 m CEP Sensitivity Up to -167 dBm Services Standalone, Assisted GPS Data server with JSON, NMEA data stream
	Connector	1x TNC female
USB	Standard	1x USB 2.0 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 1 Mbps
	Connector	1x M12 A-coded female
Voice Communication	Protocols	1x Analog voice (mono audio) Channels Line in, line out Line in +/- Line out +, COM Input 21 kΩ, signal level 1.9 Vpp, 100 Hz- 15 kHz Output 600 Ω, signal level 3.6 Vpp, 300 Hz- 4 kHz
	Connector	1x M12 A-coded female
System	Core	1.3 GHz dual-core, 1 GB RAM, 4 GB flash
	Module Slots	2x miniPCIe (PCIe + USB), 4x miniPCIe (USB)
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, NAT, masquerading, bridge filtering
	Licenses	GNSS Enabled service GNSS location service Server with JSON-, NMEA stream Voice gateway Enabled service Versatile voice gateway for seamless call routing Protocols 2G/3G/4G, POTS, VoIP, PTT (if supported by hardware)
Power	Input Voltage	24, 48 VDC Nominal voltages 24, 48 VDC Absolute voltages 24 VDC to 48 VDC (-30 % / +30 %) Galvanic isolation 1500 VDC Standard EN 50155 class S2/C1
	Connector Consumption	1x M12 A-coded male 25 W (max)
Dimensions	W x H x D	Width 167/190 mm x height 121.1 mm x depth 106.5 mm
Weight		1900 g
Environment	Operating Temperature	-40°C to +70°C
	Ingress Protection Level	IP40

MTBF		170'000 h / 19.4 years, according SN29500 at environmental temperature 40 °C
Certifications	Compliance Domain	CE according to 2014/53/EU (RED), 2011/65/EU (RoHS), Railway according to EN 50155 class OT4/ST0, EN 45545 Railway
Order Code		NB3800-LWacAm-GV
