

NB3800-L2WacCml-GFlx

Railway Router with LTE + 2x WLAN-ac 5x ETH + CAN-passive + IBIS + GNSS + FMS2IP + ITxPT + 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	2x Dual Band IEEE 802.11a/b/g/n/ac, 100 Clients in Access Point Mode
Ethernet	2x Gigabit Ethernet, 3x Fast Ethernet
Serial / Fieldbus	1x CAN passive (read only) with FMS to IP Gateway, 1x IBIS
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, SDK, FMS2IP, free updates
Compliance	CE (RED), Railway (EN50155, EN45545), ITxPT
Modularity	Extensions on request

Product description

The NB3800, with its railway approvals and ITxPT compliance and its interfaces to on-board electronics, is the ideal device for e.g. WLAN and passenger information or production data acquisition.

Applications

- Passenger WiFi
- Passenger Infotainment
- Smart Traffic
- Telematics
- Agriculture
- Mining

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	2x 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	4x 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	<p>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</p>
	Connector	1x TNC female
USB	Standard	1x USB 2.0 Host
	Connector	1x Type A
Serial, Fieldbus	Protocol	<p>1x CAN 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 Isolation 1500 VDC Termination No internal bus termination Bus access Passive - read access only Active - read and write access on request (option -C) 1x IBIS Slave Protocol VDV 300 (Slave) Signals WBED, WBME, WBSD, WBMS Signal level High > 5VDC, low < -5 VDC Bit rate 1200 bps Isolation 1500 VDC</p>
	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	<p>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</p>
	Licenses	<p>GNSS Enabled service GNSS location service Server with JSON-, NMEA stream FMS2IP Enabled services Automatic translation of CAN messages into IP datagrams according to FMS Standard. Services FMStoIP, VEHICLEtoIP Compliance According to ITxPT ITxPT Enabled services Inventory, FMS2IP, Vehicle2IP, location, time Standard ITxPT software compliance</p>
Power	Input Voltage	<p>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</p>
	Connector Consumption	<p>1x M12 A-coded male 25 W (max)</p>
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 Ingress Protection Level	-40°C to +70°C IP40
MTBF		150'000 h / 17.1 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, ITxPT (Hardware compliance requires adapter cables) Railway
Order Code		NB3800-L2WacCml-GFix