

NB3800-2LWacDf-GVi

Railway Router with 2x LTE + WLAN-ac + 5x ETH + 1 TB Storage + GNSS + Virtualization + EN50155

Railway approved, modular onboard communication platform for IP solutions.



Keyfeatures

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| Mobile / Cellular | 2x LTE, UMTS, GSM |
| SIM | 4x Mini SIM |
| WiFi / WLAN | 1x Dual-band IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients in Access Point Mode |
| Ethernet | 2x Gigabit Ethernet, 3x Fast Ethernet |
| Extended Storage | 1 TB |
| 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, LXC Virtualization, 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 passenger information, passenger WiFi or even mining.

Applications

- Mining
- Passenger WiFi
- Passenger Infotainment
- CCTV

Specifications

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| 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 TNC female |
| | SIM | 4x Mini SIM - 2FF |
| 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 TNC female |
| | Ethernet | 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 |

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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 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 115 200 Bit/s |
| | Connector | 1x M12 A-coded female |
| 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), 4x 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- and 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 Interval 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, SMTP 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, NAT, masquerading, bridge filtering, Address 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 | 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 | | 2000 g |

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| Environment | Operating Temperature Ingress Protection Level | -40°C to +70°C IP40 |
| MTBF | | 125'000 h / 14.3 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 | | NB3800-2LWacDf-GVi |
