

NB3800-2Lp2WacPb-G

Railway Router with 2x LTE-Adv Pro + 2x WLAN-ac 5x ETH + 110V + GNSS + EN50155

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



Keyfeatures

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| Mobile / Cellular | 2x LTE-Advanced Pro, UMTS |
| SIM | 4x Mini SIM |
| WiFi / WLAN | 2x 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 |
| Power | 72 VDC to 110 VDC |
| Positioning | Multi-GNSS |
| Temperature Range | -40 °C bis +55 °C, EN 50155 class OT2 / ST2 |
| Software | Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates |
| Compliance | CE (RED), Railway (EN50155, EN45545), ITxPT optional, UL*/IEC/EN 62368-1, FCC, PTCRB, AT&T |
| Modularity | Extensions on request *in Progress |

Product description

The powerful NB3800 with its features, railway approvals and interfaces to on-board electronics, is ideal for applications like passenger WiFi, passenger information systems or video surveillance.

Applications

- Passenger WiFi
- Passenger Infotainment
- CCTV
- Mining

Specifications

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| Mobile / Cellular | Standard | 2x Multimode LTE-A Pro, UMTS 4G - LTE Advanced Pro B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B38, B39, B40, B41, B42, B43, B48 (CBRS), B66, B71 2014/53/EU (RED): B1, B3, B7, B8, B20, B28, B38, B40 3G - DC-HSPA+/UMTS B1, B2, B4, B5, B6, B8, B9, B19 2014/53/EU (RED): B1, B8 Category LTE Cat 12 Antenna ports 2x2 MIMO Data rate down / up (max) 600 Mbps / 150 Mbps 3GPP 4G Rel. 12, 3G DC-HSPA+ Voice - FCC ID R17LN920 Region Europe, Middle East and Africa (EMEA), North America (NA), Asia and Pacific (APAC) |
| | Region | Europe, United States of America (USA) |
| | Connectors | 4x TNC female |
| | SIM | 4x Mini SIM - 2FF |
| WiFi / WLAN | Standard | 2x 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 | 4x TNC female |

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| Ethernet | Standard | 2x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps |
| | Connector | 3x Fast Ethernet Ethernet standard 100BASE-TX, Auto MDIX Speed 10/100 Mbps 2x M12 X-coded female, 3x M12 D-coded female |
| Positioning | Standard | 1x Multi-GNSS Receiver BeiDou, Galileo, GLONASS, GPS gpsOne Gen 9 Antennas Active or passive Tracking Sensitivity Up to -158 dBm CEP (Circular Error Probability) < 2m (CEP 50), (Open sky conditions, Horizontal) 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 |
| 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- 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, 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, 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 |
| Power | Input Voltage | 72, 96, 110 VDC Nominal voltages 72, 96, 110 VDC Absolute voltages 72 VDC to 110 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 | | 1800 g |

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| Environment | Operating Temperature Ingress Protection Level | -40°C to +55°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 OT2 / ST2, EN 45545 Railway |
| Order Code | | NB3800-2Lp2WacPb-G |