

NB3800-2Lp-G

Railway Router with 2x LTE-Adv Pro 5x ETH + 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 |
| Ethernet | 2x Gigabit Ethernet, 3x Fast Ethernet |
| Power | 24 VDC to 48 VDC |
| Positioning | Multi-GNSS |
| Temperature Range | -40 °C bis +70 °C, EN 50155 class OT4/ST0 |
| Software | Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates |
| Compliance | CE (RED), Railway (EN50155, EN45545), ITxPT optional |
| Modularity | Extensions on request |

Product description

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

Applications

- Passenger Infotainment
- CCTV
- Mining
- Voice Communication

Specifications

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|--------------------------|--|--|
| Mobile / Cellular | Standard | 2x Multimode LTE-A Pro, UMTS 4G - LTE Advanced Pro B1, B3, B7, B8, B20, B28, B38, B40 3G - DC-HSPA+/UMTS 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), on request: North America (NA), Asia and Pacific (APAC) |
| | Region Connectors SIM | Europe, Middle East and Africa (EMEA) 4x TNC female 4x Mini SIM - 2FF |
| 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 gpsOne Gen 9 Antennas Active or passive Sensitivity Up to -161 dBm Services Standalone |
| | Connector | 1x TNC female |
| USB | Standard | 1x USB 2.0 Host |
| | Connector | 1x Type A |

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|-------------------------|--|---|
| 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 miniPCle (PCle + USB), 4x miniPCle (USB) |
| Software | Features | <p>NetModule Router Software (supported features depending on product variant)</p> <p>Package The standard software package includes an intuitive user interface, covering all modern routing protocols and enables efficient mass deployment.</p> <p>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</p> <p>Remote Management Manage and monitor devices with SNMP V1/V2/V3, Netmodule vendor MIB, telnet, SSH, or HTTP/HTTPS</p> <p>Cellular Networking Multi-SIM / eSIM support (optional license), multi-APN support, signal strength monitoring, dedicated bearers, CSFB/VoLTE calls (optional license)</p> <p>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</p> <p>Link Management Link prioritization, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision,</p> <p>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</p> <p>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</p> <p>VPN OpenVPN, IPsec (IKEv1 and IKEv2), PPTP, GRE, LZTP, CSD dial-in, Certificate revocation service</p> <p>Firewall Stateful firewall, connection tracking, NAT, NAPT, masquerading, bridge filtering, Address translation (based on SRC and DST ports)</p> <p>Encryption supporting password protected PKCS12 files, integrated random certificate key generator, "Let's encrypt" certificate, ECC (Certificates with Elliptic Cryptography)</p> <p>Quality of Service Diffserv, SFQ, HTB, Priority-based Queuing, Netflow (Softflow)</p> <p>Programmability SDK</p> <p>Troubleshooting Logging, Ping, Traceroute, Tcpdump, Speed-test</p> |
| | Licenses | GNSS Enabled service GNSS location service Server with JSON-, NMEA stream |
| 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 | | 1800 g |
| Environment | Operating Temperature | -40°C to +70°C |
| | Ingress Protection Level | 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 Railway |
| Order Code | | NB3800-2Lp-G |