

NB3800-N-G

Railway Router with 1x 5G + 5x ETH + GNSS + EN50155

With excellent 5G mobile radio technology for wireless internet access in the vehicle incl. 5-port Ethernet switch.



Keyfeatures

| | |
|--------------------------|--|
| Mobile / Cellular | 1x 5G-NR, LTE-A 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 to +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 WiFi, passenger information systems or video surveillance.

Applications

- Fleet Management
- Mining
- Passenger Infotainment
- Ticketing
- CCTV
- Telematics

Specifications

| | | |
|--------------------------|--|--|
| Mobile / Cellular | Standard | <p>1x Multimode 5G-NR, LTE-A Pro, UMTS</p> <p>5G - NR n1, n3, n7, n8, n20, n28, n38, n40, n77, n78</p> <p>4G - LTE-A Pro B1, B3, B7, B8, B20, B28, B38, B40</p> <p>3G - DC-HSPA+/UMTS B1 (2100), B3 (1800), B8 (900)</p> <p>5G NR Modes Sub-6 FDD and TDD</p> <p>LTE Category Cat. 20 up to 7CA</p> <p>MIMO 4x4 MIMO in 5G-NR support on n1, n3, n7, n38, n40, n77 and LTE B1, B3, B7, B38, B40</p> <p>Antenna ports 4</p> <p>Power Class 23dBm (Power Class 3)</p> <p>Data rate down / up (max) up to 5.5 Gbps DL / 2.7 Gbps UL</p> <p>3GPP 4G/5G Rel. 15, 3G HSPA+ Rel. 18</p> <p>FCC ID R17FN980</p> <p>Voice -</p> <p>Region Europe, Middle East and Africa (EMEA), on request: North America (NA), Asia and Pacific (APAC)</p> |
| | Region Connectors SIM | <p>Europe, Middle East and Africa (EMEA)</p> <p>4x TNC female</p> <p>4x Mini SIM - 2FF</p> |
| Ethernet | Standard | <p>2x Gigabit Ethernet</p> <p>Ethernet standard 1000BASE-T, Auto MDIX</p> <p>Speed 10/100/1000 Mbps</p> <p>3x Fast Ethernet</p> <p>Ethernet standard 100BASE-TX, Auto MDIX</p> <p>Speed 10/100 Mbps</p> |
| | Connector | 2x M12 X-coded female, 3x M12 D-coded female |

| | | |
|-------------------------|--|---|
| Positioning | Standard | 1x Multi-GNSS Receiver BeiDou, Galileo, GLONASS, GPS Dual-Frequency GNSS gpsOne Gen 9 Antennas Active or passive Sensitivity Up to -161 dBm Services Standalone, Assisted GPS |
| | 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 |
| 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 |
| 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 | | 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-N-G |