

NB3800-3LpDf-GVi

Railway Router with 3x LTE-Adv Pro + 5x ETH + 1TB SSD + GNSS + EN50155

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



Keyfeatures

Mobile / Cellular	3x 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	-25 °C bis +55 °C, EN 50155 class OT1/ST2
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

- Passenger WiFi
- Passenger Infotainment
- CCTV
- Mining

Specifications

Mobile / Cellular	Standard	3x 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
	Connectors	6x TNC female
	SIM	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	<p>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</p>
	Connector	1x TNC female
USB	Standard	1x USB 2.0 Host
	Connector	1x Type A
Serial, Fieldbus	Protocol	<p>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</p>
	Connector	1x M12 A-coded female
Extended Storage		<p>1 TB SSD Capacity 1 TB Technology SSD Data Application data such as logs, media content, ...</p>
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 (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, 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 Routing Destination, policy, multipath, mobile-IP, OSPF, BGP, multicast, TCP-MSS clamping, bridging discovery protocols LLDAP, 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</p>
	Licenses	<p>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</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		2000 g

Environment	Operating Temperature Ingress Protection Level	-25°C to +55°C IP40
MTBF		164'200 h / 18.7 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 OT1/ST2, EN 45545 Railway
Order Code		NB3800-3LpDf-GVi