

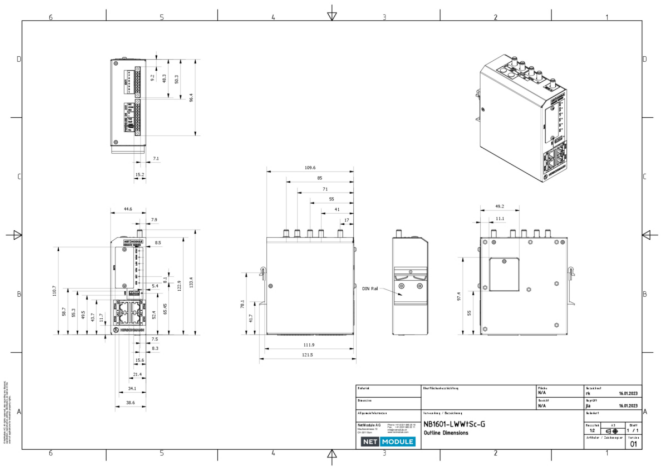
Product: NB1601-LSc-G

Industrial Router with ETH, LTE, GNSS, Serial, DI/O

Product Description

Modular Wireless Router with 4-port Ethernet switch to connect remote locations. With: LTE, Global Positioning (GNSS, GPS), Serial Port, Digital Input/Output

Technical Drawing



Technical Specifications

Product Overview

Name:	NB1601-LSc-G
WAN:	IPv4; IPv6; IP Passthrough; DynDNS Client; PPPoE;

Product Life Cycle

Life Cycle:	Active - Product is available

General Information

Scope of delivery:	Device, General safety instructions, 2x Terminal block 3.5mm

More Interfaces

USB interface:	1 x USB 2.0 socket to connect an approved USB storage device, USB Type A socket
SIM Cards:	2x Micro SIM (3FF) slot
Local Management and Device Replacement:	Management via Web (HTTPs); Command Line Interface (CLI) over SSH/Serial/Web; SNMP v1/v2c/v3; Discovery via LLDP, CDP, FDP, SONMP, EDP, IRDP
Ethernet Connector Type:	4x Fast Ethernet (100 Base-TX, Auto MDIX, 10/100 Mbps, RJ45)
Power Supply:	10-pin terminal block (connector included)
Serial:	1x RS-232; Signals TX, RX; Up to 115kBit/s; RS-485 combo (software switchable); 120 Ω for RS-485 configurable by software
GPS (global positioning system):	Multi-GNSS, Receiver BeiDou, Galileo, GLONASS, GPS/QZSS, ublox MAX-M10S engine, 4 concurrent GNSS systems, Bands: L1C/A, E1-B/C, L1OF, B1I, Augmentation: SBAS EGNOS, GAGAN, MSAS, WAAS, BDSBAS QZSS L1S (SLAS), Antennas: active or passive, Sensitivity: Down to -167 dBm, CEP (Circular Error Probability) ≤2.5m, Services: Standalone, assisted GPS, GNSS Stream NMEA or JSON, 1x SMA female
CPU:	1 GHz single core
Memory:	512 MB RAM

Storage:	4 GB flash
Signaling contact:	2x Digital I/O; Low 0-3 VDC; High 9-32 VDC; Isolation 1'500 VDC; Relay output with NO, NC, COM (normally open, normally closed) on Terminal block header 3.5mm (screw locking); +2 additional Digital I/O (4 total)
LEDs:	6 LEDs + Ethernet LEDs (Speed, Activity)
Reset Function:	Pin-hole push button for reboot and factory reset

Radio technology

Modules

Description	2G	3G	4G	MIMO	Antenna Connector	Additional Radio Features
Module 1	B2 (1900), B3 (1800), B5 (850), B8 (900)	B1 (2100), B2 (1900), B5 (850), B8 (900)	LTE Cat. 4 Max 150 Mbps down, 50 Mbps up Bands: B1 (2100), B3 (1800), B5 (850), B7 (2600), B8 (900), B20 (800)	2x2 MIMO	2x SMA female	Voice: CSFB

Load Balance:	Link Prioritizatoin and Aggregation; Load Balancing; Diffserv; SFQ; HTB; Priority based Queuing

Power requirements

Operating Voltage:	12-24 VDC (±20%)
Power Consumption:	7 W average, 10 W maximum

Diagnostics features

Alarm and event actions:	Email; SMS
Monitoring:	Watchdogs (Hard- and Software); Link Supervision; MQTT Broker

Security features

Multipoint VPN:	VXLAN, CSD dial-in, OpenVPN, IPSec, GRE, L2TP, PPTP, IKEv1/v2

Service

Other services:	DNS Cache;

Software

Firmware Storage:	Fail-safe update (FOTA); Software Update via USB, HTTP(s) (push), FTP (pull), SFTP (pull), TFTP (pull)
Radius Server:	External Radius Server Management User Authentication
Software features:	Software Development Kit (SDK);
Software Version:	5.0 (updates free of charge)
Operating system:	NRSW (NetModule Router Software)
Switching:	VLAN (802.1Q)
Redundancy:	Multipath TCP, VRRP (Virtual Router Redundancy Protocol), RSTP (Rapid Spanning Tree Protocol)
Diagnostics:	Netflow (Softflow), Ping, Traceroute, Tcpdump, Speed Test
Configuration:	DHCP Client and Server
Security:	Certificate Management (SCEP Client, Signing Requests), Certificate formats: PKCS12, PKCS7, PEM/DER, RSA/Ed25519 (OpenSSH/Dropbear), "Let's encrypt" support, Elliptic Curve Certificates (ECC), 802.1x for LAN, Stateful Firewall, Connection Tracking, Bridge Filtering
Time synchronisation:	NTP Client and Server, SNTP Server
Routing:	Destination, Policy, Multipath, OSPF, BGP, Multicast, TCP-MSS Clamping, NAT, NAPT, Masquerading
Management Software:	Compatible with "Connectivity Suite"
Cellular Functions:	Signal Strength Monitoring

Ambient conditions

Air Pressure (Operation):	Up to 4000m above sea level
Degree of Protection when Installed:	IP40
Operating temperature:	-40-+70 °C
Relative humidity (non-condensing):	0-95 %

Mechanical construction

Dimensions (WxHxD):	45 mm x 124/134 mm x 110/121 mm
Weight:	450 g
Housing Material:	brushed aluminium
Mount Type:	DIN Rail 35 mm
Mating Side:	from the front
Labeling:	Type label on side

Approvals

Basis Standard:	CE according to 2014/53/EU (RED), UKCA (RER), FCC
Safety of industrial control equipment:	EN 62368-1, IEC 62368-1, UL 62368-1
Transportation:	E-Mark ECE R10, Fire Safety ECE R118
UK Regulation Compliance:	UKCA Mark
Suitability - Indoor:	Yes

Reliability

Guarantee:	5 years

History

Update and Revision:	Revision Number: 0.6 Revision Date: 06-25-2026

Variants

Item #	Type
942998243	NB1601-LSc-G

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