

NB1601-Gr

Industrial Router with GSM-R + 4x ETH

Modular mobile router with 4-port Ethernet switch to connect remote locations.



Keyfeatures

Mobile / Cellular	1x GSM-R
SIM	2x Micro SIM
Ethernet	4x Fast Ethernet
IO	2x Digital I/O
Operation Temperature	-40°C to +70 °C
Serial / Fieldbus	1x RS-232 Console
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates
Compliance	CE (RED)
Customizable	Extensions on request

Product description

The NB1601 offers the key technologies for stationary applications that require reliable Internet access.

Applications

- Fleet Management
- Ticketing
- Telematics
- Smart Traffic

Specifications

Mobile / Cellular	Standard	1x GSM-R for EMEA 4G - LTE n.a. 3G - DC-HSPA+/UMTS n.a. 2G - GSM/GPRS GSM-R (876-880 / 921-925), B8 (900), B3 (1800) Category GPRS Multislot class 10 Output Power GSM-R Power Class 4 (2W) Antenna ports SISO Data rate down / up (max) 85.6 kbps / 42.8 kbps Voice GSM (HR/FR/EFR/AMR) ASCI n.a.
	Region Connectors SIM	Europe, Middle East and Africa (EMEA) 1x SMA female 2x Micro SIM - 3FF
Ethernet	Standard	4x Fast Ethernet Ethernet standard 100BASE-TX, Auto MDIX Speed 10/100 Mbps
	Connector	4x RJ45
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 Terminal block header 3.5 mm (screw locking)

IOs	Type	2x Digital I/O Signals 1x DI, 1x DO DI signals +, - DI level Low: 0 - 3 VDC, high: 9 - 32 VDC DO signals Relay outputs with NO, NC, COM (normally open, normally closed) DO level 0 - 32 VDC/1A Isolation 1'500 VDC
	Connector	1x Terminal block header 3.5 mm (screw locking)
System	Core	600 MHz (HW Rev. A) or 1 GHz (HW Rev. B02) single core, 512 MB RAM, 4 GB flash
	Module Slots	1x miniPCIe / extension combo (USB), 1x Shield
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
Power	Input Voltage	12, 24 VDC Nominal voltages 12, 24 VDC Absolute voltages 12 VDC to 24 VDC (-20 % / +20 %)
	Connector Consumption	1x Terminal block header 3.5 mm (screw locking) 5 W (average), 7 W (max)
Mounting		DIN-Rail
Dimensions	W x H x D	Width 45 mm x height 124/134 mm x depth 110/121 mm
Weight		450 g
Environment	Operating Temperature	-40°C to +55°C
	Ingress Protection Level	IP40
MTBF		300'000 h / 34.2 years, according SN29500 at environmental temperature 40 °C
Certifications	Compliance Domain	CE according to 2014/53/EU (RED), 2011/65/EU (RoHS)
		Industrial
Order Code		NB1601-Gr