

NB1601 Wireline

Ruggedized Router with 4x Ethernet



The NB1601 Wireline industrial router is equipped with four Ethernet ports, digital I/Os, a serial port, a USB 2.0 port and an extension slot. This positions the device ideally for the use as a device server or industrial firewall.

As the successor to the well-established NB1600, the new NB1601 industrial router offers the key technologies for stationary applications requiring reliable Internet access. As a special feature, the NB1601 offers four Ethernet ports, which are extremely configurable. Each port can be configured either as a LAN or as a WAN port.

For the application as a device server, the router also has one isolated binary digital input and relay output for connecting sensors and actuators. The NB1601 comes with an USB port which allows fast configuration and firmware updates via memory stick. An optional extension slot (EXT 2) allows to extend the system with additional interfaces RS-232, RS-485, CAN and IBIS.

The durable metal housing suitable for DIN rail mounting in combination with the supported temperature range -40 °C to 70 °C provides the robustness enabling the device for use in industrial environments.

It's possible to run customer applications in a LXC Container. In addition, a SDK environment allows to implement all types of applications with simple scripts. Data preprocessing can be done directly on the router, thus saving an additional IPC.

The supplied router software is based on well proven components including an embedded Linux operating system and a wide range of communication and routing protocols as OSPF, BGP and RSTP. With its powerful VPN protocol suite, remote devices can easily and securely be connected. Other features include Quality of Service (QoS) for an efficient data exchange, E-Mail for alarming and notifications, a web server and RADIUS authentication.

Applications

- Device server
- Industrial firewall
- Protocol conversion
- Remote management
- Factory automation
- Digital signage

Key Features

- Ethernet switch
- 1/1 Digital I/Os
- RS-232
- Extension slot
- Feature-rich software
- SDK scripting
- DIN rail mounting

Performance

- 600MHz single core ARM CPU
- 100 Mbps routing performance

Specifications

Ethernet Switch	4 Fast Ethernet ports, 10/100 Mbps, auto MDIX, RJ45 connectors
USB	USB 2.0 Host; USB A connector
Serial	1 Serial console, RS-232 (TxD, RxD, GND), up to 1Mbps; connector: 3 pins of 10-pin terminal block (w. screw), 3.5 mm pitch
Digital I/O	1 DI: level 0 (0-3VDC), level 1 (9-32VDC), isolation 1.5kVp 1 DO: 0-32VDC/1A; isolation: 1.5kVp; Connectors: 1 DI + 1DO on 10-pin terminal block (w. screw), 3.5 mm pitch
Storage	4GB internal eMMC flash (shared with host system)
Extension EXT 2 (optional)	1 Extension module (planned); Isolated: CAN, DIO, RS-232, RS-485, IBIS; Others: FXS, 32/64GB eMMC, Audio or customer specific
Dimensions, weight	Width 45mm x height 124/134mm x depth 110/121mm, ca. 450g
Power	Nominal Input Voltages: 12VDC, 24VDC (+/-20%); Average power consumption: 7W Connector type: 2 pins of 10-pin terminal block (w. screw), 3.5 mm pitch
Environment	Temperature range: -40 °C to +70 °C; Ingress Protection Rating: IP40
MTBF	>350'000h
Compliance	CE according to 2014/53/EU (RED), 2011/65/EU (RoHS), 2012/19/EU (WEEE), 1907/2006/EC (REACH), FCC according to 47 CFR, Part 15B
Standards	EN 62368-1, EN 62311, EN 55032, EN 55035, EN 61000-6-2, EN 61000-6-3, EN 301 489-1, EN 301 489-3, EN 301 489-7, EN 301 489-17, EN 301 489-24, EN 301 489-52, EN 300 328, EN 301 511, EN 301 893, EN 301 908-1, EN 301 908-2, EN 301 908-13
Order number: NB1601-R	(contact sales for more models, options or project specific adaptations) Wireline Router