

# NB1800 5G Industrial Router

High-Performance Wireless Router with 5G-NR, WLAN, Gigabit Ethernet, SFP, Serial Interfaces and GNSS

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Product Information NB1800 5G  
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## Key Features

<b>Mobile / Cellular</b>	1x 5G-NR, LTE-A-Pro, UMTS
<b>SIM</b>	2x Micro SIM
<b>WiFi / WLAN</b>	1x Dual-band IEEE 802.11ac (Wi-Fi 5)
<b>Ethernet</b>	2x Gigabit Ethernet, 1x SFP
<b>Extended Storage</b>	1x SD Card
<b>Serial / Fieldbus</b>	1x RS-232/485
<b>Positioning</b>	Multi-GNSS
<b>Temperature</b>	-40 °C to +70 °C
<b>Software</b>	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, LXC, SDK, free updates
<b>Compliance</b>	CE (RED), UKCA (RER)
<b>Modularity</b>	Extensions on request

## Product Description

The powerful NB1800 router enables fast Internet access in an industrial environment. For a reliable network connection, the device supports a 5G-NR module as well as a WiFi module according to the latest IEEE 802.11ac (Wi-Fi 5) standard. Also included are two Gigabit Ethernet and a SFP port (typ. used for fiber optic), as well as a USB host port and a serial interface with RS-232 or RS-485 mode.

DIN rail mounting, the wide operating temperature range from -40 °C to 70 °C and the IP40 metal housing allow reliable operation under harsh conditions. Combined with its versatile features and performance, this makes the NB1800 ideal for applications such as Industrial Security, CCTV or Point of Sale Connectivity.

The software is based on well proven components including an embedded Linux operating system and a powerful communication protocol suite as well as VPN technologies as OpenVPN. Customer specific software extensions may be implemented via a sophisticated SDK.

## Applications

- Industrial Security
- Point of Sale
- Public WiFi
- CCTV
- Smart Grid
- Factory Automation



## Specifications

### 1x Mobile / Cellular

#### Multimode 5G-NR, LTE, UMTS 5G-NR

n1, n3, n7, n8, n20, n28, n38, n40, n77, n78

#### 4G - LTE

B1, B3, B7, B8, B20, B28, B38, B40

#### 3G - DC-HSPA+/UMTS

B1, B3, B8

#### Specification

LTE Cat. 20 up to 7CA

4x4 MIMO support in 5G n1, n3, n7, n38, n40, n77, n78 and LTE B1, B3, B7, B38, B40

up to 5.5 Gbps DL / 2.7 Gbps UL

5G NR Modes Sub-6 FDD and TDD

5G Core SA and NSA operations

3GPP LTE/5G Rel. 15, 3G HSPA+ Rel. 18

#### Region

EMEA (APAC or NA on request)

#### Connector

4x SMA female

#### SIM

2x Micro SIM - 3FF

### 1x WiFi / WLAN (optional)

#### Standard

IEEE 802.11a/b/g/n/ac (Wi-Fi 5)

Dual-band 2.4/5 GHz

2x2 MIMO

#### Bit rate (max)

144 Mbps 2.4 GHz, 150 Mbps 5 GHz

#### Modes

Client or Access Point (max. 100

Clients)

#### Connector

2x SMA female

### 3x Ethernet

2x Gigabit Ethernet

1x SFP / GbE combo

#### Standard

1000Base-T, Auto MDIX

#### Speed

10 / 100 / 1000 Mbps

#### Connector

2x RJ45

1x SFP Cage (mini GBIC)

### USB

1x USB 2.0 Host Port

#### Connector

1x Type A

### Positioning

#### GNSS Receiver

BeiDou, Galileo, GLONASS, GPS

#### Sensitivity

Up to -161 dBm, up to 2.5m CEP

#### Antennas

Active or passive

#### Connector

1x SMA female

### 1x Serial, Fieldbus

#### Protocol

RS-232/485 combo (software switchable)

#### Signals

A, B / TX, RX

#### Bit rate

Up to 115 200 Bit/s

#### Termination

120  $\Omega$  for RS-485 configurable by software

#### Connector

1x Terminal block header 3.5 mm (screw locking)

### 1 - 2x Module Options

#### Options

Customer specific, please contact us

#### Connector

Module specific

### System

#### Core

1.3 GHz dual core, 1 GB RAM, 4 GB flash

#### Extended Storage

1x SD Card Slot

### Power

#### Nominal Input voltages

12, 24, 48 VDC (-25 % / +10 %)

#### Average Power Consumption

11 W

#### Maximal Power Consumption

20 W

#### Connector

1x Terminal block header 3.5 mm (screw locking)

### Other

#### Mounting

DIN-Rail

#### Dimensions

Width 61 mm x height 128/140 mm x depth 121 mm

#### Weight

ca. 800 g

#### Environment

##### Operating Temperature

-40 °C to +70 °C

##### Ingress Protection Level

IP40

#### MTBF

240'000 h / 27.4 years, according

SN29500 at environmental

temperature 40 °C

### Software

#### Features

Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates

#### Licenses (optional)

Voice Gateway, LXC Virtualization, OpenVPN- and DynDNS Server, GNSS, Enhanced RF Configuration

### Certifications

#### Compliance

CE according to 2014/53/EU (RED), UKCA according to Radio Equipment Regulations 2017 No. 1206 (RER), 2011/65/EU (RoHS)

### Ordering options

Contact our sales team for our standard models, options or project specific adaptations