

# NB1800 Industrial Router

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Product Information NB1800  
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High-Performance Wireless Router with LTE Advanced, WLAN, Gigabit Ethernet, Fiber, Serial Interfaces and GNSS



## Key Features

<b>Mobile / Cellular</b>	1 - 2x LTE Advanced, UMTS
<b>SIM</b>	2x Micro SIM
<b>WiFi / WLAN</b>	1 - 2x 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)
<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 multiple LTE Advanced modules as well as WiFi modules according to the latest IEEE 802.11ac (Wi-Fi 5) standard. Also included are two Gigabit Ethernet and a fiber optic port (SFP), 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

### 1 - 2x Mobile / Cellular (optional)

#### Multimode LTE, UMTS and GSM 4G - LTE

B1 (2100), B3 (1800), B5 (850), B7 (2600), B8 (900), B20 (800)

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

B1 (2100), B2 (1900), B5 (850), B8 (900)

#### 2G - GSM/GPRS/EDGE

B2 (1900), B3 (1800), B5 (850), B8 (900)

#### LTE Specification

LTE Cat 4, 2x2 MIMO  
DL 150 / UL 50 Mbps

#### Voice

CSFB

#### Region

EMEA (APAC or NA on request)

OR

#### Multimode LTE Advanced, UMTS 4G - LTE

B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B7 (2600), B12 (700ac), B13 (700c), B20 (800DD), B5 (850), B25 (1900), B26 (850), B29 (700), B41 (TDD2500), B30 (WCS)

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

B1 (2100), B2 (1900), B3 (1800), B4 (1700), B5 (850), B8 (900)

#### LTE Specification

LTE Cat 6, 2x2 MIMO  
DL 300 / UL 50 Mbps

#### Region

EMEA, NA (APAC on request)

#### Connector

2 - 4x SMA female

#### SIM

2x Micro SIM - 3FF

### 1 - 2x 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

2-4x SMA female

### 3x Ethernet

2x Gigabit Ethernet  
1x SFP / GbE combo

#### Standard

1000Base-T, Auto MDIX

#### Speed

10 / 100 / 1000 Mbps

#### Connector

3x RJ45

### USB

1x USB 2.0 Host Port

#### Connector

1x Type A

### Positioning (optional)

#### GNSS Receiver (depending on model)

BeiDou, Galileo, GLONASS, GPS/QZSS

#### Sensitivity

Up to -167 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 1 Mbps

#### Termination

120 Ω for RS-485 configurable by software

#### Connector

1x Terminal block header 3.5 mm (screw locking)

### 1 - 2x Module Options

#### Options

FXS, others on request

#### 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. 900 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), 2011/65/EU (RoHS)

#### Standards

EN 62368-1, EN 62311, EN 55032, EN 55035, EN 61000-6-2, EN 61000-6-3, EN 301489-1, EN 301489-3, EN 301489-7, EN 301489-17, EN 301489-19, EN 301489-24, EN 301489-52, EN 300328, EN 301511, EN 301893, EN 301908-1, EN 301908-2, EN 301908-13, EN 303413

### Ordering options

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