

NB1810 Industrial Router

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Product Information NB1810
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High-Performance Wireless Router with LTE Advanced, WLAN, Gigabit Ethernet Switch with PoE+, Fiber and GNSS



Key Features

Mobile / Cellular	1 - 2x LTE Advanced, UMTS
SIM	2x Micro SIM
WiFi / WLAN	1 - 2x Dual-band IEEE 802.11ac (Wi-Fi 5)
Ethernet	4x Gigabit Ethernet with PoE 1x SFP/Gigabit Ethernet Combo 1x Gigabit Ethernet
Extended Storage	1x SD Card
Serial / Fieldbus	1x RS-232/485
Positioning	Multi-GNSS
Temperature	-40 °C to +70 °C
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, free updates
Compliance	CE (RED)
Modularity	Extensions on request

Product Description

The NB1810 is a powerful and robust cellular router designed for use in industrial environments. With its approvals, versatile features and performance, it is the ideal device for applications such as Industrial Security, CCTV or Smart Grid.

DIN rail mounting, the wide operating temperature range and the IP40 metal housing allow reliable operation under harsh conditions.

The router is equipped with multiple LTE Advanced module and WiFi IEEE 802.11ac (Wi-Fi 5) modules. It also has a Gigabit Ethernet port and an SFP/GbE combo port, which can be used for fiber or Ethernet, an USB host port and a serial interface with RS-232 or RS-485 mode. The special highlight is the integrated 4-port Gigabit Ethernet switch with PoE+.

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

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)

300 Mbps 2.4 GHz, 866 Mbps 5 GHz

Modes

Client or Access Point (max. 100
Clients)

Connector

2 - 4x SMA female

6x Ethernet

1x Gigabit Ethernet,
1x SFP / GbE combo
4x Gigabit Ethernet Switch optional
with PoE+

Standard

1000Base-T, Auto MDIX

Connector

6x RJ45
1x SFP Cage (mini GBIC)

1x USB

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

TX, RX / A, B

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

Power Supply Standard

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

Power Consumption

7 W average, 25 W maximal

Power Supply with PoE+

Nominal Input Voltages
48 VDC (-10 % / +10 %)

Power Consumption

82 W average, 90 W maximal

Connector

1x Terminal block header 3.5 mm (screw
locking)

Other

Mounting

DIN-Rail

Dimensions

Width 95 mm x height 128/140 mm x
depth 121 mm

Weight

ca. 1100 g

Environment

Operating Temperature

-40 °C to +70 °C without PoE+
-40 °C to +50 °C with PoE+

Ingress Protection Level

IP40

MTBF

180'000 h / 20.5 years - 220'000 h
/ 25.1 years (depending on product
variant), 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

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models, options or project specific
adaptations