

Netmodule NB3800-UN Series

4G, 5G Railway Router with Unwired Cloud OS

High-Performance Wireless Router with 4G (CAT12) / 5G, WiFi 5, Ethernet, GNSS, SSD Storage and EN 50155. Netmodule NB3800-UN Series include NB3800-UN and NB3850-UN.

NB3800-UN with Unwired Cloud OS is a high-speed and ruggedized cellular router designed for rail environments. Its rail industry approvals, versatility, security features and performance make it ideal for applications such as Passenger WiFi, vehicle communication gateway, remote management and edge computing.

Unwired Cloud OS allows for zero-touch cloud management automatic software updates, deployment of multiple

local networks, uplink aggregation, secure remote access and virtualization of Linux containers.

Hardware features include multiple 4G/5G modules, up to two WiFi modules, GNSS for positioning, 2 Gigabit, 3 Fast Ethernet ports and up to 1 TB internal storage.

The router is compliant with the mandatory requirements of EN 50155 and EN 45545. Communication interfaces include hardened connectors, including M12 for Ethernet, as well as TNC connectors for antenna connections.



NB3800-UN Railway Router with Unwired Cloud OS

Key Features:

- ✓ Passenger WiFi, Passenger Entertainment and Information
- ✓ Vehicle Communication Gateway
- ✓ Device Management and Telemetry
- ✓ Edge Computing
- ✓ Reliable Connections
- ✓ Remote Management

Mobile/Cellular	1 - 4x 4G, 1 - 2x 5G, UMTS, GSM
SIM	4x Mini SIM
WiFi/WLAN	WiFi 5
Ethernet	2x Gigabit Ethernet 3x Fast Ethernet
Extended Storage	Up to 1 TB SSD
Positioning	Multi-GNSS
Temperature	-40°C to +70°C
Software	Unwired Cloud OS
Compliance	CE (RED), Railway (EN50155, EN45545)

Specifications

1 - 4x 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 Mbps / UL 50 Mbps

Region

EMEA

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 Mbps / UL 50 Mbps

Region

EMEA

Connector

2 - 8x TNC female

SIM

4x Mini SIM - 2FF

1 - 2x WiFi / WLAN (optional)

Standard

IEEE 802.11a/b/g/n/ac

Dual-band 2.4/5 GHz

2x2 MIMO

Bit rate (max)

300 Mbps 2.4 GHz, 866 Mbps 5 GHz

Modes

Access Point (max. 100 Clients)

Connector

2 - 4x TNC female

5x Ethernet

2x Gigabit Ethernet

3x Fast Ethernet

Standard

1000Base-TX, Auto MDIX

100Base-TX, Auto MDIX

Connector

2x M12 X-coded female

3x M12 D-coded female

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 TNC female

1-2x Module Options

Options

2-wire diagnosis

Connector

1x M12 A-coded female

System

Core

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

Extended Storage

Up to 1 TB SSD

Power

Input voltages

24, 36, 48 VDC (-30 % / +30 %)

OR

72, 96, 110 VDC (-30 % / +30 %)

Maximal Power Consumption

25 W

Standard

EN 50155 class S2 / C1

Connector

1x M12 A-coded male

Other

Mounting

Brackets (wall mounting)

Dimensions

Width 167/190 mm x height 121.1
mm x depth 106.5 mm

Weight

ca. 1900 g

Environment

Operating Temperature

(depending on model)

-40 °C to +70 °C

EN 50155 class OT4/ST0

Ingress Protection Level

IP40

Software

Unwired Cloud OS (licence included)

Features (require Unwired Edge Cloud
subscription):

Cloud Device- and Network Manage-
ment, Passenger WiFi with Passen-
ger Information and Entertainment,
Uplink Aggregation, Remote Access,
Virtualization, Monitoring and Tele-
metrie, Integration via API

Certifications

Compliance

CE according to 2014/53/EU (RED),
2011/65/EU (RoHS)

Railway according to EN 50155,
EN 45545-2

Vehicle according to UN ECE R10,
UN ECE R118 (on request)

Standards

EN 300328, EN 300440, EN 301489-
1, EN 301489-17, EN 301511, EN
301893, EN 55032, EN 61000-6-2,
EN 61000-6-3, EN 50121-3-2,
EBA EMV 06, EN 62311, EN 62368-1,
EN 45545-2, EN 50155, EN 301908-1,
EN 300413, EN 301489-3, EN
301489-52, EN 301908-2, EN
301908-13, UN ECE R118

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