**Product Description**

The NB3701 is the compact communication gateway for railway and other applications where similarly high demands are placed on the hardware. It comes with several LTE modules, a WiFi access point, digital inputs and outputs and 5 Fast Ethernet ports. Its small form factor paired with its performance and features make it the ideal device for applications such as Passenger Infotainment, CCTV and Mining.

The router is compliant with the mandatory requirements of EN 50155 and EN 45545-2. Communications interfaces include hardened connectors, including M12 for Ethernet, as well as TNC connectors for antenna connections.

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

**Key Features**

<table>
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<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Mobile / Cellular</td>
<td>1 - 2x LTE, UMTS, GSM</td>
</tr>
<tr>
<td>SIM</td>
<td>2x Mini SIM</td>
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<tr>
<td>WiFi / WLAN</td>
<td>1 - 2x Dual-band IEEE 802.11ac</td>
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<tr>
<td>Ethernet</td>
<td>5x Fast Ethernet</td>
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<tr>
<td>I/O</td>
<td>4x Digital I/O</td>
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<tr>
<td>Positioning</td>
<td>Multi-GNSS</td>
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<tr>
<td>Temperature</td>
<td>-40°C to +70 °C</td>
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<td>Software</td>
<td>Routing, Network Services, VPN, Firewall, Link Management, Supervisor, LXC, SDK, free updates</td>
</tr>
<tr>
<td>Compliance</td>
<td>CE (RED), Railway (EN 50155, EN 45545-2)</td>
</tr>
<tr>
<td>Modularity</td>
<td>Extensions on request</td>
</tr>
</tbody>
</table>

**Applications**

- Passenger WiFi
- Passenger Infotainment
- CCTV
- Mining
- Fleet Management
## 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 Mbps / UL 50 Mbps

**Voice**
- CSFB

**Region**
- EMEA (APAC or NA on request)

**Connector**
- 2 - 4x TNC female

**SIM**
- 2x 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**
- Client or Access Point (max. 100 Clients)

**Connector**
- 2 - 4x TNC female

**5x Ethernet**

**Standard**
- 100Base-TX, Auto MDIX

**Speed**
- 10 / 100 Mbps

**Connector**
- 5x M12 D-coded female

**1x USB**
- USB 2.0 Host Port

**Connector**
- 1x Type A

### Positioning (optional)

**GNSS Receiver**
- BeiDou, Galileo, GLONASS, GPS/QZSS

**Sensitivity**
- Up to -167 dBm, up to 2.5m CEP

**Antennas**
- Active or passive

**Connector**
- 1x TNC female

### 4x IOs

**2x Digital In**
- Level 0 (0-5 VDC), level 1 (7.2-40 VDC), isolation 1500 VDC

**2x Digital Out**
- 0-60 VDC/1A, isolation 1500 VDC

**Connector**
- 1x M12 A-coded female

### 1x Serial, Fieldbus (instead of IOs)

**RS-232**

**Connector**
- 1x M12 A-coded female

### System

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

### Power

**Input voltages**
- 24, 36, 48 VDC (-30 % / +30 %)
  - OR
- 72, 96, 110 VDC (-30 % / +30 %)

**Maximal Power Consumption**
- 15 W

**Standard**
- EN 50155 class S2 / C1

**Connector**
- 1x M12 A-coded male

### Other

**Mounting**
- Bracket

**Dimensions**
- Width 165/190 mm x height 85 mm x depth 104 mm

**Weight**
- ca. 1400 g

**Environment**

**Operating Temperature (depending on model)**
- -40 °C to +70 °C
- EN 50155 class OT4/ST0

**Ingress Protection Level**
- IP40

### Software

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

**Licenses (optional)**
- Voice Gateway, OpenVPN- and DynDNS Server, GNSS, LXC Virtualization, Enhanced RF Configuration

### Certifications

**Compliance**
- CE according to 2014/53/EU (RED), 2011/65/EU (RoHS), Railway according to EN 50155, EN 45545-2

**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, EN 303413

### Ordering options

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