

# NB2700 CompactVehicle

E-Mark Certified 3G/4G Router with WiFi  
802.11abgn and GPS



**The NB2700 CompactVehicle provides wireless Internet access over 3G/4G on board. The compact device integrates a WiFi access point and further interfaces for various application like remote access, data acquisition and passenger information.**

Thanks to its functional and robust design, the usability in a temperature range from -25 °C to +70 °C and its E1 automotive certification, the NB2700 is excellently suited for use in buses and other road vehicles.

The NB2700 enables wireless access to the Internet by use of an LTE or UMTS module. Depending on the network coverage, the router switches seamlessly between LTE, UMTS, or GSM using of the Mobile IP protocol. The router can manage up to two SIM cards, which assure a high availability in network connections from different providers. To enable WiFi for passengers, an WiFi access point according to standard IEEE 802.11 a/b/g/n is integrated and also a 5 port Ethernet switch is part of the equipment. The RS-232 serial interface can act as serial device server or system console. Furthermore, the serial line can be assigned to the SDK and be controlled from there. The NB2700 comes also with two isolated binary inputs and two relay outputs for direct connection of sensors and actuators. The logic for the inputs/ outputs is implemented by the user in the SDK environment on the router. The USB port enables configuration and firmware update from memory stick. You may also configure it as a device server. Please ask for support of your special USB device.

The router firmware supports common VPN technologies such as IPsec and OpenVPN in both, server and client mode. Simplified handling of a Public Key Infrastructure lets the user securely connect two NB2700 through a VPN tunnel without knowledge about cryptography.

## Typical Applications

- Remote access
- Data acquisition
- Passenger information systems
- Passenger WiFi
- Infotainment, digital signage
- Electronic payment

## Key Features

- Automotive E1-Mark
- LTE/UMTS modem
- WiFi AP/client
- 5 port Ethernet switch
- Digital I/Os
- OpenVPN, IPsec, QoS
- Options: SIP/GSM gateway, MobileIP

## Specifications

Mobile / Cellular	Multimode LTE, UMTS and GSM module LTE/4G FDD Bands: B1(2100), B2(1900), B3(1800), B5(850), B7(2600), B8(900), B20(800) DC-HSPA+/UMTS/3G: B5(850), B8(900), B2(1900), B1(2100) GSM/2G: B5(850), B9(900), B3(1800), B2(1900) Data rates: LTE max. 100 Mbps downlink / 50 Mbps uplink (DC-HSPA+ 42/5.76) - or - Multimode UMTS and GSM module UMTS/3G: B5(850), B8(900), B2(1900), B1(2100) GSM/2G: B5(850), B9(900), B3(1800), B2(1900) Data rates: max. 14.4 Mbps downlink / 5.76 Mbps uplink Antenna connector: 2x SMA female SIM slots: 2 Mini-SIM ISO/IEC 7810:2003, ID-000
WLAN / WiFi	IEEE 802.11abgn up to 300 Mbps 2.4/5GHz MIMO Access Point or Client Max users in access point mode: WPA: 54, WPA2: 110 Antenna connector: SMA female, supporting one or two antennas
Ethernet	5 port Ethernet switch, 10/100 Mbps, auto MDX - Connector type: RJ45
GPS	GPS receiver with NMEA 0183 data stream, tracking sensitivity -154 dBm (typical) Antenna connector: SMA female, support for active and passive antennas
USB	USB 2.0 Host, connector type: USB A
Serial	Protocol: RS-232 3-wire - Connector type: 3 pins of the 13-pin terminal block
Digital I/O	2 digital inputs, level 0 (not set): 0-4.0 VDC level 1 (set): 7.2-40 VDC 2 digital outputs, 0-60 VDC/1A, maximum switching capacity: 60 W Connector: 8 pins of the 13-pin terminal block
Dimensions, weight	Width 165/190mm x height 104mm x depth 40mm, approx. 600g
Power	Input voltage: 12V DC to 48V DC (- 25% /+ 20%; eff. 9-57,6V), max. power consumption: 6W
Environment	Temperature range: -25 °C to +70°C IP40 with SIM and USB covers mounted; MTBF 131'000h
EMC standards	EN55022:2010, EN 61000-6-3: 2007+A1:2012, EN 50121-3-2: 2006+AC:2008 (Emission) EN55024:2010, EN 50121-3-2: 2006+AC:2008 (Immunity)
Safety standards	EN60950-1:2006+A11:2009+A1:2010+A12:2011
Type Approvals	CE according to directive 1995/5/EC (R&TTE) E1 according to Regulation No. 10 FCC according to 47 CFR, Part 15
Order numbers NB2700-U NB2700-U-G NB2700-UW-G Nb2700-L-G NB2700-LW-G	(contact sales for more models, options or project specific adaptations) UMTS Router UMTS Router + GPS UMTS, WLAN Router + GPS LTE Router + GPS LTE, WLAN Router + GPS