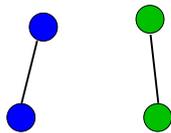# Wireless 868 MHz USB Adapter with SMA connector
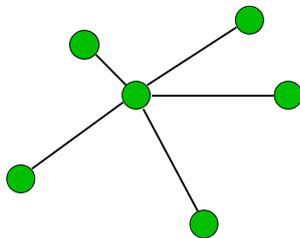
Key Features

- USB Stick based on radio module AMB8626 with SMA connector for an external antenna
- Range up to 2000 m
- Communication via virtual COM port
- Integrated software stack with comprehensive range of functions
- Flexible addressing and network topologies with up to 255 nodes in 255 networks
- Configurable data rates and RF channels
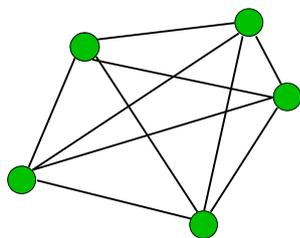- In compliance with EU RED 2014/53/EU

Network Topologies

Point-to-point

Point-to-Multipoint

Peer-to-Peer

Description

The AMB8665 is based on the radio module AMB8626 for easy connection to the PC via the USB interface. In combination with the relevant radio technology in the end device, this solution enables quick and simple realisation of PC supported radio networks and can be used for data collection or control tasks.

The integrated radio module AMB8425 enables wireless half-duplex transmission of data. The integrated microprocessor controls data communication, handling of packet and checksum formation, addressing, monitoring of channel access and resending unacknowledged packets. The host system does not have to perform any radio-specific tasks.

The USB stick offers numerous configuration possibilities e.g. data transfer with fast channel and address switching. Due to the measured field strength, the RSSI value, it is possible to assess the quality of the radio link.
The graphical user interface of the free windows application "AMBER-ACC" allows easy configuration of the operating parameters.

Combined with a suitable antenna it is possible to reach ranges about 800 m. It is also possible to operate the USB-stick in a shielded environment (e.g. a steel cabinet), by using the AMB1982, by means of which it is possible to lead the antenna to the outside via cable.

Interfaces

The device is connected either via a virtual COM port or directly via USB using the corresponding software API. The USB controller (FTDI FT232R) supports USB 2.0 (full speed).

Supported operating systems

The drivers required for the virtual COM port are available for Windows, MAC and Linux systems on http://www.ftdichip.com.

Scope of Application

Data collection, monitoring, remote control and sensor networks. The device is suitable to operate in dry rooms.

Specifications

Performance	Range*	up to 2000 m
	RF data rate	up to 100 kbps
Radio Technology	Addressing	up to 255 nodes in 255 networks
	Frequency range	868.0 – 870.0 MHz
	Channel spacing	50 kHz
	Modulation type	2-FSK, MSK
	Supported topologies	Point-to-Point, Point-to-Multipoint, Peer-to-Peer
General	Temperature range	-30 °C … + 85 °C

* Range stated is calculated assuming line-of-sight. Actual range will vary based upon specific board integration, antenna selection, and environment.

Compatible Products

The following products can be used together with the AMB8665 USB stick for setting up networks for wireless data transmissions in the 868 MHz band.

- **AMB8626**

Related Products

The products listed here can be configured to be compatible on rf and interface layer so a communication with the AMB8665 is possible.
- **AMB8420**
- **AMB8426**

Accessories

USB Stick with AMB1981 antenna *
*: The USB stick AMB8665 complies with the R&TTE directive when utilizing the antenna AMB1981

Ordering Information

Item no.	Description
AMB8665	Wireless 868 MHz USB stick/adapter with SMA-connector
AMB1981	SMA antenna with swivel base
AMB8665-K	Set comprising of AMB8665 and AMB1981

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