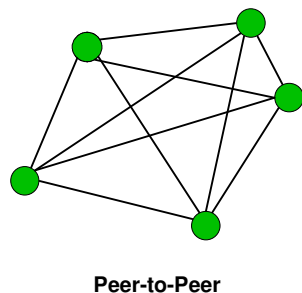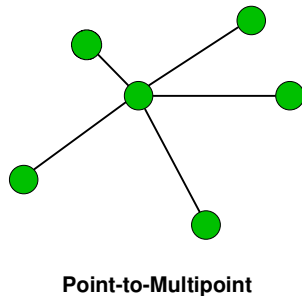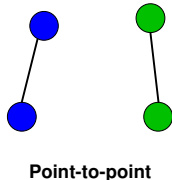**AMBER WIRELESS**

Wireless 2.4 GHz USB Stick
for radio data applications

Key Features

- USB version of the OEM radio module AMB2520

- Range* up to 100 m

- Communication via a 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 rate and transfer channel

Network Topologies

Point-to-point

Point-to-Multipoint

Peer-to-Peer

Description

The AMB2560 is a variation of the low cost radio module AMB2520 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 example, for data collection or control tasks.

The integrated radio module AMB2520 enables a wireless half-duplex transmission of data. The integrated microprocessor controls all radio communication and handles packet and checks on formation, addressing, monitoring of channel access and also the resending of unacknowledged packets.

The USB stick offers numerous configuration possibilities and data transfer with fast channel and address switching is also supported. It is also possible to assess the quality of the radio link using the measured field strength (RSSI value).

The graphical user interface of the free windows application „AMBER-ACC" allows easy configuration of the operating parameters.

The AMB4460 and AMB8460 modules are available for both the 433 MHz and 868 MHz frequency ranges.

Interfaces

The device is connected either via a virtual COM port or directly via USB using the corresponding software API. The USB controller (Silabs CP2102) supports USB 2.0 (full speed).

Supported operating systems

The drivers required for the virtual COM port are available for Windows, MAC and Linux at www.silabs.com

Scope of Application

Data collection, monitoring, remote control and sensor networks.

Specifications

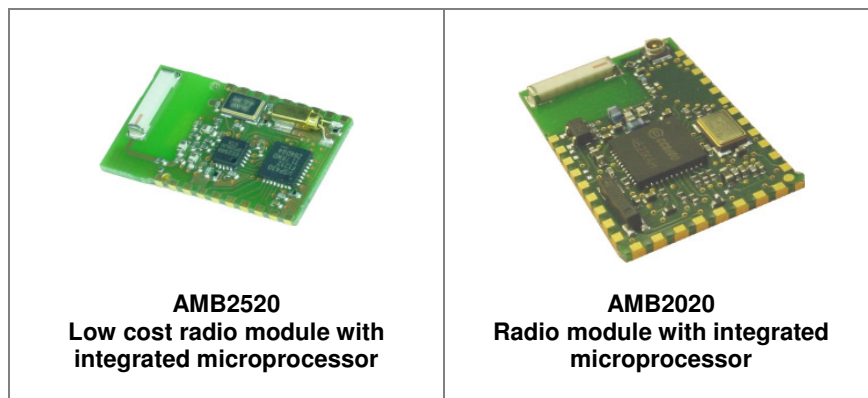| Performance	Range*	up to 100 m
	RF data rate	up to 500 kbps
Radio Technology	Addressing	up to 255 nodes in 255 networks
	Frequency range	2400 – 2483,5 MHz
	Channel spacing	500 kHz
	Modulation type	2-FSK, MSK
	Supported topologies	Point-to-Point, Point-to-Multipoint, Peer-to-Peer

* 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 AMB2560 USB stick for setting up networks for wireless data transmissions in the 2.4 GHz ISM band easily.

AMB2520
Low cost radio module with integrated microprocessor

AMB2020
Radio module with integrated microprocessor

Related Products

- **AMB4420** (433 MHz) / **AMB8420** (868 MHz) short range radio module
- **AMB4400** (433 MHz) / **AMB8400** (868 MHz) / **AMB2500** (2.4 GHz) RF transceiver without microprocessor

Evaluation Kit

- **AMB2520-EV** Evaluation Kit

Ordering Information

Item no.	Description
AMB2560	Wireless 2.4 GHz USB stick based on the AMB2520

Contact

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