



deRFusb

compact USB radio stick

IEEE 802.15.4 | sub GHz | 2.4 GHz

Applications

- ZigBee: network coordinator | gateway | commissioning device
- 6LoWPAN: coordinator, border router
- network surveillance
- Data sink for proprietary protocols
- as sniffer | analyzer

- smart metering
- building automation
- industrial automation
- personal sensors | health care
- logistics | transportation

Compact USB radio sticks deRFusb

The new generation of USB radio sticks from dresden elektronik are based on the powerful Cortex-M3 architecture and replace the existing deRFusb line. With 256 kByte flash, 64 kByte RAM and the 2.4 GHz band transceiver AT86RF231 the new Cortex-M3 microcontroller stands out with an enhanced, developer friendly handling and improved performance.

The USB radio sticks simplify the connection of a PC with an IEEE 802.15.4 based wireless sensor network. The stick can represent a virtual serial interface on the PC giving your PC direct access to the network. Individual nodes can now be easily activated, parameterized and the complete network communication coordinated. The USB radio sticks are fitted for the use in ZigBee and 6LoWPAN networks as well as RF4CE or proprietary IEEE 802.15.4 applications.



There are two basic versions available, either with or without integrated memory stick. With a storage capacity of 2 GB all required driver, documentation and application data can be delivered right on the stick so the customer can use it right away. Depending on the selected features the compact radio module with USB interface can be used for software development, network analysis, or directly in applications as network coordinator, gateway, or commissioning device.

The following versions of the deRFusb are available:

- for software development with JTAG
- for implementation with housing, without JTAG
- for network analysis with firmware for Perytons Network Analyzer



Analyzer tool for multi-channel monitoring of wireless networks (in cooperation with Perytons)

The analyzer version of the stick is part of the deRFdevelopmentKits 6LoWPAN and ZigBee.

From one to seventeen sticks of the sniffer version can be connected to a PC resulting in a one-to-16 channel sniffer using the professional analyzer software from Perytons. This analyzer is specifically made for protocol analysis in IEEE 802.15.4 networks and has plug ins for Zigbee, 6LoWPAN and RF4CE desection. You can get a 30-day test license for the Perytons software. During this time the software can be used without limitations.

These packages provide a complete implementation of the IEEE 802.15.4 MAC in source code, giving the developer a sophisticated and powerful framework to create own network applications with ZigBee or 6LoWPAN. With these packages, the customer gets a lot of sample applications covering typical 802.15.4 features from simple point-to-point-connections up to sensor network examples with tree routing and even beacon-enabled networks.



Key Features

- 23 x 71 x 8.7 mm
- powerful 32-Bit ARM Cortex-M3 MCU
- USB radio and memory stick
- IEEE 802.15.4 transceiver with up to 2 MBit/s data rate @ 2.4 GHz and up to 1 Mbit/s @ sub GHz
- with chip ceramic antenna
- debugging und trace via JTAG/trace interface possible
- FCC, IC, ETSI compliant

Benefits

- compact USB radio stick for any 802.15.4 applications at sub GHz and 2.4 GHz
- perfect as gateway between wireless and wired data transfer
- with onboard mass storage for manuals, drivers, documentation and applications
- Delivered with matching case for direct integration in customer application
- Customized solutions for larger quantities

Contact

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