USB radio stick deRFusb
13E00 | 13E06
Datasheet

dresden elektronik

- The compact designed USB radio stick deRFusb-13E00 contains a powerful Cortex-M3 microcontroller with 256 Kb High-Speed Flash and a sub-GHz ISM band transceiver.

- The transceiver AT86RF212 is intended for ZigBee, IEEE 802.15.4, 6LoWPAN, RF4CE and proprietary ISM applications. It uses a 128-Bit AES encryption.

- With the integrated chip antenna distances of more than 100 m can be reached for line of sight conditions.

- The radio stick is equipped with 3 LEDs for status indication.

- The stick comes optionally with a 2 Gb NAND on board that can be used as mass storage for user defined data.
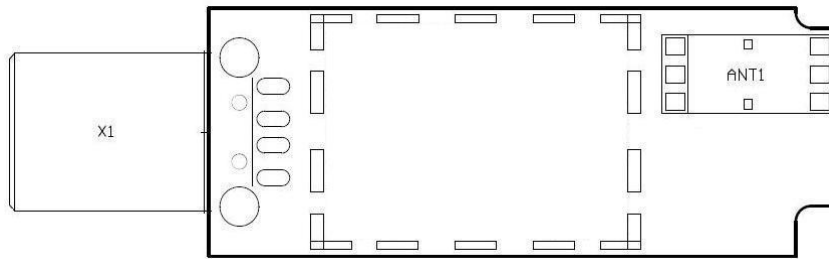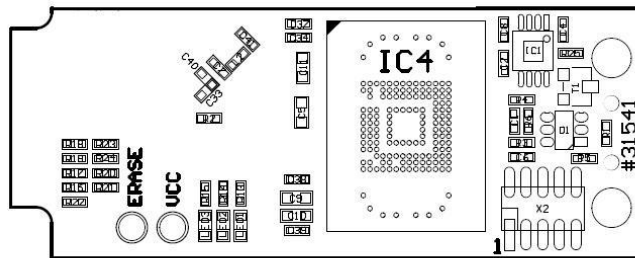
Technical Data

Dimensions	71.0 x 23.0 x 8.7 mm (case)
Operating temperature	-20°C to 70°C
Control and display elements	3x LED (red, yellow, green)
Power supply	USB powered
Power consumption	TX: 65 mA | RX: 64 mA | Idle: 45 mA
Connections	USB connector type A
Antenna	Chip ceramic antenna
Antenna gain	-0.7 dBi (peak) | -2.6 dBi (average)
Antenna diversity	No
Range	>100 m (line of sight)
Frequency range	868 MHz, 915 MHz
Transmitting power	up to +9 dBm @ 915 MHz up to +5 dBm @ 868 MHz
Receiver sensitivity	Max. -106 dBm @ 868 MHz Max. -104 dBm @ 915 MHZ
Communication standard	IEEE 802.15.4
Data rate	20/100/200/400 kBit/s @ 868 MHz 40/250/500/1000 kBit/s @ 915 MHz
Microcontroller	ATSAM3S4B
Transceiver	AT86RF212
Additional non-volatile memory	None (deRFusb-13E00) 2 Gb NAND flash (deRFusb-13E06)
Interfaces	USB, optional: JTAG and Debug
Certification	CE, ETSI, FCC pending

Technical Data

Board Overlay

(Top view)

(Bottom view – with 10 pin connector and NAND flash)

Scope of delivery	Order No.
USB stick deRFusb-13E00 (with case)	BN-031807
USB stick deRFusb-13E06 (with case and NAND)	BN-031539

Accessories (optional)

SAM-ICE adapter	BN-028337

Board versions

USB stick deRFusb-13E00 JTAG (with 10pin connector)	BN-033206
USB stick deRFusb-13E06 JTAG (with 10pin and NAND)	BN-033207
USB stick deRFusb-23E00 JTAG (with 10pin connector)	BN-033202
USB stick deRFusb-23E06 JTAG (with 10pin and NAND)	BN-033203
USB stick deRFusb-23E00 (with case)	BN-031805
USB stick deRFusb-23E06 (with case and NAND)	BN-031075
Analyzer stick BitCatcher sub-GHz	BN-600035
Analyzer stick BitCatcher 2.4 GHz	BN-600034
Analyzer stick Perytons 2.4 GHz	BN-028636

More information about the variants is described in detail in the user manual.

Order online: https://shop.dresden-elektronik.de