USB radio stick deRFusb 23E00 | 23E06

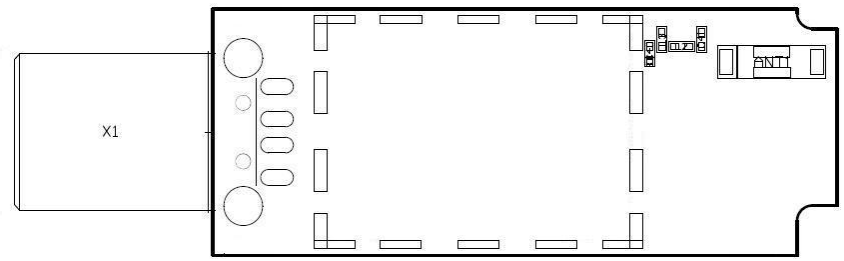
Datasheet

- The compact designed USB radio sticks deRFusb-23E00 | 06 contain a powerful Cortex-M3 microcontroller with 256 Kb High-Speed Flash and a 2.4 GHz ISM band transceiver.
- The transceiver AT86RF231 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 200 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.

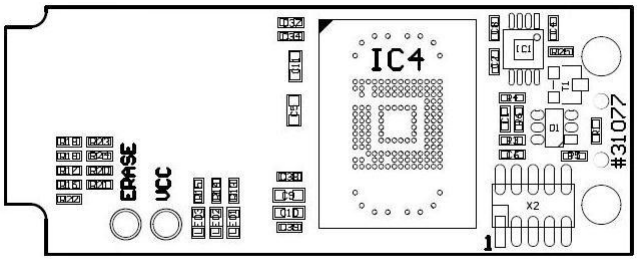
Technical Data

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	+1.3 dBi (peak) | -0.5 dBi (average)
Antenna diversity	No
Range	> 200 m (line of sight)
Frequency range	2.4 GHz
Transmitting power	+3 dBm
Receiver sensitivity	-101 dBm
Communication standard	IEEE 802.15.4
Data rate	250 kBit/s, 500 kBit/s, 1 MBit/s, 2 MBit/s
Microcontroller	ATSAM3S4B
Transceiver	AT86RF231
Additional non-volatile memory	None (deRFusb-23E00) 2 Gb NAND flash (deRFusb-23E06)
Interfaces	USB, optional: JTAG and Debug
Certification	CE, ETSI, FCC, IC pending

Board Overlay



(Top view)



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

Overlay

Scope of delivery

	Order No.
USB stick deRFusb-23E00 (with case)	BN-031805
USB stick deRFusb-23E06 (with case and NAND)	BN-031075

Accessories (optional)

SAM-ICE adapter	BN-028337

Order Information

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-13E00 (with case)	BN-031807
USB stick deRFusb-13E06 (with case and NAND)	BN-031539
USB stick deRFusb-23E00 JTAG (with 10pin connector)	BN-033202
USB stick deRFusb-23E06 JTAG (with 10pin and NAND)	BN-033203
Analyzer stick BitCatcher sub-GHz	BN-600035
Analyzer stick BitCatcher 2.4 GHz	BN-600034
Analyzer stick Perytons 2.4 GHz	BN-028636

Variants

More information about the variants is described in detail in the user manual.
Order online: https://shop.dresden-elektronik.de

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