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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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# 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.

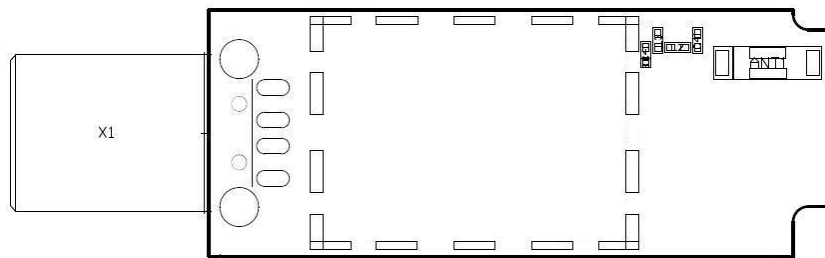


### Technical Data

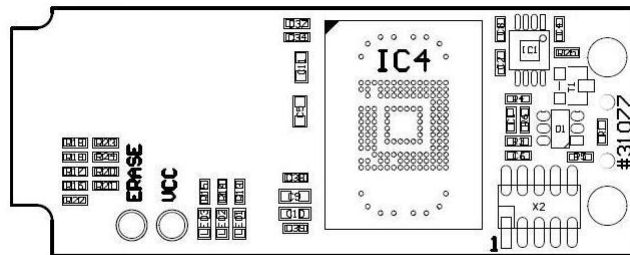
<b>Dimensions</b>	71.0 x 23.0 x 8.7 mm (case)
<b>Operating temperature</b>	-20°C to 70°C
<b>Control and display elements</b>	3x LED (red, yellow, green)
<b>Power supply</b>	USB powered
<b>Power consumption</b>	TX: 65 mA   RX: 64 mA   Idle: 45 mA
<b>Connections</b>	USB connector type A
<b>Antenna</b>	Chip ceramic antenna
<b>Antenna gain</b>	+1.3 dBi (peak)   -0.5 dBi (average)
<b>Antenna diversity</b>	No
<b>Range</b>	> 200 m (line of sight)
<b>Frequency range</b>	2.4 GHz
<b>Transmitting power</b>	+3 dBm
<b>Receiver sensitivity</b>	-101 dBm
<b>Communication standard</b>	IEEE 802.15.4
<b>Data rate</b>	250 kBit/s, 500 kBit/s, 1 MBit/s, 2 MBit/s
<b>Microcontroller</b>	ATSAM3S4B
<b>Transceiver</b>	AT86RF231
<b>Additional non-volatile memory</b>	None (deRFusb-23E00) 2 Gb NAND flash (deRFusb-23E06)
<b>Interfaces</b>	USB, optional: JTAG and Debug
<b>Certification</b>	CE, ETSI, FCC, IC pending

### Technical Data

**Board Overlay**



(Top view)



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

**Overlay**

**Scope of delivery**

USB stick deRFusb-23E00 (with case)  
 USB stick deRFusb-23E06 (with case and NAND)

**Order No.**

BN-031805  
 BN-031075

**Order Information**

**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-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>

**Contact**