![bitcraze logo]

Crazyradio 2.0
SKU: 114993067

Crazyradio 2.0 is a long range open USB radio dongle based on the nRF52840 from Nordic Semiconductor, featuring a 20dBm power amplifier and LNA.

1. Introduction

The Crazyradio 2.0 is not only for usage together with the Crazyflie family of devices, since it's an open project with open firmware and a Python API, it's a great building block for systems that require more predictable latency compared to WiFi and doesn't have the same requirements for bandwidth. The hardware comes with a bootloader that enables firmware upgrades via USB without any additional hardware needed.

The Crazyradio 2.0 is compatible with the Crazyflie eco system.

2. Features

- Radio power amplifier giving 20dBm output power
- Open source firmware
- Firmware upgrade via USB
- Low latency

3. Electrical specification

- Based on the nRF52840 chip from Nordic Semiconductor
  - Cortex-M4F processor at 64MHz with 1MB of flash and 256Kb of RAM
  - 2.4GHz ISM band radio
  - USB device peripheral
  - 100 radio channels
  - 1 Mbps, 2Mbps and long range (125kbps and 500kbps mode) Bluetooth® low energy modes
  - 250kbps IEEE 802.15.4 mode
  - 1Mbps and 2Mbps Nordic proprietary modes
- Extra signals available via soldering pads enabling custom expansions
  - 3 I/Os
  - GND
  - 3.15V out
  - 5V in
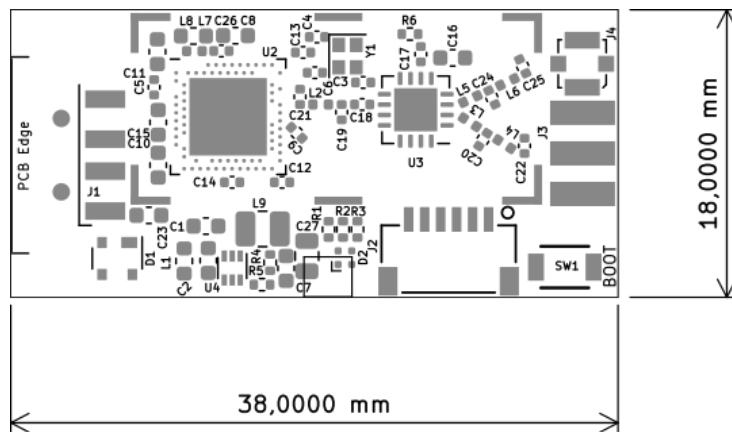- Standard USB-A connector
- Programming connector

4. Radio specification

- 20dBm output power (100mW)
- Low Noise Amplifier (LNA)
- RP-SMA connector

5. Mechanical specifications

- Weight: 7g
- Size (WxHxD): 63x18x8mm (including connectors)

6. Mechanical drawing

7. Package contents

- 1 x Crazyradio 2.0
- 1 x Duck antenna 2dBi

8. Errata

9. Hardware revisions

Revision	Comment
E	Initial release

10. History

Version	Comment	Date
1	Initial release	2023-01-31