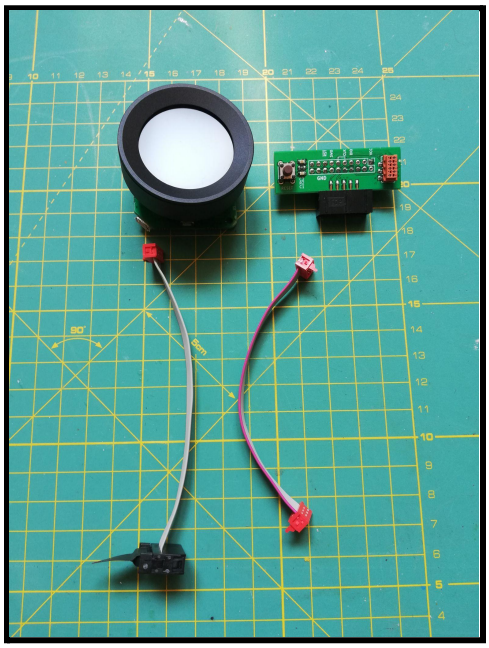
Rotary Encoder with Display

Key Features

- 1.28" TFT 240x240 round display, 400cd/m2
- STM32L433 ultra low power Arm Cortex-M4 MCU 80 MHz, 256 Kbytes of Flash
- Alps Alpine 15 Pulses / 30 Detent encoder
- NOR Flash 128 Mbits
- LDO 3V 400 mA
- 3V to 5V power supply
- 5V tolerant IO
- USB, CAN, I2C, GPIO
- Aluminum or 3D printed body
- Open source
- Open hardware
- Can be programmed with STM32CubeIDE or Arduino IDE
- Hackable and repairable, created with open source tools.

Rotary Encoder with Display

Items

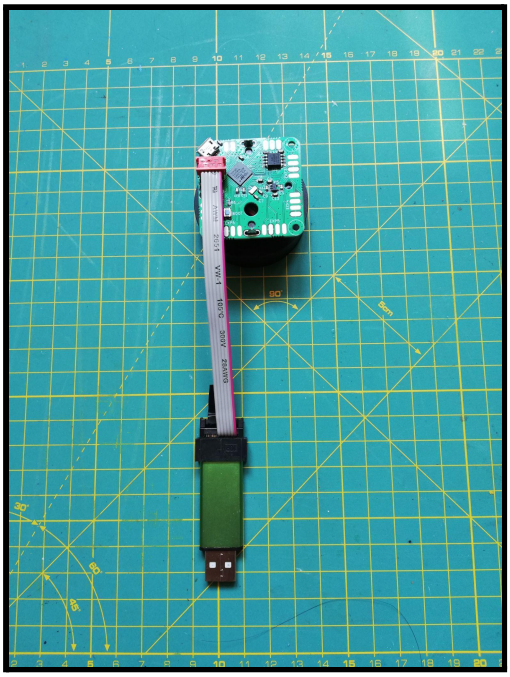


1. Rotary encoder
2. Adaptor board for ST-LINK/V2
3. Cable for adaptor board
4. Cable for ST-LINK clone debugger

NOTE: All cable connectors are keyed, so there is one correct way to plug them in. Notice the orientation of the debug board onto the ST-LINK.V2.

Possible applications:

- Home automation
- USB HID device
- Lock
- Timer
- HVAC UI
- Audio device UI



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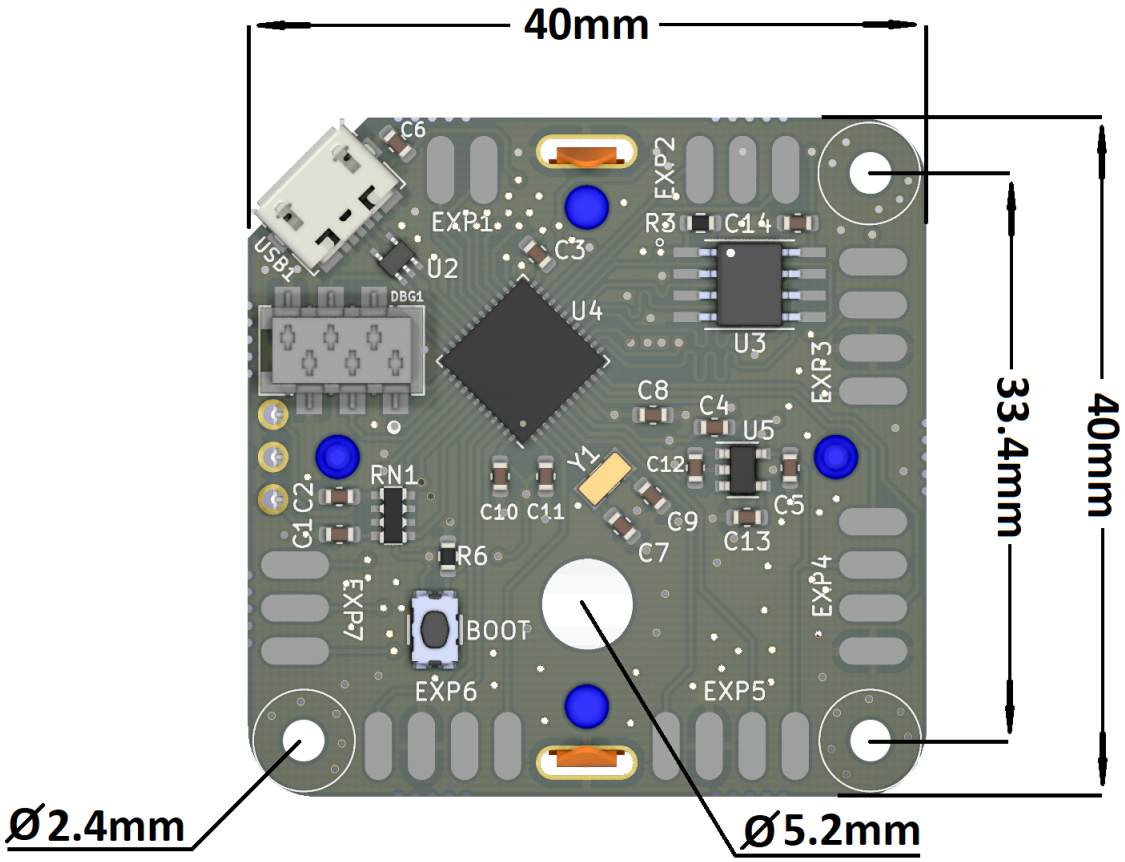
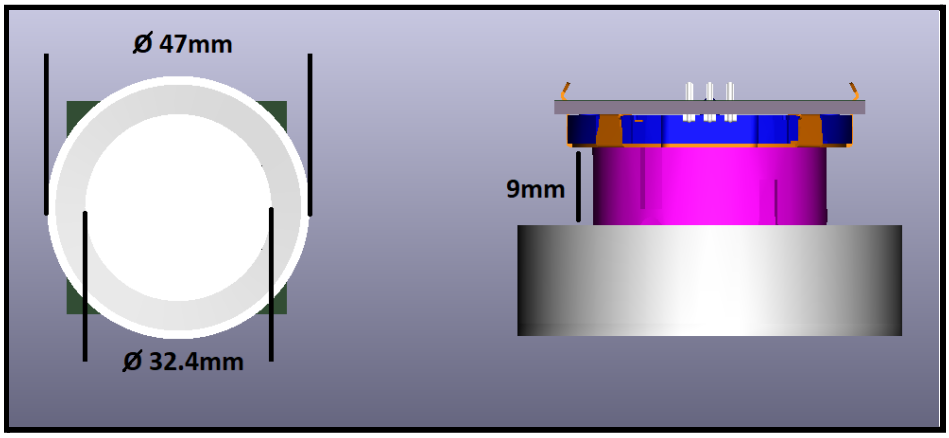
Physical dimensions





CAD models are available for the whole assembly as they are available separately for every part. The body of the encoder is available so users can 3D print their own style of knob.

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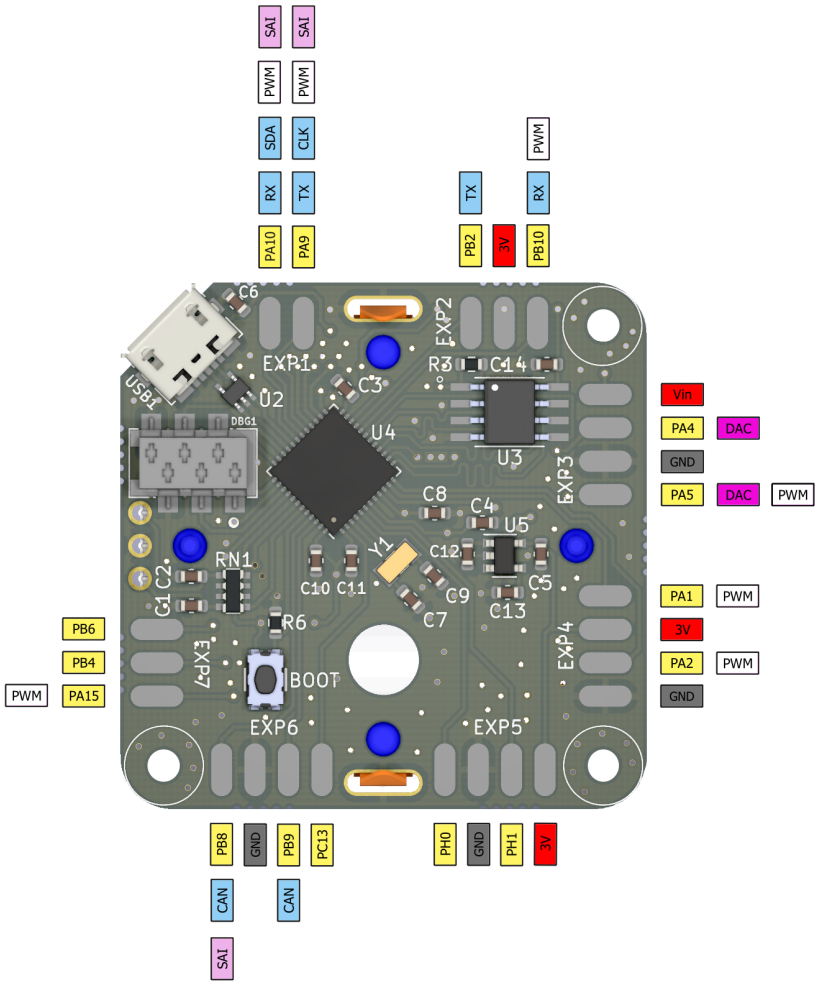
Pins available to user



Summary

- USB
- Up to 16 GPIOs
- CAN
- 2 x UARTS
- 1 x I2C
- 7 PWM channels
- SAI
- 2 x DAC

- Vin pin can be used to power up the device. Input range is from 3V to 5V.
- 3V pins can be used to send power to external devices.
- If the **boot button** is pressed during power up the device enters DFU mode.This can be used to program the device without a debugger.

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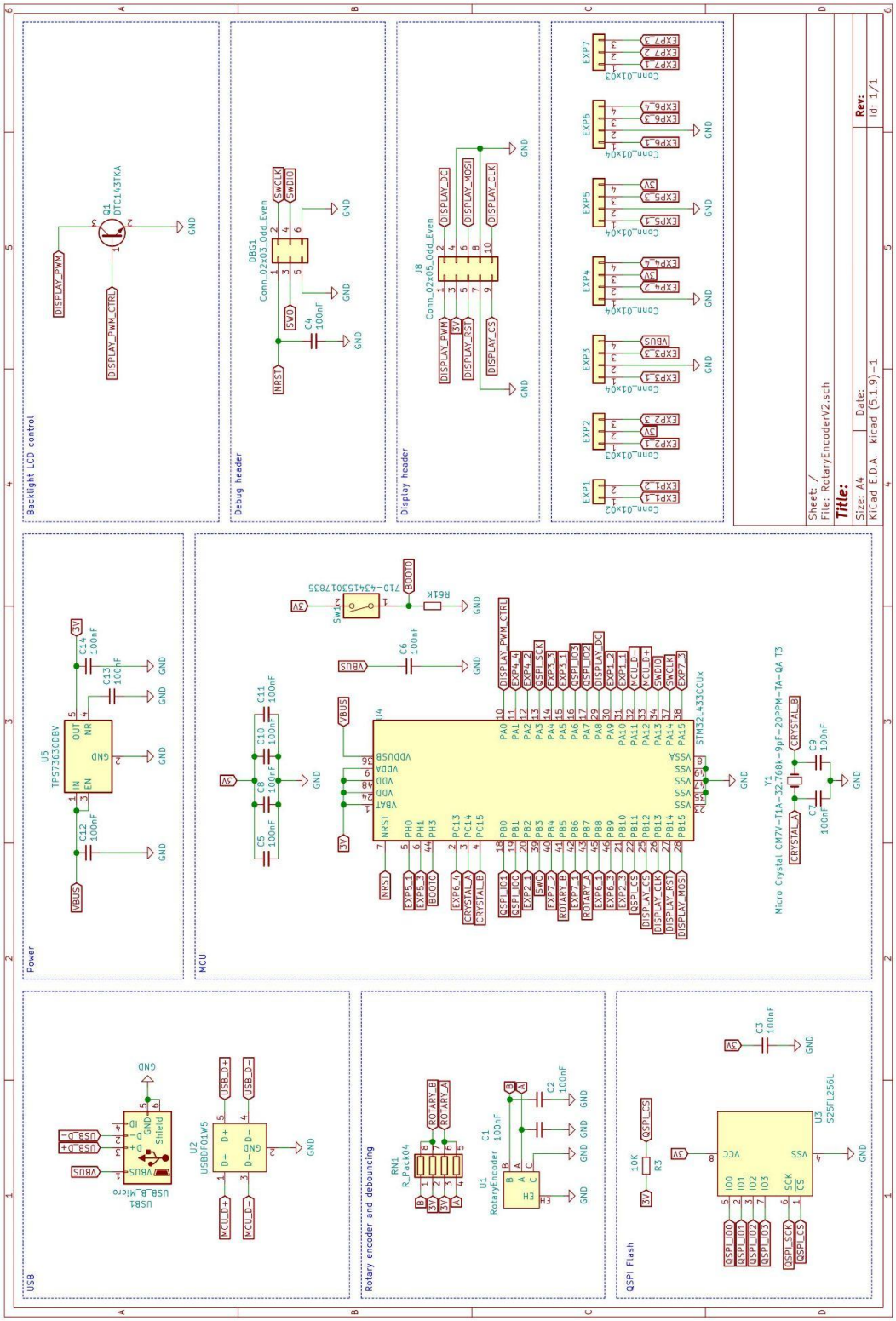
Schematics



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Links

You can find the crow supply campaign below. Please, subscribe to the newsletter and share!

CROWD SUPPLY

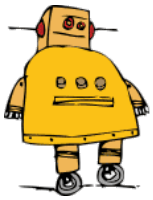
Github repository where you can find code examples for STM32CubeIDE, Arduino IDE examples, schematics, datasheets, CAD files, drawings and pictures.

GitHub

STM32CubeIDE

Arduino IDE

Instructable for the encoder



instructables