

nRF Connect SDK - latest



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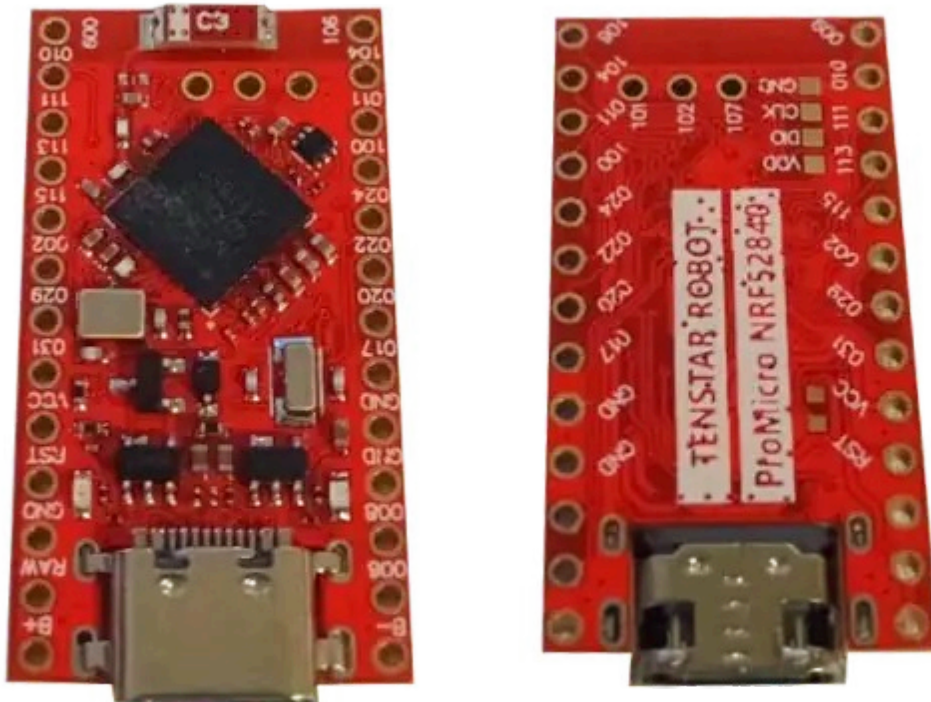
Pro Micro nRF52840 3



1. Pro Micro nRF52840

[Open on GitHub](#)

Board Overview



Pro Micro nRF52840

Name:

`promicro_nrf52840`

Vendor:

Other/Unknown

Architecture:

arm

SoC:

nrf52840

[Browse board sources](#)

More of a board type than a unique board, It is based on Nice!Nano. Also referred to as Pro Micro, Promicro, SuperMini nRF52840 boards.

Overview

The hardware provides support for the Nordic Semiconductor nRF52840 ARM Cortex-M4F CPU and the following devices:

- [ADC](#)
- [CLOCK](#)
- [FLASH](#)
- [GPIO](#)
- [I2C](#)
- [MPU](#)
- [NVIC](#)
- [PWM](#)
- [RADIO](#) (Bluetooth Low Energy and 802.15.4)
- [RTC](#)
- [SPI](#)
- [UART](#)
- [USB](#)
- [WDT](#)

More information about the original board can be found at the [Nice!Nano website](#) [1].

Information about clones can be found at [Clone Wiki](#) [2].

Pinout and Schematic are available in the [Nice!Nano Documentation](#) [3]

Supported Features

The `promicro_nrf52840` board supports the hardware features listed below.

on-chip / on-board

Feature integrated in the SoC / present on the board.

2 / 2

Number of instances that are enabled / disabled. Click on the label to see the first instance of this feature in the board/SoC DTS files.

`vnd,foo`

Compatible string for the Devicetree binding matching the feature. Click on the link to view the binding documentation.

Connections and IOs

LED

- LED0 = P0.I5, can be any color.

Programming and Debugging

The `promicro_nrf52840` board supports the runners and associated west commands listed below.

	flash	debug
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Applications for the `promicro_nrf52840/nrf52840` board target can be built in the usual way (see [Building an Application](#) for more details).

Flashing

The board is factory-programmed with Adafruit's UF2 bootloader

#. Reset the board into the bootloader by bridging ground and RST 2 times quickly

The status LED should start a fade pattern, signalling the bootloader is running.

1. Compile a Zephyr application; we'll use [Blinky](#).

```
west build -b promicro_nrf52840/nrf52840/uf2 zephyr/samples/basic/blinky
```

2. Flash it onto the board. You may need to mount the device.

```
west flash
```

When this command exits, observe the red LED on the board blinking,

Debugging

You may debug this board using the broken out pads on the back. PyOCD and openOCD can be used to flash and debug this

board.

Recovery

In case of a error resulting in a board's bootloader becoming inaccessible, it is possible to flash anything directly using openOCD:

1. Setup OpenOCD correctly, here for WCH linkE in ARM mode:

```
openocd -f interface/cmsis-dap.cfg -f target/nrf52.cfg
```

Note interface and target folders are from openOCD's tcl folder.

1. Connect to openOCD, for example with telnet or GDB:

```
telnet localhost 4444
```

```
target extended-remote localhost:3333
```

2. Erase flash:

```
reset halt  
nrf5 mass_erase
```

or

```
mon reset halt  
mon nrf5 mass_erase
```

1. Flash Bootloader

```
flash write_image erase nice_nano_bootloader-0.9.2_s140_6.1.1.hex
```

or

```
mon flash write_image erase nice_nano_bootloader-0.9.2_s140_6.1.1.hex
```

References

[1]

<https://nicekeyboards.com/docs/nice-nano/>

[2]

<https://github.com/joric/nrfmicro/wiki/Alternatives>

[3]

<https://nicekeyboards.com/docs/nice-nano/pinout-schematic>