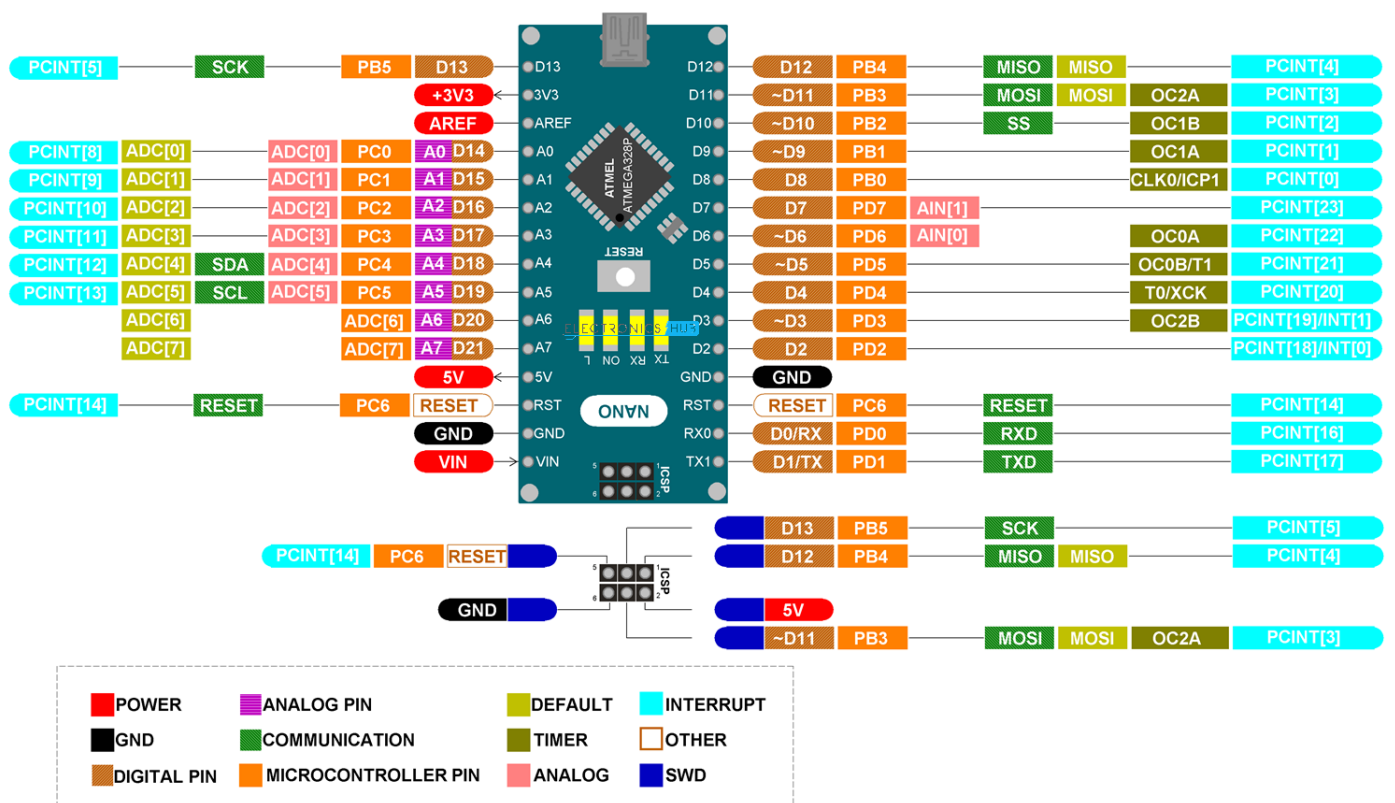


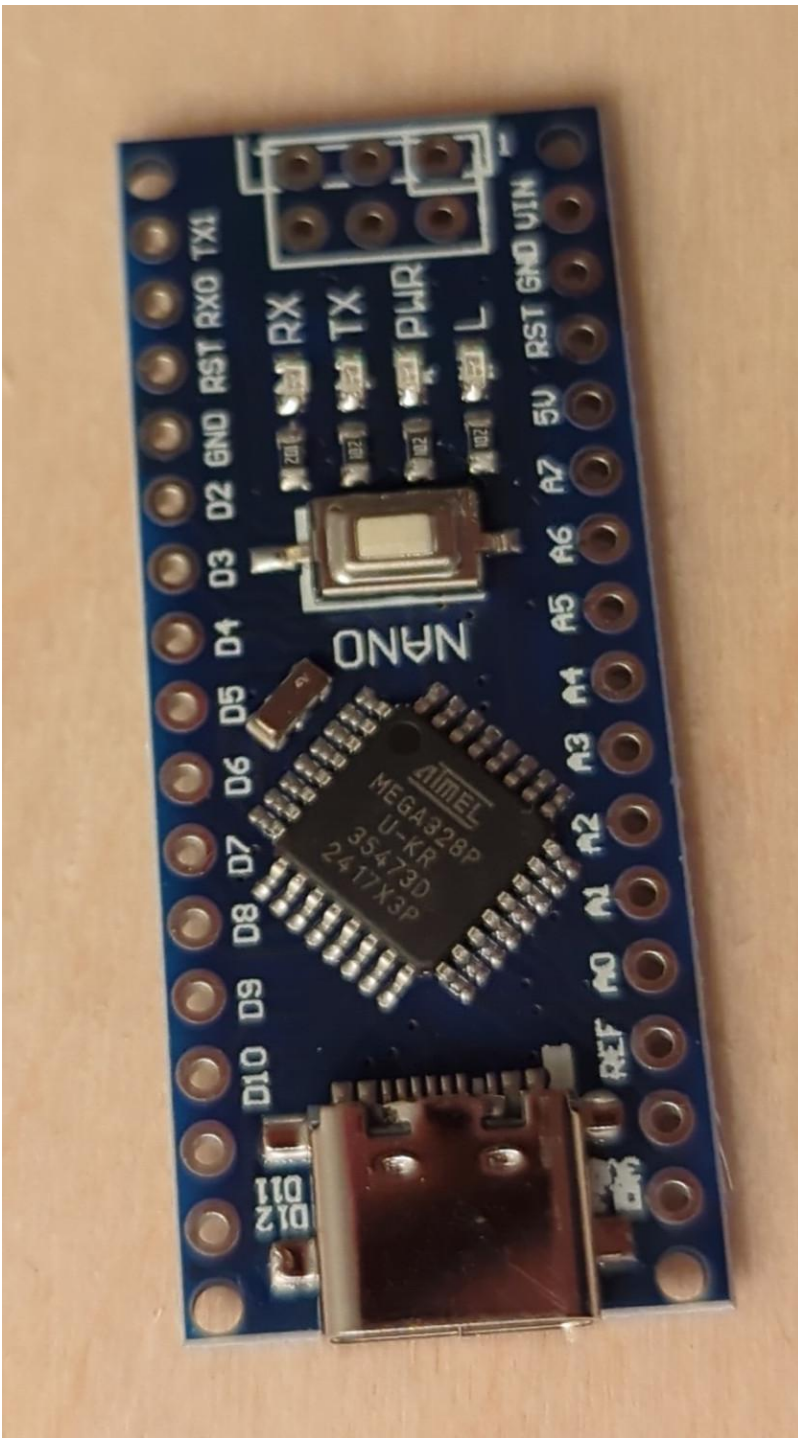
Arduino Nano - Atmel MEGA328P

Pinout



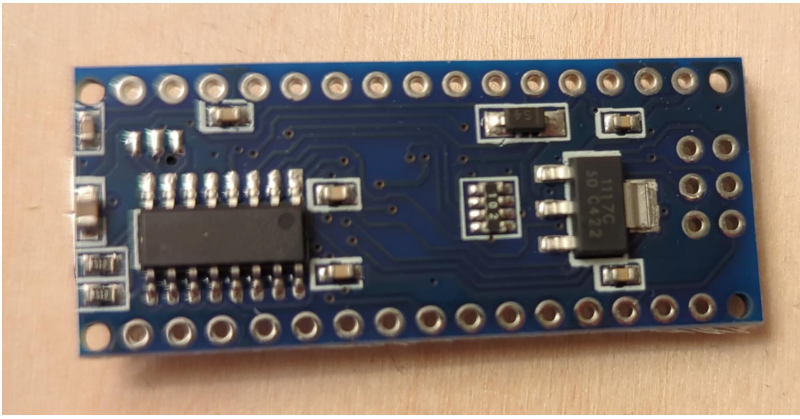
- 5V - comes from USB-C VBUS and/or output of the regulator (VIN); MCU has operating voltage of 1.8 - 5.5V
- VIN - goes to the regulator and can be maximum 15 V; minimum 5 + ~1.1 (dropout) for regulator to regulate; MCU should run with 2.9 V
- 3V3 - output from USB-UART
- D13/PB5 is connected to LED

Schematics



Datasheet: [ATmega48A-PA-88A-PA-168A-PA-328-P-DS-DS40002061B.pdf](#)

LM1117C 50 - 5V regulator



Datasheet: [lm1117.pdf](#)

CH340C - USB-UART

Datasheet: [CH340DS1.PDF](#)

Programming

Arduino / avrdude

Install IDE (and `avrdude`):

```
xi arduino
```

The board shows up on `/dev/ttyUSB0` and can be programmed with `CTRL-R` (**Compile/Verify**) and `CTRL-U` (**Upload**).

Rust

- <https://book.avr-rust.org/>
- <https://github.com/avr-rust/awesome-avr-rust>
- <https://github.com/Rahix/avr-hal>

```
cargo +stable install --locked ravedude
cargo install cargo-generate
cargo generate --git https://github.com/Rahix/avr-hal-template.git # Select: Arduino Nano New
Bootloader
```

```
# May need specific compiler version to work (see rust-toolchain.toml)
```

```
rustup override set nightly-2024-03-22
```

```
rustup component add rust-src --toolchain nightly-2024-03-22-x86_64-unknown-linux-gnu
```

```
cargo build
```

```
RAVEDUDE_PORT=/dev/ttyUSB0 cargo run
```

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