RP2040 Arduino

Autpmount RPi Headless

- https://github.com/fasteddy516/pi-usb-automount

Installation CLI

- Download .... **TBD**
- CLI an einen Pfad kopieren der im Path liegt
  `sudo cp arduino-cli /usr/local/bin/`

Pfade

- `~/.arduino15` → Boards, Cache, etc
- `~/Arduino` → Libs

RP2040 / RP2350

- `nano ~/.arduino15/arduino-cli.yaml`

  arduino-cli.yaml

  ```
  board_manager:
    additional_urls:
       -
  https://github.com/earlephilhower/arduino-pico/releases/download/g
  lobal/package_rp2040_index.json
  ```

- Index updaten
  `arduino-cli core update-index`
- Core installieren
  `arduino-cli core install rp2040:rp2040`
- Board auflisten → `arduino-cli board listall`
  Installierte Cores auflisten → `arduino-cli core list`

FQBNs

- Generic RP2040 rp2040:rp2040:generic rp2040:rp2040
- Generic RP2350 rp2040:rp2040:generic_rp2350 rp2040:rp2040

Testprojekt

- `mkdir ~/rp2040_zero_demo && cd ~/rp2040_zero_demo`

- | ws2812.ino

```
#include <Arduino.h>

void setup() {
  Serial.begin(115200);  // Serieller Port initialisieren
  while (!Serial);  // Warte auf Verbindung
  Serial.println("RP2040 Zero Demo Started");
}

void loop() {
  Serial.println("PING");   delay(1000);
  Serial.println("pong");   delay(1000);
}
```

- `arduino-cli compile --fqbn rp2040:rp2040:waveshare_rp2040_zero . -v --build-path ./build`
  Hinweis: Der *Dateiname*.ino muss gleich dem Pfad sein!
- RP2040 in Bootmodus versetzen ...
- Flashen : `cp ./build/rp2040_zero_demo.ino.uf2 /media/usb0/firmware.uf2 -v`

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