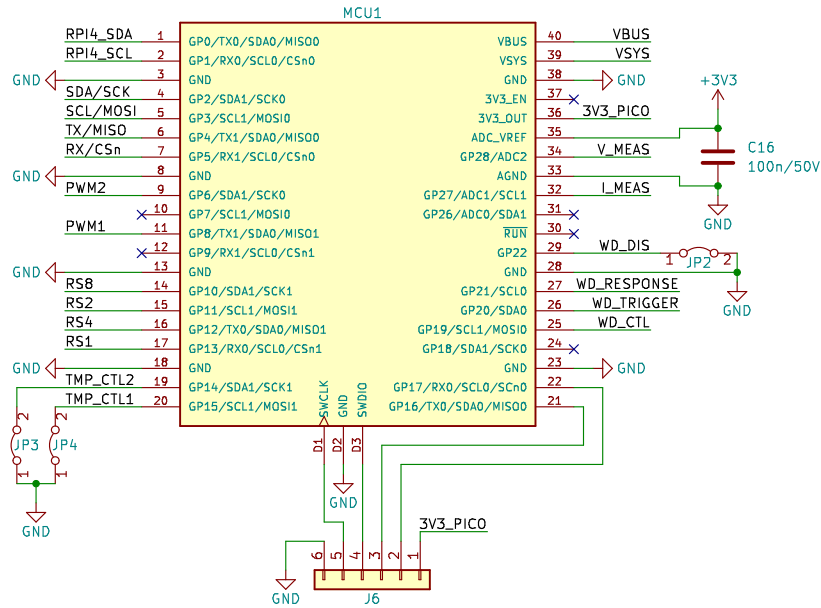
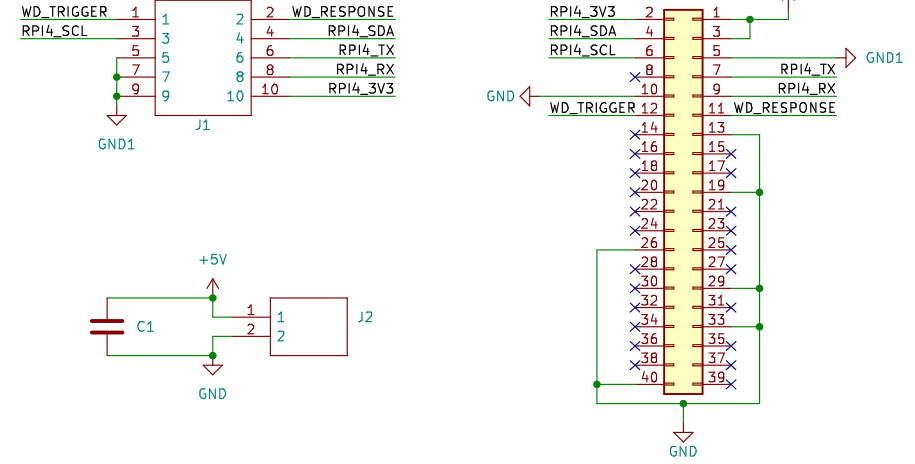


Watchdog Board



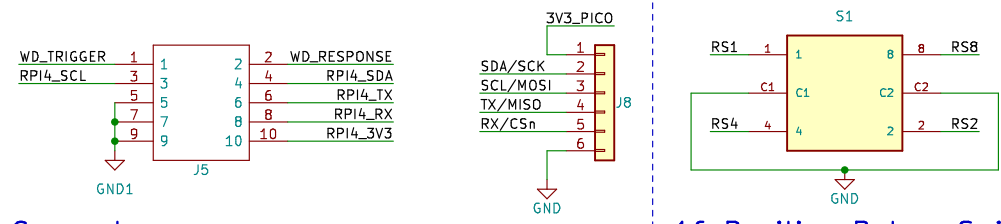
Watchdog Header



Notes

- All non-labeled pins are available for use
- VSYS and VBUS are connected to an on-board P-Ch MOSFET disabling the external 5V source when the USB cable is plugged in
- +3V3 is connected to on-board voltage regulator allowing more precise ADC measurement
- V_MEAS is connected to the output of an on-board OPAMP allowing to measure input voltage
- L_MEAS is connected to the output of an on-board OPAMP allowing to measure flowing current using a shunt (doesn't work in V4.1, OV should be measured at this pin)
- WD_TRIGGER and WD_RESPONSE are connected through the 10 wire flat cable to RPi 4
- WD_CTL is connected to an on-board MOSFET through JP1 switching the power output for RPi4 (if the jumper is disconnected the 5V output is constantly turned on)
- RPi4_SDA and RPi4_SCL are connected through the 10 wire flat cable to the RPi4 I2C pins allowing communication between these devices
- PWM1 and PWM2 are controlling the gates of on-board MOSFETS enabling the PWM functionality on connectors J2 and J3 on the watchdog board
- RS1..RS8 are connected to an on-board rotary switch, these pins should be set to PULLUP mode to work
- J3 (watchdog header) - the 2x20 header is plugged directly to the 2x20 header of the RPi4 (check the +5V pins for correct alignment)
- RPi4_TX and RPi4_RX are connected to an on-board MAX3232+ chip providing conversion between UART and RS232 interfaces
- +5V is connected to an on-board voltage regulator providing around 5.2V and up to 5A
- An on-board USB 2.0 connector is powered directly from an on-board voltage regulator providing more power for USB peripherals (up to 2A, protected by slow-blow fuse)
- TMP_CTL1 and TMP_CTL2 enable the temperature control of the cooling fan using a temperature sensor of RPi Pico

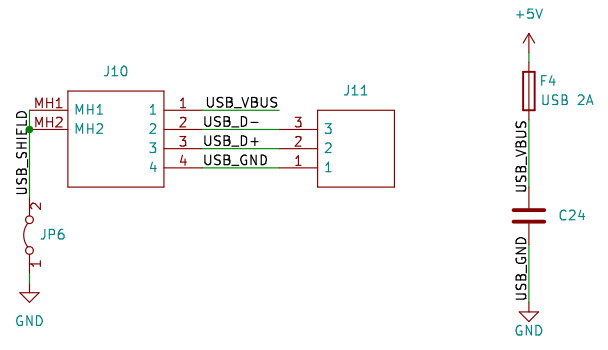
Rpi Pico



Connectors

16 Position Rotary Switch

USB 2.0



BRING AUTO

| | |
|--|------------------|
| BringAuto s.r.o | |
| Sheet: / | |
| File: pico_pinout.kicad_sch | |
| Title: BringAuto Pi V4.1: Simplified pinout | |
| Size: A4 | Date: 2023-04-25 |
| KiCad E.D.A. eeschema 6.0.2+dfsg-1 | Rev: 2 |
| | Id: 1/1 |