

FireFLY / CH32X035

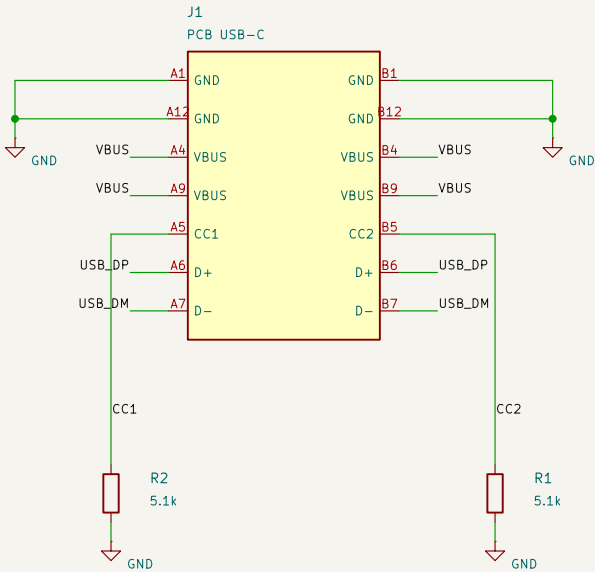
9.5 mm prototype | Two copper layers | Twelve top-side components

SCHEMATIC / REVIEW EDITION

Net-matched to routed board – 16 OCT 2026

01 / USB INTERFACE

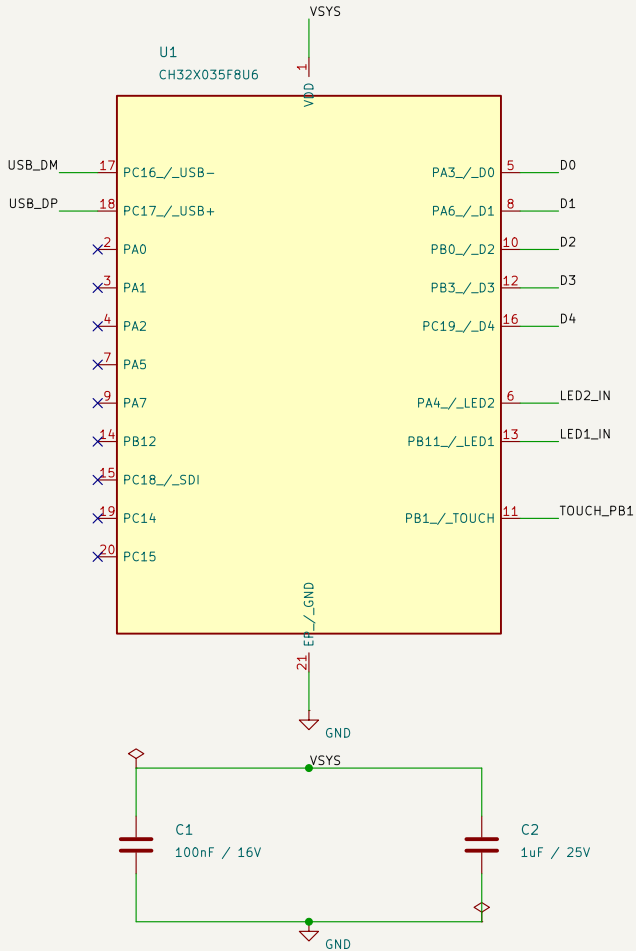
PCB contacts / fixed 5 V sink / independent CC resistors



Connector geometry / finish remain on engineering hold.

02 / CONTROLLER

48 MHz RISC-V / QFN20 / functional pin grouping

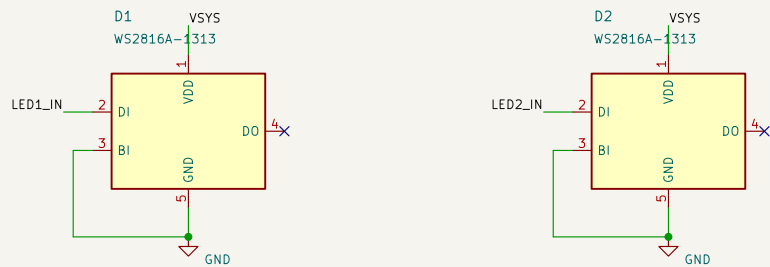


PC19 is shared with the debug clock: select GPIO mode.

Unrouted pins are intentionally marked with no-connects.

03 / RGB + TOUCH

Separate data pins for the two corner LEDs



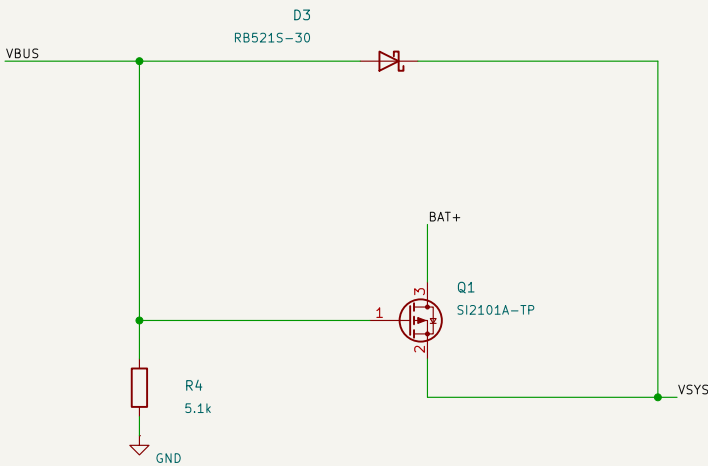
D1 = PB11 D2 = PA4 D0 pins unused

E1: PB1 / ADC9 / TouchKey. No exposed touch copper.

LED five-pad mapping retained; verify supplier land pattern.

04 / POWER SELECTION

USB diode + battery P-MOS / no regulator or charger



USB present: Q1 off; D3 supplies VSYS.

Battery only: R4 pulls gate low; Q1 supplies VSYS.

BAT polarity matters. No reverse-battery protection.

No cell charging or undervoltage disconnect.

05 / USB BOOT

Hold at power-up; release before USB communication

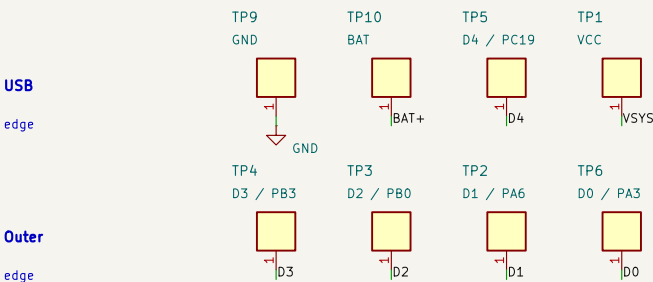


Disconnect battery and USB before entering ROM ISP.

No reset button; BOOT temporarily pulls USB D+ high.

06 / BOTTOM PADS

Direct underside view / USB tongue toward the top



ENGINEERING PROTOTYPE / Documentation describes the current circuit; it is not a fabrication release.

Connector compliance and physical fit remain unresolved. Battery, touch, LEDs and firmware have not been bench-validated.