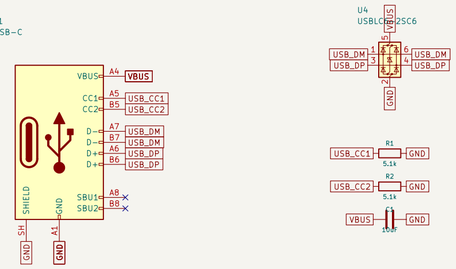
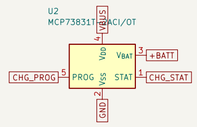
USB-C INPUT + ESD



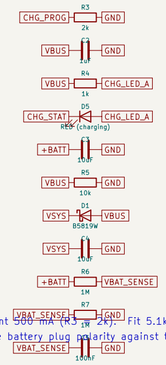
LiPo CHARGER + POWER PATH

USB present: D1 feeds VSYS, Q1 off, U2 charges the cell. USB absent: Q1 on, cell feeds VSYS.





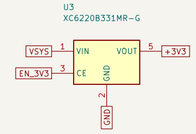


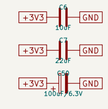


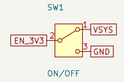
Charge current 500 mA (R3 = 2k). Fit 5.1k for cells under 500 mAh.
J2: check the battery plug polarity against the + mark on the board.

3.3 V REGULATOR + ON/OFF

SW1 drives the LDO enable pin, so the battery still charges when the unit is off.

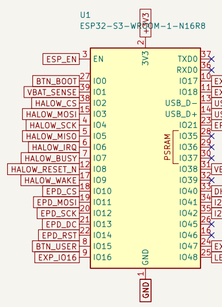


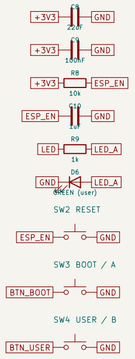






ESP32-S3 HOST

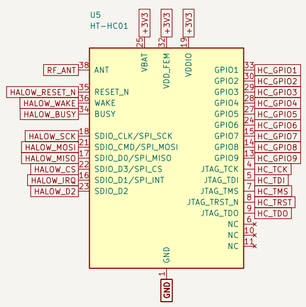


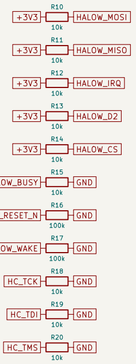


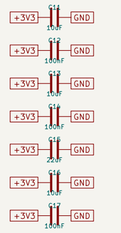
IO35–37 are used by the module's PSRAM. IO45/IO46 are boot straps, left open.

HT-HC01 Wi-Fi HaLow RADIO

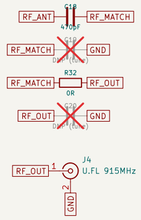
SPI wiring follows Heltec's HT-HC32 (CS=IO2 MOSI=IO3 SCK=IO4 MISO=IO5 INT=IO6 BUSY=IO7 RST=IO8 WAKE=IO9).





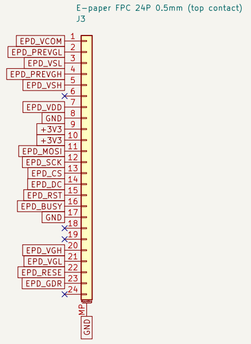


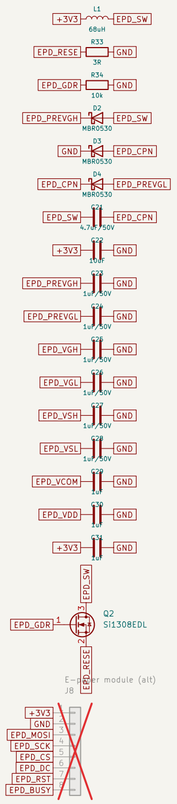
Antenna: DC block, pi match (fit 0R, shunts unpopulated), U.FL



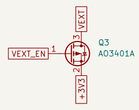
E-PAPER (24-pin flex, SSD1680 panels)

J3 pad n = panel pin 25−n (flex folds round the board edge, contacts facing away from the PCB).



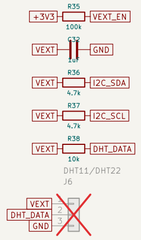


SENSORS + EXPANSION (switched VEXT rail)









VEXT is on when IO38 is low. J6/J7 are surface pads: the display glass covers the other side.

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ESP32-S3 + Heltec HT-HC01 (MM6108), LiPo + USB-C, 2.9in e-paper

Sheet: /
File: halow-ink.kicad_sch

Title: HaLow Ink: Wi-Fi HaLow e-paper node

Size: A2 | Date: | Rev: A
KiCad E.D.A. 10.0.8 | Id: 1/1