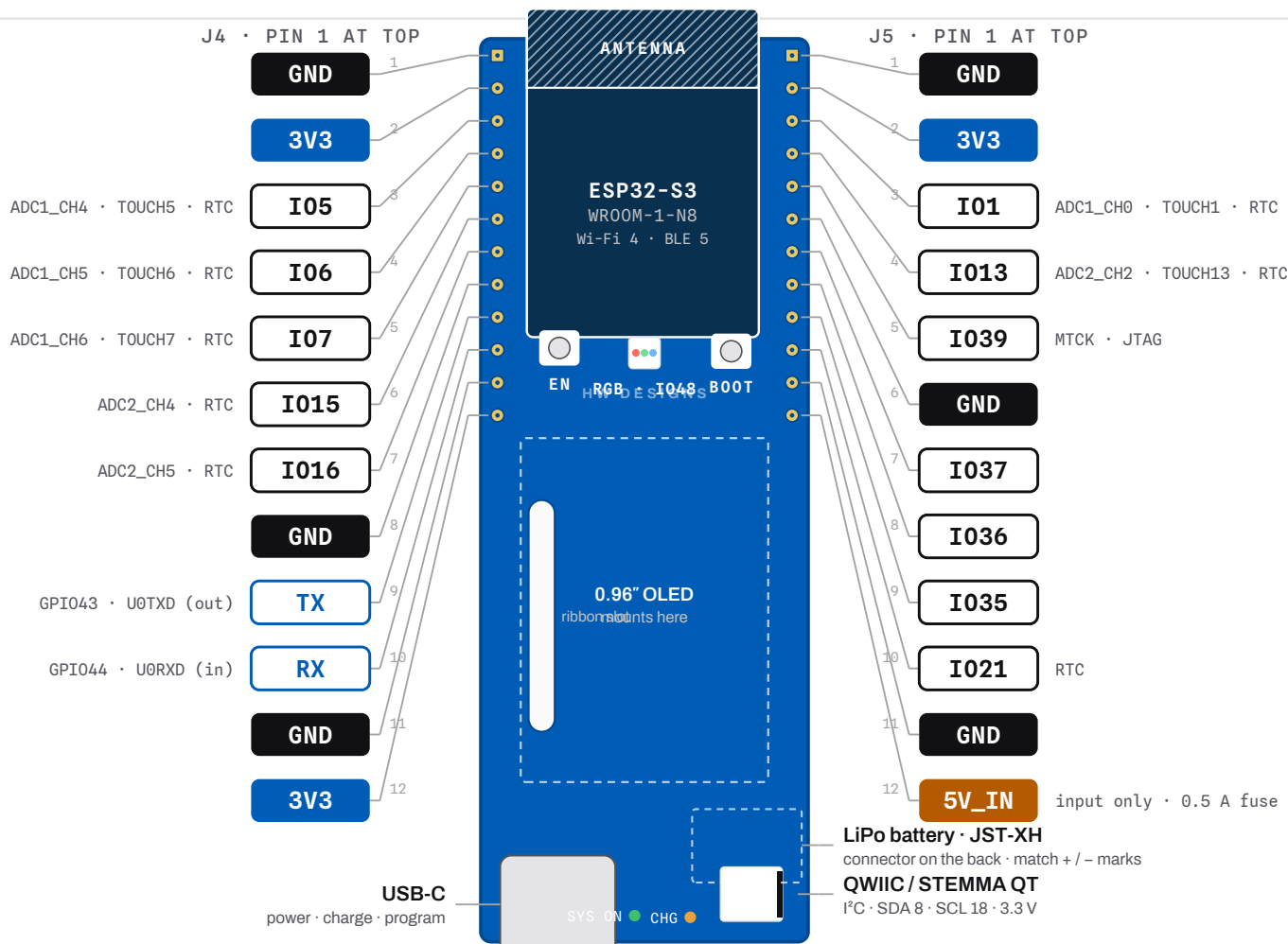


ESP32-S3 DEV BOARD

PINOUT REFERENCE



Front view, antenna up — pin labels repeat on the back silkscreen. Board 70.1 × 25.4 mm; header rows on 0.9" (22.86 mm) centers.

ON-BOARD CONNECTIONS

OLED · SPI	CS 10 · DC 9 · RST 14 · SCK 12 · MOSI 11
Qwiic · I²C	SDA 8 · SCL 18 · 4.7k pull-ups
RGB LED	IO48 (SK6812)
BOOT button	IO0 — user key after boot
USB D- / D+	IO19 / IO20
VBAT sense	IO4 = battery voltage / 2
VBUS sense	IO2 = USB voltage / 2

These signals are not brought out to the headers.

GOOD TO KNOW

All I/O is 3.3 V logic — pins are not 5 V tolerant.
Keep each pin under ~20 mA.
ADC2 (IO13, IO15, IO16) is unavailable while Wi-Fi is active — use ADC1 pins (IO1, IO5–IO7) instead.
IO35–IO37 are fully free on this module (N8, no PSRAM).
IO39 is JTAG MTCK by default; still works as GPIO.
RTC pins can wake the chip from deep sleep.
Any pin can be UART / I²C / SPI / PWM (GPIO matrix).

POWER

Inputs: USB-C · 1-cell LiPo (JST-XH) · 5V_IN pin.
5V_IN is input only (0.5 A fused) — it never outputs 5 V. Unplug the battery when powering from 5V_IN.
3V3 pins are regulator outputs — budget ≈ 150 mA for your add-ons.
Battery charges from USB-C only, at ≈ 200 mA.
CHG LED: on = charging · off = full or no battery.

