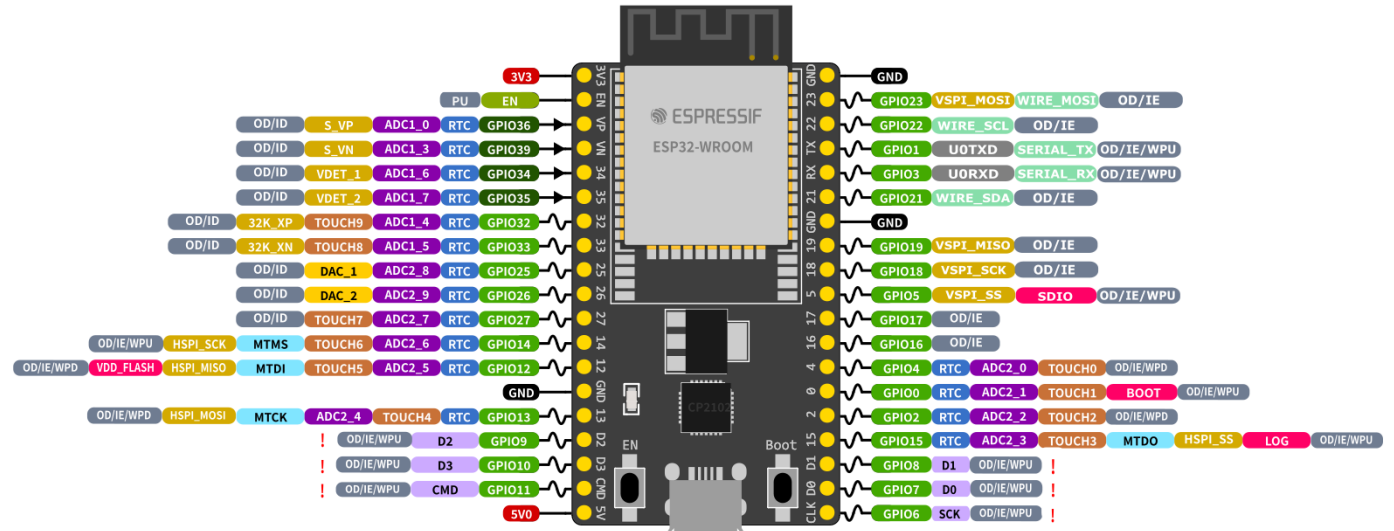
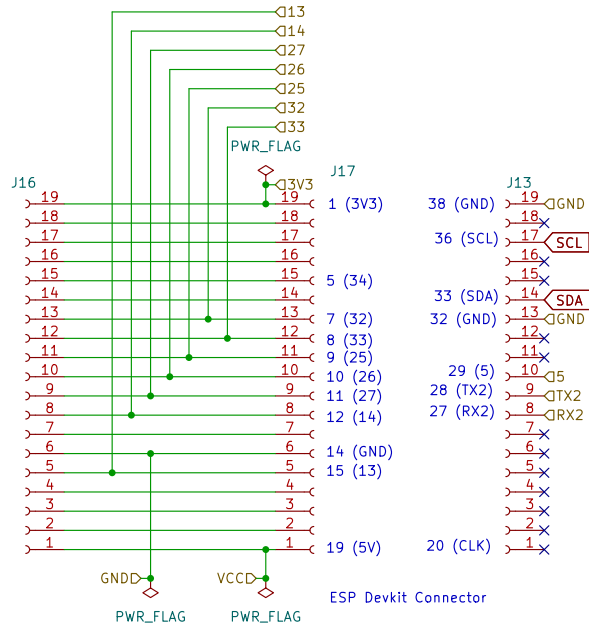


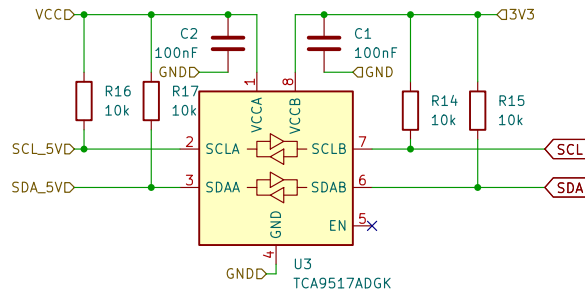
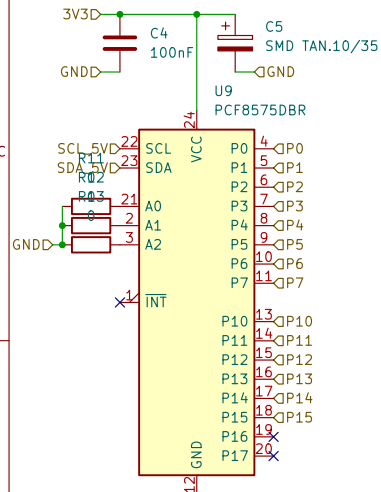
|  |                  |        |
|--|------------------|--------|
| 24V supply<br>8x 24V digital inputs; 2x 0–5V analog input<br>8x NO relay outputs; 2x 24V digital outputs<br>1x display connector |                  |        |
| Sheet: /<br>File: controesp_hat.kicad_sch  |                  |        |
| <b>Title: controesp BASE</b>   |                  |        |
| Size: A4   | Date: 2025–03–15 | Rev: 1 |
| KiCad E.D.A. 9.0.0   | Id: 1/2          |        |

# ESP32-DevKitC



## ESP32 Specs

32-bit Xtensa® dual-core @240 MHz  
Wi-Fi IEEE 802.11b/g/n 2.4 GHz  
Bluetooth 4.2 BR/EDR and BLE  
520 KB SRAM (16 KB for cache)  
448 KB ROM  
34 GPIOs, 4x SPI, 3x UART, 2x I2C  
2x I2S, RMT, LED PWM, 1 host SD/eMMC/SDIO  
1 slave SDIO/SPI, TWAI®, 12-bit ADC, Ethernet



- PWM Capable Pin
- GPIOX: GPIO Input Only
- GPIOX: GPIO Input and Output
- DAC\_X: Digital-to-Analog Converter
- DEBUG: JTAG for Debugging
- FLASH: External Flash Memory (SPI)
- ADCX\_CH: Analog-to-Digital Converter
- TOUCHX: Touch Sensor Input Channel
- OTHER: Other Related Functions
- SERIAL: Serial for Debug/Programming
- ARDUINO: Arduino Related Functions
- STRAP: Strapping Pin Functions

- RTC: RTC Power Domain (VDD3P3\_RTC)
- DEBUG: JTAG for Debugging
- GND: Ground
- PWD: Power Rails (3V3 and 5V)
- ! Pin Shared with the Flash Memory Can't be used as regular GPIO

- GPIO STATE
- WPU: Weak Pull-up (Internal)
- WPD: Weak Pull-down (Internal)
- PU: Pull-up (External)
- IE: Input Enabled (After Reset)
- ID: Input Disabled (After Reset)
- OE: Output Enabled (After Reset)
- OD: Output Disabled (After Reset)

24V supply  
8x 24V digital inputs; 2x 0–5V analog input  
8x NO relay outputs; 2x 24V digital outputs  
1x display connector

Sheet: /hat1/  
File: hat.kicad\_sch

## Title: cntroesp BASE

Size: A4 Date: 2025-03-15

KiCad E.D.A. 9.0.0

Rev: 1

Id: 3/2