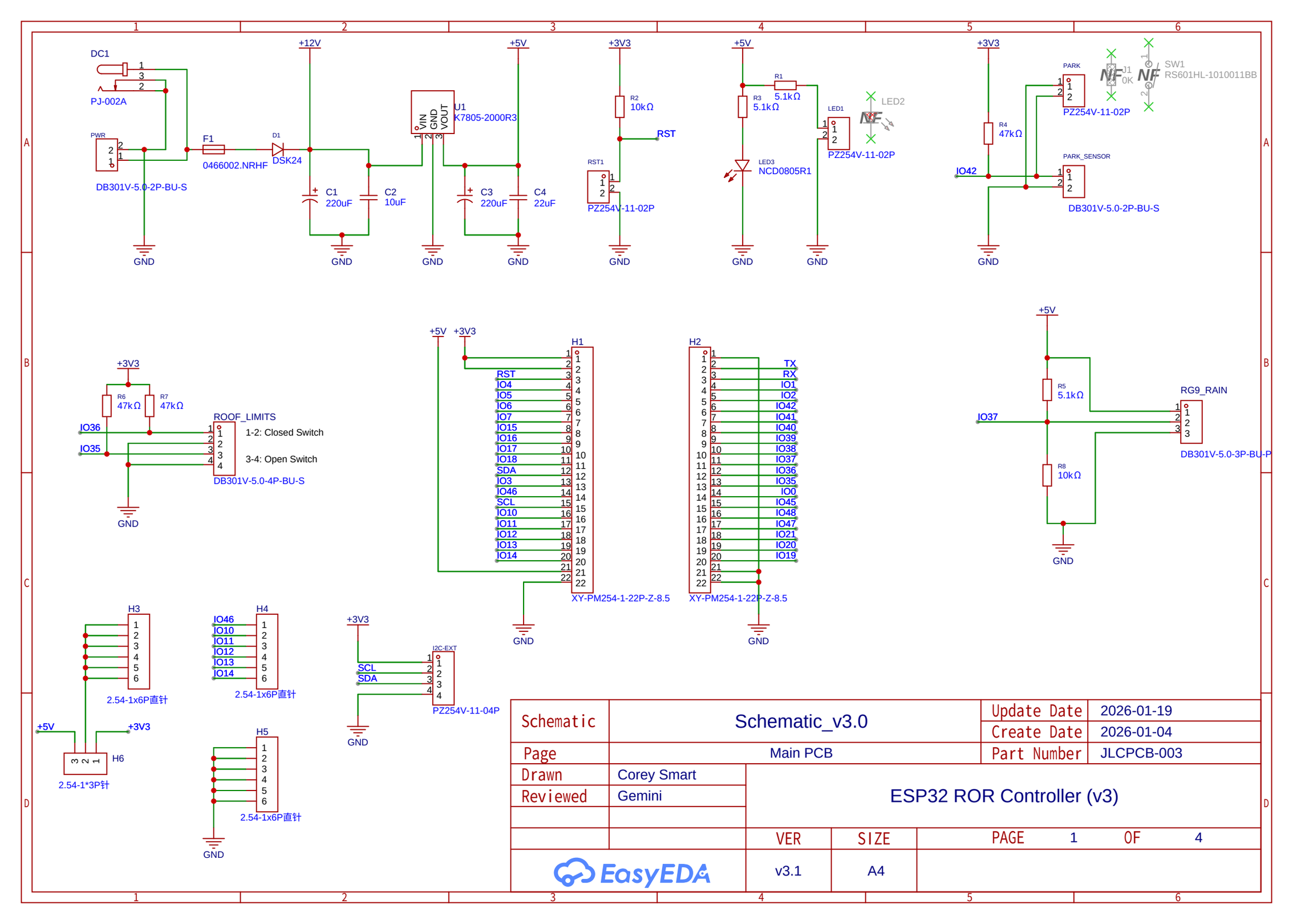

Schematic	Schematic_v3.0	Update Date	2026-01-19
		Create Date	2026-01-04
Page	Main PCB	Part Number	JLCPCB-003
Drawn	Corey Smart	ESP32 ROR Controller (v3)	
Reviewed	Gemini		
		VER	SIZE
		v3.1	A4

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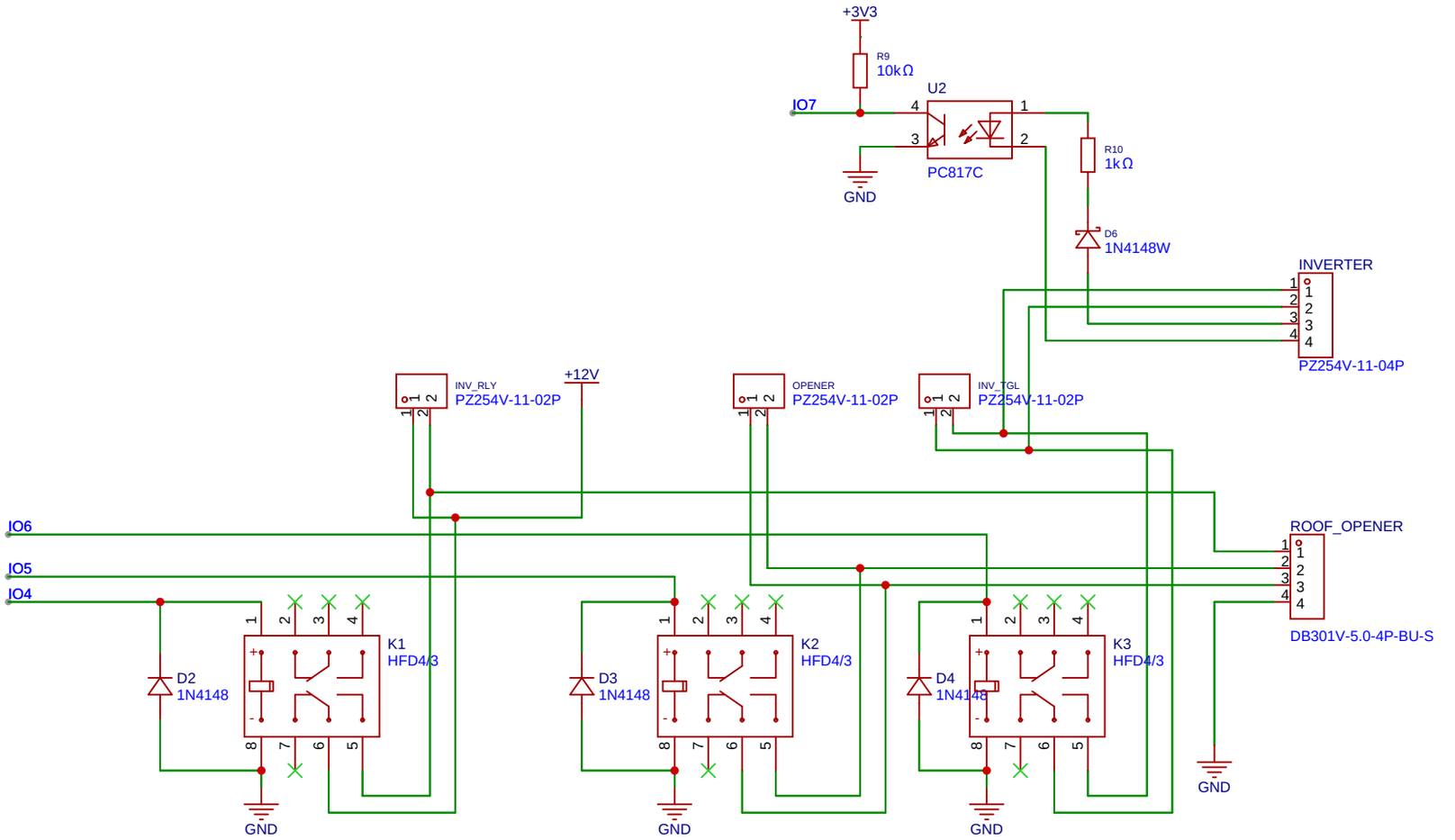

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		Create Date	2026-01-04
Page	Relay Circuit	Part Number	JLCPCB-003
Drawn	Corey Smart	ESP32 ROR Controller (v3)	
Reviewed	Gemini		
		VER	SIZE
		v3.1	A4

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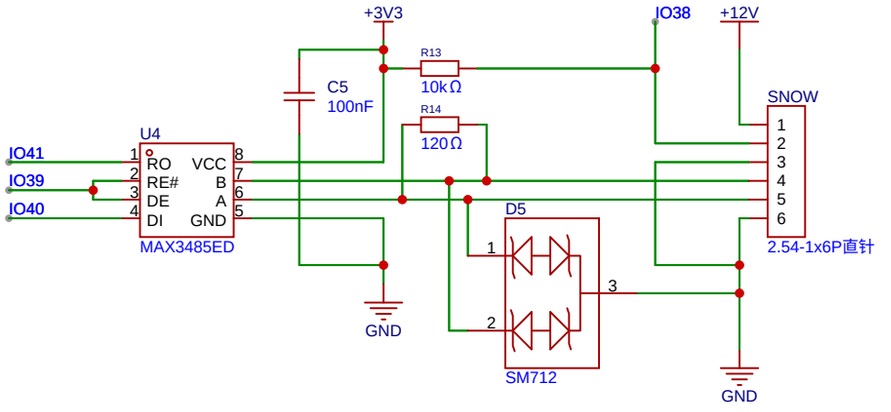
EasyEDA



Schematic	Schematic_v3.0	Update Date	2026-01-19
		Create Date	2026-01-04
Page	Rain / Snow Sensor	Part Number	JLCPCB-003
Drawn	Corey Smart	ESP32 ROR Controller (v3)	
Reviewed	Gemini		
		VER	SIZE
		v3.1	A4

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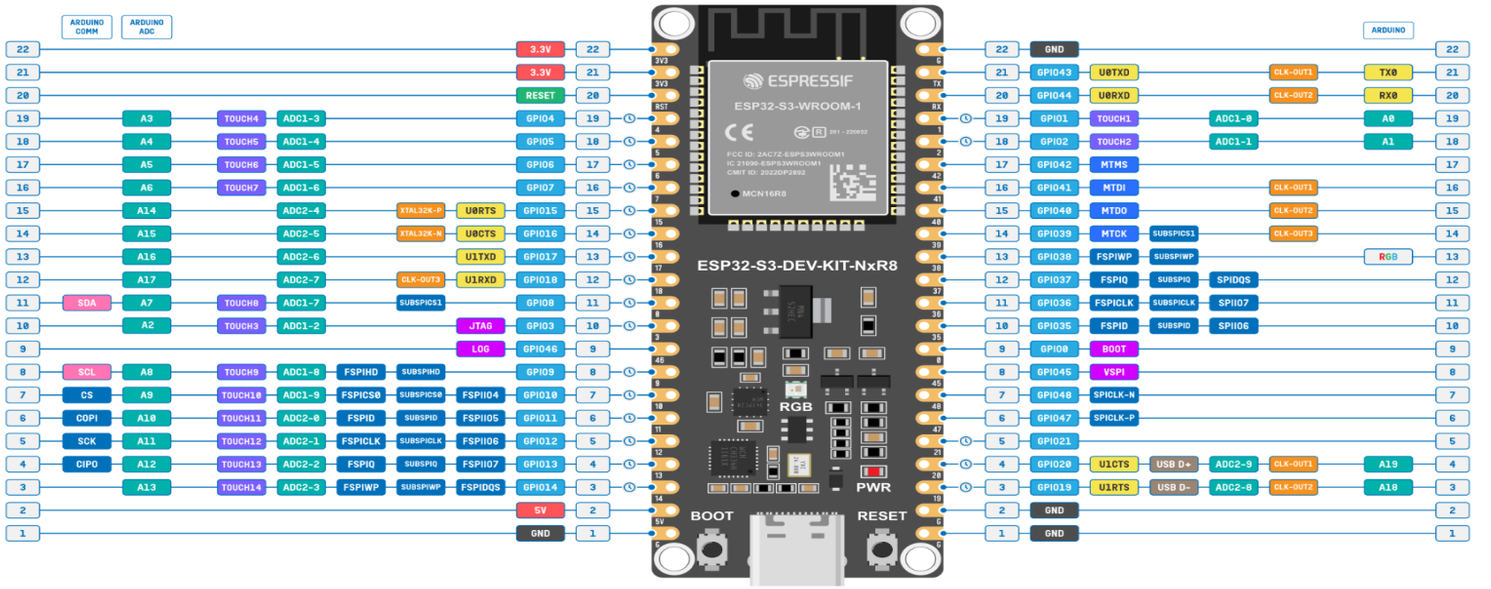
ESP32-S3-DEV-KIT-NxR8 PINOUT

CIRCUITSTATE
WWW.CIRCUITSTATE.COM



PHYSICAL PIN | POSITIVE SUPPLY | CLOCK IN/OUT | SPI
CONTROL | GROUND SUPPLY | TOUCH INPUTS | UART
GPIO | ADC INPUTS | I2C | USB
JTAG | RTC IO | BOOTSTRAP | RTC POWER DOMAIN

- GPIOs **22–25** are not available from the chip.
- **TX0** and **RX0** can be accessed as **Serial0** in Arduino.
- USB-CDC can be accessed as **Serial** in Arduino.
- Both **Serial** and **Serial0** can be used for programming.
- All GPIO pins support **PWM** and interrupts.
- Builtin RGB LED is connected to **GPIO38**.
- Arduino pin references are as per **ESP32-S3_DevKitC-1** definition.
- All touch input pins can be used as **T1–T14** in Arduino.
- Most peripheral functions can be assigned to any GPIO pins, thanks to the IO MUX.

Board Name: ESP32-S3-DEV-KIT-NxR8
Vendor: Waveshare (SKU 28409)
Module: ESP32-S3-WROOM-1
Flash: 16 MB (N16R8) / 8 MB (N8R8)
PSRAM: 8 MB
MCU: ESP32-S3, 32-Bit Xtensa, Dual-Core, 240 MHz,
Wi-Fi IEEE 802.11 b/g/n 2.4 GHz + BLE 5 Mesh,
512 KB SRAM, (16 KB in RTC), 384 KB ROM, 45 GPIOs, 4x SPI, 3x UART,
2x I2C, 14x Touch, 2x I2S, RMT, LED PWM, USB-OTG, TWAI/CAN,
2x 12-bit ADC, 1x LCD interface, DVP

BY SA
Rev. 0.1, 21-06-2025
Design: Vishnu Mohanan

https://www.circuitstate.com/pinouts/waveshare-esp32-s3-dev-kit-nxr8-wi-fi-development-board-pinout-diagram-arduino-reference/#IC

Schematic	Schematic_v3.0	Update Date	2026-01-19
		Create Date	2026-01-04
Page	Board Reference	Part Number	JLCPCB-003
Drawn	Corey Smart	ESP32 ROR Controller (v3)	
Reviewed	Gemini		
		VER / SIZE / PAGE 4 OF 4	
EasyEDA		v3.1	A4