

ESP32-S3 Gold Edition pinout

Every hole, what its GPIO can do, and the ones this board has already spent.

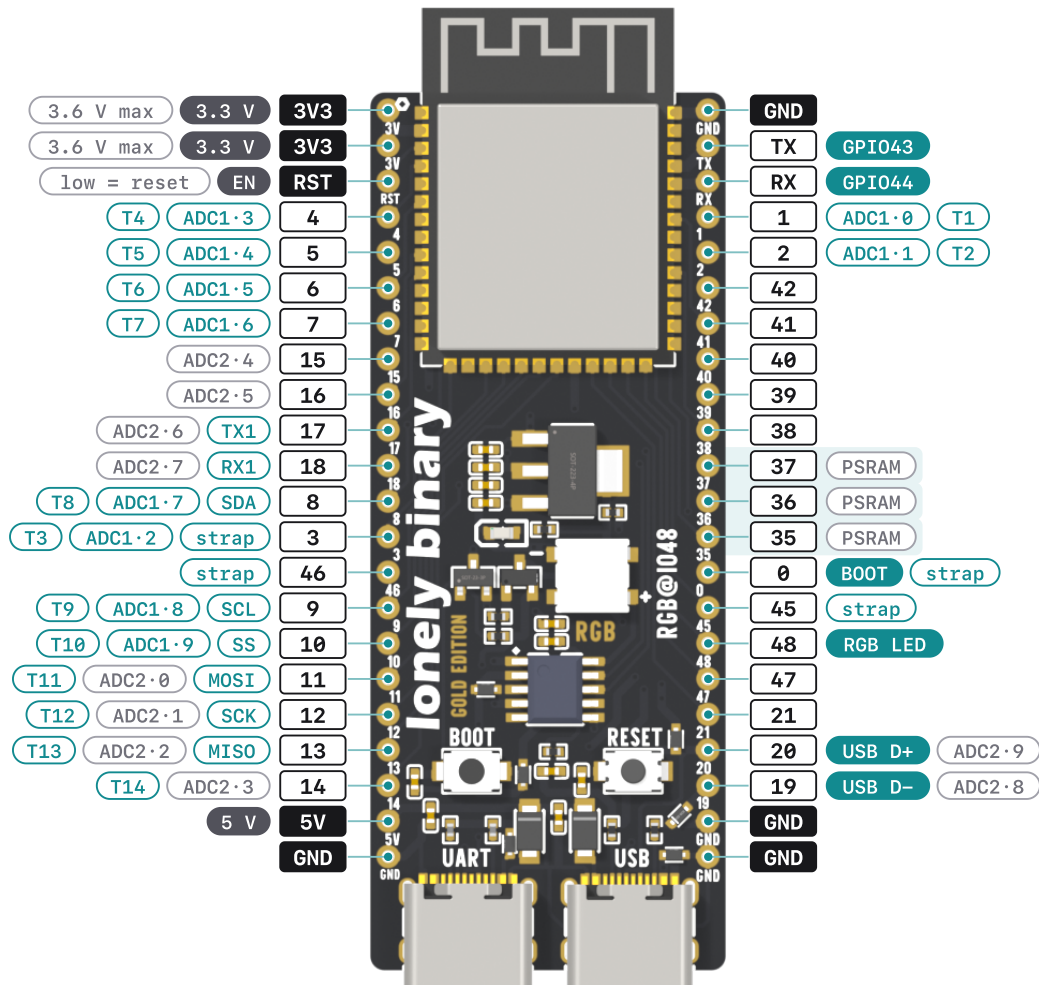


3.3 V logic

No GPIO takes 5 V, and the 3V3 pin takes 3.6 V at most. Power a board from 5V or USB-C, never 3V3 from anything above 3.6 V.

44 holes, as printed on the top

Antenna up, USB-C sockets down: UART on the left, native USB on the right. The back prints the same names, mirrored.



BOOT Already used by this board

PSRAM Taken by the module's PSRAM. Leave free

strap Read at reset. Keep quiet at power-up

ADC1·0 Analog input, works with Wi-Fi on

ADC2·0 Analog input, stops once Wi-Fi starts

T1 Capacitive touch channel

SDA Arduino's default bus pin, movable

Free, with nothing to know

24 GPIOs 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 38, 39, 40, 41, 42, 47

No board job, not read at reset, not the module's, and able to drive as well as read. Start here. The ones read at reset are 0, 3, 45, 46: usable, as long as nothing drives them while the board powers up.

Arduino's default buses

OBJECT	BUS	GPIO
Wire	I ² C	SDA 8 · SCL 9
SPI	SPI	MOSI 11 · MISO 13 · SCK 12 · SS 10
Serial1	UART1	TX1 17 · RX1 18
Serial	UART0	TX 43 · RX 44, the USB serial port

Defaults for the IDE's board setting, not wiring: every one of them can be moved to another free pin in the sketch.

Hole order from this board's net list, checked against the silkscreen. GPIO functions from the ESP32-S3 datasheet; bus pins are the Arduino core's defaults for ESP32S3 Dev Module. GPIO 35, 36 and 37 carry the octal PSRAM on N16R8 and N8R8 modules and are free on modules with quad or no PSRAM.