

SparkFun ESP32-S2 Thing Plus (WRL-17743)

PCB Antenna

SDA	Touch1	ADC1_CH0	GPIO01	01	03	GPIO03	ADC1_CH2	Touch3	
SCL	Touch2	ADC1_CH1	GPIO02	02	34	GPIO34	SPI_IO5	TX1	
	Touch4	ADC1_CH3	GPIO04	04	33	GPIO33	SPI_IO4	RX1	
	Touch6	ADC1_CH5	GPIO06	06	37	GPIO37	SPI_DQS	CIPO	
	Touch8	ADC1_CH7	GPIO08	08	35	GPIO35	SPI_IO6	COPI	
FSPI_IO4	Touch10	ADC1_CH9	GPIO10	10	36	GPIO36	SPI_IO7	SCK	
FSPI_IO5	Touch11	ADC2_CH0	GPIO11	11	A5	GPIO05	ADC1_CH4	Touch5	
FSPI_IO6	Touch12	ADC2_CH1	GPIO12	12	A4	GPIO07	ADC1_CH6	Touch7	
LED (Blue) FSPI_IO7	Touch13	ADC2_CH2	GPIO13	13	A3	GPIO09	ADC1_CH8	Touch9	FSPI_HD
			VUSB	VUSB	A2	GPIO14	ADC2_CH3	Touch14	FSPI_DQS
			Chip Enable	EN	A1*	GPIO18	ADC2_CH7	DAC_1	CLK_OUT3
			VBAT	VBAT	A0	GPIO17	ADC2_CH6	DAC_2	
					GND	GND			
					NC				
					3V3	3.3V			
					RESET	Reset			

JST Connector for LiPo Batt. (Single-Cell)

Qwiic Connector

USB-C Connector

Button: GPIO 0 Reset Button

Charge LED: Yellow

Name	ADC
Power	DAC
GND	SPI
Control	UART
Arduino	Touch
GPIO	Misc

GPIO 3.3V tolerant only
*Attached pull-up resistor

Power
 ESP32 VCC Range: 3.0V-3.6V
 VBAT: Direct to battery (and charger)
 VUSB: Direct to USB (5V)
 3V3: Direct to 3.3V regulator (600mA)
 ESP32-S2 Current Consumption:
 · WiFi: 310mA (peak)
 · Light-Sleep: 550µA
 · Deep-Sleep: 20-235µA

ESP32-S2 WROOM
 Single-Core Xtensa 32-bit LX7
 Up to 240MHz
 320KB SRAM
 4MB SPI Flash
Multiplexed I/Os allow up to
 20 12-bit ADC Channels
 4 SPI Interfaces
 2 UART Interfaces
 2 I2C Interfaces
 1 I2S Interface
 8 PWM Channels
 2 8-bit DACs
 14 Capacitive Touch I/O

Wireless
 WiFi: 802.11 b/g/n (up to 150Mbps)
 WPA/WPA2/WPA2-Enterprise/SPS
Other*
 Temp sensor (-20°C to 110°C)
 LCD Interface
 Camera Interface
 IR Remote Controller
 ESP-MESH Networking
 Cryptographic Hardware Accelerators
 *On datasheet, but may not be supported yet

