

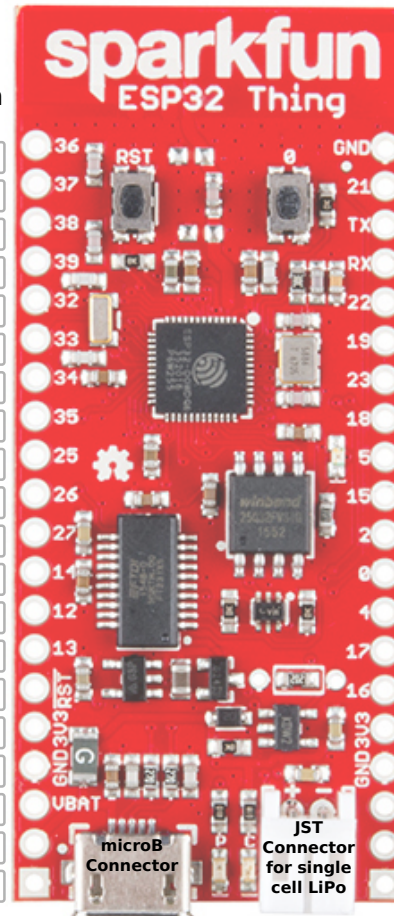
SparkFun ESP32 Thing (DEV-13907)

PCB Antenna

Reset button

Button: GPIO 0

	ADC1_0*	GPIO36*	SenseVP	36
	ADC1_1*	GPIO37*	CapVP	37
	ADC1_2*	GPIO38*	CapVN	38
	ADC1_3*	GPIO39*	SensVN	39
Touch9	ADC1_4	GPIO32	XTAL32	32
Touch8	ADC1_5	GPIO33	XTAL32	33
	VDET1	ADC1_6	GPIO34*	34
	VDET2	ADC1_7	GPIO35*	35
	DAC1	ADC2_8	GPIO25	25
	DAC2	ADC2_9	GPIO26	26
	Touch7	ADC2_7	GPIO27	27
Touch6	HSPI_CLK	ADC2_6	GPIO14	14
Touch5	HSPI_Q	ADC2_5	GPIO12	12
Touch4	HSP_ID	ADC2_4	GPIO13	13
		Reset	RST	
		3.3V	3V3	
		GND	GND	
		VBAT	VBAT	
		VUSB	VUSB	
		GND	GND	



GND				
21	SDA	GPIO21	V_SPI_HD	
TX	CLK3	GPIO1	U0_TXD	
RX	CLK2	GPIO3	U0_RXD	
22	SCL	GPIO22	V_SPI_WP	U0_RTS
19	MISO	GPIO19	V_SPI_Q	U0_CTS
23	MOSI	GPIO23	V_SPI_D	
18	SCK	GPIO18	V_SPI_CLK	
5	GPIO5	V_SPI_CS0	LED (Blue)	
15	GPIO15	ADC2_3	HSPI_CS0	Touch3
2	CS	GPIO2	ADC2_2	HSPI_WP
0	CLK1	GPIO0	ADC2_1	Touch1
4	GPIO4	ADC2_0	HSPI_HD	Touch0
17	GPIO17	U2_TXD		
16	GPIO16	U2_RXD		
3V3	3.3V			
GND	GND			
VBAT	VBAT			
VUSB	VUSB			
GND	GND			

Power LED: Red
Charge LED: Yellow

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

*GPIO: Port Input Only
*ADC: Preamplifier ADC
GPIO 3.3V tolerant only

Jumpers

SJ1: Can be cut to change charge current

SJ2: Disconnect to disable Power LED

SJ3: Use to change voltage to flash chip

Power
ESP32 VCC range: 2.2V-3.6V
VBAT: direct to battery (and charger)
VUSB: direct to USB (5V)
VCC: Output of regulator 3.3V/600mA
Up to 250mA during RF transmissions

Wireless
Wifi: 802.11 b/g/n/e/i
WPA/WPA2/WPA2-Enterprise/SPS
Bluetooth: Bluetooth 4.2/BLE

ESP32
Dual-core Xtensa 32-bit LX6
Up to 240MHz
520kB internal SRAM
4MB external flash

Multiplexed I/Os allow up to
18 ADC channels
3 SPI interfaces
3 UART interfaces
2 I2C interfaces
2 I2S interfaces
16 LED PWM outputs
2 DACs
10 Capacitive Touch Inputs

ADC Preamp
GPIO pins 36, 67, 38, and 39 are able to be used as a low noise analog pre-amplifier

Other*
Hall Sensor
Temp sensor (-40C to 125C)
SD/SDIO/MMC Host Controller
CAN Bus

*On datasheet, but may not be supported yet

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