

SparkFun ESP32 Thing (DEV-13907)

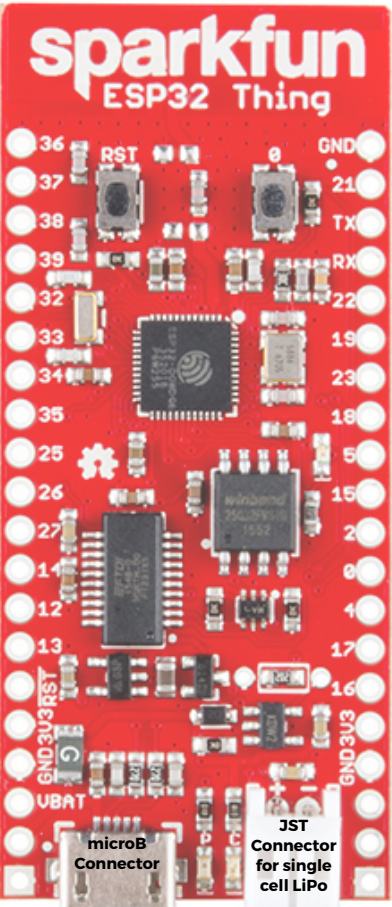
Name	ADC
Power	DAC
GND	SPI
Control	UART
Arduino	Touch
GPIO	Misc

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

PCB Antenna

Reset button

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		




Reset button


Button: GPIO 0


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	GPIO21	ADC2_2	HSPI_WP	Touch2
0	CLK1	GPIO0	ADC2_1	Touch1	Button
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

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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ELECTRONICS

