

Safety

- Do not place your board directly on a conductive surface: including most laptops!
- Only charge the LiPo battery with the proper charger (our board in this case).
- Keep LiPos at room temperature. Do not leave a LiPo in sunlight or near any source of heat!!!
- Do not pierce or puncture the battery.
- Ideally discharge LiPos completely if you're not going to use them for several days

What is the ESP32?

Chip by Espressif with integrated WiFi and Bluetooth.
Programmable with C, Arduino, MicroPython, and more!

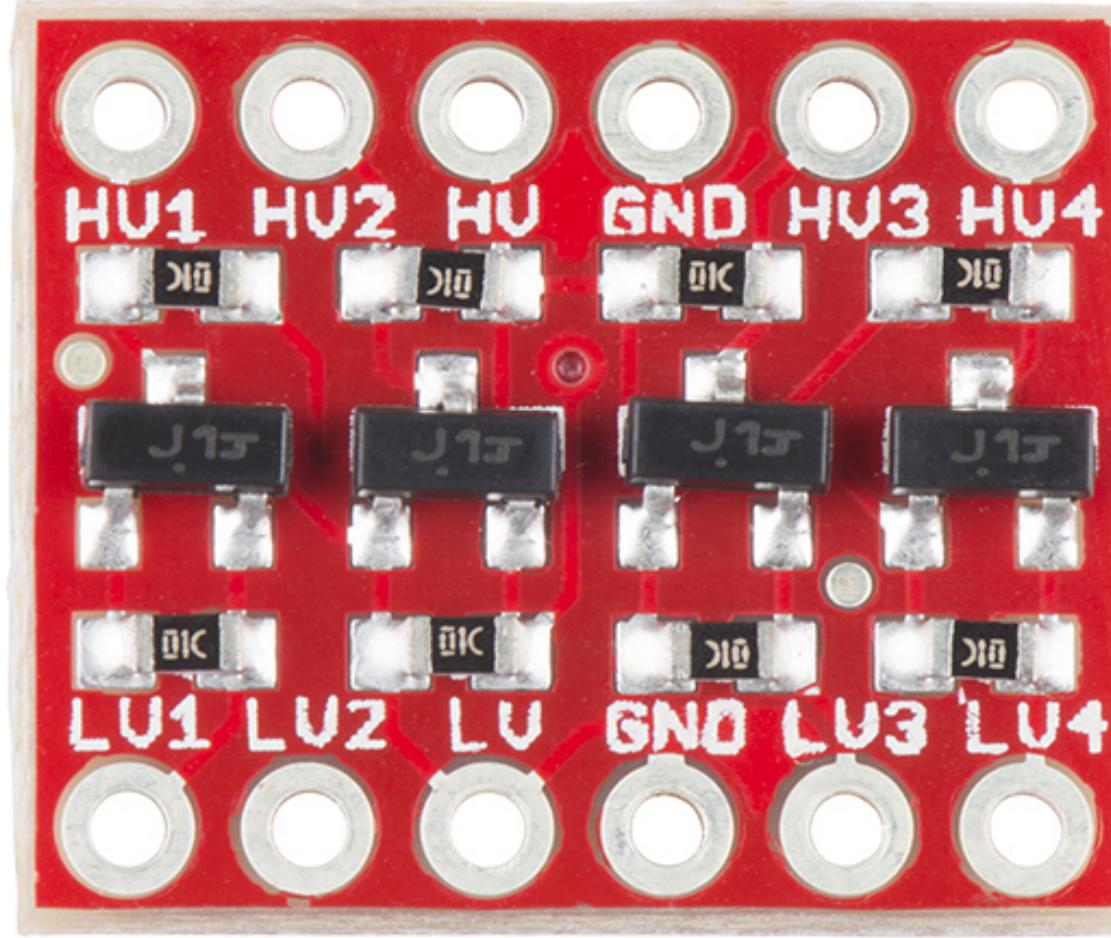
What is the ESP32 The Thing?

What you have in front of you. A board by Sparkfun that uses the ESP32 chip for its brains.

What makes
working with
the ESP32
different from
working with
Arduino Uno,
etc?



3 . 3V ONLY



Logic level converters can help

Supports most but not
all of the core
Arduino verbs

More finicky

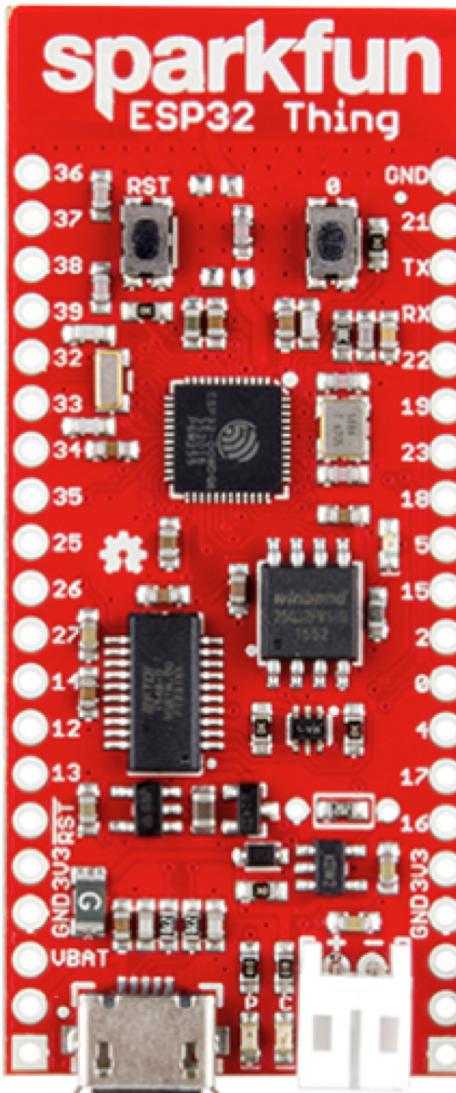
SparkFun ESP32 Thing (DEV-13907)

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
Touch8	ADC1_5	GPIO33	XTAL32
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
Touch5	HSPI_Q	ADC2_5	GPIO12
Touch4	HSP_ID	ADC2_4	GPIO13
		Reset	/RST
		3.3V	3V3
		GND	GND
		VBAT	VBAT
		VUSB	VUSB
		GND	GND

Jumpers



microB Connector

JST Connector for single celled LiPO

Power LED

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	
15	GPIO15	ADC2_3	HSPI_CS0	Touch3
2	CS	GPIO21	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			

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

*GPIO: Port Input Only

*ADC: Preamplifier ADC

GPIO 3.3V tolerant only

Arduino Boards Manager

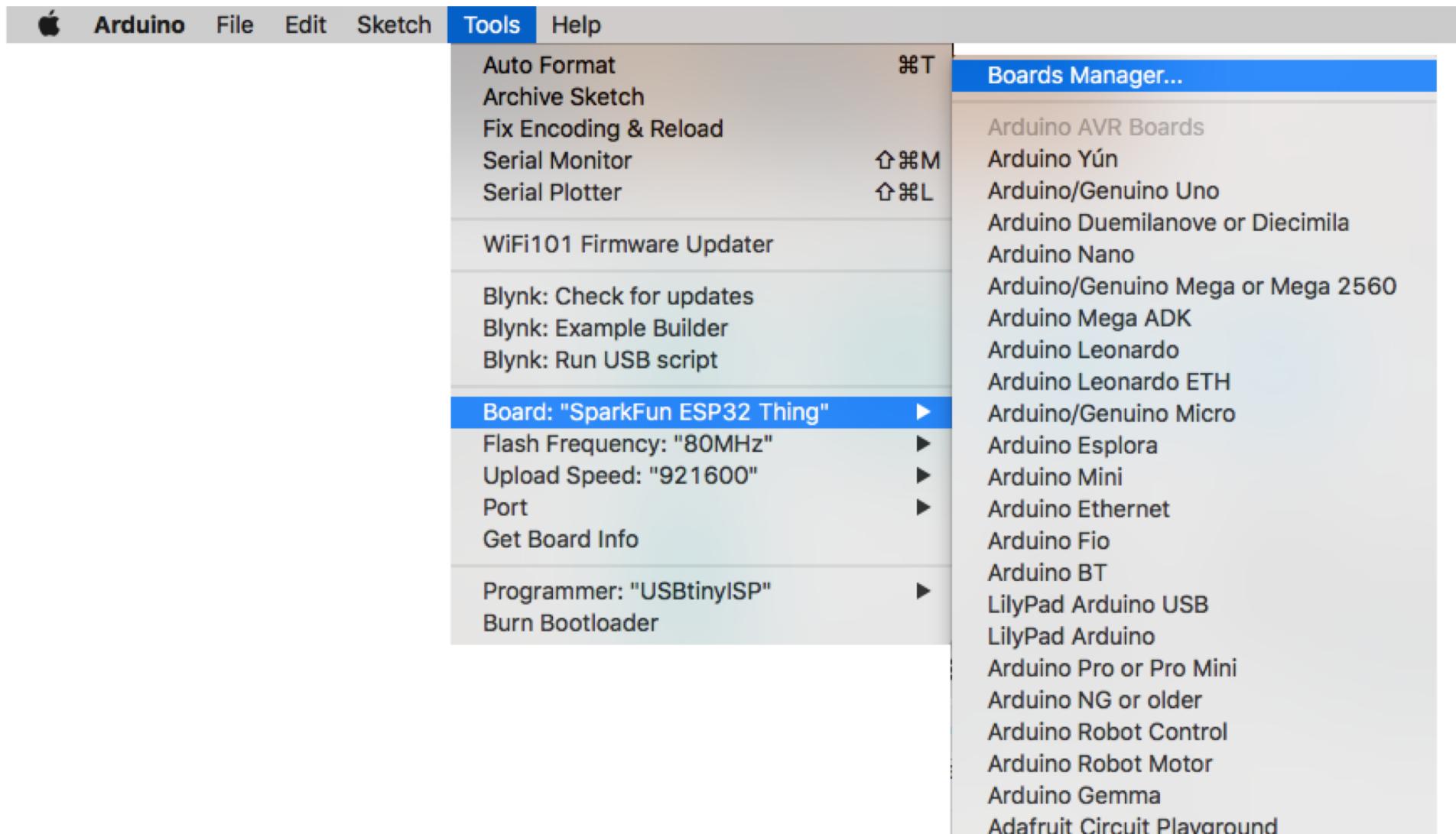
Tools > Board > Boards Manager

... then filter your results via the search box.

In this case, we need to add an additional Boards Manager URL first, in File > Preferences.

(screenshots of both on next slides)

Tools > Board > Boards Manager



File > Preferences

