

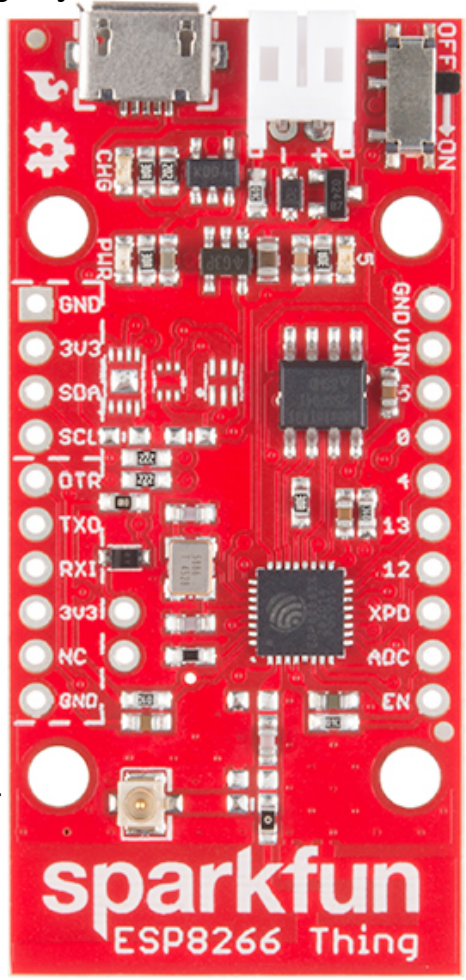
# ESP8266 Thing (WRL-13231)

Arduino add-on available  
80MHz

Name	Arduino
Power	ADC
GND	Serial
Control	Misc

Unpopulated Ics  
ATECC108A full turnkey ECSDA engine  
TMP102 12-bit digital temperature sensor  
TSL2561 luminosity/light sensor

MicroB USB for charging only  
JST for single cell LiPo



Power switch

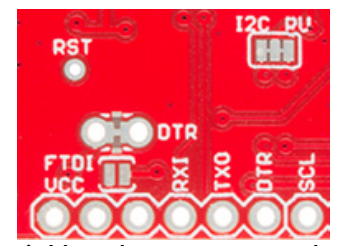
GPIO0  
On bootup will run program if high and bootloader if low  
Tied to DTR to run bootloader when reset

	GND	GND
	3.3V	3V3
SDA	D2	SDA
SCL/SCLK	D14	SCL
	Auto-reset	DTR
TX	D7	TXO
RX	D8	RXI
	Not Connected	3V3
	Not Connected	NC
	GND	GND

GND	GND	
Vin	Vin	
5	D5	LED
0	D0	Used in reset
4	D4	
13	D13	MOSI
12	D12	MISO
XPO	D16	Reset to deep sleep
ADC	A0	10-bit 1V
EN	Enable	Set to active High
		SPID
		MTCK
		SPIQ
		MTDI

u.fl antenna connector  
Not Connected  
To use rotate 0ohm resistor 90deg

Jumpers/test points on back  
DTR Jumper clear for serial debugging  
FTDI VCC Jumper close to connect 3V3 pin on serial header to 3.3V supply  
I2C Pullups 10kohm resistors clear to remove  
RST pin connected through a 0.1uF cap to DTR for auto reset  
Test points (SPI pins for the flash memory)



sparkfun  
ESP8266 Thing

PCB Antenna

Power (ESP8266 Thing)  
Vin:3.3-5.5  
Vbatt: Single cell Lipo (charged via USB)  
VCC (as input): 1.7V-3.6V  
VCC: 3.3V @ 500mA  
Max 12mA per I/O pin

Typical Power (ESP8266 module)  
Transmit 135-215mA  
Receive 60-62mA  
Standby 0.9mA  
Deep sleep 10uA

LEDs  
Power: Red  
Charge: Yellow  
User (pin 5): Green

Wi-Fi  
802.11 b/g/n  
Wi-Fi Direct (P2P) soft AP