Getting started with the Sparkfun ESP32 Thing

Let’s make sure all the basic functionality is working on our ESP32 before we start communicating across the Internet or to different devices.

I’ve experienced occasional pins behaving unreliably. If at first you encounter issues, try a different pin! However if a large number of pins don’t seem to be functioning properly, the USB cable is broken, you cannot get the wifi sketches to work, or any other serious issues, please let me know asap so we can get you a different board. Your certification below states that none of these are the case for the kit you were provided. Please upload a digital confirmation (or a scan of this completed and signed form) in Canvas.

# Connecting to wifi

1. Test the **ESP32-WiFiScan** sample code. You should see a list of available wifi networks (2.4GHz band only).
2. Test the **ESP32-WifiConnect** code, updating the ssid and password to match an available network.

# Working with inputs and outputs

First, review and test the **ESP32\_GettingStarted** code. Looks like the Arduino we’re used to, right?

You can try connecting one or more digital inputs/outputs and adapting the code. Consider also exploring the device’s capacitive sensing abilities, the Touch examples, or any other example code provided in **File > Examples > ESP32**!

The biggest difference from “classic” Arduino is that AnalogWrite is not currently supported for the ESP32 Thing. Instead, we can use SigmaDeltaWrite. There is also a very specific case designed for PWM output for LEDs, called LEDC. Check out the **ESP32-RGB-LEDC** and **ESP32-RGB-SigmaDelta** example code for details.

# Charging the LiPo battery

*Remember to follow the LiPo safety precautions at all times and only use the ESP32 Thing board to charge your battery!*

The ESP32 Thing contains a smart circuit. If we connect our device via USB to the computer with the battery plugged in via the JST connectors, then it will automatically charge our LiPo battery.

# Certification

I hereby declare that I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, am in possession of the Inworks ESP32 kit number \_\_\_\_\_. The kit is complete and all parts are in good working order. I recognize that my grade for any Inworks class will not be released until I return this equipment or its equivalent restitution by Saturday, 11 May 2019 with all parts intact and in the same condition as attested here. Signed:

# ESP32 Thing Pinout diagram

