

Raspberry Pi Readme

Both Modules are using Raspbian Stretch

Target Module Prerequisites:

1. Install **hostapd** and set up the configuration files. The following Adafruit guide is helpful in configuring the software

<https://cdn-learn.adafruit.com/downloads/pdf/setting-up-a-raspberry-pi-as-a-wifi-access-point.pdf>

NOTE: If using a Wi-Fi adapter that uses a Realtek Chipset (as the one used by our team) you must use the patched version listed in the adafruit guide for the hostapd application to work. Additionally, the drivers for the adapter may need to be installed. Alternatively, the onboard wifi can be used, with reduced range capabilities.

2. Install Apache. The following guide may be helpful in setting up and using the webserver software

<https://www.raspberrypi.org/documentation/remote-access/web-server/apache.md>

3. Download the camera.py script and set it up to run at startup. Use the following commands to add the camera.py script to the startup

- a. `sudo nano /etc/xdg/lxsession/LXDE/autostart`
- b. add the following line to the end of this file
- c. `@"filepath of camera.py"` (no quotes)

Control Module Prerequisites:

1. If the Wi-Fi adapter being used does not have drivers preinstalled for it in Raspbian, they must be installed first. Below is the driver used for the Wi-Fi adapter currently used for the product

<https://github.com/gnab/rtl8812au>

2. Download the control_module.py and install any libraries that are need for it to work. Configure it to run at startup as above with the camera.py script OR run it manually everytime the module is powered on