

A Summer Internship Project Report

ON

Wireless Controlling Of AC Devices

Submitted By

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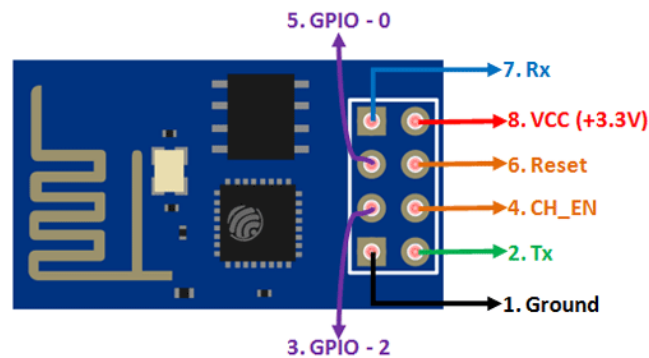


Wireless Controlling Of AC Devices

Abstract—

This report provides an introduction to ESP8266 wifi module. This WiFi module acts as a station mode, Access point mode and both at a time.

- The ESP8266 module consists of 8 pins which are arranged in 4x2 order. The labeling of these pins are as shown in below figure.



Connections with Arduino

Arduino	ESP8266
Vcc	Vcc & CH-PD
GND	GPIO 0 & GND
TX	TX
RX	RX

- Remove the ATMEGA328 chip from Arduino before uploading the program.
- Connect the GPIO 0 pin to GND during flashing the code and remove the GPIO 0 pin after flashing. We can use GPIO 2 pin for LED.
- Use 3.3 volts for Vcc.

Instructions before uploading programs

- Open Arduino IDE software.

- Go to File, at the bottom you will find preferences. Paste the following link and then click on OK link
http://arduino.esp8266.com/stable/package_esp8266com_index.json
- Go to the tools click on Board at the top you will find Board manager click on it.
- In Board manager you will find lot of Boards but we have to install ESP8266 Board. Search for ESP8266 and install it.
- After installing the ESP8266 Board, Go to tools again and click on Board select the 'Generic ESP8266 Module' Board.
- Since we have to upload the program into the ESP8266 Board we installed the ESP8266 Board. Here we use Arduino for power supply, TX and RX pins. We will not use any Digital pins.
- After completion of all above settings upload the following code into the Arduino.
- Before uploading the code Add the required libraries mentioned in the program.

PROGRAM

The code is available at <https://github.com/eid4gautam/controlling-LED-wirelessly>.

- Before uploading the program give your mobile hotspot NAME and PASSWORD. In this program I have given 'motorola' as hotspot name password as 'gautam1234'.
- After uploading the program remove GPIO 0 from GND.
- check serial monitor you will find "connecting....." After connecting serial monitor will display " mDNS responder started"

"HTTP server started" and WiFi IP Address will display like "192.168.43.161".

- Paste the generated IP in your browser and browse you will find "Toggle LED" on the browser.
- click on "Toggle LED" to ON and OFF the LED.

I made a wireless connection for AC devices. In this I used ESP8266 WiFi module as a wireless system. This can be Access by providing a SSID and PASSWORD in station Mode, where in Access point mode we have to connect to the ESP8266 wifi module. This can achieved while we programming we will given a SSID and PASSWORD. This should be connecting to our mobile, since we know the SSID and PASSWORD if we want to control any device wirelessly by sitting in a room, we can control it by connecting to the GPIO 2 pin. This is benefit for the old age people as well as companies, hospitals etc...,. In this all the controlling is done if our mobile WiFi is connected to the ESP8266 wifi. If we want to operate devices from other places not in houses, it is not possible.