12V 2 Channel IoT relay module

12V ESP8266 2 Channel Relay IoT smart home cellphone app remote control switch

Module and Mobile Application Setup

The module configuration is divided into 2 parts:

- Hardware Module Introduction and Setup
- Mobile Application Setup

• Hardware Module Introduction & Setup
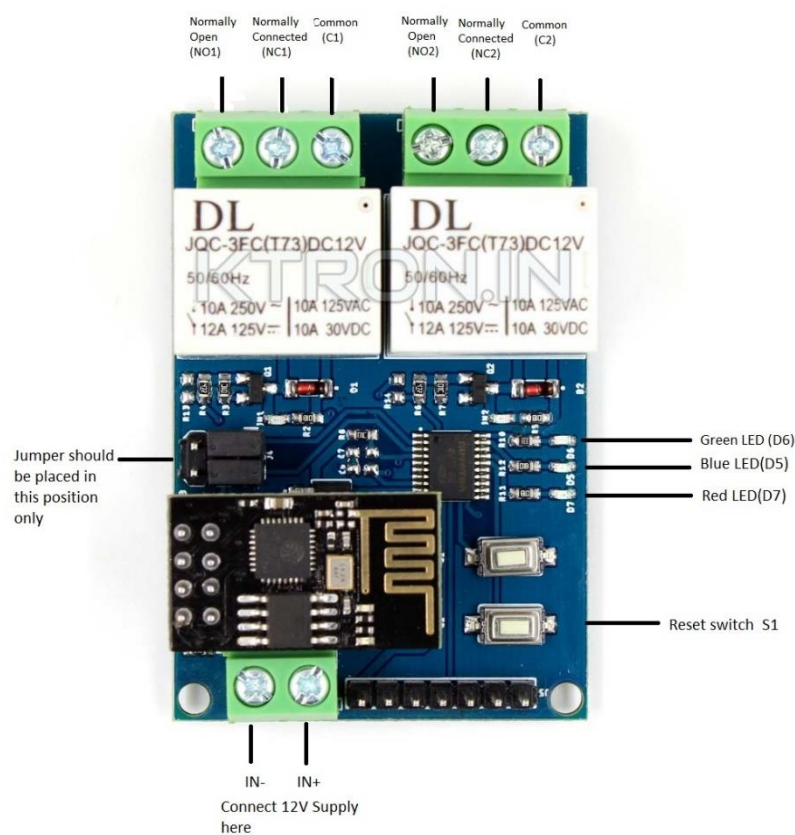### 1. Hardware Introduction:

Figure 1

- IN- and IN+ : Connect input 12V 1 A Power Supply
- NO, C and NC: This are relay terminals for both relays, connect the items that are to be remotely turned ON/OFF to these terminals.
- Reset Switch S1: Long pressing the switch for 5 seconds will reset the module to factory settings, and remove all the server and Wi-Fi configurations from memory. The initial configuration will not have to be done again.

- LEDs
    i. Red LED (D7): It lights up if the module is ON
    ii. Blue LED (D5): it lights up when the module is in Hotspot mode, and it does not have any Wi-Fi or Server Credentials, and is waiting for the initial configuration to be done.
    iii. Green LED (D6): It shows connectivity status of the module.
        1. Constantly ON: The module is connected to Wi-Fi but not connected to server.
        2. Blinks every 1 Sec: Module is connected to Wi-Fi and server, and is ready to use.
        3. Constantly off: The module is disconnected or not connected to the Wi-Fi.

2. Module Configuration:

- When you supply Power to the module 1st time, it starts the Hotspot and the Blue LED lights up. The name of the hotspot will be something like ESP-NAME.
- Wait for the BLUE Led to light up on the module, and then Connect your mobile phone to the hotspot.
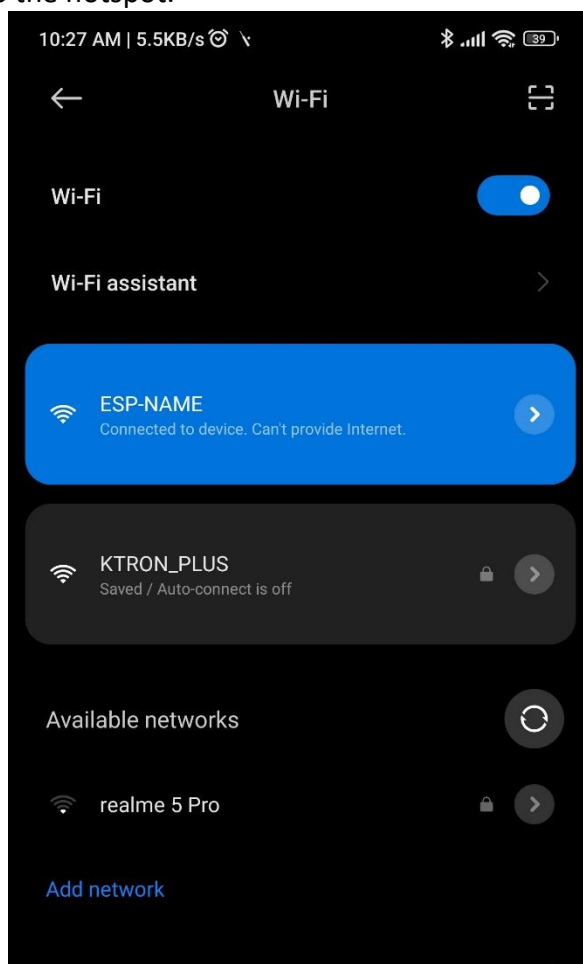

Figure 2

- Open browser on your mobile phone. Enter "192.168.4.1" in your search bar, and fill all the details as shown in figure 3 below. After filling the details click on submit button. **Be Careful, any wrong entry leads to problem in connectivity.**

Figure 3

i.   SSID & Password: Enter Wi-Fi name from available connections, and enter the Wi-Fi password.
ii. MQTT User & Password: This will be supplied to the customer via email at time of purchase.
iii. Topic: any random topic name. **Note down whatever is entered here as it will be used later for mobile application setup.**
iv. Server IP: This will be supplied to the customer via email at time of purchase.

- After submit button is pressed, below screen would appear, as the module not turns OFF the hotspot, and connects to the WiFi details submitted.
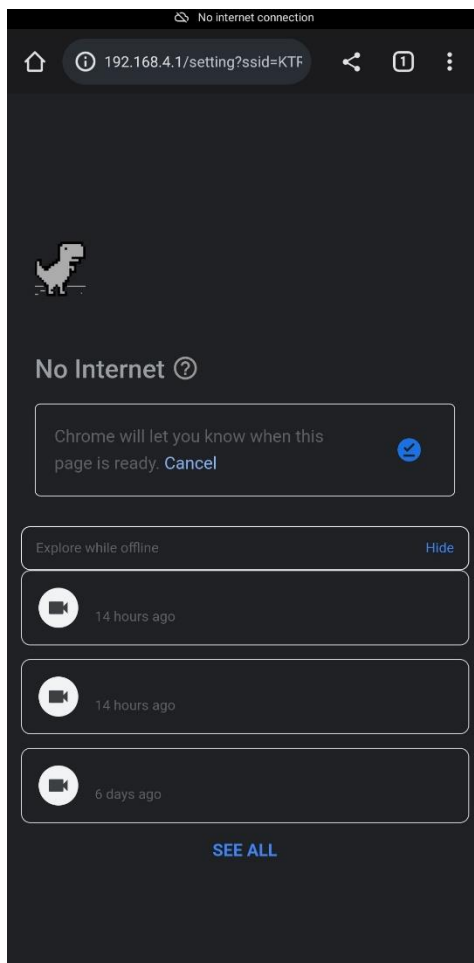

Figure 4

- If the module is able to connect successfully to the WiFi, the Green LED will turn ON, and the module will then try to connect to the server.
- If the green LED starts blinking every 1 second, than the module is connected to the server, and is ready to control devices.

Note: If your WiFi turns off or doesn't have internet access at time of initial setup or after completing the configuration, than the module will wait indefinitely to connect to server or wifi and you won't be able to operate the module. In such a case, long press S1 switch for 5 seconds, to reset the module to factory settings, and remove any saved wifi and server credentials.

- **Mobile Application Set-up**

1. Download any MQTT IoT dashboard application from play store. Lots of MQTT Panel IoT apps are available on play store for android. Few apps are listed below.

   E.g.: IoT MQTT Panel, Mqtt Dashboard, MQTT dash etc.

2. We will use IoT MQTT panel App, you can download it on play store or via Link given below.
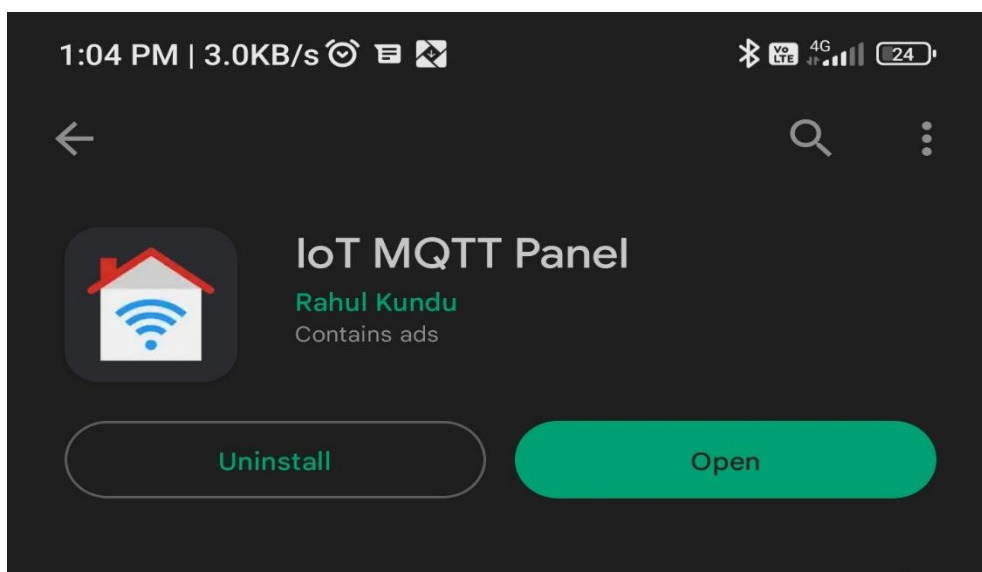
https://play.google.com/store/apps/details?id=snr.lab.iotmqttpanel.prod

Figure 5

3. Now open the app and click on Setup a Connection AS shown in figure 6

☰ **Connections**

You do not have any connection to communicate
with MQTT broker. If you are using this
application for the first time, we highly recomend
to go through FAQ and User Guide from main
menu.

SETUP A CONNECTION

Click here to make new connection

Figure 6

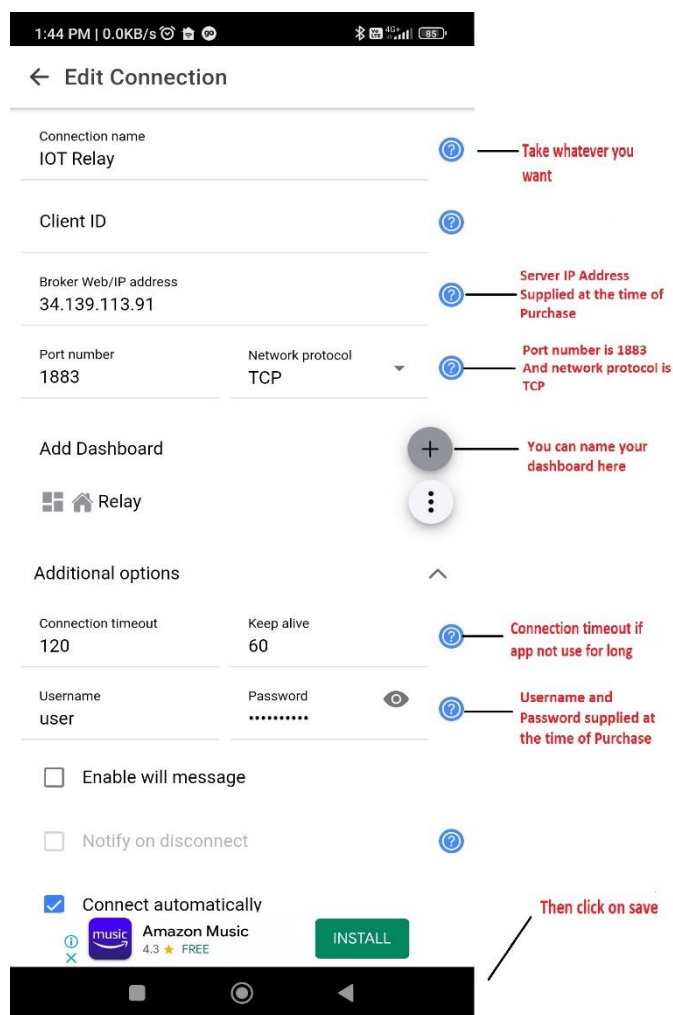4. Fill All the details as instructed in Figure 7 to complete the connection to server.

Figure 7

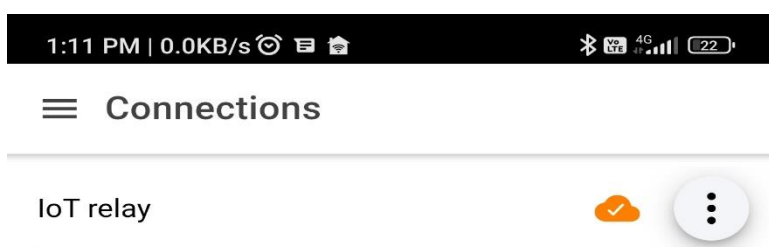5. After creating connection, the connection will be shown in home page like Figure 8 below.

Figure 8

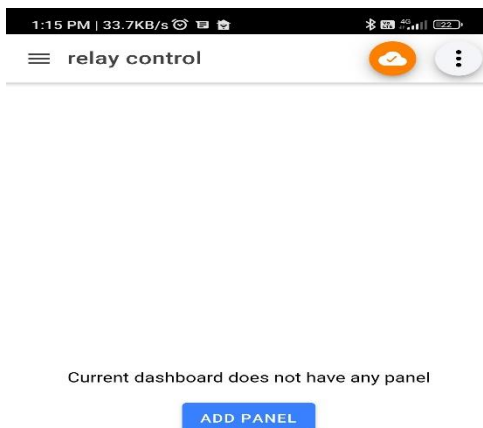6. Now click on your newly created connection and then click on Add panel on the screen shown in Figure 9.

Figure 9

7. After Clicking on add Pannel various types of panels will be shown to you on screen. Select **Switch** type Panel shown as in figure 10 below.
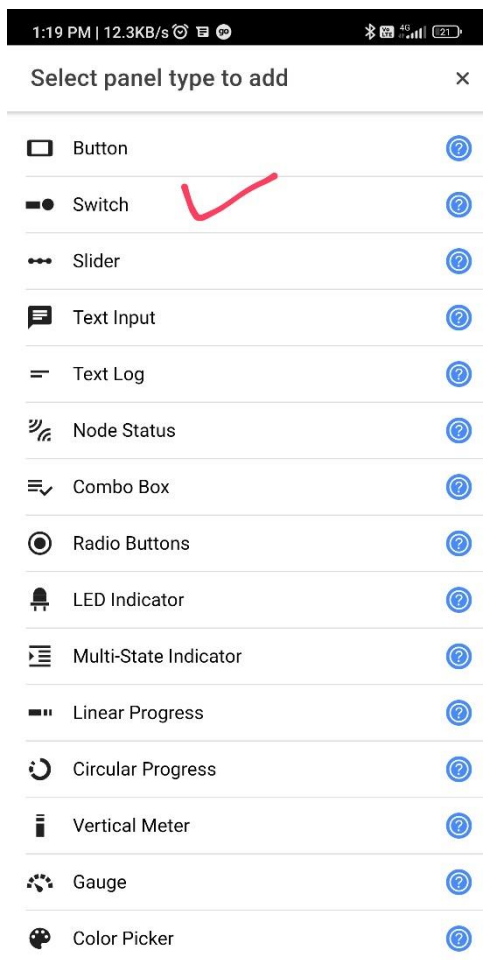

Figure 10

8. Once you select **Switch Type panel**, new screen to add device would appear as shown in figure 11.

Figure 11

Note:

- **The Topic Name should be same as the one which was entered while setting up of module.**
- **Payload on and payload off should be 1on, 1off for relay 1 and 2on, 2off for relay2.**

9. Now similarly add another relay by repeating step 7 and 8. Remember to enter payload for second relay as mentioned in above note. After completion it will look like Figure 12 below.
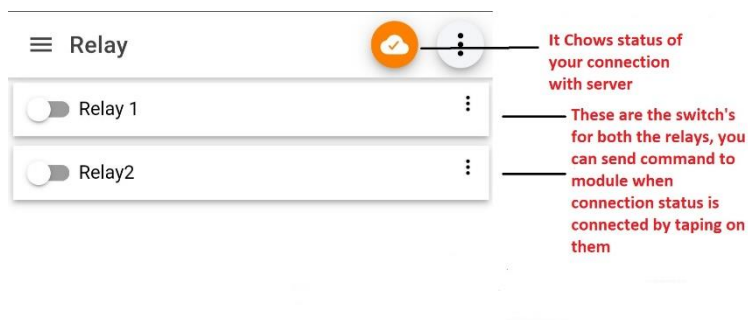

Figure 12

Now, the module and mobile app configuration is completed and you can turn the relay ON/OFF by sliding the sliding/clicking on particular button in the mobile application.

Note: The module should be connected to internet via Wi-Fi, only then it would be able to receive the commands sent by the mobile app. Same goes for the mobile phone, it will only send command if its connected to internet.