

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:

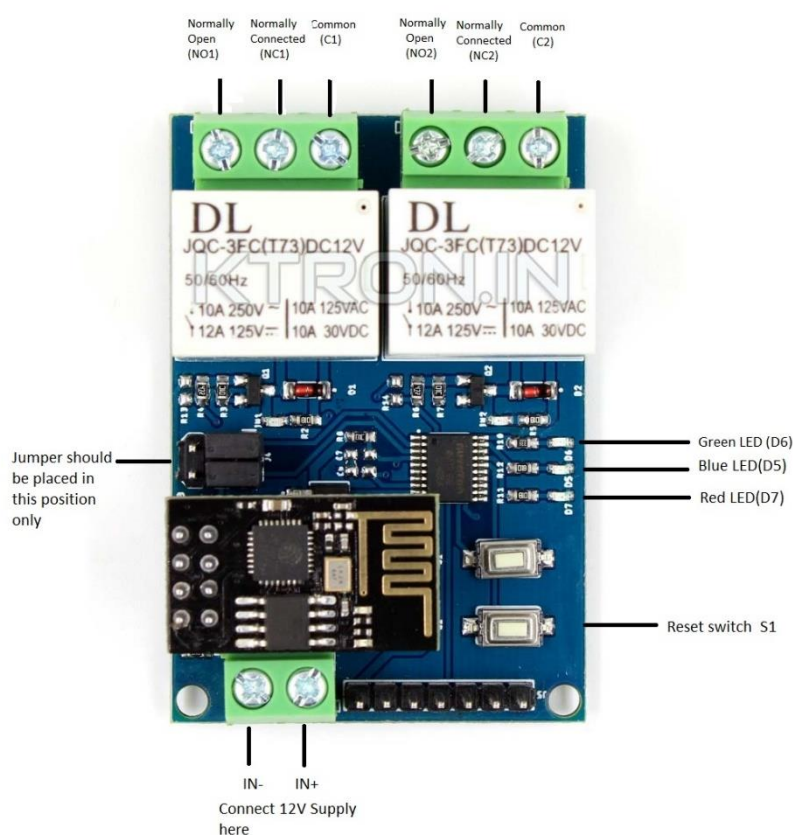


Figure 1

- IN- and IN+: Connect input 12V 1 A Power Supply
- NO, C and NC: These 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.

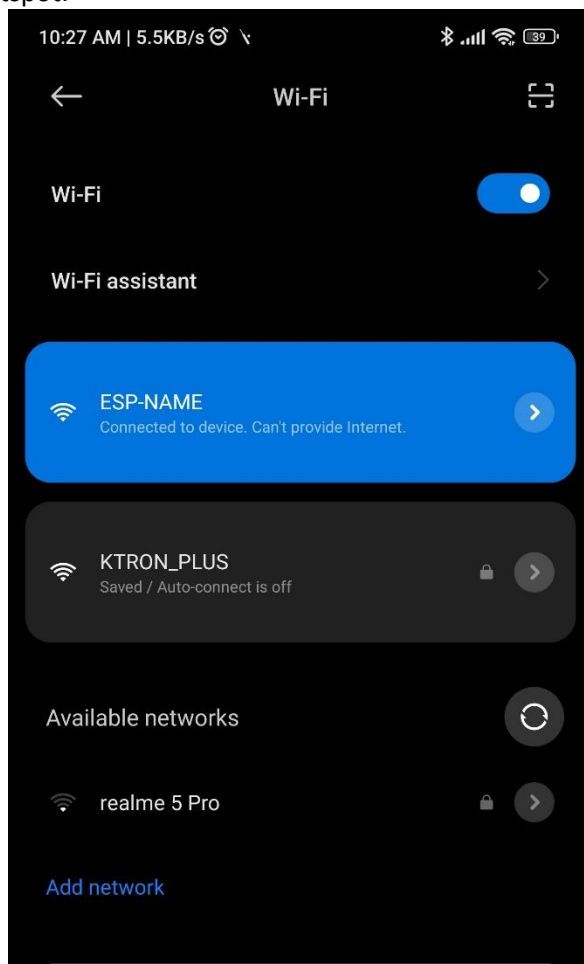


Figure 2

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

ESP8266 WiFi Connectivity Setup

192.168.4.1

1. Available Wifi — Here Shows the List of Available Wifi Network
 2.
 3.
 4.

MQTT Topic 1: — This is Topic Name Take whatever you want but remeber it
 MQTT Topic 2: — This is Topic Name Take whatever you want but remeber it
 SSID : — This is SSID or Your Wi-Fi Router Name
 Password : — This is your Wi-Fi Password
 MQTT User : — This is MQTT User Name Supplied At The Time Of Purchase
 MQTT Password: — This is MQTT Password Supplied At the Time Of Purchase
 ServerIP : — This is Server IP Address Supplied At The Time of Purchase

Figure 3

- SSID & Password: Enter Wi-Fi name from available connections and enter the Wi-Fi password.
- MQTT User & Password: This will be supplied to the customer via email at time of purchase.
- MQTT Topic: Any random topic you can take for both the field names. **Note down whatever is entered here as it will be used later for mobile application setup.**
- Server IP: This will be supplied to the customer via email at time of purchase.

- After submit button is pressed, the screen below would appear, as the module does not turn OFF the hotspot and connects to the Wi-Fi details submitted.

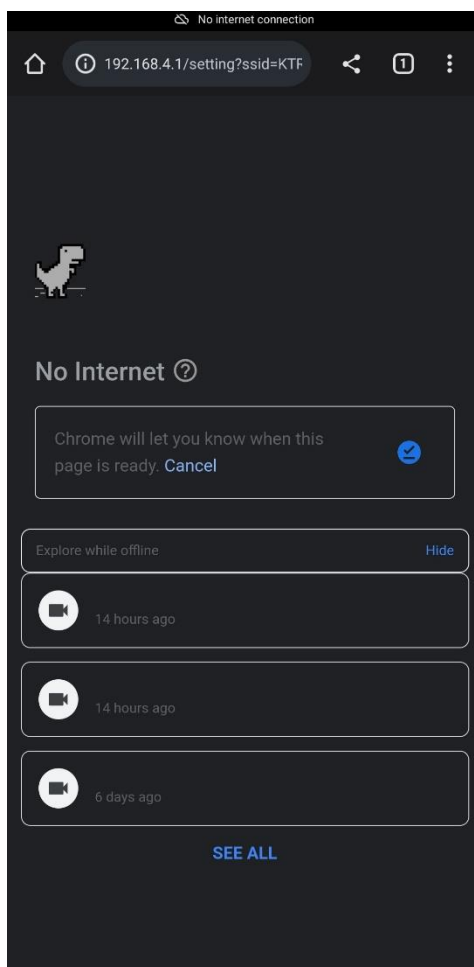


Figure 4

- 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>

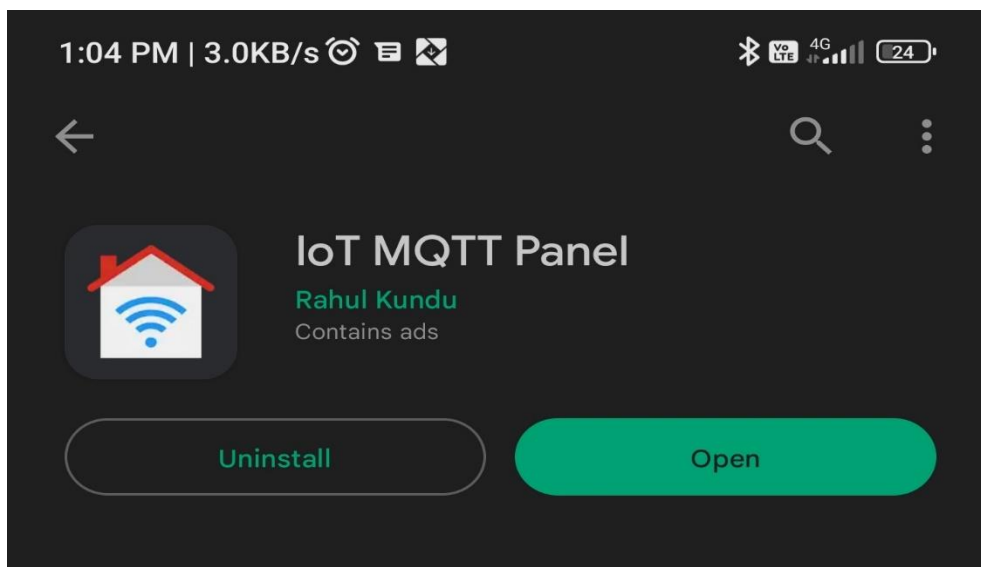


Figure 5

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 recommend 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.

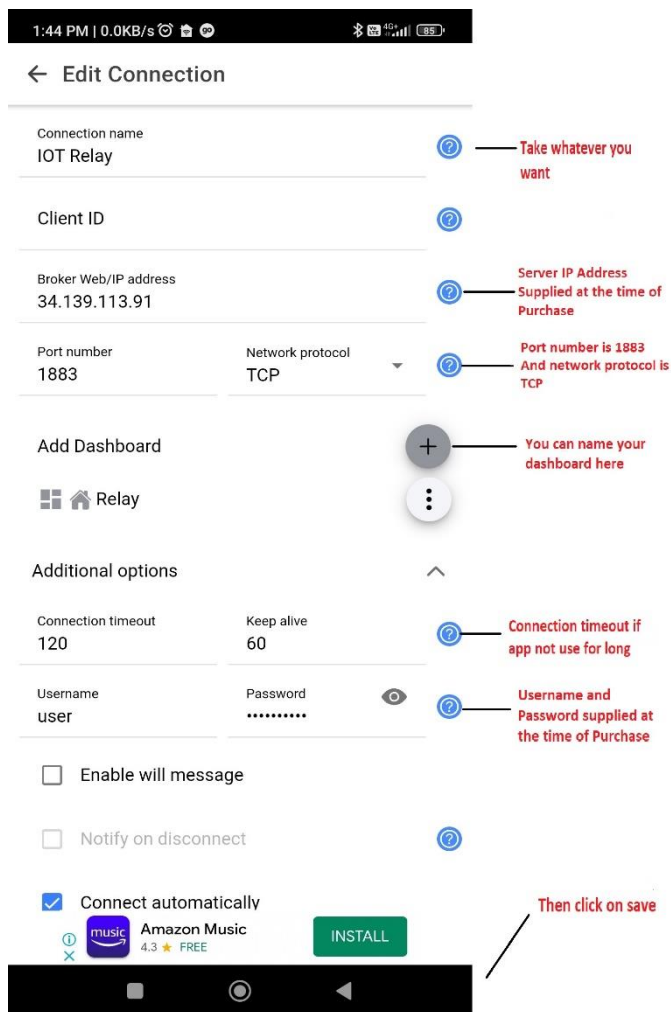


Figure 7

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

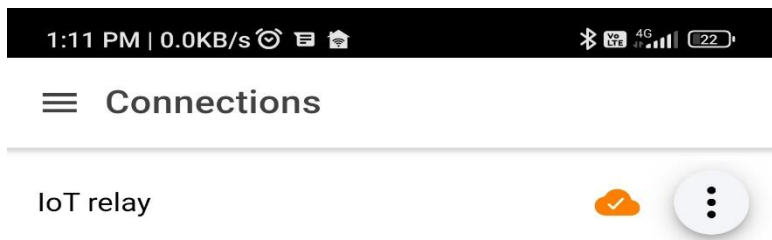


Figure 8

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



Current dashboard does not have any panel

ADD PANEL

Figure 9

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

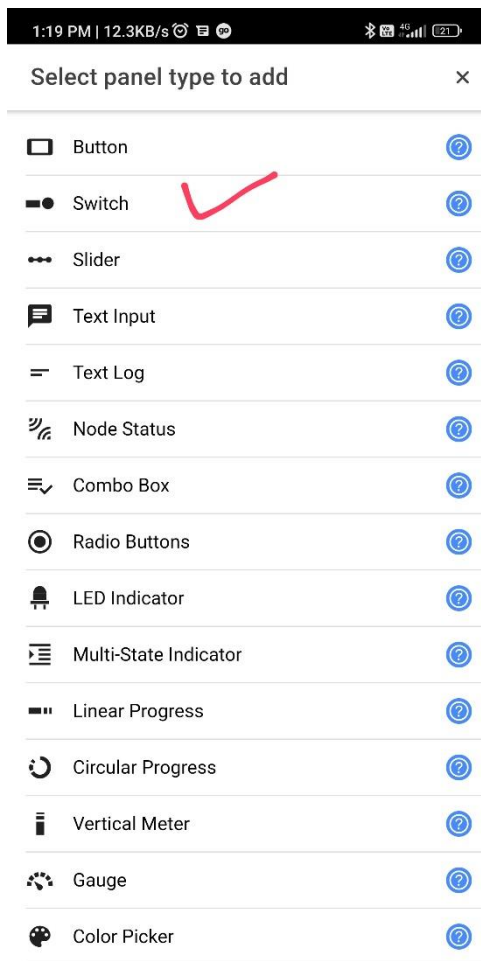


Figure 10

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

← Edit panel

Panel name *
Relay 1

Disable dashboard prefix topic

Topic *
MQTT User + Topic name - Eg. CL_1234568topic

Subscribe Topic

Payload on *
1on

Payload off *
1off

Switch color

Use icon switch

Enable notification

Payload is JSON Data

Show received timestamp

Show sent timestamp

Confirm before publish

Retain QoS 0

CANCEL SAVE

Give your switch a Name Whatever you want

Write here MQTT User id (given to you at the time of purchase)+topic name (without space) same as you entered in step-2 module configuration

Write for Relay1 on- 1on
for Relay1 off- 1off

similarly for relay 2
for Relay2 on- 2on
for Relay2 off- 2off

Finally click on save and you are ready to control relay

Figure 11

Note:

- The Topic should be as MQTT user + MQTT topic 1 name same as the one which was entered while setting up of module (without Space).

Eg. MQTT user – CI_123456

Topic name - light

So, the topic name will be – CI_123456light

- Similarly, for the second relay make Topic as MQTT user + MQTT topic 2 as the one which was entered while setting up of module (without Space).
- 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.

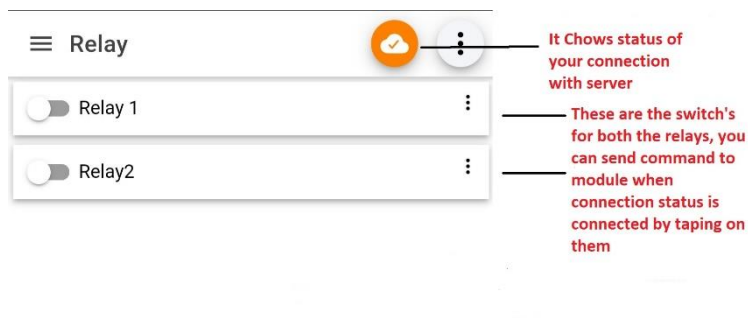


Figure 12

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.