

# Getting Started with IoT on Cayenne using Raspberry pi.

Internet of things is a system of interconnected things which communicate with each other. It's a buzz word presently. It allows data transfer without the involvement of human-human or human-machine interactions. There's been an upsurge of many IoT platforms which bring our ideas and thoughts into existence. Cayenne is one among such platforms that makes working with IoT a cakewalk even for a newbie.

## What is Cayenne?

Cayenne is an online iot platform that permits one to control iot devices. At first it was solely for Raspberry pi but now it works with Arduino ,LoRa and your own thing as well. It's drag and drop feature makes it attractive. It standardizes the connection among devices such as sensors and motors and makes sure that drivers are in place. In this sense it makes the programming and the hardware a lot easier.

Widgets are used to monitor, visualize device data and actions. One also, can incorporate custom code into it. Python script can also be used along with Cayenne by using Raspberry Pi in MQTT mode which is slightly different from this tutorial.

A wide line-up of actuators(output devices) can be added into this along with relays, motors, etc. It supports a mixture of Arduino and Raspberry Pi hardware in the same project. Hence it becomes possible to use a combination of hardware in, say, a home automation project and have a sensor on one device, trigger a control device on another. To make things automatic one can define triggers - which are 'if-then' rules that can take the state of sensor in the 'if part' and the state of an actuator in the 'then part'. Things like turning one thing off when the temperature reaches a threshold and sending notifications to the outside world using messages or email are also available. Besides, custom messages together with photos can also be sent.

Once the Cayenne agent is put in, i.e. installed on the Pi, you can interact with it via the mobile app or the website.

## GETTING STARTED WITH CAYENNE

Before moving to Cayenne agent installation on your Raspberry Pi,

- Enable SSH on pi. This may be done as:

Go to Menu --> Raspberry Pi Configuration --> Enable SSH.

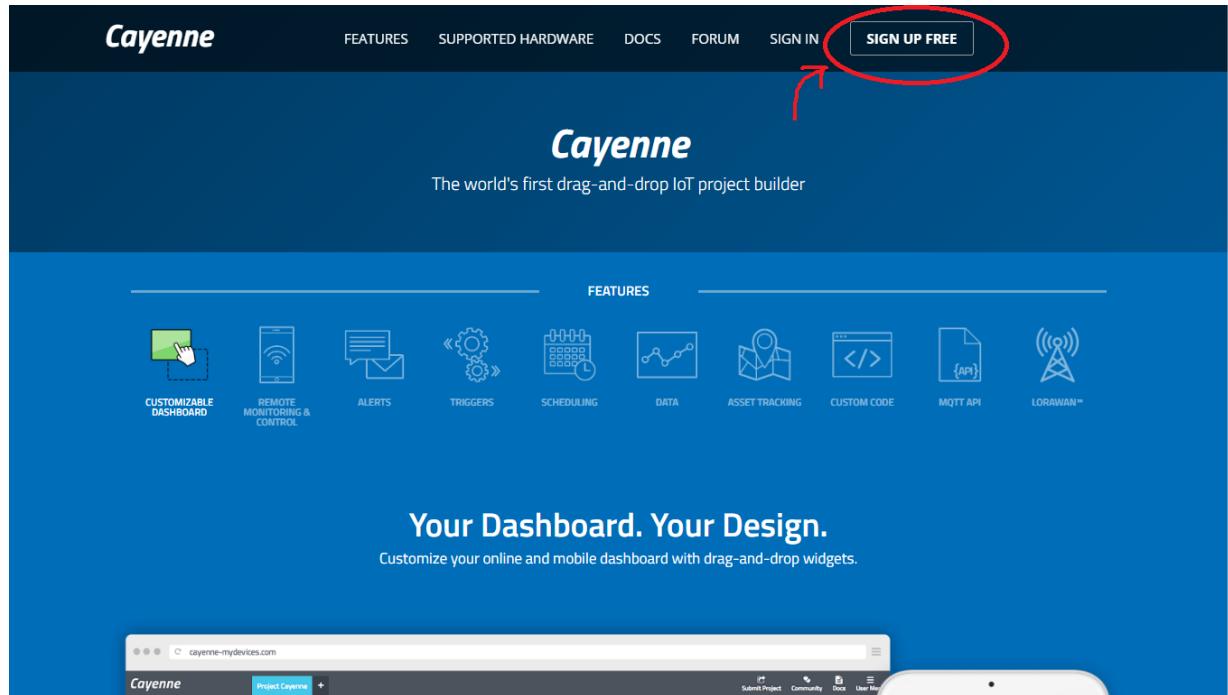
Now reboot Pi.

- Then find your IP address (optional) by heading into terminal and writing the command:

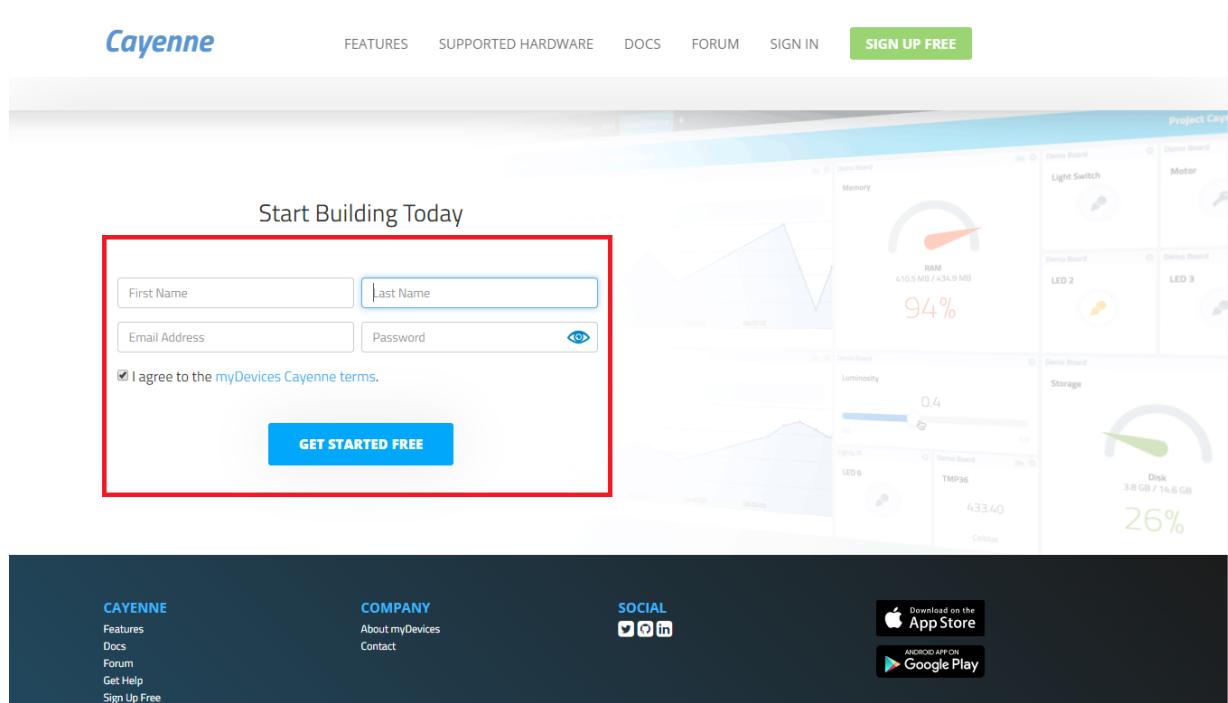
```
hostname -I
```

Keeping these things in mind let's head onto Cayenne agent installation.

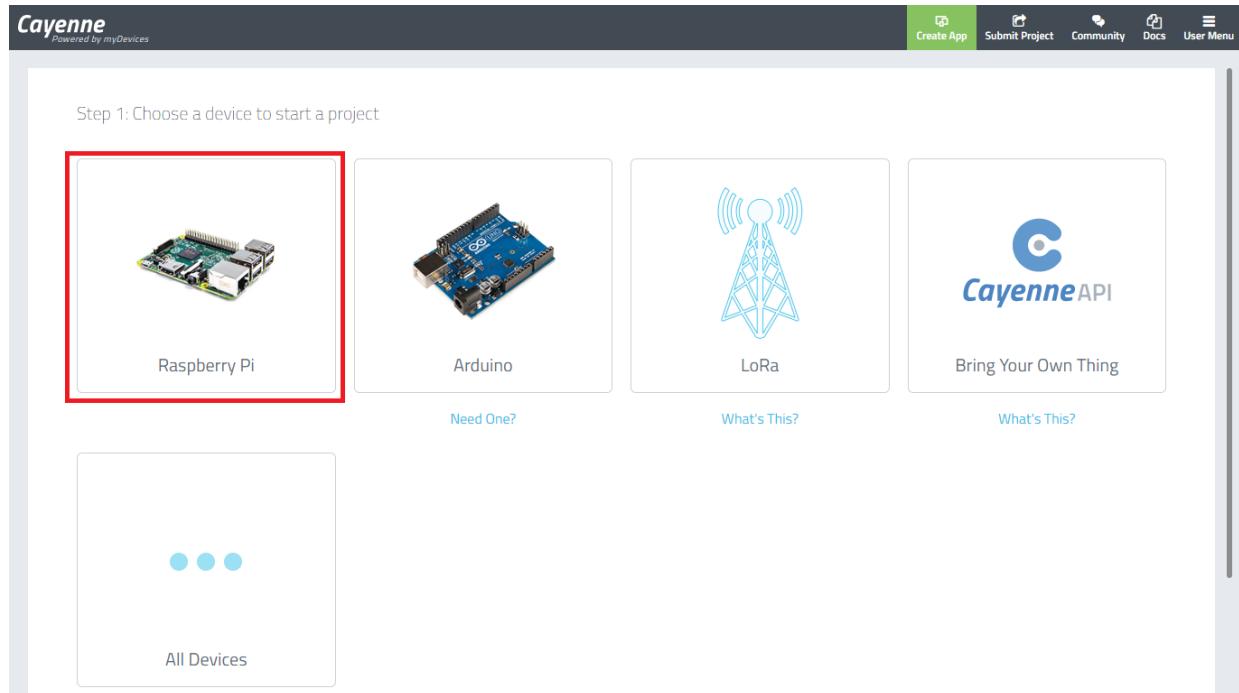
1.Go to [here](#) and click on 'sign up free'.



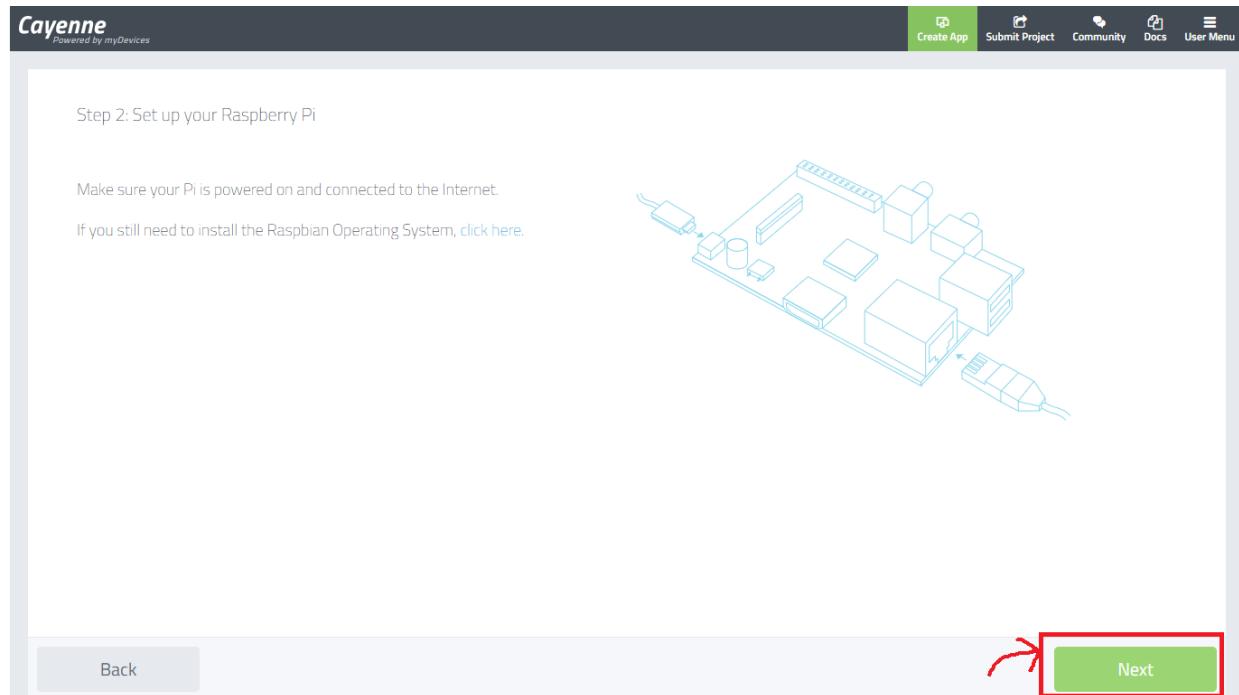
2. This takes you to the bottom of the page. Enter your details and click on 'Get Started for Free'.



3. You will be now required to choose your device. In this article, we opt for Raspberry Pi.



4. In the next prompt, click on 'Next' as shown below.



5. You will be directed as below.

**Cayenne**  
Powered by myDevices

Step 3: Connect your Raspberry Pi

OPTION 1:  
myDevices Cayenne Smartphone App  
Our smartphone app can be used to automatically locate and install myDevices Cayenne on your Pi.

[Download on the App Store](#)    [GET IT ON Google Play](#)

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OR

OPTION 2:  
Terminal / SSH  
To download and install myDevices Cayenne on your Pi, use the Terminal on your Pi or SSH. Run the following commands:

```
wget https://cayenne.mydevices.com/dl/rpi_73ig502fv4.sh
sudo bash rpi_73ig502fv4.sh -v
```

[Back](#)

You can prefer either of the installation procedures but Option 2 was easier for me. In option 2, just open Terminal on your Pi and enter the following commands:

```
 wget https://cayenne.mydevices.com/dl/rpi_73ig502fv4.sh
 sudo bash rpi_73ig502fv4.sh -v
```

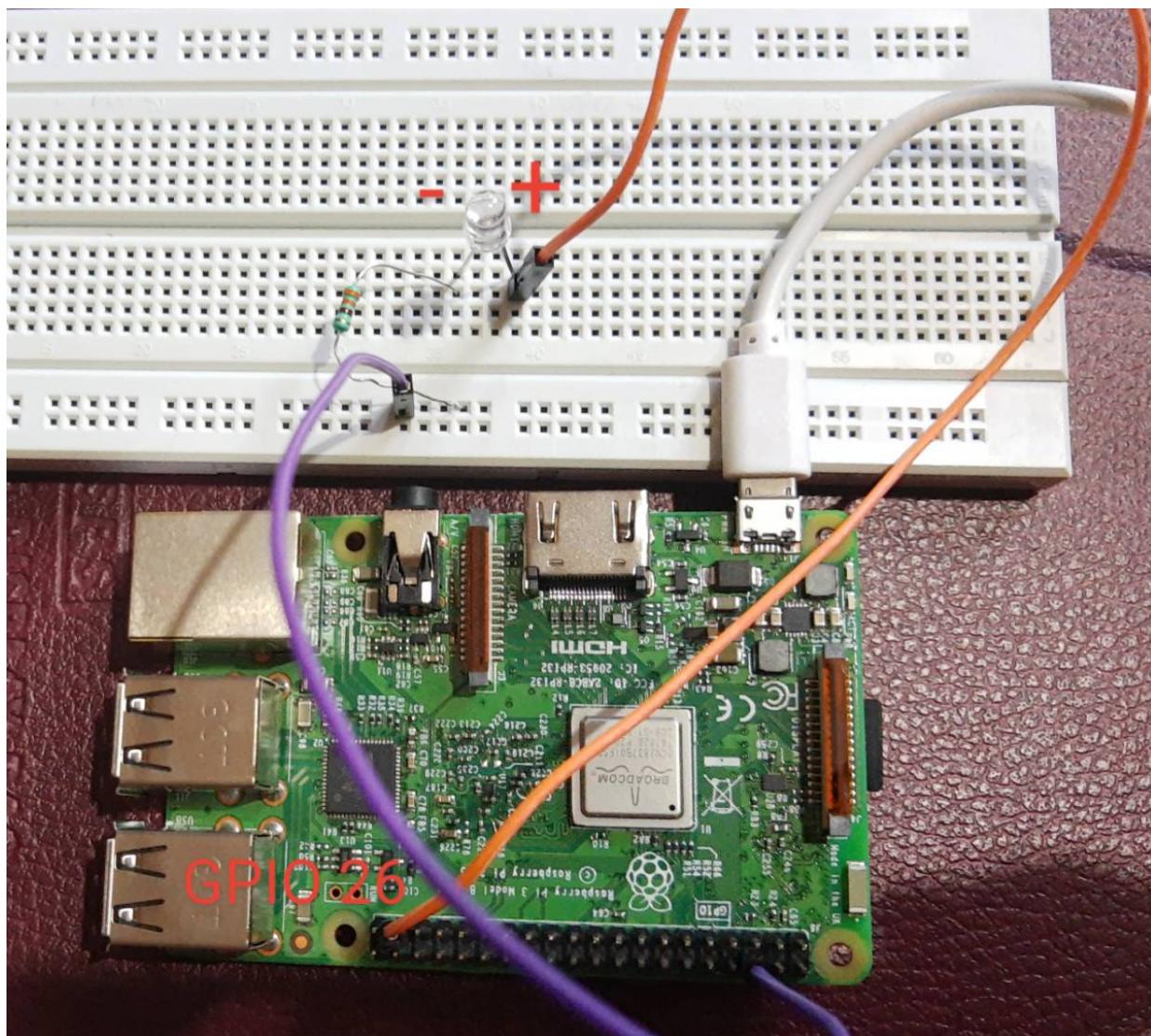
Wait for a moment. You'll get an email from 'myDevices' upon a complete and successful installation.

### LED SWITCH USING CAYENNE

1. Connect a resistor between ground and LED negative(shorter lead). Connect the LED positive(longer lead) to the GPIO PIN 26 of Pi.

Follow the image for reference.

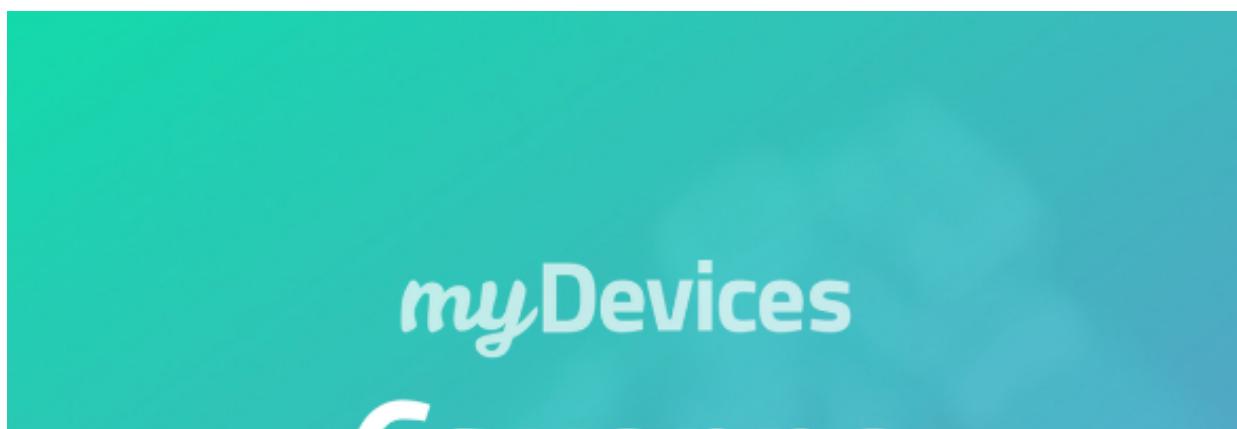
Turn Raspberry Pi ON after making those connections.



Head on to Cayenne dashboard and choose your device. I did this part in Cayenne app for Android. The same process can be adopted for iOS app and website as well.

[Click here](#) to access Cayenne dashboard on your Computer.

2. Sign in on your mobile device.



# Cayenne

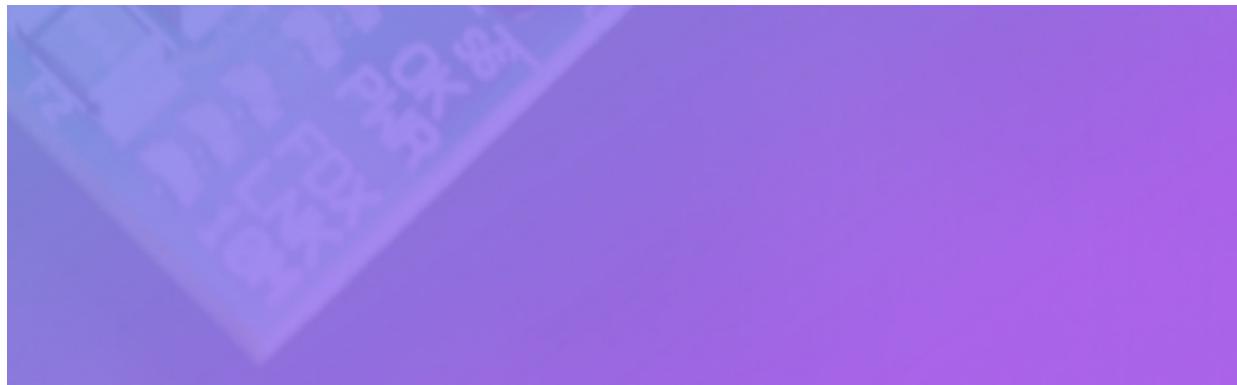
Enter details to login to account

Email

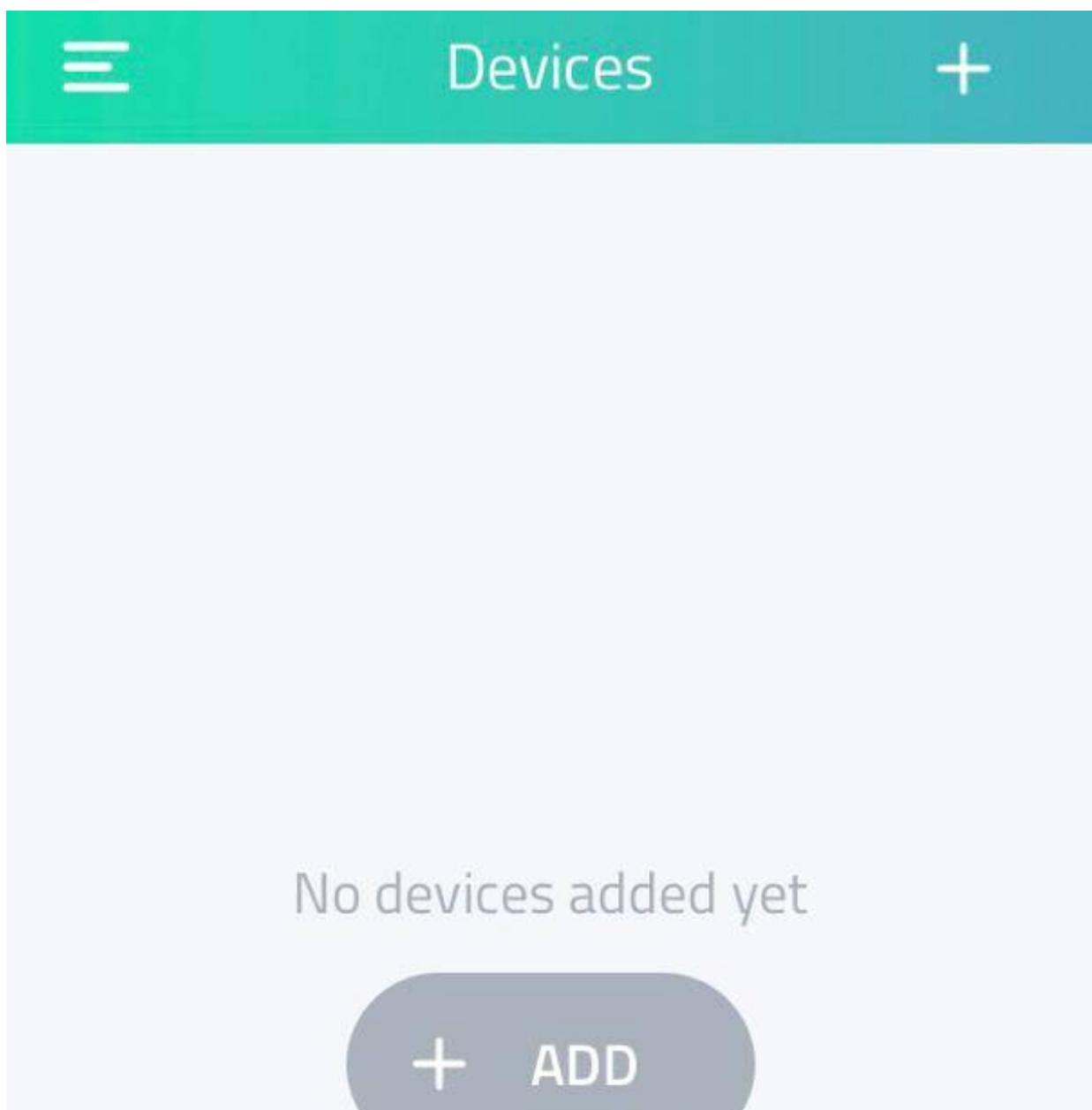
Password

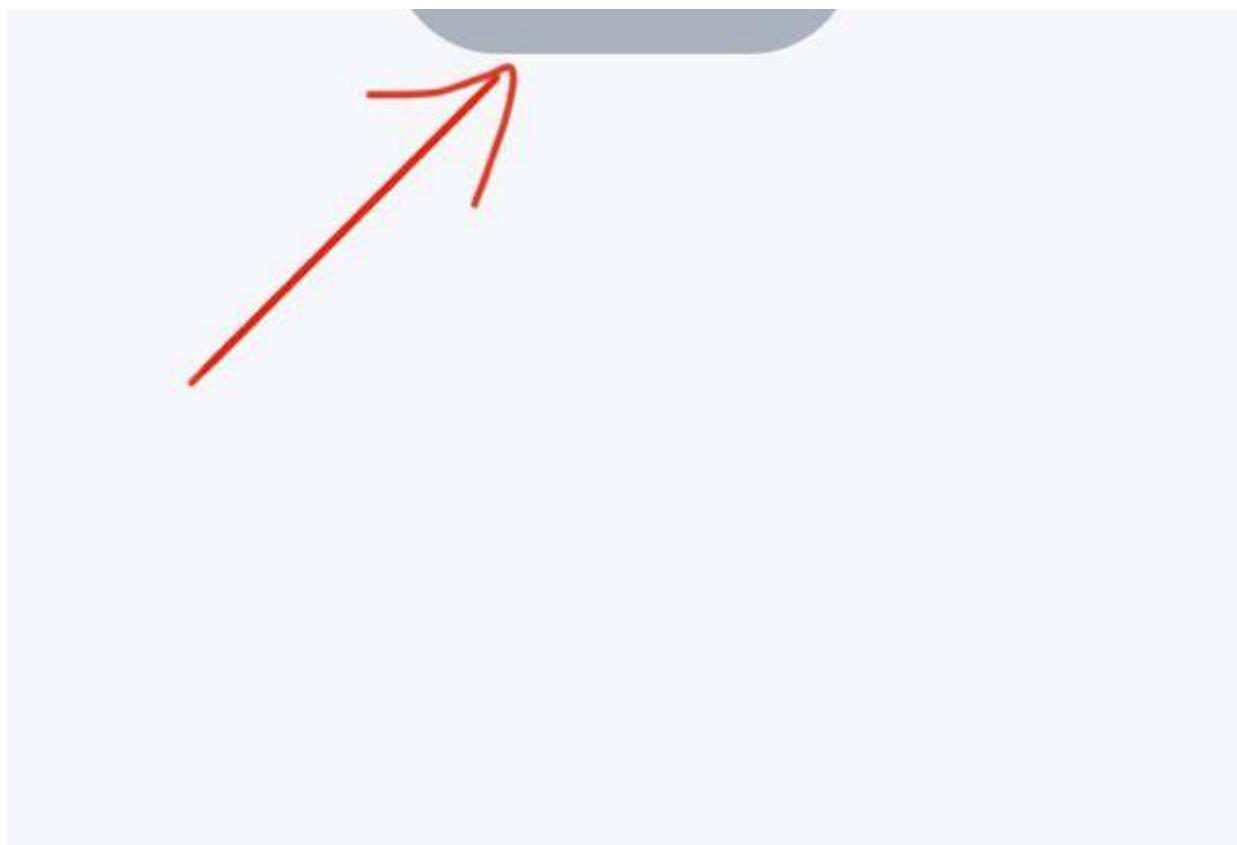
Login

[Forgot Password?](#) | [Create Account](#)



3. Then click on 'Add' and choose Raspberry Pi.





[Cancel](#) **Add Device**

Raspberry Pi

A light blue wireframe-style icon of a Raspberry Pi Model B single-board computer, showing the Broadcom SoC, RAM, and various connectors. A red checkmark is drawn below it.

Arduino

A light blue wireframe-style icon of an Arduino Uno microcontroller board, showing the ATmega328P chip and various pins. A red checkmark is drawn below it.

Need one?

Need one?

BETA

LoRa

Bring Your Own Thing

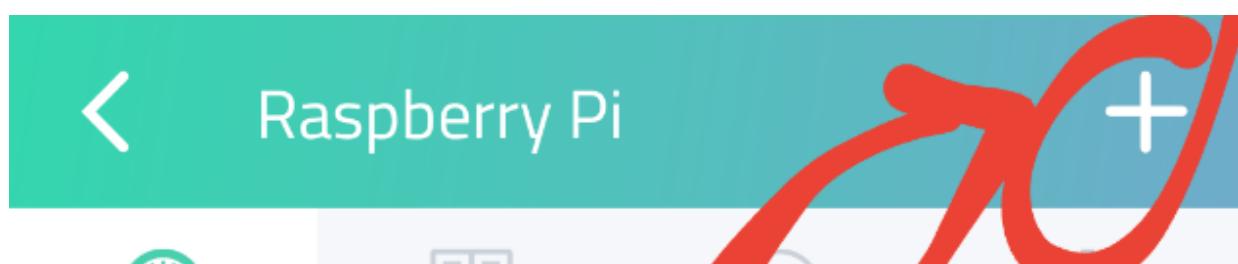
Need one?

What's this?

Cayenne app searches for devices and displays the search results. Then you select your device after which you'll be asked to enter SSH username and password.

You can also search for your device( Raspberry pi) using IP address without ambiguity.

4. When dashboard appears click on Add Device.





CPU



1

Percent (%)

RAM



432.4... MB

Storage

6.0 GB  
GBTemperatur  
e

49.39

Celsius

Network  
Speed

-

Mbps

Reset



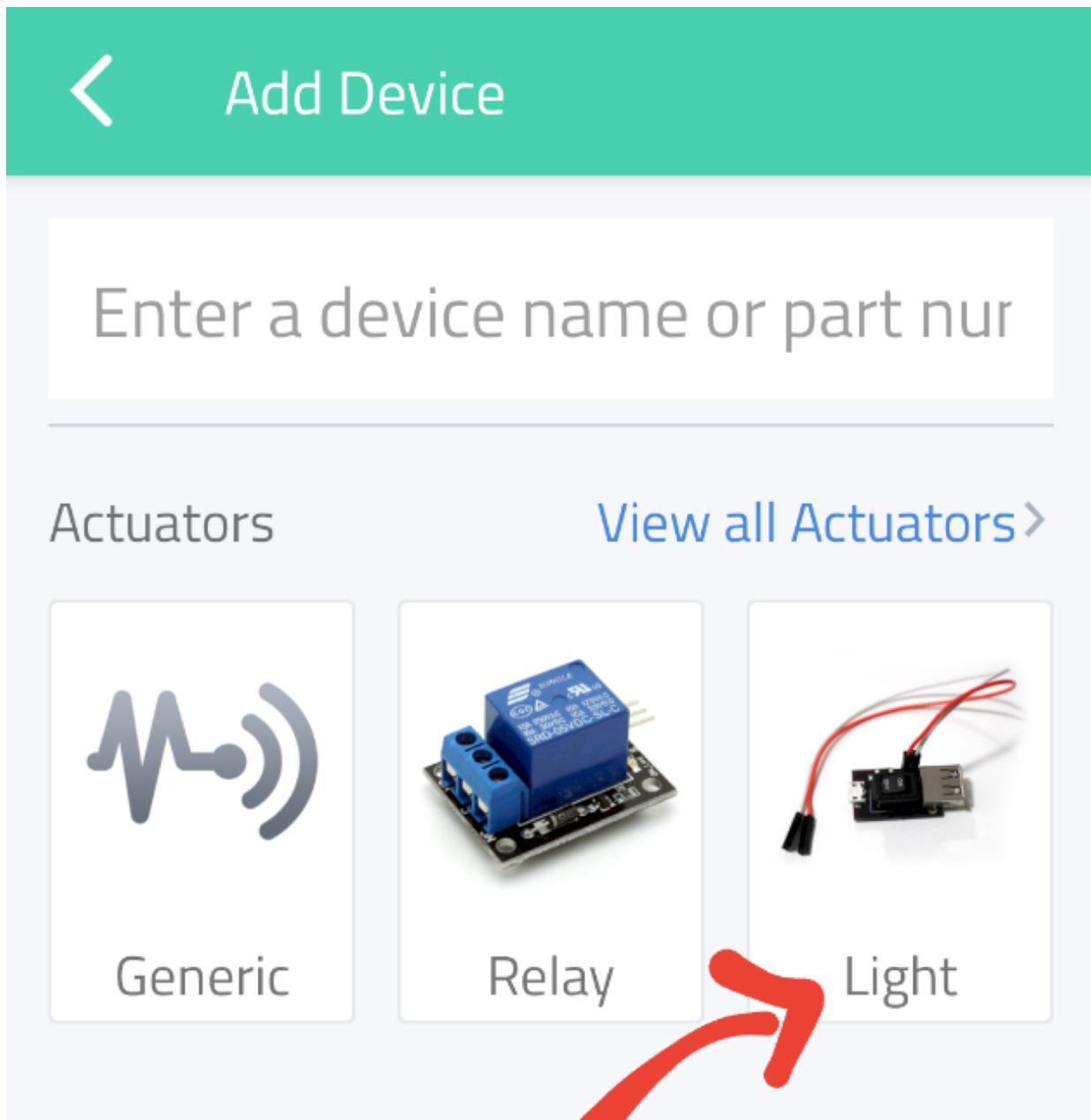
Digital (0/1)

Shut Down



Digital (0/1)

5. Select Light switch from Actuators.



## Sensors

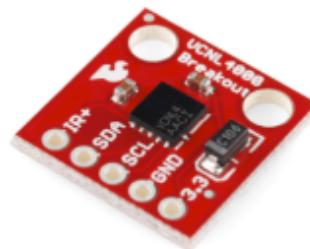
[View all Sensors >](#)



Generic



Temperatur  
e



Luminosity

6. Fill as below and click on 'Add Sensor'.



Light Switch



Light Switch

Turn On/Off a Light

Digital

[View tutorial](#)

Light Switch

Raspberry Pi

Integrated GPIO

26

Invert logic



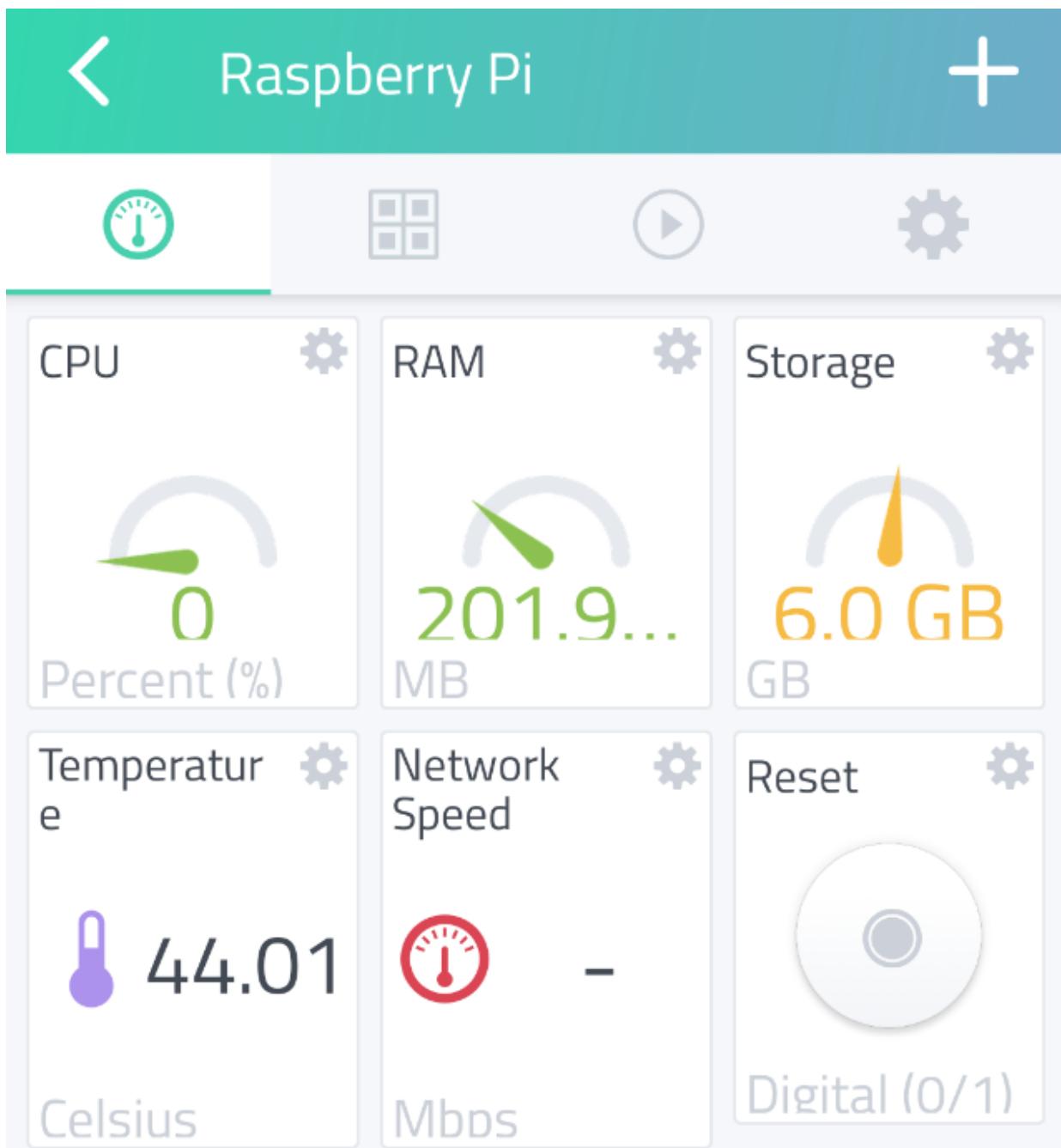
 Button

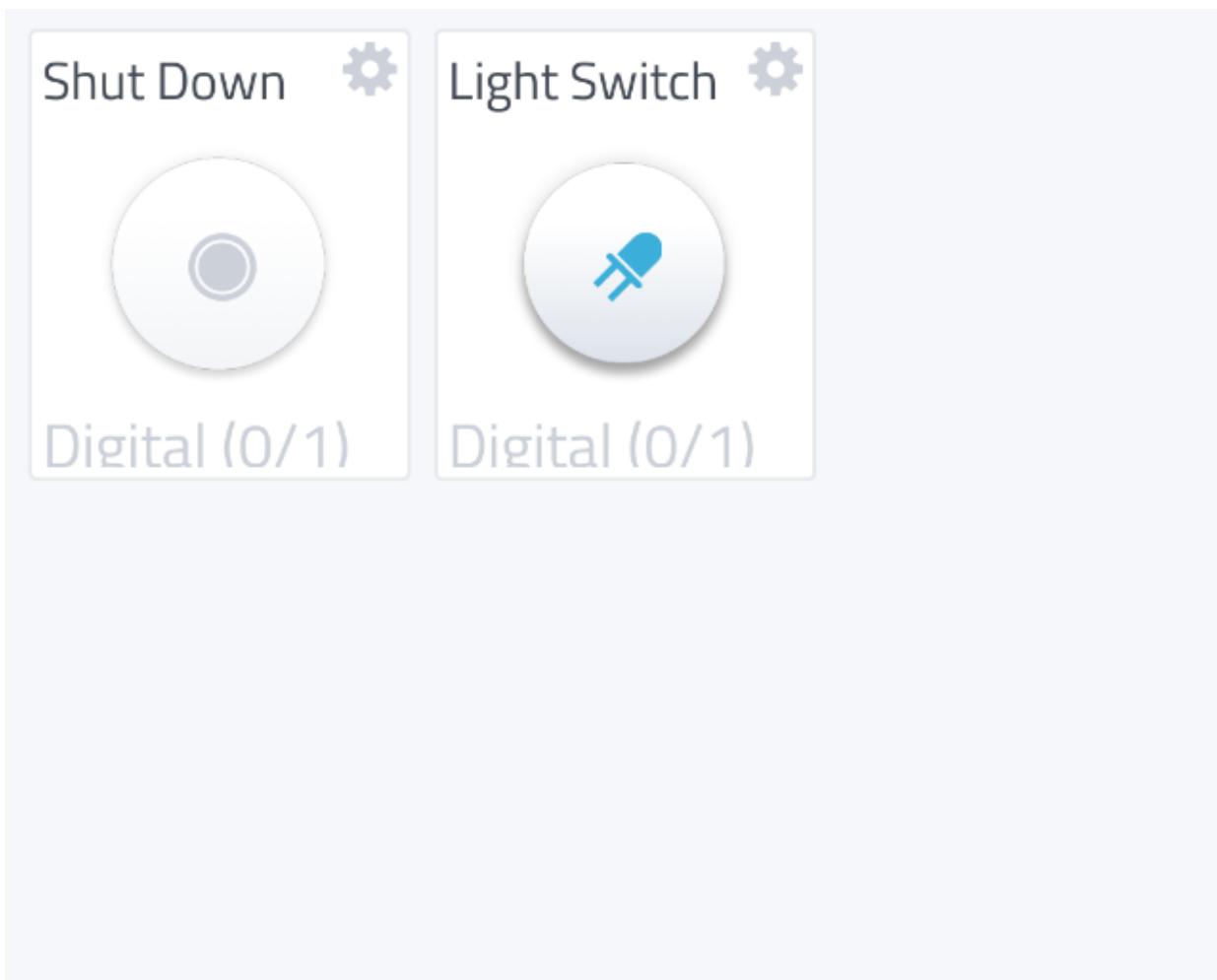
 LED

Digital (0/1)

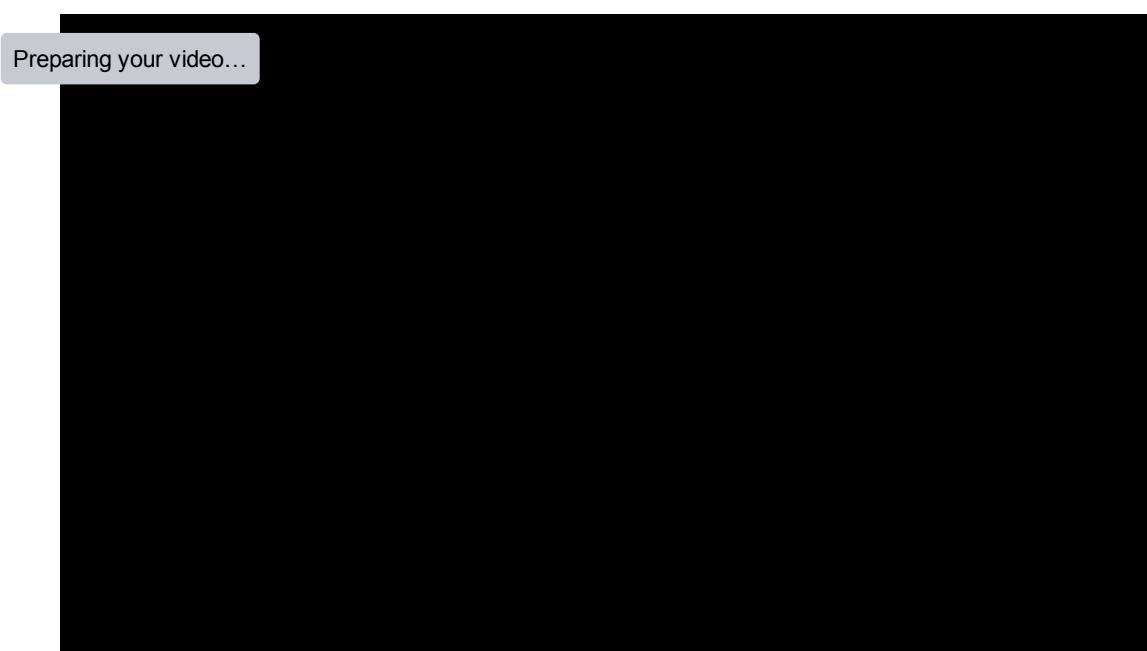
## Add Sensor

7. You can now control the LED from your Cayenne dashboard sitting anywhere in the world via Internet.





8. Here is a video of the final result.





▶ 0:00

