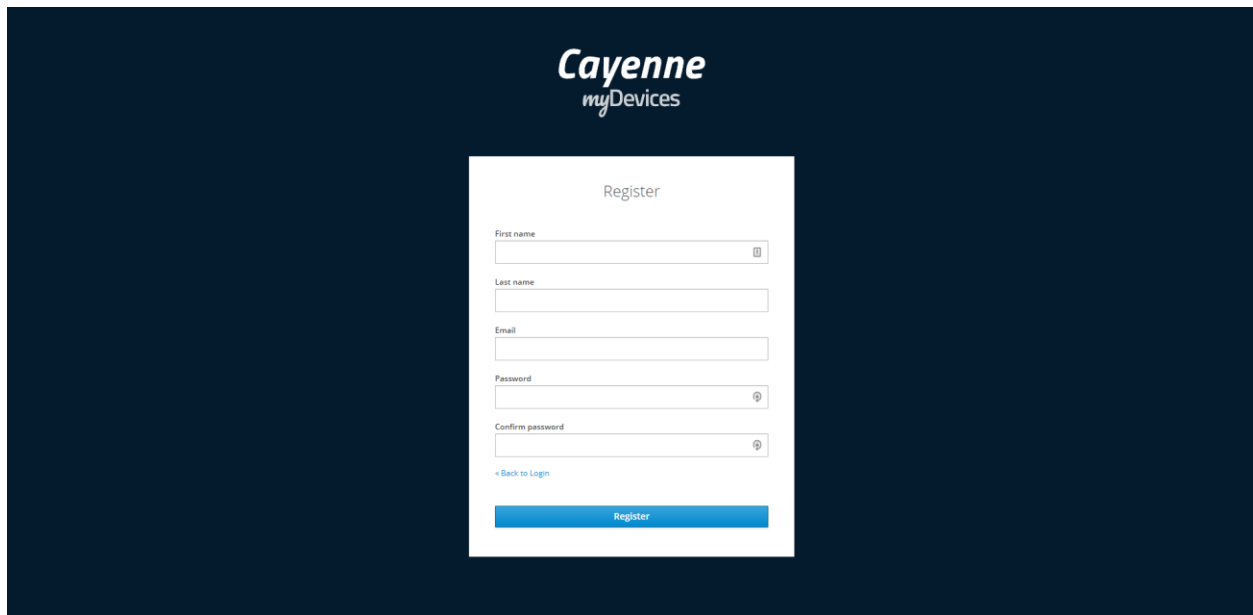


## User Guide

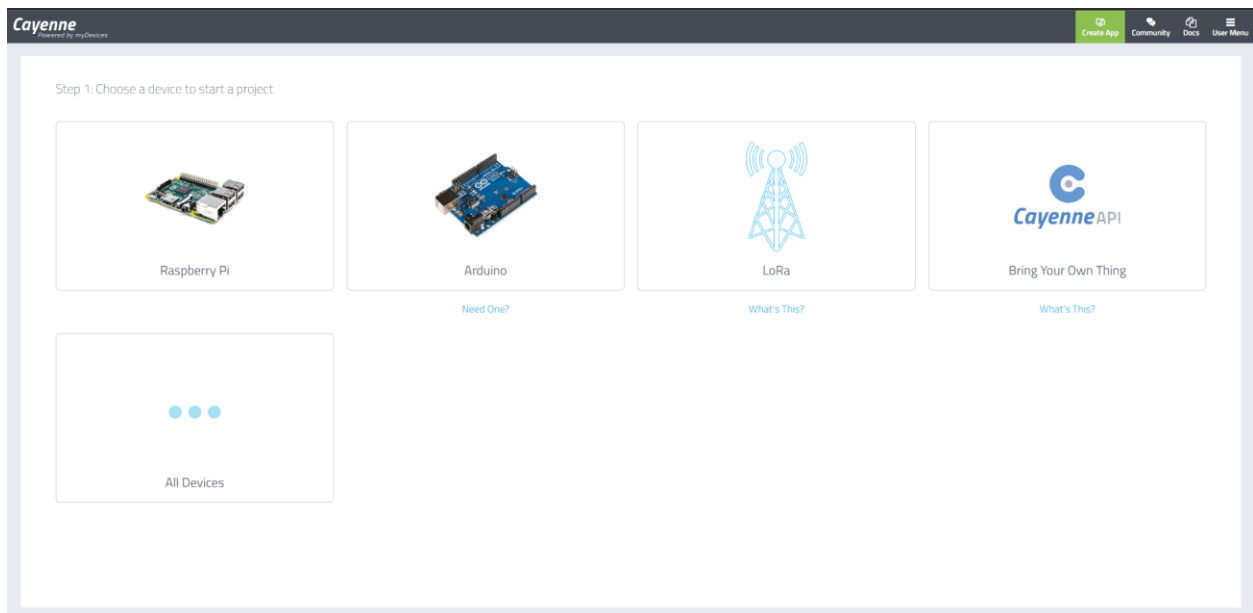
First time setup:

1. Create a free account on [Cayenne](#)



The image shows the Cayenne myDevices registration page. It features a dark blue background with the Cayenne myDevices logo at the top. In the center is a white registration form titled "Register". The form contains the following fields: "First name", "Last name", "Email", "Password", and "Confirm password". Each field has a small icon on the right side of the input box. Below the "Confirm password" field is a link that says "« Back to Login". At the bottom of the form is a blue button labeled "Register".

2. Select Arduino from the device selection and click next:



The image shows the Cayenne device selection screen. At the top, there is a header bar with the Cayenne logo and navigation links: "Create App", "Community", "Docs", and "User Menu". Below the header, the main content area is titled "Step 1: Choose a device to start a project". It displays five device options in a grid:

- Raspberry Pi**: Accompanied by an image of a Raspberry Pi board.
- Arduino**: Accompanied by an image of an Arduino board. Below this option is a link that says "Need One?".
- LoRa**: Accompanied by a LoRa antenna icon. Below this option is a link that says "What's This?".
- Bring Your Own Thing**: Accompanied by the Cayenne API logo. Below this option is a link that says "What's This?".
- All Devices**: Accompanied by three blue dots.

3. Take note of the MQTT username, password, and client id:

**Cayenne**  
Powered by mydevices

Create App Community Docs User Menu

Step 3: Connect your Arduino

SELECT YOUR ARDUINO BOARD CONNECTION:

- Arduino Due
- Arduino Leonardo
- Arduino Mega
- Arduino Mini
- Arduino Nano
- Arduino Pro
- Arduino Pro Micro
- Arduino Pro Mini
- Arduino Uno
- Arduino Yun

MQTT USERNAME:  
cf645890-a52e-11ec-9f5b-45181a95093e

MQTT PASSWORD:  
836944287512063b540e5b6e88b13a6347cc6999

CLIENT ID:  
bdf6c540-c9fa-11ec-8da3-4743599af03d7


MQTT SERVER:  
mqtt.mydevices.com

MQTT PORT:  
1883

NAME YOUR DEVICE (optional):  
Arduino 0991

Copy sketch file and MQTT Credentials in Arduino IDE to upload

Back



4. Plug in the cables according to the picture:









5. Open the Arduino files (Thermistor\_Oxi\_Cayenne and Flex\_Cayenne) and type in the credentials and the WiFi password. And upload the code afterwards.

Thermistor\_Oxi\_Cayenne \$

```
#include <SoftwareSerial.h>
#include <ArduinoJson.h>
#define CAYENNE_PRINT Serial
#include <CayenneMQTTESP8266.h>
#include <ESP8266WiFi.h>
//D6 = Rx & D5 = Tx
SoftwareSerial nodemcu(D6, D5);

char ssid[] = "";
char wifiPassword[] = "";
char username[] = "";
char password[] = "";
char clientID[] = "";
```

Flex\_Cayenne \$

```
#include <ESP8266WiFi.h>
#define CAYENNE_PRINT Serial
#include <CayenneMQTTESP8266.h>

// Set these to run example.
char ssid[] = "";
char wifiPassword[] = "";
char username[] = "";
char password[] = "";
char clientID[] = "";
```

6. After the sleep session is over head on over to the data tab and download the csv files with channel names 0, 1, 2.

LOWCOST +									
Create App Community Docs User Menu									
Overview Data Arduino bf3e									
Live m h d w 1mo Custom Query Download									
Timestamp	Device Name	Channel	Sensor Name	Sensor ID	Data Type	Unit	Values		
2022-04-26 7:09:49	Arduino bf3e	0	Channel 0	3da6fee0-c551-11ec-8c44-371df593ba58		C	36.918		
2022-04-26 7:09:49	Arduino bf3e	0	Channel 0	3da6fee0-c551-11ec-8c44-371df593ba58		C	36.918		
2022-04-26 7:09:49	Arduino bf3e	0	Channel 0	3da6fee0-c551-11ec-8c44-371df593ba58		C	36.918		
2022-04-26 7:09:49	Arduino bf3e	0	Channel 0	3da6fee0-c551-11ec-8c44-371df593ba58		C	36.918		

7. Upload the csv file on the website under the graph and table pages.

Project


Graphs

Table

Instructions

About

IoT-based Prototype  
utilizing Low-cost Sensors  
for Monitoring Apnea  
during Sleep



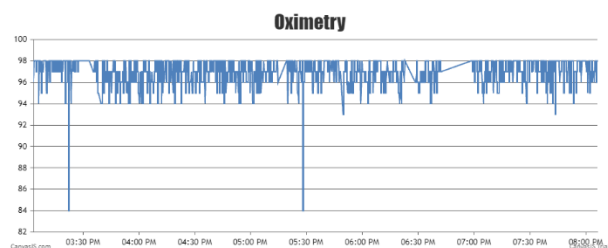
Resources

Get the links below

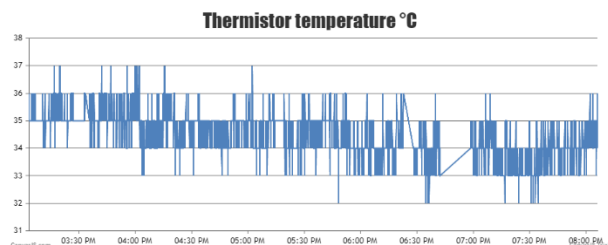
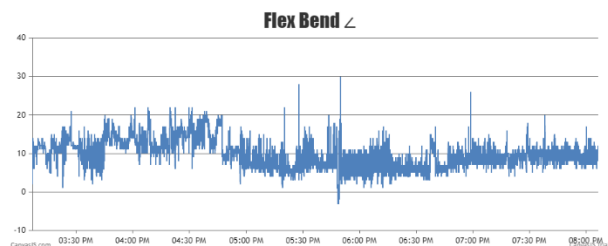
Arduino files

Cayenne IoT

Website Source Code

[Download PDF](#)**Hypopnea Events**

7:22 AM: **S4**  
7:22 AM: **S4**  
7:22 AM: **S4**  
7:22 AM: **S4**  
9:28 AM: **S4**  
9:28 AM: **S4**  
9:28 AM: **S4**  
9:28 AM: **S4**  
9:28 AM: **S4**

[Choose File](#) 1.csv[Upload Heart](#)[Choose File](#) 0.csv[Upload Thermistor](#)[Choose File](#) flex.csv[Upload Flex](#)[Choose File](#) 0.csv

Timestamp	Device ID	Channel	Sensor Name	Sensor ID	Data Type	Unit	Value
2022-04-28T12:06:31.007Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	34.91400146484375
2022-04-28T12:06:27.010Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.80799865722656
2022-04-28T12:06:23.092Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	36.71500015258789
2022-04-28T12:06:19.174Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.60900115966797
2022-04-28T12:06:15.263Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.21099853515625
2022-04-28T12:06:10.978Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.01300048828125
2022-04-28T12:06:06.972Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.01300048828125
2022-04-28T12:06:02.968Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.11199951171875
2022-04-28T12:05:59.059Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	34.816001892089844
2022-04-28T12:05:55.198Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.11199951171875
2022-04-28T12:05:50.943Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.01300048828125
2022-04-28T12:05:46.936Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.310001373291016
2022-04-28T12:05:42.936Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	33.7400016784668
2022-04-28T12:05:39.196Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	34.91400146484375
2022-04-28T12:05:34.867Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.11199951171875
2022-04-28T12:05:31.201Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	34.816001892089844
2022-04-28T12:05:26.706Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.01300048828125
2022-04-28T12:05:22.898Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.11199951171875
2022-04-28T12:05:18.639Z	0a6c9a00-c8c1-11ec-a881-73c9540e1265	0	Channel 0	4fc103c0-c8c1-11ec-8da3-474359af83d7	Temp	C	35.50899887084961

8. Repeat steps 4, 6, and 7 for a new session.

Wear guide:

Mask:

Wear the mask.



Oximeter:

Place the oximeter clip in any of your finger, attach the velcro-strap and adjust to your comfort.



Belt:

Strap the belt and adjust the length of the belt and allow for two inches gap between the belt and the abdomen.

