

# User Manual--IOT Geiger Counter ESP32-OLED

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connecting Geiger Counter and Server and smartphone

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## Part 1: Instruction

**You need to setup one WiFi hotspot using your smartphone or wireless router**

Using name: huawei153, password:11341136(or you could change wifi SSID and password on Arduino Code)

2) Power on with power cable to any 5V . MicroUSB to USB-A male.

3) OLED will display: Welcome      Measuring

Then show Nuclear radiation dose CPM: counter Per Minute

For J305 geiger tube, rough calculation could be  $151\text{CPM}=1\text{ usv/h}$  (Micro Sievert per hour).

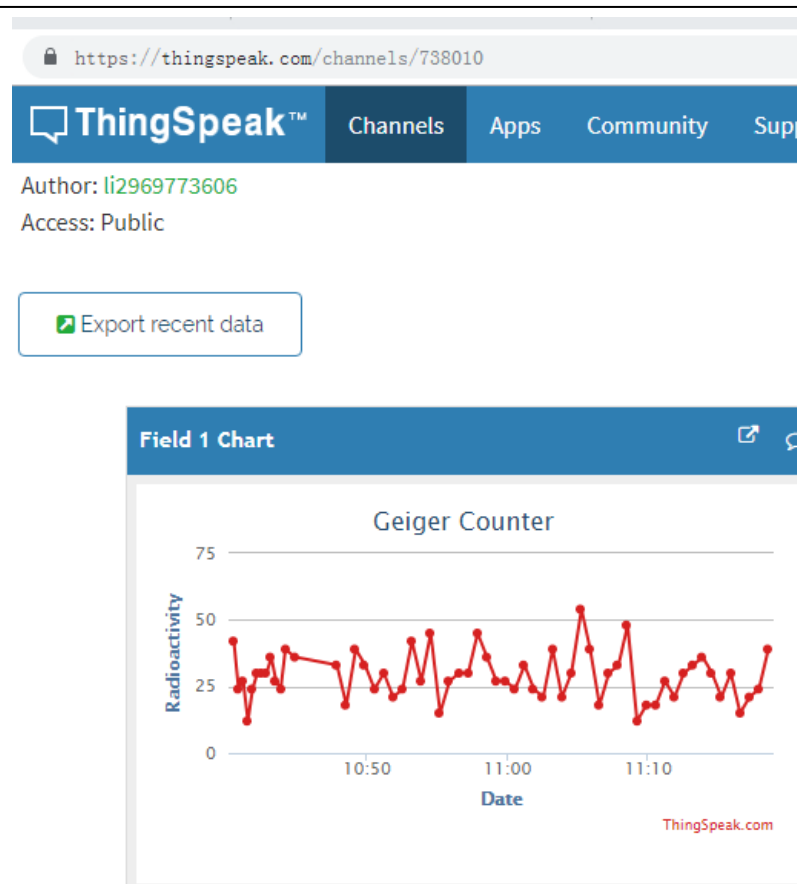
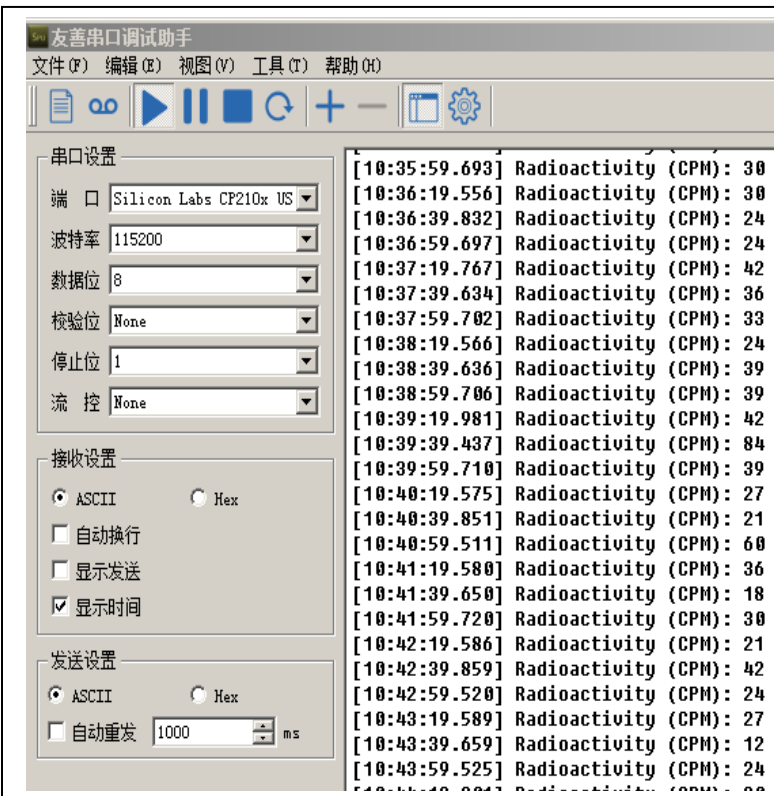
(You can also re-write code to improve algorithm for better measuring result of Nuclear radiation )

RiZhao



## Part 2:

## Using ThingSpeak to upload data to server



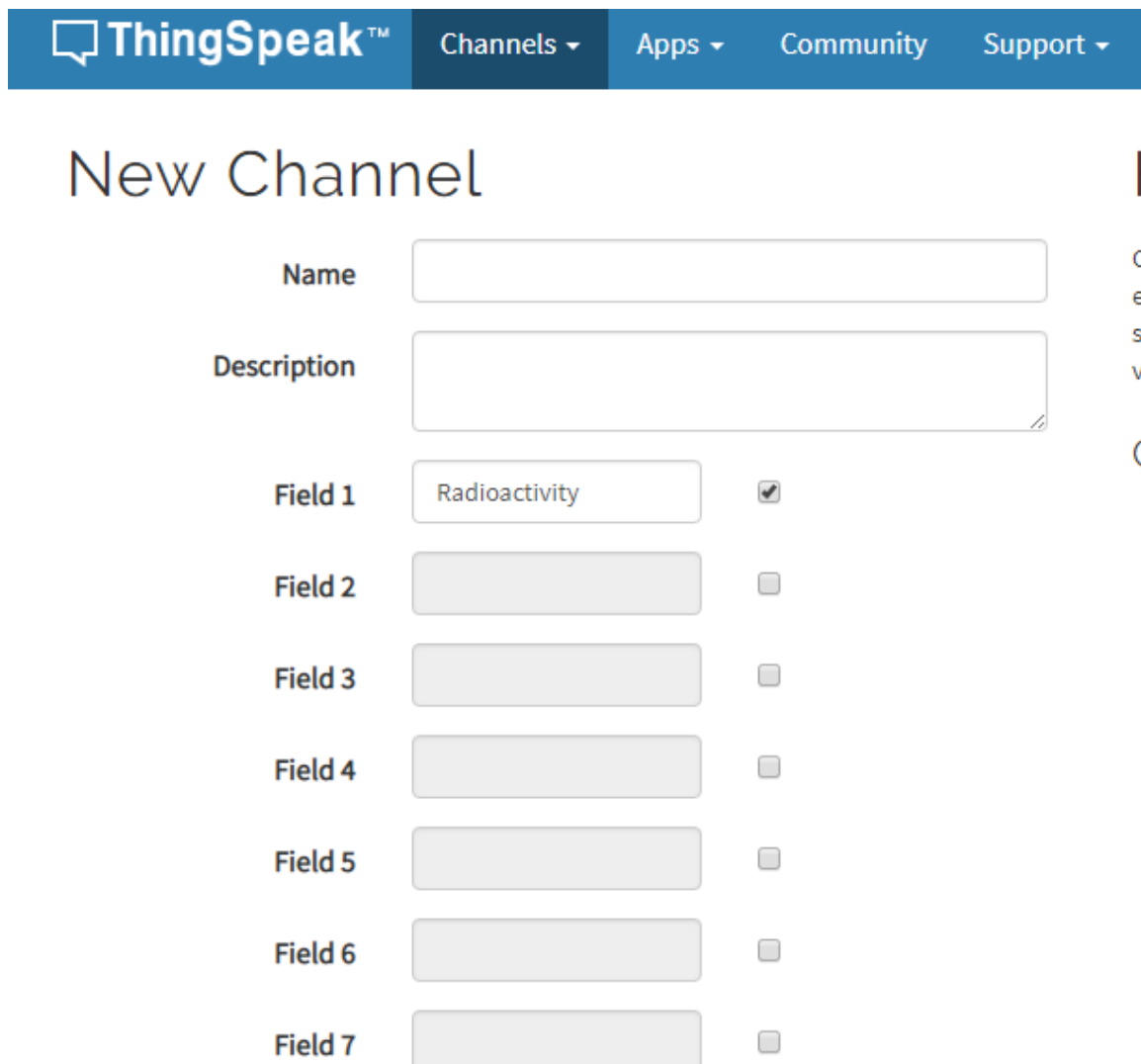
## 2.1 register one channel

Open: <https://thingspeak.com>

Register one user using your email

Channels—>New Channels->Fields Radioactivity—>Save Channel

API Keys->copy Write API Key



ThingSpeak™ Channels ▾ Apps ▾ Community Support ▾

### New Channel

**Name**

**Description**

**Field 1**  ☒

**Field 2**  ☐

**Field 3**  ☐

**Field 4**  ☐

**Field 5**  ☐

**Field 6**  ☐

**Field 7**  ☐

Latitude

0.0

Longitude

0.0

Show Video

☐☒ YouTube☐ Vimeo

Video URL

http://

Show Status

☐

Save Channel

Private View

Public View

Channel Settings

Sharing

API Keys

Data Import / Export

## Channel Sharing Settings

- ☒ Keep channel view private
- ☐ Share channel view with everyone
- ☐ Share channel view only with the following users:

Email  
Address

Enter email here

Add User

## Help

ThingSpeak allows the settings on this requires the approp

## Channel Sh

- Keep channe  
Only you will
- Share chann

Private View

Public View

Channel Settings

Sharing

API Keys

Data Import / Export

## Write API Key

Key

163M4I6JWPNQY64V

Generate New Write API Key

## Read API Keys

Key

LWNW90Z00S47R230

## Help

API keys enable  
keys are auto-g

## API Keys

- Write API  
been cor
- Read API  
feeds and  
read key!
- Note: Use  
add note:

API Requ

Copy the WriteAPIKey in code:

```
const char * myWriteAPIKey = "BGOHM1CIYHUROM70"; //update
```

Using your wifi user and password in the code:

```
// WLAN
```

```
#define mySSID "huawei153" //your wifi user name
```

```
#define myPASSWORD "11341136" //your wifi password
```

Click upload:



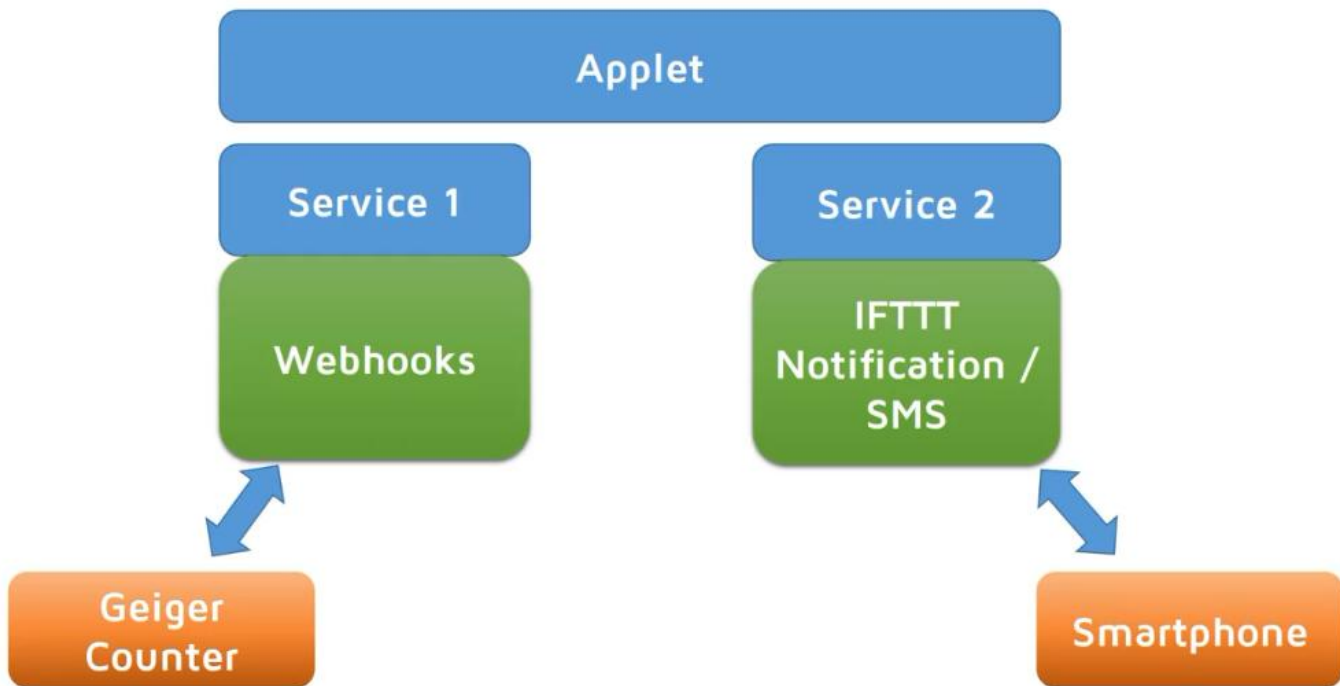
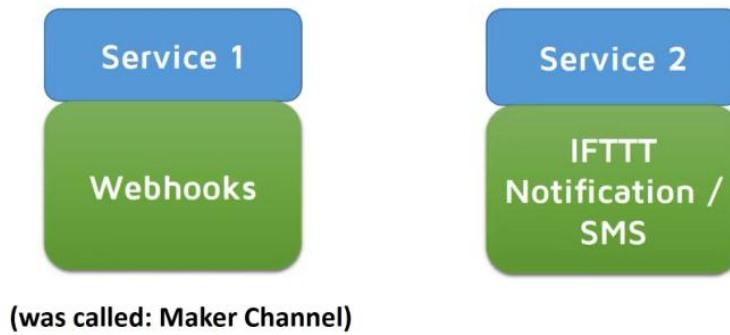
## Part 3:

### Using IFTTT for alarming

IFTTT means if this then that

functional block diagram:

## IFTTT: How it Works



Finally, we get alarming when Nuclear radiation is over one value, and you smartphone could get message.



Appendix:

Tech. email: [cajoetech@qq.com](mailto:cajoetech@qq.com)

Development board are all tested before shipping.