

SOLUTIONS FOR GROWTH



# nT19AX03 | SC6C01 AIO MULTI INPUT STREAMING AND RECORDING DEVICE



**Operation Manual**

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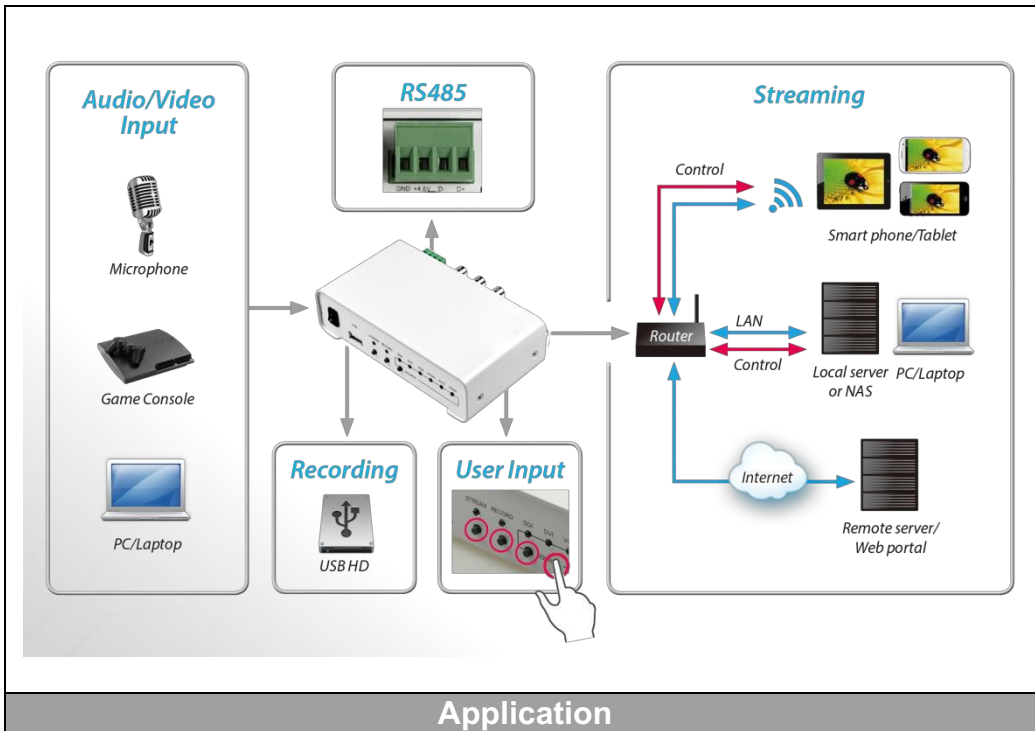
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**1. PACKAGE CONTENT**

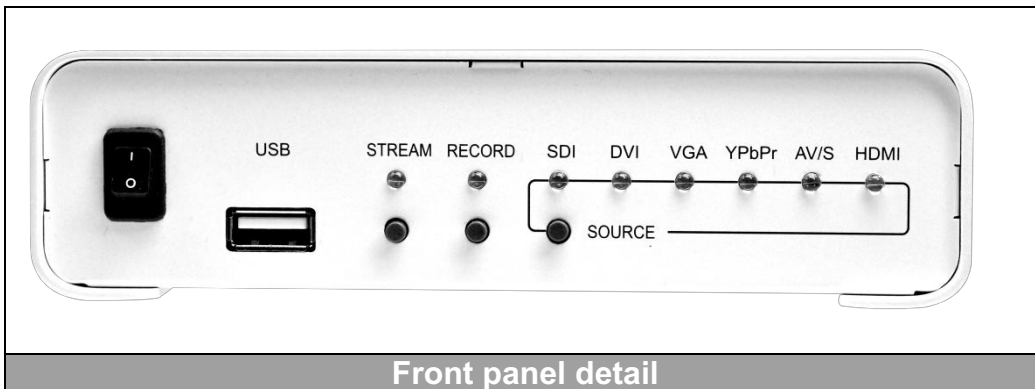
Product Name	Quanties
SC6C0N1 AIO	1
Adapter	1

## 2. PRODUCT INTRODUCTION

### 2.1. PRODUCT BRIEF



SC6C0N1 AIO provides 1 x 3G-SDI, 1 x HDMI, 1 x CVBS, 1 x YPbPr and 1 x S-Video for video signal input with audio embedded feature, it also provided a 3.5mm audio jack and a pair of RCA connector for stereo analog audio input.



Besides control button, in front panel, SC6C0N1 AIO provides power switch, USB 2.0 and RS485 communication interface. USB 2.0 interface is for user to capture input AV signal. 3 control buttons are using to on/off **streaming**, **recordmode** and **select input interface**. User can use RS485 interface to control peripherals.

## 2.2. SPECIFICATION

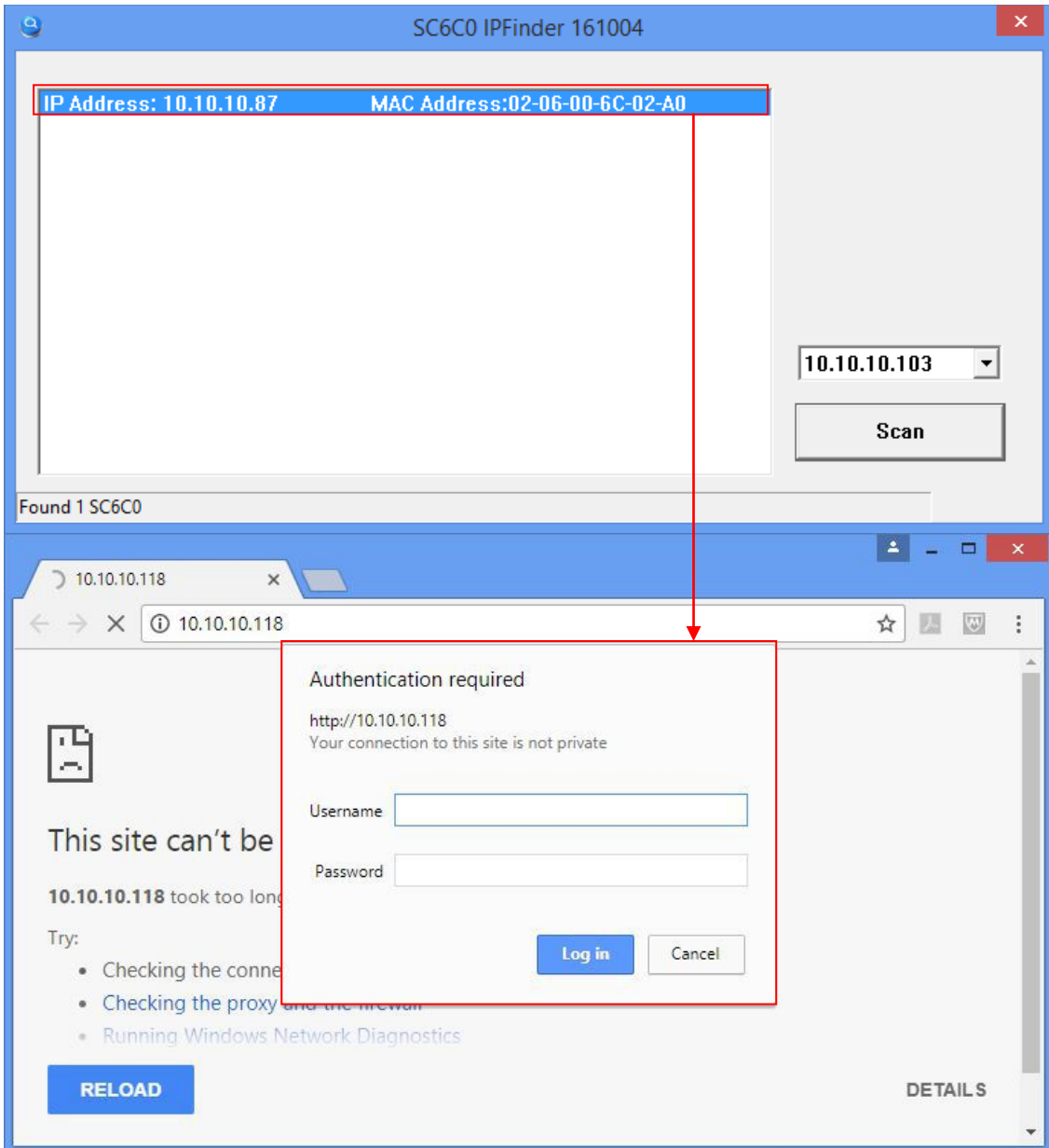
<b>Model</b>	SC6C0N1 AIO
<b>Max. FPS</b>	60/50fps@1920×1080p
<b>Recording Mode</b>	Hardware Compression, Real-Time Mode
<b>Input Interfaces</b>	<p>Video</p> <ul style="list-style-type: none"> <li>1×BNC for 3G/HD/SD-SDI</li> <li>3×BNC for YPbPr/CVBS/S-Video</li> <li>1×DVI-I for DVI-D/HDMI and DVI-A/VGA</li> <li>1×HDMI</li> </ul> <p>Audio</p> <ul style="list-style-type: none"> <li>2×RCA for Analog L/R Audio</li> <li>SDI/HDMI/DVI-D Embedded Audio</li> <li>1×3.5 mm Phone Jack</li> </ul>
<b>Video Feature</b>	<p>H.264/AVC, Baseline/Main/High Profile</p> <p>Configurable Bit Rate Up to 10Mbps</p> <p>Supported Resolutions</p> <p>Input</p> <ul style="list-style-type: none"> <li>1920×1080</li> <li>( P60/P50/P30/P25/P24/i60/i50 )</li> <li>1280×720 ( P60/P50 ), 1280×1024 ( P60 ),</li> <li>1280×960 ( P60 )</li> <li>1024×768 ( P60 ), 800×600 ( P60 ),</li> <li>720×480 ( P60/i60 )</li> <li>640×480 ( P60 ), 720×576 ( P50/i50 )</li> </ul> <p>Output</p> <ul style="list-style-type: none"> <li>Resize Range from 160x128 to 1920×1080</li> <li>( P60 )</li> </ul> <p>*Output Include Down Scaling.</p>
<b>Audio Feature</b>	<p>AAC-LC</p> <p>Configurable Bit Rate Range from 32Kbps to 384Kbps</p> <p>Sample Rate : 48KHz, 16Bit</p>
<b>Network Feature</b>	<p>1×RJ45 for 10/100Mbps Ethernet</p> <p>DHCP Client</p>
<b>Support Streaming protocol</b>	<p>TS Over UDP ( Unicast &amp; Multicast )</p> <p>RTSP Over HTTP/TCP/UDP ( RTSP Elementary Stream )</p> <p>RTMP ( Publish )</p> <p>HLS</p>
<b>Misc. Features</b>	<p>Dynamic Parameter Setting</p> <p>RS-485</p> <p>1×USB 2.0 Host for USB Storage</p> <p>Web UI for System Configuration</p> <p>Firmware Upgradable</p> <p>LED Indicator</p>
<b>Record Format</b>	MP4
<b>System Requirement</b>	

<b>Power Supply</b>	DC 12V (With DC Adapter)
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### 3. WEB UI

#### 3.1. IP FINDER

In the beginning, user can execute IP Finder to find SC6C0N1 AIO, please make sure host (PC) and target (SC6C0N1 AIO) are in the same netmask.



After double click the MAC address (The MAC address is provided in the bottom of SC6C0N1 AIO), the user will open the web browser automatically, please provide default user name and password to login the SC6C0N1 AIO.

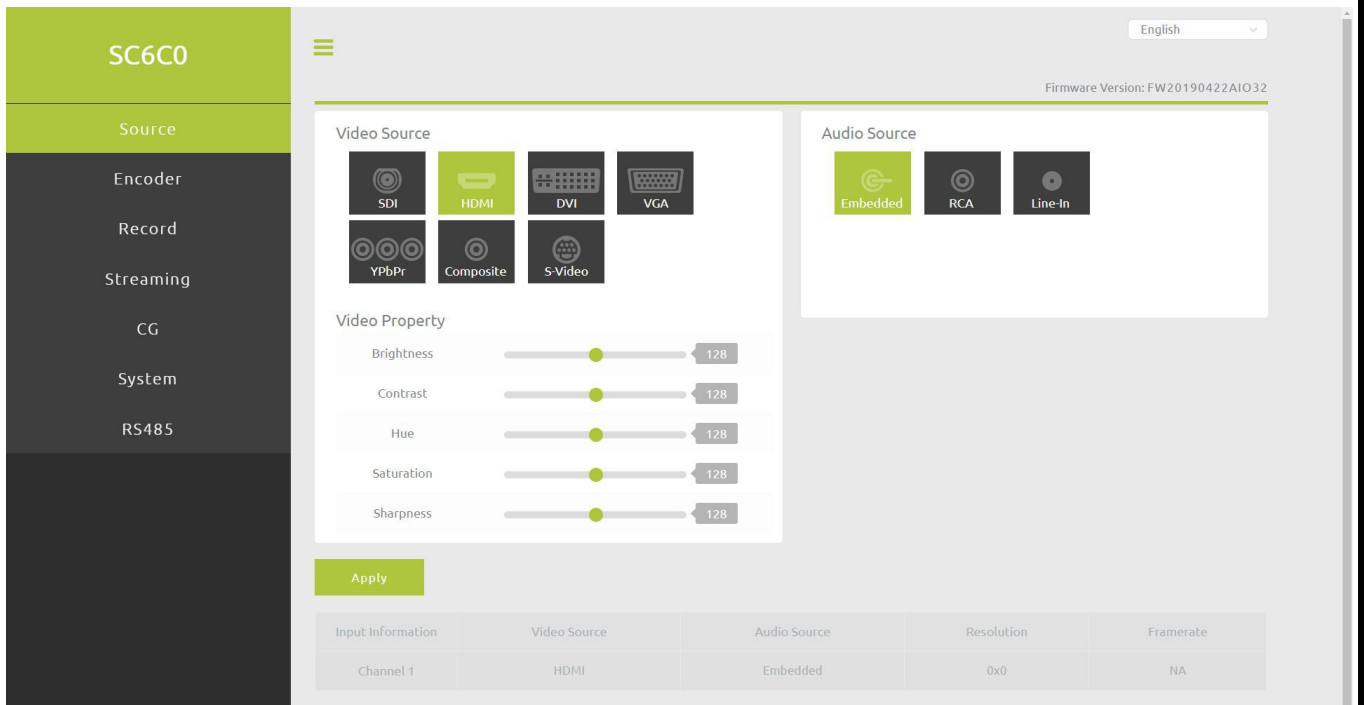
Default user name: **admin**

Default password: **000000**

After login the system, the web UI will display inside browser automatically.



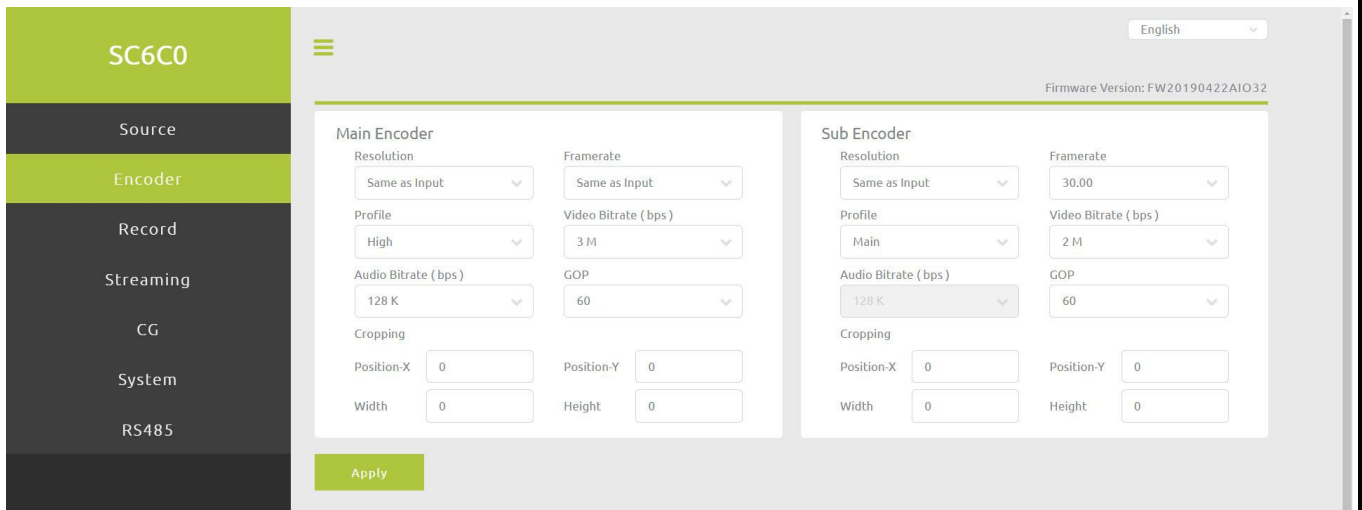
### 3.2. SOURCE



In source page, user can decide input interface and finetune video format.

Video Tuning	Default	Range
brightness	128	0~255
contrast	128	0~255
hue	128	0~255
saturation	128	0~255
sharpness	128	0~255

### 3.3. ENCODER



In encoder page, user can change encode parameters here.

Parameter	Range
Resolution	1920*1080~160*128
Framerate	60~1
Profile	Baseline Main High
Video Bitrate ( bps )	16M~256K
Audio Bitrate ( bps )	384K~32K
GOP	180~1
Position-X/Y Width/Height	Depending on screen size

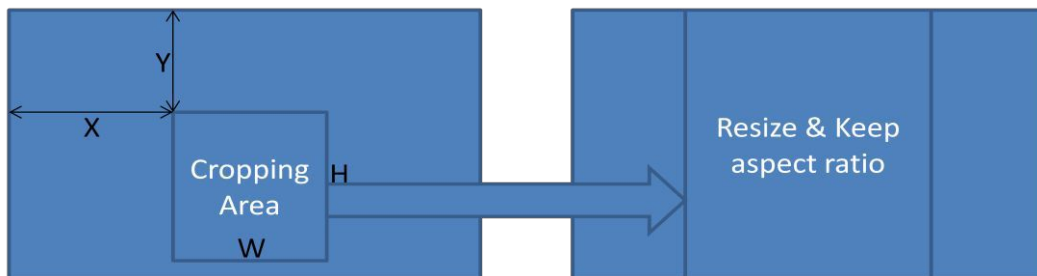
**H.264 Encode** User can adjust here for H.264 profile selection, it supports high, main and baseline.

**Cropping** The place and size of cropping are listed as below. The cropped area will displayed in keep aspect ratio mode.

Default value (X, Y, W, H) = (0, 0, 0, 0)

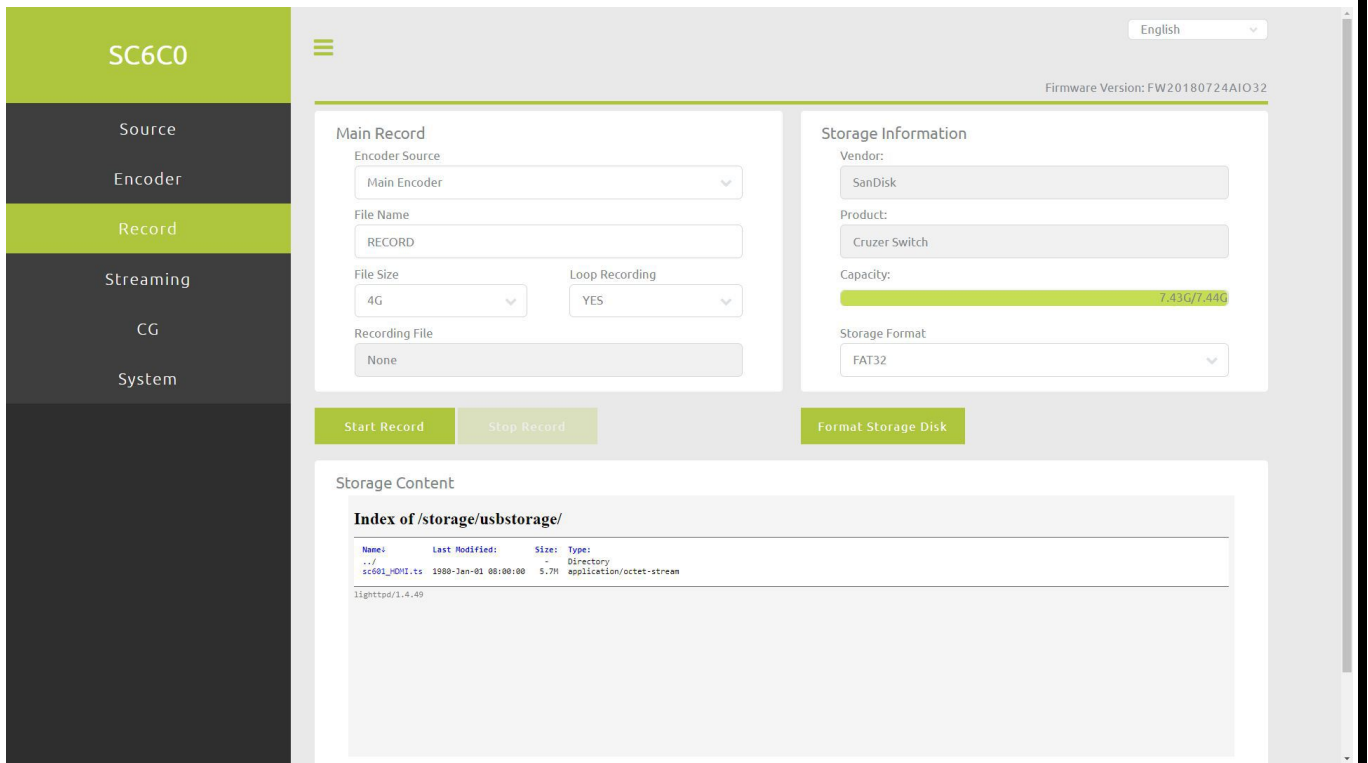
W Range : 128~1920

Y&H Range: 128~1080

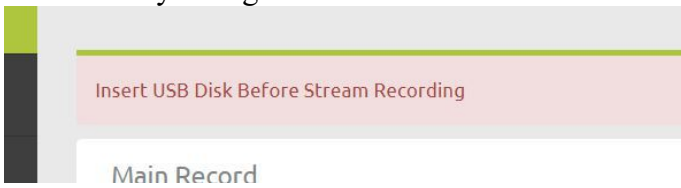


✘ Please remind, if user had use only main stream, the SC6C0 can streaming 1080P60, but if activate main and sub streaming, the main streaming can exceed to 1080P30, sub streaming can exceed to 960\*540P30.

### 3.4. RECORD



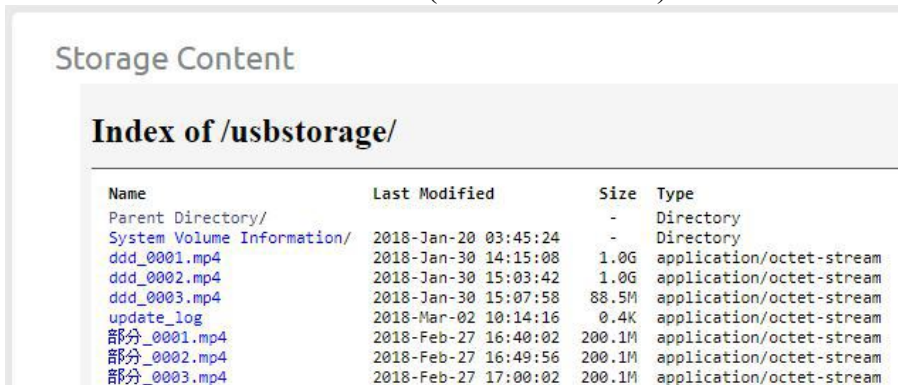
Record page contains storage media that user used, user can check left storage capacity and format newly storage media here.



※ When the Format USB Disk is not attached, the button will disable; When the USB disk is attached but not formatted, the Format USB Disk button will enable but without information; Only if the USB disk is attached and corrected formatted, the USB disk information and usbstorage information will displayed.

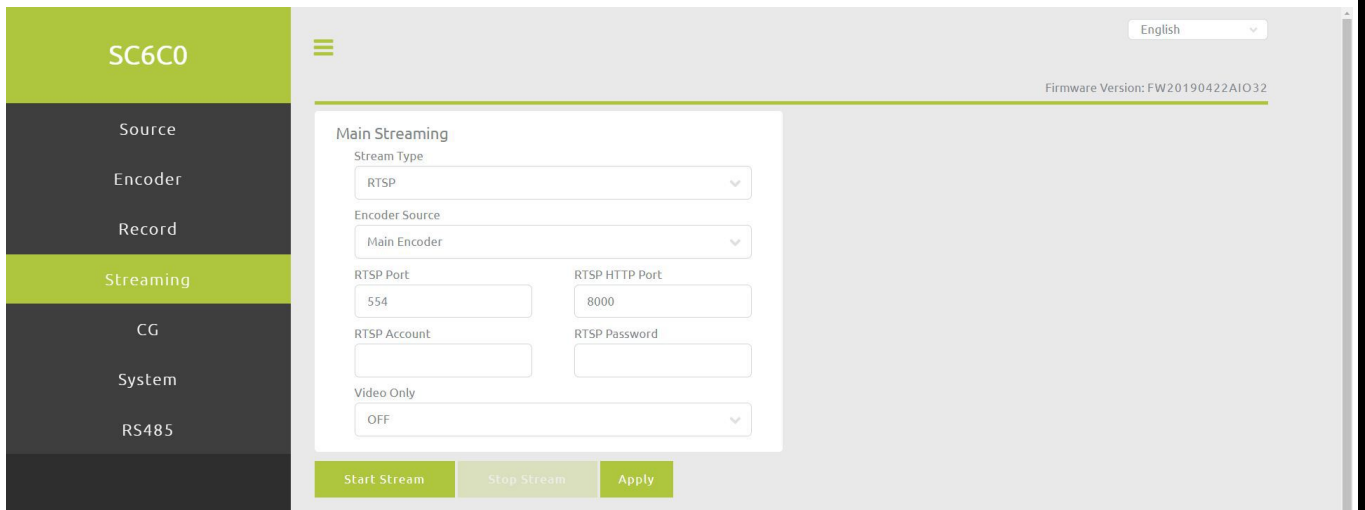
#### 3.4.1. STORAGE CONTENT

Storage Content block contains mounted USB flash disk information, when necessary, the USB flash can be formatted here (Format to FAT32).



The index block will display the connected storage here.

### 3.5. STREAMING



For streaming, here are **RTSP / RTMP / TS / HLS / SRT / YouTube** streaming methods available. Streaming server function can be only activating when the AV signal is already input to SC6C0N1 AIO.

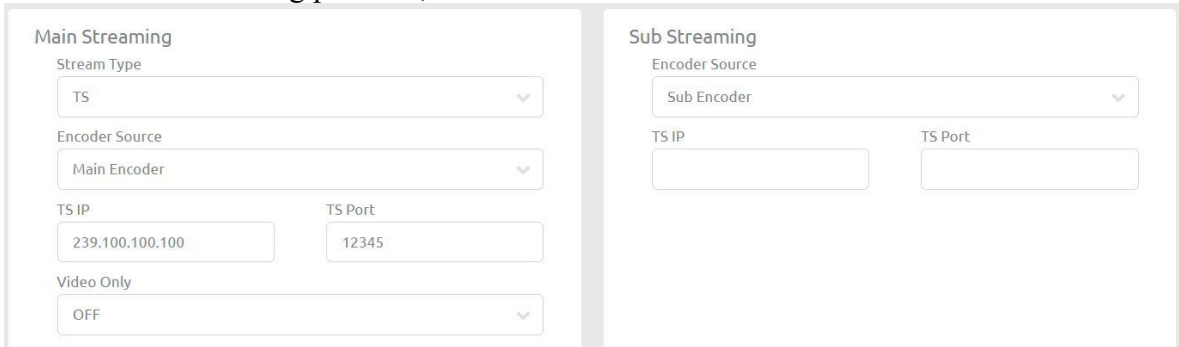
- RTSP
- RTMP
- TS
- HLS
- SRT
- YouTube

For **RTSP / RTMP / TS / HLS** streaming protocols, SC6C0 supports Video only mode for user to unsend audio data.

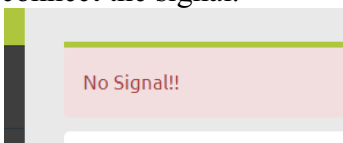
Video Only

OFF

For **TS UDP** Streaming protocol, SC6C0 can send dual stream for user to use.



When the signal is not connect, SC6C0N1 AIO will generate an error message to remind user to connect the signal.



### 3.5.1. INTRODUCTION: SRT

SRT (Secure Reliable Transport) is a video stream protocol based on UDP, using to provide a better video quality and lower latency time interval.

The advantage of SRT are listed as below

1. SRT can detect real-time network status.
2. Jitter compensation.

### 3.5.2. EXAMPLE: RTSP

**Main Streaming**

Stream Type

Encoder Source

RTSP Port

RTSP HTTP Port

RTSP Account

RTSP Password

Play URL

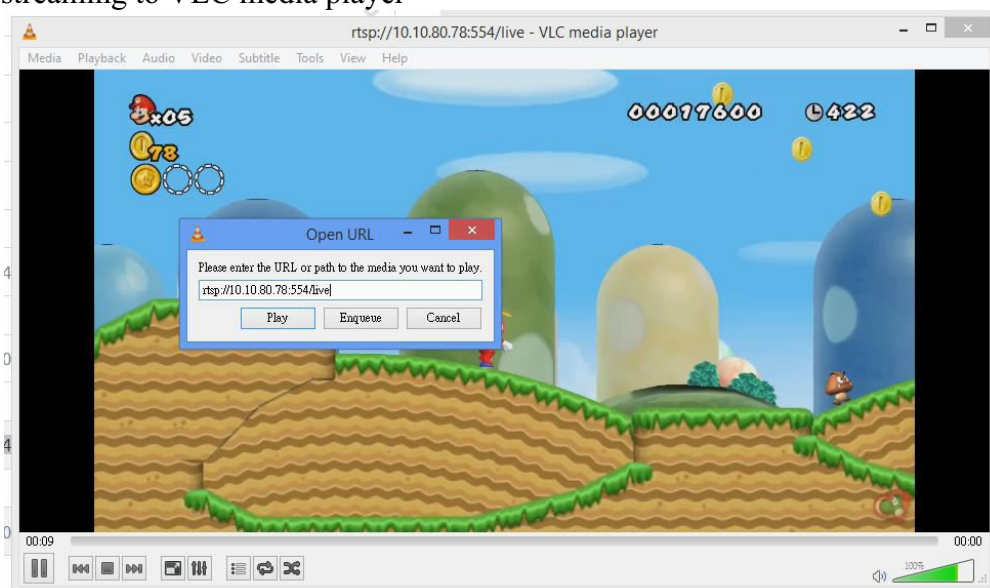
Play URL

Play URL

Play URL

After selecting Stream Type to RTSP, the SC6C0N1 AIO will generate Play URL for user to receive RTSP stream.

Open VLC media player→[Media]→[Open Network Stream] or direct press [Ctrl]+[V] to print streaming to VLC media player



### 3.5.3. EXAMPLE: RTMP

RTMP can use for streaming live video to facebook, youtube, and etc.  
 Please enter youtube live and copy server URL to SC6C0N1 AIO for SC6C0N1 AIO to streaming video.

**編碼器設定**

伺服器網址  
 rtmp://a.rtmp.youtube.com/live2

串流名稱/金鑰  
 .....

顯示

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**Main Streaming**

Stream Type  
 RTMP

Encoder Source  
 Main Encoder

RTMP URL 1  
 rtmp://a.rtmp.youtube.co

StreamName 1  
 0pqb-bfc6-

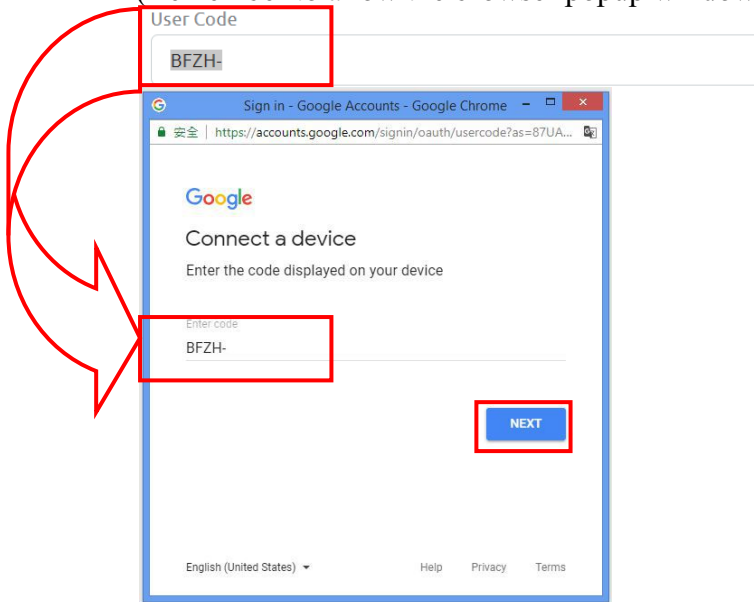
Account 1

Password 1

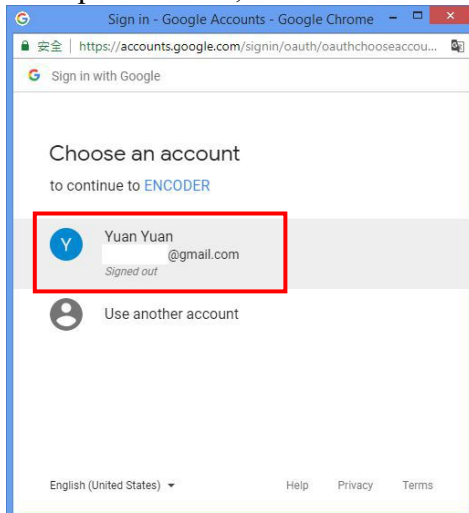
### 3.5.1. EXAMPLE: YOUTUBE

Besides RTMP, SC6C0 also provides a simple way for user to streaming their Live video to YouTube.

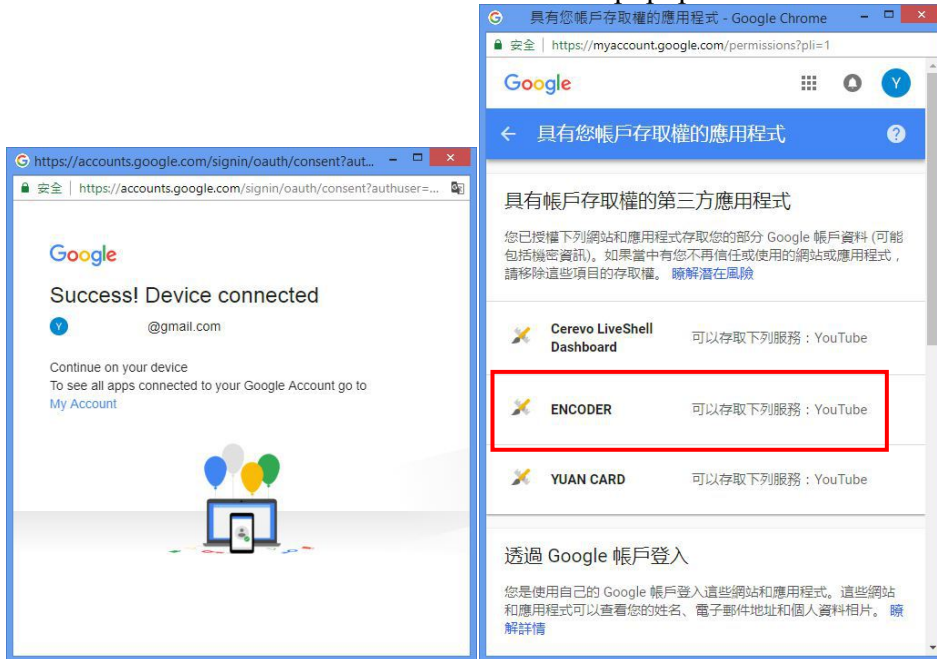
After select **Streaming Type YouTube** and press start streaming, SC6C0 will automatically generate USER CODE for user to connect with YouTube account. (Remember to allow the browser popup window for connecting youtube)



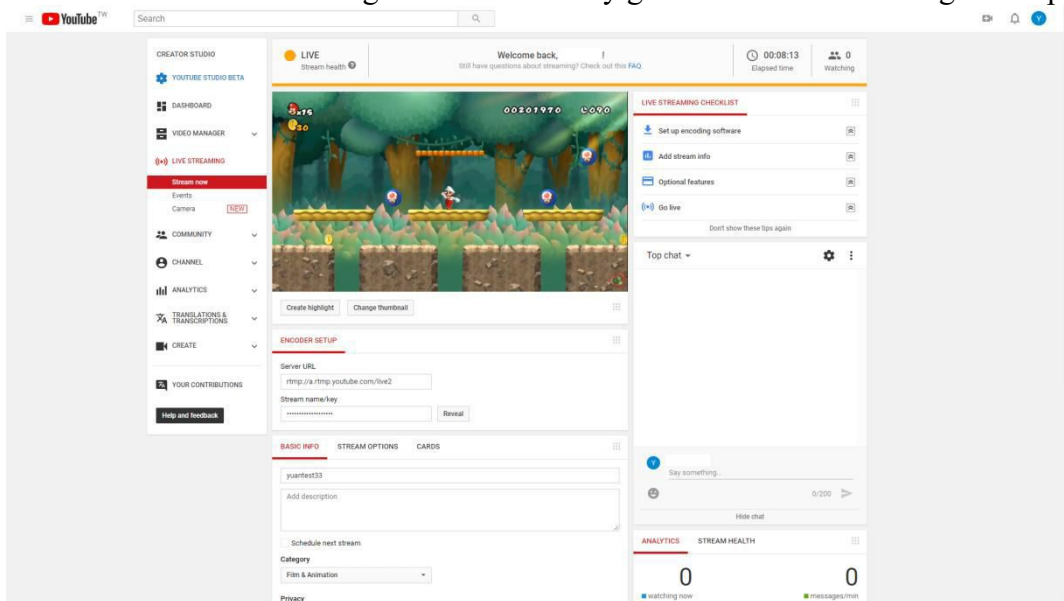
After press NEXT, the connectable user account will appear for user to select.



After the account is connected, the video will automatically live streaming to youtube; User can also check the connected SC6C0 inside the popup window.

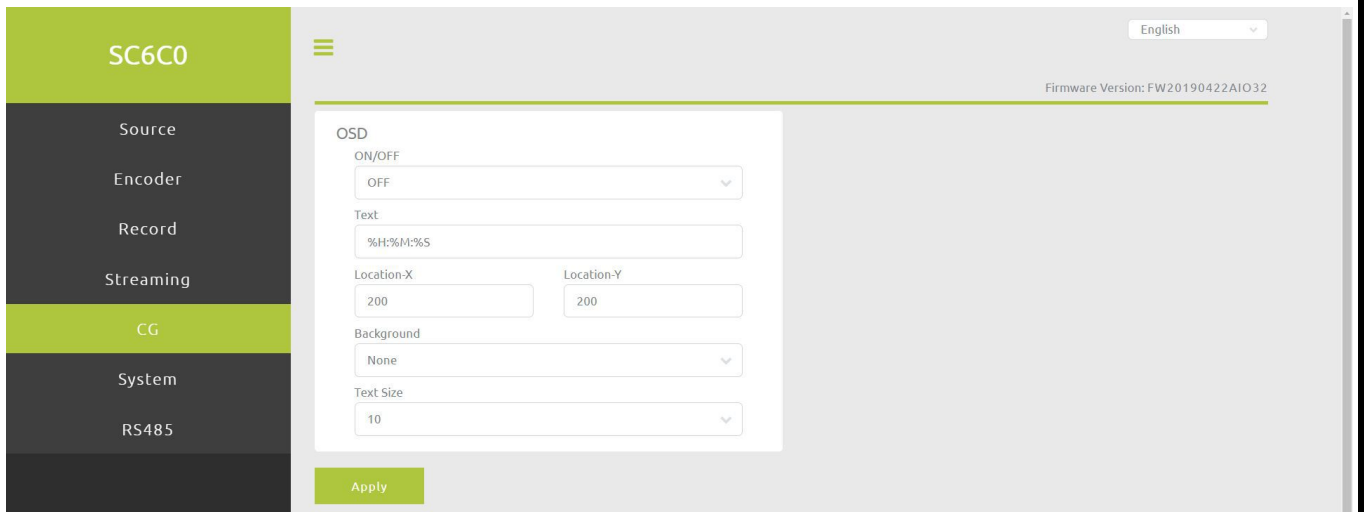


Youtube live video streaming will automatically generates after the setting is completed.

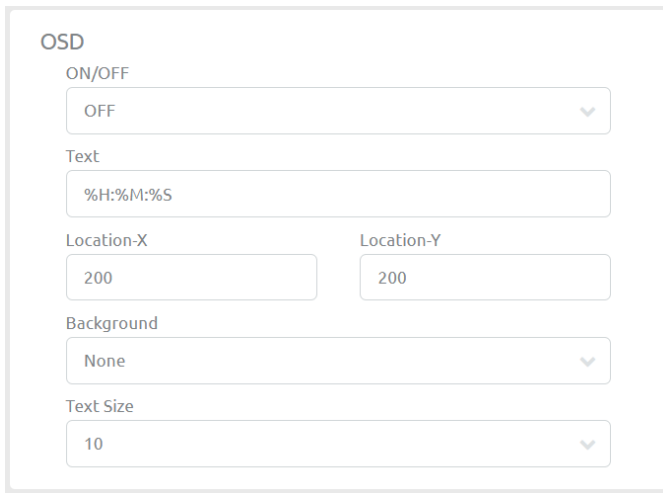




### 3.6. CG



#### 3.6.1. OSD



- ON/OFF:** Turn on or off OSD
- Text** Displayed OSD content
- LocationX:** OSD place X
- LocationY:** OSD place Y
- Background** OSD background enable/disable
- Text Size** OSD text size

### 3.7. SYSTEM

#### 3.7.1. NETWORK SETTING

User can decide disable or enable DHCP mode, when disable DHCP mode, please remember assign all necessary information for SC6C0N1 AIO.

### 3.7.2. DEVICE NAME SETTINGS

#### Device Name Settings

Device Name

Apply

User can naming SC6C0N1 AIO here.

### 3.7.3. TIME SETTING

#### Time Settings

Timezone

UTC+8

Type

Automatically from the internet

NTP

cn.pool.ntp.org

User can update system time in this block.

### 3.7.4. FIRMWARE UPDATE

#### Firmware Update

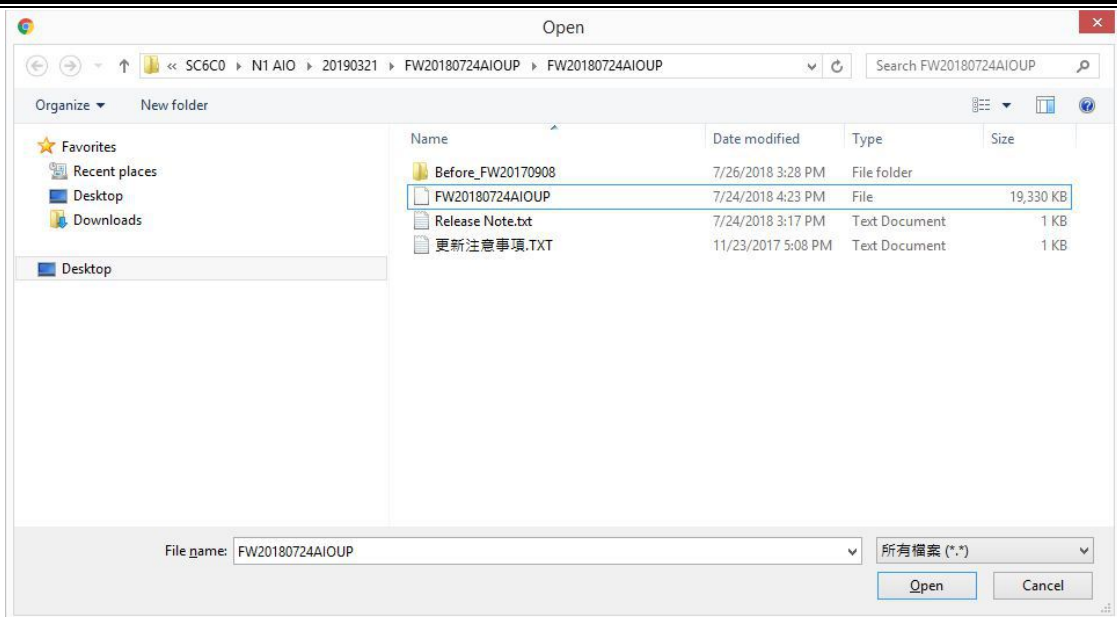
File Path

Browse

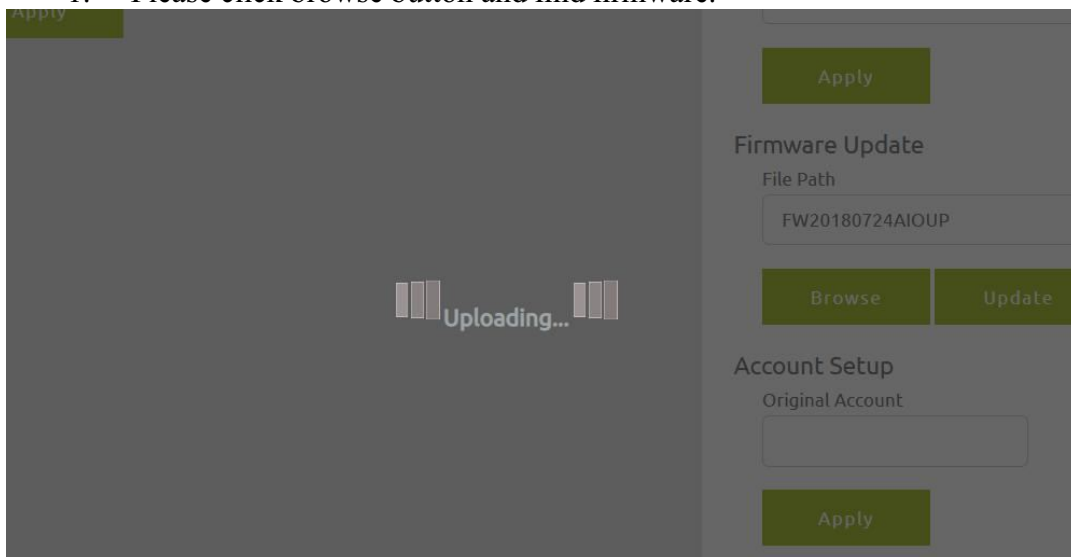
Update

User can update firmware and check firmware version in this block; **please don't turn off system when the firmware update is in the process**

Before start firmware upgrade procedure, please unzip the firmware package and make sure the directory of firmware file. (The file name will be FW201XXXXXXX )



1. Please click browse button and find firmware.



2. After select the firmware, the firmware will automatically upload to SC6C0.

## Firmware Update

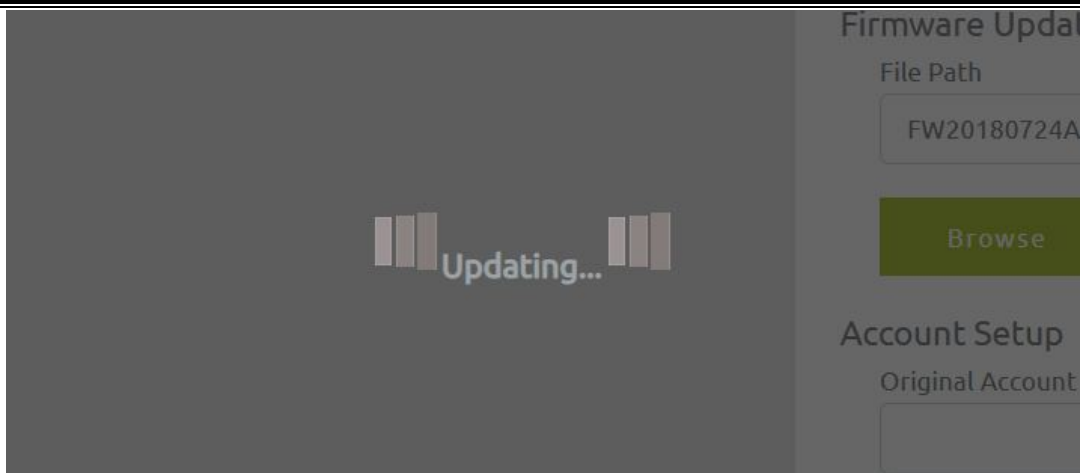
File Path

FW20180724AIOUP

Browse

Update

3. After the upload is complete, the UI will become normal and firmware name appears.



4. Click update and LED will start blinking, after the LED had stop blinking (please ignore the information from web UI), customers now can restart SC6C0.
5. Upgrade firmware had completed.

### 3.7.5. ACCOUNT SETUP

Account Setup

Original Account

Original Password

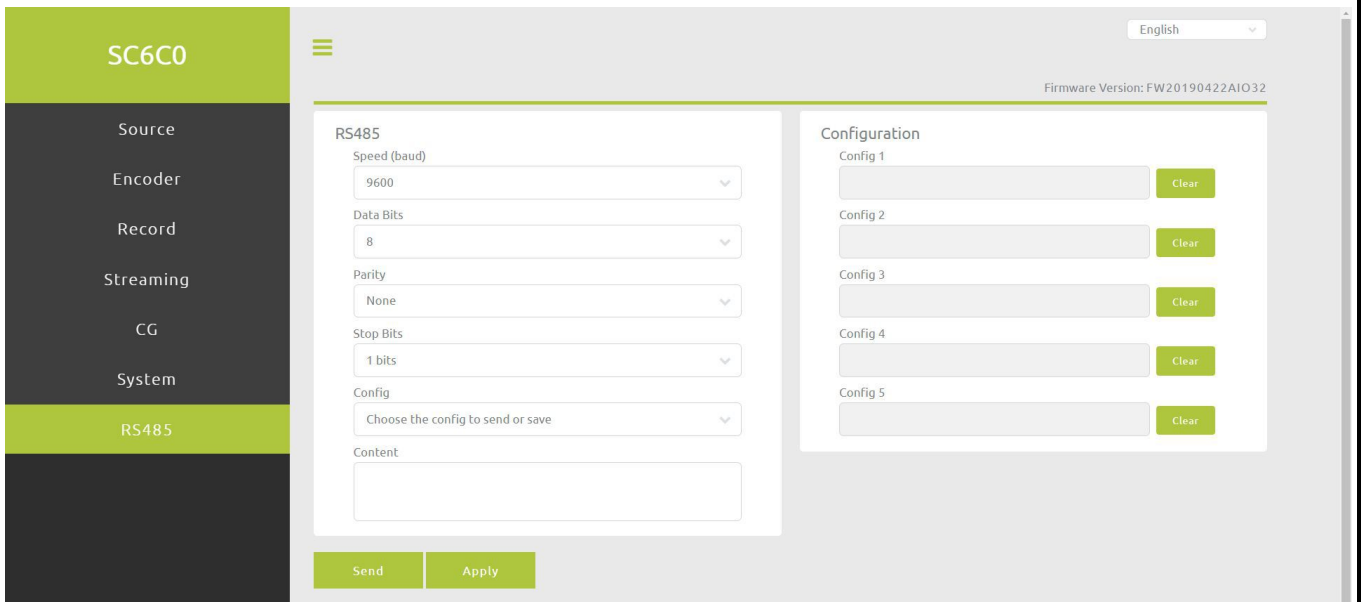
User can create account for usage

### 3.7.6. SYSTEM RELATED

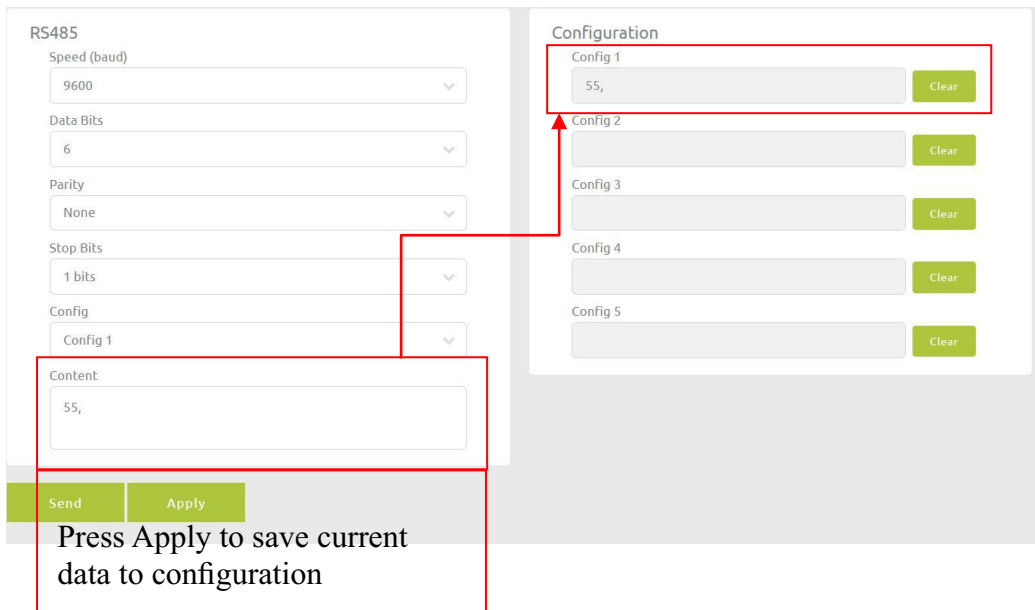
User can restore SC6C0N1 AIO to default by press Restore to Default button, the whole system will return to factory default.

User can reboot SC6C0N1 AIO to default by press Reboot button, the whole system will reboot.

### 3.8. RS485



#### 3.8.1. RS485 PARAMETER



- Speed: Select baud rate for RS485 transfer
- Data Bits: Setting data bits (5, 6, 7, 8)
- Parity: Select parity (None, Even, Odd)
- Stop bits: Stop bits selection (1 or 2)
- Config: Select the config willing to save.

1. Filling all the needed RS485 parameters.
2. Fill data (0~255) into **Content** block, and separate it with comma.
3. Press **Apply** to save the current status and content data into the config or press **Send** to send current content directly.
4. If the Configuration is no longer needed, user can press **Clear** to remove saved configuration.

## **4. VERSION**

### **4.1. VERSION 1.0**

Initial version ( FW20180301AIO32 )

### **4.2. VERSION 1.1**

Update to version FW20180515AIO

### **4.3. VERSION 1.2**

Fix typo

### **4.4. VERSION 1.3**

Update to version FW20180724AIO32

### **4.5. VERSION 1.4**

Fix typo

### **4.6. VERSION 1.5**

Add SRT info

### **4.7. VERSION 1.6**

Add FW upgrade instruction

### **4.8. VERSION 1.7**

Add RS485 upgrade instruction

### **4.9. VERSION 1.8**

Update output resolution