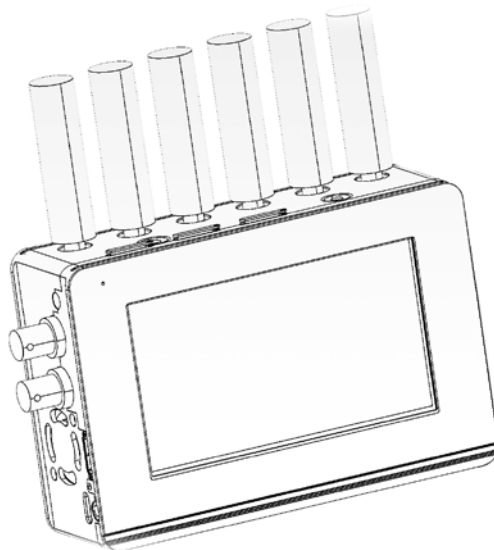




High Definition  
Bonding Live Video Streaming Encoder

# User Manual

LiveV400 Series



Revision  
Release  
Product

K1.2.0  
2021-10-25  
30501-0XX



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## Warnings and Precautions



1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the Power Adapter before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked.
7. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your LiveV400 dealer or your local power company.
9. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
10. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the Power Adapter and refer to qualified service personnel under the following conditions:
  - a) When liquid has spilled into the unit.
  - b) When the product has been exposed to rain or water.
  - c) When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation.
  - d) When the product has been dropped or the cabinet has been damaged.
  - e) When the product exhibits a distinct change in performance, indicating a need for service.

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# Disposal



## **For EU Customers only - WEEE Marking**

This symbol on the product or its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural

resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## Chapter 1      General

### 1.1 Overview

Thank you for purchasing LiveV400 – HD Live Streaming Encoder. The LiveV400 is a portable standalone, hardware-based video streaming encoder that can be mounted on top of the cameras or carried on a backpack. LiveV400 can encode and transmit video of camcorder or camera via WIFI or LAN to the cloud server in real-time for live broadcasting.

It is a high definition, bonded dual video input streaming encoder plus video router. It is cost effective, easy to use, with tripod mount, supports modern USB Type-C charger and a range of innovative features.

The LiveV400 offers 1 built-in WIFI and 1 Gigabit Ethernet port. Convenient users in indoor, outdoor and other bad situations live. In addition, the LiveV400 offers aggregation capabilities that aggregate LAN, WIFI, adaptive link quality, and joint push. And after aggregation can be distributed 9 RTMP streams.

LiveV400 has 4.3" touch screen and user-friendly operation and video and camera collage preview, live video switch, setup, status. It has full touch screen UI and full control of encoder. PC, phone and remote web encoder and settings are also supported.

LiveV400 supports dual 1080P HD video signal input, supports a variety of video graphics puzzles including two video seamless switching, picture-in-picture and so on, up to 6 different live display combinations, and also provides 2 user-defined video puzzles, can freely adjust HDMI and SDI dual video display size, location and so on.

LiveV400 uses efficient H.264 digital audio and video hardware encoding, encoding compressed video circulation too much network aggregation RTMP push to the server platform, replacing the traditional PC and video acquisition card, without the need for special PC software.

The LiveV400 provides multiple network channels, and when a network connection fails, the device automatically selects other available network push streams that are connected, without additional setup by the user. In addition, when the bandwidth of the push streaming network is less than the set target code rate, the user can choose to use the aggregation mode to push the stream, the encoder aggregates multiple networks to push the stream together, to achieve the set target code rate.

## General

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### 1.2 Feature

- 4.3" touchable LCD for in field setting and video monitoring
- At the same time LAN/WIFI aggregation improves the bandwidth and stability of live broadcast
- Up to 10mbits/s video stream by encoder, up to 20mbits/s for bonding server.
- Support multi-channel network bonding streaming mode, up to 9 RTMP Address stream at the same time
- SDI and HDMI dual channel inputs, as well as analog stereo audio in, SDI and audio out
- Accept RTMP and RTSP video stream over router
- SDI and HDMI dual channel seamless handover, picture in picture, customize the display area, position and background of dual-channel video
- Standalone and long battery life for up to 6-hour live event in the **Single** mode, live time is reduced by half in the **Bonding** mode
- QR Code scan for quick configuration with mobile phone. Local and remote management by mobile phone and PC
- Advance hardware H.264 MP/HP video codec for highest stability
- AAC audio encoder with HDMI/SDI embedded audio support
- Analog audio input and audio output for embedded and analog
- Automatic dual input resolution, format detection, no professional setting required
- Powerful and flexible OSD, text, logo and stamp can be supported with easy-to-user configuration
- With standard camera tripod mount
- Based on very stable Linux system. Local and online upgrades are available
- Onboard recording to TF for backup or post event editing
- The standard USB TYPE C power supply interface is portable and convenient
- Full web remote control without installing a mobile app
- Support various live streaming platforms such as YouTube, Facebook, twitch etc.
- Light weight and small size design for outdoor activities.
- Portable hardware encoder, no expensive PC and video captured card required.

# Quick Start Guide

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## Chapter 2 Quick Start Guide-Connection

### 2.1 What's in the Box

Encoder includes:

- LiveV400 unit
- USB TYPE C Travel Charge
- Type C cable
- Hot shoes
- Storage Bag



Hot Shoes



Type-C Cable



USB TYPE C Travel Charge



LiveV400 Unit



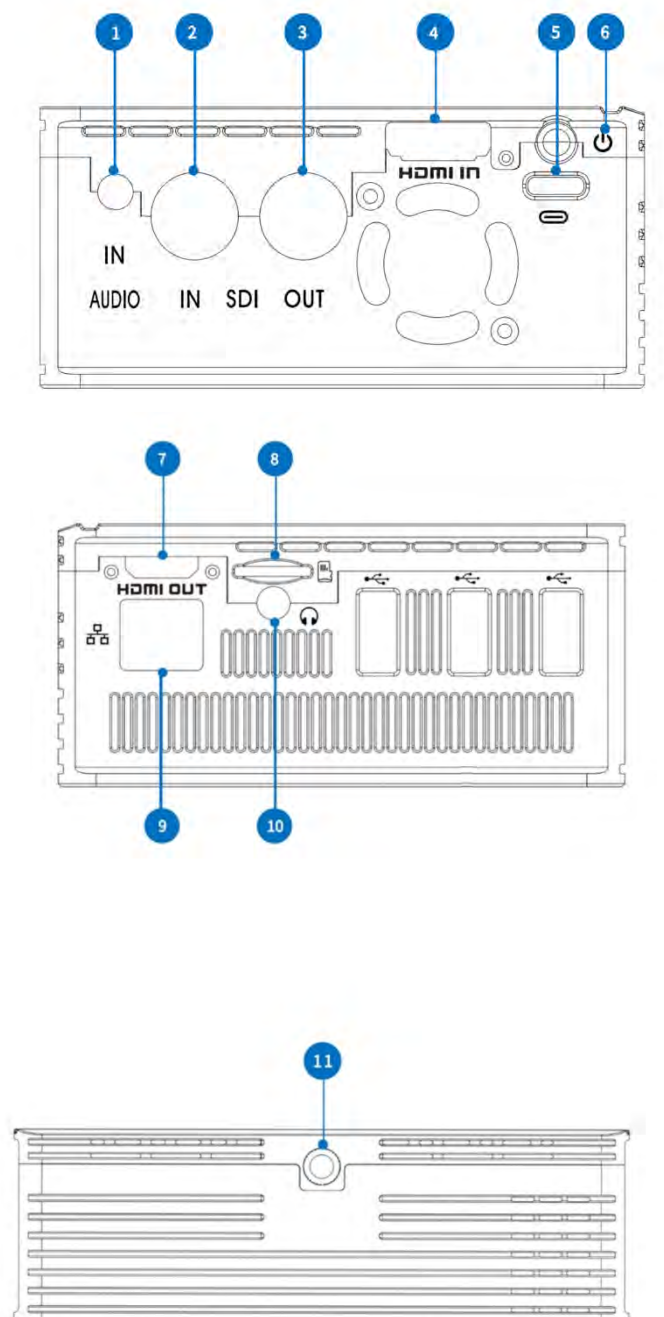
Storage Bag



## Quick Start Guide







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### 2.2 Connections and Controls



## Quick Start Guide

### 2.2.1 Physical Connections

| Label | Name                   | Icon  | Description   |
|-------|------------------------|---|---|
| 1     | Audio In               | IN<br>AUDIO   | Stereo audio input.   |
| 2     | SDI Input              | IN  | Connect up to SDI signal.   |
| 3     | SDI Loop Out           | OUT   | Connect a SDI cable from this connector to a monitor or projector.                        |
| 4     | HDMI Input             | HDMI IN   | Connects HDMI and DVI signals (using an adapter).   |
| 5     | Type-C Power Connector |    | Plug the power supply in here. The port requires a 15V DC power source (center-positive). |
| 6     | RED Power Button       |    | Press to turn on encoder.<br>Press and hold more than 5 seconds to turn off.              |
| 7     | HDMI Loop Out          | HDMI OUT  | Connect a HDMI cable from this connector to a monitor or projector.                       |
| 8     | TF Card Slot           |   | Plug the TF card in here.   |
| 9     | RJ-45 Ethernet         |  | Ethernet network port.  |
| 10    | 3.5mm Audio Output     |  | For audio confidence monitoring. Plays the audio for the currently visible channel        |
| 11    | Hot Shoe Mount         |  | Mount encoder to camera   |

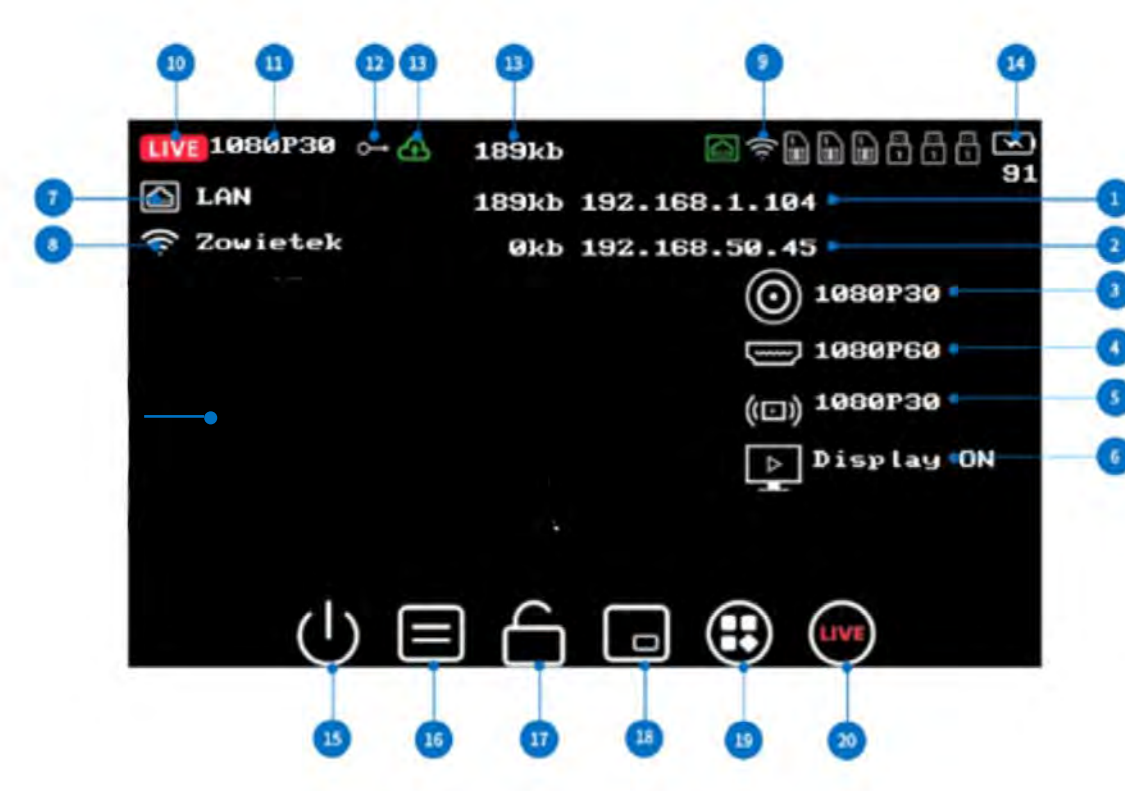
**NOTE:**

**LiveV400 has an internal rechargeable battery, so please keep it turning off and charging until fully charged when users first use it. This is required only for the first use.**

## Quick Start Guide



### 2.3 Screen Display

If Lan are connected, the screen will display all of the network information.



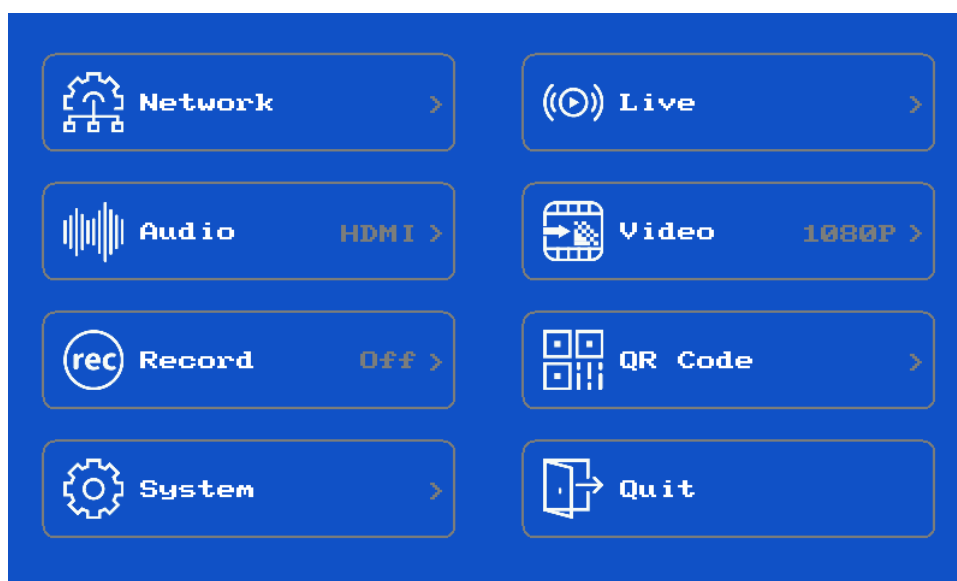
| Label | Description  |
|-------|--|
| 1     | The IP address of LAN network  |
| 2     | The IP address of wireless network   |
| 3     | SDI signal input, display <b>Resolution</b> and <b>Frame Rate</b> of SDI inputs;<br>Display <b>No Signal</b> when the no SDI input or SDI connection fail                  |
| 4     | HDMI signal input, display <b>Resolution</b> and <b>Frame Rate</b> of HDMI inputs;<br>Display <b>No Signal</b> when the no HDMI input or HDMI connection fail              |
| 5     | Pull stream Signal input, display <b>Resolution</b> and <b>Frame Rate</b> of Stream inputs;<br>Display <b>No Signal</b> when the no Stream input or Stream connection fail |
| 6     | HDMI Display ON  |
| 7     | Display <b>LAN</b> when the LAN connection is successful<br>Display uplink speed of LAN when the encoder using LAN as streaming network; Otherwise “0kb” is displayed      |
| 8 9   | Display the <b>WIFI SSID</b> when the WIFI connection is successful<br>Display 0 kb when the WIFI is not involved in streaming   |

## Quick Start Guide

|    |  |
|----|--|
| 10 | Streaming Icon.<br>The Streaming Icon is grey, when the streaming is offline   |
| 11 | Streaming Resolution   |
| 12 | Streaming Mode:  means: Normal (Single) ;  means Bonding |
| 13 | Streaming Icon and Video streaming bit rate, display 0 kb when the streaming is offline  |
| 14 | Battery Level and Battery percentage   |
| 15 | Power Off  |
| 16 | Hide / Display desktop<br>Hide / Display text and icons on the LCD screen  |
| 17 | Lock / Unlock screen   |
| 18 | Video Collage<br>Customize layout, Picture in picture, Supports 6 fixed and 2 custom screen compositions   |
| 19 | Menu<br>Setting  |
| 20 | Streaming button   |

## 2.4 Menu/Setting

After clicking the Menu button, the Device Menu main interface will be shown as follows, including “Network”, “Live”, “Audio”, “Video”, “Record”, “QR code” and “System”. And the detailed description of each part will be given below.

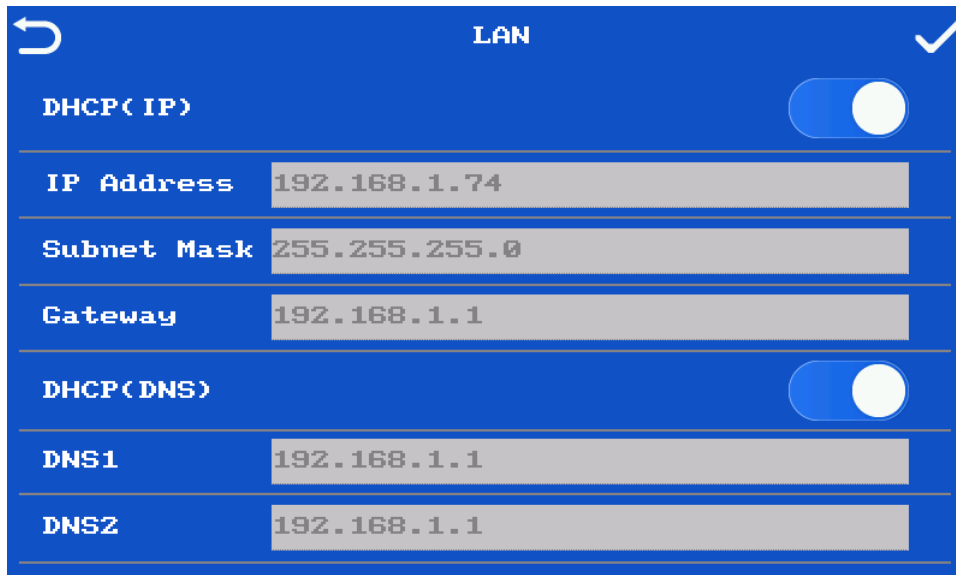


## Quick Start Guide

### 1. Network

#### ● LAN

The default Network mode of the encoder is DHCP mode. Once the DHCP mode is selected to “open”, all of these network parameters will be set automatically. In addition, user can also fill in network parameters.



#### ● WIFI

First of all, please switch the “WIFI” button to “Open”, then the user can press the “Scan” button, find WIFI name and connect it. The second method is to click on the "Setting" button, enter "SSID" and "Password" to determine the connection to WIFI, and finally don't forget to click the "v".



## Quick Start Guide

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### FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept

any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance

could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment

generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to

correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with minimum 20cm distance between the radiator and your body:

Use only the supplied antenna

## 2. Live

### ● Live

**Live:** Button for Start/Stop streaming.

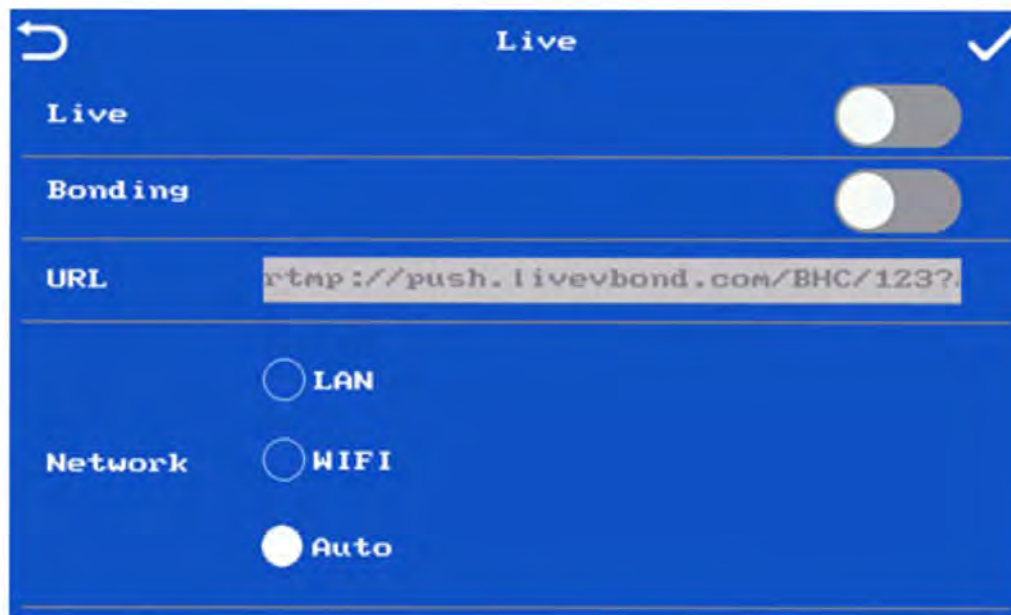
**Bonding:** Turn on/off network bonding mode.

**URL:** Combination of **RTMP URL** and **Stream Key**, equivalent to RTMP Address.

## Quick Start Guide

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**Network select:** User can select **LAN**, **WIFI** or **Auto** as the streaming network.



### 3. Audio

- **Audio**

Turn on/off audio output. Audio loop out, it can connect to earphone to monitor.

- **Source**

**LINE IN:** Use the analog stereo input as the audio source.

**HDMI:** Use the embedded digital stereo audio of HDMI input as the audio source.

**SDI:** Use the embedded digital stereo audio of SDI input as the audio source.

- **Auto Gain**

Turn on/off Auto Gain, the default setting of Auto Gain is on.

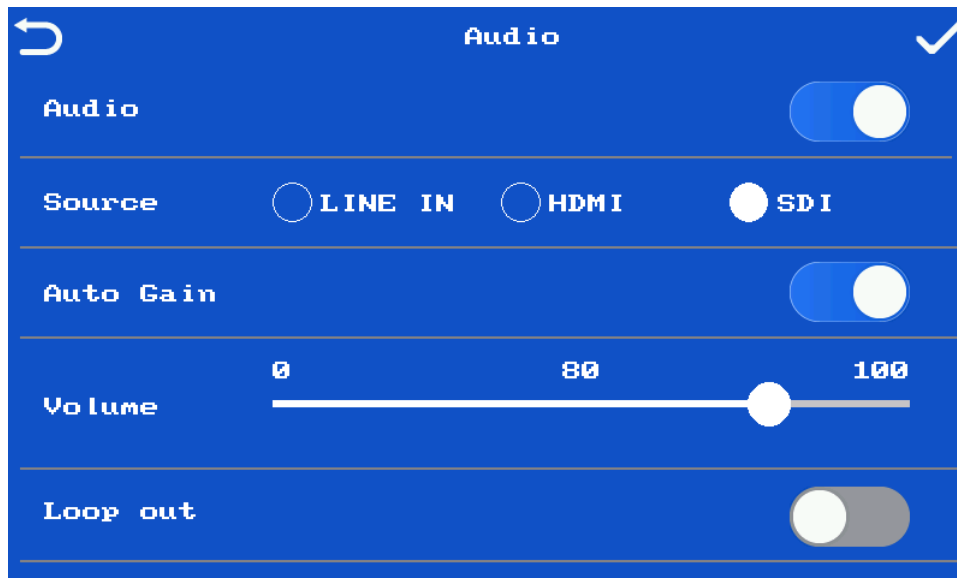
- **Volume**

Set a volume when Audio gain is turn off. The range of volume is 0~100.

- **Loop Out**

Turn on/off, monitor audio.

## Quick Start Guide



### 4. Video

- **Bit rate(kbps)**

The bitrate range of LiveV400 is 100 kbps~2,0000kbps.

- **I Frame interval**

The range of I frame interval is 5~200. The default is recommended 40.

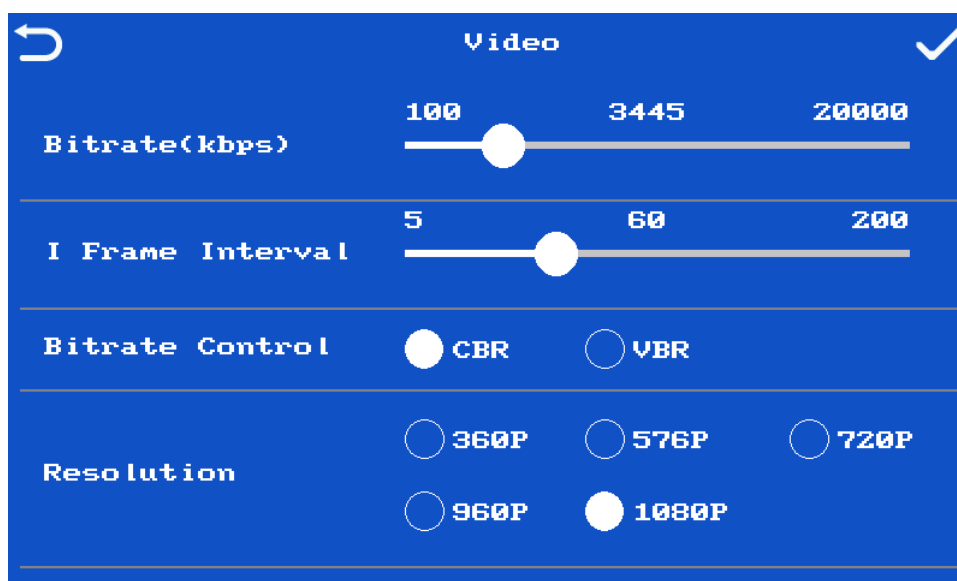
- **Bitrate control**

**CBR:** Constant Bit Rate.

**VBR:** variable Bit Rate.

- **Resolution**

The Resolution choose from 360P, 576P, 720P, 960P or 1080P. The default value is 1080P.





## Quick Start Guide

### 5. Record

Turn on/off, insert the TF card to record.



### 6. QR Code

Please scan by mobile browser or camera app, tap the notification to open the link. Click the “Create account” , if you don’t have account.



### 7. System

#### ● About

Display device **Name**, **Model**, **Serial Number**, **Hardware Version**, **Software Version**, and support users to rename the device.

## Quick Start Guide

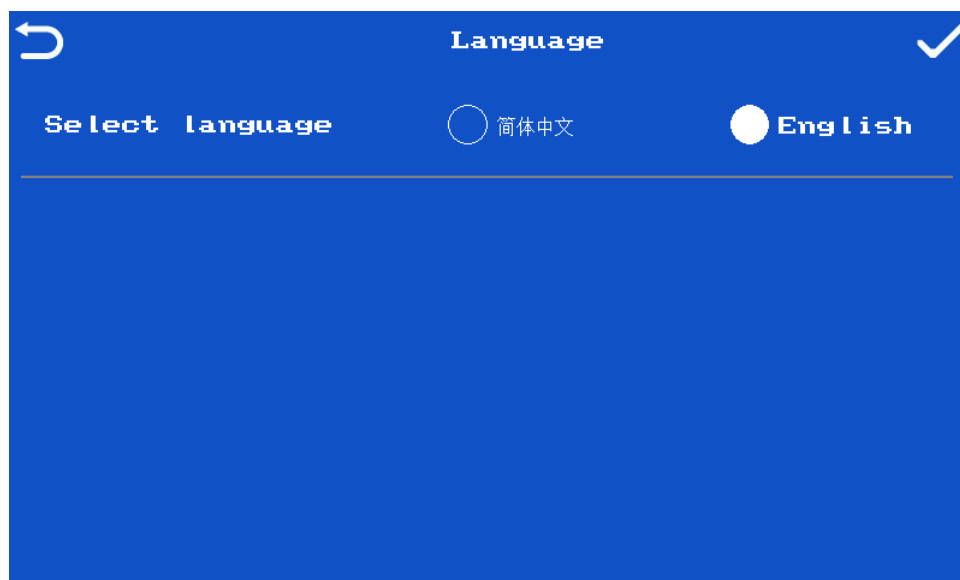


- **Software Update**

Display current Software version and support users upgrade software while the network was connected.

- **Language**

Language can be chosen from English or Chinese (simplified).



- **Silent fan**

Turn on, the fan will be stopped; turn off, the fan will be open.

**Note:** In the silent fan mode, the encoder will stop charging the battery.

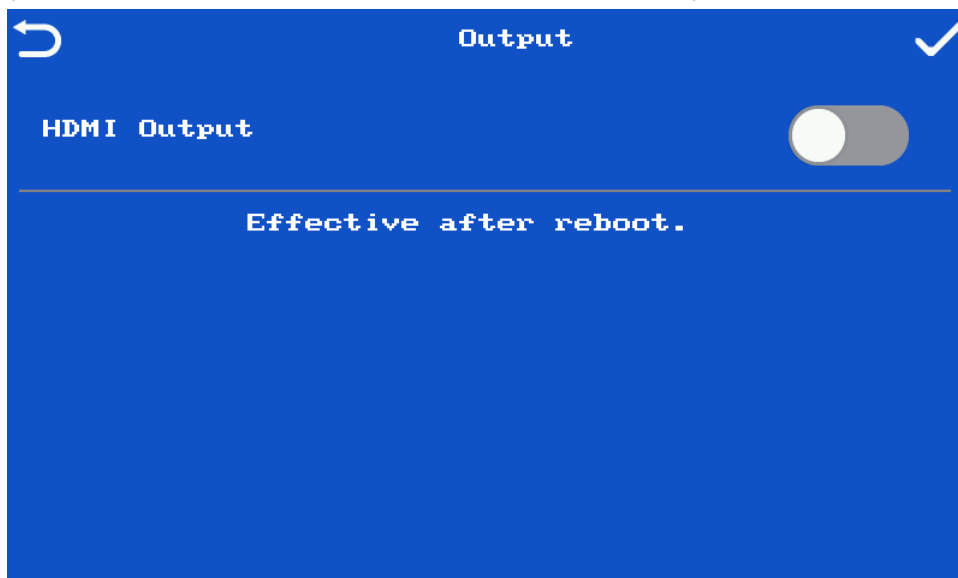
## Quick Start Guide

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- **Output**

HDMI Output turns on/off to connect the HDMI monitor to watch the preview video.



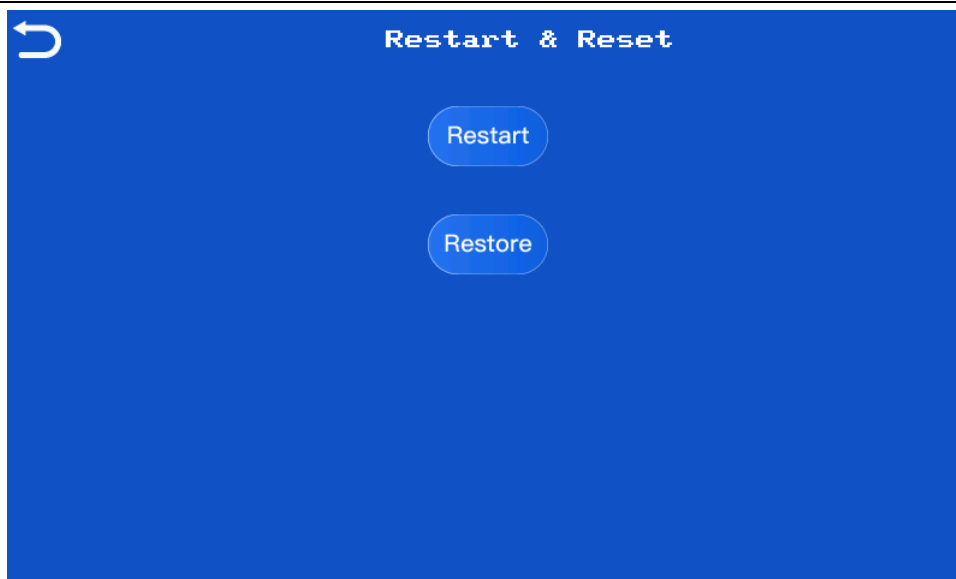
- **Restart & Reset**

**Restart:** Restart the device.

**Restore:** Restore the device to factory default status.

## Quick Start Guide

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### 2.5 Quick Start Guide

Please follow the following steps for a quick connection guidance of the encoder.

Step1. Make the Power Adapter plugged.

Step2. Press the **RED Power** button on the left of encoder to turn on the system.

Step3. Turn on your camera or video source and connect the output to corresponding connection of the encoder.


Step4. (Optional) Plug speakers or headphones into the 3.5 mm headphone jack of encoder.

Step5. Connect encoder to Network.

Encoder allows you to connect multiple ways. Find brief descriptions of these modes below.

[LAN mode](#): Connect RJ-45 Ethernet cable from the LAN port to the router.

[WIFI mode](#): Complete WIFI connection setting, see [WIFI connection setting](#) for the detail.

Step7. Press  auto push video go to live.

#### NOTE:

- When WIFI connection setting is completed, don't need to set up again unless users want to connect to another WIFI.

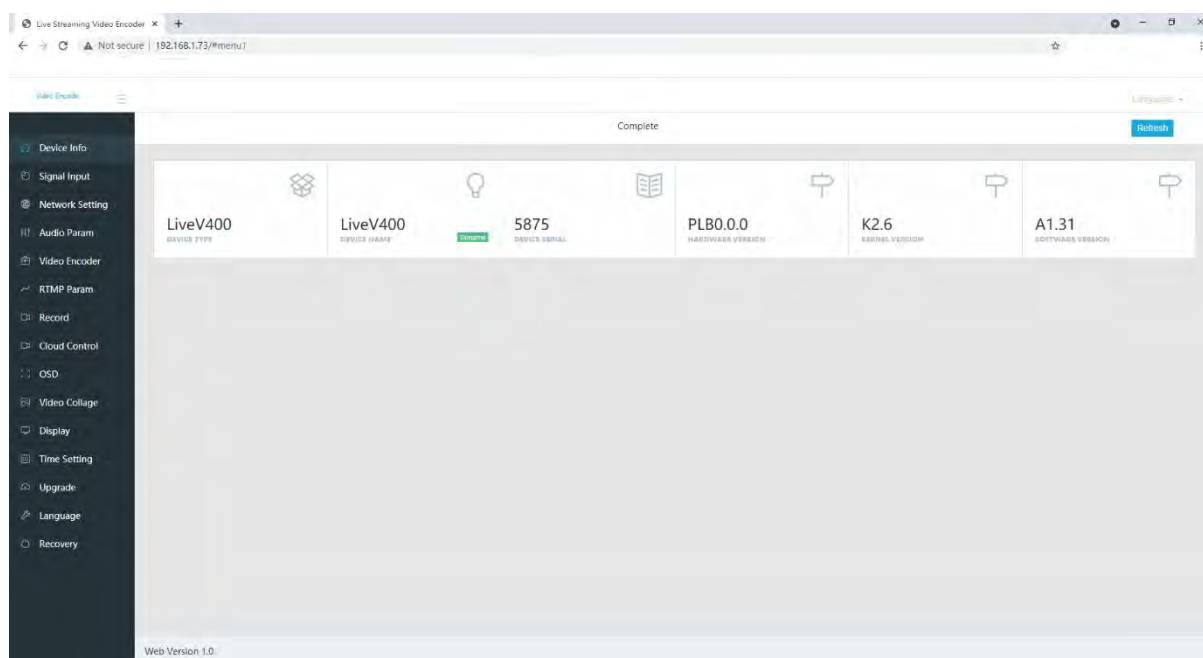
# Web Control User Interface Setting

## Chapter 3 Web Control User Interface

After connecting the encoder, follow the steps of the quick start guide in the previous chapter, users can control the encoder Web Control User Interface now by PC or Phone. Please refer to the following chapters for details of the setting and control of the encoder.

### 3.1 Main Control Interface

The IP address of the encoder will show on the LCD once connected to LAN or WIFI, users can enter the IP address into the address bar of the web browser on PC or phone, and then the encoder Web Control User Interface will be shown as follows. In this example, the IP address is “192.168.1.73”.



The main setting options of the web control UI include “**Device Info**”, “**Signal Input**”, “**Network Setting**”, “**Audio Param**”, “**Video Encoder**”, “**RTMP Param**”, “**OSD**”, “**Video Collage**”, “**Time Setting**”, “**Upgrade**”, “**Language**”, “**Recovery**”.

### 3.2 Device Info

After clicking the “**Device Info**” option on the left column of the web control UI, the Device Information option control page will be shown as follows. The Device Information page includes the information about “**DEVICE TYPE**”, “**DEVICE NAME**”, “**DEVICE SERIAL**”, “**HARDWARE VERSION**”, “**KERNEL VERSION**” and “**SOFTWARE VERSION**”, and support users change device name.

## Web Control User Interface Setting



After clicking the **“Rename”** option, the **“Rename”** window show as follows, users can enter a new user friend device name and click the **“confirm”** button to apply and save the setting.

A 'Rename' dialog box with a close button (X) in the top right corner. It contains a text input field with the text 'LV400'. Below the input field are two buttons: 'Confirm' (in blue) and 'Cancel' (in grey).

### 3.3 Signal Input

After clicking the **“Signal Input”** button on the left column of the web page, user can see information about the current detected input signal from **“HDMI”**, **“SDI”** and **“Stream”**, including Resolution and Frame Rate input channel. In this example, the device doesn't connect to the SDI signal. The resolution of video input by HDMI is 1080P.

**Stream:** Select **“Network Stream”** at Stream Type, paste RTMP or RTSP address at Pull Url.

**Note:** when choose HDMI and SDI input, the router function is unavailable.

A screenshot of the 'Signal Input' section of the web control interface. It is divided into three main sections: 'HDMI', 'SDI', and 'Stream'. The 'HDMI' section shows a signal of '1080P\_60Hz'. The 'SDI' section shows 'No Signal'. The 'Stream' section shows 'No Signal' and has a 'Stream Type' dropdown menu set to 'Network Stream' and a 'Pull Url' text input field. At the bottom of the 'Stream' section is a green 'Confirm' button.

## Web Control User Interface Setting

### 3.4 Network Setting

After clicking the **“Network Setting”** option on the left column of the web control UI, users can see the Network Setting option control page. This page provides details for the following items.

#### 3.4.1 LAN

**LAN** - This page provides users to set LAN network relevant parameters. Because the factory default of **“IP Auto”** option is enabled, so once the **“IP Auto”** option is selected to be enabled, all of these network relevant parameters will be set automatically. Furthermore, user can also choose to turn off **“IP Auto”** and fill in network related parameters. Last, click the **“Submit”** button to apply and save the setting.

| LAN                 | WIFI                         |
|---------------------|------------------------------|
| Link Status         | Connected                    |
| Internet            | Connected                    |
| IP Auto             | ON                           |
| IP Address          | 192.168.1.74                 |
| Subnet Mask         | 255.255.255.0                |
| Gateway             | 192.168.1.1                  |
| DNS Auto            | ON                           |
| DNS1                | 192.168.1.1                  |
| DNS2                | 192.168.1.1                  |
| MAC Address         | 64F8:0155:4B:7A              |
| RTSP Stream Address | rtsp://192.168.1.74/channel1 |

Submit

#### 3.4.2 WIFI

**WIFI** - This page provides users to connect WIFI network. User can choose whether to enable built-in WIFI via **“Power”** button. If the **“Power”** option is **“ON”**, there are two ways to connect WIFI.

1. After clicking the **“Scan”** button, find WIFI name and connect it.
2. After clicking the **“Manual Input”** button, please enter WIFI **“SSID”** and **“Password”** to connect a network.

## Web Control User Interface Setting

If connect success, the information about the WIFI will be updated after clicked “refresh” button.

| LAN                 | WIFI  |
|---------------------|---|
| Enable              | <input checked="" type="checkbox"/> ON        |
| Scan WIFI           | <input type="button" value="Scan"/>           |
| Signal Level        | <input type="button" value="Signal Level"/>   |
| Link Status         | <input checked="" type="checkbox"/> Connected |
| Internet            | <input checked="" type="checkbox"/> Connected |
| IP Address          | 192.168.1.138                                 |
| Subnet Mask         | 255.255.255.0                                 |
| Gateway             | 192.168.1.1                                   |
| DNS1                | 192.168.1.1                                   |
| DNS2                | 192.168.1.1                                   |
| MAC Address         | 10:2C:6B:7F:AS:6A                             |
| Manual input        | <input type="button" value="OFF"/>            |
| SSID                | Zowietek5G                                    |
| Password            | Zowietek1701                                  |
| RTSP Stream Address | rtsp://192.168.1.138/channel1                 |

### 3.5 Audio Param

After clicking the “**Audio Param**” option on the left column of the web control UI, users can see the Audio control page. The Audio control page provides user to turn on/off audio and configure audio parameters. The user can turn on/off audio output by the “**Audio Status**” button. There are three different options of Audio Type to choose from when the audio is turned on. At last, don’t forget to click “**Confirm**” to apply the setting.

| Audio Param                            |  |
|--|--|
| Enable                                 | <input checked="" type="checkbox"/> ON |
| Loop out Enable                        | <input type="checkbox"/> OFF           |
| Type                                   | <input type="text" value="SDI"/>       |
| <input type="button" value="Confirm"/> |  |



## Web Control User Interface Setting

### Audio Type

Select an audio input source from the available signal input connections. This is the audio that will be recorded and/or passed through.

**HDMI** - Use the embedded digital stereo audio of HDMI input as the audio source.

**SDI** - Use the embedded digital stereo audio of SDI input as the audio source.

**LINE IN** –Use the analog stereo input as the audio source. In this mode, user can choose to turn on/off auto “Gain”, the default setting of auto gain is on, at this condition, user can manually set a volume. The range of volume is 0~100.

| Audio Param     |  |
|-----------------|--|
| Enable          | <input checked="" type="checkbox"/> ON |
| Loop out Enable | <input type="checkbox"/> OFF           |
| Type            | LINE IN                                |
| Gain            | <input checked="" type="checkbox"/> ON |
| Volume          | 80                                     |

Confirm

## 3.6 Video Encoder

After clicking the “**Video Encoder**” option on the left column of the web control UI, users can see the Video Encoder option control page. 4 parameters of Encoder can be set on this page, including “**Bit Rate**”, “**I Frame Interval**”, “**Bit Rate Control**” and “**Resolution**”.

| Live Stream      |            |
|------------------|------------|
| Bit Rate (kbps)  | 3445       |
| I Frame Interval | 60         |
| Bitrate Control  | CBR        |
| Resolution       | 1080P(FHD) |

Confirm

### Bit Rate (kbps)

## Web Control User Interface Setting

---

The range of bit rate is 100 kbps~ 20,000 kbps. The default value is 2,000 kbps. 2,000 kbps is the best economic setting for the trade-off between image quality and bit rate

### NOTE:

Once the video goes live, the real bitrate of video streaming is shown on the top-right of LCD. If the average bitrate on LCD is smaller than your target setting above. That means the upload bandwidth is not enough. In this situation, target bitrate can be lowered to improve the performance. The resolution can also be lowered if bitrate is low.

### I Frame Interval

The range of I frame interval is 5~200. The default value is 40.

### Bitrate Control

The **“Bit Rate Control”** can be chosen as **“CBR”** (Constant Bitrate) or **“VBR”** (Variable Bitrate).

### Resolution

The Resolution choose from:

- 1080P (FHD)
- 960 (Portrait)
- 720P (HD)
- 576P (PAL)
- 360P (Standard)

The default value is 1080P (FHD) .

## 3.7 RTMP Param

After clicking the **“RTMP Param”** option on the left column of the web control UI. User can configure streaming parameter that include **“Enable”**, **“Connection Status”**, **“Model”**, **“Streaming Network”** and **“RTMP Address”** on the RTMP Parameter option control page. At first please switch **“Enable”** button is **“ON”**. Then the user should select Streaming **“Model”**.

1. If the **“Model”** is selected as **“Single”**, the user can select one of Auto, Lan, Built-in WIFI, as the **“Stream Network”**.
2. If the **“Model”** is selected as **“Bonding”**, the device will bond multiple connected networks as stream network. Furthermore, the encoder supports up to 9 RTMP Address streaming simultaneously in this model.

Last, please fill in **“RTMP Address”** and click **“Confirm”** button to apply the setting.

## Web Control User Interface Setting

The screenshot shows a web interface titled "Stream List" with a "Complete" status indicator and a "Hotspot" button. The main settings area includes:

- Enable:** A toggle switch currently set to "Off".
- Connection Status:** A label indicating "Unconnected".
- Mode:** A dropdown menu currently set to "Single".
- Stream Network:** A dropdown menu currently set to "Auto".
- RTMP Address:** A text input field containing the URL: `rtmp://publ.liveboni.com/BHC/1237aum_key=1624506388-Q-0-7a1c052912b759ed93cb563183457116`. To the right of the field is a small note: "Make sure audio is on".

At the bottom of the settings area is a green "Confirm" button.

### Enable

Turn on/off to start/stop streaming.

### Connection Status

Display "connected" when the encoder is streaming, otherwise display "Unconnected".

### Model

- **Signal:** use selected network in "Streaming network" to streaming.
- **Bonding:** The device aggregates all connected networks to push the stream together, pushing and streaming nine RTMP addresses at the same time.

### Streaming Network

Streaming Network choose from the following:

- **Auto:** encoder automatically chooses the best network as the stream network.
- **Lan:** encoder is using LAN network to stream.
- **Built-in WIFI:** encoder is using a Built-in WIFI network to stream.

### RTMP Address

Step1. Please login your video streaming provider account.

Step2. Find **RTMP URL** or **server URL** usually in ingestion area

Step3. Find **Stream key** in the same section

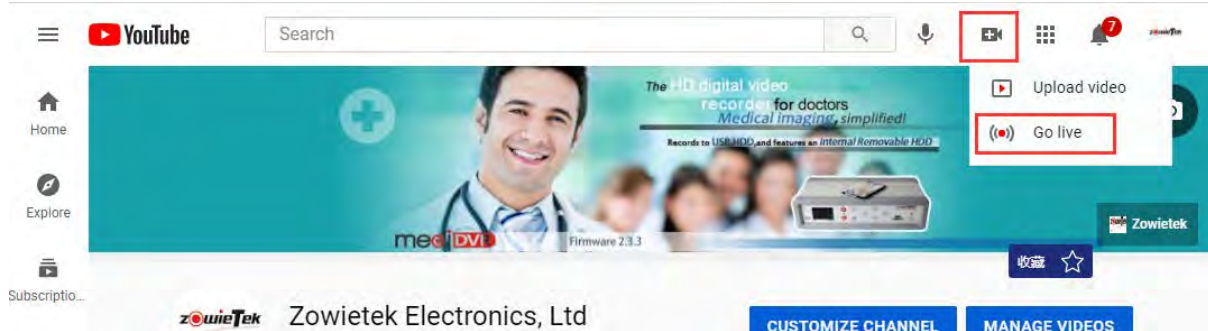
Step4. Copy, paste and combine **RTMP URL** and **Stream key** to RTMP Address setting section of encoder.

**NOTE:** Don't forget to click the confirm button to apply and save the setting.

### YouTube

- Before beginning a live stream for the first time, the YouTube channel has to be enabled. Confirm that your channel is verified. If you already enabled live stream you can skip this step.
- Log in YouTube account and click "Go live" .

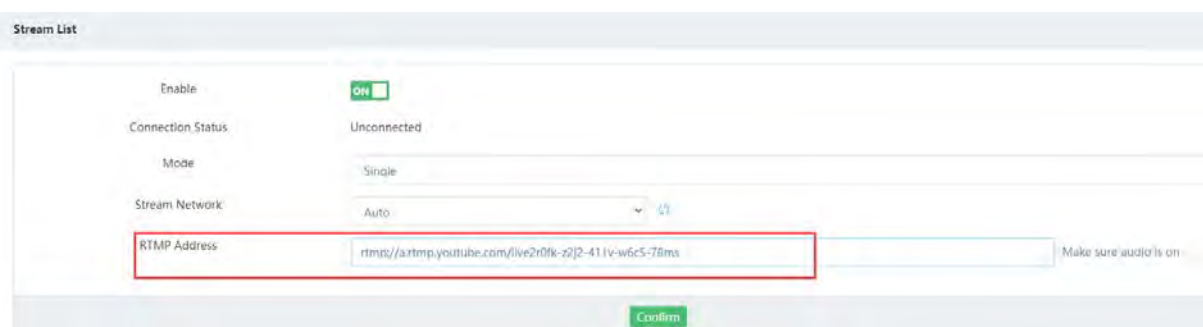
## Web Control User Interface Setting




- Add a title and description in the BASIC INFO tab. Stream URL and Stream Key can be found at the bottom of Stream now.



- Copy Server URL, Reveal and copy Stream key and paste them into encoder RTMP setting section in the format below



- Press Confirm to save the setting into encoder and it will work instantly.
- Now, configuration finished. Press  to start live streaming.

## Web Control User Interface Setting

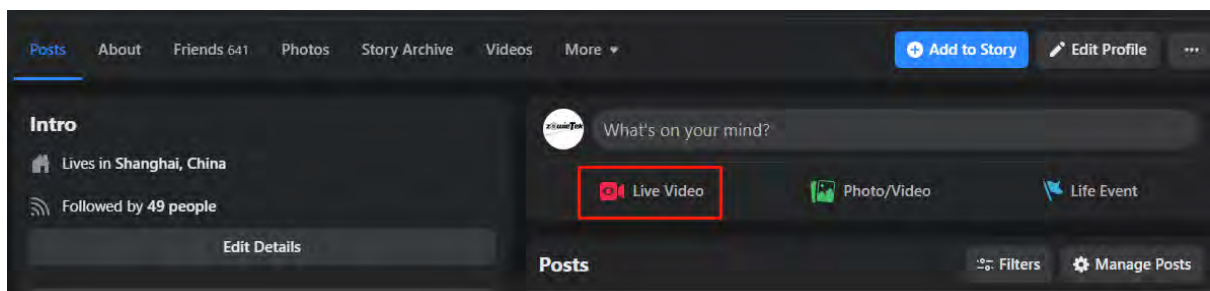
### NOTE:

YouTube requires audio in the video stream, make sure audio is correctly set in the **Video & Audio Input** section of encoder.

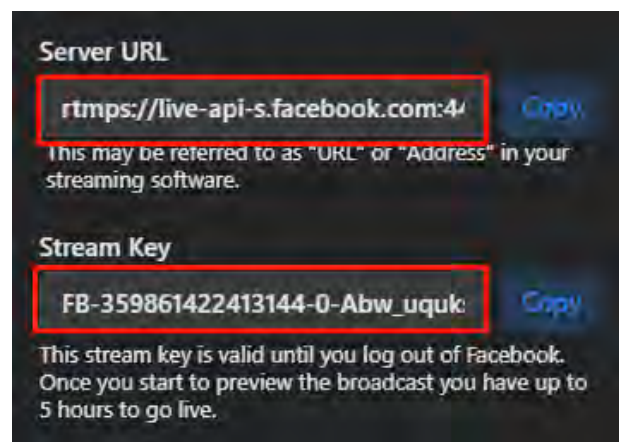
Besides Stream now, YouTube Events give you more control over your stream. You'll be able to select privacy options, set a start time, enable a backup stream for redundancy, create multiple live events, and stream them all simultaneously.

### Facebook

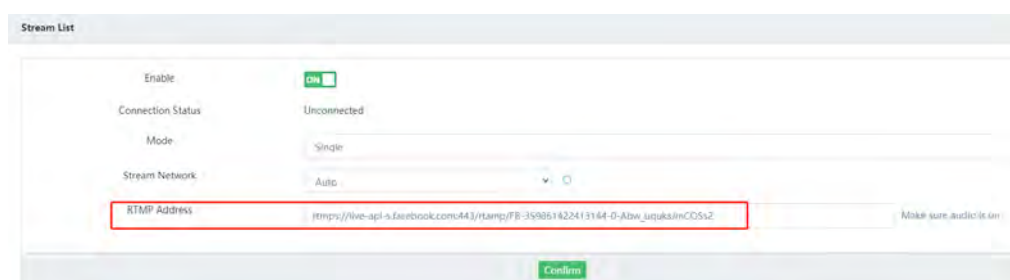
- Log in Facebook account and go to **Post**, click **"Live Video"**



- Chose where to post your live video and fill out Title and Tags. Find **Server URL** and **Stream key** and paste them together.



- Copy and paste the **server URL** and **stream key** or persistent stream key into the RTMP settings of encoder.

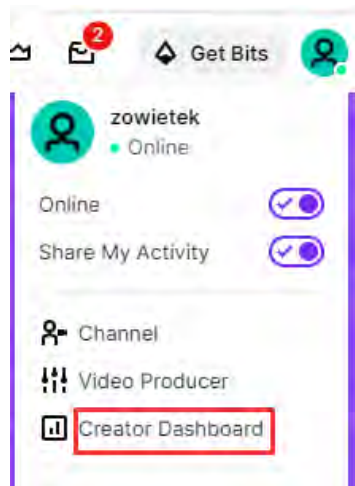


## Web Control User Interface Setting

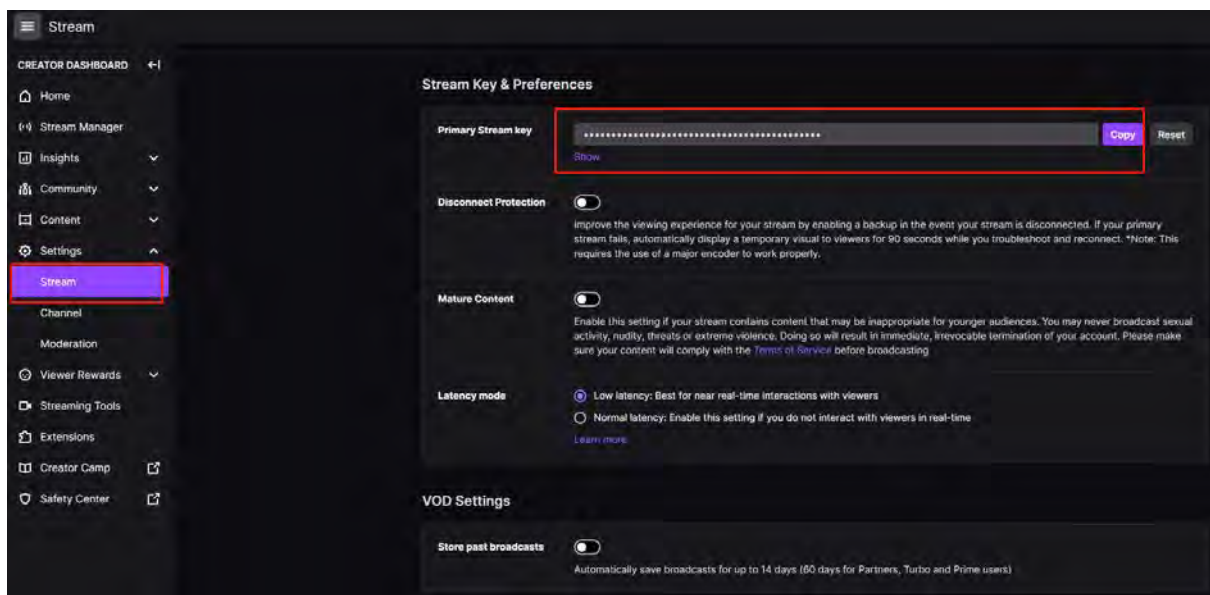
- Now, configuration finished. Press  to start live streaming.

### Twitch

- Log in Twitch.tv account and go to Creator Dashboard.



- Go to channel, the stream key can be found instantly.



The URL+ Stream Key of twitch looks like:

rtmp://server/{stream\_key}

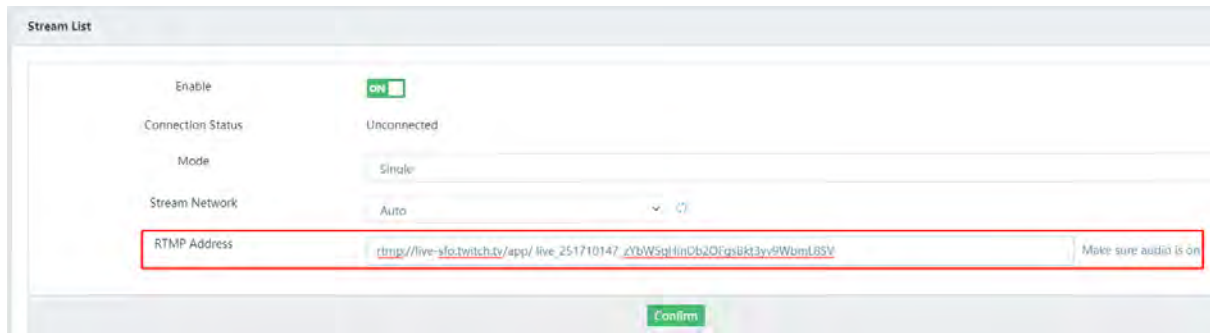
You can find best server in your area at twitch.tv, <https://stream.twitch.tv/ingests/>. Here is an example:


rtmp://live-sfo.twitch.tv/app/live\_251710147\_zYbWSqHinDb2OFgsBkt3yv9Wbml8SV

- Copy and paste the server URL and stream key or persistent stream key into the RTMP settings of encoder.



## Web Control User Interface Setting



- Now, configuration finished. Press  to start live streaming. A preview screen will appear on twitch.tv Live page under Dashboard or <https://www.twitch.tv/username/dashboard/live>

### Twitter (Media Studio)

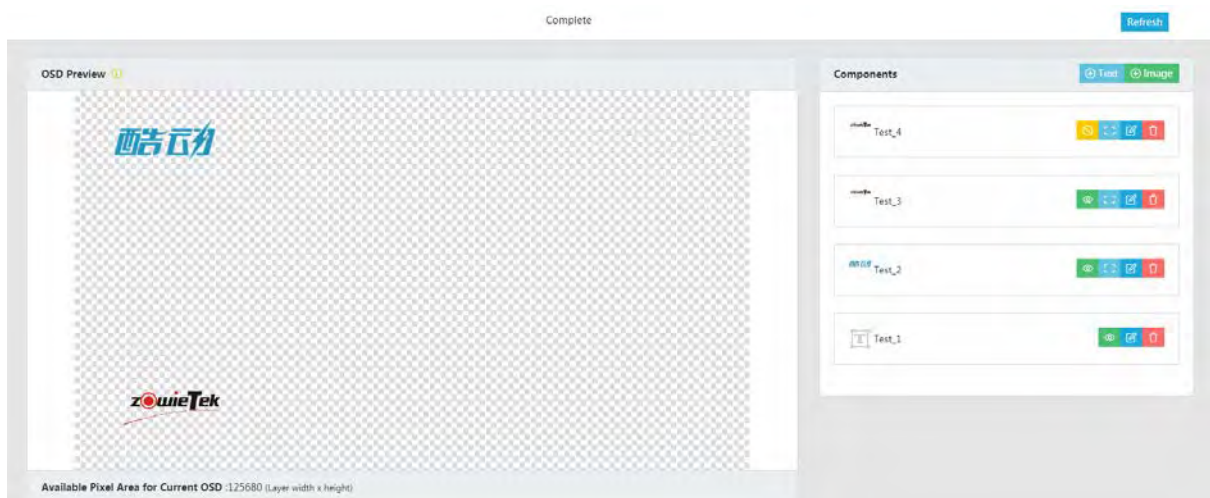
<https://media.twitter.com/en/articles/products/2018/media-studio/producer>



### Livestream.com(Now Vimeo)

<https://help.livestream.com/hc/en-us/articles/360002069647-Finding-the-RTMP-URL-and-Stream-Key-for-My-Event>

## 3.8 OSD




By clicking the “OSD” option on the left column of the web control UI, users can see the OSD option control page. There are provides up to 4 customize OSD that can be either text or a picture, and the user can drag-and-drop OSD Components anywhere on the left grid area.



-   : Click to hide/show OSD components (Test\_4 is hidden in the above figure).

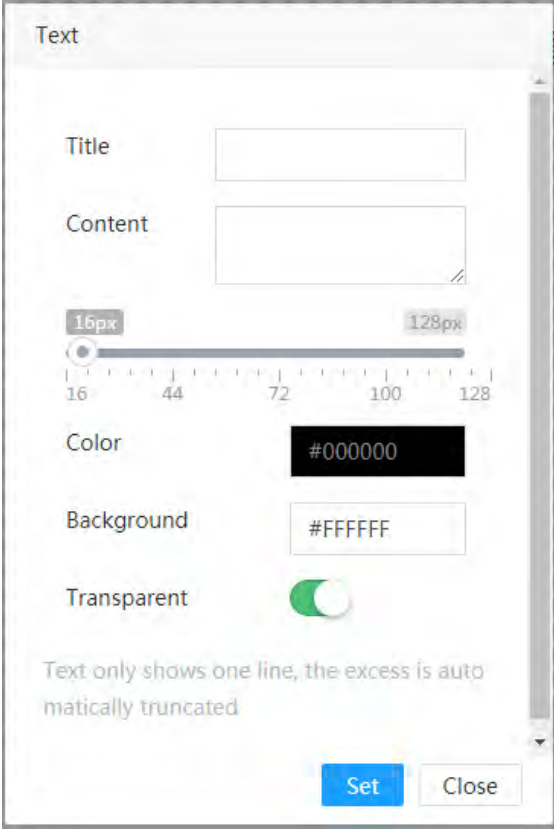
## Web Control User Interface Setting

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-  : click to change OSD Image size, the range of image length and width is 32Pixel~480Pixel. If the image size does not conform to the requirements, the image will be automatically hidden.
-  : click to change a new OSD image or re-edit text.
-  : delete OSD components.

### ⊕ Text

After clicking “⊕ Text” button, the “Text” window will pop up on the page for the user to edit the text OSD that Includes “Title”, “Content”, “Font size”, “Color” and “Background color”. The background will be transparent when switching the “Transparent switch” button on. At last, click “Set” button to apply it.



Text

Title

Content

Font size: 16px to 128px slider

Color: #000000

Background: #FFFFFF

Transparent: ☒

Text only shows one line, the excess is automatically truncated

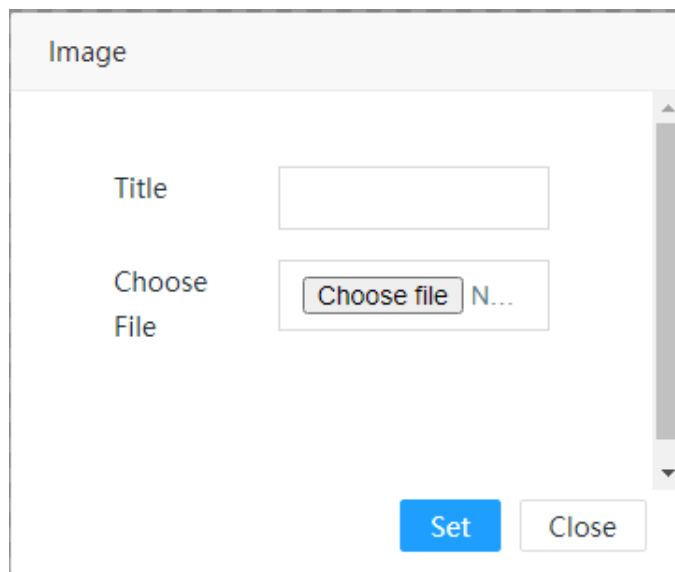
Set Close

### ⊕ Image

After clicking “⊕ Image”, a new sub window will pop up on the page for the user to set Image OSD. Only for JPG/JPEG/PNG pictures and size must be greater than 32x32 and less than 480x480 pixels. After pressing the “set” button, if the picture fits, user can preview the picture in the grid area on the left.



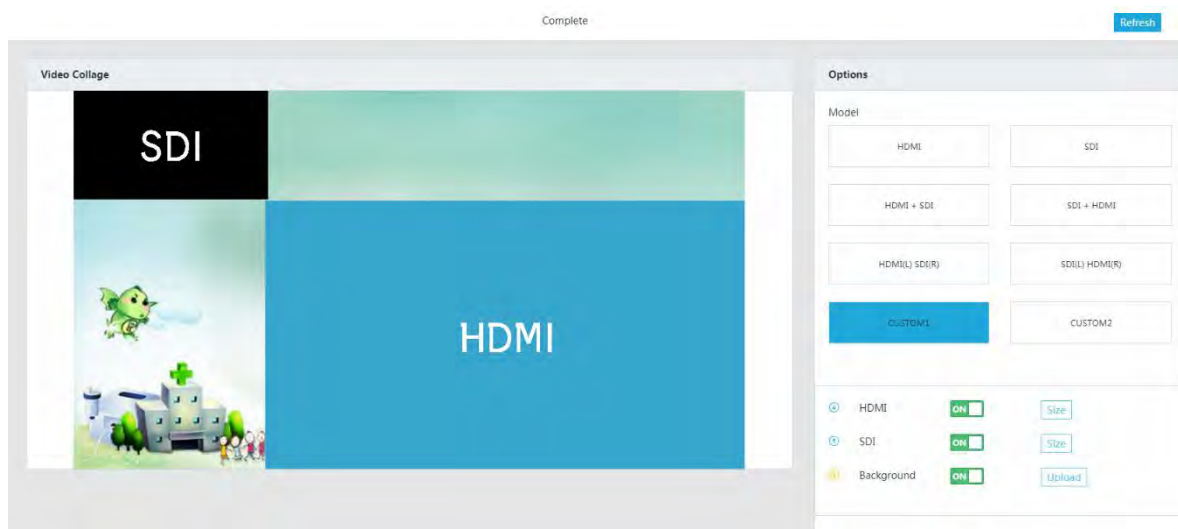
## Web Control User Interface Setting



The 'Image' configuration window contains a 'Title' text input field. Below it, the 'Choose File' section includes a 'Choose file' button and a file selection dropdown menu. At the bottom right, there are 'Set' and 'Close' buttons.

### 3.9 Video Collage

After clicking the **“Video Collage”** option on the left column of the web control UI, users can choose up to 6 different standard video collages that includes **“HDMI FIRST”**, **“SDI FIRST”**, **“HDMI (BIG) SDI (SMALL)”**, **“SDI (BIG) HDMI (SMALL)”**, **“HDMI (LEFT) SDI (RIGHT)”** and **“SDI (LEFT) HDMI (RIGHT)”**. Furthermore, user can also customize video collage that is **“CUSTOM1”** and **“CUSTOM2”**. Once the setting is completed, users can preview the display on the LCD screen immediately.

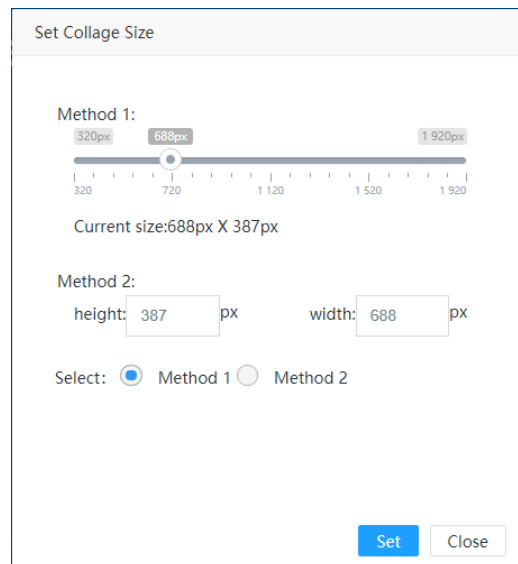


#### CUSTOM1, CUSTOM2

In the case of **“CUSTOM1”** or **“CUSTOM2”**, user can customize the size and location of **“SDI”** and **“HDMI”**, and also upload your favorite pictures as background. Users can turn HDMI or SDI on/off via the buttons on the right of **“HDMI”** and **“SDI”**. After clicking **“Size”** button on the right of **“HDMI”** or **“SDI”**, the **“Set Collage size”** window show as follows, then, the user can change the size of HDMI or SDI. Furthermore, the user can drag-and-drop HDMI and SDI anywhere on the left preview area. Moreover, when HDMI and SDI overlap, the

## Web Control User Interface Setting

user can select the arrow on the left of the **“HDMI”** to place the HDMI on the top of bottom layer, the arrow on the left of **“SDI”** is similar.



The dialog box titled "Set Collage Size" contains two methods for setting the collage size. Method 1 is a slider with a range from 320px to 1920px, with a current value of 688px. Method 2 consists of input fields for height (387px) and width (688px). A "Select" section has radio buttons for Method 1 (selected) and Method 2. At the bottom are "Set" and "Close" buttons.

Set Collage Size

Method 1:

320px 688px 1920px

320 720 1120 1520 1920

Current size:688px X 387px

Method 2:

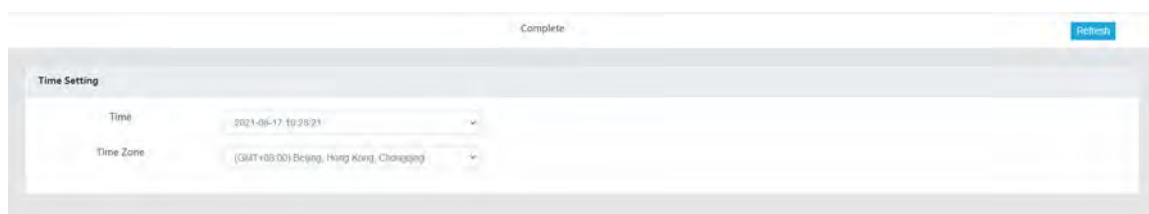
height: 387 px width: 688 px

Select: ☒ Method 1 ☐ Method 2

Set Close

### 3.10 Time Setting

After clicking the **“Time Setting”** option on the left column of the web control UI, users can see the Time Setting option control page. In the **“Time”** option, user can select Auto or manual to set the time.



The "Time Setting" form has a "Complete" status bar at the top right with a "Refresh" button. It contains two dropdown menus: "Time" set to "2021-06-17 10:28:21" and "Time Zone" set to "(GMT+08:00) Beijing, Hong Kong, Chongqing".

Complete Refresh

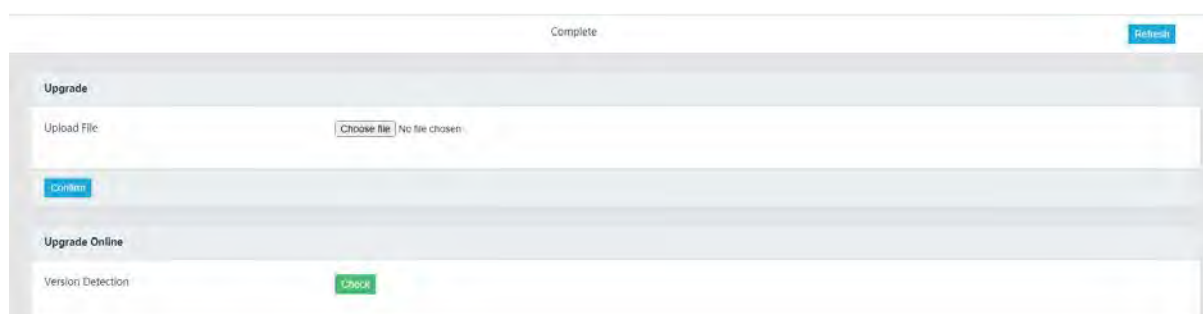
Time Setting

Time 2021-06-17 10:28:21

Time Zone (GMT+08:00) Beijing, Hong Kong, Chongqing

### 3.11 Upgrade

After clicking the **“Upgrade”** option on the left column of the web control UI, users can see the Upgrade option control page. The Upgrade control page provides two ways to upgrade device.



The "Upgrade" form has a "Complete" status bar at the top right with a "Refresh" button. It contains an "Upload File" section with a "Choose file" button and a "No file chosen" message. Below this is a "Confirm" button. The "Upgrade Online" section has a "Version Detection" label and a "Check" button.

Complete Refresh

Upgrade

Upload File Choose file No file chosen

Confirm

Upgrade Online

Version Detection Check

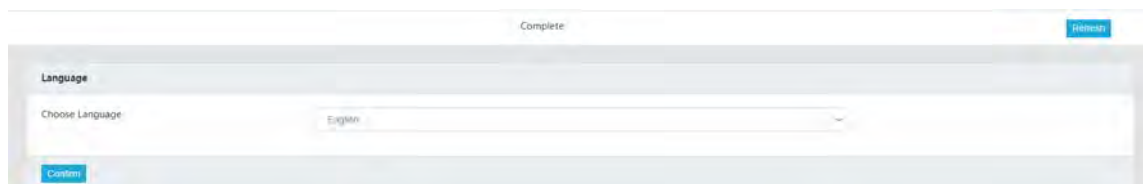
## Web Control User Interface Setting

**Local Upgrade** – please press the **“Choose file”** button to select a firmware firm from PC/laptop. After the firmware is selected, please press the **“Confirm”** button to start the firmware update procedure. Keep network connected while upgrading, do not power off. encoder will reboot when upgrade is successful.

**Upgrade Online**–please press the **“Check”** button to check current version first. After detecting a new version, please press the **“Confirm”** button to start the firmware update procedure. Keep network connected while upgrading, do not power off. Encoder will reboot when upgrade is successful.

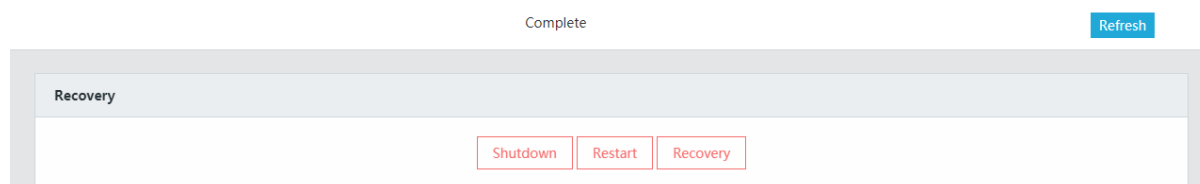
### 3.12 Language

After clicking the **“Language”** option on the left column of the web control UI, users can see the Language option control page. Once the language is changed, don’t forget to click the **“confirm”** button to apply and save the setting.



### 3.13 Recovery

After clicking the **“Recovery”** option on the left column of the web control UI, users can see the Recovery option control page.



#### Shutdown

Press the **“Shutdown”** button to shut down the encoder.

#### Restart

Press the **“Restart”** button to restart the Encoder.

#### Recovery

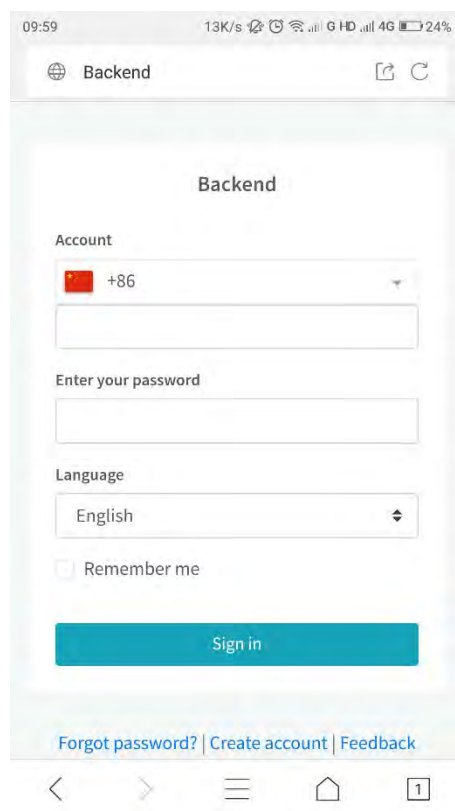
Press the **“Recovery”** button to restore encoder to factory status.

# Mobile-Phone Backend Setting

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## Chapter 4 Mobile-Phone Backend Setting

If you are not carrying or inconvenient for using your computer, you can also choose to configure your encoder by using your phone's backend settings. Please click **“QR Code”** at the Menu. Then, please scan the QR code with your mobile phone and enter the user interface as shown below. If you don't have an account yet, please click **“Create account”** at the bottom of the picture to create your own account.



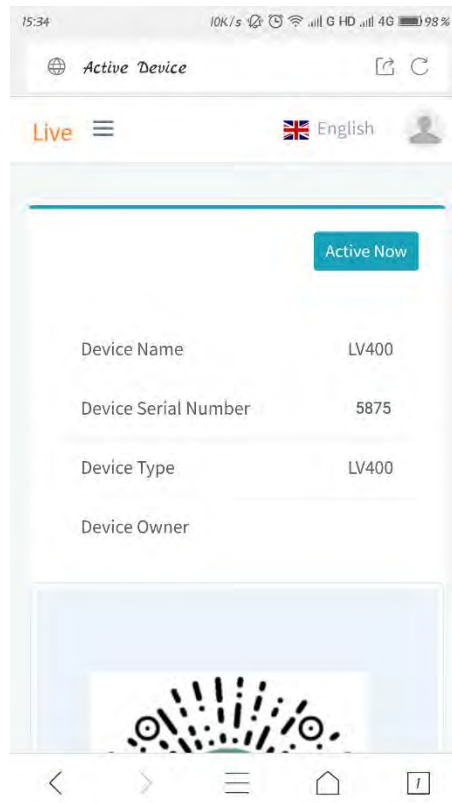
After logging in to your personal account and entering the interface as shown below, at first, please click on **“active now”** to bind the device to your account. Next time you can find your device in the list of personal devices. One account can have more than one encoder.

Once you registered your account, you can also login your account at [xx.livevbond.com](http://xx.livevbond.com) on PC to configure encoder, xx could be in, eu, us, au, cn etc. depends on the country or area of the encoder, such as [eu.livevbond.com](http://eu.livevbond.com)

### NOTE:

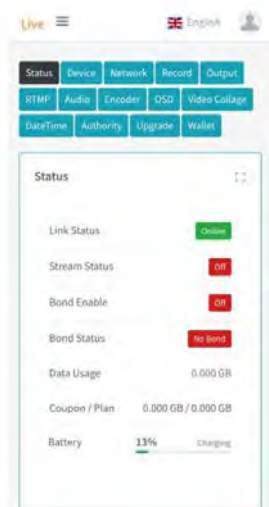
- **Make sure connect a RJ45 network cable to the LAN port of encoder.**
- **Make sure the encoder connected to Internet before go ahead at the first time.**

## Mobile-Phone Backend Setting



### 4.1 Status

After clicking "**Active now**" to activate the device, then you should find your encoder device under dashboard. Enter the interface as shown below to start configuring the device. First, you will see the "**Status**" optional control page. In the "**Status**" control page, the user can view information about the device including "**Link Status**", "**Stream Status**", "**Bonding Enable**", "**Bonding Status**", "**Date Usage**", "**Coupon**" and "**Devices Battery**".



# Mobile-Phone Backend Setting

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## Link Status

If the device is powered on and connected to the network, "**Device Online**" is displayed, otherwise "**Device Offline**" is displayed.

## Stream Status

If the device is streaming, "**On**" is displayed, otherwise "**Off**" is displayed.

## Bonding Enable

If the Bonding mode is turned on, "**On**" is displayed, otherwise "**Off**" is displayed.

## Bonding Status

If the Bonding mode is turned on, "**Bonding On**" is displayed, otherwise "**No Bonding**" is displayed.

## Date Usage

Device balance. Bonding mode is charged.

## Coupon

Top-up coupon.

## Devices Battery

Percentage of remaining battery power. If the device is charging, "**Charging**" is displayed, otherwise "**Uncharged**" is displayed.

## 4.2 Device

In the "**Device**" optional control page, user can view information about the device, including "**Name**", "**Model**", "**Serial number**" and "**Version**". Furthermore, user can change the name of the device.

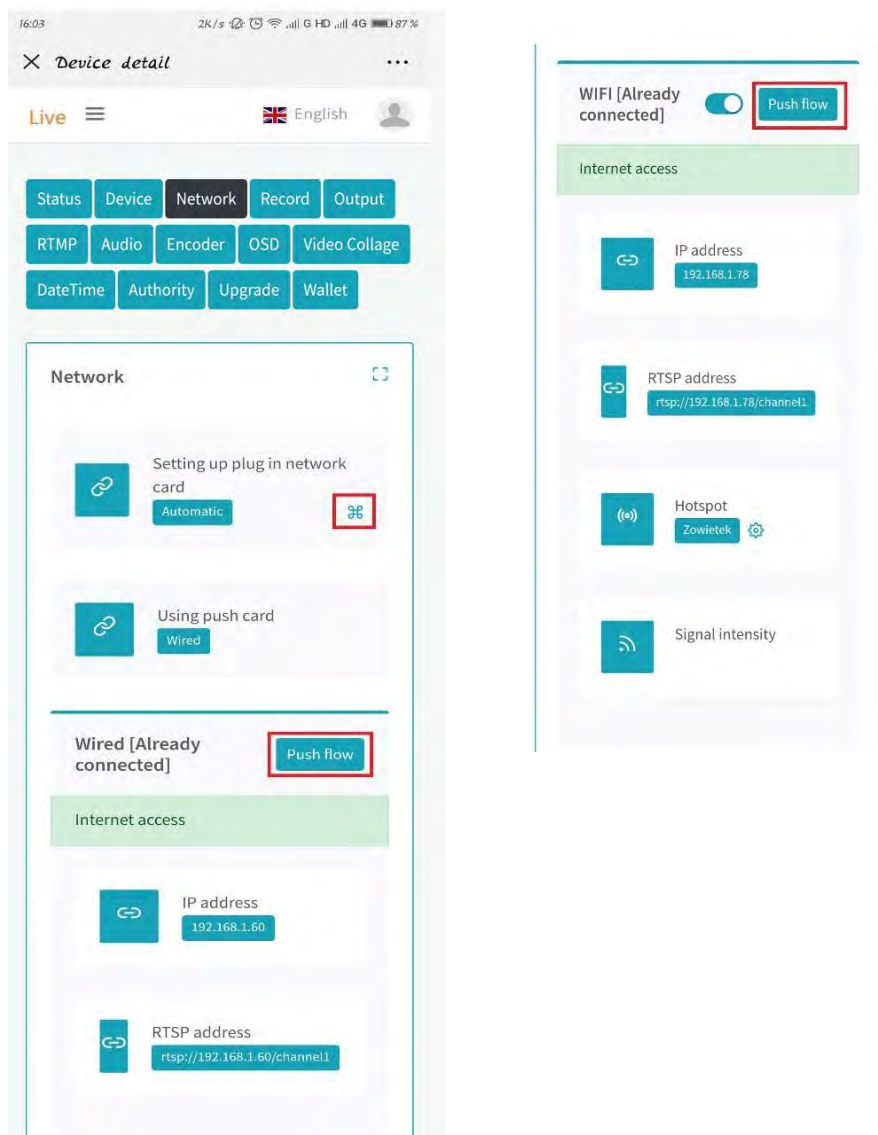
The screenshot shows a mobile application interface for device settings. At the top, there's a header with 'Live', a menu icon, 'English', and a user profile icon. Below the header is a grid of tabs: Status, Device (selected), Network, Record, Output, RTMP, Audio, Encoder, OSD, Video Collage, DateTime, Authority, Upgrade, and Wallet. The 'Device' tab is active, showing a form with the following fields: Name (LiveV400), Model (LiveV400), Serial Number (5875), and Version (K2.6-A1.31). A 'Save' button is located at the bottom of the form.

## Mobile-Phone Backend Setting

### 4.3 Network

In the **“Network”** optional control page, users can view the network information that the device has connected, set the device’s **“stream mode”**, **“stream network”** and turn on/off the built in WIFI. The user can click on the icon in the red box mark below to select **“Stream Mode”**.

1. When the **“Stream Mode”** is selected as **“Automatic”**, the device will automatically select one of connected network as the current streaming network, the priority order is LAN > WIFI . Furthermore, the user can also select the stream network by clicking **“Push Flow”** at the red mark box in the picture below.
2. When the **“Stream Mode”** is selected as **“Bonding”**, the bonding mode is turned on and the device will aggregation all connected networks as the current push network.
3. Users can also click on wired, WIFI right side of the "push flow" (red box marker below) settings specifically using a network as a push streaming network.
  - a) Users can also turn built-in WIFI on/off and view network-related parameters.



## Mobile-Phone Backend Setting

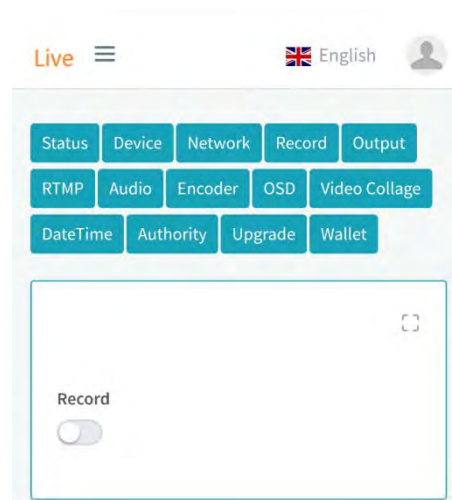
- Click the setting button by the Hotspot to set WIFI connection.



## 4.4 Record

### Record

Click on the **"Record"** button to start to record.



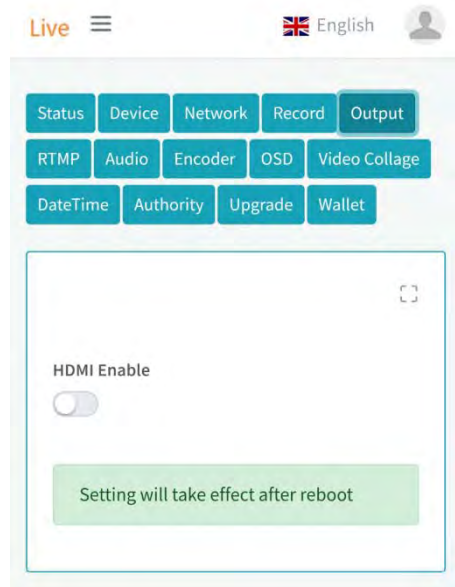
## 4.5 Output

### HDMI Enable

Click on the **"HDMI Enable"** button to start to watch the preview video by connect the HDMI monitor.

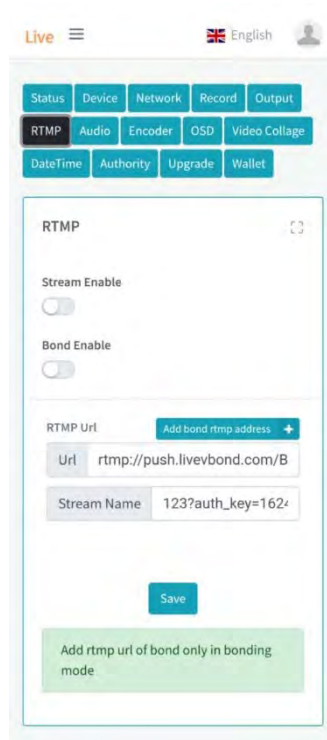


## Mobile-Phone Backend Setting



### 4.6 RTMP

In the “**RTMP**” optional control page, the user can choose to start/stop the live streaming, configure the stream mode and RTMP address.



#### Stream Enable

Click on the “**Stream Enable**” button to start/stop broadcast.

#### Bond Enable

Click on the “**Bonding Mode**” button to turn on/off bonding mode.

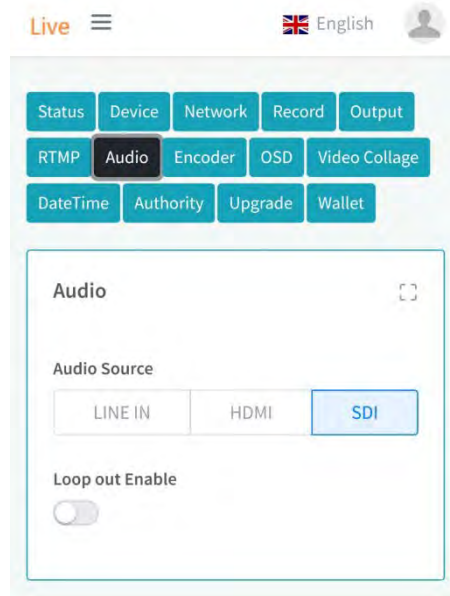
# Mobile-Phone Backend Setting

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## RTMP Url

Fill in the Stream address, please refer [3.7 RTMP Para](#) to get Url and Stream name.

## 4.7 Audio



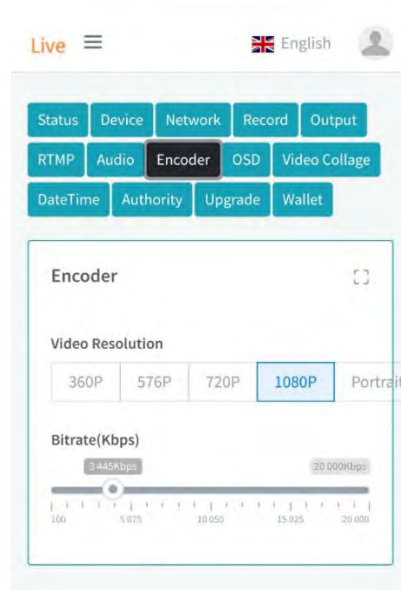
### Audio Source:

The audio source choose from

- LINE IN
- HDMI
- SDI

# Mobile-Phone Backend Setting

## 4.8 Encoder



### Video Resolution

The Resolution choose from:

- Standard (360)
- PAL (576P)
- HD (720P)
- FHD (1080P)

The default value is FHD (1080P)

### Bitrate (kbps)

The range of bit rate is 100 kbps~ 10,000 kbps. The default value is 2,000 kbps.

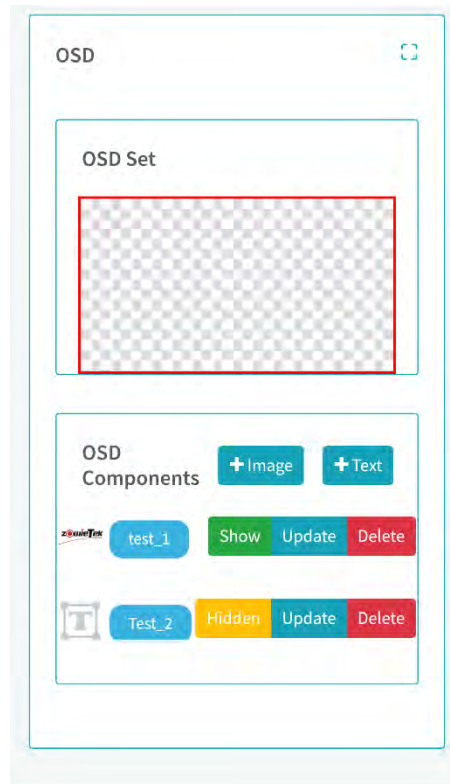
## 4.9 OSD

In the “**OSD**” optional control page, there are provides up to 4 customize OSD components that can be either text or a picture, once OSD components is added, it will appear in the upper left corner of the screen. However, if you want to change the location of the OSD components, it is recommended to operate on your computer in order to get best user experience. Please refer to [3.8 OSD](#) for details.

**NOTE:** The OSD function is limited on mobile phone. It's better to use it on PC

## Mobile-Phone Backend Setting

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- **Hidden/show:** Click to hide/show OSD components (Test\_2 is hidden in the above figure).
- **Update:** click to change a new OSD image or re-edit text.
- **Delete:** delete OSD components.

### +Image

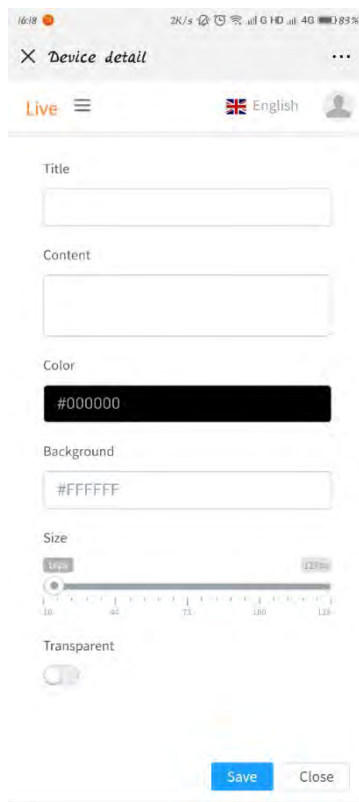
After clicking “+Image”, a new sub window will pop up in the page for the user to set Image OSD. Only for JPG/JPEG/PNG picture and size must be greater than 32x32 and less than 480x480 pixels. After pressing the “set” button, if the picture fits, user can preview the picture in the grid area.

## Mobile-Phone Backend Setting



### +Text

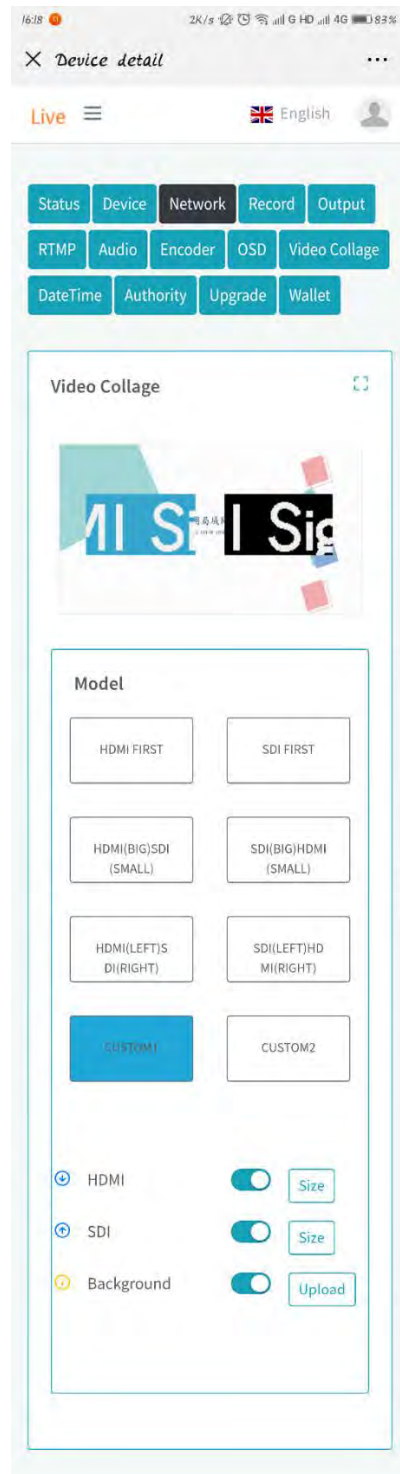
After clicking “⊕ Text” button, the “Text” window will pop up on the page for the user to edit the text OSD that Includes “Title”, “Content”, “Color”, “Background” and font “Size”. The background will be transparent when switching the “Transparent” button on. At last, click “Save” button to apply it.



## Mobile-Phone Backend Setting

### 4.10 Video collage

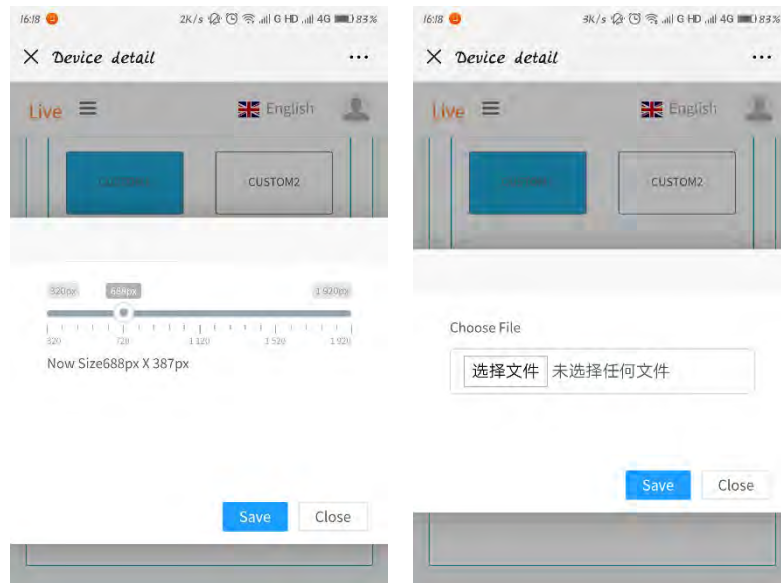
In the **“Video Collage”** optional control page, the user can choose up to 6 different standard video collages that including **“HDMI FIRST”**, **“SDI FIRST”**, **“HDMI (BIG) SDI (SMALL)”**, **“SDI (BIG) HDMI (SMALL)”**, **“HDMI (LEFT) SDI (RIGHT)”** and **“SDI (LEFT) HDMI (RIGHT)”**. Furthermore, user can also customize video collage that is **“CUSTOM1”** and **“CUSTOM2”**.



## Mobile-Phone Backend Setting

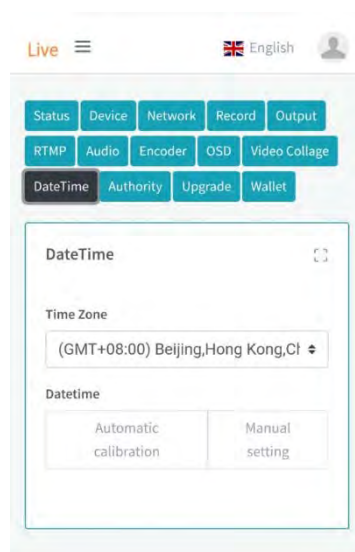
### CUSTOM1, CUSTOM2

In the case of “CUSTOM1” or “CUSTOM2”, user can customize the size and location of “SDI” and “HDMI”, and also upload your favorite pictures as background. Users can turn HDMI or SDI on/off via the buttons on the right of “HDMI” and “SDI”. After clicking “Size” button on the right of “HDMI” or “SDI”, the “Set Collage size” window show as follows, then, the user can change the size of HDMI or SDI. Furthermore, when HDMI and SDI overlap, the user can select the arrow on the left of the “HDMI” to place the HDMI on the top of bottom layer, the arrow on the left of “SDI” is similar. However, if you want to change the location of the HDMI or SDI, you will need to operate on your computer.



## 4.11 Date Time

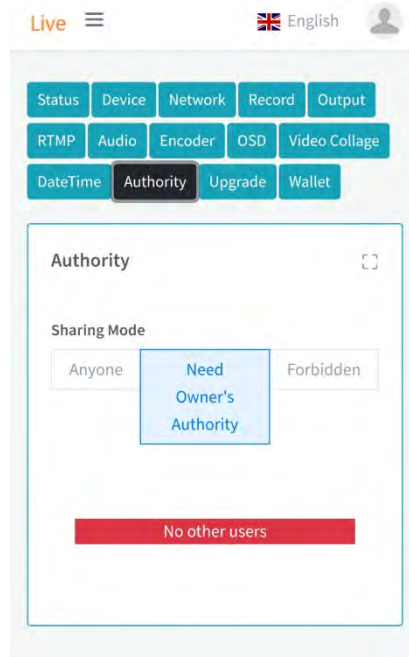
In the “Date Time” optional control page, the user can select “Automatic calibration” or “Manual setting” to set the time.



## Mobile-Phone Backend Setting

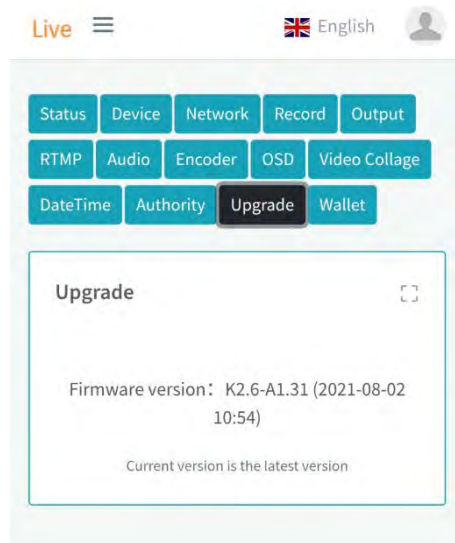
### 4.12 Authority

In the **“Authority”** optional control page, users can set the sharing mode of the device, including the **“Anyone”**, **“Need Owner’s Authority”** and **“Forbidden”**. Once the user has opened the Anyone, anyone can bind the device by scanning the QR code, please choose carefully.



### 4.13 Upgrade

In the **“Upgrade”** optional control page, users can check and upgrade the firmware version of the device here.



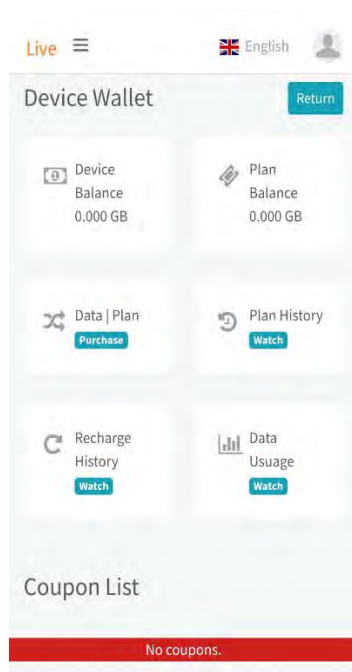


## Mobile-Phone Backend Setting

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### 4.14 Wallet

In the “**Wallet**” optional control page, users can recharge devices money, check recharge records, consumption records and coupon.



# Specification

### Power:

Power Adapter: USB TYPE C, up to 60W 20V  
Battery: Lion, 19AH Fast Charge  
Consumption: 18V @ ~1.15A max without ext.  
Meory

### Video:

Encoder: H.264/AVC MP/HP  
Resolution: 1920x1080p25/30/50/59.94/60/, SD  
1920x1080i50/59.94/60, 720p50/60  
Bitrate: 256K-20Mbits/s  
Frame Rate: 25/30  
Delay: <200ms  
Storage: mp4

### Network:

Video Streaming: RTMP, RTMPS, RTSP  
WIFI: 802.11b/g/n/ac/ax, 2.4/5.8GHz  
LAN: 100/1000Base-T  
optional LAN+WIFI simultaneously up to 8  
Distribution: 9 via aggregation server

### Audio:

Sampling: 48KHZ  
Encoder: AAC,128Kbit/s  
Channel: Dual, AGC  
Input: 0.7 V<sub>RMS</sub>, 20K  
MIC: 2.2V, 2.2K Bias, 60db gain adj.

### Input:

SDI: SD SDI, HD SDI, 3G SDI,  
SMPTE 296M/274M/292M  
HDMI: 1.4a  
Streaming: RTMP, RTSP  
Audio: SDI/HDMI Embedded, Analog Input

### Management

Configuration: Mobile Phone, PC  
WEB: Local or Remote  
LCD: Touch UI

### Interface:

SDI Input: 1 x BNC, 75ohm, 800mVpp  
SDI loop out: 1 x BNC, 75ohm, 800mVpp  
HDMI Input: 1 x Type A  
HDMI out: 1xMini HDMI  
Audio Input: 1 x 3.5mm Jack  
Audio Out: 1 x 3.5mm Jack  
Ethernet: 1 x RJ45  
Storage: 1 x MicroSD/TF  
Sound: Buzz  
Indicator: Charging LED  
Display: 4.3" IPS LCD, Touch

### Others:

OSD: Text, Logo Caption, Time Stamp  
Collage: 8 Modes and 2 customized

### Physical:

Size: 131x 85 x 42mm(5.15" x 3.34" x 1.65")  
ABS black  
Weight: 596g (1 lb, 5oz) without accessories  
Temp: 0°C to 45°C

### Certification

CE, FCC

\*Above spec is based on LiveV400