



# HDMI to USB 3.0 Video Capture & Streamer

## Operation Manual

100516



## SAFETY PRECAUTIONS

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

**NOTICE:** Please read this manual carefully before using this product.

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## 1. Introduction

The HDMI to USB 3.0 Video Capture & Streamer (Model 100516) provides a professional way to capture HDMI video signals such as Cameras, PCs, Game Consoles, TV Boxes, etc. It adopts a USB3.0 interface, which supports high speed transmission. Users can capture Full HD (1080p60) video with this capture device and send it through a USB 3.0 port to a computer converting it into computer-recognizable digital data at up to 1080p/60 that can be stored, edited or streamed live to different platforms such as YouTube, Twitch, Facebook, etc.

The device is easy to carry, has superior performance, superior compatibilities, and is easy to install. It is compatible with Windows, Linux, and Mac OS X. The HDMI to USB 3.0 Video Capture & Streamer complies with UVC and UAC standards, without having to install drivers or configure settings, the PnP is real, and easy to use. The unit supports a large image buffer to effectively avoid issues related to video tearing. The high sampling rate and high sampling accuracy assures sharp images with rich details, and less color edges.

## 2. Features

- No need to install drivers, and it is truly PnP.
- Compatible with Windows, Linux, OS X Operating systems.
- USB 3.0, 300-350MB/s throughput and it is compatible with USB 2.0.
- The audio/video processing is performed by this device and will not occupy the CPU.
- It can capture a single channel HD HDMI video signal.
- Automatically detects the input video format, and automatically adjusts to set the output size and frame rate.
- Supports video signals up to 1080P/60Hz. It is compatible with UVC video capture and YUV 422 video output.
- Low Latency.
- System Requirements (Recommended)
  - Windows® 7(SP1) / Windows 8.1 / Windows 10
  - PC: Intel® CoreTM i5-4440 3.10GHz + NVIDIA® GeForce® GTX 660 or higher
  - Laptop: Intel® Core i7-4810MQ + NVIDIA GeForce GTX 870M or higher
  - 4GB RAM or higher



1. Video quality is apparently related to the capability of computer and software setting.
2. Please use the included USB 3.0 cable in the box to protect the device and avoid further compatible issues.

## 3. Package Contents

- One (1) HDMI to USB 3.0 Video Capture & Streamer (model 100516).
- One (1) USB 3.0 Cable.

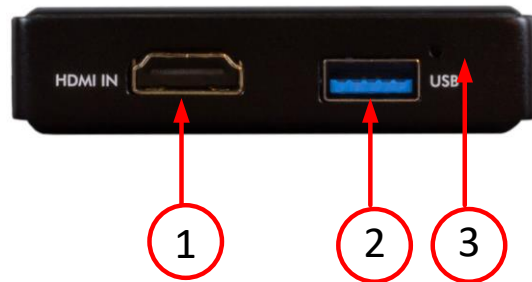
**Notes:** Confirm that the product and accessories are all included. If not, please contact the supplier from which you purchased the unit.

## 4. Specifications

|  |  |
|--|--|
| <b>Environment</b>                               | HDMI 1.3   |
| <b>Devices</b>                                   | Cameras, Game Consoles, Media Players, TV Set Top Boxes and other HDMI sources, plus Laptops and PCs |
| <b>Transmission</b>                              | Transparent to the user  |
| <b>Bandwidth</b>                                 | 148 MHz  |
| <b>Signals</b>                                   | HDMI 1.3, UVC, UAC   |
| <b>Input Resolution</b>                          | Up to 1080p60  |
| <b>USB Stream Resolution</b>                     | Up to 1080p/60   |
| <b>Audio &amp; Video Capture</b>                 | For Audio: UAC, For Video: UVC   |
| <b>Connectors</b><br><i>Cables not included.</i> | Two (2) HDMI receptacles.<br>One (1) USB Type A Connector.   |
| <b>Power</b>                                     | Powered via USB port (@ 0.5A max)  |
| <b>Temperature</b>                               | Operating: 0° to 50°C      Storage: -20° to 70°C<br>Humidity: 5 to 90% non-condensing                |
| <b>Enclosure</b>                                 | Metal  |
| <b>Unit Dimensions</b>                           | 3.9" x 2.9" x 0.6" (100 x 75 x 15 mm)  |
| <b>Shipping Weight</b>                           | 0.7 lbs (0.33 kg)  |
| <b>Compliance</b>                                | Regulatory: FCC, CE, RoHS      Flammability: 94V0  |
| <b>Warranty</b>                                  | 1 year   |
| <b>Order Information</b>                         | 100516    HDMI to USB 3.0 Video Capture & Streamer (UPC Code: 627699505168)                          |
| <b>Compatibility</b>                             | Compatible with MuxLab HDMI/IP PTZ Camera (model 500791)<br>Supports Windows 7/8.1/10 and Linux OS   |

## 5. Panels Description

### 5.1 Front Panel



| No. | Name            | Description  |
|-----|-----------------|--|
| 1   | HDMI IN         | This connector is used to connect the HDMI output from the A / V source (camera, PC, game console, TV box, etc.) |
| 2   | USB             | This connector is used to connect the USB 3.0 cable that is connected to the USB port of the computer.           |
| 3   | Power indicator | This LED lights up when the device is connected to the computer's USB port and is thus powered.                  |

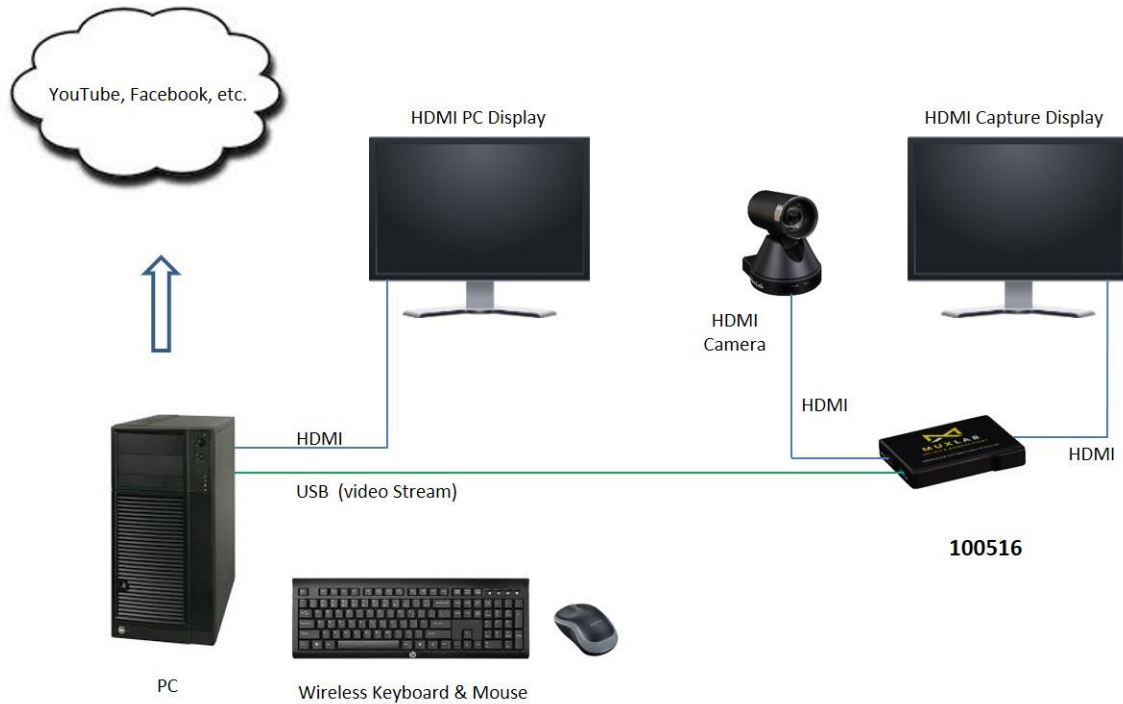
### 5.2 Rear Panel



| No. | Name     | Description  |
|-----|----------|--|
| 4   | HDMI OUT | Loop out: Local HDMI signal output used to connect to an HDMI display or TV. |

## 6. Connection

### Connection Diagram



1. Connect the HDMI output of the signal source (Camera, PC, Game Console, TV set-top box, etc.) with an HDMI cable to the HDMI IN slot of the device.
2. Insert one end of the USB 3.0 cable into the USB 3.0 port of the device, and the other end of the USB 3.0 cable into the USB 3.0 port of your computer.
3. The HDMI to USB 3.0 Video Capture & Streamer (Model 100516) will automatically configure itself on your computer without the need to install drivers.
4. The user can connect a local display or TV to the HDMI OUT port, in order to monitor the video simultaneously.

## 7. Software Instructions

### 7.1 OBS Settings

#### 7.1.1 Preview Settings

- (1) Download and install the “OBS” application software on the computer. The official website to download it is: (<https://obsproject.com/download>)
- (2) Double click the “OBS Studio” shortcut to open the application.
- (3) Find the “Sources” window, click “+” in the lower left corner, and then select “Video Capture Device” to create a new source, then click “OK” button. (Figure1)

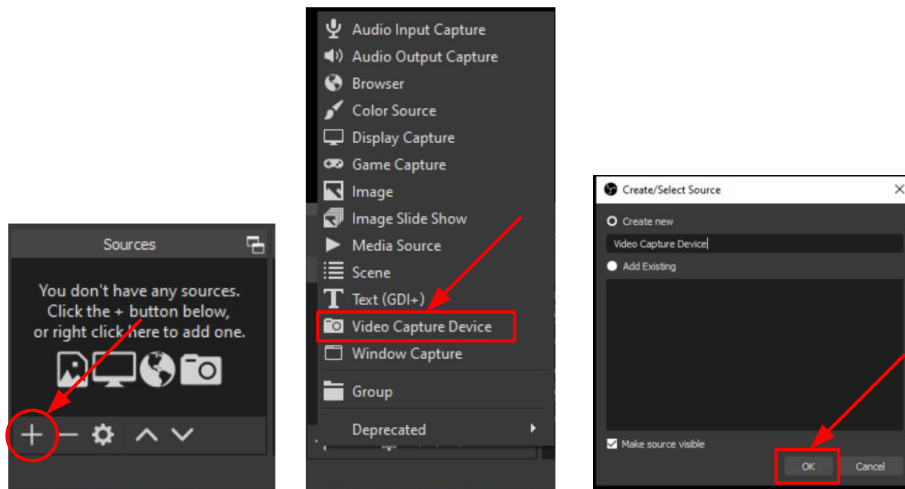


Figure 1

- (4) In the Device option, select “MuxLab Video Capture” and configure the other options in this window as shown in Figure 2. Then click OK.

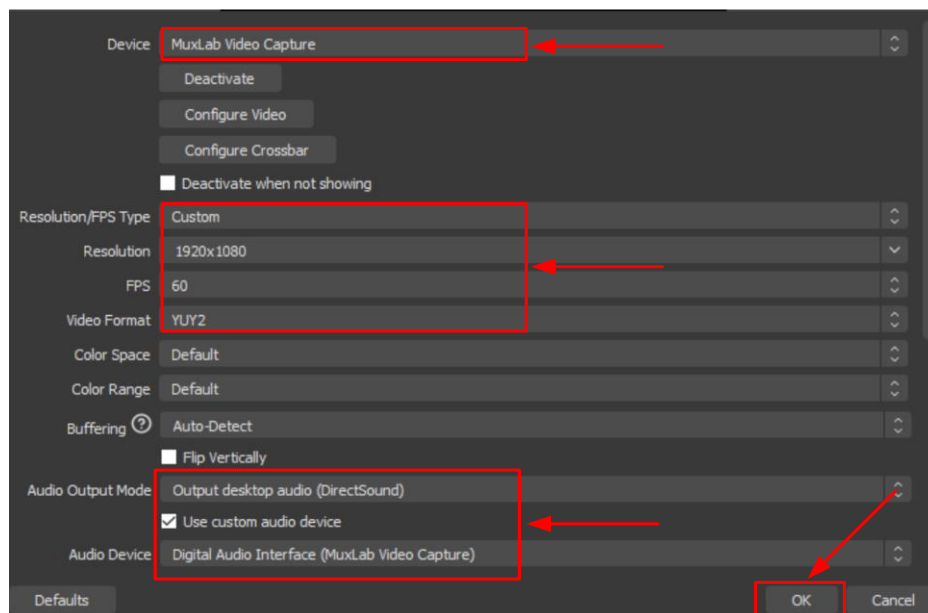


Figure 2



## (5) Precautions:

- A. When the Video Format “YUY2” is optional, it indicates that the computer USB 3.0 is connected, if not then it means it is not connected. Please check the USB interface type of your computer.
- B. If there is no sound, please check if it is set correctly. Setting “Use custom audio device” needs to be checked.

## 7.1.2 Recording Settings

- (1) Click “Settings” in the lower right corner of OBS, and then select “Output”, then select the Recording Path, Format, Quality, etc., and click “OK”, as show in Figure 3.

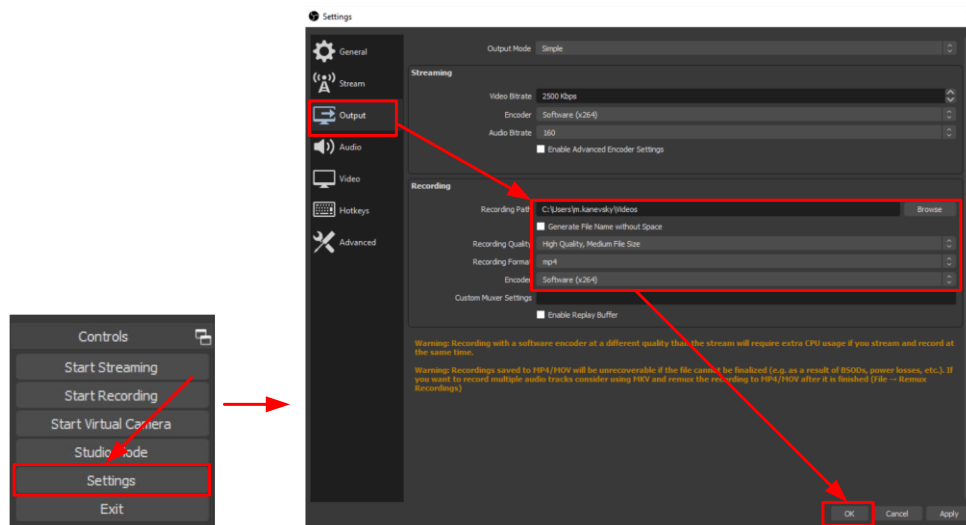


Figure 3

- (2) Click on Audio and select “Digital Audio Interface (MuxLab Video Capture), then click “OK” as shown in Figure 4.

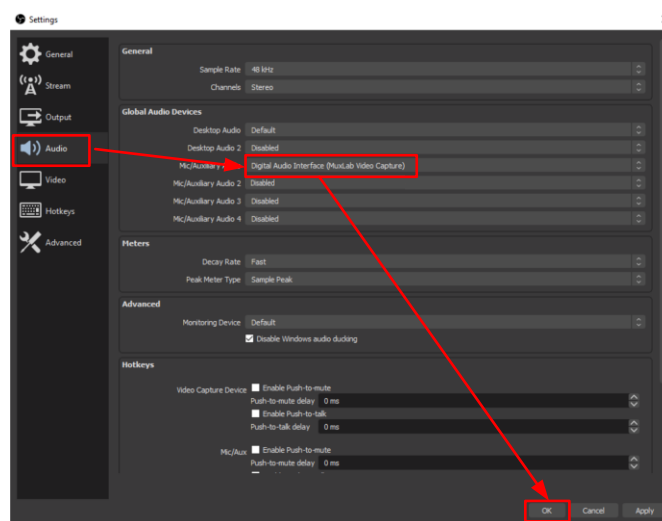
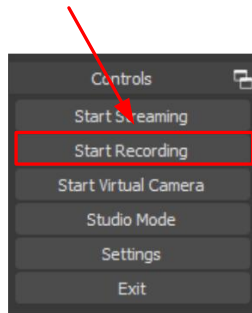


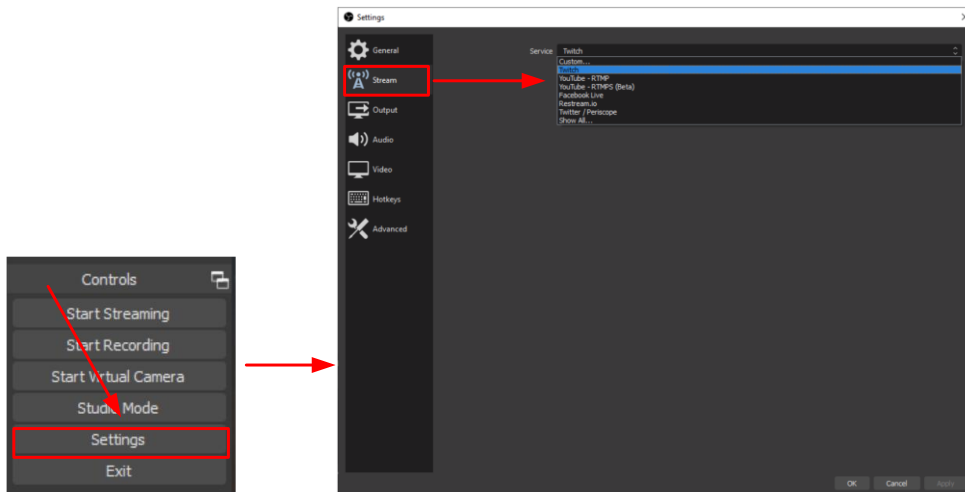
Figure 4

(3) Click “Start Recording” to record.

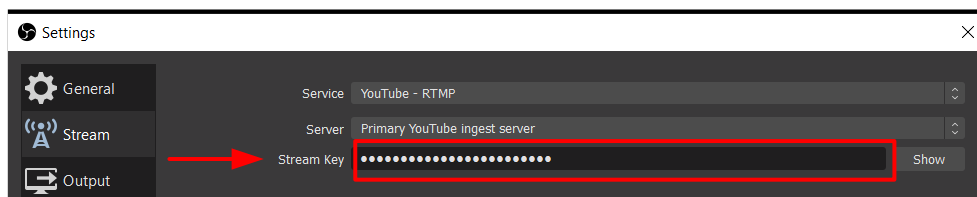


### 7.1.3 Stream Settings

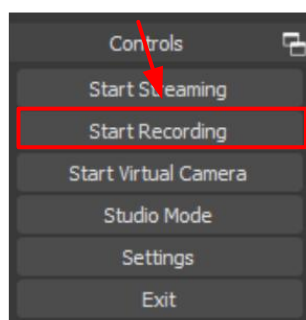
(1) Click “Settings” and then select “Stream” to configure the streaming settings. Users can choose various service providers such as YouTube, Facebook, Twitch, etc.



(2) Paste the stream key provided by the service provider into the “Stream Key” field, then click “Apply” and “OK” after setting.



(3) Please click “Start Streaming”. After clicking “Start Streaming” the captured video will be displayed in the live video.

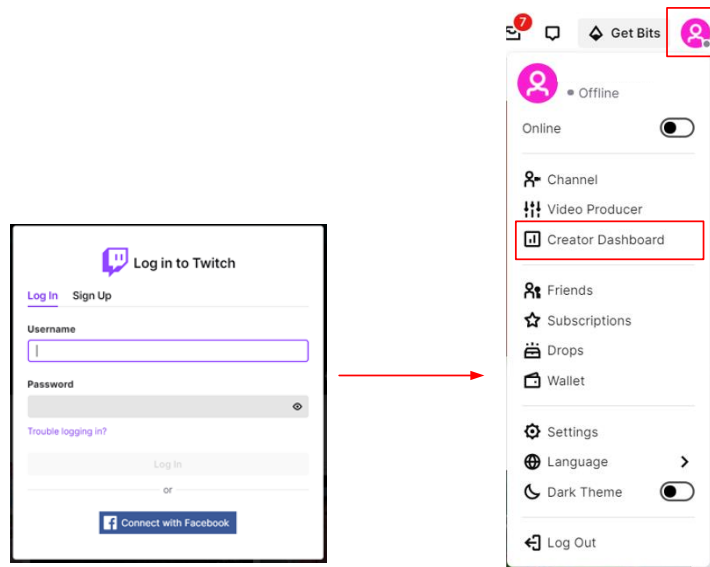


## 8. Create a Video Stream

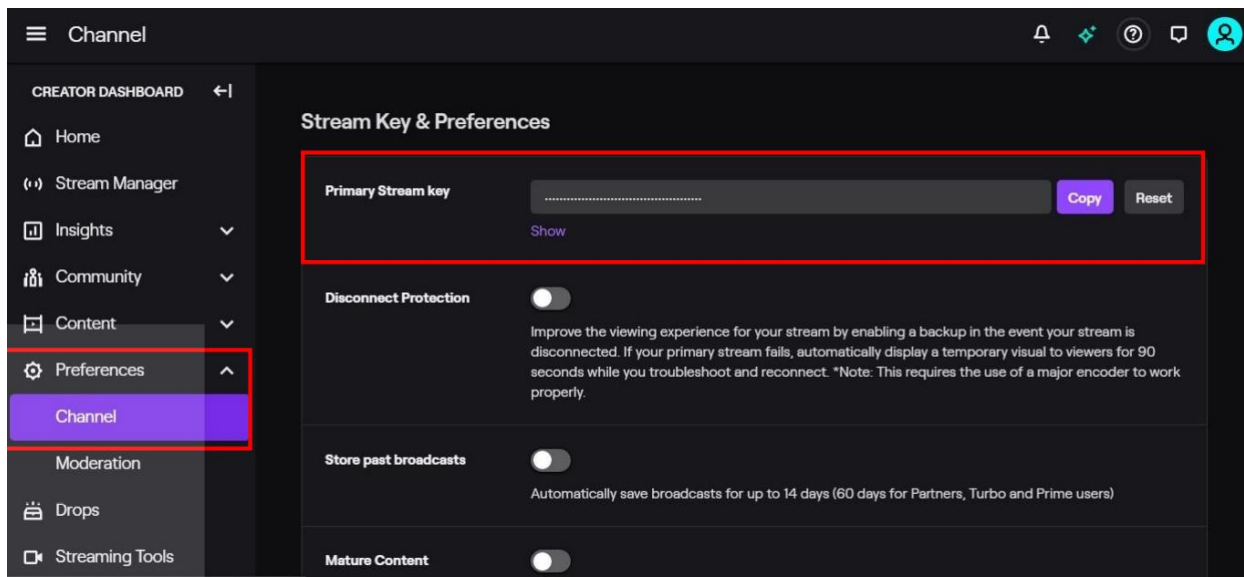
Users can create video streams on streaming service platforms. The below steps show how to set video streaming settings for Twitch and YouTube with this HDMI to USB 3.0 Video Capture & Streamer device and the OBS application.

### 8.1 Stream to Twitch

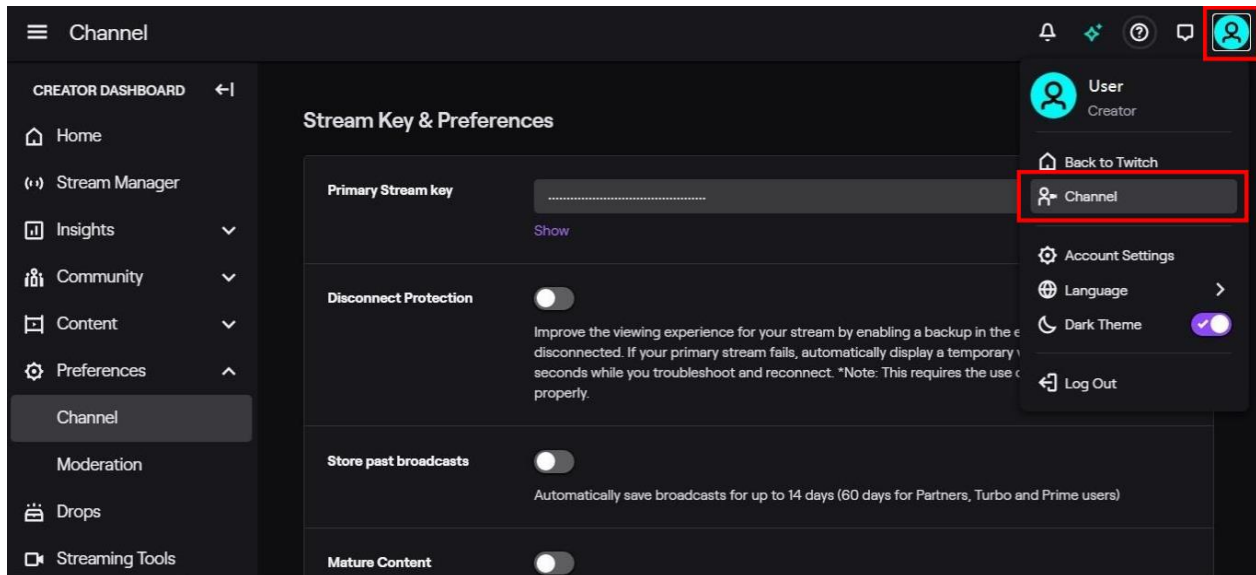
- (1) Browse the Twitch website (<https://www.twitch.tv/>) and log in, then select "Creator Dashboard" from your account drop-down menu at the top right of the screen.



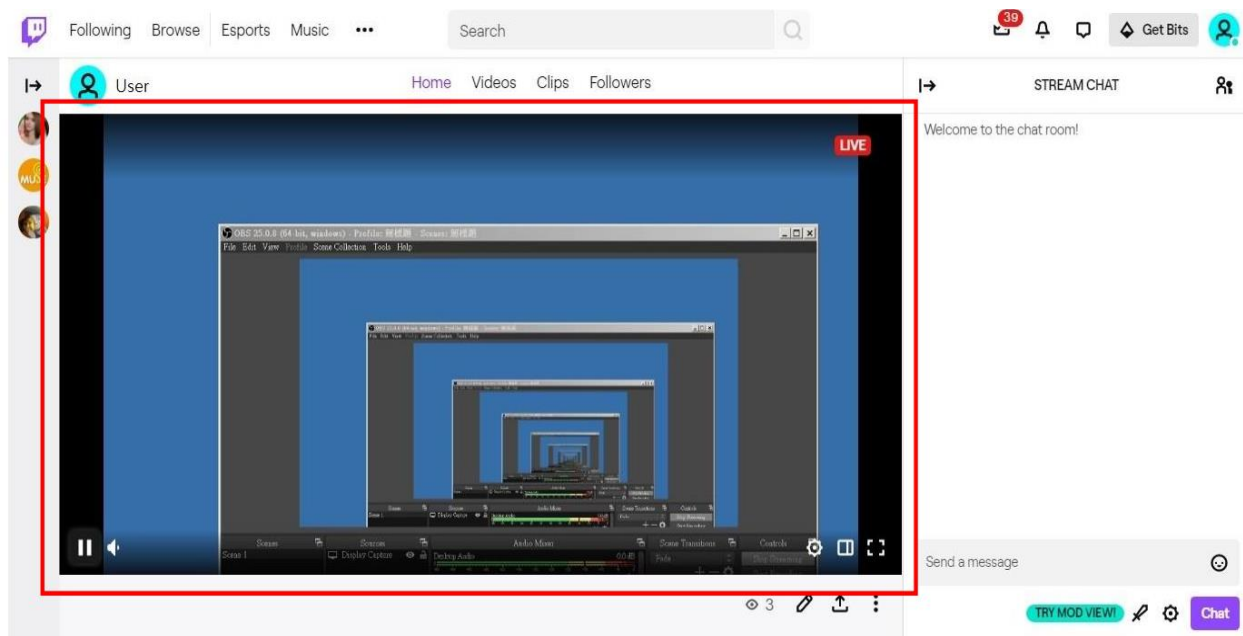
- (2) Find "Preferences" in the left menu, and click "Channel", then you will see "Primary Steam key" on the screen. Copy the "Primary Steam key" and paste it into the "Stream Key" field in the OBS application, then click "Start Streaming" in the software. (Please refer to section 7.1.3)



(3) Go back to Twitch and select "Channel" from your account drop-down menu.



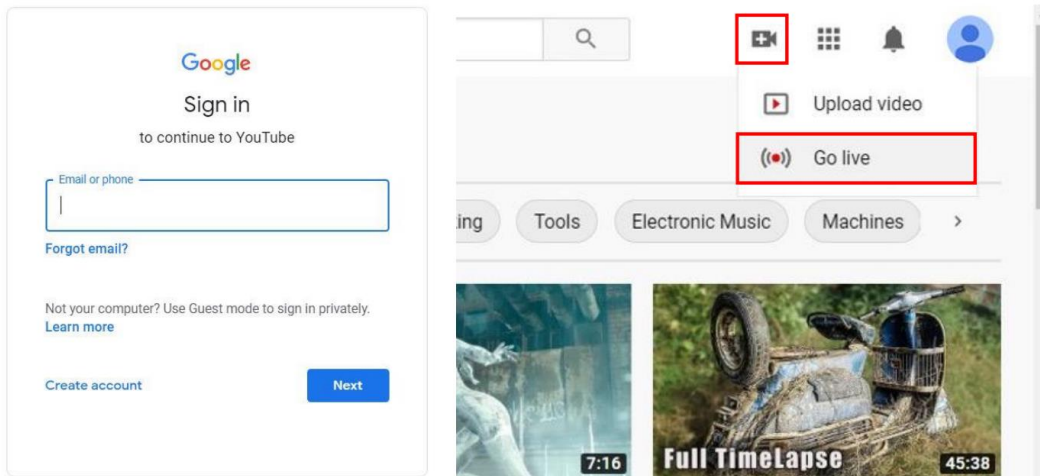
(4) At this point, you will see the player start live streaming.



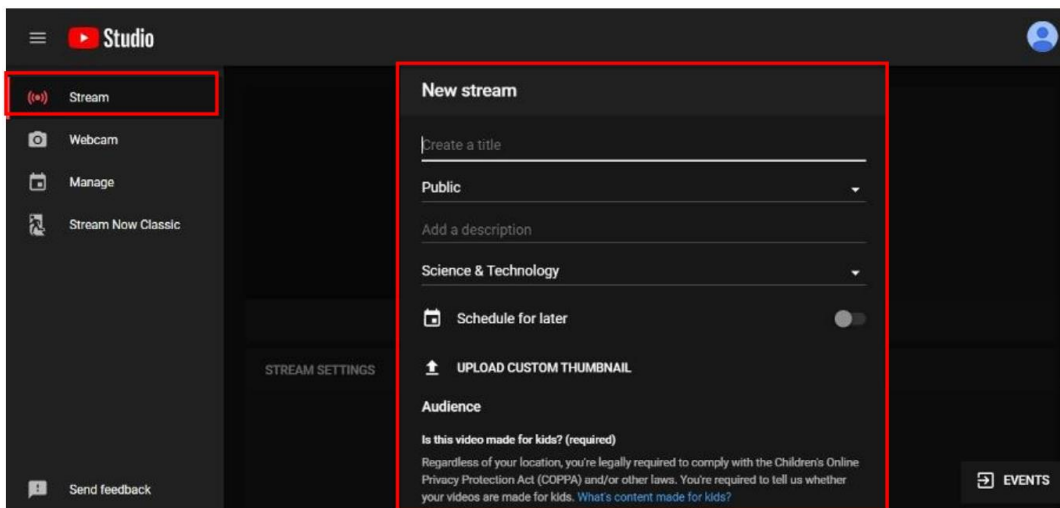
## 8.2 Stream to YouTube

(1) Browse the YouTube website (<https://www.youtube.com/>) and log in, then click "Go live" from the "Create" icon menu at the top right of the screen.

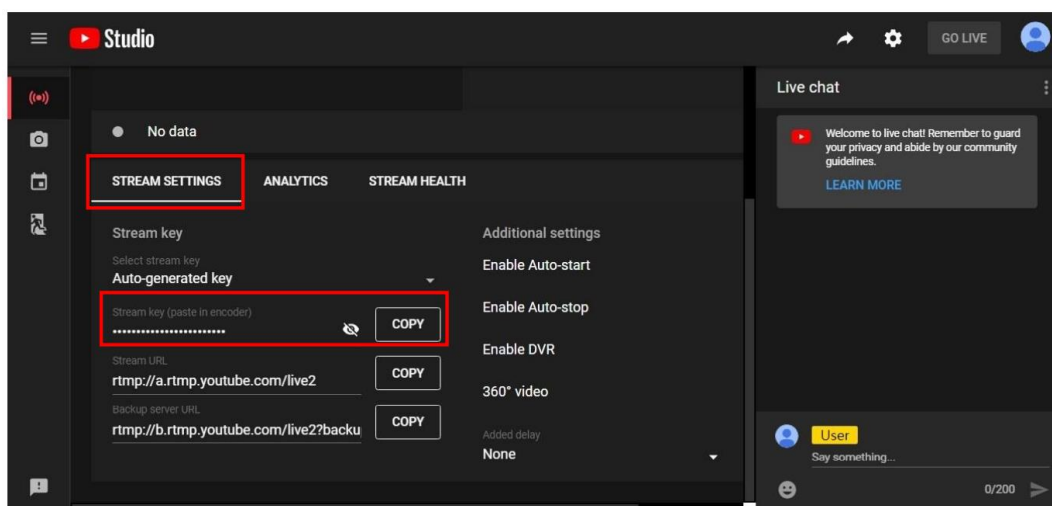
\* If your account is using YouTube for the first time to create a video stream, then you may need to wait 24 hours to access this function.



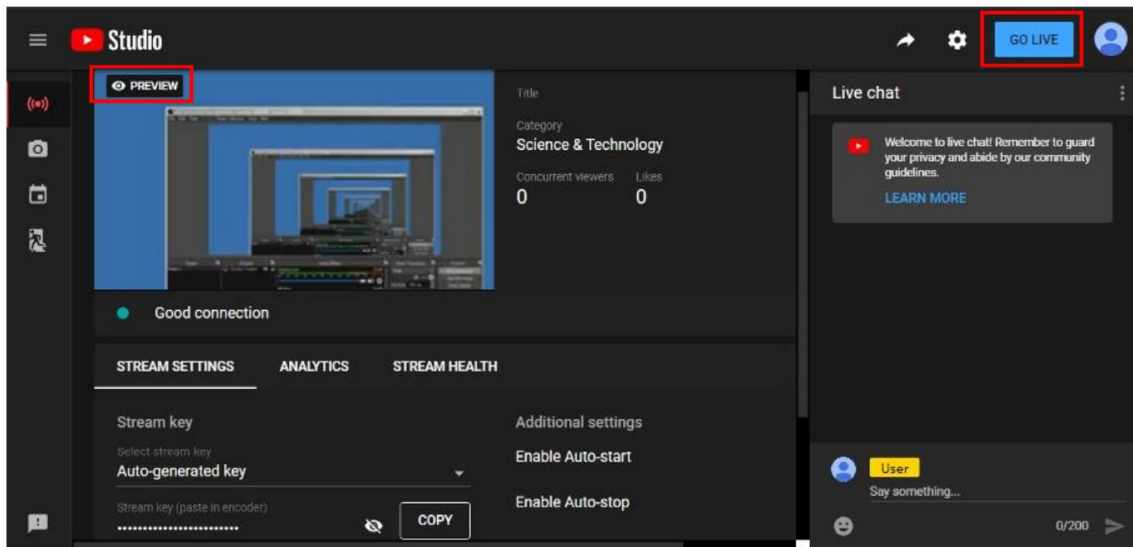
(2) Click "Stream" in the left menu and fill in the relevant information of the live video to create a new stream.



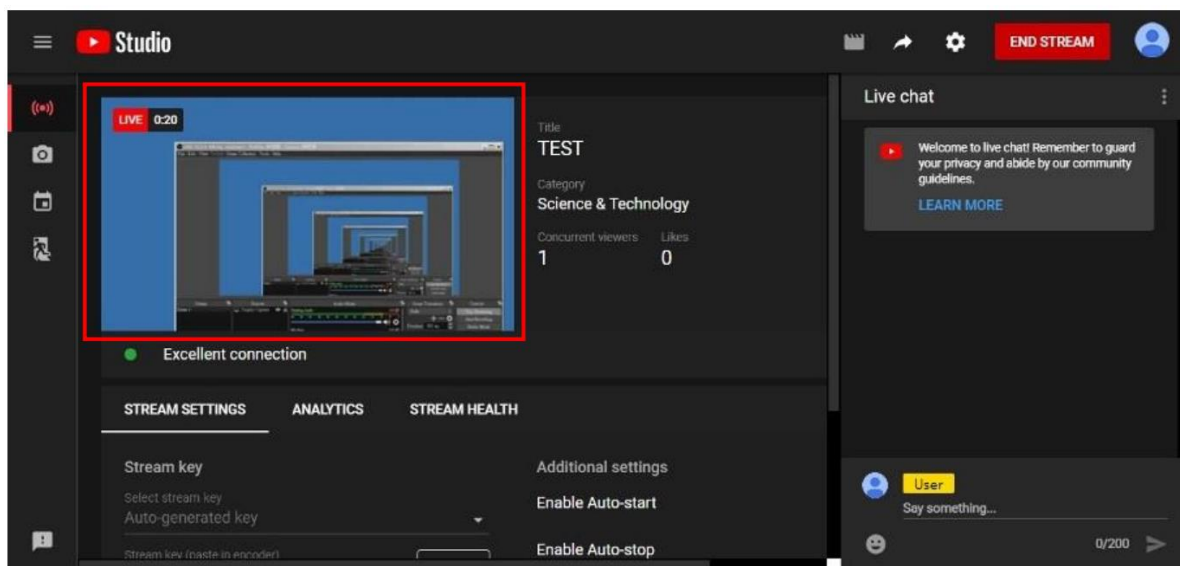
(3) You will see "Stream key" from the "STREAM SETTINGS" below. Copy the "Stream key" and paste it into the "Stream Key" field in the OBS application, then click "Start Streaming" in the software. (Please refer to section 7.1.3)



- (4) Next, go back to YouTube, and then wait for 30-60 seconds, the player will display the live preview. At the same time, the "GO LIVE" button at the top right will turn blue, please press this button.



- (5) The player on YouTube will start live streaming.



The procedures shown in this manual demonstrate the interfaces of the service providers and OBS application at the time this manual was created and they may have since changed, but never-the-less should still be somewhat similar.

## 9. Troubleshooting

The HDMI to USB 3.0 Video Capture & Streamer has undergone comprehensive tests during the manufacturing process before shipment. Most of the incompatibilities we have experienced are not from the USB capture device itself, but from the sophisticated software and hardware combination due to PCs and Laptops. Please follow the below suggestions to assist you with certain difficulties you may be experiencing.

1. OBS is a popular USB capture freeware and with excellent compatibilities. Please download it and start with OBS if users are not familiar with USB capture devices.

<https://obsproject.com/download>

2. Due to the complexities of OS and computer hardware, different USB ports on PCs and Laptops may have different performance and limitations. Please try all USB ports to see if some perform better than others.
3. Please use the USB cable included with this product. It has been extensively tested with the HDMI to USB 3.0 Video Capture & Streamer. We cannot guarantee the overall performance of this device with other brand USB cables.
4. HDMI cable quality may also play an essential role when capturing video. Please be sure that the HDMI cables used support the resolution going through these cables. Try various HDMI cables if the device is not performing as expected.
5. If audio contains unwanted noise, please adjust the sampling frequency setting on your PC or Laptop. If the default sampling rate is 48000 Hz, then please select 44100 Hz and vice versa. The path for setting the sampling frequency on windows 10 is:  
Start → Setting → System → Sound → Device properties → Additional device properties → Advanced

## 10. Regulatory Compliance

### Disclaimer

Information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any other commercial damage, including but not limited to special, incidental, consequential, or other damages.

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## ***CE/FCC & Recycling Information***

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### ***CE Certification***

This equipment complies with the requirements relating to Electromagnetic Compatibility Standards EN55022/EN55024 and the further Standards cited therein. It must be used with shielded cables only. It has been manufactured under the scope of RoHS compliance.

### ***FCC Certification***

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. You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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



### ***WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products***

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.

Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.



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