

CAP-502MJ

USB 3.1 Gen 1 Full HD Video Capture Device

User Manual



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INTRODUCTION

The **CAP-502MJ USB 3.1 Gen 1 Full HD Video Capture Device** provides a professional way to capture HDMI video signals. It adopts USB 3.1 Gen 1 (USB 3.0) interface, which can realize high-speed transmission. Users can capture Full HD(1080p60) video by this capture device. Besides, CAP-502MJ can capture and display original uncompressed HDMI video with more realistic color rendition. CAP-502MJ also uses large volume image buffer technology which effectively avoids the video tearing. The high sampling rate and high sampling accuracy assure images with high sharpness, rich details, and less color edges.

FEATURES

- HDMI video and audio streams over USB 3.1 Gen 1
- Supports UVC1.0
- Supports video resolution up to 1080p 60Hz
- Auto-detection on video format to ensure plug-play operations
- Recording Video Format: H.264 (Software Compression)
- Works on multiple operating system platforms (Windows 7/8.1/10, Mac and Linux OS)
- Compatible with most 3rd party software such as OBS Studio and AMCap
- Supports USB 3.1 Gen 1 (MJPEG/YUY2) and USB 2.0 (MJPEG)
- Low Latency
- System Requirements (Recommended)
 - Windows® 7(SP1) / Windows 8.1 / Windows 10
 - PC: Intel® Core™ 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. Video resolution change may require to restart software.

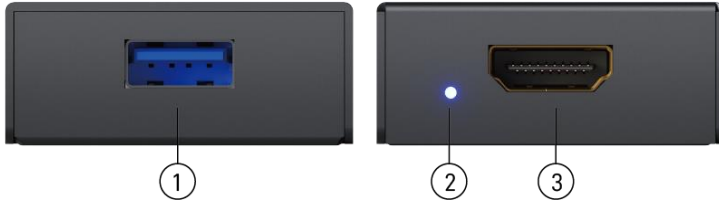
PACKAGE CONTENTS

- 1x CAP-502MJ
- 1x USB 3.0 A to A Cable (host to device)
- 1x User Manual

SPECIFICATIONS

Model Name		CAP-502MJ
Technical		
Role of usage		Video Capture Device
Input Video bandwidth		150MHz
Output Video bandwidth		Up to 350MBps (USB)
Video support(USB)		Up to 1080p60
Audio Input		HDMI Embedded Audio
Audio Format		2CH 16bit PCM
Recording Mode		Software Compression
Recording Video Format		YUY2 (USB3.1 Gen 1), MJPG (USB2.0/3.1 Gen 1)
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
PCB stack-up		6-layer board [impedance control — differential 100Ω; single 50Ω]
Firmware update		Feasible via USB Port
Input		1x HDMI
Output		1x USB
HDMI connector		Type A [19-pin female]
USB connector		USB 3.1 Type A (SuperSpeed USB)
Software compatibility (not complete list)		OBS Studio (Windows, Linux), AMCap (Windows), Potplayer (Windows), VLC (OS X, Linux), XSplit Boardcast (Windows), Skype (Windows, OS X), Zoom (Windows), Hangout (Windows), TeamViewer (Windows)
OS Support		Windows 7 / 8.1 / 10, Mac and Linux OS
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	73 x 42 x 17mm[2.9" x 1.7" x 0.7"]
	Package	165 x 111 x 42mm [6.4" x 4.4" x 1.7"]
	Carton	490 x 426 x 352mm [1'6" x 1'4" x 13.8"]
Weight	Model	80g[2.8 oz]
	Package	179g[6.3 oz]
Power supply		Via USB
Power consumption		2 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

PANEL DESCRIPTIONS



1. **LED INDICATOR:** Input signal indicator LED
2. **HDMI IN:** Connect to a HDMI source
3. **USB OUT:** Connect to a USB host (PC, NB, MAC...)



When the input source is HDCP protected, LED will start to flash intermittently to indicate the content is legally encrypted and can NOT be captured.

CONNECTION DIAGRAM



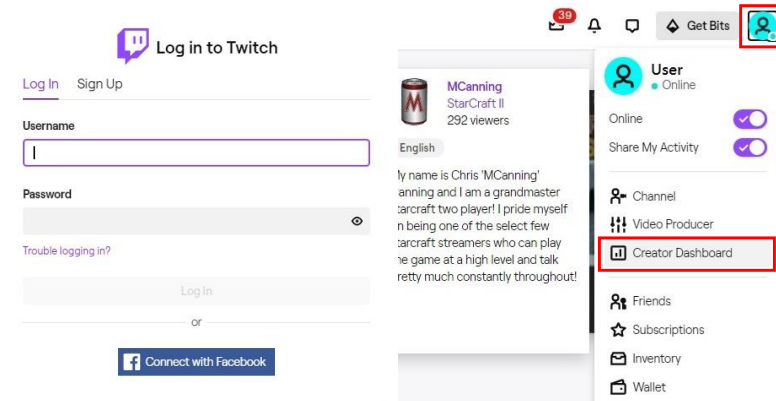
VIDEO STREAMING

Create a Video Streaming

Users can create video streams on the streaming service platform. The below steps show how to complete the video streaming settings from Twitch and YouTube.

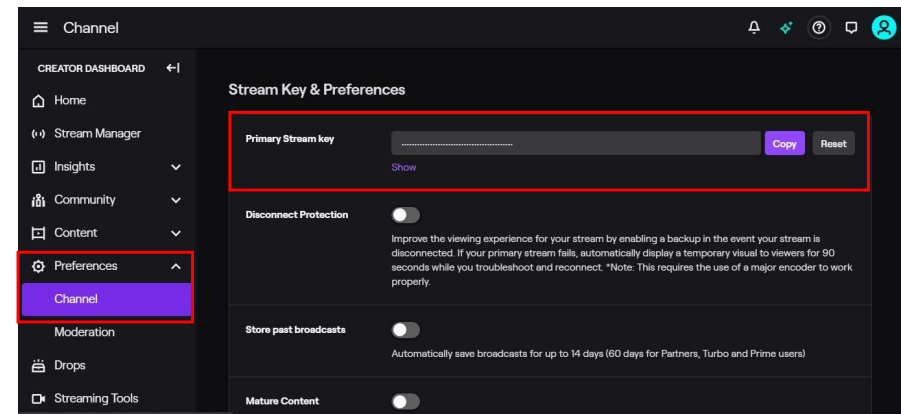
Twitch

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.

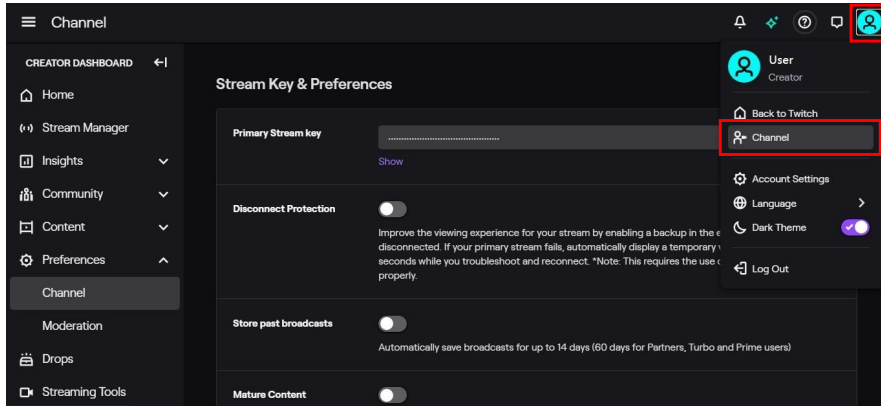


2. Find **"Preferences"** in the left menu, and click **"Channel"**, then you will see **"Primary Steam key"** on the screen. Copy the **"Primary Steam key"** and paste it into the **"Stream Key"** field in the OBS, then click **"Start Streaming"** in the software.

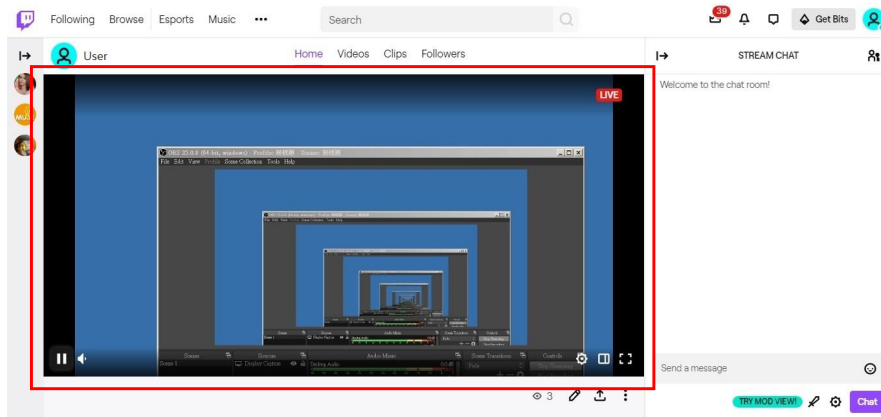
* Please refer to steps 4-6 of the OBS software control program.



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



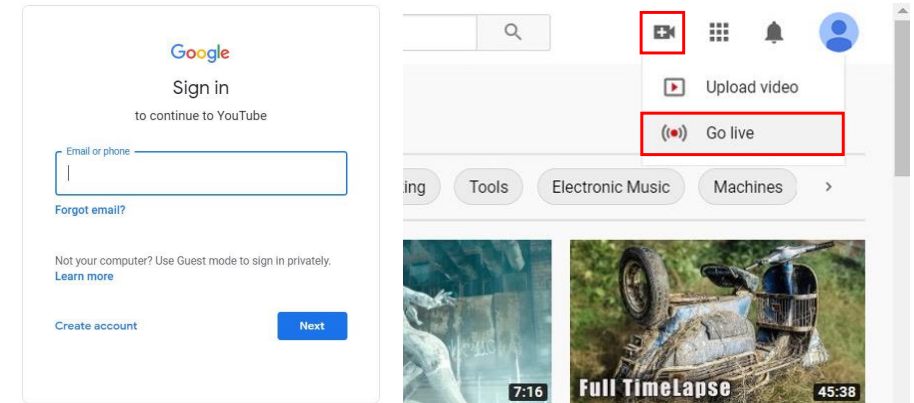
- At this point, you will see the player start live streaming.



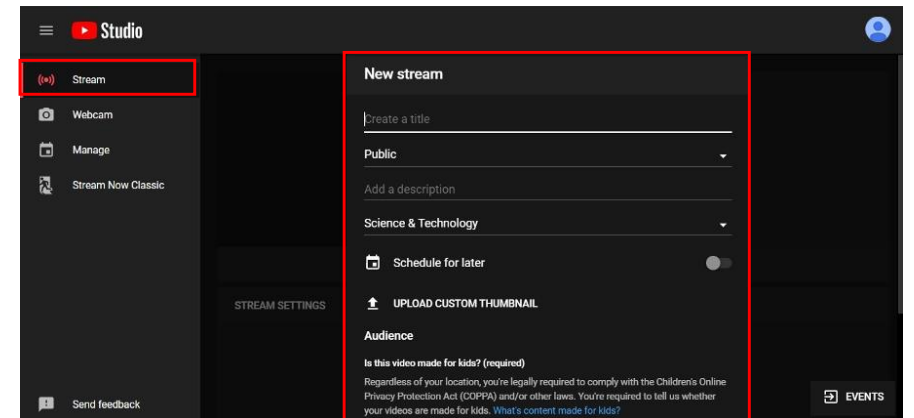
YouTube

- Browse the YouTube website (<https://www.youtube.com/>) and log in, then lick **"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, you need to wait 24 hours to enable the function.

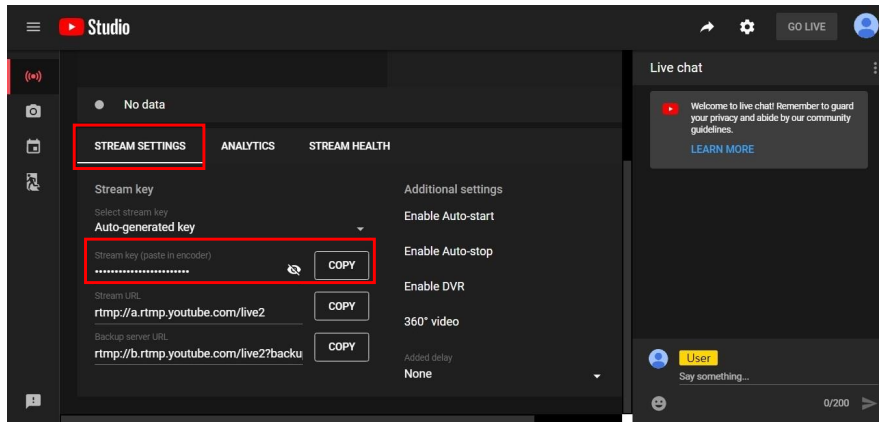


- Click **"Stream"** in the left menu, and fill in the relevant information of the live video to create a new stream.

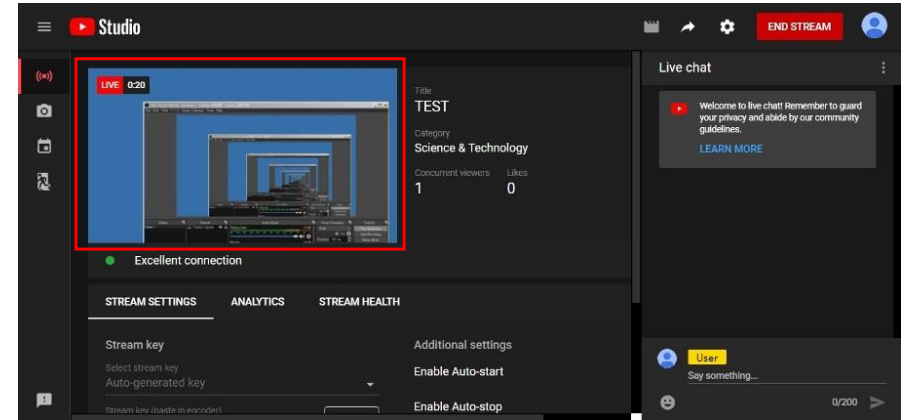


3. You will see **"Stream key"** from the **"STREAM SETTINGS"** below. Copy the **"Stream key"** and paste it into the **"Stream Key"** field in the OBS, then click **"Start Streaming"** in the software.

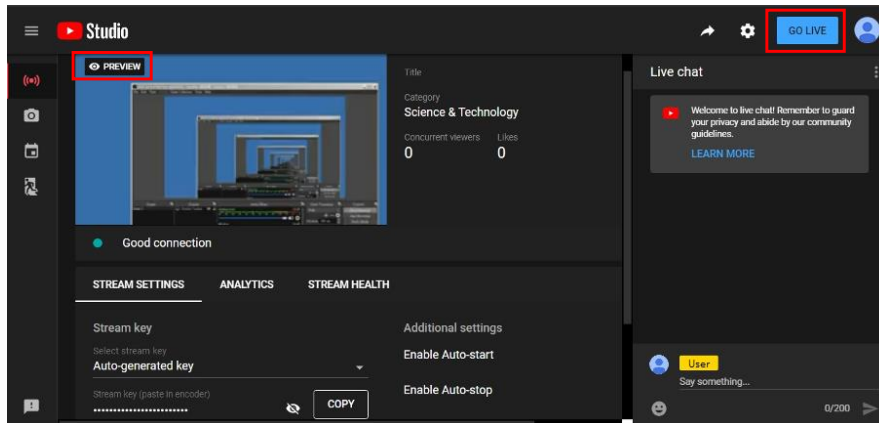
* Please refer to steps 4-6 of the OBS software control program.



5. The player on YouTube will start live streaming.



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.



Stream and record videos with OBS

OBS is popular USB capture freeware and has excellent compatibility. Please start with OBS if users are not familiar with USB capture device.

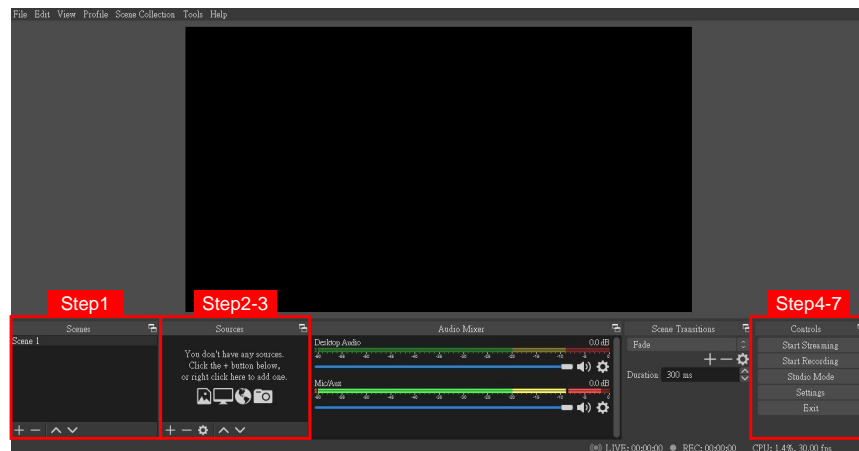
Download the software

Browse the download page of the OBS official website (<https://obsproject.com/download>), then select the suitable computer operating system and start downloading.

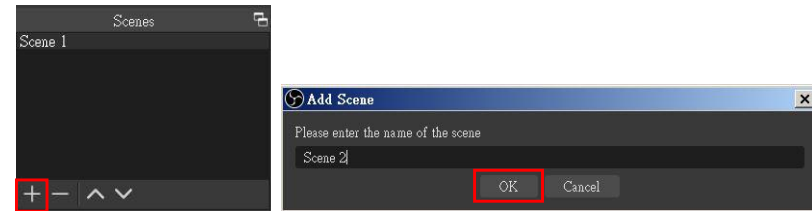


Start the software control program

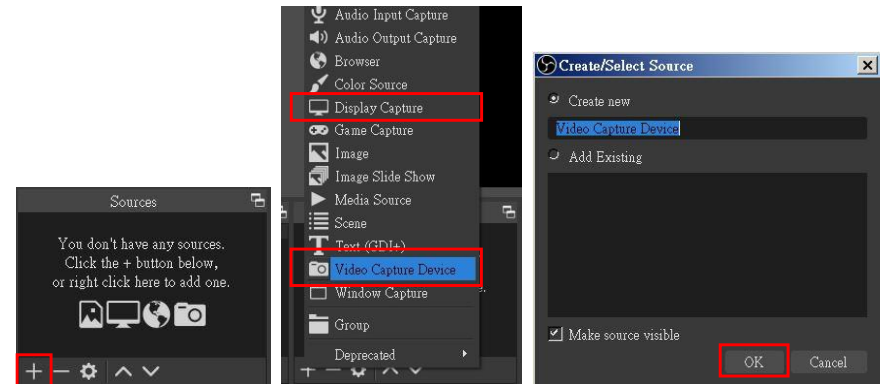
After downloading the software, please open it and follow the below steps to complete the video streaming settings.



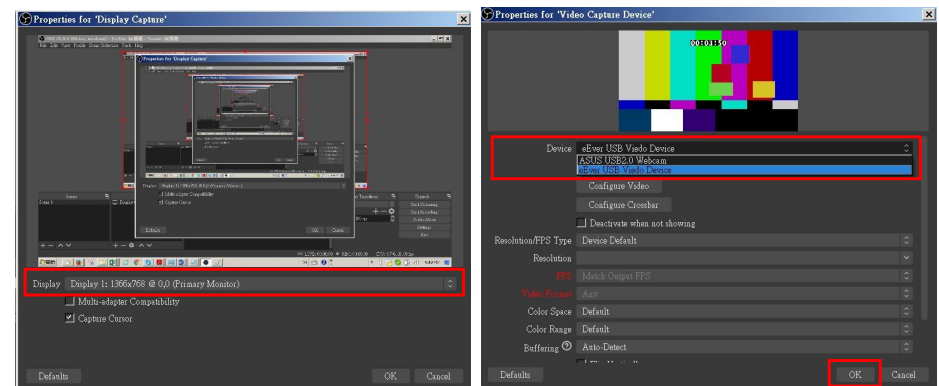
1. First, find the **"Scenes"** window, click **"+"** in the lower left corner, and then enter the name of the scene to create a new scene.



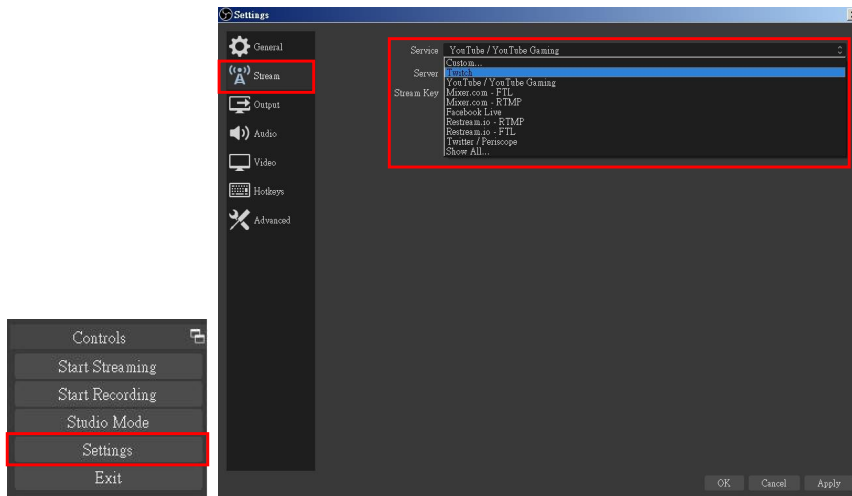
2. Find the **"Source"** window, click **"+"** in the lower left corner, and then select **"Display Capture"** or **"Video Capture Device"** to create a new source.



3. Next, you can set display capture properties. If you select **"Display Capture"** in step 2, you can select the primary monitor or other extended monitor as the display source. If you select **"Video Capture Device"** in step 2, you can select USB video device as the display source. After all settings are completed, click **"OK"**.



- Click **"Settings"** and then select **"Stream"** to perform streaming settings. Users can choose service providers, including Twitch, YouTube, etc.



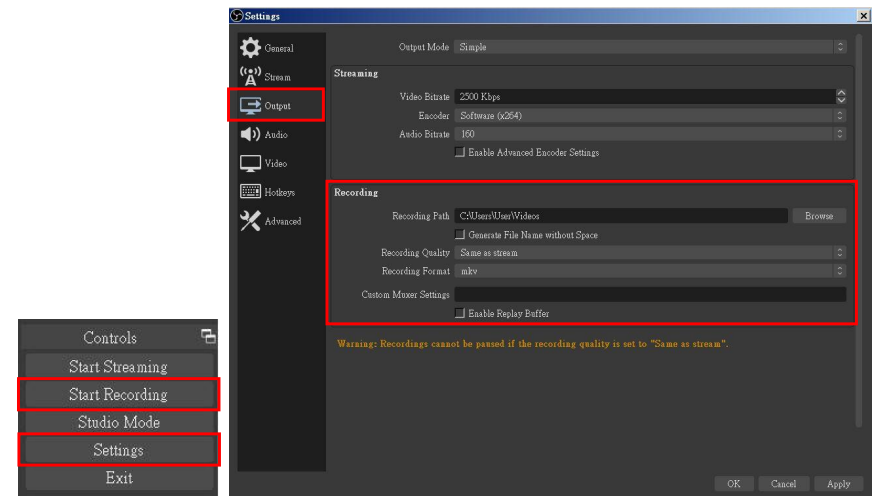
- Paste the stream key provided by the service provider into the **"Stream Key"** field, then click **"Apply"** and **"OK"** after setting. In addition, users can click **"Get Stream Key"** at this step to open the service provider website.



- Please click **"Start Streaming"**. At this time, the screen after clicking **"Start Streaming"** will be displayed in the live video.



- On the other hand, users can also click **"Start Recording"** to record videos with OBS. Besides, you can click **"Settings"** and then select **"Output"** to set **"Recording Path"** and **"Recording Format"**.



The procedures the manual demonstrates are based on the interface that each website provides at the time when the manual is written. The most recent way to make live streaming happen is supposed to be very likely as the above procedures but subject to change by the website interface update from the social media.

TROUBLESHOOTING

Our USB device has done comprehensive tests 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 of PC or laptop. Please follow the following suggestions to see any helps.

1. OBS is popular USB capture freeware and has excellent compatibility. Please download it and start with OBS if users are not familiar with USB capture device.

<https://obsproject.com/download>

2. The USB device supports HDCP mechanism to protect legal content from pirates. If any HDMI input with HDCP protection, the built-in LED will flash intermittently to indicate HDCP existence. No capture will be legally allowed if HDCP is detected. Please use non-HDCP protected HDMI sources or disable HDCP in order to get USB device work. Device like PS4 supports such a feature to turn HDCP off.
3. Due to the complexities of OS and computer hardware, different USB ports on PC or laptop may have different performance or limitation. Please try all USB ports to see if there are any differences.
4. Please must use the USB cable in box. We do not guarantee the overall performance when the USB capture box works with some other USB cables.
5. HDMI cable quality may also play an essential role when capturing. Please be sure of that HDMI cable can do 1080P@60 HDMI signal transmission or better. Try different cables when the device is not able to work as expected.
6. If audio has noise, please adjust sampling frequency setting on PC or laptop. If the default sampling rate is 48000 Hz, please select 44100 Hz and vice versa. The path of setting sampling frequency on windows 10 is:

Start → Setting → System → Sound → Device properties → Additional device properties
→ Advanced

USB PIN DEFINITION



	P1		P2
VBUS	1	↔	1
D-	2	↔	2
D+	3	↔	3
GND	4	↔	4
SSRX-	5	↔	5
SSRX+	6	↔	6
GND	7	↔	7
SSTX-	8	↔	8
SSRX+	9	↔	9
Shield	SHELL	↔	SHELL

WARRANTY

The SELLER warrants the **CAP-502MJ USB 3.1 Gen 1 Full HD Video Capture Device** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the CAP-502MJ features and specifications is subject to change without further notice.**