HDMItoU30 Capture Card User Manual

1. General Description:

Innomaker HDMItoU30 capture card is a real USB3.0 high-definition video/audio capturer and convertor. It suitable for devices with HDMI output, such as PS4, Xbox, DSLR and HDMI camera. Capture the video/audio input signals from HDMI port to the USB port of PC, tablet PC, Mobile phone for preview and storage.

Innomaker HDMItoU30 capture card use built-in drivers on most system, no need to install diver and not power supply requirement. Just a plug and play device, very convenient. It's suitable for capturing interesting details in life, can be used for indoor and outdoor live broadcast, and the color of the picture is more delicate.

2. Features

1. [Wide compatibility] Just work as camcorder or action camera device on Windows 11/10/8/7, Mac OS, Android 5.0 greater,Linux. Support mainstream streaming media software and live platform like Youtube, OBS, Zoom, Potplayer , VLC, Open Broadcaster Software and XSplit Gamecaster Studio.

2.[No Delay] Capture the video/audio input signals from HDMI port to the USB port. Real-time preview, No delay and no compression.

3. [Plug and Play Device] Support built-in drivers on most of systems, no need to install complicated driver, no external power supply, just plug and play.

4. [Sturdy and Portable]The shell is made of aluminum alloy seamlessly. Wtih small size designed ,it's very convenient to carry, suitable for capturing interesting details in life, can be used for indoor and outdoor live broadcast, and the color of the picture is more delicate.

5. [Real USB3.0 1080P@60Hz video capture card] Support HDMI input up to 4K@30FPS and USB3.0 output (capture) up to 1080P@60Hz.

3. Technical Specification

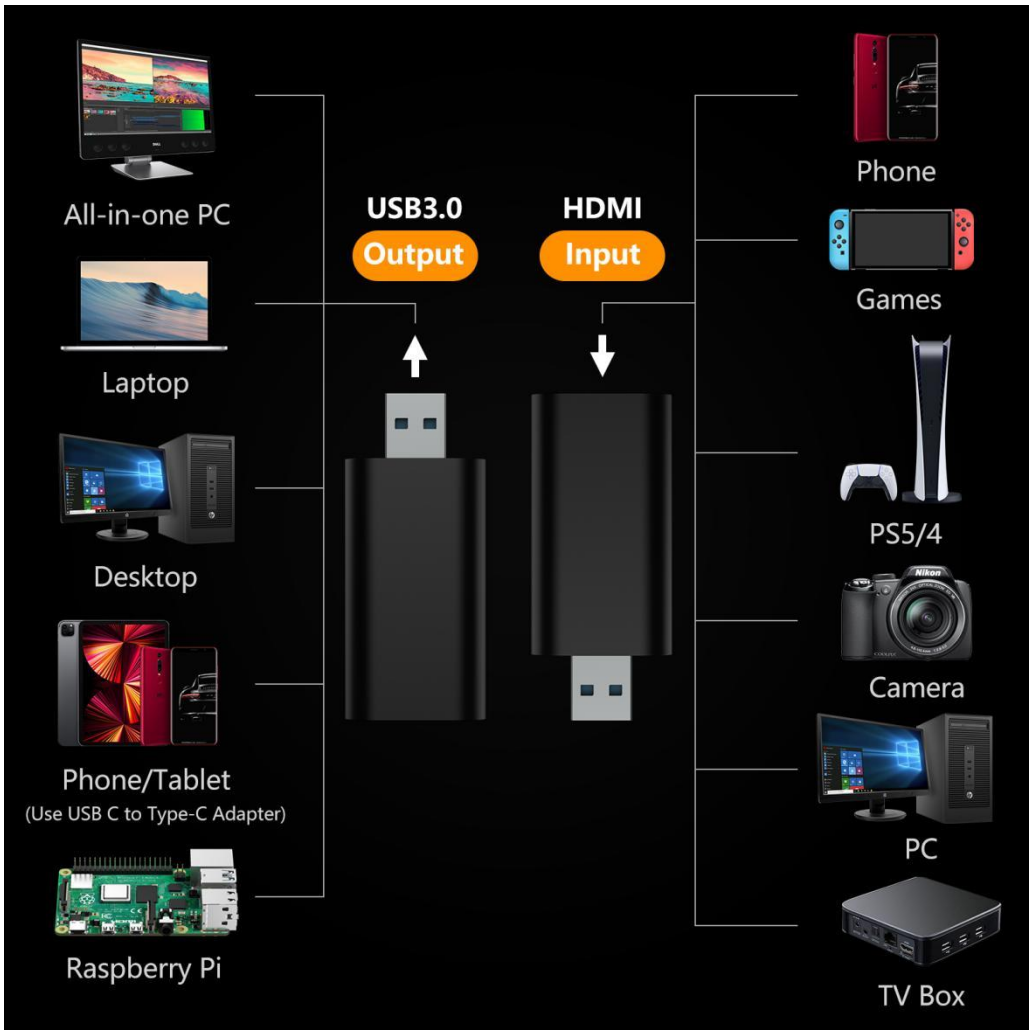
HDMI Input	
HDMI 1.4b Compatibility	√
DVI 1.0	√
HDCP 1.4	√
Data Format	RGB444、YCBCR422、YCBCR444、YCBCR420 color space
Pixel pack mode	Deep color 24/30/36 bit mode
Video Format	CEA-861-E/CEA-861-F
Input Resolution	4096x2160@30Hz (Best option) 3840x2160@30Hz (Best option) 1920x1080@60Hz (Best option) 1680x1050@60Hz 1600x900@60Hz 1440x900@60Hz 1280x1024@60Hz 1280x960@60Hz 1280x800@60Hz 1280x720@60Hz 1152x864@60Hz 1024x768@60Hz 800x600@60Hz 640x480@60Hz
USB Output	
USB protocol	USB3.0, Compatible USB2.0
USB Video protocol	UVC1.0
USB Audio protocol	UAC1.0
Audio Output	L-PCM 48KHz
Video Output Format	YUV422, MJPEG
USB3.0 Input Resolution	YUV422: 1920x1080@60Hz/50Hz/30Hz/20Hz/10Hz 1600x1200@60Hz/50Hz/30Hz/20Hz/10Hz 1360x768@60Hz/50Hz/30Hz/20Hz/10Hz 1280x1024@60Hz/50Hz/30Hz/20Hz/10Hz 1280x960@/60Hz/50Hz/30Hz/20Hz/10Hz 1280x720@60Hz/50Hz/30Hz/20Hz/10Hz 1024x768@60Hz/50Hz/30Hz/20Hz/10Hz 800x600@60Hz/50Hz/30Hz/20Hz/10Hz 720x576@60Hz/50Hz/30Hz/20Hz/10Hz

USB3.0 Input Resolution	720x480@60Hz/50Hz/30Hz/20Hz/10Hz 640x480@60Hz/50Hz/30Hz/20Hz/10Hz MJPEG: 1920x1080@60Hz/50Hz/30Hz/20Hz/10Hz 1600x1200@60Hz/50Hz/30Hz/20Hz/10Hz 1360x768@60Hz/50Hz/30Hz/20Hz/10Hz 1280x1024@60Hz/50Hz/30Hz/20Hz/10Hz 1280x960@/60Hz/50Hz/30Hz/20Hz/10Hz 1280x720@60Hz/50Hz/30Hz/20Hz/10Hz 1024x768@60Hz/50Hz/30Hz/20Hz/10Hz 800x600@60Hz/50Hz/30Hz/20Hz/10Hz 720x576@60Hz/50Hz/30Hz/20Hz/10Hz 720x480@60Hz/50Hz/30Hz/20Hz/10Hz 640x480@60Hz/50Hz/30Hz/20Hz/10Hz
System Support	
System	Windows 11/10/8 Android 5 greater Linux MacOs
Other	
Work Temperature	-10° ~ +55°
Relative humidity	15-90%, not condensing

4. Connection

(1) Connect the UHD signal source to the HDMI input of the video capture with one HDMI cable.

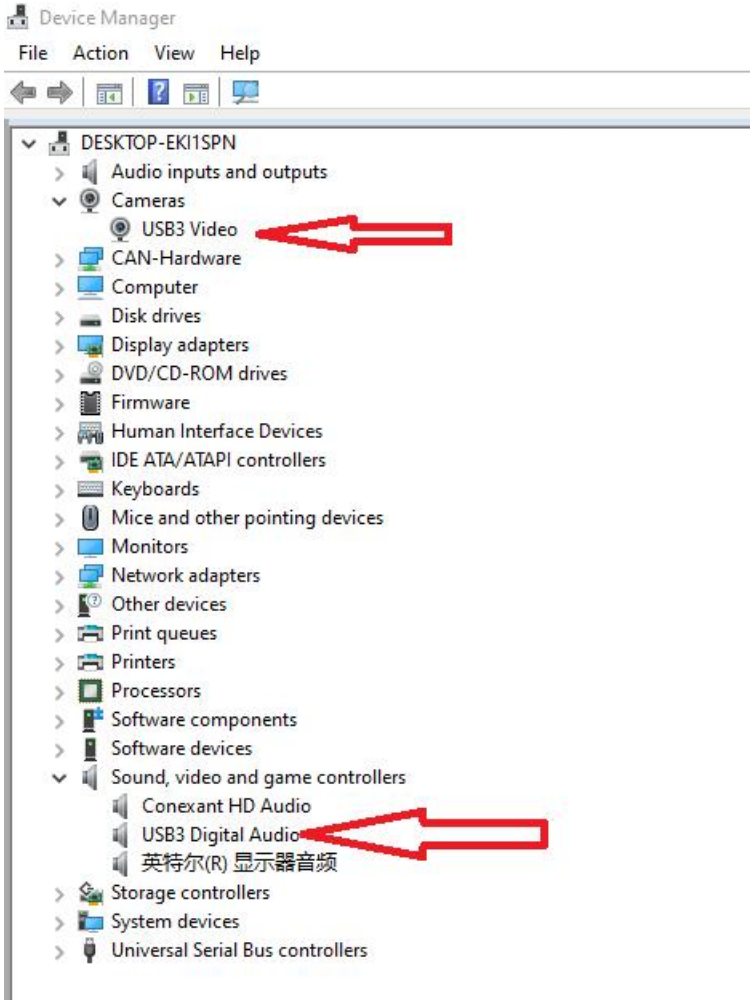
(2) Plug into the USB port of your computer



5. On Windows

5.1 Check Device

Innomaker HDMItoU30 work as usb3.0 camera on Windows, Open the device manager after plug into computer, you could check one new device named “USB3 Video” on camera list and one new device named “USB3 Digital Audio” on Sound input/output list. You could set as this video/audio device name in all software.

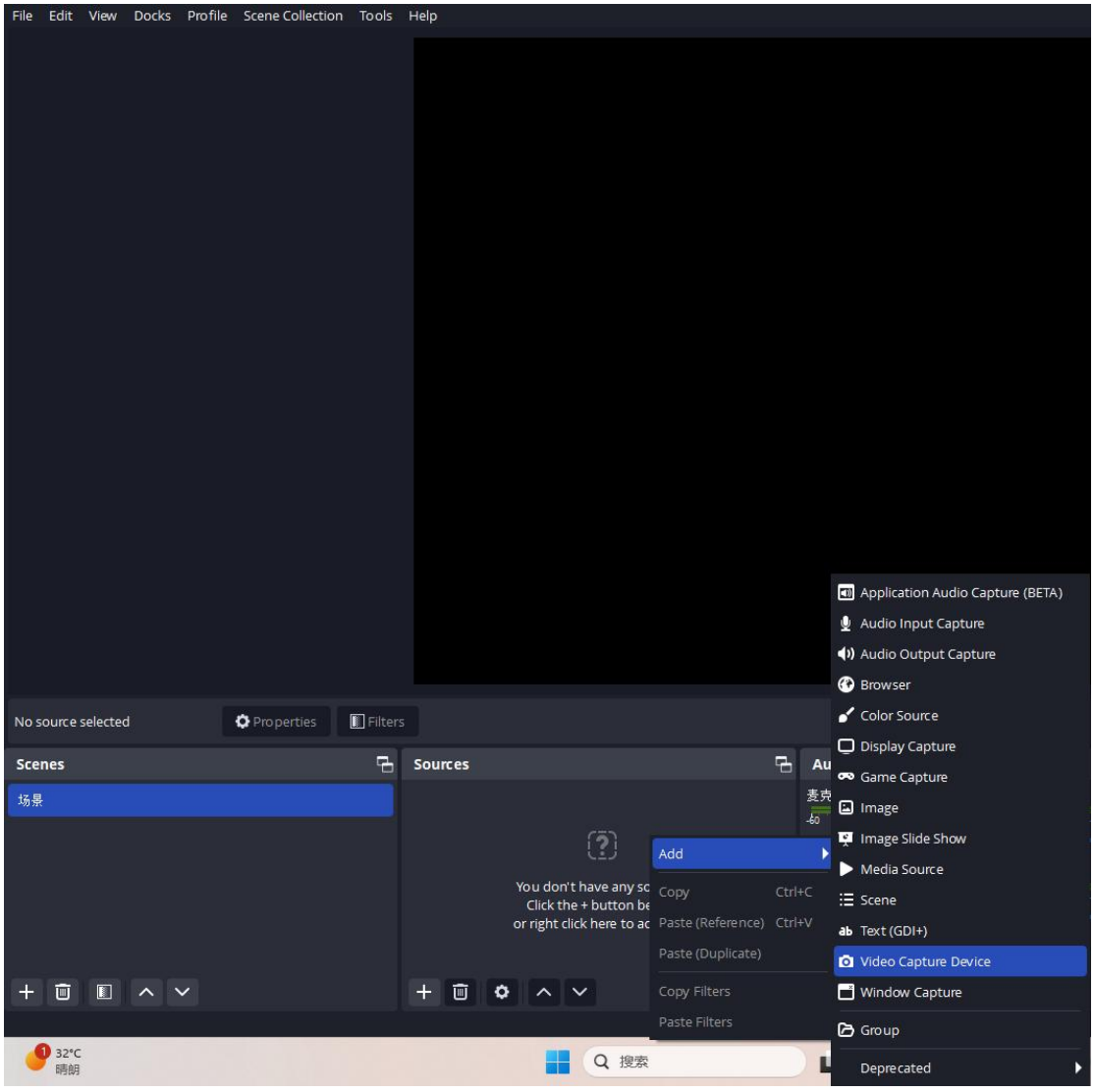


5.2 Download OBS

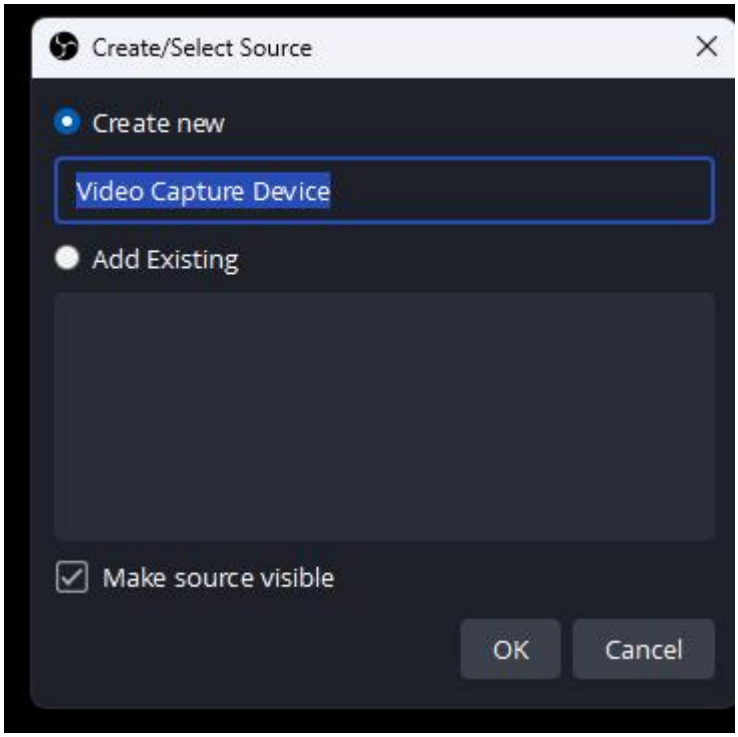
Download the OBS and install from below link. It support Windows, Mac Os and Linux, we take Windows as an example.
https://obsproject.com/download

5.3 Setting

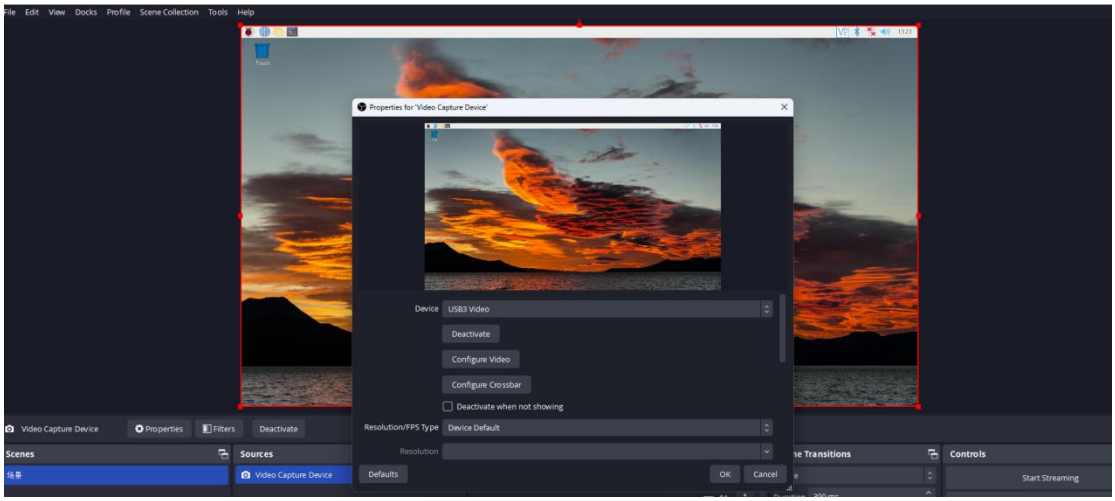
(1) Open the software → choose sources of “Video capture Device”



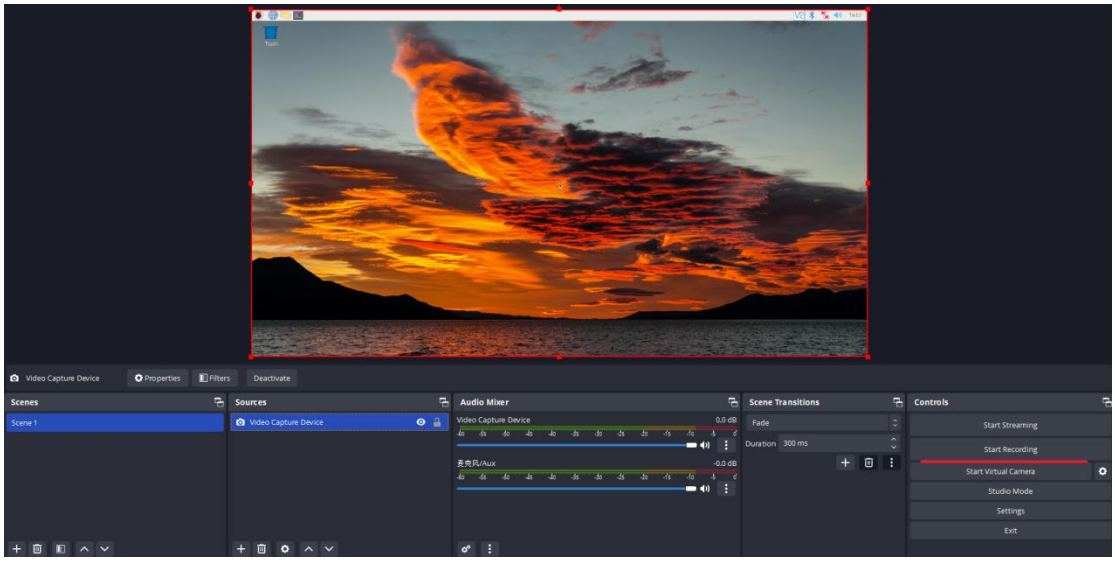
(2) Create a new device.



(3) Set device as USB3 Video. You could see the preview windows. If you have use other HDMI to USB before, pls click the default key to reset the OBS, otherwise there will not work correctly sometime.



(4) Click start recording to record .



6. On LINUX(UBUNTU、DEBIAN)

Innomaker HDMItoU30 can support V4L2(Video for linux2) software framework on Linux. So it can work with all V4L2 application directly. Most of Linux system with pre-install V4L2, if not, please install via below command:

```
sudo apt-get install v4l-utils
```

Video4Linux:
https://en.wikipedia.org/wiki/Video4Linux

Video For Linux 2 Sample Program Documentation:
https://web.archive.org/web/20110707012738/http://alumnos.elo.utfsm.cl/~yanez/video-for-linux-2-sample-programs/

6.1 Check Device

Usually the new USB camera is named video0 on Linux, You could use below command to check

```
v4l2-ctl --list-device
```

```
pi@raspberrypi:~ $ v4l2-ctl --list-device
bcm2835-codec-decode (platform:bcm2835-codec):
        /dev/video10
        /dev/video11
        /dev/video12
        /dev/video18
        /dev/video31
        /dev/media2

bcm2835-isp (platform:bcm2835-isp):
        /dev/video13
        /dev/video14
        /dev/video15
        /dev/video16
        /dev/video20
        /dev/video21
        /dev/video22
        /dev/video23
        /dev/media0
        /dev/media1

rpivid (platform:rpivid):
        /dev/video19
        /dev/media3

USB3 Video: USB3 Video (usb-0000:01:00.0-1):
        /dev/video0
        /dev/video1
        /dev/media4
```

You could use below command to check the resolution and frame rate which camera can be supported.

v4l2-ctl --list-formats-ext

```
pi@raspberrypi:~ $ v4l2-ctl --list-formats-ext
ioctl: VIDIOC_ENUM_FMT
        Type: Video Capture

        [0]: 'YUYV' (YUYV 4:2:2)
                Size: Discrete 1920x1080
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 1600x1200
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 1360x768
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 1280x1024
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 1280x960
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 1280x720
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 1024x768
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 800x600
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
                        Interval: Discrete 0.100s (10.000 fps)
                Size: Discrete 720x576
                        Interval: Discrete 0.017s (60.000 fps)
                        Interval: Discrete 0.020s (50.000 fps)
                        Interval: Discrete 0.033s (30.000 fps)
                        Interval: Discrete 0.050s (20.000 fps)
```

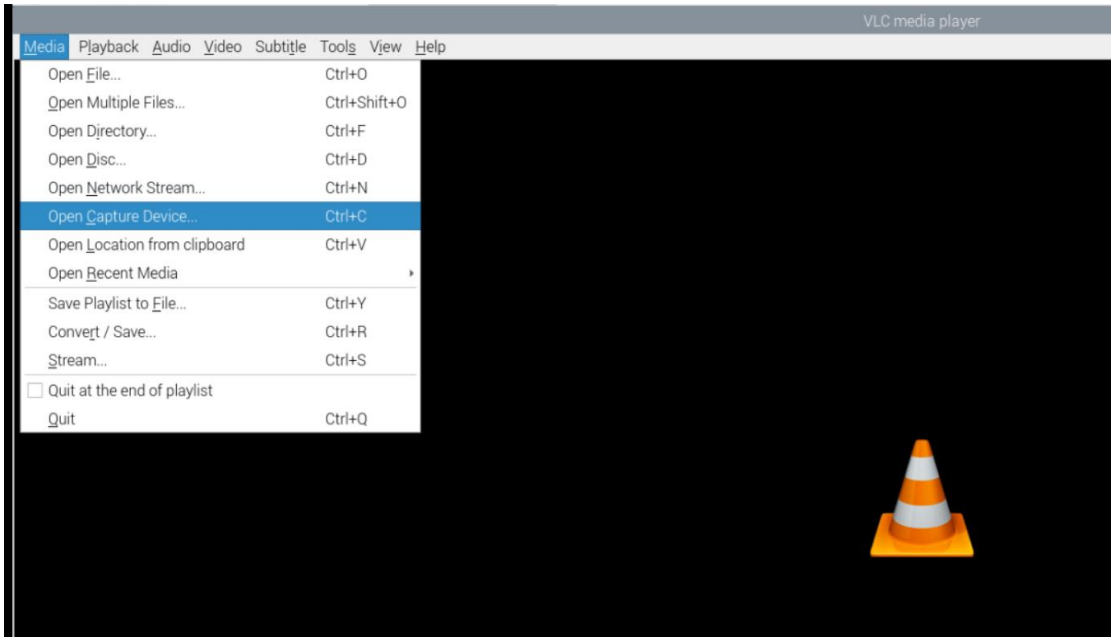
6.2 VLC

Innomaker HDMItoU30 can support V4L2 tools, we take VLC media player as an example.

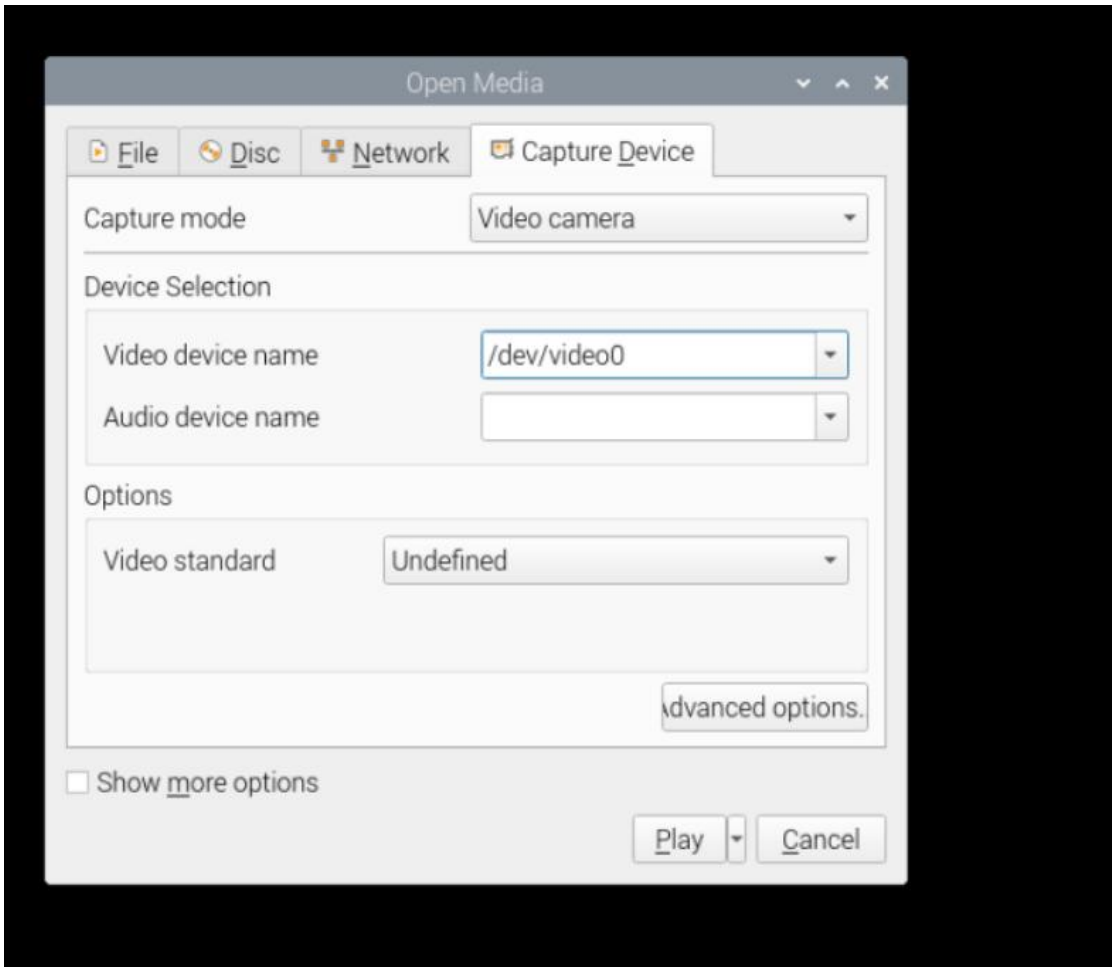
(1) Install VLC by below command.

```
sudo apt-get install vlc
```

(2) Open VLC → Media → Open Capture Device



(3) Capture Device → Video device name → select "/dev/video0" → Play. You could see the capture video.



7. User Manual Version Descriptions

Version	Description	Date	E-mail
V1.0.0.0		2022.07.12	support@inno-maker.com sales@inno-maker.com