AVer PTZ 310/330 and TR310/333 Camera Integration used with Open Broadcaster Software (OBS)

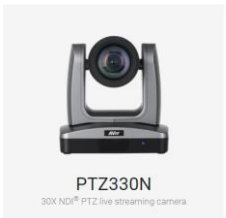
October 2020

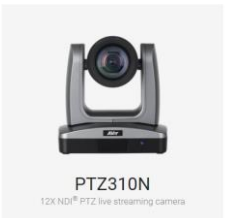
Steps to integrate the Aver PTZ310, PTZ330 and TR310, TR311HN, TR311, TR313, TR333 Cameras into the OBS Studio Software

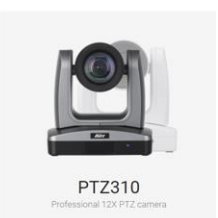
OBS offers different options for video recording and live streaming, real time video/audio capturing and mixing.
AVer has high quality image Cameras (TR311 / TR530 / PTZ330) that will integrate with these workflows for peak performance and ease of use. We will show the configuration process for the PTZ310/330 and TR310/333 Cameras and the OBS Studio Software. There are some pre-requisites for this to happen, see below.

AVer PTZ310/330 Camera Setup

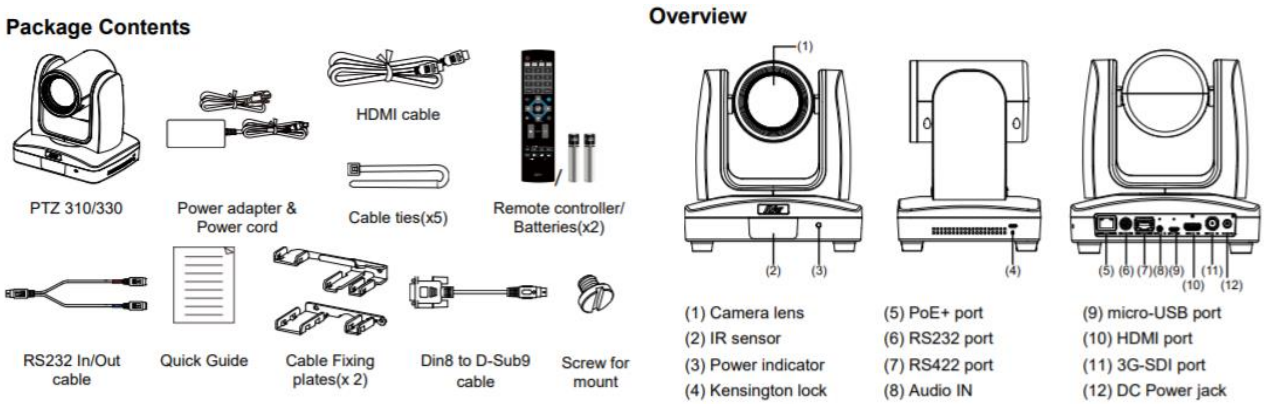
The AVer PTZ310/330(N) and TR320/530 cameras have various video output capabilities; here is a brief overview of each.



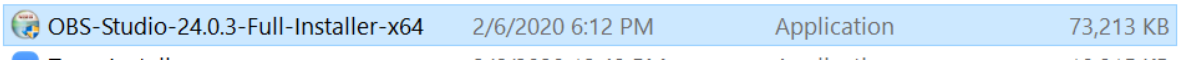




AVer PTZ310/330 Camera Setup (continued)



- Chrome Browser, version 79.0.3945.xxx and later.
- OBS 24.0.3 (64 bit) Software for Windows, roughly 73MB in size.
- (https://obsproject.com/download).

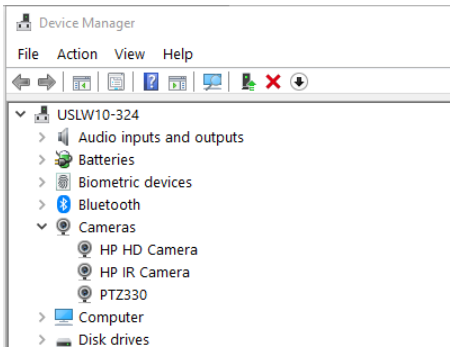


- Windows 10 Pro OS used in this setup.

1. If OBS software is not installed, install and follow the prompts.
2. There are 3 main ways to integrate the AVer camera with OBS, they are:
    1. USB Connection
    2. Real Time Streaming Protocol (RTSP)
    3. Streaming Output

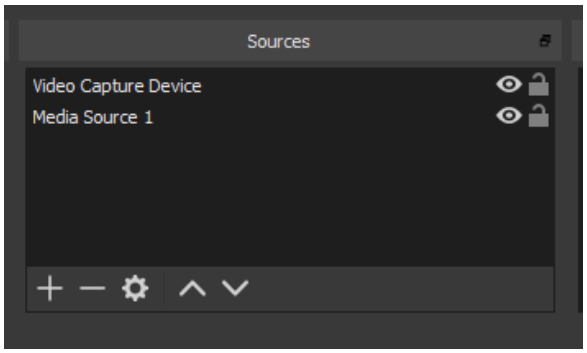
USB Connection:

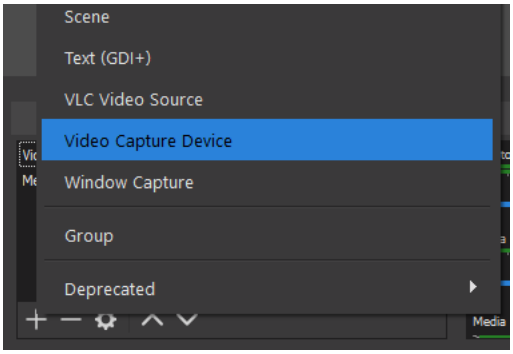
1. Connect the AVer PTZ310/330 Camera to a USB port on the PC using the USB to Micro-USB cable provided and verify that Windows does see the device in the “Device Manager” window.



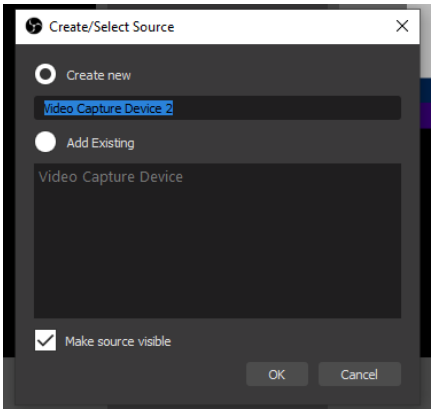
AVer PTZ310/330 Camera Setup (continued)

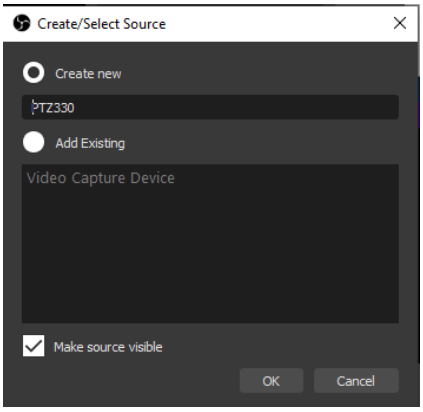
2. Next, open the OBS software and go to the “Sources” display. Select the “+” to add a source, and then select “Video Capture Device”.



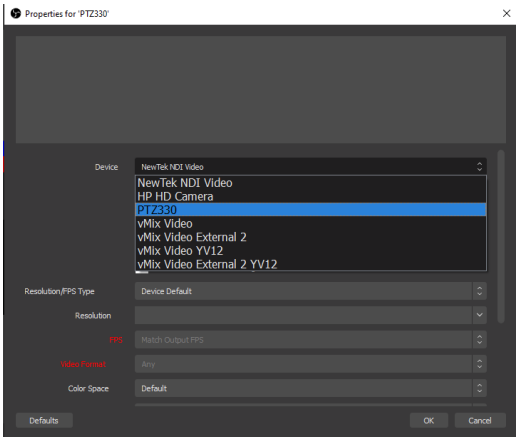


3. You should now see the following dialog box, give the Video Source a name and then select “OK”.



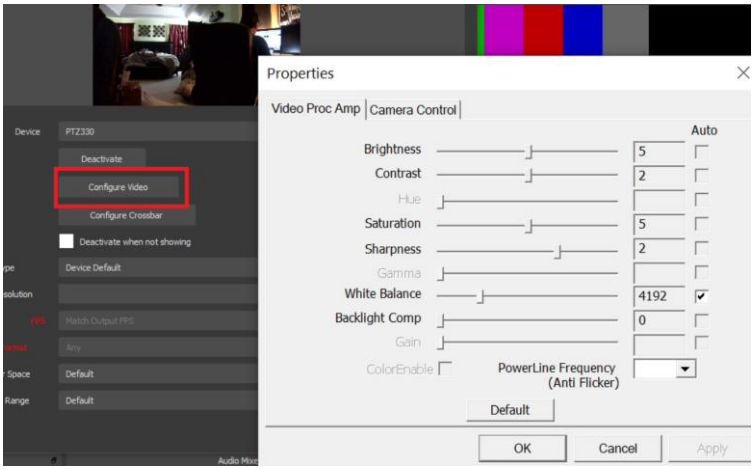


4. Next, you should now be seeing the following window to select the PTZ330 as a device.

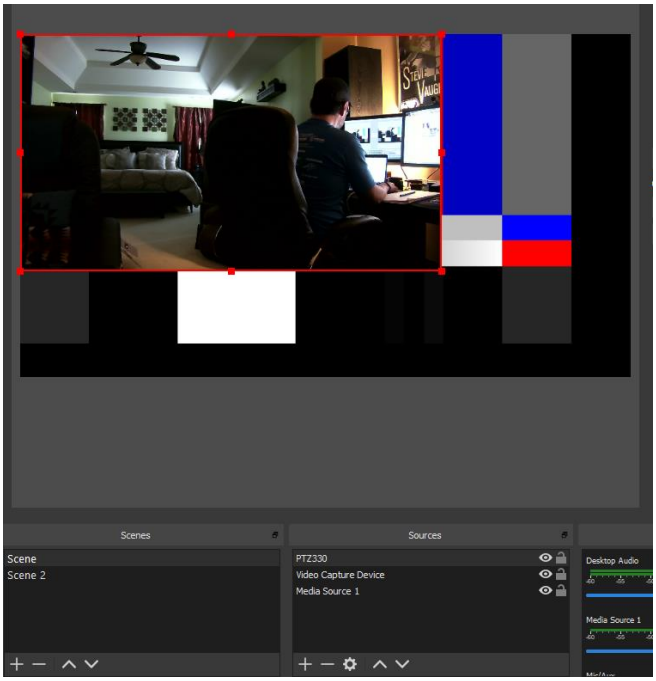


5. At this point you should have active PTZ330 Camera video. Selecting “Configure Video”, will give you some basic controls for Video Processing (Brightness/Contrast/Sat/Sharpness) and Camera Control (Pan/Tilt/Zoom).

AVer PTZ310/330 Camera USB Setup (continued)

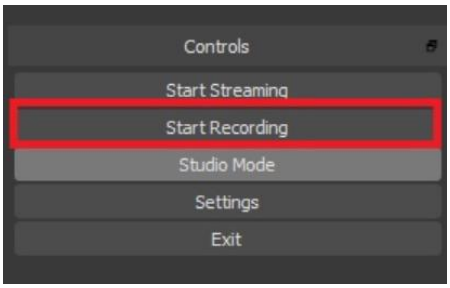


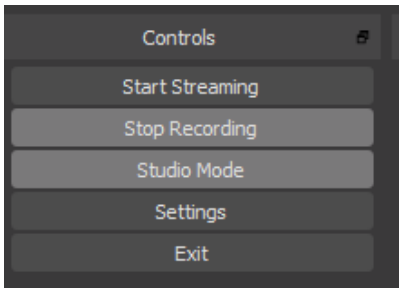
6. Once you have setup accordingly, select “OK”, then “OK” again to exit the window.
7. You will be brought back to the OBS Main page; you should now see Camera video as the PTZ330 USB Source.



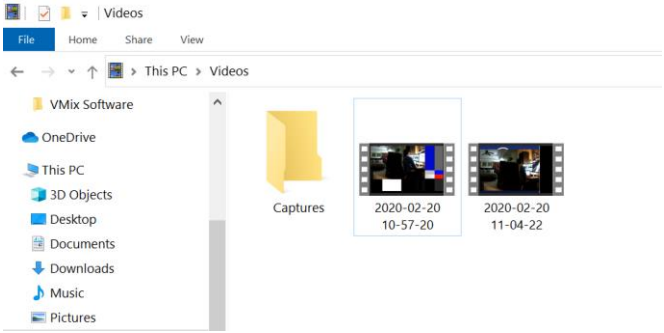
Recording

1. To begin recording the Program out of the OBS software, press the “Start Recording” selection under the “Controls” header.

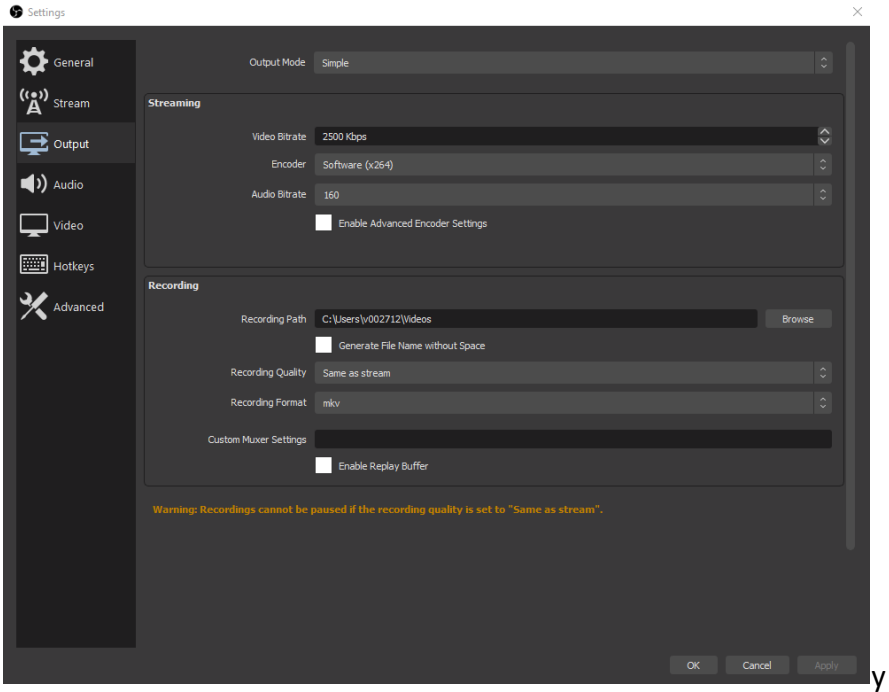




2. To end the recording, select “Stop Recording”, by default the video will be recorded to the “Videos” folder of the Windows User logged in.



3. To change the “default” settings, select “Settings” under the “Controls” header, you should see the following window appear. This is where you can change the Recording Path, Recording Format, and Streaming Properties.

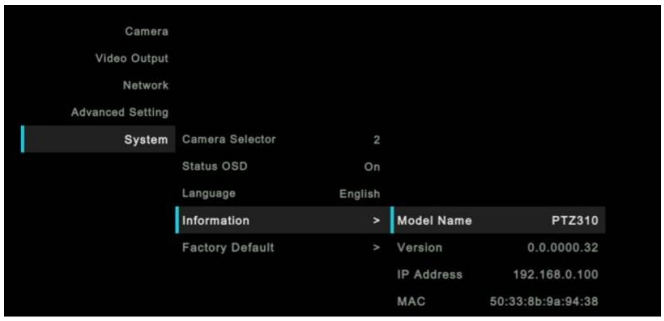


y

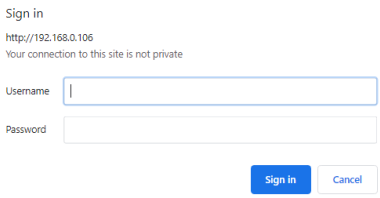
RTSP Input to the OBS system

1. Connect the PTZ310/330 camera via Network RJ45 connection; verify IP address of Camera in order to connect via Web browser. Locate the remote, select the “Menu” icon on the remote and navigate to the “**Network->DHCP->**” setting, verify it is set to DHCP “On” in order to grab an available IP address. If you are reserving IP addresses, verify it is set to “OFF” and that the correct IP address has been set.
   Go to **Network > DHCP > On**.

   After turning DHCP on, go to **System > Information** to view the IP address.

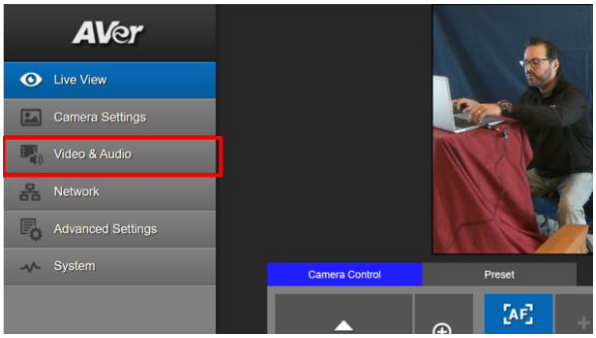


2. Once you have the IP address setup, type the IP address in your Chrome browser (Setup on same subnet) and you should now see the login to the PTZ330 camera shown below.



3. The default Username/password is “administrator” or “admin / admin”.
   ***Note:** If this is the first time accessing the PTZ310/330 camera via the Web login it will ask you to change the Username/Password.

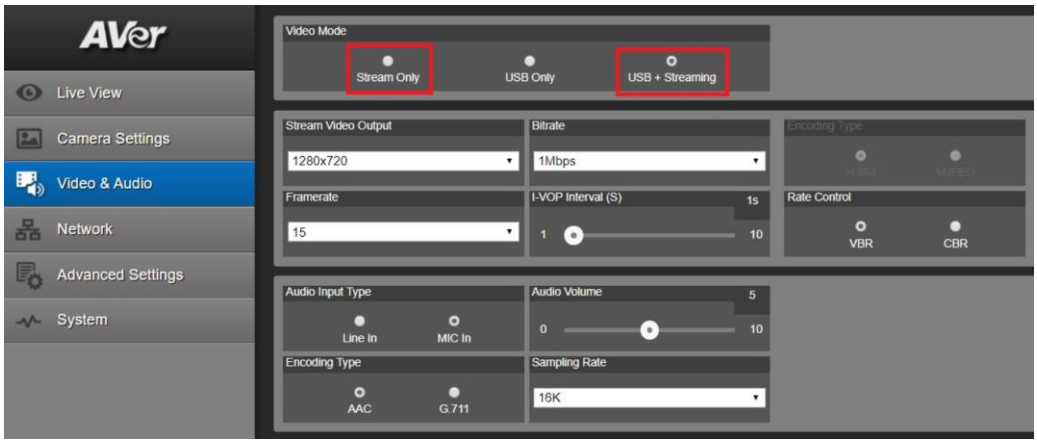
4. Next, you should now see the main login screen with a “Live View” of the PTZ Camera.



RTSP Input to the OBS system (continued)

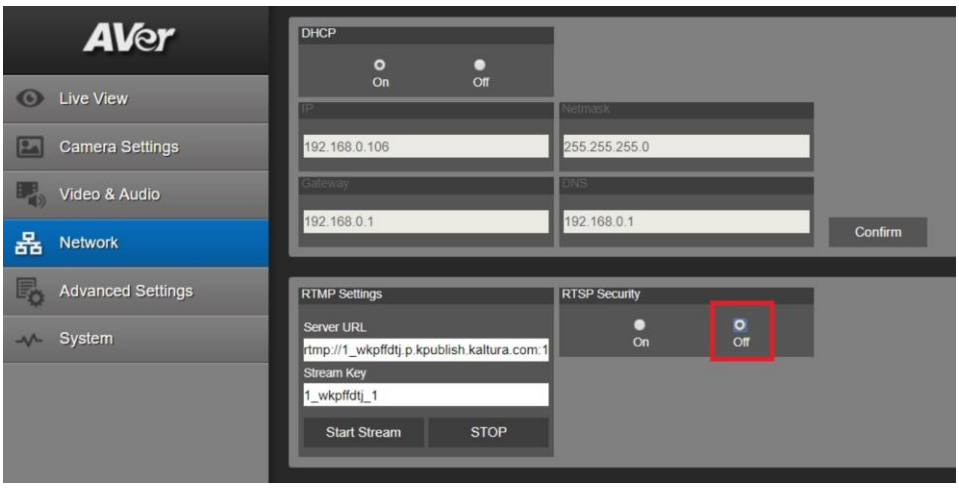
5. Next, after selecting the *Video & Audio* setting, verify that you have either “Stream Only” selected or “USB + Streaming” selected. Select your Stream Video Output, Bitrate, and Framerate.

   ***Note:** Some servers require a minimum bitrate of 2.5Mbps for their environment.



Video Standard->	Stream Only (Various)	USB Only (Various)	USB + Streaming (Various)	NDI (1080p/60)
SDI Output	✓	✓	✓	✓
HDMI Output	✓	✓	✓	✓
USB Output	x	✓	✓	x
RTSP Output	✓	x	✓	✓

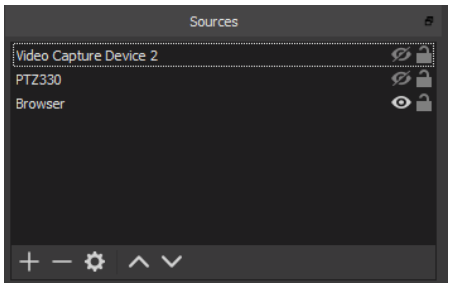
6. Next, select the *Network* setting, set the *RTSP Security* to either “On” or “Off” depending you want encryption when using RTSP.

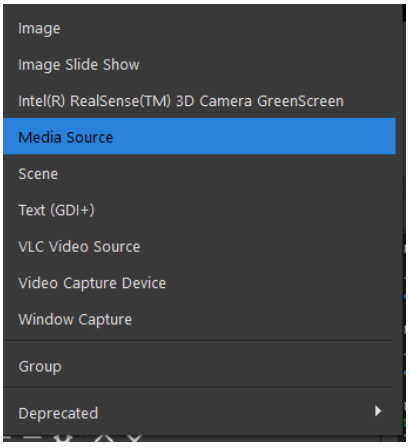


***Note:** Once streaming has started do not change the Stream Video Output on the fly, you will need to “Stop” streaming, change the Stream Video Output, then “Start” the stream again.

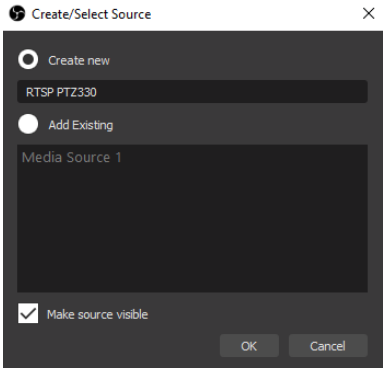
RTSP Input to the OBS system (continued)

7. Next, go back to the OBS system and select the “+” sign under the “Sources” header, and then select “Media Source”.

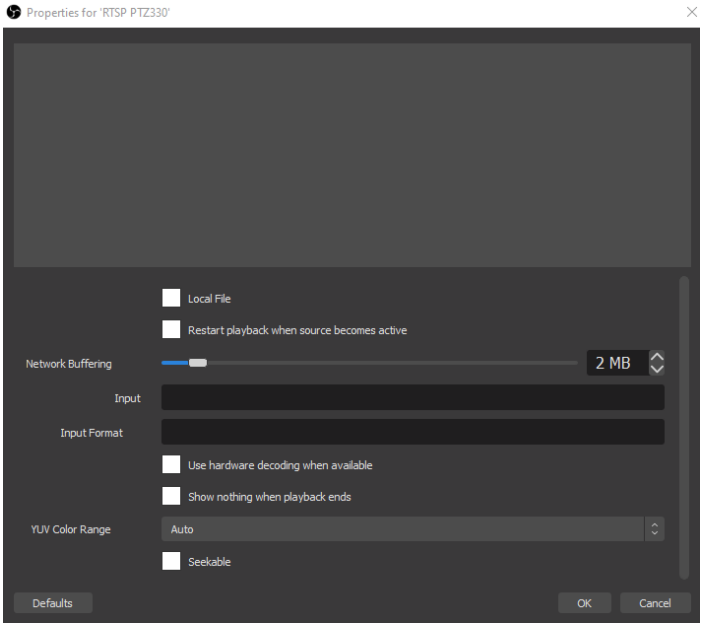




8. Next, select “*Create new*”, and give it a name, i.e. “RTSP PTZ330”, then select “OK”. After selecting “OK”, you should see the name given populate into the “Sources” display.

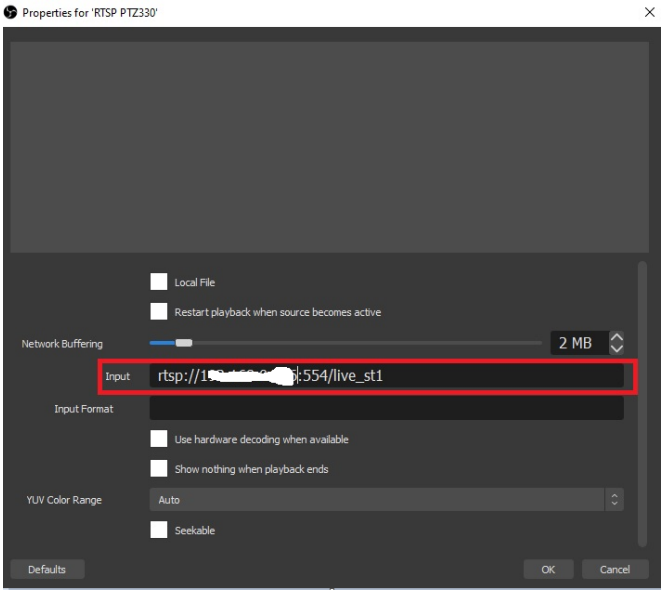


9. Next, ***de-select*** any of the boxes that are enabled/selected by default, you should now see the following.

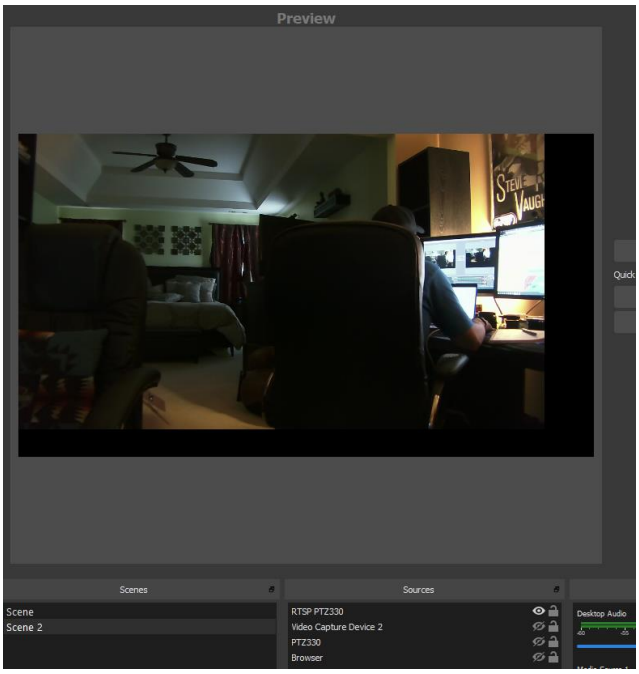


RTSP Input to the OBS system (continued)

10. Next, in the “Input” field, type in the following syntax for the PTZ310/330 RTSP feed, “rtsp://Camera IP:554/live_st1”, where Camera IP is the actual IP address of the camera.



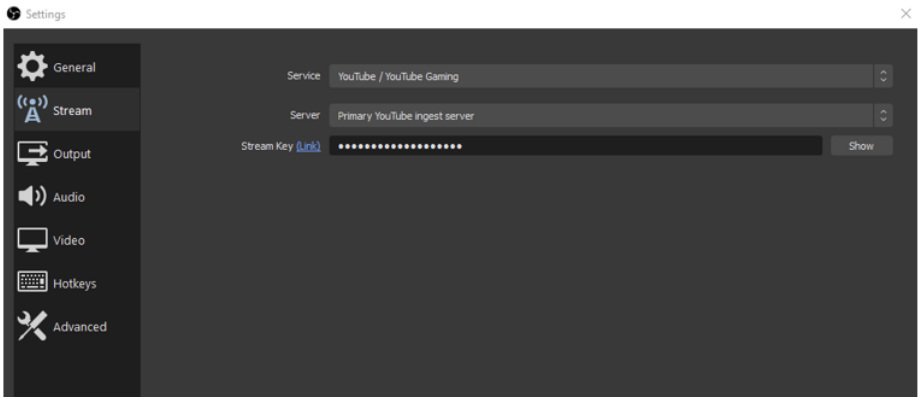
11. Next, select “OK”, you should be seeing camera video on your OBS Preview display streaming from the PTZ330 camera.



Streaming Output from OBS

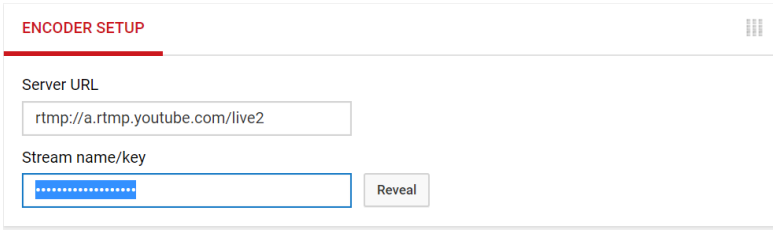
To connect to a streaming service like YouTube, Twitch, Facebook, etc., do the following steps.

1. Select Settings under the “Controls” header, then select “Stream”; you should now be seeing the following window displayed.

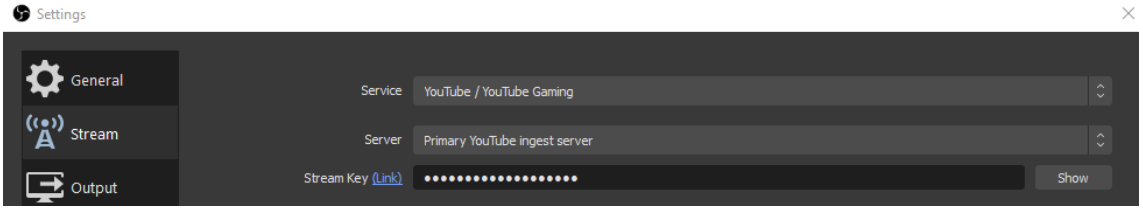


2. Next, select the “Service” you want to stream to, in this example we are using YouTube.

3. Next, you will need your “Stream Key” in order to complete the process, for YouTube, go to your account and find the “Encoder Setup” information, copy the “Stream name/key” information. You may have to switch to “Classic view” to find it quicker.

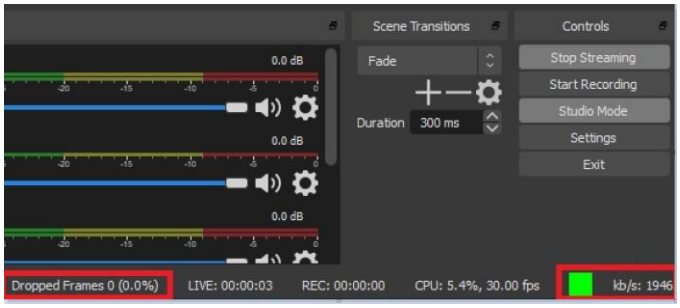


4. Next, go to the OBS Stream Key selection and paste that information into the space provided.

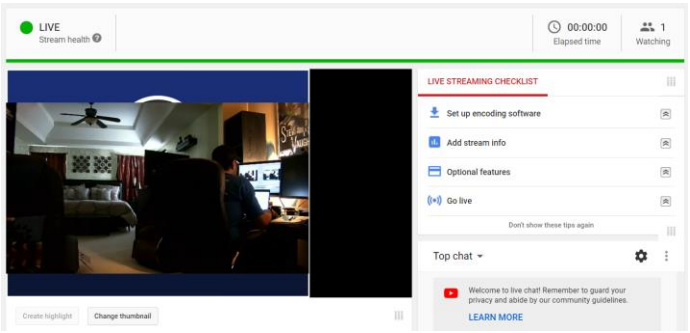


5. Next, select “OK”, then select “Start Streaming” under the “Controls” header.

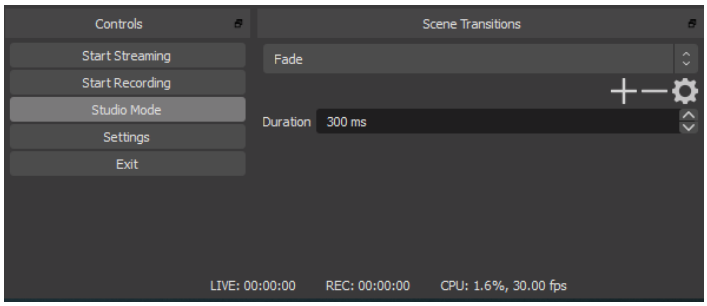
Streaming Output from OBS (continued)



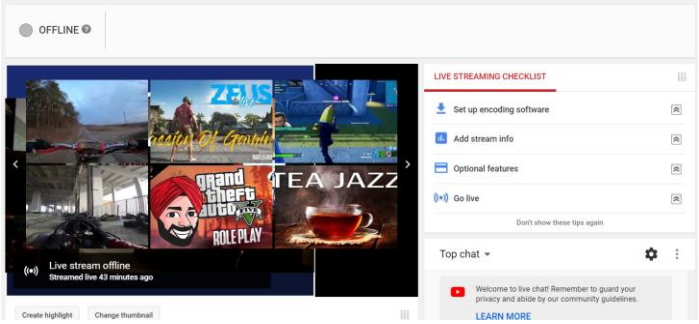
6. Verify that you see “Dropped Frames” displayed, LIVE counter, and “Green status bar” for kb/s has begun. At this point you are now streaming to YouTube.
7. To verify, go to your YouTube Live Dashboard and verify the video feed from OBS.



8. To end the streaming feed, select “Stop Streaming” from the “’Controls” header, the “Dropped Frames” and “kb/s” information should now be removed from view to indicate streaming has stopped.

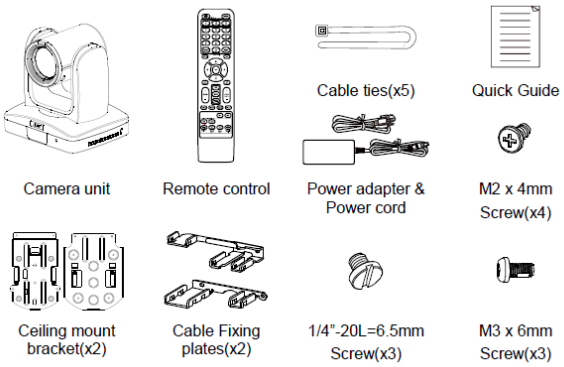


9. To verify on YouTube, go back to your YouTube Live Dashboard, it should now be displaying “Offline”.

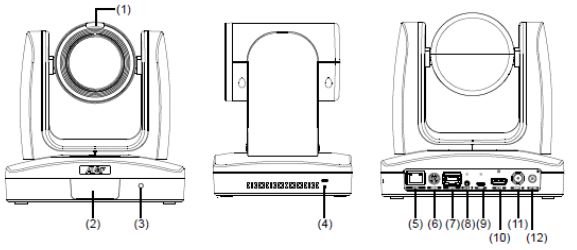


10. This concludes the AVer PTZ310/330 Camera integration within the Open Broadcaster Software (OBS).

Package Contents

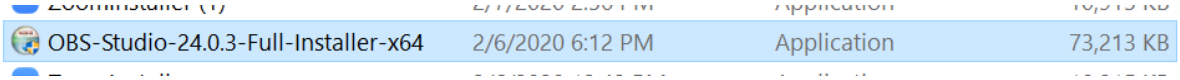


Overview



(1) Tally Lamp
(2) IR Sensor
(3) Power Indicator
(4) Kensington Lock
(5) PoE+ IEEE 802.3AT
(6) RS232 Port
(7) RS422 Port
(8) Audio In
(9) USB 3.0 Port (Type C)
(10) HDMI Port
(11) 3G-SDI Port
(12) DC Power Jack

- Chrome Browser, version 79.0.3945.xxx and later.
- OBS 24.0.3 (64 bit) Software for Windows, roughly 73MB in size.
- (https://obsproject.com/download).



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    3. Streaming Output

TR310 to TR333 Camera USB connected CaptureShare Software

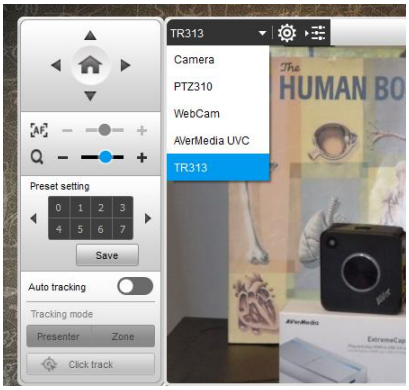
Aver Information Inc. offers a free software for the NEW TR series of cameras, CaptureShare, that works in Windows and MAC OS's. It allows you to be able to configure the TR camera for Presenter and Zone Mode Tracking, as well as some of the basic video settings such as Contrast, Saturation, Mirroring, and video output settings while being ONLY connected to the camera via USB.

Once downloaded and installed you will have two modules:

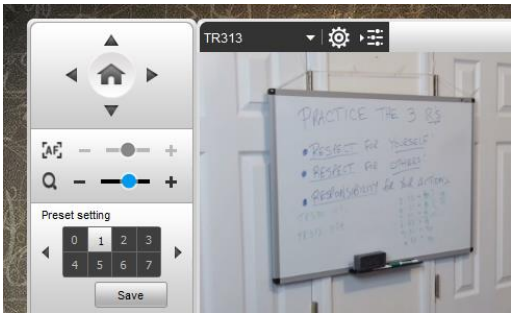
- AverCamera Setting Tool; used if you only need control/configuration of the camera.
- CaptureShare; has additional features, like PiP, annotation, recording, streaming, etc.

For more detailed information, download the User Manual on the AVer Pro-AV website.
The following is used to setup the TR310/333 camera with CaptureShare.

1. Once CaptureShare is opened, select the Camera carrot and then select the TR313 camera as the source.

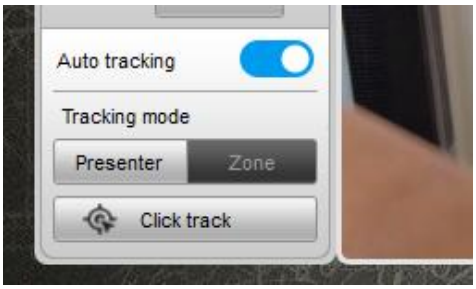


2. Next, you should see video from the camera, and have control via the Up/Down and Left/Right arrows.
3. Use the Up/Down and Left/Right arrows to position the camera to save Preset #1, then select *"Save".* This preset is used when in *Presenter Mode* tracking, if tracking is lost, the camera will automatically go to Preset #1 after 5 seconds.

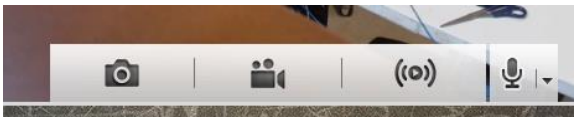


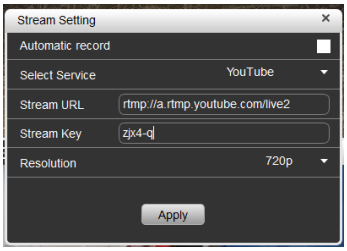
TR310 to TR333 Camera USB connected CaptureShare Software (continued)

4. Next, save Presets 6, 7, 8, and 9, these presets are used when in *Zone Mode* tracking.
5. You can Enable/Disable Tracking via CaptureShare and the camera remote.



6. You also have the ability to record locally and “stream” out to YouTube/FB/other streaming services once the RTMP Server / RTMP Key are configured.





7. Opening the AVerCamera Setting Tool will allow you to setup the camera without the additional tools for Streaming, Recording, etc.

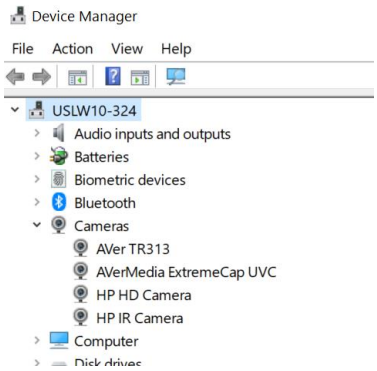
8. This concludes the brief introduction to CaptureShare and the AVerCamera Setting Tool.

TR 310 / 311 / 313 / 333 Camera USB Connection

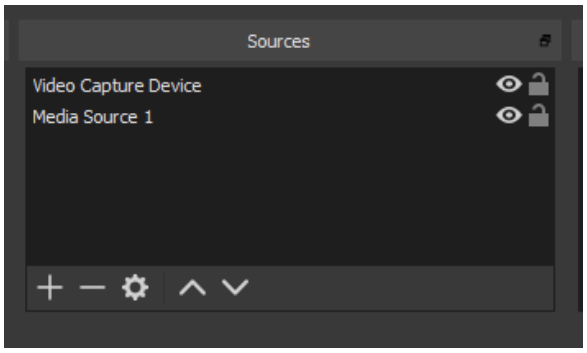
1. Connect the AVer TR310/333 Camera to a USB port on the PC using the USB to Micro-USB cable provided and verify that Windows does see the device in the “Device Manager” window.

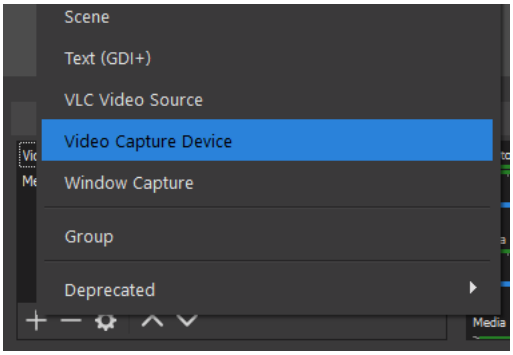
   ***Note:** A USB 2.0 extender can be used with the camera, as USB 2.0 will support 1080p/30 video.

   https://www.aver.com/Knowledge-Learns/conferencing-collaboration/compatibility-list

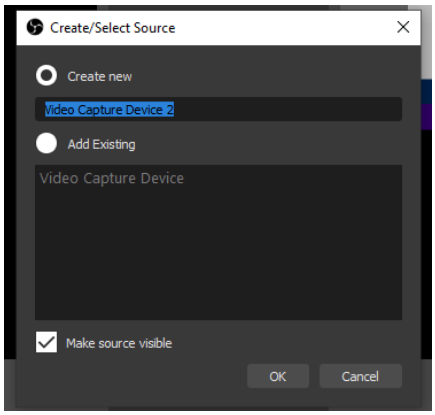


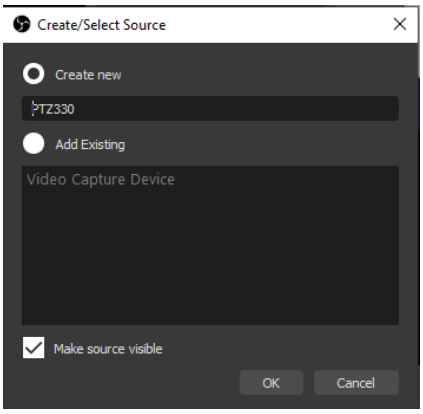
2. Next, open the OBS software and go to the “Sources” display. Select the “+” to add a source, and then select “Video Capture Device”.





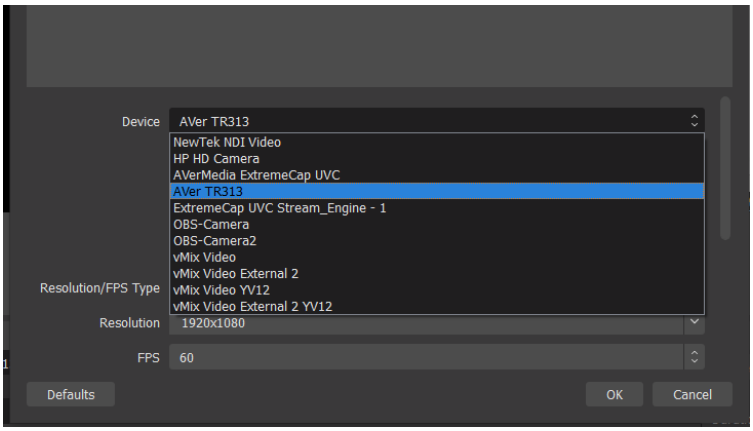
3. You should now see the following dialog box, give the Video Source a name and then select “OK”.



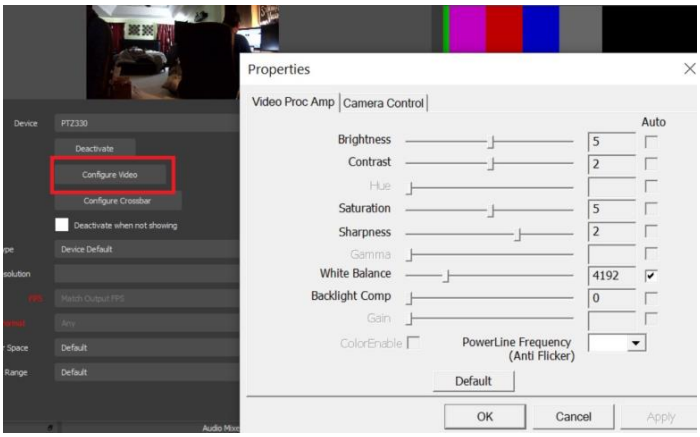


AVer TR310 / 311 / 313 / 333 Camera USB Connection (continued)

4. Next, you should now be seeing the following window to select the TR313 as a device.

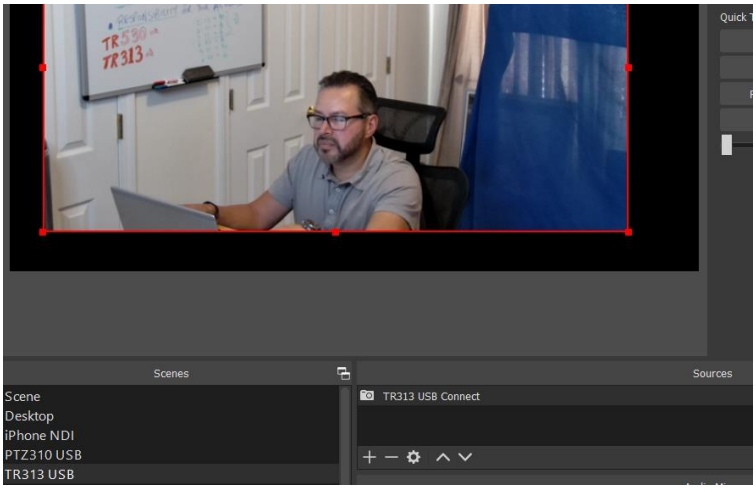


5. At this point you should have active TR313 Camera video. Selecting “Configure Video”, will give you some basic controls for Video Processing (Brightness/Contrast/Sat/Sharpness) and Camera Control (Pan/Tilt/Zoom).



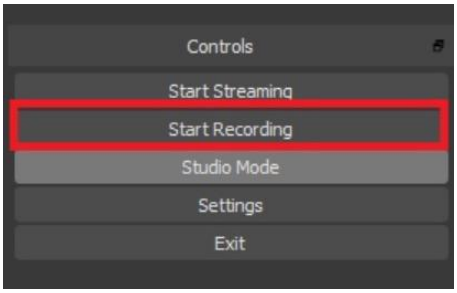
6. Once you have setup accordingly, select “OK”, then “OK” again to exit the window.

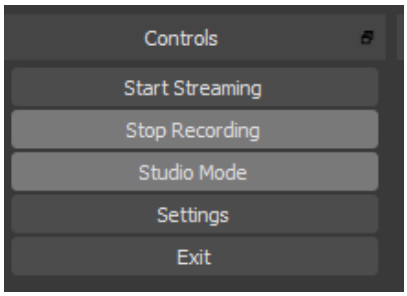
7. You will be brought back to the OBS Main page; you should now see Camera video as the TR313 USB Source.



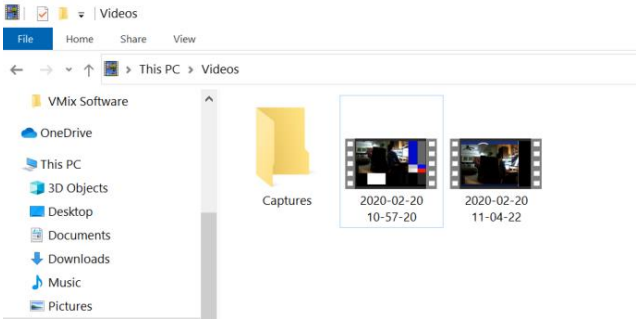
Recording

1. To begin recording the Program out of the OBS software, press the “Start Recording” selection under the “Controls” header.

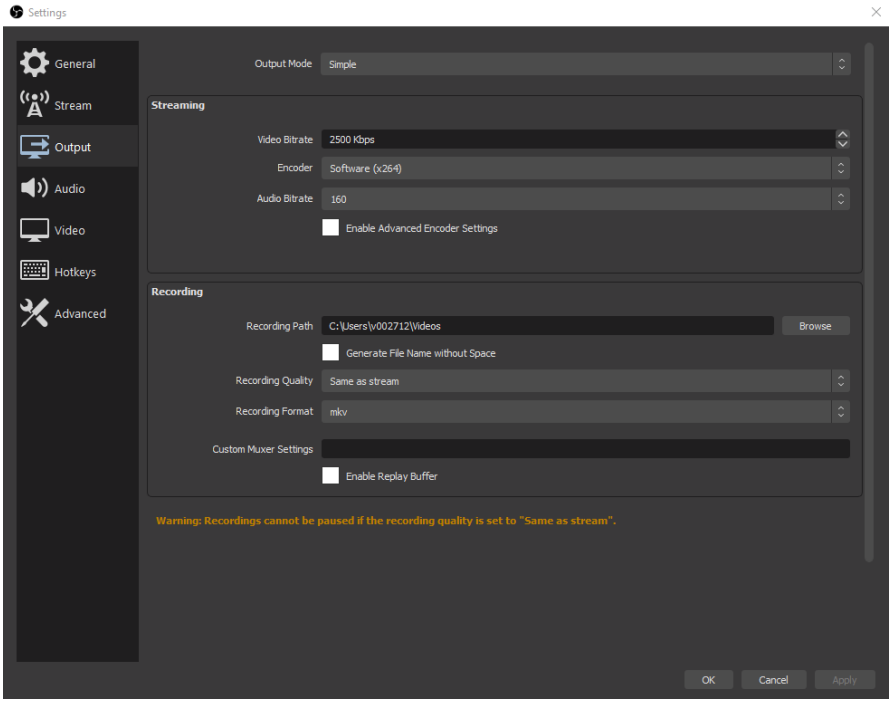




2. To end the recording, select “Stop Recording”, by default the video will be recorded to the “Videos” folder of the Windows User logged in.



3. To change the “default” settings, select “Settings” under the “Controls” header, you should see the following window appear. This is where you can change the Recording Path, Recording Format, and Streaming Properties.

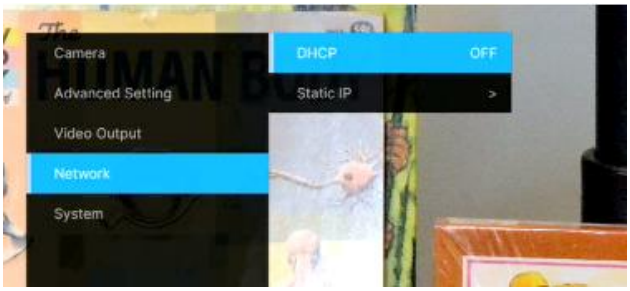


AVer TR310 / 311 / 313 / 333 Camera RTSP Setup

RTSP Input to the OBS system

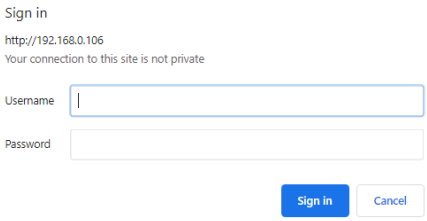
1. Connect the TR310/333 camera via Network RJ45 connection; verify IP address of Camera in order to connect via Web browser. Locate the remote, select the “Menu” icon on the remote and navigate to the “**Network->DHCP->**” setting, verify it is set to DHCP “On” in order to grab an available IP address. If you are reserving IP addresses, verify it is set to “OFF” and that the correct IP address has been set.

   Go to **Network > DHCP > On**.



   After turning DHCP on, go to **System > Information** to view the IP address.

2. Once you have the IP address setup, type the IP address in your Chrome browser (Setup on same subnet) and you should now see the login to the TR310/333 camera shown below.

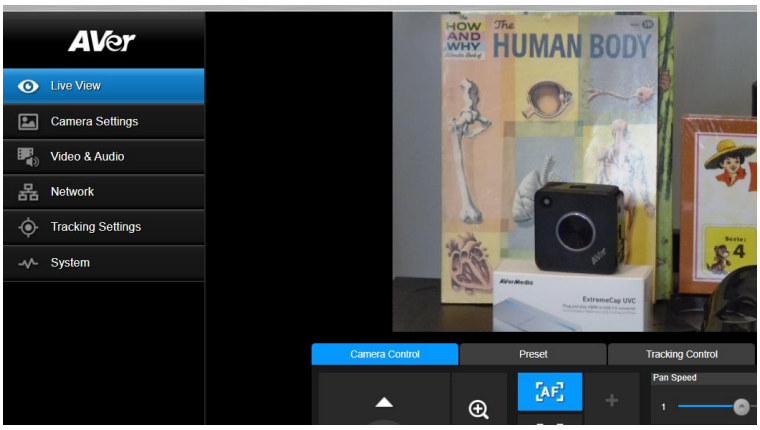


3. The default Username/password is “administrator” or “admin / admin”.

   ***Note:** If this is the first time accessing the TR310/330 camera via the Web login it will ask you to change the Username/Password.

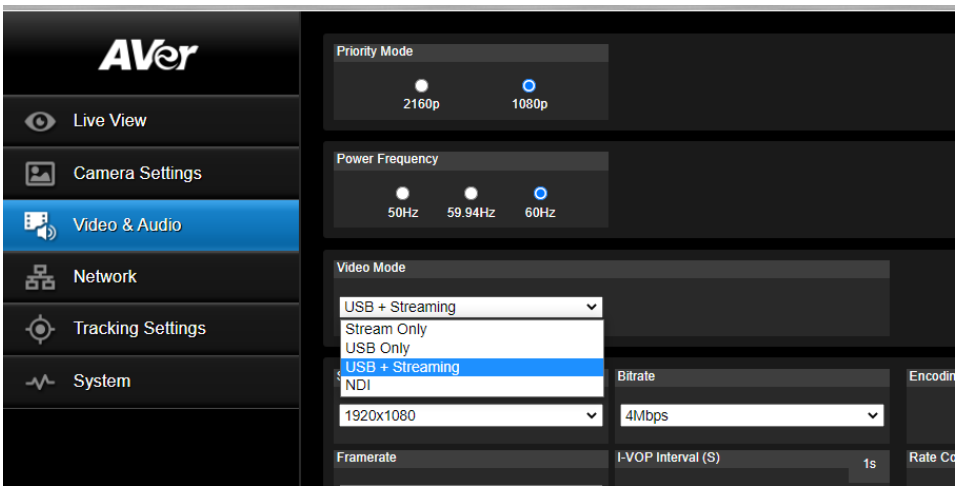
RTSP Input to the OBS system (continued)

4. Next, you should now see the main login screen with a “Live View” of the PTZ Camera.



5. Next, after selecting the *Video & Audio* setting, verify that you have either “Stream Only” selected or “USB + Streaming” selected. Select your Stream Video Output, Bitrate, and Framerate.

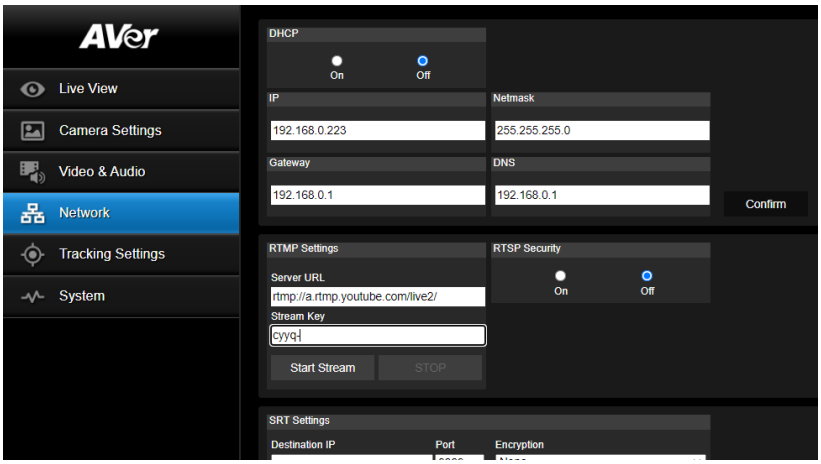
   ***Note:** Some servers require a minimum bitrate of 2.5Mbps for their environment.



Video Standard->	Stream Only (Various)	USB Only (Various)	USB + Streaming (Various)	NDI (1080p/60)
SDI Output	✓	✓	✓	✓
HDMI Output	✓	✓	✓	✓
USB Output	x	✓	✓	x
RTSP Output	✓	x	✓	✓

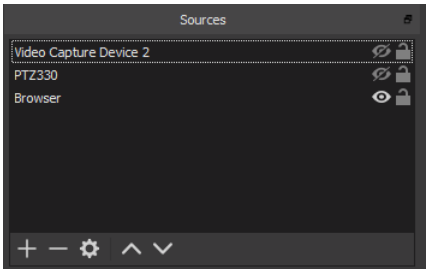
RTSP Input to the OBS system (continued)

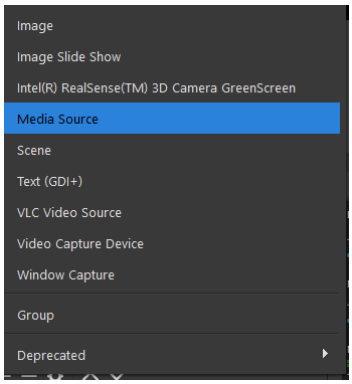
6. Next, select the *Network* setting, set the *RTSP Security* to either “On” or “Off” depending if you want encryption when using RTSP.



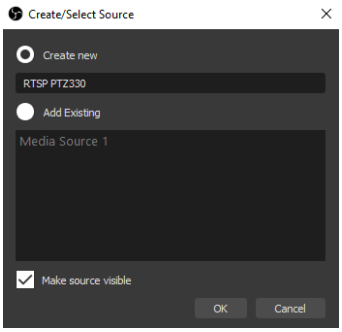
***Note:** Once streaming has started do not change the Stream Video Output on the fly, you will need to “Stop” streaming, change the Stream Video Output, then “Start” the stream again.

7. Next, go back to the OBS system and select the “+” sign under the “Sources” header, and then select “Media Source”.



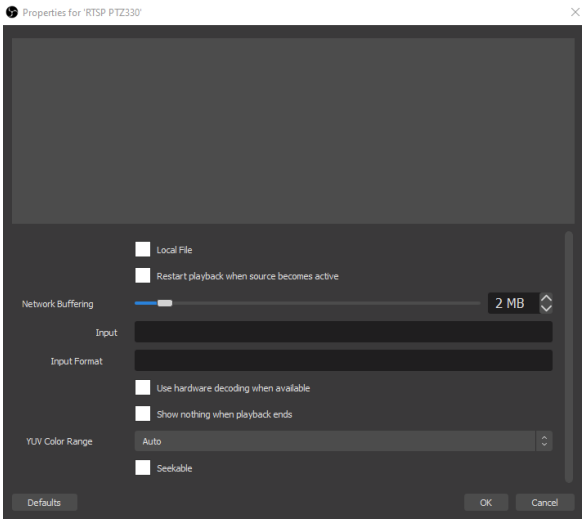


8. Next, select “*Create new*”, and give it a name, i.e. “RTSP TR313”, then select “OK”. After selecting “OK”, you should see the name given populate into the “Sources” display.

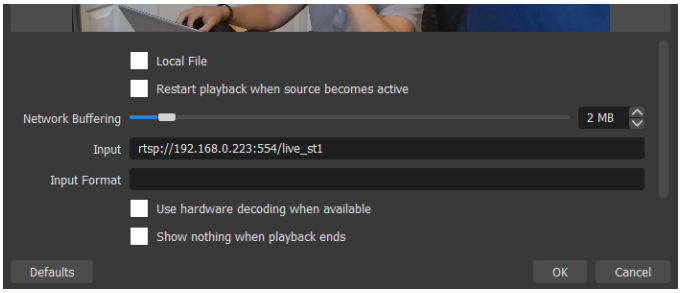


RTSP Input to the OBS system (continued)

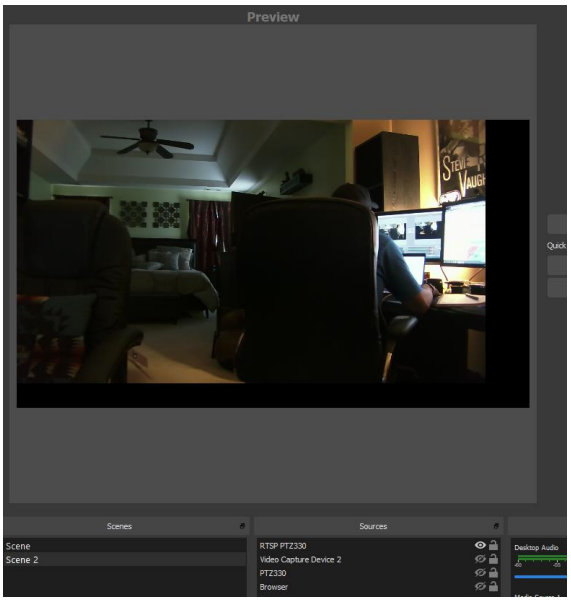
9. Next, ***de-select*** any of the boxes that are enabled/selected by default, you should now see the following.



10. Next, in the "*Input*" field, type in the following syntax for the TR310/333 RTSP feed, "rtsp://Camera IP:554/live_st1", where Camera IP is the actual IP address of the camera.



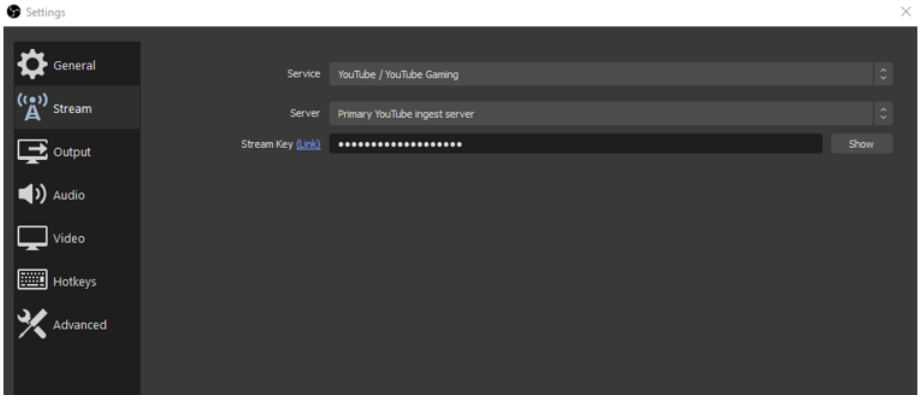
11. Next, select "OK", you should be seeing camera video on your OBS Preview display streaming from the TR310/333 camera.



Streaming Output from OBS

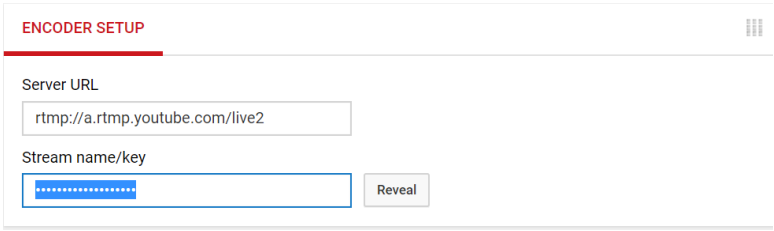
To connect to a streaming service like YouTube, Twitch, Facebook, etc. from OBS, do the following steps.

1. Select Settings under the “Controls” header, then select “Stream”; you should now be seeing the following window displayed.

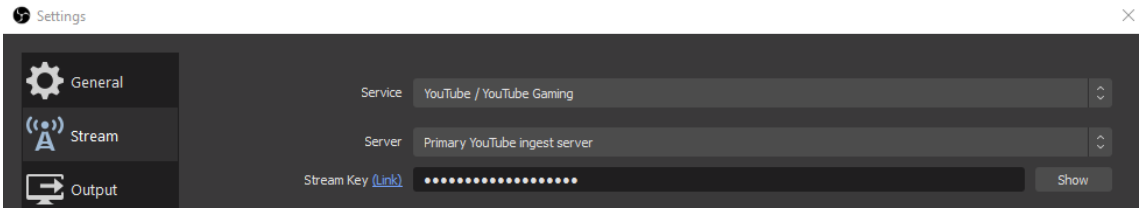


2. Next, select the “Service” you want to stream to, in this example we are using YouTube.

3. Next, you will need your “Stream Key” in order to complete the process, for YouTube, go to your account and find the “Encoder Setup” information, copy the “Stream name/key” information. You may have to switch to “Classic view” to find it quicker.



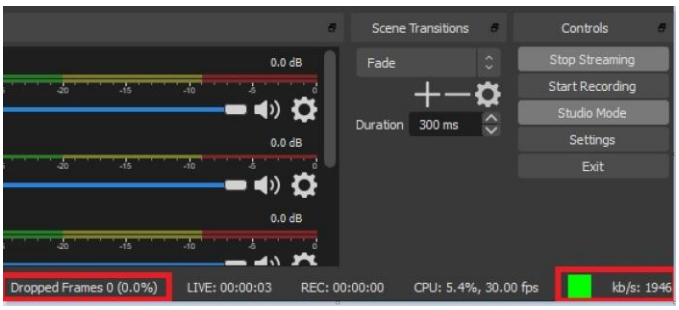
4. Next, go to the OBS Stream Key selection and paste that information into the space provided.



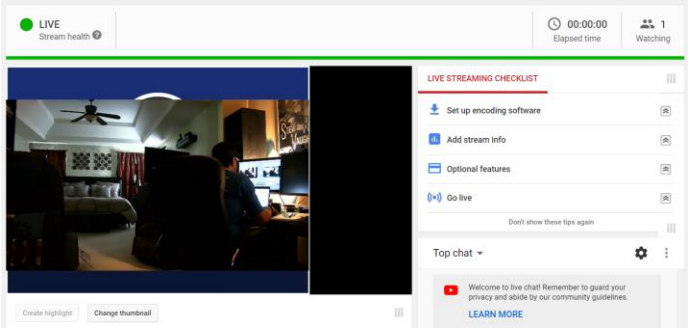
5. Next, select “OK”, then select “Start Streaming” under the “Controls” header.

Streaming Output from OBS (continued)

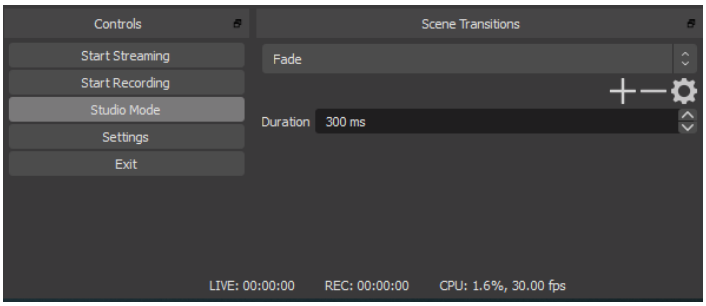
6. Verify that you see “Dropped Frames” displayed, LIVE counter, and “Green status bar” for kb/s has begun. At this point you are now streaming to YouTube.



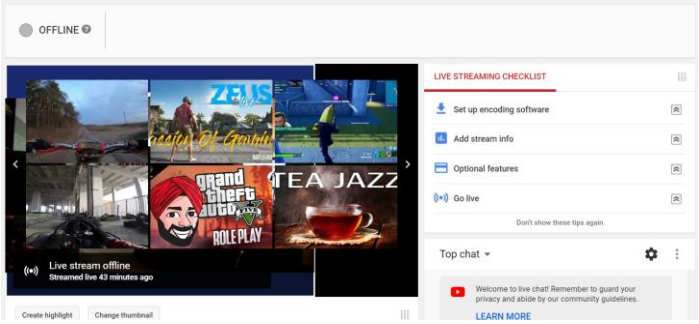
7. To verify, go to your YouTube Live Dashboard and verify the video feed from OBS.



8. To end the streaming feed, select “Stop Streaming” from the “’Controls” header, the “Dropped Frames” and “kb/s” information should now be removed from view to indicate streaming has stopped.



9. To verify on YouTube, go back to your YouTube Live Dashboard, it should now be displaying “Offline”.



10. This concludes the AVer TR310/333 Camera integration within the Open Broadcaster Software (OBS).