

AVer PTZ 310/330 Camera Integration used with vMix

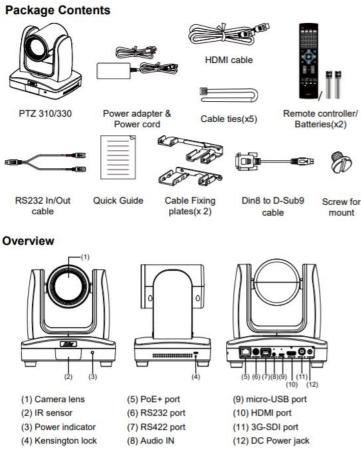
March 2020

Steps to integrate the Aver PTZ Cameras into the vMix Software

vMix offers different options for mixing video sources, live streaming, Video Delivery Solution, or Webcasting and Live Events.

AVer has high quality image Cameras (PTZ310 / PTZ330) that will integrate with these workflows for peak performance and ease of use. We will show the configuration process for the PTZ 330 Camera and the vMix Production Software. There are some pre-requisites for this to happen, see below.

• AVer PTX330/N Camera and accessories.



- Chrome Browser, version 79.0.3945.xxx and later.
- vMix 23 Software for Windows, currently version (23.0.0.39), approx. 350MB in size.

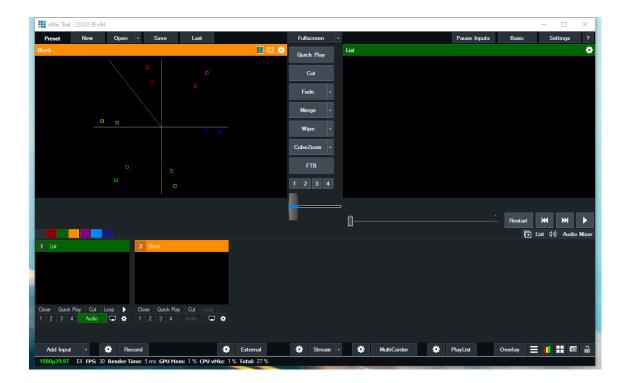
| | Name | Date modified | Туре | Size |
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| * | V Today (2) | | | |
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- .Net Framework 3.5 installed for VMix Software.
- Windows 10 Pro OS used in this setup.

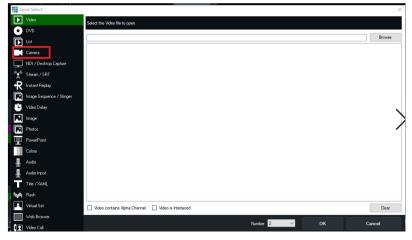
- 1. If vMix software is not installed, install and follow the prompts.
- 2. There are 3 main ways to integrate the AVer PTZ camera with vMix, they are:
 - USB Connection
 - NDI (PTZ330N and PTZ310N only)
 - (Streaming) Input and Output
- 3. **USB Connection**: Connect the AVer PTZ330/N Camera to a USB 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.



4. Next, open the vMix software and select "Add Input" located on the lower left of display.



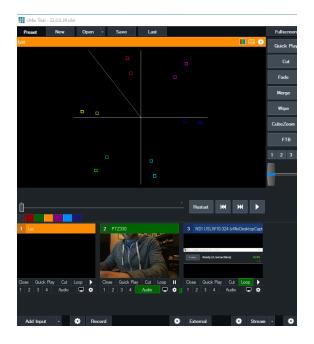
5. You should now see the following dialog box.



6. Next, select Camera, there will be a drop down menu for Camera selection, select the AVer PTZ330 camera.

| In | put Select | | | | | × |
|----------|--------------------------|--------------------------------|------------------------------|----------|------------------------|---------|
| | Video | Camera: | PTZ330 | ~ / | 1 | Use VMR |
| 0 | | Input: | Sample Input HP HD Camera | | | |
| Þ | | Resolution: | PTZ330 | | | |
| | Camera | Frame Rate: | | | | |
| \Box | NDI / Desktop Capture | | | | | |
| (1) A | Stream / SRT | Video Format: Audio Device: | | | | |
| ₽ | Instant Replay | Audio Device: Audio Input: | | | | |
| | Image Sequence / Stinger | Audio Format: | | | | |
| Ü | Video Delay | | | | | |
| | Image | | | | | |
| | Photos | | | | | |
| 匣 | PowerPoint | | | | | |
| | Colour | | Show legacy devices | | | |
| ₽ | Audio | | | | | |
| Ŧ | Audio Input | | | | | |
| Т | Title / XAML | | | | | |
| , հյլն | Flash | | | | | |
| | Virtual Set | | | | | |
| | Web Browser | | | | | |
| (1 | Video Call | | | Number 2 | ✓ ОК | Cancel |

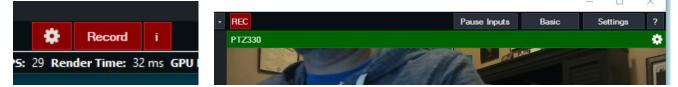
- 7. Select the Resolution and Frame rate as well as Video Format and Audio, then select "OK" once configured.
- 8. You will be brought back to the vMix Main page, you should now see video in the Input display.



9. Next, select the "Settings/Gear" icon next to Record; this will open the selections for the Recording Setup for both Audio and Video.

| Recor | Ъ | |
|---------------------|-----------------------|--|
| PS: 30 Render Time | : 11 ms | |
| Recording Setup | | × |
| 1 2 | | Output 1 V |
| AVI | Filename: | C:\Users\v002712\Documents\vMixStorage\capture.mp4 |
| WMV | | Browse |
| WMV Streaming | Size: | 1920x1080 ~ |
| MP4 | Frame Rate: | NTSC 29.97p ~ |
| FFMPEG vMix AVI | Bit Rate: Profile: | 8 V Mbps |
| | | |
| | Audio: | |
| | Audio Delay: | 0 Milliseconds |
| | Audio Bit Rate: | 128 v Kbps |
| | New File Every: | None v Minutes |
| (い) WAV File Record | | OK Cancel |

- 10. Once the selections have been made, select "OK" to confirm.
- 11. When you are ready to Record, select the "Record" button and you should see the "Settings/Record/I" selection turn red, as well as the a red REC icon in the Preview Out.



12. Once you are ready to "Stop" recording, select the RECORD button, a pop-up will appear asking if you are ready to "Stop Recording".

| vMix | \times |
|-------------|----------|
| ? Stop Reco | ording? |
| Yes | No |

13. The recorded media can be found where you had selected the Filename earlier in the "Recording Setup", typically located in "C:\Users\Rich\Documents\vMixStorage\capture.xxx".

Network Device Interface (NDI) / Desktop Connection:

NDI is a high performance standard that allows anyone to use real time, ultra-low latency video on existing IP video networks.

For this configuration the AVer camera will have later firmware installed and is designated as a PTZ330N or PTZ310N, the "N" designates that the camera has the ability to integrate with the NewTek NDI protocol. You can go to <u>https://www.ndi.tv/</u> to learn more about NDI or download the NDI Virtual Input application if needed.

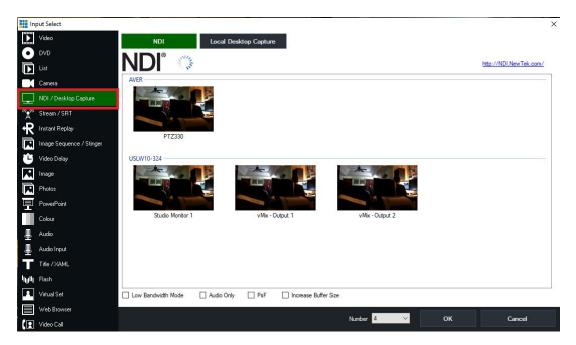
 First step is to verify that your PTZ330N/310N camera is setup for NDI, use the WebLogin and go to the "Video & Audio" settings, verify that the "NDI" radio button has been selected for Video Mode.
 *Note: The camera will need to re-boot when changing to/from NDI video mode.

| AV er | Video Mode | • | • | 0 | | | |
|-------------------|------------------------|-------------|-----------------------------|----------|---------------|----------|--|
| Live View | Stream Only | USB Only | USB + Streaming | NDI | | | |
| Camera Settings | Stream Video Output | _ | Bitrate | _ | Encoding Type | • | |
| Video & Audio | 1920x1080 Framerate | • | 8Mbps I-VOP Interval (S) | • | H 264 | MJPEG | |
| Network | 60 | ٣ | | 1s 10 | O VBR | ● CBR | |
| Advanced Settings | Audio Input Type | _ | Audio Volume | 5 | | _ | |
| -vv- System | • Line In | O MIC In | 0 | | | | |
| | Encoding Type | | Sampling Rate | | | | |
| | AAC | G.711 | 48K | V | | | |
| | | | | | | | |

2. Next, go to vMix and select "Add Input", located in the lower left of the display, it will open the "Input Select" window.

| | nk | | | | 2 | Bk | ank. | | | | |
|-------|------------|-----|------|---|-----|----|------|---|-----|------|---|
| | | | | | | | | | | | |
| Close | Quick Play | Cut | Loop | | Clo | | | | Cut | Loop | |
| | | | | • | | 2 | 3 | 4 | | | • |

3. Next, select "NDI / Desktop Capture" setting, you should see a selection for AVER-PTZ330 and also the live video camera capture.



- Next, select the AVER-PTZ330 NDI device and "OK" at the bottom of the screen.
 *Note: The Number field should be assigned/incremented automatically when this happens.
- 5. You should now have a new NDI AVER video Input assigned to vMix as a source.



STREAMING

RTSP Input to the vMix system

 Connect the PTZ330 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.

| Camera Video Output | | | |
|------------------------|-------------------|------------|------------------|
| - Network | | | |
| Advanced Setting | | | |
| System Camera | era Selector 2 | | |
| Status | IS OSD On | | |
| Langue | uage English | | |
| | ncy Reduction Off | Model Name | PTZ330 |
| | | Version | 0.0.0000. |
| | | IP Address | 192.168.0.10 |
| On | tory Default > | MAC | 00:18:1a:04:a4:3 |
| P > | | | |
| | | | |
| (T)(Am | | | |
| AVer | | | |

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.

| Sign in | | | |
|-------------------------------|--|---------|--------|
| http://192.16 Your connect | 8.0.106 ion to this site is not private | | |
| Username | | | |
| Password | | | |
| | | Sign in | Cancel |

- 3. The default Username/password is "administrator". *Note: If this is the first time accessing the PTZ330 camera via the Web login it may 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.

| AV er | |
|-------------------|---------------------------------------|
| O Live View | |
| Camera Settings | |
| Video & Audio | |
| Network | |
| Advanced Settings | |
| 🦇 System | |
| | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| | |
| | |
| | Camera Control |

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, Framerate, Encoding, etc.

| AVer | Video Mode | · · · | |
|-------------------|-------------------------|-----------------------|----------------|
| Live View | Stream Only USB Only | USB + Streaming NDI | |
| Camera Settings | Stream Video Output | Bitrate | Encoding Type |
| Video & Audio | 1920x1080 | 8Mbps 🔻 | H 264 MJREG |
| | Framerate | I-VOP Interval (S) 1s | Rate Control |
| 器 Network | 30 | 1 0 10 | O O VBR CBR |
| Advanced Settings | Audio Input Type | Audio Volume 5 | |
| -vv- System | O Line In MIC In | 0 10 | |
| | Encoding Type | Sampling Rate | |
| | O O AAC G.711 | 48K v | |

6. Next, select the "*Network*" setting, set the "RTSP Security" to "Off". Once you are finished with Streaming, you can put the RTSP Security back to "On", ensuring there is nothing being broadcast.

| AV er | DHCP |
|-------------------|--|
| Live View | On Off IP Netmask |
| Camera Settings | 192.168.0.106 255.255.0 |
| Video & Audio | Gateway DNS |
| 器 Network | 192.168.0.1 192.168.0.1 Confirm |
| Advanced Settings | RTMP Settings RTSP Security |
| -vv- System | Server URL O rtmp://1_wkpffdtj.p.kpublish.kaltura.com:1 On Stream Key I_wkpffdtj_1 |
| | Start Stream STOP |

7. Next, go to vMix and select "Add Input", located in the lower left of the display, it will open the "Input Select" window.

| | ink | | | | 2 | Blan | k | | | | |
|------|------------|-----|------|---|-------|------|-------|------|--------------|------|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| lose | Quick Play | Cut | | | Close | e (| Quick | Play | Cut | | |
| lose | Quick Play | Cut | Loop | ٠ | | | Quick | | Cut Audio | Loop | ٠ |

8. Next, select the "*Stream / SRT*" setting, where the URL setting is type in the following syntax for the PTZ330 RTSP feed,

"rtsp://Camera IP:554/live_st1", where Camera IP is the actual IP address of the camera.

| In | put Select | | | | | | × |
|----------------------------------|--------------------------|-------------|-----------------------------------|-----------------|------------------|----|--------|
| $\mathbf{>}$ | Video | Stream Type | RTSP over UDP | | ~ |] | |
| 0 | DVD | URL | rtsp://192.168.0.105:554/live_st1 | | |] | |
| $\mathbf{\overline{\mathbf{b}}}$ | List | Buffer | 3 | 00 milliseconds | Low Latency Mode | | |
| | Camera | | | | | | |
| Ţ | NDI / Desktop Capture | | | | | | |
| (A) | Stream / SRT | | | | | | |
| R | Instant Replay | | | | | | |
| R | Image Sequence / Stinger | | | | | | |
| Û | Video Delay | | | | | | |
| 2 | Image | | | | | | |
| R | Photos | | | | | | |
| 밒 | PowerPoint | | | | | | |
| | Colour | | | | | | |
| Ţ | Audio | | | | | | |
| Ŀ | Audio Input | | | | | | |
| Т | Title / XAML | | | | | | |
| կլլՈլ | Flash | | | | | | |
| • | Virtual Set | | | | | | Clear |
| | Web Browser | | | | | | |
| | Video Call | | | N | lumber 1 🗸 | ок | Cancel |

9. Next, select "OK", you should now be seeing camera video on your vMix display streaming from the PTZ330 camera.

| 1 RTSPUDP rtsp://192.168.0.105:554/ | 2 Colour Bars | |
|-------------------------------------|---------------------------------|-----------|
| | | |
| Close Quick Play Cut Loop | Close Quick Play Cut Loop | |
| 1 2 3 4 Audio 🖵 🏟 | 1 2 3 4 Audio 💻 🅸 | |
| | | |
| Add Input 🔺 🏶 Rec | cord | External |
| 720n60 EX EPS: 60 Render Time: | 1 ms GPILMem: 6 % CPILvMix: 2 % | Total: 9% |

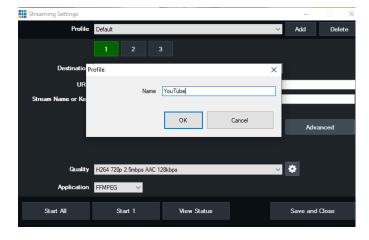
Streaming RTMP Output

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

1. In vMix select the gear icon located next to "Stream"

Select "Add" at the top of the

window, give it a name, then select "OK".



- 2. Next, select the "Destination" you want to stream to, in this example we are using YouTube Live.
- Next, you will need your YouTube "Stream Key" in order to complete the process, 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.

| ENCODER SETUP | | |
|--|--------|--|
| Server URL rtmp://a.rtmp.youtube.com/live2 | | |
| Stream name/key | Reveal | |

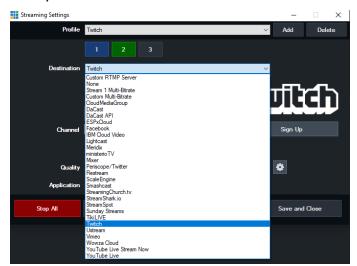
4. Next, go to the vMix Stream Key selection and paste that information into the space provided.

| Streaming Settings | | | | | — | | | | |
|--------------------|-------------------------------|-------------|--|-----|----------|--------|--|--|--|
| Profile | YouTube | | | ~ | Add | Delete | | | |
| | 1 2 3 | 3 | | | | | | | |
| Destination | Destination YouTube Live | | | | ~ | | | | |
| Stream Key | Stream Key | | | | | | | | |
| | | | | YO | u Tu | De | | | |
| | | | | | Sign Up | | | | |
| | | | | | | | | | |
| Quality | H264 720p 2.5mbps AAC 128kbps | | | × * | | | | | |
| Application | FFMPEG ~ | | | | | | | | |
| Start All | Start 1 | View Status | | | Save and | Close | | | |

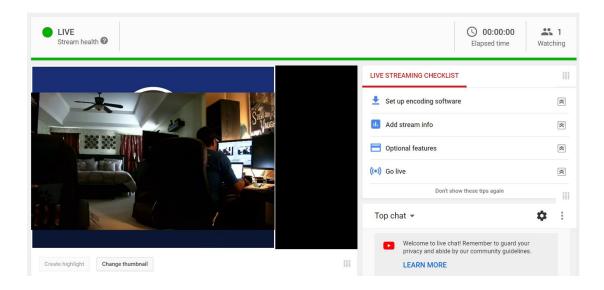
5. Next, select "OK", then select "Stream" and it should change color, from grey to orange, then red.



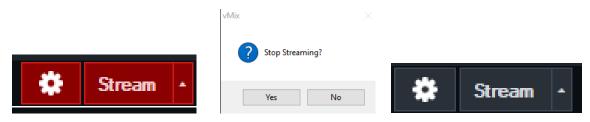
6. You can select more streams like Facebook, StreamingChurch.tv, Twitch, etc. the process would be the same way.



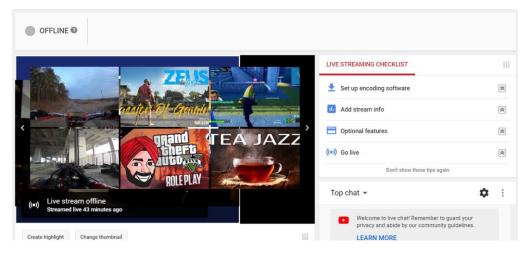
7. To verify, go to your YouTube Live Dashboard and verify the video feed from vMix.



8. To end the streaming feed from vMix, select "Stream", another window will pop up, select "Yes" to stop streaming, the indicator will turn back to grey.



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 vMix Software.