

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.

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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.