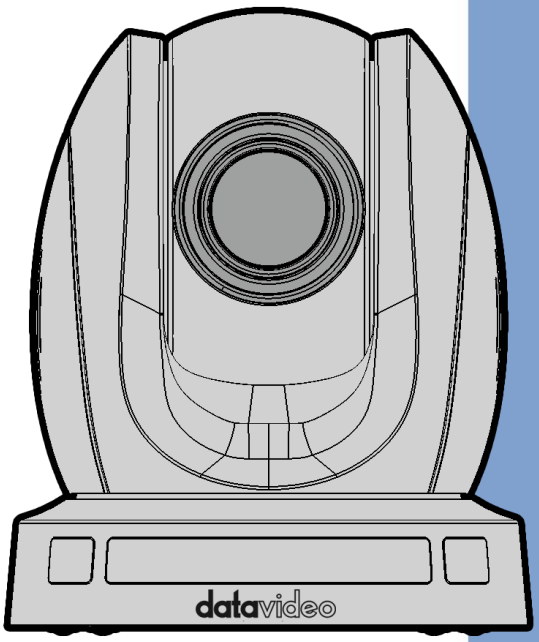
datavideo



HD PTZ CAMERA

PTC-140

Instruction Manual

www.datavideo.com

Table of Contents

Disclaimer of Product and Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord's rating.

10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.

11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.

12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.

13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:

    a. When the power cord is damaged or frayed;
    b. When liquid has spilled into the unit;
    c. When the product has been exposed to rain or water;
    d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
    e. When the product has been dropped or the cabinet has been damaged;
    f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.

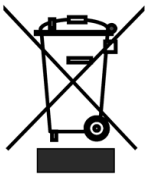
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- All accessories including headphones, cables, and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.

- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.

Disposal



For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for

the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CE Marking is the symbol as shown on the left of this page. The letters "**CE**" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.

1. Product Overview

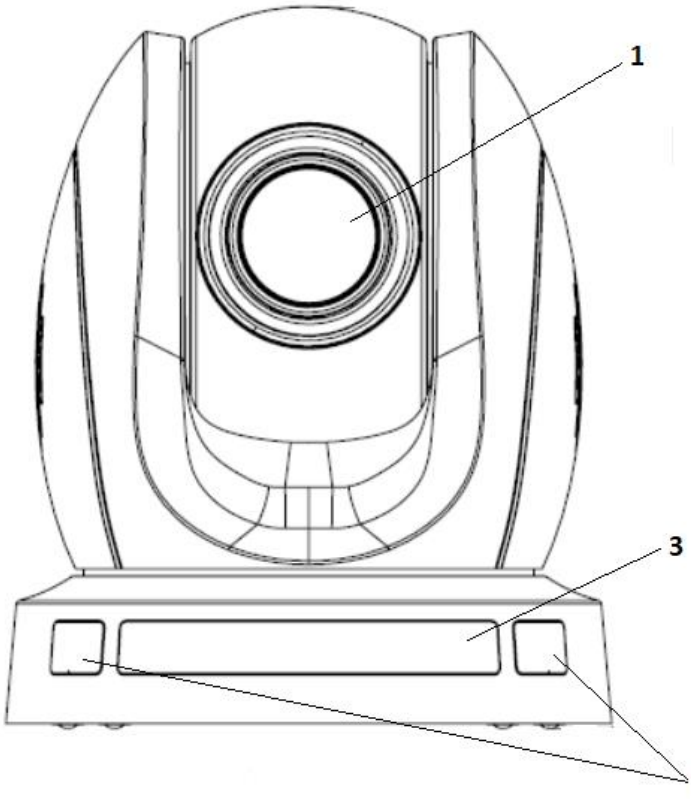
The PTC-140 is a low-cost SDI/HDMI PTZ camera featuring 20x optical zoom and 10x digital zoom.

The PTC-140 is also supporting H.264 /H.265 video compression and dual stream outputs.

Features

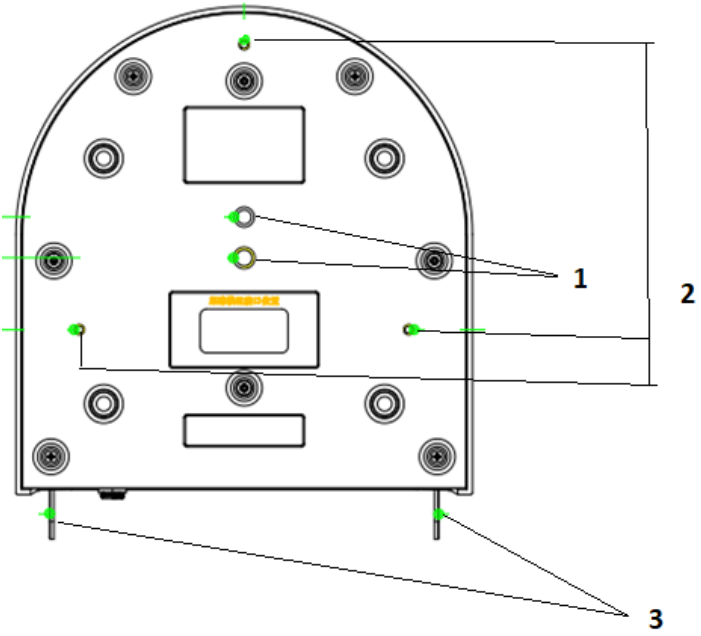
- 1/2.8 inch CMOS sensor. Resolution is up to 1920x1080 with frame rate up to 60fps.
- Low Noise CMOS effectively ensures high SNR of camera video. Advanced 2D/3D noise reduction technology is also used to further reduce the noise, while ensuring image sharpness.
- Audio Input Interface
- Supports AAC, MP3 and G.711A audio coding with sampling frequencies of 16000, 32000, 44100 and 48000.
- Supports H.264/H.265 video compressions of resolution up to 1920x1080 with frame rate up to 60fps as well as AAC, MP3 and G.711A audio compressions.
- Supports multiple network protocols such as RTSP and RTMP allowing you to easily link to any streaming media servers.

2. Location and Function of Parts

Front of Camera	
	
1	**Lens** Built-in 1/2.8” 2.07M Pixel CMOS HD color camera with white balance control, backlight compensation, automatic gain and etc.
2	**Tally LED** Tally lamp will be turned ON upon receiving the ON signal.
3	**Sensor for Remote Control** Remote control IR receiver

Rear of Camera	
	
1	**Power Input** DC in socket connects the supplied 12V PSU. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.
2	**LAN Port** This bidirectional port allows you to establish network connection with the camera. Connect an Ethernet cable from this port to the LAN port of a PC in order to monitor the camera video from the web user interface. The LAN port also allows you to stream the camera video using various streaming protocols.

3	**HDMI OUT** The **HDMI OUT** allows you to connect an external HDMI monitor via an HDMI cable.
4	**3G-SDI OUT** The **3G-SDI OUT** allows you to connect an external monitor via an SDI cable.
5	**Audio IN** The 3.5mm audio input receives external audio.
6	**RS-422/RS-485 Interface (RJ-45)** The RS-485 interface serves to connect external RS-422/RS-485 devices. Use an Ethernet cable to connect external RS-422/RS-485 controllers. See "***Section 9 Remote Control Port Pinouts***" for making the cable for the RS-422/RS-485 interface. **Note: To switch between RS-422 and RS-485 communication protocols, open OSD menu, then go to Setup → RS-485/422 in which you will be allowed to select the appropriate protocol.**
7	**RS-232 Interface (RJ-45)** The RS-232 interface connects PTC-140 to a remote controller or PC for control purpose. Use an Ethernet cable to connect external RS-232 controllers. See "***Section 9 Remote Control Port Pinouts***" for making the cable for the RS-232 interface.

Bottom of Camera	
	
1	**Tripod Screw Hole** allows the user to mount the camera on the tripod.
2	**Screw Hole** Screw holes for ceiling bracket mounting.
3	**For Safety Rope** Ties safety rope for securing the camera to the ceiling**.**

3. Basic Setup

3.1 Power-On Initialization

As shown in the diagram below, after you plug in the power cord, the tally light in the front will start flashing red and will stop flashing as soon as the power-on initialization is complete. The camera head should be at the HOME position with the lens facing front. However, if preset 0 is set, it will return to the 0th preset position.

Connect the DC 12 V power adapter

3.2 Video Output

You are allowed to view the camera video via **Ethernet port**, **HDMI OUT** and **3G-SDI OUT**.

Ethernet Port

Follow the instructions below to view your video on the web user interface.

1. Connect the PTC-140 to the PC/Notebook using an Ethernet cable.
2. On your PC/Notebook, open the web browser and enter the camera's default IP address into the address bar (default static IP address is 192.168.5.163).
3. On the Login page enter the username and password which are admin/admin respectively by default.

4. Click into the preview window on which the video will be displayed.

HDMI Video Output

Connect the HDMI OUT to an external connected monitor using an HDMI cable.

3G-SDI Video Output

Connect the SDI OUT to an external connected monitor using an SDI cable.

4. Remote Control and On-Screen Menu

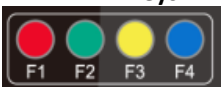
This chapter provides an overview of remote control functions and the OSD menu.

4.1 Remote Control Functions

No	Function Keys	Descriptions
1	**Standby Key** 	**Standby Key** The standby button turns **ON/OFF** the camera. To reboot the camera, press the standby button for 3 seconds. After device initialization is complete, the camera head will automatically return to **HOME** position.
2	**Camera Select Keys** 	**Camera Select Keys** To select a camera in a multi-camera environment using camera select keys (CAM1 – CAM4), you should first assign an ID number to the camera intended for operation using F1 – F4 keys then press CAMERA SELECT (CAM 1~ CAM4) keys to navigate between the four cameras. **Note: See F1 – F4 keys for ID number assignment instructions.**
3	**Number Keypad** 	**Number Keypad** Set, recall and clear presets using the number keypad. **Set Preset** Please press the **SET PRESET** at first, and then please press any of the **number keys from 0 to 9** to save the PTZ settings. You will be allowed to save up to **up to 10 presets using the remote control**. **Call Preset** Press any of the **number keys from 0 to 9** to recall the preset settings. **Note: Make sure the preset that you want to recall contains PTZ settings before pressing the number key.** **Clear Preset** First press the **CLEAR/PRESET** key then the **number key** (0 – 9) to empty the preset.

No	Function Keys	Descriptions
4	**Asterisk and Pound Keys** 	The asterisk and pound keys form various combinations with other keys to access certain functions directly. The shortcuts are listed as follows: 1. 【#】+【#】+【#】: Clear all presets 2. 【*】+【#】+【6】: Restore factory defaults 3. 【*】+【#】+【9】: Image flip along horizontal axis 4. 【*】+【#】+ AUTO: Enable aging mode 5. 【#】+【*】+ AUTO: Disable aging mode 6. 【*】+【#】+【3】: Set OSD MENU language to Chinese. 7. 【*】+【#】+【4】: Set OSD MENU language to English. 8. 【*】+【#】+ MANUAL: Restore default user name, password, and IP address. 9. 【#】+【#】+【0】: Set video format to 1080P60. 10. 【#】+【#】+【1】: Set video format to 1080P50 11. 【#】+【#】+【2】: Set video format to 1080I60 12. 【#】+【#】+【3】: Set video format to 1080I50 13. 【#】+【#】+【4】: Set video format to 720P60 14. 【#】+【#】+【5】: Set video format to 720P50 15. 【#】+【#】+【6】: Set video format to 1080P30 16. 【#】+【#】+【7】: Set video format to 1080P25
5	**AUTO Focus** 	**AUTO Focus** Pressing this key will enable auto focus mode.

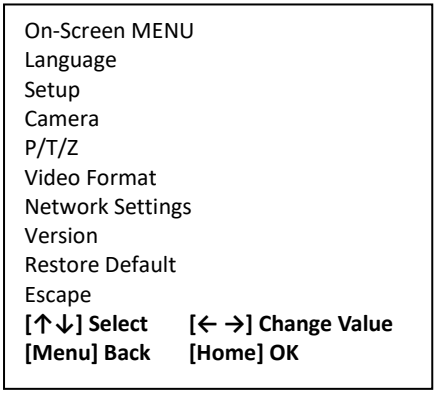
No	Function Keys	Descriptions
6	**Manual Mode** 	**Manual Focus** Pressing this key enables manual mode allowing you to adjust the camera's focus and zoom by pressing **Focus+/-** and **Zoom+/-** keys.
7	**Focus +/-** 	**Focus** Press and hold **Focus+ or Focus-** to adjust the focus accordingly and release as soon as the desired focus is reached. **Note: Before adjusting the focus using Focus +/- key, press the manual key to enable manual mode.**
8	**Zoom In (+) / Zoom Out (-)** 	**Zoom** Press and hold **Zoom + or Zoom-** to zoom in and out respectively and release as soon as the desired zoom is reached. **Note: Before adjusting the zoom using Zoom +/- key, press the manual key to enable manual mode.**
9	**SET PRESET** 	**SET PRESET** Press **SET PRESET** to set presets. See ***Number Keypad*** description for instructions.
10	**CLEAR PRESET** 	**CLEAR PRESET** Press **CLEAR PRESET** to clear presets. See ***Number Keypad*** description for instructions.

No	Function Keys	Descriptions
11-13	**Direction Arrows** 	**Direction Arrow Keys** Press the arrow keys to move the camera head up, down, left and right. **Home Key** Press **Home** to **return the camera head** to the center. **Note: In the OSD menu, press Home to enter the selected option item and MENU to exit.**
14	**MENU** 	**MENU** Open or close the camera's OSD menu.
15	**BLC ON/OFF** 	**BLC ON/OFF** Press **BLC ON/OFF** to turn ON/OFF the backlight compensation.
16	**F1 – F4 Keys** 	**F1 – F4 Keys** Assign an ID number to the camera intended for operation using F1 – F4 keys by pressing the combination keys as described below. • CAM1:【*】+【#】+【F1】 • CAM2:【*】+【#】+【F2】 • CAM3:【*】+【#】+【F3】 • CAM4:【*】+【#】+【F4】 Use Camera Select keys to select the camera intended for operation after you've assigned an ID number to each camera.

Note: Pressing【*】+【#】+ MANUAL buttons restores the device's default IP address (192.168.5.163)

4.2 On-Screen Menu

On-Screen Menu allows the user to modify various camera settings. Press **[MENU]** on the **remote control** to open the on-screen menu as shown below.



The table below summarizes the main option items and their sub-options.

	Main Options							
	Language	**Setup**	**Camera**	**P/T/Z**	**Video Format**	**Network Settings**	**Version**	**Restore Default**
Sub-Options	English	Protocol	Exposure	Zoom by Speed	1080P60	DHCP	MCU Version	Restore Default
	Simplified Chinese	VISCA Address	Color	Zoom Speed	1080P50	IP Addr	Camera Version	
		VISCA Address Fix	Image	Acc Curve	1080I60		AF Version	
		PELCO-P Address	Focus	Preset Speed	1080I50			
		PELCO-D Address	Noise Reduction	Joystic Pan Dir	1080P30			
		Baudrate	Style	Joystic Tilt Dir	1080P25			
		RS-485/422			720P60			
		Tally Light			720P50			
					1080P59.94			
					1080I59.94			
					1080P29.97			
					720P59.94			

Details of all options in the on-screen menu are listed in the table below.

Main Menu	Sub Menu	Options	Sub-options
Language	English Simplified Chinese		
Setup	Protocol	Auto	
		VISCA	
		PELCOO-D	
		PELCCO-P	
	VISCCA Address	1-7	
	VISCA Address Fix	ON/OFF	
	PELCO-P Address	1-255	
	PELCO-D Address	1-255	
	Baudrate	2400	
		4800	
		9600	
		38400	
		115200	
	RS-485/422	RS-485	
		RS-422	
	Tally Light	RED	
		GREEN	
		RED/GREEN	
		OFF	
Camera	Exposure	Mode	Auto
			Manual
			SAE
			AAE
			Bright
		EV	ON
			OFF
		EV Level	0
			1
			2
			3
			4
			5
			6
			7
			-7
			-6
			-5

Main Menu	Sub Menu	Options	Sub-options
			-4
			-3
			-2
			-1
		BLC	ON
			OFF
		Flicker	OFF
			50Hz
			60Hz
		Gain Limit	0~15
		DRC	Closed
			1
			2
			3
			4
			5
			6
			7
			8
	Color	WB Mode	Auto
			3000K
			3500K
			4000K
			4500K
			5000K
			5500K
			6000K
			6500K
			7000K
			Manual
			Onepush
		RG Tuning	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			-10
			-9

Main Menu	Sub Menu	Options	Sub-options
			-8
			-7
			-6
			-5
			-4
			-3
			-2
			-1
		BG Tuning	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			-10
			-9
			-8
			-7
			-6
			-5
			-4
			-3
			-2
			-1
		Saturation	60%
			70%
			80%
			90%
			100%
			110%
			120%
			130%
			140%
			150%
			160%
			170%
			180%
			190%
			200%

Main Menu	Sub Menu	Options	Sub-options
		Hue	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
		AWB Sensitivity	High
			Low
			Middle
	Image	Brightness	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
		Contrast	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10

Main Menu	Sub Menu	Options	Sub-options
			11
			12
			13
			14
		Sharpness	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15
		Flip-H (The camera image flips horizontally)	ON
			OFF
		Flip-V (The camera image flips vertically)	ON
			OFF
		B & W Mode	Color
			Black & White
		Gamma	Default
			0.45
			0.50
			0.55
			0.63
		DCI	Closed
			1
			2
			3
			4
			5
			6
			7
			8
	Focus	Focus Mode	Auto
			Manual

Main Menu	Sub Menu	Options	Sub-options
			Onepush
		AF-Zone	Top
			Center
			Bottom
			All
		AF-Sensitivity	High
			Low
			Middle
	Noise Reduction	NR-2D	Auto
			OFF
			1
			2
			3
			4
			5
			6
			7
		NR-3D	OFF
			1
			2
			3
			4
			5
			6
			7
			8
		Dynamic Hot Pixel	OFF
			1
			2
			3
			4
			5
	Style	Default	
		Normal	
		Clarity	
		Bright	
		Soft	
P/T/Z	Zoom by Speed	ON	When enabled, the camera zoom speeds up and slows down gradually
		OFF	
	Zoom Speed	1	
		2	

Main Menu	Sub Menu	Options	Sub-options
		3	
		4	
		5	
		6	
		7	
		8	
	Acc Curve	Standard	
		Slow	
		Fast	
	Preset Speed	Fast	
		Slow	
		Middle	
	Joystick Pan Dir	Positive	Set to negative when the camera is hung on the ceiling or installed upside down.
		Negative	
	Joystick Tilt Dir	Positive	Set to negative when the camera is hung on the ceiling or installed upside down.
		Negative	
Video Format	1080P60		
	1080P50		
	1080I60		
	1080I50		
	1080P30		
	1080P25		
	720P60		
	720P50		
	1080P59.94		
	1080I59.94		
	1080P29.97		
	720P59.94		
Network Settings	DHCP	ON	
		OFF	
	IP Addr	192.168.x.x	
Version	MCU Version		
	Camera Version		
	AF version		
Restore Default	Restore Default (Yes/No)		

5. How to Use the Tally Light Option in the OSD Menu

The “Tally Light” option in the PTC-140 OSD menu allows you to determine whether the “red” or “green” tally light should be lit when the PTC-140 is connecting to a video switcher (take SHOWCASE 100 as an example). The tally light of the camera will be lit in red or green according to different settings of the switcher’s “PVW (When the PVW is pressed, it will light up in green)” and “PGM (When the PGM is pressed, it will light up in red)” buttons.

At first, please press the “MENU” button which is located on PTC-140’s remote controller to open the OSD menu. After that, please go to “Setup→Tally Light” to select your desired Tally Light setting. There are four kinds of Tally Light options including “RED”, “GREEN”, “RED/GREEN” and “OFF” for your selection.

- **When OSD Menu’s “Tally Light” option is set in “RED”**

  - No input source is selected by the switcher’s “PVW” and “PGM” (take channel 1 as an example), which means that the “PVW” and “PGM” channels are “OFF”. At this time, the camera’s tally light will not be lit. The diagram below is a schematic diagram.

➢ Switcher's "PVW" is set to "ON" and the "PGM" is set to "OFF" (take channel 1 as an example). At this time, the tally light of the camera will not be lit. The diagram below is a schematic diagram.

➢ Switcher's "PGM" is set to "ON" and the "PVW" is set to "OFF" (take channel 1 as an example). At this time, the tally light of the camera will be lit in red. The diagram below is a schematic diagram.

➢ Switcher's "PGM" is set to "ON" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will be lit in red. The diagram below is a schematic diagram.

- **When OSD Menu's "Tally Light" option is set in "GREEN"**

➢ No input source is selected by the switcher's "PVW" and "PGM" (take channel 1 as an example), which means that the "PVW" and "PGM" channels are "OFF". At this time, the camera's tally light will not be lit. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "OFF" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will be lit in green. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "ON" and the "PVW" is set to "OFF" (take channel 1 as an example). At this time, the tally light of the camera will not be lit. The diagram below is a schematic diagram.

➢ Switcher's "PGM" is set to "ON" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will be lit in green. The diagram below is a schematic diagram.

- **When OSD Menu's "Tally Light" option is set in "RED"/ "GREEN"**

➢ No input source is selected by the switcher's "PVW" and "PGM" (take channel 1 as an example), which means that the "PVW" and "PGM" channels are "OFF". At this time, the camera's tally light will not be lit. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "OFF" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will be lit in green. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "ON" and the "PVW" is set to "OFF" (take channel 1 as an example). At this time, the tally light of the camera will be lit in red. The diagram below is a schematic diagram.

➢ Switcher's "PGM" is set to "ON" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will be lit in red. The diagram below is a schematic diagram.

- **When OSD Menu's "Tally Light" option is set in "OFF"**

➢ No input source is selected by the switcher's "PVW" and "PGM" (take channel 1 as an example), which means that the "PVW" and "PGM" channels are "OFF". At this time, the camera's tally light will not be lit. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "OFF" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will not be lit. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "ON" and the "PVW" is set to "OFF" (take channel 1 as an example). At this time, the tally light of the camera will not be lit. The diagram below is a schematic diagram.

- Switcher's "PGM" is set to "ON" and the "PVW" is set to "ON" (take channel 1 as an example). At this time, the tally light of the camera will not be lit. The diagram below is a schematic diagram.

6. Installation Instructions

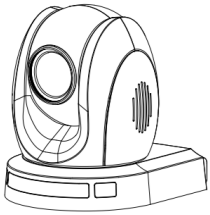
Note: Only mount the bracket on formwork or concrete surface. Do NOT mount the bracket on plasterboard.

In your product package, you should find

- PM3*5 screw x 6
- Ceiling bracket (upper and lower plates) x 1
- PTC-140 camera x 1

Ceiling Bracket (Upper and Lower Plates

PM3*5 Screw x 6



PTC-140T Camera

Additionally, you will also need the following to secure the ceiling bracket to the ceiling:

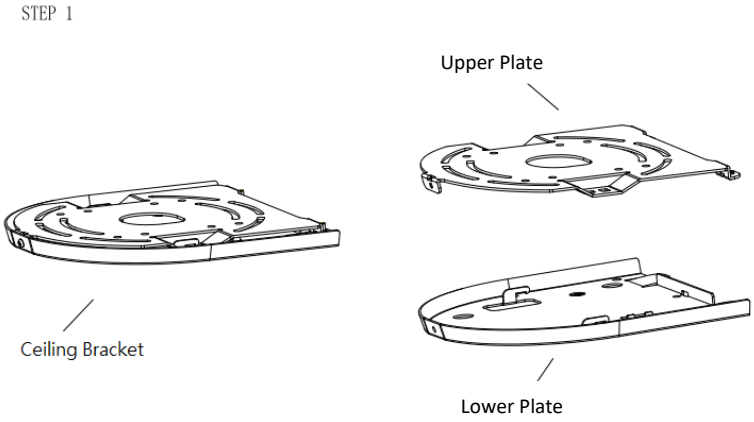
- PA4*30 self-tapping screw x 4
- PA4 plastic screw stopper x 4

PA4*30 Selft-tapping Screw x 4

PA4 Plastic Screw Stopper x 4

Step 1: The Ceiling Bracket

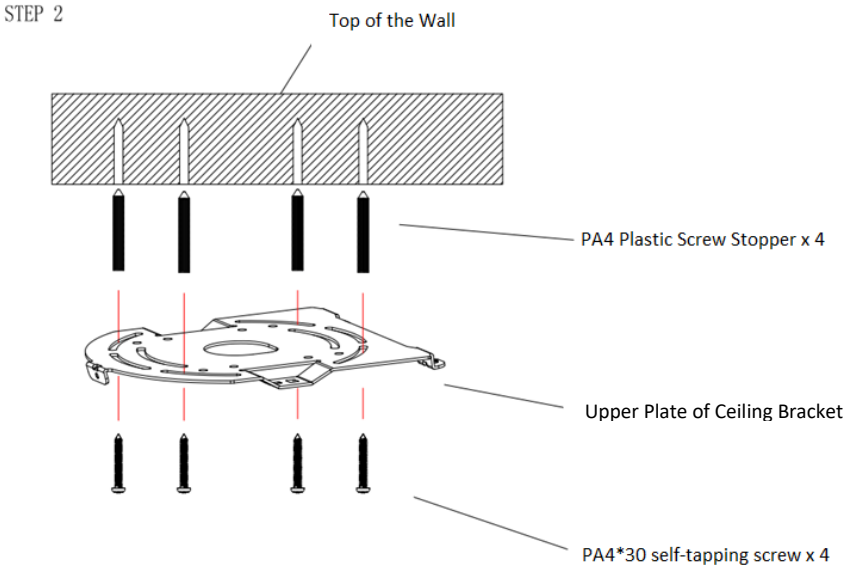
Separate the ceiling bracket into two parts (upper and lower plates) as depicted in the diagram below.



Step 2: Mount the bracket's upper plate to the ceiling

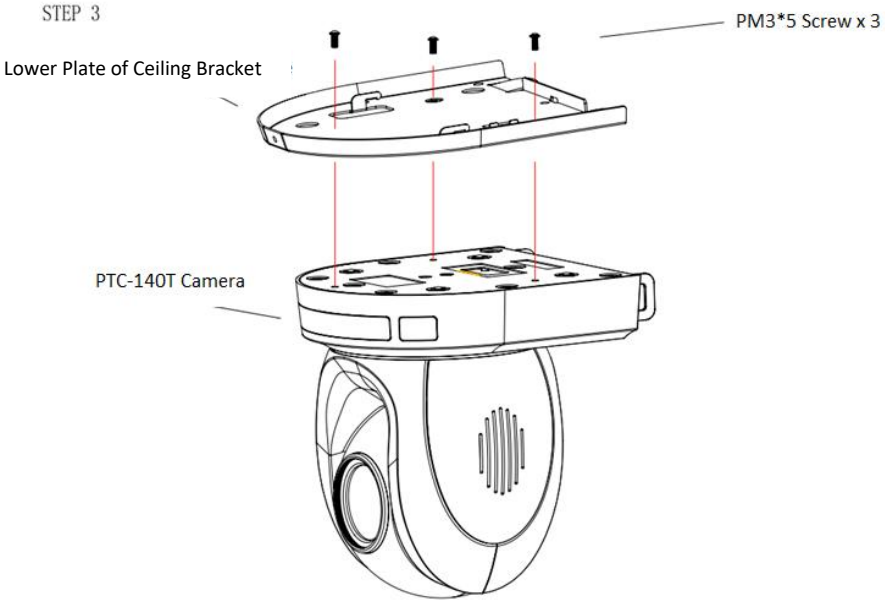
Insert the four PA4 plastic screw stoppers into the ceiling as shown in the diagram below.

Using four PA4*30 self-tapping screws, affix the bracket's upper plate to the ceiling.



Step 3: Affix the bracket's lower plate to the bottom of PTC-140

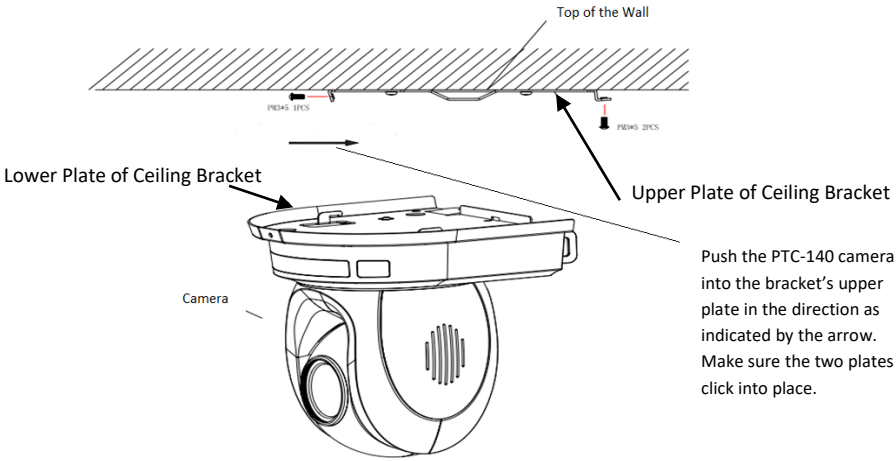
As depicted in the diagram below, use three PM3*5 screws to affix the bracket's lower plate to the bottom of PTC-140.



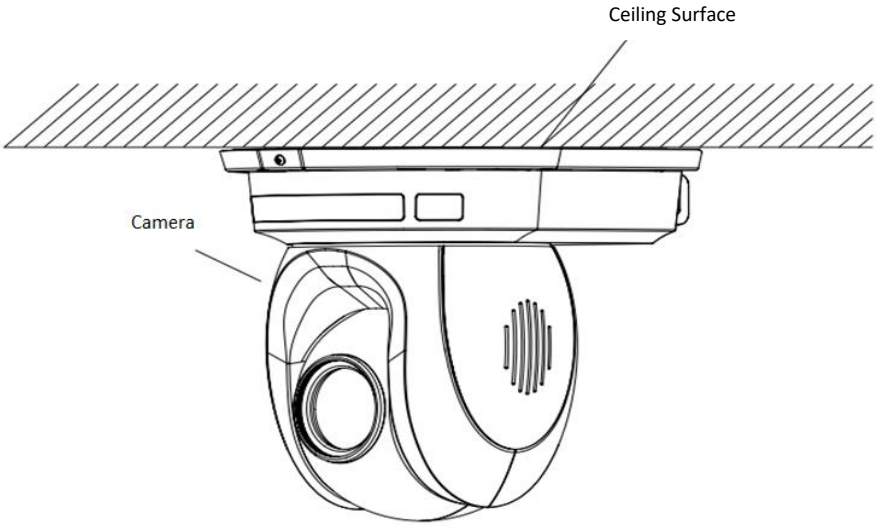
Step 4: Mount the PTC-140 Camera to the ceiling

Now push the PTC-140 camera into the bracket's upper plate in the direction as indicated by the arrow in the diagram below. Make sure the two plates click into place.

Finally, secure the PTC-140 camera to the upper plate with three PM3*5 screws.



Step 5: Final

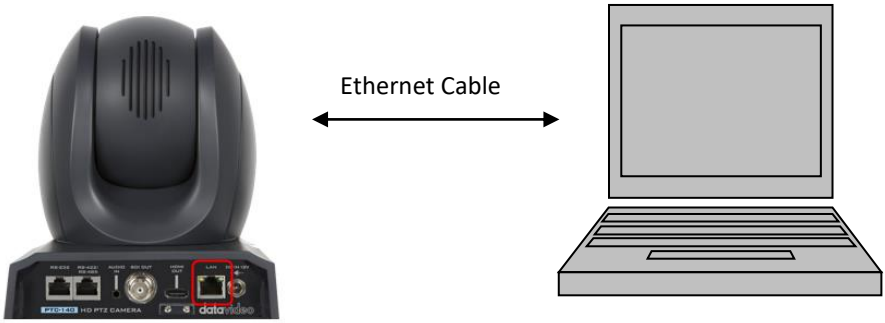


7. Network Connection

The Ethernet port on the back panel of your PTC-140 allows you to connect to the PC/Laptop with a static or dynamic IP address. To access and modify these network settings, you will need to log in to the camera's web interface.

If this is your first time using the device, please note that the camera's default IP address is **192.168.5.163**.

Set up direct connection between the camera and your PC/laptop as depicted in the diagram below; remember to manually assign an IP address of **192.168.5.X** to your PC/laptop.

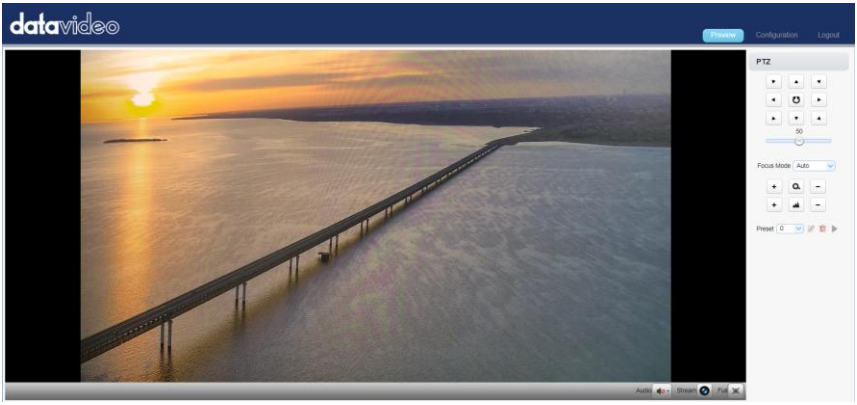


On your PC/laptop, open a web browser and in the address bar, enter the camera's default IP address, 192.168.5.163 then press the **ENTER** key which should take you to login page of the web interface.

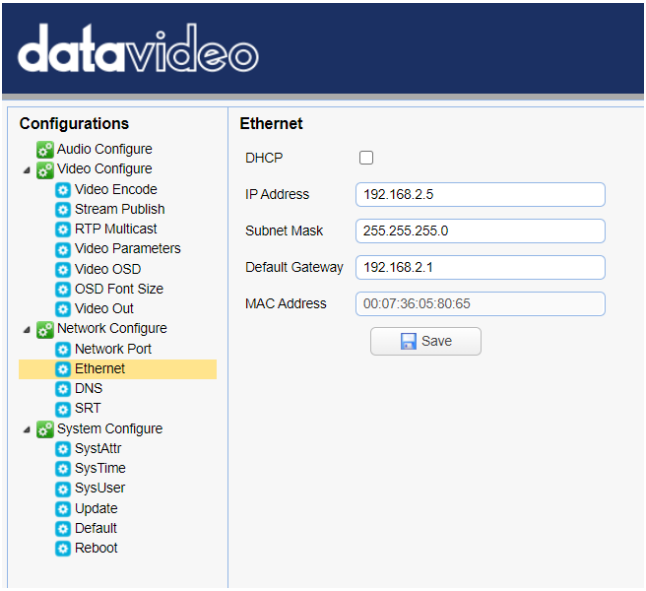
The default login credentials are:

- User Name: admin
- Password: admin

After you have successfully logged in to the web interface, you should see the camera video as shown in the diagram below.



At the top right corner of the web UI, click the Configuration tab to open the Configuration page. On the leftmost pane, click “Network Configure” → “Ethernet” to open the network settings page on which you should be able to see a list of options allowing you to set the camera’s connection mode to DHCP or static IP.

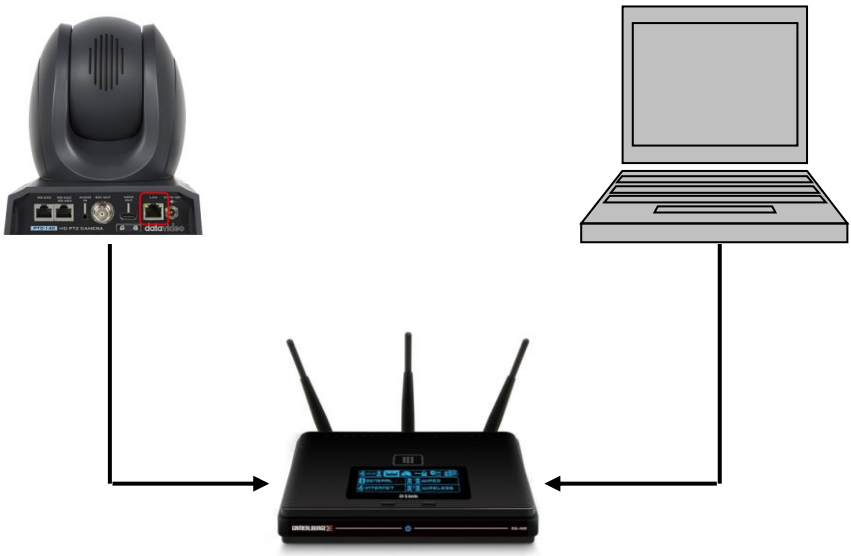


In this chapter, we will show you how to enable DHCP and Static IP modes on PTC-140 in two separate sections.

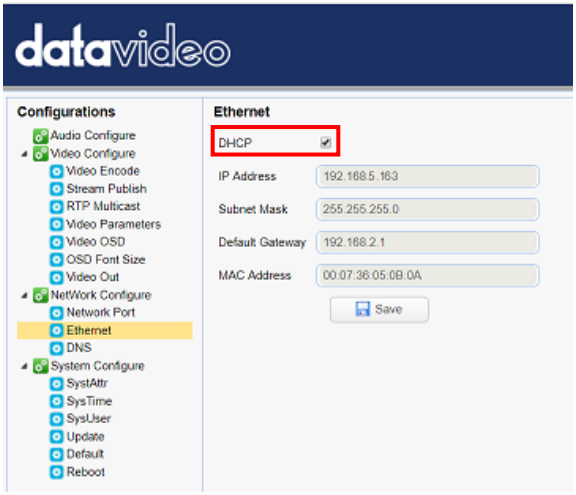
Note: To log out of the web interface, simply click "Logout" at the top right corner of the page.

7.1 DHCP Mode

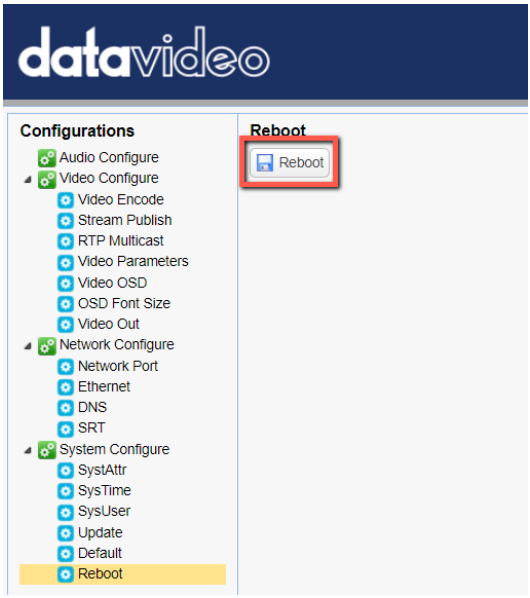
Dynamic Host Configuration Protocol (DHCP) is a network protocol that enables a server to automatically assign an IP address to a network device from a defined range of numbers configured for a given network. The diagram below illustrates a DHCP network connection example.



In order to enable the camera's DHCP mode, log in to the web interface and on the leftmost pane, click "Network Configure" → "Ethernet" to open the network settings page on which you should be able to see a list of options allowing you to set the camera's connection mode to DHCP or static IP. Then check the DHCP checkbox to allow the router to dynamically assign an IP address to PTC-140T. Please note that the DHCP option in the OSD menu should also be set to ON.



Click the “**Save**” button to save the new settings then reboot PTC-140.



7.2 Static IP

A static IP address is a fixed address manually assigned to PTC-140. First uncheck the DHCP checkbox then enter an IP address for the camera, as well as the subnet mask and the gateway IP.

Note: Never assign an address that ends in .0 or .255 as these addresses are typically reserved for network protocols. An address to the very start of the IP pool is also not recommended as it is always reserved for the router.

After you’ve configured the camera’s static IP mode, click the “Save” button to save the new settings then reboot PTC-140.

7.3 DVIP

DVIP is a network configuration software tool designed for DVIP device search on the same network and configuring device network settings such as Hostname, DHCP mode, IP address, subnet mask, gateway IP, and primary and secondary DNS.

Depending on your operating system, download DVIP Configuration Tool from the respective sites listed as follows:

PC: https://www.microsoft.com/en-us/p/dvip-network-config/9p6gtz839k6s?activetab=pivot%3Aoverviewtab

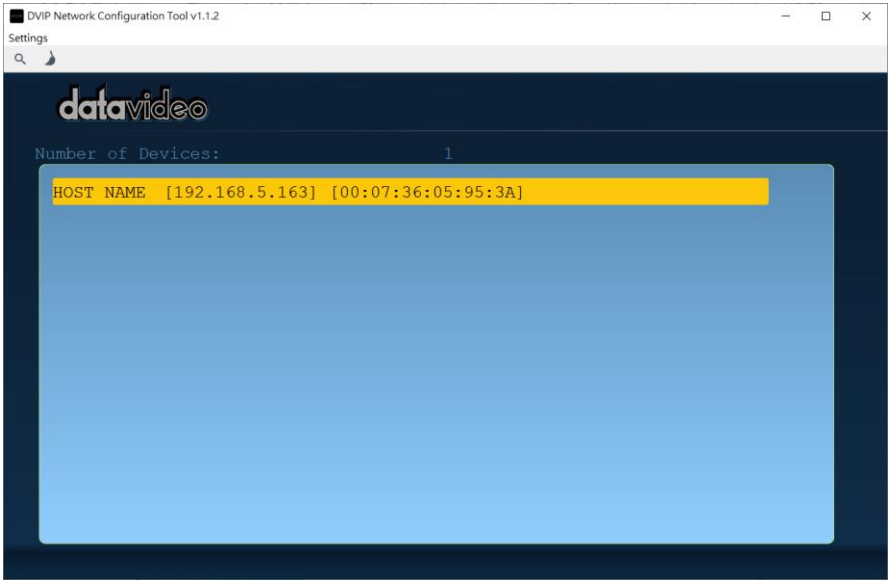
Android: https://play.google.com/store/apps/details?id=com.datavideo.dvipnetconfig&hl=en_US

iOS: https://itunes.apple.com/tw/app/dvip-network-config/id1177895983?mt=8

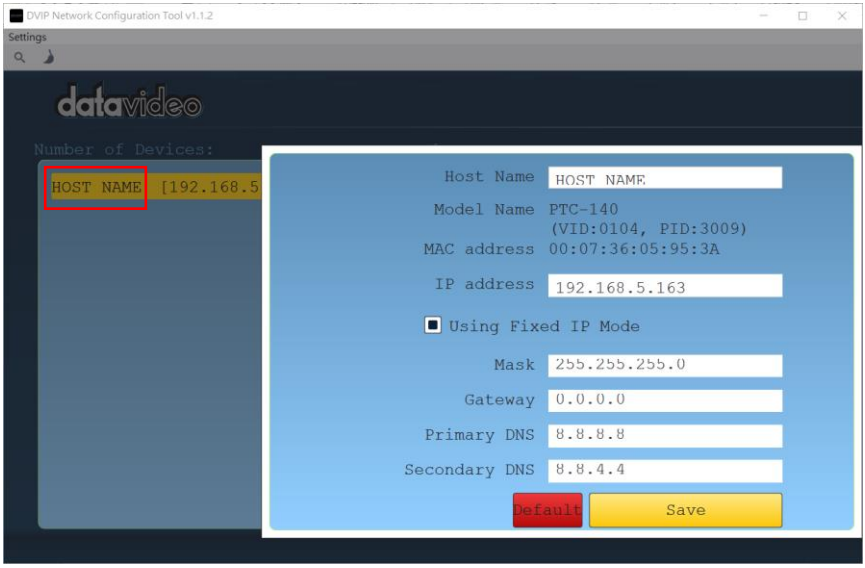
After you've installed the DVIP Network Configuration Tool, follow the steps outlined below to scan for online DVIP devices and configure their corresponding settings.

Step 1: Open the DVIP Network Configuration Tool then select your PC or laptop's network interface card from the drop-down menu as shown in the diagram below.

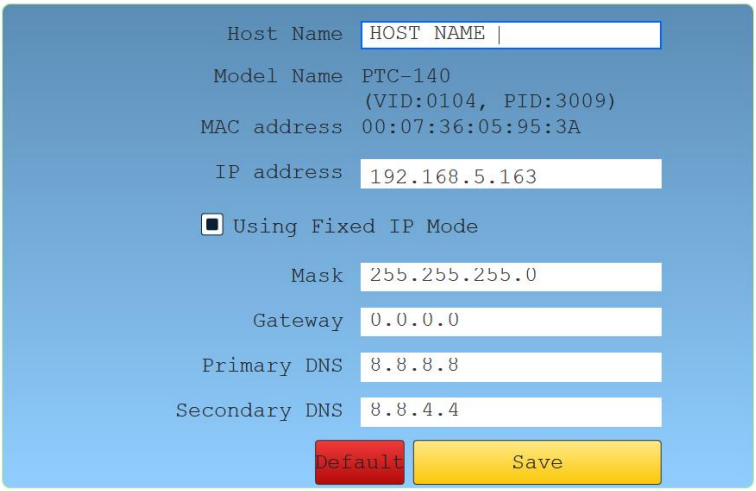
Step 2: The DVIP Network Configuration Tool interface is shown below and you should see a list of the connected cameras.



Step 3: Click one of the connected cameras (HOST NAME) to show the device information and its network settings in the pop-up window shown in the diagram below.



Step 4: You are allowed to change the device name in the Host Name field and modify the device's network settings accordingly. To reset, simply click the Default button.

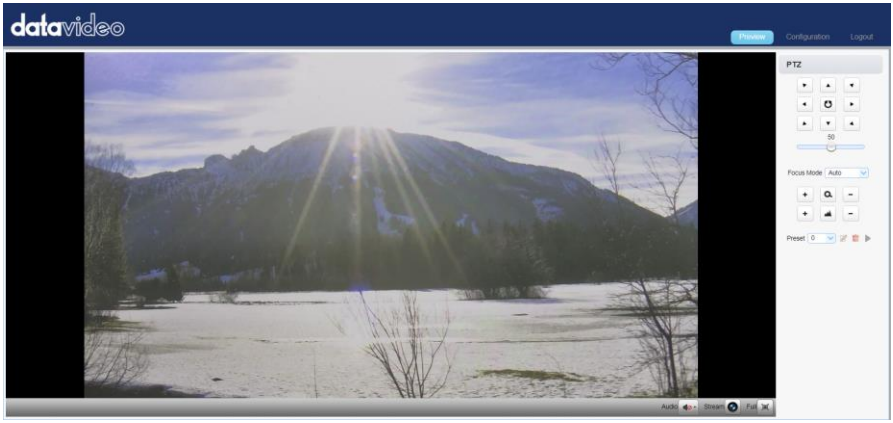


8. Web User Interface

The web based user interface allows you to set and control your PTC-140 devices.

8.1 Preview

In preview, you will be able to see the camera image in real time as shown in the diagram below. Click on the preview window once to view in full screen mode and click again to exit.



At the bottom right corner of the camera image display window, you should find three buttons, namely, Stream, Audio and Full, which are described below:

Click the "**Stream**" button to switch between Main Stream and Sub Stream previews. See ***Video Encode*** in ***Configuration*** tab for stream settings.

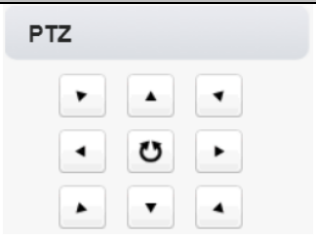
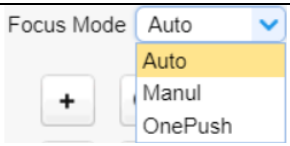
Click the "**Audio**" button to turn ON/OFF the sound. See ***Audio Configure*** for audio settings.

Click the "**Full**" button to switch to the full screen display mode.

Note: Only H.264 BP and MP video streams can be viewed on the Preview window. H.264 HP and H.265 video streams CANNOT be viewed on the Preview window.

Control Functions

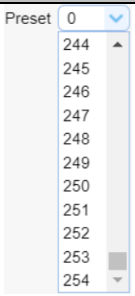
Further to the right, there are various control functions, such as **PTZ control**, **PTZ speed slider**, **focus mode** drop-down menu, **zoom** and **focus** controls, as well as **presets** for saving PTZ settings. Details of each will be described in the table below.

Controls	Descriptions
	**PTZ Control Buttons** Click the arrow buttons to move the camera head to corresponding directions. To return to **Home** position, click .
	**PTZ Speed Slider** The PTZ speed slider adjusts the P/T speed, ranging from 0 (slowest) to 100 (fastest). The default speed is 50. Slide right to increase the speed and left to decrease.
	**Focus Mode** Select focus mode from the drop-down menu; available options are **Auto**, **Manual** and **One Push**. **Auto**: Automatic focus **Manual**: Manual focus **One Push**: One time automatic focus.
	**Focus Far/Near** Click (FAR) and (Near) buttons accordingly to manually focus the camera lens onto the subject. **Note: You will not be able to manually adjust the camera focus if focus mode is set to Auto or One Push.**

Controls	Descriptions
	**Zoom IN/OUT** Click + to zoom in and − to zoom out.

Preset

The presets allow you to save multiple PTZ settings to the camera. See function descriptions in the table below.

Functions	Descriptions
	**Preset Drop-Down Menu** Select a preset number from the drop-down menu. **Note: There are 255 presets ranging from 0 – 254.**
	**Set Button** Click **Set** button to save PTZ settings to the selected preset number.
	**Delete Button** Click **Clear** button to remove PTZ settings from the selected preset number.
	**Run Button** Click **Run** button to recall PTZ settings from the selected preset number.

Set the Preset

To set the preset, follow the steps outlined below.

1. First adjust the camera head to the desired **pan** and **tilt** positions.
2. Make sure **zoom** and **focus** are adjusted as well.
3. Select a preset number from the **Preset** drop-down menu.

4. Click the Set button to save the PTZ settings to the selected preset number.

Recall the Preset

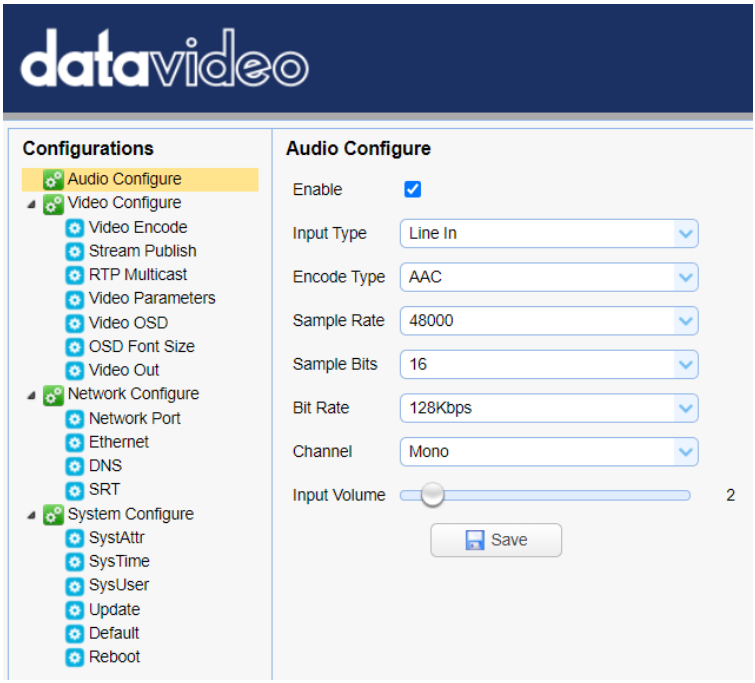
To recall a saved preset, simply select a preset number from the **Preset** drop-down menu then click the Run button to apply the saved settings.

8.2 Configuration

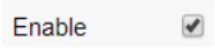
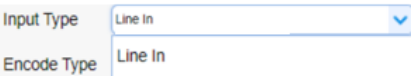
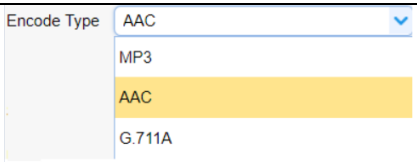
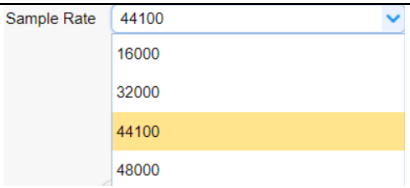
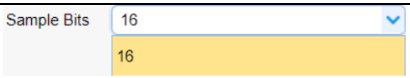
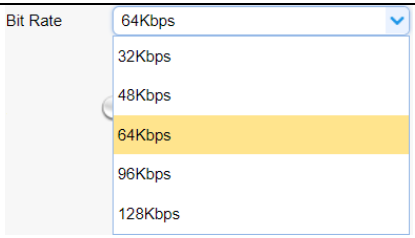
In **Configuration**, you will be able to configure the camera's audio, video, network and system settings which will be described further in the next few sections.

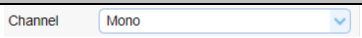
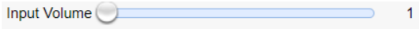
Audio Configure

Audio Configure allows you to configure the input audio source.



See the table below for descriptions of each item.

Items	Descriptions
	**Enable** Check this checkbox to enable audio settings.
	**Input Type** This allows users to select the audio input type. It provides Line IN for the audio input type.
	**Encode Type** Select an encode type for your input audio source. The available encode types include MP3, AAC and G.711A.
	**Sample Rate** Select a sample rate for your input audio source. The higher the sample rate, the better the audio quality.
	**Sample Bits** Select the sample bits for your input audio source. The default is 16.
	**Bit Rate** Select a bit rate for your input audio source. Available bit rates are: • 32 Kbps • 48 Kbps • 64 Kbps • 96 Kbps • 128 Kbps

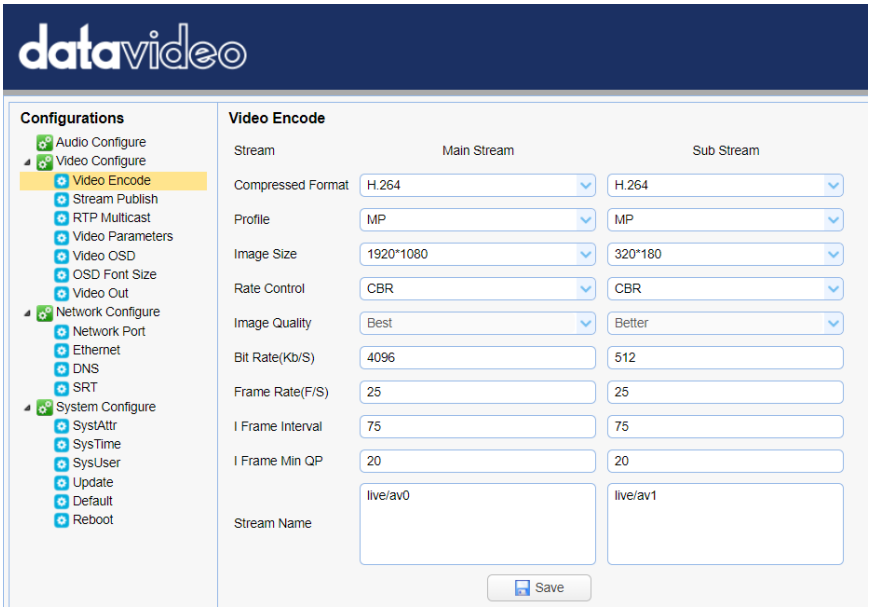
Items	Descriptions
	**Channel** Set your input audio source to **Mono**.
	**Volume Slider** Adjust the volume of your input audio source using the volume slider (Min: 1 / Max: 10).
	**Save Button** Click the Save button to save the new audio settings.

Video Configure

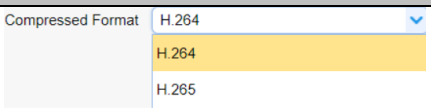
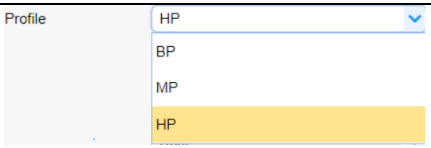
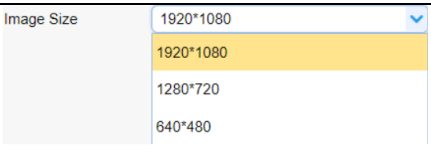
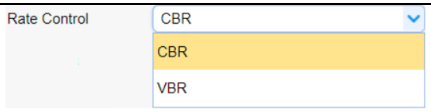
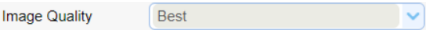
Video Configure allows you to configure the input video source.

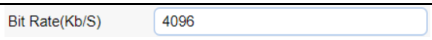
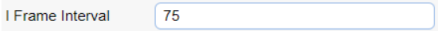
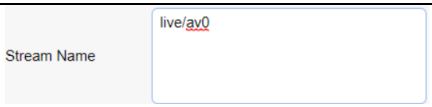
Video Encode

In **Video Encode**, you will be able to configure the video quality for main and sub streams. See the diagram below for various video settings.



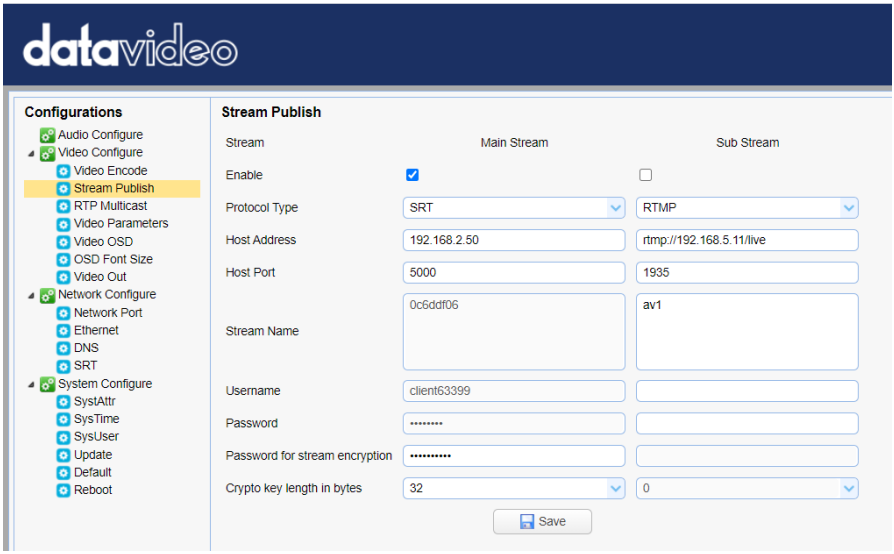
See the table below for descriptions of each item.

Items	Descriptions
	**Compressed Format** Select either **H.264** or **H.265** video compression.
	**Profile** Select a profile for your input video source. Available profiles are: • **BP: Baseline Profile (Default)** • **MP: Main Profile** • **HP: High Profile**
	**Image Size** Select an appropriate image size from the drop-down menu. • 1920 x 1080 • 1280 x 720 • 640 x 480
	**Rate Control** **CBR** encoding does not optimize media files for quality but will save you storage space. **VBR** takes longer to encode but produces the most favorable results as the quality of the media file is superior.
	**Image Quality** The default image quality for the main stream is "**Best**." The default image quality for the sub stream is "**Better**."

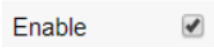
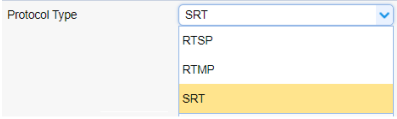
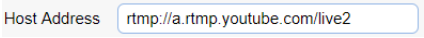
	**Bit Rate** A bitrate is the amount of data required to encode a single second of video. From a streaming perspective, the higher the bitrate, the higher the quality, and the more bandwidth it will require. The default bit rate for the main stream is "**4096 Kb/s**." The default bit rate for the sub stream is "**512 Kb/s**."
	**Frame Rate** Higher frame rate will result in smooth video viewing experience. The frame rate is **25** by default.
	**I Frame Interval** A shorter I Frame Interval results higher quality video but consumes more network bandwidth. On the other hand if longer I Frame Interval is set, less bandwidth will be required but it will result in lower video quality. I frame interval is **75** by default.
	**I Frame Min QP** A low QP value means less compression but higher video quality. The default value is **20**.
	**Stream Name** Enter a stream name for the main and sub stream.
	**Save Button** Click the Save button to save the new video settings.

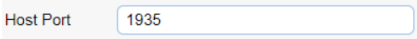
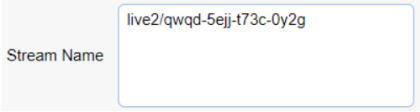
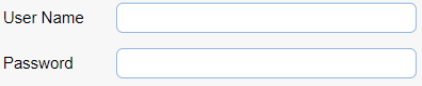
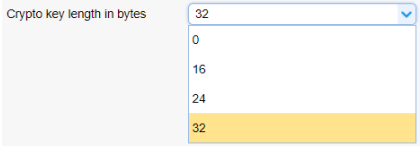
Stream Publish

In **Stream Publish**, you will be able to configure the RTMP settings for main and sub streams. See the diagram below for various RTMP settings.



See the table below for descriptions of each item.

Items	Descriptions
	**Enable** Check this checkbox to enable RTMP stream.
	**Protocol Type** The three available streaming protocols are **RTSP**, **RTMP and SRT**.
	**Host Address** This is the RTMP/RTSP Server URL provided by video streaming service providers. An example of the RTMP Server URL is provided.

Items	Descriptions
	**Host Port** The host port number is 1935 by default.
	**Stream Name** This is the RTMP/RTSP Stream Name/Key provided by video streaming service providers. An example of the RTMP Stream Name/Key is provided.
	**User Name / Password** Enter the login credentials of the RTSP or RTMP streaming platform.
	**Password for Stream Encryption** Enter a password for the SRT stream.
	**Crypto Key Length (Bytes)** Select an appropriate key length to protect the SRT stream from attacks. You can select 0, 16, 24 or 32 bytes. **Note: A 0 byte key means no encryption applied to the SRT stream.**
	**Save Button** Click the Save button to save the new RTMP settings.

Notes:

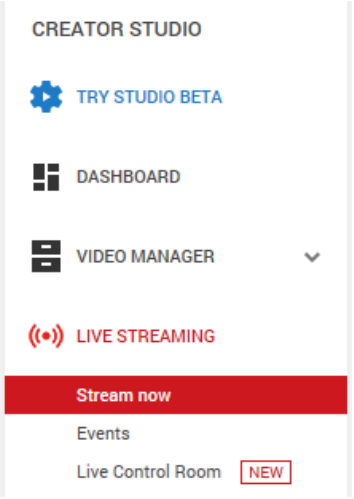
1. The SRT Caller and RTSP Publish modes can only function as the Main Stream encoder.

2. The Sub Stream will be disabled when the SRT Caller or the RTSP Publish functions as the Main Stream encoder.

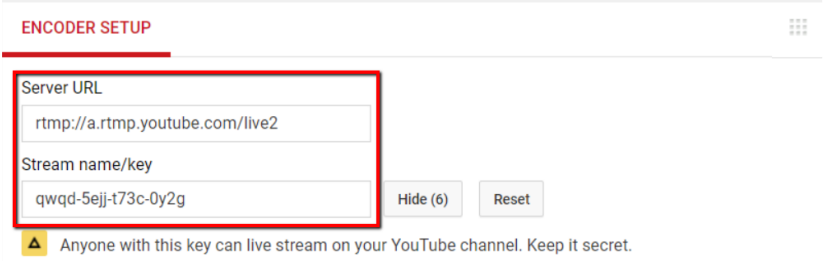
Stream to Youtube

In this section, we will show you how to set up an **RTMP(S)** stream to **Youtube**. The step-by-step setup is outlined as follows:

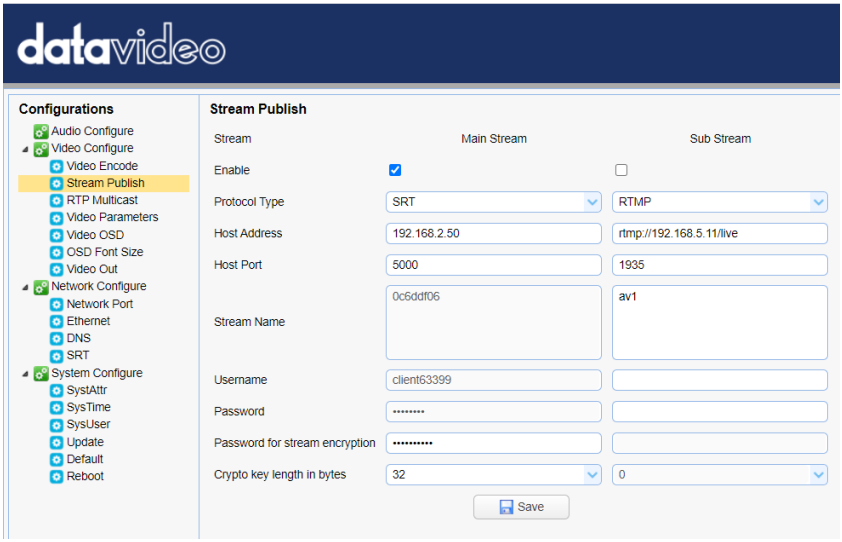
1. First of all, you have to obtain Server URL and Stream Name/Key from Youtube.
2. Open the Youtube Live Dashboard https://www.youtube.com/live_dashboard
3. On the left column, locate and click "**Stream now**."



4. On the right, scroll down to the bottom where you will be able to find **Server URL** and **Stream name/key**.



5. Open the PTC-140's web UI and click "**Video Configure**" → "**Stream Publish**".



6. Enter the **Server URL** and **Stream Name/Key** into **Host Address** and **Stream Name** respectively.

7. Check the **Enable** checkbox to enable RTMP stream.

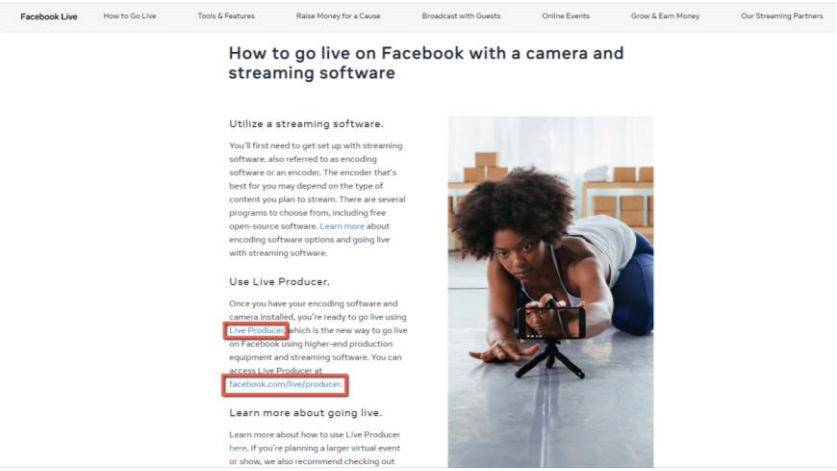
8. Click the **Save** button to save the RTMP settings and reboot (System Configure → Reboot) the camera to apply the new settings then you can start broadcasting your camera video on Youtube.

Stream to Facebook

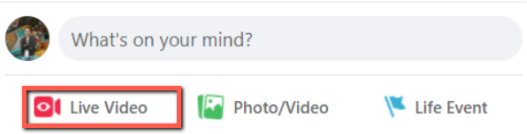
In this section, we will show you how to set up an **RTMP(S)** stream to **Facebook**. The step-by-step setup is outlined as follows:

1. Go to the "How to go live on Facebook with a camera and streaming software" website by clicking the link below or enter the link address into the address bar of your browser then hit the ENTER key.
   Link: https://www.facebook.com/formedia/solutions/facebook-live

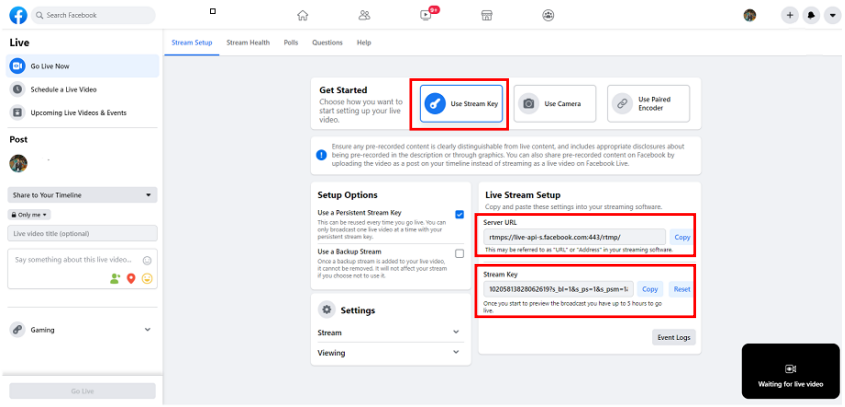
   Click "**Live Producer**" or "**facebook.com/live/producer**" on the page shown below to start the stream setup.
   Note: Facebook Live limits each stream to 8 hours.



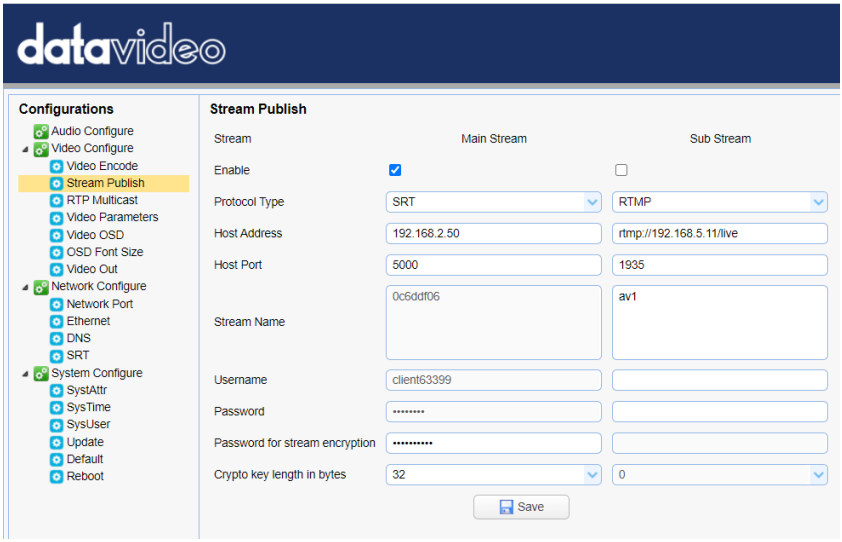
Alternatively, you can also click the Live Video tab on your personal Facebook page to start the stream setup.



2. Click the "**Use Stream Key**" tab then locate "**Server URL**" and **Stream Key**".



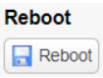
3. Open the PTC-140's web UI and click "**Video Configure**" → "**Stream Publish**"



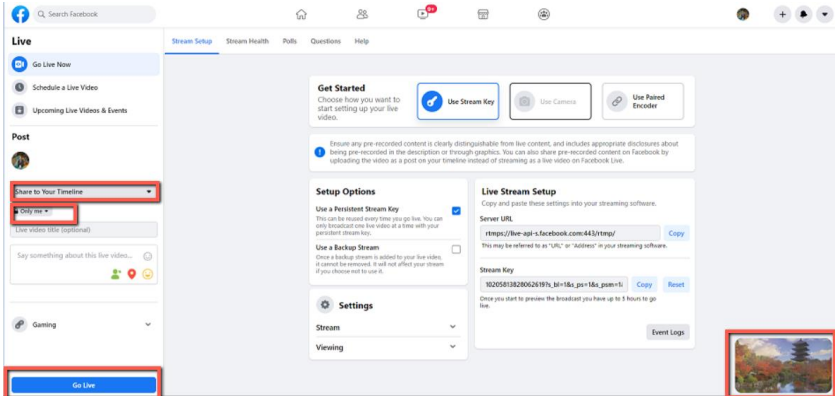
4. Enter the **Server URL** and **Stream Key** into **Host Address** and **Stream Name** respectively. Enter 443 into the "Host Port".

5. Check the **Enable** checkbox to enable RTMP stream.

6. Click the **Save** button to save the RTMP settings and reboot ("**System Configure"** → "**Reboot"**) the camera to apply the new settings.

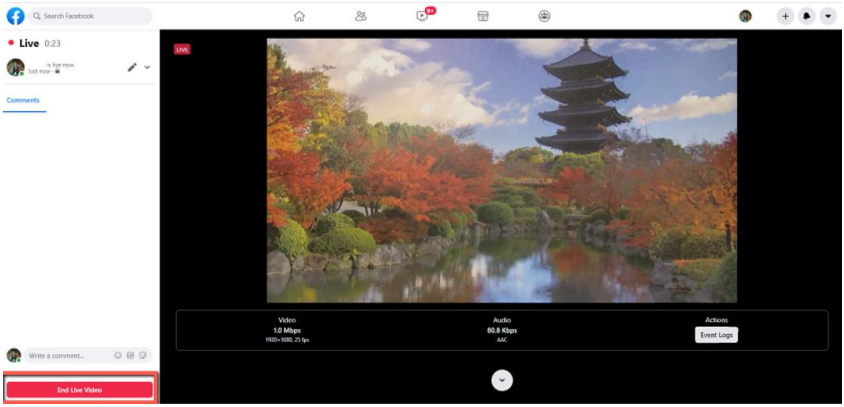


7. After the camera is successfully rebooted, you will see a preview screen appearing at the bottom right corner of the Facebook Live page as shown below.



8. On the left of the page, first select where you want to stream your live camera video to then select your audience. Finally, enter the title of the live stream and click the "**Go Live**" button to start the stream.

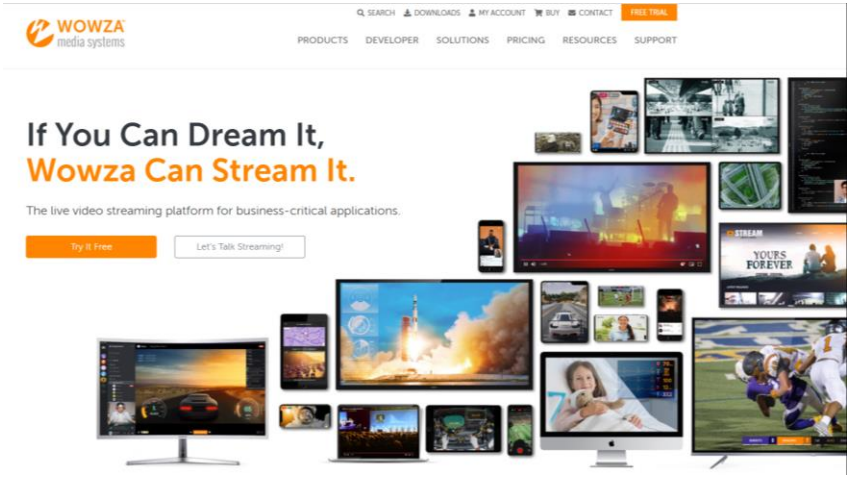
9. As soon as the live stream is started, you will be able to view the live camera video on the Facebook Live page. To end, simply click the "**End Live Video**" button.



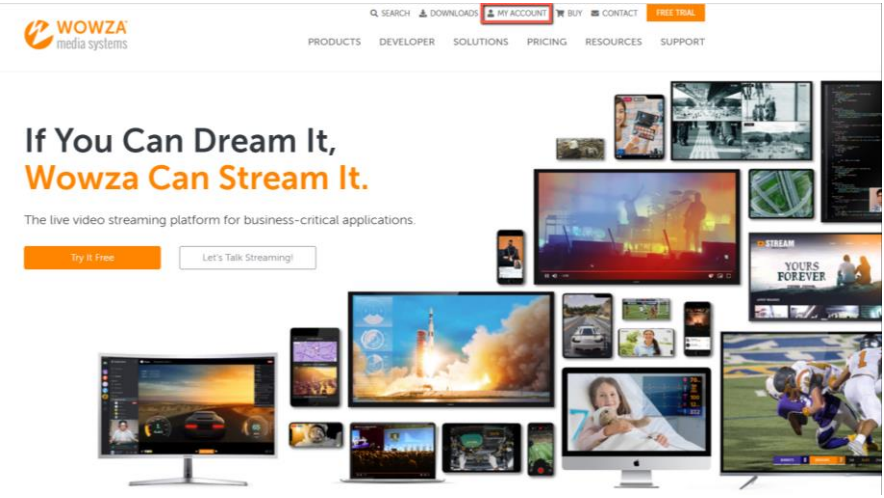
Stream via RTSP to Wowza Streaming Cloud

Wowza Streaming Cloud allows you to easily stream live video to any device. In this section, we will show you how you can stream the PTC-140 camera video to Wowza Streaming Cloud via RTSP.

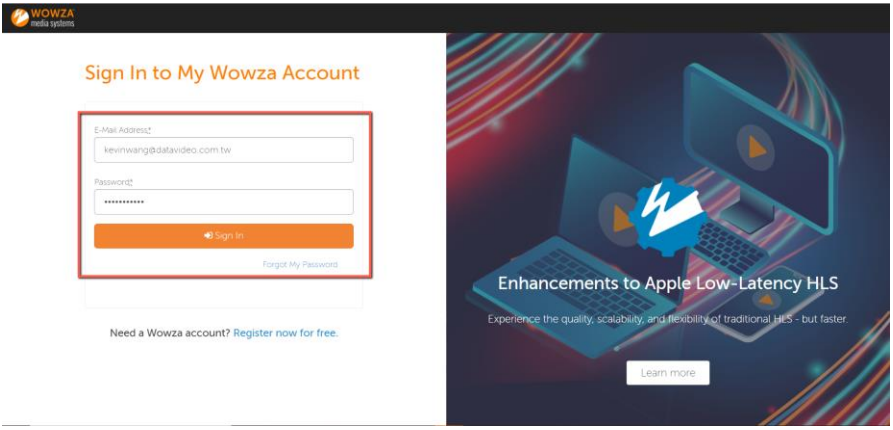
1. First open Wowza's official website (www.wowza.com) shown below.



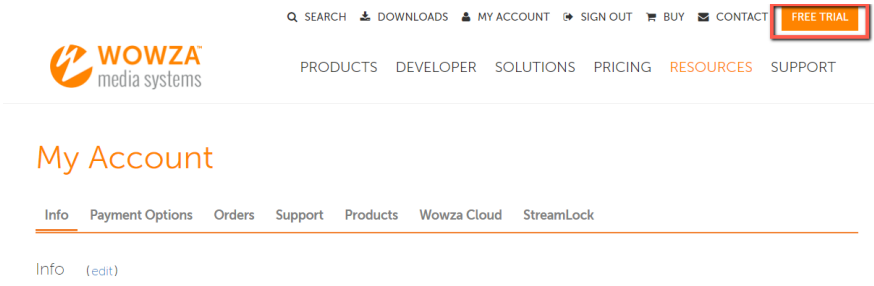
2. Click “MY ACCOUNT” to log in to your Wowza account.



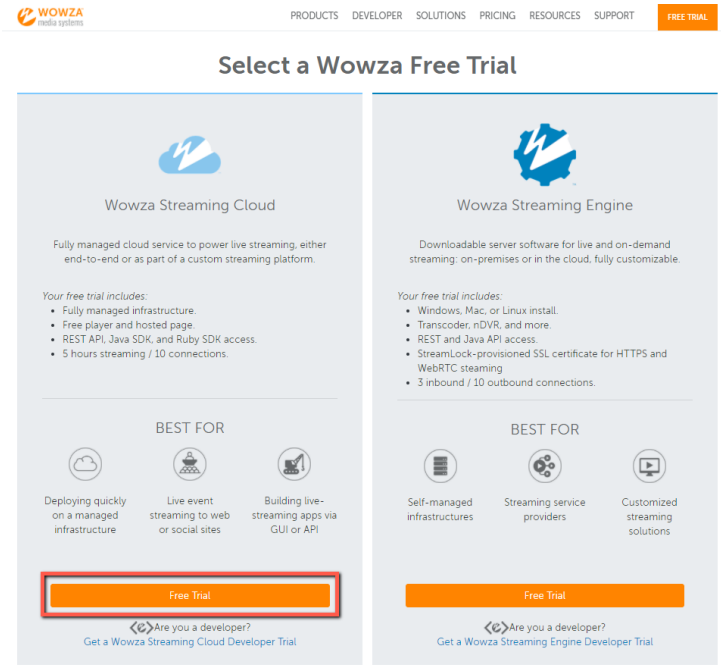
3. If you already have a Wowza account, simply log in with your email address. If you do not have a Wowza account, apply for a 30 day trial account.



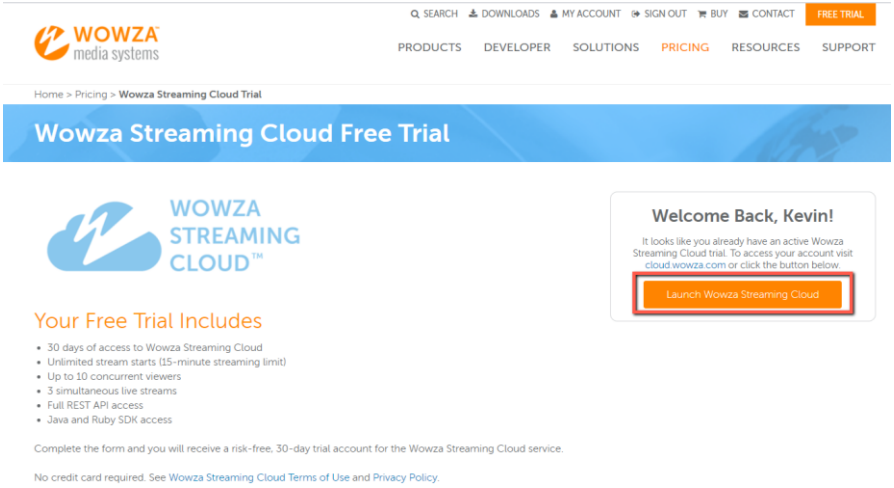
4. We will be using the free trial account in this example, so after login, on the page that opens, click the **FREE TRIAL** button located at the top right corner.



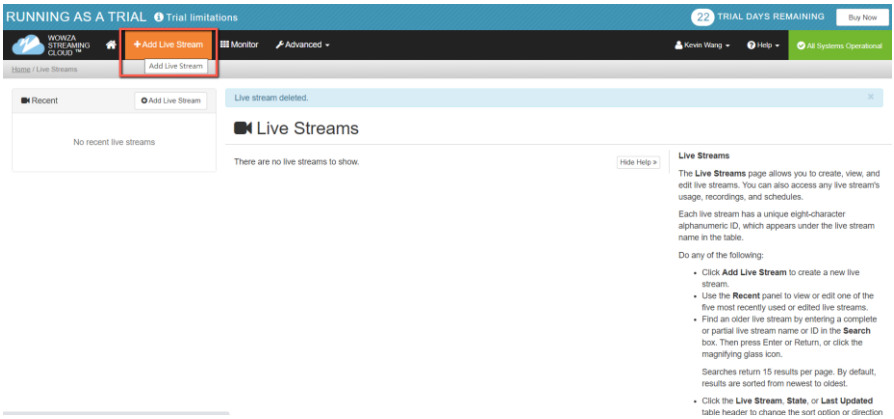
5. As shown below, click the Free Trial button of Wowza Streaming Cloud.



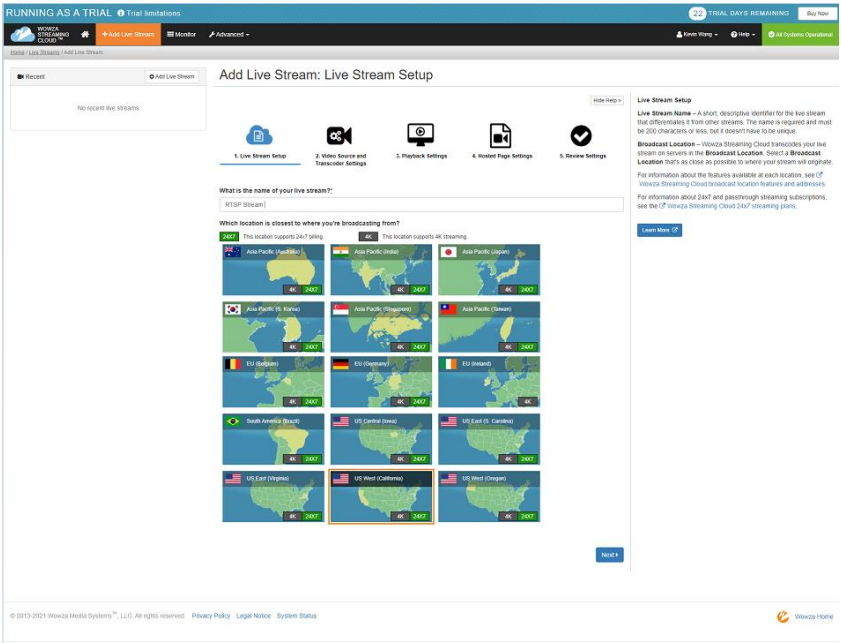
6. Click the “Launch Wowza Streaming Cloud” button.



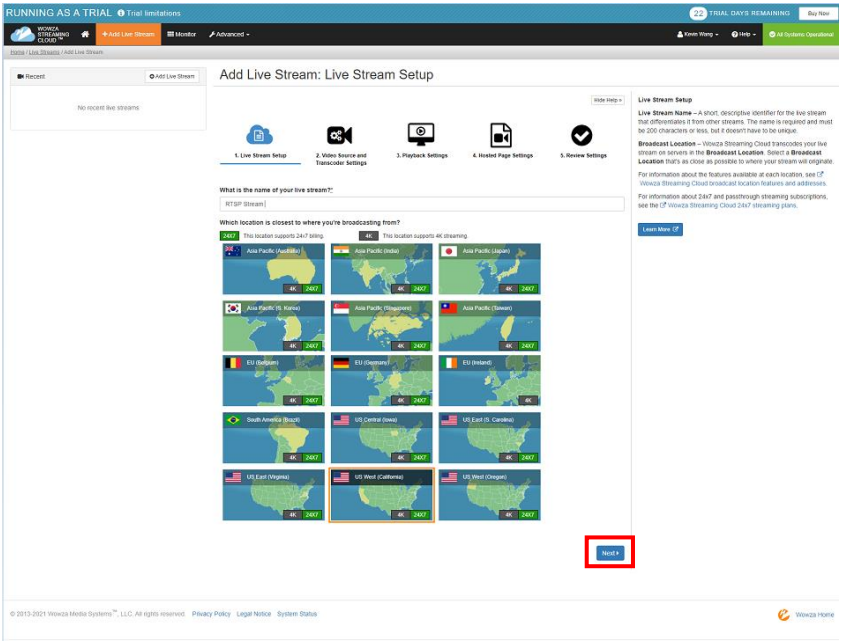
7. The UI of Wowza Streaming Cloud is shown in the diagram below. Click “Add Live Stream” to create a live stream channel.



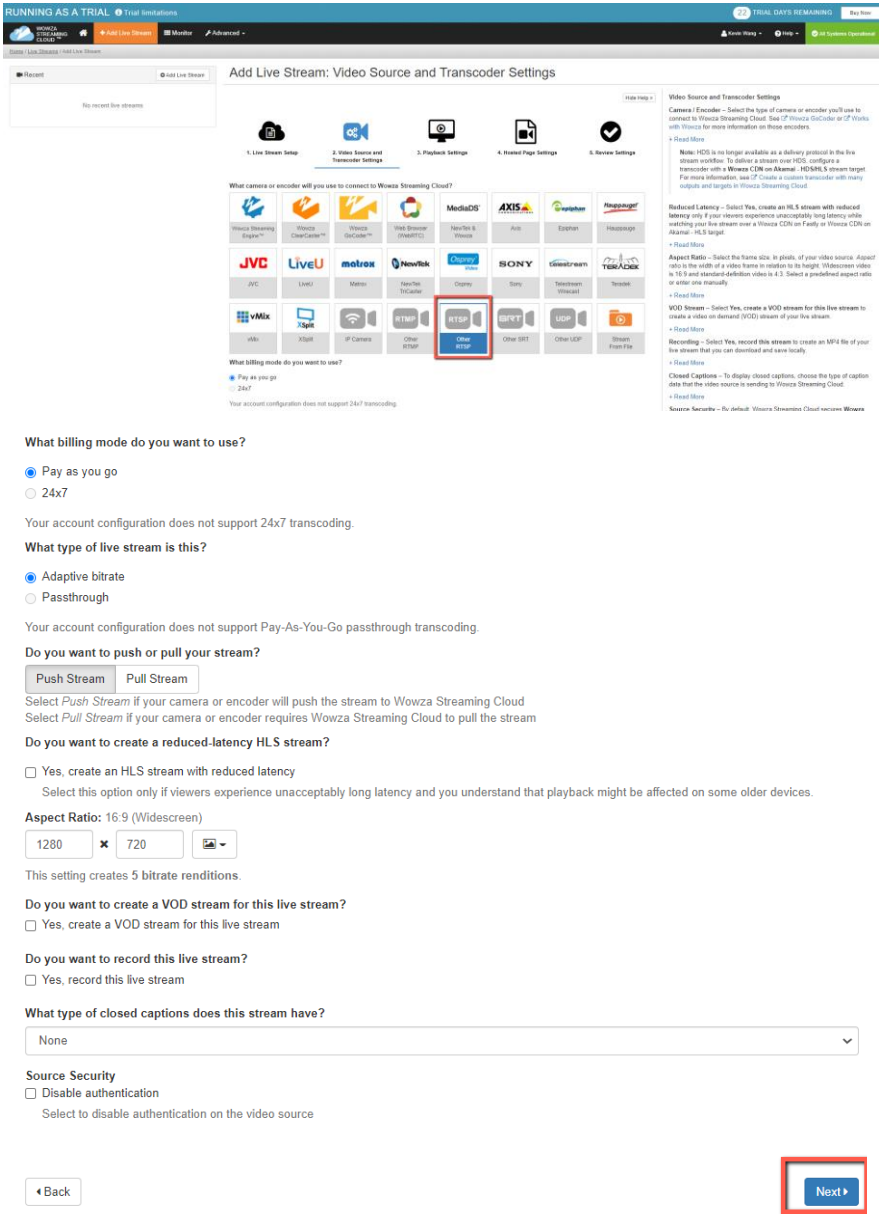
8. Enter a name for this live stream. As shown in the diagram below, we will use RTSP Stream in this example.



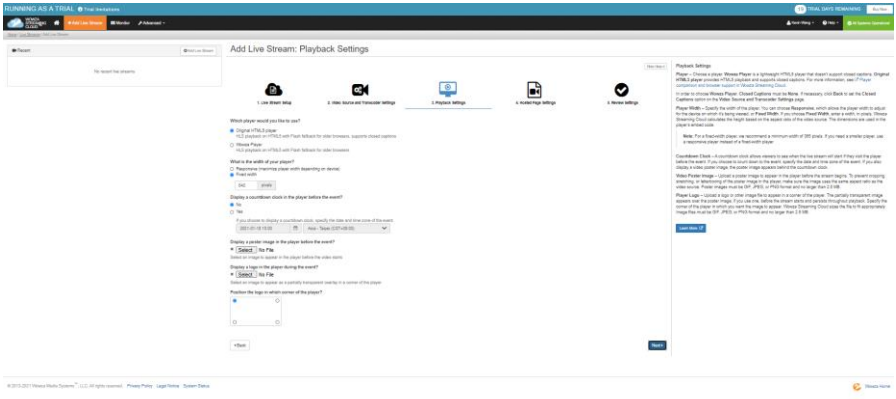
9. Select a location that is nearest to you. In this example, we will select “Asia Pacific Taiwan”, then click the Next button.



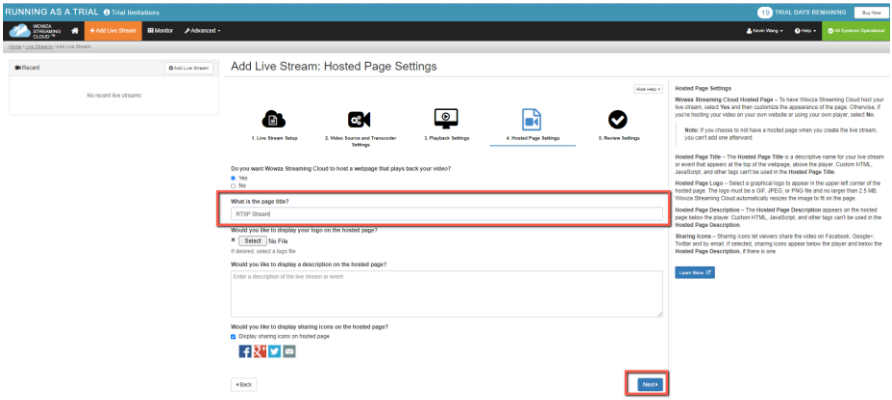
10. Select the camera or the encoder that you want to use to connect to Wowza Streaming Cloud. This example uses RTSP so click “Other RTSP” as shown in the diagram below. The rest of the options can be kept as default values. Finally, click the “Next” button.



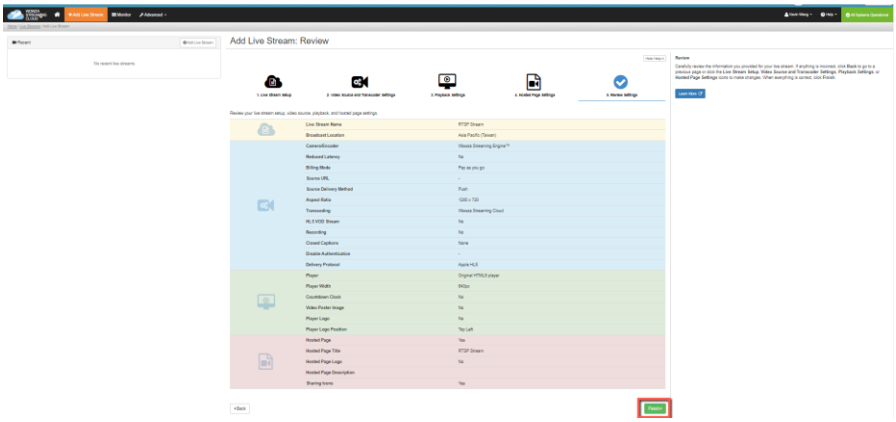
11. Configure your player on this page. Click “Next” after it’s done.



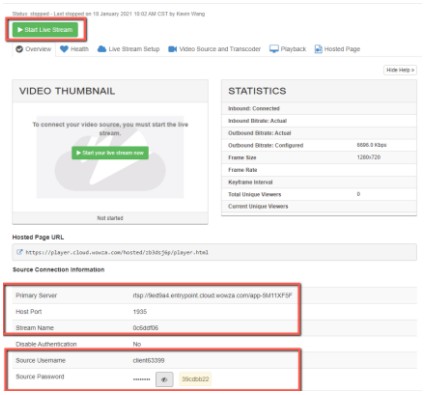
12. On the Hosted Page setup page, enter the page title then click Next.

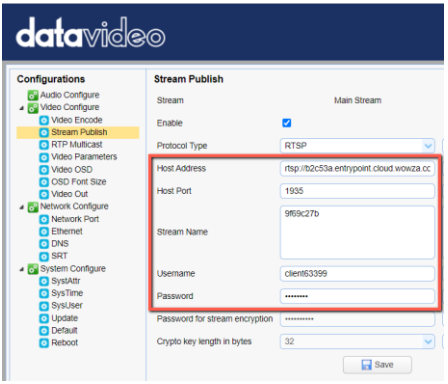


13. Check your live stream setup and click Finish if all settings are correct.



14. Set up the RTSP encoder on the PTC-140.



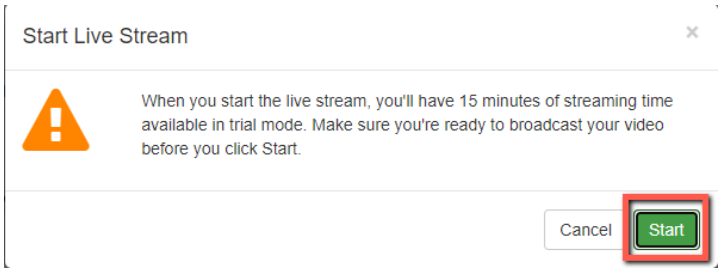


Replicate the following source connection information provided by Wowza to the corresponding fields of the RTSP encoder on your PTC-140.

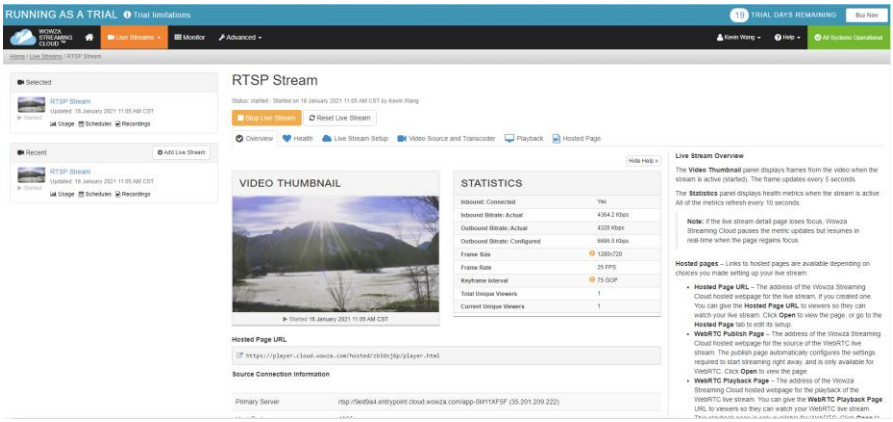
Source Connection Information	**RTSP Encoder (PTC-140)**
Primary Server	Host Address
Host Port	Host Port
Stream Name	Stream Name
Source Username	Username
Source Password	Password

After all fields are entered with the respective information, click the **Save** button to save the RTSP settings and reboot (System Configure → Reboot) the camera to apply the new settings.

15. Finally, click the “Start Live Stream” button on Wowza Streaming Cloud and you should see the prompt message below. Click Start.



16. As shown in the diagram below, your PTC-140 camera video is now successfully being streamed to Wowza Streaming Cloud via RTSP.



SRT Streaming using the vMix Software

In this section, we will show you how you can stream your camera video via SRT using the vMix Software.

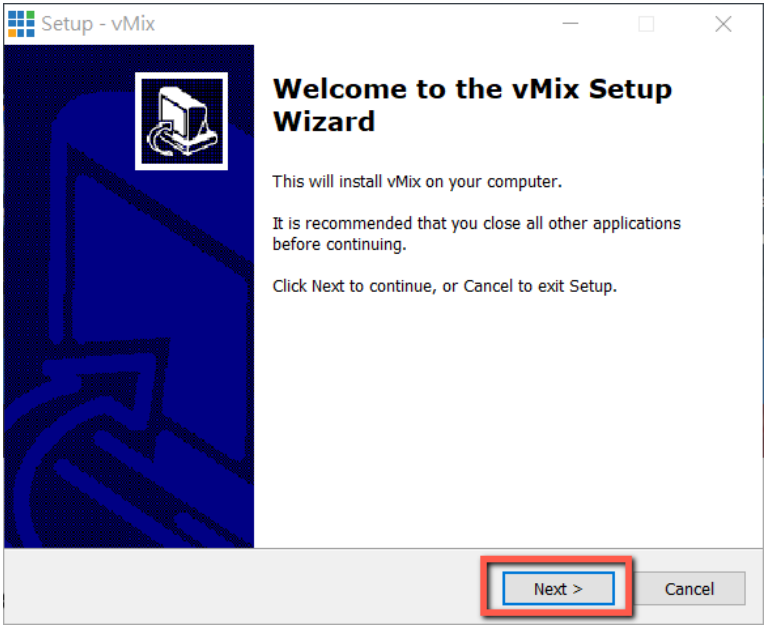
Install the vMix Software

Follow the steps outline below to install the vMix software.

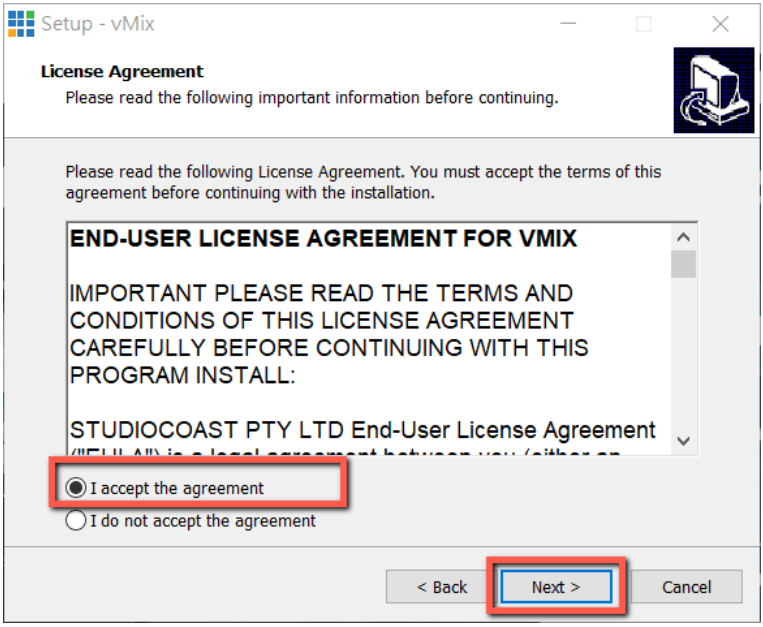
1. Download the 60 day free trial version from the vMix official website to your PC or laptop.

vmix23 2. Double click the installer icon (vmix23.exe).

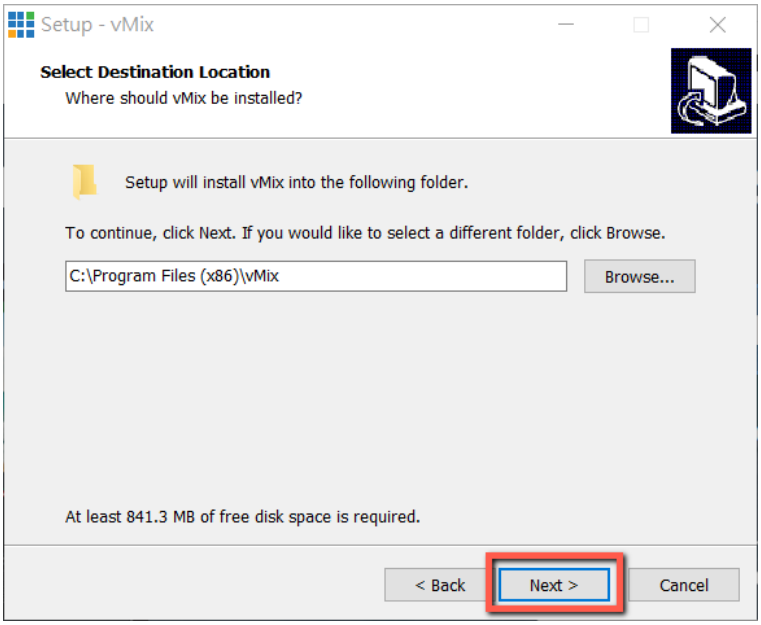
3. Click Next.



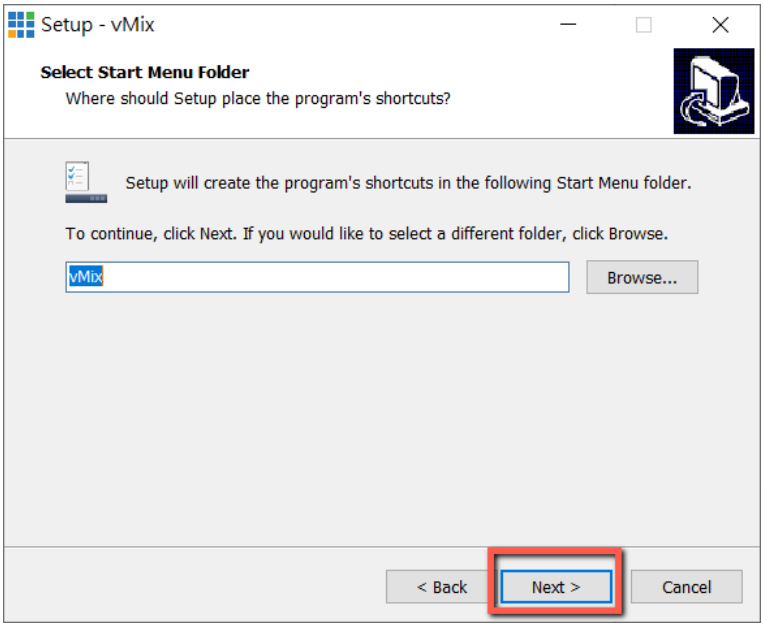
4. Accept the agreement then click Next.



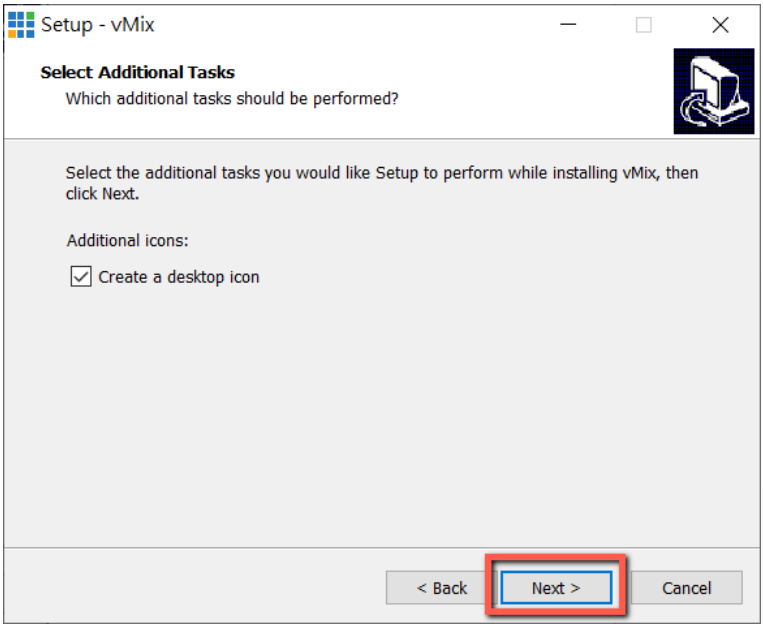
5. Click Next.



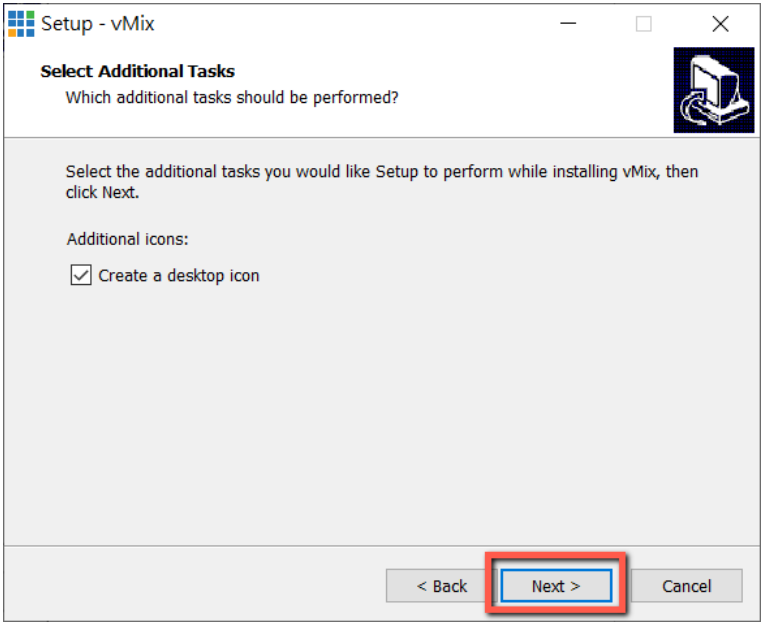
6. Click Next.



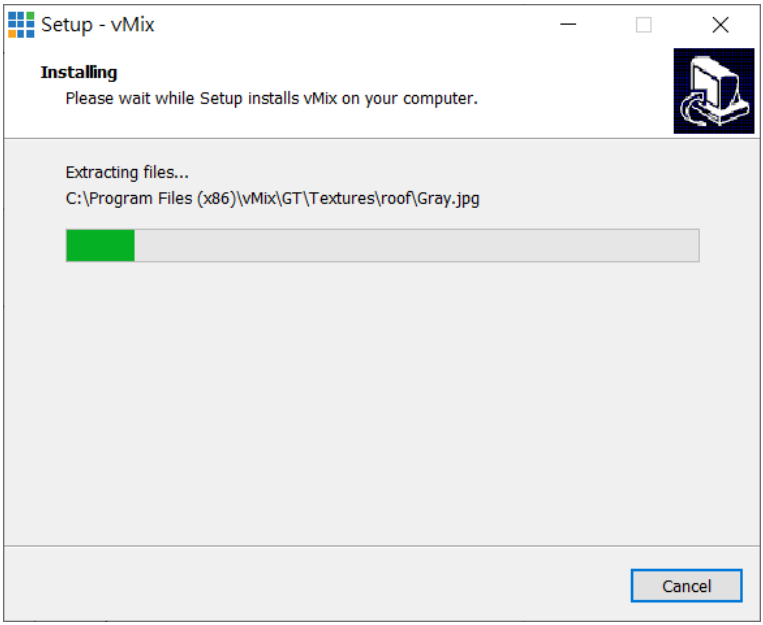
7. Click Next.



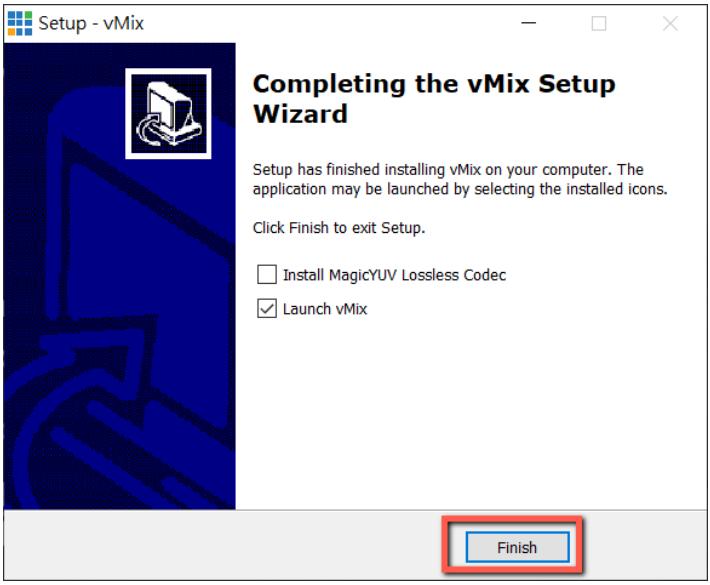
8. Click Next.



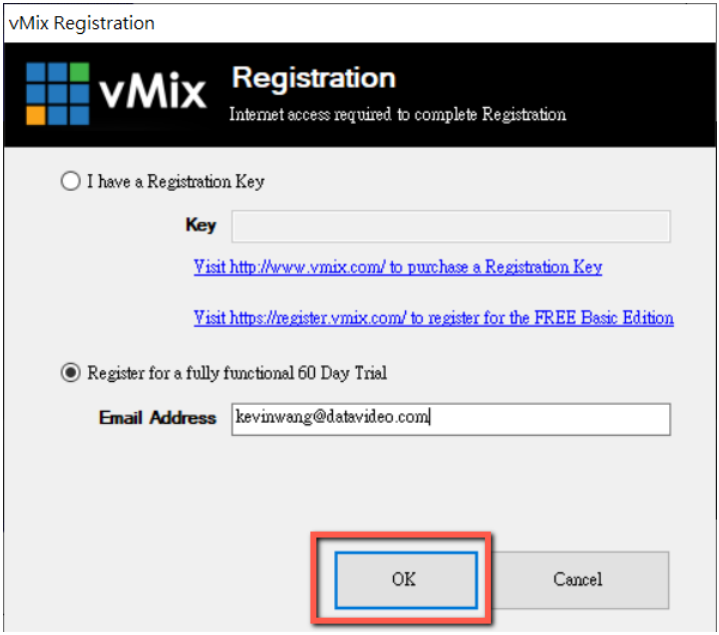
9. Installing



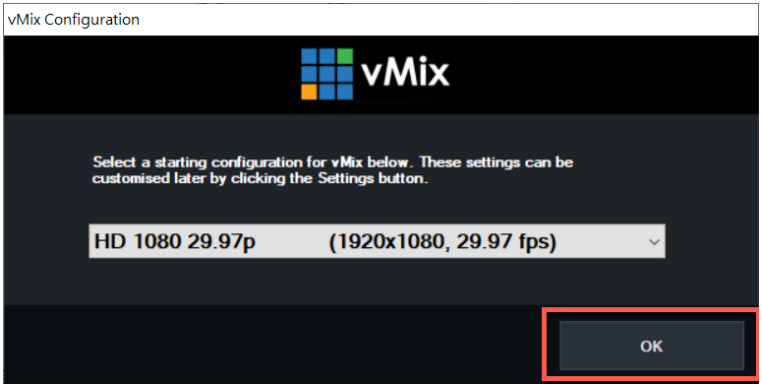
10. Click Finish to complete the setup.



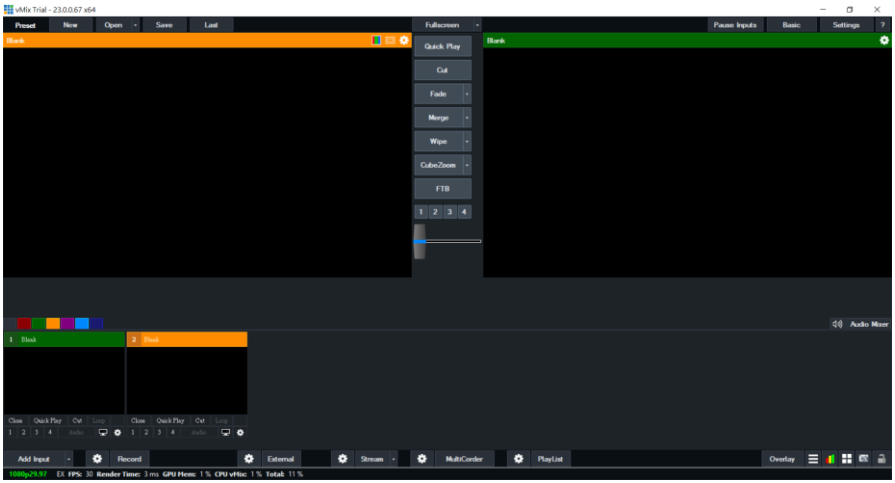
11. Remember to register for a fully functional 60 Day Trial with your e-mail address. After that, click OK.



12. Select the initial resolution and frame rate then click OK.



13. The vMix software interface is shown below.

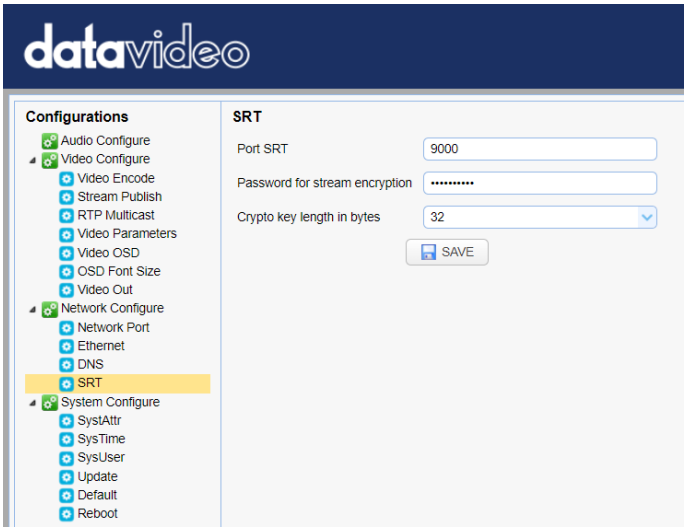


SRT Stream Setup using PTC-140 and vMix

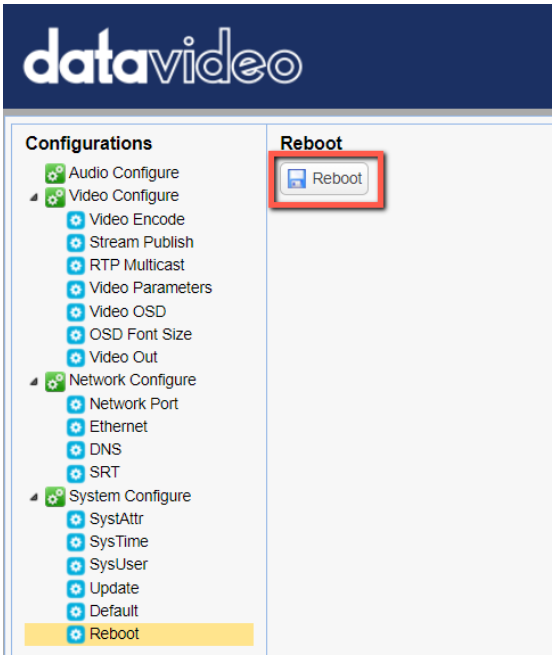
The PTC-140/vMIX connection is bidirectional. Depending on the caller-listener setup, either end can be the camera video source.

PTC-140 set to the Listener Mode

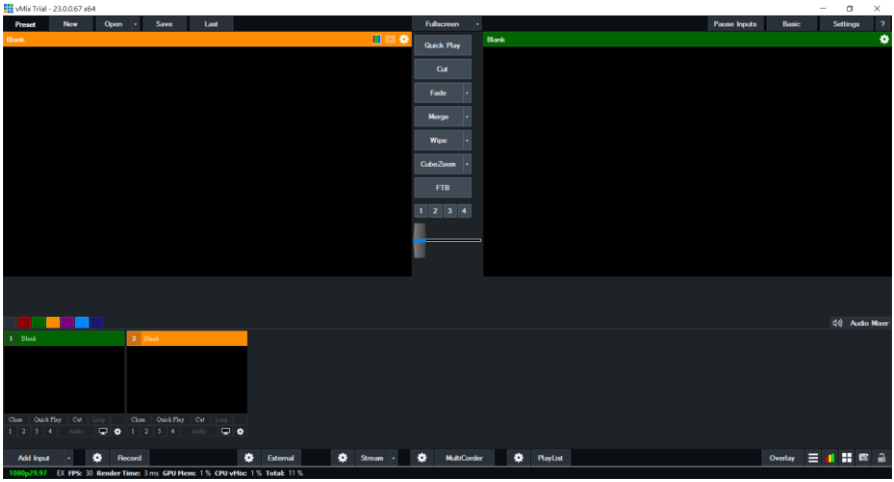
Open the web UI of the PTC-140 then click Network Configure → SRT. Use the default SRT port (9000) then set the password of your SRT stream as well as the crypto key length. In this example, the crypto key length is set to 32 bytes and the password is “8888888888”. click the **Save** button to save the SRT listener settings.



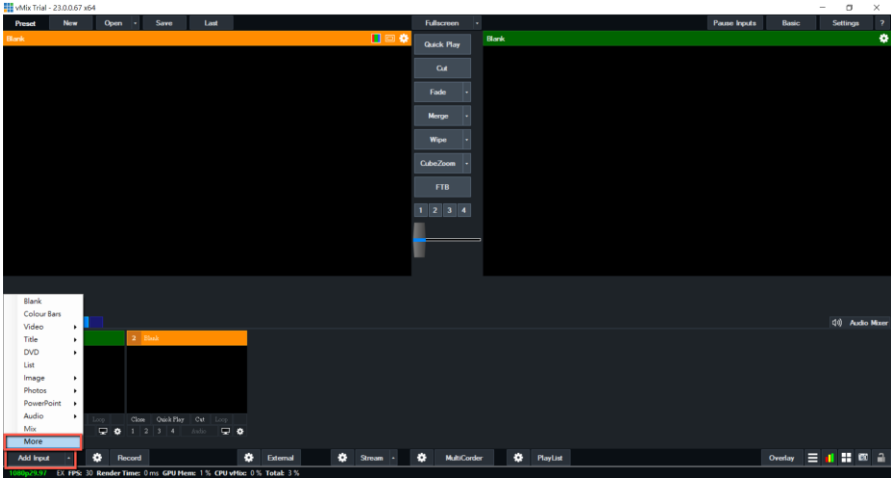
Reboot (System Configure → Reboot) the camera to apply the new settings.



On the PC or laptop where the vMIX is installed, click Start Menu → vMix(x64) and you should see the interface below after the vMIX is opened.



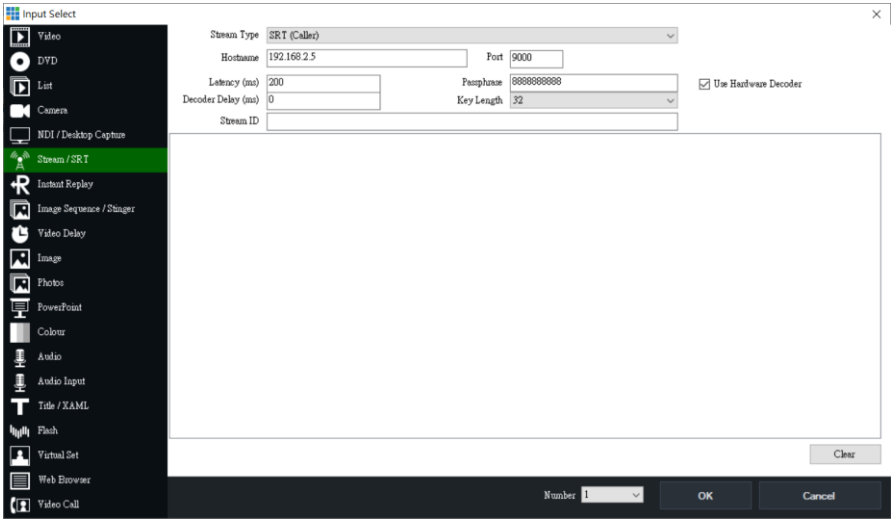
Click “Add Input” then “More”.



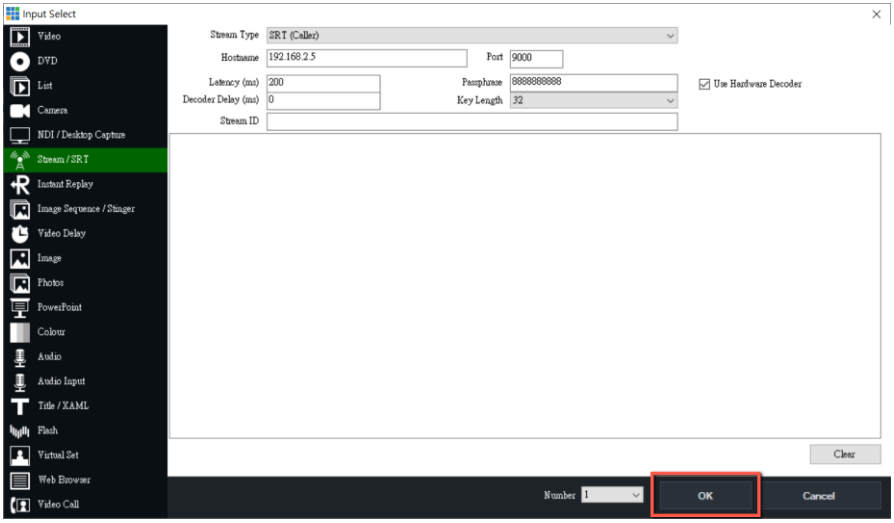
On the Input Select window, click “Stream/SRT” then select “SRT Caller” from the “Stream Type” drop-down menu. After that, enter the following into the respective fields.

- Hostname: 192.168.2.5 (The IP address of your connected device. In this case, it is the PTC-140)
- Port: 9000
- Passphrase: 8888888888 (The password set previously on the PTC-140’s Web UI)

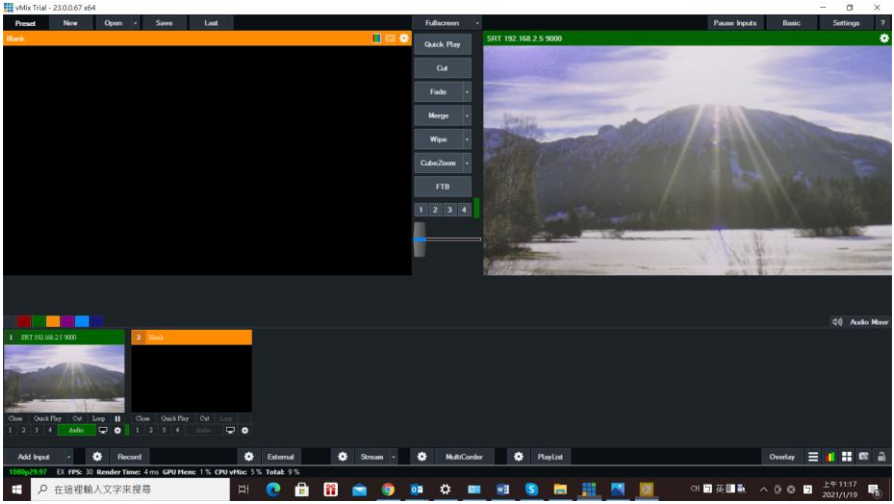
- Key length: 32 (The same length as the key length set previously on the PTC-140's Web UI)



Click the "OK" button.



The PTC-140 camera video is now successfully streamed to the vMix via SRT.



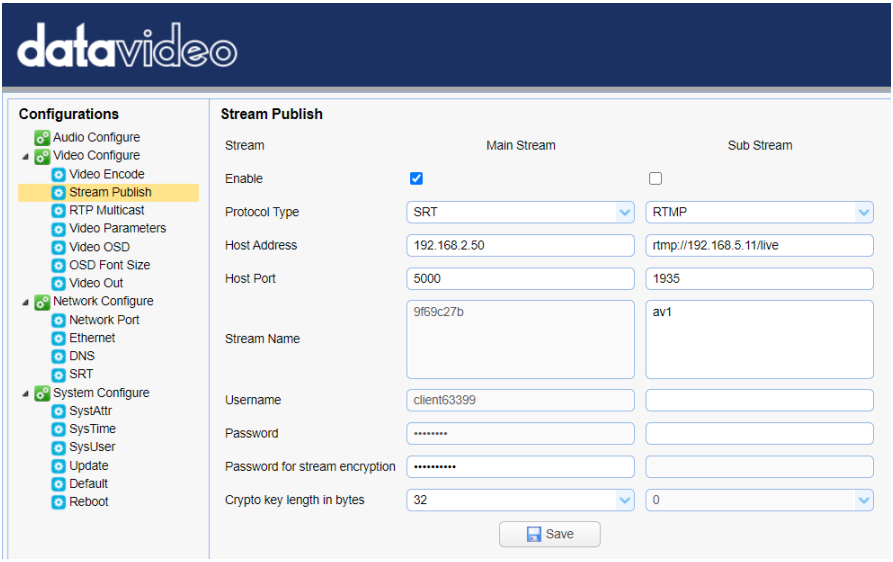
PTC-140 set to the Caller Mode

Open the web UI of the PTC-140 then click **Stream Publish**.

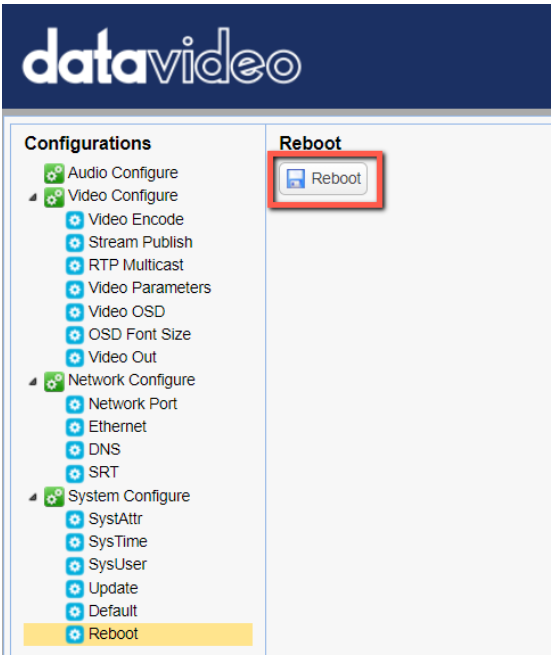
Set the protocol type to SRT then enter the following into the respective fields.

- Host Address: 192.168.2.50 (IP address of the PC/laptop on which the vMIX is installed)
- Host Port: 5000
- Crypto Key Length: 32
- Password for Stream Encryption: 8888888888 (Please note that the password is arbitrary)

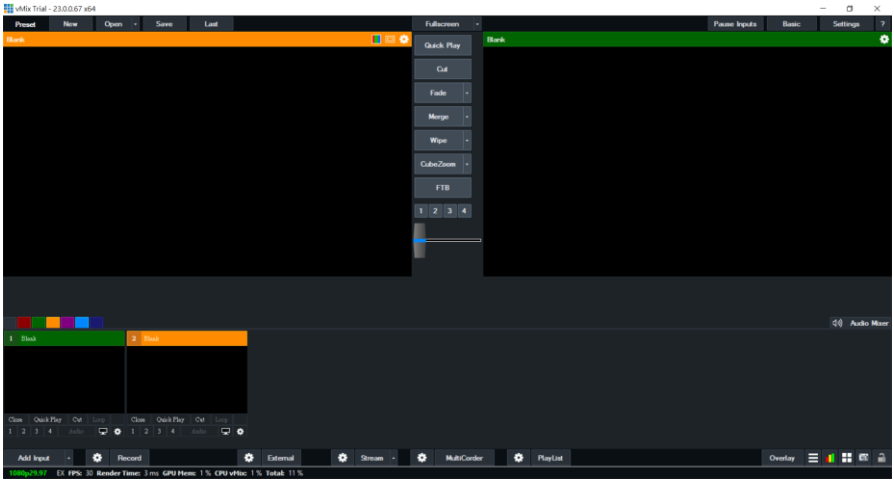
Click the **Save** button to save the SRT caller settings.



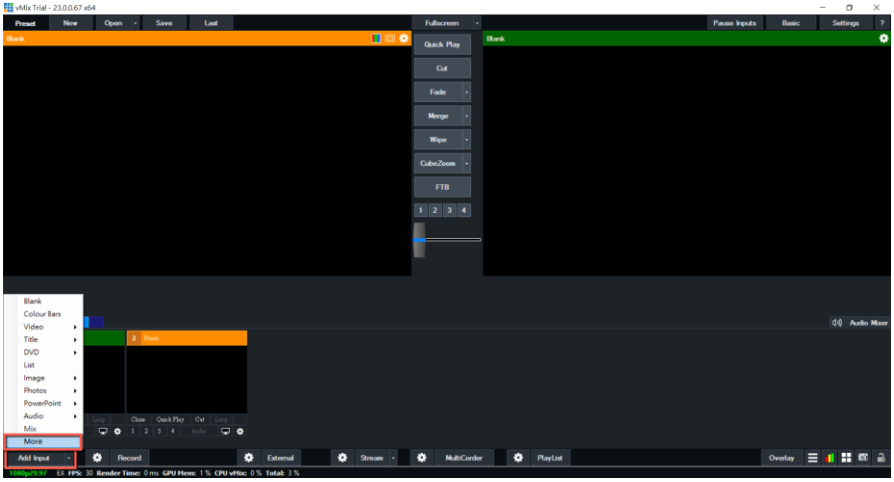
Reboot (System Configure → Reboot) the camera to apply the new settings.



On the PC or laptop where the vMIX is installed, click Start Menu → vMix(x64) and you should see the interface below after the vMIX is opened.



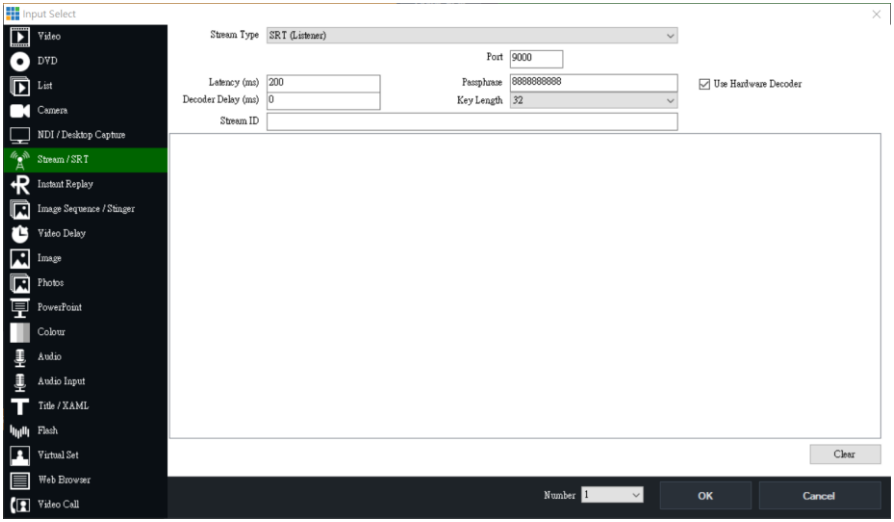
Click “Add Input” then “More”.



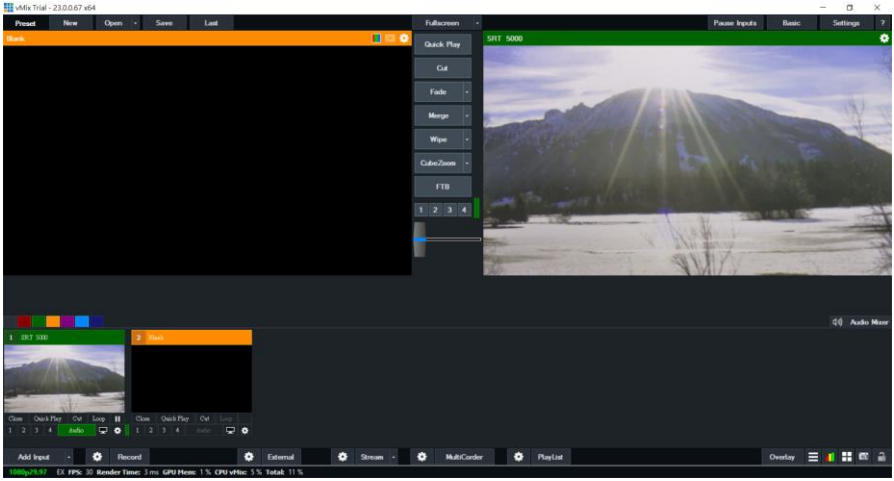
On the Input Select window, click “Stream/SRT” then select “SRT Listener” from the “Stream Type” drop-down menu. After that, enter the following into the respective fields.

- Port: 5000
- Passphrase: 8888888888 (Password for Stream Encryption)
- Key length: 32 (The same length as the key length set previously on the PTC-140’s Web UI)

Click the “OK” button.

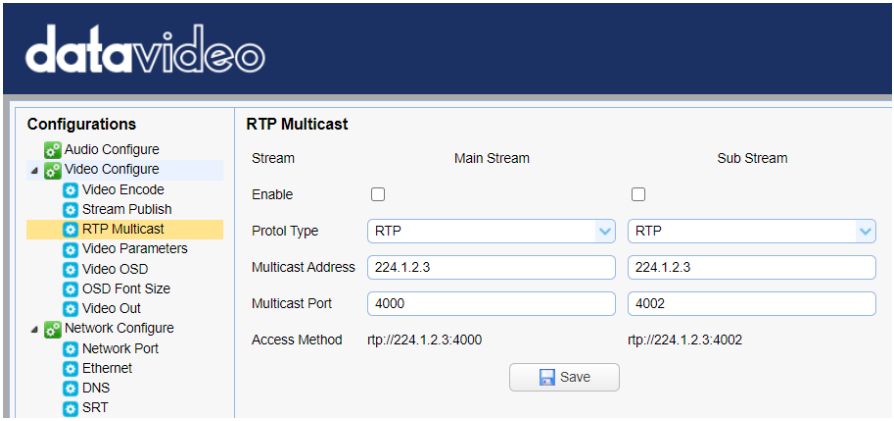


The PTC-140 camera video is now successfully streamed to the vMix via SRT.



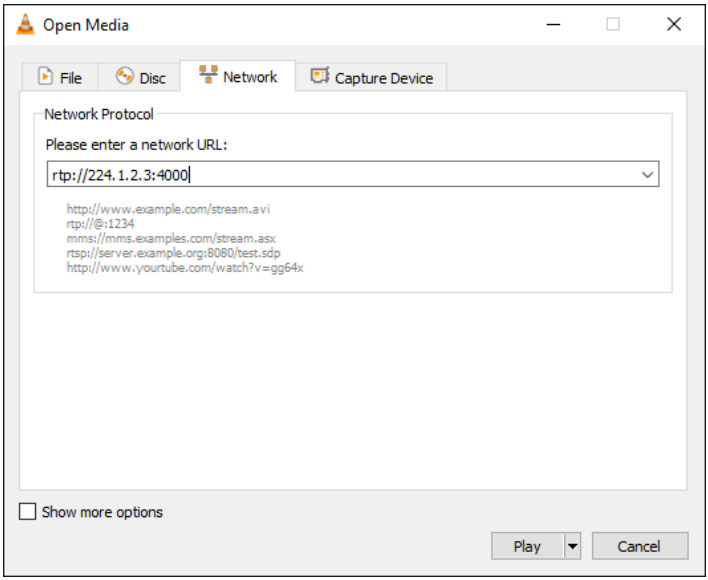
RTP Multicast

The RTP Multicast allows you to view camera video on certain video players such as VLC media player from a remote location.



Follow the steps outlined below to view the camera video on VLC media player.

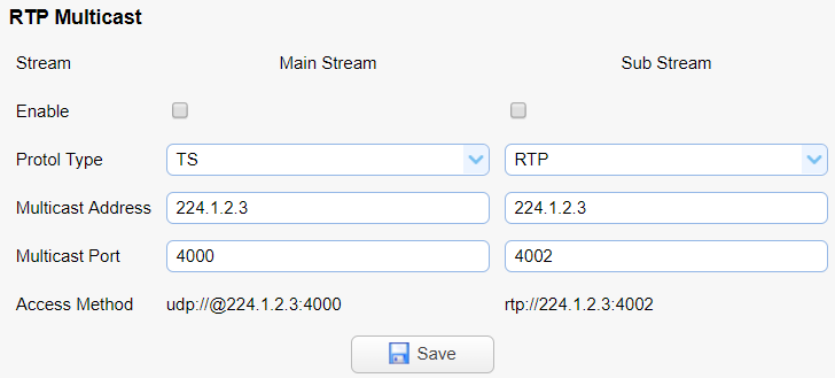
1. Download VLC media player from the link https://www.videolan.org.
2. Open VLC, click “Media” → “Open Network Stream” then enter rtp://224.1.2.3:4000 to view the main stream and rtp://224.1.2.3:4002 to view the sub stream.



3. Click the “**Play**” button to start viewing the video stream.

You can also choose to stream over TS protocol. Follow the steps outlined below to view the camera video on VLC media player over TS protocol.

1. On **RTP Multicast** page of the PTC-140’s web interface, select “TS” from the Protocol Type drop-down menu.



2. Open VLC media player, click “Media” → “Open Network Stream” then enter udp://@224.1.2.3:4000 to view the main stream and udp://@224.1.2.3:4002 to view the sub stream.

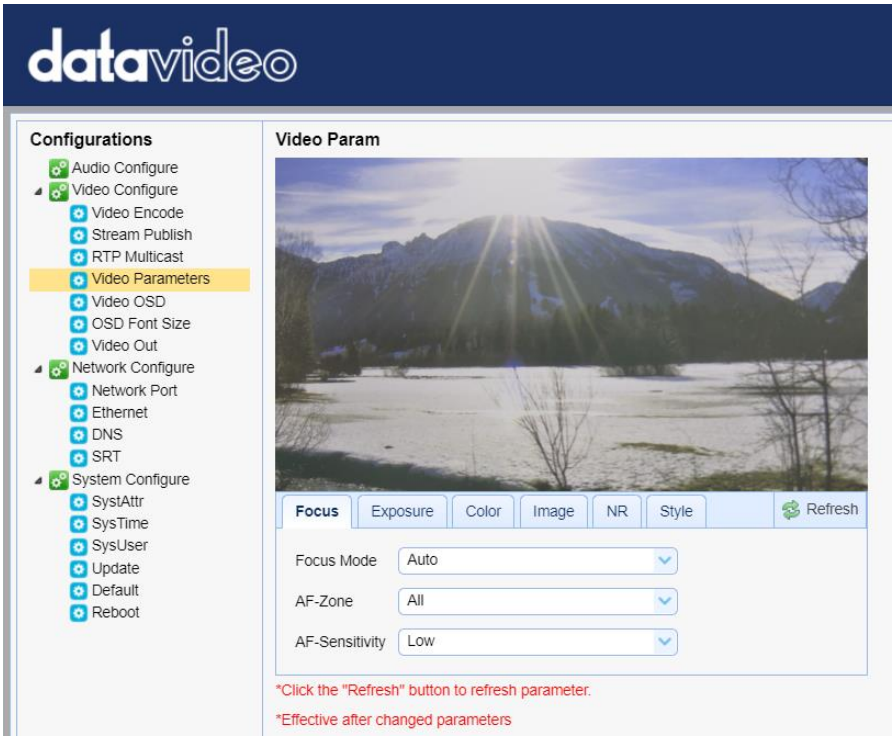
3. Click the “**Play**” button to start viewing the video stream.

Video Parameters

This sets the camera focus, exposure, color balance, image settings, noise reduction and picture styles.

Focus

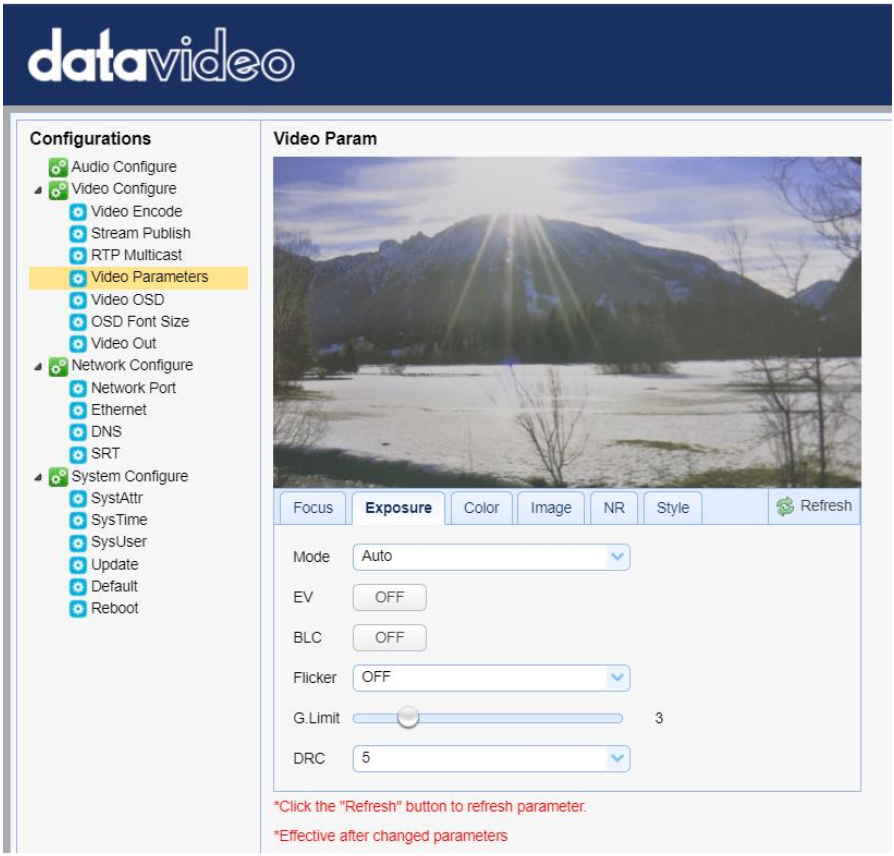
In **Focus**, you are allowed to set **Focus Mode**, **Auto Focus Zone** and **Auto Focus Sensitivity**.



- Focus Mode: Available modes are **Auto**, **Manual** and **One Push**.
- AF-Zone: This sets auto focus zone by selecting **Top**, **Center**, **Bottom** or **All** from the drop-down menu.
- AF-Sensitivity: This sets auto focus sensitivity by selecting High, Middle and Low from the drop-down menu.

Exposure

In **Exposure**, you are allowed to set Exposure Mode, Exposure Value (EV), Backlight Compensation (BLC), Anti-Flicker, Gain Limit and Dynamic Range Compression (DRC).



- Mode: Available focus modes are **Auto**, **Manual**, **SAE (Shutter Automatic Exposure)**, **AAE (Aperture Automatic Exposure)** and **Bright**.

  Auto – Fully automatic settings for shutter speed and aperture with the ability to adjust gain, dynamic range, backlight and anti-flicker.

  Manual – Full iris, shutter speed and range control

  Shutter Automatic Exposure – The camera will measure light and automatically set the aperture based on the desired shutter speed.

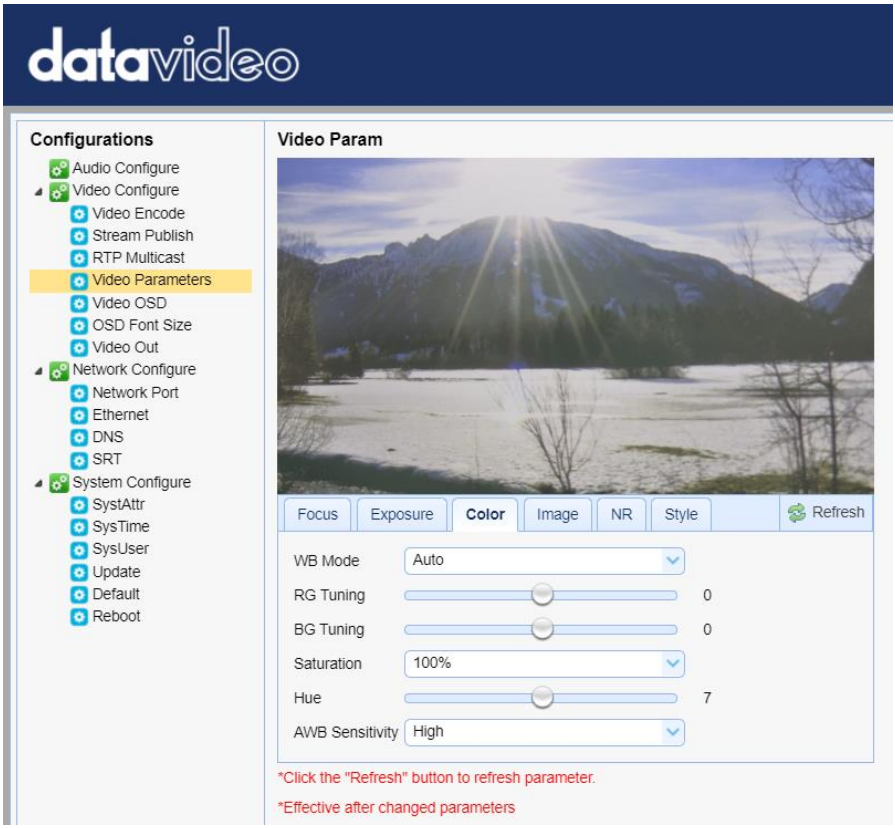
  Aperture Automatic Exposure – The camera will measure light and automatically set the shutter speed based on the desired iris opening (aperture).

- EV: **EV** is exposure value. By turning it ON, an EV slider will appear for adjusting the exposure value.

- BLC: By turning the **backlight compensation**, the camera will compensate for backlight by enhancing automatic exposure control on the camera.
- Flicker: To avoid video flicker, you can set your camera flicker frequency to **50Hz** or **60Hz**.
- Gain Limit Slider: Select gain limit from 0 to 15.
- DRC: Sets the amount of Dynamic Range Compression where higher values lead to more compression (**1 – 8** or **off**).

Color

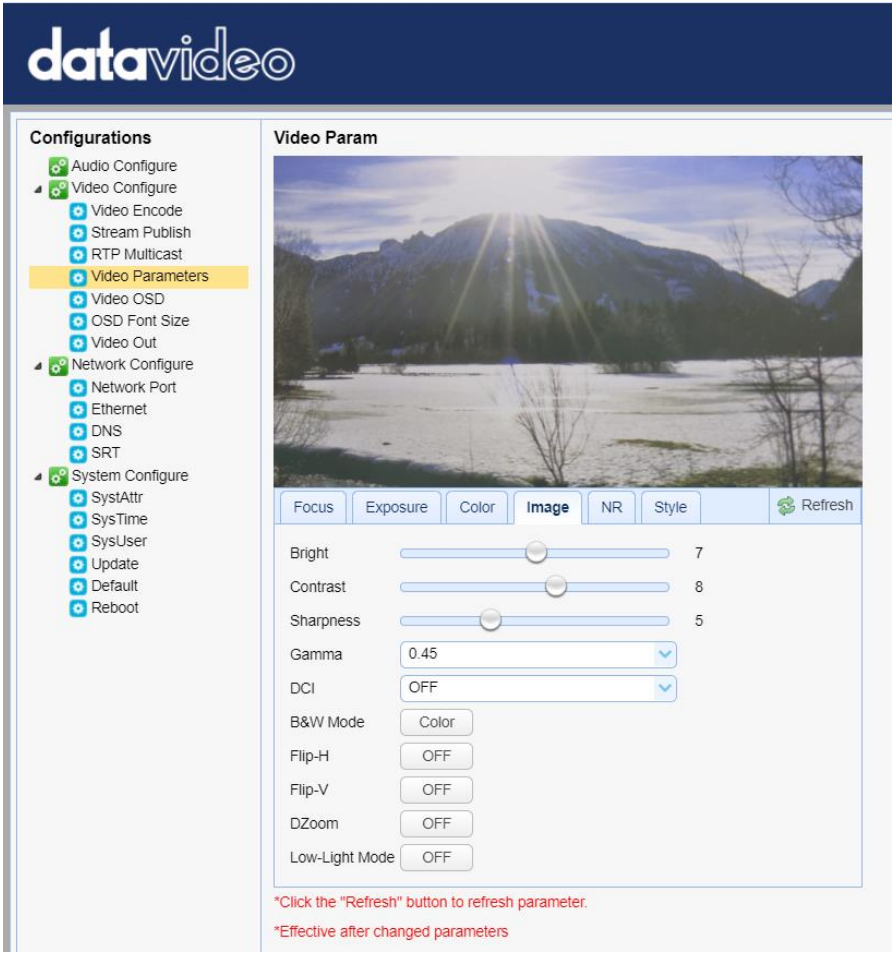
In **Color**, you are allowed to set color balance such as white balance, red gain fine tuning, blue gain fine tuning, saturation, hue and automatic white balance sensitivity. The color balance of your image will change the colors rendered in your image.



- WB Mode: Select white balance mode from the options listed below.
  - Auto
  - Manual
  - One Push
  - VAR (2400K – 7100K with a step size of 100)
- RG Tuning: This fine tunes the red gain from **-10 to 10** but effective only in **AUTO** mode.
- BG Tuning: This fine tunes the blue gain from **-10 to 10** but effective only in **AUTO** mode.
- Saturation: **60% to 200%**.
  Note: The higher the saturation, the more vivid the colors will be.
- Hue: Chroma adjustment from **0 to 14**.
- AWB Sensitivity: This is the white balance sensitivity; select **Low**, **Middle** or **High**.

Image

Other image settings include brightness, contrast, sharpness, gamma, digital cinema, black and white, orientation and digital zoom.

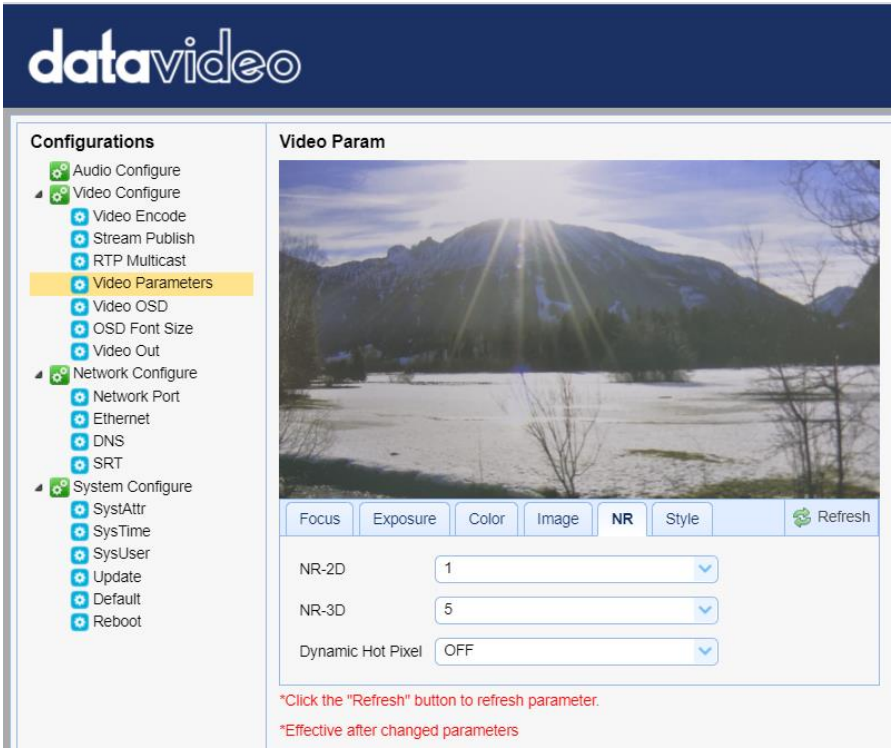


- Bright: Brightness level adjustment from **0 to 14**.
- Contrast: Contrast adjustment from **0 to 14**.
- Sharpness: Sharpness adjustment from **0 to 15**.
- Gamma: Select a gamma value from the list below:
  - Default
  - 0.45
  - 0.50
  - 0.55
  - 0.63

- DCI: To enable DCI, simply select a value from **1 to 8**; selecting **OFF** will disable DCI.
- B&W Mode: This allows you to switch between color and black-and-white modes.
- Flip-H: Turning it ON flips the image along the y-axis.
- Flip-V: Turning in ON flips the image along the x-axis.
- DZoom: This enables/disables digital zoom.
- Low-Light Mode: This enables/disables Low-Light Mode.

NR

Image noise is extremely distracting to viewers and enabling noise reduction will remove noise to achieve a broadcast quality image.



- NR-2D: 2D noise reduction is ideal for scenes with movement.
  - OFF
  - 1 – 7
  - Auto
- NR-3D: 3D noise reduction is ideal for static fields of view.
  - OFF
  - 1 – 7

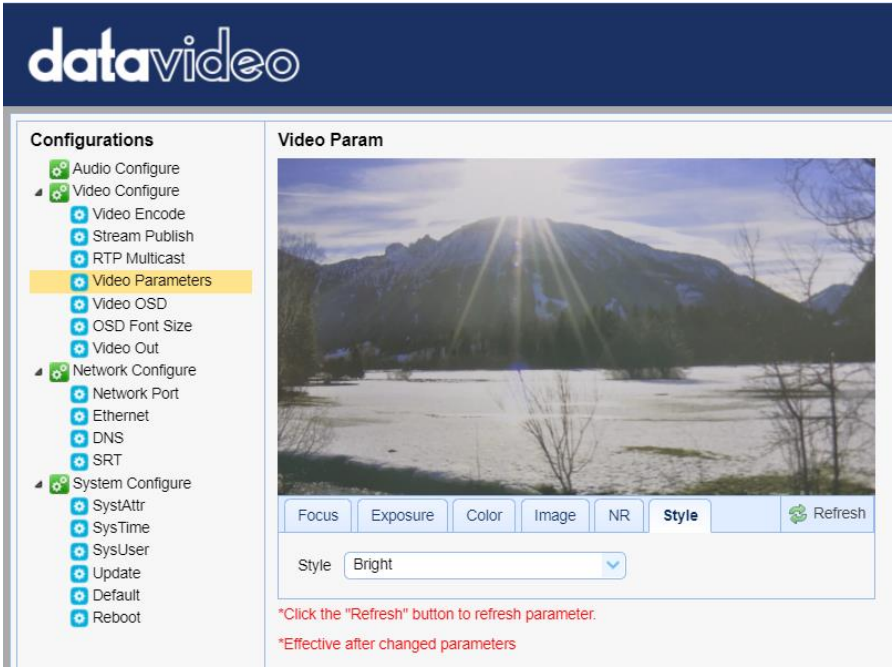
Note: By using both 2D and 3D noise reduction together, you can effectively enhance both moving and static imagery, which is ideal for most live broadcast environments.

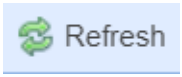
- Dynamic Hot Pixel: Hot pixels are bright colored spots in your images, often noticeable with slow shutter speeds or high ISO settings. By enabling the dynamic hot pixel feature, these spots will be automatically removed.
  - OFF
  - 1 – 5

Style

In **Style**, you will be able to select the picture style of your preference. The available styles are:

- Default
- Normal
- Clarity
- Bright
- Soft

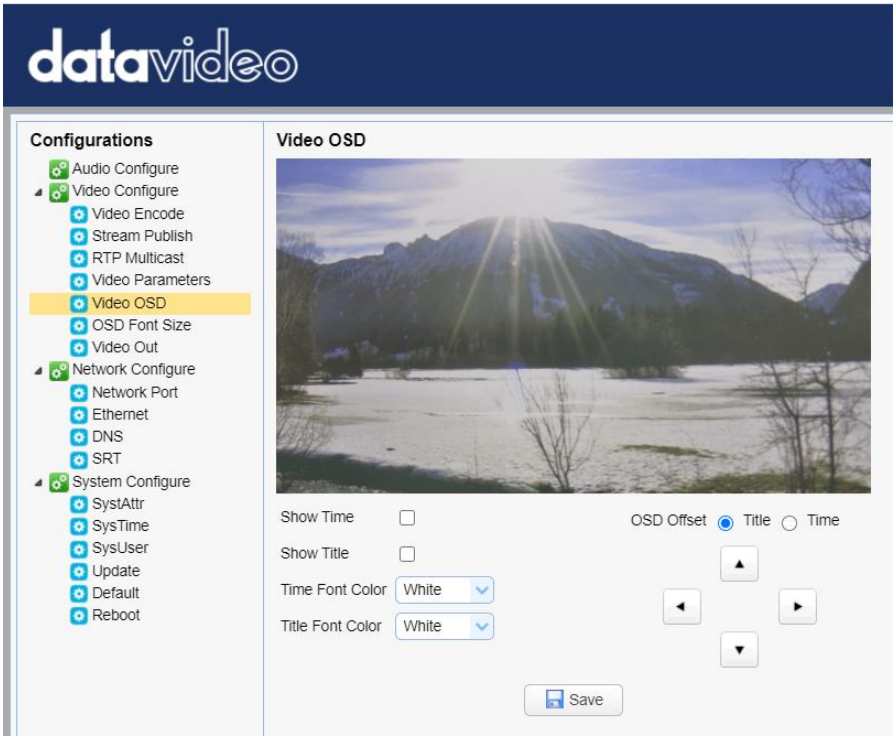




Note: Each time after you modify the camera parameters, please click the Refresh button to apply the new settings.

Video OSD

In **Video OSD**, you will be allowed to show video time and title on the screen. You can further set the font color as well as their positions.



Enable Video Time and Title on Screen

Simply check the checkbox then click the **Save** button to display video time and title on the screen.

Set Font Color of Time and Title

You can also select a display color for your time and title. Available color options include:

- White
- Black
- Yellow
- Red
- Blue

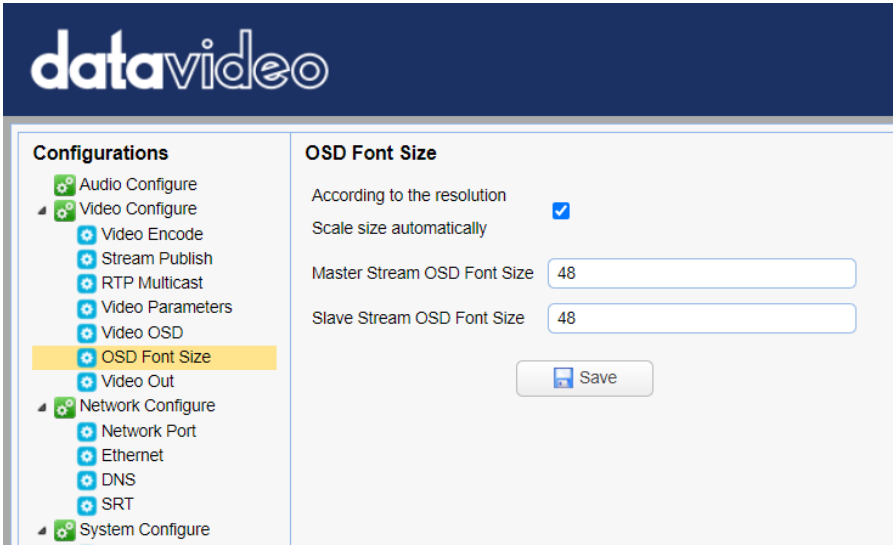
Adjust Time and Title Positions

On the OSD Offset tile, you will be allowed to adjust positions of the Time and Title displayed on the screen. First select Time or Title then click the arrow buttons to move it to the desired position.

Note: After you've configured the video time and title, click the Save button to apply the new settings.

OSD Font Size

In **OSD Font Size**, you can set the font size for the Master and Slave streams by entering a number into the respective textboxes shown in the diagram below. In addition, you can also select to allow the system to scale the font size automatically according to the resolution set.



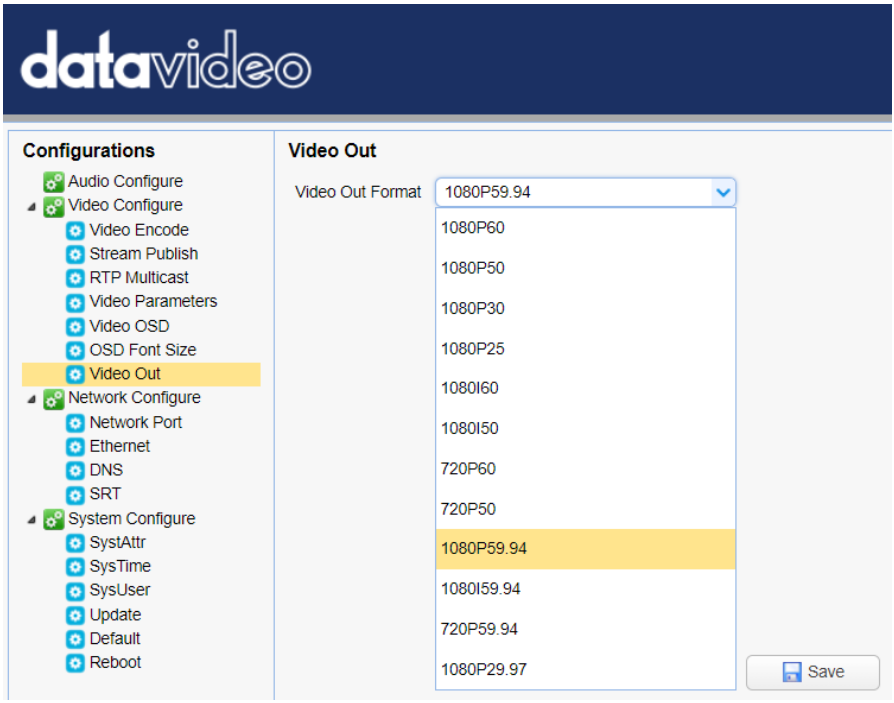
Video OUT

The **Video Out** allows users to select the desired video output resolution from the drop-down menu. Supported output resolutions include:

- 1080P60
- 1080P50

- 1080P30
- 1080P25
- 1080I60
- 1080I50
- 720P60
- 720P50
- 1080P59.94
- 1080I59.94
- 720P59.94
- 1080P29.97

Note: Click the Save button after you've selected a resolution.



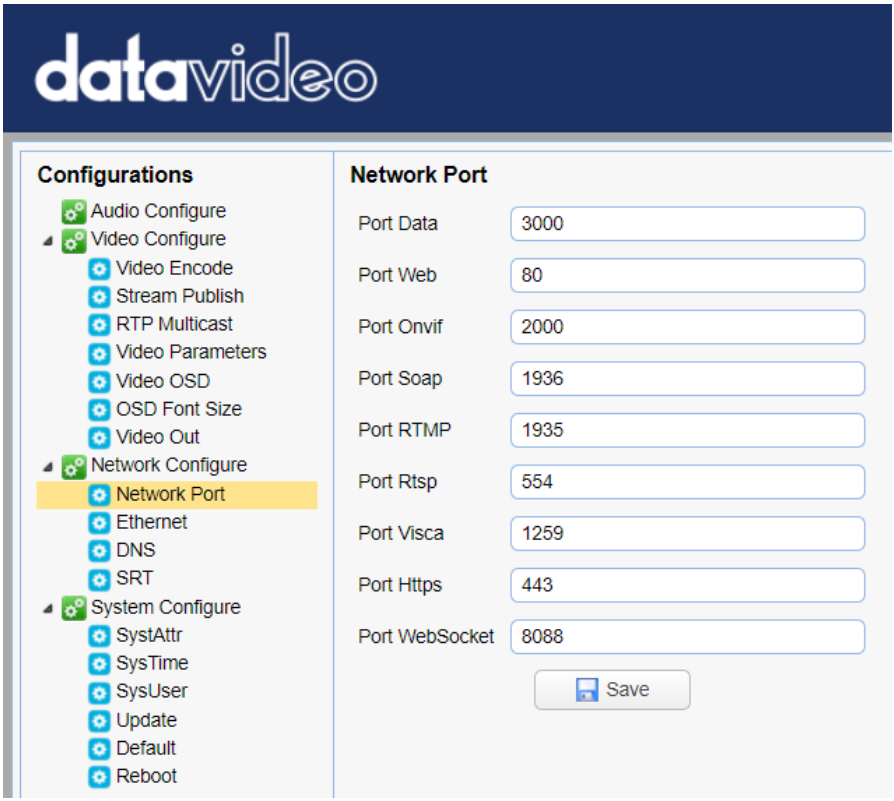
Network Configure

Network Configure allows you to configure the network functions of your camera.

Network Port

In **Network Port**, you should be able to find a list of default port numbers for different data communication protocols. Please note that these port numbers may vary according to your network environment.

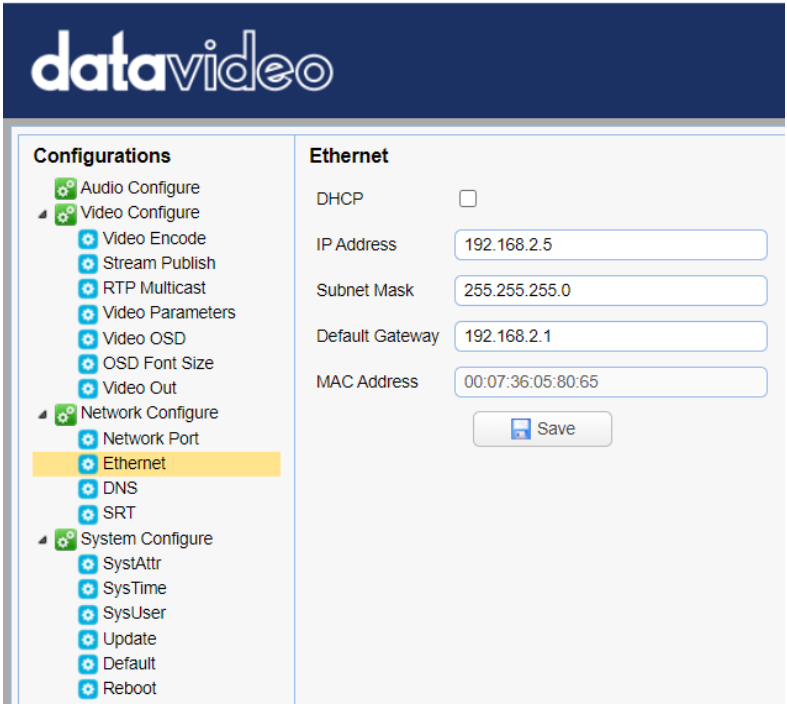
Note: Click the Save button after you've edited the port numbers.



Ethernet

In **Ethernet**, you are allowed to modify your network settings according to your network environment. For more details about **DHCP** and **Static IP Mode**, see ***Network Connection***.

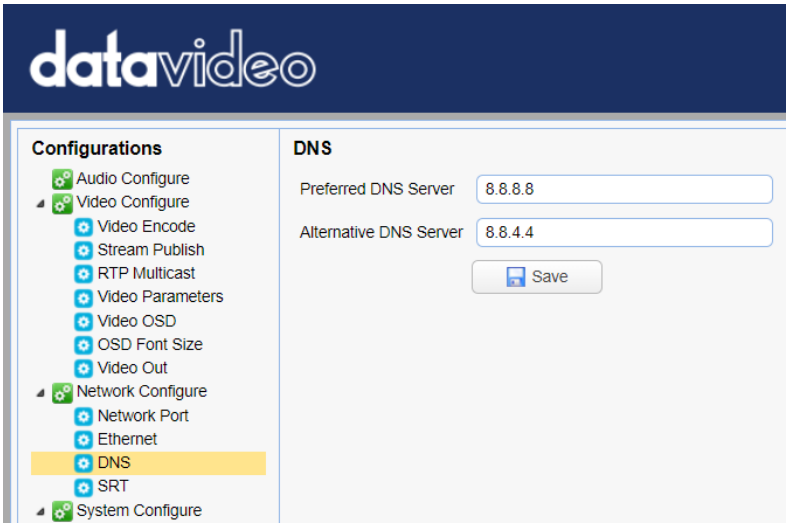
Note: Click the Save button after you've edited the network settings.



DNS

In **DNS**, Enter the DNS information which is 8.8.8.8 by default.

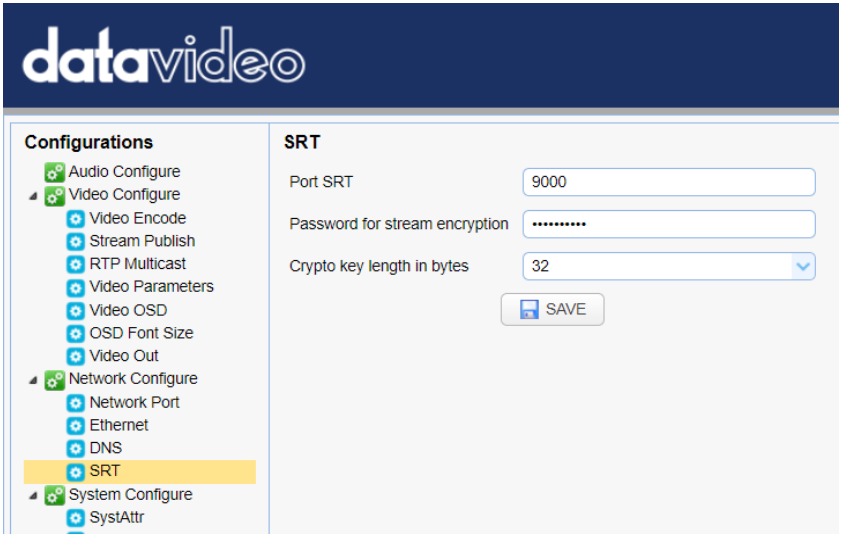
Note: Click the Save button after you've edited the DNS information.



SRT

In SRT, you can set the port number for the SRT stream. The default port number is 9000. The password and the key length allow you to encrypt the SRT stream.

Note: Click the Save button after you've edited the SRT settings.

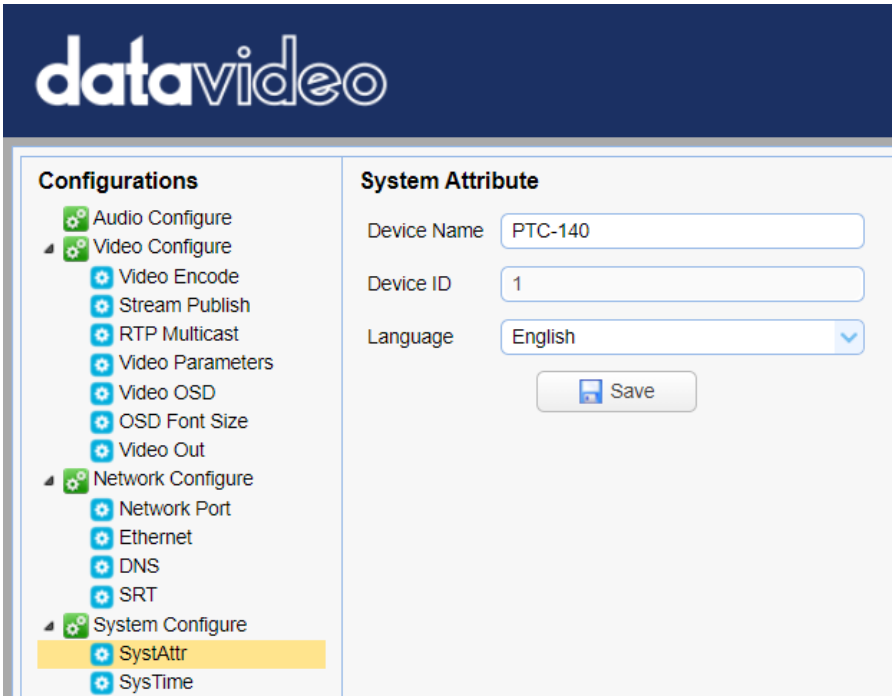


System Configure

System Configure allows you to configure your camera system.

System Attribute

In System Attribute, you are allowed to edit your camera name and select the Web UI language. Available languages are **Traditional Chinese**, **Simplified Chinese** and **English**.

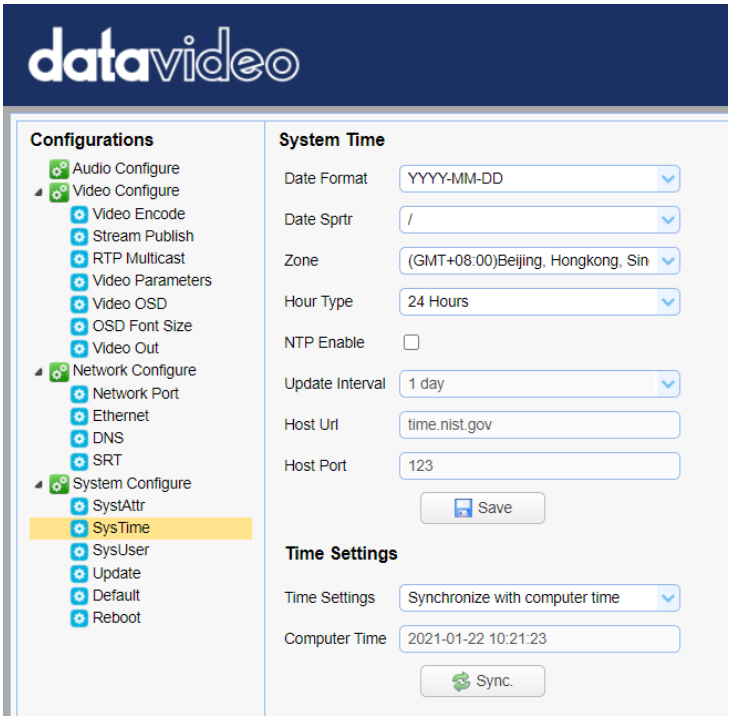


System Time

In **System Time**, you are allowed to set the **Date Format**, **Time Zone**, **Hour Type** and **NTP**.

NTP stands for Network Time Protocol and it is an Internet protocol used to synchronize the clocks of devices over a network to some time reference. Once NTP is enabled, you will be allowed to select the update frequency and assign the time server.

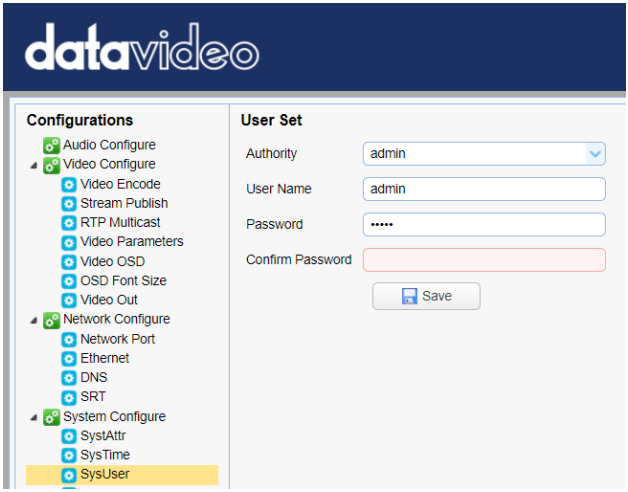
If NTP is not enabled, you may choose to synchronize the device time with the computer time.



System User

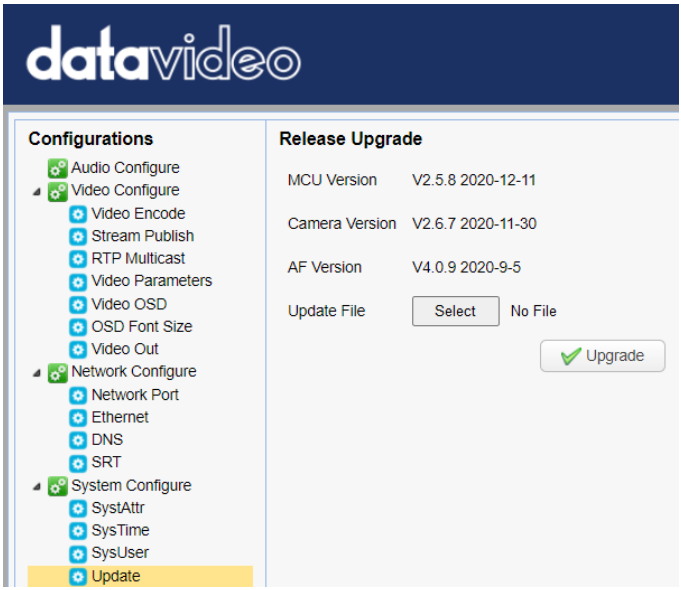
In **System User**, you are allowed to edit the login credentials for Admin, User 1 and User 2.

Note: Click the Save button to save the new login credentials.



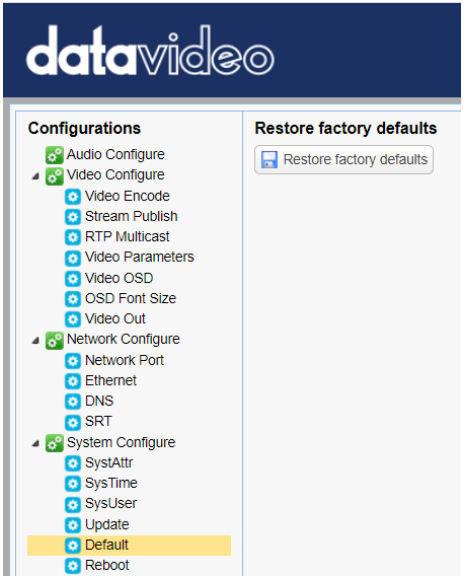
Update

This is where you will be able to view current firmware information. See ***Firmware Update*** for detailed firmware upgrade instructions.



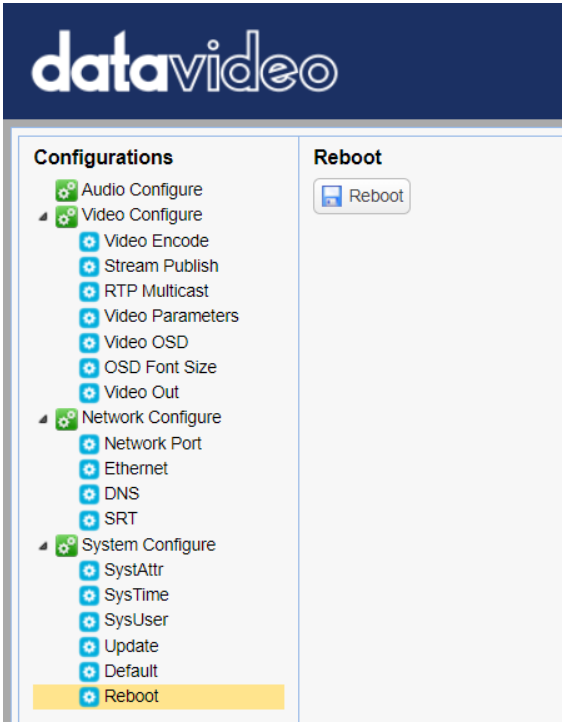
Default

In **Default**, click "**Restore factory defaults**" to reset the device to factory defaults.



Reboot

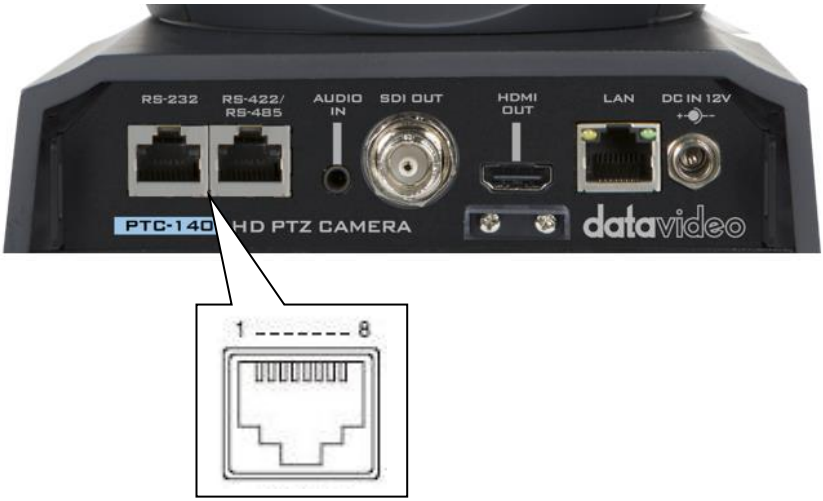
Click “**Reboot**” to reboot the device.



9. Remote Control Port Pinouts

In addition to using the Ethernet port for remote control, you can also connect your PC or any keyboard controllers to the RS-232 or RS-422/RS-485 remote port to control PTC-140. Use an Ethernet cable to connect the external RS-232 or RS-422/RS-485 controller to PTC-140. You can make your own cable using the pinout information provided in this chapter.

Remote Control Port



The RS-232 pinout is described below.

No.	RJ-45 Connector	Camera's RS-232 Port
1	White/Orange	GND
2	Orange	NC
3	White/Green	NC
4	Blue	Transmit IN
5	White/Blue	NC
6	Green	Receive IN
7	White/Brown	Transmit OUT
8	Brown	Receive OUT

The RS-422/RS-485 4-wire pinout is described below.

No.	RJ-45 Connector	Camera's RS-422/485 Port
1	White/Orange	GND
2	Orange	NC
3	White/Green	RX-
4	Blue	TX-
5	White/Blue	TX+
6	Green	RX+
7	White/Brown	NC
8	Brown	NC

The RS-485 2-wire pinout is described below.

No.	RJ-45 Connector	Camera's RS-485 Port
1	White/Orange	GND
2	Orange	NC
3	White/Green	(RX-/TX-)
4	Blue	NC
5	White/Blue	NC
6	Green	(RX+/TX+)
7	White/Brown	NC
8	Brown	NC

10. Firmware Update

Datavideo usually releases new firmware containing new features or reported bug fixes from time to time. Customers can either download the firmware as they wish or contact their local dealer or reseller for assistance.

This section outlines the firmware upgrade process which should take ***approximately few minutes to complete***.

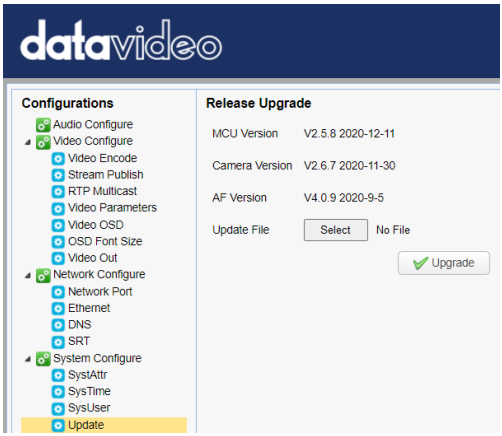
The existing settings should persist through the *firmware upgrade process, which should not be interrupted once started* as this could result in a non-responsive unit.

Requirements

- PTC-140 Unit
- PC/Laptop
- Latest firmware files
  Download from https://www.datavideo.com/product/PTC-140
- Ethernet Cable
- Router if connected over a network

Procedure

1. Open the web user interface of the PTC-140.
2. Click “System Configure” → “Update”



3. Click “Select File” button to browse your disk for the latest firmware file.
4. Click “Upgrade” button to start upgrading the firmware.

11. Frequently-Asked Questions

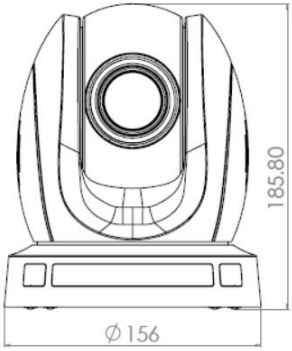
This section describes problems that you may encounter while using PTC-140. If you have any questions, please refer to related sections and follow all suggested solutions. If problem still exists, please contact your distributor or the service center.

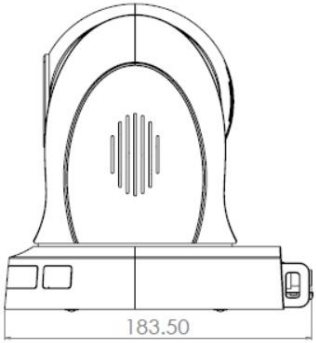
No.	Problems	Solutions
1.	What are important points of product maintenance?	1. If the camera will not be used for a long time, please unplug the 12V DC power plug, and remove AC power adapter from AC outlet. 2. Use soft cloth or tissue to clean the camera. 3. After washing the camera lens, dry it with a soft dry cloth. Use a neutral detergent rather than acidic or corrosive detergents to clean the lens.
2.	There is no output video.	1. Check that your power is properly connected. This is indicated by the power LED. 2. Make sure the camera is switched ON. 3. Check your video cable connection.
3.	I have seen image jitter while zooming in or out.	1. Make sure the camera is properly mounted. 2. Make sure that machines that could cause vibration are not in proximity of the camera.
4.	The remote control is not working.	1. Try setting the camera to CAM1 and try again. 2. Make sure the remote control's battery is fully charged. 3. Check your device working mode. 4. Make sure the OSD menu is turned off. The remote control cannot be used if the OSD menu is enabled.
5.	The serial port is not working properly.	1. Make sure you are using the standard connection cable provided by Datavideo. 2. Make sure your baud rate and device addresses are correct. 3. Check your cable connection.

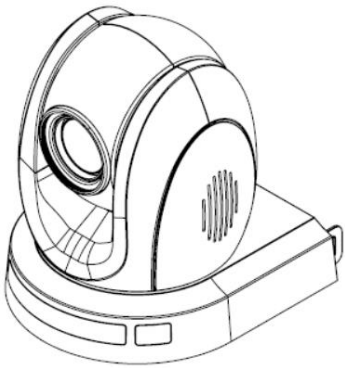
		4. Check your device working mode.
6.	I cannot log in to the web user interface.	1. Check your Ethernet connection. 2. Check your network settings such as IP address.
7.	The camera image cannot be viewed in the preview window.	Make sure you are using Google Chrome or Microsoft Edge to view the camera image in the preview window. The preview window cannot open in Microsoft Internet Explorer. The preview window may stop responding if the browser is left idle for a period of time. To resume playing, try refreshing the page or relogin the web UI.

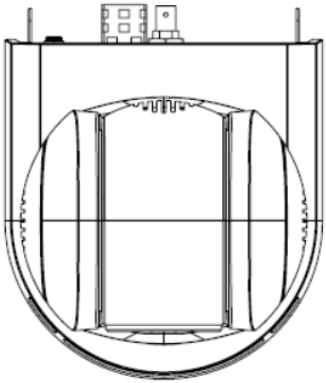
12. Dimensions

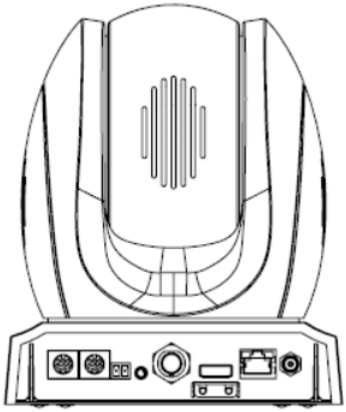
Unit: mm











13. Specifications

Camera Parameters	
Video Format	1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50
Image Sensor	1/2.8 inch high quality HD CMOS sensor
Effective Pixels (approx.)	2.07 Mega pixels
S/N Ratio	>55dB
Min. Illumination	0.5Lux (F1.8, AGC ON)
Electronic Shutter	Auto / Manual
Zoom Ratio	20x Optical Zoom, 10x Digital Zoom
Gamma Control	Off / Normal
Iris Control	Auto / Manual
Digital Noise Reductions	Yes
On-Screen Display (OSD)	English, Simplified Chinese
White Balance	Auto, Manual, One Push, 3000K, 4000K, 5000K, 6500K
AGC / Gain Control	Auto / Manual
Mirror / Flip Image	Yes
Focus Mode	Auto / Manual
Panning / Tilting Range	Pan: 340° Tilt: +90° to -30°
Panning / Tilting Speed	Pan: 0.1~60°/sec Tilt: 0.1~30°/sec
Preset	255 Positions
Focal Length	f=5.2 (wide) to 98 (tele) mm F1.6 to F3.5
Field of View (Horizontal, Wide)	Approx. 54.7° (WIDE END) / 3.3° (TELE END)
Image Compensation	Backlight Compensation

Input /Output Interfaces	
Video Output	HDMI x 1 SDI x 1
Audio Input	3.5mm Line in
Tally LED	Dual colors (Red, Green)
Lens Filter	M52.0 x 0.75 Thread with UV Protection
Control Protocol	VISCA/Pelco-D/Pelco-P; Baud Rate:115200/38400/9600/4800/2400bps DVIP
Remote Control Interface and Transmit Distance	RJ-45: for IP control (DVIP) RS-232: Mini DIN 8-pin (IN / OUT) RS-485
Video Compression Format	H.264, H.265, Dual stream output
Audio Compression Format	AAC/MP3/G.711A Audio compression
HD IP Interface	100M IP port(100BASE-TX); Support DVIP
Streaming Protocols	TCP/IP, HTTP, RTSP, RTMP(S), DHCP, Multicast, etc
Others	
F/W Update	Ethernet
IR Control	Yes
Camera Control Unit	RMC-180/RMC-300C
Tripod Mount	1/4-20 UNC
Optional Accessories	WM-1/ WM-10
Color	Dark Blue/White
Dimensions (LxWxH)	156 x 184 x 186 mm
Weight	1.6 kg
Operating Temp. Range	0~40 °C
Power	DC 12V 12W

Notes

Notes

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo.com for answers to common questions, support requests or contact your local office below.

Please visit our website for latest manual update.

www.datavideo.com/product/PTC-140

datavideo

www.datavideo.com

@DatavideoUSA @DatavideoIndia2016
@DatavideoEMEA @Datavideojapan
@DatavideoTaiwan @DatavideoLatam
@DatavideoAsia @DatavideoBrasil

@Datavideo
@Datavideo_EMEA
@Datavideo_Taiwan

@DatavideoUSA
@DVTWDVCN

@DatavideoUSA
@DatavideoEurope