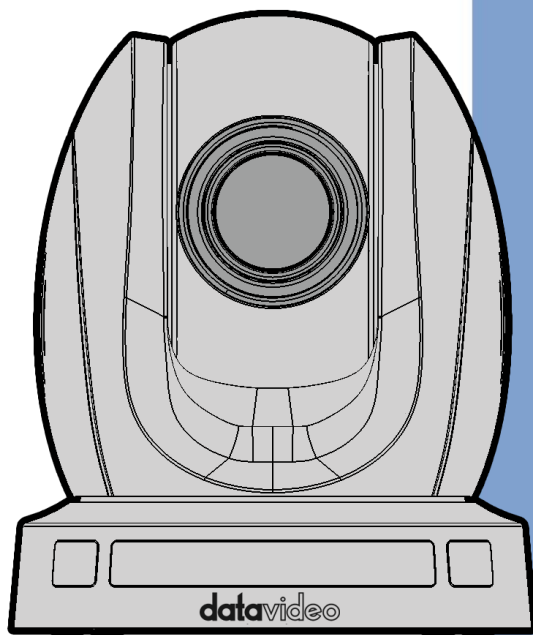


**data**video



HD PTZ CAMERA

**PTC-140**

**Instruction Manual**

[www.datavideo.com](http://www.datavideo.com)

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### **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.

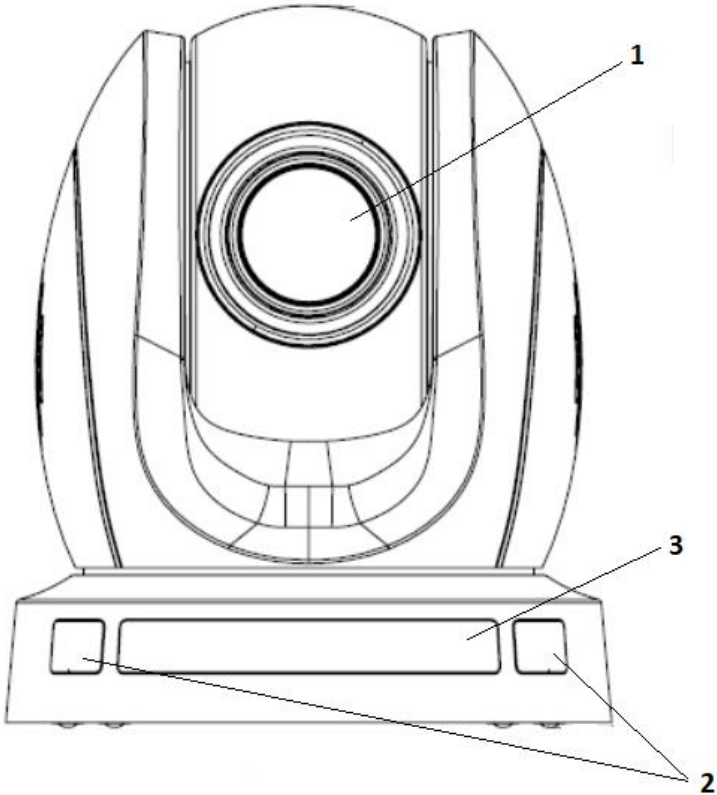
The PTC-140 is also an IP camera supporting H.264 /H.265 video compression and dual stream outputs.

## ***Features***

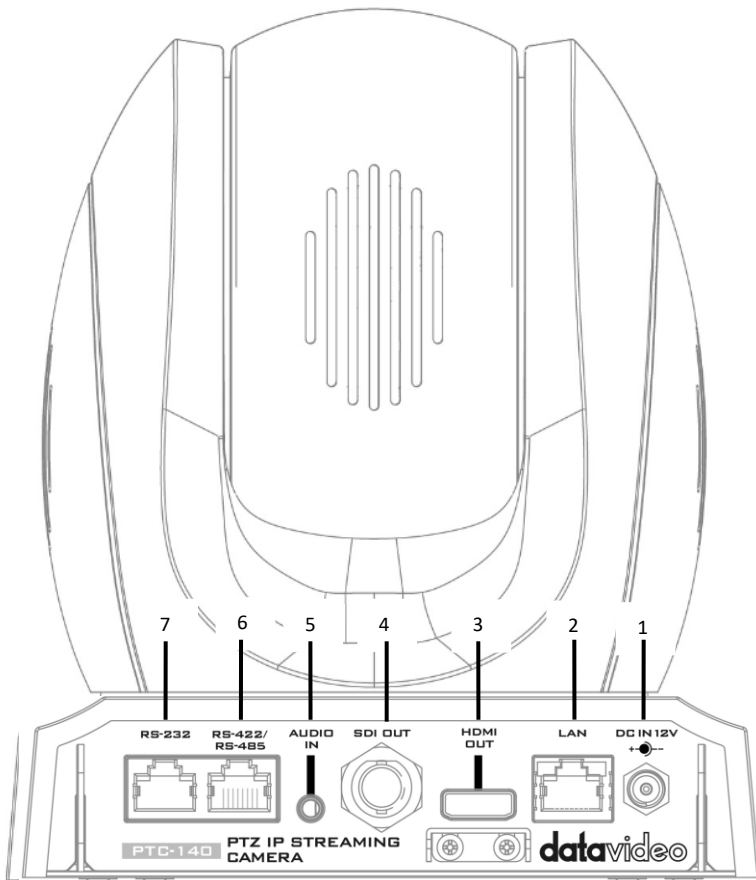
- 1/2.8 inch CMOS sensor. Resolution is up to 1920x1080 with frame rate up to 60fps.
- Low Noise CMOS effectively ensures high SNR of camera video. Advanced 2D/3D noise reduction technology is also used to further reduce the noise, while ensuring image sharpness.
- Audio Input Interface
- Supports AAC, 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	<b>Lens</b> Built-in 1/2.8" 2.07M Pixel CMOS HD color camera with white balance control, backlight compensation, automatic gain and etc.
2	<b>Tally LED</b> Tally lamp will be turned ON upon receiving the ON signal.
3	<b>Sensor for Remote Control</b> Remote control IR receiver

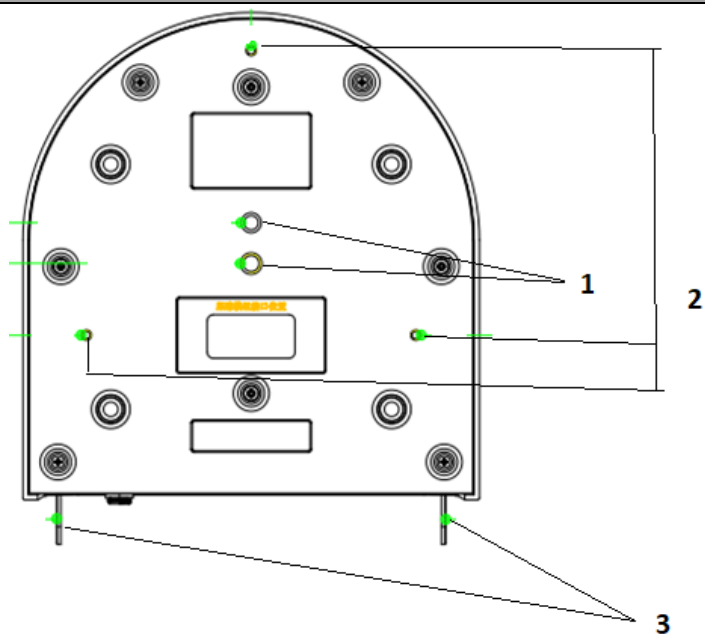
## Rear of Camera



1	<p><b>Power Input</b></p> <p>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.</p>
2	<p><b>LAN Port</b></p> <p>This 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.</p>

3	<b>HDMI OUT</b> The <b>HDMI OUT</b> allows you to connect an external HDMI monitor via an HDMI cable.
4	<b>3G-SDI OUT</b> The <b>3G-SDI OUT</b> allows you to connect an external monitor via an SDI cable.
5	<b>Audio IN</b> The 3.5mm audio input receives external audio.
6	<b>RS-422/RS-485 Interface (RJ-45)</b> 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 <b><u>“Section 8 Remote Control Port Pinouts”</u></b> for making the cable for the RS-422/RS-485 interface.  <b>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.</b>
7	<b>RS-232 Interface (RJ-45)</b> 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 <b><u>“Section 8 Remote Control Port Pinouts”</u></b> for making the cable for the RS-232 interface.

### Bottom of Camera

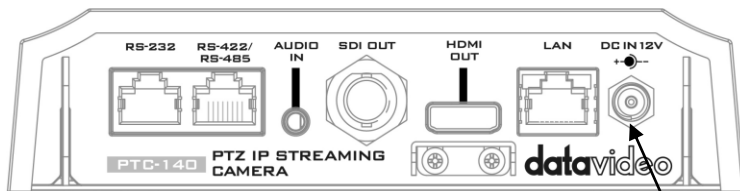


1	<b>Tripod Screw Hole</b> allows the user to mount the camera on the tripod.
2	<b>Screw Hole</b> Screw holes for ceiling bracket mounting.
3	<b>For Safety Rope</b> Ties safety rope for fixing the camera to the ceiling.

## 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 be OFF 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 0<sup>th</sup> preset position.

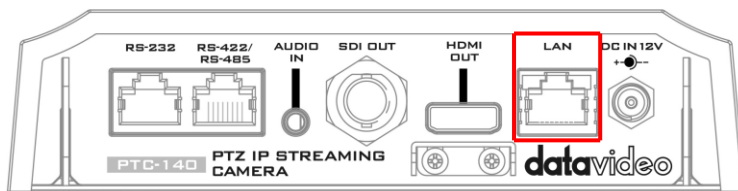


Connect the DC 12 V  
power adapter

### 3.2 Video Output

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

#### Ethernet Port

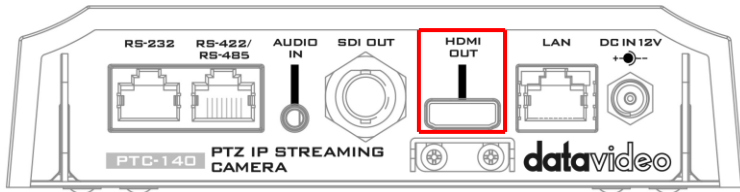


Follow the instructions below to view your video on the web user interface.

1. Connect the PTC-140 to the PC/Notebook using an Ethernet cable.
2. On your PC/Notebook, open the web browser and enter 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.

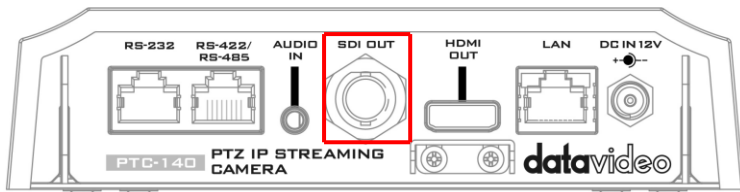
- Click into the preview window on which the video will be displayed.

### 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 OSD menu.


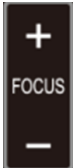



### 4.1 Remote Control Functions




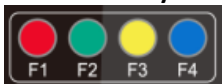


No	Function Keys	Descriptions
1	<p><b>Standby Key</b></p> 	<p><b>Standby Key</b> The standby button turns <b>ON/OFF</b> the camera.</p> <p>To reboot the camera, press the standby button for 3 seconds. After device initialization is complete, the camera head will automatically return to <b>HOME</b> position.</p>
2	<p><b>Camera Select Keys</b></p> 	<p><b>Camera Select Keys</b> 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.</p> <p><b>Note: See F1 – F4 keys for ID number assignment instructions.</b></p>
3	<p><b>Number Keypad</b></p> 	<p><b>Number Keypad</b> Set, recall and clear presets using the number keypad.</p> <p><b>Set Preset</b> Please press the <b>SET PRESET</b> at first, and then please press any of the <b>number keys from 0 to 9</b> to save the PTZ settings. You will be allowed to save up to <b>up to 10 presets using the remote control</b>.</p> <p><b>Call Preset</b> Press any of the <b>number keys from 0 to 9</b> to recall the preset settings. <b>Note: Make sure the preset that you want to recall contains PTZ settings before pressing the number key.</b></p> <p><b>Clear Preset</b> First press the <b>CLEAR/PRESET</b> key then the <b>number key (0 – 9)</b> to empty the preset.</p>



No	Function Keys	Descriptions
4	<p><b>Asterisk and Pound Keys</b></p> 	<p>The asterisk and pound keys form various combinations with other keys to access certain functions directly.</p> <p>The shortcuts are listed as follows:</p> <ol style="list-style-type: none"> <li>1. <b>【#】 + 【#】 + 【#】</b> : Clear all presets</li> <li>2. <b>【*】 + 【#】 + 【6】</b> : Restore factory defaults</li> <li>3. <b>【*】 + 【#】 + 【9】</b> : Image flip along horizontal axis</li> <li>4. <b>【*】 + 【#】 + AUTO</b>: Enable auto focus mode</li> <li>5. <b>【*】 + 【#】 + 【3】</b> : Set OSD MENU language to Chinese.</li> <li>6. <b>【*】 + 【#】 + 【4】</b> : Set OSD MENU language to English.</li> <li>7. <b>【*】 + 【#】 + MANUAL</b>: Restore default user name, password, and IP address.</li> <li>8. <b>【#】 + 【#】 + 【0】</b> : Set video format to 1080P60.</li> <li>9. <b>【#】 + 【#】 + 【1】</b> : Set video format to 1080P50</li> <li>10. <b>【#】 + 【#】 + 【2】</b> : Set video format to 1080I60</li> <li>11. <b>【#】 + 【#】 + 【3】</b> : Set video format to 1080I50</li> <li>12. <b>【#】 + 【#】 + 【4】</b> : Set video format to 720P60</li> <li>13. <b>【#】 + 【#】 + 【5】</b> : Set video format to 720P50</li> <li>14. <b>【#】 + 【#】 + 【6】</b> : Set video format to 1080P30</li> <li>15. <b>【#】 + 【#】 + 【7】</b> : Set video format to 1080P25</li> </ol>
5	<p><b>AUTO Focus</b></p> 	<p><b>AUTO Focus</b></p> <p>Pressing this key will enable auto focus mode.</p>

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

No	Function Keys	Descriptions
11-13	<p><b>Direction Arrows</b></p> 	<p><b>Direction Arrow Keys</b> Press the arrow keys to move the camera head up, down, left and right.</p> <p><b>Home Key</b> Press <b>Home</b> to <b>return the camera head</b> to the center.</p> <p><b>Note: In the OSD menu, press Home to enter the selected option item and MENU to exit.</b></p>
14	<p><b>MENU</b></p> 	<p><b>MENU</b> Open or close the camera's OSD menu.</p>
15	<p><b>BLC ON/OFF</b></p> 	<p><b>BLC ON/OFF</b> Press <b>BLC ON/OFF</b> to turn ON/OFF the backlight compensation.</p>
16	<p><b>F1 – F4 Keys</b></p> 	<p><b>F1 – F4 Keys</b> Assign an ID number to the camera intended for operation using F1 – F4 keys by pressing the combination keys as described below.</p> <ul style="list-style-type: none"> <li>• CAM1: <b>【*】 + 【#】 + 【F1】</b></li> <li>• CAM2: <b>【*】 + 【#】 + 【F2】</b></li> <li>• CAM3: <b>【*】 + 【#】 + 【F3】</b></li> <li>• CAM4: <b>【*】 + 【#】 + 【F4】</b></li> </ul> <p>Use Camera Select keys to select the camera intended for operation after you've assigned an ID number to each camera.</p>

**Note:** If users press the **\*+#+MANUAL** buttons, the IP address of the PTC-140NDI will be resumed to factory default 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.

On-Screen MENU	
Language	
Setup	
Camera	
P/T/Z	
Video Format	
Network Settings	
Version	
Restore Default	
Escape	
[↑↓] Select	[← →] Change Value
[Menu] Back	[Home] OK

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

Main Options								
Sub-Options	Language	Setup	Camera	P/T/Z	Video Format	Network Settings	Version	Restore Default
	English	Protocol	Exposure	Speed by Zoom	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			
					720P50			
					1080P59.94			
					1080I59.94			
					1080P29.97			

Main Options							
Language	Setup	Camera	P/T/Z	Video Format	Network Settings	Version	Restore Default
				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	
Camera	Mode		Auto
			Manual
			SAE
			AAE
			Bright
	EV		ON
			OFF
	EV Level		0
			1
			2
			3
			4
			5

Main Menu	Sub Menu	Options	Sub-options
			6
			7
			-7
			-6
			-5
			-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

Main Menu	Sub Menu	Options	Sub-options
			3
			4
			5
			6
			7
			8
			9
			10
			-10
			-9
			-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

Main Menu	Sub Menu	Options	Sub-options
		Saturation	60%
			70%
			80%
			90%
			100%
			110%
			120%
			130%
			140%
			150%
			160%
			170%
			180%
			190%
			200%
		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



Main Menu	Sub Menu	Options	Sub-options
			6
			7
			8
			9
			10
			11
			12
			13
			14
		Contrast	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
		Sharpness	0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14

Main Menu	Sub Menu	Options	Sub-options
			15
		Flip-H	ON
			OFF
		Flip-V	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
			Onepush
		AF-Zone	Top
			Center
			Bottom
			All
		AF-Sensitivity	High
			Low
			Middle
	Noise Reduction	NR-2D	Auto
			OFF
			1
			2
			3
			4
			5
			6

Main Menu	Sub Menu	Options	Sub-options
			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	
		OFF	
	Zoom Speed	1	
		2	
		3	
		4	
		5	
		6	
		7	
		8	
	Acc Curve	Standard	
		Slow	
		Fast	
	Preset Speed	Fast	
		Slow	
		Middle	
	Joystick Pan Dir	Positive	
		Negative	

Main Menu	Sub Menu	Options	Sub-options
	Joystick Tilt Dir	Positive	
		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)		

### Note:

- Please remember to use the PTC-140 web UI and the OSD menu to modify the DHCP ON/OFF setting, and then the IP address information which is shown in the OSD menu and the web UI will be consistent.
- If the “Network Settings” option in the PTC-140 OSD menu is used for setting, users must reboot the PTC-140 after setting the “Network Settings” option and then the setting will be effective.

### 4.3 Professional Jargon Explanations of the OSD Menu

There are some professional jargons or nouns which are shown in the OSD menu of the PTC-140 camera, please refer to this section for realizing those jargons.

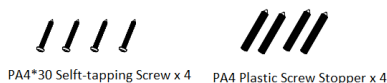
- **Speed by Zoom:** When this function is turned “ON”, at the time when the zoom-in/zoom out is beginning or it is about to reach the zoom-in/zoom-out limit or users want to stop zooming in/zooming out, the zoom-in/zoom-out speed of the camera lens will be reduced linearly. When this function is turned “OFF”, the zoom-in/zoom-out speed will be consistent no matter when the camera zoom-in is started or stopped.
- **Joystick Pan Dir:** Because the PTC-140 can use the upside down installation, if this option is set as “Positive”, the PTZ camera lens moving direction will be consistent to the direction which is selection by the remote controller. If this option is set as “Negative”, the PTZ camera lens moving direction will be reverse to the direction which is selected by the remote controller.
- **Joystick Tilt Dir :** Because the PTC-140 can use the upside down installation, if this option is set as “Positive”, the PTZ camera lens moving direction will be consistent to the direction which is selection by the remote controller. If this option is set as “Negative”, the PTZ camera lens moving direction will be reverse to the direction which is selected by the remote controller.
- **Flip-H:** This is the “Horizontal Flipping”. When “ON” is selected, the screen which is shot by the camera will flip horizontally. If “OFF” is selected, the screen will be shown in normal direction.
- **Flip-V:** This is the “Vertical Flipping”. When “ON” is selected, the screen which is shot by the camera will flip vertically. If “OFF” is selected, the screen will be shown in normal direction.

## 5. Installation Instructions

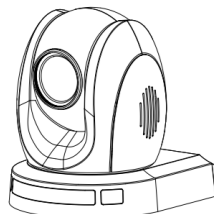
**Note: Only mount the bracket on formwork or concrete surface. Do NOT mount the bracket on plasterboard.**

In your product package, you should find

- PA4\*30 self-tapping screw x 4
- PA4 plastic screw stopper x 4
- PM3\*5 screw x 6
- Ceiling bracket (upper and lower plates) x 1
- PTC-140 camera x 1



Ceiling Bracket (Upper and Lower Plates)

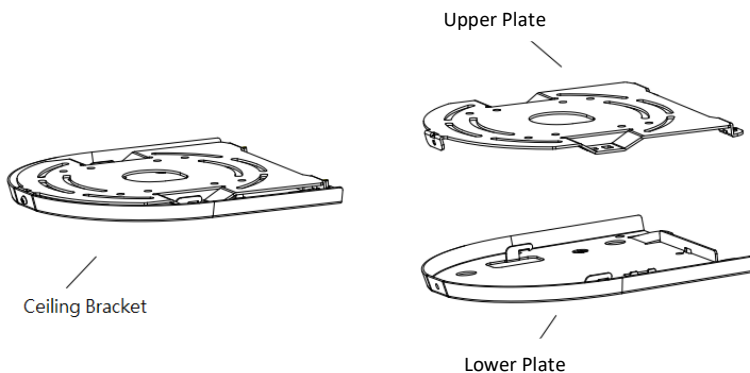


PTC-140T Camera

### Step 1: The Ceiling Bracket

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

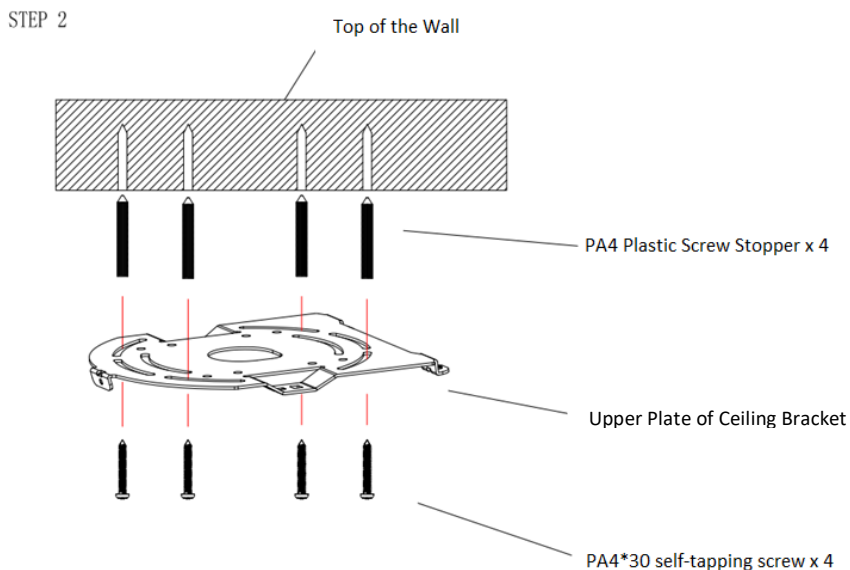
STEP 1



## 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.

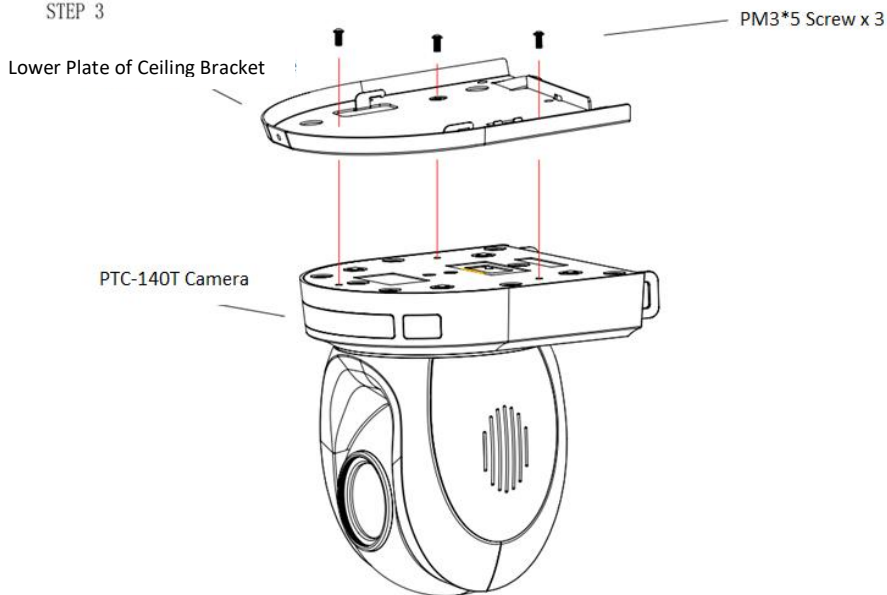
Using four PA4\*30 self-tapping screws, affix the bracket's upper plate to the ceiling.



## 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.

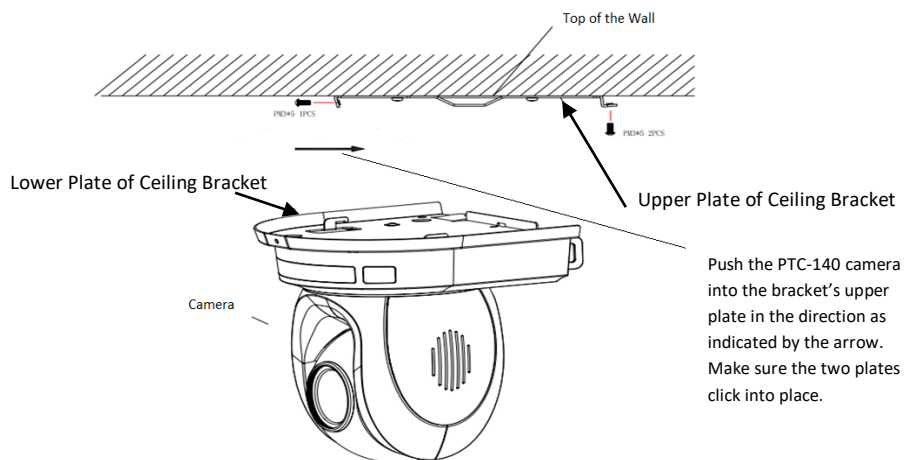
### STEP 3



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

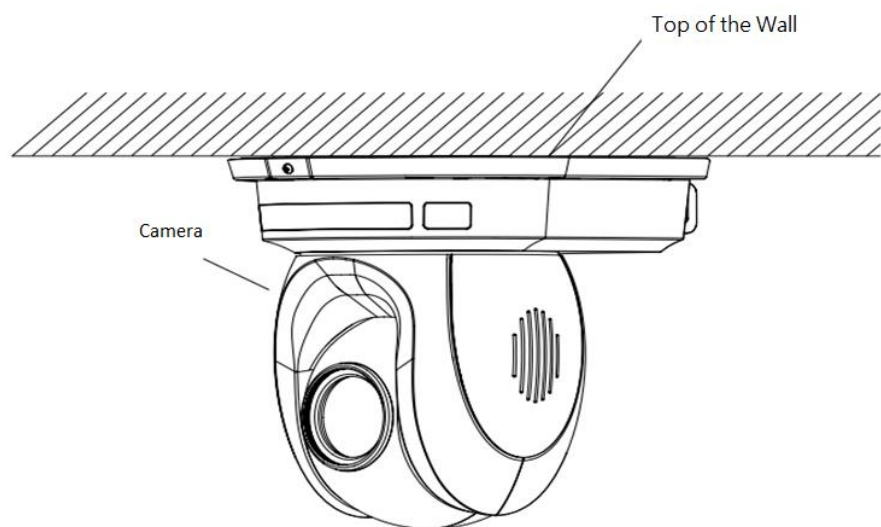
Now push the PTC-140 camera into the bracket's upper plate in the direction as indicated by the arrow in the diagram below. Make sure the two plates click into place.

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





## Step 5: Final

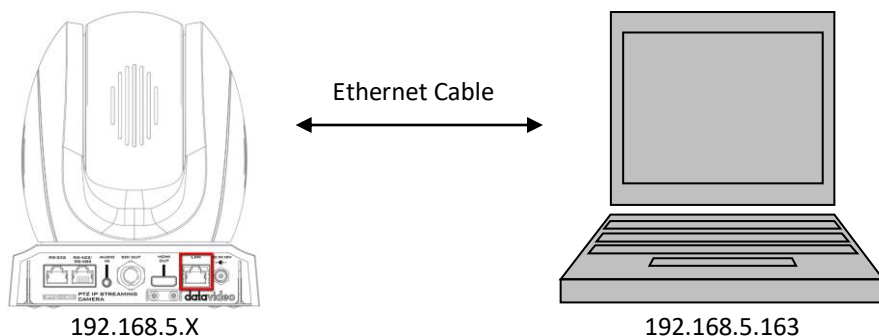


## 6. Network Connection

The Ethernet port on the back panel of your PTC-140 allows you to connect to camera from the PC/Laptop with Static or dynamic IP addresses. To access and modify these network settings, you will need to login 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.



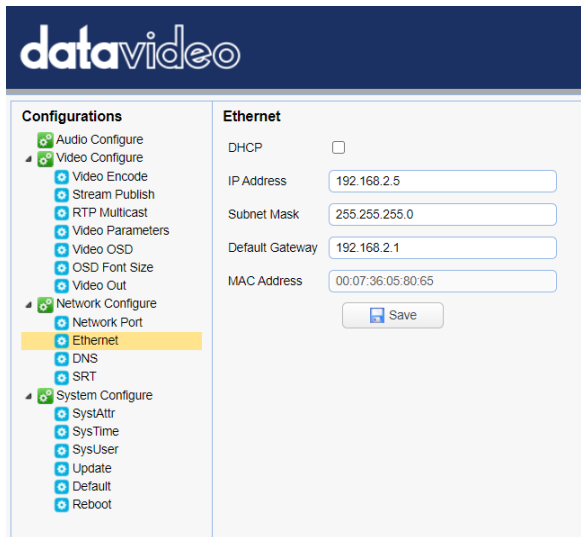
On your PC/laptop, open a web browser and in the address bar, enter the camera's default IP address, 192.168.5.163 then press the **ENTER** key which should take you to login page of the web interface.



The default login credentials are:

- User Name: admin
- Password: admin

After you have successfully login to the web interface, click “Configuration” → “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.

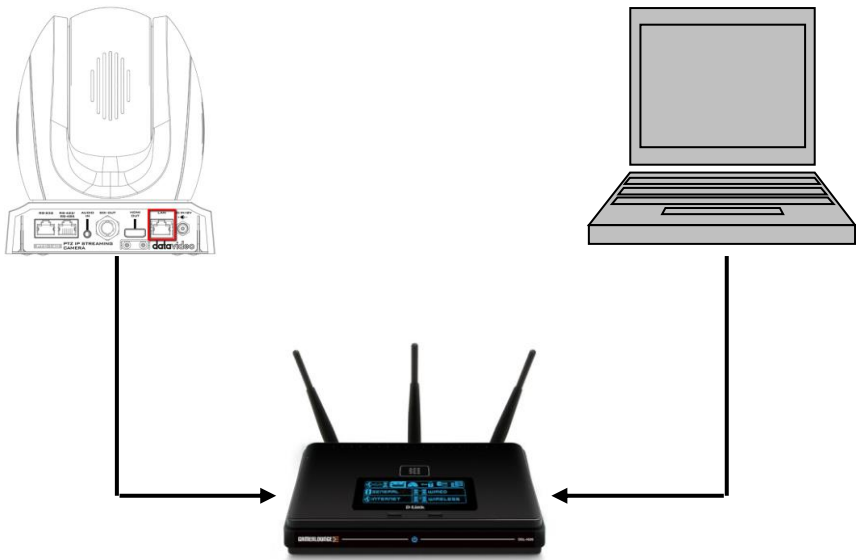


In this chapter, we will show you how to enable DHCP and Static IP modes on PTC-140 in two separate sections.

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

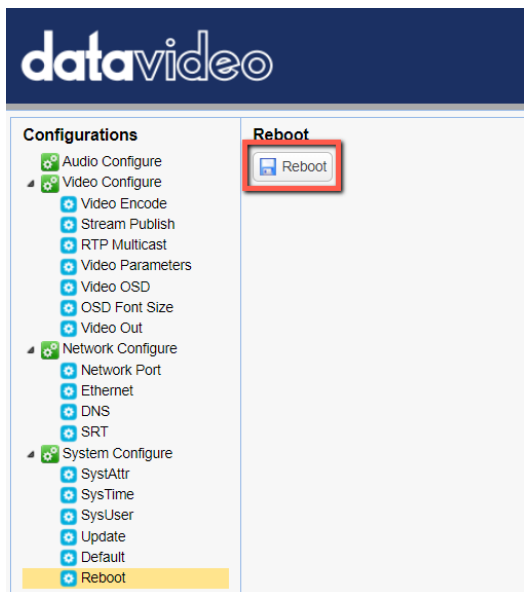
## 6.1 DHCP Mode

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, simply check the DHCP checkbox to allow the router to dynamically assign an IP address to PTC-140.

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



## 6.2 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, 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, click "Save" button to save the new settings then reboot PTC-140.

## 6.3 DVIP

DVIP is a special 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](https://play.google.com/store/apps/details?id=com.datavideo.dvipnetconfig&hl=en_US)

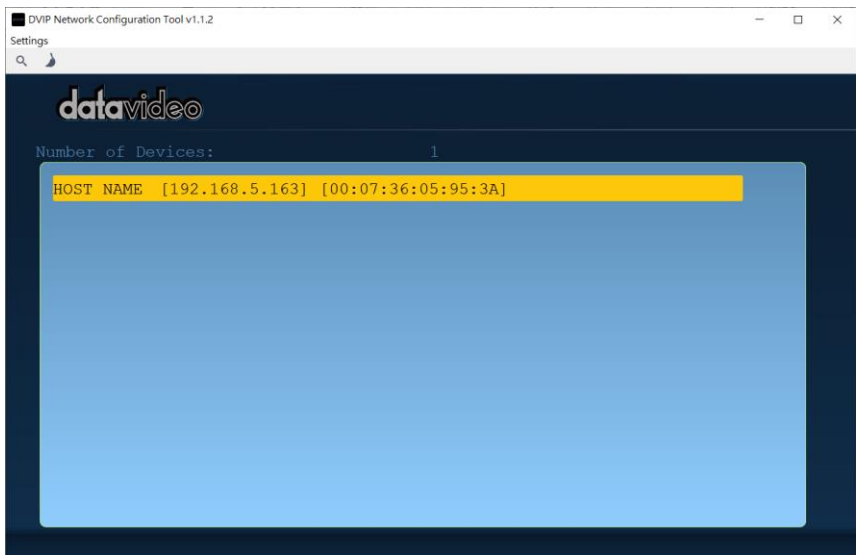
iOS: <https://itunes.apple.com/tw/app/dvip-network-config/id1177895983?mt=8>

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.

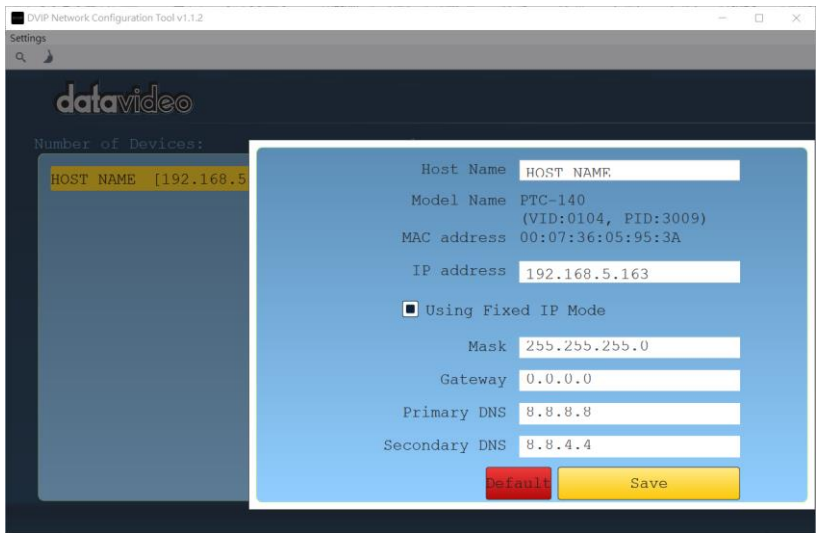
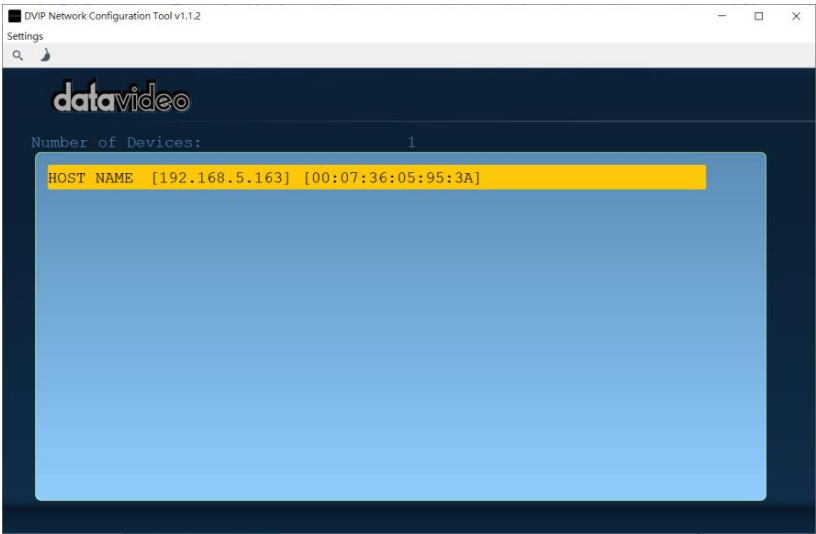
Step 1: Open the DVIP Network Configuration Tool and then select the connected Ethernet option from the “Network interface” pop-up window. After that please press the “OK” button.



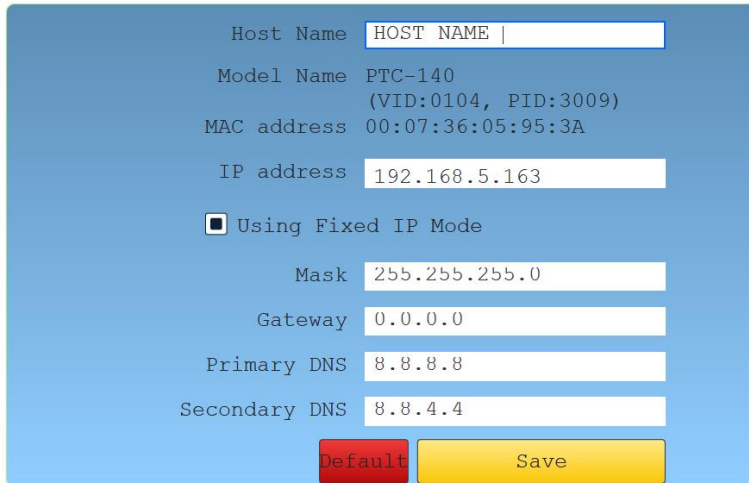
Step 2: After the Network interface is selected, the DVIP Network Configuration Tool interface will be shown as following diagram.



Step 3: Please press “HOST NAME” and then the network settings pop-up window will be shown.



Step 4: users can click “Host Name” column for changing the device name. Users can also click each setting column for changing value if it is needed. After that, please press “Save” for saving those settings. Users can also press “Default” for resuming those settings to factory default value.



The image shows a network configuration interface for a PTC-140 device. It features a light blue background with white text labels for various settings. Each setting is followed by a white input field with a blue border. The settings include Host Name, Model Name, MAC address, IP address, a checkbox for 'Using Fixed IP Mode', Mask, Gateway, Primary DNS, and Secondary DNS. At the bottom, there are two buttons: a red 'Default' button and a yellow 'Save' button.

Host Name	HOST NAME
Model Name	PTC-140 (VID:0104, PID:3009)
MAC address	00:07:36:05:95:3A
IP address	192.168.5.163
<input type="checkbox"/> Using Fixed IP Mode	
Mask	255.255.255.0
Gateway	0.0.0.0
Primary DNS	8.8.8.8
Secondary DNS	8.8.4.4
<div>Default Save</div>	

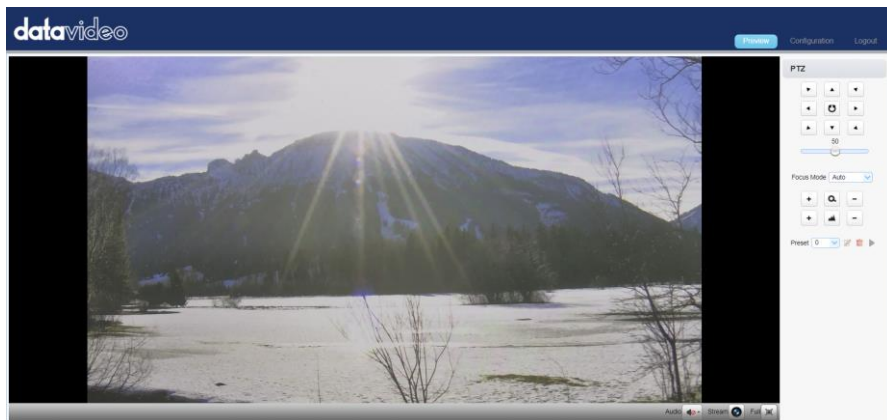


## 7. Web User Interface

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

### 7.1 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, click the “Stream” button to switch between Main Stream and Sub Stream previews. See **Video Encode** in **Configuration** tab for stream settings.



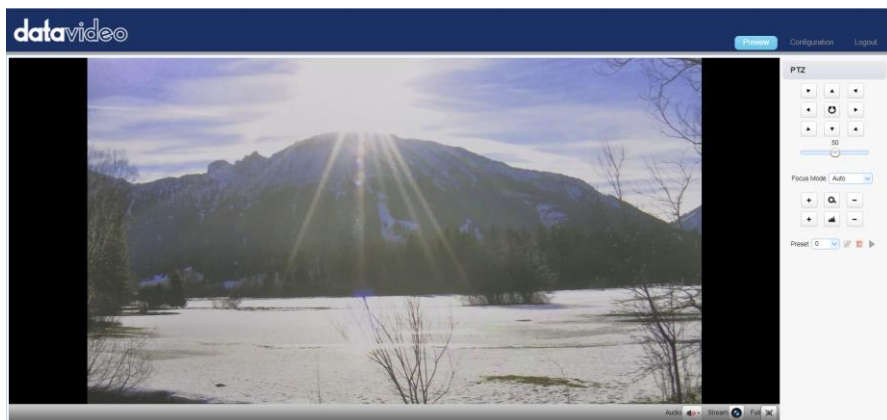
Click this “Audio” button once to turn on the sound, and then click this button again to turn off the sound.



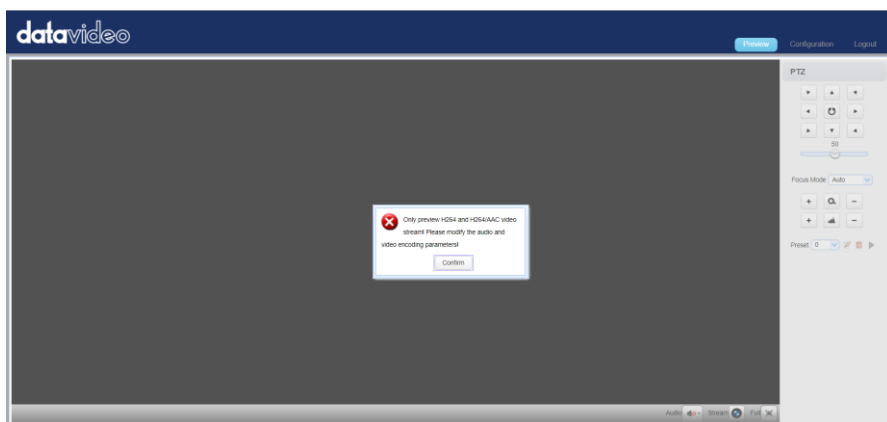
Click this “Full” button to enlarge the screen size to Full Screen.

Note: The Preview window can support the image preview for the image which is compressed in H.264 format and the Profile is set in BP or MP. If the Profile of the image is HP or the image is compressed in H.265 format, this image can not be shown in the Preview window.

- If the H.264 format is selected, the preview screen can be shown normally which is shown as following diagram.

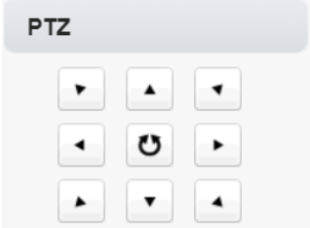


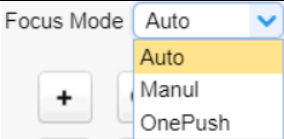








- If the H.265 format is selected, there is no screen in the Preview window and there is a warning message that will be shown.



## Control Functions

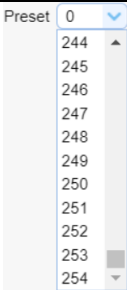



Further to the right, there are various control functions, such as **PTZ control**, **PTZ speed slider**, **focus mode** drop-down menu, **zoom** and **focus** controls, as well as **presets** for saving PTZ settings. Details of each will be described in the table below.

Controls	Descriptions
	<p><b>PTZ Control Buttons</b></p> <p>Click the arrow buttons to move the camera head to corresponding directions.</p> <p>To return to <b>Home</b> position, click .</p>
	<p><b>PTZ Speed Slider</b></p> <p>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.</p>
	<p><b>Focus Mode</b></p> <p>Select focus mode from the drop-down menu; available options are <b>Auto</b>, <b>Manual</b> and <b>One Push</b>.</p> <p><b>Auto</b>: Automatic focus</p> <p><b>Manual</b>: Manual focus</p> <p><b>One Push</b>: One time automatic focus.</p>
	<p><b>Focus Far/Near</b></p> <p>Click  (FAR) and  (Near) buttons accordingly to manually focus the camera lens onto the subject.</p> <p><b>Note: You will not be able to manually adjust the camera focus if focus mode is set to Auto or One Push.</b></p>

Controls	Descriptions
	<b>Zoom IN/OUT</b> 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
	<b>Preset Drop-Down Menu</b> Select a preset number from the drop-down menu.  <b>Note: There are 255 presets ranging from 0 – 254.</b>
	<b>Set Button</b> Click <b>Set</b> button to save PTZ settings to the selected preset number.
	<b>Delete Button</b> Click <b>Clear</b> button to remove PTZ settings from the selected preset number.
	<b>Run Button</b> Click <b>Run</b> 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.

## 7.2 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

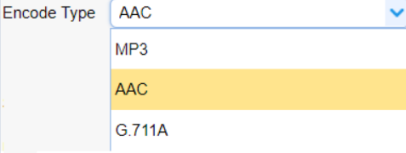
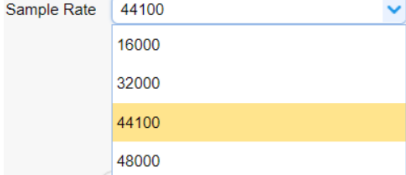
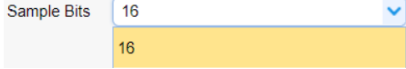
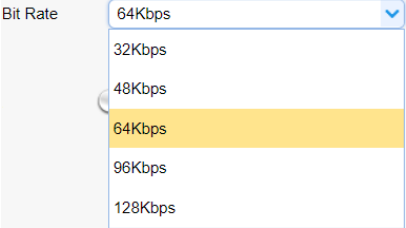

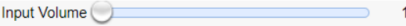
Audio Configure allows you to configure the input audio source.


The screenshot shows the 'datavideo' web interface for audio configuration. The left sidebar lists configuration categories: Audio Configure (selected), Video Configure, Network Configure, and System Configure. The main panel, titled 'Audio Configure', contains the following settings:

- Enable:** A checked checkbox.
- Input Type:** A dropdown menu set to 'Line In'.
- Encode Type:** A dropdown menu set to 'AAC'.
- Sample Rate:** A dropdown menu set to '48000'.
- Sample Bits:** A dropdown menu set to '16'.
- Bit Rate:** A dropdown menu set to '128Kbps'.
- Channel:** A dropdown menu set to 'Mono'.
- Input Volume:** A slider control set to 2.
- Save:** A button with a floppy disk icon.

See the table below for descriptions of each item.

Items	Descriptions
<b>Enable</b> <input checked="" type="checkbox"/>	<b>Enable</b> Check this checkbox to enable audio settings.
<b>Input Type</b> <input type="text" value="Line In"/> <b>Encode Type</b> <input type="text" value="Line In"/>	<b>Input Type</b> This allows users to select the audio input type. It provides Line IN for the audio input type.

Items	Descriptions
	<p><b>Encode Type</b></p> <p>Select an encode type for your input audio source. The available encode types include MP3, AAC and G.711A.</p>
	<p><b>Sample Rate</b></p> <p>Select a sample rate for your input audio source. The higher the sample rate, the better the audio quality.</p>
	<p><b>Sample Bits</b></p> <p>Select the sample bits for your input audio source. The default is 16.</p>
	<p><b>Bit Rate</b></p> <p>Select a bit rate for your input audio source. Available bit rates are:</p> <ul style="list-style-type: none"> <li>• 32 Kbps</li> <li>• 48 Kbps</li> <li>• 64 Kbps</li> <li>• 96 Kbps</li> <li>• 128 Kbps</li> </ul>
	<p><b>Channel</b></p> <p>Set your input audio source to <b>Mono</b>.</p>
	<p><b>Volume Slider</b></p> <p>Adjust the volume of your input audio source using the volume slider (Min: 1 / Max: 10).</p>

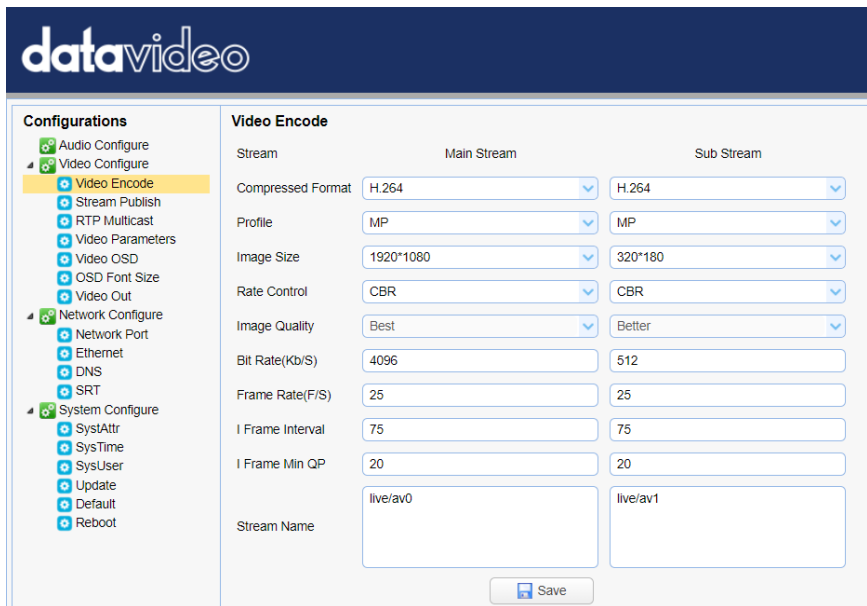
Items	Descriptions
 Save	<b>Save Button</b> Click the Save button to save the new audio settings.

## 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.



**Configurations**

- Audio Configure
- Video Configure
  - Video Encode**
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

**Video Encode**

Stream	Main Stream	Sub Stream
Compressed Format	H.264	H.264
Profile	MP	MP
Image Size	1920*1080	320*180
Rate Control	CBR	CBR
Image Quality	Best	Better
Bit Rate(Kb/S)	4096	512
Frame Rate(F/S)	25	25
I Frame Interval	75	75
I Frame Min QP	20	20
Stream Name	live/av0	live/av1


Save

See the table below for descriptions of each item.

Items	Descriptions
Compressed Format <div>             H.264             <div>H.264</div>             H.265           </div>	<b>Compressed Format</b> Select either <b>H.264</b> or <b>H.265</b> video compression.



<div>Profile</div> <div> <div>HP</div> <div>BP</div> <div>MP</div> <div>HP</div> </div>	<p><b>Profile</b></p> <p>Select a profile for your input video source. Available profiles are:</p> <ul style="list-style-type: none"> <li>• <b>BP: Baseline Profile (Default)</b></li> <li>• <b>MP: Main Profile</b></li> <li>• <b>HP: High Profile.</b></li> </ul>
<div>Image Size</div> <div> <div>1920*1080</div> <div>1920*1080</div> <div>1280*720</div> <div>640*480</div> </div>	<p><b>Image Size</b></p> <p>Select an appropriate image size from the drop-down menu.</p> <ul style="list-style-type: none"> <li>• 1920 x 1080</li> <li>• 1280 x 720</li> <li>• 640 x 480</li> </ul>
<div>Rate Control</div> <div> <div>CBR</div> <div>CBR</div> <div>VBR</div> </div>	<p><b>Rate Control</b></p> <p><b>CBR</b> encoding does not optimize media files for quality but will save you storage space. <b>VBR</b> takes longer to encode but produces the most favorable results as the quality of the media file is superior.</p>
<div>Image Quality</div> <div>Best</div>	<p><b>Image Quality</b></p> <p>The default image quality for the main stream is “<b>Best.</b>”</p> <p>The default image quality for the sub stream is “<b>Better.</b>”</p>

<div>Bit Rate(Kb/S)</div> <div>4096</div>	<p><b>Bit Rate</b></p> <p>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.</p> <p>The default bit rate for the main stream is “<b>4096 Kb/s.</b>”</p> <p>The default bit rate for the sub stream is “<b>512 Kb/s.</b>”</p>
<div>Frame Rate(F/S)</div> <div>25</div>	<p><b>Frame Rate</b></p> <p>Higher frame rate will result in smooth video viewing experience. The frame rate is <b>25</b> by default.</p>
<div>I Frame Interval</div> <div>75</div>	<p><b>I Frame Interval</b></p> <p>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 <b>75</b> by default.</p>
<div>I Frame Min QP</div> <div>20</div>	<p><b>I Frame Min QP</b></p> <p>A low QP value means less compression but higher video quality. The default value is <b>20</b>.</p>
<div>Stream Name</div> <div>live/av0</div>	<p><b>Stream Name</b></p> <p>Enter a stream name for the main and sub stream.</p>
<div>  Save         </div>	<p><b>Save Button</b></p> <p>Click the Save button to save the new video settings.</p>

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.

datavideo

Configurations

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

Network Configure

Network Port

Ethernet

DNS

SRT

System Configure

SysAttr

SysTime

SysUser

Update

Default

Reboot

Stream Publish

Stream

Main Stream

Sub Stream

Enable

☒

☐

Protocol Type

SRT

RTMP

Host Address

192.168.2.50

rtmp://192.168.5.11/live

Host Port

5000

1935

Stream Name

0c6ddf06

av1

Username

client63399

Password

\*\*\*\*\*

Password for stream encryption

\*\*\*\*\*

Crypto key length in bytes

32


0

Save

See the table below for descriptions of each item.

Items	Descriptions
<div>Enable<input checked="" type="checkbox"/></div>	<b>Enable</b> Check this checkbox to enable RTMP stream.
<div>Protocol Type<div>SRTRTMPRTMPRTMPRTMP</div></div>	<b>Protocol Type</b> There are three streaming protocols including <b>RTSP</b> , <b>RTMP</b> and <b>SRT</b> for users to select.
<div>Host Address<div>rtmp://a.rtmp.youtube.com/live2</div></div>	<b>Host Address</b> This is the RTMP Server URL/RTSP Server URL provided by the video streaming providers. An example of the RTMP Server URL is provided.

Items	Descriptions
<div>Host Port</div> <div>1935</div>	<p><b>Host Port</b></p> <p>The host port number is 1935 by default.</p>
<div>Stream Name</div> <div>live2/qwqd-5ejj-t73c-0y2g</div>	<p><b>Stream Name</b></p> <p>This is the RTMP/RTSP Stream Name/Key provided by the video streaming providers. An example of the RTMP Stream Name/Key is provided.</p>
<div>User Name</div> <div></div> <div>Password</div> <div></div>	<p><b>User Name / Password</b></p> <p>Enter the login credentials of your live streaming platform or the Source Username &amp; Source Password which are provided by the RTSP streaming platform.</p>
<div>Password for stream encryption</div> <div>*****</div>	<p><b>Password for stream encryption</b></p> <p>If users select the SRT stream and want to set a password for the SRT stream, this column allows users to enter their desired SRT stream password.</p>
<div>Crypto key length in bytes</div> <div> <div>32</div> <div>0</div> <div>16</div> <div>24</div> <div>32</div> </div>	<p><b>Crypto key length in bytes</b></p> <p>If users select the SRT stream, the “Crypto Key length in bytes” allows users to select their desired SRT crypto key length. There are 4 different key lengths including 0/16/24/32 for users to select.</p> <p>Note: The unit of the crypto key length is bytes. If 0 is selected, it means that there is no crypto key for this SRT stream.</p>

Items	Descriptions
	<b>Save Button</b> Click the Save button to save the new RTMP settings.

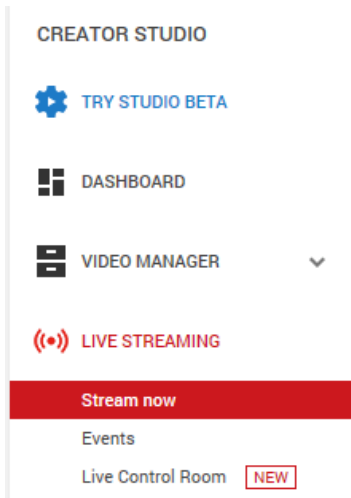
**Note:**

1. The SRT Caller mode and the RTSP Publish can be operated only as the “Main Stream”.
2. When the SRT Caller or the RTSP Publish is operated as the “Main Stream”, the “Sub Stream” can not be operated at the same time.

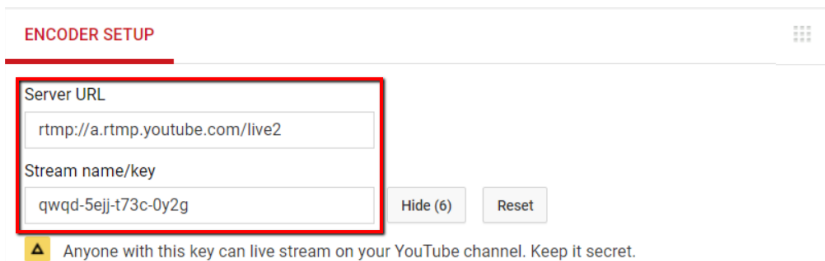
***Stream to Youtube***

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](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.**"

### Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish**
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SysAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

### Stream Publish

	Main Stream	Sub Stream
Enable	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Protocol Type	SRT	RTMP
Host Address	192.168.2.50	rtmp://192.168.5.11/live
Host Port	5000	1935
Stream Name	0c6ddf06	av1
Username	client63399	
Password	*****	
Password for stream encryption	*****	
Crypto key length in bytes	32	0

Save

- Enter the **Server URL** and **Stream Name/Key** into **Host Address** and **Stream Name** respectively.
- Check the **Enable** checkbox to enable RTMP stream.
- Click the **Save** button to save the RTMP settings and start broadcasting your camera video on Youtube.

## Stream to Facebook

### ● Use Facebook Live Producer for Streaming

- Go to Facebook Live website

<https://www.facebook.com/formedia/solutions/facebook-live>, and then

click “**Live Producer**” or “**facebook.com/live/producer**” links from “How to go live on Facebook with a camera and streaming software” section.

**Note:** Facebook Live limits each stream to 8 hours.

Facebook Live   How to Go Live   Tools & Features   Raise Money for a Cause   Broadcast with Guests   Online Events   Grow & Earn Money   Our Streaming Partners

## How to go live on Facebook with a camera and streaming software

**Utilize a streaming software.**


You'll first need to get set up with streaming software, also referred to as an encoding software or an encoder. The encoder that's best for you may depend on the type of content you plan to stream. There are several programs to choose from, including free open-source software. [Learn more about encoding software options and going live with streaming software.](#)

**Use Live Producer.**

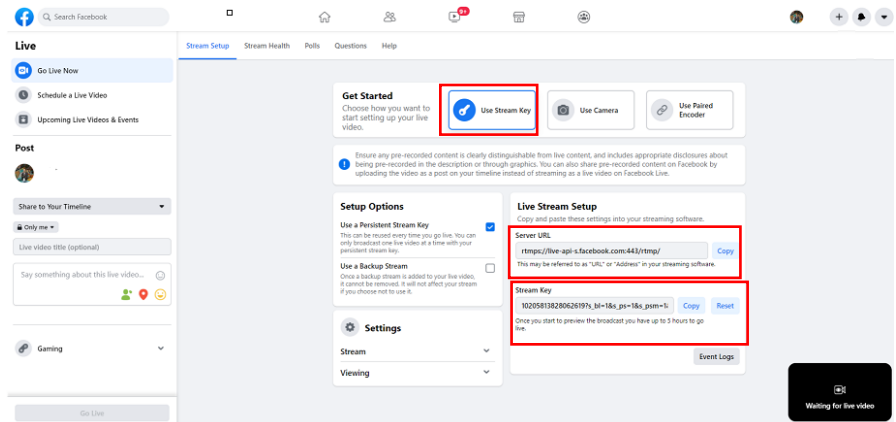
Once you have your encoding software and camera installed, you're ready to go live using **Live Producer**, which is the new way to go live on Facebook using higher-end production equipment and streaming software. You can [access Live Producer at Facebook.com/liveproducer](#).

**Learn more about going live.**

Learn more about how to use Live Producer [here](#). If you're planning a larger virtual event or show, we also recommend checking out



2. Check **“Use stream key”** then copy and paste **“Server URL”** and **Stream Key** into **“Host Address”** and **“Stream Name”** as shown on the PTC-140’s web UI respectively. Please modify the **“Host Port”** to 443.



**Get Started**

Choose how you want to start setting up your live video.

**Use Stream Key**   **Use Camera**   **Use Paired Encoder**

Ensure any pre-recorded content is clearly distinguishable from live content, and includes appropriate disclosures about being pre-recorded in the description or through graphics. You can also share pre-recorded content on Facebook by uploading the video as a post on your timeline instead of streaming as a live video on Facebook Live.

**Setup Options**

**Use a Persistent Stream Key** ☒ This can be reused every time you go live. You can only broadcast one live video at a time with your persistent stream key.

**Use a Backup Stream** ☐ Once a backup stream is added to your live video, it cannot be removed. It will not affect your stream if you choose not to use it.

**Settings**

**Stream**   **Viewing**

**Live Stream Setup**

Copy and paste these settings into your streaming software.

**Server URL:** `rtmps://live-api-s.facebook.com:443/rtmp/` **Copy**

This may be referred to as "URL" or "Address" in your streaming software.

**Stream Key:** `1020581382806261979_h=1&_ps=1&_psm=5` **Copy** **Reset**

Once you start to preview the broadcast you have up to 5 hours to go live.

**Event Logs**

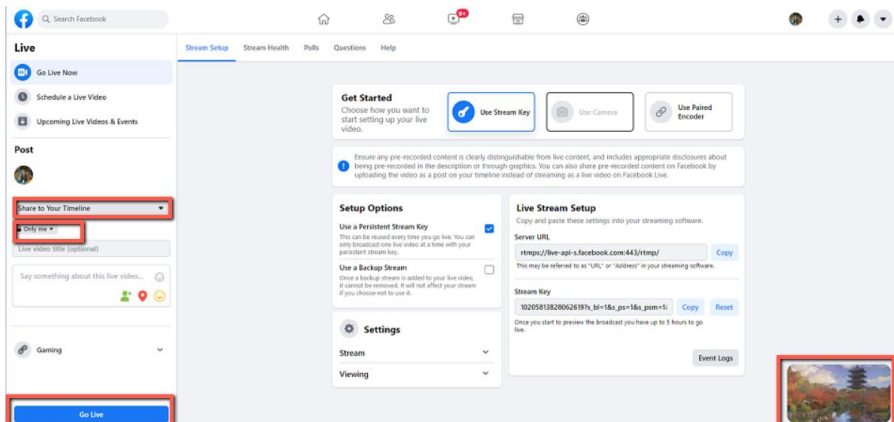
**Waiting for live video**

3. Check the **Enable** checkbox to enable RTMP stream.
4. Click the **Save** button to save the RTMP settings.

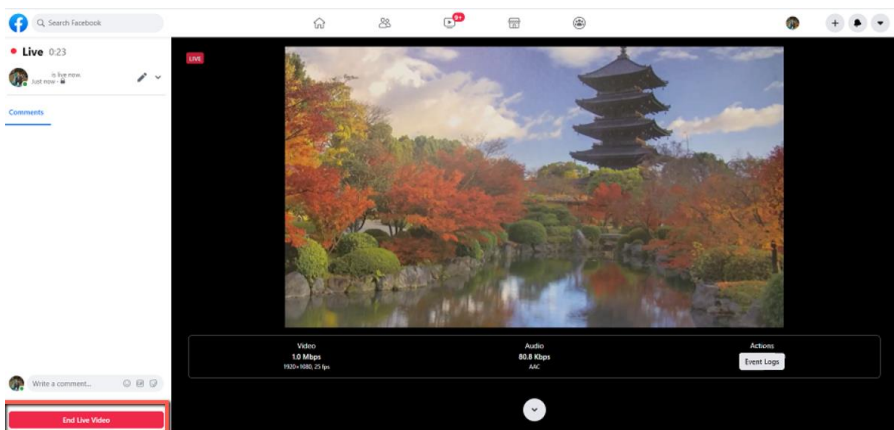
5. Please press the **“Reboot”** button  from the Reboot option from the PTC-140 Web UI.



6. The preview screen will be shown on the bottom-right corner of the Facebook Live page. Please select where you want to post your live-streaming and who can see your live-streaming. After that, please enter the title of the live-streaming and then please click “Go Live” button for live-streaming the video which is shot by the camera to the Facebook page.

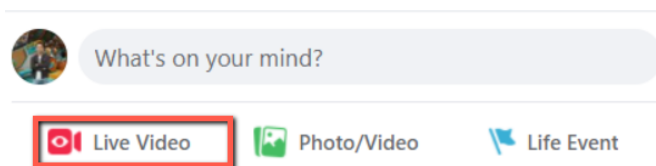


7. After the live-streaming is started, users can see related information for the live-streaming video from the Facebook Live interface. If you want to stop the live-streaming, please click the “End Live Video” button for stopping your Facebook live-streaming.

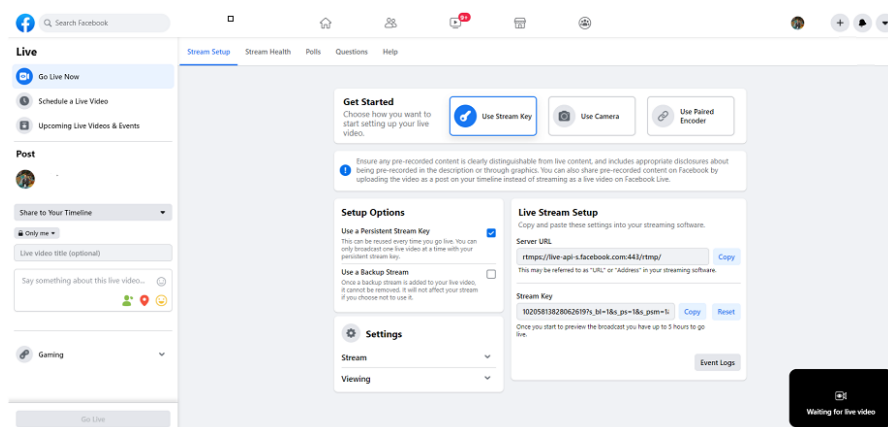


## ● Use your personal Facebook Page or Facebook Fan Page for Live-Streaming

1. Please press “Live Video” button from your personal Facebook Page or the Facebook Fan Page.




2. Check “Use stream key” then copy and paste “Server URL” and Stream Key” into “Host Address” and “Stream Name” as shown on the PTC-140’s web UI respectively. Please modify the “Host Port” to 443.

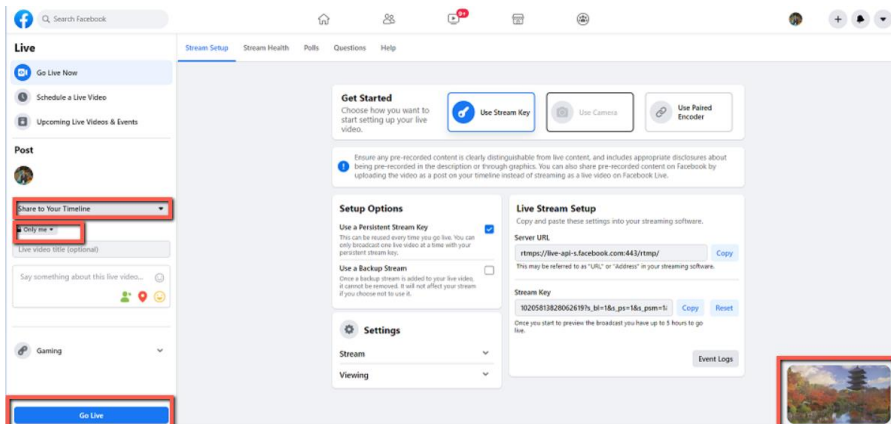


3. Check the **Enable** checkbox to enable RTMP stream.

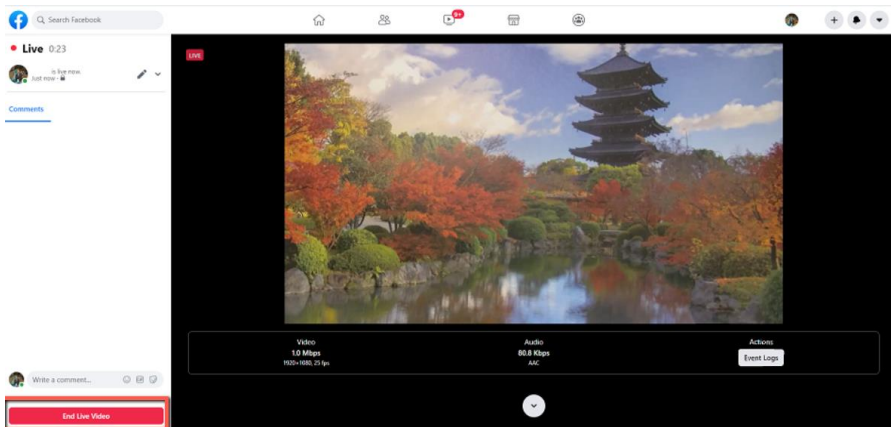
4. Click the **Save** button to save the RTMP settings.

5. Please press the “Reboot” button  from the Reboot option from the PTC-140 Web UI.

6. The preview screen will be shown on the bottom-right corner of the Facebook Live page. Please select where you want to post your live-streaming and who can see your live-streaming. After that, please enter the title of the live-streaming and then please click “Go Live” button for live-streaming the video which is shot by the camera to the Facebook page.



- After the live-streaming is started, users can see related information for the live-streaming video from the Facebook Live interface. If you want to stop the live-streaming, please click the “End Live Video” button for stopping your Facebook live-streaming.



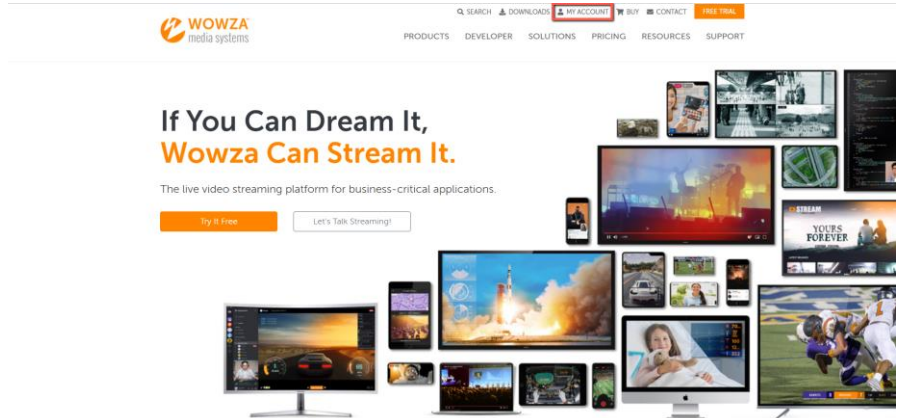
## How to Stream the RTSP Streaming to Wowza Cloud Streaming Platform

Wowza Streaming Cloud is a cloud streaming platform which is a global leader in the live-streaming area. This chapter will take Wowza Streaming Cloud as an example to show how to do the RTSP streaming by Datavideo PTC-140 with the Wowza Streaming Cloud. Please see following steps to know how to stream the RTSP streaming by the PTC-140 camera to Wowza Streaming Cloud.

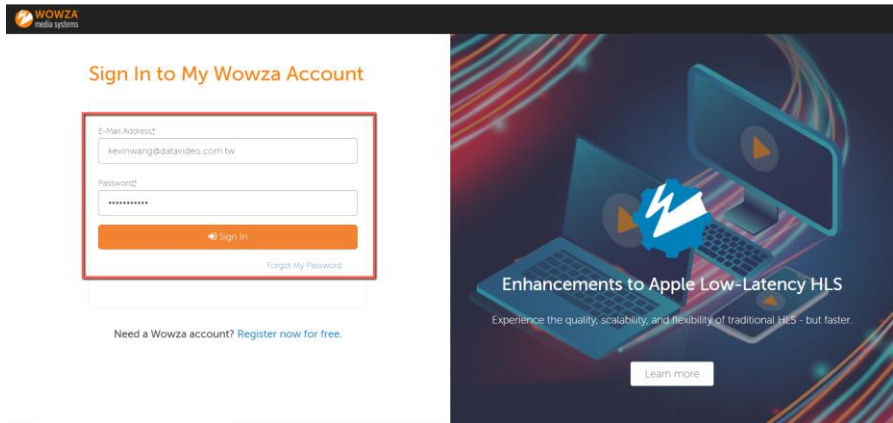
1. Please go to Wowza official website [www.wowza.com](http://www.wowza.com) which is shown as following diagram.



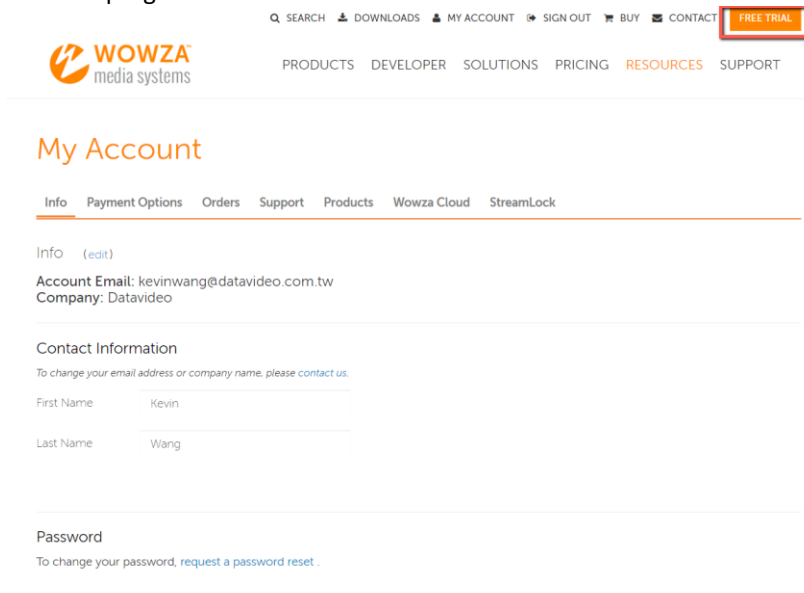
2. Please click “MY ACCOUNT” option for entering your Wowza Account and Password.




3. If you already have your own Wowza account, please enter your Email Address and Password and then click the “Sign In” button for logging into your own Wowza account which is shown as following diagram. If you do not have the Wowza account, you can apply a Wowza trial account for a 30 day free trial.



4. Because this example takes Wowza trial account as an example, so, after logging into your account, please click the “FREE TRIAL” button which is located on the top-right corner.




5. After logging into your account, users can see that there are two kinds of products including “Wowza Streaming Cloud” and “Wowza Streaming Engine”. What we need is the Wowza Streaming Cloud, so, please click the “FREE TRIAL” button of the “Wowza Streaming Cloud”.

PRODUCTSDEVELOPERSOLUTIONSPRICINGRESOURCESSUPPORT

FREE TRIAL

## Select a Wowza Free Trial




### Wowza Streaming Cloud

Fully managed cloud service to power live streaming, either end-to-end or as part of a custom streaming platform.


Your free trial includes:

- Fully managed infrastructure.
- Free player and hosted page.
- REST API, Java SDK, and Ruby SDK access.
- 5 hours streaming / 10 connections.


**BEST FOR**



Deploying quickly on a managed infrastructure




Live event streaming to web or social sites




Building live-streaming apps via GUI or API

Free Trial



Are you a developer?

[Get a Wowza Streaming Cloud Developer Trial](#)




### Wowza Streaming Engine

Downloadable server software for live and on-demand streaming: on-premises or in the cloud, fully customizable.


Your free trial includes:

- Windows, Mac, or Linux install.
- Transcoder, nDVR, and more.
- REST and Java API access.
- StreamLock-provisioned SSL certificate for HTTPS and WebRTC streaming
- 3 inbound / 10 outbound connections.


**BEST FOR**



Self-managed infrastructures




Streaming service providers



Customized streaming solutions

Free Trial

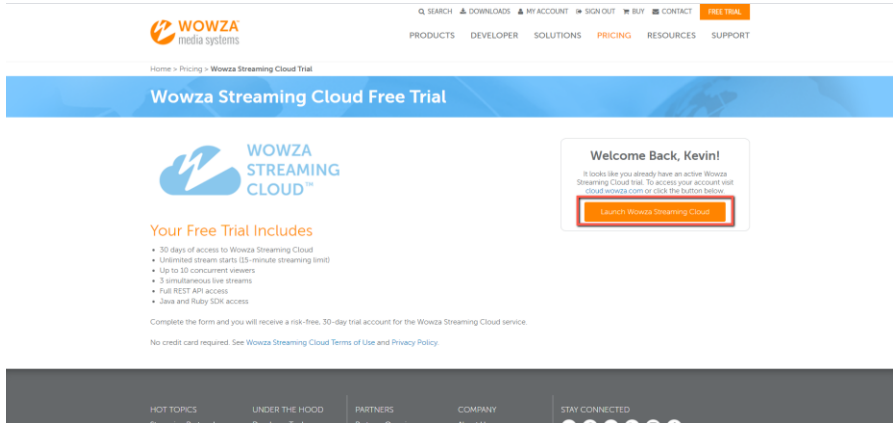


Are you a developer?

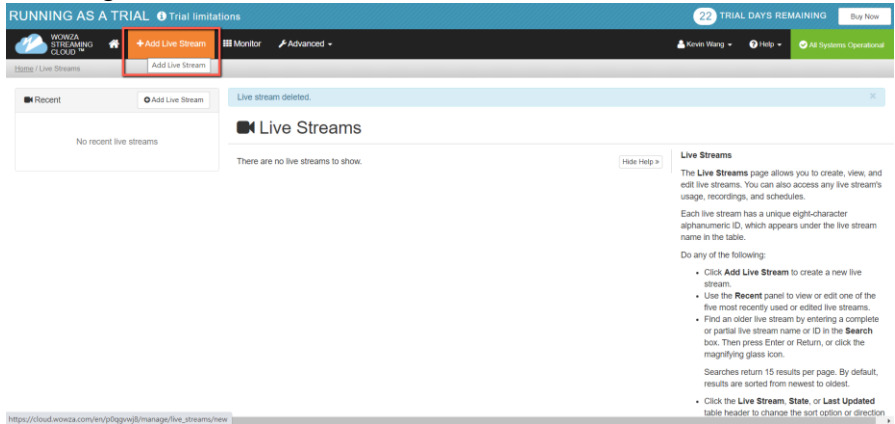
[Get a Wowza Streaming Engine Developer Trial](#)

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6. Please click the “Launch Wowza Streaming Cloud” button for launching the Wowza Streaming Cloud.



7. You will see the main interface of the Wowza Streaming Cloud which is shown as following diagram. Please click “Add Live Stream” button for adding a new live-streaming.



8. Please enter your desired name for the stream into the “**What is the name of your live stream?**” column. For this example, the stream name is “RTSP Stream”.

**ADD LIVE STREAM: LIVE STREAM SETUP**

1. Live Stream Setup | 2. Video Source and Transcoder Settings | 3. Playback Settings | 4. Hosted Page Settings | 5. Review Settings

What is the name of your live stream?:

Which location is closest to where you're broadcasting from?

Asia Pacific (Australia) | Asia Pacific (India) | Asia Pacific (Japan) | Asia Pacific (Korea) | Asia Pacific (Singapore) | Asia Pacific (Taiwan) | EU (London) | EU (Frankfurt) | EU (Ireland) | South America (Brazil) | US Central (Iowa) | US East (N. Carolina) | US East (Virginia) | US West (California) | US West (Oregon)

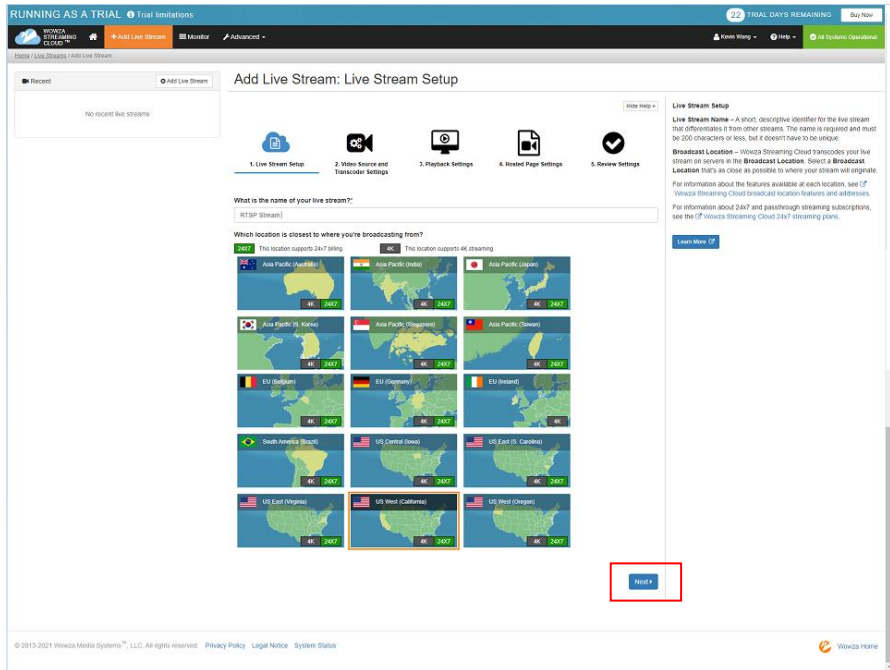
**Next >**

**Live Stream Setup**  
**Live Stream Name** – A short, descriptive identifier for the live stream that differentiates it from other streams. The name is required and must be 200 characters or less, but it doesn't have to be unique.  
**Broadcast Location** – Wowza Streaming Cloud transcodes your live stream on servers in its **Broadcast Location**. Select a **Broadcast Location** that's as close as possible to where your stream will originate. For information about the features available at each location, see [CF Wowza Streaming Cloud broadcast location features and addresses](#). For information about 24x7 and pay-as-you-go streaming subscriptions, see the [CF Wowza Streaming Cloud 24x7 streaming plans](#).  
[Learn More >](#)

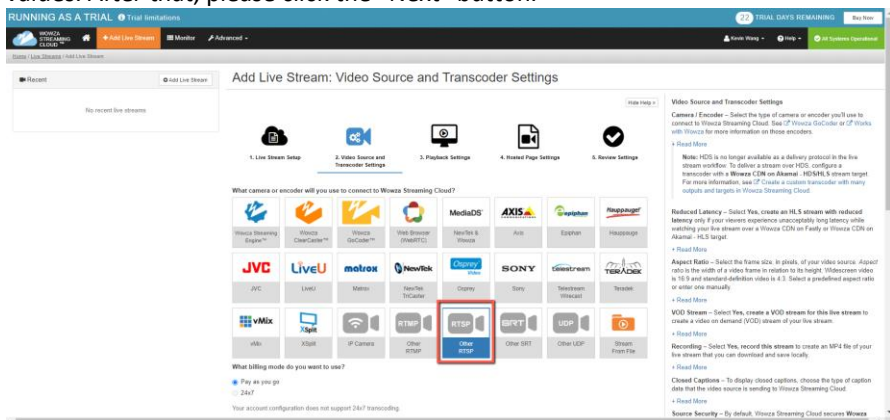
© 2015-2021 Wowza Media Systems™, LLC. All rights reserved. [Privacy Policy](#) [Legal Notice](#) [System Status](#)

9. Please click one of the following countries which is located at the nearest location to where you want to start the live-streaming. Moreover, please click the “Next” button. In this example, please select “Asia Pacific Taiwan”.





10. Please select the camera or the encoder that you want to use to connect to Wowza Streaming Cloud. This example is RTSP streaming, so, please select “Other RTSP” option from the following diagram. You can keep other options as default values. After that, please click the “Next” button.



What billing mode do you want to use?

- ☒ Pay as you go  
☐ 24x7

Your account configuration does not support 24x7 transcoding.

What type of live stream is this?

- ☒ Adaptive bitrate  
☐ Passthrough

Your account configuration does not support Pay-As-You-Go passthrough transcoding.

Do you want to push or pull your stream?

**Push Stream** Pull Stream


Select **Push Stream** if your camera or encoder will push the stream to Wowza Streaming Cloud  
Select **Pull Stream** if your camera or encoder requires Wowza Streaming Cloud to pull the stream

Do you want to create a reduced-latency HLS stream?

- ☐ Yes, create an HLS stream with reduced latency

Select this option only if viewers experience unacceptably long latency and you understand that playback might be affected on some older devices.

Aspect Ratio: 16:9 (Widescreen)

1280 x 720 

This setting creates 5 bitrate renditions.

Do you want to create a VOD stream for this live stream?

- ☐ Yes, create a VOD stream for this live stream

Do you want to record this live stream?

- ☐ Yes, record this live stream

What type of closed captions does this stream have?

None

Source Security

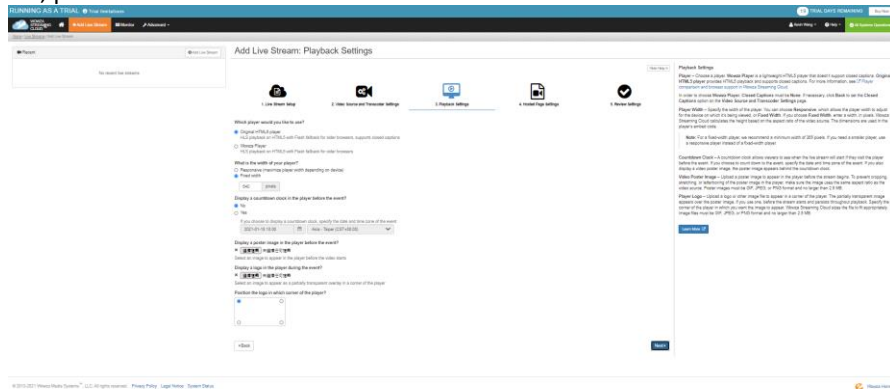
- ☐ Disable authentication

Select to disable authentication on the video source

◀ Back

Next ▶

11. This page allows users to set some detailed settings. After all parameters are set, please click the “Next” button.



12. Please enter your desired title and then click the “Next” button.

The screenshot shows the 'Add Live Stream: Hosted Page Settings' window in OBS Studio. The window has a top bar with 'RUNNING AS A TRIAL' and 'Trial Expiration' information. Below the top bar, there are tabs for 'Recent' and 'Add Live Stream'. The main area is titled 'Add Live Stream: Hosted Page Settings' and contains several sections: '1. Live Stream Info', '2. Video Source and Transmitter Settings', '3. Playback Settings', '4. Hosted Page Settings' (which is the active tab), and '5. Review Settings'. The 'Hosted Page Settings' section includes a 'Hosted Page Title' field, which is highlighted with a red box. Below this field, there are checkboxes for 'Do you want OBS Studio to automatically create a hosted page for you?' and 'Would you like to display a description on the hosted page?'. There is also a text area for 'Enter a description of the live stream or event'. At the bottom right, there is a 'Next' button, which is also highlighted with a red box.

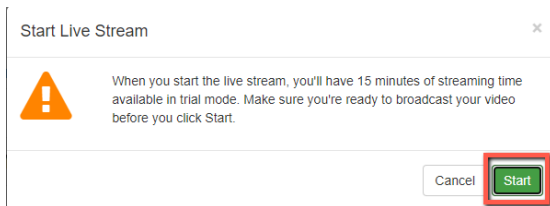
13. This page allows you to check all parameters before starting the live-streaming. Please confirm that all parameters are correct and then click the “Finish” button.

The screenshot shows the 'Add Live Stream: Review' window in OBS Studio. The window has a top bar with 'RUNNING AS A TRIAL' and 'Trial Expiration' information. Below the top bar, there are tabs for 'Recent' and 'Add Live Stream'. The main area is titled 'Add Live Stream: Review' and contains a summary of all settings configured for the live stream. The settings are organized into sections: '1. Live Stream Info', '2. Video Source and Transmitter Settings', '3. Playback Settings', '4. Hosted Page Settings', and '5. Review Settings'. The 'Review Settings' section is the active tab and displays a table of settings. The 'Finish' button at the bottom right is highlighted with a red box.

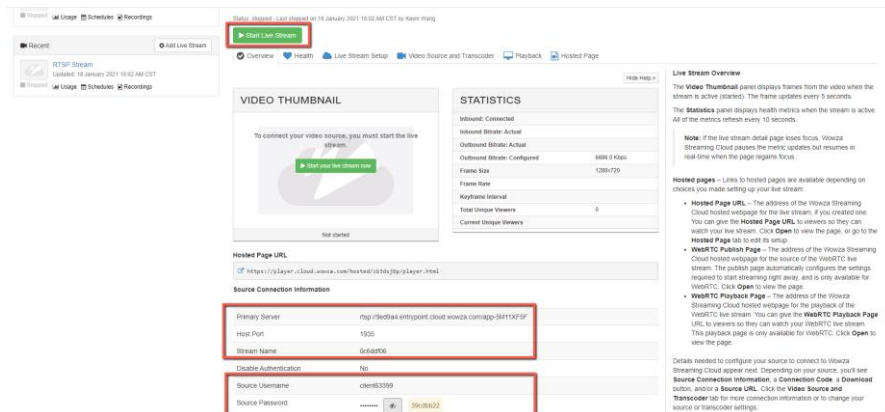
Section	Setting	Value
1. Live Stream Info	Live Stream Name	RTMP Stream
	Broadcast Location	Asia/Pacific/Default
	Latency/Buffer	Stream Streaming/Default
	Reduced Latency	No
	Bitrate Mode	File set via .ps
	Source URL	-
	Source Delivery Method	Push
	Aspect Ratio	1280 x 720
	Transcoding	Stream Streaming/Cloud
	ALAC/DSD Stream	No
2. Video Source and Transmitter Settings	Recording	No
	Stream Output	None
	Stream Substitution	-
	Delivery Protocol	Apple HLS
	Player	Original HTML5 player
	Player Mode	Web
	Contentment Mode	No
	Video Player Image	No
	Player Logo	No
	Player Logo Position	Top Left
3. Playback Settings	Hosted Page	No
	Hosted Page Title	RTMP Stream
	Hosted Page Logo	No
	Hosted Page Description	None

14. Please do the streaming settings according to following steps.

- Please click the “Start Stream” button, after those reminder is shown, please click the “Start” button.



- Moreover, please copy the “Primary Server” address and paste it into the “Host Address” column in the “Stream Publish” option of the PTC-140 Web UI.
- Please copy the “Host Port” and then paste it into the “Host Port” column in the “Stream Publish” page of the PTC-140 Web UI. Please copy the “Stream Name” and then paste it into the “Stream Name” column in the “Stream Publish” page of the PTC-140 Web UI.
- Please copy the “Source Username” and then paste it into the “Username” column in the “Stream Publish” page pf the PTC-140 Web UI.
- Please copy the “Source Password” and then paste it into the “Password” column in the “Stream Publish” page of the PTC-140 Web UI.



**Configurations**

- Audio Configure
- Video Configure
- Video Encode
- Stream Publish**
- RTP Multicast
- Video Parameters
- Video OSD
- OSD Font Size
- Video Out
- Network Configure
- Network Port
- Ethernet
- DNS
- SRT
- System Configure
- System Attr
- System Time
- System User
- Update
- Default
- Reboot

**Stream Publish**

Stream: Main Stream | Sub Stream

Enable: ☒ | ☐

Protocol Type: RTSP | RTMP

Host Address: rtsp://b2c53a.entrypoint.cloud.wowza.cc | rtmp://192.168.5.11/live

Host Port: 1935 | 1935

Stream Name: 9f69c27b | av1

Username: client63399

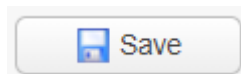
Password: \*\*\*\*\*

Password for stream encryption: \*\*\*\*\*

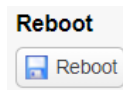
Crypto key length in bytes: 32 | 0

[Save](#)

15. After those data are pasted, please click the “Save” button.



16. Please click the “Reboot” button from the “Reboot” option in the PTC-140 Web UI.



17. Users can see the image which is shot by the PTC-140 is streamed to Wowza Streaming Cloud platform successfully by using the RTSP protocol.

**RTSP Stream**

Status: Started on 10 January 2021 11:05:48 CST by Kevin Wang

[Stop Live Stream](#) [Reset Live Stream](#)

[Overview](#) [Health](#) [Live Stream Setup](#) [Video Source and Transcoder](#) [Playback](#) [Hosted Page](#)

**VIDEO THUMBNAIL**

[Hosted Page URL](#)  
https://player.cloud.wowza.com/rtsp/9f69c27b/player.html

**Source Connection Information**

Primary Server: rtsp://feedback.entrypoint.cloud.wowza.com:3344/PTC140/PTC140-209-222

**STATISTICS**

Inbound Connected	Yes
Inbound Stream: Actual	8364.2 Kbps
Outbound Stream: Actual	4328 Kbps
Outbound Stream: Configured	8364.2 Kbps
Frame Rate	25 FPS
Keyframe Interval	75 GOP
Total Unique Viewers	1
Current Unique Viewers	1

**Live Stream Overview**

The Video Thumbnail panel displays frames from the video when the stream is active (started). The frame updates every 5 seconds.

The **Statistics** panel displays health metrics when the stream is active. All of the metrics refresh every 10 seconds.

**Note:** If the live stream detail page loses focus, Wowza Streaming Cloud pauses the metrics updates but resumes in real time when the page regains focus.

**Hosted pages** - Links to hosted pages are available depending on choices you made setting up your live stream.

- Hosted Page URL** - The address of the Wowza Streaming Cloud hosted webpage for the live stream. If you created one, you can give the **Hosted Page URL** to viewers so they can watch your live stream. Click **Open** to view the page, or go to the **Hosted Page** link to edit its settings.
- Wowza Cloud Hosted Page** - The address of the Wowza Streaming Cloud hosted webpage for the source of the Wowza live stream. The publish page automatically configures the settings required to start streaming right away, and is only available for Wowza. Click **Open** to view the page.
- Wowza Cloud Hosted Page** - The address of the Wowza Streaming Cloud hosted webpage for the playback of the Wowza live stream. You can give the **Wowza Cloud Hosted Page URL** to viewers so they can watch your Wowza live stream.


## How to do the SRT Streaming by the vMix Software

### How to install the Vmix Software

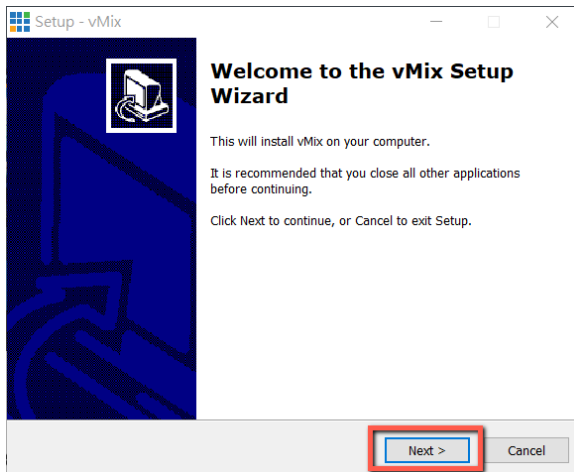
Please install the vMix software according to following steps.

1. At first, please go to vMix official website and then download the vMix 60-day free-trial. This section will use vMix free-trial as an example to demonstrate the operation steps. Please click the “DOWNLOAD FREE TRIAL” button for downloading.

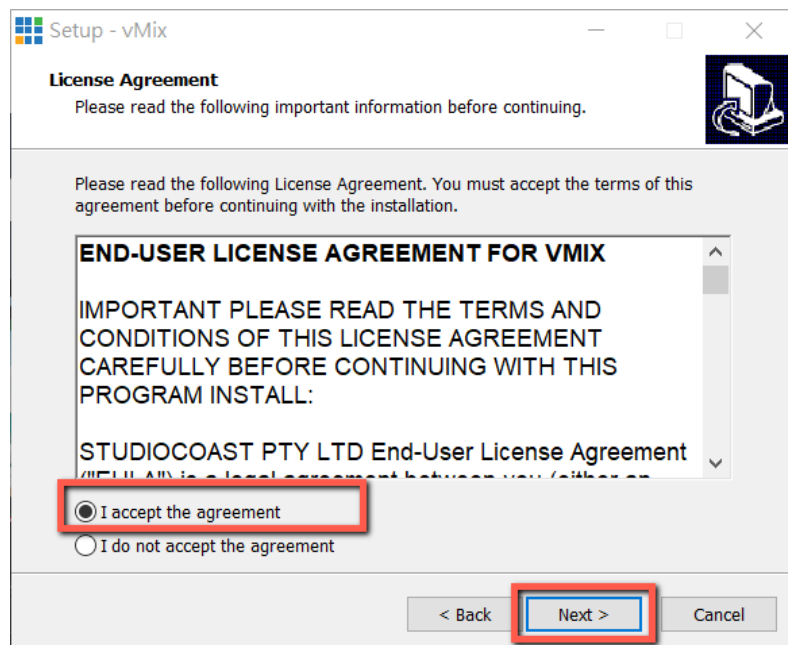


2. Please double-click the vmix23.exe  vmix23 .

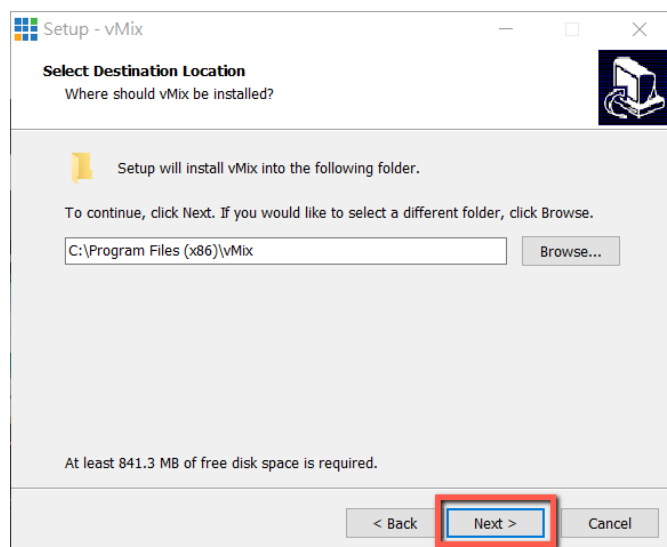
3. Please click the “Next” button.



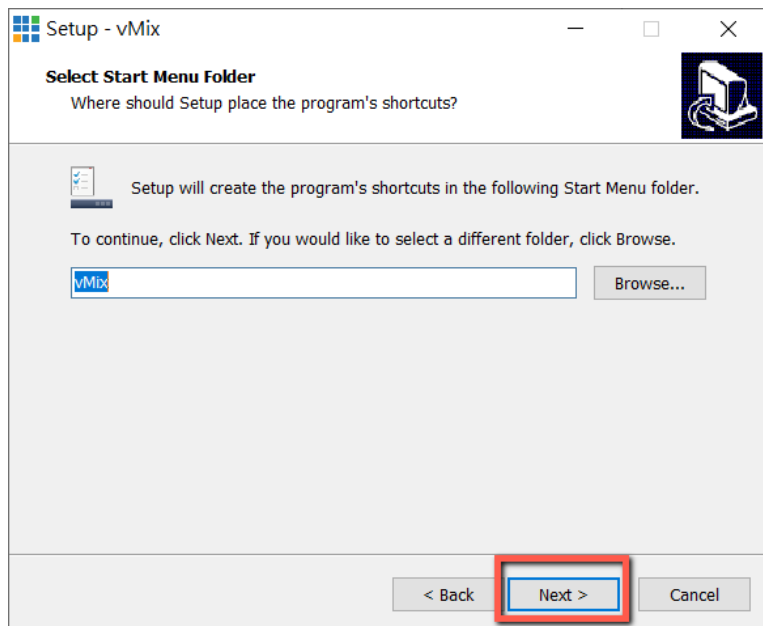
4. Please click “I accept the agreement” and then click the “Next” button.



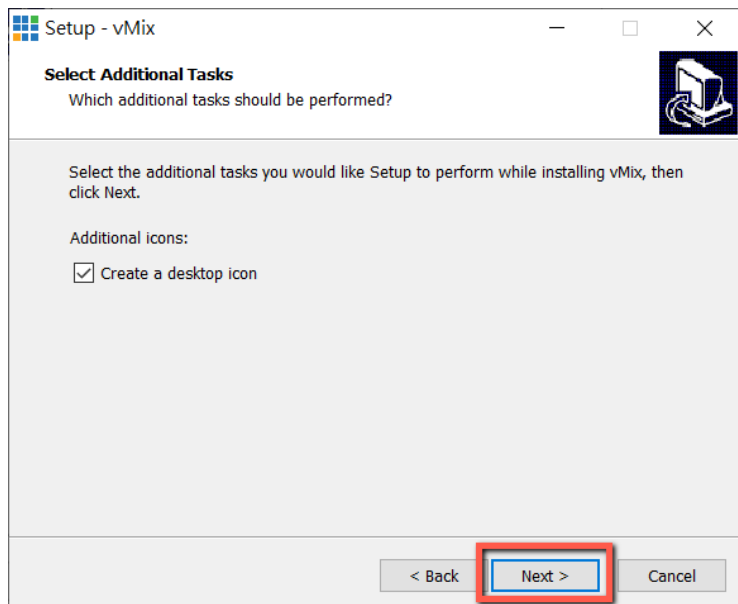
5. Please click the “Next” button.



6. Please click the “Next” button.

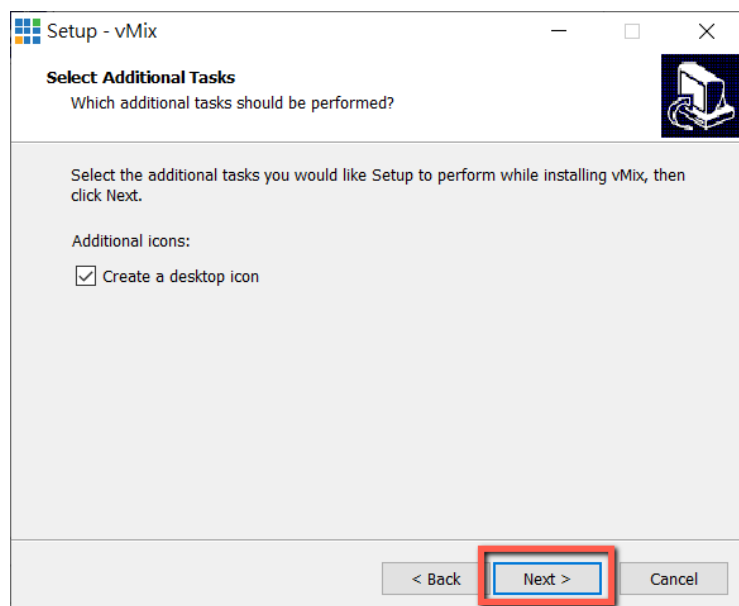


7. Please click the “Next” button.

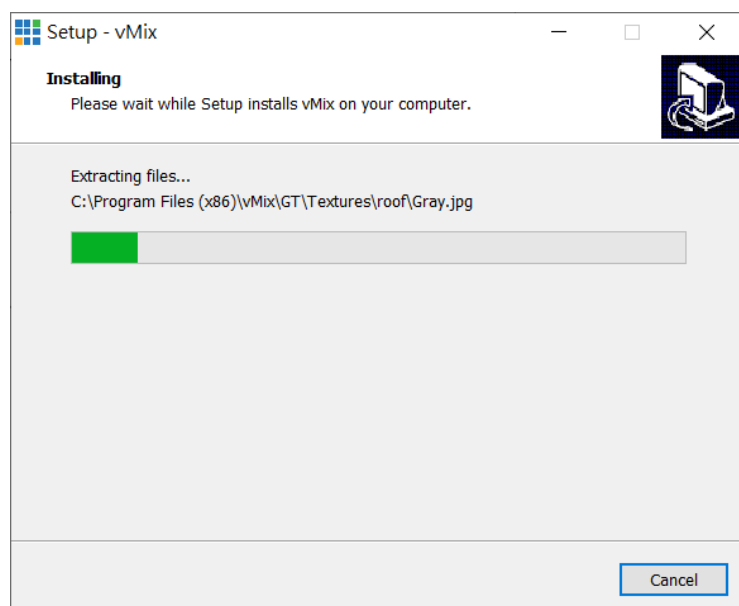




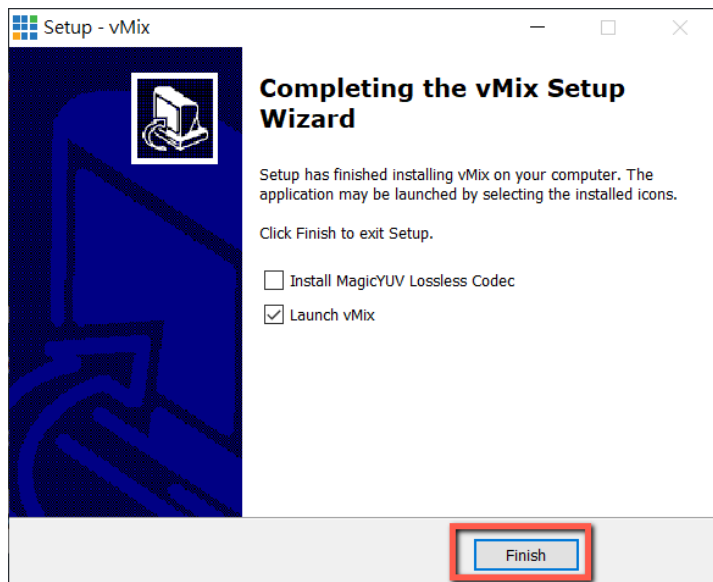
8. Please click the “Install” button.



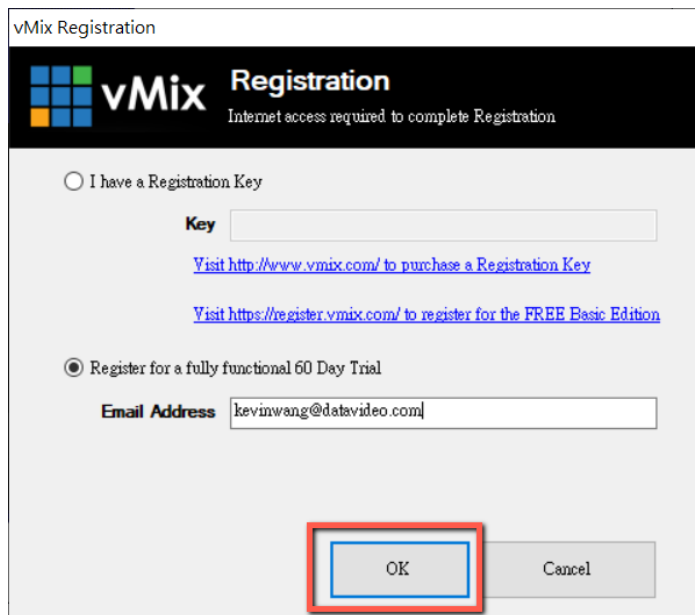
9. The installation will be started.



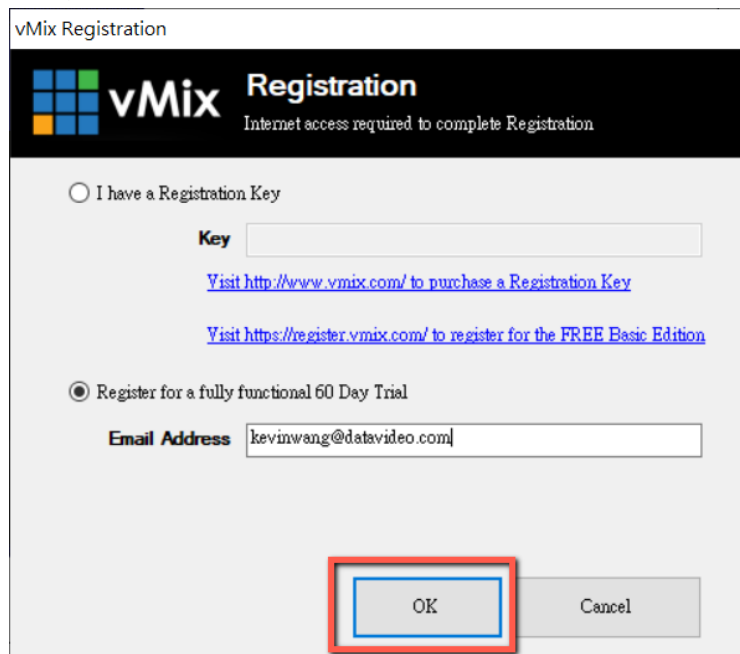
10. Please click the “Finish” button to finish the installation.



11. Please select “Register for a fully functional 60 Day Trial” to fill out your Email Address. After that, please click the “OK” button to open the vMix software.

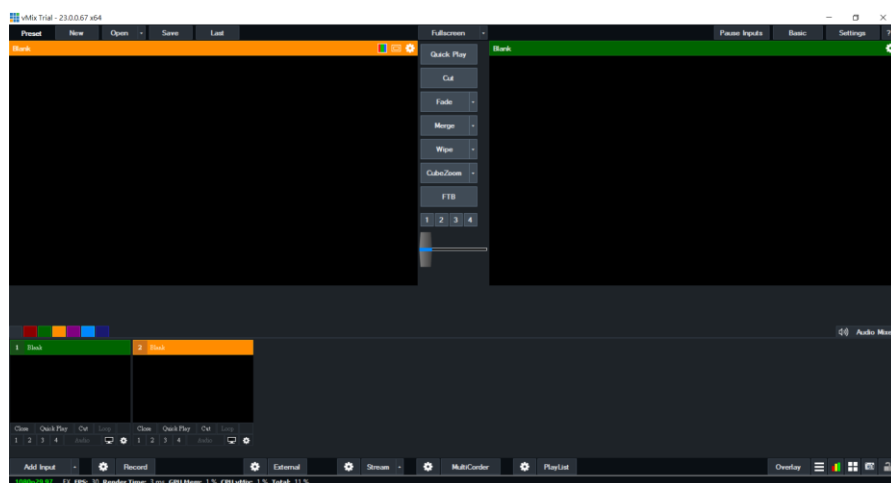


12. Please select the initial resolution and frame rate that you want to use and then please click the “OK” button.



The image shows the vMix Registration window. At the top, it says "vMix Registration" with the vMix logo and the text "Internet access required to complete Registration". There are two radio buttons: "I have a Registration Key" (unselected) and "Register for a fully functional 60 Day Trial" (selected). Below the first option is a "Key" text box and two links: "Visit <http://www.vmix.com/> to purchase a Registration Key" and "Visit <https://register.vmix.com/> to register for the FREE Basic Edition". Below the second option is an "Email Address" text box containing "kevinwang@datavideo.com". At the bottom, there are two buttons: "OK" and "Cancel". The "OK" button is highlighted with a red and blue border.

13. After opening vMix, the software interface is shown as following diagram.



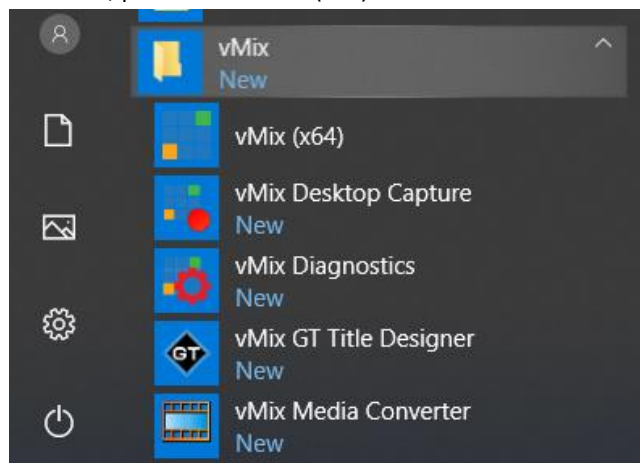
### ***How to do the SRT Stream by Using the PTC-140 Camera and vMix Software***

There are two modes for the SRT streaming including the Caller Mode and the Listener Mode. Please see following steps for realizing operation steps for the vMix.

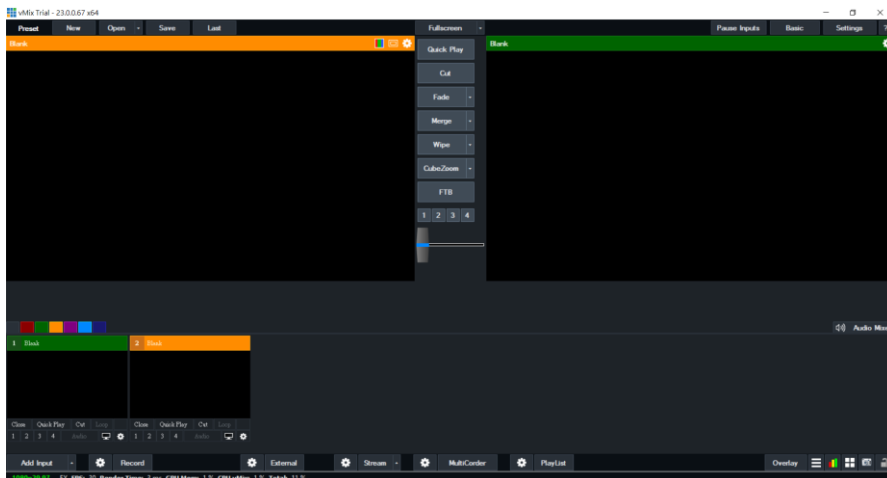
#### **If the PTC-140 is set in Listener Mode**

**Note:** If vMix is set in Caller Mode, the PTC-140 Web UI must be set in Listener Mode. If vMix is set in Listener Mode, the PTC-140 Web UI must be set in Caller Mode.

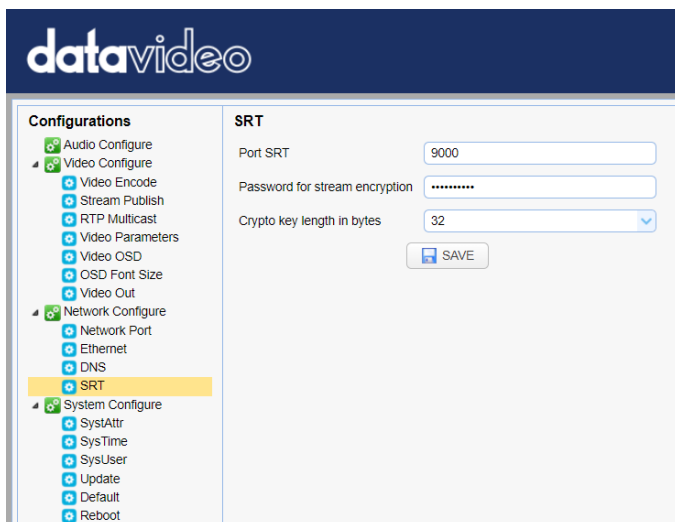
1. At first, please click “vMix(x64)” from the Start Menu.



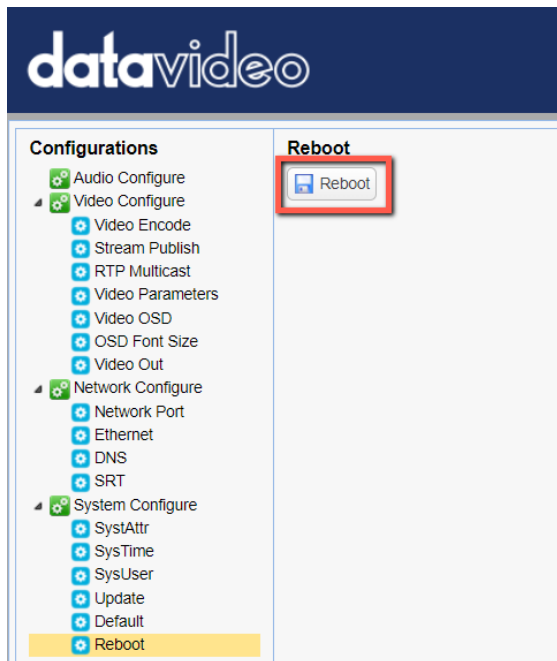
2. Users can see the main interface of the vMix which is shown as following diagram.



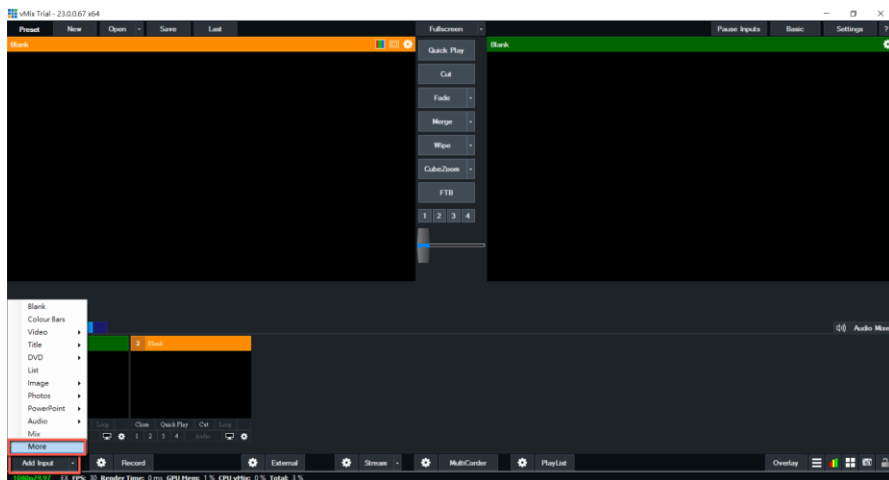
3. Please go back to the interface of the PTC-140 Web UI, click the “SRT” option, and then select your desired SRT encryption way from “Crypto key length in bytes”. For this example, “32” is selected. After that, please set your desired SRT password in “Password for stream encryption”. For this example, it is “8888888888”. The default SRT port is “9000” and it is no need to change this value. After all settings are finished, please click the “SAVE” button.



4. Please click the “Reboot” button from the “Reboot” option for rebooting the PTC-140.



5. Please go back to vMix and then please click “Add Input”. After that, please click “More” from the drop-up menu.



6. At this time, please click the “Stream/SRT” option from the “Select Input” interface. Select “SRT Caller” from the “Stream Type” drop-down menu. After that, please enter the IP address of your connected device. In this example, it is the PTC-140 and its IP address is 192.168.2.5. After that, please enter the password that is set in the PTC-140 Web UI, which is “8888888888” in the “Passphrase” column. And then please select “32” in the “Key length” drop-down menu to make sure that it is consistent as the setting in the PTC-140 Web UI.

Input Select

Stream Type: SRT (Caller)

Hostname: 192.168.2.5 Port: 9000

Latency (ms): 200 Passphrase: 8888888888 ☒ Use Hardware Decoder

Decoder Delay (ms): 0 Key Length: 32

Stream ID:

Number: 1 OK Cancel

7. Please click the “OK” button.

Input Select

Stream Type: SRT (Caller)

Hostname: 192.168.2.5 Port: 9000

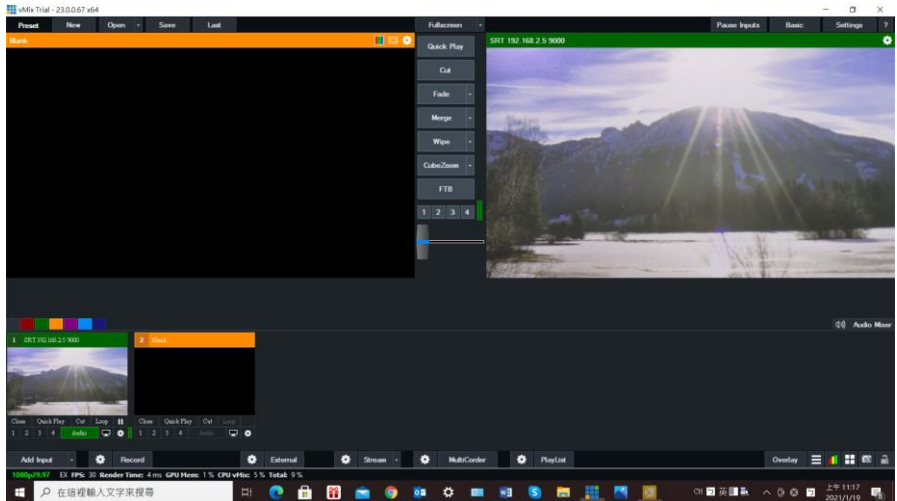
Latency (ms): 200 Passphrase: 8888888888 ☒ Use Hardware Decoder

Decoder Delay (ms): 0 Key Length: 32

Stream ID:

Number: 1 OK Cancel

8. Users can see that the image which is shot by the PTC-140 is streamed to vMix software by the SRT Listener Mode.

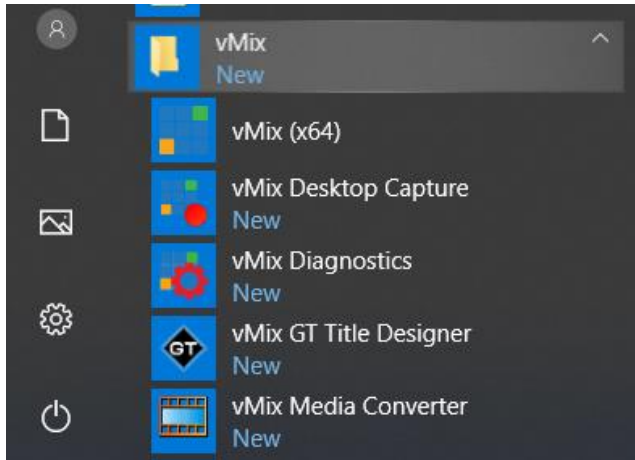




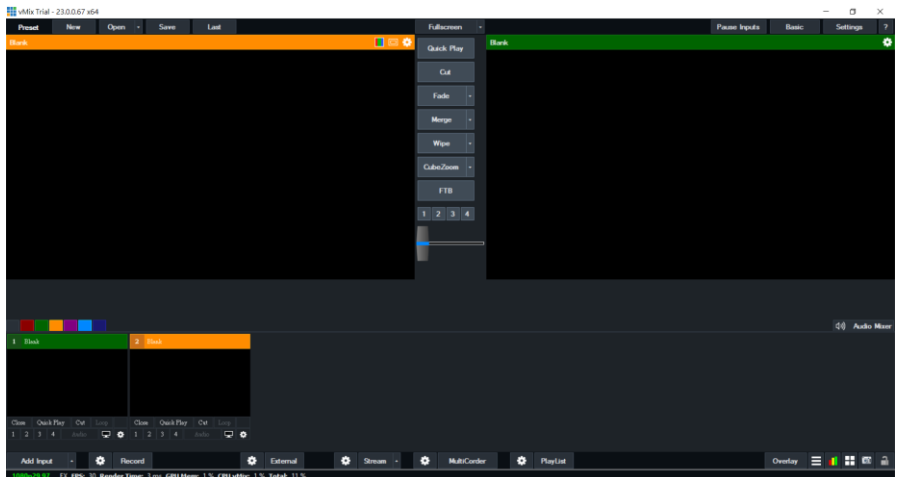
## If the PTC-140 is set in Caller Mode

**Note:** If vMix is set in Caller Mode, the PTC-140 Web UI must be set in Listener Mode. If vMix is set in Listener Mode, the PTC-140 Web UI must be set in Caller Mode.


1. At first, please click “vMix(x64)” from the Start Menu.



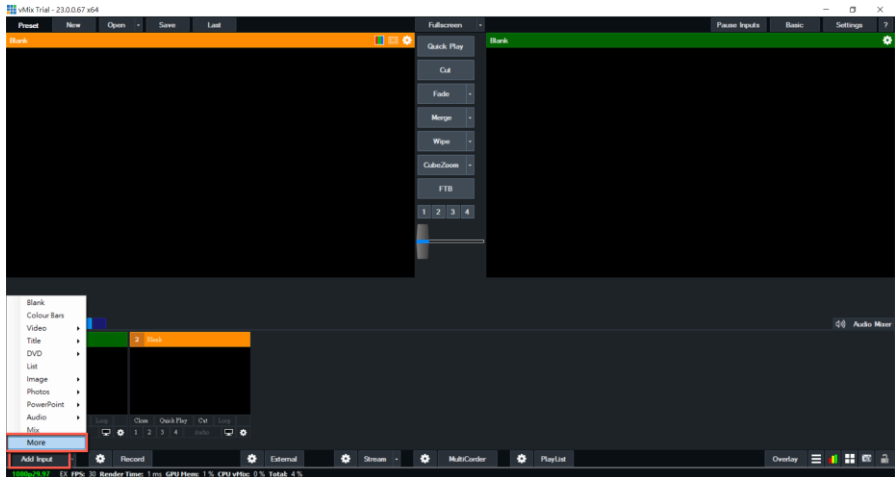
2. Users can see the main interface of the vMix which is shown as following diagram.



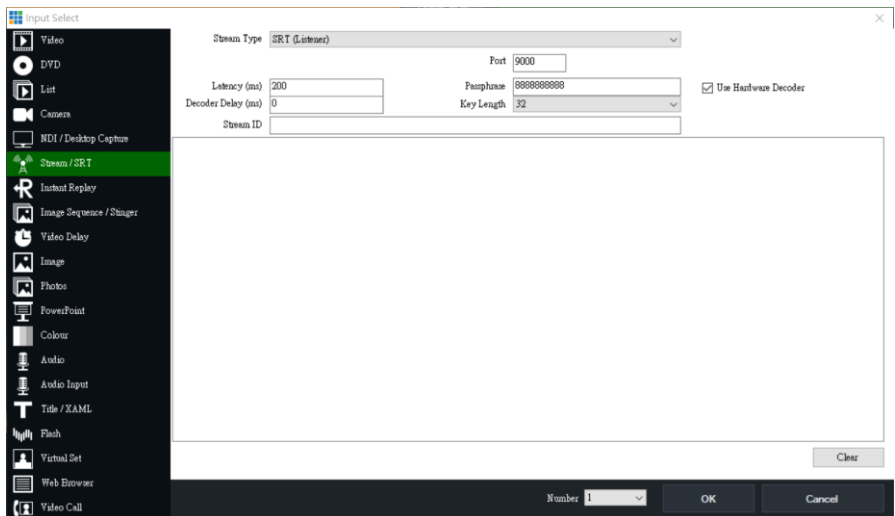
3. Please go back to the interface of the PTC-140 Web UI, click the “Stream Publish” option, and then you can see the “Stream Publish” interface which is shown as following diagram.

4. Please select “SRT” option from the “Protocol Type” drop-down menu.
5. Please enter the IP address of the device that the vMix software is installed in the “Host Address” column. In this example, it means the Notebook PC, and its IP address is 192.168.2.50.
6. The “Host Port” default value for the PTC-140 is 5000.
7. Please select 32 from the “Crypto key length in bytes” drop-down menu.
8. Please enter your desired SRT password in the “Password for stream encryption” column. In this example, it is “8888888888”.
9. Please click the “SAVE” button .
10. Please click the “Reboot” button from the “Reboot” option for rebooting the PTC-140.

11. Please go back to vMix and then please click “Add Input”. After that, please click “More” from the drop-up menu.

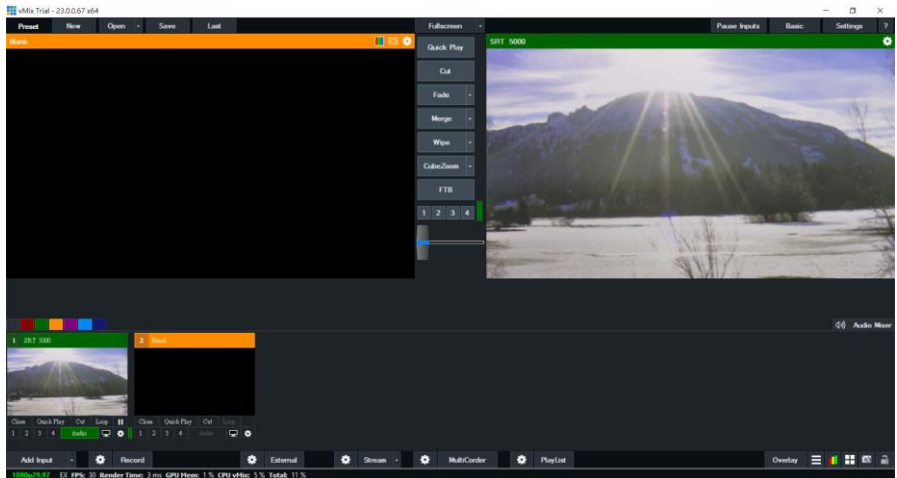


12. Please select “SRT Listener” from the “Stream Type” drop-down menu. And then please paste the “Host Port” default value “5000” in the “Stream Publish” option into the “Port” column of the vMix software. After that, please set the “Passphrase” password to “88888888” which is consistent to the “Password for Stream Encryption” in the “Stream Publish” page of the PTC-140 web UI. After that, please set the “Key length” drop-down menu to 32, which is consistent to the PTC-140 web UI.



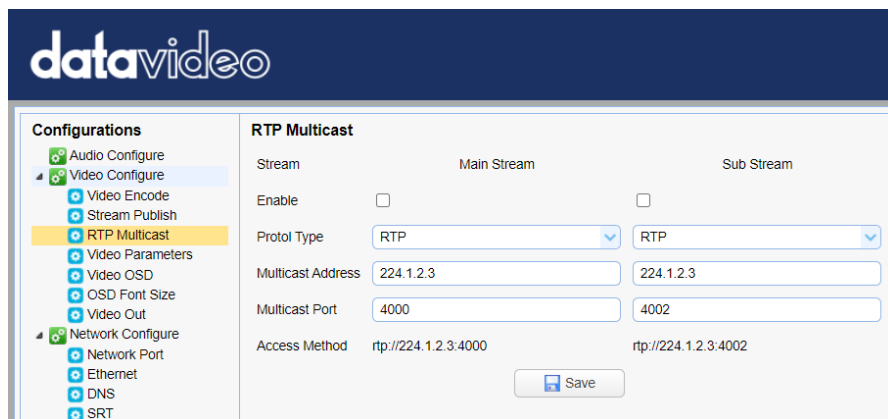
13. Finally, please click the “OK” button.

14. Users can see that the image which is shot by the PTC-140 is streamed to vMix software by the SRT Caller Mode.



## RTP Multicast

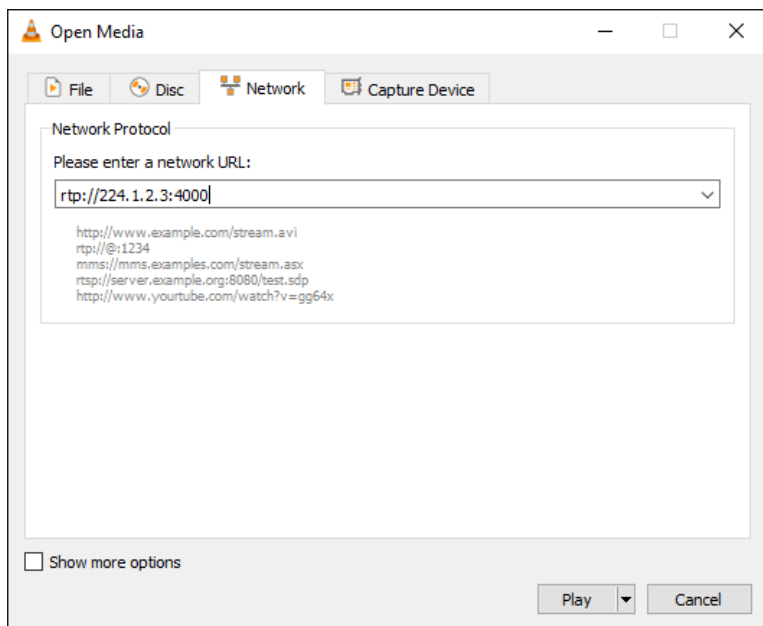
The RTP Multicast allows you to view camera video on certain video players such as VLC media player from a remote location.



The screenshot shows the 'datavideo' web interface. On the left is a 'Configurations' sidebar with a tree view containing: Audio Configure, Video Configure (expanded), Video Encode, Stream Publish, RTP Multicast (highlighted), Video Parameters, Video OSD, OSD Font Size, Video Out, Network Configure (expanded), Network Port, Ethernet, DNS, and SRT. The main panel is titled 'RTP Multicast' and is divided into two columns: 'Main Stream' and 'Sub Stream'. Each column has an 'Enable' checkbox (both are unchecked), a 'Protocol Type' dropdown menu (both are set to 'RTP'), a 'Multicast Address' text field (both are '224.1.2.3'), and a 'Multicast Port' text field (Main is '4000', Sub is '4002'). Below these fields, the 'Access Method' is displayed as 'rtp://224.1.2.3:4000' for the main stream and 'rtp://224.1.2.3:4002' for the sub stream. A 'Save' button is located at the bottom right of the configuration area.

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.

RTP Multicast		
Stream	Main Stream	Sub Stream
Enable	<input type="checkbox"/>	<input type="checkbox"/>
Protol Type	TS	RTP
Multicast Address	224.1.2.3	224.1.2.3
Multicast Port	4000	4002
Access Method	udp://@224.1.2.3:4000	rtp://224.1.2.3:4002
<input type="button" value="Save"/>		

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.

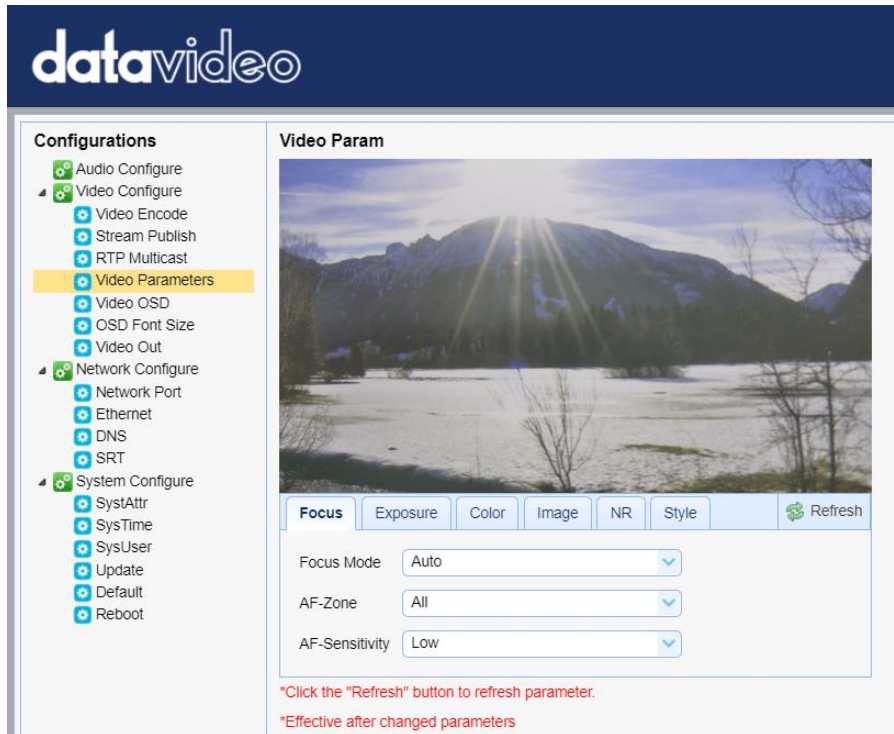
3. Click the **“Play”** button to start viewing the video stream.

### **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**.



The screenshot shows the 'datavideo' web interface. On the left is a 'Configurations' sidebar with a tree view containing: Audio Configure, Video Configure (expanded), Video Encode, Stream Publish, RTP Multicast, Video Parameters (highlighted), Video OSD, OSD Font Size, Video Out, Network Configure (expanded), Network Port, Ethernet, DNS, SRT, System Configure (expanded), SystAttr, SysTime, SysUser, Update, Default, and Reboot. The main area is titled 'Video Param' and features a live video feed of a snowy mountain landscape. Below the feed are tabs for 'Focus', 'Exposure', 'Color', 'Image', 'NR', 'Style', and a 'Refresh' button. The 'Focus' tab is active, showing three settings: 'Focus Mode' set to 'Auto', 'AF-Zone' set to 'All', and 'AF-Sensitivity' set to 'Low'. Each setting has a dropdown arrow. At the bottom, two red notes state: '\*Click the "Refresh" button to refresh parameter.' and '\*Effective after changed parameters'.

- 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).

**datavideo**

**Configurations**

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters**
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

**Video Param**

Focus **Exposure** Color Image NR Style Refresh

Mode: Auto

EV: OFF

BLC: OFF

Flicker: OFF

G.Limit: 3

DRC: 5

\*Click the "Refresh" button to refresh parameter.

\*Effective after changed parameters

- **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 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 your desired shutter speed.



**Aperture Automatic Exposure** – The camera will measure light and automatically set the shutter speed based on your 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.

## Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

## Video Param



Focus	Exposure	Color	Image	NR	Style	Refresh
WB Mode: <input type="text" value="Auto"/>						
RG Tuning: <input type="range" value="0"/> 0						
BG Tuning: <input type="range" value="0"/> 0						
Saturation: <input type="text" value="100%"/>						
Hue: <input type="range" value="7"/> 7						
AWB Sensitivity: <input type="text" value="High"/>						

\*Click the "Refresh" button to refresh parameter.

\*Effective after changed parameters

- WB Mode: Select white balance mode from the options listed below.
  - Auto
  - Manual
  - One Push
  - VAR
    - 2400K
    - 2500K
    - 2600K
    - 2700K
    - 2800K
    - 2900K
    - 3000K
    - 3100K

- 3200K
- 3300K
- 3400K
- 3500K
- 3600K
- 3700K
- 3800K
- 3900K
- 4000K
- 4100K
- 4200K
- 4300K
- 4400K
- 4500K
- 4600K
- 4700K
- 4800K
- 4900K
- 5000K
- 5100K
- 5200K
- 5300K
- 5400K
- 5500K
- 5600K
- 5700K
- 5800K
- 5900K
- 6000K
- 6100K
- 6200K
- 6300K
- 6400K
- 6500K
- 6600K
- 6700K
- 6800K

- 6900K
- 7000K
- 7100K
- 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.

## Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

## Video Param



Focus	Exposure	Color	Image	NR	Style	Refresh
Bright	<input type="range"/>		7			
Contrast	<input type="range"/>		8			
Sharpness	<input type="range"/>		5			
Gamma	<input type="text" value="0.45"/>		▼			
DCI	<input type="text" value="OFF"/>		▼			
B&W Mode	<input type="button" value="Color"/>					
Flip-H	<input type="button" value="OFF"/>					
Flip-V	<input type="button" value="OFF"/>					
DZoom	<input type="button" value="OFF"/>					
Low-Light Mode	<input type="button" value="OFF"/>					

\*Click the "Refresh" button to refresh parameter.

\*Effective after changed parameters

- Bright: Brightness level adjustment from **0 to 14**.
- Contrast: Contrast adjustment from **0 to 14**.
- Sharpness: Sharpness adjustment from **0 to 15**.
- Gamma: Selects a gamma value from the following
  - 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 horizontal axis.
- Flip-V: Turning in ON flips the image along the vertical 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.

### Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters**
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

### Video Param

FocusExposureColorImage**NR**StyleRefresh

NR-2D1
NR-3D5
Dynamic Hot PixelOFF

\*Click the "Refresh" button to refresh parameter.

\*Effective after changed parameters

- 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

## Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters**
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

## Video Param



Focus
Exposure
Color
Image
NR
Style
 Refresh

Style Bright

\*Click the "Refresh" button to refresh parameter.

\*Effective after changed parameters



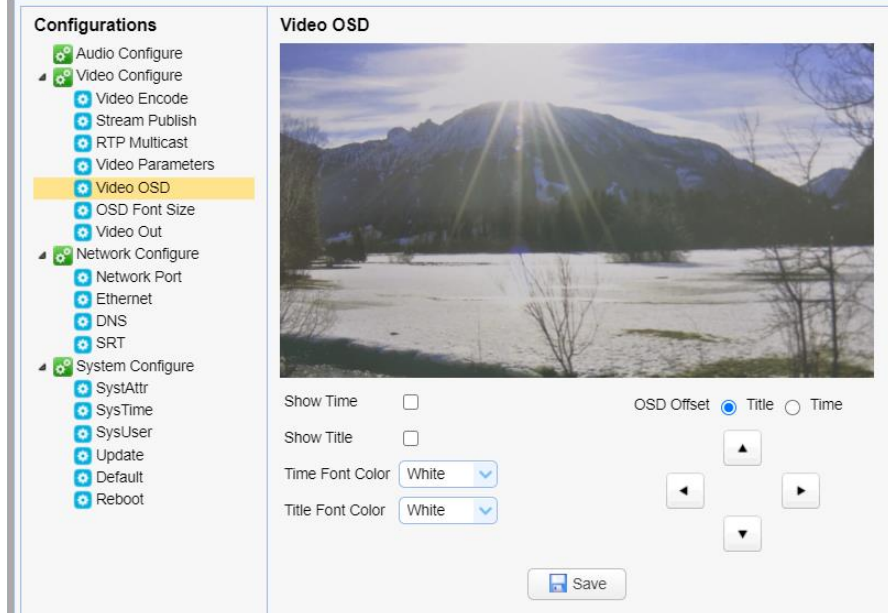
Refresh

**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

Show Time ☐

Show Title ☐

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



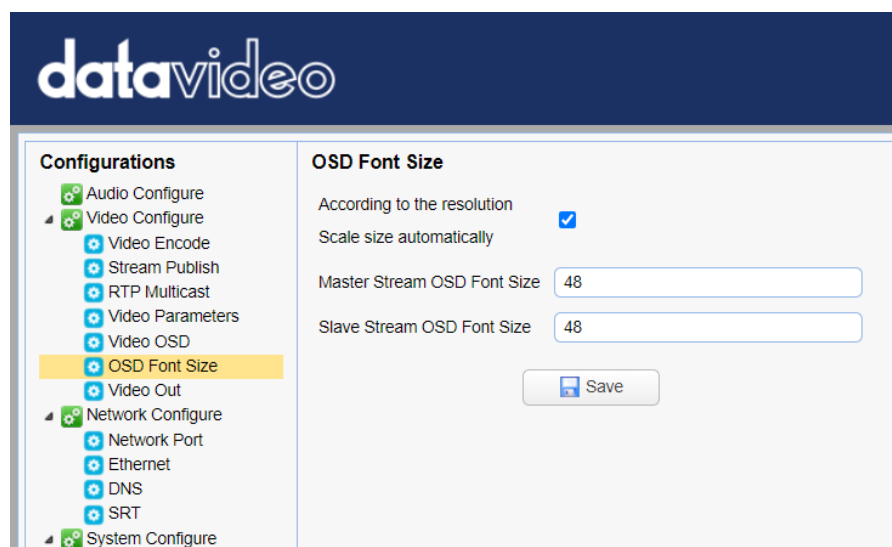
On the OSD Offset tile, you will be allowed to adjust positions of the Time and Title displayed on the screen. First select Time or Title then click the arrow buttons to move it to the desired position.



**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.

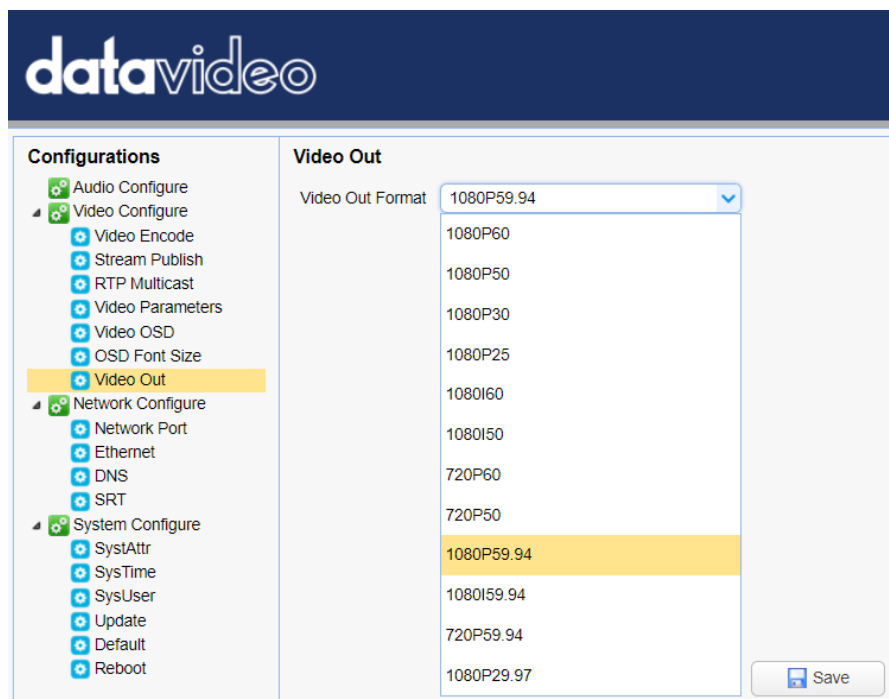


## Video OUT

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.



The screenshot displays the DataVideo configuration interface. On the left, a sidebar titled "Configurations" lists various settings categories: Audio Configure, Video Configure (expanded), Network Configure, and System Configure. Under "Video Configure", the "Video Out" option is highlighted. The main panel, titled "Video Out", shows a "Video Out Format" dropdown menu currently set to "1080P59.94". A list of supported resolutions is displayed below the dropdown, with "1080P59.94" highlighted. A "Save" button is located at the bottom right of the interface.

**Configurations**

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out**
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - SRT
- System Configure
  - SystAttr
  - SysTime
  - SysUser
  - Update
  - Default
  - Reboot

**Video Out**

Video Out Format: 1080P59.94

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

Save

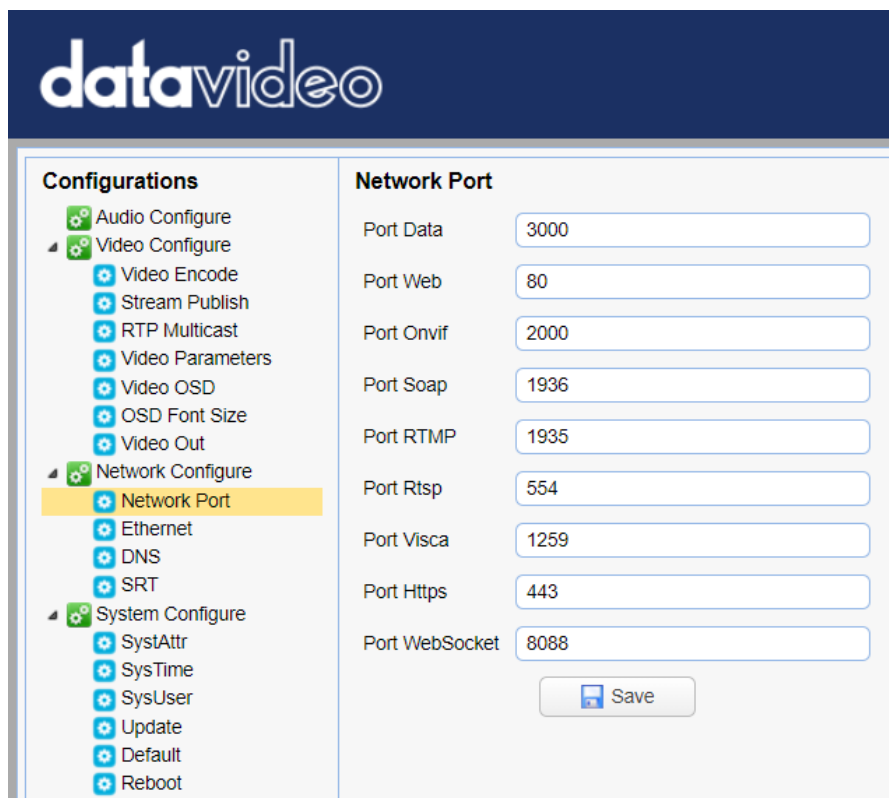
## Network Configure

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.



The screenshot shows the 'datavideo' web interface for network configuration. On the left, a sidebar titled 'Configurations' lists various settings: Audio Configure, Video Configure (expanded), Network Configure (expanded and highlighted), and System Configure. Under 'Network Configure', 'Network Port' is selected. The main area, titled 'Network Port', displays a list of ports with their corresponding values in input fields: Port Data (3000), Port Web (80), Port Onvif (2000), Port Soap (1936), Port RTMP (1935), Port Rtsp (554), Port Visca (1259), Port Https (443), and Port WebSocket (8088). A 'Save' button is located at the bottom right of the main area.

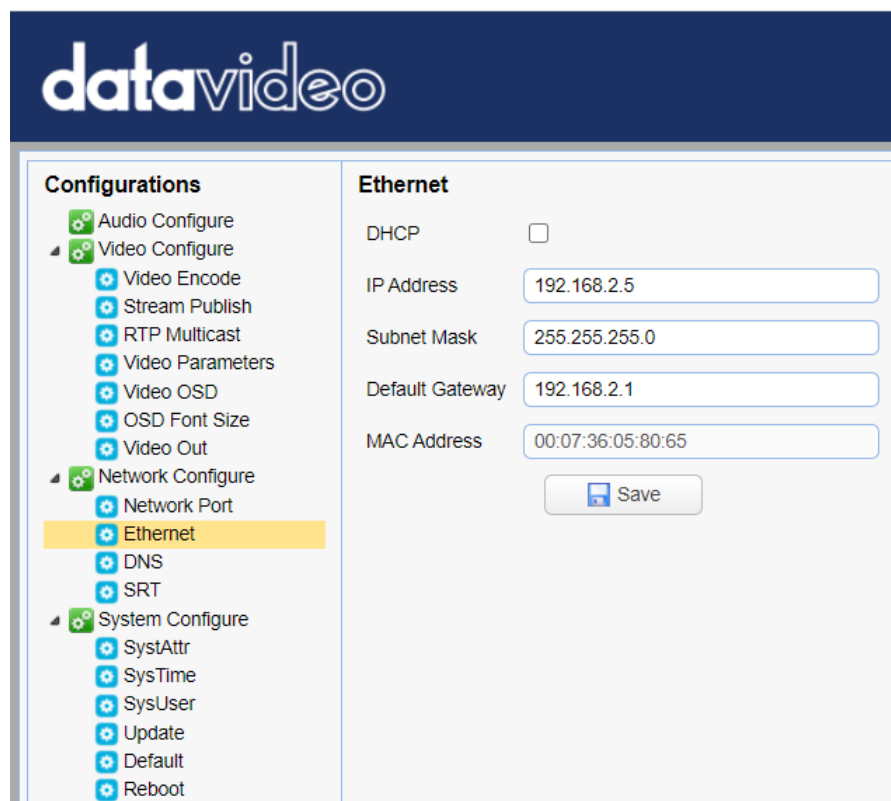
Port Name	Port Value
Port Data	3000
Port Web	80
Port Onvif	2000
Port Soap	1936
Port RTMP	1935
Port Rtsp	554
Port Visca	1259
Port Https	443
Port WebSocket	8088

### Ethernet


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

**Network Connection.**

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



The screenshot shows the 'datavideo' web interface. On the left is a 'Configurations' sidebar with a tree view. The 'Ethernet' option under 'Network Configure' is highlighted in yellow. The main area on the right is titled 'Ethernet' and contains the following settings:

- DHCP: ☐
- IP Address:
- Subnet Mask:
- Default Gateway:
- MAC Address:
- Save button:  Save

### **DNS**

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

### Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS**
  - SRT
- System Configure
  - SystAttr

### DNS

Preferred DNS Server

Alternative DNS Server


















## 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**.

## Configurations


-  Audio Configure
-  Video Configure
  -  Video Encode
  -  Stream Publish
  -  RTP Multicast
  -  Video Parameters
  -  Video OSD
  -  OSD Font Size
  -  Video Out
-  Network Configure
  -  Network Port
  -  Ethernet
  -  DNS
  -  SRT
-  System Configure
  -  SystAttr
  -  SysTime

## System Attribute

Device Name

Device ID

Language

 Save

## 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.

datavideo

Configurations

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

Network Configure

Network Port

Ethernet

DNS

SRT

System Configure

SystAttr

SysTime

SysUser

Update

Default

Reboot

System Time

Date Format

YYYY-MM-DD

Date Sprtr

/

Zone

(GMT+08:00)Beijing, Hongkong, Sin

Hour Type

24 Hours

NTP Enable

☐

Update Interval

1 day

Host Uri

time.nist.gov

Host Port

123

Save

Time Settings

Time Settings

Synchronize with computer time

Computer Time

2021-01-22 10:21:23

Sync.

## 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.

datavideo

Configurations

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

Network Configure

Network Port

Ethernet

DNS

SRT

System Configure

SystAttr

SysTime

SysUser

Update

Default

Reboot

User Set

Authority

admin

User Name

admin

Password

.....

Confirm Password

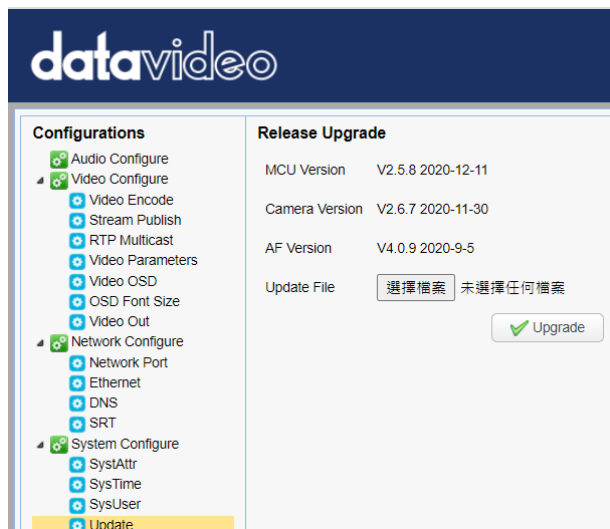
Save

104



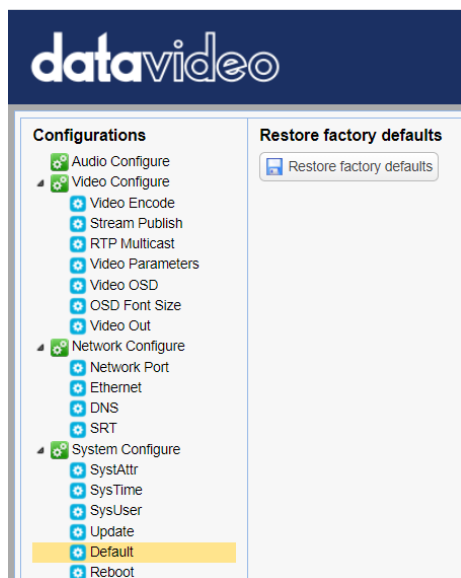
## Update

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



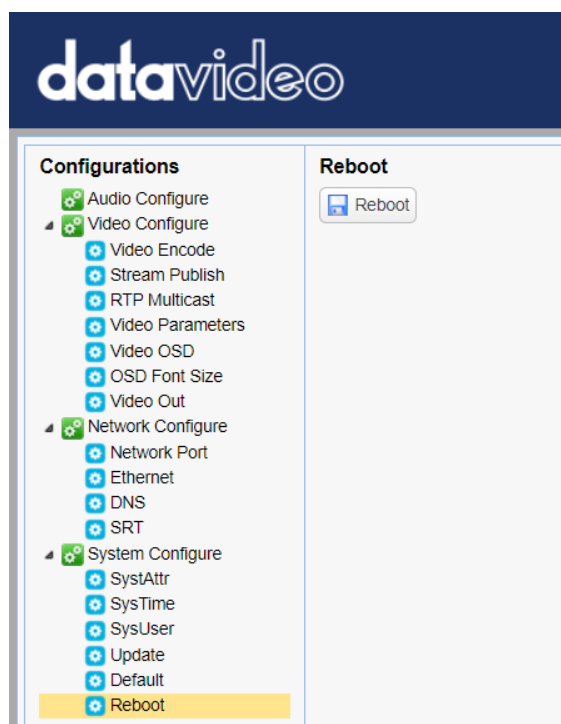
## Default

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



## Reboot

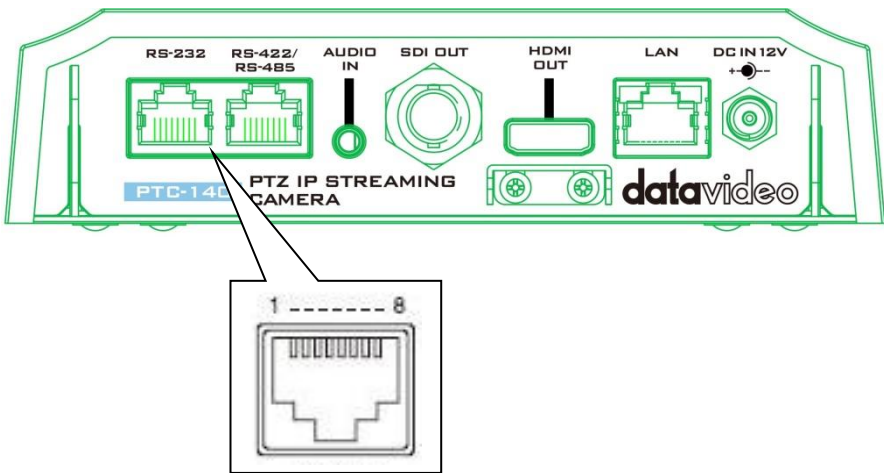
Click “**Reboot**” to reboot the device.



# 8. 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 pinouts are 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 pinouts are 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

How to Connect the PTC-140 to a 2-wire RS-485 Interface

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

## 9. 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***.

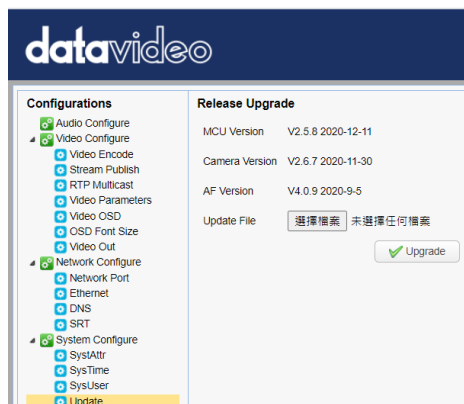
**The existing settings should persist through the *firmware upgrade process, which should not be interrupted once started* as this could result in a non-responsive unit.**

### 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.

## 10. Frequently-Asked Questions

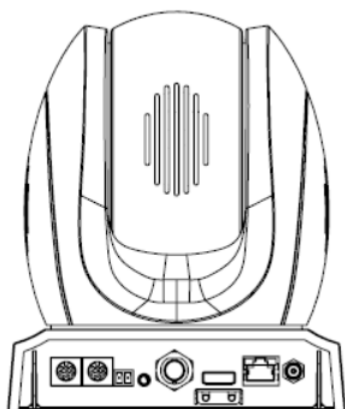
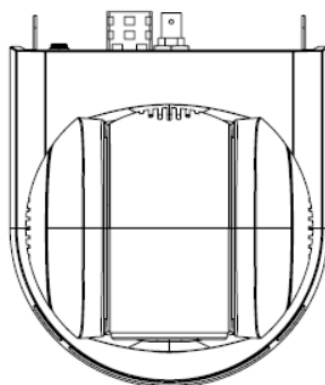
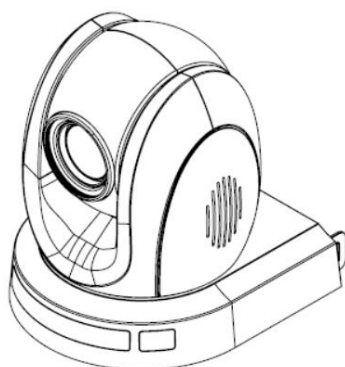
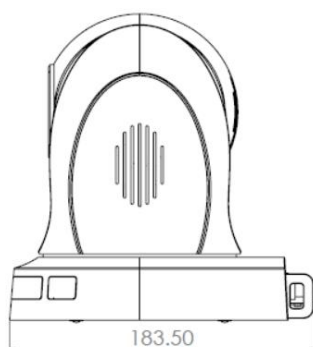
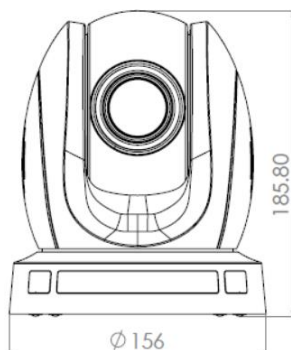
This section describes problems that you may encounter while using PTC-140. If you have any questions, please refer to related sections and follow all suggested solutions. If problem still exists, please contact your distributor or the service center.

No.	Problems	Solutions
1.	What are important points for product maintenance?	<ol style="list-style-type: none"><li>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.</li><li>2. Use soft cloth or tissue to clean the camera.</li><li>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.</li></ol>
2.	There is no output video.	<ol style="list-style-type: none"><li>1. Check that your power is properly connected. This is indicated by the power LED.</li><li>2. Make sure the camera is switched ON.</li><li>3. Check your video cable connection.</li></ol>
3.	I have seen image jitter while zooming in or out.	<ol style="list-style-type: none"><li>1. Make sure the camera is properly mounted.</li><li>2. Make sure that machines that could cause vibration are not in proximity of the camera.</li></ol>
4.	The remote control is not working.	<ol style="list-style-type: none"><li>1. Try setting the camera to CAM1 and try again.</li><li>2. Make sure the remote control's battery is fully charged.</li><li>3. Check your device working mode.</li><li>4. Make sure the OSD menu is closed. The remote control cannot be used if the OSD menu is opened.</li></ol>
5.	The serial port is not working properly.	<ol style="list-style-type: none"><li>1. Make sure you are using the standard connection cable provided by Datavideo.</li><li>2. Make sure your baud rate and device addresses are correct.</li><li>3. Check your cable connection.</li><li>4. Check your device working mode.</li></ol>
6.	I cannot login the web user interface.	<ol style="list-style-type: none"><li>1. Check your Ethernet connection.</li><li>2. Check your network settings such as IP address.</li></ol>

7.	Important notices for the Preview Window which is played by the HTML5 player.	<p>1. If the Microsoft Internet Explorer browser is used, the preview image can not be shown normally.</p> <p>2. The delay time for the screen in Google Chrome is shorter than the delay time when using Firefox and Microsoft Edge browsers. (In local area network, the delay time for using Google Chrome is less than 0.5 second).</p> <p>3. If the browser is not clicked by users for a period of time (the time length is uncertain), it will cause the issue that the preview window of the PTC-140 web UI will stop the preview screen update. To solve this issue, please click the “Configuration” page at first and then click the “Preview” page or users can press “Ctrl+F5” combination key from the keyboard. After that, the preview screen will be shown normally.</p> <p>4. When the browser is not clicked by users. After 1 or 2 minutes, when users want to control it again, users will feel that the delay time becomes longer. Please switch to other pages or login into the web UI again, the delay time will be resumed to less than 0.5 seconds.</p>
8.	Important notice when using the PTC-140 and the vMix software to do the SRT streaming.	<p>When the PTC-140 is set in SRT Caller Mode, the vMix must be set in SRT Listener Mode. When the PTC-140 is set in SRT Listener Mode, the vMix must be set in SRT Caller Mode.</p>

## 11. Dimensions

Unit: mm





## 12. 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)

<b>Image Compensation</b>	Backlight Compensation
<b>Input /Output Interfaces</b>	
<b>Video Output</b>	HDMI x 1 SDI x 1
<b>Audio Input</b>	3.5mm Line in
<b>Tally LED</b>	Dual colors (Red, Green)
<b>Lens Filter</b>	M52.0 x 0.75 Thread with UV Protection
<b>Control Protocol</b>	VISCA/Pelco-D/Pelco-P; Baud Rate:115200/38400/9600/4800/2400bps DVIP
<b>Remote Control Interface and Transmit Distance</b>	RJ-45: for IP control (DVIP) RS-232: Mini DIN 8-pin (IN / OUT) RS-485
<b>Video Compression Format</b>	H.264, H.265, Dual stream output
<b>Audio Compression Format</b>	AAC/MP3/G.711A Audio compression
<b>HD IP Interface</b>	100M IP port(100BASE-TX); Support DVIP
<b>Streaming Protocols</b>	TCP/IP, HTTP, RTSP, RTMP(S), DHCP, Multicast, etc
<b>Others</b>	
<b>F/W Update</b>	Ethernet
<b>IR Control</b>	Yes
<b>Camera Control Unit</b>	RMC-180/RMC-300C

<b>Tripod Mount</b>	1/4-20 UNC
<b>Optional Accessories</b>	WM-1/ WM-10
<b>Color</b>	Dark Blue/White
<b>Dimension (LxWxH)</b>	156 x 184 x 186 mm
<b>Weight</b>	1.6 kg
<b>Operating Temp. Range</b>	0~40 °C
<b>Power</b>	DC 12V 12W

## 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](http://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](http://www.datavideo.com/product/PTC-140)

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[www.datavideo.com](http://www.datavideo.com)



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