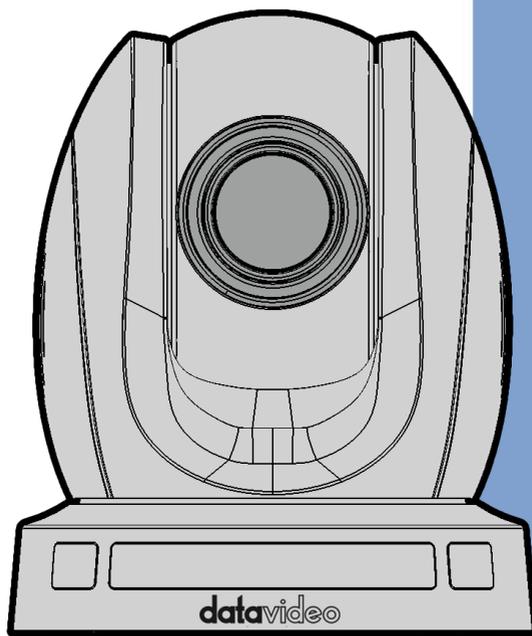


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HDBASET PTZ CAMERA

PTC-140T/PTC-140TH

Instruction Manual

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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 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

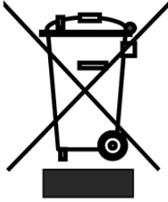
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. 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.

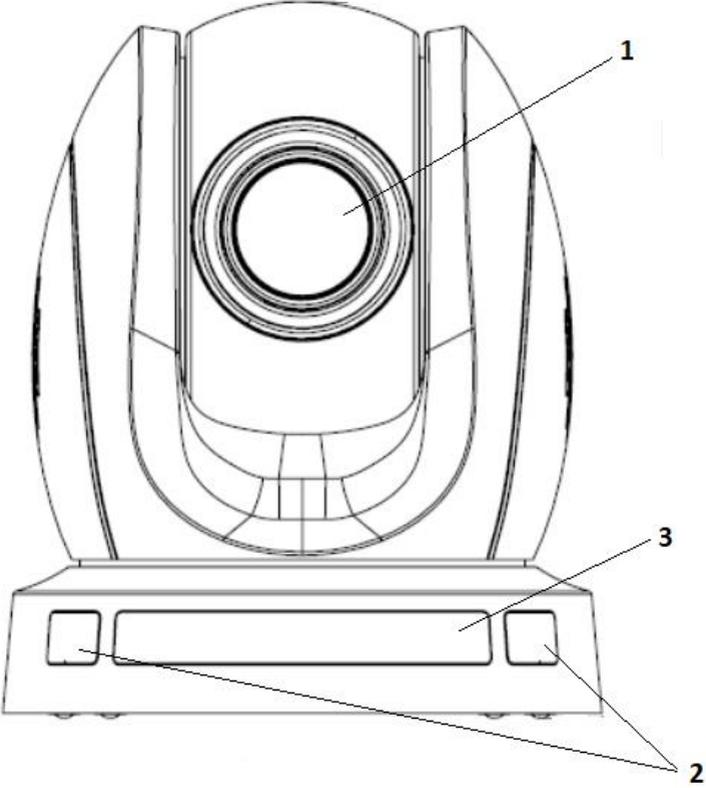
1. Product Overview

The PTC-140T is a low-cost HDBT PTZ camera, which features PoE functionality, 20x optical zoom, 10 digital zoom, transmitting the uncompressed video up to 100 meters (1080p60/50). The PTC-140T is an IP camera as well, supports H.264 /H.265 video compression and dual stream output.

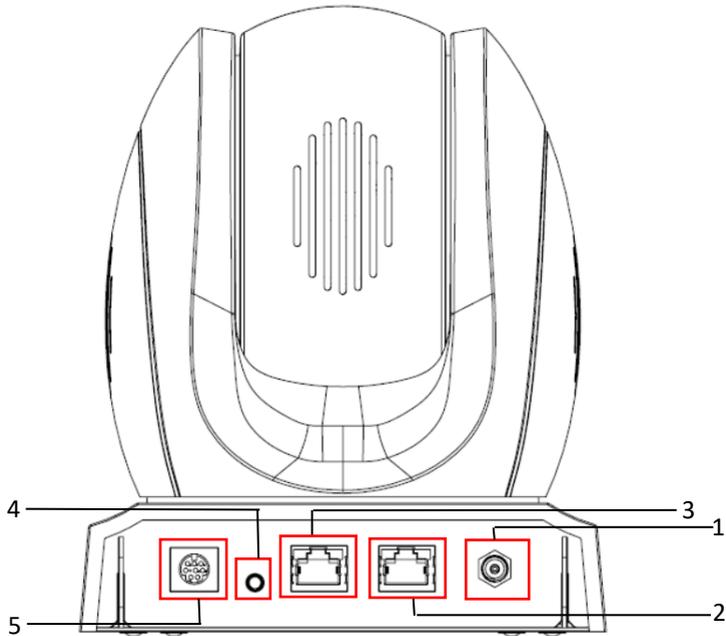
2. Features

- 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
- Support 16000,32000,44100,48000 sampling frequency and AAC, MP3, G.711A audio coding.
- Supports H.264/H.265 video compression; AAC, MP3 and G.711A audio compression; Support compression of resolution up to 1920x1080 with frame up to 60fps and 2 channel 1920x1080p with 30fps compression.
- Supports multiple network protocols including RTSP, RTMP and it also supports easy to link streaming media server.

3. Location and Function of Parts

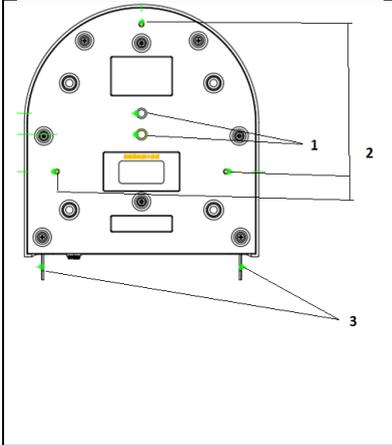
Front of Camera	
	
1	Lens Built-in 1/2.8" 2.07M Pixel CMOS HD color camera with white balance control, backlight compensation settings, automatic gain settings and etc.
2	Tally LED Tally lamp lights up when tally signal has been transmitted to the tally signal box.
3	Sensor for Remote Control Remote controller receiver

Rear of Camera



1	<p>Power Input</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>LAN Port</p> <p>This port is used to output the video of the camera. Please connect a Ethernet cable from this port to the LAN port of a PC or Notebook PC and then users can monitor the video of the camera from the web control interface. Moreover, it allows users to stream the video of the camera in various stream protocols.</p>
3	<p>HDBaseT Communication Port</p> <p>Connects the camera to the receiver box, thereby extending video transmission up to 100m. Use an Ethernet cable to connect from this port to the HDBaseT port of the receiver box and then it can output HDMI signal to external connected monitor.</p>
4	<p>Audio Input Interface</p> <p>It provides a 3.5mm audio input interface for audio signal input.</p>
5	<p>8 pin RS-232 Input Port</p> <p>Please connect an RS-232 Mini-Din 8 pin to RS-232 DB9 adapter cable from the camera to an RS-232 remote controller.</p>

Bottom of Camera



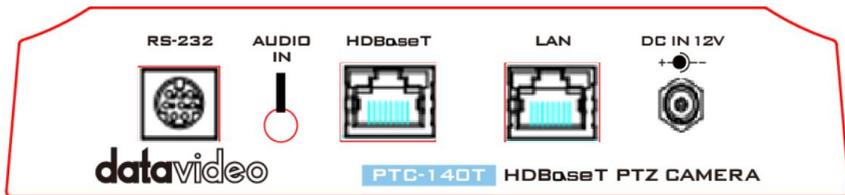
1 **Tripod Screw Hole** allows the user to mount the camera on the tripod.

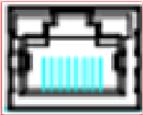
2 **Screw Hole**
Screw holes for ceiling bracket mounting.

3 **Safety Rope Loop**
Safety rope loop for fixing the camera.

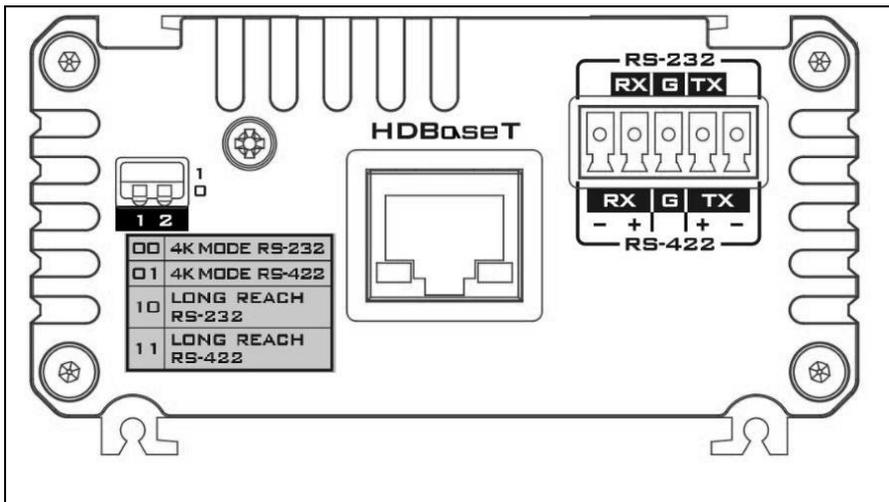
4. Connections

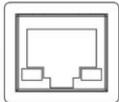
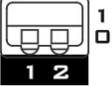
4.1 Camera Rear Control Panel



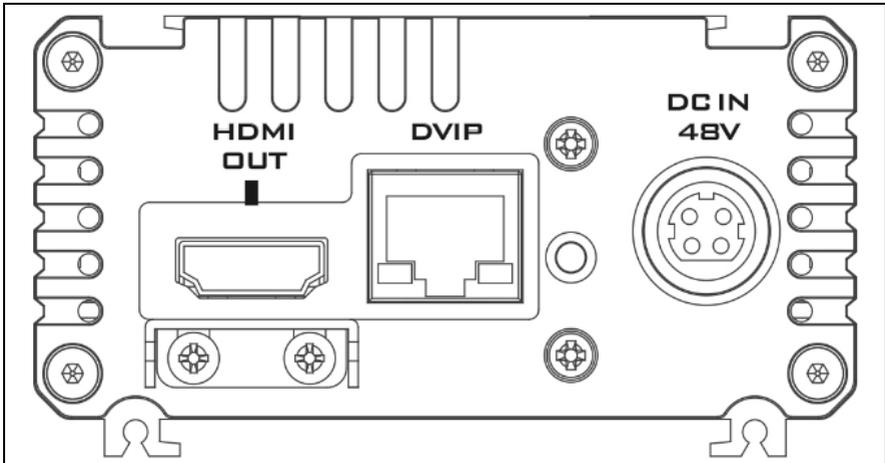
<p>HDBaseT</p> 	<p>HDBaseT</p> <p>Port for connection to the PTC-140T Receiver Box HDBaseT port using a CAT5e/6 cable.</p>
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4.2 Receiver Box Front Panel



	<p>HDBaseT</p> <p>Port for connection to the PTC-140T Camera HDBaseT Port using a CAT5e/6 Cable</p>
	<p>RS-232/RS-422 Interface (Phoenix Terminal)</p> <p>Connects to external RS-232/RS-422 device.</p> <p>RX: Receiver PIN (differential pair if using RS-422 connection)</p> <p>TX: Transmitter PIN (differential pair if using RS-422 connection)</p> <p>G: Ground PIN</p>
	<p>DIP Switch</p> <p>The receiver box extends the video transmission distance up to 100 meters. Select 4K mode (2160p) if the video transmission distance is less than 70 meters. Select long reach mode if the video transmission distance is more than 70 meters but less than 100 meters at the expense of video quality (1080p). The DIP Switch is used to select the modes of connection listed as follows.</p> <p>00: 4K Mode RS-232</p> <p>01: 4K Mode RS-422</p> <p>10: Long Reach RS-232</p> <p>11: Long Reach RS-422</p>

4.3 Receiver Box Rear Panel



 <p>DC IN 48V</p>	<p>DC In Socket Connects the supplied 48V PSU to this socket. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.</p>
 <p>HDMI OUT</p>	<p>HDMI OUT Connection to Monitor Display</p>
 <p>DVIP</p>	<p>DVIP Communication Port Connect the DVIP port to an Ethernet switch or router, serving as a communication port between the network and the HBT-11 receiver.</p>

Note: The HBT-11 is not the accessory of the PTC-140T, The HBT-11 will be packaged only with the PTC-140TH.

4.4 How to Connect the PTC-140T Camera to the HS-1600T HDBaseT Portable Video Streaming Studio

The PTC-140T can be the accessory of the HS-1600T 4 Channel HD/SD HDBaseT Portable Video Streaming Studio. The PTC-140T can be used by connecting with the HS-1600T. Please follow following steps for connecting the PTC-140T HDBaseT PTZ camera to the HS-1600T 4 Channel HD/SD HDBaseT Portable Video Streaming Studio.

Step 1. Please use an RJ-45 Ethernet cable to connect from the HDBaseT interface on the rear panel of the PTC-140T camera to the HDBaseT IN interface on the rear panel of the HS-1600T and then the PTC-140T can be operated with the HS-1600T.

4.4.1 Troubleshooting for the PTC-140T and the HS-1600T Connection

If the PTC-140T and the HS-1600T can not be operated after connecting the Ethernet cables, please try following two steps for troubleshooting.

4.4.1.1 How to Set the Baud Rate of the PTC-140T Camera

The Factory Default Baud rate for the HS-1600T is 38400 and this value can not be changed by users.

The Factory Default Baud rate for the PTC-140T is set at 38400 and there is no need for users to change it. However, if there is something wrong when connecting the PTC-140T with the HS-1600T, please check whether the Baud rate of the PTC-140T is changed or not. If the Baud rate of the PTC-140T is changed, please follow following steps for setting the value back to 38400.

Step 1. Please press the “MENU” key on the PTC-140T remote controller to enter the OSD menu.

Step 2. After the OSD menu is shown, please press the “Down” key on the remote controller to select Setup option. And then please press the “Home” key to enter the Setup option.

Step 3. Please make sure that the Protocol option is set to “Auto”.

Step 4. Please press “Down” key to select the Baud rate option.

Step 5. Please press the “Left” key or “Right” key to set the Baud rate at 38400.

Please make sure that the Baud rate of the PTC-140T and the Baud rate of the HS-1600T must be consistent to assure their normal operation.

4.4.1.2 How to Set PTC-140T’s Video Format to be Consistent to HS-1600T’s PGM OUT Resolution

For connecting the PTC-140T camera to the HS-1600T, please make sure that the setting of the PTC-140T’s video format and the PGM OUT resolution of the HS-1600T is consistent. Please follow following steps to confirm the settings.

Step 1. Please press the “MENU” button from the keyboard of the HS-1600T and then the OSD menu will be shown.

Step 2. From the popup OSD menu, users can see the PGM OUT Resolution of the HS-1600T. Please press the “Down Arrow” button on the HS-1600T keyboard to select the “Camera” option on the left column of the OSD.

Step 3. Please press the “Right Arrow” button on the keyboard of the HS-1600T to select the PTC-140T camera option from the OSD.

Step 4. Please press the “Enter” button on the keyboard of the HS-1600T to enter the PTC-140T camera parameter setting OSD.

Step 5. Please press the “Down Arrow” button to select the “Video” option on the left column of the OSD.

Step 6. After the “Video” option is selected, users can see the current Video Format setting of the PTC-140T.

Step 7. Please press the “Right Arrow” button on the keyboard of the HS-1600T to select the “Video Format” column.

Step 8. Please press the “Right Arrow” button on the keyboard of the HS-1600T again and then the Video Format drop-down menu will be shown for users to select the corrected camera resolution to be consistent to the PGM OUT resolution of the HS-1600T. Please press the “Down Arrow” button to select the consistent resolution.

Step 9. After the consistent resolution is selected, please press the “MENU” button on the keyboard of the HS-1600T until the OSD is back to its first layer.

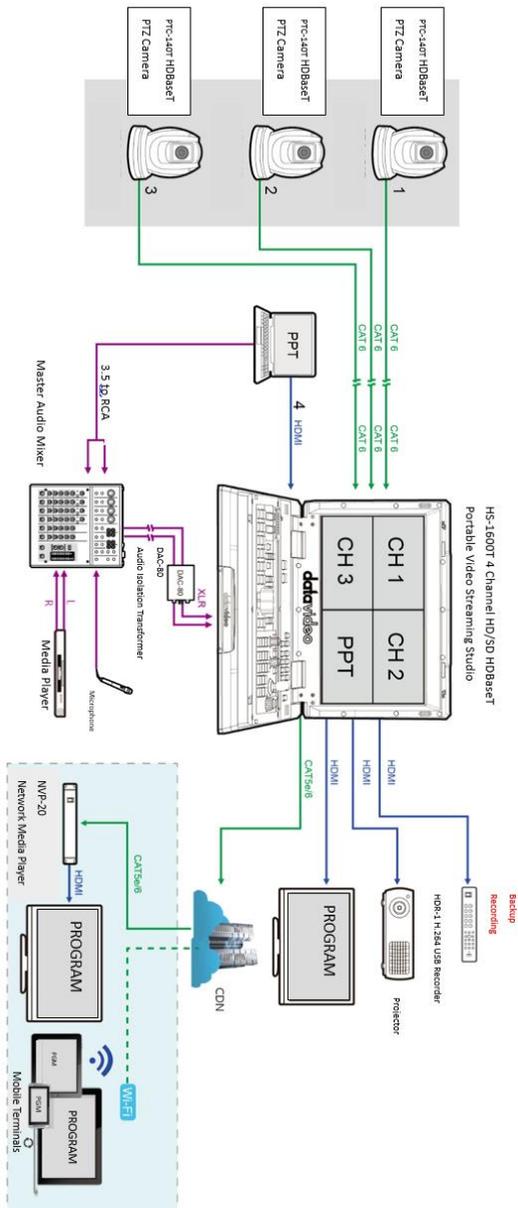
Step 10. After the OSD goes back to its first layer, please press the “Right Arrow” button and “Down Arrow” button on the keyboard of the HS-1600T to select the “Save Setup” option on the OSD.

Step 11. After the “Save Setup” option is selected, please press the “Right Arrow” button again and then there are two buttons including “Yes” and “No” will be shown on the OSD.

Step 12. Please select the “Yes” button by using the “Left or Right Arrow” key and then please press the “Enter” button on the keyboard of the HS-1600T to save the updated settings.

The system diagram for the PTC-140T and the HS-1600T connection is shown as following diagram.

4.4.2 System Diagram for the PTC-140T and the HS-1600T Connection



5. Basic Setup

5.1 Power-On Initial Configuration

Step 1. Please connect the DC 12 V power adapter.

Step 2. The camera will start the initial configuration, the Red indicator light will be flashing.

Step 3. When the camera returns to the HOME position (middle position for P/T) and lens zoom-in/zoom-out is finished, the auto-testing is finished. The IR led will also stop flashing. If the preset 0 is set, camera will rotate to the 0 preset position after initial configuration.

5.2 Video Output

➤ Network Output

Step 1. Please connect the PTC-140T to the PC/Notebook PC by an Ethernet cable.

Step 2. Please open your web browser and then enter the default IP address of the camera into the address bar.

Note: The default Static IP address of the PTC-140T is 192.168.5.163

Step 3. The Login page of the web control user interface will pop-up. Please enter user name and password (the default user name and password is admin/admin).

Step 4. After entering into the preview window, the preview screen of the video will be shown.

➤ Video Output through HDBaseT

Step 1. Please connect the HDBaseT interface on the rear panel of the PTC-140T camera to the HDBaseT port on the front panel of the HDBaseT receiver box.

Step 2. Please connect a HDMI cable from the HDMI OUT port to the HDMI port of the external connected monitor.

Step3. After the self-test of the PTC-140T camera is done, the video will be shown.

6. Remote Control and On-Screen Menu

6.1 Remote Control Functions

No.	Item	Description
1		<p>After pressing the Standby button for 3 seconds, the camera will do the self-test again and then go back to the Home position. (Note: If power-on mode is turned on and Preset 0 is set, and there is no operation within 12s, it will automatically point to the specified preset position).</p>
2		<p>These four keys are used to determine which camera will be controlled. Press the number to determine which camera will be controlled.</p>
3		<p>The 0-9 number keys are used to set or to call presets. To Set Preset: Please press the SET PRESET at first, and then please press any of the number keys from 0 to 9 to save the PTZ settings. You will be allowed to save up to up to 10 presets using the remote control.</p> <p>To Call Preset: Press the 0-9 number keys directly and then the preset will be executed automatically. Note: If there is no preset for a specific number key, the call preset function will be ineffective after pressing that number key.</p> <p>To Clear Preset: Press the CLEAR PRESET key at first and then please press one of the 0-9 number key and then the corresponding preset will be cancelled.</p>
No.	Item	Description

4	<p>* , # Keys</p> 	<p>The * and # keys are used for key combination. The PTC-140T provides 17 key combinations for users which are shown as follows.</p> <ol style="list-style-type: none"> (1) 【#】 + 【#】 + 【#】 : Clear all presets. (2) 【*】 + 【#】 + 【6】 : Restore factory defaults (3) 【*】 + 【#】 + 【9】 : Switch images between normal & Up-side down position. (4) 【*】 + 【#】 +AUTO: Enter into the aging mode. (5) 【*】 + 【#】 + 【3】 : Set OSD MENU language to Chinese. (6) 【*】 + 【#】 + 【4】 : Set OSD MENU language to English. (7) 【*】 + 【#】 + MANUAL: Restore the default user name, password, and IP address. (8) 【#】 + 【#】 + 【0】 : Switch the video format to 1080P60. (9) 【#】 + 【#】 + 【1】 : Switch the video format to 1080P50 (10) 【#】 + 【#】 + 【2】 : Switch the video format to 1080I60 (11) 【#】 + 【#】 + 【3】 : Switch the video format to 1080I50 (12) 【#】 + 【#】 + 【4】 : Switch the video format to 720P60 (13) 【#】 + 【#】 + 【5】 : Switch the video format to 720P50 (14) 【#】 + 【#】 + 【6】 : Switch the video format to 1080P30 (15) 【#】 + 【#】 + 【7】 : Switch the video format to 1080P25
5	<p>AUTO Focus</p> 	<p>AUTO Focus</p> <p>This key is used to enter the Auto Focus mode. Once this key is pressed, the PTC-140T will enter into the Auto Focus mode.</p>
6	<p>Manual Focus</p> 	<p>Manual Focus</p> <p>This button helps users to set the camera in Manual Focus mode. Once this key is pressed, it allows users to adjust the Focus In/Focus Out and Zoom In/Zoom Out manually by pressing the Focus+/Focus- and Zoom+/Zoom- keys.</p>
7	<p>Focus Near/Focus Far</p> 	<p>Adjust Focus (Near)/Focus (Far)</p> <p>Once the Manual key is pressed, users can adjust the Focus (Near)/Focus (Far) of the camera by pressing this key.</p> <p>Focus (Near): Press “ 【Focus+】 ” key (Valid only in manual focus mode).</p> <p>Focus (Far): Press “ 【Focus-】 ”key (Valid only in manual focus mode).</p> <p>Press and hold the key, the camera keeps focusing and the camera stops as soon as the key is released.</p>
8	<p>Zoom In/Zoom Out</p>	<p>Zoom In/ Zoom Out</p> <p>Once the Manual key is pressed, users can adjust the Zoom In/Zoom Out of the camera by pressing this key.</p> <p>Press and hold the key, the camera will keep zooming in or</p>

		zooming out and stops as soon as the key is released.
9	SET PRESET 	SET PRESET This key is used for users to set presets. For Setting Preset Please press the SET PRESET key plus the 0-9 number keys and then the preset is set successfully.
10	CLEAR PRESET 	CLEAR PRESET This key is used for users to clear preset. For Clearing Preset Please press the CLEAR PRESET key plus the 0-9 number keys and then the preset is cleared successfully.
11, 12, 13	Direction Arrows 	11 & 12. PTZ Direction Control Keys Press the     keys to move the camera head to up/down/left/right sides. 13. Home Key Users can press the Home Key to change the camera head of the PTC-140T back to the center position. Users can also press the Home key to enter next level of the OSD MENU once the OSD MENU is shown.
14	MENU 	Enter or Exit Camera Menu Option or Return to previous level of the OSD MENU.
15	BLC ON/OFF 	BLC ON/OFF This key allows users to turn ON/OFF the backlight compensation of the camera. Press this key to switch between backlight compensation ON/OFF.

16	<p style="text-align: center;">Camera Remote Controller Address Setting Keys</p> 	<p>Camera Remote Controller Address Setting</p> <p>The F1 to F4 keys are used for users to set the camera remote controller addresses.</p> <p>Set the camera address as No.1: Please press 【*】 + 【#】 + 【F1】 from the remote controller.</p> <p>Set the camera address as No.2: Please press 【*】 + 【#】 + 【F2】 from the remote controller.</p> <p>Set the camera address as No.3: Please press 【*】 + 【#】 + 【F3】 from the remote controller.</p> <p>Set the camera address as No.4: Please press 【*】 + 【#】 + 【F4】 from the remote controller.</p>
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Note: If users press the ***##+MANUAL** buttons, the IP address of the PTC-140T will be resumed to factory default 192.168.5.163

6.2 On-Screen Menu (Control by Remote Controller)

On-Screen Menu allows the user to change various camera settings such as shooting conditions and the system setup. The PTC-140T provides several options in the first layer OSD MENU including Language, (Setup), (Camera), (P/T/Z), (Video Format), (Version) and (Restore Default). Press **[MENU]** on the **remote control** to enter the on-screen menu as shown below.

On-Screen MENU	
1: Language	
2: Setup	
3: Camera	
4: P/T/Z	
5: Video Format	
6. Network Settings	
7: Version	
8: Restore Default	
9: Escape	
[↑↓]Select	[← →]Change Value
[Menu] Back	[Home] OK

The following table lists all the sub-options of the options on the main menu.

	Language	Setup	Camera	P/T/Z	Video Format	Network Settings	Version
Sub-Options	1. English	1. Protocol	1. Exposure	1. Speed by Zoom	1. 1080P60	DHCP	1. MCU Version
	2. Simplified Chinese	2. VISCA Address	2. Color	2. Zoom Speed	2. 1080P50	IP Addr	2. Camera Version
		3. VISCA Address Fix	3. Image	3. Image Freezing	3. 1080I60		3. AF Version
		4. PELCO-P Address	4. Focus	4. ACC Curve	4. 1080I50		
		5. PELCO-D Address	5. Noise Reduction		5. 1080P30		
		6. Baudrate	6. Style		6. 1080P25		
					7. 720P60		
					8. 720P50		
					9. 1080P59.94		
					10. 1080I59.94		
					11. 1080P29.97		
					12. 720P59.94		

Sub-Options	Restore Default
	Restore Default

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

First Level Main Options	Second Level Sub-Options	Third Level Parameters	Fourth Level Parameters	Sub-Option Descriptions
1. Language (English/Simplified Chinese)				
2. Setup	Protocol	1. Auto		
		2. VISCA		
		3. PELCCO-D		
		4. 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				
3. Camera	Exposure	Mode	Auto	
			Manual	
			SAE	
			AAE	
			Bright	
		EV	ON	
			OFF	
		EV Level	0	
			1	
			2	
	3			
	4			
	5			
	6			
	7			
	-7			
	-6			
	BLC	ON		
		OFF		
	Flicker	OFF		
50Hz				
60Hz				

Color	Gain Limit	0~15
	DRC	Closed
		1
		2
		3
		4
		5
		6
		7
	8	
	WB Mode	Auto
		3000K
		3500K
		4000K
		4500K
		5000K
		5500K
		6000K
		6500K
		7000K
Manual		
Onepush		
RG Tuning		0
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	-10	
	-9	
	-8	
	-7	
	-6	
	-5	
-4		
-3		
-2		
-1		
BG Tuning	0	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	-10	
-9		
-8		

		-7
		-6
		-5
		-4
		-3
		-2
		-1
	Saturation	60%
		70%
		80%
		90%
		100%
		110%
		120%
		130%
		140%
		150%
		160%
		170%
		180%
		190%
	200%	
	Hue	0
		1
		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
	14	
	AWB Sensitivity	High
		Low
		Middle
Image	Brightness	0
		1
		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
	14	
	Contrast	0
		1

		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
		14
	Sharpness	0
		1
		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
		14
	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
	DZoom	ON
		OFF
	DCI	Closed
		1
		2
		3
		4
		5
		6
		7
		8
Focus	Focus Mode	Auto
		Manual
		Onepush
	AF-Zone	Top
Center		
Bottom		

		AF-Sensitivity	All			
			High			
	Low					
	Middle					
	Noise Reduction	NR-2D				Auto
						OFF
						1
						2
						3
						4
						5
		6				
		7				
		NR-3D				OFF
						1
						2
						3
	4					
	5					
	Dynamic Hot Pixel		OFF			
1						
2						
3						
4						
Style		Default				
		Normal				
		Clarity				
		Bright				
		Soft				
4. P/T/Z	Zoom by Speed		ON			
			OFF			
	Zoom Speed		1			
			2			
			3			
			4			
			5			
			6			
			7			
	8					
	Image Freezing		ON			
			OFF			
	Acc Curve		Slow			
Fast						
5. Video Format	1080P60					
	1080P50					
	1080I60					
	1080I50					
	1080P30					
	1080P25					
	720P60					
	720P50					
1080P59.94						

	1080I59.94			
	1080P29.97			
	720P59.94			
6. Network Settings	DHCP	ON		
		OFF		
	IP Addr	192.168.x.x		
7. Version	MCU Version			
	Camera Version			
	AF version			
8. Restore Default	Restore Default (Yes/No)			

6.3 Professional Jargon Explanations of the OSD Menu

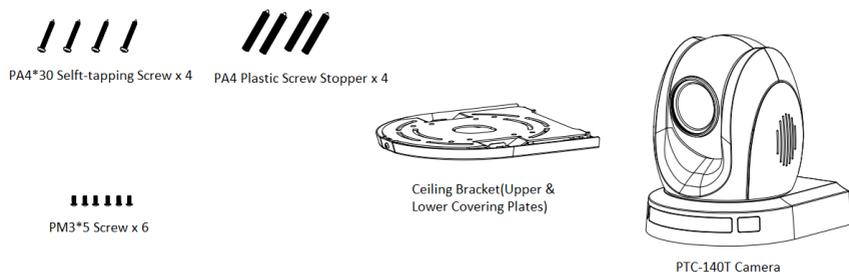
There are some professional jargons or nouns which are shown in the OSD menu of the PTC-140T camera, please refer to this section for realizing those jargons.

- 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-140T 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-140T 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.

7. Installation Instructions

Note: The material for the ceiling mounting and vertical mounting of the bracket is limited to the formwork or concrete and cannot be installed on the plasterboard.

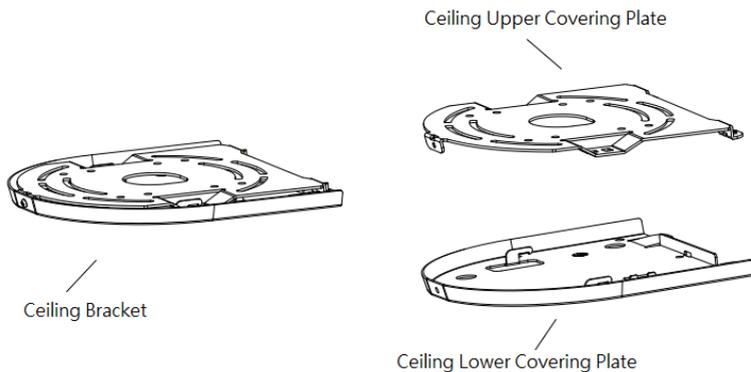
For the ceiling mount installation of the PTC-140T, PA4*30 self-tapping screw x 4, PA4 plastic screw stopper x 4, PM3x5 screw x 6, ceiling upper covering plate x 1, ceiling lower covering plate x 1 and PTC-140T camera x 1 are needed.



Step 1. The Ceiling Bracket, Ceiling Upper Cover Plate and Ceiling Lower Covering Plate

- The ceiling bracket is shown as following and it can be separated into two parts including “ceiling upper covering plate” and “ceiling lower covering plate”.

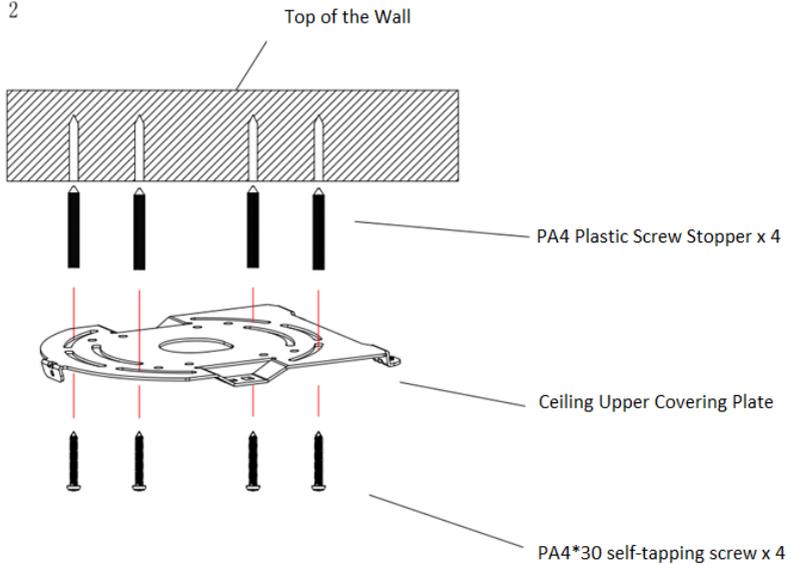
STEP 1



Step 2. Mount the Ceiling Upper Covering Plate to the Ceiling

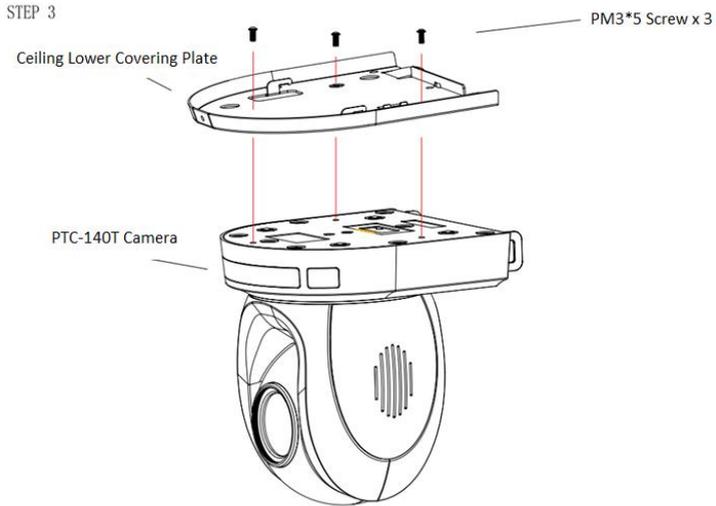
- At first, Please screw 4 PA4 plastic screw stoppers into the ceiling as shown as following diagram.
- Please connect the ceiling upper covering plate to the screw stoppers by using 4 PA4*30 self-tapping screws.

STEP 2



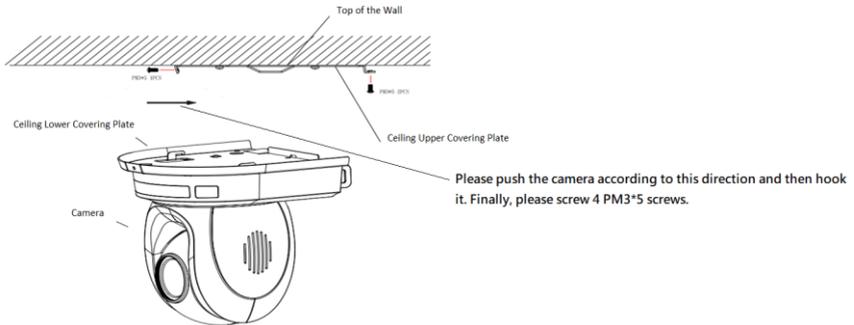
Step 3. Mount the PTC-140T Camera to the Ceiling Lower Covering Plate

- Please screw the PTC-140T camera to the ceiling lower covering plate by using 3 PM3*5 screws as shown as following diagram.



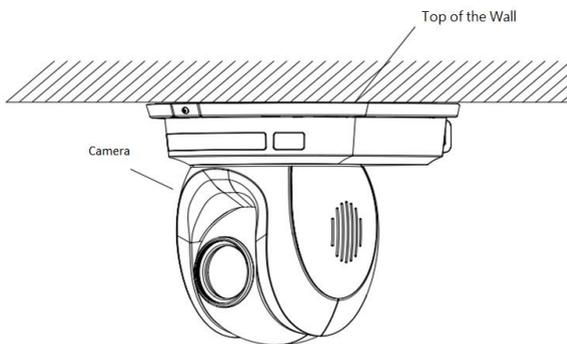
Step 4. Mount the PTC-140T Camera with the Ceiling Lower Covering Plate to the Ceiling Upper Covering Plate on the Wall

- Please push the PTC-140T camera with the ceiling lower covering plate according to the direction of following diagram and then please hook the ceiling lower covering plate to the ceiling upper covering plate. Finally, please screw 3 PM3*5 screws to fix the PTC-140T camera to the ceiling upper covering plate.



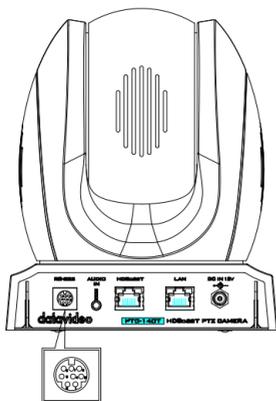
- **Step 5. The installation is Finished**

FINISH



8. Direct Connection to Camera

To use the PTZ Camera Control Unit to directly control the PTC-140T camera, connect the Mini-Din 8 pin RS-232 port on the camera's rear panel to the DB9 pin RS-232 port on the control keyboard or PC by a Mini-Din 8 pin to DB9 pin adapter cable.



Connect PTC-140T to Control Panel or PC

PTC-140T	Remote Control Panel/PC's Windows DB-9 RS-232
1.DTR	1.DCD
2.DSR	2.RXD
3.TXD	3.TXD
4.GND	4.DTR
5.RXD	5.GND
6.GND	6.DSR
7.IR OUT	7.RTS
8.NC	8.CTS
	9.RI



8.1 RS-232 Mini-Din 8 Pin Definition

	NO.	Port	Definition
	1	DTR	Data Terminal Ready
	2	DSR	Data Set Ready
	3	TXD	Transmit Data
	4	GND	System Ground
	5	RXD	Receive Data
	6	GND	System Ground
	7	IR OUT	IR Commander Signal
	8	NC	No Connection

8.2 RS232 (DB9) Pin Definition

	NO.	Port	Definition
	1	DCD	Data Carrier Detect
	2	RXD	Receive Data
	3	TXD	Transmit Data
	4	DTR	Data Terminal Ready
	5	GND	System Ground
	6	DSR	Data Set Ready
	7	RTS	Request to Send
	8	CTS	Clear to Send
	9	RI	Ring Indicator

9. PTC-140T's Web-Based User Interface

9.1 How to Connect the PTC-140T Camera to the PC

Users can connect the PTC-140T camera to the PC/Laptop in Static IP mode and DHCP mode. The default static IP address of the PTC-140T is **192.168.5.163**. Please see following steps for connecting the PTC-140T camera to the network for using the web-based user interface of the PTC-140T.

Note: The HBT-11 is not the accessory of the PTC-140T, The HBT-11 will be packaged only with the PTC-140TH.

9.1.1 Connect the Camera to the PC in DHCP Mode

Please follow following steps for connecting the PTC-140T camera to the PC in DHCP Mode.

Step 1. Please connect a 12V power adapter to the DC IN 12V interface on the rear panel of the PTC-140T.

Step 2. Please connect an RJ-45 Ethernet cable from the HDBaseT interface on the rear panel of the PTC-140T camera to the HDBaseT interface on the front panel of the HBT-11 Receiver Box.

Step 3. Please connect a 48V power adapter to the DC IN 48V interface on the rear panel of the HBT-11.

Step 4. Please use an HDMI cable to connect from the HDMI OUT port of the HBT-11 to the HDMI IN port of an external connected monitor.

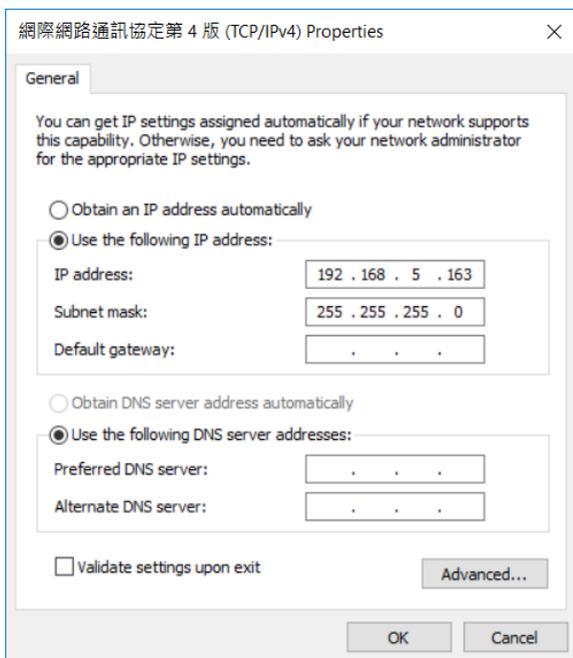
Step 5. Please use an RJ-45 Ethernet cable to connect the WAN port of a router to an RJ-45 port of the public network.

Step 6. Please connect an RJ-45 Ethernet cable from the LAN interface on the rear panel of the PTC-140T to the RJ-45 Ethernet port of a router.

Step 7. You can see the IP address and the IR address of the PTC-140T-T will be shown on the top-left side of the screen.

Step 8. Please connect an RJ-45 Ethernet cable from the RJ-45 port of your PC to the LAN port of the router.

Step 9. The default IP mode for the PTC-140T is Static IP mode. So please set your PC in Static IP mode in advance. Since the Static IP address of the PTC-140T is **192.168.5.163**, the IP address for your PC must be set in **192.168.5.x**



Step 10. After that, the PTC-140T and your PC are in the Static IP mode. Please open the PTC-140T web UI by using the IP address 192.168.5.163.

Step 11. Please enter the default User Name and Password and then click the Login button.

The Default User Name: admin

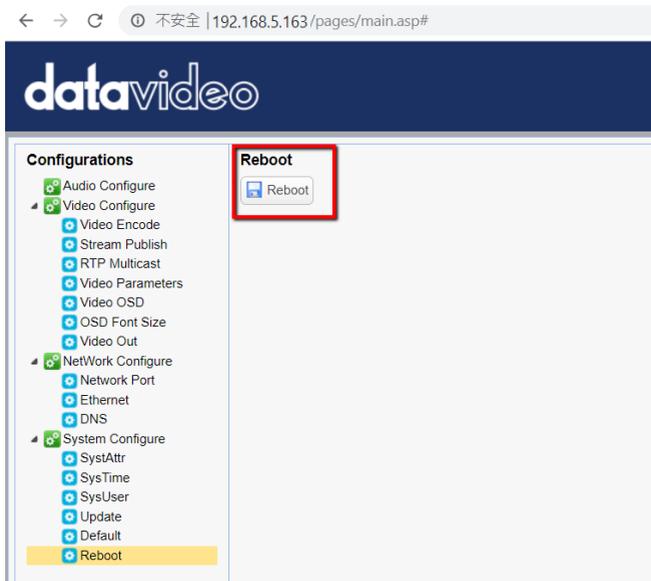
The Default Password: admin



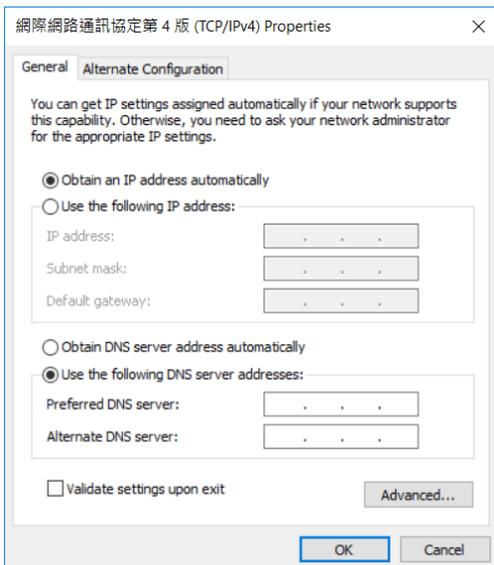
Step 12. Please click the “Configuration” option of the web UI and then click the “Ethernet” option. After that, please check the “DHCP” checkbox and then click the “Save” button.



Step 13. Please click the “Reboot” button from the Reboot option to reboot the camera.



Step 14. Please set the network setting of your PC in DHCP mode.



Step 15. You can login to the PTC-140T web UI in DHCP mode.

9.1.2 Connect the Camera to the PC in Static IP Mode

Please follow following steps for connecting the PTC-140T camera to the PC in DHCP Mode.

Step 1. Please connect a 12V power adapter to the DC IN 12V interface on the rear panel of the PTC-140T.

Step 2. Please connect an RJ-45 Ethernet cable from the HDBaseT interface on the rear panel of the PTC-140T camera to the HDBaseT interface on the front panel of the HBT-11 Receiver Box.

Step 3. Please connect a 48V power adapter to the DC IN 48V interface on the rear panel of the HBT-11.

Step 4. Please use an HDMI cable to connect from the HDMI OUT port of the HBT-11 to the HDMI IN port of an external connected monitor.

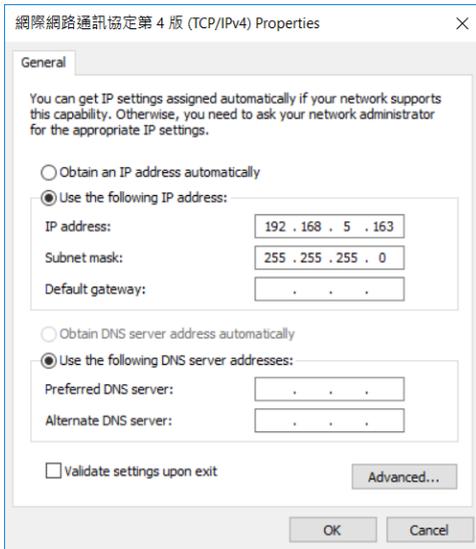
Step 5. Please use an RJ-45 Ethernet cable to connect the WAN port of a router to an RJ-45 port of the public network.

Step 6. Please connect an RJ-45 Ethernet cable from the LAN interface on the rear panel of the PTC-140T to the RJ-45 Ethernet port of a router.

Step 7. You can see the IP address and the IR address of the PTC-140T-T will be shown on the top-left side of the screen.

Step 8. Please connect an RJ-45 Ethernet cable from the RJ-45 port of your PC to the LAN port of the router.

Step 9. The default IP mode for the PTC-140T is Static IP mode. So please set your PC in Static IP mode. Since the Static IP address of the PTC-140T is **192.168.5.163**, the IP address for your PC must be set in **192.168.5.x**



Step 10. After that, the PTC-140T and your PC are in the Static IP mode. Please open the PTC-140T web UI by using the IP address 192.168.5.163.

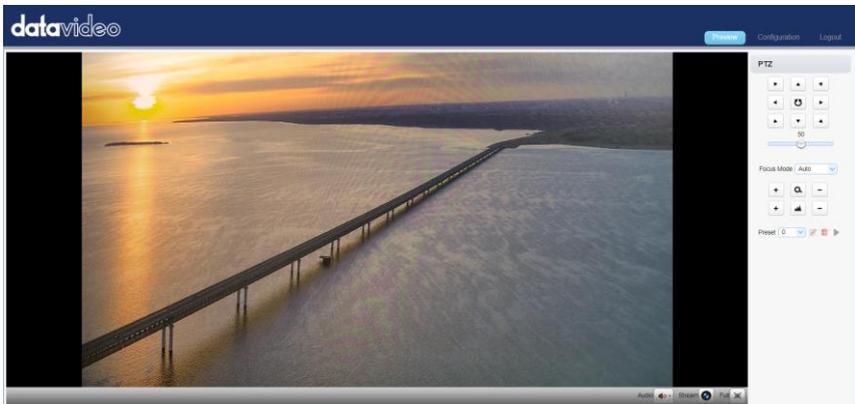
Step 11. Please enter the default User Name and Password and then click the Login button.

The Default User Name: admin

The Default Password: admin



Step 12. After logging into the PTC-140T web UI, the main interface of the web UI will be shown.



9.2 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

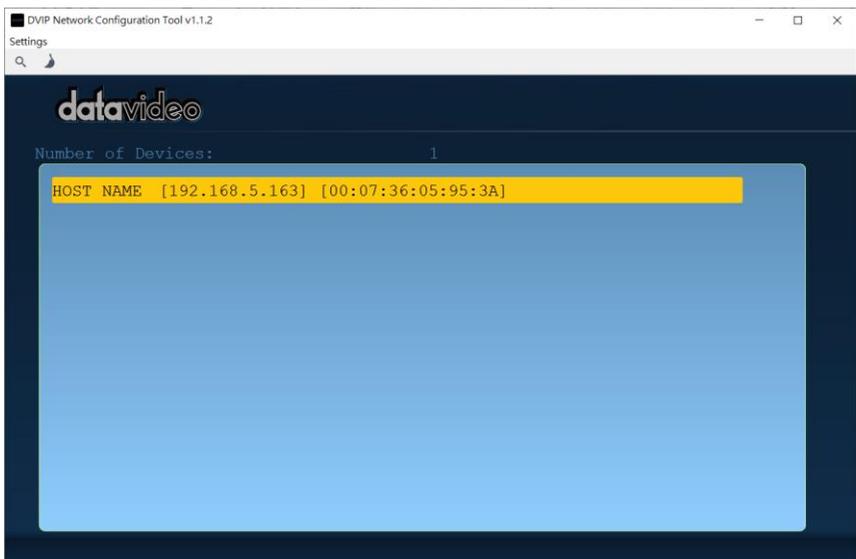
iOS: <https://itunes.apple.com/tw/app/dvip-network-config/id1177895983?mt=8>

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.

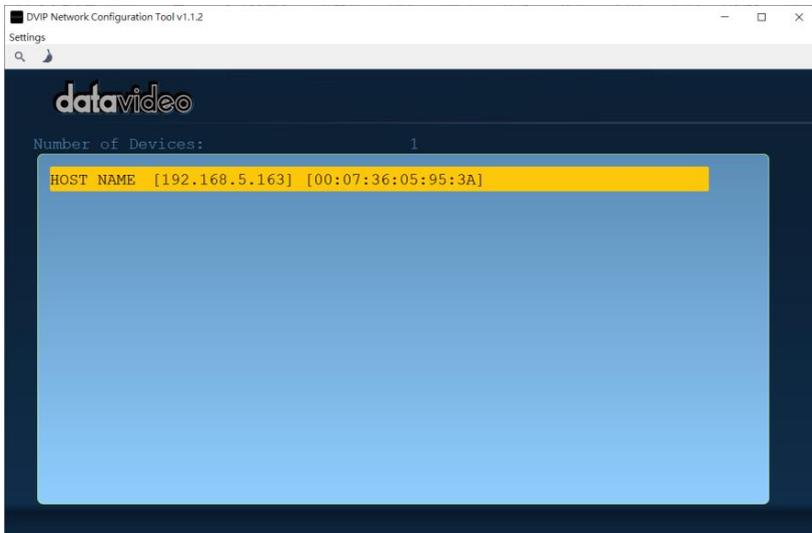
Step 1: Open the DVIP Network Configuration Tool and then select the connected Ethernet option from the “Network interface” pop-up window. After that please press the “OK” button.



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.

Host Name

Model Name PTC-140
(VID:0104, PID:3009)

MAC address 00:07:36:05:95:3A

IP address

Using Fixed IP Mode

Mask

Gateway

Primary DNS

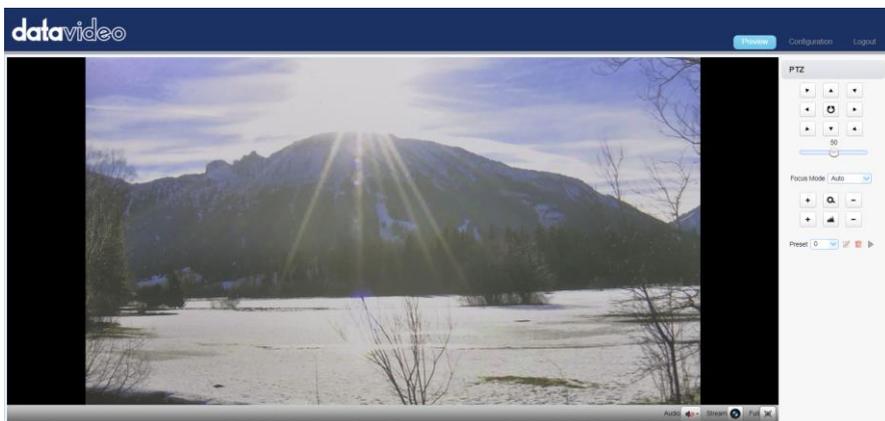
Secondary DNS

9.3 Introduction of the PTC-140T Web User Interface

The web based user interface of the PTC-140T provides users three main options for setting and controlling the PTC-140T through the web UI. The web user interface of the PTC-140T provides users three main options including **Preview**, **Configuration** and **Logout**.

9.3.1 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.

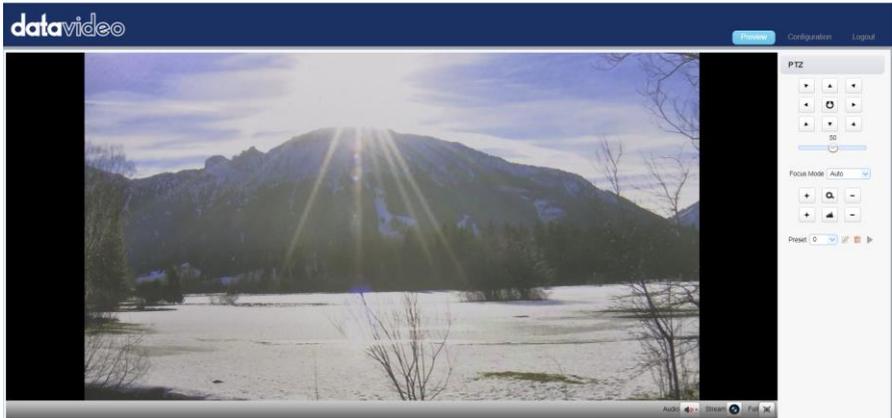


Click this “Full” button to enlarge the screen size to Full Screen.

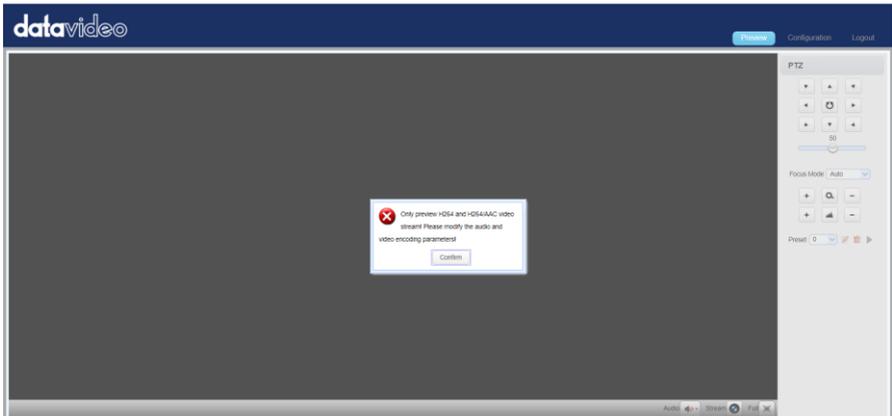
Note: The Preview window can support the image preview for the image which is compressed in H.264 format and the Profile is set in BP or MP. If the

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.

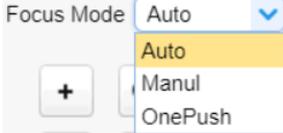


- If the H.265 format is selected, there is no screen in the Preview window and there is a warning message that will be shown.



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>The image shows a control panel with a grey header labeled 'PTZ'. Below the header are nine square buttons arranged in a 3x3 grid. The top row contains three directional arrows: right, up, and left. The middle row contains left, a circular refresh/home icon, and right. The bottom row contains up, down, and left directional arrows.</p>	<p>PTZ Control Buttons</p> <p>Click the arrow buttons to move the camera head to corresponding directions.</p> <p>To return to Home position, click .</p>
 <p>The image shows a horizontal slider control. The slider is blue with a white knob in the center. Above the slider, the number '50' is displayed, indicating the current speed setting.</p>	<p>PTZ Speed Slider</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>The image shows a 'Focus Mode' drop-down menu. The menu is open, showing three options: 'Auto' (highlighted in yellow), 'Manul', and 'OnePush'. To the left of the menu is a '+' button.</p>	<p>Focus Mode</p> <p>Select focus mode from the drop-down menu; available options are Auto, Manual and One Push.</p> <p>Auto: Automatic focus Manual: Manual focus One Push: One time automatic focus.</p>
 <p>The image shows three square buttons in a row. From left to right: a '+' button, a button with a mountain-like icon representing a focus range, and a '-' button.</p>	<p>Focus Far/Near</p> <p>Click  (FAR) and  (Near) buttons accordingly to manually focus the camera lens onto the subject.</p> <p>Note: You will not be able to manually adjust the camera focus if focus mode is set to Auto or One Push.</p>

Controls	Descriptions
	<p>Zoom IN/OUT</p> <p>Click  to zoom in and  to zoom out.</p>

Preset

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

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

9.3.1.1 The Operations of Zoom and Focus Buttons in Different Focus Modes

There are three Focus Modes for the PTC-140T camera. For the Focus and Zoom buttons operations in different Focus Modes, please see following table.

	Focus Mode- Auto	Focus Mode- Manual	Focus Mode- One Push
Zoom In/ Zoom Out	Can be adjusted by users.	Can be adjusted by users.	Can be adjusted by users.
Focus In/ Focus Out	Can NOT be adjusted by users.	Can be adjusted by users.	Can NOT be adjusted by users.

9.3.1.2 How to Set the Preset Position

Please follow following steps for setting your desired preset.

Step 1. Please adjust the pan and tilt of the PTC-140T camera to your desired position.

Step 2. Please make sure that other parameters including Zoom, Focus and those parameters in the Configuration option are set in advance.

Step 3. Please select your desired preset number from the Preset drop-down menu.



Step 4. After the desired preset number is selected, please click the Set button



and then the Preset is set successfully.

9.3.1.3 How to Recall the Pre-saved Preset

Please follow following steps for recalling the pre-saved Preset.

Step 1. Please select the Preset number that the preset position is pre-saved from the Preset drop-down menu.

Step 2. After the Preset number is selected, please click the Run button  and then the pre-saved preset position of the camera lens will be recalled.

9.3.1.4 How to Change the PTZ Speed of the Camera

The default number of the PTZ speed control slider is 50 and the range for adjusting is from 0 to 100. Please follow following steps for adjusting the PTZ speed of the PTC-140T camera.

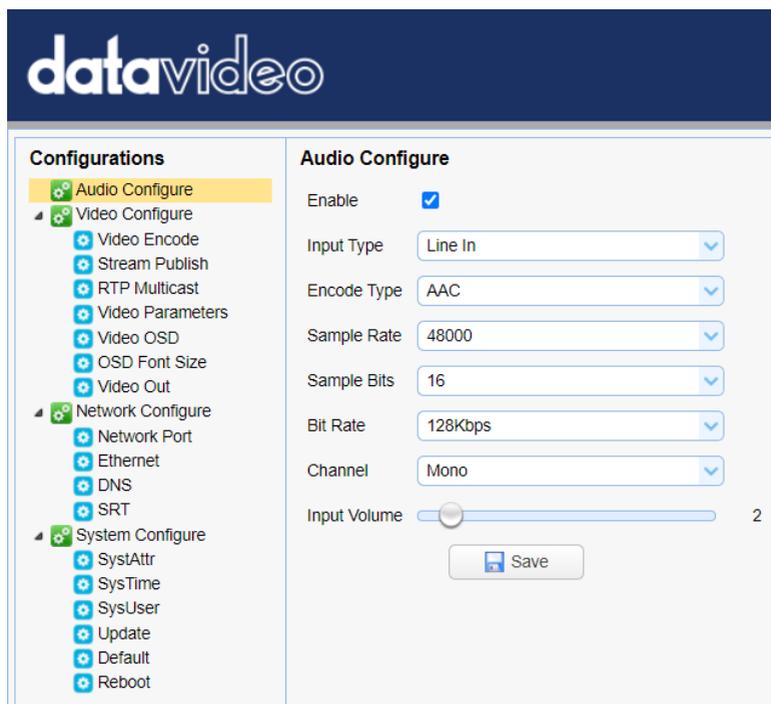
Step 1. Please slide the PTZ speed control slider  to the left side to reduce the pan and tile speed of the camera lens according to the number. The lower the number, the slower the pan and tilt speeds of the camera. Moreover, the higher the number, the faster the pan and tilt speeds of the camera.

9.3.2 Configuration

The Configuration option provides users to set many parameters of the PTC-140T camera including Audio Configuration, Video Configuration, Network Configuration and System Configuration. There are several parameters for each configuration, please see following paragraphs for more details.

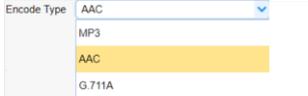
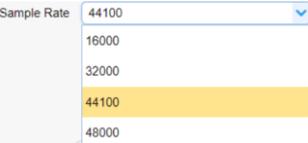
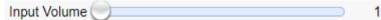
9.3.2.1 Audio Configure

The Audio Configure option allows users to set audio related parameters for the input audio source. The main interface of the Audio Configure option is shown as following diagram.



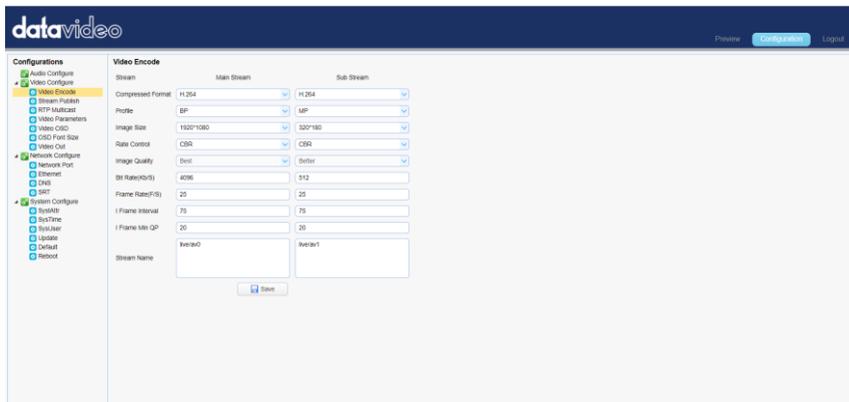
Please see following table for the introduction of Audio Configure.

<p>Enable <input checked="" type="checkbox"/></p>	<p>Enable This Enable check box allows users to enable the settings for the parameters in the Audio Configure option.</p>
<p>Input Type <input type="text" value="Line In"/></p> <p>Encode Type <input type="text" value="Line In"/></p>	<p>Input Type This allows users to select the audio input type. It provides Line IN for the audio input type.</p>

	<p>Encode Type</p> <p>This drop-down menu allows users to select their desired Encode type for the input audio source. There are three Encode type for users to select including MP3, AAC and G.711A.</p>
	<p>Sample Rate</p> <p>This drop-down menu allows users to select their desired sample rate for the input audio source. Higher sample rate can get the audio that is closer to the original audio source.</p>
	<p>Sample Bits</p> <p>This drop-down menu allows users to select the Sample Bits for the input audio source. The default sample Bits is 16.</p>
	<p>Channel</p> <p>This drop-down menu allows users to select the Channel of the input audio source to be Mono.</p>
	<p>Input Volume</p> <p>This slider allows users to adjust the volume of the input audio source. The range is from 1 to 10. The higher the value, the louder the volume of the input audio source.</p>
	<p>Save Button</p> <p>Please press this Save button to save the “Audio Configure” related parameters that are set by users.</p>

9.3.2.2 Video Configure-Video Encode

The Video Encode option allows users to set many Video Encoder related parameters for the main stream and sub stream including Compressed Format, Profile, Image Size, Rate Control, Image Quality, Bit Rate(kb/s), Frame Rate(F/S), I Frame Interval, I Frame Min QP and Stream Name. The main interface of the Video Encode in the Video Configure option is shown as following diagram.



Please see following table for the introduction of Video Encode option for Main Stream and Sub Stream.

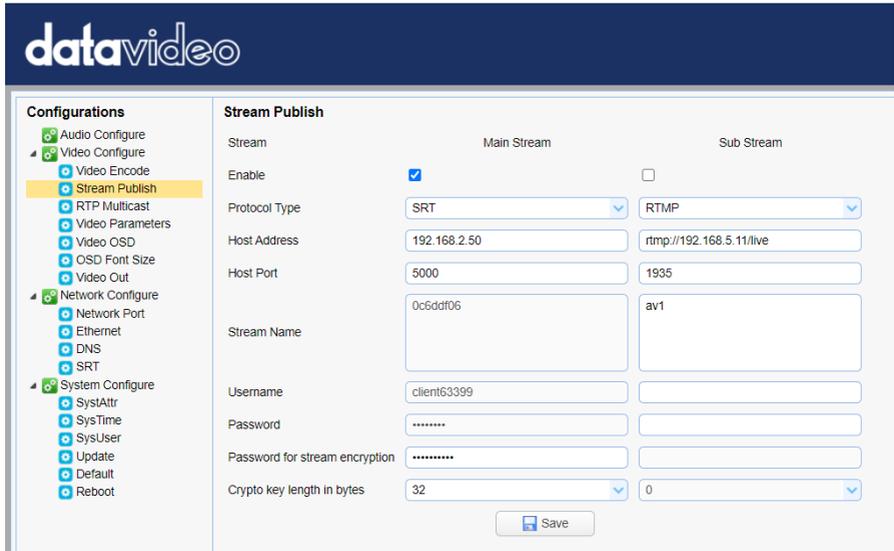
Items		Descriptions
Compressed Format	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #f0f0f0; padding: 2px;">H.264</div> <div style="background-color: #ffff00; padding: 2px;">H.264</div> <div style="padding: 2px;">H.265</div> </div>	<p>Compressed Format Select either H.264 or H.265 video compression.</p>
Profile	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #f0f0f0; padding: 2px;">HP</div> <div style="padding: 2px;">BP</div> <div style="padding: 2px;">MP</div> <div style="background-color: #ffff00; padding: 2px;">HP</div> </div>	<p>Profile Select a profile for your input video source. Available profiles are:</p> <ul style="list-style-type: none"> ● BP: Baseline Profile (Default) ● MP: Main Profile ● HP: High Profile.

<p>Image Size</p> <p>1920*1080</p> <p>1920*1080</p> <p>1280*720</p> <p>640*480</p>	<p>Image Size</p> <p>Select an appropriate image size from the drop-down menu.</p> <ul style="list-style-type: none"> • 1920 x 1080 • 1280 x 720 • 640 x 480
<p>Rate Control</p> <p>CBR</p> <p>CBR</p> <p>VBR</p>	<p>Rate Control</p> <p>CBR encoding does not optimize media files for quality but will save you storage space. VBR takes longer to encode but produces the most favorable results as the quality of the media file is superior.</p>
<p>Image Quality</p> <p>Best</p>	<p>Image Quality</p> <p>The default image quality for the main stream is “Best.”</p> <p>The default image quality for the sub stream is “Better.”</p>
<p>Bit Rate(Kb/S)</p> <p>4096</p>	<p>Bit Rate</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 “4096 Kb/s.”</p> <p>The default bit rate for the sub stream is “512 Kb/s.”</p>
<p>Frame Rate(F/S)</p> <p>25</p>	<p>Frame Rate</p> <p>Higher frame rate will result in smooth video viewing experience. The frame rate is 25 by default.</p>

<p>I Frame Interval <input type="text" value="75"/></p>	<p>I Frame Interval A shorter I Frame Interval results higher quality video but consumes more network bandwidth. On the other hand if longer I Frame Interval is set, less bandwidth will be required but it will result in lower video quality. I frame interval is 75 by default.</p>
<p>I Frame Min QP <input type="text" value="20"/></p>	<p>I Frame Min QP A low QP value means less compression but higher video quality. The default value is 20.</p>
<p>Stream Name <input type="text" value="live/av0"/></p>	<p>Stream Name Enter a stream name for the main and sub stream.</p>
<p></p>	<p>Save Button Click the Save button to save the new video settings.</p>

9.3.2.3 Video Configure-Stream Publish

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



See the table below for descriptions of each item.

Items	Descriptions
<p>Enable <input checked="" type="checkbox"/></p>	<p>Enable Check this checkbox to enable RTMP stream.</p>
<p>Protocol Type <input type="text" value="SRT"/></p> <ul style="list-style-type: none"> RTSP RTMP <li style="background-color: #ffff00;">SRT 	<p>Protocol Type There are three streaming protocols including RTSP, RTMP and SRT for users to select.</p>
<p>Host Address <input type="text" value="rtmp://a.rtmp.youtube.com/live2"/></p>	<p>Host Address This is the RTMP Server URL/RTSP Server URL provided by the video streaming providers. An example of the RTMP Server URL is provided.</p>

Items	Descriptions
<p>Host Port <input type="text" value="1935"/></p>	<p>Host Port The host port number is 1935 by default.</p>
<p>Stream Name <input type="text" value="live2/qwqd-5ejj-t73c-0y2g"/></p>	<p>Stream Name 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>
<p>User Name <input type="text"/></p> <p>Password <input type="text"/></p>	<p>User Name / Password Enter the login credentials of your live streaming platform or the Source Username & Source Password which are provided by the RTSP streaming platform.</p>
<p>Password for stream encryption <input type="text" value="....."/></p>	<p>Password for stream encryption 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>
<p>Crypto key length in bytes <input type="text" value="32"/></p> <ul style="list-style-type: none"> 0 16 24 32 	<p>Crypto key length in bytes 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
	<p>Save Button Click the Save button to save the new RTMP settings.</p>

Note:

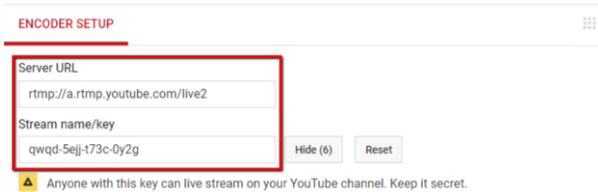
1. The SRT Caller mode and the RTSP Publish can be operated only as the “Main Stream”.
2. When the SRT Caller or the RTSP Publish is operated as the “Main Stream”, the “Sub Stream” can not be operated at the same time.

9.3.2.3.1 How to Stream the PTC-140T Video to the RTMP Platform (Take Youtube as an Example)

Please follow following steps for streaming PTC-140T video to the RTMP platform.

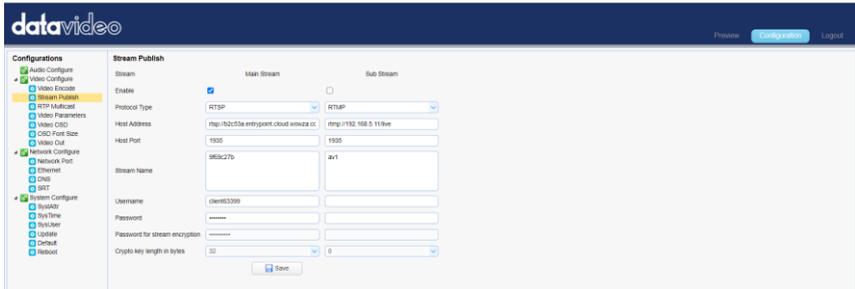
Step 1. Please make sure the PTC-140T and other devices are successfully connected.

Step 2. Please obtain the stream server address and the stream token from the Youtube platform.



Step 3. Please open the web UI of the

PTC-140T and then select the Stream Publish option.



Step 4. Please enter the stream server URL that is provided by the Youtube website into the Host Address column.

Step 5. Please enter the stream name into the Stream Name column.

Step 6. Please check the Enable checkbox for the main stream/sub stream.
 Step 7. Please press the save button and then the streaming can be done successfully through the Youtube platform.

9.3.2.3.2 How to Stream the PTC-140T Video to the RTMP Platform (Take Facebook as an Example)

- **Use Facebook Live Producer for Streaming**

1. 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 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.

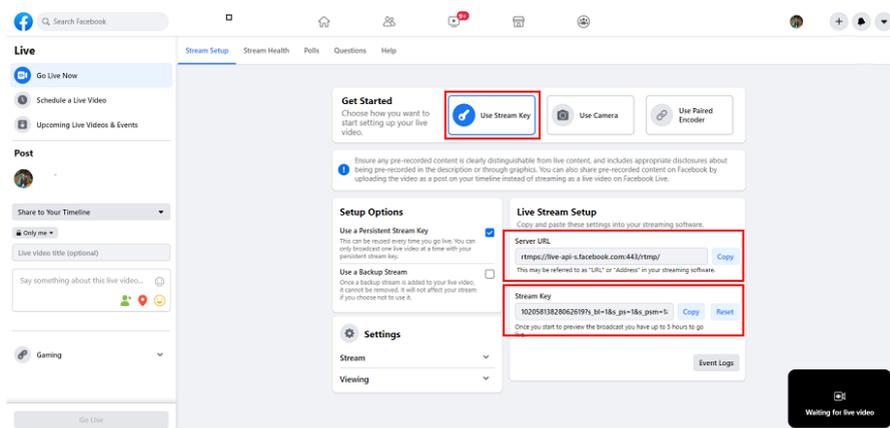
Once you have your encoding software and camera installed, you're ready to go live using **Live Producer**, which is the new way to go live on Facebook using higher-end production equipment and streaming software. You can access **Live Producer** at facebook.com/live/producer.

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

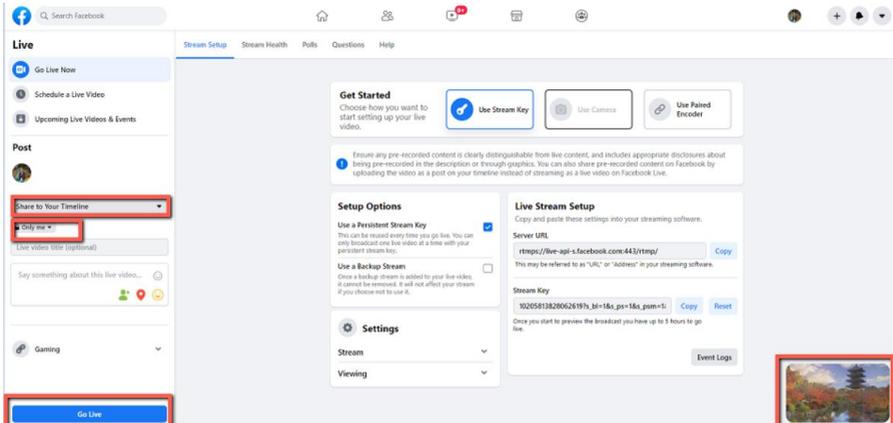


2. Check **“Use stream key”** then a copy and paste **“Server URL”** and **Stream Key”** into **“Host Address”** and **“Stream Name”** as shown on the PTC-140T’s web UI respectively. Please modify the **“Host Port”** to 443.

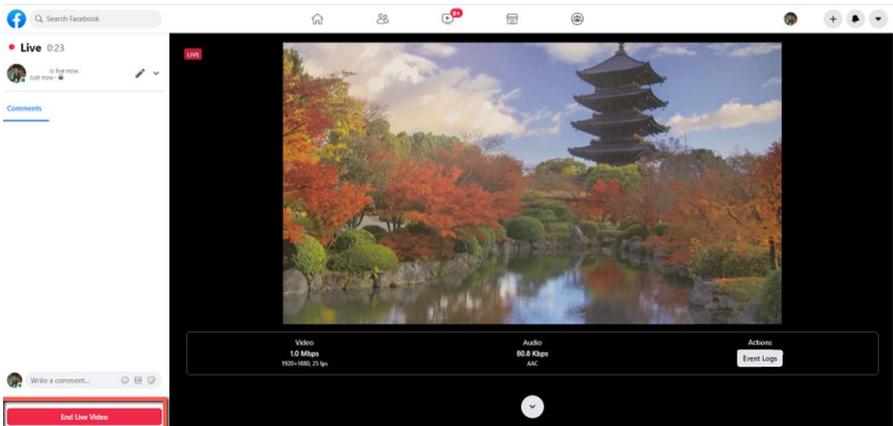


3. Check the **Enable** checkbox to enable RTMP stream.
4. Click the **Save** button to save the RTMP settings.
5. Please press the **“Reboot”** button  from the Reboot option from the PTC-140T Web UI.

- 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.

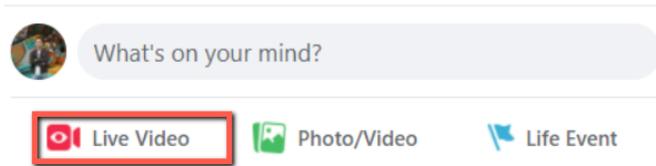


- After the live-streaming is started, users can see related information for the live-streaming video from the Facebook Live interface. If you want to stop the live-streaming, please click the “End Live Video” button for stopping your Facebook live-streaming.

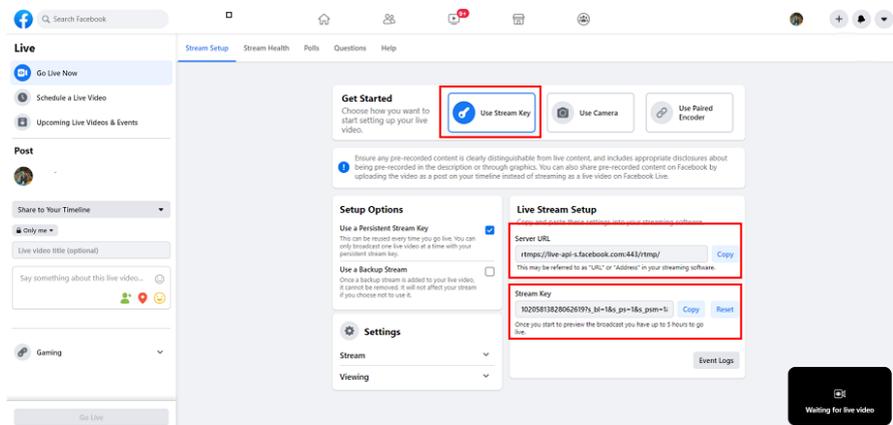


● Use your personal Facebook Page or Facebook Fan Page for Live-Streaming

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-140T’s web UI respectively. Please modify the “Host Port” to 443.

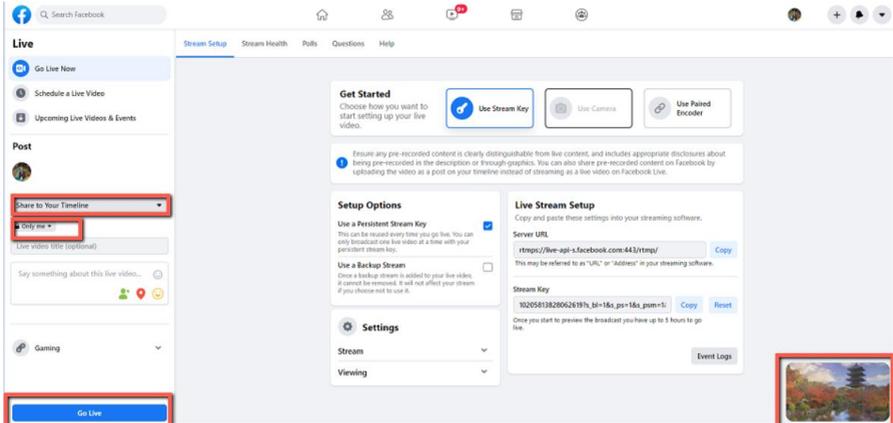


3. Check the **Enable** checkbox to enable RTMP stream.

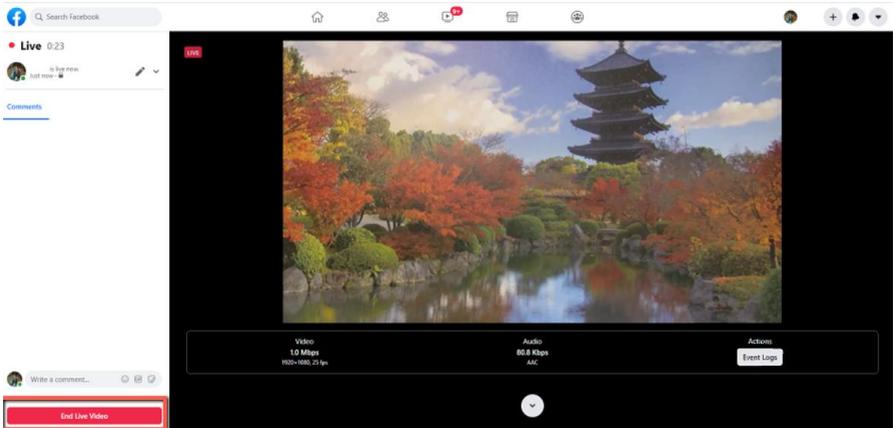
4. Click the **Save** button to save the RTMP settings.

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



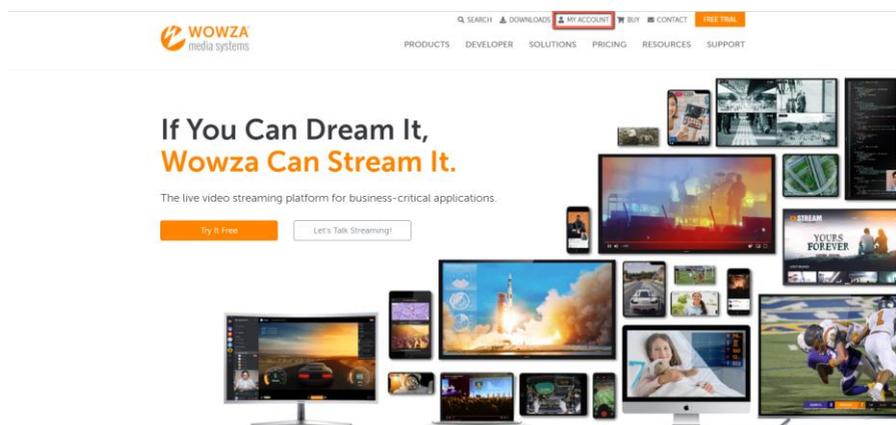
How to Stream the RTSP Streaming to Wowza Cloud Streaming Platform

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-140T with the Wowza Streaming Cloud. Please see following steps to know how to stream the RTSP streaming by the PTC-140T camera to Wowza Streaming Cloud.

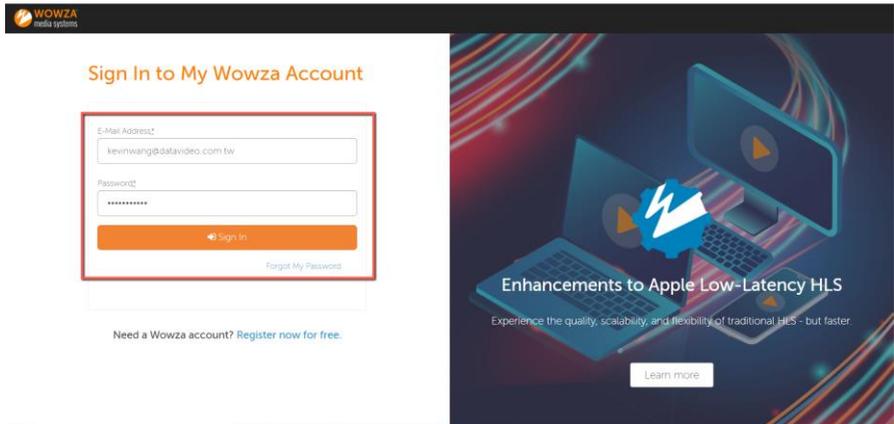
1. Please go to Wowza official website www.wowza.com which is shown as following diagram.



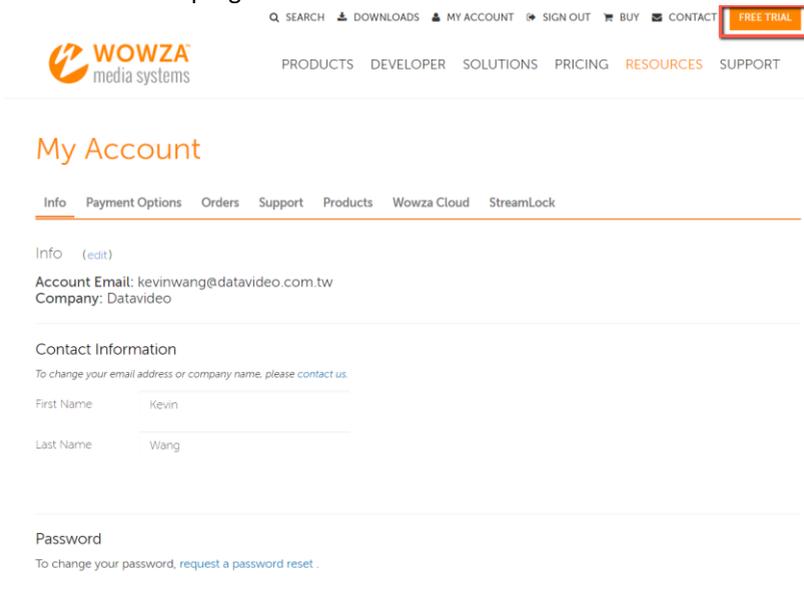
2. Please click “MY ACCOUNT” option for entering your Wowza Account and Password.



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”.

WOWZA
media systems

PRODUCTS DEVELOPER SOLUTIONS PRICING RESOURCES SUPPORT **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.

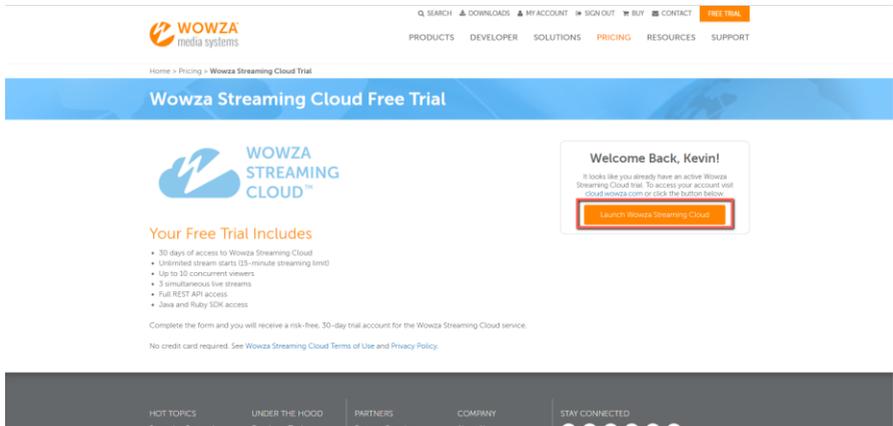
BEST FOR

- Self-managed infrastructures
- Streaming service providers
- Customized streaming solutions

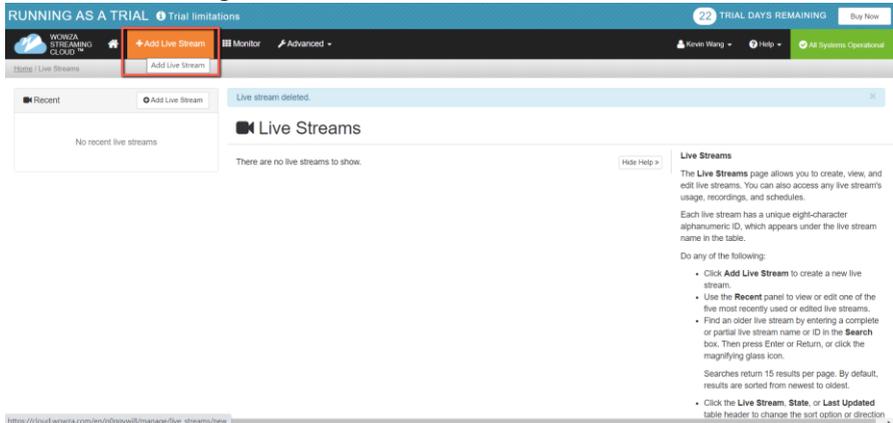
Free Trial

[Are you a developer? Get a Wowza Streaming Engine Developer Trial](#)

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



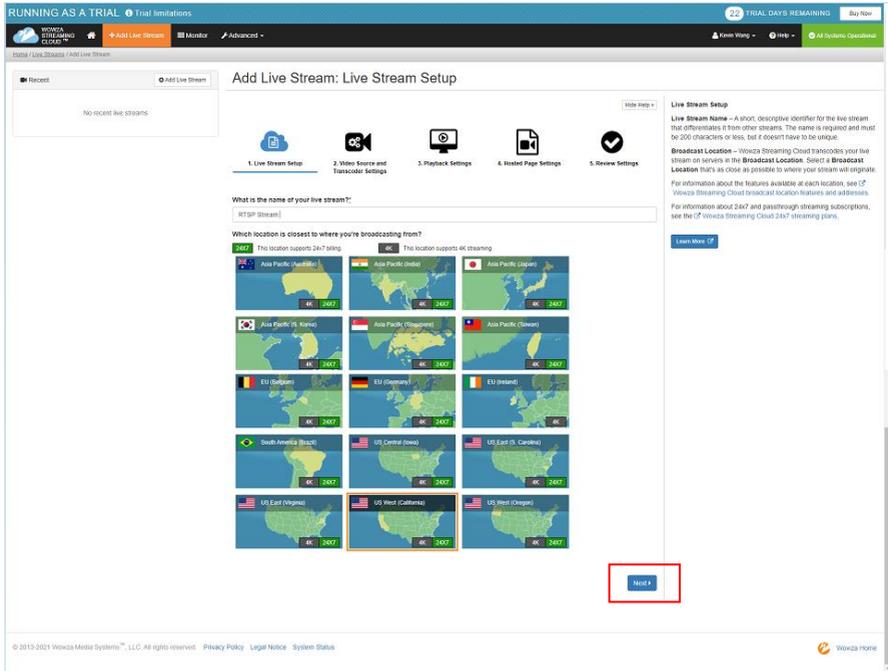
7. You will see the main interface of the Wowza Streaming Cloud which is shown as following diagram. Please click “Add Live Stream” button for adding a new live-streaming.



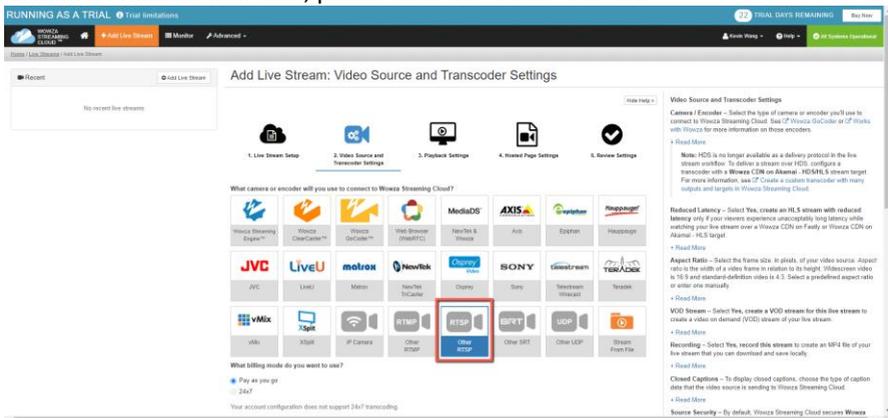
8. Please enter your desired name for the stream into the “**What is the name of your live stream?**” column. For this example, the stream name is “RTSP Stream”.

The screenshot shows the 'Add Live Stream: Live Stream Setup' page in the Wozza Streaming Cloud interface. The page is titled 'RUNNING AS A TRIAL' and includes a 'Trial limitations' indicator. The main content area is divided into two columns. The left column contains a 'Recent' section with 'Add Live Stream' and 'No recent live streams'. The right column contains the 'Add Live Stream: Live Stream Setup' section, which includes a progress bar with five steps: 1. Live Stream Setup (active), 2. Source and Transcoder Settings, 3. Playback Settings, 4. Webpage Settings, and 5. Review Settings. Below the progress bar, there is a text input field labeled 'What is the name of your live stream?' containing the text 'RTSP Stream'. Underneath, there is a section titled 'Which location is closest to where you're broadcasting from?' with two columns of regional maps. The first column is labeled '240S' and the second '4K'. The 'Asia Pacific (Taiwan)' map is highlighted with a yellow border. A 'Next >' button is located at the bottom right of the map grid. On the right side of the page, there is a 'Live Stream Setup' section with a 'Learn More <>' link.

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?

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)

x

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

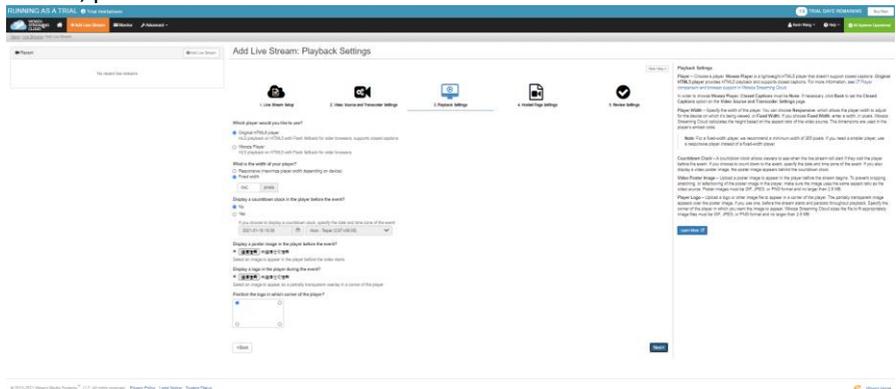
What type of closed captions does this stream have?

Source Security

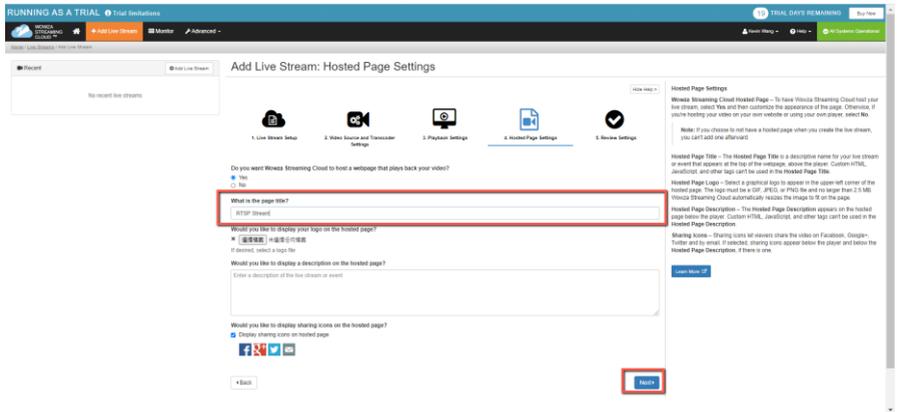
- Disable authentication

Select to disable authentication on the video source.

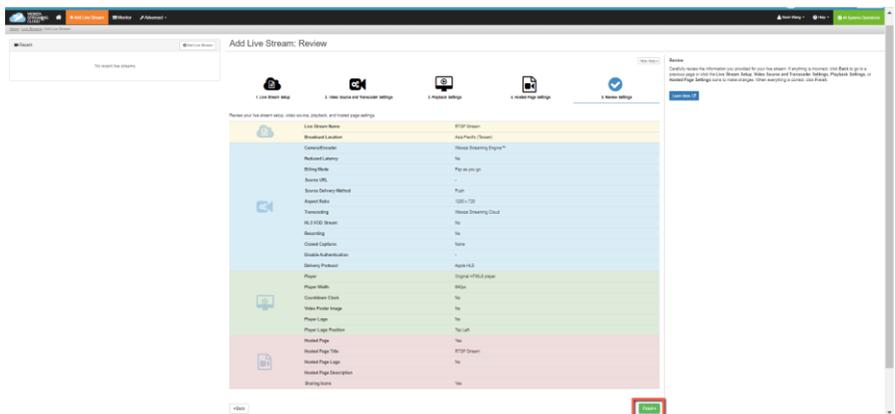
11. This page allows users to set some detailed settings. After all parameters are set, please click the “Next” button.



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

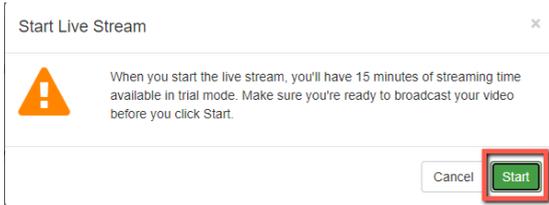


13. This page allows you to check all parameters before starting the live-streaming. Please confirm that all parameters are correct and then click the “Finish” button.

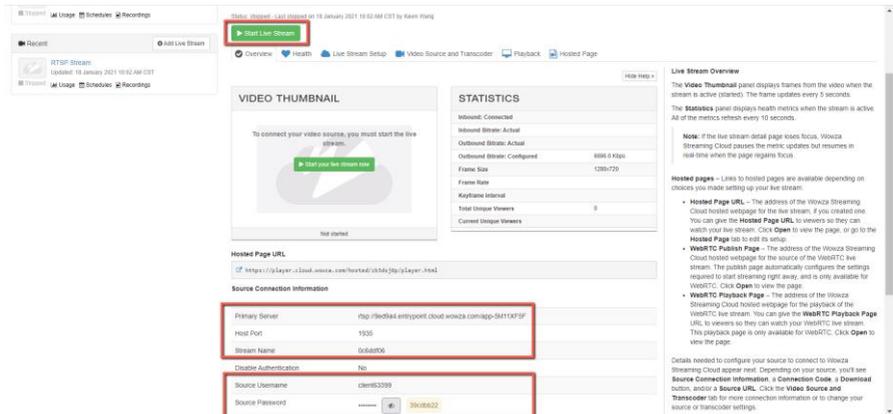


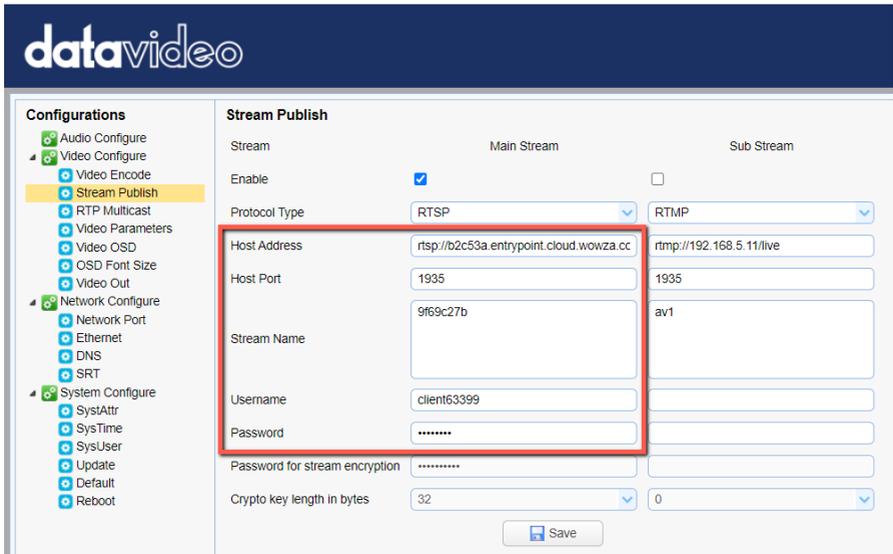
14. Please do the streaming settings according to following steps.

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

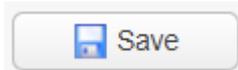


- Moreover, please copy the “Primary Server” address and paste it into the “Host Address” column in the “Stream Publish” option of the PTC-140T Web UI.
- Please copy the “Host Port” and then paste it into the “Host Port” column in the “Stream Publish” page of the PTC-140T Web UI. Please copy the “Stream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

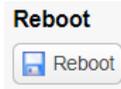




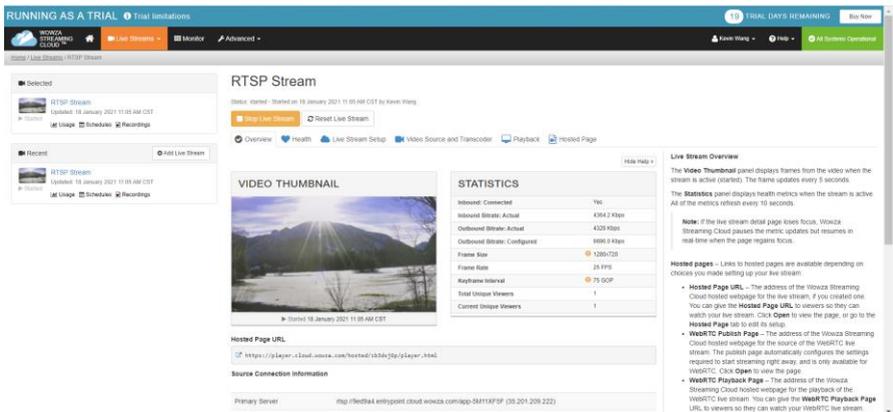
15. After those data are pasted, please click the “Save” button.



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



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



How to do the SRT Streaming by the vMix Software

How to install the Vmix Software

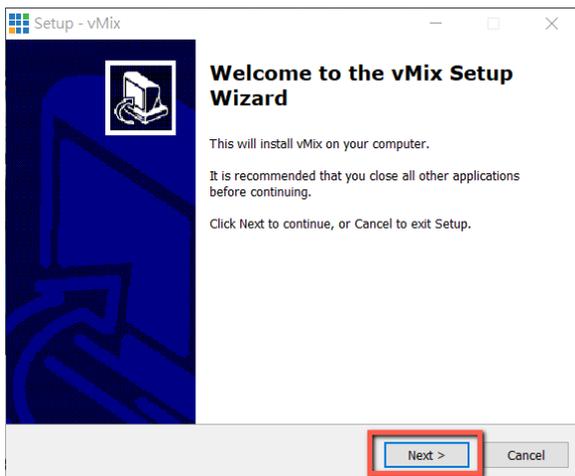
Please install the vMix software according to following steps.

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.

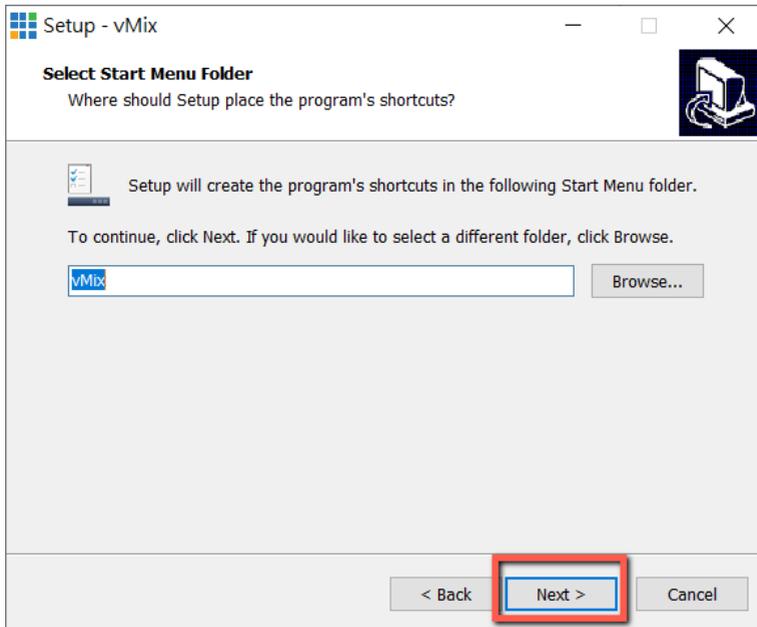


2. Please double-click the vmix23.exe  vmix23 .

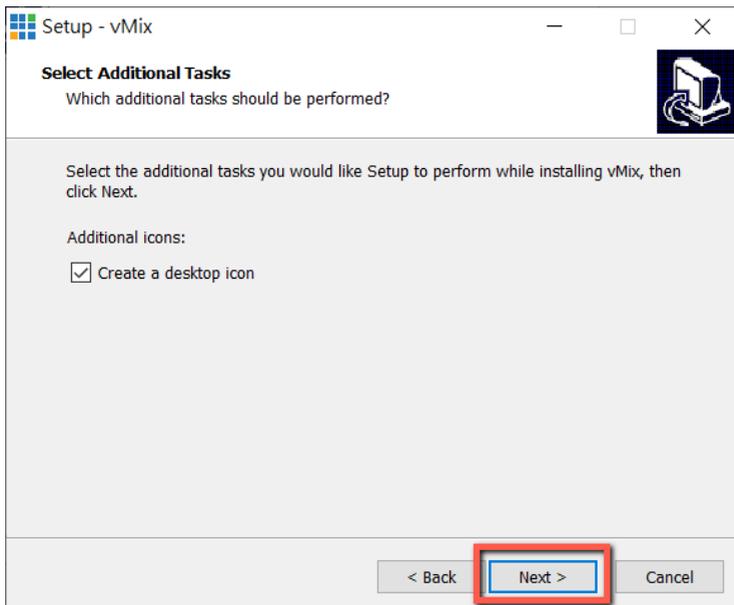
3. Please click the “Next” button.



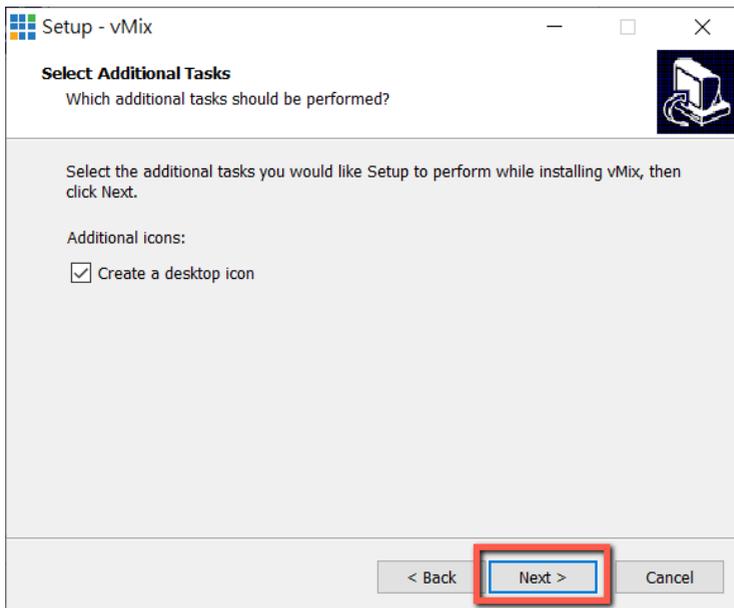
6. Please click the “Next” button.



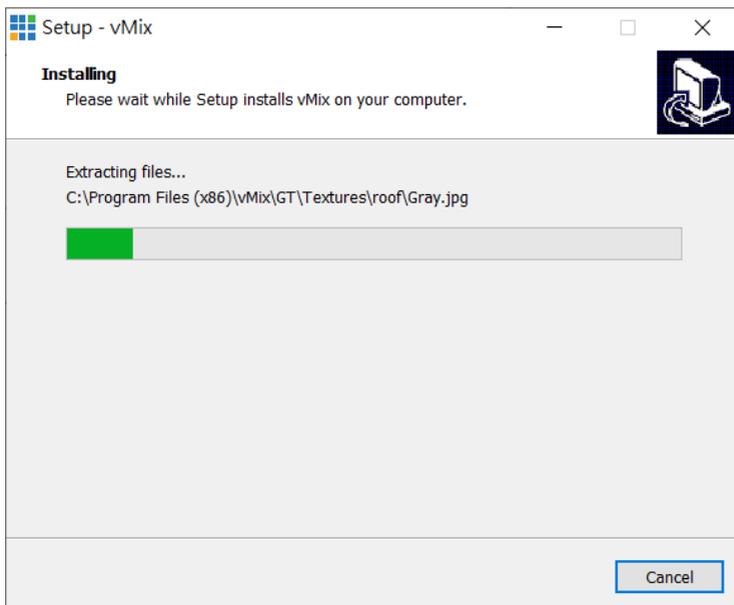
7. Please click the “Next” button.



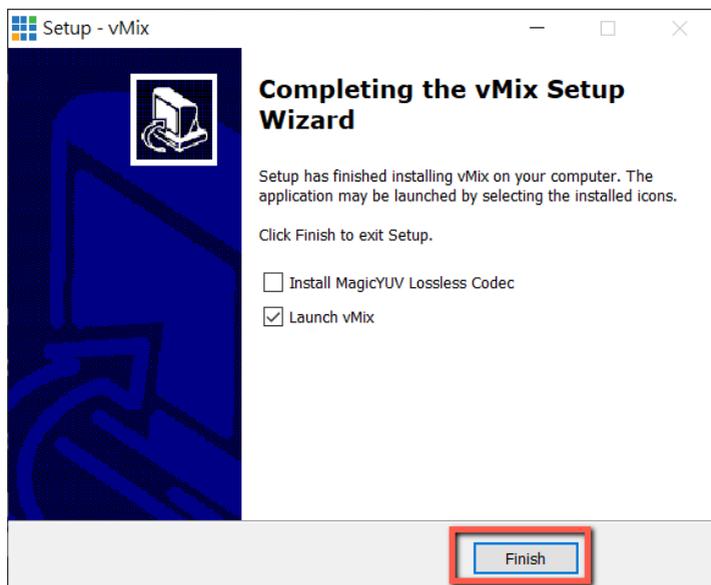
8. Please click the “Install” button.



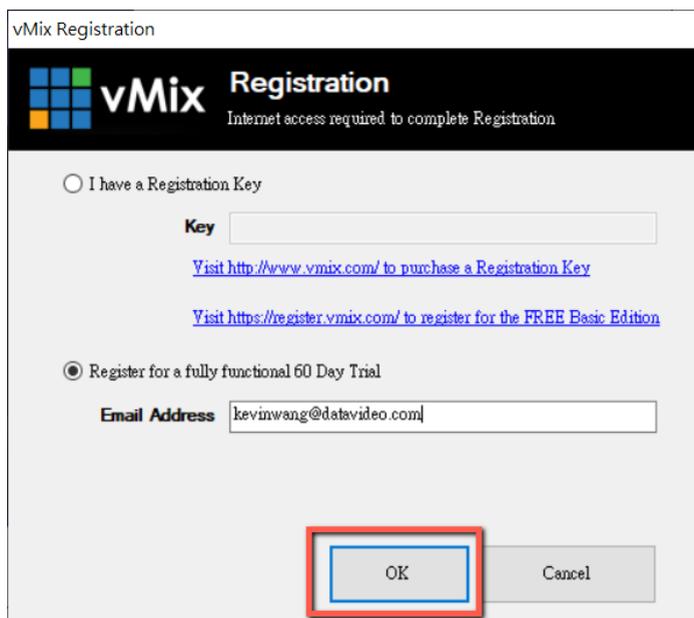
9. The installation will be started.



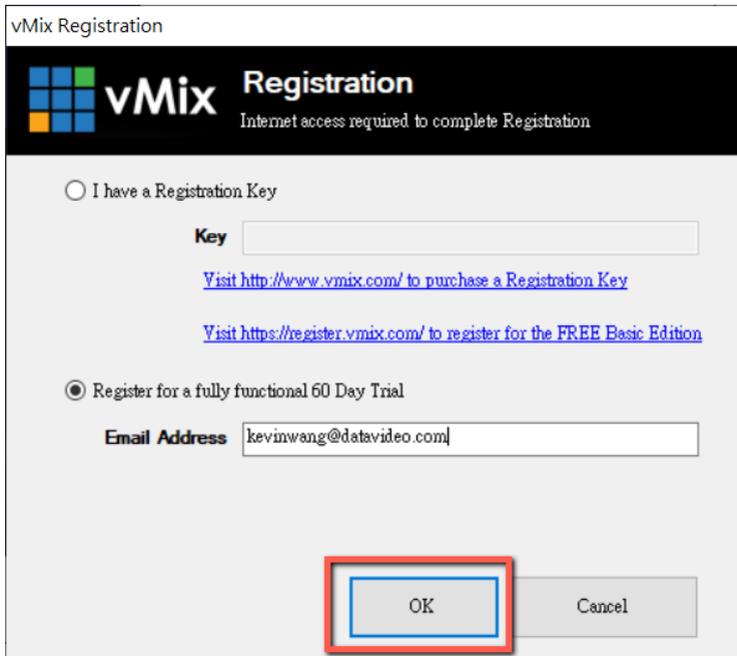
10. Please click the “Finish” button to finish the installation.



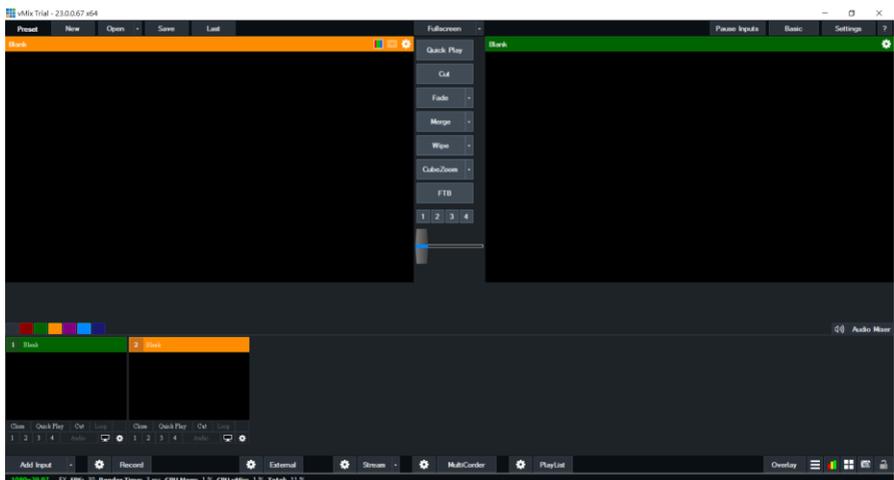
11. Please select “Register for a fully functional 60 Day Trial” to fill out your Email Address. After that, please click the “OK” button to open the vMix software.



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



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



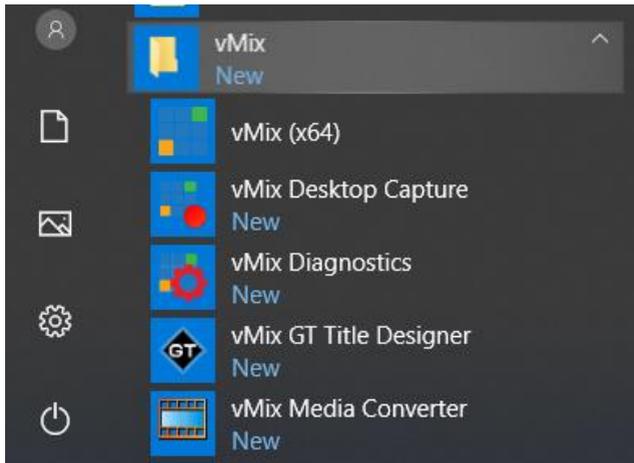
How to do the SRT Stream by Using the PTC-140T Camera and vMix Software

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.

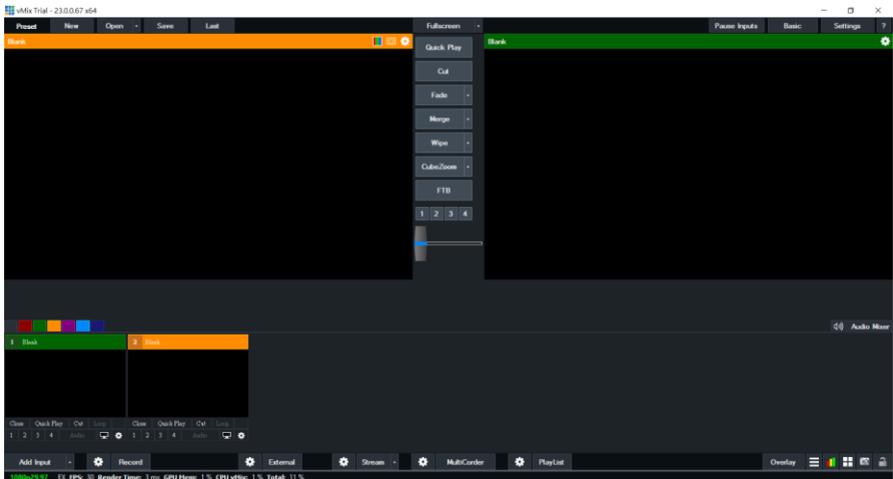
If the PTC-140T is set in Listener Mode

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

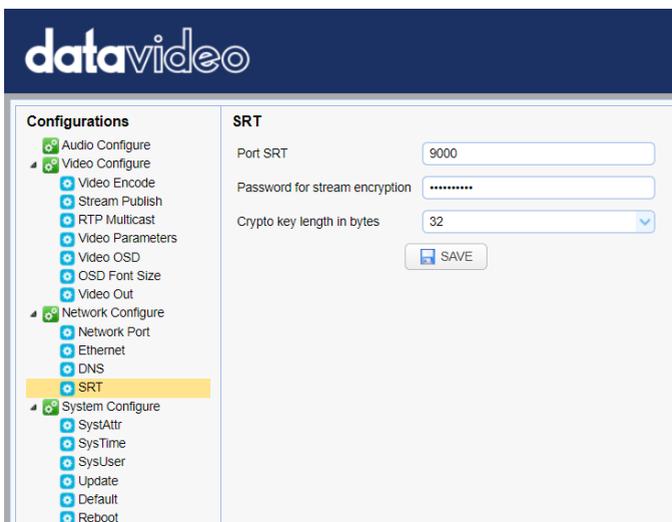
1. At first, please click “vMix(x64)” from the Start Menu.



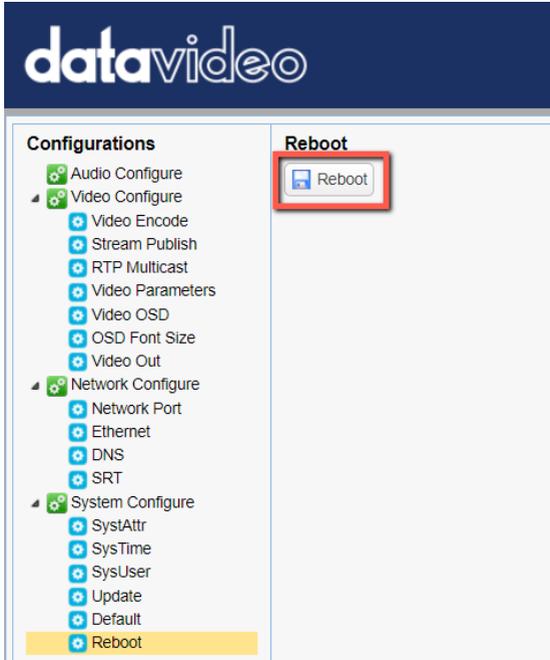
2. Users can see the main interface of the vMix which is shown as following diagram.



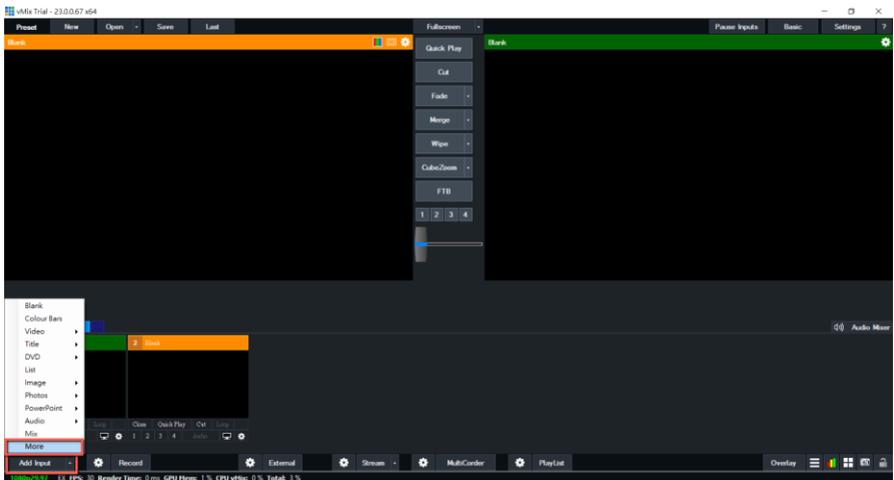
3. Please go back to the interface of the PTC-140T Web UI, click the “SRT” option, and then select your desired SRT encryption way from “Crypto key length in bytes”. For this example, “32” is selected. After that, please set your desired SRT password in “Password for stream encryption”. For this example, 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.



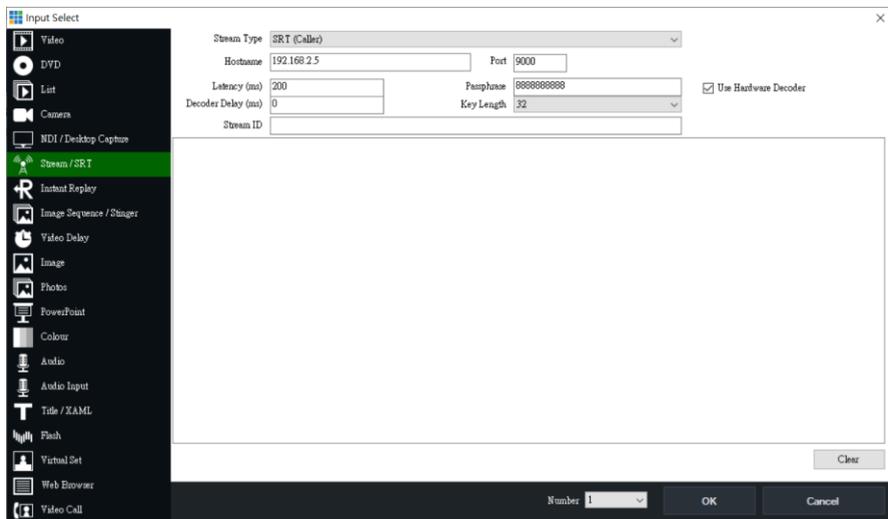
4. Please click the “Reboot” button from the “Reboot” option for rebooting the PTC-140T.



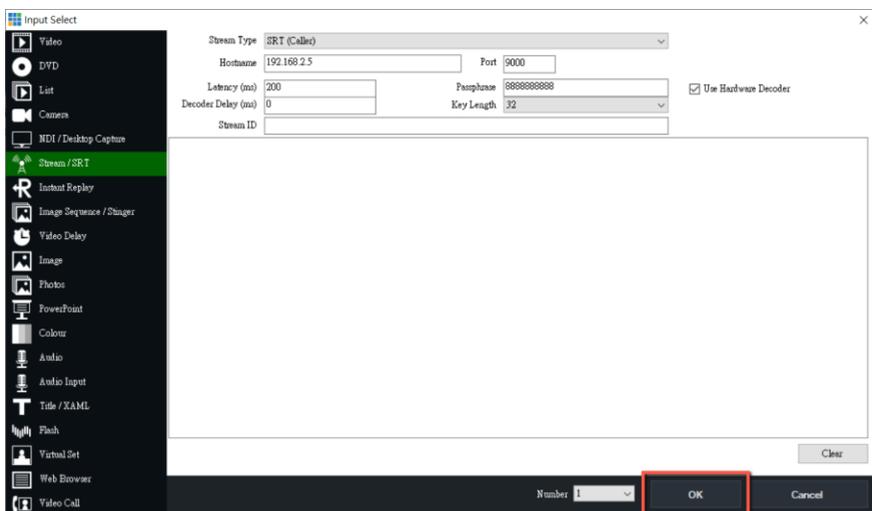
5. Please go back to vMix and then please click “Add Input”. After that, please click “More” from the drop-up menu.



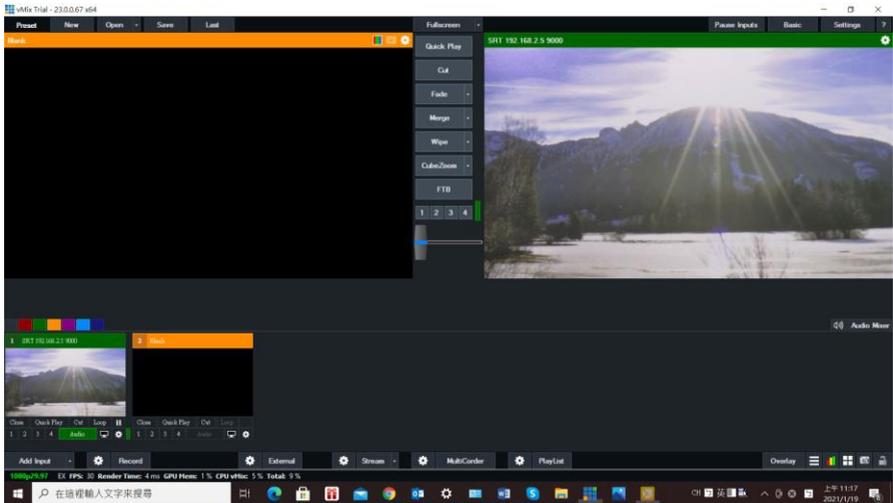
6. At this time, please click the “Stream/SRT” option from the “Select Input” interface. Select “SRT Caller” from the “Stream Type” drop-down menu. After that, please enter the IP address of your connected device. In this example, it is the PTC-140T and its IP address is 192.168.2.5. After that, please enter the password that is set in the PTC-140T 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-140T Web UI.



7. Please click the “OK” button.



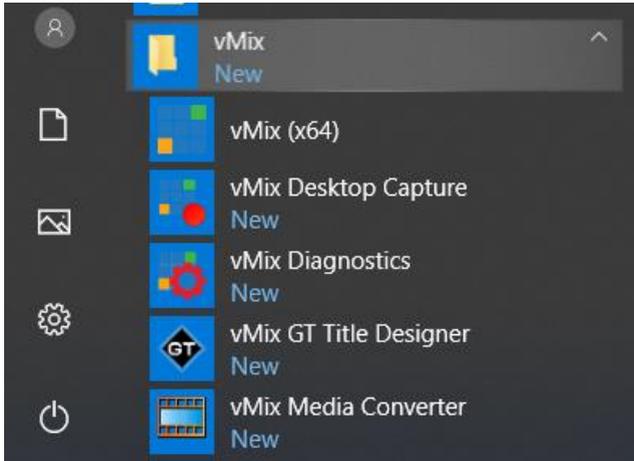
8. Users can see that the image which is shot by the PTC-140T is streamed to vMix software by the SRT Listener Mode.



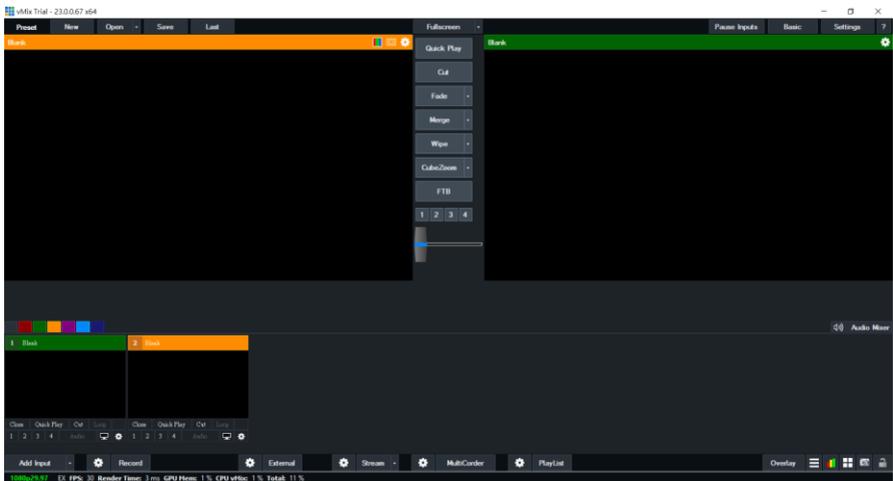
If the PTC-140T is set in Caller Mode

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

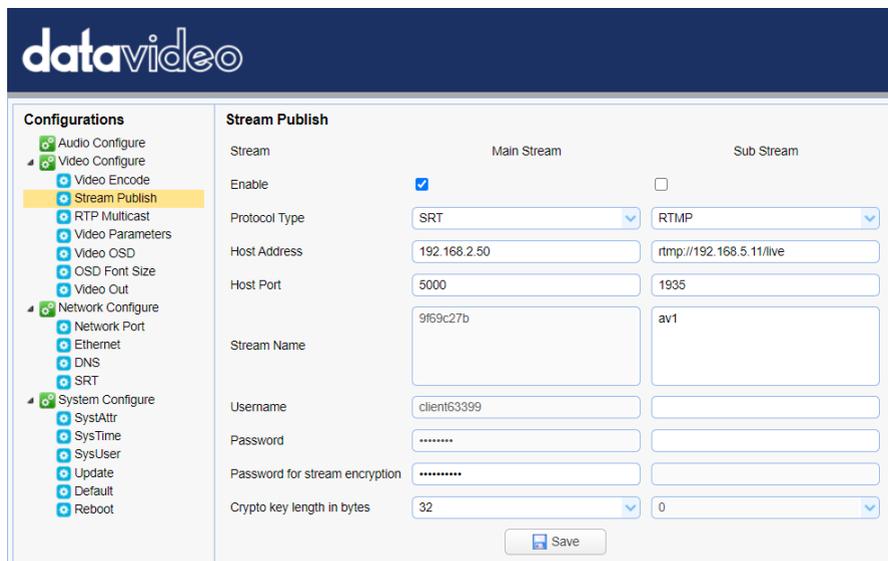
1. At first, please click “vMix(x64)” from the Start Menu.



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

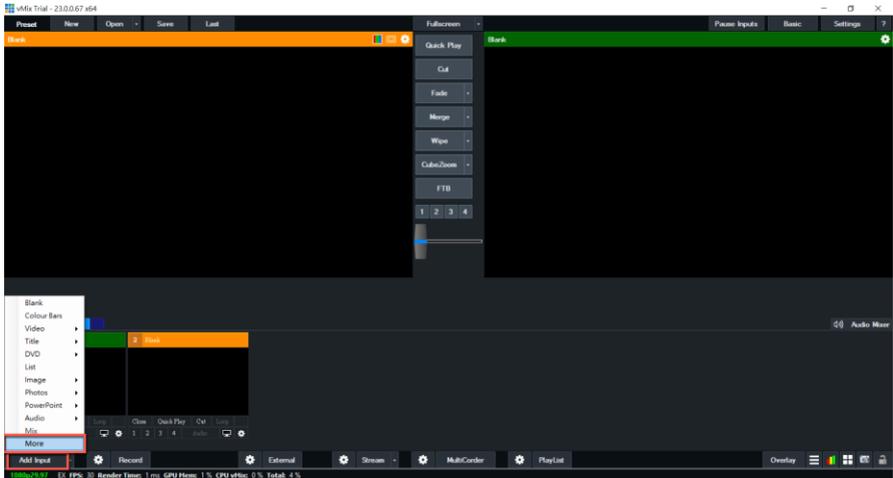


3. Please go back to the interface of the PTC-140T Web UI, click the “Stream Publish” option, and then you can see the “Stream Publish” interface which is shown as following diagram.

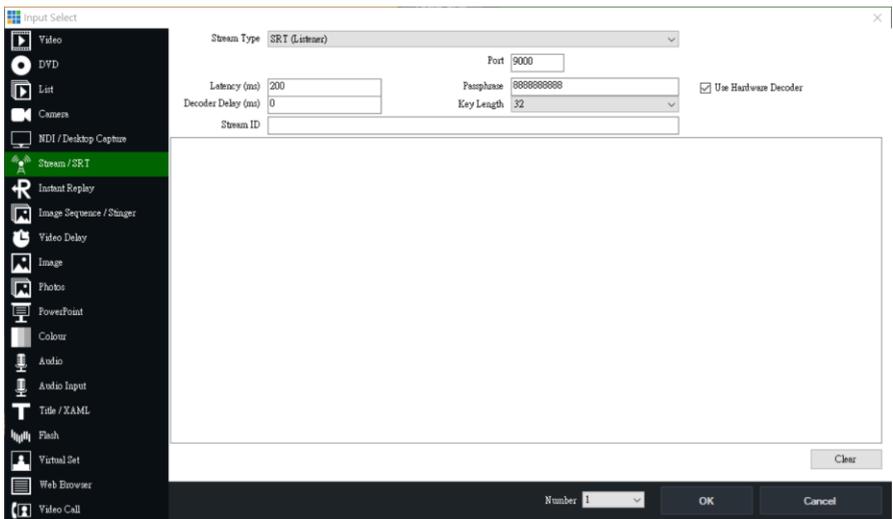


4. Please select “SRT” option from the “Protocol Type” drop-down menu.
5. Please enter the IP address of the device that the vMix software is installed in the “Host Address” column. In this example, it means the Notebook PC, and its IP address is 192.168.2.50.
6. The “Host Port” default value for the PTC-140T 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-140T.

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

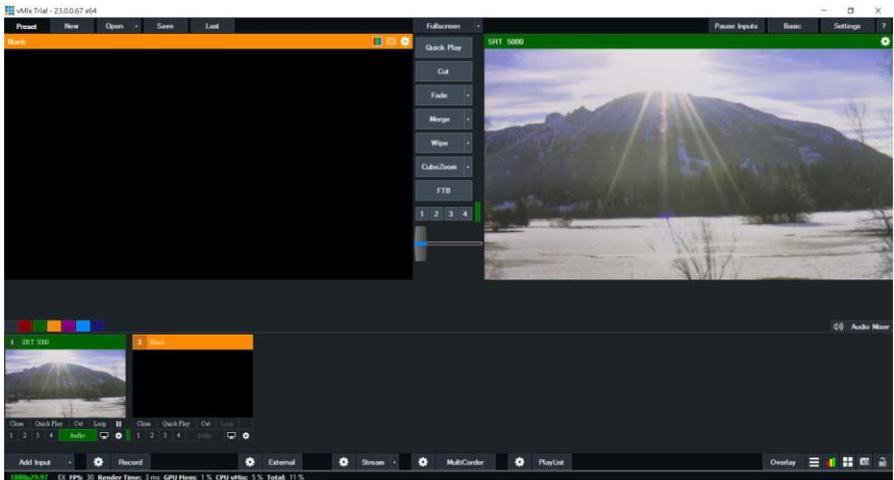


12. Please select “SRT Listener” from the “Stream Type” drop-down menu. And then please paste the “Host Port” default value “5000” in the “Stream Publish” option into the “Port” column of the vMix software. After that, please set the “Passphrase” password to “88888888” which is consistent to the “Password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



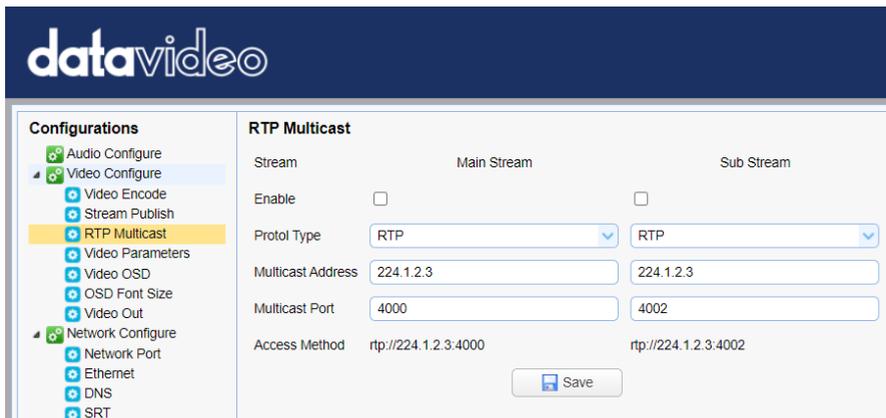
13. Finally, please click the “OK” button.

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



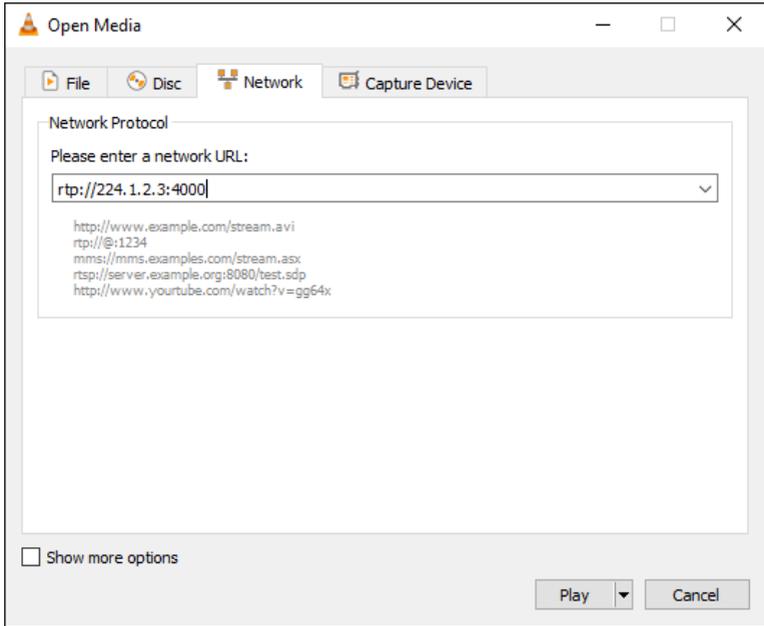
9.3.2.4 RTP Multicast

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



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

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



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

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

1. On **RTP Multicast** page of the PTC-140T’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.

9.3.2.5 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**.

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

Focus Mode: Auto

AF-Zone: All

AF-Sensitivity: Low

*Click the "Refresh" button to refresh parameter.

*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).

The screenshot shows the DataVideo configuration interface. On the left is a 'Configurations' sidebar with a tree view. The 'Video Parameters' option is highlighted in yellow. The main area is titled 'Video Param' and contains a video preview window showing a landscape with mountains and a river. Below the preview are several tabs: 'Focus', 'Exposure', 'Color', 'Image', 'NR', 'Style', and a 'Refresh' button. The 'Exposure' tab is active, showing the following settings:

- Mode: Auto (dropdown menu)
- EV: OFF (button)
- BLC: OFF (button)
- Flicker: OFF (dropdown menu)
- G.Limit: A slider set to 3
- DRC: 5 (dropdown menu)

Below the settings, there are two red text annotations:

- *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	Auto					
RG Tuning	<input type="range"/>				0	
BG Tuning	<input type="range"/>				0	
Saturation	100%					
Hue	<input type="range"/>				7	
AWB Sensitivity	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 7

Contrast 8

Sharpness 5

Gamma 0.45

DCI OFF

B&W Mode Color

Flip-H OFF

Flip-V OFF

DZoom OFF

Low-Light Mode 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.

The screenshot displays the DataVideo web interface. On the left is a 'Configurations' sidebar with a tree view where 'Video Parameters' is highlighted. The main area is titled 'Video Param' and features a live video feed of a snowy mountain landscape. Below the video is a control panel with tabs for 'Focus', 'Exposure', 'Color', 'Image', 'NR', and 'Style'. The 'NR' tab is selected, showing three settings: 'NR-2D' set to '1', 'NR-3D' set to '5', and 'Dynamic Hot Pixel' set to 'OFF'. A 'Refresh' button with a circular arrow icon is located to the right of these settings. At the bottom of the interface, there are two lines of red text: '*Click the "Refresh" button to refresh parameter.' and '*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

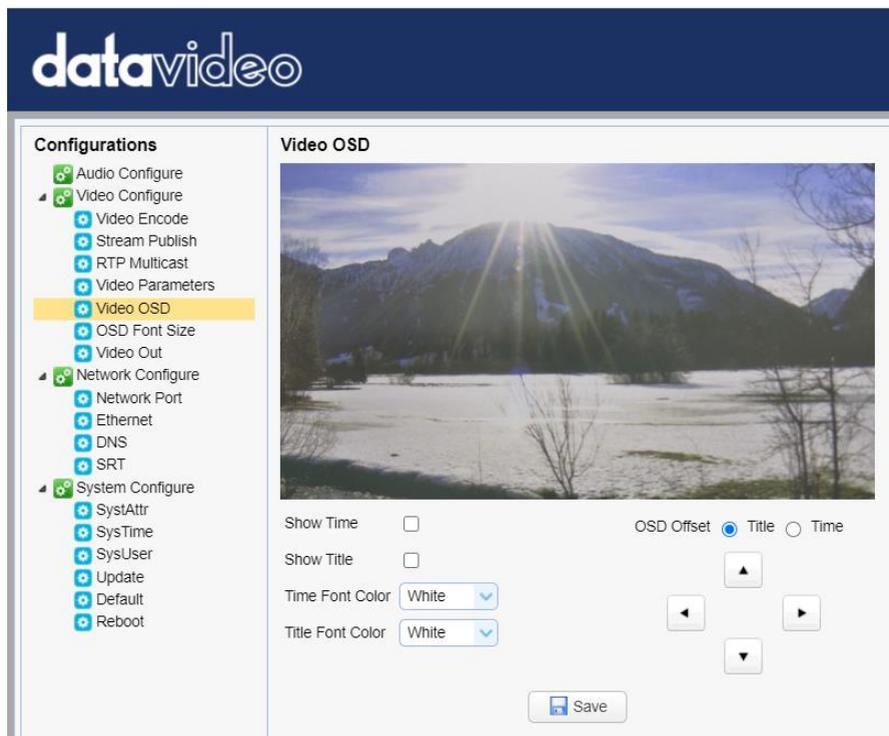


Refresh

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

9.3.2.6 Video OSD

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



Enable Video Time and Title on Screen



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

Set Font Color of Time and Title

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

- White
- Black
- Yellow
- Red
- Blue

Adjust Time and Title Positions



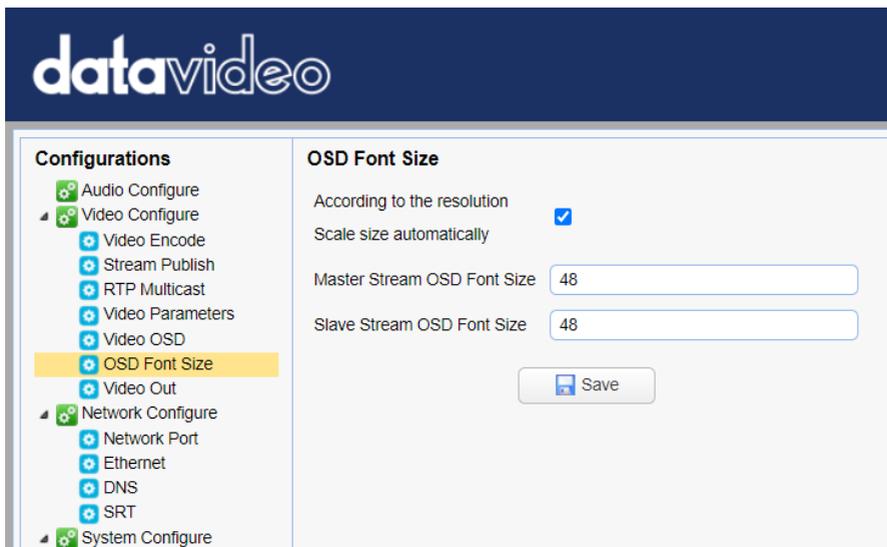
On the OSD Offset tile, you will be allowed to adjust positions of the Time and Title displayed on the screen. First select Time or Title then click the arrow buttons to move it to the desired position.



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

9.3.2.7 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.



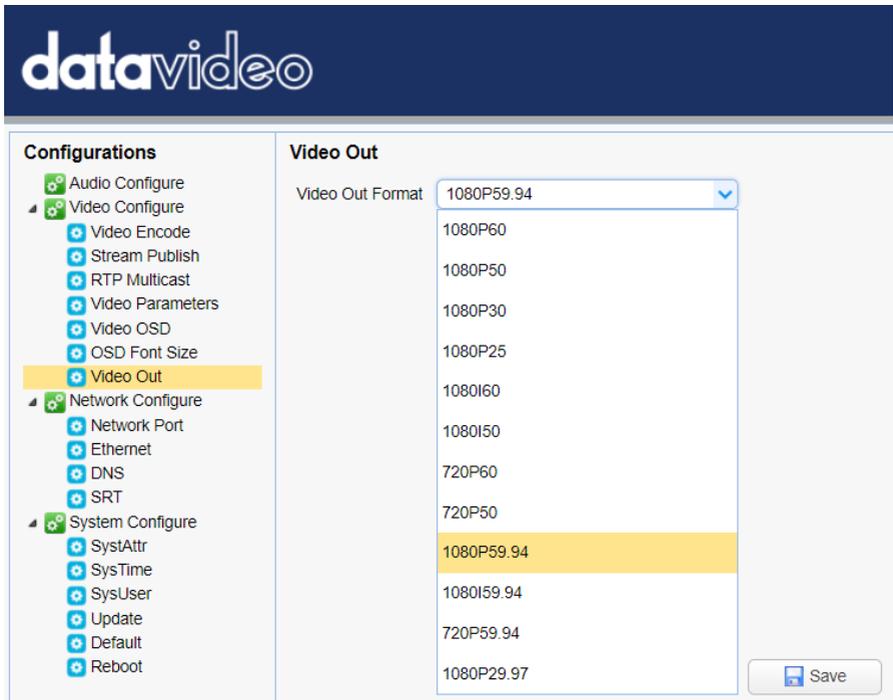
9.3.2.8 Video OUT

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 shows the 'datavideo' configuration interface. On the left, a 'Configurations' sidebar lists various settings, with 'Video Out' highlighted in yellow. The main area, titled 'Video Out', features a dropdown menu for 'Video Out Format' currently set to '1080P59.94'. A list of available resolutions is displayed below the dropdown, with '1080P59.94' highlighted in yellow. A 'Save' button is located at the bottom right of the main area.

Video Out Format
1080P60
1080P50
1080P30
1080P25
1080I60
1080I50
720P60
720P50
1080P59.94
1080I59.94
720P59.94
1080P29.97

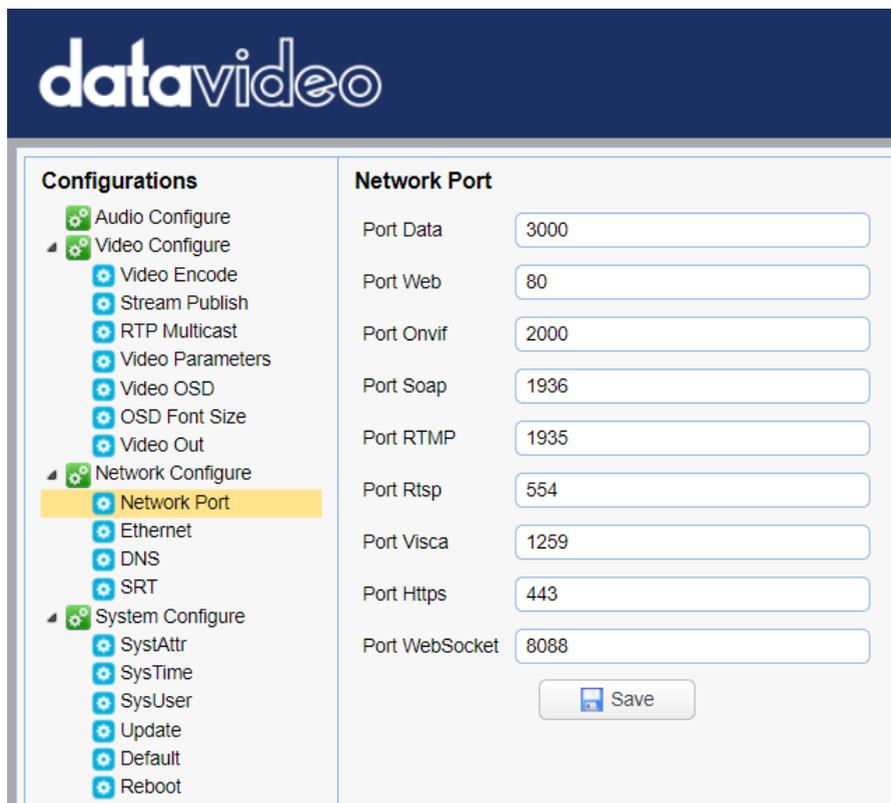
9.3.2.9 Network Configure

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

9.3.2.9.1 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.



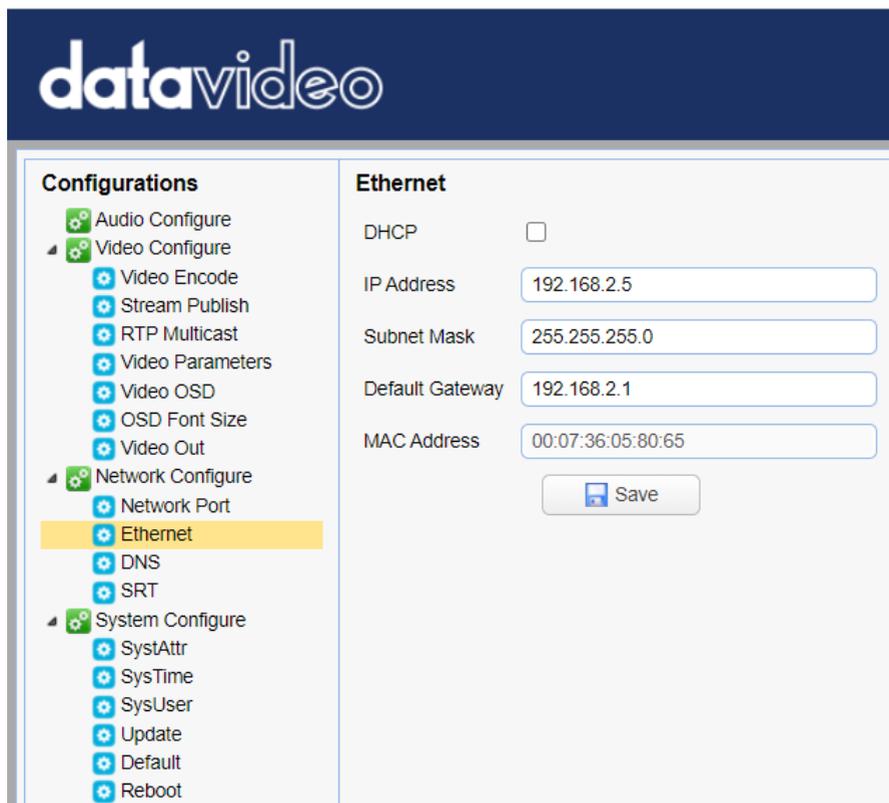
The screenshot shows the 'datavideo' web interface. On the left is a 'Configurations' sidebar with a tree view. The 'Network Port' option is selected and highlighted in yellow. The main area on the right is titled 'Network Port' and contains a list of configuration items, each with a text input field containing a default port number. At the bottom right of this area is a 'Save' button.

Configuration Item	Default Port Number
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

9.3.2.9.2 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](#)**.

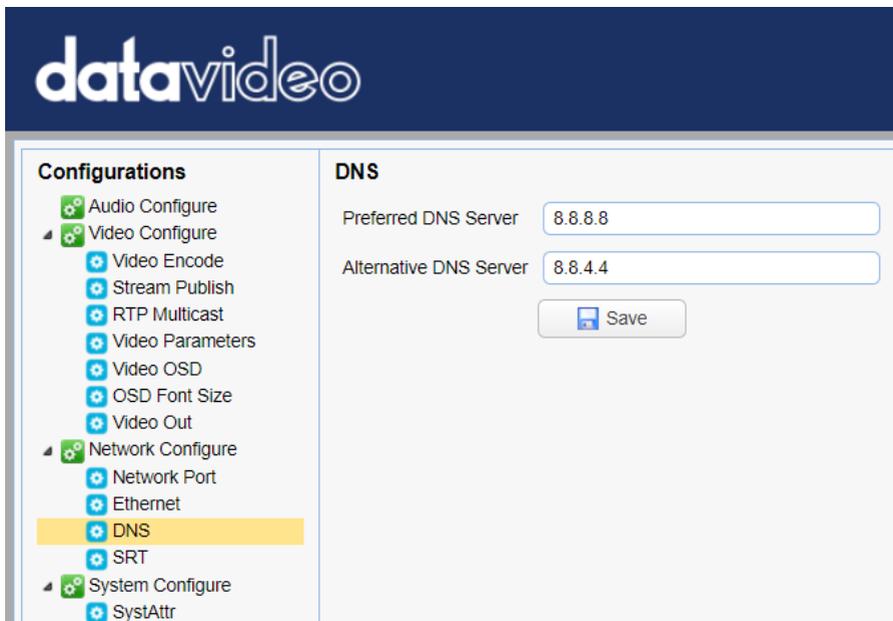
Note: Click the **Save** button after you've edited the network settings.



The screenshot displays the DataVideo configuration interface. At the top, the 'datavideo' logo is visible on a dark blue background. Below the logo, the interface is divided into two main sections. On the left, a 'Configurations' sidebar lists various settings categories, each with a gear icon. The categories are: Audio Configure, Video Configure (expanded), Network Configure (expanded), and System Configure (expanded). Under 'Video Configure', options include Video Encode, Stream Publish, RTP Multicast, Video Parameters, Video OSD, OSD Font Size, and Video Out. Under 'Network Configure', options include Network Port, Ethernet (highlighted in yellow), DNS, and SRT. Under 'System Configure', options include SystAttr, SysTime, SysUser, Update, Default, and Reboot. The main content area on the right is titled 'Ethernet'. It contains the following settings: 'DHCP' with an unchecked checkbox; 'IP Address' with a text input field containing '192.168.2.5'; 'Subnet Mask' with a text input field containing '255.255.255.0'; 'Default Gateway' with a text input field containing '192.168.2.1'; and 'MAC Address' with a text input field containing '00:07:36:05:80:65'. At the bottom of this section is a 'Save' button with a floppy disk icon.

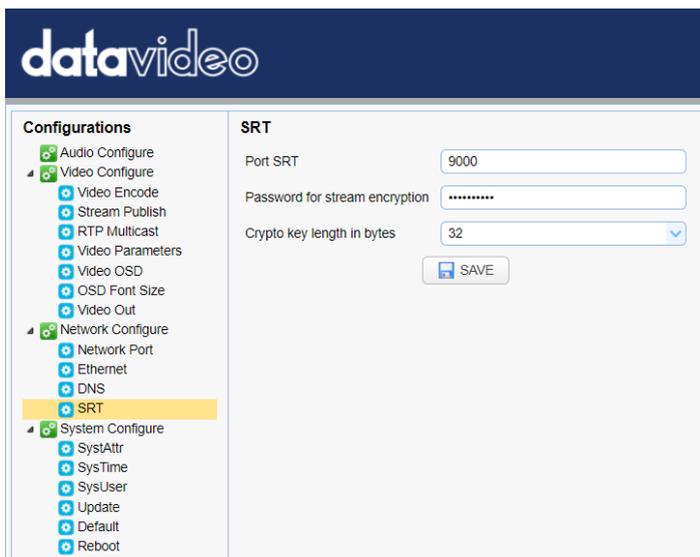
9.3.2.9.3 DNS

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



9.3.2.9.4 SRT

The main interface of the SRT option is shown as following diagram. This interface provides the SRT port No. The default port No. is 9000. Moreover, if users want to encrypt the SRT stream, it allows users to set their desired SRT password and the SRT crypto key length. After those settings are finished, please click the “SAVE” button and those settings will be effective.

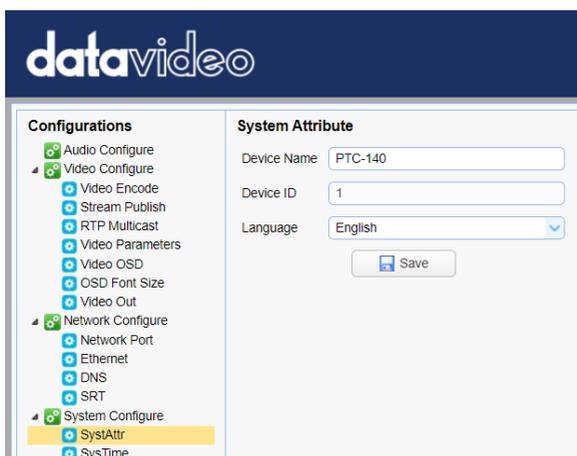


9.3.2.10 System Configure

System Configure allows you to configure your camera system.

9.3.2.10.1 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**.

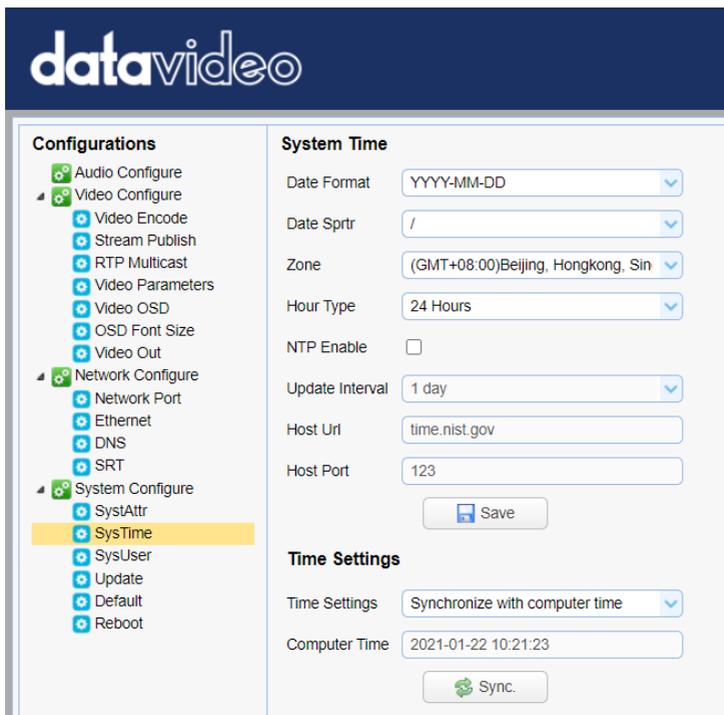


9.3.2.10.2 System Time

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.



The screenshot displays the DataVideo web interface. The top header features the 'datavideo' logo. On the left, a 'Configurations' sidebar lists various settings categories: Audio Configure, Video Configure (expanded), Network Configure, and System Configure. Under 'System Configure', 'SysTime' is highlighted. The main content area is titled 'System Time' and contains the following fields:

- 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 Url: time.nist.gov
- Host Port: 123

A 'Save' button is located below these fields. Below the 'System Time' section is a 'Time Settings' section with the following fields:

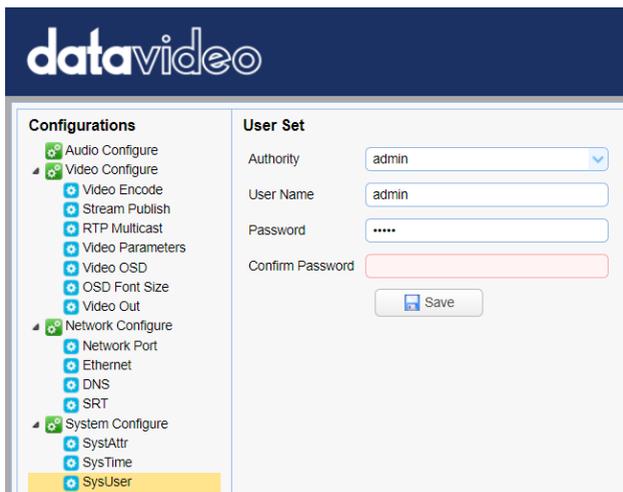
- Time Settings: Synchronize with computer time
- Computer Time: 2021-01-22 10:21:23

A 'Sync.' button is located below the 'Time Settings' section.

9.3.2.10.3 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.

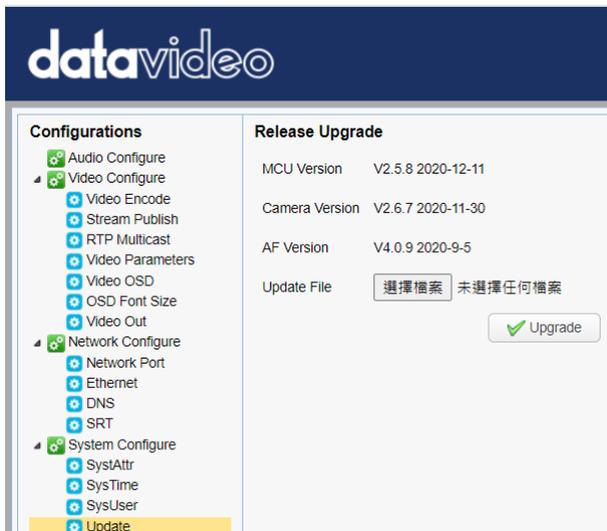


The screenshot shows the 'datavideo' web interface. On the left, a 'Configurations' sidebar lists various settings, with 'SysUser' under 'System Configure' highlighted. The main content area is titled 'User Set' and contains the following fields:

- Authority: dropdown menu with 'admin' selected.
- User Name: text input field with 'admin' entered.
- Password: text input field with masked characters '.....'.
- Confirm Password: empty text input field.
- Save: button with a floppy disk icon.

9.3.2.10.4 Update

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

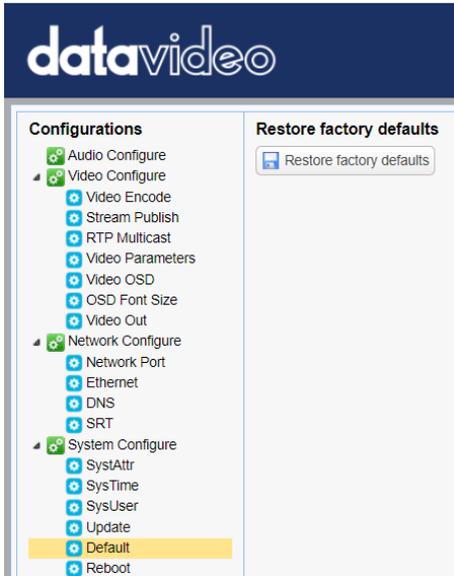


The screenshot shows the 'datavideo' web interface. On the left, a 'Configurations' sidebar lists various settings, with 'Update' under 'System Configure' highlighted. The main content area is titled 'Release Upgrade' and displays the following information:

- MCU Version: V2.5.8 2020-12-11
- Camera Version: V2.6.7 2020-11-30
- AF Version: V4.0.9 2020-9-5
- Update File: 選擇檔案 (button) 未選擇任何檔案 (status)
- Upgrade: button with a green checkmark icon.

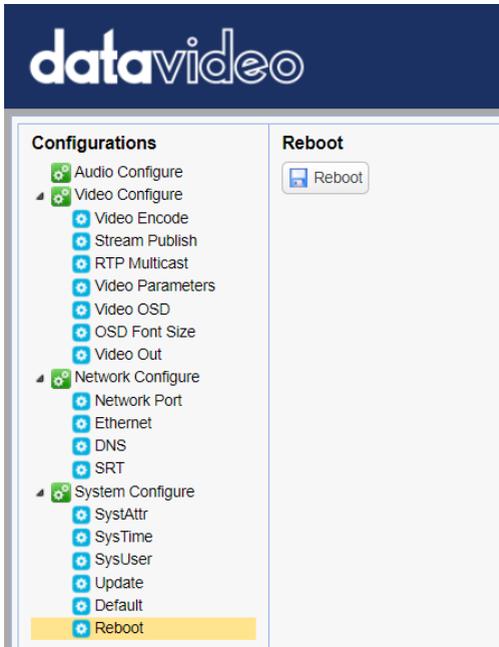
9.3.2.10.5 Default

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



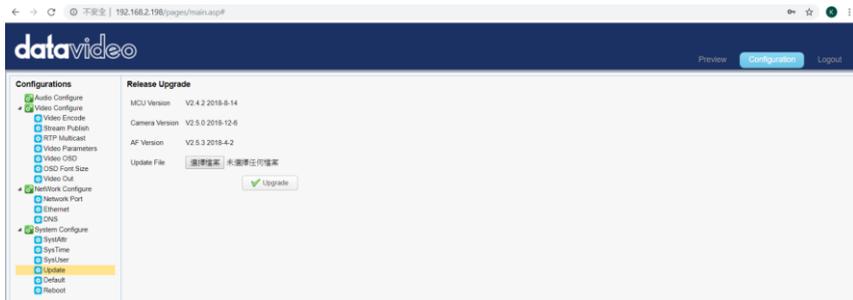
9.3.2.10.6 Reboot

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



10. Firmware Update

The Update option provides several current firmware related information including MCU Version, Camera Version and AF Version for users. Moreover, it also provides interface for users to update the latest firmware. Please see following diagram for the main interface of the Update.



How to Update the Latest Firmware for the PTC-140T Camera

Please follow following steps for updating the latest firmware for the PTC-140T camera.

Step 1. Please download the latest firmware of the camera from Datavideo Official website <https://www.datavideo.com/product/PTC-140T>

Step 2. Please download the latest firmware and then save the firmware in the hard disk of your PC.

Step 3. Please click the “Select File” button to select the latest firmware from your PC.

Step 4. After the latest firmware is selected, please click the “Upgrade”

button and then the firmware update procedure will be started.

11. Frequently-Asked Questions

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

No	Problems	Solutions
1.	What are the important points for product maintenance?	<ol style="list-style-type: none">1. If the camera will not be used for a long time, please unplug the 12V DC power plug. Moreover, please remove the AC power adapter from the AC outlet.2. Please use soft cloth or tissue to wipe the dust from the case of the camera.3. If the lens of the camera is washed, please wipe it by a soft and dry cloth. Please use neutral detergent rather than strong or corrosive detergent to wipe the camera to prevent the camera lens from damaging.
2.	Why there is no output video?	<ol style="list-style-type: none">1. Please check that whether the power adapter and power plug are connected correctly. Moreover, please check whether the power LED indicator is lighting up.2. Please check whether the device is self-checked normally if the power is turned off and then restarted again.3. Please check whether the cable connection between the camera and the external connected monitor is connected correctly.

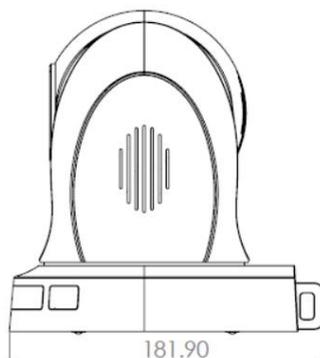
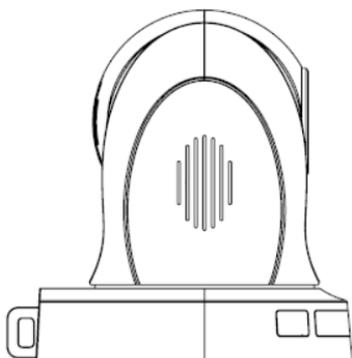
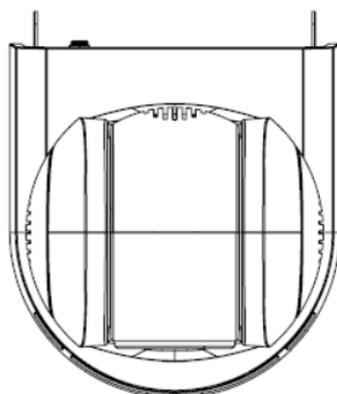
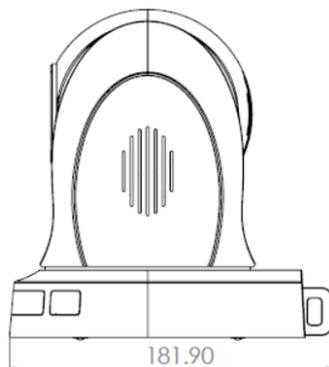
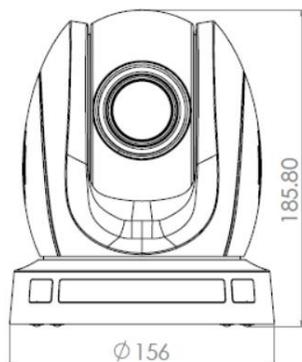
3.	Sometimes there is no image?	1. Please check whether the cable connection between the camera and the external connected monitor is connected correctly.
4.	Image jittering is happened when the camera lens is zooming.	1. Please check whether the camera is well-mounted. 2. Whether there is a vibrating machine or object that is around the camera.
5.	The remote controller can not be used.	1. Please check whether the remote controller can be used if the IR address is set to 1. (If the camera is restored to factory default value and then the IR address of the remote controller will be reset to 1). 2. Please check whether the battery of the remote controller is well-installed and whether the battery power is enough or not. 3. Please check whether the working mode of the device is normal or not. 4. Please check whether the OSD menu is closed, the remote controller can be used only when the OSD menu is closed. If the output video is shown on the web-based user interface, the OSD menu will not be shown. If the OSD menu is shown and there is no action for about 30 seconds, the OSD menu will be closed automatically.

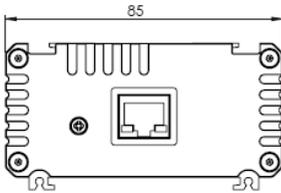
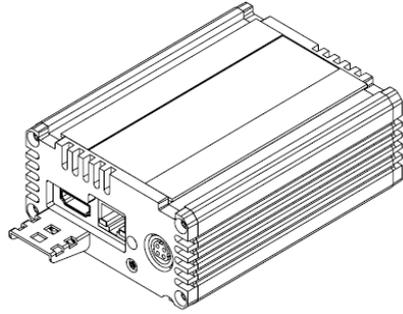
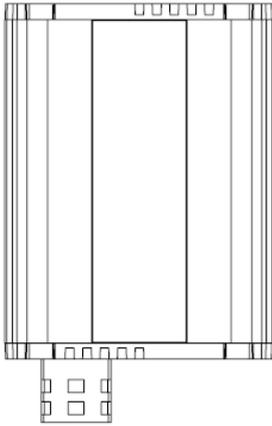
<p>6.</p>	<p>The camera can not be controlled by the serial port.</p>	<ol style="list-style-type: none"> 1. Please check whether the control cable is the standard control cable that is provided by our company. 2. Please check whether the protocol, baud rate and address of the device that is connected are consistent to the protocol, baud rate and address of the camera. 3. Please check whether the control cable is connected correctly or not. 4. Please check whether the working mode of the device is normal or not.
<p>7.</p>	<p>The web-based user interface can not be logged in.</p>	<ol style="list-style-type: none"> 1. Please check whether the output video of the camera can be shown on the external connected monitor correctly or not. 2. Please check whether the Ethernet cable is connected correctly or not (If the yellow LED indicator on the rear panel of the camera is flickering, it means that the Ethernet cable is connected correctly.) 3. Please check that whether the network segment is added for your PC's network setting and please confirm that whether this network segment is consistent to the camera's IP address. 4. Please click "Type here to search" from your PC and then please enter CMD command. After that, please click "Enter" to open the DOS command window. Finally, please enter ping 192.168.5.163 to confirm that the network is successfully connected.

<p>8.</p>	<p>Important notices for the Preview Window which is played by the HTML5 player.</p>	<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-140T 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>
<p>9.</p>	<p>Important notice when using the PTC-140T and the vMix software to do the SRT streaming.</p>	<p>When the PTC-140T is set in SRT Caller Mode, the vMix must be set in SRT Listener Mode. When the PTC-140T is set in SRT Listener Mode, the vMix must be set in SRT Caller Mode.</p>

12. Dimensions

Unit: mm





13. Specifications

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

Image Compensation	Backlight Compensation
Input /Output Interfaces	
Video Output	HDBaseT (PoE) x1 RJ-45 x1
Audio Input	3.5mm Line in
Tally LED	Dual colors (Red, Green)
Lens Filter	M52.0 x 0.75 Thread with UV Protection
Control Protocol	VISCA/Pelco-D/Pelco-P; Baud Rate:115200/38400/9600/4800/2400bps DVIP
Remote Control Interface and Transmit Distance	RS-232 Lan (RJ-45) HDBaseT(RJ-45)/Serial control on Receiver Box: Transmit up to 100m
Video Compression Format	H.264, H.265, Dual stream output
Audio Compression Format	AAC/MP3/G.711A Audio compression
HD IP Interface	100M IP port(100BASE-TX); Support DVIP
Streaming Protocols	TCP/IP, HTTP, RTSP, RTMP(S), DHCP, Multicast, etc
Others	
F/W Update	Ethernet
IR Control	Yes
Camera Control Unit	HS-1500T/HS-1600T/HS-1600T MK II/RMC-180/RMC-300C

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

Cable Selection

Video Resolutions (HDBaseT Connection)			
Cable	Range	Video Resolution	
CAT5e/6	100 meters	Up to 1080p, 60Hz, 36 bpp. Data rates lower than 5.3 Gbps or below 255 MHz TMDS clock.	
	70 meters	Ultra HD video formats: HDMI Deep color: 1080p, 60, 48 bpp.	
CAT6a/CAT7	100 meters(*)	4K x 2K Data rates higher than 5.3 Gbps or above 255 MHz TMDS clock.	
* Recommended Cables for Ultra-HD video at 100 Meter range			
Type	P/N	Manufacturer	Web
CAT7 S/FTP	FR-LSZH	Teldor	http://www.teldor.com/
CAT6A H-STP	HFFR	Teldor	http://www.teldor.com/
CAT.7	2170475	Earthline	http://products.lappgroup.com/online-catalogue/datacommunication-systems-for-ethernet-technology/

Note

Note

Service & Support

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



Please visit our website for latest manual update.
<https://www.datavideo.com/tw/product/PTC-140T>

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