

HD PTZ CAMERA

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.
- This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
- 8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
- 9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord's rating.

- 10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
- 11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
- 12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
- 13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
 - a. When the power cord is damaged or frayed;
 - b. When liquid has spilled into the unit;
 - c. When the product has been exposed to rain or water;
 - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
 - e. When the product has been dropped or the cabinet has been damaged;
 - f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

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

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

Three Year Warranty

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



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

Disposal



For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CE Marking is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced

by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.

1. Product Overview

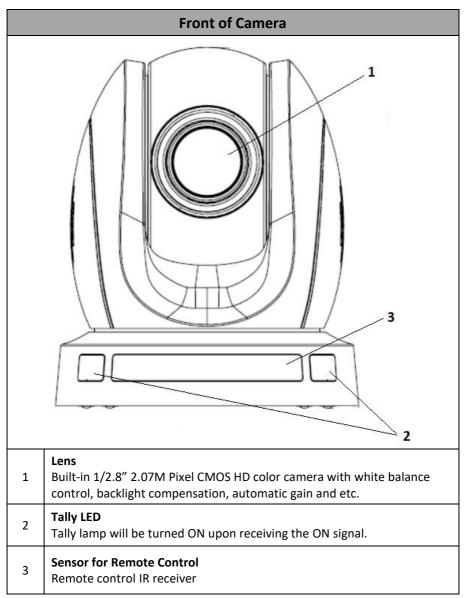
The PTC-140 is a low-cost SDI/HDMI PTZ camera featuring 20x optical zoom and 10x digital zoom.

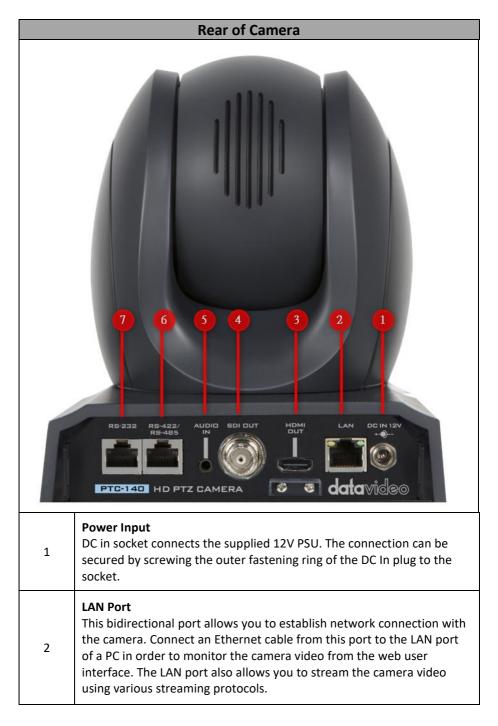
The PTC-140 is also supporting H.264 /H.265 video compression and dual stream outputs.

Features

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

2. Location and Function of Parts





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

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

3. Basic Setup

3.1 Power-On Initialization

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



3.2 Video Output

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

Ethernet Port



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

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

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

HDMI Video Output



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

3G-SDI Video Output



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

4. Remote Control and On-Screen Menu

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

4.1 Remote Control Functions



No	Function Keys	Descriptions
1	Standby Key	Standby Key The standby button turns ON/OFF the camera. To reboot the camera, press the standby button for 3 seconds. After device initialization is complete, the camera head will automatically return to HOME position.
2	Camera Select Keys	Camera Select Keys To select a camera in a multi-camera environment using camera select keys (CAM1 – CAM4), you should first assign an ID number to the camera intended for operation using F1 – F4 keys then press CAMERA SELECT (CAM 1~ CAM4) keys to navigate between the four cameras. Note: See F1 – F4 keys for ID number assignment instructions.
3	Number Keypad 1 2 3 4 ·5· 6 7 8 9 0	Number Keypad Set, recall and clear presets using the number keypad. Set Preset Please press the SET PRESET at first, and then please press any of the number keys from 0 to 9 to save the PTZ settings. You will be allowed to save up to up to 10 presets using the remote control. Call Preset Press any of the number keys from 0 to 9 to recall the preset settings. Note: Make sure the preset that you want to recall contains PTZ settings before pressing the number key. Clear Preset First press the CLEAR/PRESET key then the number key (0 – 9) to empty the preset.

No	Function Keys	Descriptions		
4	Asterisk and Pound Keys	The asterisk and pound keys form various combinations with other keys to access certain functions directly. The shortcuts are listed as follows: 1. $[#] + [#] + [#] : Clear all presets$ 2. $[*] + [#] + [6] : Restore factorydefaults3. [*] + [#] + [6] : Restore factorydefaults3. [*] + [#] + [9] : Image flip alonghorizontal axis4. [*] + [#] + [9] : Image flip alonghorizontal axis4. [*] + [#] + [4] : Set OSD menulanguage to Chinese.7. [*] + [#] + [3] : Set OSD MENUlanguage to Chinese.7. [*] + [#] + [4] : Set OSD MENUlanguage to English.8. [*] + [#] + [4] : Set OSD MENUlanguage to English.8. [*] + [#] + [0] : Set video format to1080P60.10. [#] + [#] + [1] : Set video format to1080P5011. [#] + [#] + [2] : Set video format to1080I6012. [#] + [#] + [3] : Set video format to1080I5013. [#] + [#] + [4] : Set video format to720P6014. [#] + [#] + [6] : Set video format to1080P3015. [#] + [#] + [6] : Set video format to1080P3016. [#] + [#] + [7] : Set video format to1080P25$		
5	AUTO Focus	AUTO Focus Pressing this key will enable auto focus mode.		

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

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

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

4.2 On-Screen Menu

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

On-Screen MEN	U
Language	
Setup	
Camera	
P/T/Z	
Video Format	
Network Setting	zs
Version	
Restore Default	
Escape	
[↑↓] Select	[\leftarrow →] Change Value
[Menu] Back	[Home] OK

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

	Main Options							
	Language	Setup	Camera	P/T/Z	Video Format	Network Settings	Version	Restore Default
	English	Protocol	Exposure	Zoom by Speed	1080P60	DHCP	MCU Version	Restore Default
	Simplified Chinese	VISCA Address	Color	Zoom Speed	1080P50	IP Addr	Camera Version	
		VISCA Address Fix	Image	Acc Curve	1080160		AF Version	
		PELCO-P Address	Focus	Preset Speed	1080 50			
ons		PELCO-D Address	Noise Reduction	Joystic Pan Dir	1080P30			
Sub-Options		Baudrate	Style	Joystic Tilt Dir	1080P25			
Sub-		RS-485/422			720P60			
		Tally Light			720P50			
					1080P59.94			
					1080 59.94			
					1080P29.97			
					720P59.94			

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

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

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

Main Menu	Sub Menu	Options	Sub-options
			-8
			-7
			-6
			-5
			-4
			-3
			-2
			-1
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
		BG Tuning	10
		20101116	-10
			-9
			-8
			-7
			-6
			-5
			-4
			-3
			-2
			-1
			60%
		Saturation	70%
			80%
			90%
			100%
			110%
			120%
			130%
			140%
			150%
			160%
			170%
			180%
			190%
			200%

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

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

Main Menu	Sub Menu	Options	Sub-options
			Onepush
			Тор
			Center
		AF-Zone	Bottom
			All
			High
		AF-Sensitivity	Low
			Middle
			Auto
			OFF
			1
			2
		NR-2D	3
			4
			5
			6
			7
			OFF
			1
	Noise Reduction		2
		NR-3D	3
			4
			5
			6
			7
			8
		Dynamic Hot Pixel	OFF
			1
			2
			3
			4
			5
		Default	
		Normal	-
	Style	Clarity	-
	Style	Bright	-
		Soft	-
		5011	
P/T/Z		ON	When enabled, the camera zoom
	Zoom by Speed	OFF	speeds up and slows down gradually
		1	
	Zoom Speed	2	-
	<u> </u>	2	

Main Menu	Sub Menu	Options	Sub-options
		3	
		4	
		5	
		6	
		7	
		8	
		Standard	
	Acc Curve	Slow	
		Fast	
		Fast	
	Preset Speed	Slow	
		Middle	
		Positive	Set to negative when the camera is
	Joystick Pan Dir	Negative	hung on the ceiling or installed upside down.
		Positive	Set to negative when the camera is
	Joystick Tilt Dir	Negative or ir	hung on the ceiling or installed upside down.
	1080P60		
	1080P50		
	1080160		
	1080 50		
	1080P30		
Video Format	1080P25		
video Format	720P60		
	720P50		
	1080P59.94		
	1080159.94		
	1080P29.97		
	720P59.94		
Network Settings	DHCP	ON OFF	
	IP Addr	192.168.x.x	
Version	MCU Version		
	Camera Version		
	AF version		
Restore Default	Restore Default (Yes/No)		

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

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

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

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



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



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



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



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

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



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



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



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



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

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



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



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



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



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

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



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



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



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



Installation Instructions 6.

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

In your product package, you should find

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





..... PM3*5 Screw x 6

Lower Plates

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

• PA4*30 self-tapping screw x 4





PA4 plastic screw stopper x 4

PA4*30 Selft-tapping Screw x 4 PA4 Plastic Screw Stopper x 4

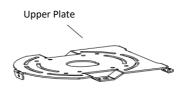
Step 1: The Ceiling Bracket

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

STEP 1



Ceiling Bracket



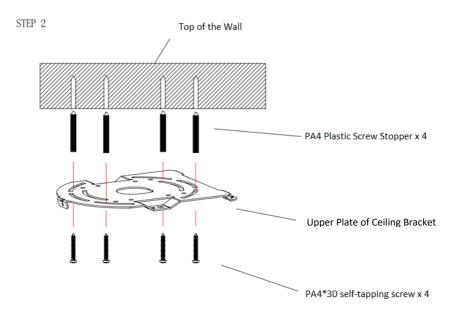


Lower Plate

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

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

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



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

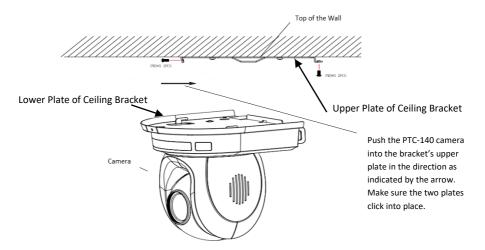
As depicted in the diagram below, use three PM3*5 screws to affix the bracket's lower plate to the bottom of PTC-140.

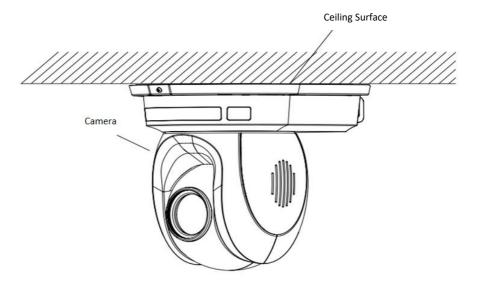


Step 4: Mount the PTC-140 Camera to the ceiling

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

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



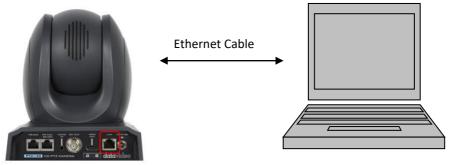


7. Network Connection

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

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

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



192.168.5.X

192.168.5.163

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

da	avid	00	
GG		30	
User Nam	e: admin		
Password	: [4		
	V Login		
	e copi		
		窗体中文 繁体中文 English	

The default login credentials are:

- User Name: admin
- Password: admin

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



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

datavideo			
Configurations Audio Configure Video Configure Video Encode Stream Publish RTP Multicast Video Parameters Video OSD OSD Font Size Video OSD OSD Font Size Video Out Network Configure Network Port Ethernet ONS SRT System Configure System System System System DNS System DNS System DNS System DNS System DS System Diffue System Diffue Default Reboot	Ethernet DHCP IP Address Subnet Mask Default Gateway MAC Address	□ 192.168.2.5 255.255.0 192.168.2.1 00:07:36:05:80:65 ■ Save	

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

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

7.1 DHCP Mode

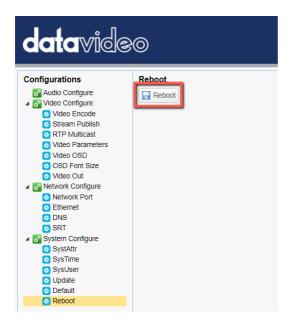
Dynamic Host Configuration Protocol (DHCP) is a network protocol that enables a server to automatically assign an IP address to a network device from a defined range of numbers configured for a given network. The diagram below illustrates a DHCP network connection example.



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

datavideo				
Configurations	Ethernet			
Audio Configure	DHCP	2		
 Video Encode Stream Publish 	IP Address	192.168.5.163		
RTP Multicast Video Parameters	Subnet Mask	255.255.255.0		
 Video OSD OSD Font Size 	Default Gateway	192.168.2.1		
 Video Out NetWork Configure Network Port 	MAC Address	00.07:36.05:08:0A		
Ethernet				
DNS System Configure SystAttr SysTime SysTime Update Default Peboot				

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



7.2 Static IP

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

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

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

7.3 DVIP

DVIP is a network configuration software tool designed for DVIP device search on the same network and configuring device network settings such as Hostname, DHCP mode, IP address, subnet mask, gateway IP, and primary and secondary DNS. Depending on your operating system, download DVIP Configuration Tool from the respective sites listed as follows:

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

Android:

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

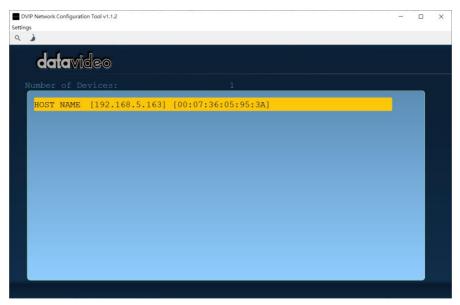
iOS: https://itunes.apple.com/tw/app/dvip-network-config/id1177895983?mt=8

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

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



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



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



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

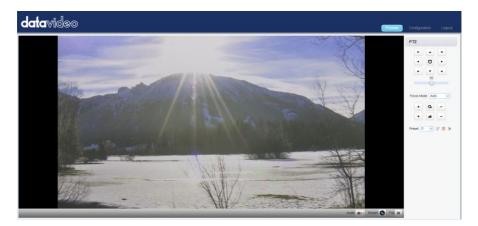
Host Name	HOST NAME
Model Name	PTC-140 (VID:0104, PID:3009)
MAC address	00:07:36:05:95:3A
IP address	192.168.5.163
Using Fixe	ed IP Mode
Mask	255.255.255.0
Gateway	0.0.0
Primary DNS	8.8.8.8
Secondary DNS	8.8.4.4
Def	ault Save

8. Web User Interface

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

8.1 Preview

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



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



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



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

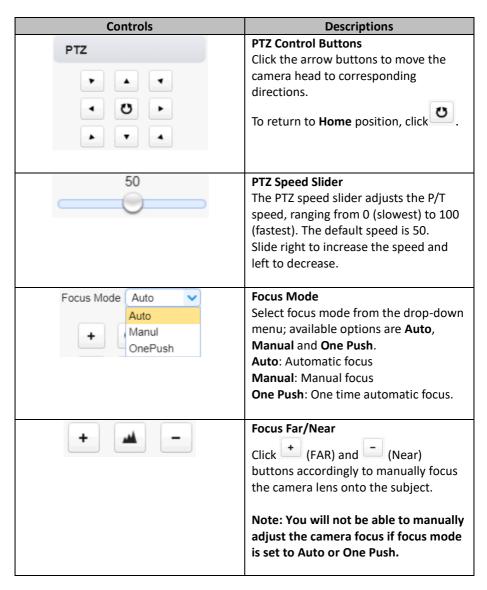


Click the "Full" button to switch to the full screen display mode.

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

Control Functions

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



Controls	Descriptions
+ 0	Zoom IN/OUT Click + to zoom in and - to zoom out.

Preset

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

Functions	Descriptions
Preset 0 244 245 246 247 248 249 250 251 252 253 254 ×	Preset Drop-Down Menu Select a preset number from the drop- down menu. Note: There are 255 presets ranging from 0 – 254.
	Set Button Click Set button to save PTZ settings to the selected preset number.
<u></u>	Delete Button Click Clear button to remove PTZ settings from the selected preset number.
	Run Button Click Run button to recall PTZ settings from the selected preset number.

Set the Preset

To set the preset, follow the steps outlined below.

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

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

Recall the Preset

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

8.2 Configuration

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

Audio Configure

Audio Configure allows you to configure the input audio source.

datavideo					
Configurations Audio Configure					
Audio Configure Signal Audio Configure	Enable				
 Video Encode Stream Publish 	Input Type	Line In 🗸	•		
 RTP Multicast Video Parameters 	Encode Type	AAC	•		
Video OSD OSD Font Size	Sample Rate	48000	•		
o Video Out	Sample Bits	16 🗸)		
 Network Configure Network Port 	Bit Rate	128Kbps 🗸	•		
 Ethernet DNS 	Channel	Mono	,		
 SRT System Configure 	Input Volume		2		
 SystAttr SysTime 		Save			
SysUser					
 Update Default 					
 Reboot 					

See the table below for descriptions of each item.

	Items	Descriptions			
	Enable 🕑	Enable Check this checkbox to enable audio settings.			
	ine In	Input Type This allows users to select the audio input type. It provides Line IN for the audio input type.			
Encode Type	AAC	Encode Type			
	MP3	Select an encode type for your input			
1	AAC	audio source. The available encode			
l,	G.711A	types include MP3, AAC and G.711A.			
Sample Rate	44100	Sample Rate			
	16000	Select a sample rate for your input			
	32000	audio source. The higher the sample			
	44100	rate, the better the audio quality.			
	48000				
Sample Bits	16	Sample Bits			
	16	Select the sample bits for your input			
		audio source. The default is 16.			
Bit Rate	64Kbps	Bit Rate			
	32Kbps	Select a bit rate for your input audio source. Available bit rates are:			
ę	48Kbps	• 32 Kbps			
	64Kbps	• 48 Kbps			
	96Kbps	• 64 Kbps			
	128Kbps	• 96 Kbps			
		• 128 Kbps			

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

Video Configure

Video Configure allows you to configure the input video source.

Video Encode

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

datavideo					
Configurations	Video Encode				
Audio Configure Ideo Configure	Stream	Main Stream		Sub Stream	
 Video Encode Stream Publish 	Compressed Format	H.264	~	H.264	~
 RTP Multicast Video Parameters 	Profile	MP	~	MP	~
Video OSD OSD Font Size	Image Size	1920*1080	~	320*180	~
 Video Out Network Configure 	Rate Control	CBR	~	CBR	~
Network Port Ethernet	Image Quality	Best	~) (Better	~
O DNS	Bit Rate(Kb/S)	4096		512	
 SRT System Configure 	Frame Rate(F/S)	25		25	
 SystAttr SysTime 	I Frame Interval	75		75	
 SysUser Update 	I Frame Min QP	20		20	
 Default Reboot 	Stream Name	live/av0		live/av1	
		Save			

See the table below for descriptions of each item.

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

Bit Rate(Kb/S)	4096	Bit Rate A bitrate is the amount of data required to encode a single second of video. From a streaming perspective, the higher the bitrate, the higher the quality, and the more bandwidth it will require. The default bit rate for the main stream is " 4096 Kb/s ." The default bit rate for the sub stream is " 512 Kb/s ."
Frame Rate(F/S)	25	Frame Rate Higher frame rate will result in smooth video viewing experience. The frame rate is 25 by default.
I Frame Interval	75	I Frame Interval A shorter I Frame Interval results higher quality video but consumes more network bandwidth. On the other hand if longer I Frame Interval is set, less bandwidth will be required but it will result in lower video quality. I frame interval is 75 by default.
I Frame Min QP	20	I Frame Min QP A low QP value means less compression but higher video quality. The default value is 20 .
Stream Name	live/ <u>av0</u>	Stream Name Enter a stream name for the main and sub stream.
	Save	Save Button Click the Save button to save the new video settings.

Stream Publish

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

datavide	0		
Configurations	Stream Publish		
Audio Configure	Stream	Main Stream	Sub Stream
 Video Encode Stream Publish 	Enable		
 RTP Multicast Video Parameters 	Protocol Type	SRT	RTMP
 Video OSD OSD Font Size 	Host Address	192.168.2.50	rtmp://192.168.5.11/live
 Video Out Network Configure 	Host Port	5000	1935
Network Port Ethernet DNS SRT	Stream Name	0c6ddf06	av1
System Configure SystAttr	Username	client63399	
 SysTime SysUser 	Password		
O Update	Password for stream encryption		
 Reboot 	Crypto key length in bytes	32 🗸	0
		Save	

See the table below for descriptions of each item.

Items	Descriptions
Enable 🕑	Enable Check this checkbox to enable RTMP stream.
Protocol Type SRT RTSP RTMP SRT	Protocol Type The three available streaming protocols are RTSP , RTMP and SRT .
Host Address rtmp://a.rtmp.youtube.com/live2	Host Address This is the RTMP/RTSP Server URL provided by video streaming service providers. An example of the RTMP Server URL is provided.

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

Notes:

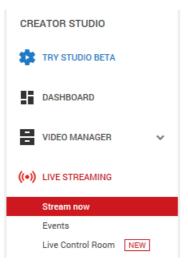
1. The SRT Caller and RTSP Publish modes can only function as the Main Stream encoder.

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

Stream to Youtube

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

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



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

ENCODER SETUP		
Server URL rtmp://a.rtmp.youtube.com/live2		
Stream name/key		
qwqd-5ejj-t73c-0y2g	Hide (6) Reset	
Anyone with this key can live stream on you	ur YouTube channel. Keep it secret.	

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

datavide	30		
Configurations	Stream Publish		
Audio Configure	Stream	Main Stream	Sub Stream
 Video Encode Stream Publish 	Enable		
RTP Multicast Video Parameters	Protocol Type	SRT	RTMP
 Video OSD OSD Font Size 	Host Address	192.168.2.50	rtmp://192.168.5.11/live
 Video Out Network Configure 	Host Port	5000	1935
 Network Port Ethernet DNS SRT 	Stream Name	Oc6ddf06	av1
System Configure SystAttr	Username	client63399	
 SysTime SysUser 	Password		
O Update	Password for stream encryption		
 Reboot 	Crypto key length in bytes	32	0
		ave Save	

- 6. Enter the Server URL and Stream Name/Key into Host Address and Stream Name respectively.
- 7. Check the **Enable** checkbox to enable RTMP stream.
- Click the Save button to save the RTMP settings and reboot (System Configure → Reboot) the camera to apply the new settings then you can start broadcasting your camera video on Youtube.

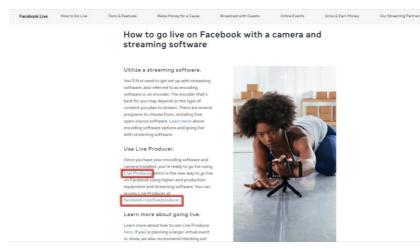
Stream to Facebook

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

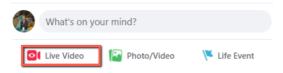
 Go to the "<u>How to go live on Facebook with a camera and streaming</u> <u>software</u>" website by clicking the link below or enter the link address into the address bar of your browser then hit the ENTER key. Link: <u>https://www.facebook.com/formedia/solutions/facebook-live</u>

Click "Live Producer" or "facebook.com/live/producer" on the page shown below to start the stream setup.

Note: Facebook Live limits each stream to 8 hours.



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



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

Q. Search Facebook	•	ĥ	1	28	<mark>.</mark>	6	۲		G	+ • •
Live	Stream Setup	Stream Health Polls	Questions	Help						
Go Live Now										
Schedule a Live Video			Get Sta	rted ow you want to				Use Paired		
Upcoming Live Videos & Events			start setti video.	ng up your live	Use Use	Stream Key	Use Camera	Concoder		
Post			Deing	pre-recorded in th	e description or thro	ugh graphics	from live content, and include . You can also share pre-recor streaming as a live video on F	is appropriate disclosures abou ded content on Facebook by acebook Live.		
Share to Your Timeline			Setup O	ptions			Stream Setup and paste these settings into			
B Only me • Uve video title (optional)			This can be n	stent Stream Key sused every time you st one live video at a sam key.	go live. You can time with your	Server			PY	
Say something about this live video			Use a Back Once a back	p stream is added to	your live video,	This m	ay be referred to as "URL" or "Add	ress" in your streaming software.		
2 9 😳			if you choose	emoved. It will not af not to use it.	nect your stream	Stream 1020	n Key 15813828062619?s bl=18s ps-	-18s psm-1i Copy Re	941	
			© Se	ttings			ou start to preview the broadcast y	-		
🔗 Gaming 🗸 🗸			Stream		~			Event Lo	gs	
			Viewing		Ý					•
Go Live										Waiting for live video

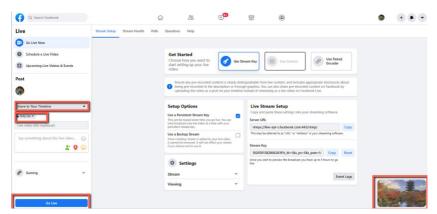
3. Open the PTC-140's web UI and click "Video Configure" → "Stream Publish"

datavide	80		
Configurations	Stream Publish		
 Audio Configure Oldeo Configure 	Stream	Main Stream	Sub Stream
 Video Encode Stream Publish 	Enable		
 RTP Multicast Video Parameters 	Protocol Type	SRT	RTMP
O Video OSD	Host Address	192.168.2.50	rtmp://192.168.5.11/live
Video Out Setwork Configure	Host Port	5000	1935
Network Conngare Network Port Ethernet DNS SRT	Stream Name	0c6ddf06	av1
 System Configure SystAttr 	Username	client63399	
 SysTime SysUser 	Password		
 Update Default 	Password for stream encryption		
o Reboot	Crypto key length in bytes	32	0
		ave Save	

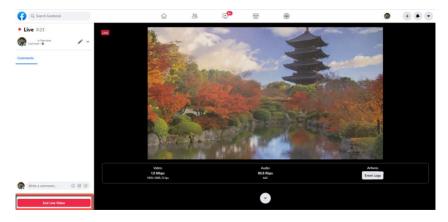
- 4. Enter the **Server URL** and **Stream Key** into **Host Address** and **Stream Name** respectively. Enter 443 into the "Host Port".
- 5. Check the **Enable** checkbox to enable RTMP stream.
- Click the Save button to save the RTMP settings and reboot ("System Configure" → "Reboot") the camera to apply the new settings.

Reb	poot
	Reboot

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



- 8. On the left of the page, first select where you want to stream your live camera video to then select your audience. Finally, enter the title of the live stream and click the **"Go Live**" button to start the stream.
- As soon as the live stream is started, you will be able to view the live camera video on the Facebook Live page. To end, simply click the "End Live Video" button.



Stream via RTSP to Wowza Streaming Cloud

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

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



2. Click "MY ACCOUNT" to log in to your Wowza account.



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

E-Mail Address,*			
kevinwang@datavideo.com.tw			
Password			
# ∂ Sign	l in-		
	Forgot My Password	Enhancem	nents to Apple Low-Latency HLS
		Experience the gue	lity, scalability, and flexibility of traditional HLS - but fas

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



PRODUCTS DEVELOPER SOLUTIONS PRICING RESOURCES SUPPORT

My Account

To change your password, request a password reset

 Info
 Payment Options
 Orders
 Support
 Products
 Wowza Cloud
 StreamLock

 Info
 (edit)

 Account Email: kevinwang@datavideo.com.tw

 Company: Datavideo

 Contact Information

 To change your email address or company name, please contact us.

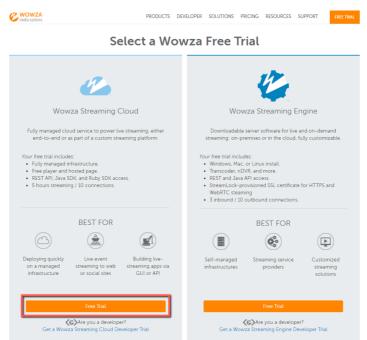
 First Name

 Kevin

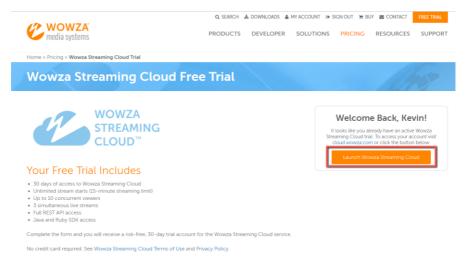
 Last Name

 Wang

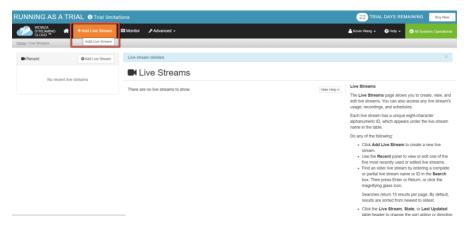
5. As shown below, click the Free Trial button of Wowza Streaming Cloud.



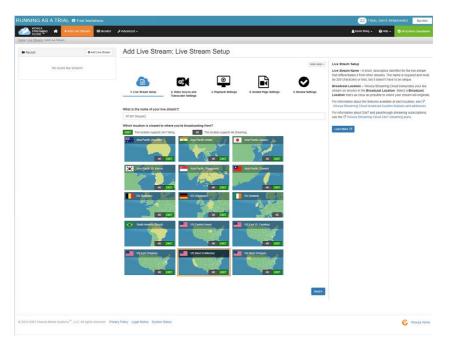
6. Click the "Launch Wowza Streaming Cloud" button.



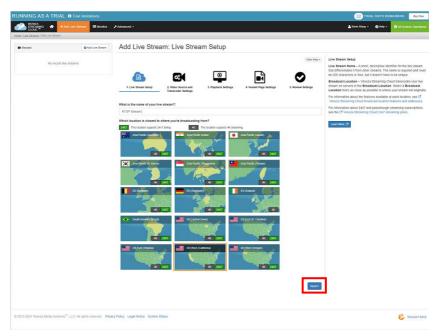
7. The UI of Wowza Streaming Cloud is shown in the diagram below. Click "Add Live Stream" to create a live stream channel.



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



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



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

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11. Configure your player on this page. Click "Next" after it's done.

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

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

		Ond Live Stream	Add Live Stream:	Review				
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				Hosted Page Title	RTSP Seven			
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				Hosted Page Description				
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14. Set up the RTSP encoder on the PTC-140.

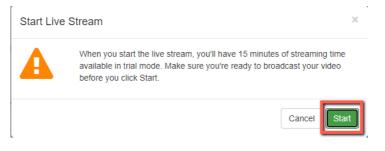
		Hide Help >	Configurations	Stream Publish		
VIDEO THUMBNAIL	STATISTICS		Audio Configure			
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To connect your video source, you must start the live	Inbound Bitrate: Actual		Video Encode	Enable		
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	Outbound Bitrate: Configured	6656.0 K3ps	RTP Multicast	Protocol Type	RTSP	
Start your live stream new	Frame Size	1280x720	Video Parameters			
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mary Server rtsp://Sed3a4.entrypoint	cloud wowza com/app-SM11XF5F		 SysTime 	Password	[
st Port 1995			SysUser			
			 Update 	Password for stream encryption	•••••	
ream Name 0c6ddt06			 Default 			
sable Authentication No			Reboot	Crypto key length in bytes	32	

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

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

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

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



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

	IAL Trial limitations				19 TRIAL DAYS REMAINING BUT NO
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RTSP Stream Updated: 18 January 2021 110 Mil Usage @Schedules @Ro		VIDEO THUMBNAIL	STATISTICS		The Video Thumbnail panel displays frames from the video when t stream is active (started). The frame updates every 5 seconds.
	lules 😸 Recordings	and the second se	Inbound: Connected	Yes	The Statistics panel displays health metrics when the stream is ac All of the metrics refresh every 10 seconds.
			Inbound Bitrate: Actual	4364.2 Kbps	
			Outbound Bitrate: Acteal	4325 Kbps	Note: If the live stream detail page loses focus, Wowza Streaming Cloud pauses the metric updates but resumes in
		Statistics of the second second	Outboard Bitrate: Configured	6698.0 K0ps	real-time when the page regains focus
		A BANAR	Trane Size	9 1200×720	
			France Rate	25 FPS	Hosted pages – Links to hosted pages are available depending or choices you made setting up your live stream.
		the second se	Keyframe Interval	0 75 00P	Hosted Page URL - The address of the Wowza Streaming
		North States	Total Unique Viewers	1	Cloud hosted webpage for the live stream, if you created on
		and the second se	Current Unique Viewers	1	You can give the Hosted Page URL to viewers so they can watch your live stream. Click Open to view the page, or go to
		 Started 18 January 2021 11:05 AM CST 			Hosted Page tab to edit its setup.
		Hosted Page URL	 WebRTC Publish Page – The address of the Viowza Stream Cloud hosted webpage for the source of the WebRTC live stream. The publish page automatically configures the settin. 		
		@ https://player.cloud.wowza.com/hosted/zbldsj6p/			
		Source Connection Information		required to start streaming right wary, and is only available f WebRTC. Click Open to view the page. • webRTC Playback Plage — The address of the Viovza Streaming Cloud hosted webpage for the playback of the WebRTC to the stream. You can give the WebRTC Playback URL. by events so the view and know WebRTC the stream	
		Pitmary Server rtsp.//9ed9a4.entrypoi	It cloud wowza com/app-5M11XFSF (35.201.209.222)		
		11.10.1			This are deale ages in anti-al alteria for the PTP. Old Au

SRT Streaming using the vMix Software

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

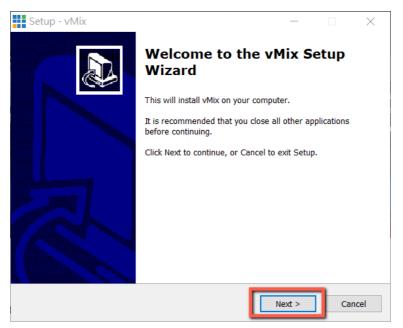
Install the vMix Software

Follow the steps outline below to install the vMix software.

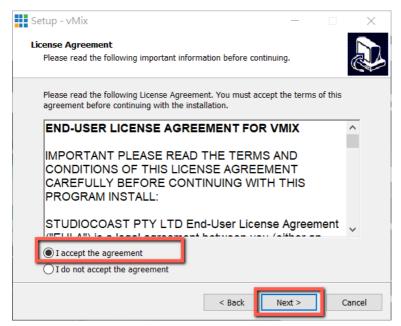
 Download the 60 day free trial version from the vMix official website to your PC or laptop.

v	Mix		vM ₩	atch Now LOG		
номе	SOFTWARE DOWNLOAD	PRODUCTS SOLUTIO	INS PURCHASE	PARTNERS FOR		<u>.</u>
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					ictions using vMix. 9 providers including	ŗ
	 • m	F L			NUTUbe Plus Many Morel	
	BUY NOW	COMPARISON TABLE	WATCH DEMO VID	DEO VIEW FEAT	UDES	
				ining Videos		

- vmix23 2. Double click the installer icon (vmix23.exe).
- 3. Click Next.



4. Accept the agreement then click Next.



5. Click Next.

Setup - vMix		_		\times
Select Destination Location Where should vMix be installed?				
Setup will install vMix into the follow	ing folder.			
To continue, click Next. If you would like to s	elect a different	folder, clic	k Browse.	
C:\Program Files (x86)\vMix			Browse	
At least 841.3 MB of free disk space is requir	ed.			
	< Back	Next >	Ca	ncel

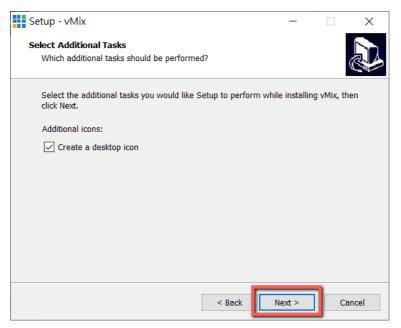
6. Click Next.

Setup - vMix			_		×
Select Start Menu Folde Where should Setup pla	er ace the program's shortc	uts?			
Setup will crea	te the program's shortcut	s in the fol	llowing Star	t Menu fold	ler.
To continue, click Next.	If you would like to selec	t a differer	nt folder, cli	ck Browse.	
VMix				Browse.	
	<	< Back	Next >		Cancel

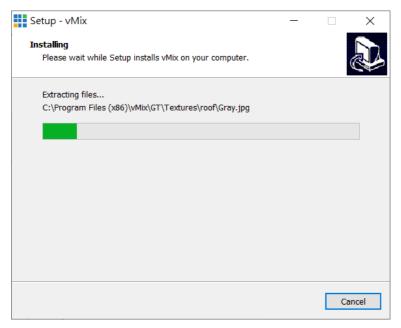
7. Click Next.

Setup - vMix	—		×
Select Additional Tasks Which additional tasks should be performed?			Ð
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Additional icons:			
✓ Create a desktop icon			
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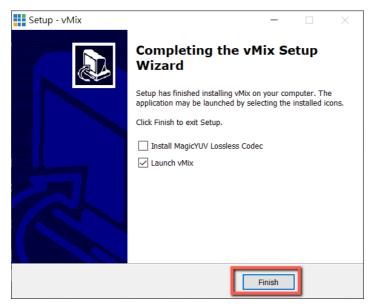
8. Click Next.



9. Installing



10. Click Finish to complete the setup.



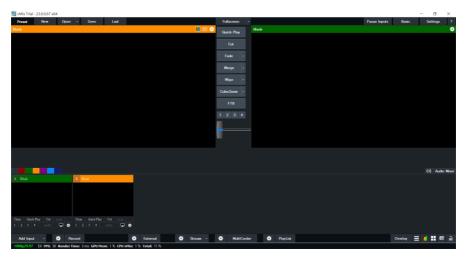
11. Remember to register for a fully functional 60 Day Trial with your e-mail address. After that, click OK.

vMix Registration					
vMix	Registration Internet access required to complete Registration				
◯ I have a Registration	n Key				
Кеу					
Visit http://www.vmix.com/ to purchase a Registration Key					
Visit	https://register.vmix.com/ to register for the FREE Basic Edition				
Register for a fully	functional 60 Day Trial				
Email Address	kevinwang@datavideo.com				
	OK Cancel				

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



13. The vMix software interface is shown below.



SRT Stream Setup using PTC-140 and vMix

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

PTC-140 set to the Listener Mode

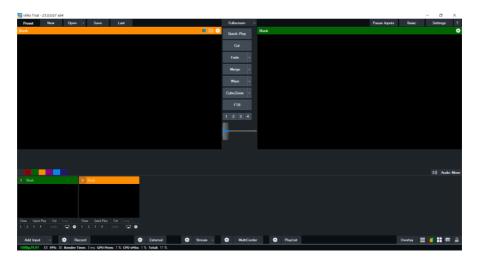
Open the web UI of the PTC-140 then click Network Configure \rightarrow SRT. Use the default SRT port (9000) then set the password of your SRT stream as well as the crypto key length. In this example, the crypto key length is set to 32 bytes and the password is "8888888888". click the **Save** button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

datavideo					
Configurations	SRT				
 Audio Configure Video Configure Video Encode 	Port SRT 9000 Password for stream encryption				
 Stream Publish RTP Multicast Video Parameters 	Crypto key length in bytes 32				
 Video OSD OSD Font Size 	SAVE				
 Video Out Network Configure Network Port 					
Ethernet DNS SRT					
 Ski System Configure SystAttr SysTime 					
 SysUser Update 					
 Default Reboot 					

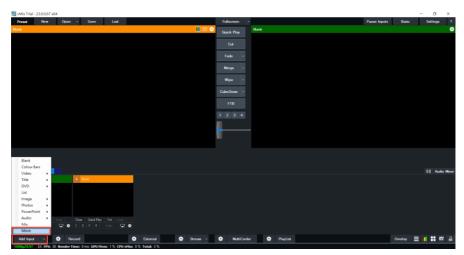
Reboot (System Configure \rightarrow Reboot) the camera to apply the new settings.

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

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



Click "Add Input" then "More".



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

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

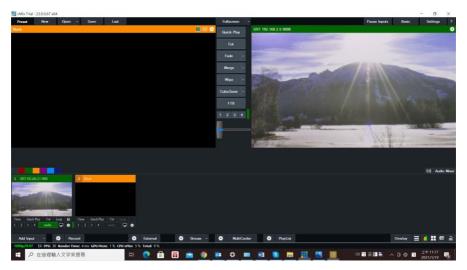
• Key length: 32 (The same length as the key length set previously on the PTC-140's Web UI)

ln	put Select						×
	∀ideo	Stream Type	SRT (Caller)			\sim	
0	DVD	Hostname	192.168.2.5	Port	9000		
D	List		200	Passphrase		Use Ha	ardware Decoder
	Camera	Decoder Delay (ms)	0	Key Length	32	\sim	
	NDI / Desktop Capture	Stream ID					
4 AN	Stream / SRT						
₽	Instant Replay						
	Image Sequence / Stinger						
Û	∛ideo Delay						
R	Image						
	Photos						
冝	PowerPoint						
	Colour						
Ŧ	Audio						
Ē	Audio Input						
Т	Title / XAML						
կլլՈլ	Flash						
	Virtual Set						Clear
	Web Browser						
(1	Video Call				Number 1 🗸	ОК	Cancel

Click the "OK" button.

	put Select							×
D	∀ideo	Stream Type	SRT (Caller)			~		
0	DAD	Hostname	192.168.2.5	Po	rt 9000			
D	List		200	Passphra			🗹 Use Hardware	Decoder
	Camera	Decoder Delay (ms)	0	Key Leng	h 32	~		
	NDI / Desktop Capture	Stream ID						
4	Stream / SRT							
R	Instant Replay							
	Image Sequence / Stinger							
Û	∜ideo Delay							
	Image							
	Photos							
亘	PowerPoint							
	Colour							
Ŧ	Audio							
Ţ	Audio Input							
Т	Title / XAML							
կլլՈլ	Flash							
•	∀irtual Set							Clear
	Web Browser				1 1			
(P	¥ideo Call				Number 1	~	ок	Cancel

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



PTC-140 set to the Caller Mode

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

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

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

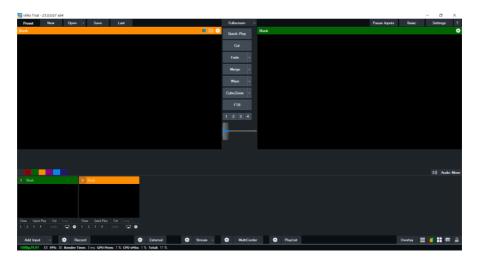
Click the **Save** button to save the SRT caller settings.

datavideo						
Configurations	Stream Publish					
Audio Configure Video Configure	Stream	Main Stream	Sub Stream			
 Video Encode Stream Publish 	Enable					
 RTP Multicast Video Parameters 	Protocol Type	SRT	RTMP			
Video OSD	Host Address	192.168.2.50	rtmp://192.168.5.11/live			
 OSD Font Size Video Out 	Host Port	5000	1935			
Government G	Stream Name	9f69c27b	av1			
System Configure SystAttr	Username	client63399				
SysTime SysUser	Password					
Update Default	Password for stream encryption					
 Default Reboot 	Crypto key length in bytes	32 🗸	0			
		Save				

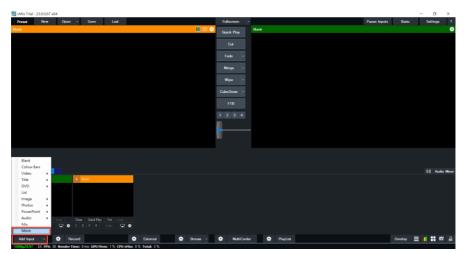
Reboot (System Configure \rightarrow Reboot) the camera to apply the new settings.

datavideo					
Configurations	Reboot				
 Audio Configure Video Configure Video Encode Stream Publish RTP Muticast Video OSD OSD Font Size Video OXD OSD Font Size Video Out Network Configure Network Port Ethernet DNS SRT System Configure Systatr Systare 	Reboot				
 Default Reboot 					

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



Click "Add Input" then "More".



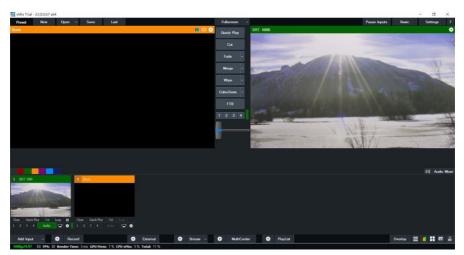
On the Input Select window, click "Stream/SRT" then select "SRT Listener" from the "Stream Type" drop-down menu. After that, enter the following into the respective fields.

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

Click the "OK" button.

In	put Select						×
	¥ideo	Stream Type	SRT (Listener)		~		
0	DAD			Port	9000		
D	List	Latency (ms)		Passphrase	888888888	🗹 Use Hardwar	e Decoder
	Camera	Decoder Delay (ms)	0	Key Length	32 ~		
Ţ	NDI / Desktop Capture	Stream ID					
the sta	Stream / SRT						
R	Instant Replay						
	Image Sequence / Stinger						
Ü	Video Delay						
	Image						
	Photos						
冝	PowerPoint						
	Colour						
Ŧ	Audio						
Ē	Audio Input						
Т	Title / XAML						
կլլՈլ	Flash						
•	∀irtual Set						Clear
	Web Browser						
R	Video Call				Number 1 🗸	ок	Cancel

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



RTP Multicast

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

	datavide	0		
	Configurations	RTP Multicast		
	Audio Configure	Stream	Main Stream	Sub Stream
l	 Video Encode Stream Publish 	Enable		
	 RTP Multicast Video Parameters 	Protol Type	RTP	RTP
	OSD Video OSD	Multicast Address	224.1.2.3	224.1.2.3
	 OSD Font Size Video Out 	Multicast Port	4000	4002
	Network Configure Network Port	Access Method	rtp://224.1.2.3:4000	rtp://224.1.2.3:4002
	 Ethernet DNS 		Save	
	o SRT			

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

- 1. Download VLC media player from the link <u>https://www.videolan.org</u>.
- 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.

🛓 Open Media		_		×	
🕞 File 📎 Disc 🚏 Network 🖽 Capture Device					
Network Protocol					
Please enter a network URL:					
rtp://224.1.2.3:4000			~	/	
rtp://vww.example.com/stream.avi rp://@:1234 mms://mms.examples.com/stream.asx rtp://@isver.examples.com/stream.asx rtp://iserver.examples.com/stream.asx rtp://iserver.examples.com/stream.asx rtp://iserver.examples.com/stream.asx rtp://iserver.examples.com/stream.asx rtp://iserver.examples.com/watch?v=gg64x					
Show more options					
	Play	•	Cano	el	

3. Click the "Play" button to start viewing the video stream.

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

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

RTP Multicast					
Stream	Main Stream	Sub Stream			
Enable					
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			
	Save				

- Open VLC media player, click "Media" → "Open Network Stream" then enter udp://@224.1.2.3:4000 to view the main stream and udp://@224.1.2.3:4002 to view the sub stream.
- 3. Click the "Play" button to start viewing the video stream.

Video Parameters

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

Focus

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

datavide	<u> 80</u>
Configurations Audio Configure Video Configure Video Encode Stream Publish RTP Multicast Video OSD Video OSD Video OSD Video Out Network Configure Network Port Ethernet DNS SRT System Configure Vistur	<section-header></section-header>
 SysTime SysUser Update Default Reboot 	Focus Exposure Color Image NR Style Style Focus Mode Auto Image Image Image Image Image AF-Zone All Image Image Image Image Image
	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).



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

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

Manual – Full iris, shutter speed and range control

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

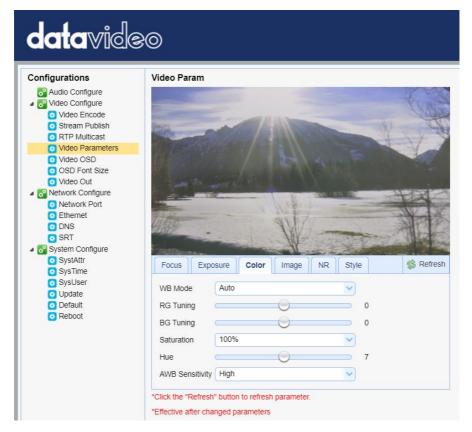
Aperture Automatic Exposure – The camera will measure light and automatically set the shutter speed based on the desired iris opening (aperture).

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

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

Color

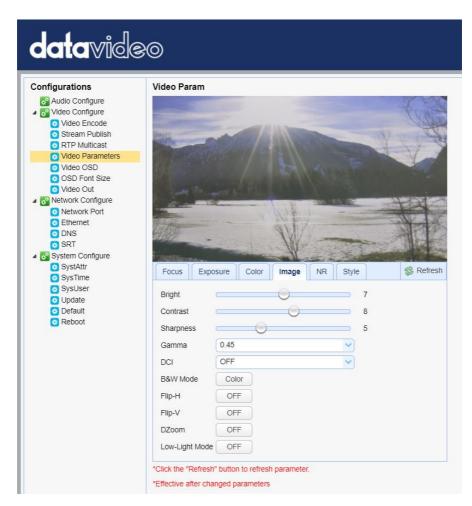
In **Color**, you are allowed to set color balance such as white balance, red gain fine tuning, blue gain fine tuning, saturation, hue and automatic white balance sensitivity. The color balance of your image will change the colors rendered in your image.



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

Image

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



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

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

NR

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

datavide	≥ 0
Configurations Audio Configure Video Configure Video Encode Stream Publish RTP Multicast Video Parameters Video OSD OSD Font Size Video Out Video Out Network Configure Network Port Ethernet DNS	
 SRT System Configure SystAttr 	Focus Exposure Color Image NR Style SRefresh
 SysTime SysUser Update Default Reboot 	NR-2D 1 Image Image Image NR-3D 5 Image Image Image Dynamic Hot Pixel OFF Image Image *Click the "Refresh" button to refresh parameter.

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

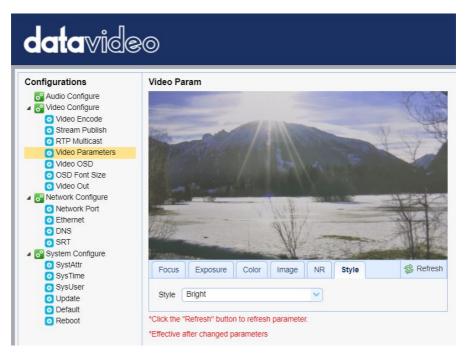
Note: By using both 2D and 3D noise reduction together, you can effectively enhance both moving and static imagery, which is ideal for most live broadcast environments.

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

Style

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

- Default
- Normal
- Clarity
- Bright
- Soft





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

Video OSD

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

data vide	<u>30</u>
Configurations Audio Configure Video Configure Video Configure Stream Publish RTP Multicast Video Parameters Video OSD OSD Font Size Video OSD OSD Font Size Video OU Stream Publish RTP Multicast Network Configure Stream System Configure Systattr Systattr SysTime SysUser Update Default Reboot	Video OSD Image: Show Time Show Time OSD Offset Time Font Color White Time Font Color White Title Font Color

Enable Video Time and Title on Screen

Show Time	
Show Title	

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

Set Font Color of Time and Title

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

- White
- Black
- Yellow
- Red
- Blue

Adjust Time and Title Positions



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

	~	
	Save	
A	Ouve	

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

OSD Font Size

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

dc	ntavide	0	
Config	urations	OSD Font Size	
	udio Configure deo Configure Video Encode Stream Publish RTP Multicast Video Parameters Video OSD OSD Font Size Video Out etwork Configure Network Port Ethernet DNS	According to the resolution Scale size automatically Master Stream OSD Font Size Slave Stream OSD Font Size	 48 48 48 save
0	SRT ystem Configure		

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
- 1080160
- 1080I50
- 720P60
- 720P50
- 1080P59.94
- 1080|59.94
- 720P59.94
- 1080P29.97

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

datavideo					
Configurations	Video Out				
 Audio Configure Video Configure Video Encode Stream Publish RTP Multicast Video Parameters Video OSD OSD Font Size Video Out Sketwork Configure Network Port Ethernet DNS SRT System Configure Systatr SysUme SysUser Update 	Video Out Format	1080P59.94			
 Default Reboot 		1080P29.97	Save		

Network Configure

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

Network Port

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

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

datavideo						
Configurations	Network Port					
 Audio Configure ✓ Video Configure 	Port Data	3000				
 Video Encode Stream Publish 	Port Web	80				
 RTP Multicast Video Parameters 	Port Onvif	2000				
 Video OSD OSD Font Size 	Port Soap	1936				
 Video Out Network Configure 	Port RTMP	1935				
Network Port	Port Rtsp	554				
 Ethernet DNS 	Port Visca	1259				
SRT System Configure	Port Https	443				
 SystAttr SysTime 	Port WebSocket	8088				
 SysUser Update 		Save				
 Default Reboot 						

Ethernet

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

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

datavideo					
Configurations	Ethernet				
 Section Configure ✓ Section Configure 	DHCP				
 Video Encode Stream Publish 	IP Address	192.168.2.5			
RTP Multicast Video Parameters	Subnet Mask	255.255.255.0			
 Video OSD OSD Font Size 	Default Gateway	192.168.2.1			
💿 Video Out	MAC Address	00:07:36:05:80:65			
Network Configure Network Port		Save			
Ethernet					
 SRT System Configure 					
SystAttr					
SysTime					
📀 SysUser					
O Update					
 Default Reboot 					

DNS

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

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

datavideo		
Configurations	DNS	
Audio Configure	Preferred DNS Server	8.8.8.8
O Video Encode	Alternative DNS Server	8.8.4.4
 Stream Publish RTP Multicast 		Save
 Video Parameters Video OSD 		
OSD Font Size		
Video Out		
Network Configure		
 Network Port Ethernet 		
O DNS		
O SRT		
a 💦 System Configure		

SRT

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

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

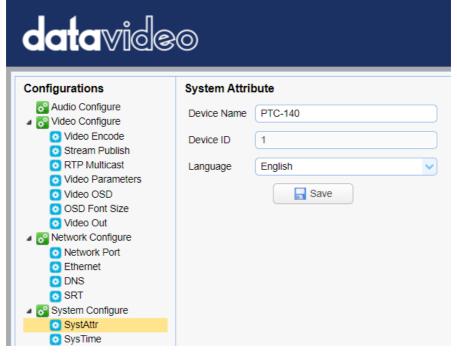
datavideo			
Configurations	SRT		
🐼 Audio Configure 🕢 😿 Video Configure	Port SRT	9000	
 Video Encode Stream Publish 	Password for stream encryption		
RTP Multicast Video Parameters	Crypto key length in bytes	32	
Video OSD OSD Font Size		SAVE	
👩 Video Out			
Network Configure Network Port			
Ethernet			
O DNS SRT			
System Configure SystAttr			

System Configure

System Configure allows you to configure your camera system.

System Attribute

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



System Time

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

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

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

datavide	<u>}</u> 0		
Configurations	System Time		
a Audio Configure Reg Video Configure	Date Format	YYYY-MM-DD	~
Video Encode	Date Sprtr	1	~
RTP Multicast	Zone	(GMT+08:00)Beijing, Hongkong, Sin	~
 Video Parameters Video OSD 	Hour Type	24 Hours	~
 OSD Font Size Video Out 	NTP Enable		
Network Configure Network Port	Update Interval	1 day	~
 Ethernet DNS 	Host Url	time.nist.gov	
SRT System Configure	Host Port	123	
 System comgure SystAttr SysTime 		Save	
o SysUser	Time Settings	;	
 Update Default 	Time Settings	Synchronize with computer time	~
Reboot	Computer Time	2021-01-22 10:21:23	
		Sync.	

System User

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

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

datavideo		
Configurations	User Set	
🔗 Audio Configure 🖌 💦 Video Configure	Authority	admin
 Video Encode Stream Publish 	User Name	admin
 RTP Multicast Video Parameters 	Password	
O Video OSD	Confirm Password	
 OSD Font Size Video Out 		Save
Network Configure		
Network Port		
 Ethernet DNS 		
O SRT		
System Configure		
SystAttr		
SysTime		
SysUser		

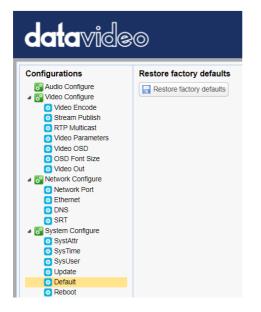
Update

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

datavideo		
Configurations	Release Upgra	de
 a Audio Configure ⊿ S Video Configure 	MCU Version	V2.5.8 2020-12-11
 Video Encode Stream Publish 	Camera Version	V2.6.7 2020-11-30
 RTP Multicast Video Parameters 	AF Version	V4.0.9 2020-9-5
 Video OSD OSD Font Size 	Update File	Select No File
 Video Out Network Configure 		Vpgrade
 Network Port Ethernet 		
0 DNS		
SRT System Configure		
 SystAttr SysTime 		
 Systime SysUser 		
💽 Update		

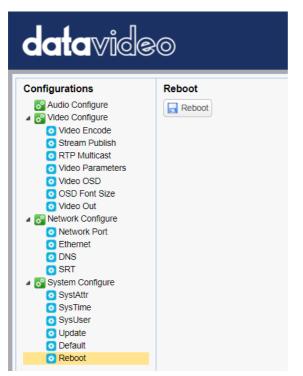
Default

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



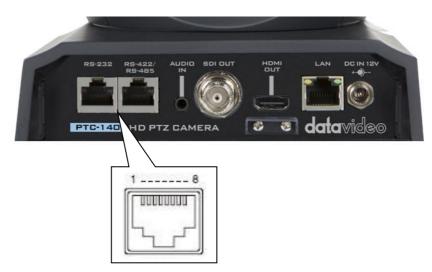
Reboot

Click "Reboot" to reboot the device.



9. Remote Control Port Pinouts

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



Remote Control Port

The RS-232 pinout is described below.

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

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

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

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

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

10. Firmware Update

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

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

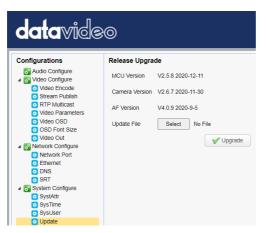
The existing settings should persist through the *firmware upgrade process,* which should not be interrupted once started as this could result in a non-responsive unit.

Requirements

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

Procedure

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



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

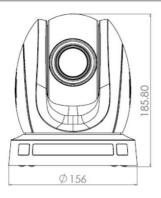
11. Frequently-Asked Questions

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

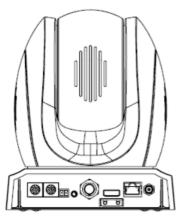
No.	Problems	Solutions
1.	What are important points of product maintenance?	 If the camera will not be used for a long time, please unplug the 12V DC power plug, and remove AC power adapter from AC outlet. Use soft cloth or tissue to clean the camera. After washing the camera lens, dry it with a soft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

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

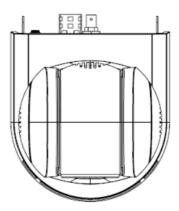
12. Dimensions











13. Specifications

	Camera Parameters
	1080p 60/59.94/50/30/29.97/25
Video Format	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	Pan: 340°
Range	Tilt: +90° to -30°
Panning / Tilting Speed	Pan: 0.1~60°/sec Tilt: 0.1~30°/sec
Preset	255 Positions
Focal Length	f=5.2 (wide) to 98 (tele) mm F1.6 to F3.5
Field of View (Horizontal, Wide)	Approx. 54.7° (WIDE END) / 3.3° (TELE END)
Image Compensation	Backlight Compensation

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

Service & Support

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

Please visit our website for latest manual update.

www.datavideo.com/product/PTC-140





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