

4K PTZ CAMERA

PTC-300

Instruction Manual

www.datavideo.com

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Disclaimer of Product and Services

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

FCC Compliance Statement

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

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warnings and Precautions

- 1. Read all of these warnings and save them for later reference.
- 2. Follow all warnings and instructions marked on this unit.
- 3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- 4. Do not use this unit in or near water.
- 5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
- 6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
- 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.
- 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.

1. Product Overview

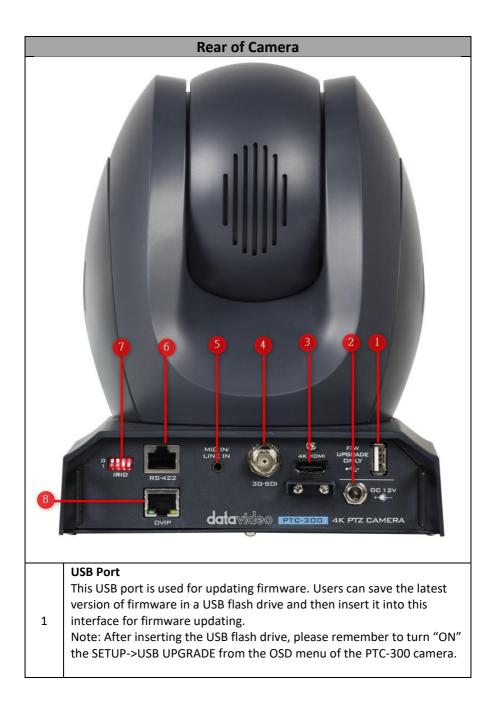
The PTC-300 series features a large 1/1.8" CMOS sensor, supports highquality 2160p50/60 UHD video output, features 20x optical zoom, 16x digital zooms and supports versatile outputs, including 3G-SDI, HDMI, IP stream, NDI (PTC-300 NDI). The PTC-300 series is the ideal choice for taking your remote camera production to the next level.

Features

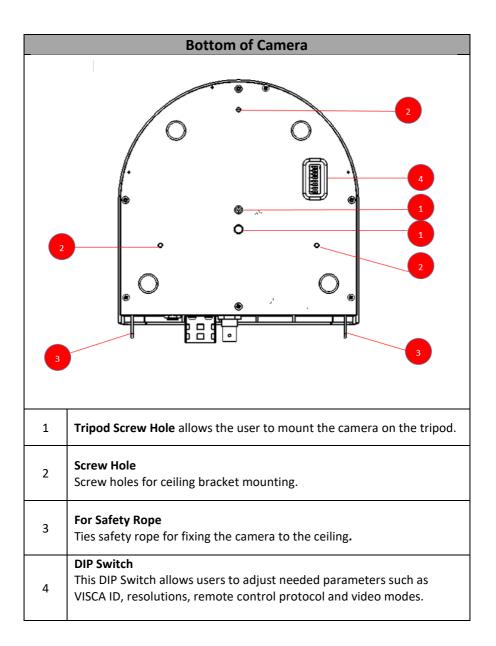
- PTZ Camera for Supporting 2160p50/59.94/60 Resolutions.
- Supports 20x Optical Zoom and 16x Digital Zoom.
- Supports 4K Video Output Interfaces including HDMI and IP (H.264 & H.265).
- Supports 2160p and 1080p (3G-SDI) Simultaneous video output.
- Supports RS-422 Serial Port Control.
- Supports External Audio Input interface: Audio In/Line In (switchable on the web UI).
- Provides Friendly Web UI.

2. Location and Function of Parts

| | Front of Camera | | | | |
|---|--|--|--|--|--|
| | | | | | |
| 1 | Lens Built-in 1/1.8" 8.51M Pixel CMOS 4K color camera with white balance control, backlight compensation, automatic gain and etc. | | | | |
| 2 | Tally LED Tally lamp will be turned ON upon receiving the ON signal. | | | | |
| 3 | Sensor for Remote Control Remote control IR receiver | | | | |



| 2 | Power Input DC in socket connects the supplied 12V PSU. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket. |
|---|---|
| 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 | MIC IN/LINE IN The 3.5mm audio input receives external audio. |
| 6 | RS-422 Interface (RJ-45) The RS-422 interface serves to connect external RS-422 devices. Use an Ethernet cable to connect external RS-422 controllers. See <u>"Section 15</u> <u>Remote Control Port Pinouts"</u> for making the cable for the RS-422 interface. Note: If users want to switch between the RS-422 and DVIP communication protocols, please use the No.4 pin of the DIP Switch which is located at the bottom of the PTC-300. Please switch this pin to "ON" for operating in DVIP mode. If this pin is switched to "OFF", it will operate in "RS-422" mode. |
| 7 | IRID Interface This interface allows users to use the DVIP Switch to control the numbering of the camera on the remote controller. Users can use this interface to set the camera to any number from No.1 to No. 4 in order to use remote controller to control the camera. |
| 8 | DVIP Interface The DVIP interface allows users to control the PTC-300 camera by |



3. Basic Setup

3.1 Power-On Initialization

As shown in the diagram below, after you plug in the power cord, the tally light in the front will start flashing red and will be OFF as soon as the poweron 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 **DVIP port**, **HDMI OUT** and **3G-SDI OUT**.

DVIP Port



Please follow following steps for viewing the camera video from the web UI.

• Connect the PTC-300 camera directly to your PC/Notebook PC

- 1. Connect the PTC-300 to your PC or laptop by an Ethernet Cable.
- 2. Open the web UI by the connected PC or laptop and then please enter the default IP address into the address bar of the web browser.

Note: The default static IP address of the PTC-300 is 192.168.100.88.

3. The login page of the web UI will be opened, please enter the user name and password (the default user name and password are admin/admin).

4. Open the preview window for previewing the video which is shot by the camera.

• Connect the PTC-300 camera to your PC or laptop by a router.

1. Please set the Ethernet IP address of your PC or laptop as 192.168.100.x(x means 0-255) and it will be at the same local area network as the PTC-300.

2. Please use an RJ-45 Ethernet cable to connect from the DVIP port on the rear panel of the PTC-300 to the LAN port of a router. And then please use another RJ-45 Ethernet cable to connect from the RJ-45 Ethernet port of your PC or laptop to the LAN port of the same router.

3. Please open the web UI from the connected PC or laptop and then please enter the default IP address of the camera into the address bar of the web browser.

Note: The default static IP address of the PTC-300 is 192.168.100.88.

4. The login page of the web UI will be opened, please enter the user name and password (the default user name and password are admin/admin).

5. 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.

10 C MIC IN/ IRID R5-422 datavideo PTC-300 4K PTZ CAMERA DVIP

3G-SDI Video Output

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

4. Remote Control and On-Screen Menu

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

4.1 Remote Control Functions



| No | Function Keys | Descriptions | | |
|--------|--|--|--|--|
| 1 | Standby Key | Standby Key Press this button once to enter Standby Mode, press it again to enter Normal Mode. Note: The power consumption in Standby Mode is approximately half of the power consumption in Normal Mode. | | |
| 2 | Number Keypad STD REV 1 2 3 4 5 6 7 8 9 0 | Number Keypad Set, recall and clear presets using the number keypad. Set Preset At first, please press PRESET, and then please press any of the 0~9 number key to save the PTZ position. Call Preset Press any of the number key to recall the PTZ position which is saved by the Preset function. Note: Make sure the preset that you want to recall contains PTZ settings before pressing the number key. Clear Preset • At first, please press the RESET button and then please press any number key to delete the PTZ position which is saved in corresponding Preset No. • Moreover, users can press [*] + [#] + [RESET] to delete all PTZ positions which are saved in all Preset numbers at one time. | | |
| 3 & 11 | Asterisk and Pound Keys | The asterisk and pound keys form various combinations with other keys to access certain functions directly. (1) [*] + [#] + [1] : Set OSD MENU language to English. (2) [*] + [#] + [3] : Set OSD MENU language to Chinese. (3) [*] + [#] + [4] : Show current IP address. | | |

| No | Function Keys | Descriptions |
|----|--|---|
| | | (4) [*] + [#] + [6] : Restore default value rapidly. (5) [*] + [#] + [8] : Check camera version. (6) [*] + [#] + [9] : Set upside down setting rapidly. (7) [*] + [#] + [MANUAL] : Restore default IP address. |
| 4 | PRESET Button | Set Preset Position Press PRESET to set presets. See Number Keypad description for instructions. |
| 5 | Home Key HOME | 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. |
| 6 | Return Key | Return Key Press this key to return to last level of the OSD menu. |
| 7 | Zoom in Slowly(SLOW+)/ Zoom out Slowly(SLOW-) | Zoom in Slowly(SLOW+)/Zoom out Slowly(SLOW-) Press this key to zoom in the camera lens slowly(SLOW+) or to zoom out the camera lens slowly(SLOW-)。 |

| No | Function Keys | Descriptions |
|----|---|---|
| | Zoom in Fastly(FAST+)/ Zoom out Fastly(FAST-) | Zoom in Fastly(Fast+)/ Zoom out Fastly(Fast-) Press this key to zoom in the camera lens fastly(FAST+) or to zoom out the camera lens fastly(FAST-)。 |
| 8 | L/R SET Key | Left/Right Setting Key Press this L/R SET key and combine this key with the number key 1 and number key 2 to set the panning-tilting directions of the camera lens. Press the L/R SET plus number key 1 (STD) simultaneously to set the panning direction to be the same as the left/right direction setting in the OSD menu. Press the L/R SET plus number key 2 (REV) simultaneously to set the panning direction to opposite direction compared to the left/right direction setting in the OSD menu. |
| 9 | Focus Keys AUTO FAR NEAR MANUAL FOCUS | Focus Keys Those keys are used for Focus adjusting. Press the AUTO key to focus the focus to the center of the object. Press the MANUAL key to focus the focus to the center of the object manually. Press the MANUAL key and then use the FAR button (Focus to FAR) or the NEAR button (Focus to NEAR) to adjust the focal length manually. |
| 10 | CAMERA SELECT | Camera Selection Keys Users can use the F1-F4 keys to assign the ID number to camera among the multi-camera scene. After that, please switch between the four cameras by using the Camera Select keys. Note: Please refer to F1-F4 keys section for showing how to assign the camera ID number. |

| No | Function Keys | Descriptions |
|----|---------------------------------------|--|
| 12 | RESET Button | Clear Preset Press RESET and corresponding 0-9 Number keys to clear preset. Please see Number Keypad description for instructions. |
| 13 | PTZ Control Keys | PTZ Control Keys Press the arrow buttons for panning and tilting operations. Press the Home key for turning the camera lens from the back side to the front side. |
| 14 | | MENU Press this key for entering or exiting the OSD menu. |
| 15 | Backlight BACKLIGHT | Backlight BLC ON/OFF: Press this key for turning on the backlight compensation function, press this key again for turning off the backlight compensation function. |
| 16 | PTZ Reset Button P/T RST | PTZ Reset Button Press this key and then the camera will do the default self- testing. |
| 17 | Image Freezing button F4 ►II | Image Freezing Button Press this key once and then no matter how the camera head is moved, the camera image will be frozen on current image. Press this button again will unfreeze the image. |

4.2 OSD 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.

| OSD Menu | |
|---------------------|--|
| Exposure | |
| Color | |
| Image | |
| P/T/Z | |
| Noise Reduction | |
| Setup | |
| Communication Setup | |
| Information | |
| Restore Default | |
| 【Home】 Enter | |
| 【Menu】 Exit | |

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

| | Main Options | | | | | | |
|------------|-----------------|------------|--------------|-------------------|--------------------|------------------|-------------------------|
| | Exposure | Color | Image | P/T/Z | Noise Reduction | Setup | Communicati on Setup |
| | Mode | WB Mode | Luminance | SpeedByZoo m | NR2D-Level | Language | Protocol |
| | ExpComp Mode | RG | Contrast | AF-Zone | NR3D-Level | HDMI RGB Mode | V_Address |
| | Backlight | BG | Sharpness | AF-Sense | | Video Format | V_AddrFix |
| ns | Gain Limit | Saturation | Flip-H | L/R Set | | Audio Select | Net Mode |
| Sub-Option | Anti-Flicker | Hue | Flip-V | Display Info | | SDI-3G Mode | Baudrate |
| | Meter | AWB Sens | B&W- Mode | Image Freeze | | USB UPGRADE | |
| | DRC | | Gamma | Digital Zoom | | VISCA ID | |
| | | | Style | Pre Speed | | Audio Channel | |
| | | | | Pre Zoom Speed | | | |

| | Information | Restore Default |
|-------------|-------------|--------------------|
| | ARM | Restore? Yes/No |
| | SOC | |
| | Model | |
| | Date | |
| JS | AF | |
| Sub-Options | Format | |
| -di | Lens | |
| Su | IP | |
| | GateWay | |
| | NetMask | |
| | CTRL SRC | |

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

| Main Menu | Sub Menu | Options | Options |
|-----------|--------------|----------|---------|
| | | Auto | |
| | | Manual | |
| | | SAE | |
| | | AAE | |
| | Mode | | |
| | | | |
| | | Bright | |
| | | | |
| | | | |
| | | Off | |
| | ExpCompMode | On | ExpComp |
| | | | -7~+7 |
| | Backlight | Off | |
| | Bucklight | On | |
| | | 0 | _ |
| | | 1 | |
| | | 2 | |
| | | 3 | |
| | Gain Limit | 4 | |
| | | 5 | _ |
| | | 6 | _ |
| | | 7 | _ |
| _ | | 8 | _ |
| Exposure | | 9 | _ |
| | | 10 | _ |
| | | 11 | _ |
| | | 12 | _ |
| | | 13 | _ |
| | | 14 | _ |
| | | 15 | _ |
| | | 16 | _ |
| | | 17 18 | |
| | | 19 | - |
| | | 20 | - |
| | | 20 | - |
| | | 22 | - |
| | <u> </u> | Off | - |
| | Anti-Flicker | 50Hz | - |
| | | 60Hz | 1 |
| | | Average | |
| | | Center | |
| | Meter | Smart | |
| | | Тор | |
| | | 0 | |
| | DRC | 1 | 1 |
| | | 2 | 1 |

| I | 3 |
|---------|---------|
| | 4 |
| | 5 |
| | 6 |
| | 7 |
| | 8 |
| | F1.8 |
| | F2.0 |
| | F2.4 |
| | F2.8 |
| | F3.4 |
| | F4.0 |
| Iris | F4.8 |
| 1115 | F5.6 |
| | F6.8 |
| | F8.0 |
| | |
| | F9.6 |
| | F11.0 |
| | Close |
| | 1/30 |
| | 1/60 |
| | 1/90 |
| | 1/100 |
| | 1/125 |
| | 1/180 |
| | 1/250 |
| | 1/350 |
| Shutter | 1/500 |
| | 1/725 |
| | 1/1000 |
| | 1/1500 |
| | 1/2000 |
| | 1/3000 |
| | 1/4000 |
| | 1/6000 |
| | 1/10000 |
| | 0 |
| | 1 |
| | 2 |
| | 3 |
| | 4 |
| | 5 |
| | 6 |
| Gain | 7 |
| | 8 |
| | 9 |
| | 10 |
| | 11 |
| | 12 |
| | 13 |
| | 14 |
| • | |

| 1 | I | | 1 1 |
|-------|-----------|---------|-----|
| | | 15 | |
| | | 16 | |
| | | 17 | |
| | | 18 | |
| | | 19 | |
| | | 20 | |
| | | 21 | |
| | | 22 | |
| | | 0 | |
| | | 1 | |
| | | 2 | |
| | | 3 | |
| | | | |
| | | 4 | |
| | | 5 | |
| | | 6 | |
| | | 7 | |
| | Pright | 8 | |
| | Bright | 9 | |
| | | 10 | |
| | | 11 | |
| | | 12 | |
| | | 13 | |
| | | 14 | |
| | | | |
| | | 15 | |
| | | 16 | |
| | | 17 | |
| | | Auto | |
| | | Indoor | |
| | WB Mode | Outdoor | |
| | WB MODE | OnePush | |
| | | Manual | |
| | | VAR | |
| | | 0 | |
| | | +1 | |
| | | +2 | |
| | | +3 | |
| | | +3 +4 | |
| | PC Tuning | | |
| 6.1 | RG Tuning | +5 | |
| Color | | +6 | |
| | | +7 | |
| | | +8 | |
| | | +9 | |
| | | +10 | |
| | | 0 | |
| | | +1 | |
| | | +2 | |
| | | +3 | |
| | BG Tuning | +4 | |
| | | +5 | |
| | | | |
| | | +6 | |
| I | I | +7 | J I |
| | 26 | | |

| I | +8 |
|------------|----------------|
| | +9 |
| | +10 |
| | |
| | 60% |
| | 70% |
| | 80% |
| | 90% |
| | 100% |
| | 110% |
| | 120% |
| Saturation | 130% |
| | 140% |
| | 150% |
| | 160% |
| | 170% |
| | 180% |
| | 190% |
| | 200% |
| | 0 |
| | 1 |
| | 2 |
| | |
| | 3 |
| | 4 |
| | 5 |
| | 6 |
| Hue | 7 |
| | 8 |
| | 9 |
| | 10 |
| | 11 |
| | 12 |
| | 13 |
| | 14 |
| | High |
| AWB Sens | Middle |
| | Low |
| | 0 |
| RG | 0~255 |
| BG | 0~255 |
| | 2500K |
| | 2600K |
| | 2700K |
| | 2800K |
| | 2900K |
| Color Temp | 3000K |
| | 3100K |
| | 3200K |
| | 3200K 3300K |
| | |
| | 3400K |
| l | 3500K |

| 3600k 3700k 3800k 3900k 3900k 4000k 4100k 4200k 4200k 4200k 4200k 4200k 4200k 4200k 4200k 4200k 4300k 5200k 5200k 5200k 5200k 5200k 5200k 5200k 5200k 5200k 6200k 6300k 7000k 7300k 7400k </th <th>1</th> <th>l</th> <th></th> <th></th> | 1 | l | | |
|---|-------|-----------|-------|--|
| 3800K 3900K 4000K 4100K 4200K 4300K 4400K 4500K 4400K 4500K 4400K 4500K 4400K 4500K 4400K 4500K 4400K 4500K 4900K 5000K 5100K 5200K 5300K 5500K 5600K 5500K 5600K 5000K 6300K 6400K 5500K 6600K 6100K 6200K 6300K 6600K 6700K 7100K 7200K 7300K 7400K 7500K 7600K 7700K 7800K 7900K 8000K 1 2 | | | 3600K | |
| 3900K 4000K 4200K 4300K 4400K 4500K 5000K 5100K 5500K 5500K 5500K 5500K 5600K 5700K 5800K 5900K 6000K 6100K 6200K 6500K 6500K 6500K 6500K 6700K 6900K 7000K 7200K 7200K 7200K 7200K 7200K 7800K 7900K 8000K 1 2 | | | | |
| 4000K 4100K 4200K 4300K 4400K 4500K 5000K 5100K 5200K 5300K 5500K 5500K 5500K 5500K 5500K 6000K 6000K 6000K 6000K 6000K 6000K 6000K 6000K 6000K 6900K 7000K 7200K 7500K 7600K 7700K 7800K 7900K 8000K 1 2 3 4 </th <th></th> <td></td> <td></td> <td></td> | | | | |
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| | On | |
| Flip-V | Off | |
| • | On | |
| B&W-Mode | Off | |
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| | EXT | |
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| | | PC | |
| | SpeedByZoom | Off | - |
| | 0000000 | On | |
| | | Front | |
| | AF-Zone | Тор | |
| | Al-2011e | Center | |
| | | Bottom | |
| | | High | |
| | AF-Sense | Low | |
| | | Normal | |
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| | L/R Set | REV | |
| | | Off | 1 |
| | Display Info | On | - |
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| | Image Freeze | Off | |
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| | | 2x | |
| | Digital Zoom | 4x | |
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| P/T/Z | | 2 | |
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| | NR2D-Level | 2 | |
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| | | Auto | |
| Noise Reduction | | Off | |
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| | NR3D-Level | 4 | |
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| | HDMI RGB Mode | HDMI | |
| | | DVI | |
| | | 1080P25 | |
| | | 720P50 | |
| | | 1080P60 | |
| | | 1080P50 | |
| | | 1080160 | |
| | | 1080150 | |
| Satur | | 1080P30 | |
| Setup | | 720P60 | |
| | | 1080P29.97 | |
| | Video Format | 1080159.94 | |
| | | 1080P59.94 | |
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| | | 720P59.94 | |
| | | 4KP29.97 | |
| | | 4KP59.94 | |
| | | 4KP25 | |
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| | | 4KP50 | |
| | | 4KP60 | |
| | Audio Select | MIC | |
| | | LINE IN | |
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| Í. | | LEVEL-A | |
|-----------------|---------------|---------|--|
| | SDI-3G Mode | LEVEL-A | |
| | USB UPGRADE | Off | |
| | | On | |
| | | By DIP | |
| | VISCA ID | By OSD | |
| | | Stereo | |
| | Audio Channel | Mono | |
| | | | |
| | | VISCA | |
| | Protocol | PELCO-D | |
| | | PELCO-P | |
| | | Auto | |
| | V_Address | 7 | |
| Communication | V_AddrFix | Off | |
| Setup | | On | |
| | Net Mode | Serial | |
| | | Paral | |
| | | 38400 | |
| | Baudrate | 2400 | |
| | | 4800 | |
| | | 9600 | |
| | ARM | | |
| | SOC | | |
| | Model | | |
| | Date | | |
| | AF | | |
| Information | Format | | |
| | Lens | | |
| | IP | | |
| | GateWay | | |
| | NetMask | | |
| | CTRL SRC | 7 | |
| Restore Default | Restore? | | |

4.3 Professional Jargon Explanations of the OSD Menu

There are some professional jargons or nouns which are shown in the OSD menu of the PTC-300 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 zoomin/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.
- 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.
- L/R Set: If the "REV" is selected for this option, the panning direction of the PTC-300 camera lens will be opposite to the direction which is controlled by the remote controller. If the "STD" is selected for this option, the panning direction of the camera lens will be the same as the direction which is selected by the remote controller.

5. Instruction for installation

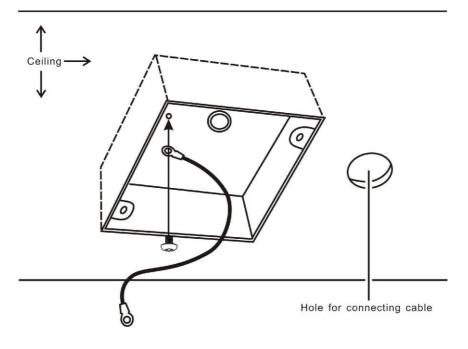
Note: Only mount the bracket on formwork or concrete surface. Do NOT mount the bracket on plasterboard.

Step 1 – DIP Switch Setting

Set the Mirror option to H+V mode.

Step 2 – One End of Retaining Wire

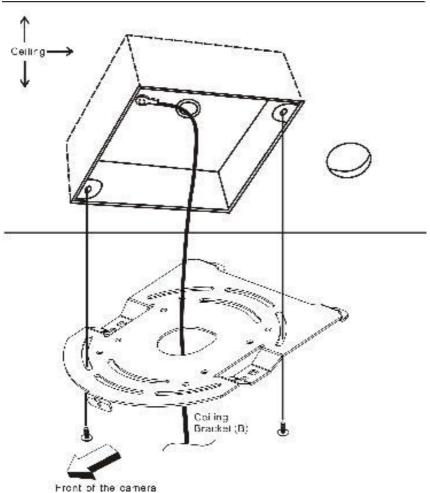
Attach the retaining wire to the junction box mounted on the ceiling by screwing one end of the retaining wire into a screw hole in the junction box with a screw (not supplied) as shown in the diagram below.



Step 3 – Ceiling Bracket (B)

Again, as illustrated in the diagram below, screw a ceiling bracket (B) into the junction box mounted on the ceiling.

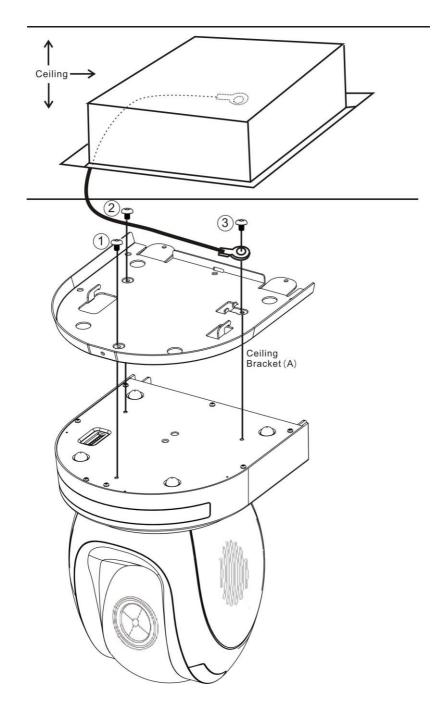
Make sure the screw holes of the ceiling bracket (B) are aligned with the holes on the junction box.



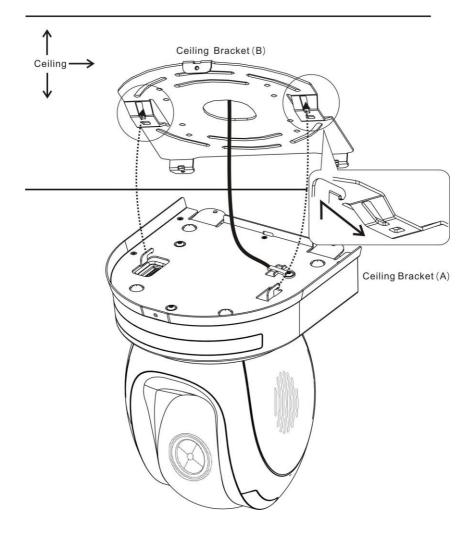
or the cartera

Step 4 – Ceiling Bracket (A) and Camera

- Screw ceiling bracket (A) into the bottom of the camera using three screws.
- Position the screws as shown in the diagram below.
- Align the screw holes on the bottom of the camera with those in the ceiling bracket.
- Insert the screws into the corresponding screw holes in the numbered order.
- The other end of the retaining wire is screwed into the screw hole #3.
- Securely tighten all three screws.

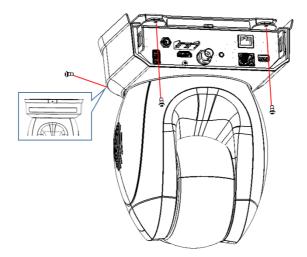






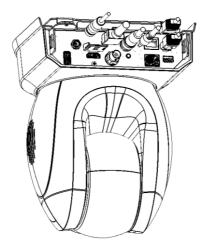
Step 6 – Screw to Fix Camera

Fix the camera by screwing three screws into the corresponding screw holes as shown in the diagram below.



Step 7 – Cable Connection

Connect the cables to the connectors located on the rear of the camera.

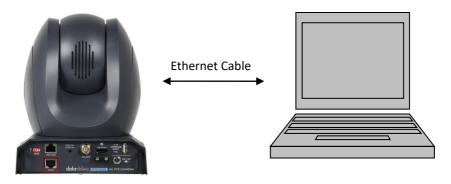


6. Network Connection

The Ethernet port on the back panel of your PTC-300 allows you to connect to camera from the PC/Laptop with Static or dynamic IP addresses. To access and modify these network settings, you will need to login to the camera's web interface.

If this is your first time using the device, please note that the camera's default IP address is **192.168.100.88**.

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 **192.168.100.X** to your PC/laptop.



192.168.100.88

On your PC/laptop, open a web browser and in the address bar, enter the camera's default IP address, 192.168.100.88 then press the **ENTER** key which should take you to login page of the web interface.

| datavideo | | |
|-----------|-------|--|
| username | admin | |
| password | | |
| Login | | |

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The default login credentials are:

- User Name: admin
- Password: admin

After users login into the web user interface successfully, please click the "Network" option and then please click the "IP Configuration Type" dropdown menu from the "Lan Settings" area to modify the connection type of the camera to DHCP or Fixed IP. If the "Fixed IP Address" is selected, it will be set in fixed IP mode. If the "Dynamic IP Address" is selected, it will be set in DHCP mode. After the setting is finished, please click the "Apply" button for completing the setting.



In following two chapters, we will show you how to enable DHCP and Static IP modes in two separate sections.

6.1 DHCP Mode

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



In order to enable the DHCP mode of the camera, please select "Dynamic IP Address" from the "IP Configuration Type" drop-down menu for assigning a dynamic IP address to PTC-300 by the router. After that, please click the "**Apply**" button to save the new settings and then please reboot the PTC-300.

| data video | Lan Settings IP Configuration Type: IP Address: | Dynamic IP Address |
|---|--|--|
| Live Video Image Audio System | Subnet Mask: Gateway: DNS Address: MAC Address: | 255.255.0 192.168.100.1 192.168.2.1 D4 : E0 : 8E : AB : 18 : 06 Apply Cancel |
| Network Information | Port Settings HTTP Port number: | 80 (80) |

6.2 Static IP

A static IP address is a fixed address manually assigned to PTC-300. First please select "Fixed IP Address" from the "IP Configuration Type" drop-down menu and then please enter an IP address for the camera, the subnet mask and the gateway IP.

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

After the Static IP address is set, please click the "Apply" button for saving new settings and then please reboot the PTC-300.

| datavideo | Lan Settings IP Configuration Type: IP Address: | Fixed IP Address |
|--|---|---|
| Live Video Image Audio System Network | Subnet Mask: Gateway: DNS Address: MAC Address: Port Settings | 255. 255. 255. 0 192. 168. 100. 1 192. 168. 2. 1 D4 : E0 : BE : AB : 18 : 06 Cance 1 00 (00) |

6.3 DVIP

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

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

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

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

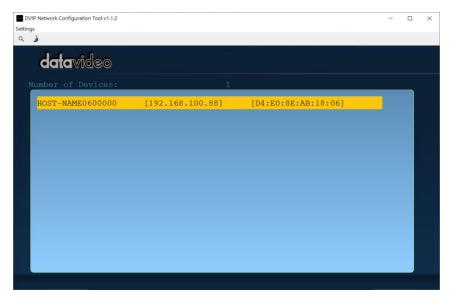
iOS: <u>https://itunes.apple.com/tw/app/dvip-network-</u> config/id1177895983?mt=8

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.

| DVIP Network Configuration Tool v1.1.2 Settings | | | - | × |
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| Number of Devices: | ĩ | | | |
| HOST-NAME 600000 | [192.168.100.88] | [D4:E0:8E:AB:18:06] | | |
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| DVIP Network Configuration Tool v1.1.2 | | - | × |
|--|---|----------------------|---|
| Settings Q | | | |
| data video | | | |
| Number of Devices: | | | _ |
| HOST-NAME0600000 | Host Name | HOST-NAME060000 | |
| | Model Name | PTC-300 | |
| | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - | (VID:0103, PID:300b) | |
| | MAC address | D4:E0:8E:AB:18:06 | |
| | IP address | 192.168.100.88 | |
| | Using Fix | ed IP Mode | |
| | Mask | 255.255.255.0 | |
| | Gateway | 192.168.100.1 | |
| | Primary DNS | 192.168.2.1 | |
| | Secondary DNS | 8.8.8.8 | |
| | Def | ault Save | |
| | | | |

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 | HOST-NAME060000 |
|---------------|---|
| Model Name | PTC-300 |
| MAC address | (VID:0103, PID:300b) D4:E0:8E:AB:18:06 |
| IP address | 192.168.100.88 |
| Using Fixe | ed IP Mode |
| Mask | 255.255.255.0 |
| Gateway | 192.168.100.1 |
| Primary DNS | 192.168.2.1 |
| Secondary DNS | 8.8.8.8 |
| Defa | ault Save |

7. Web User Interface

The web based user interface allows you to set and control your PTC-300 devices.

7.1 Live

Live option allows users to preview the image which is shot by the PTC-300 in a real-time basis. Please click the "Live" option and then please select "HTML5" from the drop-down menu below the preview window. After that, users can preview the image which is shot by the PTC-300 camera from the preview window.



7.2 Video

"Video" option allows users to set various parameters including Video Format, Encode Level. Moreover, it also allows users to set the Encode Protocol, Resolution, Bit Rate, Frame Rate, I Key Frame Interval, Bit Rate Control, Fluctuate Level, Slice Split Enable and Slice Size for the First stream and Second stream. The main interface for the Video option is shown in the following diagram.

| datavideo | Video Settings | |
|--------------------|-----------------------|-----------------------------------|
| | Video Format: | Dial Priority 🗸 |
| Live | Encode Level: | baseline 🗸 |
| Video | First stream | |
| Image | Encode Protocol: | H264 ¥ |
| Audio | Resolution: | 1920x1080 ¥ |
| System | | |
| Network | Bit Rate: | 4096 (32~51200) kbps |
| Information | Frame Rate: | 25 v fps |
| | I Key Frame Interval: | 25 (2 [~] 1200) |
| | Bit Rate Control: | ○ CBR ● VBR |
| | Fluctuate Level: | 1 • |
| | Slice Split Enable: | ○ On ● Off |
| Zoom In Zoom Out | Slice Size: | 68 blocks |
| Focus In Focus Out | Second stream | |
| Pan Speed 10 🗸 | Encode Protocol: | H264 ¥ |
| Tilt Speed 10 🗸 | Resolution: | 640x360 V |
| Zoom Speed 5 🛩 | Bit Rate: | 1024 (32 [~] 20480) kbps |
| Focus Speed 5 🗸 | Frame Rate: | |
| Set Call | | 25 • fps |
| | I Key Frame Interval: | 25 (2~1200) |
| Preset (0~254) | Bit Rate Control: | • CBR • VBR |
| PTZ 🛩 Back | Fluctuate Level: | 1 🗸 |
| | Slice Split Enable: | ○ On ● Off |
| | Slice Size: | 23 blocks |
| | | |
| | | Apply Cancel |
| | | |
| Language English 🗸 | | |

Please see following section for realizing the descriptions for each item for the Video option.

| Items | Descriptions | |
|---|---|--|
| Video Format: Encode Level: 0SD ~ 0SD | Video Format It can support three video formats including 50Hz(PAL), 60Hz(NTSC) and OSD. | |
| 50Hz (PAL): If you select this option, the maximum frame rate per second (FPS) for the streaming video will be 50. 60Hz (NTSC): If you select this option, the maximum frame rate per second for the streaming video will be 60. Dial Priority: If you select this option, the maximum frame rate per second will be 30, and it is possible that the parameters including the video format and frame rate will be affected by the camera OSD menu | | |
| settings. Note: 1. If you want to use the PTC-300 camera to connect to some Datavideo switchers which support the interlace format only such as the HS-1300, SE-120 MU and SE-650, please remember to select the "Dial Priority" option as your video format. 2. If the 50Hz or the 60Hz is selected for the PTC-300 web UI, the SDI or the | | |

HDMI output format of the PTC-300 camera will be fixed at 1080p 50/60.

| Encode Level: | baseline baseline mainprofile highprofile svc-t | Encode Level It allows users to select needed Encode Level from four Encode Levels including baseline profile, mainprofile, highprofile and svc-t. |
|---|---|---|
| Encode Protocol: H265 H264 MJPEG | | Encode Protocol (First Stream & Second Stream) It allows users to select three Encode Protocols including H.264, H.265 and MJPEG for the "First Stream" and "Second Stream". |

| Items | Descriptions |
|--|---|
| Items Resolution for the first stream Resolution: 1920x1080 × 1280x720 1024x576 960x540 640x480 640x360 640x360 Resolution for the second stream Resolution for the second stream Resolution for the second stream 640x360 1920x1080 1280x720 1024x576 720x576 720x408 640x360 480x270 320x240 320x180 | Descriptions Resolution (First Stream & Second Stream) There are two drop-down menus including the resolution for the First Stream and the resolution for the Second Stream for users to select different resolution. When the resolution is higher, the image will become clearer. However, it will occupy more network bandwidth. |
| Bit Rate: 40% (32~51200) kbps Bit Rate: 1024 (32~20480) kbps | Bit Rate (First Stream & Second Stream) It allows users to determine the Bit Rate range by themselves. The range for the Bit Rate for the first stream is from 32-51200kbps. The range for the Bit Rate for the second stream is from 32- 20480kbps. Note: If the network bandwidth is too narrow and the Bit Rate setting is too high, it will cause that the video streaming can not be transferred normally and it will cause a poor visual effect for viewers. |

| Items | Descriptions |
|-----------------------------------|--|
| Frame Rate: 25 🗸 fps | Frame Rate (First Stream & |
| | Second Stream) Users can set the Frame Rate from the drop-down menu by themselves. The range is from 1 to 60. When the Frame Rate value is higher, the image will be smoother. When the Frame Rate value is lower, it will cause an unsmooth image. |
| I Key Frame Interval: 25 (2~1200) | I Key Frame Interval (First Stream & Second Stream) It allows users to set the interval between two I frames. When the interval is larger, the response speed from the viewing window will be lower. |
| Bit Rate Control: OCBR • VBR | Bit Rate Control (First Stream & |
| | Second Stream) |
| | There are two ways for Bit Rate Control including the CBR and VBR. CBR: The video encoder will encode the video according to the default speed. VBR: The video encoder will encode the video by adjusting the encoding speed according to the default value in order to achieve best image quality. |
| Fluctuate Level: | Fluctuate Level (First Stream & |
| 1 2 3 4 5 6 | Second Stream) This function is used to suppress the fluctuation degree of the variable bit rate. Users can set different degrees from 1 to 6. |

| Items | | Descriptions |
|---------------------|------------|---|
| Slice Split Enable: | ○ On ● Off | Slice Split Enable (First Stream & |
| | | Second Stream) |
| | | This is used to turn on or turn off the Slice Split function. |
| Slice Size: | 68 blocks | Slice Size (First Stream & Second |
| | | Stream) |
| | | This is used to set the Slice size. |
| | | |
| Apply | | Apply Key |
| | | After all of the options are set, please click the "Apply" key and |
| | | then all of the changes will be |
| | | effective. |
| | | |
| Cancel | | Cancel Key If the "Cancel" key is pressed, all of |
| | | the changes will not take effect. |
| | | 5 |

7.2.1 How to Connect the PTC-300 to a Datavideo Switcher after a 60FPS/50FPS Video Streaming (Take the HS-1300 as an example)

When you select the 50Hz or the 60Hz option from the $\lceil Video \rceil \rightarrow \lceil Video \rceil$ Settings] drop-down menu in the PTC-300 web UI for streaming videos, the PTC-300 HDMI/SDI output will be fixed at 1080p 50/60. However, the Datavideo HS-1300 switcher supports the 1080i video format only rather than the 1080p video format. So, when you want to connect the PTC-300 to the HS-1300 switcher, it is necessary for you to set the PTC-300 again in order to make sure that the video formats for the PTC-300 and the HS-1300 are consistent. Moreover, it can assure that the input screen that is received by the HS-1300 can be displayed correctly. Please follow following steps for setting the PTC-300 and the HS-1300.

• Take the adjustment to 1080i59.94 as an example

Step 1. At first, please press the "MENU" button which is located on the PTC-300 remote controller to open the OSD menu.

Step 2. After the OSD menu is opened, please use the down arrow

button to select the "Setup" option and then please press the "Home"

button to enter the "Setup" option.

Step 3. Please select the "Video Format" option, and then please use the left

arrow button and the right arrow button / of the remote controller to select 1080i60, 1080i59.94 or 1080i50 video format.

Step 4. Please press the "MENU" button which is located on the control panel of the HS-1300 switcher to open its OSD menu.

Step 5. Please use the down arrow button **Line** to select the "Setup" option.

Step 6. Please use the right arrow button to select "Standard""1080i59.94", and then please press the "Enter" button to enter this option for further adjustment.

Step 7. If the format for the "Standard" is not 1080i59.94, please use the up

arrow button and down arrow button are located on the control panel to adjust the video format to 1080i59.94.

Step 8. Please select your desired "Standard" value and then press the "ENTER" button again to confirm your selection.

Step 9. Please press the right arrow button **Land**again to select the "Save Setup" option.

Step 10. Please use the left arrow button and the right arrow button to select the "Yes" button and then press the "ENTER" button again to save the setting.

Step 11. After the setting is saved, please press the "MENU" button to exit to the previous menu and to exit the OSD menu of the HS-1300. The "Standard" option setting for the HS-1300 is finished until this step.

Step 12. Please open the web UI of the PTC-300.

Step 13. Please click the "Video" option, and then please select "OSD" from the "Video Format" drop-down menu.

| datavideo | Video Settings | |
|------------------|-----------------------|----------------------|
| | Video Format: | OSD V |
| Live | Encode Level: | 60Hz e 🗸 |
| Video Image | First stream | OSD |
| Audio | Encode Protocol: | H264 🗸 |
| System | Resolution: | 1920x1080 🗸 |
| Network | Bit Rate: | 4096 (32~51200) kbps |
| Information | Frame Rate: | 25 v fps |
| | I Key Frame Interval: | 25 (2~1200) |
| | Bit Rate Control: | O CBR VBR |
| | Slice Split Enable: | ○ 0n ● 0ff |
| | Slice Size: | 68 blocks |
| Zoom In Zoom Out | Second stream | |

Step 14. Please click the "Apply" button

Apply

Step 15. Please click the "Reboot" button in the "System" option to reboot the PTC-300.

Step 16. After the PTC-300 is rebooted, please use an SDI cable to connect from the 3G-SDI interface which is located on the rear panel of the PTC-300 to the SDI IN interface which is located on the rear panel of the HS-1300, or you can use an HDMI cable to connect from the HDMI interface which is located on the rear panel of the PTC-300 to the HDMI IN interface which is located on the

rear panel of the HS-1300. After that, you can see the image which is shot by the PTC-300 is displayed in the MULTIVIEW window of the HS-1300 correctly.

For SDI: The SDI IN 1 to SDI IN 4 interfaces which are located on the rear panel of the HS-1300 represent the MULTIVIEW window's Input 1 to Input 4.

For HDMI: The HDMI IN 1 to HDMI IN 2 interfaces which are located on the rear panel of the HS-1300 represent the MULTIVIEW window's Input 5 to Input 6.

Note: Datavideo's SE-650, HS-1200 MU and HS-1300 switchers support 1080i video format only. So, the 1080p video format is not supported by the abovementioned switchers. If you want to connect the PTC-300 camera to the SE-650 or the HS-1200 MU switcher, please remember to select the "OSD" item from "Video→ Video Format" in the PTC-300 web UI. Moreover, please use the OSD menu of the PTC-300 camera and the OSD menu of the abovementioned switchers to adjust them in the same video standard before connecting to prevent the video format incompatible issue and the issue that the video that is shot by the PTC-300 can not be displayed normally in the MULTIVIEW window of the above-mentioned switchers.

7.3 Image

The "**Image**" option allows users to see the image that is shot by the PTC-300 from the preview window. Moreover, users can adjust many parameters including Brightness, Saturation, Contrast, Sharpness and Hue from this interface by using sliders. Please select "HTML5" from the drop-down menu which is located below the preview window and then users can preview the image which is shot by the PTC-300 from the preview window. The main interface of the Image option is shown as following diagram.

| Live Video Image Audio System Network Information | TT T |
|---|--|
| Zoom In Zoom Out Focus In Focus Out Pan Speed 10 ~ | Brightness: Saturation: Contrast: Sharpness: Hue: 7 |
| Zoom Speed 5 V Focus Speed 5 V Set Call Preset (0~254) | Flip Mirror Apply Cancel Default |
| PTZ v Back | |

- Brightness: This option allows users to adjust the Brightness. Please use the slider for adjusting the Brightness.
- Saturation: This option allows users to adjust the Saturation. Please use the slider for adjusting the Saturation. After the adjustment is finished, please click the "Apply" button and then it is set successfully.
- Saturation: This option allows users to adjust the Saturation. Please use the slider for adjusting the Contrast. After the adjustment is finished, please click the "Apply" button and then it is set successfully.
- Sharpness: This option allows users to adjust the Sharpness. Please use the slider for adjusting the Sharpness. After the adjustment is finished, please click the "Apply" button and then it is set successfully.
- Hue: This option allows users to adjust the Hue. After the adjustment is finished, please click the "Apply" button and then it is set successfully.
- Flip: Please check the checkbox of the "Flip" option Flip and then please click the "Apply" button for flipping the image that is shot by the camera.
- Mirror: Please check the checkbox of the "Mirror" option
 Mirror and then please click the "Apply" button for mirroring the image that is shot by the camera.
- Default: Please click the "Default" button **Default** for restoring the settings in this page to factory default value.

7.4 Audio

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

| datavideo | Audio Settings | | |
|---|----------------|----------|----------------|
| | Audio Switch: | 0n 🗸 | |
| Live | Audio Type: | AAC 🗸 | |
| Video | Sample Rate: | 44. 1K 🛩 | |
| Image | Bit Rate: | 128K 🗸 | |
| Audio | Input Type: | MIC IN 🗸 | |
| System | ADTS Options: | Off 🗸 | |
| Network | | | |
| Information | | App I y | Gance I |
| | | лррту | Vancer |
| | | | |
| 000 | | | |
| | | | |
| Zoom In Zoom Out | | | |
| Focus In Focus Out | | | |
| Pan Speed 10 🗸 | | | |
| Tilt Speed 10 🗸 | | | |
| Zoom Speed <mark>5 🛩</mark> Focus Speed <mark>5 🛩</mark> | | | |
| | | | |
| Set Call | | | |
| Preset (0~254) | | | |
| DTZ te Back | | | |
| PTZ 🛩 Back | | | |
| | | | |

Please see following section for realizing the descriptions for each item for the Audio option.

| ltems | | Descriptions |
|---------------|-------------------------------|---|
| Audio Switch: | On ✔ On Off | Audio Switch This option allows users to turn on or turn off the input of the audio source. |
| Audio Type: | | Audio Type This allows users to select the encoding format of the input audio. The default audio type is the AAC format. |
| Sample Rate: | 44. 1K ✓ 44. 1K 48K | Sample Rate This drop-down menu allows users to select desired sample rate for the input audio source. There are two sample rate including 44.1K and 48K for users to select. |
| Bit Rate: | 128K ✓ 96K 128K 256K | Bit Rate This drop-down menu allows users to select their desired Bit Rate. |
| Input Type: | MIC IN V LINE IN MIC IN | Input Type This option allows users to select the audio signal input way. Users can input the audio by external connected MIC or by LINE IN. |

| ltems | | Descriptions |
|---------------|--------------------|--|
| ADTS Options: | Off ✓ Off On | ADTS Option This drop-down menu allows users to turn on or turn off the ADTS. |
| Арр I у | | Apply Key After all of the options are set, please click the "Apply" key and then all of the changes will be effective. |
| Cancel | | Cancel Key If the "Cancel" key is pressed, all of the changes will not take effect. |

7.5 System

This System option allows users to select functions including Work Mode, Reboot, User Name and Password. The main interface of the System option is shown as following diagram.

| data video | <mark>Initialize</mark> Work Mode: Reboot: | RTSP V Reboot | |
|-------------------|--|------------------|--------|
| Live | User | | |
| Video | username: | admin | |
| Image | Passwd: | | |
| Audio | Guest: | guest | |
| System | Passwd: | | |
| Network | | | |
| Information | | АррТу | Gancel |

Please see following section for realizing the descriptions for each item for the System option.

| Items | | Descriptions |
|---|----------------------------------|---|
| Work Mode: | RTSP RTSP SDK Multicast | Work Mode This option allows users to select their desired work mode including RTSP, SDK and Multicast. |
| Reboot: | Reboot | Reboot Press the Reboot button for rebooting the camera. |
| User username: Passwd: Guest: Passwd: | admin guest | User There are several items including Username, Password, Guest and Password for users to set the username and password for user and guest. After the setting is finished, please press the "Apply" button for applying the setting. The default username/Password for user is "admin/admin". The default Username/Password for Guest is "guest/guest". |
| АррТу | | Apply Key After all of the options are set, please click the "Apply" key and then all of the changes will be effective. |

| Items | Descriptions |
|--------|---|
| Cancel | Cancel Key If the "Cancel" key is pressed, all of the changes will not take effect. |

7.6 Network

The Network option allows users to set many network related functions. The main interface of the Network option is shown as following diagram.

| data viideo | Lan Settings | Fixed IP Address |
|-----------------------------------|---------------------|---|
| | IP Configuration Ty | |
| | IP Address: | 192.168.2.100 |
| Live | Subnet Mask: | 255.255.255.0 |
| | Gateway: | 192.168.2.1 |
| Image | DNS Address: | 192.168.2.1 |
| Audio | MAC Address: | D4 : E0 : 6E : 48 : 18 : 06 |
| System | | Apply Cancel |
| Notwork | Port Settings | |
| Information | | 80 (80) |
| the of the cross | RTSP Port: | 554 (554) |
| | PTZ Port: | 5678 (5678) |
| | UDP Port: | 1259 (1259) |
| | Sony Visca: | 52381 |
| | SRT Settings | 22201 |
| | SRT: | 0 0n • 0ff |
| Zoom In Zoom Out | SRT Port: | 4578 |
| Focus In Focus Out | SRT Encry; | |
| | SRT Password: | 1234557891 (SRT Password length greater than 9 |
| Pan Speed 10 🗸 | Control Protocol | Cost Farancia Tenger greater charty |
| Tilt Speed 10 ✓ | Settings | |
| Zcon Speed 5 ¥ Focus Speed 5 ¥ | Pelco-D Address; | 0 (0~254) |
| Focus Speed 5 V | Pelco-P Address: | 0 (0~31) |
| | RTMP(S) Settings | |
| Set Call | First stream: | 🔹 On 🔾 Off 🛛 Video 🗳 Audio |
| Preset (0°254) | IRL: | rtmp://a.rtmp.youtube.com/live2/gfay=3jva=70av=trjd=6grr |
| | Second stream: | 🔿 On 🔹 Off 🛛 Video 🗳 Audio |
| PTZ 🛩 Back | IRL: | rtnp://128.199.120.200/strean3/0daejr9nd5u1k3ne813ph97vjdg4es5e |
| | RTSP Settings | |
| | RTSP Auth: | On • Off |
| | ONVIFSettings | |
| | ONVIF: | 🔾 On 💌 Off |
| | ONVIE Auth: | 🔾 On 🔹 Off |
| | Multicast Settings | |
| | Multicest: | O 0n • 0ff |
| | Address: | 224.1.2.3 |
| | Port: | 1234 |
| | SDK Settings | |
| | Active Connection: | O Do • Off |
| | Address; | 192, 168, 100, 138 |
| | Port: | 6088 |
| | NTP Settings | |
| | time zone: | (087+08:00) Beijing, Chongqing, Hong Kong, Urunqi 🌱 |
| | NTP time sync: | • On Off |
| | | on intal orgi on |
| | Server address: | |
| | Time interval: | 1440 minutes |
| | Main time show: | • 0n • 0ff |
| | Position: | X 0 Y 0 (0~100) |
| | Sub time show: | On • Off |
| | Position: | X 0 Y 0 (0~100) |
| | | |
| | | |
| Languago English V | | Apply Gancel |
| | | |

Please see following section for realizing the descriptions for each item for the Network option.

| Items | | Descriptions |
|---|--|--|
| | Fixed IP Address | IP Configuration Type This drop-down menu allows users to select the Static IP or DHCP mode. If the "Fixed IP Address" is selected, it will operate in static IP mode. If the "Dynamic IP Address" is selected, it will operate in DHCP mode. |
| IP Address: Subnet Mask: Gateway: DNS Address: | 192. 168. 2. 100 255. 255. 255. 0 192. 168. 2. 1 192. 168. 2. 1 | IP Address/Subnet Mask/Gateway/DNS Address If the fixed IP address is selected, users can set related parameters manually. After the settings are finished, please click the "Apply" button and then those settings will take effect. |
| MAC Address: D4 : ED : BE | : AB : 18 : 00 | MAC Address This is the MAC Address and it can not be changed by users. |
| HTTP Port number: 80 | (80) | HTTP Port This is the HTTP Port and the default port No. is 80. |

| | Items | Descriptions |
|-------------|-------------|---|
| RTSP Port: | 554 (554) | RTSP Port This is the RTSP Port and the default port No. is 554. |
| PTZ Port: | 5678 (5678) | PTZ Port This is the PTZ Port No. and the default port No. is 5678. |
| UDP Port: | 1259 (1259) | UDP Port This is the UDP Port No. and the default port No. is 1259. |
| Sony Visca: | 52381 | Sony Visca This is the Sony Visca Port No. and the default No. is 52381. |
| SRT: | ○ On ⊙ Off | SRT On/Off This allows users to turn on or turn off the SRT streaming function. |
| SRT Port: | 4578 | SRT Port This is the SRT port and the default port No. is 4578. |

| Items | Descriptions |
|---|---|
| SRT Encry: Off AES-128 AES-192 AES-256 | SRT Encry When the SRT function is turned on, this option allows users to select their desired SRT Encryption way. There are three encryption ways including AES-128, AES-192 and AES-256 for users to select. |
| SRT Password: 1234557891 (SRT Password length greater than 9 bits) | SRT Password When the SRT encryption way is set, it is needed for users to use this password. The default value is 1234567891 and this password can change by users. |
| Pelco-D Address: 0 (0~254) | Pelco-D Address This option allows users to set the Pelco-D address, the range is from 0 to 254. |
| Pelco-P Address: 0 (0~31) | Pelco-P Address This option allows users to set the Pelco-P Address, the range is from 0 to 31. |
| #IMP(b) Settings First stream: 0 n 0 ff 2 Video 2 Audio #BL: rtm://a rtm: youtube.com/live2/gfm=3/yu=78mmetryd=dmpr | First Stream This option allows users to determine whether they want to turn on/turn off the First Stream streaming. Moreover, this option can turn on/turn off the streaming of video and audio separately. |
| | MRL Please copy the RTMP server address and streaming key |

| Items | Descriptions |
|---|--|
| | from the streaming platform and then paste them into this MRL column. After that, please press the "Apply" button for starting the streaming successfully. |
| Second stream: On ● Off CI Video CI Audio MRL; rtmp://128.199.120.200/stream2/0daejr4nx80ul%3nx813ptd7vjdplet5m | Second Stream This option allows users to determine whether they want to turn on/turn off the Second Stream streaming. Moreover, this option can turn on/turn off the streaming of video and audio separately. |
| | MRL Please copy the RTMP server address and streaming key from the streaming platform and then paste them into this MRL column. After that, please press the "Apply" button for starting the streaming successfully. |
| RTSP Auth: ○ On ● Off | RTSP Auth This option allows users to turn on or turn off the authentication of the RTSP streaming. |
| ONVIF: On Off | ONVIF This option allows users to turn on or turn off the ONVIF function. |

| Items | Descriptions |
|---|--|
| ONVIF Auth: On Off | ONVIF Auth This option allows users to turn on or turn off the ONVIF authentication. |
| Multicast: O On Off | Multicast This option allows users to turn on or turn off the Multicast function. |
| Address: 224.1.2.3 | Address This option is the address of Multicast. The default value is 224.1.2.3 |
| Port: 1234 | Port This is the Port No. of the Multicast. The default No. is 1234. |
| SDK Settings Active Connection: On Off | SDK Settings This allows users to turn on or turn off the Active Connection of the SDK Settings. |
| Address: 192.168.100.138 Port: 6688 | Address/Port This is the Address and Port of the SDK Settings. The Address is 192.168.100.138. The Port No. is 6688. |

| Items | Descriptions |
|--|--|
| Bit 11:00 Bit dawn Filester Bit 11:00 Bit Assatz Bit 11:00 Bit A Grands Bit 11:00 Bit 11:00 Bit 11:00 Bit 11:00 | Time Zone This option allows users to select their time zone. |
| NTP time sync: On Off | NTP Time Sync This option allows users to turn on or turn off the NTP Time Sync function. |
| Server address: cn. ntp. org. on | Server Address This option allows users to enter their desired NTP server. |
| Time interval: 1440 minutes | Time Interval This option allows users to set the time interval for the time calibration. |
| Main time show: On Off Position: X O Y O (0~100) | Main Time Show/Position This option allows users to open or close the time display function for the main time. Moreover, users can enter different X coordinate and Y coordinate positions to determine the position for showing the time on the screen. (The allowable setting range is from 0 to 100). |
| Sub time show: On Off Position: X O Y O (0~100) | Sub Time Show/Position This option allows users to open or close the time display function for the sub time. Moreover, users can enter different X coordinate and Y |

| Items | Descriptions |
|---------|--|
| | coordinate positions to determine the position for showing the time on the screen. (The allowable setting range is from 0 to 100). |
| Арр I у | Apply Key After all of the options are set, please click the "Apply" key and then all of the changes will be effective. |
| Cancel | Cancel Key If the "Cancel" key is pressed, all of the changes will not take effect. |

7.7 Information

In the "Information" option, users can change the device name by themselves. Moreover, users can also see the messages including software version, device model and web UI version. The main interface of the Information option is shown as following diagram.

| datavideo | Information | |
|--------------------|-------------------|----------------------------------|
| | Device ID: | HD Camera |
| Live | Software Version: | SOC v9. 0. 850 - ARM v7. 0. 12SD |
| Video | Device Type: | A5. D |
| Image Audio | Webware Version: | v1. 5. 5 |
| System | | |
| Network | | Apply Cancel |
| Information | | |
| | | |
| 000 | | |
| | | |
| Zoom In Zoom Out | | |
| Focus In Focus Out | | |

Please see following section for realizing the descriptions for each item for the information option.

| | Items | Descriptions |
|-------------------|------------------------------|---|
| Device ID: | HD Camera | Device ID This column allows users to determine the device ID by themselves. What they have to do is to enter their desired device ID and then click the "Apply" button. |
| Software Version: | SOC v9.0.850 - ARM v7.0.12SD | Software Version This option can show current software version. |

| Items | Descriptions |
|-------------------------|--|
| Device Type: A5.D | Device Type This can show device type. |
| Webware Version: v1.5.5 | Webware Version This is the version of the web- based control UI. |
| АррІу | Apply Key After all of the options are set, please click the "Apply" key and then all of the changes will be effective. |
| Cancel | Cancel Key If the "Cancel" key is pressed, all of the changes will not take effect. |

7.8 The PTZ Control Area of the Web UI

PTC-300 camera's PTZ control area in the Web UI allows users to control the directions, Zoom-In, Zoom-Out, Focus Near and Focus Far parameters for the PTZ camera lens. Moreover, users can also adjust the panning, tilting speed, preset setting and preset calling functions. The PTZ control area is shown as following diagram.

| datavideo |
|--|
| Live Video |
| Image |
| Audio |
| System |
| Network |
| Information |
| |
| Zoom In Zoom Out Focus In Focus Out |
| Pan Speed 10 ✔ Tilt Speed 10 ✔ Zoom Speed 5 ✔ Focus Speed 5 ✔ |
| Set Call Preset (0~254) |
| PTZ 🛩 🛛 Back |

| Items | Descriptions |
|--|--|
| | UP/Down/Left/Right/Home Keys Users can click the up, down, left and right keys and the PTZ camera lens will rotate to assigned direction. If the Home key $$ is pressed, the camera lens will return back to the initial position automatically. If this Home key is used with the "Back" key, when the "OSD" is selected and the Back key is clicked, the OSD menu will be shown on the external connected screen and users can use the up, down, left and right keys on the Web UI to control the camera. |
| Zoom In Zoom Out Focus In Focus Out | Zoom In/Zoom Out/Focus In/Focus Out Click "Zoom In" or "Zoom Out" for zooming in or zooming out the camera lens. Click the "Focus In" or "Focus Out" for Focusing Near or Focusing Far the camera lens. |
| Pan Speed 10 🗸 | Pan Speed The "Pan Speed" allows users to adjust the rotation speed of the PTZ camera lens. The allowable setting range is from 1 to 24. The larger the number, the faster the PTZ camera lens will rotate. |
| Tilt Speed 10 ∨ | Tilt Speed The "Tilt Speed" allows users to adjust the vertical rotation speed of the camera lens. The allowable setting range is from 1 to 20. The larger the number, the faster the PTZ camera lens will rotate. |

| Items | Descriptions |
|---|---|
| Zoom Speed 5 🗸 | Zoom Speed The "Zoom Speed" allows users to adjust the Zoom In/Zoom Out speed of the PTZ camera lens. The allowable setting range is from 0 to 7. The larger the number, the faster the PTZ camera lens will rotate. |
| Focus Speed 5 ✔ | Focus Speed The "Focus Speed" allows users to adjust the "Focus Near" and "Focus Far" speed of the PTZ camera lens. The allowable setting range is from 0 to 7. The larger the number, the faster the PTZ camera lens will rotate. |
| Set Call Preset (0~254) | Set and Call Presets The PTC-300 provides 255 presets (0-254) for users to set. Users can use "Set" button to set the preset position and users can use the "Call" button to recall the pre-saved presets. |
| PTZ V PTZ OSD | OSD/PTZ Drop-Down Menu Press the OSD option from the web UI allows camera to call the OSD menu immediately. If the PTZ is selected after the OSD menu is shown, the OSD menu will disappear and the screen will go back to the scene that is shot by the camera. |
| 中文 <mark>English</mark> Русский 繁体中文 | Language Drop-Down Menu Users can use this drop-down menu for selecting four different languages including Traditional Chinese, русский, English and Simplified Chinese. |

8. How to Use the Web UI to Set and Call Presets

Please follow following steps for setting and recalling the presets.

• How to Set Preset

1. Please adjust your desired camera parameters and camera lens positions in advance.

2. Please enter your desired preset number in the "Preset" column Preset (0[°]254).

3. Please click the "Set" button Set and then the preset is set successfully.

• How to Recall Preset

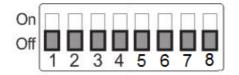
1. Please enter the preset number that you want to recall into the "Preset" Preset (0[°]254) column.

2. Please click the "Call" button Call and then the preset is recalled successfully.

9. DIP Switch Settings

9.1 DIP Switch SW1

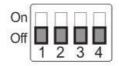
The DIP Switch SW1 can be found at the bottom of the camera, where the user is allowed to set the camera's VISCA ID, enable remote control, select the video resolution, and configure how the video mode can be selected.



| DIP SW 1/2/3 | VISCA ID |
|-------------------------|--|
| (1,2,3) = (ON,OFF,OFF) | VISCA-ID 1 |
| (1,2,3) = (OFF,ON ,OFF) | VISCA-ID 2 |
| (1,2,3) = (ON ,ON ,OFF) | VISCA-ID 3 |
| (1,2,3) = (OFF,OFF,ON) | VISCA-ID 4 |
| (1,2,3) = (ON ,OFF,ON) | VISCA-ID 5 |
| (1,2,3) = (OFF,ON ,ON) | VISCA-ID 6 |
| (1,2,3) = (ON ,ON ,ON) | VISCA-ID 7 |
| DIP SW 4 | Remote Control Protocol |
| ON | DVIP |
| OFF | RS-422 |
| DIP SW 5/6/7 | Resolution |
| (5,6,7) = (OFF,OFF,OFF) | 1920 x 1080i 59.94 |
| (5,6,7) = (ON,OFF,OFF) | 1920x1080i50 |
| (5,6,7) = (OFF,ON,OFF) | 1920 x 1080p 59.94 |
| (5,6,7) = (ON,ON,OFF) | 1920 x 1080p 50 |
| (5,6,7) = (OFF,OFF,ON) | 3840 x 2160p 29.97 |
| (5,6,7) = (ON,OFF,ON) | 3840 x 2160p 25 |
| (5,6,7) = (OFF,ON,ON) | 3840 x 2160p 59.94 |
| (5,6,7) = (ON,ON,ON) | 3840 x 2160p 50 |
| DIP SW 8 | Video Mode Selection Method |
| ON | Video mode selectable by DIP switch only |
| | Video mode selectable by menu |

9.2 DIP Switch SW2 (IRID)

The IRID DIP Switch can be found on the rear panel of the PTC-300 camera. This DIP switch allows the user to assign an ID number to the camera so that the user can navigate between the cameras by pressing the **CAMERA SELECT** buttons.



| DIP SW 1/2 | Camera Select Function (IR Remote Control) – Camera ID Assignment | | | | |
|------------------------------------|--|--|--|--|--|
| (1,2) = (OFF,OFF) | CAM1 (IR) | | | | |
| (1,2) = (ON,OFF) | CAM2 (IR) | | | | |
| (1,2) = (OFF,ON) | CAM3 (IR) | | | | |
| (1,2) = (ON,ON) | CAM4 (IR) | | | | |
| * DIP SW 3/4 should be always OFF. | | | | | |

10. How to Play the RTSP Stream by the VLC Player

Please follow following steps for playing the RTSP streaming by using the VLC Player.

| 4 | VLC | C media pla | yer | | | | | _ | | | × |
|-----------|-----|----------------|------------|--------|----------|---------|------|------|-----|-----|---|
| Me | dia | Playback | Audio | Video | Subtitle | Tools | View | Help | | | |
| ▶ | Ор | en File | | | Ctrl+ | 0 | | | | | |
| Þ | Ор | en Multiple | Files | | Ctrl+ | Shift+O | | | | | |
| ▶ | Ор | en Folder | | | Ctrl+ | F | | | | | |
| ٠ | Ор | en Disc | | | Ctrl+ | D | | | | | |
| ** | Ор | en Network | Stream. | | Ctrl+ | N | | | | | |
| : | Ор | en Capture | Device | | Ctrl+ | С | | | | | |
| | Ор | en Location | from cli | pboard | Ctrl+ | V | | | | | |
| | Ор | en Recent M | ⁄ledia | | | | | | | | |
| | Sav | /e Playlist to | o File | | Ctrl+ | Y | | | | | |
| | Cor | nvert / Save | ÷ | | Ctrl+ | R | | | | | |
| ((*)) | Str | eam | | | Ctrl+ | S | | | | | |
| | Qu | it at the end | d of playl | ist | | | | | | | |
| Œ | Qu | it | | | Ctrl+ | Q | | | | | |
| :- | | | | | | | | | | | : |
| | ŀ | ₩ ■ | 0.0 14 | t; | \sim | | | | • = | 10% | |

- 1. Please open the VLC Player.
- 2. Please click "Media-> Open Network Stream".
- 3. Please enter the RTSP address.

rtsp://ip address: port No./1 (first stream).

rtsp://ip address: port No./2 (second stream).

| 🛓 Open Media | | | - | × |
|---|------------------------|-------------|--------|--------|
| 🖻 File 🔗 Disc 🖣 | - Network | 📑 Capture I | Device | |
| Network Protocol | | | | |
| Please enter a network URL | .: | | | |
| rtsp://192.168.100.88:554/ | 1 | | | \sim |
| htp://www.etample.com/str rtp://@:1234 mms://mms.examples.com/s rtsp://sever.example.org:808 http://www.yourtube.com/wa | tream.asx OAest.sdp | | | |
| Show more options | | | Play 🔻 | Cancel |

4. Please click "Play" button.

Note: The default port No. of the RTSP is 554, if the default http port of the camera is 80, it is no need for users to enter the port No.

| Open Media | _ | | × |
|---|------------------|-----|--------|
| 🕞 File 🛛 📎 Disc 😽 Network | : Capture Device | | |
| Network Protocol | | | |
| Please enter a network URL: | | | |
| rtsp://192.168.100.88/1 | | | \sim |
| http://www.ettample.com/stream.avi rtp://@:1234 mms://mms.extamples.com/stream.asx rtsp://server.ettample.org;8080/test.sdp http://www.yourtube.com/watch?v=gg64x | | | |
|] Show more options | Play | • C | ancel |

11. How to Play the Multicast by the VCL Player

The RTP Multicast allows users to view the camera image remotely by specific video player such as the VLC Player.

| Multicast Settings | |
|--------------------|--------------|
| Multicast: | 🔾 On 💿 Off |
| Address: | 224. 1. 2. 3 |
| Port: | 6688 |

Please follow following steps for playing the RTP Multicast in the VLC Player.

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

2. Open VLC, click "Media" → "Open Network Stream" then enter rtp://224.1.2.3:6688 to view the first stream and rtp://224.1.2.3:6690 to view the second stream.

| Open Media | | | - | | | \times |
|--|----------|---------|--------|---|-----|----------|
| 🕞 File 🛛 😽 Disc 😽 Net | work | Capture | Device | | | |
| Network Protocol | | | | | | |
| Please enter a network URL: | | | | | | |
| rtp://224.1.2.3:6688 | | | | | | \sim |
| http://www.extanple.com/stream.avi rtp://@:1234 mms:/imma:examples.com/stream.a rtsp://server.extample.org;8080/test.s http://www.yourtube.com/watch?v=j | su dp | | | | | |
| Show more options | | [| Play | ▼ | Cai | ncel |

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

12. How to Stream to Facebook

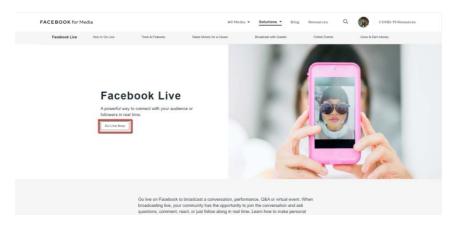
Please follow following steps for streaming to Facebook Streaming platform.

• Use Facebook Live Producer for Streaming

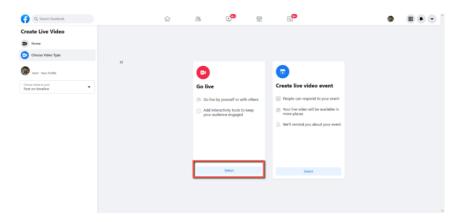
1. Please go to Facebook Live website

https://www.facebook.com/formedia/solutions/facebook-live, and then please click "Go Live Now" button which is shown in the following diagram.

Note: Facebook Live limits each stream to 8 hours.



2. Please click the "Select" button from the "Go live" option which is shown in the following diagram.



3. Please select the "Streaming Software" option, and then please enter the title and description of your live-streaming video in the "Title" and "Description" columns. Moreover, you can determine whether you want to share your live-streaming video to your Facebook Story.

| G Search Facebook | ଜ | ës 💌 | | 9 | | ø | • • |
|--|-----------------------|--|---------|---|----------|---|-----|
| Create Live Video ? | Select a vi | deo source 🔘 | _ | Add live video details Share to story | , | | |
| Connect video source | | • 0 | | Your live video will also be added to your story. | | | |
| Go live | Webcam | Streaming Software | | Title (optional) Description | | | |
| Host - Your Profile | Copy and software. | paste the stream key into your stream | ng | | 0 0 2 | | |
| Choose where to post Post on timeline | Stream FB-10208 | (ey 102208590202-0-AbwFgk48bMHH6b48 | Сору | 5 | | | |
| â Only me | preview the b | ry is valid until you log out of Facebook. Once you s roadcast you have up to 5 hours to go live. | tart to | | | | |
| Stream Setup | Advance | d Settings | × | | | | |
| Dashboard | Video | | _ | | | | |
| :• Interactivity ~ | | | | | | | |
| | | Connect streaming software to go live | | | | | |
| Back Di Go Live | | | | | | | |

4. Please select "Advanced Settings", and then you can see the "Server URL". You need the "Server URL" and the "Stream Key" which are on the page for live-streaming videos on the Facebook page.

| Search Facebook | ଜ | 25 | | Ē | 5 ⁹⁹ | | |
|-----------------------|-------------------------------------|--|---|----------|---|--------------|--|
| Live Video ? | Select a | video source 🔞 | | | Add live video details | | |
| 1/3 1 video source | | ۵ | 0 | | Share to story Your live video will also be added to your story. | | |
| ete post details | U | | Streaming Software | | Title (optional) | | |
| | | ng Software Setup d paste the stream ke | ry into your streami | 10 | Description | 0 | |
| our Profile | software | | | <u> </u> | | * 9 😉 | |
| to post teline | | 8902208590202-0-Abw | | Сору | | | |
| | This stream preview the | key is valid until you log out broadcast you have up to 5 | t of Recebook. Once you st hours to go live. | art to | | | |
| m Setup | Advan | ced Settings | | ^ | | | |
| board | | Stream Key | | | | | |
| gs v | This can be one live vis | reused every time you go liv leo at a time with your persis | ve. You can only broadcast itent stream key. | | | | |
| ractivity ~ | Backup S Once a bac removed.t | tream kup stream is added to your will not affect your stream it | live video, it cannot be f you choose not to use it. | | | | |
| | Server U | 11. /live-api-s facebook.com | - 143 (steps / | Copy | | | |
| 🕅 Go Live | | e referred to as "URL" or "Ac | | | | | |

5. Please click the "Copy" buttons which are located next to the "Server URL" and "Stream Key" columns respectively. After that, please paste them to the "First Stream MRL" column in the "Network" option of the PTC-300 web UI.

| Q. Search Facebook | | r 20 50 a 50 | @ II • • |
|--|--|--|----------|
| Create Live Video ? Connect video source Connect video source Connecte details Go live Connect video rotella | ٥ | Sect a video source | |
| Choose where to pool Post on timeline | | Stream Key F8-102000220550022-0-Absrlgsk80MHH668 Corp T0-102000220550022-0-Absrlgsk80MHH668 Corp Corp Advanced Settings | |
| Stream Setup U Dashboard Settings V Interactivity V | | Resident Stream Sch The set is ward over all you denote the the set of the s | |
| Break Billion Line | Lan Settings IP Configuration T IP Address: | | |
| Live Video Audio System Network Information | Subnet Mask: Gatemay: DNS Address: MAC Address: MTTP Port number: RTSP Port: PTZ Port: UDP Port: Sony Visca: SRT Settings SRT: | 255.255.0 192.168.100.100.1 192.168.100.100.100.100.100.100.100.100.100.10 | |
| Zoom In Zoom Out Focus In Focus Out Pan Speed 10 ~ Till Speed 10 ~ Zoom Speed 5 ~ Focus Speed 5 ~ Set Call Preset (0°254) | SRT Fort: SRT Fort: SRT Fassmord: Control Protocol Settings PelcorD Address: RTMP(S) Settings First stream: WRL: Second stream: | Un 0 0TT 4576 0ff ✓ 1234507891 (SRT Password length greater than 9 bits) 0 0 0 0 254) 0 0 0 0 ff ✓ Video ✓ Audio rtsps://live.api-s.facebook.com.43/rtsp./FD-1020875216335350-0-Abx00LPF01WxAs5g 0 n 0 0 ff ✓ Video ▲ Audio |] |
| PTZ 🗸 Back | MRL: | rtmp://192.168.100.138/live/stream1 |] |

Note: Please make sure that the "ON" is selected for the First Stream MRL . Moreover, please make sure that the "Video" and "Audio" checkboxes are checked.

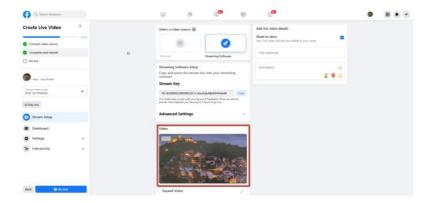
6. Please click the "Apply" button



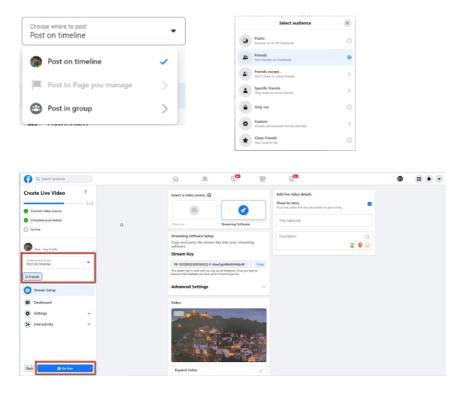
7. Please click the "Reboot" button in the "System" option to reboot the PTC-300.

| Live Video Image Audio System Network Information | Initialize Reboot: factory default: User username: Passwd: Guest: Passwd: | Reboot Apply admin guest Apply | Cance I |
|---|--|--|---------|
| 192.168.50.30 the ipcam will be rebooted. Are you sure? | OK Cancel | | |

8. After the PTC-300 is rebooted, you can see the real-time preview which is shot by the PTC-300 camera from the "Video" option of the Facebook Live page.



9. Please set related settings including "Choose where to post" and "Select audience". After that, please press the "Go Live" button for live-streaming the real-time image which is shot by the PTC-300 immediately.



10. And then you can see that the live-streaming is done successfully. If you want to stop the live-streaming, please click the "End Live Video" button for stopping the live-streaming immediately.

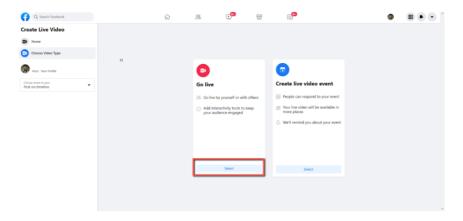
| Q. Search Facebook | ଜ ୫ ତି | | 5 | | |
|--|--------------------------------------|-------------------------|------------------------------------|-----|--|
| Live Dashboard ? Now they pay or the you can be your mail- ment leagth or and throat to not rease darkbuildin or engagement. Part - Your Hotle | Video | - | Comments | 0 • | |
| Chana wave tan Photo can therefore | | | | | |
| Settings v Interactivity v Distribution v | Expand Video | · | | | |
| | Insights | v | Write a commant | 0.0 | |
| | Commentation Commentation | | Polls Create a poll Question | | |
| 00:00:14 | Stream Metrics | * | Outstan | | |
| End Live Video | ++++++++++++++++++++++++++++++++++++ | AT Mops Video Dirate | Option | 0.1 | |

• Use the Personal Facebook Page or the Facebook Fan Page for Streaming

1. Please click "Live Video" from your Facebook Personal Page or Facebook Fan Page.



2. Please click the "Select" button from the "Go live" option which is shown in the following diagram.



3. Please select the "Streaming Software" option, and then please enter the title and description of your live-streaming video in the "Title" and "Description" columns. Moreover, you can determine whether you want to share your live-streaming video to your Facebook Story.

| G Search Facebook | r 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
|--|--|
| Create Live Video ? Contect Video toure Contect Video Ioure Complete post detalls Gonglete post detalls Gonglete | Select a vidros source |
| test: Non helik | Streaming Software Setup Crypt and patie the dreams key inits your dreaming Crypt and patie the dreams key inits your dreaming Stream Key The member by valid and obtained. One you for the The member by valid and obtained. One you for the |
| Stream Setup | Advanced Settings ~ |
| III Dashboard | Video |
| Settings v | िः Cannet internet is go he |
| Back Di Go Live | |

4. Please select "Advanced Settings", and then you can see the "Server URL". You need the "Server URL" and the "Stream Key" which are on the page for live-streaming videos on the Facebook page.

| Q. Search Facebook | | ŵ & | ••• | | 5 ⁹⁹ | | ۵ | H |
|---|-----|--|---|----------|---|--------------|---|---|
| Create Live Video | ? | Select a video source 🔞 | | | Add live video details | | | |
| O Connect video source | 1/3 | 0 | 0 | | Share to story Your live video will also be added to your story. | | | |
| Complete post details | | Webcam | Streaming Software | | Title (optional) | | | |
| J Go iive | | Streaming Software Setu Copy and paste the strea | | | Description | | | |
| 🛞 Host - Your Profile | | software. | | | | * 9 😉 | | |
| Choose where to post Post on timeline | • | FB-10208902208590202-0 | | Сору | | | | |
| a Only me | | This stream key is valid until you i preview the broadcast you have u | log out of Facebook. Once you st up to 5 hours to go live. | Ht to | | | | |
| Stream Setup | | Advanced Settings | | ^ | | | | |
| Dashboard | | Persistent Stream Key This can be neused every time you one live video at a time with your | u go live. You can only broadcast | | | | | |
| Settings Interactivity | ž | Backup Stream Once a backup stream is added to removed, it will not affect your sh | p your live video, it cannot be | | | | | |
| | | Server URL rtmps://live-api-s.facebool | k.com:443/rtmp/ | Сору | | | | |
| Back Di Go Live | | This may be referred to as "URL" | or "Address" in your streaming s | oftware. | | | | |

5. Please click the "Copy" buttons which are located next to the "Server URL" and "Stream Key" columns respectively. After that, please paste them to the "First Stream MRL" column in the "Network" option of the PTC-300 web UI.

| Q. Search Facebook | | ŵ ²⁸ | 9 9 | | G ⁹⁹ | | (| • • |
|--|---|--|---|------|---|-------------------|----------|---------|
| Create Live Video ? | | Select a video source @ | | | Add live video details Share to story Your live video will also be added to your story. | ۵ | | |
| Connect video source Complete post details Go live | • | Webcam | Streaming Software | | Title (optional) | | | |
| Host - Your Profile | | Streaming Software Setup Copy and paste the stream key software. | y into your streaming | | Description | ः २ २ २ | | |
| Choose where to post Post on timeline | | Stream Key F8-10208902208590202-0-AbwF This stream key is valid until you log out preview the broadcast you have up to 51 | of Facebook. Once you start to | Сору | | | | |
| Stream Setup | | Advanced Settings | | ^ | | | | |
| III Dashboard | | Persistent Stream Key This can be reused every time you go live one live video at a time with your persist | ve. You can only broadcast (tant stream key. | 3 | | | | |
| > Interactivity ~ | | Backup Stream Once a backup stream is added to your if removed, it will not affect your stream if Server URL | live video, it cannot be you choose not to use it. | | | | | |
| Back DI Go Live | | rtmps://live-api-s.facebook.com This may be referred to as "URL" or "Add | | Сору | | | | |

| datavideo | Lan Settings | |
|--------------------|----------------------|--|
| | IP Configuration Typ | |
| | IP Address: | 192. 168. 100. 88 |
| Live | Subnet Mask: | 255. 255. 255. 0 |
| Video | Gateway: | 192. 168. 100. 1 |
| | DNS Address: | 192. 168. 100. 1 |
| Image | MAC Address: | 00 : 07 : 36 : 0B : 40 : 3A |
| Audio | | Apply Cancel |
| System | | Appry Galicer |
| Network | Port Settings | (00) |
| Information | HTTP Port number: | 80 (80) |
| | RTSP Port: | 554 (554) |
| | PTZ Port: | 5678 (5678) |
| | UDP Port: | 1259 (1259) |
| | Sony Visca: | 52381 |
| | SRT Settings | |
| | SRT: | ● On ● Off |
| Zoom In Zoom Out | SRT Port: | 4578 |
| | SRT Encry: | Off v |
| Focus In Focus Out | SRT Password: | 1234567891 (SRT Password length greater than 9 bits) |
| Pan Speed 10 🗸 | Control Protocol | |
| Tilt Speed 10 🗸 | Settings | |
| Zoom Speed 5 🗸 | Pelco-D Address: | 0 (0~254) |
| Focus Speed 5 🗸 | Pelco-P Address: | 0 (0 [~] 31) |
| | RTMP(S) Settings | |
| Set Call | First stream: | 🔍 On 🔍 Off 🔤 Video 🗳 Audio |
| Preset (0~254) | MRL: | rtmps://live-api-s.facebook.com:443/rtmp/FB-10208975216335350-0-AbwXXLPFGINvAx5g |
| Preset (0~254) | Second stream: | 🔍 On 💿 Off 📃 Video 💷 Audio |
| PTZ 🗸 Back | MRL: | rtmp://192.168.100.138/live/stream1 |
| | RTSP Settings | |

Note: Please make sure that the "ON" is selected for the First Stream MRL . Moreover, please make sure that the "Video" and "Audio" checkboxes are checked.

6. Please click the "Apply" button

| ADD | lv |
|-----|----|
| 140 | |

7. Please click the "Reboot" button in the "System" option to reboot the PTC-300.

| data video | <mark>Initialize</mark> Reboot: factory default: | Reboot Apply | |
|------------------------|--|-----------------|---------|
| Live | User | | |
| Video | username: | admin | |
| Image | Passwd: | ••••• | |
| Audio | Guest: | guest | |
| System | Passwd: | | |
| Network Information | | Арр I у | Cance I |

| 192.168.50.30 | | | |
|---|---|----|--------|
| the ipcam will be rebooted. Are you sure? | _ | | |
| | Γ | ОК | Cancel |

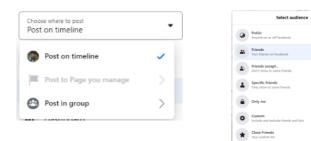
8. After the PTC-300 is rebooted, you can see the real-time preview which is shot by the PTC-300 camera from the "Video" option of the Facebook Live page.

| Q. Search Facebook | | r 😤 🕐 🖶 | 5 | |
|-------------------------|----|--|--|--|
| Create Live Video | ? | Select a video source () | Add live video details Share to story Tour live video self atm to added to your story. | |
| Go live | | Streaming Software Setup Streaming Software Setup Copy and paste the stream key into your streaming offware. Stream Key | Description | |
| Bott on timeline | • | 18-10209910208930020-4-Asserbgaketannenkaan Cryp The inserse lage a wind a cut para lage and of Particess Ones you date to preview the installant you have also to 3 have to go its Advanced Settings | | |
| Dashboard O Settings | u: | Video | | |
| 3. Interactivity | • | | | |
| Back D Gellee | | Expand Video | | |

9. Please set related settings including "Choose where to post" and "Select audience". After that, please press the "Go Live" button for live-streaming the real-time image which is shot by the PTC-300 immediately.

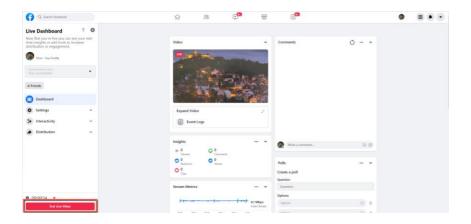
×

•



| Q. Search Facebook | | r 28 e ^o 8 | 59 | | • |
|--|---|---|--|--|---|
| Create Live Video ? 2/3 Connect video source Complete post details Complete post details | D | Select a video source | Add live video details Share to story Too Ise sideo will also be added to your story. The (optional) | | |
| Genter | | Streaming Software Setup: Cay may ask the stream key into your streaming subjects. Stream Key The subject setup is the stream of the strea | Decoption | | |
| Dashbard Settings v Intractivity | | Vde | | | |

10. And then you can see that the live-streaming is done successfully. If you want to stop the live-streaming, please click the "End Live Video" button for stopping the live-streaming immediately.

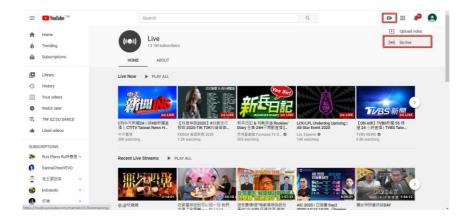


13. How to Stream to Youtube

Please see following steps for realizing how to stream to Youtube streaming platform.

1. Please go to Youtube website $\underline{www.youtube.com}$ and then click

"Create->Go Live".



2. Users will enter "Youtube Live Control Room" page, please click the "START" button from the "Right Now" option.

| = | 🕨 Studio | (6) |
|-------|----------|--|
| ((+)) | | |
| ۵ | | Schedule your stream sheed of time and let |
| ۵ | | bit development of the second se |
| | | Welcome to the new YouTube Live Control Room |
| | | When do you want to go live? |
| | | Right now |
| | | (e) |
| | | Later date |
| | | Schedule a smars for a later time You can even one set to pahead of time Laters more |
| | | |
| | | |
| | | |

3. Please click "Go" button from the "Streaming Software" option.

4. Users will see the main page of the "Youtube Studio". Please click the "EDIT" button for setting detail information of your streaming activity. After you finish filling out those information, please click the "SAVE" button.

| = | Studio | | | | | | A 🗢 K |
|-----------|--|-----------------------------|--|--|--------|------|--------|
| (**) © | Conned streaming Viewers will be able to find y STREAM SE | our stream once you go live | Tale Test Category Education Privacy © Public Viewers watting 0 0 | skes D | | | EDIT |
| | Excellent connection | | | | | | |
| | STREAM SETTINGS AN Stream key Beleat stream key Default stream key (Variabi Stream key (saste in exceder) Stream fill Stream fill Stream fill Stadue areas fills | & RESET | | Additional settings Enable DVR 360° video Anter Anter None — — | | • | |
| P | rtmp://b.rtmp.youtube.com | n/live2?backup=1 | COPY | Closed captions | | • | |
| | | | | Deflet fan oerlen oar de de | | | |
| = | ► Studio | | | tistist European laurene staaren oo de | | | * \$ K |
| ((*)) | | dit settings | _ | talistike eesten oor sterre ood | | | |
| | Ed | dit settings | Title (required | 9 ® | | T L | ент |
| | Ed | | Title (required Test | 9 Q | | | |
| | Ed Det Connect streem | bils | Test Description (| | | | |
| | Ed Det Connect stream Line Viewers will be able to fi | bils | Test Description (| | | | |
| | Connect dream Veners all be able to STREAM | bils | Test Description (| | | | |
| | Connect stress Verseen will be also to A STREAM | bils | Test Description (This is a ter | | | | |
| | EC Connect stream Ververn with te calls to 5 STREAM Excellent connect STREAM SETTINGS STREAM SETTINGS Stream Key Default stream key (Var | bils | Test Description (This is a ter Visitsity @ Public | S at streaming video | | | |
| | Consci stree Verens with a calle to 1 STREAM Consci stree STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS | bils | Test Description (This is a ter Vistulity Public Made for | | | | |
| | Connect stream Connect stream Vecess all to ado to to CTECAN CECEMENT Connect STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS STREAM SETTINGS | bils | Test Description (This is a ter Visitsity @ Public | S at streaming video | CANCEL | SAVE | |

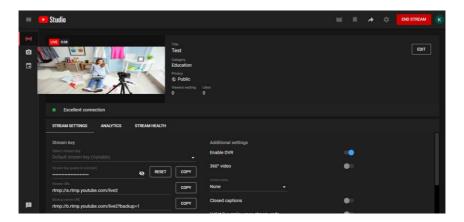
5. Users can see the Stream Key and Stream URL that are provided by the Youtube streaming platform. Please copy the stream key and stream URL and then paste them into the "First Stream MRL" within the "Network" option of the PTC-300 Web UI. Please click "On" and please check the checkboxes of "Audio" and "Video".

| = | ► S | Studio | | | | | | | | | * | ۵ | к |
|--------|----------------------|---------------|----------------------------------|----------------|------------------|--|------------------|---------|---|--|---|-----|---|
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | _ | |
| Ø | | | | | | Test | | | | | E | DIT | |
| | | | | | | | | | | | | _ | |
| Ö | | | onnect streaming software | to go live | | Education | | | | | | | |
| | | Viewers w | Il be able to find your strea | m once you go | lve | | | | | | | | |
| | | | | | | © Public | | | | | | | |
| | | | | | | | Likes | | | | | | |
| | | | | | | | 0 | | | | | | |
| | | Exceller | at compation | | | | | | | | | | |
| | | Exceller | nt connection | | | | | | | | | | |
| | | STREAM SETTI | INGS ANALYTIC | S STR | EAM HEALTH | | | | | | | | |
| | | Stream key | | | | | Additional s | ettings | | | | | |
| | | | | | | | Enable DVR | | | | | | Π |
| | | | n key (Variable) | | | | Chable DVR | | | | | | |
| | | | | | | | 360° video | | | | | | |
| | | | | ĕ | RESET | г сору | | | | | | | |
| | | | | | | | Added delay | | | | | | |
| | | rtmp://a.rtmp | .youtube.com/live2 | | | COPY | None | | | | | | |
| | | | | | | | Closed capt | ions | | | | | |
| | | rtmp://b.rtmp | .youtube.com/live2 | backup=1 | | COPY | ensed cupt | | | | | | |
| da | ła vi | ideo | Lan Sottings IP Configuration | Type: | | | v | | | | | | |
| | | | IP Address: | | | 92. 168. 2. 100 | _ | | | | | | |
| | Live | | Subnet Mask: Gateway: | | | 55. 255. 255. 0 92. 168. 2. 1 | _ | | | | | | |
| | Video | | DNS Address: | | | 92. 168. 2. 1 | _ | | | | | | |
| | Audio | | MAC Address: | | | 4 : ED : 8E : AB | : 18 : 06 | | | | | | |
| | Syste | | | | Apply | Cancel | | | | | | | |
| | Networ | | Port Settings | | | | | | | | | | |
| | nformat | tion | HTTP Port number: RTSP Port: | | | | | | | | | | |
| | | | RISP Port: PTZ Port: | 554 (55 | | | | | | | | | |
| | | | UDP Port: | | 159) | | | | | | | | |
| - 6 | 00 | | Sony Viscar | 52381 | | | | | | | | | |
| | Ø | | SRT Settings | | | | | | | | | | |
| Zoo | m In Z | oom Out | SRT: SRT Port: | 0 0n • 4578 | 011 | | | | | | | | |
| | | ocus Out | SRT Enery: | 0ff V | | | | | | | | | |
| | an Speed | | SRT Password: | 1234567891 | | (SRT Password lengt | th greater than | 9 bits) | | | | | |
| | It Speed | 10 🗸 | Control Protocol Settings | | | | | | | | | | |
| | om Speed us Speed | | Pelco-D Address: | 0 (0" | 254) | | | | | | | | |
| | | | Pelco-P Address: | | 31) | | | | | | | | |
| S | et | Call | RTMP(S) Settings | | | | | | _ | | | | |
| Preset | | (0~254) | First stream: MRL: | • On O | | Video 🗹 Audio /live2/gfay=3jva=70aw=1 | | | | | | | |
| PTZ | ~ | Back | Second stream: | | | Video Ca Audio | | | | | | | |
| 110 | | | MRL: | rtmp://128.1 | 199. 120. 200/st | ream3/Odaejr9nd5u1k3rm8 | 813ph97vjdg4es5m | | | | | | |
| | | | RTSP Settings RTSP Auth: | 0 On 💿 | 044 | | | | | | | | |
| | | | ONVIFSettings | | | | | | | | | | |
| | age E | nglish 👻 | | | | | | | | | | | |

6. Please click the "Apply" button.

Apply

7. Please reboot the PTC-300 camera and then users can see the streaming is started on the Youtube Live page. If you want to stop the live streaming, please click the "END STREAM" button for stopping the live streaming.



14. How to do the SRT Streaming by the vMix Software

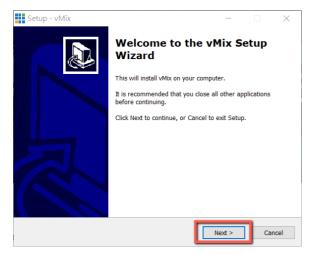
How to install the Vmix Software

Please install the vMix software according to following steps.

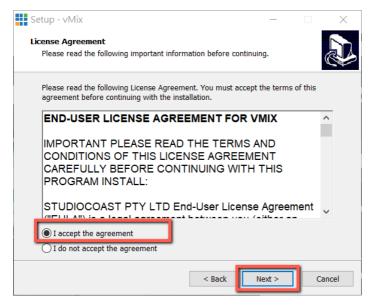
1. At first, please go to vMix official website and then download the vMix 60day free-trial. This section will use vMix free-trial as an example to demonstrate the operation steps. Please click the "DOWNLOAD FREE TRIAL" button for downloading.



- 2. Please double-click the vmix23.exe ^{wmix23}.
- 3. Please click the "Next" button.



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



5. Please click the "Next" button.

| Setup - vMix | _ | | × |
|--|------------|----------|-----------|
| Select Destination Location | | | |
| Where should vMix be installed? | | | <u>کہ</u> |
| Setup will install vMix into the following folder. | | | |
| To continue, click Next. If you would like to select a different f | older, cli | ck Brows | e. |
| C:\Program Files (x86)\vMix | | Brows | e |
| | | | |
| At least 841.3 MB of free disk space is required. | | | |
| < Back | Next > | | Cancel |

6. Please click the "Next" button.

| Setup - vMix - | - | × |
|---|------------------|-------|
| Select Start Menu Folder Where should Setup place the program's shortcuts? | | |
| Setup will create the program's shortcuts in the following S | itart Menu folde | r. |
| To continue, click Next. If you would like to select a different folder, | , click Browse. | |
| vMix | Browse | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| < Back Next | > Ca | incel |

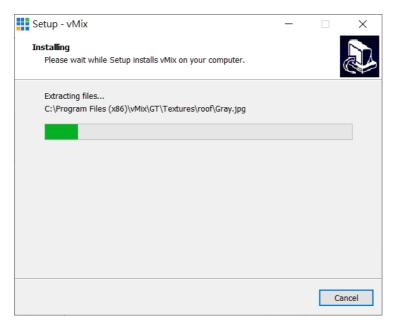
7. Please click the "Next" button.

| Setup - vMix | | | _ | | × |
|--|-----------|---------|------------|----------|------|
| Select Additional Tasks Which additional tasks should be performed? | | | | | |
| Select the additional tasks you would like Setup click Next. | to perfor | m while | installing | vMix, th | en |
| Additional icons: | | | | | |
| ✓ Create a desktop icon | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | < Back | Ne | xt > | Ca | ncel |

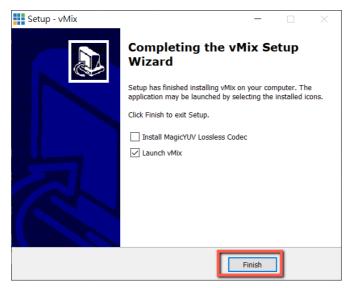
8. Please click the "Install" button.

| Setup - vMix | _ | | × |
|---|---------------|------------|----------|
| Select Additional Tasks Which additional tasks should be performed? | | | <u>F</u> |
| | | | |
| Select the additional tasks you would like Setup to perform wh click Next. | ile installin | g vMix, tl | hen |
| Additional icons: | | | |
| ✓ Create a desktop icon | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| < Back | Next > | с | ancel |

9. The installation will be started.



10. Please click the "Finish" button to finish the installation.



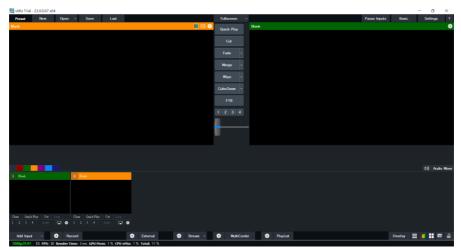
11. Please select "Register for a fully functional 60 Day Trial" to fill out your Email Address. After that, please click the "OK" button to open the vMix software.

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

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

| vMix Configuration | | |
|---|---------------------|--------------|
| | vMix | |
| Select a starting configuration for v customised later by clicking the Set | | n be |
| HD 1080 29.97p (1 | 920x1080, 29.97 fps | 5) ~ |
| | | |
| | | ок |

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



How to do the SRT Stream by Using the PTC-300Camera and

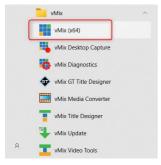
vMix Software

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.

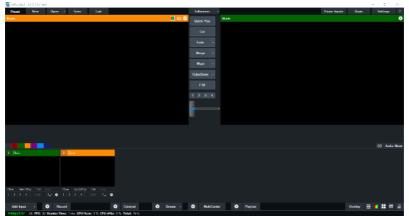
If the PTC-300 is set in Listener Mode

Note: Due to the fact that the PTC-300 supports SRT Listener Mode only currently. So, please set the Vmix in SRT Caller Mode.

1. At first, please click the "Vmix(x64)" from the Start Menu to open the Vmix software.



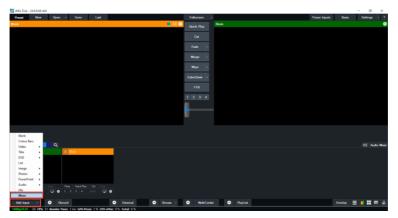
2. After that, you will see the Vmix main interface which is shown in the following diagram.



3. Please go back to the PTC-300 interface to make sure that the "SRT" option in the SRT Settings is "ON". Moreover, the default value of the "SRT Port" is "4578". The "SRT Encry" drop-down menu allows you to select your desired SRT Encryption way including AES-128, AES-192 and AES-256. The default value of the "SRT Encry" option is "Off". In this section, we will take AES-256 as an example. If you need to set an SRT password, please enter your desired SRT password in the "SRT Password" column, it needs a 10-digit or above number. The default SRT Password is "1234567891". After the setting for the SRT Password is finished, please press the "Apply" button which is located on the bottom side of the Web UI to apply the new setting.

| datavideo | Lan Settings | | Fixed IP Address | |
|--------------------|-----------------------------------|------------------------|---|---|
| | IP Configuration T IP Address: | ype: | 192, 168, 100, 88 | |
| | Subnet Mask: | | 255. 255. 255. 0 | |
| Live | | | 192. 168. 100. 1 | |
| Video | Gateway: | | 192.168.100.1 | |
| Image | DNS Address: | | | |
| Audio | MAC Address: | | 00 : 07 : 36 : 08 : 40 : 3A | |
| System | | Apply | Cancel | |
| Network | Port Settings | | | |
| Information | HTTP Port number: | 80 (80) | | |
| | RTSP Port: | 554 (554) | | |
| | PTZ Port: | 5678 (5678) | | |
| 000 | UDP Port: | 1259 (1259) | | |
| | Sony Visca: | 52381 | | _ |
| | SRT Settings | | | 1 |
| | SRT: | 🖲 On 🔘 Off | | |
| Zoom In Zoom Out | SRT Port: | 4578 | | |
| Focus In Focus Out | SRT Encry: | AES-256 ~ | | |
| Pan Speed 10 🗸 | SRT Password: | 1234567891 | (SRT Password length greater than 9 bits) | J |
| Tilt Speed 10 🗸 | Control Protocol Settings | | | |
| Zoom Speed 5 🛩 | Pelco-D Address: | 0 (0~254) | | |
| Focus Speed 5 🗸 | Pelco-P Address: | 0 (0~31) | | |
| | RTMP(S) Settings | | | |
| Set Call | First stream: | 🔾 0n 💿 0ff | Video Audio | |
| Preset (0~254) | MRL : | rtmp://192.168.100.138 | /live/stream0 | |
| | Second stream: | ○ 0n ● 0ff | Video Audio | |
| PTZ V Back | MRL: | rtmp://192.168.100.138 | /live/stream1 | |
| | RTSP Settings | | | |
| | RTSP Auth: | 🔾 On 💿 Off | | |
| | ONVIFSettings | | | |
| | ONVIF: | 🔾 On 💿 Off | | |
| | ONVIF Auth: | 🔾 On 💿 Off | | |
| | Multicast | | | |

4. Please go back to the main interface of the Vmix software and then press the "Add Input" button. After that, please select the "More" option from the drop-up menu.



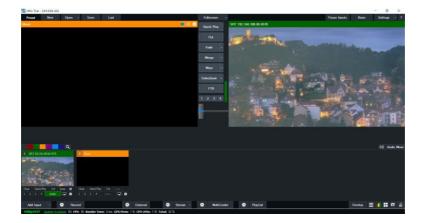
5. After the "Input Select" option is opened, please select the "Stream/SRT" option and then you can see the "Stream/SRT" interface which is shown in the following diagram.

| | put Select | | | | | | × |
|----------|--------------------------|-------------|---------------|-----------------|-------------------|----|--------|
| | Video | Stream Type | RISP over UDP | | | ~ | |
| | DAD | URL | | | | | |
| D | List | Buffer | | 300 millisecond | s Low Latency Mol | e | |
| | Camera | | | | | | |
| Ţ | NDI / Desktop Capture | | | | | | |
| °≵° ₽ | Stream / SRT | | | | | | |
| R | | | | | | | |
| | Image Sequence / Stinger | | | | | | |
| Û | ∀ateo Delay | | | | | | |
| R | lmage | | | | | | |
| | Photos | | | | | | |
| 里 | PowerPoint | | | | | | |
| | Colour | | | | | | |
| Ŧ | Autio | | | | | | |
| Ŧ | Audio Input | | | | | | |
| Т | Title / XAML | | | | | | |
| | Wirtoal Set | | | | | | |
| | Web Browser | | | | | | Clear |
| (A | Video Call | | | | | | |
| | | | | | Number 1 🗸 🗸 | ок | Cancel |

6. Please select the "SRT Caller" option from the "Stream Type" drop-down menu. After that, please enter the default static IP address "192.168.100.88" of the PTC-300into the "Hostname" column. Moreover, please enter the default SRT port number "4578", which is provided by PTC-300web UI's "SRT Port" column into the "Hostname" column. After that, please enter your SRT Password which is set in the PTC-300web UI into the "Passphrase" column. The default password is "1234567891". For the "Key Length", please select "32" from the drop-down menu. After all of the values are entered, please press the "OK" button.

| Inj | put Select | | | | | | × |
|-----|--------------------------|------------------------------------|----------------|--------------------------|--------------|-----------|-------------|
| D | Video | Stream Type | SRT (Caller) | | | \sim | |
| 0 | DYD | Hostname | 192.168.100.88 | Port | 4578 | | |
| D | List | Latency (ms) Decoder Delay (ms) | 200 | Passphrase Key Length | 1234567891 | Use Hardw | are Decoder |
| | Camera | Stream ID | | Key Lengu | 34 | · | |
| Ţ | NDI / Desktop Capture | 04000112 | | | | | |
| "A" | Stream / SR T | | | | | | |
| R | Instant Replay | | | | | | |
| | Image Sequence / Stinger | | | | | | |
| Û | Video Delay | | | | | | |
| | Image | | | | | | |
| | Photos | | | | | | |
| 孠 | PowerPoint | | | | | | |
| | Colour | | | | | | |
| Ĩ | Audio | | | | | | |
| Ē | Audio Input | | | | | | |
| Т | Title / XAML | | | | | | |
| • | Virtual Set | | | | | | |
| | Web Browser | | | | | | Clear |
| | ∀ideo Call | | | | | | |
| | | | | | Number 1 🗸 🗸 | ок | Cancel |

7. After that, you can see that the image which is shot by the PTC-300 is streamed to the vMix software by the SRT Listener Mode successfully.



15. 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-422 remote port to control PTC-300. Use an Ethernet cable to connect the external RS-422 controller to PTC-300 You can make your own cable using the pinout information provided in this chapter.

Remote Control Port



| RMC-180 Controller (RJ-45 Port) | | | | PTC-300 (RS-422 | | |
|------------------------------------|---|-----------------|----------|--|---|-----|
| GND | 1 | White/Orange | GND | White/Orange | 1 | GND |
| NC | 2 | Orange | | Orange | 2 | NC |
| ТХ- | 3 | White/Green | ├ | White/Green | 3 | RX- |
| RX- | 4 | Blue | ←─── | Blue | 4 | TX- |
| RX+ | 5 | White/Blue | ←─── | White/Blue | 5 | TX+ |
| TX+ | 6 | Green | ├ | Green | 6 | RX+ |
| NC | 7 | White/Brown | | White/Brown | 7 | NC |
| NC | 8 | Brown | | Brown | 8 | NC |
| | Ľ | 8 8 1/EXT | | 1 [[[[[]]]] []] []] []] []] | | |

The RS-422 pinouts are described below.

16. 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.

16.1 Firmware Update by the PTC-300 Firmware Update Tool

Requirements

- PTC-300 Unit
- PC/Laptop
- Latest firmware files
- Download from: <u>https://www.datavideo.com/product/PTC-300</u>
- Ethernet Cable

Procedure

1. At first, please confirm that the IP address of your laptop is set within the same LAN as the PTC-300 camera. Please use an Ethernet cable to connect from the RJ-45 Ethernet port of your laptop to the DVIP port which is on the rear panel of the PTC-300.

2. Please download the PTC-300 firmware

"VXxxD_Ax.D_Vx.x.xxx_xx.xM_yyyymmdd" and firmware update tool "upgrade vx.x" from Datavideo official website.

3. Please unzip the downloaded firmware and firmware update tool to the hard disk of your laptop.

4. Please double-click the firmwar3e update tool upgrade.exe 🕥 ^{upgrade}.

5. Users can see that the interface of the firmware update tool is shown as following diagram.

| | Upgrade | Config | Backup | Preview | | | |
|---------|---------|---------|--------|---------|-------------|---------|----------|
| Devices | : | | Inter | faceZ | 太網路:192.16 | 8.100.5 | • Search |
| No 🔺 IP | Address | NetMask | GateWa | y I | MAC Address | Uptime | Device |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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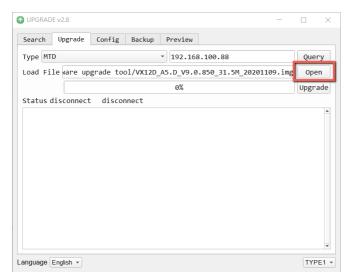
6. Please select the LAN IP address which is set by your laptop from the "Interface" drop-down menu.



7. Please select the "Upgrade" option and then users can see the interface which is shown as following diagram.

| Search | Upgrade | Config | Backup | Preview | | | | | |
|----------|------------|-----------|-----------|-----------|--------------------|-------|--------|--------|----------|
| Туре МТ | D | | | • 192.168 | 8.100 | .88 | | | Query |
| Load Fi | le vare up | grade too | ol/VX12D_ | A5.D_V9.0 | 0.850 ₋ | 31.5M | 202011 | 09.img | Open |
| | | | | 0% | | | | | Upgrade |
| status d | lisconnect | discor | nnect | | | | | | |
| status u | | | | | | | | | |
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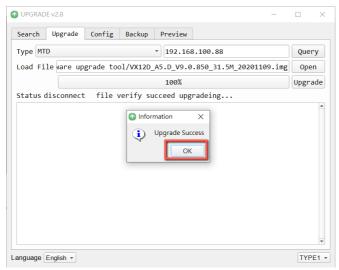
8. Please click the "**Open**" button and select the downloaded latest firmware.



9. Please click the "Upgrade" button for starting the firmware upgrading. At this time, the external connected monitor will show the wording" **Upgrading!** Please Wait! "

| Search | Upgrade | Config | Backup | Preview | | | | |
|----------|------------|-----------|-----------|------------|-----------|-----------|--------|--------|
| Type MT | D | | | • 192.16 | 8.100.88 | | | Query |
| Load Fi | le vare up | grade too | ol/VX12D | _A5.D_V9.0 | 0.850_31. | 5M_202011 | 09.img | Open |
| | | | | 98% | | | | Upgrad |
| Status d | disconnect | file v | verify su | icceed upg | gradeing. | | | |
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10. After the firmware upgrading is finished, the PTC-300 camera will reboot automatically, please click the "**OK**" button and then the firmware upgrade procedure is completed.



16.2 Firmware Update by the USB Flash Drive

Requirements

- PTC-300 Unit
- USB 2.0 or USB3.x USB Flash Drive x 1
- Laptop
- Latest firmware files
 Download from: <u>https://www.datavideo.com/product/PTC-300</u>
- Ethernet Cable

Procedure

1. At first, please format your USB flash drive in FAT32 format.

2. Please download the latest PTC-300 firmware file from Datavideo official website's PTC-300 product page <u>https://www.datavideo.com/product/PTC-300</u> and then save it to the hard disk of your laptop.

3. Please unzip the downloaded firmware file and then save the latest firmware file "VX12D_A5.D_Vx.x.xxx_31.5M_yyyymmdd.img" into the root directory of your USB flash drive.

VX12D_A5.D_V9.0.897_31.5M_20210312.img

4. Please insert your USB flash drive with the latest firmware file into the "F/W UPGRADE ONLY" USB interface which is located on the rear panel of the PTC-300NDI.



5. Please press the "MENU" button from the PTC-300 remote controller to open the OSD menu.



6. Please press the "down-arrow" button to move to the "Setup" option in the OSD menu.

7. After the "Setup" option is selected, please press the "Home" button from the PTC-300 remote controller to enter the "Setup" page.

MENU Exposure Color Image P/T/ZNoise Reduction Setup Communication Setup Infomation Restore Default [Home] Enter [Menu] Exit

8. Please press the "down-arrow" button from the PTC-300 remote controller to move to the "USB UPGRADE" option in the "Setup" page.

| SETUP | |
|-------------------------|----------|
| Language EN | - |
| HDMI RGB Mode HDMI | |
| Video Format 1080P59.94 | |
| Audio Select LINE IN | |
| SDI-3G Mode LEVEL-A | |
| ▶USB UPGRADE Off | |
| VISCA ID BY DIP | |
| Audio Channel Stereo | |
| | - |
| ▲▼ Select Item | |
| ♦ Change Value | <u>.</u> |
| [Menu] Back | 1 |
| | 1 |



9. Please press the "left-arrow" or "right-arrow" button / / / to set the "USB UPGRADE" option as "ON". After that, please press the "Home" button

HOME

from the PTC-300 remote controller for confirmation and then the PTC-300 will start the firmware update procedure automatically. During the firmware update procedure, the warning "Updating! Please Wait!" will be shown by the external monitor. When the firmware update procedure is finished, the PTC-300 will reboot automatically. The whole firmware update procedure is done successfully.

| SETUP Language EN HDMI RGB Mode HDMI Video Format 1080P59.94 Audio Select LINE IN SDI-3G Mode LEVEL-A |
|--|
| |
| HDMI RGB Mode HDMI |
| Video Format 1080P59.94 |
| Audio Select LINE IN |
| SDI-3G Mode LEVEL-A |
| ▶USB UPGRADE On |
| VISCA ID By DIP |
| Audio Channel Stereo |
| AV Select Item |
| ◆ Change Value |
| [Menu] Back |
| [Home] OK |
| |
| |

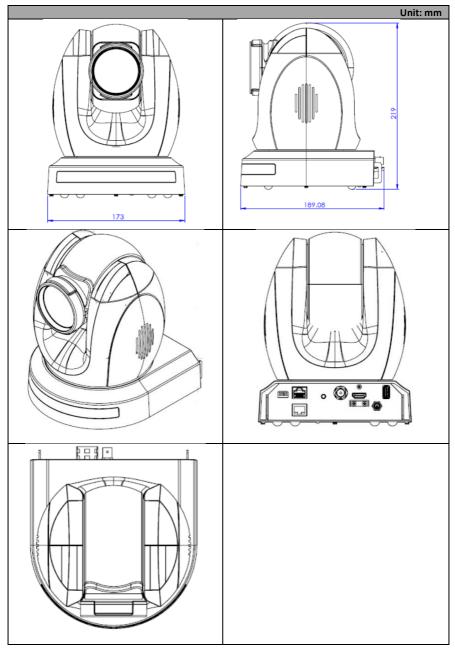
17. Frequently-Asked Questions

This section describes problems that you may encounter while using PTC-300. If you have any questions, please refer to related sections and follow all suggested solutions. If problem still exists, please contact your distributor or the service center.

| No. | Problems | Solutions |
|-----|--|---|
| 1. | What are important points for product maintenance? | 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. After you reboot the camera, please check that whether the camera can do the self-test normally or not. Please check that the camera is connected correctly to the external connected monitor. |
| 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. | There is no image by using the IE browser. | Please go the the VLC website (<u>http://www.videolan.org/vlc</u>) to download the 32-bit VLC media player. After it is installed, the screen will be shown normally when connecting to the camera. |

| 5. | The camera can not be accessed by using the IE browser. | Use PC to access the internet to see whether it can operate normally or not. At first, please solve the network failure that is caused by the computer virus until the PC and the camera can ping each other. Please remove the Ethernet cable and then connect the PC to the camera directly. After that, please reset the IP address of the PC. |
|----|---|--|
| 6. | 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 closed. The remote control cannot be used if the OSD menu is opened. |
| 7. | The serial port is not working properly. | Make sure your baud rate and device addresses are correct. Check your device working mode. Make sure the OSD menu is closed. The remote control cannot be used if the OSD menu is opened. |
| 8. | Can not login to the Web control interface. | Please check your Ethernet cable. Please check your Ethernet setting such as the IP address. |

18. Dimensions



19. Specifications

| | Camera Parameters |
|------------------------------|--|
| Product Name | 4K PTZ camera |
| | HDMI: 2160p 60/59.94/50/30/29.97/25 1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50 |
| Video Format | SDI: 1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50 (2160p 60/59.94/50 YUV 4:2:0 only) |
| Image Sensor | 1/1.8" CMOS Sensor |
| Effective Pixels(approx.) | 8.42 Mega Pixels |
| S/N Ratio | ≥55dB |
| Min. Illumination | 0.5 Lux @ (F1.8, AGC ON) |
| Electronic Shutter | 1/30s ~ 1/10000s |
| Zoom Ratio | 20x Optical Zoom, 16x Digital Zoom |
| Gamma Control | Off / Normal |
| Iris Control | Auto / Manual |
| Digital Noise Reductions | 2D/3D |
| HDR | твс |
| On-Screen Display (OSD) | English、Traditional Chinese、Simplified Chinese、 Russian |
| White Balance | Auto/Indoor/Outdoor/OnePush/Manual/VAR |
| AGC / Gain Control | Yes |
| Mirror / Flip Image | Yes |

| Focus Mode | Auto / Manual |
|--|--|
| Panning / Tilting | Pan: 300 degrees, |
| Range | Tilt: +130 to -15 degrees |
| Panning / Tilting | Pan: 0.876°/s~43°/s |
| Speed | Tilt: 0.693°/s ~21.32°/s |
| Preset | 255 Positions |
| Focal Length | 20x, f=6.7 (wide) to 125 (tele) mm F1.58 to F3.95 |
| Field of View (Horizontal, Wide) | 60° |
| Image Compensation | Backlight Compensation |
| | Input /Output Interfaces |
| | HDMI 2.0 x1 |
| Video Output | 3G-SDI x1 |
| | 10/100/1000M RJ45 x1 |
| Audio Input (MIC/Line Input) | 3.5mm x 1 |
| Tally LED | Yes |
| | |
| Control Protocol | Pelco-D, Pelco-P, VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP |
| | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, |
| Remote Control | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI |
| Remote Control Interface and | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 |
| Remote Control Interface and Transmit Distance | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI |
| Remote Control Interface and | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 |
| Remote Control Interface and Transmit Distance Video Compression | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression Format Audio Bitrate | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG AAC |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression Format | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG AAC 96Kbps, 128Kbps, 256Kbps TCP/IP, HTTP, RTSP, RTMP(S), SRT, ONVIF, DHCP, Multicast |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression Format Audio Bitrate | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG AAC 96Kbps, 128Kbps, 256Kbps TCP/IP, HTTP, RTSP, RTMP(S), SRT, ONVIF, DHCP, Multicast 3840x2160 |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression Format Audio Bitrate | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG AAC 96Kbps, 128Kbps, 256Kbps TCP/IP, HTTP, RTSP, RTMP(S), SRT, ONVIF, DHCP, Multicast 3840x2160 1920x1080 |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression Format Audio Bitrate Streaming Protocols | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG AAC 96Kbps, 128Kbps, 256Kbps TCP/IP, HTTP, RTSP, RTMP(S), SRT, ONVIF, DHCP, Multicast 3840x2160 1920x1080 1280x720 |
| Remote Control Interface and Transmit Distance Video Compression Format Audio Compression Format Audio Bitrate Streaming Protocols First Stream | VISCA, VISCA over IP DHCP, RTSP, RTMP (IP Cam), RTMPS, DVIP IR Web UI RS-422 DVIP H.264/H.265/MJPEG AAC 96Kbps, 128Kbps, 256Kbps TCP/IP, HTTP, RTSP, RTMP(S), SRT, ONVIF, DHCP, Multicast 3840x2160 1920x1080 |

| | 640x480 |
|--------------------------|---|
| | 640x360 |
| | 1280x720 |
| | 1024x576 |
| | 720x576 (50Hz) |
| Second Stream | 720x480 (60Hz) |
| Supported Resolution | 720x408 |
| | 640x360 |
| | 480x270 |
| | 320x240 |
| Video Bitrate | 32Kbps ~ 50Mbps (Single Stream) |
| Video Bitrate Mode | VBR, CBR |
| Encoding Frame rate | 50Hz: 1-50fps |
| | 60Hz: 1-60fps |
| POE | IEEE 802.3at |
| | Others |
| F/W Update | By web UI or USB 2.0 port |
| IR Control | Yes |
| Camera Control Unit | RMC-180 series/RMC-300 series/PTZ View Assist APP |
| Tripod Mount | 1/4-20 UNC |
| Optional Accessories | WM-1/ WM-10/WM-11 |
| Color | Dark Blue/White |
| Dimensions | 173 (W) x 219 (H) x 189.08 (D) mm |
| Weight | 2.6kg |
| Operating Temp. Range | 0~40 °C |
| Power | DC 12V 12W |

Note

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.

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