

DVDO



DVDO-Camera-Ctl-2

IP PTZ Camera Controller with Joystick

User Manual

Version v1.0

Thank you for purchasing DVDO-Camera-Ctl-2

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference. reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

1. Product Overview

1.1 Description

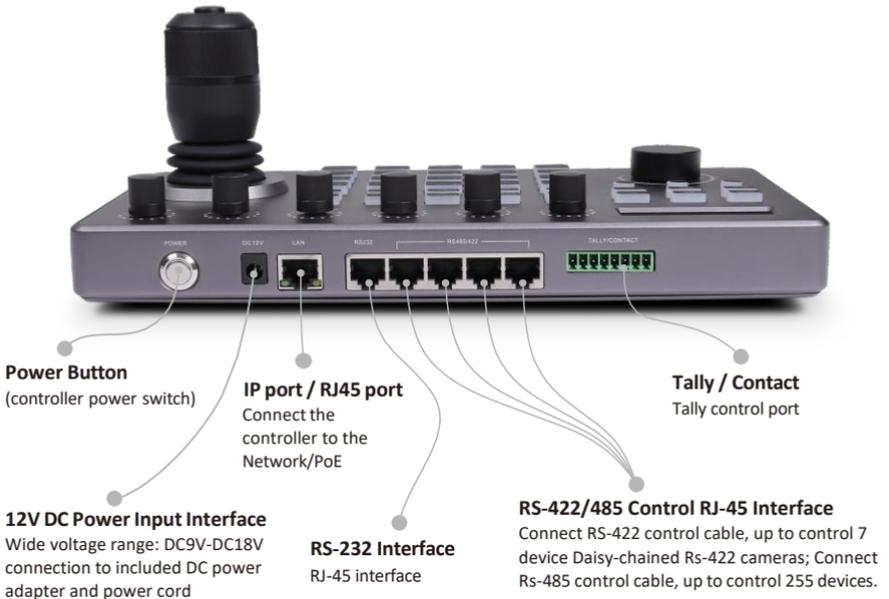
DVDO-Camera-Ctl-2 is a PTZ camera controller with a joystick, an LCD screen as well as multiple knobs and backlit buttons. It can control up to 255 PTZ cameras over IP and/or serial (hybrid). Controls include Pan, Tilt, Zoom, PTZ speed, Focus, Iris, White Balance and R/B color correction. The web-based GUI allows easy set up and configuration of the cameras. DVDO-Camera-Ctl-2 can be powered either by its external power supply or over ethernet (PoE).

1.2 Features

- Controls up to 255 PTZ cameras over IP and/or serial (RS232/RS422/RS485 within the same network
- Supports NDI, ONVIF, VISCA & Pelco protocols and auto-discovery
- 4D joystick (up/down, left/right, zoom in/out, confirm) with variable speed for Pan, Tilt and Zoom controls
- Additional circular knob for zoom adjustment
- 7 buttons for direct camera selections
- Other controls include PTZ speed, Focus, Iris, White Balance and R/B color correction
- Web-based GUI for easy setup and configuration
- Tally control function
- Two power options: PoE or external 12V power supply

2. Product Interface Description

2.1 Interface Description



3. Button Function Description



3.1 Functional Button Description

Camera Function Section

HOME:	Home	MENU ON:	Menu On
AUTO EXPOSURE:	Auto Exposure	MENU OFF:	Menu Off
EXPOSURE CYCLE:	Exposure adjust Auto	MENU ENTER:	Menu Confirm
AUTO WHITE BALANCE:	white balance White	MENU BACK:	Menu Back
WHITE BALANCE CYCLE:	balance adjust	NEAR:	Focus +
BACKLIGHT ON:	Backlight on	FAR:	Focus -
BACKLIGHT OFF:	Backlight off	AUTOFOCUS:	Auto focus

Knob Function Section

IRIS/SHUTTER:	Aperture/Shutter adjust
R GAIN:	Red gain + -
B GAIN:	Blue gain + -
FOCUSSPEED:	Focus speed adjust
PRESETSPEED:	Preset speed adjust PT
ZOOM SPEED:	speed adjust Zoom speed
JOG KNOB:	adjust Zoom + -

Controller Functional Button

SETUP:	Set controller native settings
CALL PRESET:	Call preset
CAM ID:	Camera address
ESC:	Exit
ENTER:	Confirm
NUMBER0-9	Number Key, IP, Preset, etc

Shortcut Function Section

CAM1-7: 1-7 Cameras Switch Button

F1-F2: Custom hexadecimal command buttons

Keyboard Setup	Description	
1. Add IP Device	Can add: Onvif, Visca over IP (TCP / UDP)	
2. Add Analog Device	Can add: Visca, Pelco (D / P)	
3. Switch Controller Mode	Controller enter into Network mode / Analog mode	
4. Device List	Display the added camera information	
5. Type: Static / Dynamic	Network Type	Switch the joystick left and right, [Enter] confirm
	DHCP	Dynamic allocation according to the switch
	Static	Need to set in IP, gateway, subnet mask
6. System Language: EN/CH	Switch the joystick left and right, [Enter] button to confirm	
7. Button Touch-tone	Switch the joystick left and right, [Enter] button to confirm	
8. Reset	Press [Enter] twice to enter recovery, [Esc] to cancel	
9. System Infomation	Display version number, local network parameters	
10. VISCA Return code Enable / Disable	Switch the joystick left and right, [Enter] button to confirm	

3.2 Description of Rotary Joystick

Operate	Output	Operate	Output	Operate	Output
	Up		Down		Left
Operate	Output	Operate	Output	Operate	Output
	Right		Zoom +		Zoom -

Joystick [Up, Down, Left, Right]: Control the PTZ to turn up, down, left and right.

Joystick [rotate left and right]: Rotate the joystick to zoom function, rotate right to zoom +, zoom

4. Controller Connection & Control Device

- > 255 Cameras respectively adopt RS485 Pelco protocol
- > 7 Cameras respectively provided by Visca via RS422 group
- > 255 Cameras adopt Visca Over IP protocol respectively
- > A total of 255 cameras are controlled by cross-protocol mixing

> Add Network Camera

- (1) Press the enter button to enter the cameras ID
- (2) Set to select IP Visca (Onvif, Sony Visca) protocol
- (3) Press [Enter] button to save (After input enter)
- (4) Enter the IP address of the camera
- (5) Enter port number
- (6) Enter camera username, password
- (7) IP Visca (Sony Visca) protocol does not need to input camera username, password

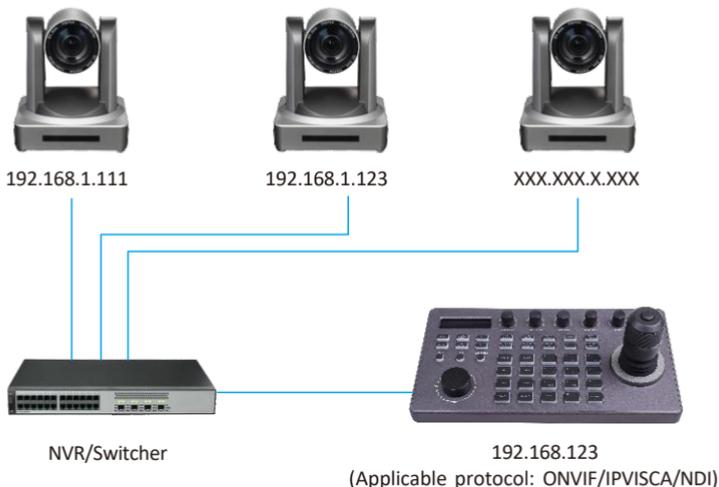
Port: IP control port
Sony Visca defaults to 52381
IP Visca defaults to 1259
ONVIF default to 2000 or 80

If you have multiple Visca Over IP cameras different manufactures, you may have to set different

> Network mode connection diagram

The controller and PTZ camera are connected in the same LAN, and the IP addresses are in the same network segment, such as: 192.168.1.123 and 192.168.1.111.

Belong to the same network segment; If not in the same LAN, you need to modify the IP address of the controller or camera at first, the default IP acquisition method of the controller is get it dynamically.

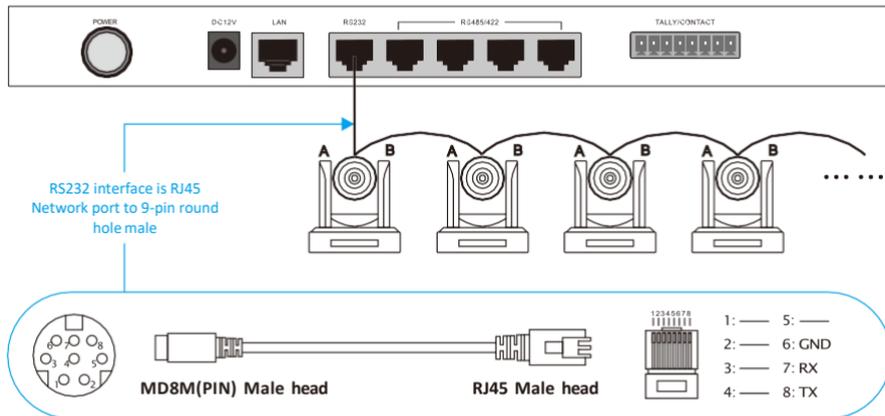


> Add Analog Camera

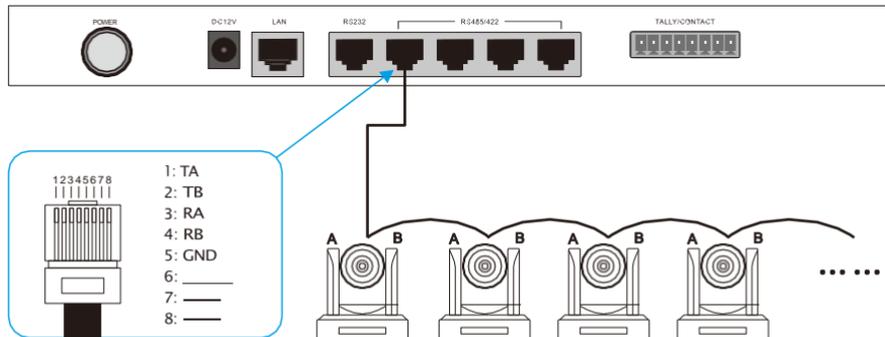
- (1) Press the confirm button to enter the camera ID, set to select the Visca (Pelco D/P) protocol, press the [Enter] button to save
- (2) Enter the camera address code, press [Enter] button to save
- (3) Input camera baud rate, press [Enter] button to save
- (4) Input serial port ID, press [Enter] button to save

> Analog Mode Connection Diagram

(1) Analog Mode RS232



(2) Analog Mode RS485/RS422



5. Network Configuration

5.1 First connection and login

The controller and PTZ camera are connected in the same LAN, and the IP addresses are in the same network segment, such as: 192.168.1.123 and 192.168.1.111. Belong to the same network segment; If not in the same LAN, you need to modify the IP address of the controller or camera at first, the default IP acquisition method of the controller is get it dynamically.

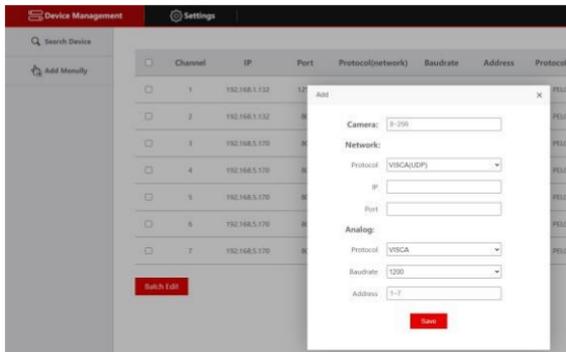


(2) After entering the device web UI, the page is displayed as shown below.

<input type="checkbox"/>	Channel	IP	Port	Protocol(network)	Baudrate	Address	Protocol(analog)	Operate
<input type="checkbox"/>	1	192.168.1.132	1259	VISCA(UDP)	9600	1	PELCO-D	
<input type="checkbox"/>	2	192.168.1.132	80	ONVIF	9600	2	PELCO-D	
<input type="checkbox"/>	3	192.168.5.170	80	ONVIF	9600	3	PELCO-D	
<input type="checkbox"/>	4	192.168.5.170	80	ONVIF	9600	4	PELCO-D	
<input type="checkbox"/>	5	192.168.5.170	80	ONVIF	9600	5	PELCO-D	

(3) After entering the homepage of the device, you can view the details of the device parameters and change them.

(4) Click the [] button to add and modify device parameters in the LAN, the page is displayed as follows.



(Enter device number, corresponding IP address, port number and username click save.)

Notice:

When entering the controller web and add device successfully is synchronized with controller, in the web page adds the device successfully then click the controller corresponding to the number to control the dome camera.

5.2 Web UI Network Setting

The LAN settings can modify the IP acquisition method and port parameters of the device, as shown in the picture below:

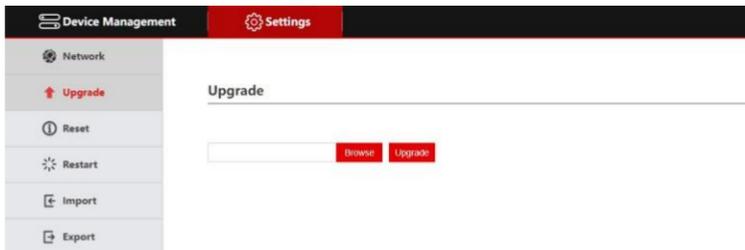


Static address (Static): When the user needs to set network segment by himself, change the network type to a static address, and fill in the network segment information to be modified.

Dynamic address (DHCP) (default acquisition method): The controller will automatically request an IP address from the router. After the request is successful, it will be displayed on the display screen of the controller. The displayed format is "Local IP: XXX,XXX,XXX,XXX".

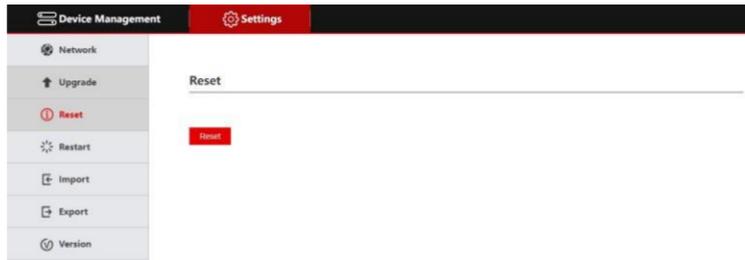
5.3 System Upgrade

The upgrade function is used as a maintenance and update controller function. After entering the upgrade page, select the correct upgrade file and click [Start]. Note: Do not perform any operations on the device the upgrade process, and do not cut off the power or network!



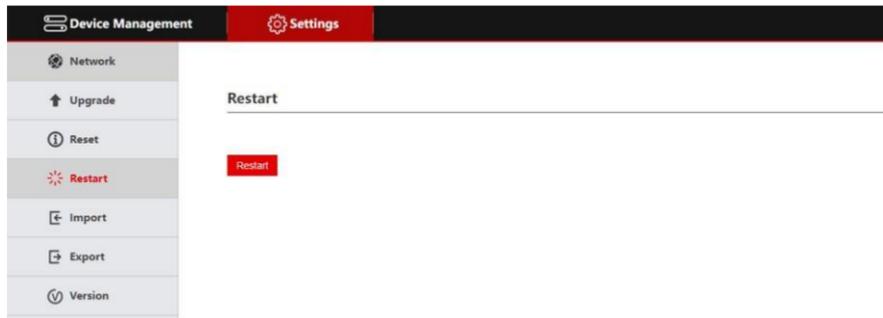
5.4 System Reset

When clicking Device Reset, the controller will delete the configuration information and clear the added devices.



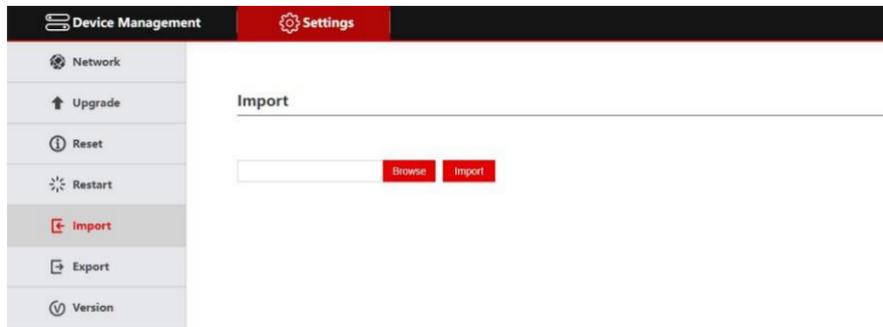
5.5 Restart

When the device has been running for a long time and needs to be restarted for maintenance, click Restart to achieve the purpose of restarting maintenance.



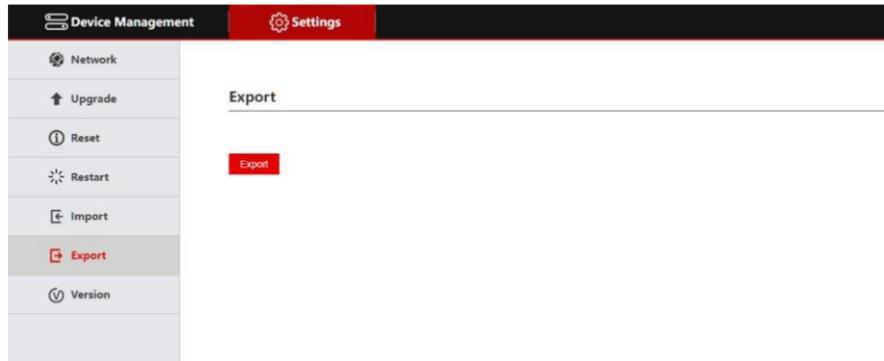
5.6 Import Configuration

Import the device information of the previous controller (for example, when adding multiple devices to the previous controller, export the file type, and use it as an import to another device when adding a new controller).



5.7 Export information

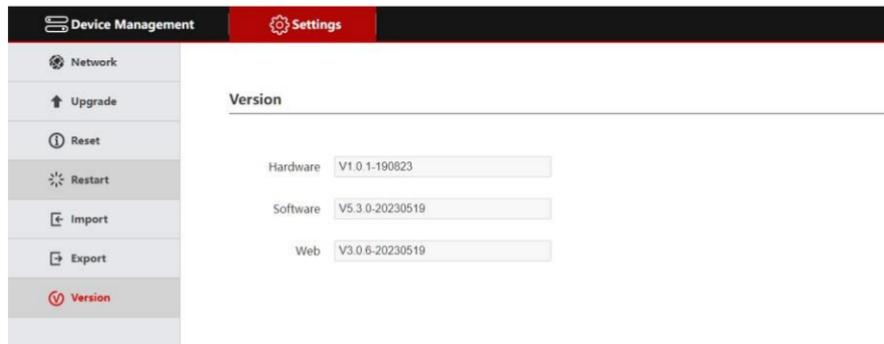
Export information about adding multiple devices to the current controller, which can be exported to other controller devices for use.



The screenshot shows the 'Settings' page under 'Device Management'. The left sidebar contains a list of options: Network, Upgrade, Reset, Restart, Import, Export, and Version. The 'Export' option is highlighted in red. The main content area is titled 'Export' and contains a single red button labeled 'Export'.

5.8 Version Information

Display the hardware and software information of the current controller.



The screenshot shows the 'Settings' page under 'Device Management'. The left sidebar contains a list of options: Network, Upgrade, Reset, Restart, Import, Export, and Version. The 'Version' option is highlighted in red. The main content area is titled 'Version' and displays three fields: Hardware (V1.0.1-190823), Software (V5.3.0-20230519), and Web (V3.0.6-20230519).

6. FAQs

1. When the screen displays "Connection Failed", please check whether the device corresponding to this IP is connected normally in the LAN.
2. When the screen displays "Username password error", please check whether the username and password of the added device are correct.
3. When adding another brand of equipment using the ONVIF protocol fails, check whether the camera has enabled the ONVIF protocol of the device.

- NOTE:**
1. Adding devices is manual.
 2. Enter the correct port number and device connection protocol in Add Device.

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