IC REALTIME

HD-AVS Mid-Sized PTZ Camera

Quick Start Guide

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IMPORTANT SAFEGUARDS AND WARNINGS

Electrical Safety

All installation and operation here should conform to your local electrical safety codes. The power shall conform to the requirement in the SELV (Safety Extra Low Voltage) and the Limited power source is rated DC24V/2.5A ± 25%. We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation. We are not liable for any problems caused by unauthorized modification or attempted repair.

Transportation Security

Care must be given to avoid heavy stress, violent vibration or water damage during transportation, storage and installation.

Installation

Do not apply power to the camera before completing installation. Please install the proper power cut-off device during the installation connection. Always follow the instruction guide the manufacturer recommended.

Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers. We are not liable for any problems caused by unauthorized modifications or attempted repair.

Environment

This series network camera should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc. Please keep it away from the electromagnetic radiation object and environment. Please make sure the CCD (CMOS) component is out of the radiation of the laser beam device. Otherwise it may result in CCD (CMOS) optical component damage. Please keep the sound ventilation. Do not allow the water and other liquid falling into the camera. Lightning-proof device is recommended to be adopted to better prevent lightning damage. The grounding studs of the product are recommended to be grounded to further enhance the reliability of the camera.

Daily Maintenance

Please shut down the device and then unplug the power cable before you begin daily maintenance work. Do not touch the CCD (CMOS) optic component. You can use the blower to clean the dust on the lens surface. Always use the dry soft cloth to clean the device. If there is too much dust, please use the water to dilute the mild detergent first and then use it to clean the device. Finally use the dry cloth to clean the device. Please put the dustproof cap to protect the CCD (CMOS) component when you do not use the camera.

Accessories

Be sure to use all the accessories recommended by manufacturer. Before installation, please open the package and check all the components are included. Contact your local retailer ASAP if something is broken in your package.

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1A. OVERVIEW

This series PTZ camera utilizes High Definition Advanced Video System (HDAVS) technology, an HD-over-coaxial cable video standard that allows long-distance, HD transmission of video, audio, and control functions. The camera supports CVBS with an additional output.

The camera supports DC24V/2.5A ± 25%, and draws from: 9.6W to 22W. It also is IP66 rated with TVS 6000V lightning protection; surge protection.

The camera supports the IR night vision function. In the night environments, the device can use the IR light to highlight the object which is suitable for the surveillance function in the low illumination environments. The waterproof design conforms to the IP67 level, thus is suitable for use in outdoor environments.

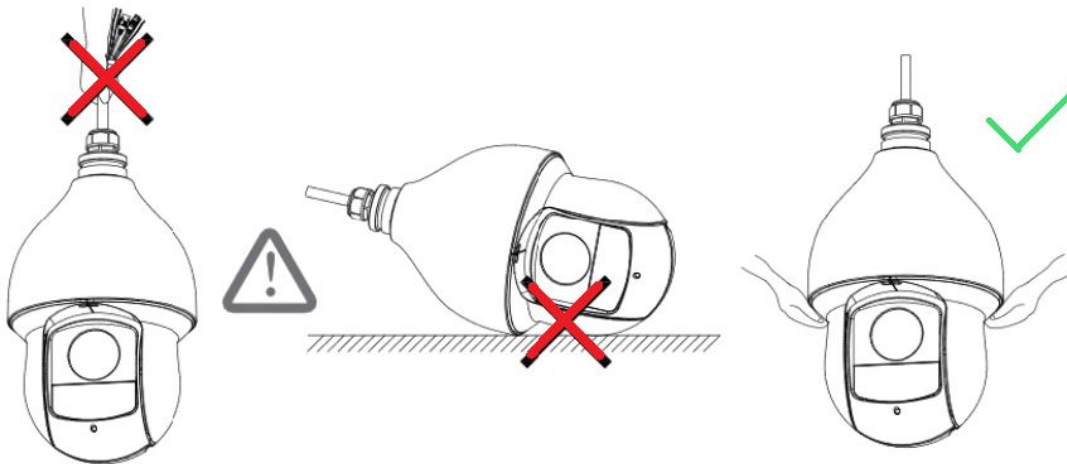**Note:** Take careful steps when handling the camera. See figure 1-1.

Figure 1-1

1B. Cable Interface

See Figure 1-2.

1. FC Connector
2. DC Power input
3. 24VAC input: Red(+), Black(-), Yellow/Green (ground)
4. RS485: Yellow (A+), Orange (B-)
5. Video output
6. Ethernet port (on some models)
7. Audio IO: White- Input, Red-Output, Black-Ground
8. Alarm IO: Blue: Alarm output 1, Black: Alarm output 2, Green: Contac switch 1, Pink: Contact switch, Yellow-green: Grounding cable, Red: Alarm input 1, Brown: Alarm input 2, Grey: Alarm input 3, Light green: Alarm input 4, Purple: Alarm input 5, White: Alarm input 6, Yellow-black: Alarm input 7
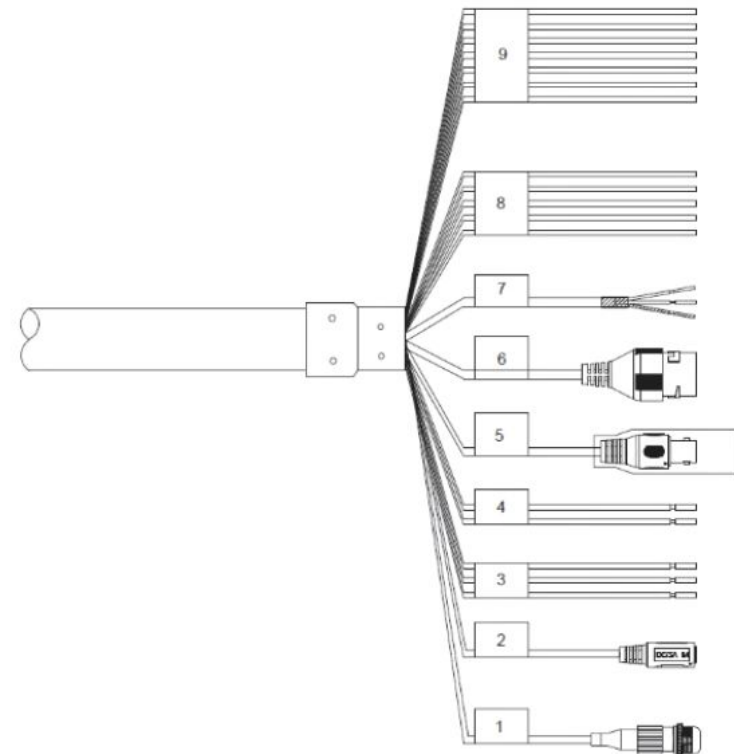

Figure 1-2

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2A. INSTALLATION STEPS

Step 1 Remove any packaging tape or material on the camera. See Figure 2-1.

Figure 2-1

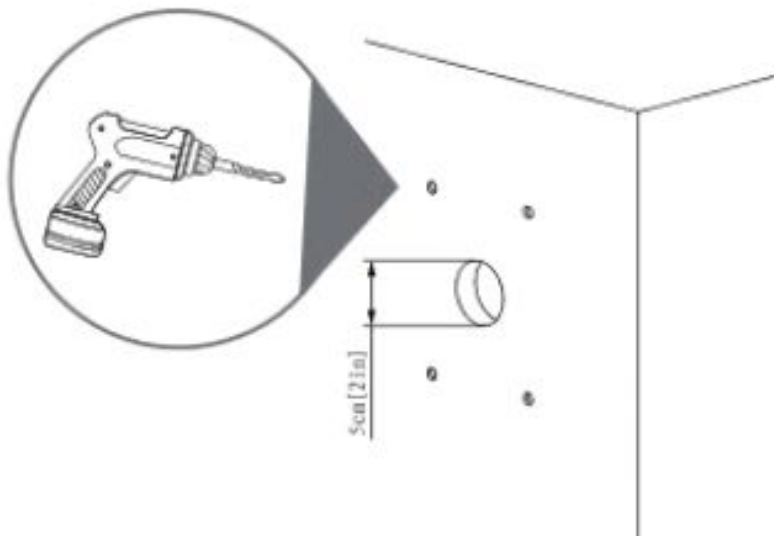**Step 2** Drill the appropriate mounting holes and cable exit. See Figure 2-2.

Figure 2-2

Step 3 Thread the Mount adaptor to the gooseneck mount and tighten the set screw as shown in Figure 2-3.
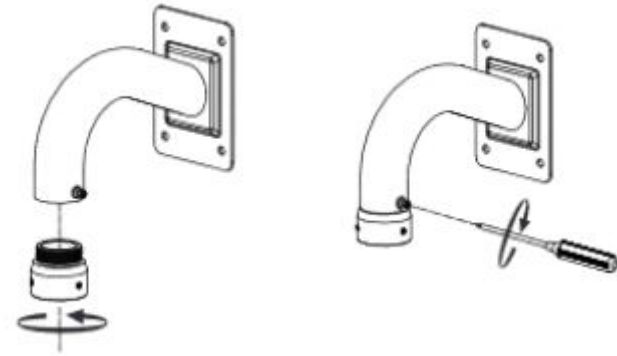

Figure 2-3

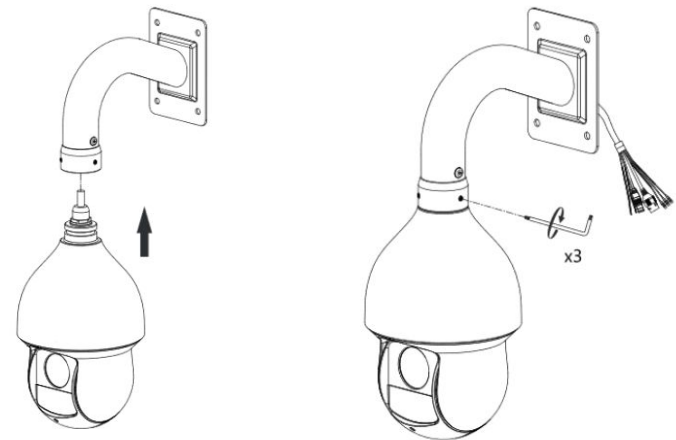**Step 4** Insert the camera into the adapter/ mount and tighten the set screw. See Figure 2-4.

Figure 2-4

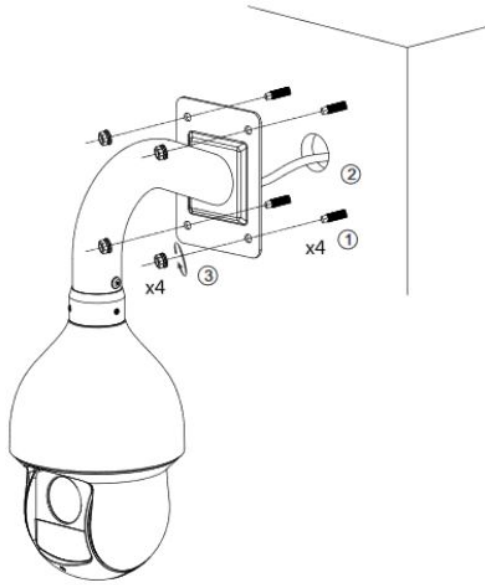**Step 5** Install the camera with mount using the mounting bolts. See Figure 2-5.

Figure 2-5

Step 2 Connect PTZ interface cables to the wall cable. Make sure they are waterproofed properly. Figure 2-6.
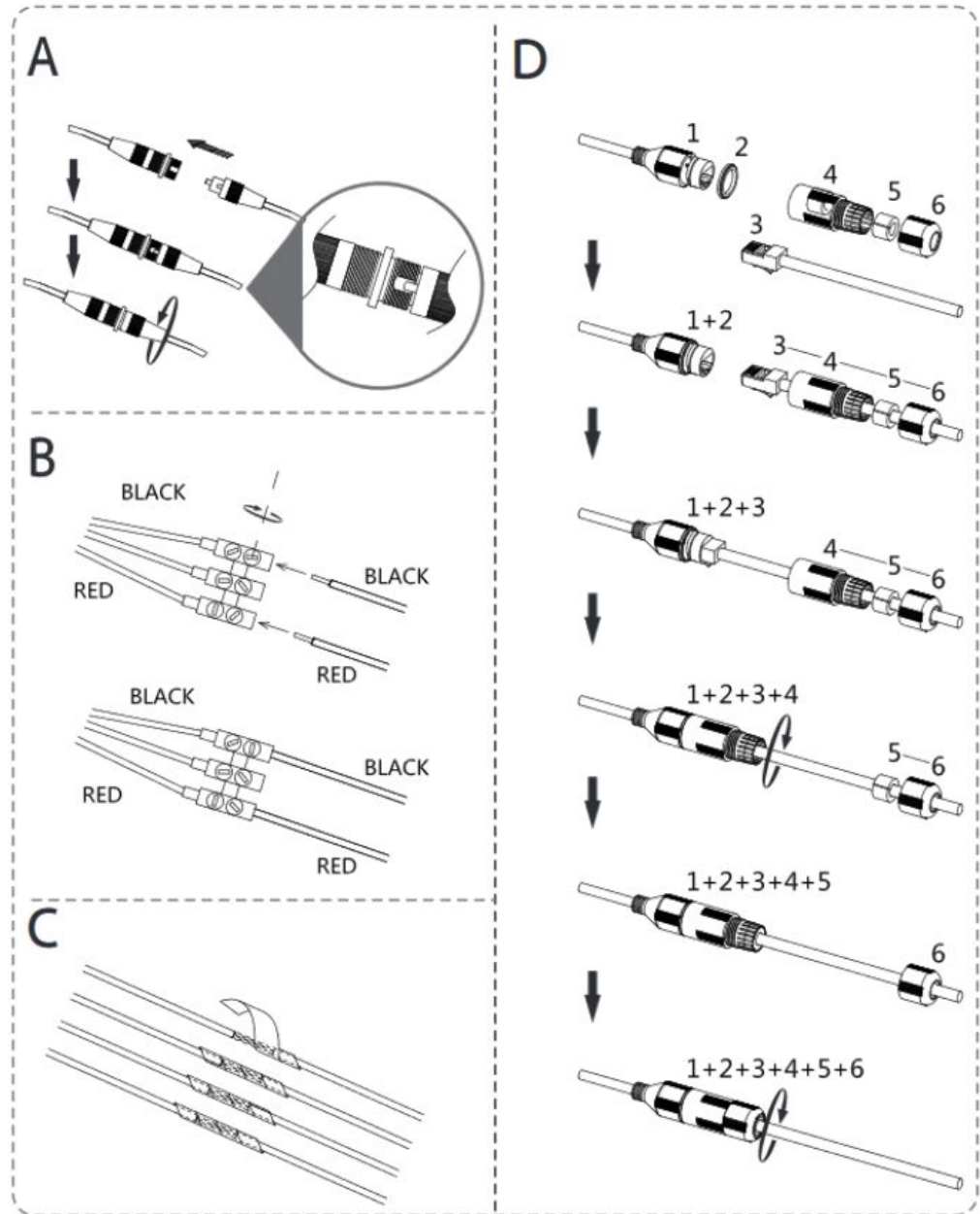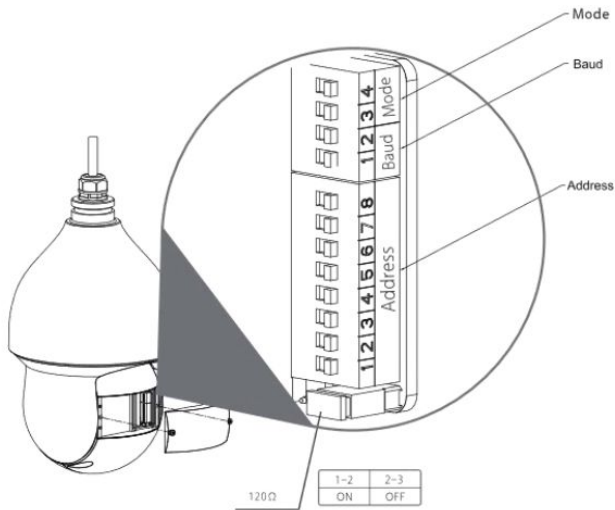

Figure 2-6

2B. Dip switch settings

See Figure 2-7 for Cover location and dip switch settings.

1	2	Baud Rate	3	4	HD/SD video mode
OFF	OFF	9600bps	OFF	OFF	HD
ON	OFF	4800bps	ON	OFF	/
OFF	ON	2400bps	OFF	ON	/
ON	ON	1200bps	ON	ON	SD

Address	1	2	3	4	5	6	7	8
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
....				....				
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

Figure 2-7

3A. OSD Operation

To open the On Screen Display (OSD) make sure you set the protocol under Main Menu-> Camera-> PTZ. Make sure the Channel the PTZ is on is set to AVS mode.

Step 1 Using a mouse and a local display, right click on the live view and select PTZ control. The PTZ menu will populate. See Figure 3-1.
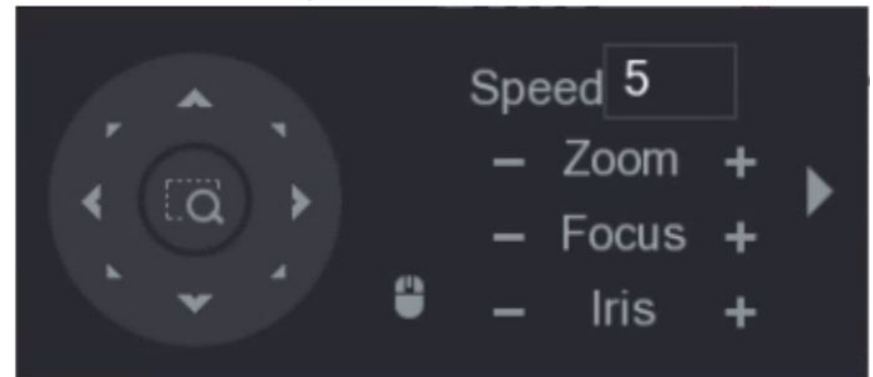

Figure 3-1

Step 2 Click ▶ to open PTZ Control Panel then click 🔽 to open OSD. The Use the up and down buttons to select menu item and the left and right to change parameter values. Click Enter to confirm. See Figure 3-2.
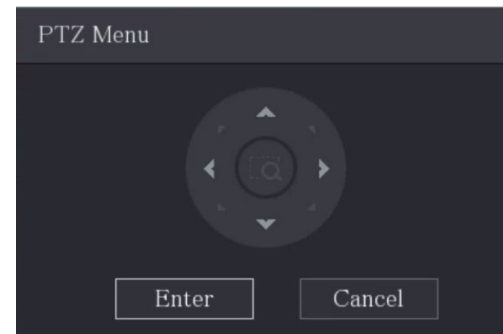

Figure 3-2

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3B. OSD Menu Functions

See the table below for Menu Index.

System Setting	System Information; Addr Information; Count Information; System Time Setting; Set North; Language; Switch Type; Video Output; Audio Mode; Factory Default; Restart
Display Setting	Preset Title; Azimuth Disp; Time Disp; Position; Zoom Disp; Inside Temp; Title Disp; Alarm Disp; Pattern Disp
Camera Setting	WB Setting; Exposure Setting; Day/Night Setting; Focus Setting; Image Adjust; Defog Setting; Zoom Speed; Sharpness; Sharpness Restrain; Digital Zoom; Picture Flip;Lens Init; Picture Mode; Camera Maintain; Camera Factory Default; Camera Restart
Function Setting	Preset; Auto Pan; Auto Scan; Tour; Pattern; Idle Motion; Auto Run; Privacy Masking; PTZ Speed; Set Zero; Power Up; Menu Password; Menu Idle; Channel Title; PTZ Auto Stop; Warm Machine; PTZ Correction
Alarm Setting	Alarm No; Action; Parameter; Contact; Relay Out; Reset Delay
IR Light Setting	IR Sensitivity; IR Light Ctrl; Near Light; Far Light; IR Light Comp

3C. Setting Video Output

Note: PTZ is set to to AVS/ CVI by default as it is compatible with IC Realtime HDVRs.

Step 1 Open the OSD. Select System Setting and click Enter.

Step 2 Navigate to Video output. Select the desired output from : AVS/CVI, TVI, AHD or SD (CVBS) then click Enter. See Figure 3-4.

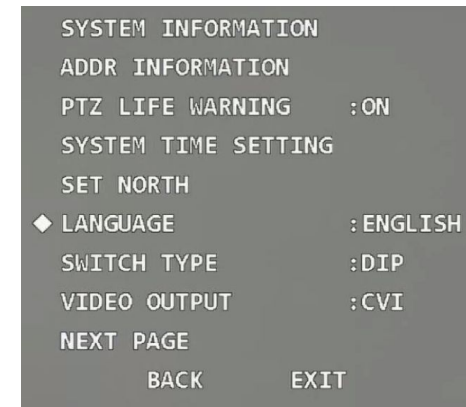**Note:** if Switch Type is set to DIP, you can only change the video output mode through the DIP switch on the PTZ.

Figure 3-3

3D. Function Settings

Presets- These are positions the PTZ can move to,
- **Preset No** : You can select different preset numbers to modify.
- **Title:** You can name the preset (optional).
- **Setting:** Select this option after moving the PTZ to the desired   position to save the preset in that position.
- **Call:** This will move the PTZ to this preset (if saved)

Pan- This is the 360° horizontal rotation of the PTZ at a certain speed.
- **Pan Speed:** Select the speed of the Pan.
- **Run:** Enable Pan action
- **Stop**: Stops Pan action.

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Scan- This is the horizontal rotation of the PTZ with defined left and right limits.

- **Auto Scan No** : You can select different scan numbers to modify.
- **Set Left/ Right limit:** You can select the left/ right limits on this PTZ. Select one option, move the camera to the appropriate limit then click *Enter*. "OK" will be displayed if set successfully.
- **Scan Speed:** Select the speed of the Scan movement
- **Call:** This will enable the Scan motion.
- **Stop**: This will cancel the scan motion.

Tour- A tour is an action the will move to the different preset positions at specified time intervals.

- **Tour No:** You can select between different Tour numbers
- **Setting:** You will be able to select the presets for the tour, dwell time and speed. See Figure 3-4.
- **Delete**: Deletes current tour setting
- **Call**: Starts the Tour action
- **Stop**: Cancels Tour action.

NO	PRESET	DWELL	SPEED
◆ 01	000	015	012
02	000	015	012
03	000	015	012
04	000	015	012
05	000	015	012
06	000	015	012
07	000	015	012
08	000	015	012
	BACK	EXIT	

Figure 3-4

Pattern- This a recorded set of movements that the PTZ will follow.

- **Pattern No** : You can select different scan numbers to modify.
- **Program Start:** This records the pattern movement. Click Enter to start. An "OK" will flash indicating the PTZ movements will now be recorded. Move the PTZ as desired.
- **Program End:** Select this option after you have finished recording your pattern.
- **Call:** Starts the recorded pattern movement.
- **Stop**: This will cancel the pattern movement.

Idle Function- Is a defined operation when the Device does not receive any valid command within a certain period.

- **Idle Function:** Turns Idle Function on or off.
- **Idle Time:** The time delay where the PTZ will activate the Idle function if no commands are sent
- **Idle Action**: Select the idle action type between: None, Preset, Scan, Tour, and Pattern
- **Parameter**: Number of selected function

Power Up- This is the automatic operation of the Device after it is powered on.

- **Power Up:** Sets action of: Auto, Preset, Scan, Tour, Pattern and None. If set to auto, the camera will resume the previous action before it powered down.
- **Parameter**: Number of selected function

Figure 4-2

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4A. FAQ

No self-test and no image after the Device is powered on	• Check whether the power supply is properly connected. • Camera may be underpowered. Check power. • Check whether the main power and transformer are working normally.
Self-test can not be performed, or there is noise	• Use the required power supply. • Contact support as there may be mechanical failure.
Video signal loss occurs when the Device is in high-speed rotation	• Insufficient power, use the required power supply
Image is not stable	• Poor contact on circuits. Connect the cable properly.
Blurry image.	• Lens glass is dirty. Clean the lens. • Focus is in manual mode. Set Focus settings on PTZ,

4B. LIGHTNING PROOFING AND SURGE PROTECTION

This PTZ adopts TVS lighting protection technology. It can effectively prevent damages from various pulse signals below 6000W, such as sudden lighting and surge. Necessary precaution measures should be taken in accordance to local guidelines when installing the speed dome in an outdoor environment.

• The signal transmission cable and high-voltage device (or high-voltage cable) should be at least 50 meters apart.

• If possible, route cables through a properly grounded and shielded underground conduit.

• In areas of strong lightning occurrence or near high sensitive voltage (such as near high-voltage transformer substation), it is required to install additional a high-power lightning protection device or lightning rod.

• Electrical bonding is recommended. The ground device should meet anti-jamming requirements and conform to your local electrical safety code. The ground device should not short circuit to N (neutral) line of high voltage power grid or mixed with other wires. When connecting the system to the ground alone, the grounding resistance should not be more than 4Ω, and the earth cable cross-sectional area should be no less than 25 mm². See Figure 5-1.

• For indoor usage, The yellow and green GND wire or GND screw of the speed dome should be reliably connected by several strands of copper wire with no less than 25mm²and indoor equipotential GND terminal. Please refer to Figure 5-2 for lightning proof installation mode.

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Figure 5-1

Figure 5-2