



## **MPTZ20XIRIP-ST**

### **Network HD IR High Speed PTZ Camera**

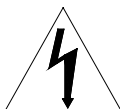
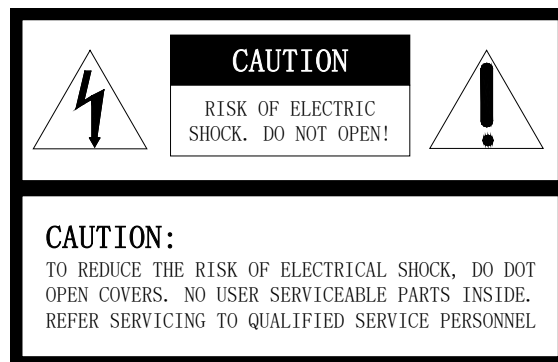
#### **Manual operation**

V4.5.1

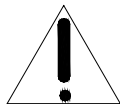
<http://iotsmartsolutions.net>

Please read the operation manual  
Carefully before installing and using this product

**PRECAUTIONS:**



The lighting flash with a arrowhead symbol, in an equilateral triangle, is intended to alert the user. There is uninsulated “dangerous voltage” presence near by the product’s enclosure which may be risk of to persons .



The exclamation point within an equilateral triangle is intended to alert the user to reference of the important operating and maintenance (servicing ) instructions .

THE PRODUCT CODE MARKED ON THE BOTTOM COVER. PLEASE FILL THE CODE IN THE FOLLOWING BLANK. PLEASE SAVING THIS SPECIFICATION CAREFULLY, SO THAT CHECKING.

MODEL: \_\_\_\_\_

PRODUCT CODE: \_\_\_\_\_

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## **I. Important Safeguards**

1. All the safety and operating instructions should be read before the units is operated.
2. Power supply for HD IR PTZ Camera: DC12V. The power input power supply indicated on the base of PTZ or other related marking label.
3. During the course of transportation, storage and installation, the product should be avoided from incorrect operations such as heavy pressing, strong vibration etc., which can cause damage of product as there are sophisticated optical and electronic devices inside the machine.
4. Do not attempt to disassemble the camera. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.
5. Always follow all electrical standards for safety when it is in operation. Adopt the particular power supply, which is provided with the unit. RS-485 and video signal should keep enough distance with high voltage equipments and cables when they are in transmission. Precautions for anti-lightning and anti-surfing should be taken if necessary.
6. Do not operate it in case temperature, humidity and power supply are beyond the limited stipulations.
7. Do not let the camera aim at the sun or the object with extreme light whatsoever it is switched on or not. Do not let the camera aim at or monitor bright and standstill object for a long time.
8. Do not use aggressive detergent to clean the main body of the camera. Wipe dirt with dry cloth. If needed, mild detergent can be used suitably.
9. Operate the intelligent PTZ camera with great care to avoid shock or vibration. It operate incorrectly, the PTZ could be damaged.
10. Please ensure the installation position with enough endurance when you install the intelligent IR High speed PTZ camera.
11. If necessary, use a commercial lens cleaning paper to clear the lens windows. Gently wipe the lens window until clean..

## **II. Description of Functions**

The intelligent PTZ camera is a hi-tech CCTV product, which incorporates high-clarity color camera, panoramic speed-variable PAN/TILT, multifunctional decoder, universal character generator, CPU processor, memory chip into a whole. It can largely reduce connection and installation processes of components in the system, rise up reliability of the system and facilitate installation and maintenance. Therefore, it has advantages of beautiful appearance, compact structure and easy operation.

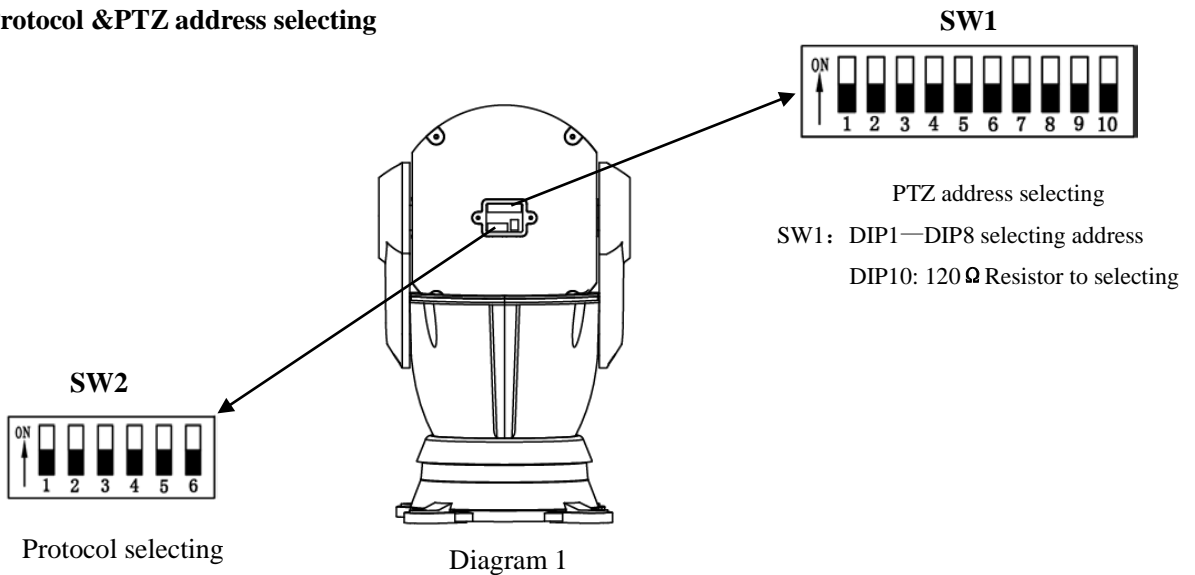
### **1. Dome descriptions:**

- a. Pan 360° continuously rotation, manual pan control speed 0.1~100rad/s;Tilt range 0~90°(It could be up to -60°~90°without outer housing),Manual operation control speed 90°/s, pan preset speed max up to150°/s,tilt preset speed max up to 120°/s.
- b. Running stably at low speed with super lower noise. Pictures have no shaking.
- c. Automatic flip and panoramic monitoring without blind point, the location precision up to  $\pm 0.1^\circ$ .
- d. It could setup 6 cruising tracks, 4 scanning commands, 1 patterns function.

- e. Home position as tracking, patterns, presets
- f. Memory function after power off, it automatically returns to the original station after power on.
- g. Built-in temperature sensor, with temperature display function, can control internal air cooling system by manual or auto.
- h. Coordination display function, the compass direction way could setup to the North.
- i. PELCO-D coordination searching, coordination setup functions.
- j. It stores 255 preset positions, data memorize after power off.
- k. Proportional pan function, it could recognize many normal using cameras.
- l. With wiper for the PTZ, it could solve the disadvantages side of cleaning camera lens.
- m. IP Grade: IP66.
- n. 4 Alarm input, 1 Alarm output (Optional).
- o. It could analyze dome camera fault problem, some fault details information, such as pan/tilt information, and self-testing information could be displayed on the screen.
- p. IR lamp opening threshold could be adjusted. It could be used at different environment.
- q. Infrared lights and cameras really achieve three-compartment isolation; completely solve the infrared lamp rapidly aging and camera lens fog problem.
- r. Constant current dimming design, more stable infrared lamp life up to 30,000 hours.
- s. This PTZ applies with the 3<sup>rd</sup> generation high-power IR light, multiple angles with the adjustable of brightness, could maximally achieve the best illumination.
- t. 4 different IR lamp light compensation, it meets different requirement.

### III. Setup of PTZ Camera

#### 1. Protocol & PTZ address selecting

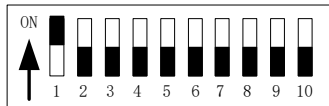


**2. Setup of Coding Switch of PTZ Camera** .As diagram 1 shows, SW1 is used to set address of the PTZ camera from 1 – 255. The coding switches from DIP-8 to DIP-1 are equivalent to a 8-bit binary digital. DIP-8 is MSB while DIP-1 is LSB. The state “ON” of each bit means 1 while “OFF” means 0. Following table shows states of coding switches of some addresses.

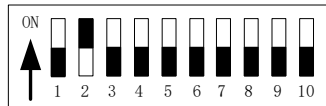
Dome Address	Coding Switch Status							
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6	DIP-7	DIP-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
...	...	...	...	...	...	...	...	...
255	ON	ON	ON	ON	ON	ON	ON	ON

Table 1

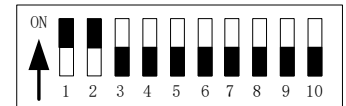
For example:



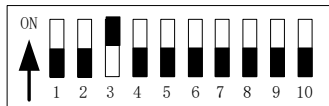
Speed Dome Address=1



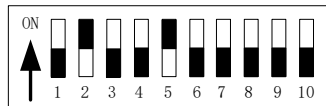
Speed Dome Address=2



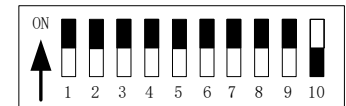
Speed Dome Address=3



Speed Dome Address=4



Speed Dome Address=18



Speed Dome Address=512

**3. Setup of the Protocol and the Default Baud Rate.** As figure 1 shows, SW2 is used to set the protocol of communication and the baud rate used by the PTZ camera. DIP-4 to DIP-1 of SW2 is used to select protocols.

Protocols	DIP Status				Normal Baud Rate	
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
PELCO-D	OFF	OFF	OFF	OFF	OFF	OFF
PELCO-P	OFF	ON	OFF	OFF	OFF	OFF

Tablet 2

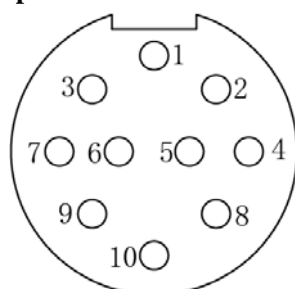
**4. Setup of the Baud Rate of Communication.** As shown in Figure 1, SW2 is used to set the

protocol of communication and the baud rate used by the PTZ camera. DIP-6 and DIP-5 of SW2 are used to select the baud rate of communication and 4 different baud rates can be selected in maximum. If the controller adopts non-standard baud rate, you can adjust it to be identical with that of the main machine as per the following table.

Baud Rate of Communication	Setup of Baud Rate					
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
2400bps					OFF	OFF
4800bps					ON	OFF
9600bps					OFF	ON
19200bps					ON	ON

**5. Selection of the Terminal Resistor of the PTZ Camera.** As shown in Figure 1, **SW1** is the select switch of the 120 Ω terminal resistors on the bus RS485, on which only one terminal resistor of the dome camera at the farthest end can be connected, while the terminal resistors of other devices should be opened. Dip 10 turns ON of SW1, it means 120 Ω resistor turns ON; Dip 10 turns OFF of SW1, it means 120 Ω resistor turns OFF.

**6. Outline connecting socket description:**



A. 10-pin input connecting socket

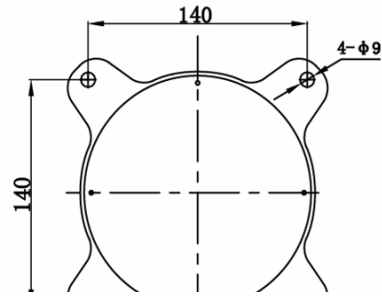
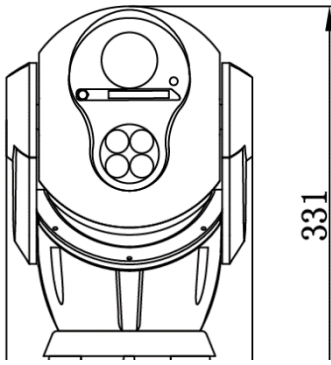
**6.1 10-pin input connecting socket description:**

1. NET_TX-	2. NET_RX+
3. NET_TX+	4. Video output(CVBS)
5. GND	6. POWER-
7. POWER+	8. NET_RX-
9. RS485+	10. RS485-

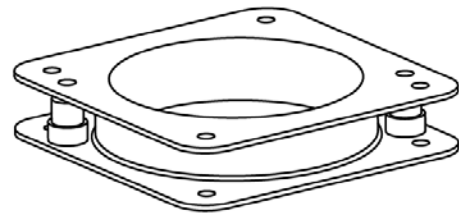
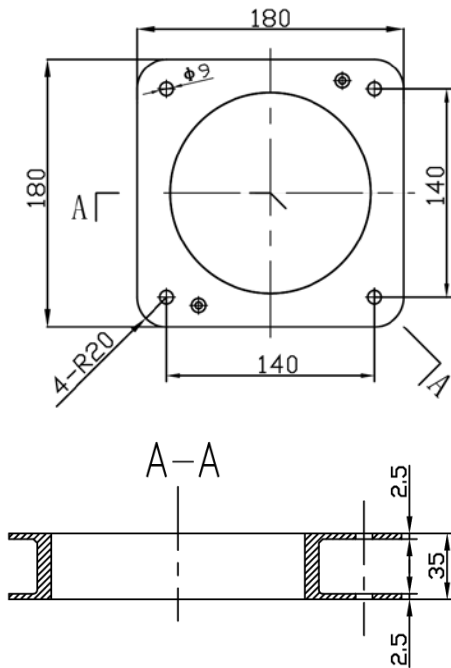
**IV. The installation of system**

**1. Installing ways**

1) Dimension(IR Version)



## 2. Dimension for shock absorber



Dimension for shock absorber

1. Please carefully take out the PTZ and accessories from package.
2. You may cancel Step 2, and Step3 if protocol and address don't need to change
3. As Diagram 2 shows, please setup the related protocol according to table 2 shows. And please ensure if the PTZ address is matched with your requiring address, if it's not matched; please setup according to the table 1.

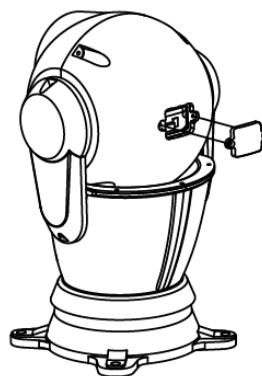
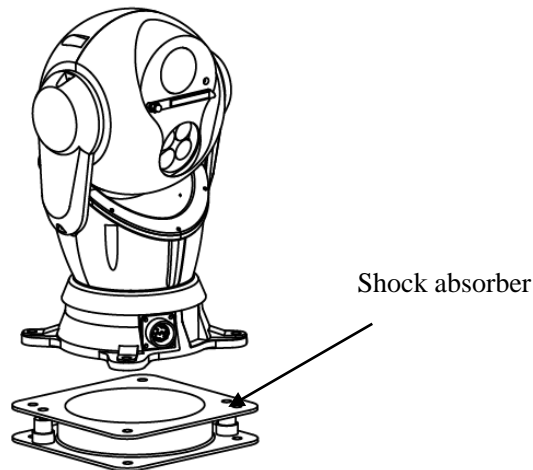


Diagram 2

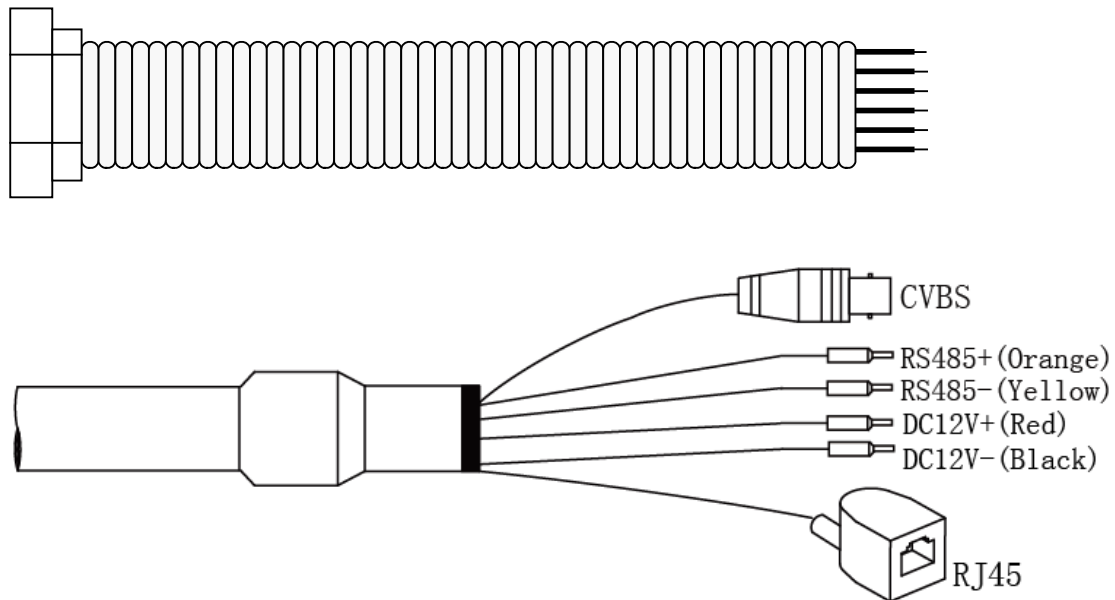


4. If it uses on car surveillance, please put the absorber on the surface of the shock absorber, then fix the total PTZ on the shock absorber components, here it also needs 4 pieces M8X25 outer hexagonal screws, 4 pieces  $\phi$  8 spring washers, 4 pieces  $\phi$  8 flat washers, 4 pieces M8 nut.



12V installing way

5. Please connect the socket outlet correctly according to the related wire color, and avoid any mistake of connecting wire.



Notes: Please connect the related adaptor according to the actual using situation: DC power supply input could be recommended as car surveillance.

## V. Technical Parameter

PTZ function	Pan range	360°continuously rotation
	Pan speed	Pan control speed: 0.1°-100°/s, Pan preset speed: 150°/s
	Tilt range	-60° - 90°
	Tilt speed	Tilt speed: 0.1°-90°/s, Tilt preset speed: 120°/s
	Proportional pan function	Support
	Preset positions	255
	Cruising scanning	6, each with 16 preset positions
	Patterns function	4, pattern direction and speed could adjust
	Self-studying function	1 with 200 seconds
	Memory after power off	Support
	Home position	Presets /Tracking/ Pan scanning
	Coordination display	Support
	Temperature display	Support
	Compass function	Support, the North direction could be setup
	Wiper function	Support jog and linkage mode
	Power supply	DC10.8V-DC18V
	Consumption	50W (Max) (IR lamp 20W Max, Heater 5W Max)
	Temperature and humidity	-30 °C - 65 °C humidity less than 90%
	IP Grade	IP66(Outdoor)TVS 4000V lightning、 anti-surge protection
	Installing way	Different installing ways accordingly(Support car surveillance)
Weight	6kg	
IR function	IR range	60m
	IR lamp consumption	8W

