Thank you for using ILDVR® product, this manual will guide you install and operate SC/SE Series speed dome camera, please read it thoroughly and carefully.

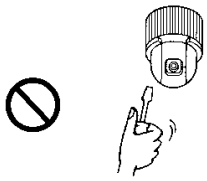
1. Precautions:

1.1 This manual provides information on features, installation, configuration and applications. Please read this manual carefully and use the product correctly. Also please refer to the detail information if you have any inquiries.

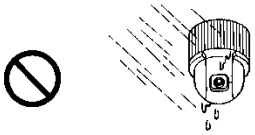
1.2 Either DC15V/1A or AC24v power supply. Before using, to confirm power Supply.

1.3 This product should be protected against extremes of pressure, vibration or dampness during transportation. It should be shipped in parts as original packing. Damage caused by not obeying said above is not in the warranty.

1.4 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 and only qualified personnel are to service the unit.



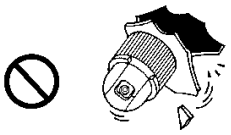
1.5 Do not install this product to outdoor environment alone and do not put the camera to shoot the sun directly.



1.6 Do not use strong or abrasive detergents when cleaning the camera body. Do use a dry cloth to clean the camera when dirty. In case the dirt is hard to remove, use mild detergent and wipe gently.

1.7 If necessary, use a professional lens' cleaning paper to clear the lens' glass.

1.8 Never mount the unit on a ceiling that cannot support its weight.



2. Function

2.1 The multi-protocol interface transfer inside.

a. The multi-protocol cable can integrate 16 kinds of protocol, the baud rate can be adjusted, by setting the 1~10 bits of the DIP Switch. The dome is compatible with the most of systems.

b. RS485 COM control; dome address 1~511

2.2 Speed pan/tilt

a. Tilt rotation range 0º~90º with auto flip gives full 180º correctly orientated continuous vision.

b. 360º pan rotation without dead spots.

c. Extremely smooth low speed pan operation is achieved without picture vibration

2.3. High level of intelligence

a. 64 preset positions, dome stores current horizontal angle and the tilt angle of pan/tilt/zoom and position parameters into the memorizer even if lose power.

b. Set left and right of the desired view area beforehand and make the dome scan between the two positions.

c. The preset positions can be programmed to be recalled in a set of sequence. This sequence can be set to automatically cycle from one position to the next at a setting time .The dome can remember 6 tracks even if lose power these tracks will not be lost.

2.4 New function

a. Updatable English Character function, display dome address and the presets.

b. Shiftable speed rotation (pan 0º~240º/s tilt 0º~60º/s). In manual control applications, the high lead it is very difficult to view images when the lens is zoomed to longer focal lengths. To improve the ergonomics of control the dome has a zoom-pan speed interaction function this will automatically make control the operating speed of the pan function dependant on the focal length of the zoom lens. This feature automatically product very good image control under manual pan operation.

2.5 The range of optical power zoom lens

Optical Power Zoom Lens	Focus range	Lux
22x	F4~f88mm	0.2 Lux（F1.6 1/3s）
23x	F3.6~f82.8mm	1Lux(normal)/ 0.01Lux（D/N）
30x	F3.4~102.0mm	1Lux(normal)/ 0.01Lux（D/N）
35x	F3.4~119.0mm	1Lux(normal)/ 0.01Lux（D/N）

2.6 Camera function

□ If you use SONY camera and the on screen display is opened.

(1) Focus: user can adjust focus near or far, when the focus is near state the screen display the symbol , when the focus is the nearest state the screen display , when the focus is far state the screen display .

(2) Backlight: In a weak light background, user can turn on the backlight function the screen will display the symbol.

(3) White Balance: camera can adjust white balance according to the alteration of background lightness to give a true image. There are 6 modes of white balance can be chosen:

①indoor
②outdoor
③one-push
④ATW ATW
⑤manual WB-MAN
⑥auto

(4) Zoom: User can adjust zoom wide or tele by controller and get desired image .The screen display W T

(5) Camera Power: ON

(6) Shutter: When turn on the camera the shutter default is 1/50sec,this time the screen display 50, user can turn on the manual shutter function the adjust range :1/3sec～1/10000sec.

(7) Set the Image Effect: User can set the image effect by personal fancy. There are 8 kinds of image effect can be chosen.

① Pastel
② Neg. Art
③ Sepia
④ B&W
⑤ SOLARIZE
⑥ Mosaic
⑦ SLIM
⑧ Stretch

(8) AE Mode: Setting the parameter of shutter, iris, gain, light, etc.

① Full Auto：automatic exposure mode（FCB-IX48/480:1/60sec. FCB-IX48P/480P: 1/50sec.）
② Shutter Priority：Shutter Priority automatic exposure mode
③ Iris Priority：Iris Priority automatic exposure mode （F1.4 to Close, 18 steps）
④ Gain Priority：Gain Priority automatic exposure mode (-3 dB to 18 dB, 18 steps),
⑤ manual：Manual control mode.
⑥ Bright：Bright mode（Manual control Closed to F1.6, 17 steps at 0 dB: F1.4, 7 steps form 0 to 18 dB）
⑦ Iris auto：Automatic iris mode
⑧ Shutter auto：Automatic shutter mode
⑨ Gain auto：Automatic gain mode

(9) ICR shot: The camera can change from color to mono. The picture is clear even if the illumination is as low as 1 Lux.

(10) Reverse: mirror image.

(11) Freeze: still image.

□ If you use Hitachi Camera

(1) Focus: user can adjust focus near or far.

(2) Backlight: In a weak light background, user can turn on the backlight function.

(3) Shutter: When turn on the camera the shutter default is 1/50sec,this time the screen display 50, user can turn on the manual shutter function the adjust range :1/3sec～1/10000sec.

(4) White Balance: camera can adjust white balance according to the alteration of background lightness to give a true image.

⑸Zoom: User can adjust zoom wide or tele by controller and get desired image.

(6) Camera Power: ON

(7) AE Mode: Setting the parameter of shutter, iris, gain, light, etc. Can choose auto or manual.

(8) Iris is auto mode cannot adjust.

(9) Reverse (some cameras have not this function): mirror image.

□ If you use Honeywell Camera

(1) Zoom, focus, iris can be adjusted by manual.

(2) The other functions can be set by menu.

<< SETUP MENU1 >>	
BACK LIGHT	OFF
COLOR	ON
NEGATIVE	OFF
MIRROR	OFF
SHARPNESS	10
BRIGHTNESS	50
FLICKERLESS	OFF
MAX AGC	34db
INITIAL SET	OFF
NEXT MENU	

<<SETUP MENU2 >>	
WB MODE	ATW
WB CONT	AUTO
FOCUS SET	AUTO
START ZOOM	X1
END ZOOM	X128
ID DISPLAY	1
SPECIAL MENU	
PREV MENU	

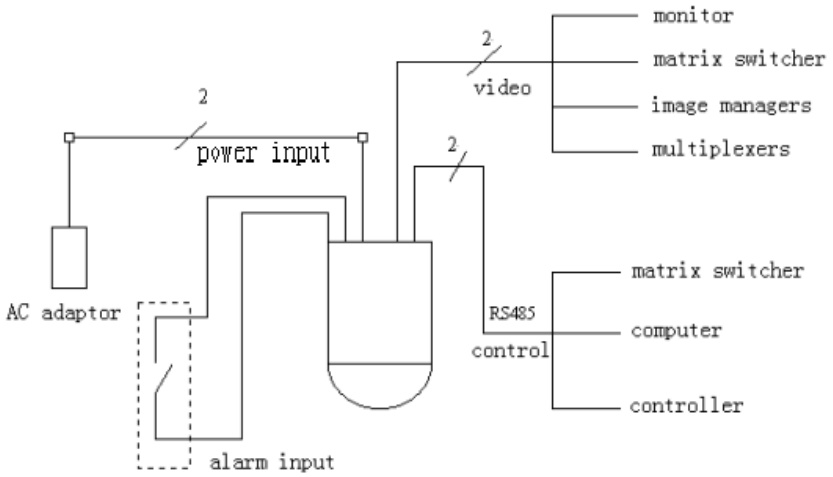
Attention: these symbol only displays when turn on the On Screen Display function. Turn Off it the screen would only display the image.

3. Dome Setting

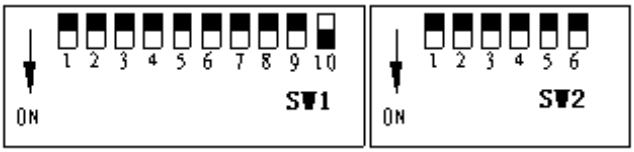
3.1 Factory default setting

Factory default protocol is Pelco-D, Baud Rate is 2400, Address is 1.

3.2 Connection:



Before install the dome please confirm the protocol, baud rate of the control system, then setting the SW2 to fit for the controller.



SW2 Setting Baud Rate (DIP5, 6)

DIP / Baud Rate	1	2	3	4	5	6
2400bps					OFF	OFF
4800bps					ON	OFF
9600bps					OFF	ON
19200bps					ON	ON

Table 1

SW1 Setting Dome Address:

DIP / Address	1	2	3	4	5	6	7	8	9
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
...	...								
511	ON	ON	ON	ON	ON	ON	ON	ON	ON

Table2

Note:

1. The dome address is binary digit, ON equal “1” OFF equal “0”.
2. The range of ID from 1 to 511.
3. The 10 bit of SW1 is a switch to a resistance on the connection line for the last camera to the daisy chain.

Protocol type:

DIP	Protocol Type				Baud Rate		Integrated Protocol
Protocol	1th	2th	3th	4th	5th	6th	
*Santach	OFF	ON	OFF	OFF	OFF	ON	●
*PELCO-D	ON	ON	OFF	OFF	OFF	OFF	●
*PELCO-P/4800	OFF	OFF	ON	OFF	ON	OFF	●
*PELCO-P/9600					OFF	ON	
PANASONIC	ON	OFF	ON	OFF	OFF	ON	○
Longcomity	OFF	ON	ON	OFF	OFF	ON	●
HUNDA600	ON	ON	ON	OFF	OFF	ON	●
TAIYO	OFF	OFF	OFF	ON	ON	OFF	○

VICON	ON	OFF	OFF	ON	OFF	ON	○
Molynx	OFF	ON	OFF	ON	OFF	ON	○
KALATE	ON	ON	OFF	ON	OFF	ON	○
VCL	OFF	OFF	ON	ON	OFF	ON	○
DAIWA	ON	OFF	ON	ON	OFF	ON	○
ALIC	OFF	ON	ON	ON	OFF	ON	●
Ultrak	ON	ON	ON	ON	OFF	ON	●

Table3

Note:

1. Setting Dome Protocol (bit1~bit4 of SW2) and Baud Rate (bit6~bit7 of SW2). If the default protocol or baud rate is not fit for the given system please set the protocol and baud rate to consist with the matrix. (● means this protocol has integrated)

2. The above table have listed the kinds of protocol for dome, the normal control are same as the foreign system. But some special protocol such as “Santach”,”PELCO-D” and “PELCO-P” without the command of control some especial functions, in order to use the special functions of dome, so we changed the command of calling/setting NO.51 preset to NO.64 preset to control them.

Refer to the table 4:

N	Object of control	Keyboard control	
		Call the N position	**Preset the N position**
51	Auto scan	Auto scan（low speed）	Auto cruise
52		Auto scan（middle speed）	Set the start point of scan
53		Auto scan（high speed）	Set the end point of scan
54	Camera power	Power on	Power off
55	Back light *	On	Off
56	ICR shot	On	Off
57	OSD (On Screen Display) *	On	Off
58	Digital Zoom *	On	Off
59	FOCUS	Auto	Manual
60	IRIS	Auto	Manual
61	White Balance Mode *	Auto	Manual
62		Indoor	Outdoor
63		ATW	One Push WB
64	Character control		Set the title of the current position

Table 4

Note:

1. The object marked “*” can be remembered by dome even if lose power.

2. Some cameras have it’s own menu, to open/close the menu by the command “turn on the OSD”, and use the command “turn off the OSD” to open/close the OSD.

3. Some cameras have not the function “ICR shot” or this function is automatic, so user cannot control it by command.

Auto Cruise:

(1) The sequence is automatic cycle from the 1 to the 16 preset, if there are some presets have not set Auto Cruise would skip them.

(2) The dwelling time is 4 seconds on per position.

(3) To turn on auto cruise us the command of setting the 51 preset.

4. Auto Scan:

(1) The dome scans between two positions which can be set.

(2) There are 3 classes of scan speed can be chosen use the command of calling the 51/52/53 preset.

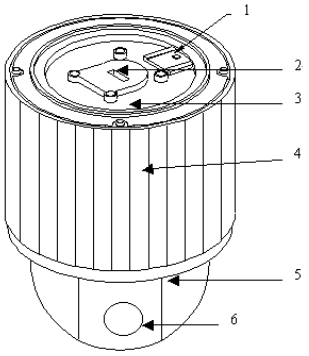
(3) The dwelling time at the start point and end point is 3 seconds.

5. Because preset/call the 51 to 64 positions has changed to assistant function, so there are total 50 presets.

6. If the dome being provided with Updatable English Character function, we can modify the caption by next step: First, open the OSD (if OSD OFF). Second, call the present position which you want to modify the caption by using call preset positions command. Third, set the 64 positions present by using setting preset number command. Forth, when the cursor winking, you can modify the caption by using rocker. In the end, you can quit the state by setting the 64 positions present.

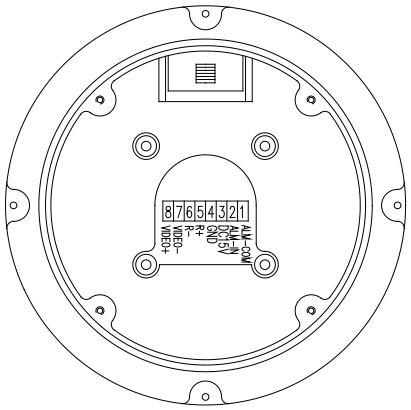
4. Structure and installing

4.1 Structure

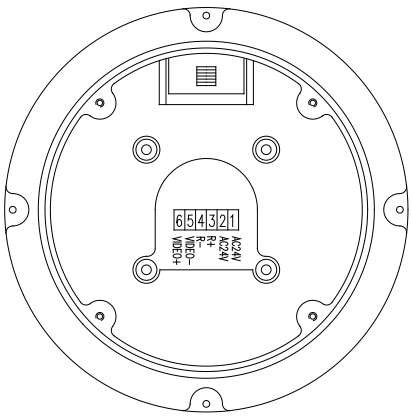


1. ID-code
2. out-line socket
3. bottom board
4. barrel body
5. lens hood
6. camera

1. Please read this manual carefully.
2. Please set the protocol and baud rate before installation.
3. Connecting power supply, RS485 and video signal correctly. Attention, the dome power supply is DC15V 1A, please use the supplementary switch power supply.



1ALARM _COM
2 ALARM _IN
3 DC15V
4 GND
5 RS485+
6 RS485-
7 VIDEO-
8 VIDEO+



1 AC24V
2 AC24V
3 RS485+
4 RS485-
5 VIDEO-
6 VIDEO+

OR

1 DC15V
2 GND
3 RS485+
4 RS485-
5 VIDEO-
6 VIDEO+

(Before using, please checkpower supply.)

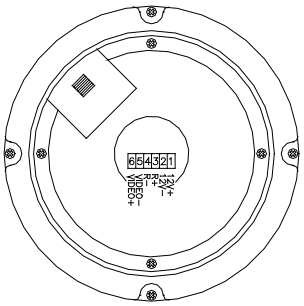
If use the 15V/1A power supply the dome has one line alarm signal input. If there is alarm signal input the dome will call the 32 preset (refer to the function intro). If use the AC24V power supply the dome has not this function.

4. Socket Intro:

There are 2 ways to connect the dome

a: socket mode.(default)

b: out-line mode.(According to the customer Request)



NO.	
1	15V DC +
2	GND
3	RS 485 +
4	RS 485 -
5	VIDEO -
6	VIDEO +

Socket mode (default)

5. Set speed dome address:
   a. Remove the clip
   b.The dome address is 9 bits binary digit, the range is from 1 to 511, refer to the table 2.
   c. Recover the clip.

4.2 Installation

(Referenced equipment must to be chosen and bought.)

1. Drop ceiling mount (Fig 1):

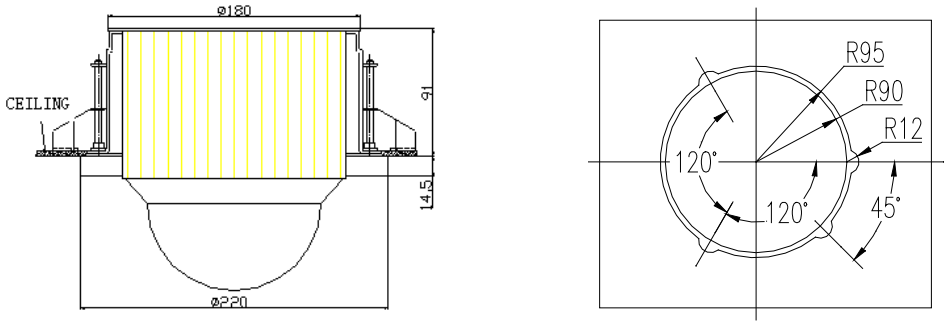


Fig 1

2. Hanging ceiling mount (Fig 2):
   The follow is installed on ceiling under the dome unit base
3. Embedded dome cover mount (Fig 3):
4. Outdoor mount (Fig 4)

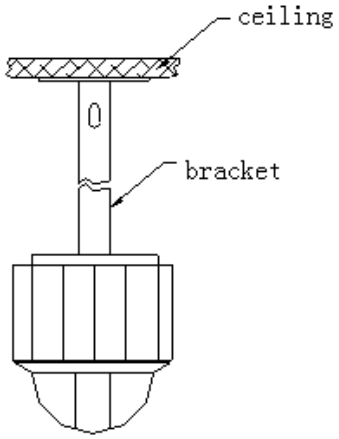


Fig 2

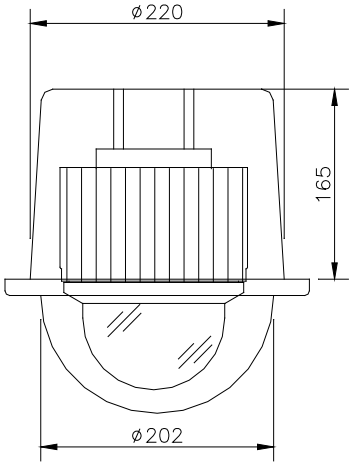


Fig 3

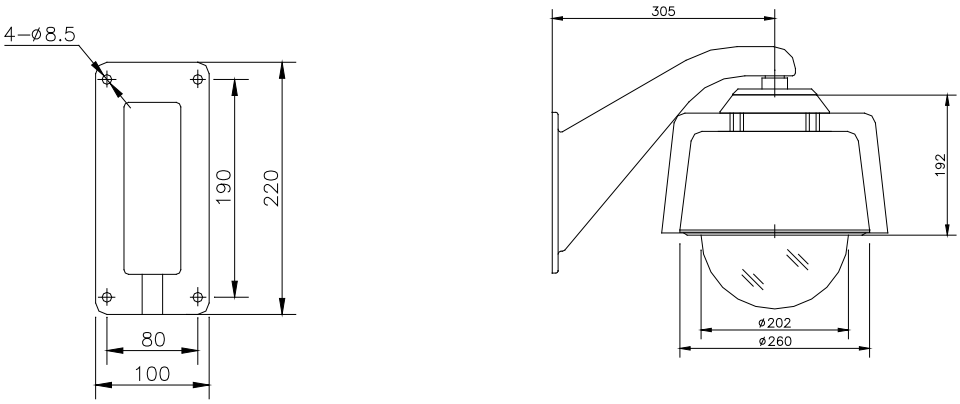


Fig 4

5. Reference of installation:

Take off the bottom board; put the connection line through the center hole on the bottom board. Refer to the following fig 5, use 3 bolts to fix the bottom board on the ceiling, and then connect the dome with the external connection line. Finally install the dome to the bottom board, circumgyrate rightward until the shrapnel bounding.

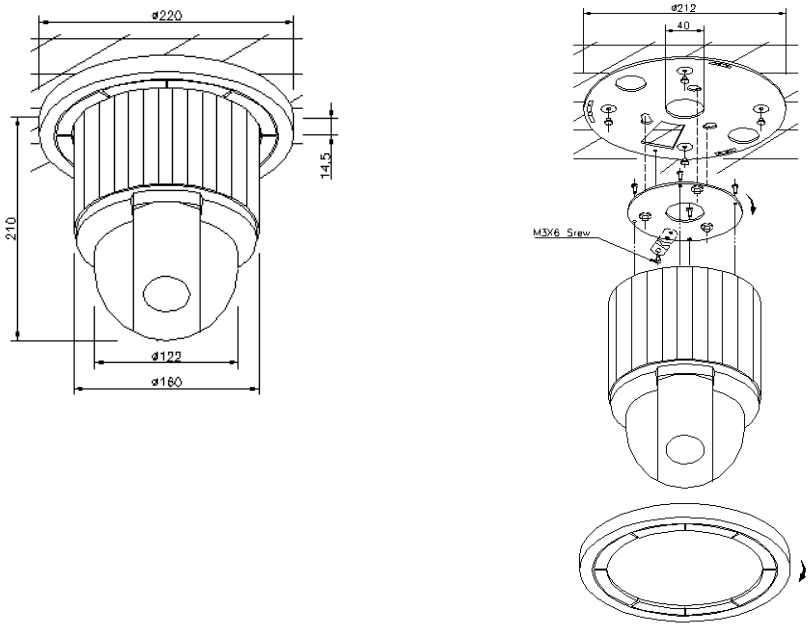


Fig 5

5. Technical data table

Specification	Image inductor	1/4″color CCD
	Pixels	752H×582V（440000pixels） PAL
	In-phase system	In-phase inside
	Video out	1.0Vp-p/75Ω
	White balance	Auto/manual
	Power supply	DC15V±10% 1.0A
	Power consumption	10VA
	Weight	2Kg
	Installation	Drop ceiling mount, Surface mount, etc.
	Opposite temp	10-75%

	Environment temp	0℃~40℃
Camera function	Scan system	15.625KHz(H) 50Hz(V)
	Horizontal	480 horizontal
	Signal-to-Noise	> 48db
	Shutter	1/3～1/10000sec
	Sensitivity	0.01～1Lux(F1.6)
Lens parameter	Zoom rate	16x, 18x, 22x, 23x, 27x optical 8x digital
	Iris	Auto / manual
	Focus	Auto / manual
Dome Function	Pan speed	0～240°/s
	Tilt speed	0～60°/s
	Preset	64 presets
	Auto cruise	At best 6 cruises

6. Troubleshooting table

Problem	Probable cause	Solution
On power no action	Power supply fault	Replace
	Bad connection of the power	Make correction
	Transformer damaged	Replace
On power cannot self-check have image but have motor noise	Mechanical failure	Repair
	Camera incline	Reinstall
	Power supply not enough	Replace
Self-check ok, but have no image	Video signal fault	Reinstall
	Bad connection of the video	Press to full connect
	Camera damaged	Replace
Self-check ok but cannot control	RS485 Bus bad connection	Check the RS485 connection
	Dome id setting is wrong	Reselect
	Protocol setting is wrong	Reset and on power again
Vague image	Bad connection of the video	Press to full connect
	Power supply not enough	Replace
On power cannot control	Self check error	On power again
	Bad connection of control	Press to full connect
	Bad control of matrix	On power again

There are some reason cause to the familiar problem, and it's resolve method, it is just list to be consulted. If you have different requirements or problems, please contact us directly to ask the technical support.

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Manufacturer: ILDVR Digital Technology USA Inc
Website: www.ildvr.com
Tech-support: supprot@ildvr.com