Xvision™

XSD27ZS

High Resolution 600 TVL
Speed Dome CCTV Camera
27x Optical Zoom

User Manual

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SAFETY CAUTION

WARNING: User shall be reminded to avoid the risk including potential deaths or severe injuries.

1. Please refer to the ambient requirement for equipment when installation; do not install this equipment in the environment with too much moisture, dust and smoke dust (which may result in fire or electric shock).

2. In case that this equipment emits abnormal smell or smoke, please immediately stop it, shut off the power and contact the supplier (otherwise this equipment may result in fire or electric shock).

3. During cleaning this equipment do not directly spray water on any part of this equipment (which may result fire or electric shock).

4. Please do not place this equipment near a heat source (otherwise, a fire risk is potential).

5. It is forbidden to store, install and use this product in danger areas with inflammable or explosive substances.

NOTICE: Please carefully read the instruction book before installation.

1. During transportation, storage and installation, heavy load, violent vibration and immersion shall be prevented to avoid the damage of the equipment.

2. Before moving or re-installing this equipment, please be sure that the power is shut off.

3. This equipment shall be installed at the site with good ventilation.

4. In case that this equipment does not work normally, please contact supplier and do not disassemble or reform this equipment (Xvision will not take any responsibility for the problem resulted from unapproved reformation or repair).

5. During cleaning the surfaces of this equipment, do not use chemical cleaning agent which may result in the deformation of equipment surface or damage of covering layer.

6. It is important that the dome camera is not left in a position where the camera is pointing directly at the sun or other extremely bright light source. This may result in CCD damage and poor image quality.

1   OVERVIEW

1.1   BRIEF INTRODUCTION AND APPLICATION

As a high-end monitoring product, the integrated smart high-speed dome camera features strong, stable and reliable function, easy operation and installation, etc. It has a good cost performance, and has become the mainstream product in monitoring industry.

This camera has many functions such as fast trace, 360° unlimited rotation, 180°automatic overturn, areas can preset location scan, pattern scan, screen menu, etc.

The remote head is driven by a stable and reliable step motor that has several speeds.

The camera is designed to watch a moving target in a large area and is a performance unit. Therefore, it is widely used in various areas such as Airports, stations, Supertores, Banks, and Hospitals.

1.2   PRODUCT FEATURES

- Supporting CVBS standard definition video signal output
- Driven by accurate step motor, with stable running and low noise
- Up to 255 programmable preset locations
- Several scan modes such as area scan, preset location scan, pattern scan, etc.
- Multi-function Chinese-English menu with flexible and easy configuration
- Vertical and automatic over turn function can realize the continuous watch without blind area
- Telephoto and limit speed function provides a clear and stable monitoring picture
- Self-adaptive baud rate and communication protocol
- Non-polarity RS485 supports broadcast address and soft address
- Supporting failure detection indication for RS485 communication
- IP66 Protection grade: IP 66
- Ultra lowpower consumption and ultra-strong stability

1.3 TECHNICAL INDICATORS

No.	Item	Technical Indicator
1	Video standard	PAL/NTSC
2	Horizontal rotation scope	360° continuous rotation
3	Vertical rotation scope	0° ～ 90° automatic overturn
4	Horizontal operation speed	0.1～ 300° /s
5	Vertical operation speed	0.1～ 240° /s
6	Prese location running speed	300° /s
7	Preset location accuracy	± 0.10°
8	Preset locations	255
9	Menu operation	Supporting multi language (Chinese and English)
10	Function display	Yes
11	Coordinate display	Yes
12	Communication Failure detection and indication	Yes (error indications such as baud rate error, address error, protocol unmatched, etc.)
13	Editable area to be blocked	8 areas
14	Preset location scan	4 (32 preset locations for each routine)
15	Routine scan	4 (left and right boundaries, speed and area name can be set)
16	Pattern scan	4 (there are no less than 200 instructions for each routine)
17	Watch location function	Yes
18	Timing running	Supporting 8 time intervals
19	Integrated protocol	PELCO-D, PELCO-P, Industrial protocol, DH-SD1, YAAN self-adaption
20	Communication baud rate	2400/4800/9600/19200 bps
21	RS485	Supporting non-polarity
22	Telephoto and limit speed	Yes

No.	Item	Technical Indicator
23	Power-off memory	Yes
24	Screen freeze	Yes
25	Compatible camera	Automatic Identification (LG/SONY/HITACH/CNB/SAMSUNG)
26	Protection grade	IP66
27	Lightining protection	4000V
28	Working temp	-35° C ∼+35° C

2   HARDWARE INSTALLATION

Address setting

The address of dome can be set in three ways:

- Address Dial Switch: when the soft address is closed, the dome address will be determined by the dial switch.
- Soft Address: After the Soft address option is opened, the address dial switch will not work. The default soft address will also be closed.
- Broadcasting Address: the fixed broadcasting address of dome if 100; no matter how the dome address is set, key DVR is able to control the dome through 100 addresses.

Comparison list of address dial switch:

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
. . .								
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

3. OPERATION INSTRUCTION

3.1 MAPPING TABLE FOR PRESET LOCATION

Preset Location	Function
95+CALL	Entering the main menu
XXX+PRESET	Saving some presetting point
XXX+CALL	Calling some presetting point
40+CALL	Operating the first group of preset location scanning
41+CALL	Operating the second group of preset location scanning
42+CALL	Operating the third group of preset location scanning
43+CALL	Operating the fourth group of preset location scanning
44+CALL	Setting the left boundary of area scanning 1
45+CALL	Setting the right boundary of area scanning 1
46+CALL	Setting the left boundary of area scanning 2
47+CALL	Setting the right boundary of area scanning 2
48+CALL	Setting the left boundary of area scanning 3
49+CALL	Setting the right boundary of area scanning 3
50+CALL	Setting the left boundary of area scanning 4
51+CALL	Setting the right boundary of area scanning 4
52+CALL	Operating area scanning 1
53+CALL	Operating area scanning 2
54+CALL	Operating area scanning 3
55+CALL	Operating area scanning 4
56+CALL	Starting the setting of pattern scan
57+CALL	Saving the setting ofthe first group of pattern scanning

58+CALL	Saving the setting of the third group of pattern scanning
59+CALL	Saving the setting of the third group of pattern scanning
60+CALL	Saving the setting of the third group of pattern scanning
61+CALL	Operating the first group of pattern scanning
62+CALL	Operating the second group of pattern scanning
63+CALL	Operating the third group of pattern scanning
64+CALL	Operating the fourth group of pattern scanning
65+CALL	Starting 360° continuous rotation
67+CALL	Arming of alarming input 1 (for the machines with this function only)
68+CALL	Arming of alarming input 2 (for the machines with this function only)
69+CALL	Disarming of alarming input 1 (for the machines with this function only)
70+CALL	Disarming of alarming input 2 (for the machines with this function only)
71+CALL	Starting alarming output (for the machines with this function only)
72+CALL	Closing alarming output (for the machines with this function only)
75+CALL	Starting the display of status column
76+CALL	Closing the display of status column
77+CALL	Starting vertical flip
78+CALL	Closing vertical flip
79+CALL	Starting guarding function
80+CALL	Closing guarding function
81+CALL	Starting the privacy shelter grid(for the machines with this function only)

82+CALL	Closing the privacy shelter grid(for the machines with this function only)
83+CALL	Starting backlight compensation (for the movement with this function only)
84+CALL	Closing backlight compensation (for the movement with this function only)
85+CALL	Starting image freezing function(for the movement with this function only)
86+CALL	Closing image freezing function(for the movement with this function only)
87+CALL	Starting image mirror function(for the movement with this function only)
88+CALL	Closing image mirror function(for the movement with this function only)
89+CALL	Automatic color-to-black function(for the movement with this function only)
90+CALL	Starting color-to-black function(for the movement with this function only)
91+CALL	Closing color-to-black function(for the movement with this function only)
92+CALL	Closing wide dynamic(for the movement with this function only)
93+CALL	Automatic wide dynamic(for the movement with this function only)
94+CALL	Manual wide dynamic(for the movement with this function only)
95+CALL	Entering the main menu
97+CALL	Starting image rollover(for the movement with this function only)
98+CALL	Closing image rollover(for the movement with this function only)
101+CALL	Defaulted setting
102+CALL	Switch manual operation speed (fast, slow and medium)

103+CALL	Switching linear scanning speed (fast, slow and medium)
105+CALL	Starting digital zoom
106+CALL	Closing digital zoom
107+CALL 、108+CALL	Calling 107 followed by 108 and restarting the dome
109+CALL	Starting communication fault indication
110+CALL	Closing communication fault indication

3.2   KEYBOARD OPERATION

3.2.1   PRESET LOCATION SCAN

1. Set preset location scan: Preset location scan routine can be set using 2 ways:
   See 'Menu set -> Scan Set'
   There are a total of 4 preset location routines and 32 preset locations that can be set. The 40th and 43rd preset locations are in turn used to set and call the 1st and 4th preset location routines:

   1) Execute the command of setting 40th preset location to enter the set status

   2) Call the desired set option to the preset location in routines, such as the first, the second, etc.

   3) Wait a desired time to stay (the interval time between two location), and do not conduct any operation.

   4) Call next routine that you want to set to preset location. If there are unused preset location, add it into routine, execute in looping way the 3) and 4), or execute 5) and the set is over.

   5) Execute the command of setting 40th preset location, and save the set and exit in addition to calling preset location. Executing any command other than, such as up, down, right or left does not need to be saved before exit.

2. Run preset location scan: call 40th - 43rd preset locations to run 1st-4th group preset scan location series.

3.2.2 AREA SCANNING

There are two ways to set the area of scanning.

Using special preset location order
Setting of the left boundary: dome is controlled to ideal position and preset location 44 is called to set the left boundary of Region 1

Setting of the right boundary: dome is controlled to ideal position and preset location 45 is called to set the right boundary of Region 1

Using keyboard for setting
Menu set -> scan set -> area scanning

Setting of the left boundary: control the dome to ideal position and press 'OPEN' key to set the left boundary or Region 1

Setting of the right boundary: control the dome to ideal position and press 'OPEN' key to set the right boundary of Region 1

4 area scanning can be set and the method is the same.

Setting of scanning speed: see 'menu set -> auxiliary set'

Setting of regional title: see 'menu set -> title set'

Operating area scanning

Call the preset location 52-55 to operate area scanning path 1-4 respectively

Dome rotates between the set right and left boundary according to the set speed and the screen displays the corresponding regional title.

3.2.3 PATTERN SCANNING

Setting of pattern scanning

1. Call preset location 56 to start setting pattern scanning

2. Operate 'up, down, left, right, WIDE, TELE, NEAR, FAR, CLOSE and OPEN on the dome.

3. Call preset location 57-60 to save the 1-4 pattern scanning

Operation of pattern scanning

Call the preset location 61-64 to operate pattern scanning path1-4 respectively

3.3   MENU SET

3.3.1   BASIC MENU OPERATION

1. Press control keyboard or use matrix to execute the command of 'call 95th preset location' to enter and set main menu

2. After the main menu page appears, press 'up or down' icon to move the cursor to the submenu option to be set and press 'right' icon to enter this submenu setting page

3. After submenu page appears, press 'up or down' icon to move the cursor to the option to be set and press 'right' icon to change or set the content of this option

4. The contents normally fall into 2 types; Digit type and List Type. The blink indication means that the content of the option can be changed.

For Digit type: press the 'left or right' icon to select the input location, press 'up or down icon to modify the value. To confirm and quit the option setting, move the cursor to the last digit and press 'right'.

For List type; press 'up or down' to modify the content of option and press 'right' to confirm and quit the option setting.

3.3.2   MENU SET

MAIN MENU

1. System Information: Check dome information (such as version, address, communication, etc.)

2. Camera Setting: Set the camera parameters

3. Privacy Shelter: Set the parameters for privacy masking

4. Auxiliary Setting: Set some auxiliary parameters of the dome

5. Scanning Setting: Set the scan sequence of preset location

6. Title Setting: Set regional title by input method

7. Alarm Linkage: Alarming setting

8. Defaulted Setting: Recovery the defaulted setting of the dome

9. Exit: Exit the main menu

3.3.3   SYSTEM INFORMATION

1. Version No. : The version number of the dome fixed ware

2. Address: Dome address to be set by dial switch

3. Communication: Communication Baud rate

4. Protocol: Communication protocol PELCO-D

5. Camera : Display the movement type of camera

6. Date of Manufacture: August 2012

7. Manufacturer: Xvision

8. Exit: Exit the sub menu of system information

3.3.4 CAMERA SETTING

1. Zoom Speed: Fast, medium and slow

2. Digital Zoom: On and off

3. White Balance: Automatic

4. R gain: 1-225 (white balance manually effective)

5. B gain: 0-225 (white balance manually effective)

6. Exposure Setting: 0-7

7. Backlight Compensation: On and off

8. Image Freezing: On and off

9. Wide Dynamic Mode: Automatic, off and manual

10. Wide Dynamic Level: 0-128 (wide dynamic manually effective)

11. Image Mirror: On and off

12. Colour-to-black setting: Automatic, on and off

13. Image Effect: Off, inverse colour and white-band-black

14. Image Rollover: On and off

15. Camera Display: On and off

16. Minimum Focus: 1cm, 10cm, 30cm and 100cm

17. Save: Save the settings and exit sub menu

18. Exit: Exit the sub menu without saving the modification

3.3.5 AUXILIARY SETTING

1. Area Scanning Speed: Fast, medium and slow

2. Manual Rotation Speed: Fast, medium and slow

3. Guarding Position: Preset location 0-225 (0:closing the guard position)

4. Recall Time: Set the time for automatic recall and duration when it will not be controlled
or return to the guard position time: 0-225s

5. Vertical Automatic Rollover: Dome 180° automatic rollover on/off

6. Setting of Status Bar: On and Off

7. Language Setting: English and Chinese

8. Soft Address On and Off: On and Off

9. Soft Address: 001-255

10. Exit: Exit the sub menu without saving the modification

11. Save: Save the settings and exit sub menu

3.3.6 SCANNING SET

1. Setting of Area Scanning: Region No. (0-4)

2. Operating Area Scanning: Region No. (0-4) 0 means the scanning without linking area scanning number

3. Setting Presetting Scanning: Preset location No. (0-225)

4. Operating Presetting Scanning: Preset location No. (0-225) 0 means the scanning without linking presetting

5. Setting of Mode Scanning: Mode No. (0-4)

6. Operating Mode Scanning: Mode No. (0-4)

7. Exit: Exit the sub menu without saving the modification

3.3.7 TITLE SET

1. Region No. : 1-4

2. X Co-Ordinates: X position of title on the screen (0-29)

3. Y Co-Ordinates: Y position of title on the screen (0-14)

4. The title content in the current region. To change, move 'left and right' and select characters. Move 'down' to confirm changes or move 'up' to exit this option

5. Mode: Input method mode (capitalized and low case characters, symbols, number and Pinyin)

6. Delete: To delete the characters in the insert characters of 'title'

7. Exit: Exit the sub menu without saving the modification

8. Save: Save the settings and exit sub menu

3.3.8 ALARM LINKAGE

1. Alarm Input: Alarm input No. (1 and 2)

2. Input Type: On and Off

3. Arming Time (Hours: Minutes)

4. Disarming Time (Hours: Minutes)

5. Presetting Scanning: Linkage preset location scanning No. (0-4)

0 means the scanning without linking presetting

6. Pattern Scanning: Linkage pattern scanning No. (04)

0 means the pattern scanning without linking

7. Area Scanning: Linkage area scanning No. (0-4)

0 means the area scanning without linking

8. Alarm Output: On and Off

9. Exit: Exit the submenu without saving the modification

10. Save: Save the settings and exit submenu

3.3.9 DEFAULT SETTING
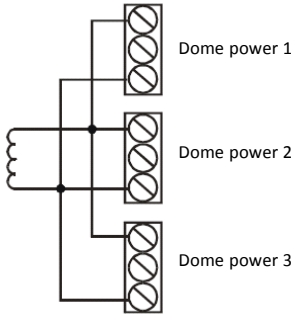
Cancel: Cancel and exit the sub menu

Enter: Perform the defaulted setting and exit the sub menu

4 TROUBLESHOOTING

4.1 TROUBLE SHOOTING TABLE

Phenomenon	Possible Cause	Countermeasures
No action or image after electrifying	Power damage or insufficient power	Change it
	Error connection of power line	Correct it
	Faults of engineering route	Eliminate it
Abnormal self-inspection; image exists but with motor noise	Mechanical fault	Inspect it
	Inclined camera	Adjust it
	Insufficient power supply	Change the power complying with the requirements and put the switch power near the dome
Normal self-inspection but no image	Error video lines	Correct it
	Poor video line connection	Eliminate it
	Camera damage	Change it

Phenomenon	Possible Cause	Countermeasures
Normal self-inspection but no image	Error video lines	Correct it
	Poor video line connection	Eliminate it
	Camera damage	Change it
Successful self-inspection but out of control	Error connection of control signal line	Correct it
	Unmatched dome address	Select it again
	Unmatched protocol or communication Baud rate	Adjust the protocol or controller to make it match and electrify again
	Too far distance and too large delay of 485 signal	Wire diameter in twisted-pair or thicker control line
Unstable image	Poor video line connection	Eliminate it
	Insufficient power supply	Change it

The video picture on the monitor rolls vertically in switching process	Incorrect camera phase position	If several domes are connected in one line (central power supply), AC24V power connector of dome shall be connected according to the same direction. Dome power 1 Dome power 2 Dome power 3