



XL-ICA-H660-SC110

6-inch Mega Pixel IP Speed Dome User's Manual



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Welcome

Thank you for purchasing our product!

This user's manual is designed to be a reference tool for the operation of your system.

Here you can find information about this IP speed dome features and functions.

Please keep it well for future reference.

Before installation and operation, please read the following safeguard and warning carefully!

Important Safeguard and Warning

1. Electrical Safety

All installation and operation should conform to your local electrical safety codes.

We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation

2. Transportation Security

No heavy stress, violent vibration or water splash are allowed during transportation, storage and installation.

This series product must use split type package during the transportation.

We are not liable for any damage or problem result from the integrated package during the transportation.

3. Installation

Keep upwards. Handle with care.

Does not touch the lower dome cover; it may affect the video quality,

Do not apply power to the dome before completing installation.

4. Qualified Engineers Needed

All installation here should be done by the qualified engineers.

All the examination and repair should be done by the qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or attempted repair.

6. Environment

This product has been tested and found to comply with the IP67 standard of Degrees of protection provided by enclosure (IP Code).

The dome should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

7. About Camera

Camera should be installed away from direct sunlight or other strong artificial lights to avoid blooming and smear.

When the camera is aiming at bright light or object, such as spotlight or sun, smear or blooming may appear.

Only use mild detergent or dry cloth to clean the camera.

8. About Accessories

Always use all the accessories recommended by manufacturer.

Before installation, please open the package and check that all the components are included in the package:

Contact you local retailer ASAP if something is missing in your package.

1 Features and Functions

1.1 General Introduction

This 6-inch mega pixel IP dome integrates the remote network monitor function and integration high intelligent speed dome together. It is easy to install and operate. This series IP speed dome has mega pixel vivid video and supports intelligent recognition, alarm activation, wide dynamic region (WDR) function and etc. It can guarantee the stability of audio/video data transmission and control data transmission via network technology, so that this series product can realize real-time monitor in anytime and at any where. Working with the built-in PTZ, the 6-inch mega pixel IP speed dome can implement the quick, accurate and convenient positioning surveillance.

1.2 Feature

This series IP speed dome has the following features:

1.2.1 Storage

- z Support central server backup function in accordance with your configuration and setup to save audio/video data.
- z Support record via Web and the recorded file are storage in the client-end PC.
- z Support local Micro SD card hot swap and memory backup function, support short time backup when encounter network connection failure.

1.2.2 Network Monitor

- z Supports audio/video data transmit to network terminal and then decode. Audio and video transmission protocol: HTTP, TCP, UDP, MULTICAST and RTP/RTCP and etc.
- z Support Web access. Max supports 10 connections.

1.2.3 Support multiple protocols

- z This series speed dome supports and intelligently recognize universally used protocols PELCO-P and PELCO-D. You can use various devices (such as matrix, control keyboard and DVR) and protocols to control the IP speed dome.

1.2.4 Proportional Pan and Tilt

- z This function keeps the image from moving too fast when there is a large amount of zoom.
- z Speed dome continually decreases or increases pan and tilt speeds in proportion to depth of zoom. When zooms speed is increasing, the camera moving speed becomes slow. When zooms speed is decreasing, the camera moving speed becomes fast.

1.2.5 Preset Setup and Recall

- z Preset function is to save the address information (such as PTZ pan/tilt, focus and etc) to the memory so that you can quickly adjust the dome and PTZ to the correct position. This series speed dome supports 200 presets.

1.2.6 Auto Scan

- z Camera scans back and forth regularly in a horizontal field. Here you need to set left and right limit and scan speed. This series IP speed dome max supports 5 scanning paths either via control keyboard or via the menu in screen.

1.2.7 Auto Cruise (Touring)

- z Auto cruise is to add presets into a routine in a desired order and then set time and stop duration for each address. The dome will begin an auto cruise between these presets. System supports 8 cruise paths. Each cruise consists of max 32 presets.

1.2.8 Auto Pattern

- z Auto pattern is to memorize dome operation such as pan, tilt, and zoom to repeat. Focus and iris are in auto mode during auto pattern. This series IP speed dome supports 5 pattern paths.

1.2.9 Action on Alarm

- z This series speed dome support seven alarm inputs (normal close or normal open). Each alarm has three types of PTZ actions. It can be individually programmed to initiated pattern, or go to an associated preset, cruise (touring) when received. The IP dome will return to a previously programmed state after alarm acknowledgement or to its previous position before alarm.
- z For video loss alarm or camera masking alarm, the IP speed dome can alert you according to your setup (either pop up prompt or alarm). System can activate corresponding channel to record video or snapshot. The alarm information will be saved in the SD card or be sent to you via email.

1.2.10 Auto Flip

- z This function allows you to trace the object manually. As long as you continue to hold the keyboard joystick in the down position, the dome rotates 180 degrees and repositions itself for uninterrupted viewing of any subjects that passes directly beneath the dome.

1.2.11 Self-diagnosis

There is a self-diagnosis procedure when IP dome boots up.

- z Tilt and vertical engine check
- z Camera diagnostics (mainly the zoom function diagnostics)

1.2.12 Day/Night Mode (B/W & Color Mode)

In auto mode, the camera can automatically adjust CCD light level.

1.2.13 Auto Focus

- z Auto focus allows the lens to remain in focus during zoom-in, zoom-out and motion functions to get vivid image. You can use FAR or NEAR button to adjust focus manually.

1.2.14 Pan Tilt and Zoom

- z Supports zoom in and zoom out during tilt and pan movement. In this period focus and iris are both in auto mode to get vivid video.

1.2.15 3D Intelligent Location

- z Working with DVR or WEB, just click part of the current scene, that zone will be displayed in the central window and automatically zooms. All of these allow you to trace precisely.

2 Cable Connection

2.1 RS485 and Power Cable Connection

This series mega pixel IP speed dome has audio cable port, network port and power port. These ports are to input audio, output signal, network data and connect to the power source.

Please connect the audio cable to the audio port of the device board, connect the network cable to the network port of the device board, and connect the power cable to the power socket of the device board respectively. See Figure 2-1 and Figure 2-2.

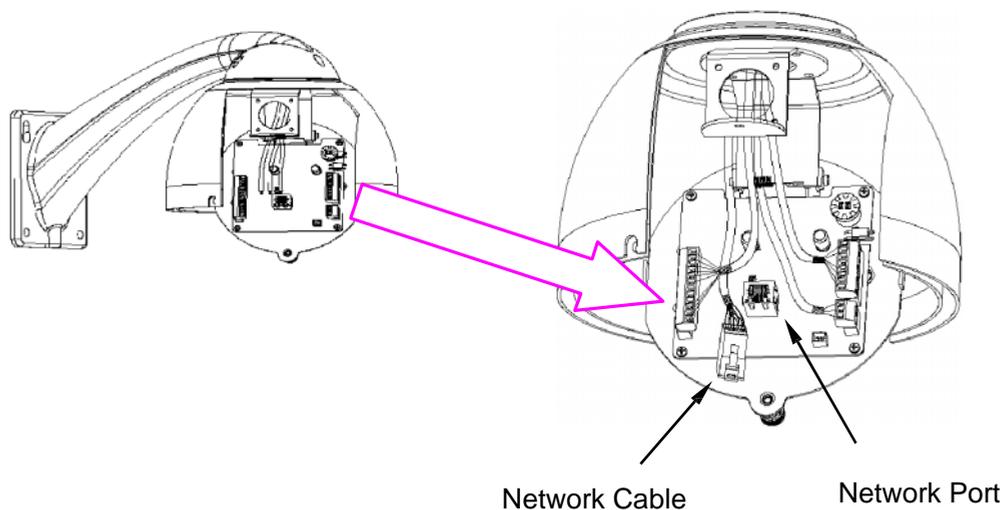


Figure 2-1

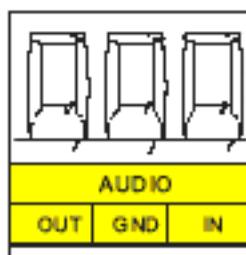


Figure 2-2

Name	Function	
AUDIO	OUT	Audio output port.
	GND	Ground port.
	IN	Audio connection port.

Power port connection interface is shown as in Figure 2-3.

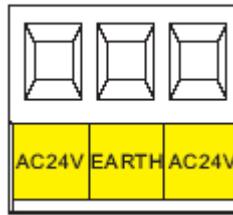


Figure 2-3

Name	Function
AC24V	24V power port. Connect to the power cable.
EARTH	Ground port.
AC24V	24V power port. Connect to power cable.

2.2 Alarm Cable Connection

Open the dome cover and take PTZ chip core out. Turn the core upside down; you can see the alarm port. See Figure 2-4.

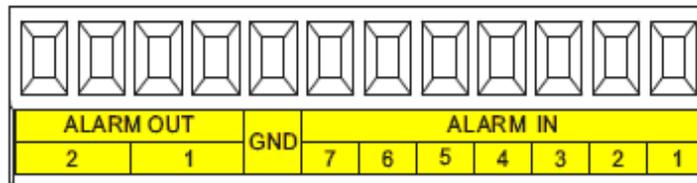


Figure 2-4

Name	Function
Alarm out: 1-2	<ul style="list-style-type: none"> z Two alarm output channels. When there is an alarm from current channel, system activates relay or not. z Alarm output relay default setup is NO. You can use the jump-cap near the power board relay to set. z NO: Normal open alarm output. z NC: Normal close alarm output.
GND	Alarm input ground end.
Alarm in: 1-7	<ul style="list-style-type: none"> z Seven alarm input channels. They are to receive relay signal from the external alarm source. You can go to dome menu to activate specified preset or patten. z When the activation mode is NO (normal open), dome alarms when there is low voltage. High voltage will not activate the alarm. z When the activation mode is NC (normal close), dome alarms when there is high voltage. Low voltage will not activate the alarm. <p>Note:</p> <ul style="list-style-type: none"> z Dome alarm input message is ground mode. z Dome alarm input signal are two modes: normal open and

normal close.

2.2.1 System Layout

2.2.1.1 System Connection

Please refer to the following interface for Ethernet connection information.

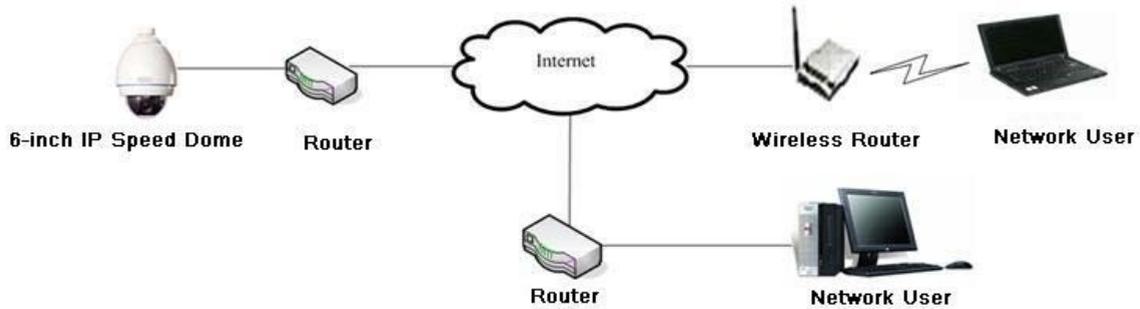


Figure 2-5

Please refer to Figure 2-6 for alarm cable connection.

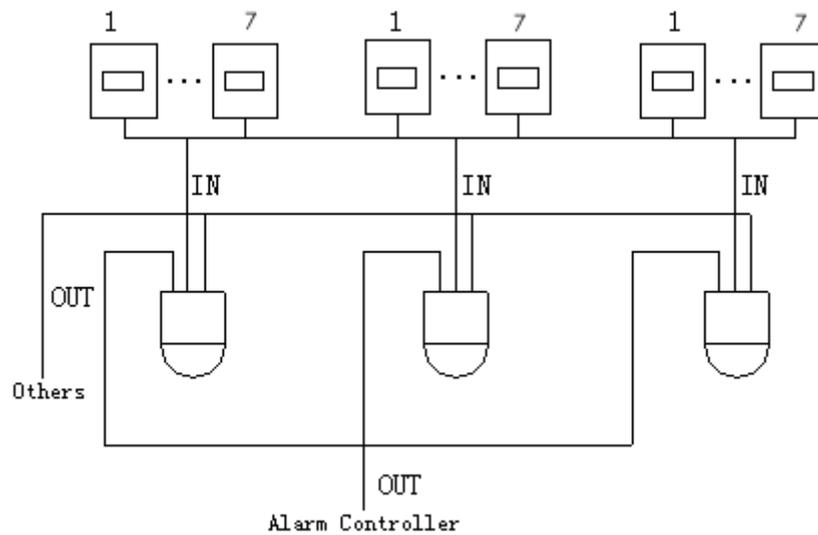


Figure 2-6

2.2.2 Keyboard Connection

This series speed dome protocol is open and supports multiple popular system platforms in today's market. Please feel free to contact us if some matrix systems do not support dome camera communication protocol. The most direct and easy way is to use current system to process video signal and add some control keyboards to control speed dome. See Figure 2-7.

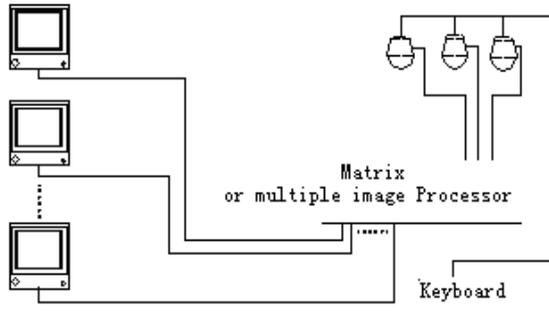


Figure 2-7

3 Quick Configuration Tool

3.1 Overview

Quick configuration tool can search current IP address, modify IP address. At the same time, you can use it to upgrade the device.

Please note the tool only applies to the IP addresses in the same segment.

3.2 Operation

Double click the “ConfigTools.exe” icon, you can see an interface is shown as in Figure 3-1. In the device list interface, you can view device IP address, port number, subnet mask, default gateway, MAC address and etc.

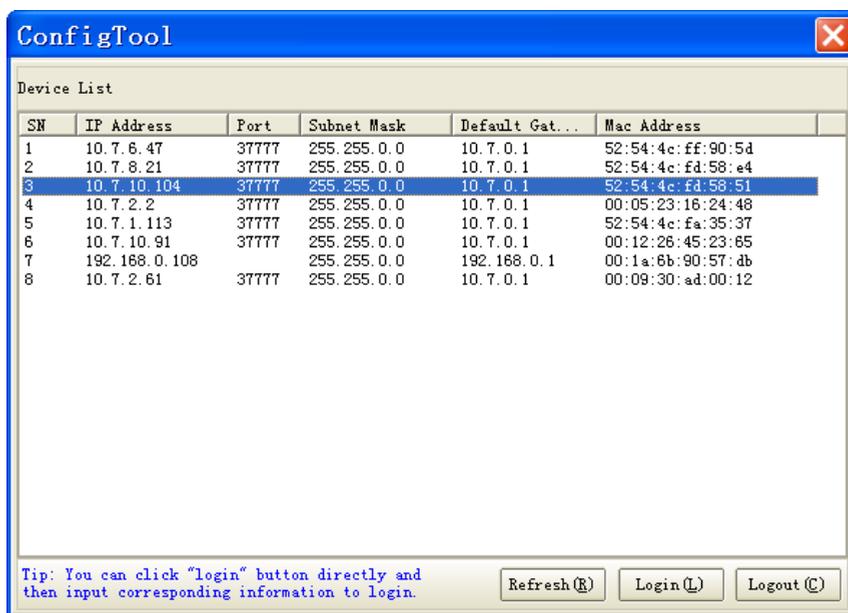


Figure 3-1

Select one IP address and then right click mouse, you can see an interface is shown as in Figure 3-2.

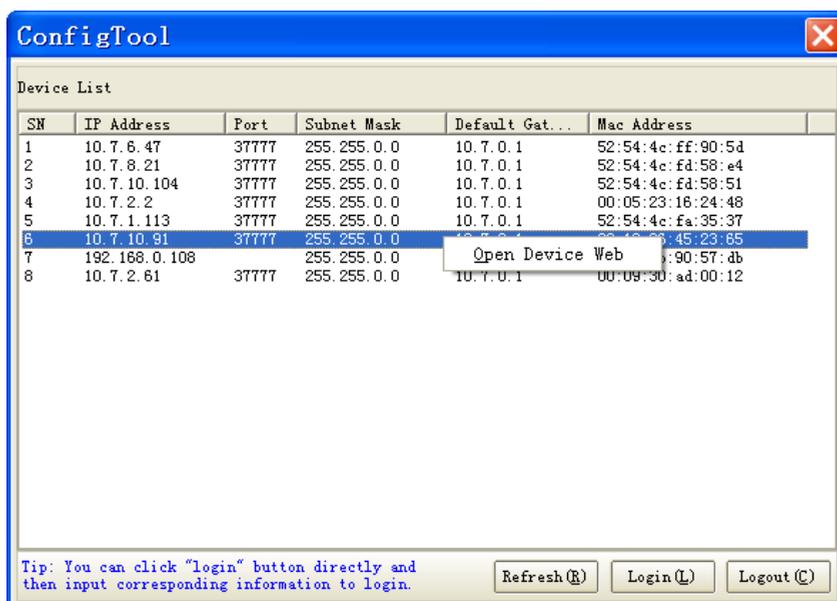


Figure 3-2

Select the “Open Device Web” item; you can go to the corresponding web login interface. See Figure 3-3.

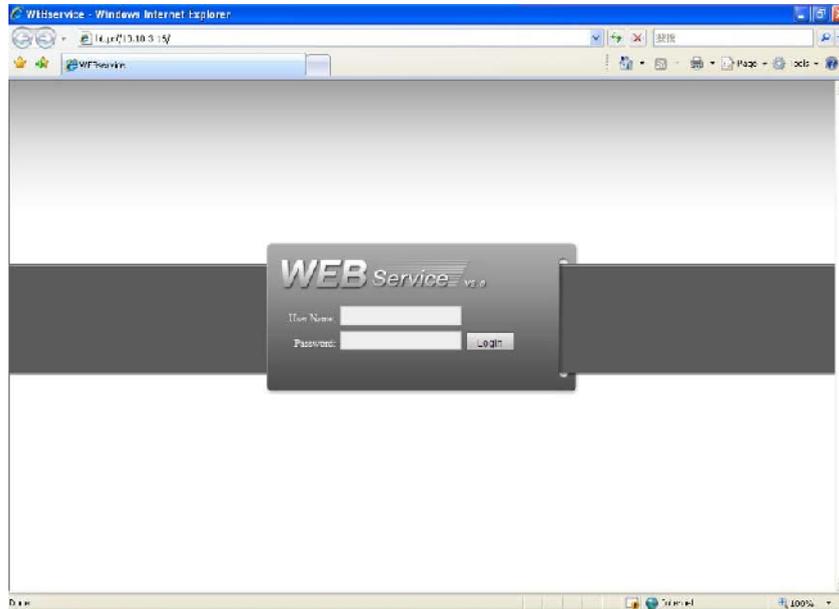


Figure 3-3

If you want to modify the device IP address without logging in the device web interface, you can go to the configuration tool main interface to set.

In the configuration tool search interface (Figure 3-1), please select a device IP address and then double click it to open the login interface. Or you can select an IP address and then click the Login button to go to the login interface. See Figure 3-4.

In Figure 3-4, you can view device IP address, user name, password and port. Please modify the corresponding information to login.

Please note the port information here shall be identical with the port value you set in TCP port in Web Network interface. Otherwise, you can not login the device.

If you are use device background upgrade port 3800 to login, other setups are all invalid.



Figure 3-4

After you logged in, the configuration tool main interface is shown as below. See Figure 3-5.

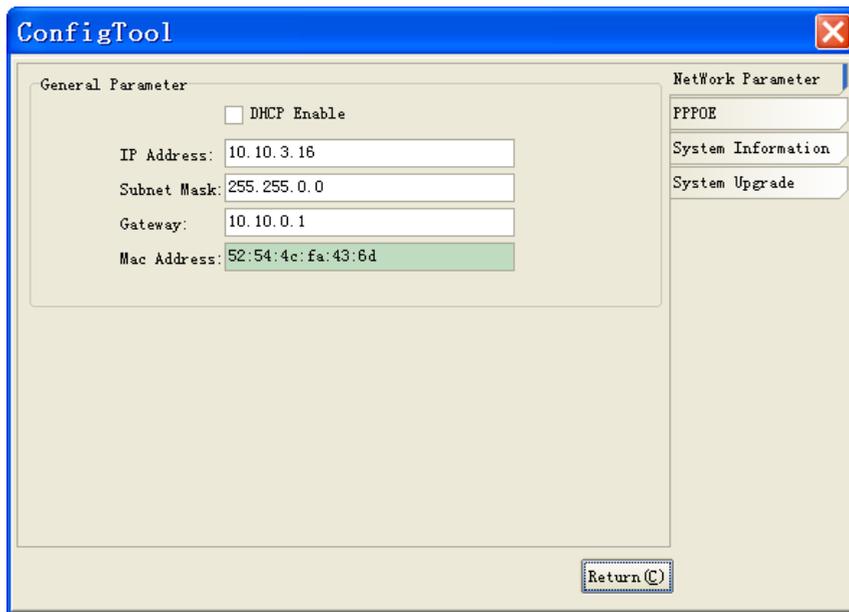


Figure 3-5

For detailed information and operation instruction of the quick configuration tool, please refer to the *Quick Configuration Tool User's Manual* included in the resources CD.

4 Web Operation

4.1 Overview

IP speed dome support Web access via PC to manage device.

Web operation consists of the following operation sections: monitor channel, record search, alarm setup, system setup, PTZ control and monitor window.

4.2 Login

Before web operation, please check the following items:

- z PC and IP speed dome connection is OK.
- z You have set PC IP address, IP speed dome IP address, subnet mask and gateway.
(Please set the IP address of the same section for the PC and IP speed dome. Please input corresponding gateway and subnet mask if there are routers.) IP speed dome default IP address is 192.168.1.108.
- z Use order ping `***.***.***.***`(IP speed dome IP address) to check connection is OK or not.
Usually the return TTL value should be less than 255.

Open IE and input device IP address in the address column. For example, if your device IP is 192.168.1.108(factory default IP address), then please input `http:// 192.168.1.108` in IE address column. See Figure 4-1.

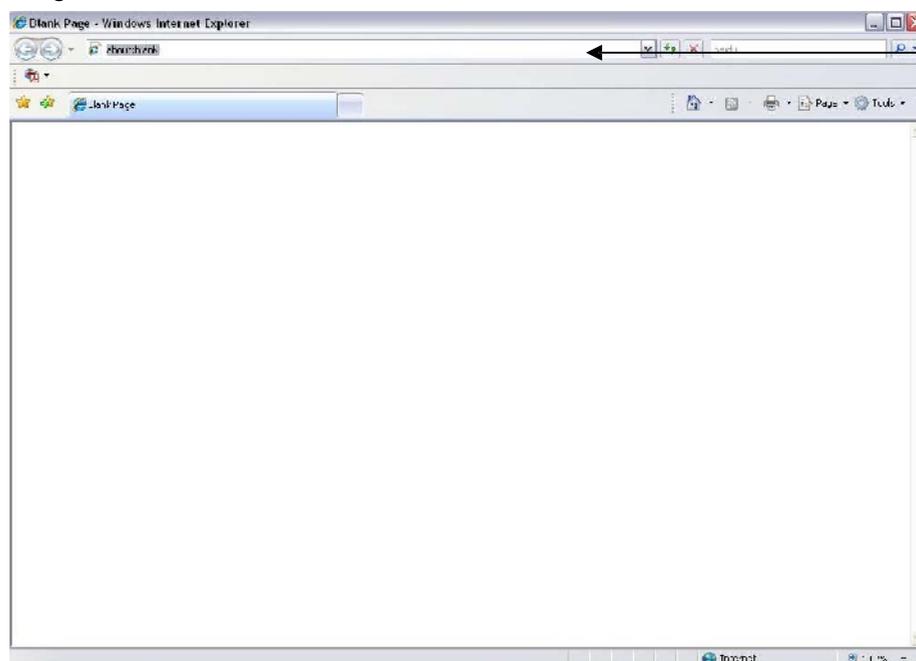


Figure 4-1

System pops up warning information to ask you whether install webrec.cab control or not. Please click yes button.

If you can't download the ActiveX file, please modify your settings as follows. See Figure 4-2.

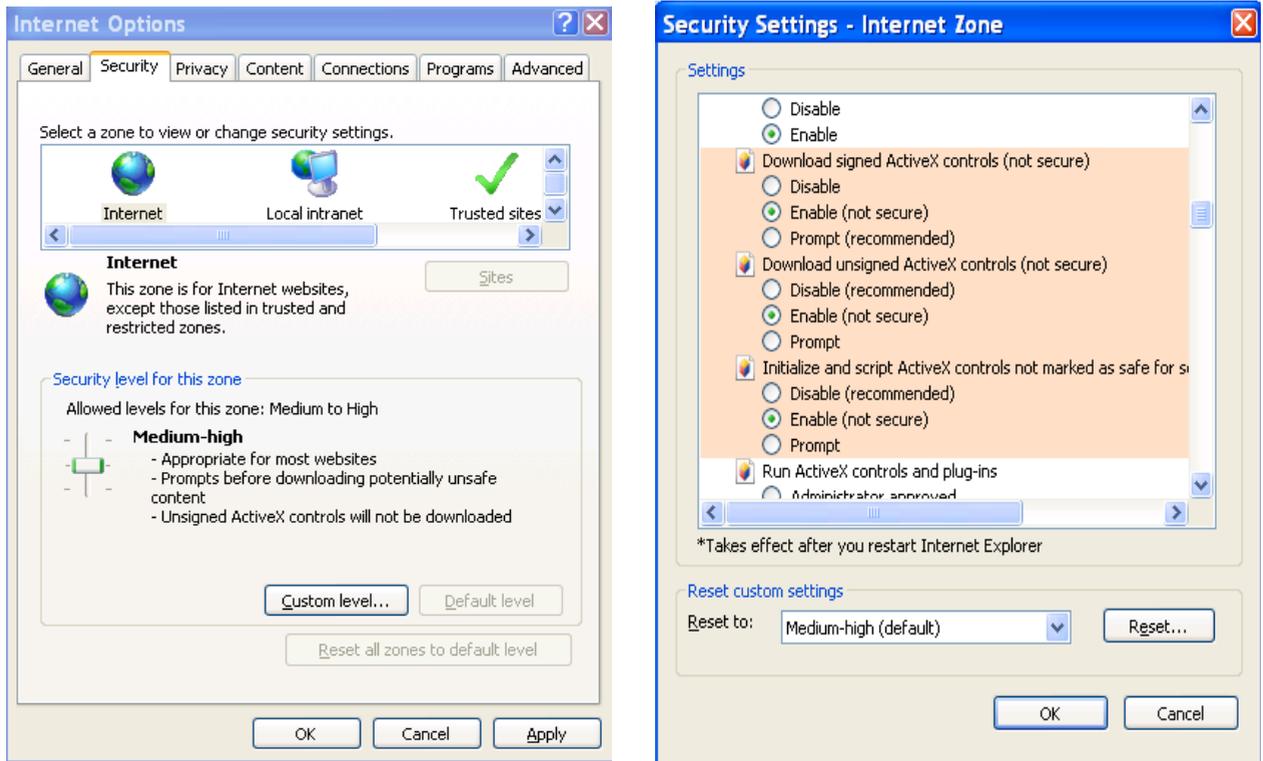


Figure 4-2

After installation, the interface is shown as below. See Figure 4-3.

Please input your user name and password.

Default factory name is admin and password is admin.

Note: For security reasons, please modify your password after you first login.

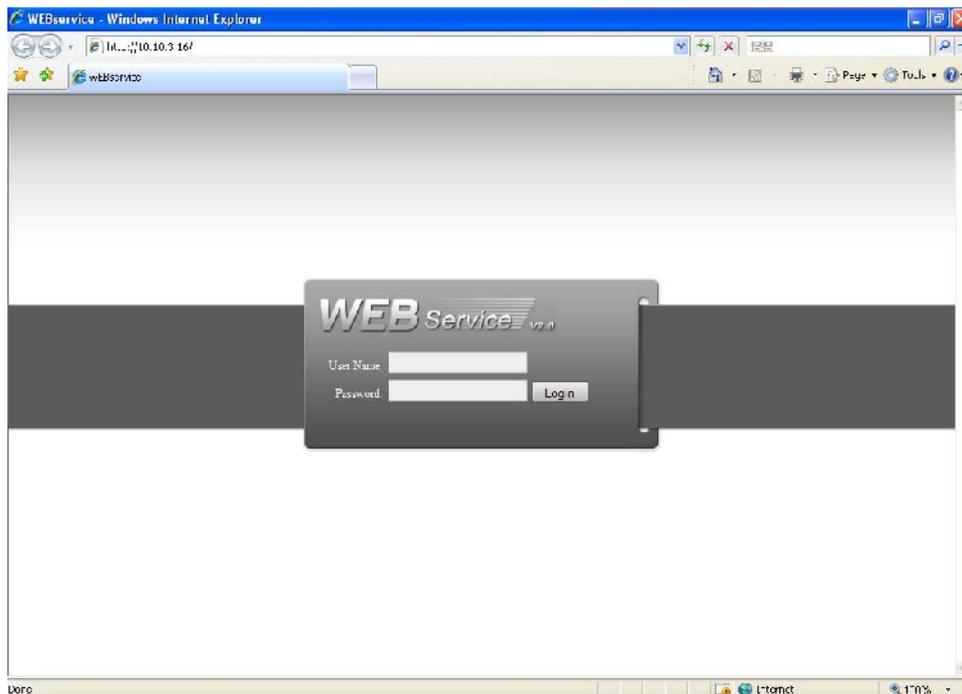


Figure 4-3

After you logged in, you can see the main window. See Figure 4-4.

There are six sections:

- z Section 1: Monitor channel menu tree
- z Section 2: System menu
- z Section3: PTZ control
- z Section4: Color setup and other setup
- z Section5: Preview window
- z Section 6: Monitor window switch

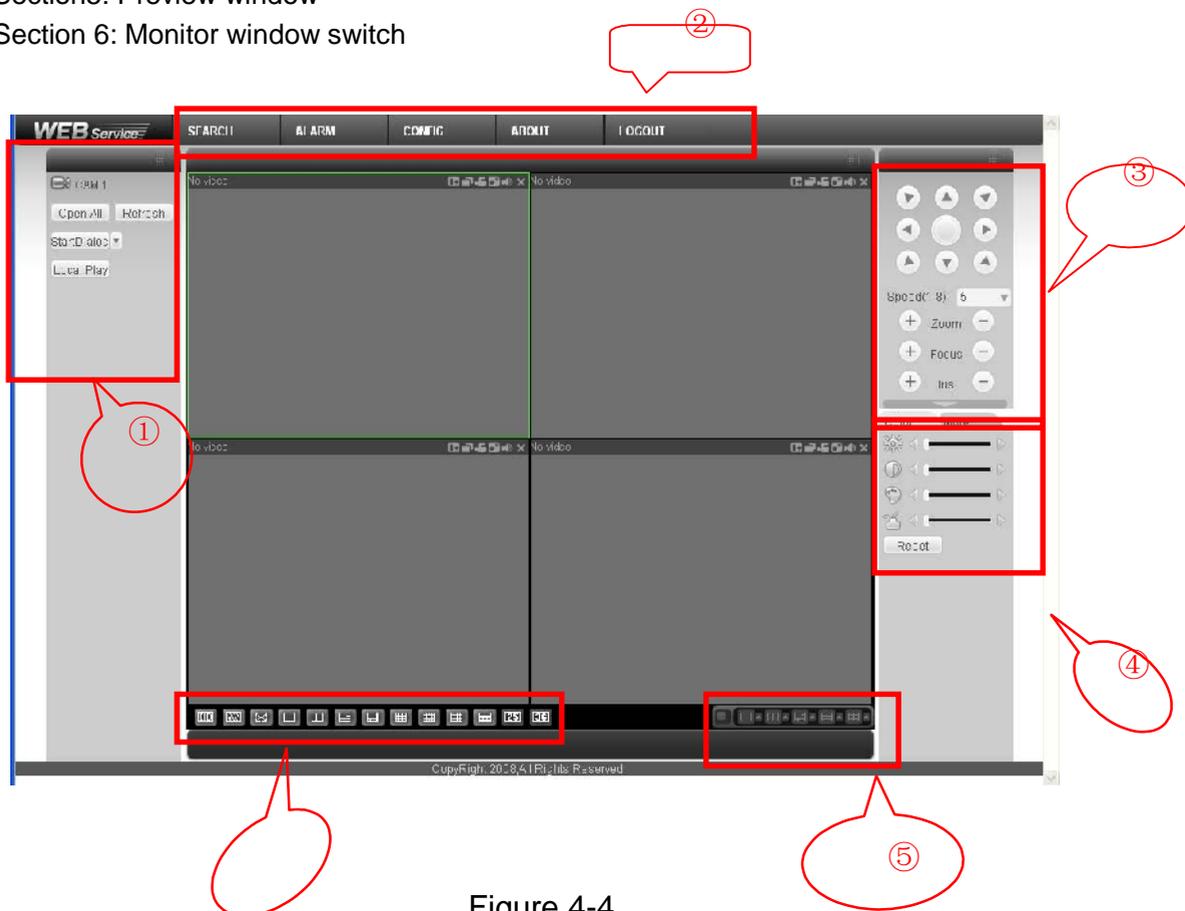


Figure 4-4

Please refer to *6-inch mega pixel IP Speed Dome Web Operation Manual* included in the resource CD for detailed information.

5 Performance Specification

Specification		Index
Camera	Sensor Type	1/3-inch CCD
	Video Format	PAL/NTSC
	Pixel	1.30 mega pixle, 1280 (Pan) *960 (Tilt)
	Min Illumination	0.02Lux@F1.6
	Shutter Speed	1/4~1/100000
Video	Standard Supported	PAL : 1f/s-25f/s NTSC: 1f/s-30f/s
	Encode capacity	One 720P+one D1
	Encode bit stream	1.3M (1280*960) 720 (1280*720) VGA (640*480) QVGA (320*240) D1 (704*576/704*480) HD1 (352*576/352*480) CIF (352*288/352*240) QCIF (176*144/176*128) QQVGA (160*128)
	Encode Speed	1.3M signal mode: NTSC 1f/s-15s for each channel (Adjustable). PAL 1f/s-1f/s for each channel (Adjustable) 720P signal mode; NTSC 1f/s-30f/s for each channel (Adjustable). PAL 1f/s-25f/s for each channel (Adjustable)
Power Consumption		50W
Power		24V AC
Temperature		-40~+60°C
Protection Level		IP66
Working Environment Humidity		<90%
Package Dimension		525mm*325mm*340mm
Weight		5kg

6 Function Specification

Specification		Note
Lens Control	Zoom Adjustment	Manual
	Focus Adjustment	Auto/Manual adjust
	Aperture Adjustment	Auto /manual adjust
PTZ Control	Preset	255 ((PELCOD、PELCOP proctcl)
	Auto Tour	8
	Auto Pattern	5
	Auto Scan	5
	Focus speed auto control	Auto adjusts the speed according to the focus distance.
	Auto flip	Tilt 90 degrees auto flip to realize 180 degrees continuing trace
	Auto rotation speed	0.1 ^o ~300 ^o /s
	Preset max speed	300 ^o
	Manual tilt flip speed	0.1 ^o ~150 ^o /s
Video Process	White balance adjustment	Auto
	Color/B&W(Day/Night) switch	Auto
Video	Signal input type of camera property	1.3M /720P
	Video compression	H.264 video comprression standard
	Motion Detection	Support motion detection zone setup.
	Dual-stream	Support one main stream and one extra stream.
Audio		Bidirectional Talk .Delaying value within 200ms
		Audio Listening .Support 1-ch MIC input.
Network		WEB Access
		PPPoE
		DHCP
		DDNS
		SMTP
		NTP
		DNS
		Support IP address auto search function
	Support IP address filter function	
Record	Schedule Record	6 periods in one day. This series product does not support this function.
	Manual Record	After enabling manual record, no matter system is in schedule or alarm status or not, system just begins recording.

	Alarm Record	System automatically enables recording function when alarm occurred.
	Motion Detection Record	When input video changes, system automatically enables record operation.
OSD	Time Title Display	Transparent value ranges from 0 to 255. 0 means completely transparent and 255 is opaque.
	Channel Title Display	Please refer to the above information.
Storage		Local Micro SD storage .Support high-speed card/low-speed card.
		Based on SDK network storage
Alarm		2-ch alarm output.
		7-ch local alarm/network alarm input
Event Management		Activate alarm via motion detection or external input. Please enable pre-record function when activating the alarm
		Upload image via email.
		Send out alarm notice via email, external port. Need anti-dither supported when alarm occurs frequently.
		Support video short-time buffer storage function before or after alarm . Pre-record is 2Mbytes Buffer storage 5 seconds video
Control		PTZ control via Web
Device Upgrade		Network remote upgrade .Working wit the upgrade tool in the resource CD.
		COM upgrade. Working wit the upgrade tool in the resource CD.
Device Management		Log in the client-end software in the PC to realize real-time monitor.
Parameter Configuration		IP speed dome provides user interface to modify device information, video information, record setup, motion detection setup, alarm setup, OSD information.
		IP speed dome provides user interface to search log, status, user management, email setup, time and date setup to check system running information.
Log		Important event log record. It can record the following information: System operation, setup operation, alarm event, record

	management, user management, clear log.
Digital watermark	Prevent from unauthorized data modification.
RESET	Support hardware/software/Watchdog reset Watch dog max support 35 seconds.
Interface	7 alarm input ports
	2 alarm output ports
	1 analog audio input put and 1 analog audio output port.
	1 network port (RJ45 10M/100M self-adaptive Ethernet port)
	1 Micro SD card port. Support high-speed card/low-speed card.
Installation	Suspended, wall mount and embedded installation

7 Factory Default Setup

Function Configuration Type	Item Name	Default setup		
General Setup	Date format	Y-M-D		
	DST	Disable		
	Date separator	' _ '		
	Time format	24H		
	Language	Simplified Chinese		
	When HDD is full	Overwrite		
	Record duration	60M		
	Device No.	8		
	Video type	PAL		
Encode Setup	Main stream	Channel	Channel01	
		Encode mode	H.264	
		Stream Type	Main stream	
		Audio/Video enable	Enable audio and video	
		Resolution	720	
		Frame rate	25	
		Bit stream control	VBR	
		Quality	Good	
		Bit stream value	2048	
		I frame interval control	50	
	Extra stream	Stream Type	Extra stream	
		Audio/Video enable	Enable video	
		Resolution	QVGA	
		Frame rate	15	
		Bit stream control	VBR	
		Quality	Good	
		Bit stream value	384	
	Watermark	Enable Watermark: all type: character Watermark: Digital CCTV		
		Privacy mask	Never	
	Time title	Enable. OSD transparent :128		
	Channel title	Enable. OSD transparent :128		
	Record Setup	Channel	Ch01	
		Pre-record	5 seconds.	
		Period Setup	Start time	0:00:00
			End time	23:59:59
			Record	Period 1:Enable motion detection/alarm
			Snapshot	Period 1::Enable motion detection/alarm
		Week	Sunday	
COM Setup	Option	COM01		

	Function	General
	Data bit	8
	Stop bit	1
	Baud rate	115200
	Parity	None
Network Setup	Ethernet	Port 01
	DHCP	Disable
	IP address	192.168.1.108
	Subnet mask	255.255.0.0
	Gateway	192.168.0.1
	Device name	Device factory default name
	TCP port	37777
	HTTP port	80
	UDP port	37778
	Network user connection amount	10
	Network transmission QoS	Disable
	Remote host	Multiple broadcast group
	Enable	Disable
	IP address	239.255.42.42
	Port	36666
	Email setup	Enable
	Multiple DDNs	Disable
	NAS setup	Disable
	NTP setup	Disable
	Alarm server	Disable
Alarm Setup	Event type	Local
	Alarm input	Input 01, disable
	Type	Normal open
	Setup	Period: Start time 0:00:00 End time:23:59:59 Period 1:enable Week: Sunday
	Anti-dither	0 second
	Alarm output	Disable
	Alarm latch	10 seconds
	Record channel	1, enable
	Record latch	10 seconds
	Send email	Enable
	PTZ activation	Disable Event type: never Address: 0
	Snapshot	Disable
	Video Detection	Event type
Channel		Ch01, Disable
Sensitivity		3
Time period setup		Period: Start time 0:00:00 End time:23:59:59 Period 1:enable Week: Sunday
Anti-dither		5 seconds
Alarm output		Disable
Alarm latch		10 seconds

	Record channel	Disable	
	Record latch	10 seconds	
	Send email	Disable	
	PTZ activation	Event type: Never Address: 0 Disable	
	Snapshot	Disable	
PTZ Setup	Channel	Ch01	
	Protocol	DH-SD1	
	Address	1	
	Baud rate	38400	
	Data bit	8	
	Stop bit	1	
	Parity	None	
Default and Backup	All	Disable	
	General	Disable	
	Encode	Disable	
	Record	Disable	
	COM	Disable	
	Network	Disable	
	Alarm	Disable	
	Video detection	Disable	
	Display output	Disable	
Channel name.	Disable		
Advanced	Abnormity	Event Type	No disk, disable
		Alarm Output t	Disable
		Alarm Latch	10 seconds
		Send email	Disable
	Record control		Auto. Ch1
	User account		admin--- password: admin 888888--- password: 888888 (reusable) 666666--- password: 666666 (reusable) default--- password: tluafed
	Snapshot	Channel	Ch01
		Snapshot mode	Scheduled
		Frame rate	1f/s
		Resolution	D1
		Quality	60%
	Auto maintain	Auto reboot	02.00 everday
		Auto delete old files	Never
	Camera Property	Channel	1
		Exposure mode	N/A
Day/night mode		N/A	
Backlight compensation		N/A	
White balance		N/A	
Signal Type		720P	
Mirror		N/A	
Flip		N/A	

Auto registration	Enable	Disable
	SN	1
	IP	0.0.0.0
	Port	7000
	Device ID	Dahua
DNS Setup	DNS	202.101.172.35
	Alternative DNS	202.101.172.35

8 FAQ

Bug	
SD card write times	Do not set the SD card as the storage media to storage the schedule record file. It may damage the SD card duration.
I can not use the disk as the storage media.	When disk information is shown as hibernation or capacity is 0, please format it first (Via Web).
I can not upgrade the device via network.	The status indication light is shown as red when network upgrade operation failed. You can use port 3800 to continue upgrade.
Recommended SD card brand	Kingston 4GB、Kingston 1GB、Kingston 16GB、Transcend 16GB、SanDisk 1G、SanDisk 4G Usually we recommend the 4GB (or higher) high speed card in case the slow speed results in data loss.
Audio function	Please use active device for the audio monitor input, otherwise there is no audio in the client-end.

9 Appendix I Daily Maintenance and IP Speed Dome FAQ

9.1 Daily Maintenance

Please clean dome cover regularly to get vivid image.

Handle the cover with care. Use water to wash. Don't use cloth to clean.

Use mild detergent to clean if there is too much dust.

Note:

The sweat from your hand may erode plating surface, your nail may scrape dome cover result in blur image.

9.2 FAQ

SYMPTOM	CAUSE	SOLUTION
No self-diagnosis, no video signal when I connect dome to power.	Red LED is not on. z 24V AC does not apply to the power. Or connection is too loose. z Power off or Transformer problem.	z Check 24V AC power is connected or properly earthed. z Check power supply condition or check 24V transformer.
	Red LED light is on z 24V AC power is low z Something wrong with power socket.	z Use multimeter to check dome load. If it is lower than 24V AC, then the IP speed dome can not work. z Please contact your local retailer to replace power socket.
No self diagnosis. There is a noise	Power supply is inadequate.	Replace power socket.
	Mechanical malfunction.	Need electrical engineer help.
Self diagnosis is ok. No video signal	Power connection is too loose.	Connect tightly
	Check the circuit connection.	Connect again
	Video switch connection is wrong or improper operation.	Please refer to user's manual for cable connection information.
Self diagnosis is OK but I can not operate the dome.	Control circuit is not properly connected	Check control cable connection.
	Dome address, protocol or baud rate setup is not right.	Please refer to user's manual for detailed setup information.
Video signal loss occurs in high speed rotation.	Power supply is not sufficient	Replace power socket.
Video signal is not successive	Circuit connection is too loose.	Connect tightly.
	Video switch or power problem	Need electrical engineer help.
Video is not clear.	Focus is in manual mode.	Control manually.
	Dome cover is dirty.	Wash dome cover
During camera switch, there is a tilt movement in the monitor.	Camera power is not in the same Phase.	When several domes are connected to one transformer, please connect the transformer output cable to the domes' same side.

10 Appendix II Thunder Proof and Surge Protection

This series speed dome adopts TVS lightning protection technology. It can effectively prevent damages from various pulse signals below 1500W, such as sudden lighting and surge. While maintaining your local electrical safety code, you still need to take necessary precaution measures when installing the speed dome in the outdoor environment.

- z The distance between the signal transmission cable and high-voltage device (or high-voltage cable) shall be at least 50 meters.
- z Outdoor cable layout shall go under the penthouse if possible.
- z For vast land, please use sealing steel tube under the land to implement cable layout and connects one point to the earth. Open floor cable layout is forbidden.
- z In area of strong thunderstorm hit or near high sensitive voltage (such as near high-voltage transformer substation), you need to install additional high-power thunder protection device or lightning rod.
- z The thunder protection and earth of the outdoor device and cable shall be considered in the building whole thunder protection and conform to your local national or industry standard.
- z System shall adopt equal-potential wiring. The earth device shall meet anti-jamming and at the same time conforms to your local electrical safety code. The earth device shall not short circuit to N (neutral) line of high voltage power grid or mixed with other wires. When connect the system to the earth alone, the earth resistance shall not be more than 4Ω and earth cable cross-sectional area shall below 25 mm^2 . See Figure 10-1.

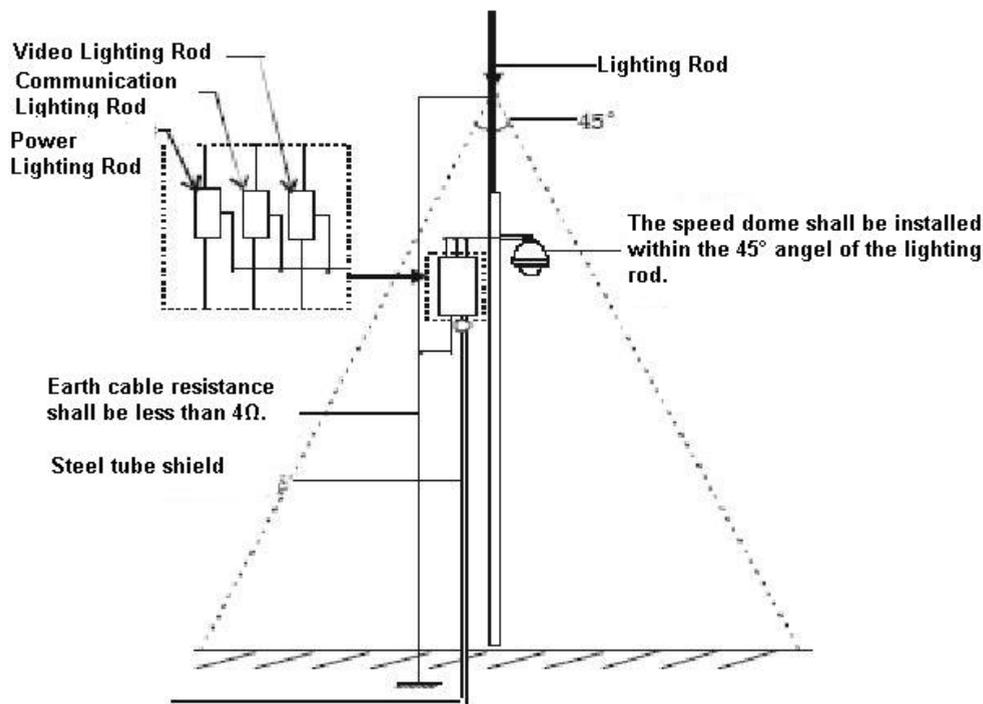


Figure 10-1

Note:

- z This manual is for reference only. Slight difference may be found in the user interface.**
- z All the designs and software here are subject to change without prior written notice.**
- z If there is any uncertainty or controversy, please refer to the final explanation of ours.**
- z Please visit our website or contact your local retailer for more information.**