Explosionproof Sign: Ex d IIC T6 Gb, Ta:-40 ℃to +60℃
Ex tb IIIC T80℃ Db -40 ℃to +60℃

Dahua HD Explosion-proof Camera User's Manual

Version 1.0.0
Zhejiang Dahua System Engineering CO., LTD

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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 speed dome features and functions, as well as a detailed menu tree.

Please keep it well for future reference!

Before installation and operation, please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1．Electrical safety

- All installation and operation here 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.
- We are not liable for any problems caused by unauthorized modification or attempted repair.

2．Transportation Security

- No heavy stress, violent vibration or water splash are allowed during transportation, storage and installation.
- Please use the original packing material (or the material of the same quality) when you ship it back to the manufacturer.

3．Installation

- Do not apply power to the product before completing installation.
- Do not put object on the product.

4．Environment

- This series product 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 keep the sound ventilation.
- Do not allow the water and other liquid falling into the device. This series product complies with the IP66 standard specified in the Degrees of Protection Provided by Enclosure.
- 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.
- Usually we recommend thunder-proof device to prevent thunder strike.
- The GND port of the product shall be grounded to further enhance the reliability of the device.

5. Daily Maintenance

- Current series product has no power button. Please unplug all corresponding power cables before your begin installation or daily maintenance work.
- Please keep the dustproof cap back to protect the CCD or CMOS part if the device does not work for a long time.
- Do not touch CCD (CMOS) component. You can use the blower to clean the dust on the surface of the device. You can use the dry cloth with some alcohol or mild detergent to clear if necessary.
- Do not use the volatility solvent such as the benzene or thinner, or detergent with strong abradability. It may result in lens damage or it may adversely affect the device performance.

- 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.

6. 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 your local retailer ASAP if something is missing in your package.

7. Explosion-proof Structure Description

- It is fully considered that even if there is any explosive gas mixture entering inside of the device, it won't cause explosion due to electrical operation when designing the product enclosure. The explosion-proof performance of the device is completely ensured by the enclosure intensity and the junction surface gap, length and max surface temperature limit of each component that makes up the enclosure.

- The enclosure can sustain the hydrostatic test regulated in the GB3836.2-2010 after welding and finish machining; test pressure is 1.6 MPa and lasts 10 seconds without dripping and deformation of the structure.

- The max surface temperature of the enclosure is not allowed to exceed 80℃ during normal work.

- Inspection window adopts tempered glass, which can sustain impact and thermal shock test.

- IP68 compliance for the enclosure.

- Cable entry mode of the product adopts packing mode, which is to fully compress the cable without looseness.

1 Overview

1.1 Brief introduction

HD explosion-proof camera is a new generation of explosion-proof monitoring device, which adopts more advanced manufacturing technique and makes the product quality; performance and appearance take the leading position within the same type product. The device structure adopts new design and convenient installation after which it won't affect the overall aesthetics of the monitoring scene. Besides, it is also equipped with several features like clear image, digitalization, intelligentization, easy installation and etc.

The HD explosion-proof camera is designed and manufactured by strictly conforming to the standards like GB3836.1-2010 <Explosive Environment Chapter 1: Device General Requirements>, GB3836.2-2010 <Explosive Environment Chapter 2: The device protected by flameproof enclosure "d"> and GB12476.1-2013 <Flammable dust environment electrical device chapter 1: the electrical device protected by enclosure and surface temperature limit section 1: Technical Requirements of Electrical Device>. The enclosure adopts antirust processing which realizes IP68 compliance. The device can be widely used in many industries such as oil, chemical, dock, port, mine, aerospace, aviation, military, food processing and etc.

1.2 Electrical Index

See Sheet 1-1 for more details about electrical index.

Parameter	Index
Input voltage	Optional 100V AC～240V AC or AC 24V or DC 12V
Max current	≤1A
Power consumption	≤30W
Electrical connection	Complex cable connects video, power, control, network, alarm and audio.

Sheet 1-1

1.3 Mechanical Index

See Sheet 1-2 for more details about mechanical index.

Parameter	Index
Material	Stainless steel 304
Protection level	IP68
Cable exit hole amount	3
Cable exit hole thread specification	One glued cable exit adopts G3/4 thread, two plugs adopt M26X1.5
Installation mode	Motorized PTZ, semifixed PTZ, fixed bracket

Sheet 1-2

1.4 Environmental Condition

Parameter	Index
Atmospheric pressure	80 kPa～ 110kPa
Environment temperature	-40℃～ +60℃
Relative humidity	No more than 95%RH （+25℃）

Sheet 1-3

1.5 Product Dimension

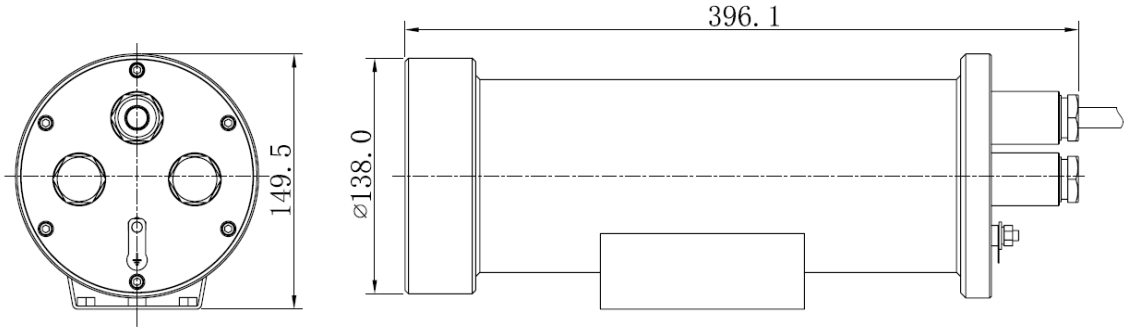


Figure 1-1

1.6 Installation Dimension

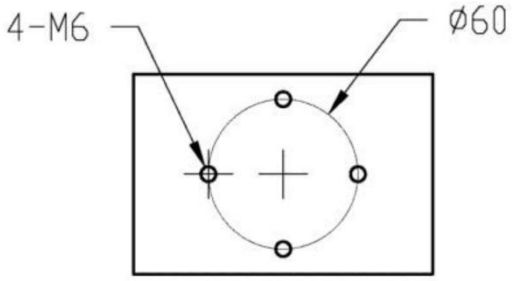


Figure 1-2

2 Installation

Installation Requirements

- The product has to take the following inspection before installation, it is not allowed to use if it fails to meet the following requirements.
  - ◆ If there is serial number of explosionproof certificate;
  - ◆ If the explosionproof sign conforms to the application of explosive gas mixture environment;
  - ◆ All the explosionproof components have no cracks and influence of explosionproof performance defect.
- There is a nameplate and warning sign "It is prohibited to open cover with power on" set in the obvious location on the product surface.

2.1 Cable

2.1.1 Use Explosionproof Flexible Tube

Step 1

Cover explosionproof flexible tube component on the cable in advance; take down the compression nut and reserve the default gasket and rubber gasket (users can also use the spare parts in the package), see Figure 2-1.

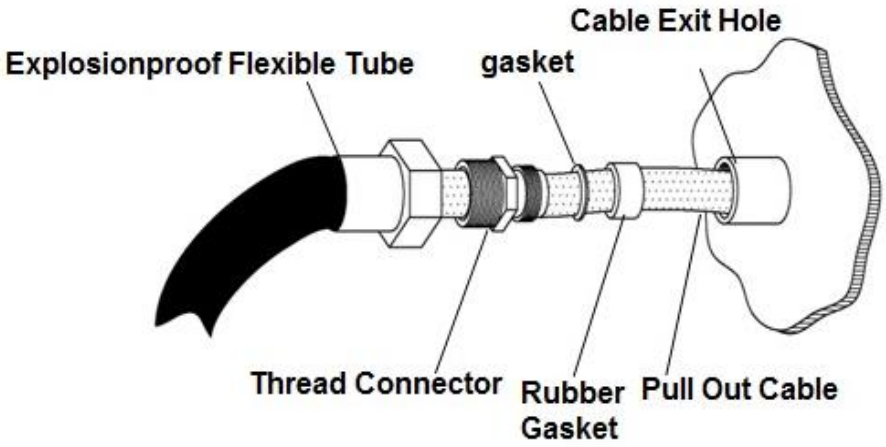


Figure 2-1

Step 2

After screwing the thread connector tightly, then tighten the explosionproof flexible tube, see Figure 2-2.

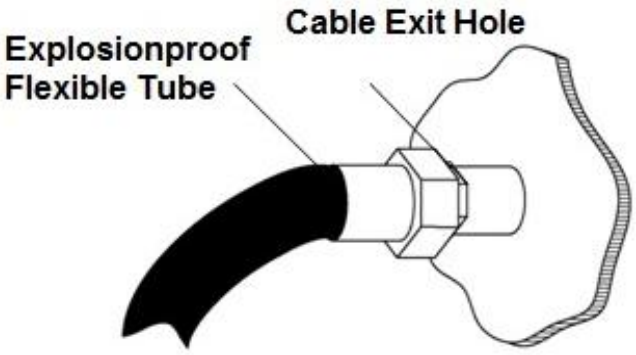


Figure 2-2

2.2 Bracket Installation

Attention:

It is advised to debug indoors with power on if possible due to the product specificity, it is better to implement on-site installation after getting familiar with the device performance.

Step 1

Install the camera unit on the selected wall or installation location with bolts or expansion screws; see Figure 2-5 for more details.

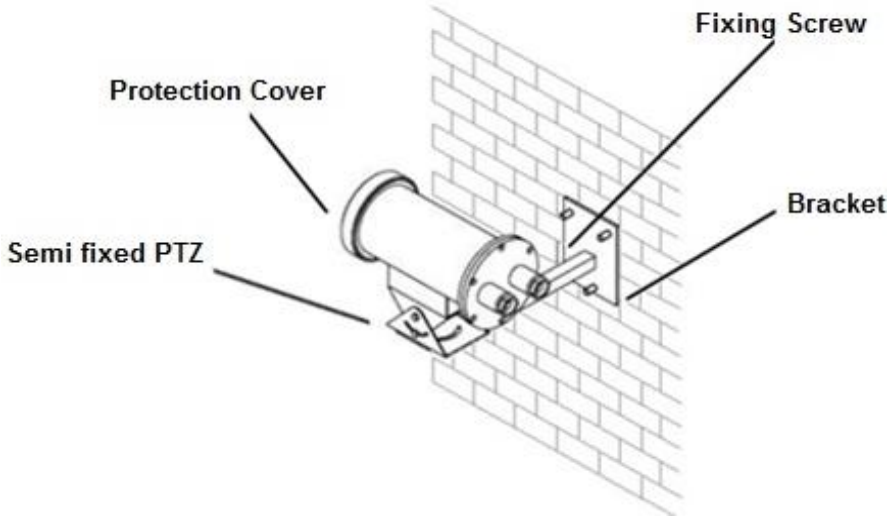


Figure 2-5

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.

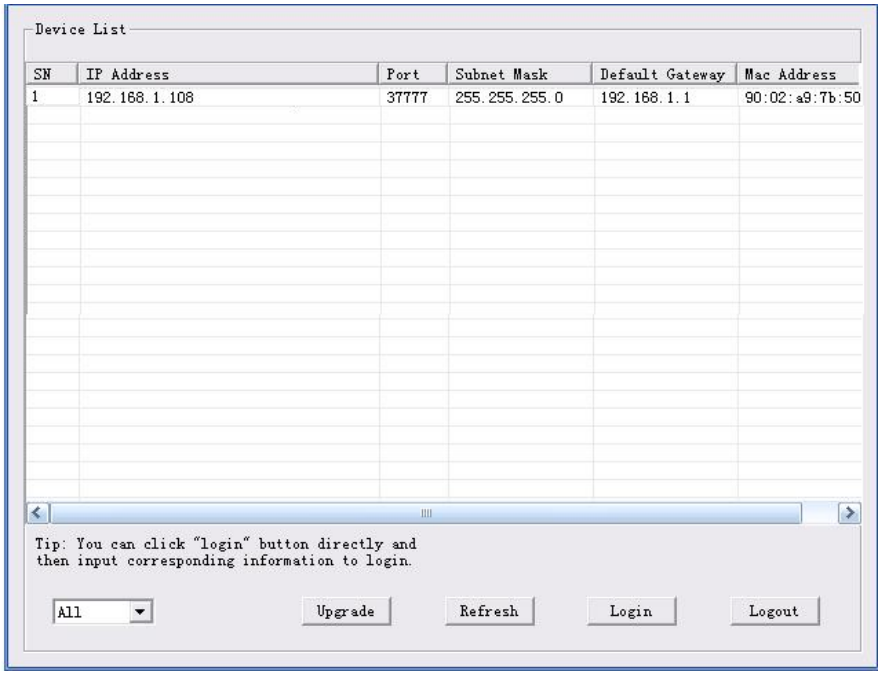


Figure 3-1

Modify the IP address, PPPOE setup, system info setup of the device.

- Set via device WEB page

After selecting the device IP address, right click the IP address, the system displays "Open Device Web" option, see Figure 2-2.

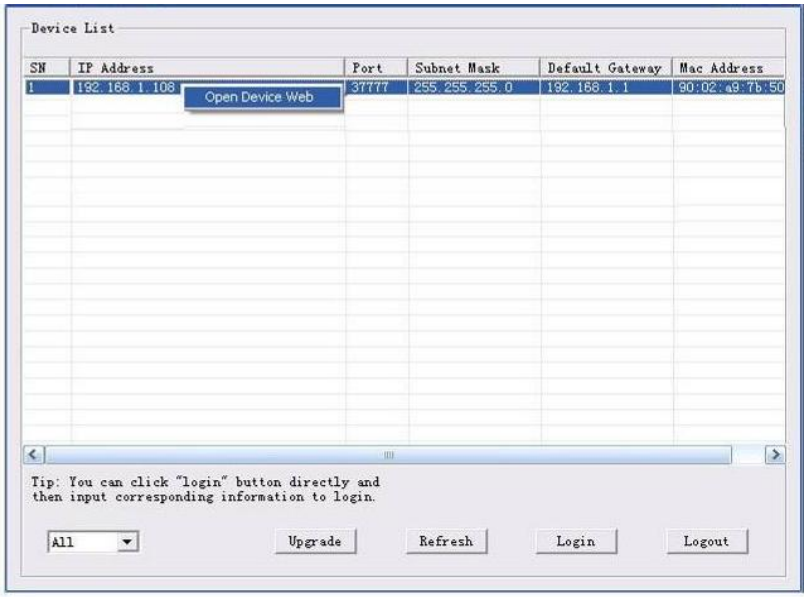


Figure 3-2

Single click the command to open the device WEB login page of the corresponding IP address, see Figure 2-3.

Figure 3-3

Modify the device IP address, PPPOE setup, system info and etc according to the actual situation.

- Set via the main interface of quick configuration tool.

After selecting the device IP address, double click the IP address or single click the "login" button on the "tool search" page, the system will display the login prompt box of quick configuration tool, see Figure 2-4.

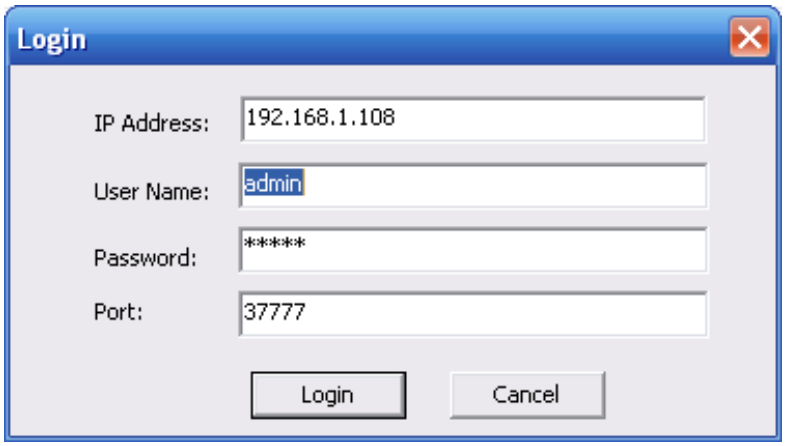


Figure 2-4

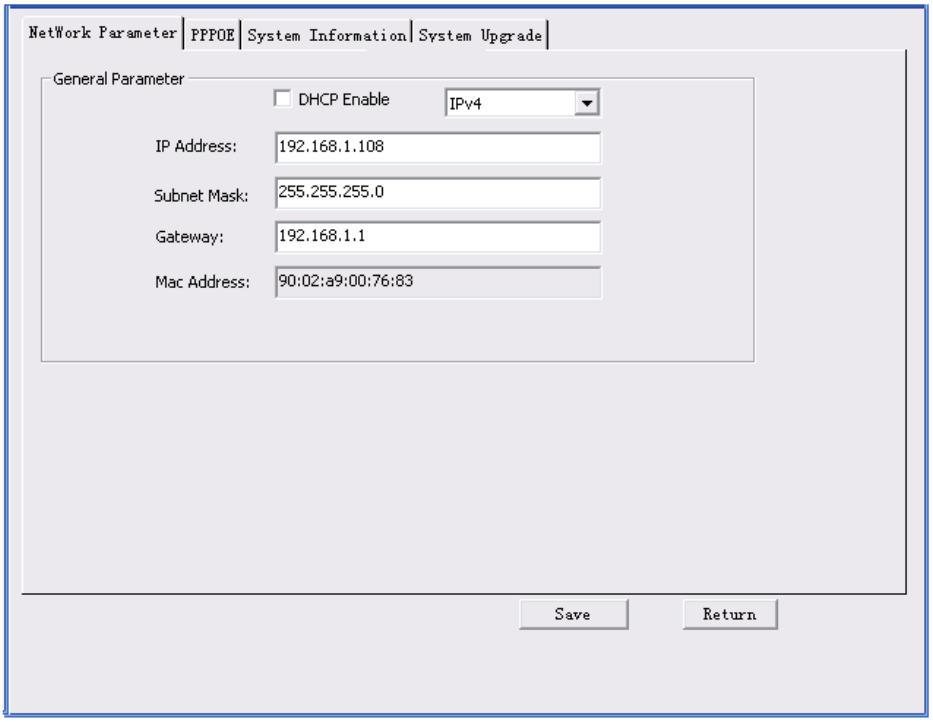


Figure 3-4

Note:

- The tool login prompt box generally displays the default user name; password and port name of the device, users can modify the user name and password of the corresponding login quick configuration tool.
- Besides using device backstage upgrade port number 3800 to log in, other port numbers need to be identical with the port number set in the "System Config—Network setup – TCP port" on the device WEB page, otherwise, it will fail to log in.

Modify the device IP address, PPPOE setup, system info and etc according to the actual situation.

Note:

For detailed parameters setup and system upgrade method, please refer to the *Quick Configuration Tool User's Manual* included in the resources CD.

4 Web Operation

This series speed dome product supports the Web access and management via PC.
Web includes several modules: live view, setup, alarm, logout and etc.
Speed dome factory default setup:

- IP address: 192.168.1.108.
- User name: admin
- Password: admin

4.1 Network Connection

Please follow the steps listed below for network connection.

- Make sure the HD explosion-proof speed dome has connected to the network properly.
- Speed dome IP address and PC IP address shall be in the same network segment. Speed dome default IP address is 192.168.1.108. If there is router, please set the corresponding gateway and subnet mask.
- Use order ping ***.***.***.***(* speed dome address) to check connection is OK or not.

4.2 Login and Logout

Open IE and input speed dome address in the address bar.
For example, if your speed dome IP is 192.168.1.108, then please input http:// 192.168.1.108 in IE address bar. See Figure 4-1.

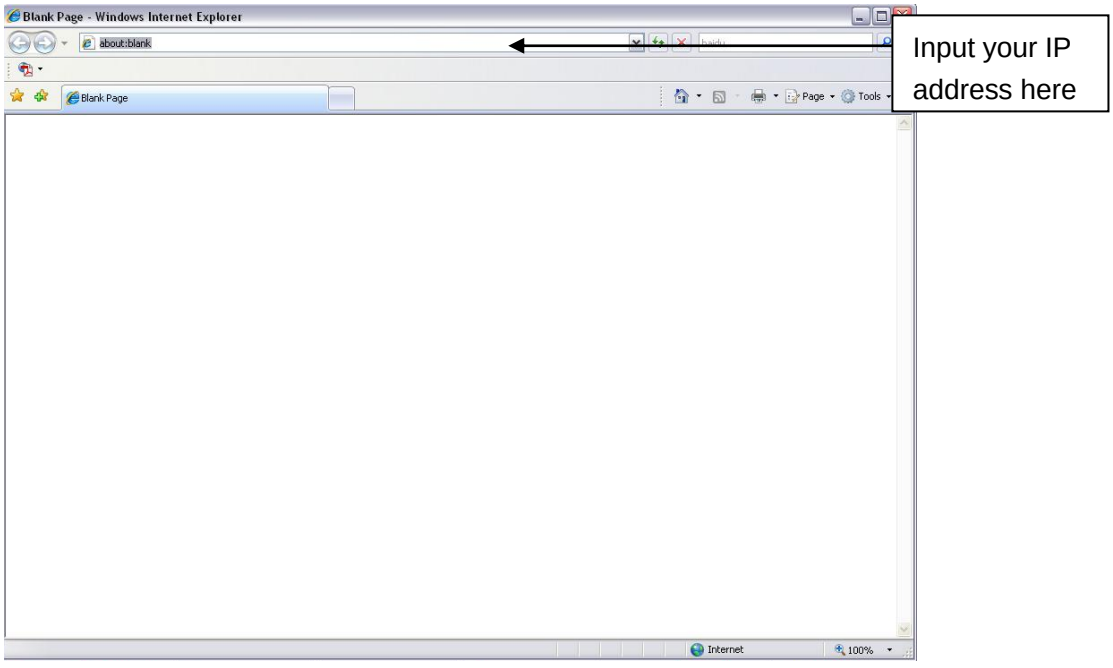


Figure 4-1

System pops up warning information to ask you whether install control webrec.cab or not. Please click OK button, system can automatically install the control. When system is upgrading, it can overwrite the previous Web too.
If you can't download the ActiveX file, please check whether you have installed the plug-in to disable the control download. Or you can lower the IE security level. See Figure 4-2.

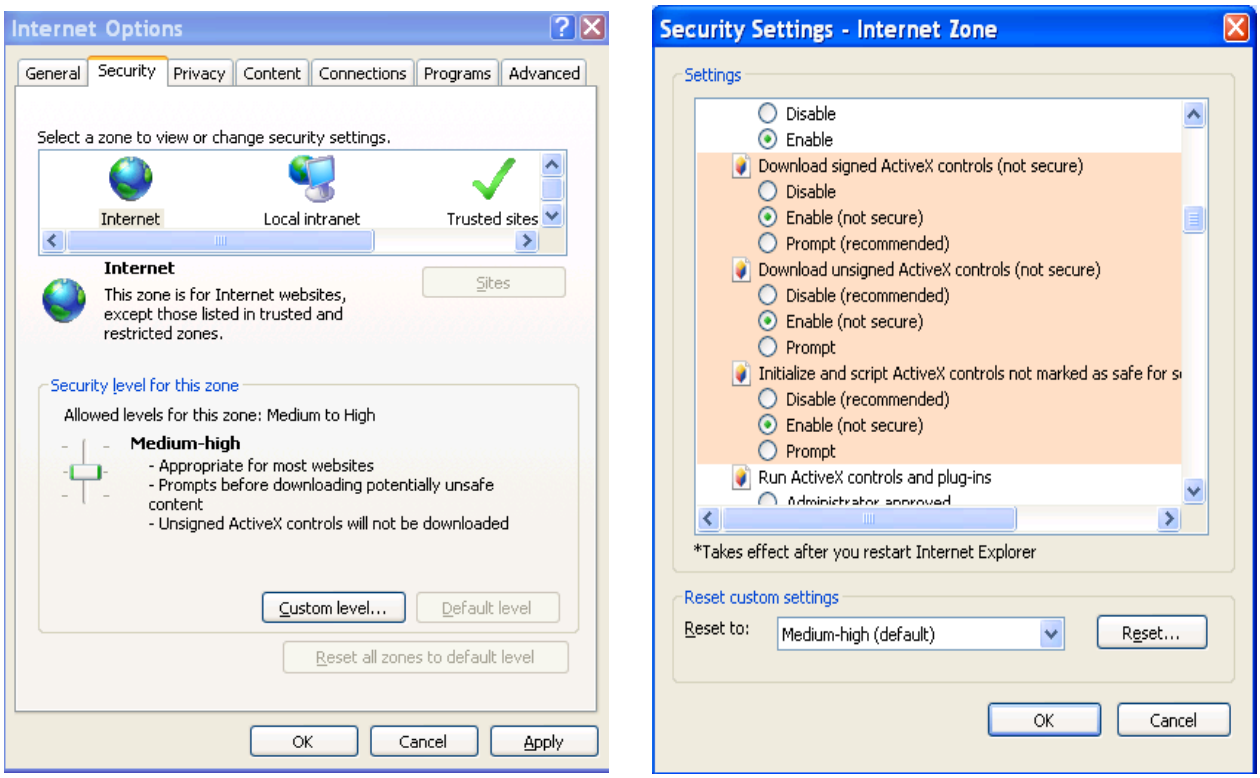


Figure 4-2

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**.

Select the network connection type.

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.

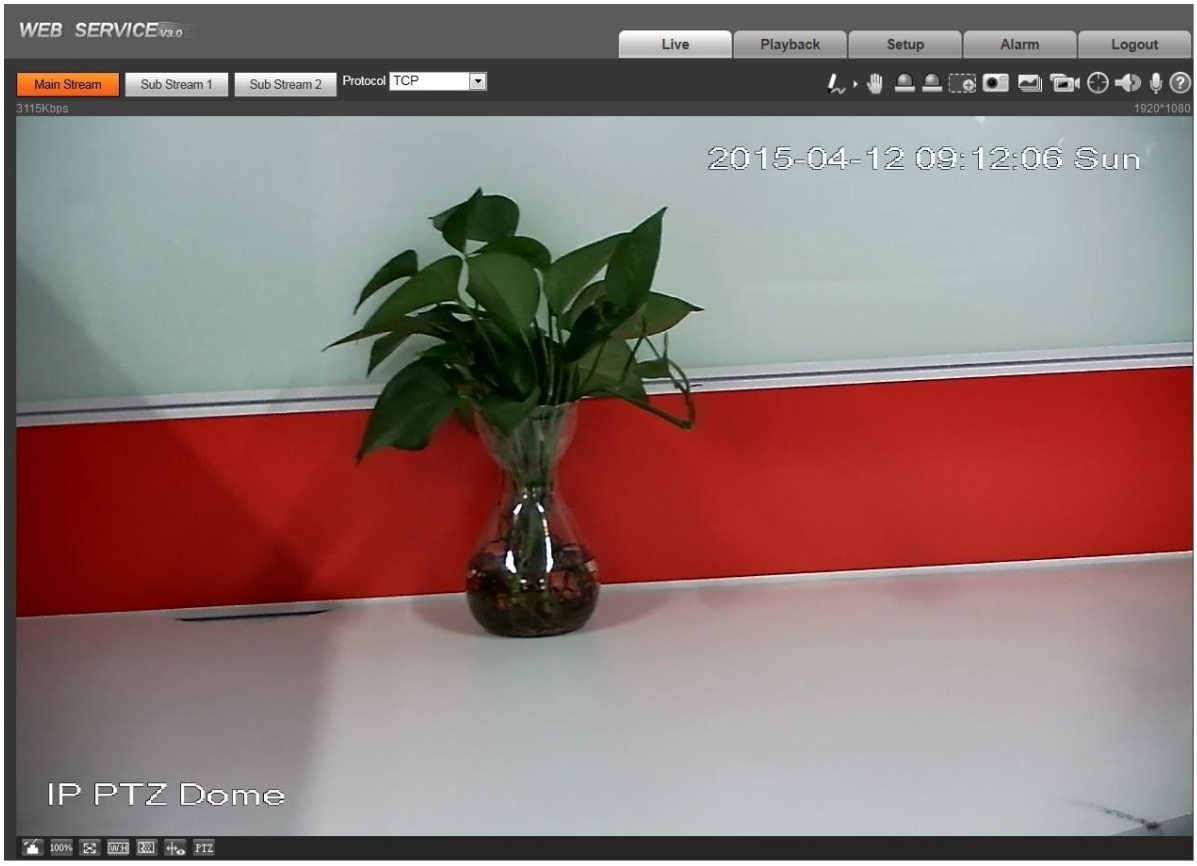


Figure 4-4

Please refer to the *Web Operation Manual included* in the resource CD for detailed operation instruction.

5 Cable Connection

5.1 Combination Cable Connection

The speed dome combination cable includes network cable, audio/video cable connection port, RS485 connection port, alarm input and output port. Please refer to the label for detailed information.

- **Please note the IE6 does not support alarm upload function. Please use IE7 or higher version.**
- **If it is your first time to boot up the WEB on the Windows 7 OS, please right click the Internet Explorer icon on the desktop and then select "Run as Administrator".**
- **Slight difference may be found in the port amount since some functions are optional.**

Name		Function
POWER GND		Power port. Connect to the power cable. GND: ground end.
485A 485B		RS485 remote control.
VIDEO	GND	Ground port.
	OUT	Video output port.
LAN		Network port. Connect to network cable.
AUDIO		Active audio signal
ALARM		Alarm

6 Daily Maintenance

6.1 Regular Cleaning

Please clean dome cover regularly to get vivid image.

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

Note:

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

6.2 Problems and Solutions

SYMPTOM	CAUSE	SOLUTION
1) No self-diagnosis, no video signal when I connect dome to power.	Red LED is not on. ● Your power supplying does not apply to the power. Or connection is too loose. ● Power off or transformer problem.	● Check power is connected or properly earthed. ● Check power supply condition or check transformer.
	Red LED light on the power board is on ● Power supplying is low ● Something wrong with power board.	● Use multimeter to check dome load. ● Please contact retailer to replace power board.
2) No self diagnosis. There is a noise	Power supplying is inadequate.	Replace power supplying.
	Mechanical malfunction.	Need electrical engineer help.
3)Video signal is not successive	Circuit connection is too loose.	Connect tightly.
	Video switch or power problem	Need electrical engineer help.
4) Video is not clear.	Focus is in manual mode.	Control manually.
	Dome cover is dirty.	Wash dome cover
5) 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.

Note:

After the malfunction is fixed, it needs to confirm the following issues: check if there is any damage to the enclosure, each explosionproof surface, each thread explosionproof surface, each glue surface, cable entry device and etc. If yes, please replace it immediately till it is perfectly repaired.

6.3 Packaging, transportation and storage

Packing material and arrangement

The product adopts exclusive carton or wooden box for package and the product surface is covered with foamed plastic padding, fasten the package with plastic belt after the upper cover is sealed.

Transportation

The packed product can be applied to various transportation modes as long as it can avoid being caught in the rain directly.

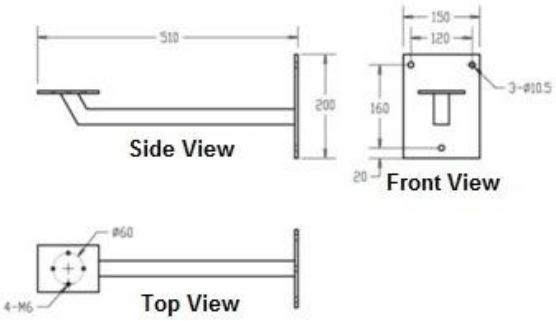
Storage

After the product is packed, it can be stored in the environment where the temperature is between 0℃ and 40℃ , and the relative humidity is not more than 90%. The storage life is one year since the day it is manufactured in the factory.

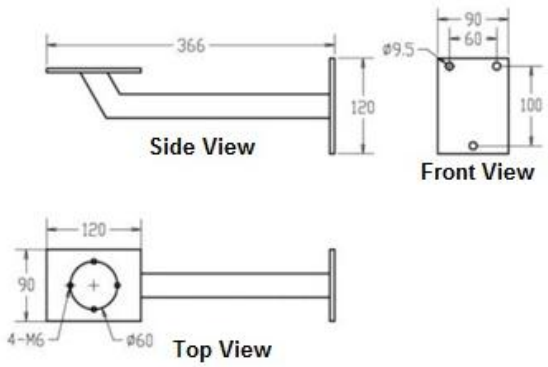
7 Accessories Installation

It provides the following brackets optional when leaving the factory.

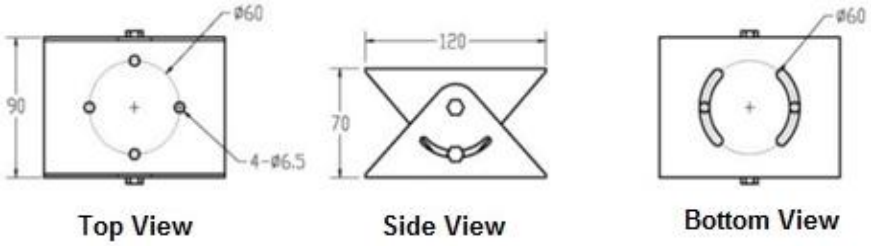
Wall mount bracket 1



Wall mount bracket 2



Semi fixed PTZ



Note

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

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