

# Anti-corrosion Bullet Camera

## Quick Start Guide

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**Welcome**

Thank you for purchasing our bullet camera.

**Please read the following safeguards and warnings carefully before you install or use the product.**

**Important Safeguards and Warnings**

The following is about the correct operation method of the product and how to avoid danger and prevent property loss, please read the manual carefully before using the device and keep it well for future use.

**Warnings**

- Please make sure the power requirement is in accordance with that on the device nameplate before providing power to the device.
- A control cable about 1 meter long is reserved when the device is delivered out of factory. Use anti-corrosion flexible tube when it is connected to the anti-corrosion control cabinet.
- Both internal and external ground connection should be reliable.
- Please cut off the power before device maintenance and overhaul.
- Please keep the product packing container properly which can be used during transportation in the future.
- Check the tectonic intensity of installation space and site, which means 8X safety factor is required.
- Please contact the local distributor or service center if the device fails to work normally. Do not dismantle or modify the device by any means (our company is not liable for any problems caused by unprofessional modification or maintenance).

**Disclaimer**

- This manual is for reference only. Slight difference may be found in the user interface.
- All the designs and software 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.

## Table of Contents

<b>1 OPEN-PACKAGE INSPECTION</b>	<b>04</b>
1.1 Inspection Steps	04
1.2 Attached Accessories	04
<b>2 OVERVIEW</b>	<b>05</b>
2.1 Brief Introduction	05
2.2 Electrical Index	05
2.3 Mechanical Index	05
2.4 Environmental Condition	06
2.5 Product Dimension	06
2.6 Mounting Hole Dimension	06
<b>3 INSTALLATION</b>	<b>07</b>
3.1 Cable	07
3.1.1 Use Anti-corrosion Flexible Tube	07
3.2 Installation Mode	08
3.2.1 Wall Mount	08
3.2.2 Pendant	08
<b>4 CONFIG MODE</b>	<b>09</b>
4.1 Quick Config Tool	09
4.2 WEB Client	11
4.2.1 Overview	11
4.2.2 System Login	11
<b>5 CABLE CONNECTION</b>	<b>13</b>
<b>6 DAILY MAINTENANCE</b>	<b>14</b>
6.1 Regular Cleaning	14
6.2 Problems and Solutions	14
6.3 Packaging, Transportation and Storage	14
6.3.1 Packing Material and Arrangement	14
6.3.2 Transportation	15
6.3.3 Storage	15
<b>7 INSTALL ACCESSORIES</b>	<b>15</b>

<b>8 APPENDIX I LIGHTNING PROOF AND SURGE PROTECTION</b>	<b>16</b>
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<b>9 APPENDIX II ABOUT RS485 BUS</b>	<b>17</b>
9.1 RS485 Bus Main Feature	17
9.2 RS485 Bus Transmission Distance	17
9.3 The Problem in Practical Use	17
9.4 RS485 Bus FAQ	18

# 1

## OPEN-PACKAGE INSPECTION

### 1.1 Inspection Steps

When you receive the camera, please first check if there is any obvious damage to the device appearance and the protection material on the product package can sustain most accidental impact during transportation. Then you need to open the outer packing container and check if all the accessories are included. Refer to Table 1-1 to check all the accessories.

### 1.2 Attached Accessories

Please confirm if the accessories are in accordance with that on the list when opening the outer packing container. Please refer to the following table for more details.

Refer to the exact product for the actual config, and please contact local distributor if there is any accessory lost.

Accessory name	Quantity
Anti-corrosion camera	1
DC12V power	1
CD	1
Quick start guide	1

Table 1-1

# 2

## OVERVIEW

### 2.1 Brief Introduction

Anti-corrosion camera is a new generation of anti-corrosion 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 product can be widely applied to the locations which need acidic and neutral salt mist, and it has high requirements for the image quality, which hopes to see the various details of the target, such as chemical industry, smelting, shipbuilding, port and other locations.

### 2.2 Electrical Index

Refer to Table 2-1 for the electrical index.

Parameter	Index
Input voltage	Support AC 24V/DC 12V/PoE (optional)
Max current	≤2A
Power consumption	≤20W
Electrical connection	Complex cable connects to video, power, control, network, alarm and audio.

Table 2-1

### 2.3 Mechanical Index

Refer to Table 2-2 for mechanical index.

Parameter	Index
Material	Stainless steel 316L
Protection level	IP68
Cable exit hole amount	1
Cable exit hole thread specification	G3/4 external thread
Installation mode	Wall mount, pendant

Table 2-2

## 2.4 Environmental Condition

Refer to Table 2-3 for environmental conditions.

Parameter	Index
Atmospheric pressure	80kPa ~ 110kPa
Environment temperature	-40℃ ~ +70℃
Relative humidity	No more than 95%RH ( +25℃ )

Table 2-3

## 2.5 Product Dimension

Refer to Figure 2-1 for the device dimension, the unit is mm.

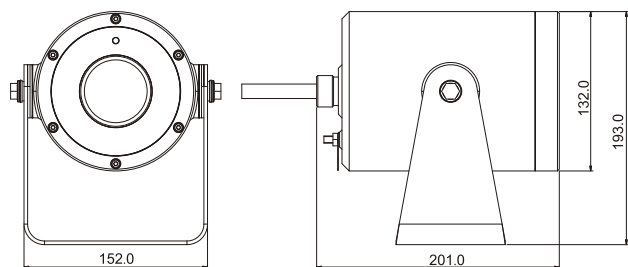


Figure 2-1

## 2.6 Mounting Hole Dimension

Refer to Figure 2-2 for mounting hole dimension, the unit is mm.

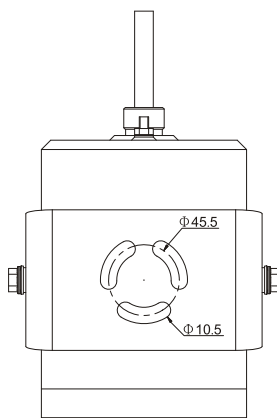


Figure 2-2

# 3 Installation

## 3.1 Cable

### 3.1.1 Use Anti-corrosion Flexible Tube

To install the anti-corrosion flexible, do the following:

#### Step 1

Cover anti-corrosion flexible tube component on the cable in advance, which is shown in Figure 3-1.

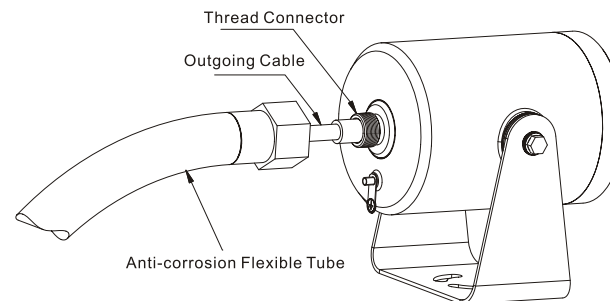


Figure 3-1

#### Step 2

After tightening the thread connector tightly, tighten the anti-corrosion flexible tube, which is shown in Figure 3-2.

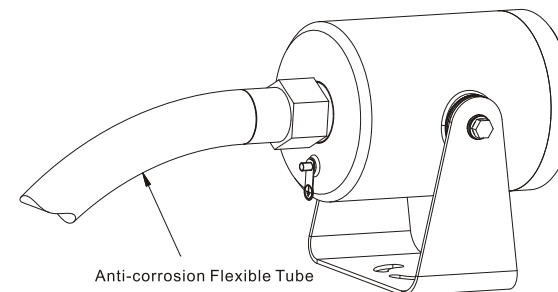


Figure 3-2

## 3.2 Installation Mode

### Caution

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

### 3.2.1 Wall Mount

Use bolt or expansion screws to install the whole camera on the selected wall or installation location, which is shown in Figure 3-3.

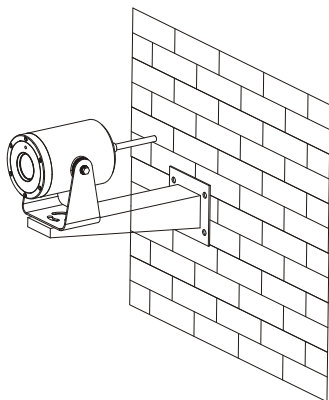


Figure 3-3

### 3.2.2 Pendant

Use bolt or expansion screws to install the whole camera on the ceiling or plane, which is shown in Figure 3-4.

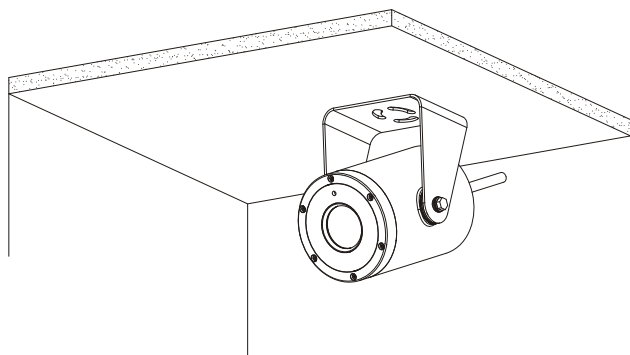


Figure 3-4

# 4

## Config Mode

### 4.1 Quick Config Tool

#### Note

Quick configuration tool can search current IP address, modify IP address. At the same time, you can use it to upgrade the device system. Currently the quick config tool can only supports to search the IP address of device which is in the same segment with PC.

#### Step 1

Double-click the “ConfigTools.exe” icon, and it will display the information such as IP address, port number, subnet mask, default gateway, and MAC address of all the devices that are running normally in the device list on the Config Tool search interface. The config interface is shown in Figure 4-1.

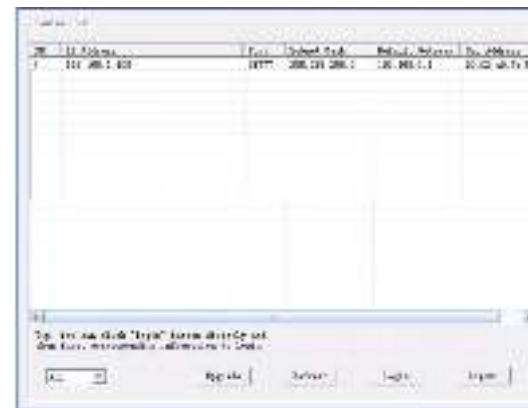


Figure 4-1

#### Step 2

After selecting the searched device IP address, right click the IP address to display “Open Device” option, it will open the device WEB login interface of corresponding IP address after click the command. The config interface is shown in Figure 4-2 and the WEB interface is shown in Figure 4-3.

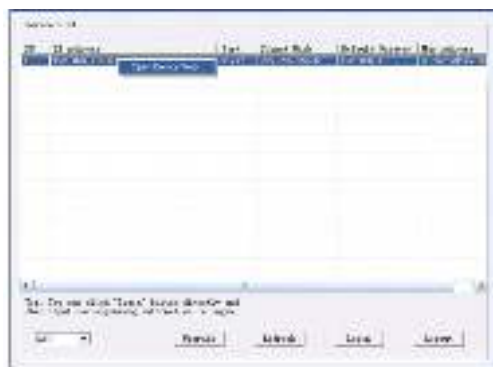


Figure 4-2



Figure 4-3

**Step 3**

(Optional) It can log in the main interface of quick config tool to set if the users can quickly modify device IP address, PPPoE setting and system info setting without logging in the device WEB interface. The steps are shown as follows.

1) Select an IP address in the “Device list info” on the tool search interface, double click the IP address directly to open the login prompt box of quick config tool; or click “login” button on the tool search interface to open the login prompt box of quick config tool after selecting the IP address, which is shown in Figure 4-4.



Figure 4-4

2) Generally it displays device default user name, password and port number on the tool login prompt box, users can modify login user name and password of corresponding quick config tool according to the requirements.

**Note**

The port number needs to be in accordance with the one which is set in “System Config > Network Setup > TCP Port” on the device WEB, otherwise, it will fail to log in.

3) Click Login button to log in the main interface of quick config tool.

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

## 4.2 WEB Client

### 4.2.1 Overview

Anti-corrosion camera supports visiting and managing device via WEB interface on PC end.

WEB client system provides several application modules such as live, setup, alarm and logout.

### 4.2.2 System Login

#### 1. Network Connection

**Step 1**

Make sure the network camera is correctly connected to network.

**Step 2**

Set IP address, subnet mask and gateway for computer host and network camera respectively ( please distribute IP address of the same network segment if there is no route device in the network, it needs to set corresponding gateway and subnet mask if there is route device in the network ), The default IP address of network camera is 192.168.1.108.

**Step 3**

Use ping \*\*\*.\*\*\*.\*\*\*.\*\*\* ( Network camera IP address ) to check if network is connected.

## 2. Log in WEB

**Step 1**

Open IE browser, and input the IP address of the network camera which you want to log in in the address bar.

**Step 2**

It will pop out safety warning to ask you whether it is to accept WEB control webrec. cab or not when opening system, please select accept and the system will auto recognize and install, the system will auto cover the previous WEB client when upgrading new version of WEB. If the system is forbidden to download, then you have to confirm if it has installed other plugins which forbid to download control and lower the security level of IE.

**Step 3**

After it is successfully connected, you will see the interface which is shown in Figure 4-5, input user name and password, and click login button to log in the system. The factory default administrator user name and password are admin and admin respectively, please modify administrator password after login.



Figure 4-5

**Step 4**

You will see the interface shown in Figure 4-6 after WEB login is successful.



Figure 4-6

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

# 5

## Cable Connection

The camera multi-function combination cable includes network cable, power cable, video cable terminal and RS485 terminal. Please refer to the label for detailed information.

Please refer to Table 5-1 for more details about the function of each port.

Name	Composite cable					Video cable	Network cable	
	Power cable			485 control cable				
Function	Power +	Power -	Ground wire	RS485-A	RS485-B	Signal wire: white Signal ground: black	CAT 5	
Color	Red	Black	Yellow/ Green	Yellow	Orange			
Name	Alarm 2 in 2 out					Audio 1 in 1 out		
Function	Input1	Input 2	Ground Yellow	Output 1	Output	Output	Input	GND
Color	Red	Brown	green	Blue	Orange white	Red	White	Black

Table 5-1

**Note**

- 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 about connection ports, please refer to the actual product for more details.



# 6

## Daily Maintenance

### 6.1 Regular Cleaning

Please clean the cover regularly to get clear image.

#### Note

- Clean the device with care, use hands to hold the camera body, which is to avoid fingers directly touching the glass surface.
- Please use water to clean the glass surface.

### 6.2 Problems and Solutions

SYMPTOM	CAUSE	SOLUTION
No self-diagnosis, no video signal when I connect device to power.	Red LED is not on. <ul style="list-style-type: none"> <li>• The power is not connected to the socket on the power board or the connection is too loose.</li> <li>• Power supply blackout or transformer malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>• Check if the power is connected, make sure the socket can be well touched.</li> <li>• Check if power supply is normal, transformer can work normally.</li> </ul>
	If the red LED light on the power board is on <ul style="list-style-type: none"> <li>• Camera damage.</li> <li>• Power board malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace camera.</li> <li>• Please contact supplier and replace power board.</li> </ul>
No self-diagnosis. There is a noise	Power supplying is inadequate.	Replace proper power supply.
	Mechanical malfunction.	Need maintenance.
Image is not stable	Circuit connection is too loose.	Connect tightly.
Video is not clear.	Focus is in manual mode.	Operate the camera.
	The glass is dirty.	Clean glass

Table 6-1

### 6.3 Packaging, Transportation and Storage

#### 6.3.1 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.

#### 6.3.2 Transportation

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

#### 6.3.3 Storage

After the product is packed, it can be stored in the environment where the temperature is between 0°C and 40°C, and the relative humidity is no more than 90%. The storage life is one year since the day it is manufactured in the factory.

# 7

## Install Accessories

The wall-mounted bracket shown in Figure 7-1 is optional for the device. The unit is mm.

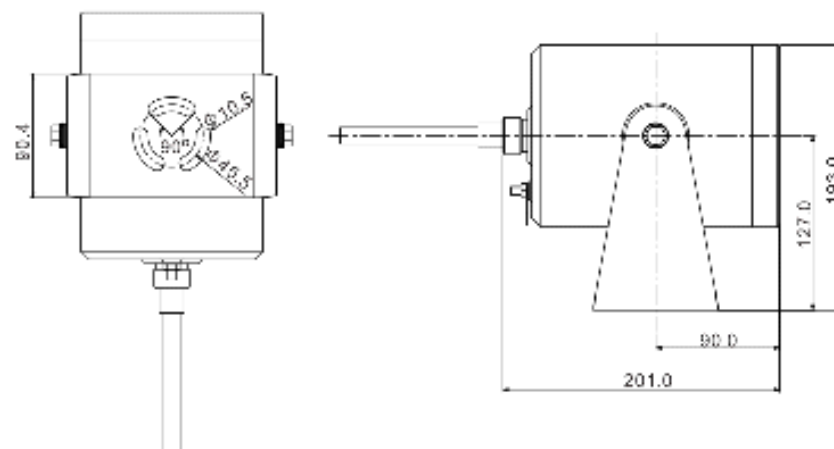


Figure 7-1

## 8

## APPENDIX I Lightning proof and surge protection

This series speed dome adopts TVS lightning protection technology. It can effectively prevent damages from various pulse signals below 6000W, such as sudden lightning 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.

- The distance between the signal transmission cable and high-voltage device ( or high-voltage cable ) shall be at least 50 meters.
- Outdoor cable layout shall go under the penthouse if possible.
- 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.
- 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.
- 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.
- 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  $4\Omega$  and earth cable cross-sectional area shall be no less than  $25\text{ mm}^2$ . See Figure 8-1 for the lightning protection installation mode for outdoor anti-corrosion bullet camera.

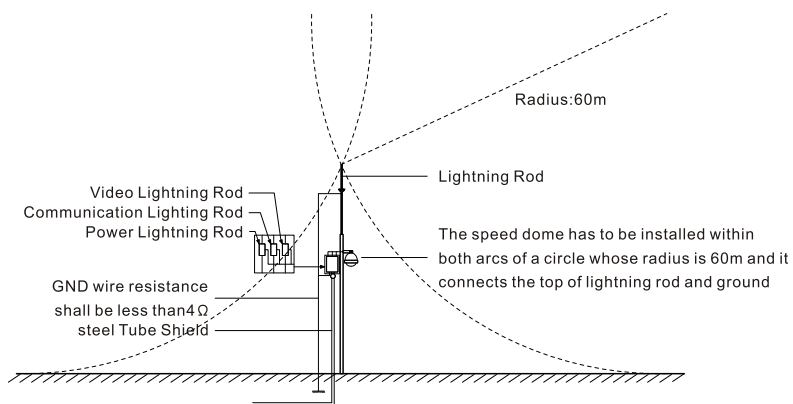


Figure 8-1

## 9

## APPENDIX II About RS485 BUS

## 9.1 RS485 Bus Main Feature

RS485 is semi duplex communication cable of impedance  $120\Omega$ . Its max load amount is 32 effective loads ( including main control device and devices to be charged ) .

## 9.2 RS485 Bus Transmission Distance

When we take 0.56mm ( 24AWG ) twisted-pair as communication cable, the max transmission distance ( theoretically ) are listed below ( according to different baud rates ) .

Baud Rate	Max Distance
2400 BPS	1800M
4800 BPS	1200M
9600 BPS	800M

In the following situations, the max transmission distance shall become shorter accordingly:

- The communication cable is a little bit thin.
- The surrounding environment has strong electromagnetic interference.
- There are too much devices connected to the RS485 bus.

And vice versa, the max transmission distance shall become longer.

## 9.3 The Problem in Practical Use

In practical usage, we usually adopt star type connection. The terminal resistance shall connect to the furthest two devices ( Such as device 1# and device 15# in Figure 9-1 ) . But this connection way does not conform to RS485 Bus standard. When the distances between devices are too long, the signal reflection occurs and anti-jamming decreases, thus the signal reliability becomes very low. You can see speed dome is not under control or speed dome is running automatically and cannot stop.

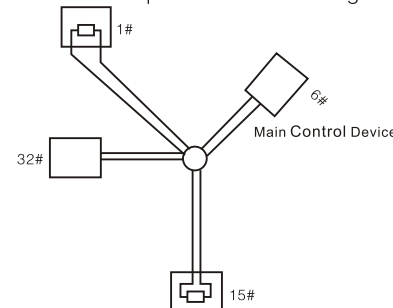


Figure 9-1

In this situation, we recommend RS485 distributor. This device can turn star type connection into the connection that conforms to RS485 bus industry standard, which can avoid the above mentioned problems and enhance communication reliability. See Figure 9–2.

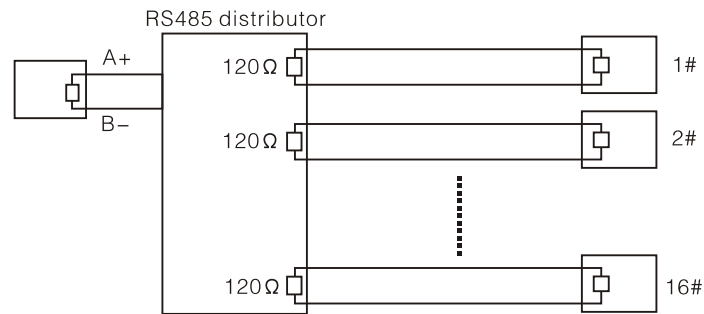


Figure 9–2

9.4 RS485 Bus FAQ

Phenomenon	Possible Reasons	Solution
Speed dome can run self-diagnosis but I cannot control it.	<ul style="list-style-type: none"><li>● Host address ( baud rate ) and speed dome address ( baud rate ) are not match.</li><li>● Positive and negative end of RS485 Bus are misconnected.</li><li>● Connection cable is loose.</li><li>● RS485 Bus connection are cut off.</li></ul>	<ul style="list-style-type: none"><li>● Modify host or speed dome setup.</li><li>● Switch RS485 positive end and negative end.</li><li>● Fix connection cable firmly.</li><li>● Replace RS485 Bus.</li></ul>
I can control the speed dome but is not smooth	<ul style="list-style-type: none"><li>● RS485 Bus connection are not good.</li><li>● One RS485 bus is off.</li><li>● The distance between host and speed dome is too far.</li><li>● Parallel connected too much speed domes.</li></ul>	<ul style="list-style-type: none"><li>● Connect RS 485 Bus again.</li><li>● Replace RS485 Bus.</li><li>● Add terminal matching resistance.</li><li>● Add RS485 distributor.</li></ul>

Table 9–1

