Explosion-Proof
Network Positioning System

Quick Start Guide

Quick Start Guide

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website (http://www.hikvision.com).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

Trademarks Acknowledgement

LEGAL DISCLAIMER

YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE, FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

05070120211231

Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU, and the ATEX Directive 2014/34/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

Intended Use of the Positioning System

⟨Ex⟩ II 2 G Ex db IIC T6 Gb, Ta -40° C to +60° C

II 2 D Ex tb IIIC T80° C Db

Hazardous Area Classification: Zone 1, Zone 2, Zone 21, Zone 22

IP Degree: IP68 (2m, 2h)

Ex Standards:

IEC 60079-0: 2011   EN 60079-0: 2012/A11: 2013

IEC 60079-1: 2014   EN 60079-1: 2014

IEC 60079-31: 2013   EN 60079-31: 2014

Explosion-proof Positioning System Nameplate

Explosion-proof Positioning System
Product Model: xxxxxxxxxxxxxxxxxxx
Protection Level: IP68   **Temperature:-40℃~ +60℃**
Working Voltage: AC100—240V **Working Current: ≤1000mA**
Product No.: xxxxxxxxxxx   **Date of Production: xxxxxx**

TÜV 17 ATEX 8118   IECEx TUR 17.0049

⟨Ex⟩ II 2 G Ex db IIC T6 Gb   Ex db IIC T6 Gb

⟨Ex⟩ II 2 D Ex tb IIIC T80℃ Db   Ex tb IIIC T80℃ Db   CE 0035

WARNING:DO NOT OPEN WHEN ENERGIZED

CAUTION : USE FASTENERS WITH YIELD

STRENGTH ≥450MPa

Hangzhou Hikvision Digital Technology Co., Ltd.

NO.555 Qianmo Road, Binjiang District, Hangzhou , China

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into **Warnings** and **Cautions**:

Warnings: Neglecting any of the warnings may cause serious injury or death.

Cautions: Neglecting any of the cautions may cause injury or equipment damage.

⚠	⚠
Warnings Follow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

⚠ **Warnings**

Laws and Regulations

The device should be used in compliance with local laws, electrical safety regulations, and fire prevention regulations.

Electrical Safety

CAUTION: To reduce the risk of fire, replace only with the same type and rating of fuse.

The equipment must be connected to an earthed mains socket-outlet.

A readily accessible disconnect device with the appropriate rating shall be incorporated external to the equipment.

An overcurrent protective device with the appropriate rating shall be incorporated external to the equipment not exceeding the specification of the building.

An all-pole mains switch shall be incorporated in the electrical installation of the building.

Grounding: The both internal and external earthing shall be connected reliably.

Battery

This equipment is not suitable for use in locations where children are likely to be present.

CAUTION: Risk of explosion if the battery is replaced by an incorrect type.

Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).

Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.

Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.

Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.

Dispose of used batteries according to the instructions.

L'utilisation ou le remplacement inadéquats de la pile peuvent entraîner un risque d'explosion. Remplacez-la par le même type ou l'équivalent du même type seulement. Jetez les piles usagées conformément aux directives fournies par le fabricant de la pile.

Maintenance

To avoid fire danger caused by electrostatic charge, never touch or wipe the device in explosive environment. Perform the wiping and replacing accessories only under non-explosive environment with the glove.

To prevent accumulation of electrostatic charge, use a soft and damp cloth when clean inside and outside surfaces of the bubble. DO NOT use alkaline detergents.

Installation

Never place the equipment in an unstable location. The equipment may fall, causing serious personal injury or death.

⚠ **Cautions**

Electrical Safety

Ensure correct wiring of the terminals for connection to an AC mains supply.

The equipment has been designed, when required, modified for connection to an IT power distribution system.

Fire Prevention

No naked flame sources, such as lighted candles, should be placed on the equipment.

The serial port of the equipment is used for debugging only.

Installation

Install the equipment according to the instructions in this manual.

To prevent injury, this equipment must be securely attached to the wall in accordance with the installation instructions.

Be sure that there is enough space to install the device and accessories.

Make sure that the wall is strong enough to withstand at least 8 times the weight of the device and the mount.

Make sure that the power has been disconnected before you wire, install, or disassemble the device.

Installation could be only conducted by qualified personnel according to relevant national regulations.

Transportation

Do not drop the product or subject it to physical shock.

Keep all wrappers after unpack them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and lead to additional costs.

Power Supply

The power source should meet limited power source or PS2 requirements according to IEC 60950-1 or IEC 62368-1 standard.

Refer to the device label for the standard power supply. Please make sure your power supply matches with your device.

Use a power adapter provided by qualified manufacturers. It is recommended to provide an independent power adapter for each device as adapter overload may cause over-heating or a fire hazard.

System Security

Please understand that you have the responsibility to configure all the passwords and other security settings about the device, and keep your user name and password.

Maintenance

If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.

A few device components (e.g., electrolytic capacitor) require regular replacement. The average lifespan varies, so periodic checking is recommended. Contact your dealer for details.

To ensure explosion-proof performance, do not damage explosion-proof surface.

Ambient temperature: -40°C to 60°C

DO NOT OPEN WHEN ENERGIZED.

POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

When assembly and operation, the operator must follow the requirements of the IEC 60079-14: latest version Explosive atmospheres- Part 14: Electrical installations design, selection and erection, beside of the manufacturer's operating instructions or its National equivalent.

Repair and overhaul shall comply with IEC 60079-19: latest version or its National equivalent.

Cleaning

Please use a soft and dry cloth to clean the inner and outer surfaces. Do not use alkaline detergents.

Keep the surface clean and prevent dust accumulation. DO NOT clean the surface by compressed air duster.

Do not touch sensor modules with fingers. If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period, please replace the lens cap to protect the sensor from dirt.

Using Environment

When any laser equipment is in use, make sure that the device lens is not exposed to the laser beam, or it may burn out.

DO NOT aim the lens at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.

To avoid heat accumulation, good ventilation is required for a proper operating environment.

DO NOT expose the device to extremely hot, cold, dusty, corrosive, saline-alkali, or damp environments. For temperature and humidity requirements, see device specification.

DO NOT expose the device to high electromagnetic radiation.

Emergency

If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

Time Synchronization

Set up device time manually for the first time access if the local time is not synchronized with that of the network. Visit the device via web browser/client software and go to time settings interface.

Table of Contents

1 Overview

1.1 Introduction

Explosion-proof Network Positioning System is designed with full consideration for explosion-proof effect. If the explosive gas mixture gets inside of the positioning system, the explosion-proof effect is guaranteed by several measures, including enclosure strength, width and length of the junction gap surfaces of components, limiting the highest temperature of the surface, etc.

Explosion-proof Network Positioning System is capable of video/audio collecting, smart encoding and network transmitting. It adopts an embedded system and a high-performed hardware process platform to achieve good stability and reliability. You can visit and configure your positioning system via web browser and client software.

Explosion-proof Network Positioning System adopts a stainless steel enclosure, receiving an IP68 rating for ingress protection. And the window adopts the tempered glass, which is able to stand shock and heat.

1.1.1 Power Supply

For detailed information about the power supply, refer to ***Explosion-proof Positioning System Nameplate***.

1.1.2 Explosion-proof Parameters

For detailed information about explosion-proof parameters, refer to ***Explosion-proof Positioning System Nameplate***.

1.1.3 Mechanical Specification

Material: 304/316L Stainless Steel

1.1.4 Working Environment

- Altitude (Above sea level): Within 2000 m.
- Humidity: Within 95%.
- Temperature: refer to ***Explosion-proof Network System Nameplate***.

Note:

To ensure safety of the users and explosion-proof performance of the device, your installation environment must meet the installation requirements of the positioning system you purchased.

1.2 Explanation of model naming

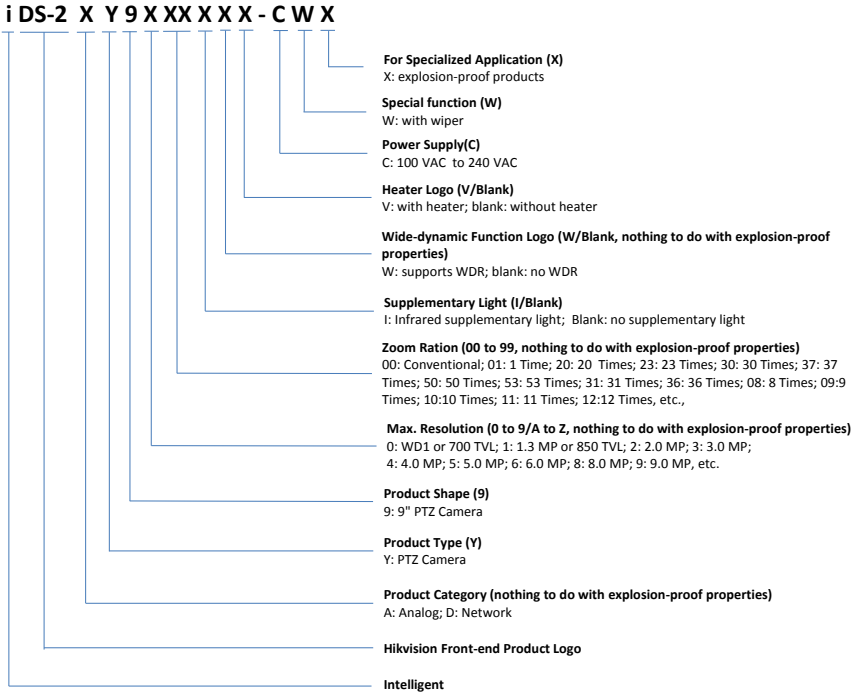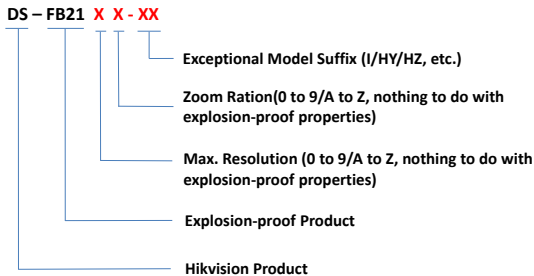The product can be named by the rules in Figure 1-1 and Figure 1-2.

i DS-2 X Y 9 X XX X X X - C W X

For Specialized Application (X)
X: explosion-proof products

Special function (W)
W: with wiper

Power Supply(C)
C: 100 VAC to 240 VAC

Heater Logo (V/Blank)
V: with heater; blank: without heater

Wide-dynamic Function Logo (W/Blank, nothing to do with explosion-proof properties)
W: supports WDR; blank: no WDR

Supplementary Light (I/Blank)
I: Infrared supplementary light; Blank: no supplementary light

Zoom Ration (00 to 99, nothing to do with explosion-proof properties)
00: Conventional; 01: 1 Time; 20: 20 Times; 23: 23 Times; 30: 30 Times; 37: 37 Times; 50: 50 Times; 53: 53 Times; 31: 31 Times; 36: 36 Times; 08: 8 Times; 09:9 Times; 10:10 Times; 11: 11 Times; 12:12 Times, etc.,

Max. Resolution (0 to 9/A to Z, nothing to do with explosion-proof properties)
0: WD1 or 700 TVL; 1: 1.3 MP or 850 TVL; 2: 2.0 MP; 3: 3.0 MP;
4: 4.0 MP; 5: 5.0 MP; 6: 6.0 MP; 8: 8.0 MP; 9: 9.0 MP, etc.

Product Shape (9)
9: 9" PTZ Camera

Product Type (Y)
Y: PTZ Camera

Product Category (nothing to do with explosion-proof properties)
A: Analog; D: Network

Hikvision Front-end Product Logo

Intelligent

Figure 1-1 Product Naming Rule I

DS – FB21 X X - XX

Exceptional Model Suffix (I/HY/HZ, etc.)

Zoom Ration(0 to 9/A to Z, nothing to do with explosion-proof properties)

Max. Resolution (0 to 9/A to Z, nothing to do with explosion-proof properties)

Explosion-proof Product

Hikvision Product

Figure 1-2 Product Naming Rule II

This manual is application to the models below:

Explosion-proof Network Positioning System · Quick Start Guide

DS-2DY9220-CWX	DS-2DY9230-CWX	DS-2DY9223-CWX
DS-2DY9237-CWX	DS-2DY9250-CWX	DS-2DY9253-CWX
DS-2DY9336-CWX	DS-2DY9831-CWX	DS-2DY9236-CWX
DS-2DY9100-CWX	DS-2DY9200-CWX	DS-2DY9300-CWX
DS-2DY9120-CWX	DS-2DY9130-CWX	DS-2DY9220-CWX
DS-2DY9230-CWX	DS-2DY9223V-CWX	DS-2DY9236W-CWX
DS-2DY9120W-CWX	DS-2DY9130W-CWX	DS-2DY9220W-CWX
DS-2DY9230W-CWX	DS-2DY9223W-CWX	DS-2DY9101-CWX
DS-2DY9201-CWX	DS-2DY9301-CWX	DS-2AY9001W-CWX
DS-2AY9000W-CWX	DS-2AY9023-CWX	DS-2AY9036-CWX
DS-2DY9220I-CWX	DS-2DY9230I-CWX	DS-2DY9223I-CWX
DS-2DY9250I-CWX	DS-2DY9253I-CWX	DS-2DY9336I-CWX
DS-2DY9831I-CWX	DS-2DY9236I-CWX	DS-2DY9120I-CWX
DS-2DY9130I-CWX	DS-2DY9220I-CWX	DS-2DY9230I-CWX
DS-2DY9223IV-CWX	DS-2DY9120IW-CWX	DS-2DY9130IW-CWX
DS-2DY9220IW-CWX	DS-2DY9223IW-CWX	DS-2DY9230IW-CWX
DS-2DY9236IW-CWX	DS-2DY9200I-CWX	DS-2DY9100I-CWX
DS-2DY9300I-CWX	DS-2DY9201I-CWX	DS-2DY9101I-CWX
DS-2DY9301I-CWX	DS-2AY9000I-CWX	DS-2AY9001I-CWX
DS-2AY9023I-CWX	DS-2AY9036I-CWX	DS-FB2116
DS-FB2127	DS-FB2126	DS-FB2128-LH
DS-FB212X-HY	DS-FB2116-I	DS-FB2127-I
DS-FB2126-I	iDS-2DY9253-CWX	iDS-2DY9237-CWX
iDS-2DY9253I-CWX	iDS-2DY9237I-CWX	iDS-2DY9225I-CWX

1.3 Appearance

This series has two appearance types:

Type I: network positioning system

Type II: network positioning system with IR
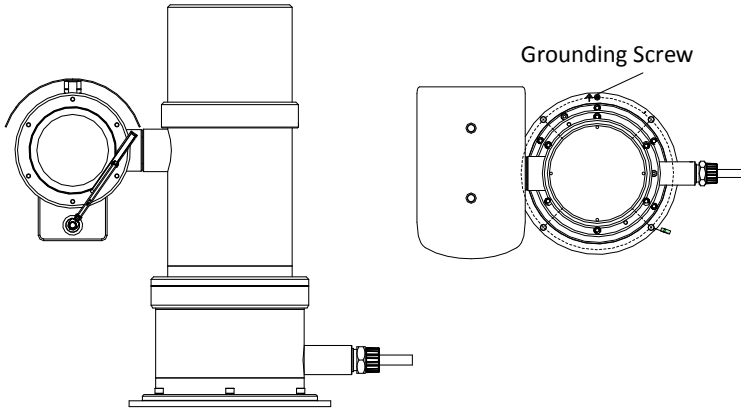
1.3.1 Type I Camera Overview

Figure 1-3 Explosion-proof Network Positioning System
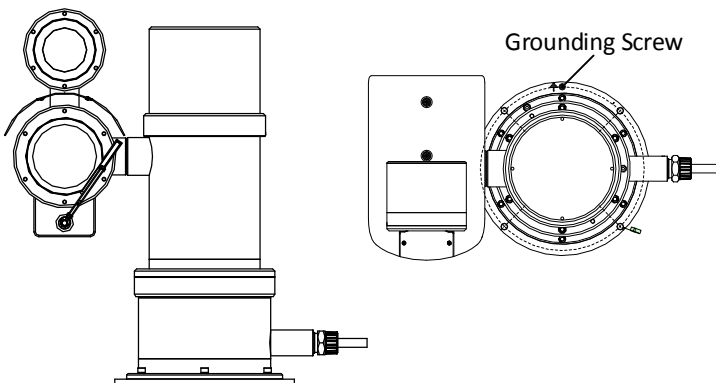
1.3.2 Type II Camera Overview

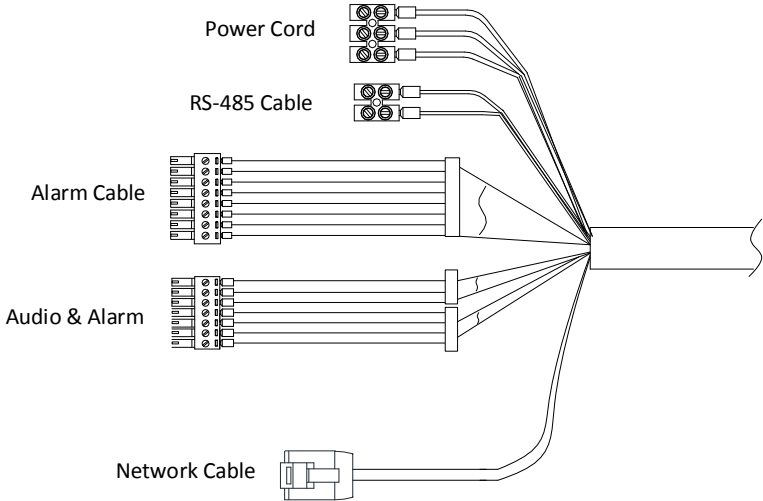Figure 1-4 Explosion-proof Network Positioning System with IR

1.4 Cable Description

Power Cord

RS-485 Cable

Alarm Cable

Audio & Alarm

Network Cable

Figure 1-5 Cable Description

Note:

● Cables vary depending on different positioning system models.

● The three cables of the power cord should be connected to corresponding wires. The red cable should be connected to live wire. The black cable should be connected to neutral wire. The yellow/green cable must be connected to the ground.

● To avoid transmitting interference, route power cables separately.

2 Installation

2.1 Trial Run the Positioning System in Safe Area

It is recommended to trial run the device in the safe area before installation.

Steps:

1. Make sure the power cable and network cable are connected properly. Then power on the device to trial run the device.
2. Check if the device performs power-up action. If not, contact the technical support. Normally, the power-up action should include the device movement of automatically panning and tilting.
3. Check if the image can be displayed normally. If not, contact the technical support.
4. Start the installation after making sure the device works properly.

Note:

If the device cannot be powered up, check the cable connection carefully.

2.2 Install the Positioning System

Before you start:

Make sure the device in the package is in good condition and all the assembly parts are included.

Notes:

● Do not power the positioning system up until the installation is finished. To ensure the safety of personnel and device, all the installation steps should be done with power supply off.

● Make sure that there is enough space to install the device and accessories.

● Make sure that the wall is strong enough to withstand at least eight times the weight of the device and accessories.

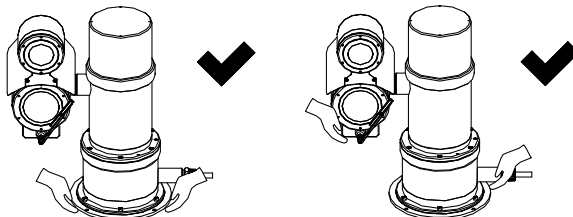● Carry the positioning system as shown in Figure 2-1.

Figure 2-1 Carry the Positioning System

Steps:

1. Install the wall mounting bracket.

    1) Drill four Ø16 screw holes where you want to install the positioning system according to the holes on the bracket as shown in Figure 2-2.
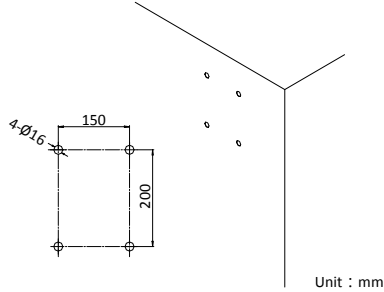

Figure 2-2 Drill Screw Holes

    2) Insert four M12 expansion screws into the mounting holes through the holes on the bracket.

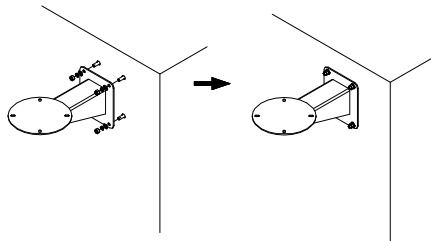   3) Secure the bracket with four flat gaskets, spring washers, and nuts as shown in Figure 2-3.

Figure 2-3 Secure the Bracket

2. Fix the positioning system to the bracket.

    1) Place the positioning system on the plate of wall mounting bracket.

    2) Align the four screw holes on the positioning system to the four screw holes on the bracket, and secure the positioning system with four M8 × 30 screws.
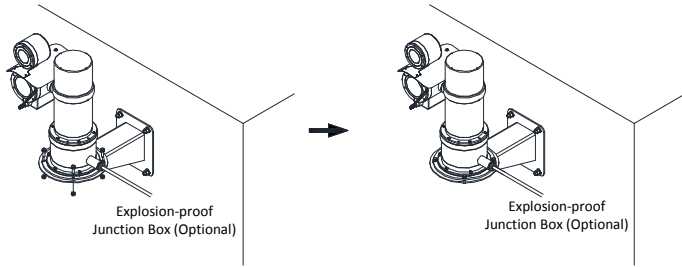
Figure 2-4 Fix the Positioning System

2.3 Protective Measures for Outdoor Installation

If the device is installed outdoors, necessary protective measures should be taken to ensure safety. Scan the following QR code to get protective measures for outdoor installation.

3 Setting the Positioning System over the LAN

Notes:

- You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, strengthen your own protection. If the product does not work properly, contact with your dealer or the nearest service center.

- To ensure the network security of the positioning system, we recommend you to have the positioning system assessed and maintained termly. You can contact us if you need such service.

3.1 Wiring

To view and configure the network positioning system via LAN (Local Area Network), you need to connect the positioning system in the same subnet with your PC. Then, install the SADP or client software to search and change the IP address of network positioning system.

Connect the positioning system to network according to the following figures.
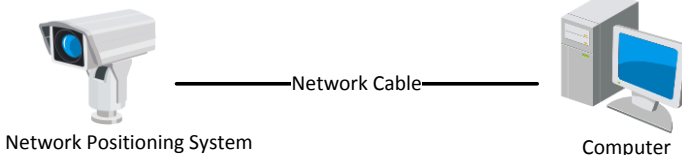

Network Positioning System　　　　　　Network Cable　　　　　　Computer
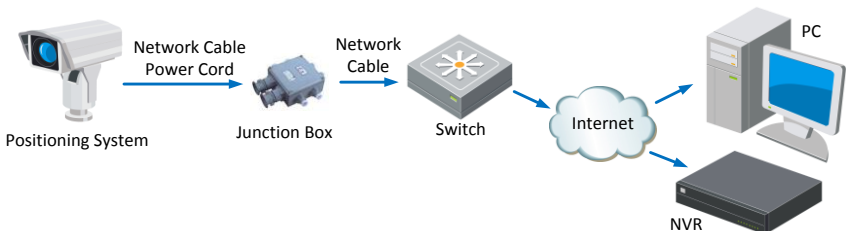
Figure 3-1 Connecting Directly

Figure 3-2 Wiring over LAN

3.2 Activating the Positioning System

Purpose:

You are required to activate the positioning system first by setting a strong password for it before you can use the positioning system.

Activation via web browser, activation via SADP, and activation via client software are supported. We will take activation via SADP software and activation via web browser as examples to introduce the positioning system activation.

3.2.1 Activation via Web Browser

Steps:

1. Power on the positioning system. Connect the positioning system to your computer or the switch/router which your computer connects to.

2. Input the IP address into the address bar of the web browser, and enter the activation interface.

   Notes:

   ● The default IP address of the positioning system is 192.168.1.64.

   ● The computer and the positioning system should belong to the same subnet.

   ● For the positioning system enables the DHCP by default, you need to use the SADP software to search the IP address.

Figure 3-3 Activation Interface (Web)

3. Create a password and input the password into the password field.

⚠️ **STRONG PASSWORD RECOMMENDED**– *We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.*

4. Confirm the password.

5. Click **OK** to activate the positioning system and enter the live view interface.

3.2.2 Activation via SADP Software

SADP software is used for detecting the online device, activating the device, and resetting the password.

Get the SADP software from the supplied disk or the official website, and install the SADP according to the prompts.

Follow the steps to activate the positioning system**.**

Steps:

1. Run the SADP software to search the online devices.
2. Check the device status from the device list, and select an inactive device.

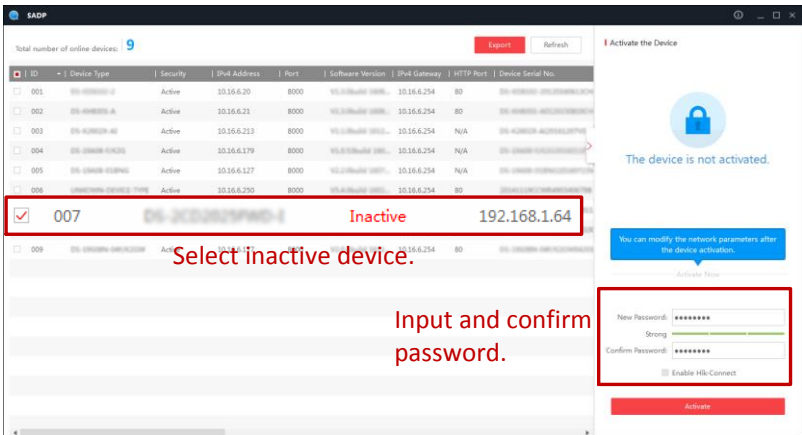Figure 3-4 SADP Interface

Note:

The SADP software supports activating the positioning system in batch. Refer to the user manual of SADP software for details.

3. Create a password and input the password in the password field, and confirm the password.

> ⚠️ **STRONG PASSWORD RECOMMENDED**– *We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.*

4. Click **Activate** to save the password.

Note:

You can check whether the activation is completed on the popup window. If activation failed, make sure that the password meets the requirement and try again.

3.3 Modifying the IP Address

Purpose:

To view and configure the positioning system via LAN (Local Area Network), you need to connect the network positioning system in the same subnet with your PC.

Use the SADP software or client software to search and change the IP address of the device. We take modifying the IP Address via SADP software as an example to introduce the IP address modification.

Note:

For IP address modification via client software, refer to the user manual of client software.

Steps:

1. Run the SADP software.
2. Select an active device.
3. Change the device IP address to the same subnet with your computer by either modifying the IP address manually or checking **Enable DHCP**.
4. Input the admin password and click **Modify** to activate your IP address modification. The batch IP address modification is supported by SADP. Refer to the user manual of SADP for details.

4 Accessing via Web Browser

System Requirement:

Operating System: Microsoft Windows XP SP1 and above version/Vista/Win7/Server 2003/Server 2008 32bits

CPU: Intel Pentium IV 3.0 GHz or higher

RAM: 1G or higher

Display: 1024 × 768 resolution or higher

Web Browser: Internet Explorer 8 to 11, Google Chrome 31 to 44, and Mozilla Firefox 30 to 51

Steps:

1. Open the web browser.
2. In the browser address bar, input the IP address of the network positioning system, and enter the login interface.

   Note:

   The default IP address is 192.168.1.64. You are recommended to change the IP address to the same subnet with your computer.

3. Input the user name and password.

   The admin user should configure the device accounts and user/operator permissions properly. Delete the unnecessary accounts and user/operator permissions.

   Note:

   The device IP address gets locked if the admin user performs 7 failed password attempts (5 attempts for the user/operator).

4. Click **Login**.

Figure 4-1 Login Interface

5. Install the plug-in before viewing the live video and managing the network positioning system. Follow the installation prompts to install the plug-in.

   Note:

   You may have to close the web browser to finish the installation of the plug-in.

Figure 4-2 Download Plug-in

6. Reopen the web browser after the installation of the plug-in and repeat the above step 2 to step 4 to login.

   Note:

   For detailed instructions of further configuration, refer to the user manual of network positioning system.

See Far, Go Further