



Fall Detection Radar

User Manual

Legal Information

About this Document

- This Document 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 Document is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of the Document at the Hikvision website (<https://www.hikvision.com>). Unless otherwise agreed, Hangzhou Hikvision Digital Technology Co., Ltd. or its affiliates (hereinafter referred to as "Hikvision") makes no warranties, express or implied.
- Please use the Document with the guidance and assistance of professionals trained in supporting the Product.

About this Product

This product can only enjoy the after-sales service support in the country or region where the purchase is made.

Acknowledgment of Intellectual Property Rights

- Hikvision owns the copyrights and/or patents related to the technology embodied in the Products described in this Document, which may include licenses obtained from third parties.
- Any part of the Document, including text, pictures, graphics, etc., belongs to Hikvision. No part of this Document may be excerpted, copied, translated, or modified in whole or in part by any means without written permission.
- **HIKVISION** and other Hikvision's trademarks and logos are the properties of Hikvision in various jurisdictions.
- Other trademarks and logos mentioned are the properties of their respective owners.

LEGAL DISCLAIMER

- TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS DOCUMENT AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKVISION BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.
- YOU ACKNOWLEDGE THAT THE NATURE OF THE INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKVISION SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION,

PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INFECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

- 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 DOCUMENT AND THE APPLICABLE LAW, THE LATTER PREVAILS.

© Hangzhou Hikvision Digital Technology Co., Ltd. All rights reserved.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
 Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Note	Provides additional information to emphasize or supplement important points of the main text.

Safety Instruction

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

- During device installation and use, the electrical safety regulations of the country and region must be strictly followed.
- Please use the power adapter provided by normal manufacturer. See product's specifications for the specific requirements of the power adapter.
- Disconnect all power sources during connection, disassembling, etc. Do not power up.
- After the device is powered on, do not directly contact exposed contacts and components to prevent electric shock.
- Do not use damaged power supply device (cable, adapter, etc.) to prevent electric shock, fire, and explosion.
- Make sure the device is grounded before powering on.
- To avoid heat build-up, please keep the device ventilation smooth.
- The device should be stored in a dry, non-corrosive gas environment, and avoid direct sunlight.
- Keep the device watertight, away from fire sources, and avoid explosion.
- The device should only be used in an indoor environment.
- Keep the device away from the place where there is magnetic field interference.
- Do not connect multiple devices to the same power adapter (exceeding the adapter load may generate excessive heat or cause fire).
- Warning: If the wrong model of battery is used, it may result in an explosion hazard.
- Replacing a battery with the wrong model (e.g. some types of lithium batteries) may result in the failure of the safety guard.
- Do not throw the battery into fire or heating furnace, do not crush, bend or cut the battery, it may cause an explosion.
- Do not place the battery in an extremely low air pressure environment, which may cause the battery to explode or leak flammable liquid or gas.
- Waste batteries will pollute the environment, please dispose of used batteries according to the instructions.
- Do not place bare flame sources on the device, such as lit candles.
- Please strictly refer to the installation method in this manual for device installation.
- To prevent injury, the device must be securely fastened to the mounting plane.
- If the device has smoke, odor or noise, please disconnect the power of the device immediately and contact the dealer or service center in time.
- If the device is not working properly, please contact the store where the device was purchased or the nearest service center, do not disassemble or modify the device in any way. (The company is not responsible for problems caused by unauthorized modifications or repairs).

Contents

Chapter 1 Overview	1
1.1 Introduction	1
1.2 Key Features	1
1.3 Specifications	1
1.4 Appearance	2
1.5 Typical Application	3
Chapter 2 Installation	5
2.1 Installation Environment.....	5
2.2 Installation Preparation	5
2.3 Installation	5
Chapter 3 Device Activation and Accessing.....	7
3.1 Activate the Device via SADP	7
3.2 Activate the Device via Browser	7
3.3 Login and Logout via Web	8
Chapter 4 Web Operation	9
4.1 Fall Detection Monitoring	9
4.1.1 Rader Information.....	9
4.1.2 Basic Settings	9
4.1.3 Fall Down Detection Event Settings	10
4.1.4 Detection Area and Event Settings	11
4.1.5 Point Cloud Information.....	13
4.1.6 Current Status Information.....	14
4.1.7 Trajectory Map, Real-Time Data, and Alarm Information.....	14
4.2 System Configuration	15
4.2.1 Basic Information	15
4.2.2 Device Status	16
4.2.3 Time Settings	16
4.2.4 DST	16
4.2.5 Indicator	17

4.2.6 Maintenance	17
4.3 Network Configuration.....	18
4.3.1 Network Interface	18
4.3.2 Wi-Fi	19
4.4 Data Connection Configuration	21
4.4.1 OTAP	21
Chapter 5 Device Maintenance	23
Chapter 6 FAQ (Frequently Asked Question)	24
6.1 Question 1.....	24
6.2 Question 2.....	24
6.3 Question 3.....	24
6.4 Question 4.....	24
6.5 Question 5.....	25
6.6 Question 6.....	25
6.7 Question 7.....	25
6.8 Question 8.....	25
6.9 Question 9.....	26
6.10 Question 10.....	26
6.11 Question 11.....	26
6.12 Question 12.....	26
6.13 Question 13.....	26
6.14 Question 14.....	26
6.15 Question 15.....	27
6.16 Question 16.....	27
6.17 Question 17.....	27
6.18 Question 18.....	27

Chapter 1 Overview

1.1 Introduction

IRS-BFDR6-H1AG is a millimeter-wave radar based on the 60 GHz frequency band for people fall detection. The radar adopts the FMCW system, and comprehensively uses MIMO, beamforming, group tracking, and deep learning technologies to realize indoor people detection and fall recognition.

The device can be applied to private places such as bedrooms, living rooms, toilets, and kitchens, without privacy leakage.

1.2 Key Features

The device has following key features:

- Adopts millimeter-wave radar detection without visual sense, no privacy disclosure.
- All-weather detection without the influence of illumination and temperature.
- High detection accuracy and low false alarm rate.
- Detects person presence in the area.
- Non-contact fall detection.
- Supports audio intercom function.

1.3 Specifications

Table 1-1 Specifications

Parameter	Fall Detection Radar
Working Frequency	60 GHz to 64 GHz
Modulation Waveform	FMCW
Detection Distance	0.3 m to 6 m
Scan Bandwidth	1.7 GHz
Distance Resolution	0.1 m
Horizontal Detection Angle	-45° to 45° (3 dB)
Vertical Detection Angle	-30° to 30°(3 dB)
Data Period	66 ms
Power Input	12 VDC, or PoE power supply (IEEE 802.3 at class 4)
Alarm Output	Switch volume (without voltage)
Communication Interface	Wi-Fi (2.4 G frequency band)/PoE
Communication Protocol	OTAP protocol

Parameter	Fall Detection Radar
Working Temperature	-10 °C to 50 °C (14 °F to 122 °F)
Protection	IP65
Dimensions	110.5 mm × 104.1 mm × 67.8 mm (4.4" × 4.1" × 2.7")

1.4 Appearance

- Button:

(1) Press and hold the button for 5 seconds until the indicator starts slow flashing. Release the button during the slow flashing to activate the Wi-Fi hotspot.

(2) Press and hold the button for 15 seconds until the indicator starts rapid flashing. Release the button during the rapid flashing to restore the device to factory settings.

- Dimensions: 110.5 mm × 104.1 mm × 67.8 mm, including bracket.



Figure 1-1 Appearance

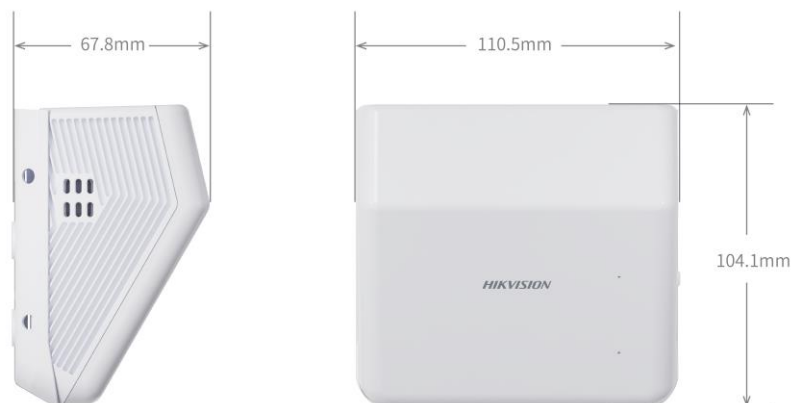


Figure 1-2 Dimensions

1.5 Typical Application

The device can be applied to private places such as bedrooms, living rooms, toilets, and kitchens, without privacy leakage.

- Installation height: 2.3 m above the ground. Can be extended to 2.2 m to 2.4 m above the ground if the installation condition is not allowed.
- Coverage area: Max. area of 5.7 m × 6 m in front of the device without barrier.

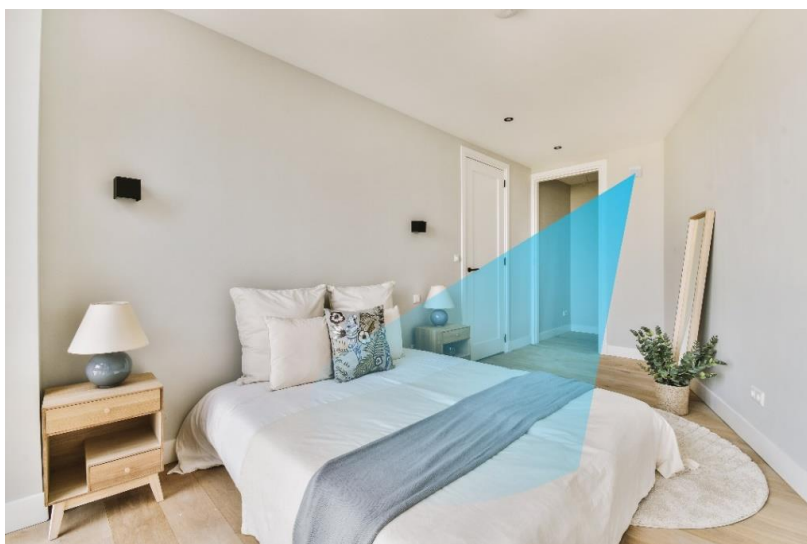


Figure 1-3 Typical Application

Table 1-2 Typical Application

Scenario	Example	Whether to Detect Fall/Sit
General Scenario	Stand → Lie down	Yes
	Stand → Partly lie down	Yes
	Stand → Sit against the wall	Yes
	Stand → Sit on chair	No
	Stand → Crouch	No
	Stand → Sit on ground	Small probability
	Single person fall	Yes
	Two people fall (interval 2 meters)	Large probability
	More than two people fall	Small probability
Ward Scenario	Fall from wheelchair	Large probability
Toilet Scenario	Fall from toilet	Large probability
Bedroom Scenario	Fall from bed	Large probability

 Note

The device is only used as an auxiliary detection device, it cannot identify all types of falls, affected by a variety of factors, false negatives and false positives are possible, it is recommended to set reasonable parameter values according to the actual scenario.

Chapter 2 Installation

2.1 Installation Environment

- The device only supports side installation, fixed on the wall, and the installation height is 2.3 m, extend to 2.2 m to 2.4 m, from the ground.
- Please make sure that the device is less obstructed by furniture.

2.2 Installation Preparation

Before You Start

- Before installation, please prepare the hammer, network cable and accessories that come with the device.
- Before installation, please confirm that the device and accessories in the package are complete.
- Please pre-deploy the power cord.

2.3 Installation

Steps

1. Select a suitable location according to the installation instructions.
2. Install the bracket: Use the expansion screws that come with the device to fix the bracket in the location to be installed through the mounting holes on the bracket.

Note

The bracket supports sidewall mounted.

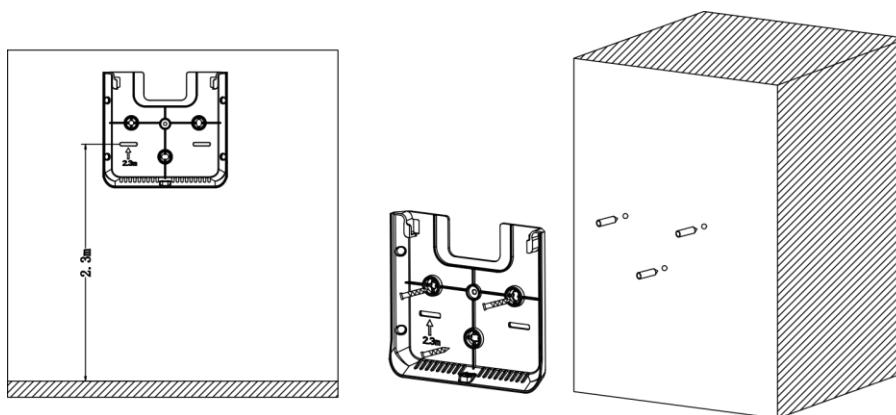


Figure 2-1 Sidewall Installation

3. Connect the power cable and network cable.
4. After the bracket is fixed, align the mounting holes of the device with the bracket buckle, pull down and hang tightly, and then tighten the locking screws.

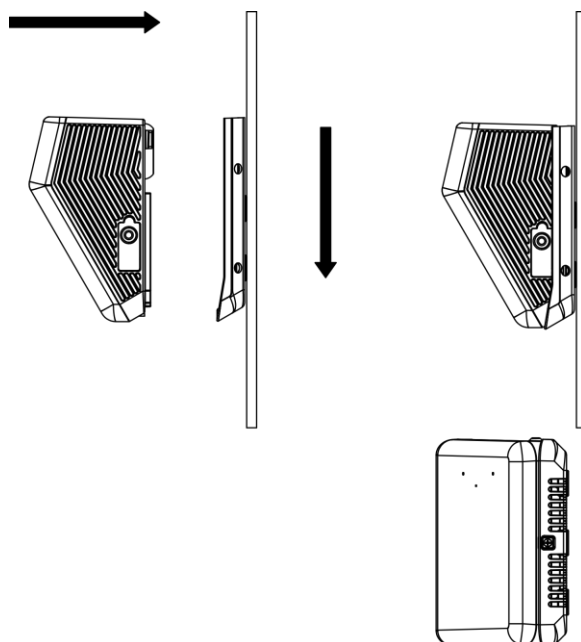


Figure 2-2 Fix Device

5. According to the installation environment, the wiring is routed from the rear outlet hole of the bracket, or from the upper outlet hole.

Rear outlet hole of the bracket, or
from the upper outlet hole

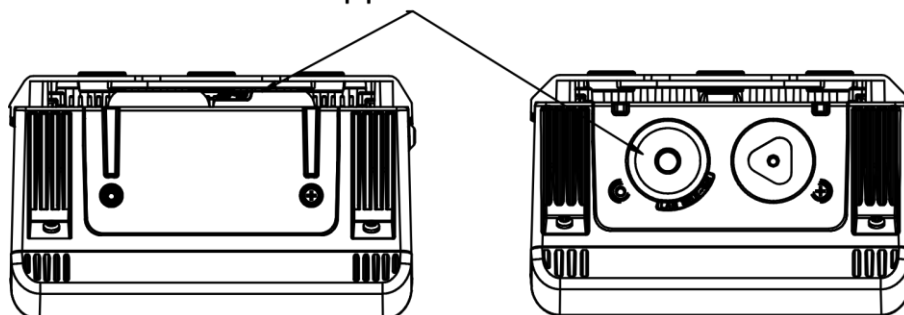


Figure 2-3 Wiring

Note

It is necessary to ensure that the device is installed horizontally. The location of the installation is as little as possible when the device is obscured by furniture.

Chapter 3 Device Activation and Accessing

3.1 Activate the Device via SADP

Search and activate the online devices via SADP software.

Before You Start

Access www.hikvision.com to get SADP software to install.



Note

The default values of the device are as follows:

- Default IP address: 192.168.1.64
 - Default username: admin
-

Steps

1. Connect the device to network using the network cable.
 2. Run SADP software to search the online devices.
 3. Check **Device Status** from the device list, and select **Inactive** device.
 4. Create and enter the new password in the password field, and confirm the password.
-



Caution

We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including 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.

5. Click **OK**. **Device Status** changes into **Active**.
6. Optional: Change the network parameters of the device in **Modify Network Parameters**.

3.2 Activate the Device via Browser

You can access and activate the device via the browser.

Steps

1. Connect the device to the PC using the network cables.
2. Change the IP address of the PC and device to the same segment.

Note

The default IP address of the device is 192.168.1.64. You can set the IP address of the PC from 192.168.1.2 to 192.168.1.253 (except 192.168.1.64). For example, you can set the IP address of the PC to 192.168.1.100.

3. Enter **192.168.1.64** in the browser.
 4. Set device activation password.
-

Caution

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.

5. Click **OK**.
6. Enter the activation password to log in to the device.

3.3 Login and Logout via Web

Log in to the device via Web browser.

Steps

1. Enter the IP address of the device in the address bar of the browser, for example, `http://192.168.1.64`, and press **Enter**.
2. Enter your username and password.
3. Click **OK**.
4. Optional: If you need to exit the system safely, please click **Logout** in the upper right corner.

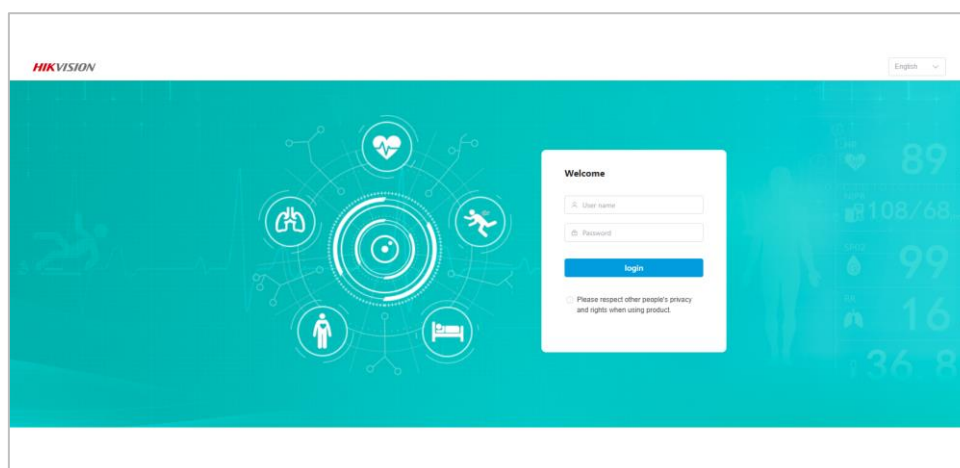


Figure 3-1 Login via Web

Chapter 4 Web Operation

4.1 Fall Detection Monitoring

In the page of fall detection monitoring, you can view and set real-time detection data.

4.1.1 Rader Information

You can view radar status and software version here.

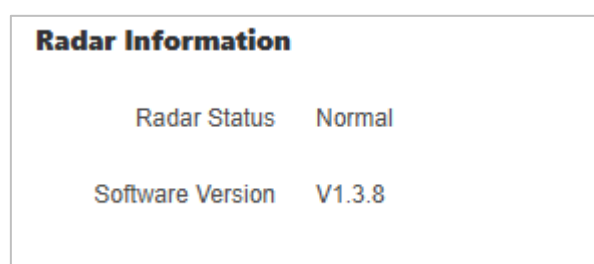


Figure 4-1 Radar Information

4.1.2 Basic Settings

- Installation Height (m): It is the distance between the center of the device and the ground, ranging from 2.2 m to 2.4 m. It is recommended to set 2.3 m. Follow the real installation height shall help improve the detection performance.
- Installation Angle: The angle between the front shell of the device and the wall, ranging from 25° to 35°. It is recommended to set 30°.
- Current Detection Angle: It indicates the installation tilt angle calculated by the six-axis sensor in the device for reference.
- Normal Mode: Enabled: Normal mode, used for the general room i.e. bedroom, living room and other open areas. Disabled: Single target detection for the bathroom. Note: Mode switching requires a reboot to take effect.

Note

The parameter of normal mode is enabled by default, and it is used to adapt to different application scenarios, and it needs to be enabled for wide scenes such as bedrooms and living rooms. For narrow scenarios such as bathroom, the parameter needs to be disabled.

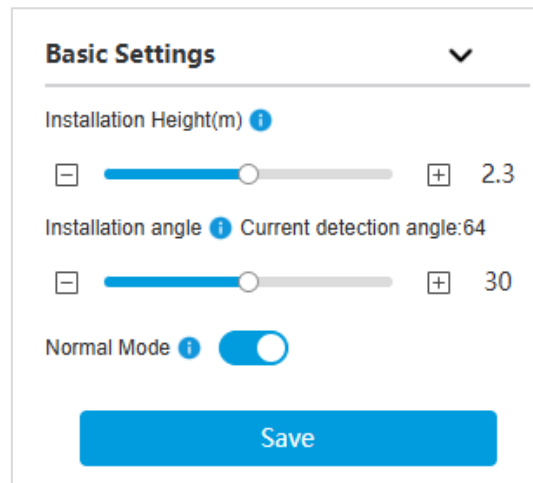


Figure 4-2 Basic Settings

4.1.3 Fall Down Detection Event Settings

You can set fall detection parameters here in event settings.

- **Fall Detection Delay (second):** It sets how long it takes for the device to respond after a fall event, and a moderate delay time can effectively ensure the detection performance of the device. The range is from 10 s to 255 s. It is recommended to set the parameter between 30 s and 60 s.
- **Fall Detection Sensitivity:** The sensitivity of fall detection. The higher the value, the more sensitive the fall detection. Over high parameter value may lead to false fall alarms. The lower the number, the more you can eliminate some false alarms, but too low can lead to missed fall detection. The range is from 0 to 9.
- **Sit-on-Floor Detection:** It is used to detect the posture of a person who does not fall completely to the ground after falling, such as half-lying with his/her arm on the ground, sitting on the ground against a wall, etc., It is enabled by default.

Note

This mode is only applicable to single person scenario.

- **Sit-on-Floor Detection Delay:** It indicates how long it takes for the device to respond after the sit-down event occurs, and the moderate delay time can effectively ensure the detection performance of the device. The range is from 10 s to 255 s. It is recommended to set the parameter as 60 s.
- **Sit-on-Floor Detection Sensitivity:** The sensitivity of sit-on floor detection. The higher the value, the more sensitive the sit-on-floor detection. Over high parameter value may lead to false fall alarms. The lower the number, the more you can eliminate some false alarms, but too low can lead to missed fall detection. The range is from 0 to 9.

Fall Down Detection Event Settings

Fall Detection Delay(second) [-] [Slider] [+] 30

Fall Detection Sensitivity [-] [Slider] [+] 5

Sit-on-Floor Detection [Toggle]

Sit-on-Floor Detection Delay(second) [-] [Slider] [+] 60

Sit-on-Floor Detection Sensitivity [-] [Slider] [+] 5

Save

Figure 4-3 Fall Down Detection Event Settings

4.1.4 Detection Area and Event Settings

Event Detection Range

The detection area, where the device detects the fall, usually is set to slightly larger than the size of the room. By setting the front, rear, left, and right boundaries, the detection range is determined. The maximum left boundary is -3 m, the maximum right boundary is 3 m, the maximum front boundary is 6 m, and the minimum rear boundary is 0.3 m. The area within 0.3 m constitutes a blind area for detection.

Event Detection Range

☒ Sofa Area

☐ Bed Area

☐ Custom Area

☒ Shield Area

1 Clean All

Front(m) 6

Left(m) -3

Right(m) 2

Rear(m) 0.3

Save **Cancel**

Figure 4-4 Detection Area and Event Settings

Sofa Area

You can draw the sofa area and enable or disable parameters of In/Out of Sofa Detection and Overstay Detection, and set parameters of Duration(s), and Event Schedule.

Note

- The sofa area does not support fall down detection.
- Drawing the sofa area helps avoid false detections caused by prolonged sitting in that area. We strongly recommend drawing the sofa area.

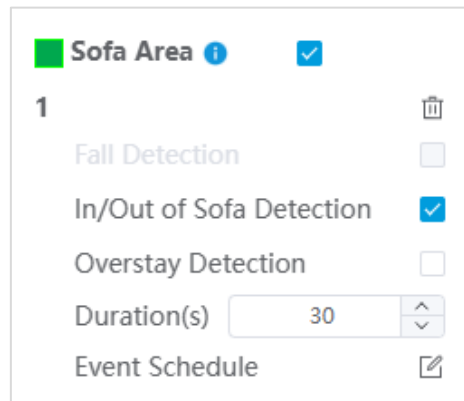


Figure 4-5 Sofa Area

Bed Area

You can draw the bed area and enable or disable parameters of In/Out of Bed Detection and Long Time Out of Bed Detection, and set parameters of Duration(s), and Event Schedule.

Note

- The bed area does not support fall down detection.
- Drawing the bed area helps avoid false fall down detection. We strongly recommend drawing the bed area according to actual conditions even if out of bed detection isn't required.

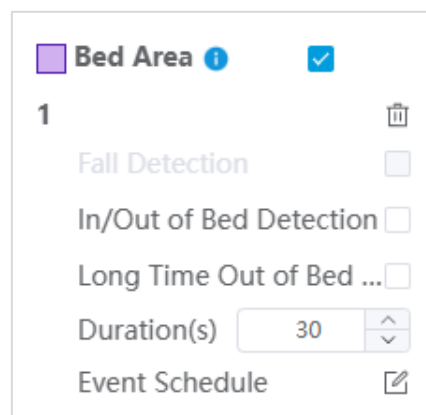


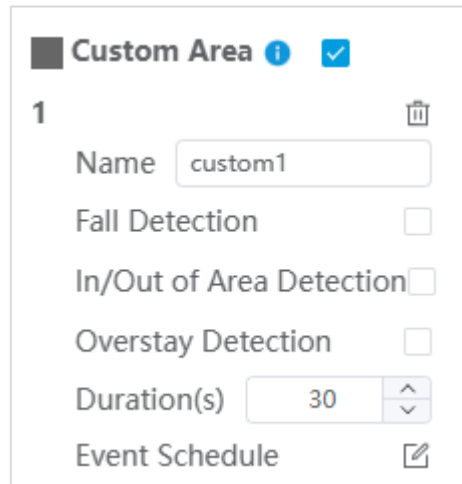
Figure 4-6 Bed Area

Custom Area

Drawing custom area enables detection of fall down, entry and exit, and prolonged presence, with configurable event schedule.

Note

- Custom area supports fall down detection.
 - You can draw custom area according to actual needs.
-



Custom Area  	
1 	
Name	custom1
Fall Detection	☐
In/Out of Area Detection	☐
Overstay Detection	☐
Duration(s)	30  
Event Schedule	

Figure 4-7 Custom Area

Shield Area

Drawing shield area disables event detection within those areas. Drawing shield area is an effective way to reduce false fall down detection.

- For vibrating appliances including air purifiers, humidifiers, fans, refrigerators, washing machines, desktop computer, and air conditioners, drawing shield area is needed.
- For curtain-like objects such as drapes, tablecloths, hanging garments, and mosquito nets, drawing shield area is needed.
- For plants, large metallic objects, and swinging doors, drawing shield area is needed.

4.1.5 Point Cloud Information

The location information detected by the device is displayed real-timely by a point cloud in the web client, as shown below.

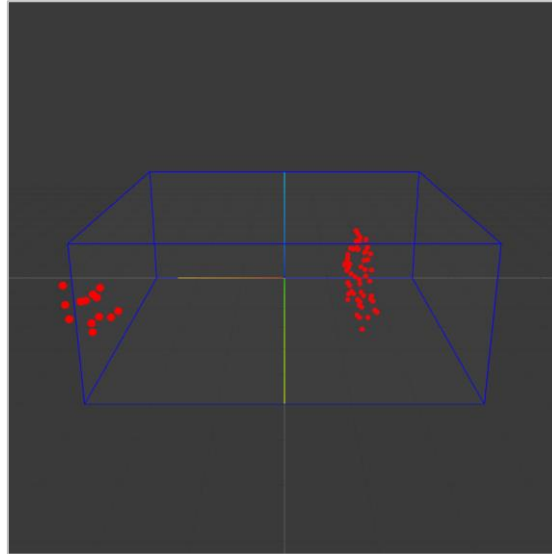


Figure 4-8 Point Cloud Information

4.1.6 Current Status Information

The current status information displays the people's status, including no human, human detected, suspected fall and fall detected.

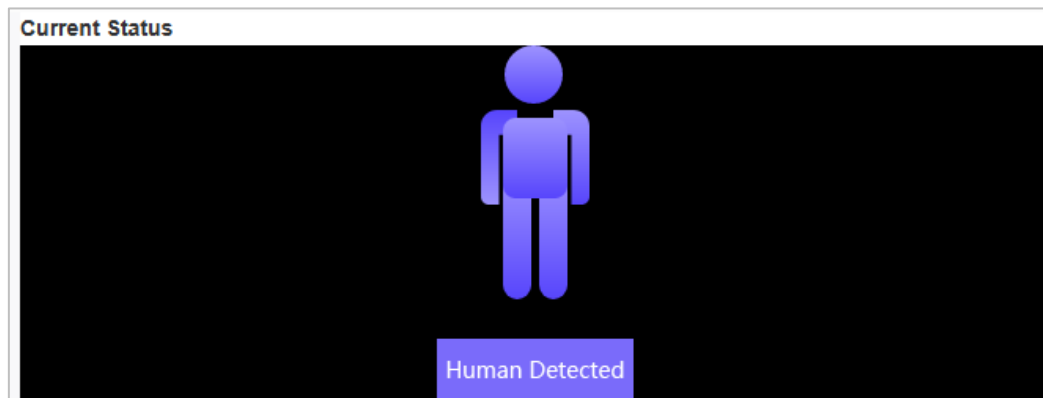


Figure 4-9 Current Status Information

4.1.7 Trajectory Map, Real-Time Data, and Alarm Information

- Trajectory map: It represents the current location of a person.
- Real-time data: it represents the current trajectory information of each person.
- Alarm information: It is log information that records status changes.

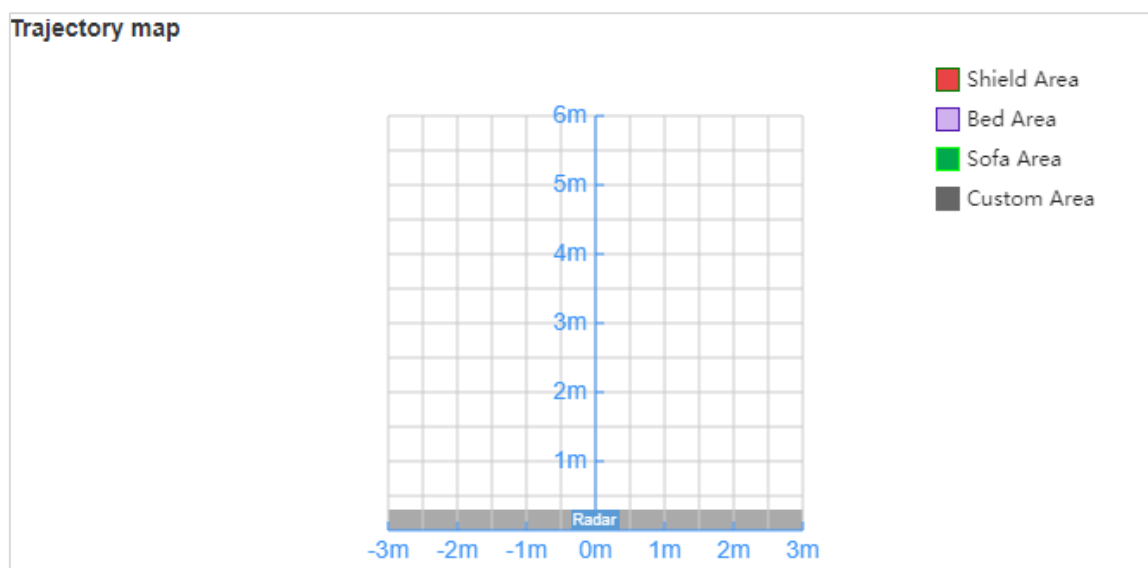


Figure 4-10 Trajectory Map, Real-Time Data, and Alarm Information

4.2 System Configuration

In system configuration page, you can view and configure the device's basic information, status, time, DST, indicator, and maintenance information.

4.2.1 Basic Information

Go to **Configuration** → **System** → **System Settings** → **Basic Information**, and you can edit the device's name, and view its type, serial number, firmware version, and web version.

Basic Information

Device Name

dev001

Device Type

IRS-BFDR6-H1A

Device Serial No.

20241217001

Firmware Version

V1.3.8 build 241224

Web Version

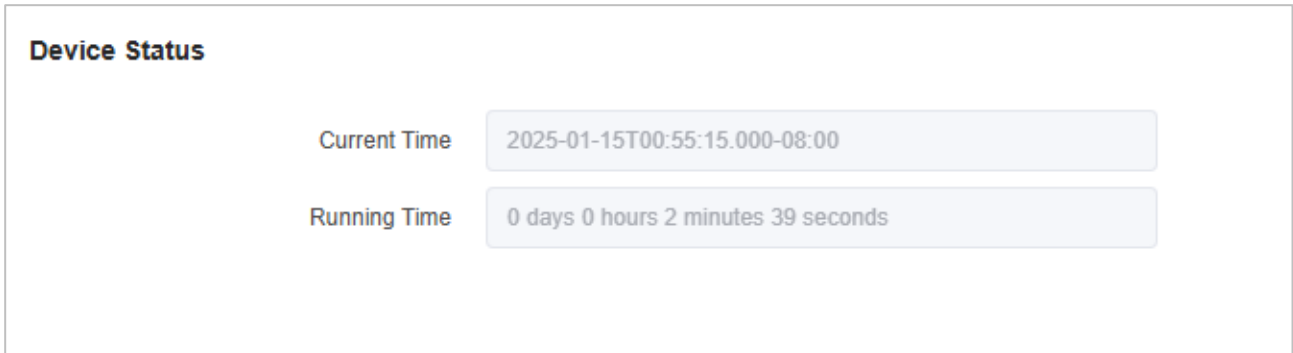
V1.6.6 build 241224

Save

Figure 4-11 Basic Information

4.2.2 Device Status

Go to **Configuration** → **System** → **System Settings** → **Device Status**, and you can view the device's current time and running time.



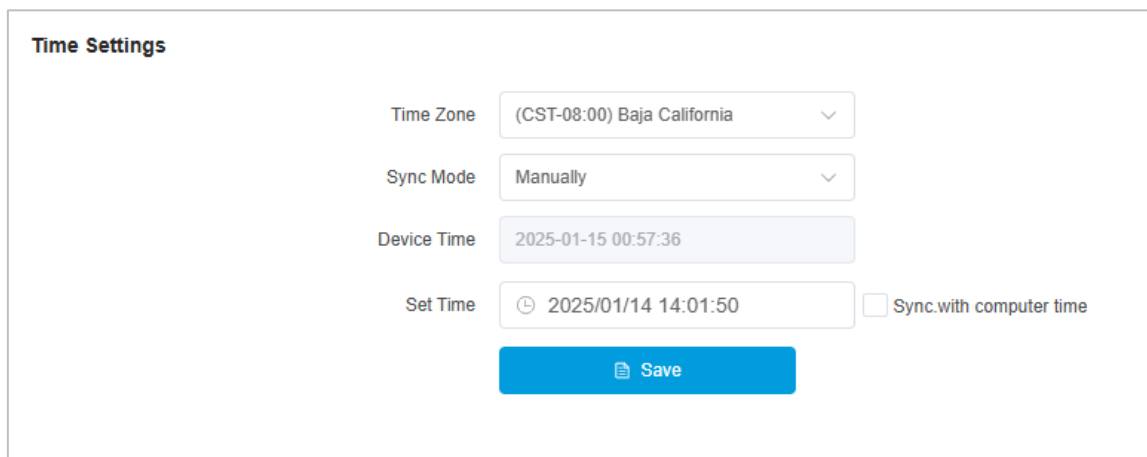
The screenshot shows the 'Device Status' page. It has a title 'Device Status' in the top left. Below it, there are two rows of information. The first row is 'Current Time' with a value of '2025-01-15T00:55:15.000-08:00'. The second row is 'Running Time' with a value of '0 days 0 hours 2 minutes 39 seconds'.

Label	Value
Current Time	2025-01-15T00:55:15.000-08:00
Running Time	0 days 0 hours 2 minutes 39 seconds

Figure 4-12 Device Status

4.2.3 Time Settings

Go to **Configuration** → **System** → **System Settings** → **Time Settings**, and you can set time zone, select time sync. mode, view and set the device's time.



The screenshot shows the 'Time Settings' page. It has a title 'Time Settings' in the top left. Below it, there are four rows of settings. The first row is 'Time Zone' with a dropdown menu showing '(CST-08:00) Baja California'. The second row is 'Sync Mode' with a dropdown menu showing 'Manually'. The third row is 'Device Time' with a text field showing '2025-01-15 00:57:36'. The fourth row is 'Set Time' with a text field showing '2025/01/14 14:01:50' and a checkbox labeled 'Sync with computer time'. At the bottom, there is a blue 'Save' button.

Label	Value
Time Zone	(CST-08:00) Baja California
Sync Mode	Manually
Device Time	2025-01-15 00:57:36
Set Time	2025/01/14 14:01:50

☐ Sync with computer time

Save

Figure 4-13 Time Settings

4.2.4 DST

If the region where the device is located adopts Daylight Saving Time (DST), you can set this function.

Steps

1. Go to **Configuration** → **System** → **System Settings** → **DST**.
2. Check **Enable DST**.
3. Select **Start Time**, **End Time** and **DST Bias**.
4. Click **Save**.

DST

☒ Enable DST

Start Time

March

Second

Sunday

02

End Time

November

First

Sunday

02

DST Bias

60 min

Save

Figure 4-14 DST

4.2.5 Indicator

Go to **Configuration** → **System** → **System Settings** → **Indicator**, and you can set the device's indicator.

- Automatic Switch: The indicator changes automatically according to the connection network status, the indicator turns on when connected to the server, and the indicator turns off when the server is disconnected.
- Manual Switch: It manually sets the indicator's status, turn on and off according to the **Turn On/Off Light Manually**.

Indicator Settings

Indicator

Manual Switch

Turn On/Off Light Manually

☒

Save

Figure 4-15 Indicator

4.2.6 Maintenance

Go to **Configuration** → **System** → **Maintenance** → **Upgrade & Maintenance**, and you can reboot the device, restore it to factory settings, export device data, and upgrade the device.

Upgrade & Maintenance

Device Maintenance

Device Reboot

Reboot

Fully Restore to Factory Settings

Restore to Factory Settings

Restore the device to the factory inactive status

Data Export

Log File

Log File

Upgrade

(Note:The upgrade package is named as XX.bin.)

Firmware

Browse

Upgrade

Note

Do not turn off the power.The device will reboot automatically after upgrade completes.

Figure 4-16 Maintenance

4.3 Network Configuration

In network configuration page, you can configure network parameters, OTAP parameters, etc.

4.3.1 Network Interface

Go to **Configuration** → **Network** → **Network Parameters** → **Network Interface** for parameter settings.

- **DHCP**: The device automatically gets the IPv4 parameters from the network if you check **DHCP**. The device IP address is changed after enabling the function. You can use SADP to get the device IP address.
- **Manual**: If you do not check **DHCP**, you can set the device IPv4 parameters manually. Enter **IPv4 Address**, **IPv4 Subnet Mask**, and **IPv4 Default Gateway**.

Note

- The network that the device is connected to should support DHCP (Dynamic Host Configuration Protocol).
 - Click **Save** after parameter settings.
-

Network Interface

Wi-Fi

NIC Settings

Link

Disconnected

DHCP

☐

IPv4 Address

192.168.1.64

IPv4 Subnet Mask

255.255.255.0

IPv4 Default Gateway

0.0.0.0

Mac Address

02:71:2c:e1:d4:05

Save

Figure 4-17 Network Interface

4.3.2 Wi-Fi

In Wi-Fi configuration page, you can configure Wi-Fi and Wi-Fi hotspot parameters, and check its status.

Set Wi-Fi

You need to configure Wi-Fi parameters if the device accesses to the network via Wi-Fi.



Note

This device supports 2.4 G Wi-Fi only.

Steps

1. Go to **Configuration** → **Network** → **Network Parameters** → **Wi-Fi** for parameter settings.
2. Check **Wi-Fi** and enter **SSID** and **Key**, and click **Save**.
3. Select **IP Address Type**, and enter corresponding parameters.

Network Interface

Wi-Fi

Wi-Fi

☒ Wi-Fi
 ☐ Wi-Fi Hotspot

Wi-Fi Configuration

Wi-Fi

Enable

☒

SSID

HIK-Office

Key

Wi-Fi Status

Wi-Fi Connection Status

Connected

IP Address Type

☐ Dynamic IP
 ☒ Static IP

IP Address

10.185.12.65

Subnet Mask

255.255.255.0

Route Address

10.185.12.254

Save

Figure 4-18 Set Wi-Fi

Set Wi-Fi Hotspot

You need to configure Wi-Fi hotspot parameters if the device is used as a hotspot for sharing network with other devices.

Steps

1. Go to **Configuration** → **Network** → **Network Parameters** → **Wi-Fi** for parameter settings.
2. Check **Wi-Fi Hotspot**, enter related parameters, and click **Save**.

Network Interface

Wi-Fi

Wi-Fi

☐ Wi-Fi
 ☒ Wi-Fi Hotspot

Wi-Fi Configuration

Enable

☒

SSID

Key

IP Address

Subnet Mask

DHCP

Start IP Address

End IP Address

Figure 4-19 Set Wi-Fi Hotspot

4.4 Data Connection Configuration

4.4.1 OTAP

OTAP is a platform access protocol, and when the device needs to forward data through the platform, you can configure OTAP platform.

Before You Start

The platform server has been configured, and the device communicates with the platform network normally.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **OTAP** for parameter settings.
2. Check **Enable** and enter **Server IP**, **Server Port**, and **Device ID**.

Note

The device ID is the same as the device ID that is reserved when the device is added to the platform software.

3. Enter **Key** and click **Save**.

Note

The key is the same as added to the platform software.

OTAP

OTAP

Enable ☒

Server IP

Server Port

Device ID

Key 

 1-16 letters or numbers,case sensitive.You are recommended to use a combination of letters or numbers

Register Status

 You need to set the network parameters including device IP address, gateway,DNS,ect,to get access to the network

 Save

Figure 4-20 Set OTAP

Chapter 5 Device Maintenance

If the device is not working properly, please contact the store where the device is purchased or the nearest service center, do not disassemble or modify the device in any way.

The surface of the device may accumulate dust after long-term use, please power off it before cleaning the surface dust, wipe off the dust with an alcohol cotton or dry rag, and power on again.

Chapter 6 FAQ (Frequently Asked Question)

6.1 Question 1

Question: What is the detection principle of the fall detection radar?

Answer: The fall detection radar emits electromagnetic beams to human targets through the RF front-end transmitting antenna of the radar. Electromagnetic waves are reflected in various parts of the human body, and the reflected signal contains the distance and angle information of the human body, which is received by the receiving antenna. The algorithm solves the distance and angle through radar signal processing technology and AI deep learning technology, and calculates the point cloud information of the human target. According to the point cloud information, the algorithm further implements the fall detection function.

6.2 Question 2

Question: How long does it take to alarm after a fall is detected?

Answer: Normally, the alarm response time for fall down detection corresponds with your configured Fall Detection Delay. However, under certain circumstances, the alarm time may be triggered later than the configured Fall Detection Delay due to factors including distance between the body and device, body position during the fall down, and obstruction by environmental barriers.

6.3 Question 3

Question: What is a Sit-on-Floor Event and what are the similarities and differences between Sit-on-Floor Detection Event and Fall Detection Event?

Answer: Sit-on-Floor Event where the limbs and torso are not fully close to the ground are defined as sitting postures (such as leaning on a table or chair after falling to the ground, half-lying down, etc.). The effective area of Sit-on-Floor Event and Fall Detection Event is the same, but the height threshold of Sit-on-Floor Event is greater than that of Fall Detection Event and the detection delay is longer.

6.4 Question 4

Question: What is the maximum allowable boundary value of the detection area?

Answer: The detection area for fall and sit-down detection is 0.3 meters to 6 meters in front of the device and 3 meters on each side of the device. Since there is a blind area of 0.3 meters in the radar, the maximum detection area is 5.7 meters × 6 meters, and the boundary should be set according to

the actual room situation, otherwise it may cause false alarms.

6.5 Question 5

Question: Will some electronic devices have an impact on the detection? For example, mobile phones, computers, NVRs, electric fans, etc.

Answer: The electronics themselves do not have an impact on the detection. However, if there are moving or vibrating objects (such as a working electric fan) in the detection area, it will have a significant impact on the detection effect of the device, and it is necessary to draw a shielding area for the interfering objects.

6.6 Question 6

Question: Is the radiation generated by the device harmful to human?

Answer: The radiation level of smartphones is about 20 dBm, while the device has a radiation level of less than 10 dBm. So the device has less harm to human than that of the smartphones.

6.7 Question 7

Question: What is the effect of glass and shower curtains on radar detection?

Answer: Moving shower curtain will have a significant impact on radar detection. The radar signal is also significantly reduced as it passes through the glass.

6.8 Question 8

Question: What is the guide for installing the device?

Answer: The device must be installed on the vertical wall, the angle between the front shell plane of the device and the wall plane is 30 degrees (the recommended error is within 1°). The device must be installed horizontally (the recommended error is within 1 °), the difference between the installation height of the device and the actual height should not exceed 5 cm, and the front shell of

the device should not be pasted with tape, etc., to avoid the increase of false alarms.

6.9 Question 9

Question: Can the device identify a specific person who has fallen?

Answer: The device can detect that someone has fallen, but cannot identify who has fallen.

6.10 Question 10

Question: Under what conditions can a fall be detected?

Answer: Falls can be detected when the device can clearly detect all parts of its monitoring area, and is not blocked by large objects such as TVs, bookshelves, furniture, etc., and there is no interference from obvious vibrating objects near the person.

6.11 Question 11

Question: Will pets affect the device?

Answer: It is not recommended to install device in rooms where pets may enter, and false alarms caused by target trajectory mismatch are prone to occur when low-height targets such as young children, sweeping robots, and pets exist at the same time in the scene.

6.12 Question 12

Question: What should I do if I encounter a false alarm for fall detection?

Answer: Usually a false alarm indicates that the installation is incorrect or that there is some object interference in the monitoring area that causes the device to incorrectly trigger a fall. You can extend the trigger time, adjust the detection sensitivity, or draw the interference into a shielded area to reduce false alarms.

6.13 Question 13

Question: Can the device detect a fall in the shower?

Answer: It is not supported and not recommended since water spray may cause false detection.

6.14 Question 14

Question: Can the device detect falls for people at any height?

Answer: The device will record and update the target height only for the target with height

information (personnel target) and the height of the detected target is between 1.3 m and 2.0 m.

6.15 Question 15

Question: Is it possible not to set up Shielded Area, Bed Area and Sofa Area, and how to set them up?

Answer: The device must be configured with the above three kinds of areas, and failure to set or incorrect settings will cause false detection or missed detection. Because when lying in bed, the height of the person is low. In the same way, when sitting on a sofa or a low stool, the height of the same person is low, and there is a risk of false alarm, so it is necessary to configure the area, and expand the area by 0.2 meters according to the actual size. For furniture that will not move such as washing machines and refrigerators, there will also be slight vibrations when running, which will affect the detection, so it is recommended to set up a Shielded Area, and expand the area by 0.2 meters according to the actual size.

6.16 Question 16

Question: Under what circumstances might have missed fall down detection?

Answer: (1) The current device lacks identification and processing mechanisms for interferences from objects like curtains or fans, which may compromise function under such conditions; (2) When multiple targets coexist in the detection area, the device cannot guarantee consistent detection of all targets; (3) Fall down detection relies on height data. If a target is lost due to interference (e.g., other individuals, curtains, or fans) and falls down before the device reacquires accurate height information after re-detection, missed detection may occur.

6.17 Question 17

Question: What are the common interference sources?

Answer: Objects in the scene that may generate vibration or slight motion include: (1) Vibrating appliances such as air purifiers, humidifiers, fans, refrigerators, washing machines, desktop computer, air conditioners, and heaters; (2) Curtain-type moving objects like drapes, tablecloths, hanging garments, and mosquito nets; (3) Plants, large metallic objects, swinging doors, large glass surfaces, or displays.

6.18 Question 18

Question: What impacts do interference sources have? How can they be addressed?

Answer: Interference sources may trigger false fall down detection or missed detections. Countermeasures include: (1) Remove interference sources; (2) Adjust the radar's installation position; (3) Set an optimized detection area; (4) Configure Shield Area.



See Far, Go Further