HIKVISION

Wireless Bridge (Web)

User Manual

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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. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. 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.

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: http://www.recyclethis.info.

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Industry Canada ICES-003 Compliance

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

Preface

Applicable Models

This manual is applicable to the wireless bridge for web operation.

Symbol Conventions

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

Symbol	Description
<u> </u>	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 Instructions



- This is a class A product and may cause radio interference in which case the user may be required to take adequate measures.
- 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.
- Install the equipment according to the instructions in this manual.
- To prevent injury, this equipment must be securely attached to the floor/wall in accordance with the installation instructions.
- Keep vertical downward when moving or using the equipment.



- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

	wireless Bridge (web) • Oser Manual	
•	Do not connect several devices to one power adapter as adapter overload may overheating or a fire hazard. Please make sure that the plug is firmly connected to the power socket.	cause

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Chapter 1 Introduction

You can manage and configure the device through the web browser, including network settings, wireless network settings, and system management.
Note

Functions of the wireless bridges vary with models. Pictures used for illustration here are for example purposes. The actual interface prevails.

Chapter 2 Activation and Login

2.1 Activate the Device

For the security of your privacy and system data, you are required to set a password for your first use. After the password is set, you can log in to the web for further configuration.

Before You Start

Ensure that your PC and the device are on the same network segment.

Steps

- 1. Run the web browser.
- 2. Enter the IP address of the device in the address bar, and press Enter.
- 3. Set your password and confirm.



The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of 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 change your password regularly, especially in the high security system. Changing the password monthly or weekly can better protect your product.

Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

4. Select the desired **Country/Region Code** and confirm.



Only when **Country/Region Code** is set, can the device work normally.

2.2 Log in to the Device

Log in to the device to check device information and configure related parameters.

Steps

1. Enter the IP address in the address bar of the web browser, and press **Enter**.



Figure 2-1 Log In

- 2. Enter the user name and password.
- 3. Click **Login**.

Chapter 3 Network Configuration

3.1 LAN Settings

If the device is connected to the LAN, you can go to **Network Setting** \rightarrow **LAN Settings** to configure related parameters, including **Network Connection Method**, **IPv4**, **IPv4 Subnet Mask**, **Gateway**, **DNS Address**, and **Standby DNS Address**.



Figure 3-1 LAN Settings

After the IPv4 is reset, the web page redirects to the new login interface of the newly set IP address.

[]i_{Note}

To prevent IP address conflict, it is recommended to use SADP tool when you set the device IP address.

3.2 Wireless Network Settings

Click Wireless Network Settings to set basic and advanced parameters of wireless network.

Note

Parameters of this function vary with models. The actual interface prevails.

3.2.1 Basic Settings

Go to Wireless Network Setting \rightarrow Basic Settings to set wireless network basic parameters.

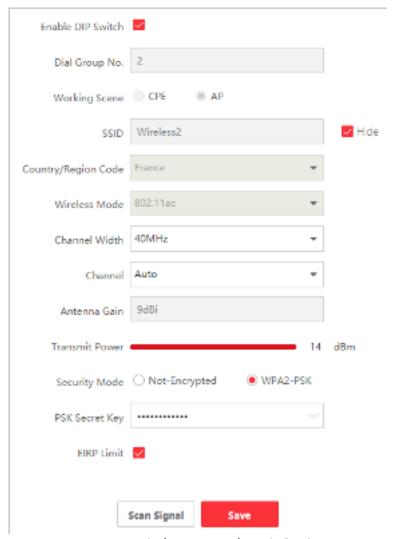


Figure 3-2 Wireless Network Basic Settings

Table 3-1 Parameter Description

Parameter	Description
	Enable/disable the pairing code and scene switching function through the DIP switch. This function is enabled by default.
Enable DIP Switch	 If the DIP group numbers are not enough, you can disable this function and set SSID accordingly. Enabling or disabling DIP switch makes the wireless connection disconnected. Please operate with caution.
Dial Group No.	1 to 16 indicate different group numbers. This information is only displayed when DIP switch is enabled.
Working Scene	DIP switch enabled: The web displays the selected working scene of the device.

Parameter	Description
	If AP is selected on the device, the web displays AP in Working Scene. If CPE is selected on the device, the web displays CPE in Working Scene. DIP switch disabled: You can set Working Scene as desired through the web. Select AP to set AP as Working Scene. Select CPE to set CPE as Working Scene.
SSID	 By default, the SSID is determined by the dial group number, and the CPE pairs with the AP according to SSID. If DIP switch is disabled, you can set SSID as desired. It is recommended to hide the SSID of APs for security.
Country/Region Code	Set when activating the device. It is unchangeable after selected, unless you restore all the settings to default settings.
Wireless Mode	Default value: 802.11ac . It is unconfigurable.
Channel Width	 For APs: Three channel widths available: 20 MHz, 40 MHz, and 80 MHz. The specific value depends on the country/region code. For CPEs: The channel width is automatically changed according to the AP. It is unconfigurable.
Channel	 For APs: Auto is set by default. You can set a desired one. For CPEs: Auto is set by default. It is unconfigurable.
Antenna Gain	The power transmitted in the direction of peak radiation to that of an isotropic source.
Transmit Power	A key factor affecting the wireless coverage area and the maximum achievable signal-to-noise ratio.
Security Mode	 WPA2-PSK is set by default, and the encryption method is AES. If Not-Encrypted is selected, there is no need to set PSK Secret Key.
PSK Secret Key	The pairing password for CPEs and APs. If WPA2-PSK is set as Security Mode , you should configure PSK Secret Key .
EIRP Limit	Check to limit the EIRP (Effective Isotropic Radiated Power) of the device.

[]i_{Note}

You can select an optimum channel by clicking **Scan Signal** to check the signal intensity of available channels nearby.

3.2.2 Advanced Settings

Go to Wireless Network Setting \rightarrow Advanced Settings, enable or disable TDMA and Intelligent Frequency Management as desired.



Figure 3-3 Advanced Settings

Table 3-7 Parameter Description

Parameter	Description	
TDMA	Enable TDMA to improve the throughput performance of the working scene when an AP is connected to multiple devices.	
	Enable Intelligent Frequency Management to ensure stable video transmission when interference detected.	
Intelligent Frequency Management	 The function is available for some models only when AP is set as the working scene. With this function, the working channel will be automatically switched to the optimal channel of all the choices except the DFS (Dynamic Frequency Selection) channels and indoor channels. The function varies with countries. For certain countries, this function is not available. 	

Chapter 4 System Maintenance

4.1 Check Device Information

You can view the basic information, hardware status, network status, and wireless status for routine check or device maintenance.

4.1.1 Device Information

Go to **System Status** \rightarrow **Device Information** to check device name, device model, serial No., program version, MAC address, etc.

Device Name is configurable. See 4.2 Edit Device Name.



Figure 4-1 Check Device Information

4.1.2 Device Status

Go to **System Status** \rightarrow **Basic Status** to check the CPU usage, memory usage, running time, and background noise condition of the device. Click **Refresh** at the upper-right corner to update the overall status.

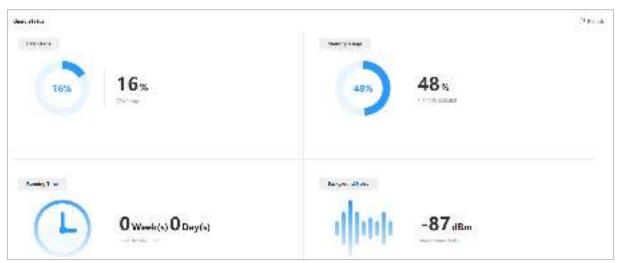


Figure 4-2 Check Device Status

4.1.3 Network Status

Go to **System Status \rightarrow Network Status** to check the working mode, IPv4, IPv4 subnet mask, gateway, DNS address, and standby DNS address of the device.

The LAN parameters are configurable. See 3.1 LAN Settings.



Figure 4-3 Check Network Status

4.1.4 Connected Device Information

Go to **System Status** \rightarrow **Wireless Status** to check wireless parameters and the information of connected devices.

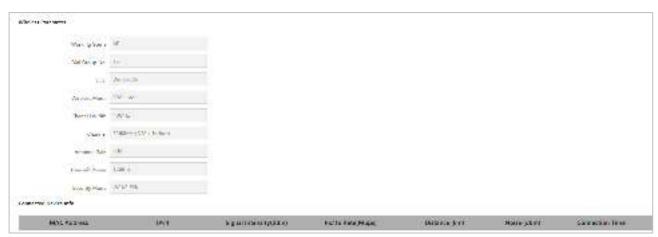


Figure 4-4 Connected Device Information

4.2 Edit Device Name

Edit the device name for identification.

Steps

- 1. Go to System Management → Device Maintenance.
- 2. Edit your desired name in **Device Name**.
- 3. Click Save.

4.3 Reboot the Device

You can reboot the device remotely through the web page.

Steps

- 1. Go to System Management → Device Maintenance.
- 2. Click Reboot in Device Maintenance.
- 3. Follow the prompts for further operation.

4.4 Restore Defaults

Go to **System Management** \rightarrow **Device Maintenance** for default settings restoration.

- Restore Default Settings: Restore the parameters to the default settings, except network settings and user settings.
- Restore All: Restore all the parameters to the default settings.



- Restoring all the parameters will clear all the settings, please operate with caution.
- It is recommended to export all the configuration files before restoration.

4.5 Enable Intelligent Power Management

When the intelligent power management feature is enabled, the device would power off automatically in condition of insolvable device failure.

Go to **System Management** \rightarrow **Device Maintenance**. Enable **Intelligent Power Management** as needed.



This function is only available for some models. The actual interface prevails.

4.6 Save Debug Information

Save debug information of different levels for restoring specific information when the device reboots. The saved information can be used for technical support professionals to conduct troubleshooting and maintenance.

Steps

- 1. Go to System Management \rightarrow Device Maintenance.
- 2. Select Level in Debug Information as desired.



Three levels are selectable: **Low (Alarm)**, **Medium (Report)**, and **High (Message)**. The higher the level is, the more specific the information will be.



Figure 4-5 Save Debug Information

- 3. Click Save.
- 4. Enable **Save** above **Level** to save the debug information in the next 7 days.



After 7 days, this function will be restored to disabled status.

4.7 Import and Export Files

Go to **System Management** \rightarrow **Device Maintenance**, you can import or export configuration files for quick configuration or backup. Debug information can also be exported for trouble shooting by professionals.

- **Export Debug Information**: Click **Export** to export debug information in TXT format.
- Export Configuration File: Click Export, set the password of configuration file, and click OK.
- Import Configuration File: Click in to select the desired configuration file, and click Import.





Importing configuration file requires the password you set when exporting files, and the device will reboot automatically after the file is imported.

4.8 Upgrade the Device

Use the newest firmware for available upgrades, and upgrade the device through web page remotely.

Before You Start

Copy the upgrade package to the local directory of the PC used for remote access.

Steps

- 1. Go to System Management \rightarrow Device Maintenance.
- 2. Click in **Upgrade Device** to go to the local directory, and select the desired upgrade package.
- 3. Click Upgrade.



- The device will reboot automatically after upgrade, and you need to log in again.
- If upgrade fails and the device cannot work normally, please contact the supplier for restoration.

4.9 Time Settings

Both manual time synchronization and NTP time synchronization are supported.

4.9.1 Manual Settings

You can set a desired specific time, or synchronize the time with that of the computer.

Steps

- 1. Go to System Management \rightarrow Time Settings.
- 2. Select a Time Zone.



The time zone is automatically selected after you set the country/region code. You can also select the desired time zone as needed.

- 3. Select Sync Method as Manual Time Sync.
- 4. Set the desired time or check **Sync. with computer time**.

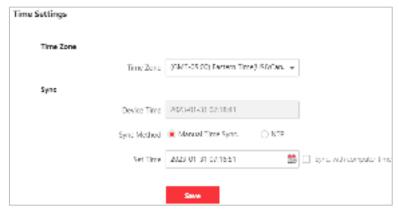


Figure 4-6 Manual Setting

5. Click Save.

4.9.2 NTP Setting

NTP time synchronization is used to synchronize the time with that of a specific NTP server.

Steps

- 1. Go to System Management \rightarrow Time Settings.
- 2. Select a Time Zone.

TiNote

The time zone is automatically selected after you set the country/region code. You can also select the desired time zone as needed.

3. Select Sync Method as NTP.

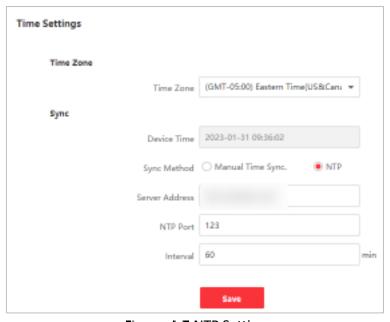


Figure 4-7 NTP Setting

4. Enter NTP server information.

Server Address

The IP address of the NTP server.

NTP Port

Monitoring port of NTP server. Default value: 123. Value range: 1 to 65535.

Interval

The frequency for the device to synchronize with the NTP server. Value range: 1 to 10080 minutes.

4.10 Safety Management

4.10.1 HTTP Service

The port used for HTTP (Hyper Text Transfer Protocol) connection can be set as needed. HTTP service is available on port 80 by default.



This function is only available for some models. The actual interface prevails.

Steps

- 1. Go to System Management \rightarrow Safety Management.
- 2. Enter the server port number for HTTP connection.



Figure 4-8 HTTP Service



The server port number for HTTP service can be set as 80 or any number from 2000 to 65535.

4.10.2 HTTPS Service

The port used for HTTPS (Hypertext Transfer Protocol Secure) connection can be set as needed. HTTPS service is available on port 443 by default when enabled.



This function is only available for some models. The actual interface prevails.

Steps

1. Go to System Management → Safety Management.

- 2. Enable HTTPS service.
- 3. Enter the server port number for HTTPS connection.



Figure 4-9 HTTPS Service



The server port number for HTTPS service can be set as 443 or any number from 2000 to 65535.

4.10.3 SSH Service

SSH protocol can prevent information leakage caused by remote management. If SSH service is enabled, you can manage the device remotely. SSH service is disabled by default.

Steps

- 1. Go to System Management \rightarrow Safety Management.
- 2. Enable SSH Service.

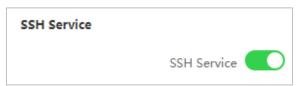


Figure 4-10 SSH Service

[]i_{Note}

The user name of **SSH Client** is **root**, and the password is the same as that of web login.

4.10.4 SADP Service

If SADP service is enabled, you can activate the device, change password, and modify IP through the software. SADP service is enabled by default.

Steps

- 1. Go to System Management \rightarrow Safety Management.
- 2. Enable SADP Service.



Figure 4-11 SADP Service



If SADP service is disabled, some of the functions may turn into unavailable. It is recommended to enable this service.

4.11 Log Management

Export desired logs to your local storage.

Steps

- 1. Go to System Management → Log Management.
- 2. Select Main Type, Subtype, Starting Time, and End Time.
- 3. Click Search.

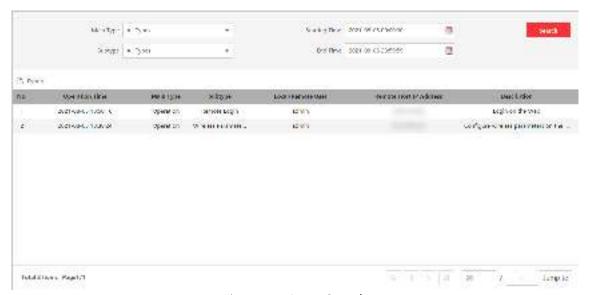


Figure 4-12 Log Search

4. Click **Export** to save the log files.

4.12 Network Diagnosis

Network diagnosis provides network status information, which would be useful for the technical support.

Steps

- 1. Go to System Management \rightarrow System Tool \rightarrow Network Diagnosis.
- 2. Enter the IP address.
- 3. Click Ping.

Diagnosis results display.



Figure 4-13 Network Diagnosis

4.13 Ping Watchdog

By pinging a specific IP address and check the packet loss, technical support professionals can examine the device working status. If the device is in abnormal status, they may reboot the device.

Steps

- 1. Go to System Management \rightarrow System Tool \rightarrow Ping Watchdog.
- 2. Enable Ping Watchdog.

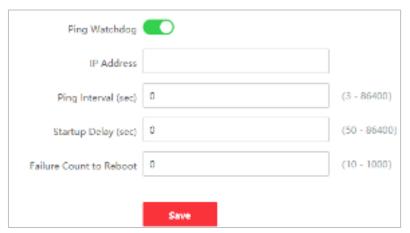


Figure 4-14 Ping Watchdog

3. Enter related information.

Ping Interval

The interval of Ping packet.

Startup Delay

The delay time for reboot when the device is in abnormal status.

Failure Count to Reboot

The limit for packet loss times. The device is reckoned as abnormal when the packet loss times reach this limit.

4. Click Save.

4.14 Change Password

For data security, we highly recommend you to change your password regularly.

Steps

- 1. Click at the upper-right corner.
- 2. Select Change Password.



Figure 4-15 Change admin Password

- 3. Enter the original password, new password and confirm.
- 4. Click **OK**.

The web page redirects to the login interface.

Chapter 5 FAQ

5.1 Why the device cannot start up?

Reason

- 1. The network cable length connecting the wireless bridge to the PoE module exceeds 60 m.
- 2. The network cable cannot meet the standard of Category 5e.
- 3. The registered jack of the network cable is not firmly connected, or the connection order is improper.

Solution

- 1. Use a network cable shorter than 60 m.
- 2. Use a network cable with Category 5e or higher standard.
- 3. Remake the registered jack.

5.2 Why devices pairing failed?

Reason

The devices pairing status depends on the distance, direction, and DIP switch setting.

Solution

You can check as follows:

- Check distance and direction: Ensure the AP and CPE are directly faced to each other, and the distance between them is within the limit.
- 2. DIP switch enabled: Ensure the pairing codes of the AP and CPE are consistent.
- 3. DIP switch disabled: Ensure the SSID name and PSK password are correct.

5.3 Why the wireless connection rate is relatively low?

Reason

The wireless system makes connection with its maximum working rate, and the actual rate depends on the distance and environment.

Solution

You can check as follows to ensure the highest connection rate:

- 1. Device position: Adjust the device position and direction.
- 2. Wireless channel or frequency: Change to another signal channel or frequency to reduce interference.
- 3. Wireless interference: Adjust, shield, or disable the device causing interference.

5.4 Why the signal intensity is too low?

Reason

- 1. There is a large-sized obstruction between the CPE and the AP.
- 2. The CPE is not directly faced to the AP.

Solution

- 1. Remove the obstruction or bypass it.
- 2. Adjust the angle of the CPE and the AP.

5.5 Why the throughput is inadequate even with high signal quality?

Reason

- 1. Excessive interference or multipath interference.
- 2. Wired device error.

Solution

- Remove the interference or change the device frequency.
 Method of changing frequency: Reboot the AP of wireless bridge to allow auto search of available signal channel.
- Change a network cable or use another PC.

5.6 Why there are excessive packet loss and time delay when PC pings the device IP address?

Reason

- 1. The registered jack of the network cable is not firmly connected.
- 2. The IP addresses of multiple devices conflict.

Solution

Port isolation should be conducted for APs connected to the same switch.

- 1. Remake the registered jack.
- 2. Modify the IP addresses of different devices.

