



HIKVISION

DS-1600KI
Network Keyboard

User Manual

UD00183B

User Manual

COPYRIGHT ©2015 Hangzhou Hikvision Digital Technology Co., Ltd.

ALL RIGHTS RESERVED.

Any and all information, including, among others, wordings, pictures, graphs are the properties of Hangzhou Hikvision Digital Technology Co., Ltd. or its subsidiaries (hereinafter referred to be “Hikvision”). This user manual (hereinafter referred to be “the Manual”) cannot be reproduced, changed, translated, or distributed, partially or wholly, by any means, without the prior written permission of Hikvision. Unless otherwise stipulated, Hikvision does not make any warranties, guarantees or representations, express or implied, regarding to the Manual.

About this Manual

This Manual is applicable to DS-1600KI Network Keyboard.

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 in the company website (<http://overseas.hikvision.com/en/>).

Please use this user manual under the guidance of professionals.

Trademarks Acknowledgement

HIKVISION and other Hikvision’s trademarks and logos are the properties of Hikvision in various jurisdictions. Other trademarks and logos mentioned below are the properties of their respective owners.

Legal Disclaimer

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, IS PROVIDED “AS IS”, WITH ALL FAULTS AND ERRORS, AND HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF THIRD PARTY. IN NO EVENT WILL HIKVISION, ITS DIRECTORS, OFFICERS, EMPLOYEES, OR AGENTS 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 OR DOCUMENTATION, IN CONNECTION WITH THE USE OF THIS PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. HIKVISION SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. HIKVISION SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

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

Regulatory Information

FCC Information

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 2004/108/EC, 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: 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.



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: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

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



Warnings

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 100~240 VAC or 12 VDC according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

Preventive and Cautionary Tips

Before connecting and operating your keyboard, please be advised of the following tips:

- Ensure unit is placed in a well-ventilated, dust-free environment.
- Keep all liquids away from the keyboard.
- Please check the power supply to avoid the damage caused by voltage mismatch.
- Please make sure the keyboard works in the allowed range of temperature and humidity.
- Please keep the device horizontal and avoid the installation under severe vibration environment.
- The dust board will cause a short circuit after damping; please use brush to dedust regularly for the board, connector, chassis fan, etc.

Table of Contents

Chapter 1	Product Overview	7
1.1	Introduction	8
1.2	Appearance	8
Chapter 2	Getting Started	10
2.1	Activating the Keyboard	11
2.2	Configuring Keyboard by SADP	12
2.3	Login and Logout	15
Chapter 3	General Settings	17
3.1	Ethernet Settings	19
3.2	WLAN Settings	20
3.3	Language Settings	22
3.4	Date and Time Settings	22
3.5	Others	24
3.6	About	25
Chapter 4	Keyboard Application	27
4.1	Main Menu	28
4.2	Device Management	28
4.2.1	Managing the Devices	29
4.2.2	Managing the Cameras	36
4.2.3	Managing the Groups	39
4.2.4	Managing the Video Wall	43
4.3	Live View	46
4.3.1	Local View	47
4.3.2	Video Wall	53
4.3.3	External View	59
4.4	System Configuration	62
4.4.1	User Management	62
4.4.2	Storage Management	69
4.4.3	System Maintenance	70
Chapter 5	Accessing by iVMS Platform	72
5.1	Configuring iVMS-5200 Platform	73
5.1.1	Platform Login	73
5.1.2	Main Menu	73
5.1.3	Managing the Video Wall	74
5.1.4	Managing the Input Channel	76
5.2	Displaying Video on Monitor	77
5.3	Logout	79
Chapter 6	Accessing by Matrix Access Gateway	81
6.1	Matrix Access Gateway Login	82
6.2	Configuring the Video Wall	82
6.3	Logout	84
Chapter 7	Appendix	85

7.1	Specifications.....	86
7.2	Summary of Changes.....	86

Chapter 1 Product Overview

1.1 Introduction

DS-1600KI is the new generation of fully touch-enabled and detachable network keyboard independently developed by Hikvision. In addition to displaying images, the 10.1" capacitive touchscreen supports DVI and HDMI video outputs. It runs on Android 4.4 and has the brand new UI design. It is compatible with all series of front-end and back-end devices of Hikvision and control center platform such as iVMS. It supports recording, picture capturing and two-way audio, as well as the video wall control and scene switch of iVMS and decoding devices. The four-axis joystick can be used to the PTZ control of speed dome and quick location of the target. The joystick panel is detachable for the convenience of operation. This keyboard can be widely used in various video surveillance fields.

1.2 Appearance



Figure 1.1 Appearance of DS-1600KI Keyboard



The DS-1600KI keyboard consists of a touchscreen and a joystick panel. The joystick panel is detachable and can be separated from the keyboard. Refer to Table 1.1 for the description of the keyboard appearance.





Table 1. 1 Description of Keyboard Appearance

Number	Name	Description
1	Touchscreen	10.1" capacitive touchscreen for display, configuration and operation of the keyboard.
2	Joystick	Used for PTZ control.
3	Capture Button	Used for picture capture.

Refer to Table 1.2 for the description of the joystick operations.

Table 1. 2 Description of Joystick Operations

Graphic	Operation	Function
	Up	PTZ control mode: Move the PTZ up.
	Down	PTZ control mode: Move the PTZ down.

	Left	PTZ control mode: Move the PTZ left.
	Right	PTZ control mode: Move the PTZ right.
	Rotate anticlockwise	Zoom out (ZOOM-)
	Rotate clockwise	Zoom in (ZOOM+)

There are eight interfaces and one button on the rear panel of DS-1600KI keyboard.

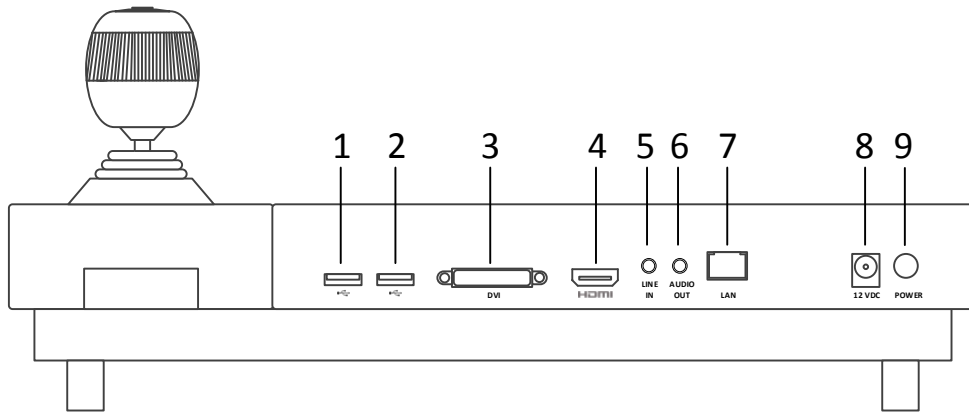


Figure 1.2 Rear Panel of DS-1600KI

Refer to Table 1.3 for the description of the rear interface of the keyboard.

Table 1.3 Description of Rear Panel

Number	Name	Description
1	USB Interface	One for connecting to the USB device. One for connecting to the joystick.
2		
3	DVI	DVI video output connector.
4	HDMI	HDMI video output connector.
5	LINE IN	3.5 mm connector for audio input.
6	AUDIO OUT	3.5 mm connector for audio output.
7	LAN Network Interface	1 10M/100M/1000M adaptive Ethernet interface.
8	Power Input	12 VDC power input.
9	Power Switch	Press to turn on or turn off the touchscreen. Hold down to enable the keyboard into the sleeping mode. Hold down in the sleeping mode to wake it up.

Chapter 2 Getting Started

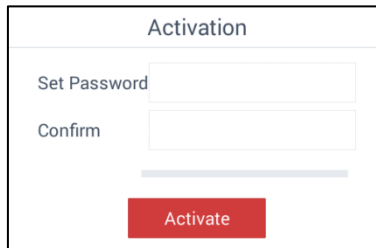
The network keyboard is in inactive status when it leaves factory. You should activate it before performing other operations. Then you can log in to and log out of the keyboard.

2.1 Activating the Keyboard

For the first-time access, you need to activate the keyboard by setting an admin password. No operation is allowed before activation. You can activate by the local keyboard or SADP. Refer to *Chapter 2.2 Configuring Keyboard by SADP* for details.


Steps:

1. Enter the password in the **Set Password** text field. You can only use any two or more than two combinations of upper case letters, lower case letters, numbers, and special characters. The password level hint will appear.



The screenshot shows a web interface titled "Activation". It contains two text input fields: "Set Password" and "Confirm". Below these fields is a red button labeled "Activate".

Figure 2.1 Activation Interface

 **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.



There are 4 levels of the password. The strength level of the password will be displayed when you enter the password.

- Level 0 (Risky password): The length of the password is less than 8-character long. Or the password is the same with the user name or the sequence of the password is the inverted sequence of the user name. Or the password only contains one kind of characters.

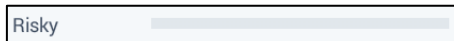


Figure 2.2 Risky Password

- Level 1 (Weak password): It includes two kinds of characters including numbers and lower case letters, or numbers and upper case letters. A minimum of 8 characters are used.



Figure 2.3 Weak Password

- Level 2 (Medium password): It includes two kinds of characters. The combination cannot be numbers and

lower case letters, or numbers and upper case letters. A minimum of 8 characters are used.



Figure 2.4 Medium Password

- Level 3 (Strong password): It includes three kinds of characters or above. A minimum of 8 characters are used.



Figure 2.5 Strong Password

2. Confirm the password in the **Confirm** text field.
3. Click **Activate** button to activate the keyboard.

2.2 Configuring Keyboard by SADP

You can also configure the keyboard by SADP. SADP can search the DS-1600KI keyboard and display the device information.

Activating the Keyboard

Purpose:

For the new keyboard or the keyboard after complete restoration, the security status is inactive. You need to activate the keyboard before the other operations.

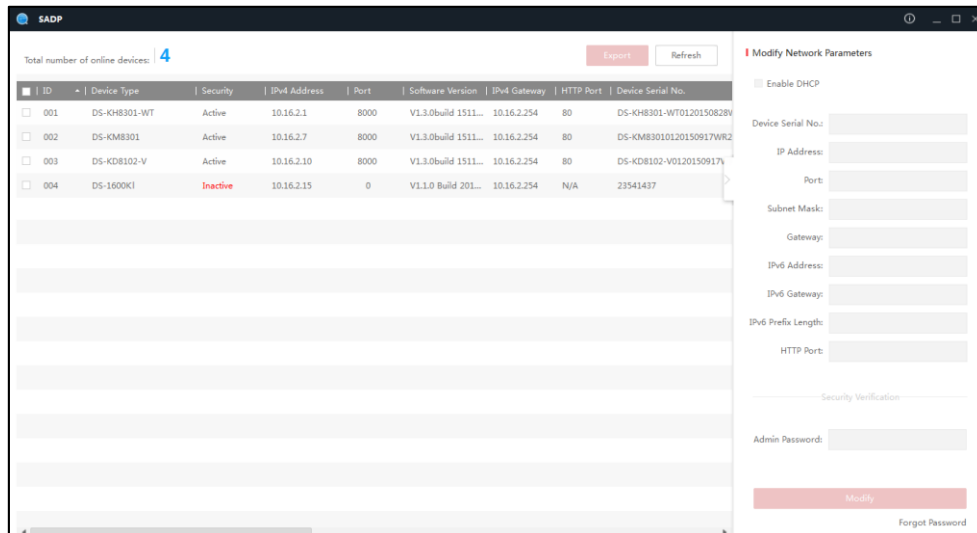


Figure 2.6 SADP Interface

Steps:

1. Select the checkbox before the ID of the DS-1600KI keyboard and the **Activate the Device** panel appears on the right.

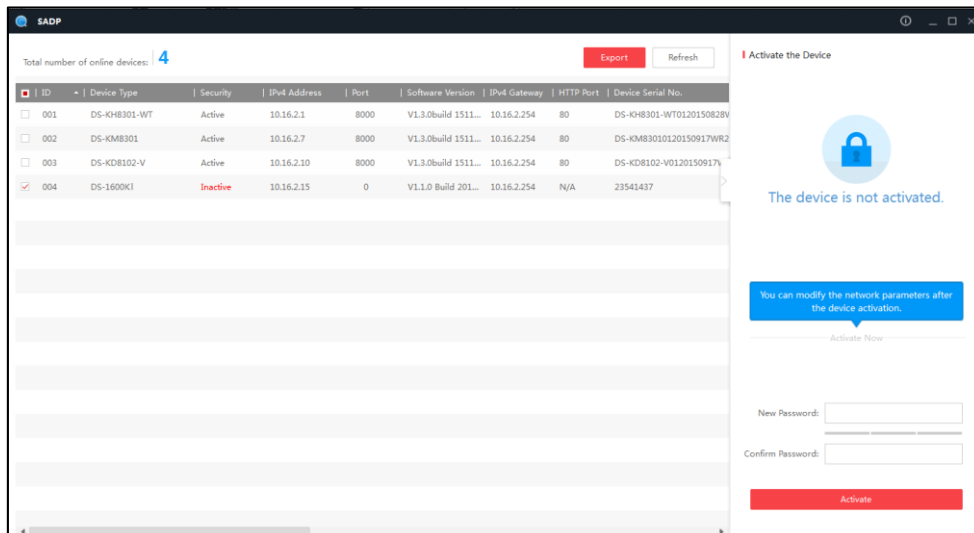


Figure 2.7 Activating the Device

2. Enter the new password in the **New Password** text field and confirm the password in the **Confirm Password** text field.

Figure 2.8 Entering and Confirming the Password



The strength level of the password shows when you enter 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.

3. Click **Activate** button to activate the keyboard. After the activation, the security status of the keyboard will become **Active**.

Modifying Network Parameters

Purpose:

You can modify the network parameters of the keyboard by SADP.

Steps:

1. Select the checkbox before the ID of the DS-1600KI keyboard.
2. The **Modify Network Parameters** panel appears on the right. Enter the IP Address, Port, Subnet Mask and Gateway in the corresponding text field. Or select the checkbox of **Enable DHCP** to get the network parameters automatically.

Figure 2.9 Modifying Network Parameters

3. Enter the Admin Password you have configured.
4. Click **Modify** button to complete the modification.



- You can modify the port randomly within the range from 2000 to 65535.
- You don't need to modify the parameters of IPv6 Address, IPv6 Gateway, IPv6 Prefix Length and HTTP Port.

Resetting the Keyboard Password

Purpose:

You can reset the keyboard password by SADP.

Steps:


1. Select the checkbox before the ID of the DS-1600KI keyboard.
2. Click [Forgot Password](#) to enter the **Reset Password** interface.

Figure 2.10 Resetting the Password

- Click **Export** button to download the key request file. Set the file path in the pop-up window. Click **Select Folder** to save the device key request file on your PC.



The exported key request file is XML file which is named as **Device Serial No.-System Time**.

- Send the key request file to our technical engineers and the engineer will send you a key file back.
- Select **Import File** radio button as the resetting mode.
- Click  to select the key file (XML file) returned by the technical engineer and click **Open**.
- Enter the new password in text fields of **New Password** and **Confirm Password**. The system will judge password strength automatically, and we highly recommend you to use a strong password to ensure your data security.



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.

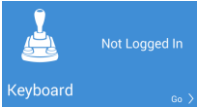
- Click **Confirm** to reset the password.

2.3 Login and Logout

Logging in to the Keyboard

Before you operate the keyboard application, you need to log in.

Steps:

- Click  to enter the **Login** interface.

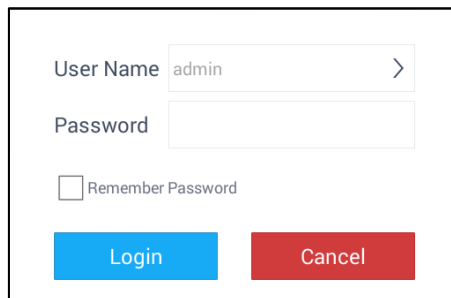



Figure 2.11 Login Interface

- Click  to select the account to login.

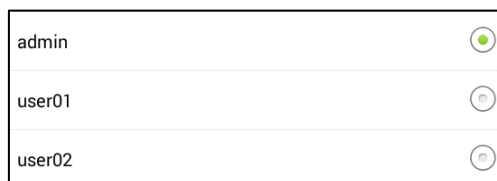



Figure 2.12 Selecting the Account

3. Select the user account name by clicking .
4. Enter the password of the account.
5. (Optional) You can click the checkbox to select **Remember Password** to save the password.
6. Click **Login**.




If the admin enters wrong password for 7 times, the password would be locked. If the operator enters wrong password for 5 times, the password would be locked. The times of entering wrong password by two users in 3 minutes will be overlapped. The password will be unlocked automatically in 30 minutes after being locked.

Logging out of the Keyboard

After login, you can log out of the keyboard.

Steps:

Click  admin on the upper-right corner. The window box pops up as follows.

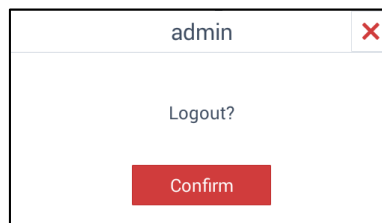


Figure 2.13 Logout Interface

Click **Confirm** to log out.

(Optional) Click  to cancel the logout.

Chapter 3 General Settings

Purpose:

You can configure the general settings of the keyboard including network, language, time and other settings. After starting up, you can see the home page as follows, including time information (yy/mm/dd, week and current time), keyboard information, general settings and keyboard operation.

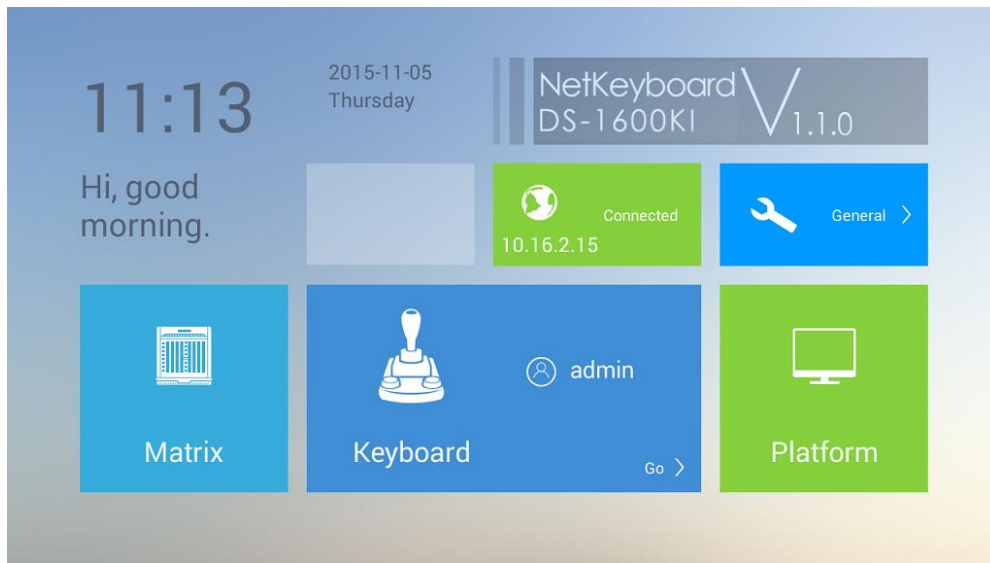



Figure 3.1 Home Page of the Keyboard

Click  on the home page for the general configuration of the keyboard. A window pops up as shown in Figure 3.2.

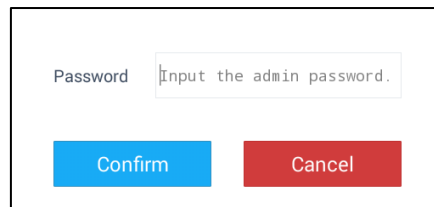


Figure 3.2 Entering the Admin Password

Enter the admin password and click **Confirm** to enter the **General Configuration** interface as shown in Figure 3.3, including **Ethernet, WLAN, Language, Date & Time, Others** and **About**.

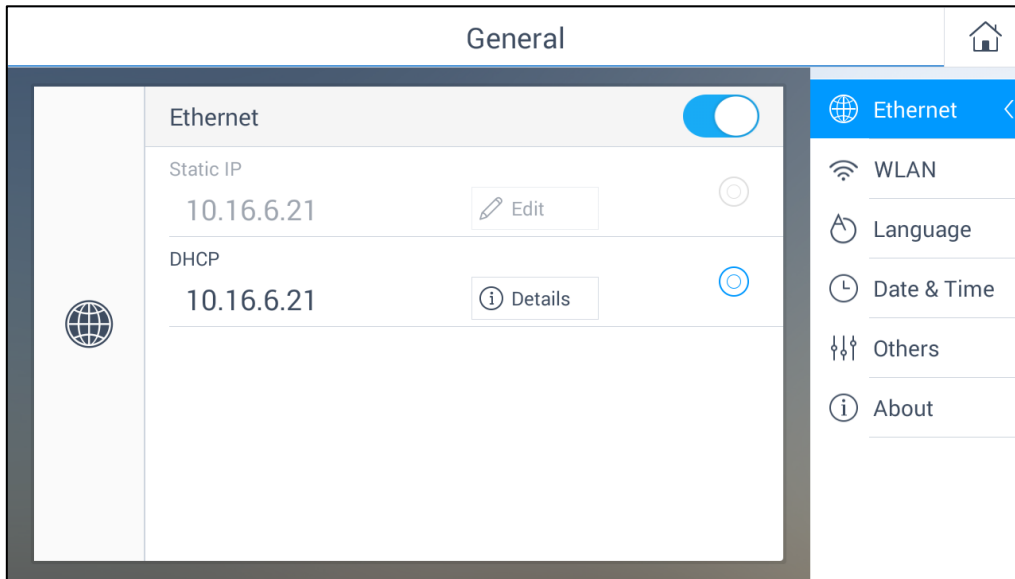


Figure 3.3 General Settings Interface

Refer to Table 3.1 for the description of the General Settings interface.

Table 3.1 Description of General Settings Interface



Menu	Descriptions
Ethernet	Support two network configuration modes: Static IP and DHCP.
WLAN	Connect to available WLAN
Language	Chinese / English
Date & Time	Set Date & Time and select Time Zone
Others	Adjust the Brightness of the screen, choose interval of the Sleep time, enable/disable the Alarm Sound and choose the Resolution of External Monitor.
About	Show the detailed information of the DS-1600KI

3.1 Ethernet Settings

Purpose:




You can configure Ethernet settings to connect to the network.

Steps:

1. Click the **Ethernet** button on the right of the **General** interface to enter the **Ethernet Configuration** interface.
2. Switch the Ethernet enable button  to  to enable Ethernet configuration.

Task 1: Configure Static IP

Steps:

- 1) Click the Static IP enable button  to  to enable Static IP configuration.
- 2) Click the **Edit** button to enter the IP address configuration interface shown in Figure 3.4.
- 3) You can set the IP address parameters and click  on the upper-left corner to save the modification.

Edit		
IP Address	10.16.6.21	✕
Gateway	10.16.6.254	✕
Netmask	255.255.255.0	✕
DNS1	10.1.7.88	✕
DNS2	10.1.7.77	✕
MAC	00:40:30:11:11:2f	

Figure 3.4 Setting the Static IP Parameters

Task 2: Configure DHCP

Steps:

- 1) Click the DHCP enable button to to enable DHCP configuration.
- 2) Click the **Details** button to enter the **Details** interface shown in Figure 3.5 to gain the practical IP parameters.

Details		
IP Address	10.16.6.21	
Gateway	10.16.6.254	
Netmask	255.255.255.0	
DNS1	10.1.7.88	
DNS2	10.1.7.77	
MAC	00:40:30:11:11:2f	

Figure 3.5 Details of DHCP



You can not enable Static IP and DHCP at the same time.

3.2 WLAN Settings

Purpose:

You can configure WLAN parameters to connect to the network.

Steps:

1. Click the **WLAN** button on the right of the **General** interface to enter the **WLAN Configuration** interface.
2. Switch the WLAN enable button to to enable automatic acquisition of WLAN information. You can obtain Wi-Fi information nearby or enter Wi-Fi information manually to add network.

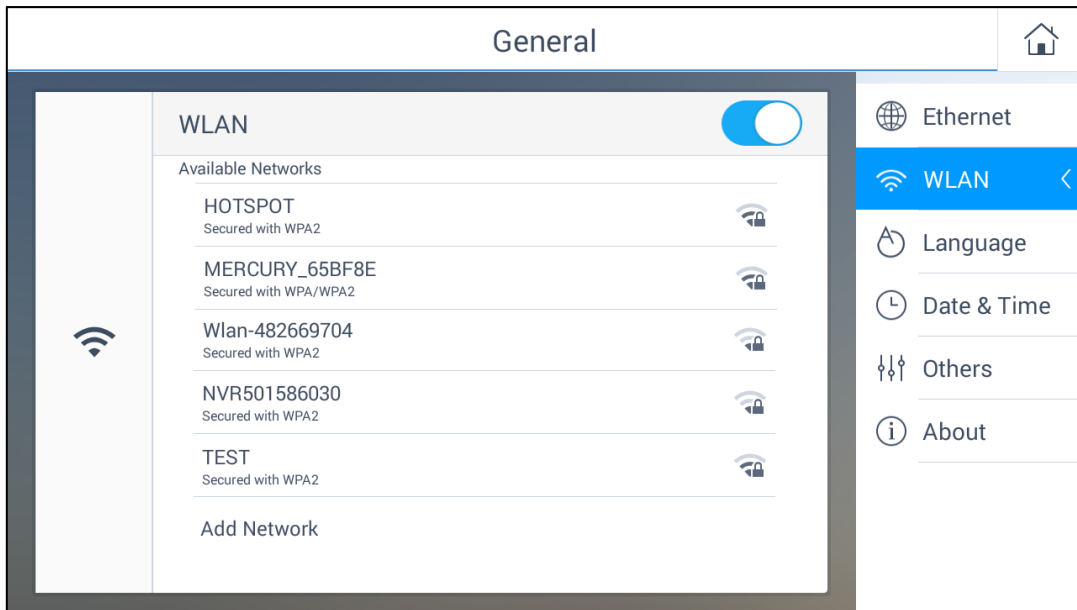


Figure 3.6 WLAN Configuration Interface

3. Connect to the network in two ways.

Task 1: Connect to the available network in the list

Steps:

- 1) Click the Wi-Fi hotspot in the Wi-Fi list
- 2) Enter the password and connect to the network.

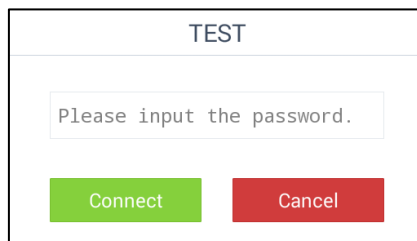


Figure 3.7 Connecting to Available Network

Task 2: Add new network

Steps:

- 1) Click the **Add Network** at the bottom of the Wi-Fi list.
- 2) Enter the SSID manually.

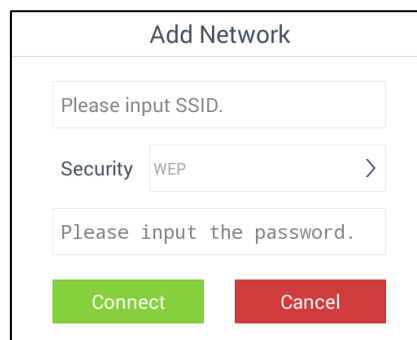


Figure 3.8 Adding New Network

- 3) Select the security type as shown in Figure 3.9.



Figure 3.9 Selecting the Security Type

- 4) Enter the password to connect to the network.



If you open both the Ethernet and WLAN, the WLAN takes effect by default.

3.3 Language Settings

Purpose:

You can choose language for the device in this section.

Steps:

1. Click the **Language** button on the right of the **General** interface to enter the **Language Configuration** interface.
2. Click the radio button to to select the Chinese or English language.

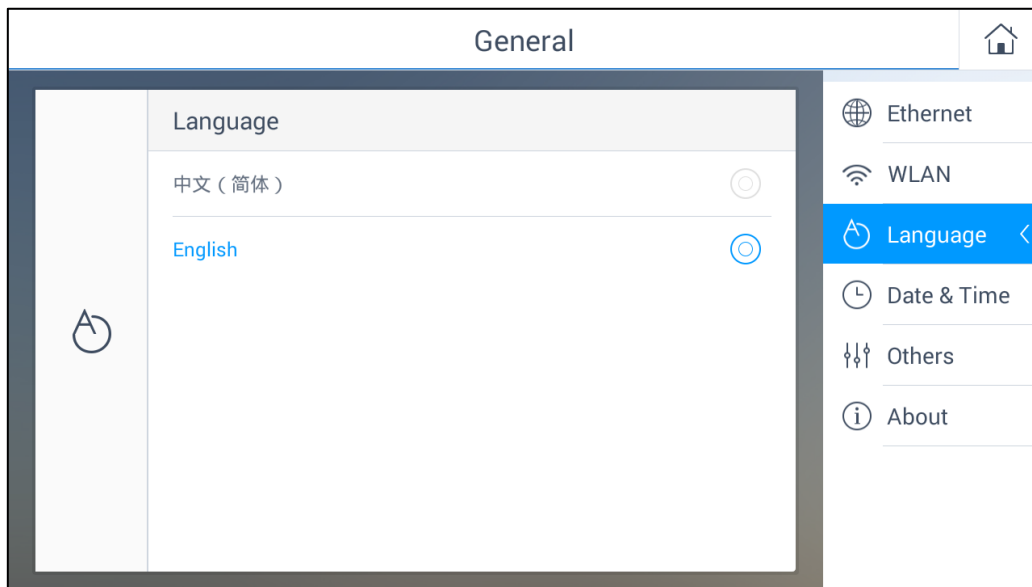


Figure 3.10 Language Configuration Interface

3.4 Date and Time Settings

Purpose:

You can set date and time and select time zone by configuring the parameters.

Configure Date & Time:

Steps:

1. Click the **Date & Time** button on the right of the **General** interface to enter the configuration interface.

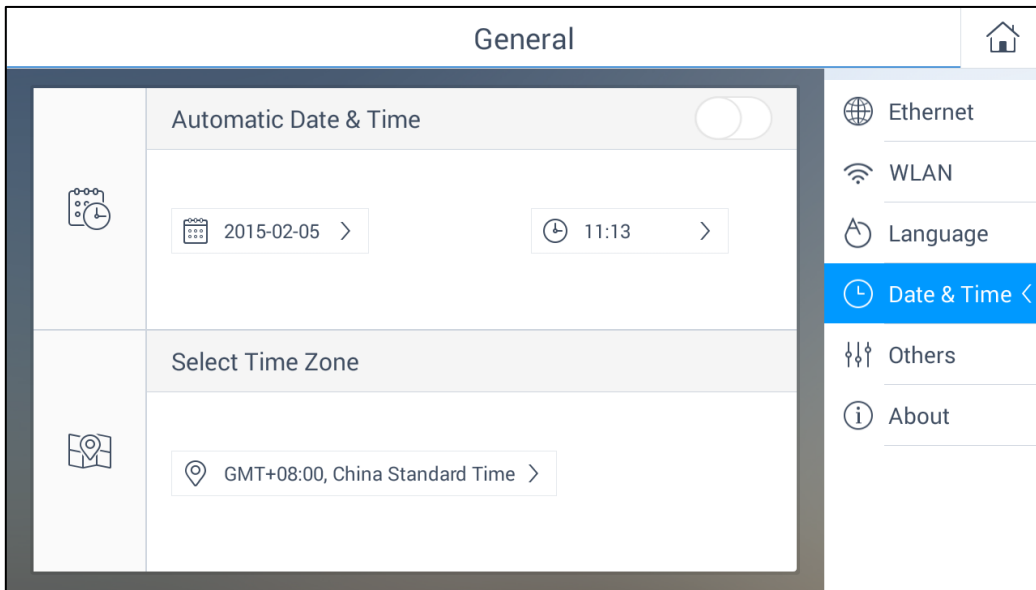




Figure 3.11 Date and Time Configuration Interface

2. Set the date and time in two ways.



Task 1: Automatic mode

Steps:

Enable the automatic mode by switching  to , or else the manual mode is enabled.

Task 2: Manual mode

Steps:

- 1) Click  2015-02-02 > to set the current date as shown in Figure 3.12.
- 2) Click  9:26 > to set the current time as shown in Figure 3.12.

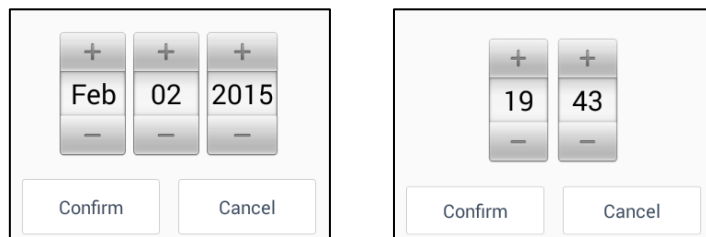



Figure 3.12 Date and Time Configuration

Select Time Zone:

Steps:

- Click  to select time zone in your location. The pop-up interface is shown in Figure 3.13.

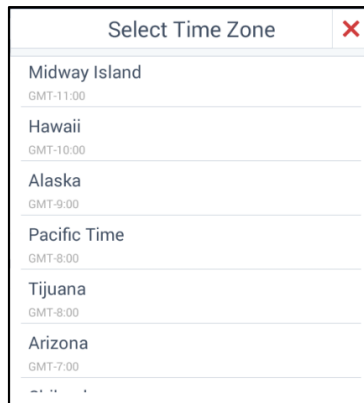


Figure 3.13 Selecting Time Zone

3.5 Others

Purpose:

You can adjust the brightness of the screen, choose interval of the sleep time, enable/disable the alarm sound and choose the resolution of the external monitor.

Steps:

1. Click the **Others** button on the right of the **General** interface to enter the configuration interface.

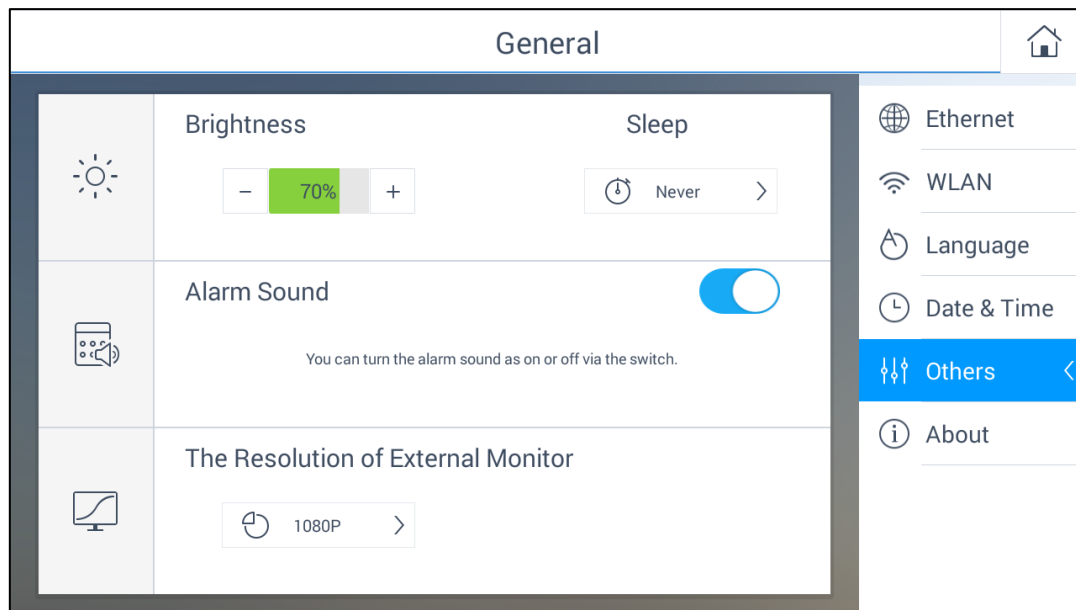


Figure 3.14 Others Configuration Interface

2. Configure the other parameters.

Task 1: Configure brightness

Steps:

Click to lighten the screen and click to darken the screen. You can choose in the range of 5% to 100%.

Task 2: Configure sleeping interval

Steps:

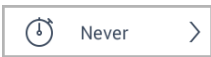
Click  for interval selecting and five modes of interval are selectable. The pop-up window is shown in Figure 3.15.



Figure 3.15 Selecting Sleeping Interval

Task 3: Configure alarm sound

Steps:

Turn the alarm sound as ON via setting  as  and turn it as OFF via setting  as .

Support alarm in network disconnected, IP conflicted, USB error and FTP error conditions.

Task 4: Configure the resolution of external monitor

Steps:


Click  to select the resolution of external monitor. The pop-up window is shown in Figure 3.16.



Figure 3.16 Selecting the Resolution of External Monitor

3.6 About

Purpose:

You can obtain the detailed information of DS-1600KI network keyboard including Version information and Serial No..

Steps:

Click the **About** button on the right of the **General** interface to enter the **About** interface. You can see the detailed information of the network keyboard.

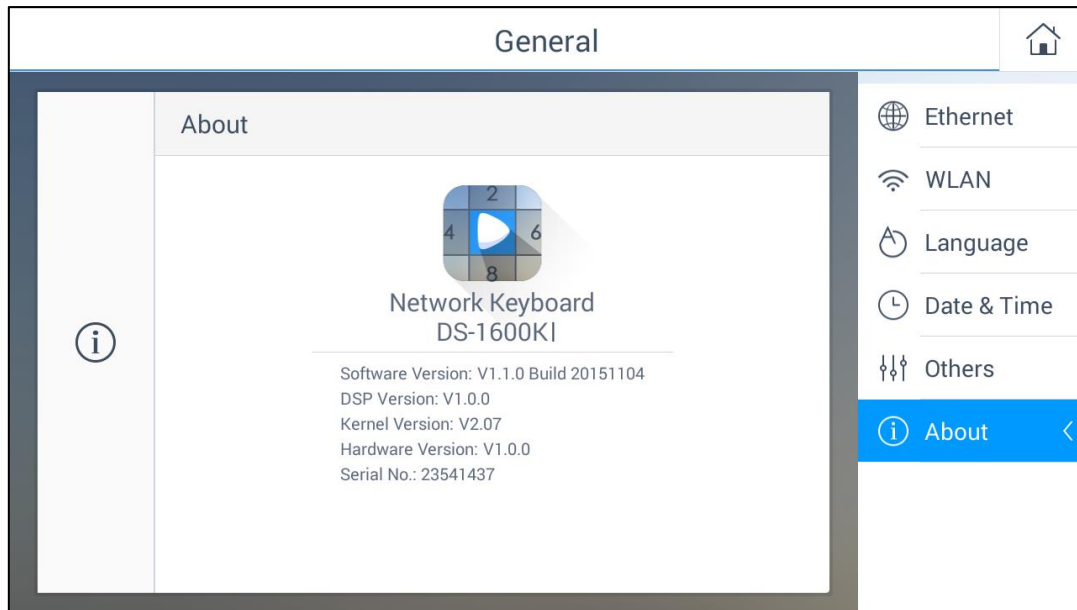



Figure 3.17 About Interface

Chapter 4 Keyboard Application

4.1 Main Menu



Click [Keyboard](#) to enter the keyboard operation interface. You can click  on the upper-right corner to enter the main menu shown in Figure 4.1.

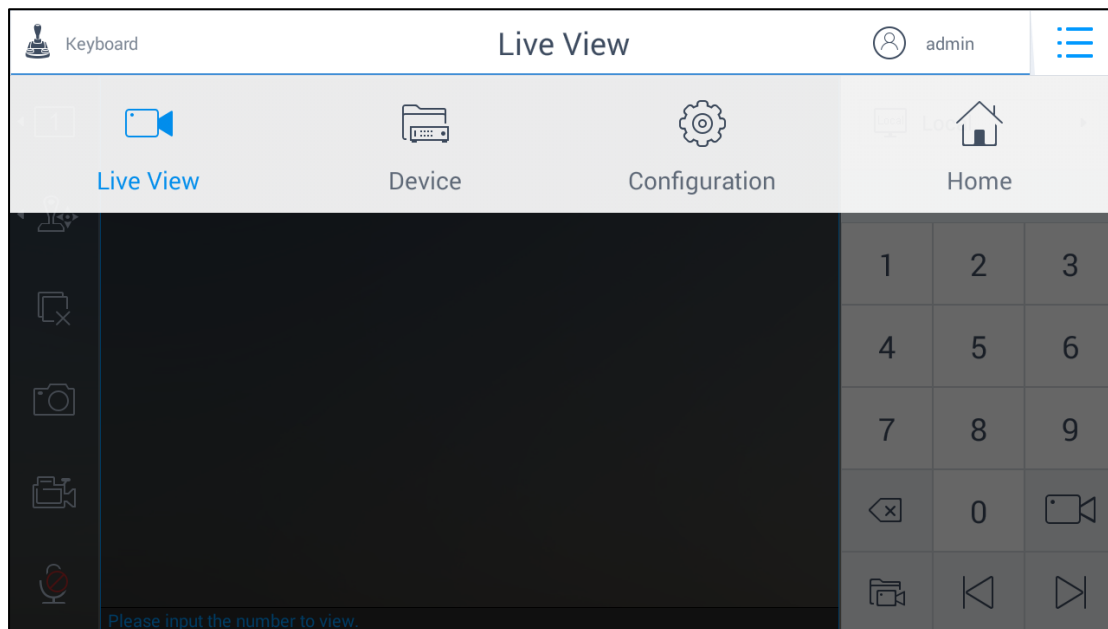


Figure 4.1 Main Menu

Refer to Table 4.1 for the description of the main menu.

Table 4.1 Description of Main Menu

Menu	Description
Live View	Live view by Local/Video Wall/External, PTZ control, recording, picture capturing, two-way audio, etc.
Device	Display device list, manage the device/camera/group/video wall, view device information, etc.
Configuration	User management, Storage management and System maintenance.
Home	Return to the home page.

4.2 Device Management

Purpose:

You can manage the devices in the Device Management section, including managing the device, camera, group and video wall.



Click [Device](#) on the main menu to enter the **Device Management** interface.

The Device Management contains four sections: managing devices, camera, group and video wall. Refer to Table

4.2 for the description of device management.

Table 4.2 Description of Device Management

Menu	Description
Device	Add/view/delete/modify/refresh devices
Camera	View and modify the details of the channels.
Group	Add/delete/modify the groups which contains several channels.
Video Wall	Edit the video wall name, row and column; Configure the output of the channels on video wall.

4.2.1 Managing the Devices

Purpose:

For the admin, you can add/delete/modify/refresh devices on the **Device Management** interface. And some other basic operations are supported, including viewing the device details, and clearing all the added devices. For the operators, you can only refresh/view the details of the devices authorized by the admin on the **Device Management** interface.

Select **Device** on the right side to enter the **Device Management** interface.

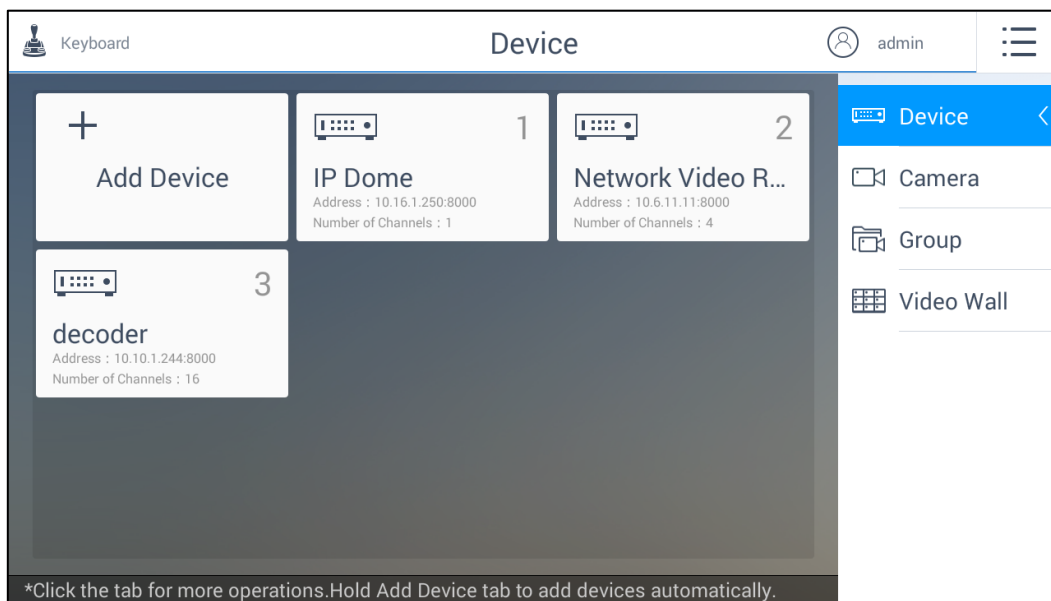


Figure 4.2 Device Management Interface of the Admin

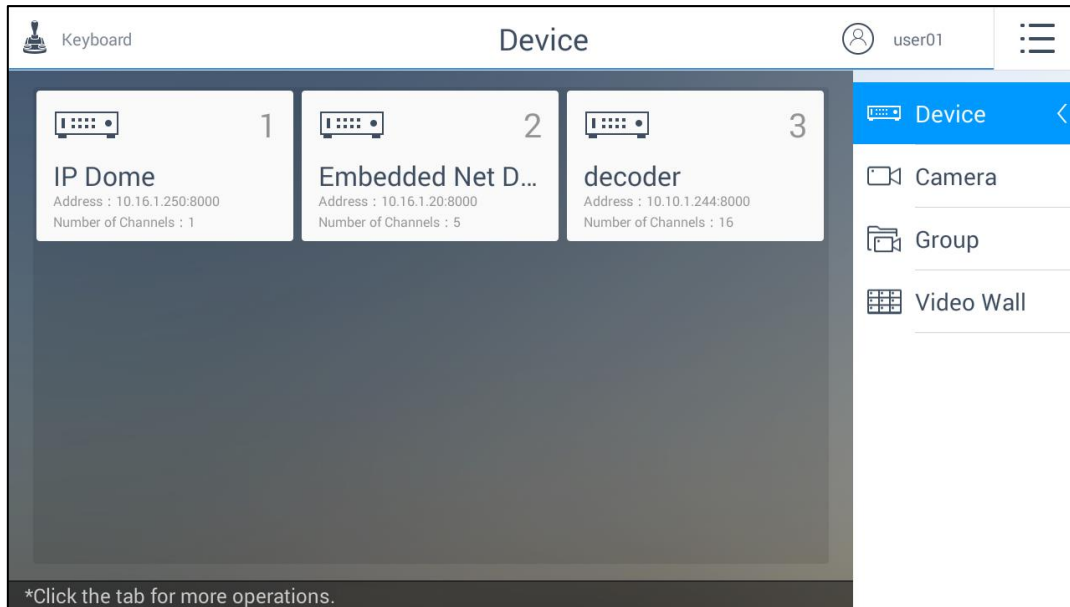


Figure 4.3 Device Management Interface of the Operator

Adding a Device by the Admin

Purpose:

As the admin, you need to add a device firstly that all operations such as live view and device management are accessible. Two ways are available for adding the devices: manual adding and auto-adding. As an operator, you cannot add devices. All the devices authorized by the admin are shown on the **Device Management** interface.



Up to 2000 devices can be added by the admin.

Task1: Manual Adding

Steps:

1. Click **Add Device** to manually add a device. A window pops up as shown in Figure 4.4.


Figure 4.4 Manual Adding Device


- **Name:** Edit a name for the device as desired.



Special characters are not allowed to enter. The longest length is 32 characters long. If the name is left empty, the current name of the device is remained.

- **Type:** The type of the added device. It is not editable when you add a device. The type of the device will be shown after you add it successfully.
- **Address:** The IP address of the added device.
- **Port:** The port of the added device.
- **User Name:** Enter the user name of the added device.
- **Password:** Enter the password of the added device.

2. Click  to confirm and finish the adding of device.

3. (Optional) You can click  to cancel adding.



If the entered parameters are wrong, an exception window will pop up to remind you.

Task2: Auto-adding

Steps:

1. Click and hold down the **Add Device** icon for one second. The **Auto Search** window pops up as shown in Figure 4.5. All the online devices under the same broadcast domain with the keyboard will be displayed in the Auto Search window.

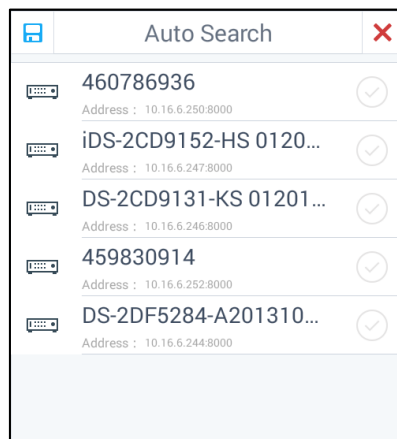



Figure 4.5 Auto Search Result

2. Click to select the added device. The device already added will be marked with **Added**.
3. Click  to confirm the settings. And a pop-up box will show up to enter the user name and password of the added device.

Automatic

User Name

Password

Figure 4.6 Auto Adding Device

4. Enter the user name and password of the added device.
5. Click **Confirm**.
6. (Optional) You can click **Cancel** to cancel the auto-adding.



When you add devices in batch, the user names and passwords of all the devices will be matched one by one. Only when matched successfully can the device be added.

Editing the Device by the Admin

Purpose:

In the **Device Management** interface, for the admin, you can view the details of, refresh and delete the added devices. You can also clear all the added devices.

Click the added device in the **Device Management** interface. A pop-up box is shown in Figure 4.7.

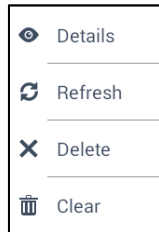


Figure 4.7 Editing the Device by the Admin

Viewing and Modifying the Device

Steps:

1. Click **Details** to view the detailed information of the added devices including IP address, port, etc. The details of the added devices is shown in Figure 4.8.



View Device	
Name	Embedded Net DVR
Type	DS73XXH_ST
Address	10.6.11.13
Port	8000
User Name	admin
Password	*****
Channels	16

Figure 4.8 Viewing Device Information

2. Click  to modify the details of the added devices. Only **Name**, **User Name** and **Password** are editable.

Edit Device	
Name	Embedded Net DVR
Type	DS73XXH_ST
Address	10.6.11.13
Port	8000
User Name	admin
Password	*****
Channels	16

Figure 4.9 Editing the Device

3. Click  to confirm the modification.
4. (Optional) You can click  to cancel the modification.

Refreshing the Device

You can click **Refresh** to refresh the status of the added devices.

Deleting the Device

Steps:


1. Click **Delete** to delete the selected device. A hint box will pop up as shown in Figure.4.10 .

Hint

Delete the device?

Delete

Figure 4.10 Hint Box of Deleting the Device

2. Click **Delete** to confirm the deletion.
3. (Optional) You can click  to cancel the deletion.

Clearing the Devices

Steps:

1. Click **Clear** to delete all the devices. A hint box will pop up as shown in Figure 4.11.

Hint

Delete all devices?

Delete

Figure 4.11 Hint Box of Deleting all the Devices

2. Click **Delete** to confirm the deletion.

3. (Optional) You can click **✖** to cancel the deletion.

Controlling the Front Panel of Added DVR/NVR by the Admin

Purpose:

The keyboard can control the front panel of the added DVR/NVR.

Steps:

1. Click the added DVR/NVR in the **Device Management** interface. A pop-up box is shown in Figure 4.12.

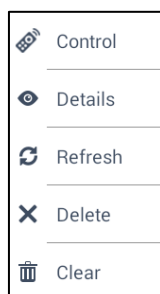


Figure 4.12 Editing the Added DVR/NVR

2. Select **Control** to enter the **Remote Panel**.

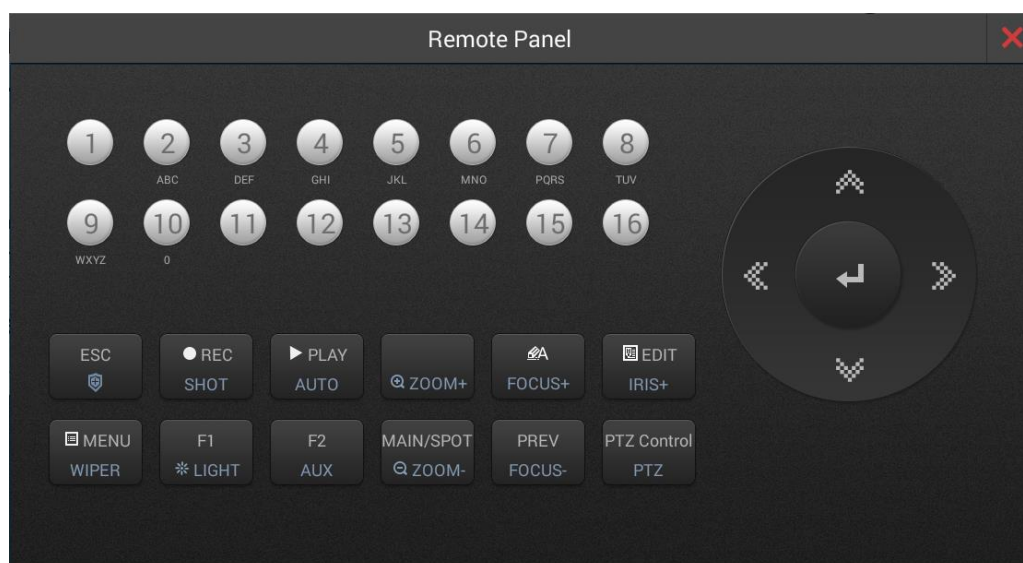


Figure 4.13 DVR/NVR Remote Panel

3. Click the buttons on the control panel to control the front panel of the added DVR/NVR.

4. Click **✖** to exit from the **DVR/NVR Control Panel**.



You can also view the details of, refresh, delete and clear the added DVR/NVR. Refer to *Editing the Device by the Admin* for reference.

Editing the Device by the Operator

Purpose:

In the **Device Management** interface, for the operator, you can only view the details of the added device and refresh it.

Click the added device in the **Device Management** interface. A pop-up box is shown in Figure 4.14.

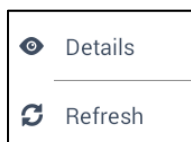


Figure 4.14 Editing the Device

Viewing the Device

Steps:

Click **Details** to view the detailed information of the added devices including IP address, port, etc. The details of the added devices are shown in Figure 4.15.



View Device		✕
Name	IP Dome	
Type	IPDOME_MEGA200	
Address	10.16.1.250	
Port	8000	
User Name	admin	
Password	
Channels	1	

Figure 4.15 Viewing Device Information



For the operator, you cannot modify the detailed information of the devices.

Refreshing the Device

You can click **Refresh** to refresh the status of the added devices.

Controlling the Front Panel of Added DVR/NVR by the Operator

Purpose:

The keyboard can control the front panel of the added DVR/NVR.

Steps:

1. Click the added DVR/NVR in the **Device Management** interface. A box pops up as shown in Figure 4.16.

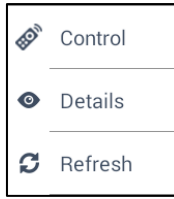


Figure 4.16 Editing the Added DVR/NVR by the Operator

2. Select **Control** to enter the **DVR/NVR Control Panel**.

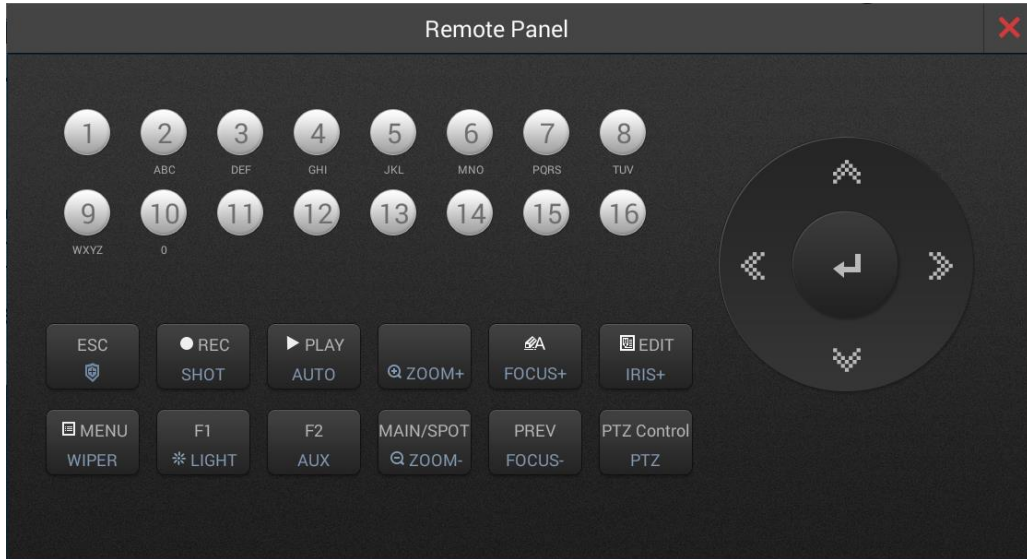



Figure 4.17 DVR/NVR Control Panel

3. Click the buttons on the control panel to control the front panel of the added DVR/NVR.
4. Click  to exit from the **DVR/NVR Control Panel**.



You can also view the details of, and refresh the added DVR/NVR. Refer to *Editing the Device by the Operator* for reference.

4.2.2 Managing the Cameras

Purpose:

You can view and edit the channel details on the **Camera Management** interface.

Select **Camera** on the right side to enter the **Camera Management** interface.



Figure 4.18 Camera Management Interface

The number on the upper-right corner of each camera, e.g., 1, is the serial number of the corresponding camera.

Viewing the Camera

Steps:

1. Click the camera tab to view the details. A window of channel details is shown in Figure 4.19.

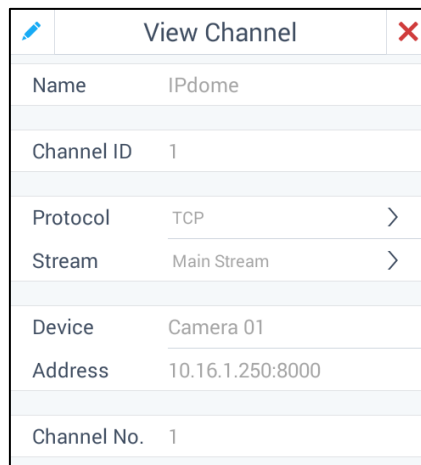


Figure 4.19 Viewing the Camera for the Admin

View Channel		✕
Name	IPdome	
Channel ID	1	
Protocol	TCP	>
Stream	Main Stream	>
Device	IP Dome	
Address	10.16.1.250:8000	
Channel No.	1	

Figure 4.20 Viewing the Camera for the Operator


- You can view the information of the camera including name, channel ID, protocol, stream, device, address and channel No.
 - Name:** The name of the camera as desired.
 - Channel ID:** The serial number of the camera according to the added sequence.
 - Protocol:** The transfer protocol of the camera.
 - Stream:** The stream type of the camera.
 - Device:** The name of the channel.
 - Address:** The IP address and port of the corresponding device.
 - Channel No.:** The No. of the added camera.

Editing the Camera by the Admin



Only the admin has the permission to edit the channel.

Steps:

- Click  to modify the details of the cameras. Only **Name**, **Channel ID**, **Protocol** and **Stream** are editable.

Edit Channel		✕
Name	IPdome	✕
Channel ID	1	✕
Protocol	TCP	>
Stream	Main Stream	>
Device	Camera 01	
Address	10.16.1.250:8000	
Channel No.	1	

Figure 4.21 Editing the Camera



- When editing Name and Channel ID, you can click to delete the original information.
 - The range of the Channel ID is from 1 to 999999, and the ID cannot be repeated.
2. Click to select the protocol.

TCP	<input checked="" type="radio"/>
UDP	<input type="radio"/>
MCAST	<input type="radio"/>
RTP	<input type="radio"/>

Figure 4.22 Selecting the Protocol

3. Click to select the stream.

Main Stream	<input checked="" type="radio"/>
Sub Stream	<input type="radio"/>

Figure 4.23 Selecting the Stream Type

4. Click to confirm the modification.
5. (Optional) You can click to cancel the modification.

4.2.3 Managing the Groups



For the admin and operators, the group management steps are the same. This section takes the operations of the admin as an example.

Purpose:

You can add the relevant cameras into the same group to make them easy to manage. E.g., you can add all the cameras of the underground garage into one group.

You can add/delete/modify groups in the **Group Management** interface. And some other basic operations are supported, including viewing the group details, and clearing all the groups.

Select **Group** on the right side to enter the **Group Management** interface.

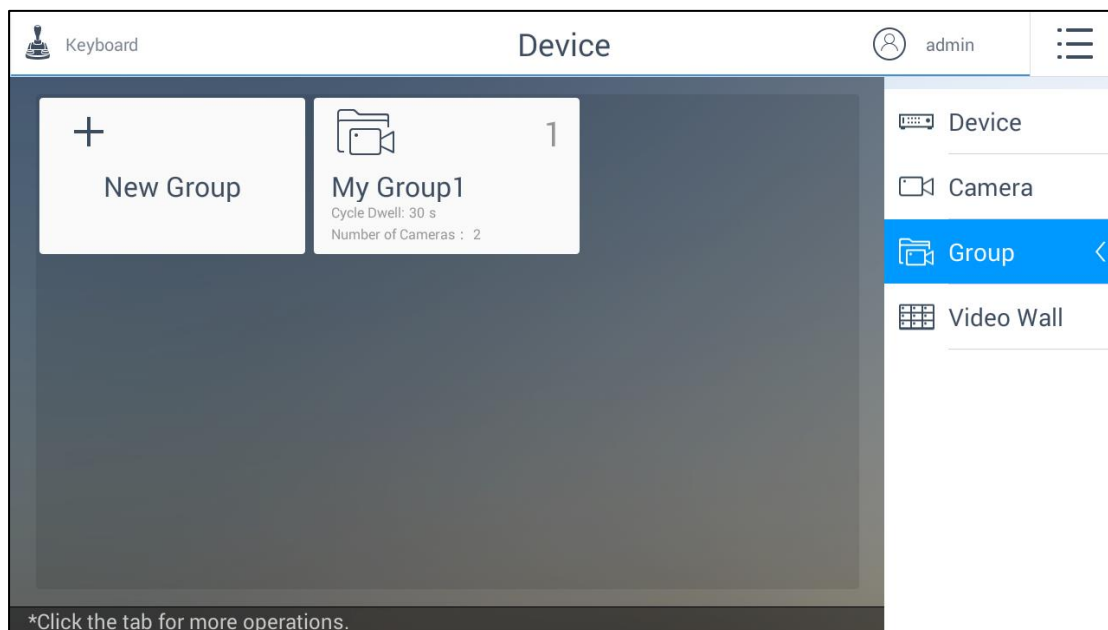


Figure 4.24 Group Management Interface

Creating a New Group

Purpose:

You can create a new group and add some cameras in it.

Steps:

1. Click **New Group** to manually create a group. A pop-up window is shown in Figure 4.25.

New Group		✕
Name	My Group1	✕
Group No.	1	✕
Dwell Time	30 s	✕
Add Camera		

Figure 4.25 Creating a New Group

- **Name:** Edit a name for the group as desired. Special characters are not allowed to enter in the Name text field. The longest length of the name is 32 characters long.
- **Group No.:** Edit the group number as desired. The range is from 1 to 16, and the No. cannot be repeated. You can add up to 64 cameras in each group and you can add up to 16 groups.
- **Dwell Time:** Edit the cycle dwell time for each channel as desired. The range is from 10s to 10000s. The default dwell time is 30s.



- You can click to delete the original information.
 - The Dwell Time should be between 10s and 10000s. It is 30s by default.
2. Click **Add Camera** to add channels into the new group.

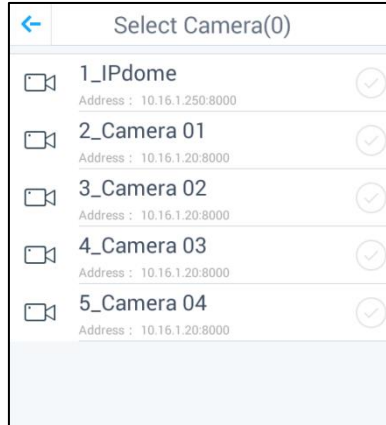


Figure 4.26 Adding Camera(s) to the New Group

3. Select the camera(s) by clicking and then click to go back to the New Group dialog box.
4. Click to confirm the adding.
5. (Optional) You can click to cancel the adding.

Editing the Group

Purpose:

In the **Group Management** interface, you can view the group details, delete and clear the groups. Click the group in the **Group Management** interface. A pop-up box is shown in Figure 4.27.

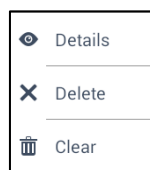


Figure 4.27 Editing the Group

Viewing and Modifying the Group

Steps:

1. Click **Details** to view the detailed information of the group including name, number, cycle dwell, etc. The details of the group are shown in Figure 4.28.

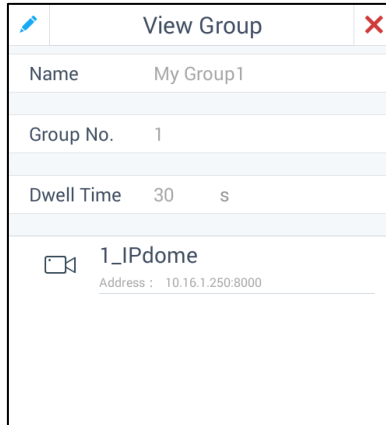



Figure 4.28 Viewing the Group

1. Click  to modify the details of the selected group. Only **Name**, **Dwell Time** and **Channels** are editable.

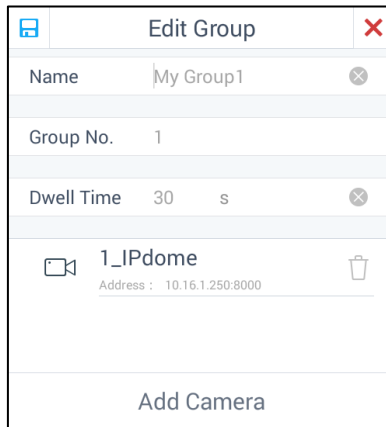





Figure 4.29 Modifying the Group

2. If you want to delete an added camera, click .
3. Click **Add Camera** to add camera(s) to the group.
4. Click  to confirm the modification.
5. (Optional) You can click  to cancel the modification.

Deleting the Group

Steps:

1. Click **Delete** to delete the selected group. A hint box will pop up as follows.

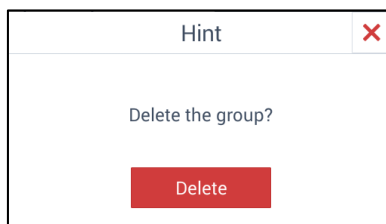


Figure 4.30 Hint Box of Deleting the Group

2. Click **Delete** to confirm the deletion.

- (Optional) You can click **✖** to cancel the deletion.

Clearing the Groups

Steps:

- Click **Clear** to delete all the groups. A hint box will pop up as follows.

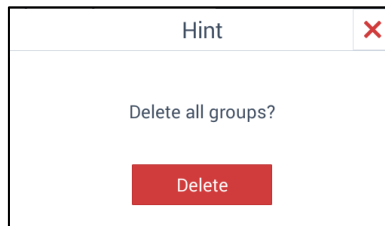


Figure 4.31 Hint Box of Deleting all the Groups

- Click **Delete** to confirm the deletion.
- (Optional) You can click **✖** to cancel the deletion.

4.2.4 Managing the Video Wall

Purpose:

You can configure the video wall on the **Video Wall Management** interface, including editing the video wall, selecting the output channel and deleting the configured window.

Select **Video Wall** on the right side to enter the **Video Wall Management** interface.

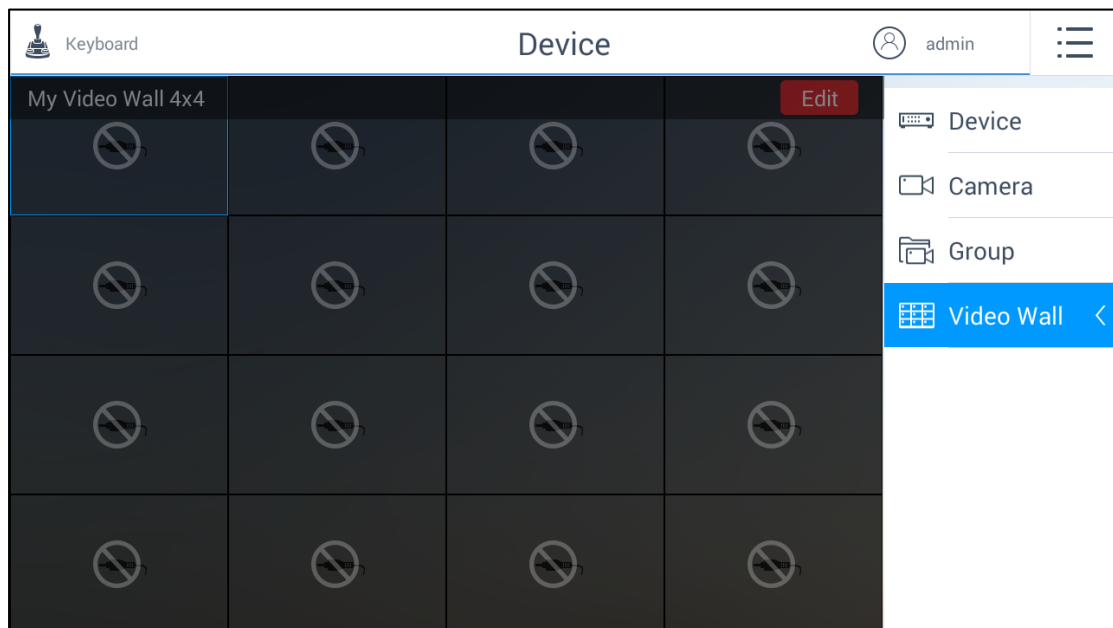



Figure 4.32 Video Wall Management Interface

Editing the Video Wall

Purpose:

You can edit the details of the video wall, including the name, row and column.

Steps:

1. Click  on the upper-right corner. A window pops up as shown in Figure 4.33.

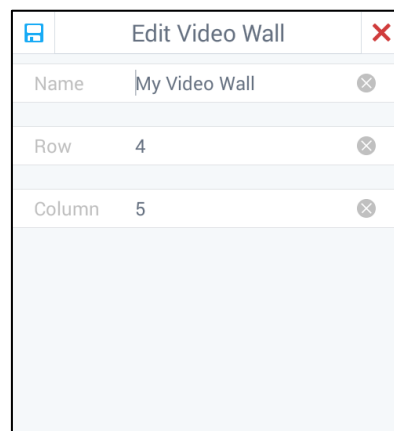





Figure 4.33 Editing the Video Wall

-
- **Name:** Edit a name for the video wall as desired.
 - **Row:** The row of the video wall.
 - **Column:** The column of the video wall.



- You can click  to delete the original information.
 - The row and column should be between 1 and 8.
 - The details will be displayed on the upper-left corner.
2. Click  to confirm and save the settings.
 3. (Optional) You can click  to cancel editing.

Configuring the Output Channel

Purpose:

For the normal decoding devices, you can select the output channel for each video wall window. For some other video wall devices, you can get the output channels automatically.

Steps:

1. Click the window on the video wall. A pop-up window is shown in Figure 4.34.

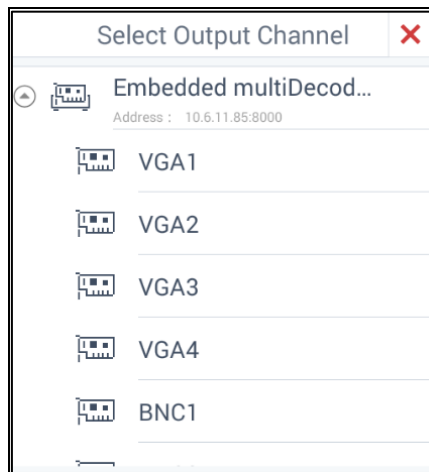





Figure 4.34 Selecting the Output Channel

2. Click  on the upper-left corner to view all the channels of the decoder.
3. Click one of the channels to set it as the output channel of the selected window.
4. (Optional) You can click  to cancel the configuration.

Deleting the Configured Window

As the admin, hold down the configured window for one second. Click  on the upper-right corner of the selected window to delete it.

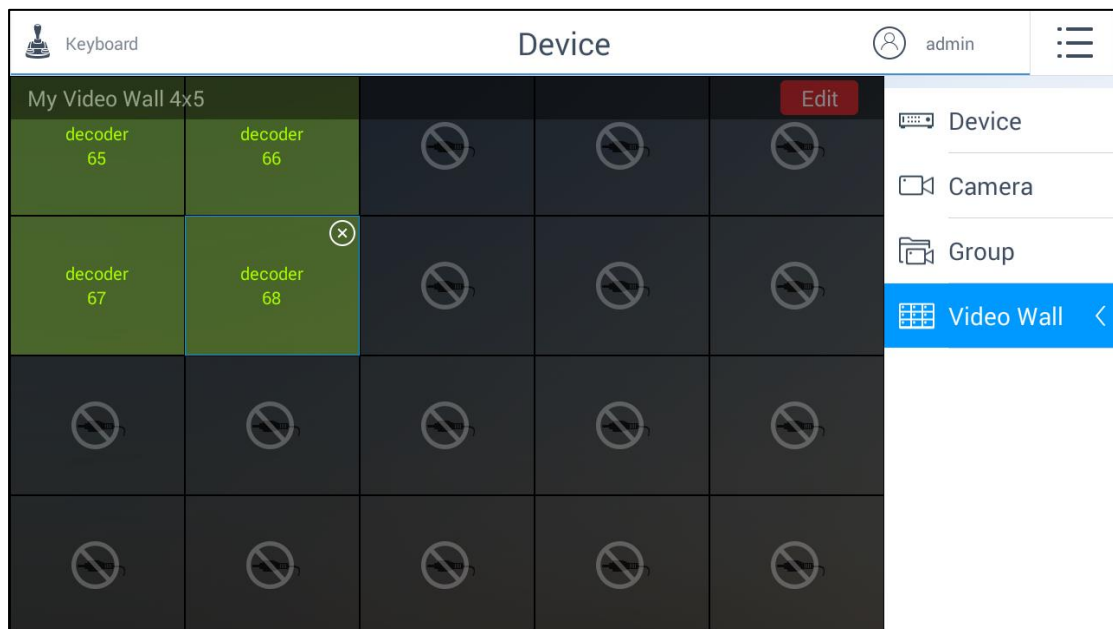



Figure 4.35 Deleting the Configured Window



The DS-1600KI keyboard can automatically obtain the configured video wall of the DS-6400HDI-S, DS-6400HDI-T, DS-6500HDI-T, DS-6901UDI, DS-B20, DS-C10S, DS-C10N, etc.. It supports the output configuration of DS-6300DI, DS-6300DI-T, DS-6401HDI, DS-6500DI, DS-6500DI-T, etc.. It also supports

opening/closing the window, moving the window and switching the images and groups. The multi-screen display configured on the iVMS-5200 client software cannot be deleted by holding down the window and clicking .

4.3 Live View



For the admin and operators, the live view steps are the same. This section takes the operations of the admin as an example.

Purpose:

After the device is successfully added, you can view the live video of the added network cameras and video encoders in the **Live View** interface. And some other basic operations are supported, including picture capturing, manual recording, PTZ control, etc.



The PTZ control should be supported by the added device.

Steps:



1. Click **Live View** on the main menu to enter the **Live View** interface. The screen will be displayed in 1-division mode by default. The keyboard supports three modes of live view: **Local**, **Video Wall** and **External**.

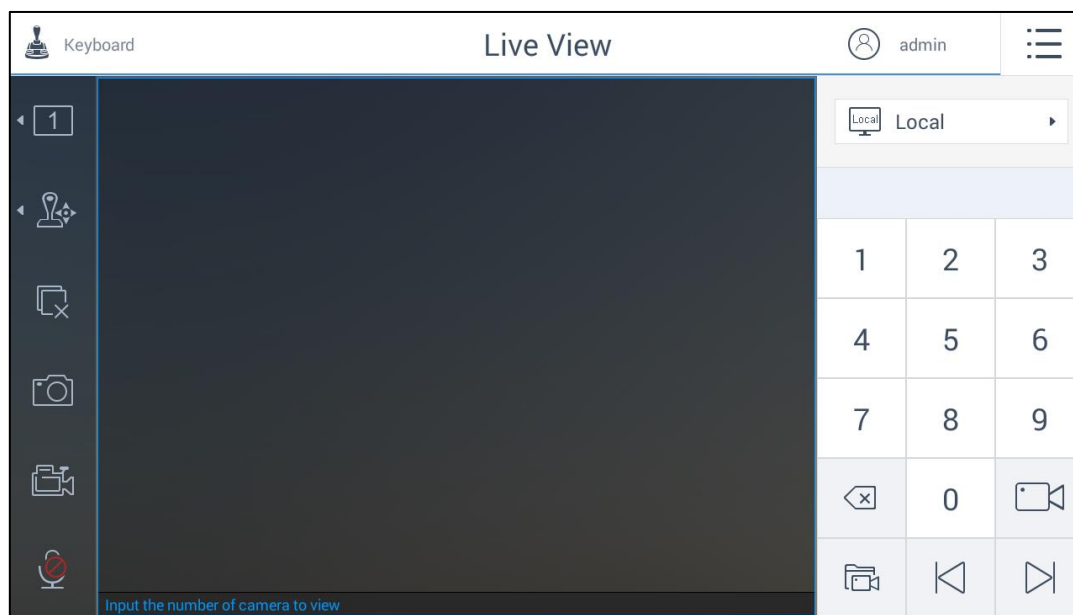



Figure 4.36 Live View Interface

2. Click  **Local** on the upper-right corner in the **Live View** interface to select the live view mode.

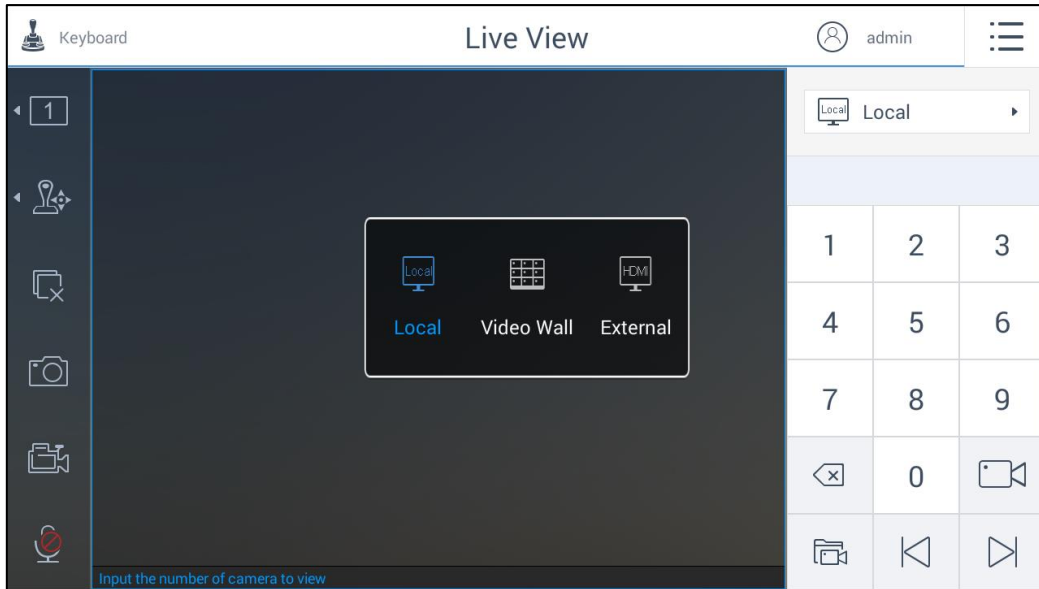


Figure 4.37 Selecting Live View Types

Refer to Table 4.3 for the description of the live view mode.

Table 4.3 Description of Live View Mode

Menu	Description
Local	Live view of the added devices locally on the touchscreen of the keyboard.
Video Wall	Live view of the added devices on the video wall.
External	Live view of the added devices via the external devices.

4.3.1 Local View

Purpose:

The keyboard supports local view of the live video of the added network cameras and video encoders on the touchscreen.

Select **Local** in the pop-up window.

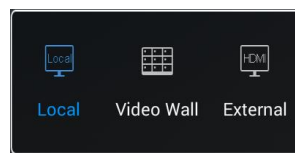


Figure 4.38 Selecting Local Live View

There are six icons on the left side indicating different functions.

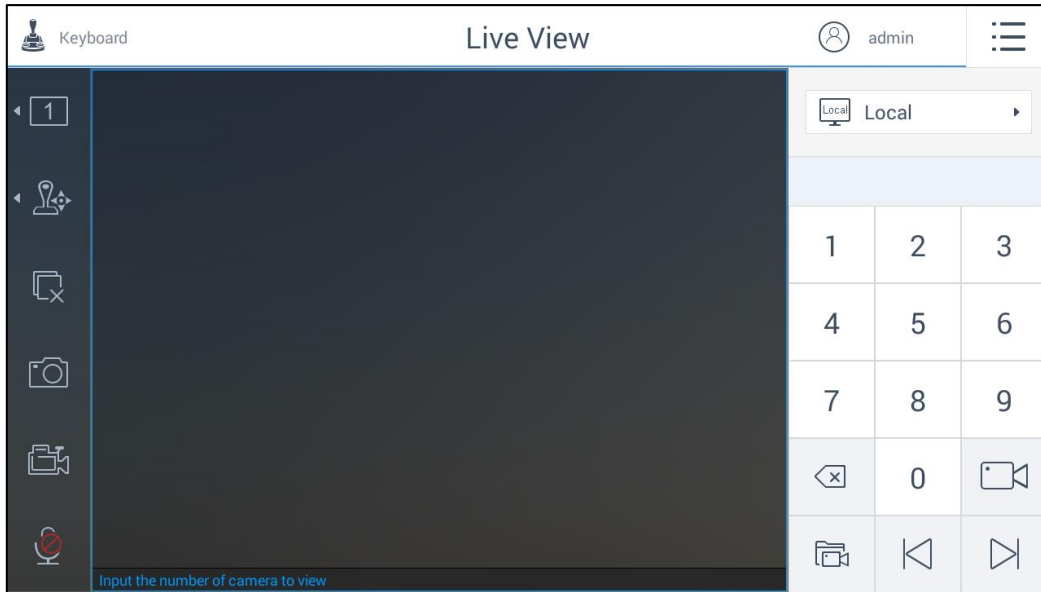


Figure 4.39 Local Live View Interface

Refer to Table 4.4 for the description of the live view icons.

Table 4.4 Description of Live View Icons

Icon	Description
	Select the window division. The screen will be displayed in 1-division mode by default. NOTE The window division modes vary with the connected devices.
	PTZ control panel.
	Stop all the live view.
	Capture picture of the selected live view window, and save the picture to the USB disk or upload it to the FTP server. You can also press the button at the top of the joystick to capture the picture.
	Record the video of the selected live view window, and save the video to the USB disk or upload it to the FTP server.
	Enable/Disable two-way audio. You can get not only the live video but also the real-time audio.

There is a numeric panel on the right with numbers 0 to 9 and five other icons for you to enter the serial number of the device.

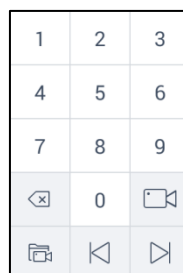


Figure 4.40 Live View Numeric Panel

Refer to Table 4.5 for the description of the live view numeric panel icons.

Table 4.5 Description of Live View Numeric Panel Icons

Icon	Description
0~9	Number 0 to 9.
	Delete the entered information.
	View the live video of the added cameras.
	View the live video of the added groups.
	View the previous/next camera or group.

Starting Live View

Steps:

- (Optional) You can click in the upper-left corner to set the window division mode as desired. Click to select the window division mode.

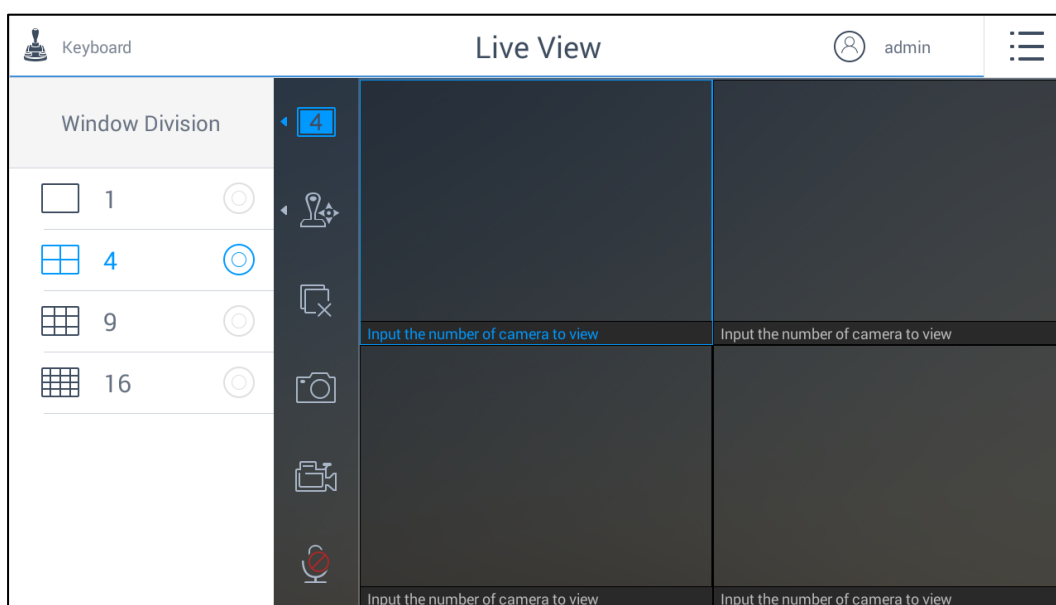


Figure 4.41 Selecting Window Division Mode

- Select one output window and enter the serial number in the numeric panel, and then click . The live view of the corresponding cameras will be displayed on the selected window.



Up to 16 cameras can be selected for live view at the same time.

- Select one output window and enter the serial number, then click . The live view of the corresponding group will be displayed on the selected window.



For group, auto-switching is not supported in multi-screen mode. The hint box shown in Figure 4.42 pops up if you select multi-window division mode first and then start auto-switch of the group. The hint box shown in Figure 4.43 pops up if you start auto-switch of the group in one-window division mode and

then select multi-window division mode.

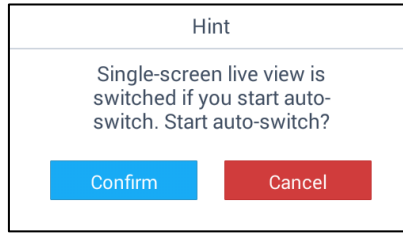


Figure 4.42 Hint box of Starting Auto-Switch of the Group (1)

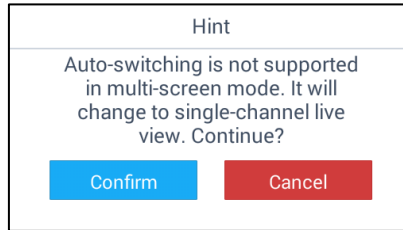


Figure 4.43 Hint box of Starting Auto-Switch of the Group (2)

4. Enter 0 in the numeric panel and click . You can stop the live view of the corresponding camera.
5. (Optional) You can click to delete the entered information if you entered incorrectly.
6. (Optional) You can click or to preview the previous or next camera or group.
7. (Optional) You can double-click the selected window to realize full-screen live view. Or double-click in the full-screen mode to restore to the normal live view mode.
8. (Optional) You can click to stop the local live view.

PTZ Control

In the live view mode, select a playing window and click to activate PTZ control panel, and the changes to .

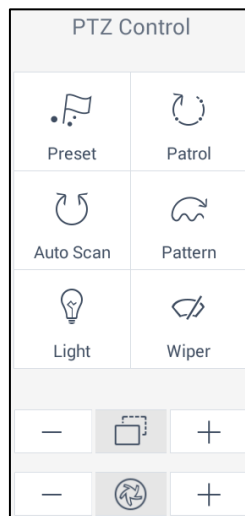


Figure 4.44 PTZ Control Panel



The PTZ control should be supported by the added device.

You can turn the joystick to realize the pan left/right and tilt up/down movements. You can also rotate the joystick anticlockwise/clockwise to zoom out/in in the live view. Refer to Table 4.6 for the description of PTZ control panel icons.

Table 4.6 Description of PTZ Control Panel Icons

Icon	Description
	Set and call the preset.
	Call the patrol.
	Start/stop the auto-scan.
	Call and record the pattern.
	Light on/off
	Wiper on/off
	Focus control: + Focus+ / - Focus-
	Iris control: + Iris+ / - Iris-

Setting and Calling a Preset

A preset is a predefined image position which contains information of pan, tilt, zoom, focus and other parameters.

Steps:

1. In the PTZ control mode, turn the joystick to move the camera to the desired scene.
2. Click to access the dialog box shown in Figure 4.45.

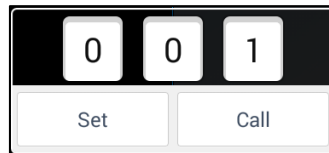


Figure 4.45 Setting a Preset

3. Slide the number area to set the preset No..



The preset No. should be between 1 and 300.

4. Click **Set** to finish the preset settings.
5. For the programmed preset, you can slide to set the preset No. in the dialog box and click **Call** to call it.

Calling a Patrol

A patrol is a scanning track specified by a group of user-defined presets, with the scanning speed between two presets and the dwell time at the preset separately programmable.

Steps:

1. In the PTZ control mode, click to access the dialog box shown in Figure 4.46.

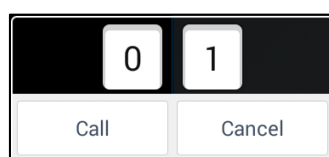


Figure 4.46 Setting a Patrol

-
- Slide to select a patrol No. in the dialog box and click **Call** to call it.




The patrol No. should be between 1 and 32.

- Click **Cancel** to close the patrol dialog box.

Recording and Calling a Pattern

Patterns can be set to record the movement of the PTZ.

Steps:

- In the PTZ control mode, click  to access the dialog box shown in Figure 4.47.

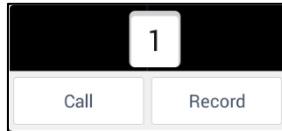


Figure 4.47 Setting a Pattern

-
- Slide to select a pattern No. in the dialog box.



Up to 4 patterns can be configured.

- Click **Record** to start recording of this pattern path. The dialog box is shown in Figure 4.48.

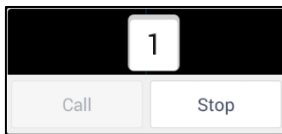




Figure 4.48 Calling the Pattern

-
- Use the joystick and other buttons to control the PTZ movement.
 - Click **Stop** to stop and save the pattern recording.
 - Click **Call** to call the pattern.

After completion of PTZ control, click  to hide the PTZ control panel.

Capturing the Picture

Steps:





- Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
- Click  to capture the picture of the selected live view window, and save the picture to the USB disk or upload it to the FTP server. You can also press the button at the top of the joystick to capture the picture.




You must connect a USB disk to the keyboard, or ensure the network connection of the PC (running FTP server) and the keyboard is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Recording




Steps:



1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click  to record the video of the selected window, and then the icon will change to . The hint of “Start recording” will appear.
3. Click  to stop recording and the hint of “Stop recording” will appear.

 **NOTE** You must connect a USB disk to the keyboard, or ensure the network connection of the PC (running FTP server) and the keyboard is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Two-Way Audio

Steps:

1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click  to start two-way audio and the hint of “Start two-way audio” will appear.
3. Click  to stop two-way audio and the hint of “Stop two-way audio” will appear.

 **NOTE** In local live view mode, turn on  to enable two-way audio between the keyboard and the IP camera, network speed dome, DVR or NVR.

4.3.2 Video Wall

Purpose:

The keyboard supports preview on the video wall of the live video of the added devices on the touchscreen. Select **Video Wall** in the pop-up window of live view mode.

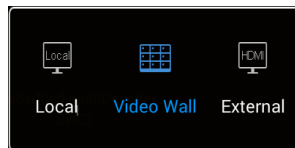


Figure 4.49 Selecting Video Wall Live View

There are seven icons on the left side indicating different functions.

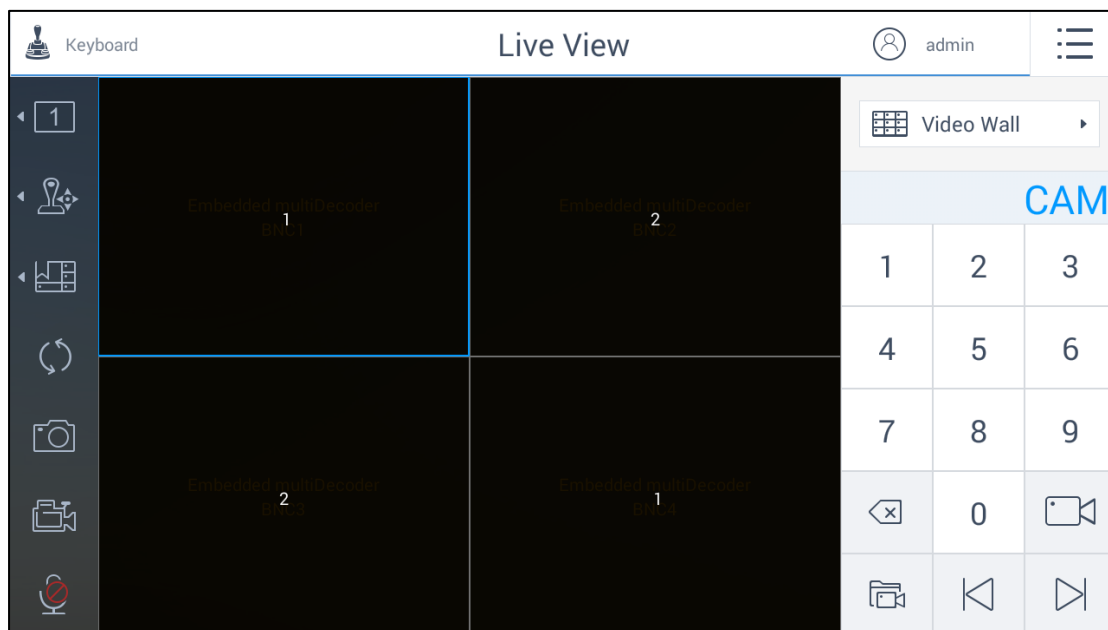


Figure 4.50 Live View Interface of Video Wall



You can edit the name of the video wall as well as the row and column in **Video Wall Management** interface. Refer to *Chapter 4.2.4 Managing the Video Wall* for details. Refer to Table 4.7 for the description of video wall icons.

Table 4.7 Description of Video Wall Icons

Icon	Description
	Select the window division mode. NOTE The window division modes vary with the connected devices.
	PTZ control panel.
	Call the scene of the video wall.
	Get the present status of the video wall.
	Capture picture of the selected live view window, and save the picture to the USB disk or upload it to the FTP server. You can also press the button at the top of the joystick to capture the picture.
	Record the video of the selected live view window, and save the video to the USB disk or upload it to the FTP server.
	Enable/Disable two-way audio. You can get not only the live video but also the real-time audio.

There is a numeric panel on the right with numbers 0 to 9 and five other icons for you to enter the serial number of the device.











1	2	3
4	5	6
7	8	9
	0	
		

Figure 4.51 Live View Numeric Panel


Refer to Table 4.8 for the description of video wall numeric panel icons.


Table 4.8 Description of Video Wall Numeric Panel Icons



Icon	Description
0~9	Number 0 to 9.
	Delete the entered information.
	View the live video of the added cameras.
	View the live video of the added groups.
 	View the previous/next camera or group.

Starting Live View

Steps:





1. (Optional) You can click  on the upper-left corner to set the video wall window division as desired.

Click  to select the video wall window division mode.


2. Select one output window and enter the serial number in the numeric panel, and then click . The live view of the corresponding cameras will be displayed on the selected window.
3. Select one output window and enter the serial number, then click . The live view of the corresponding group will be displayed on the selected window.



For group, auto-switching is only supported in single-screen mode.

4. Enter 0 in the numeric panel and click . You can stop the live view of the corresponding camera.
5. (Optional) You can click  to delete the entered information if you entered incorrectly.
6. (Optional) You can click  or  to display the video of the previous or next camera or group on the video wall.

PTZ Control

In live view mode, select a playing window and click  to activate PTZ control panel.



The PTZ control should be supported by the added device.

You can turn the joystick to realize the pan left/right and tilt up/down movements. You can also rotate the joystick anticlockwise/clockwise to zoom out/in in the live view. Refer to *Chapter 4.3.1 Local View* for details.

Switching the Scene

Steps:

1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click to pop up the **Scene List** interface.

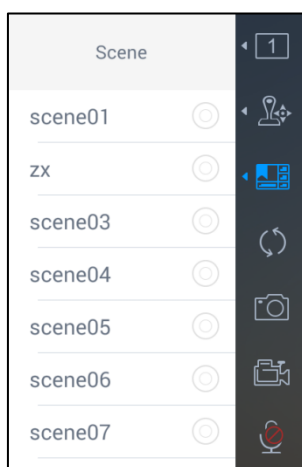


Figure 4.52 Scene List Interface

3. Select a scene in the list to switch the scene.

Capturing the Picture

Steps:





1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click to capture the picture of the selected live view window, and save the picture to the USB disk or upload it to the FTP server. You can also press the button at the top of the joystick to capture the picture.



You must connect a USB disk to the keyboard, or ensure the network connection of the PC (running FTP server) and the keyboard is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Recording

Steps:




1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click  to record the video of the selected window, and then the icon will change to . The hint of “Start recording” will appear.
3. Click  to stop recording and the hint of “Stop recording” will appear.




You must connect a USB disk to the keyboard, or ensure the network connection of the PC (running FTP server) and the keyboard is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Two-Way Audio

Steps:

1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click  to start two-way audio and the hint of “Start two-way audio” will appear.
3. Click  to stop two-way audio and the hint of “Stop two-way audio” will appear.



In video wall live view mode, turn on  to enable two-way audio between the keyboard and the corresponding front-end devices if the output channel is DS-B20, or between the keyboard and the decoder if the output channel is a decoder (including DS-6400HDI-S).

Floating and Matching the Window

Purpose:

For the devices supporting window floating (i.e., DS-B20), you can move the playing window within the video wall as desired, close the window and adjust the window to match it with the borders.



The function must be supported by the connected decoding device before using it.

Steps:

1. Drag a screen which links to a decoding output to open a window.
2. You can move the playing window within the video wall as desired and adjust its size.

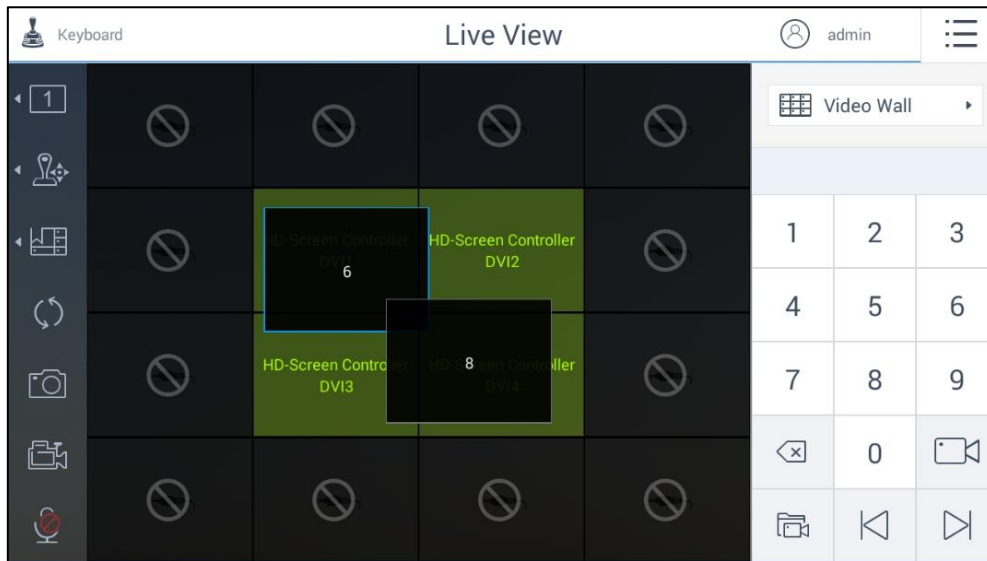


Figure 4.53 Floating the Window

3. During moving the window, the dotted borders will display. You can double-click the window to adjust it to match it to the borders.

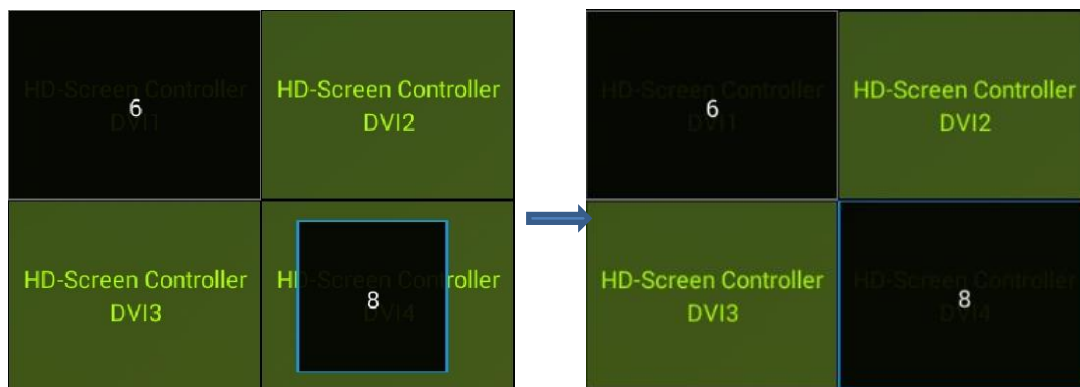


Figure 4.54 Matching the Window

Closing the Window

Steps:

1. Hold down the window to access the  button on the window by which you can close the window.
2. Hold down the window again to hide the  button.

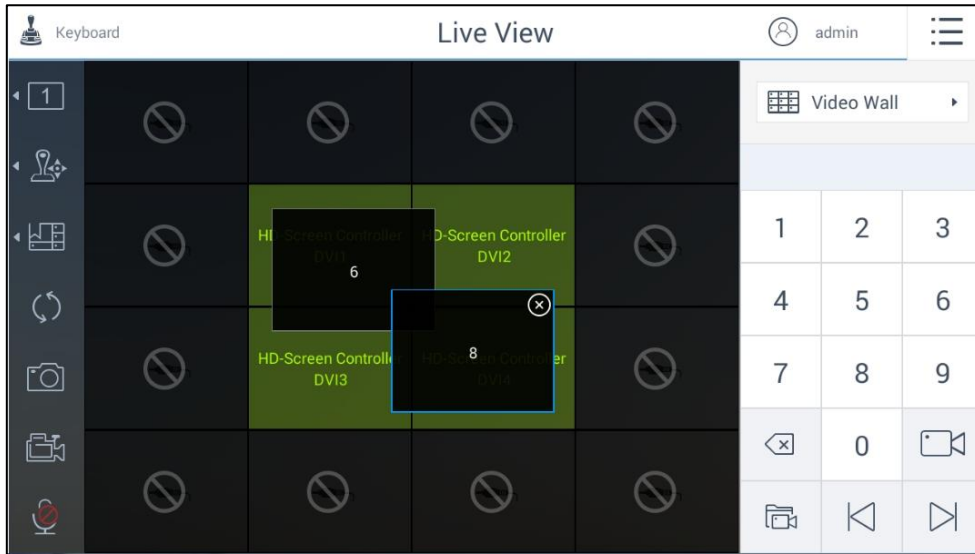


Figure 4.55 Closing the Window

4.3.3 External View

Purpose:

The keyboard supports external preview of the live video of the added devices, e.g., external display via HDMI or DVI interface. The local keyboard will not display the video.

Select **External** in the pop-up window of live view mode.

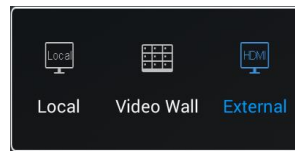


Figure 4.56 Selecting External Live View

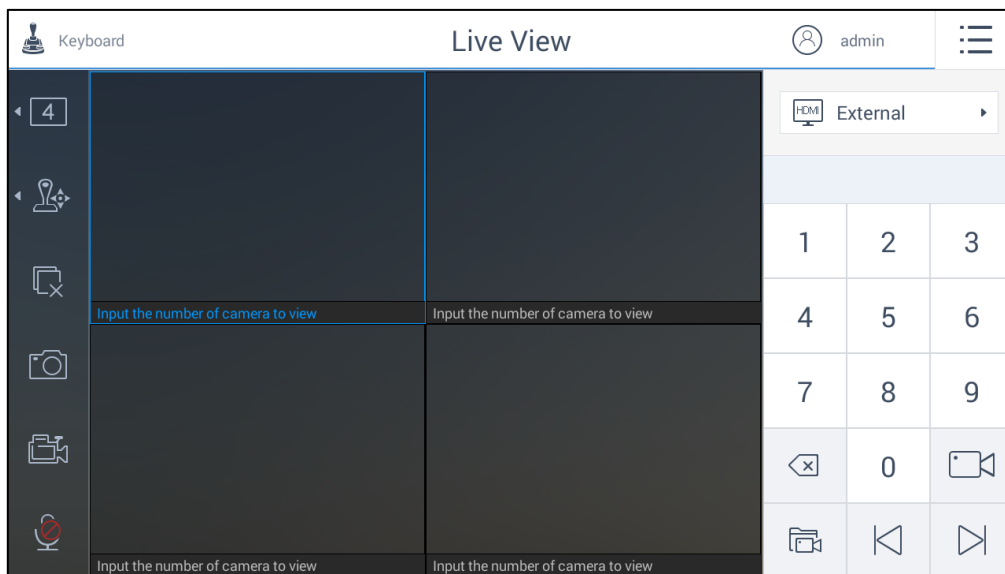









Figure 4.57 External Live View Interface

Refer to Table 4.9 for the description of the external live view icons.

Table 4.9 Description of External Live View Icons

Icon	Description
	Select the window division mode. The screen will be displayed in 1-division mode by default.  The window division modes vary with the connected devices.
	PTZ control panel.
	Stop all the live view.
	Capture picture of the selected live view window, and upload the picture to the USB disk or to the FTP server. You can also press the button at the top of the joystick to capture the picture.
	Record the video of the selected live view window, and save the video to the USB disk or upload it to the FTP server.
	Enable/Disable two-way audio. You can get not only the live video but also the real-time audio.

There is a numeric panel on the right with numbers 0 to 9 and five other icons for you to enter the number of the device.

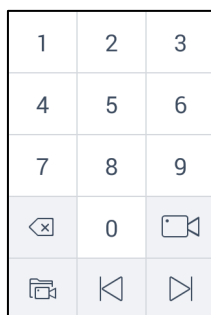






Figure 4.58 Live View Numeric Panel



Refer to Table 4.10 for the description of the external live view numeric panel icons.

Table 4.10 Description of External Live View Numeric Panel Icons



Icon	Description
0~9	Number 0 to 9.
	Delete the entered information.
	Preview the live video of the added cameras.
	Preview the live video of the added groups.
	Preview the previous/next camera or group.

Starting Live View

Steps:






1. (Optional) You can click  on the upper-left corner to set the window division as desired. Click 

to select the window division mode.


2. Select one output window and enter the serial number in the numeric panel, and then click . The live view of the corresponding cameras will be displayed on the selected window.
3. Select one output window and enter the serial number, then click . The live view of the corresponding group will be displayed on the selected window.



For group, auto-switching is only supported in single-screen mode.

4. Enter 0 in the numeric panel and click . You can stop the live view of the corresponding camera.
5. (Optional) You can click  to delete the entered information if you entered incorrectly.
6. (Optional) You can click  or  to display the video of the previous or next camera or group on the external display.
7. (Optional) You can click  to stop the external live view.

PTZ Control

In live view mode, select a playing window and click  to activate PTZ control panel.





The PTZ control should be supported by the added device.

You can turn the joystick to realize the pan left/right and tilt up/down movements. You can also rotate the joystick anticlockwise/clockwise to zoom out/in in the live view. Refer to *Chapter 4.3.1 Local View* for details.

Capturing the Picture

Steps:


1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click  to capture the picture of the selected live view window, and save the picture to the USB disk or upload it to the FTP server. You can also press the button at the top of the joystick to capture the picture.






You must connect a USB disk to the keyboard, or ensure the network connection of the PC (running FTP server) and the keyboard is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Recording

Steps:

1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.




2. Click  to record the video of the selected window, and then the icon will change to . The hint of “Start recording” will appear.
3. Click  to stop recording and the hint of “Stop recording” will appear.




You must connect a USB disk to the keyboard, or ensure the network connection of the PC (running FTP server) and the keyboard is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Two-Way Audio

Steps:

1. Select one output window and enter the serial number in the numeric panel, and then click . The live video of the corresponding cameras will be displayed on the selected window.
2. Click  to start two-way audio and the hint of “Start two-way audio” will appear.
3. Click  to stop two-way audio and the hint of “Stop two-way audio” will appear.



In external live view modes, turn on  to enable two-way audio between the keyboard and the IP camera, network speed dome, DVR or NVR.

4.4 System Configuration

Purpose:

As the admin, you can configure the keyboard system including user management, storage management and system maintenance. As an operator, you can only configure the keyboard system including user management and storage management.



Click [Configuration](#) on the main menu to enter the **System Configuration** interface.

The System Configuration contains three sections for the admin: user management, storage management and system maintenance. Refer to Table 4.11 for the description of system configuration for the admin.

Table 4.11 Description of System Configuration for the Admin

Menu	Description
User	Add/view/delete user accounts.
Storage	Configure the FTP server for picture and record uploading.
Maintenance	System upgrade, import/export configuration file, restore the defaults of local configurations.

4.4.1 User Management

Purpose:

Multiple user accounts can be added to the system. And some other basic operations are supported for the admin,

including viewing/deleting user accounts, adding devices to the users and changing the password. For the operator, you can only view the account and change the password.



The keyboard supports adding 1 admin and 15 operators at most. The admin has the highest authority and can operate the devices. The operators can only operate the devices linked by the admin.

Select **User** on the right side to enter the **User Management** interface.

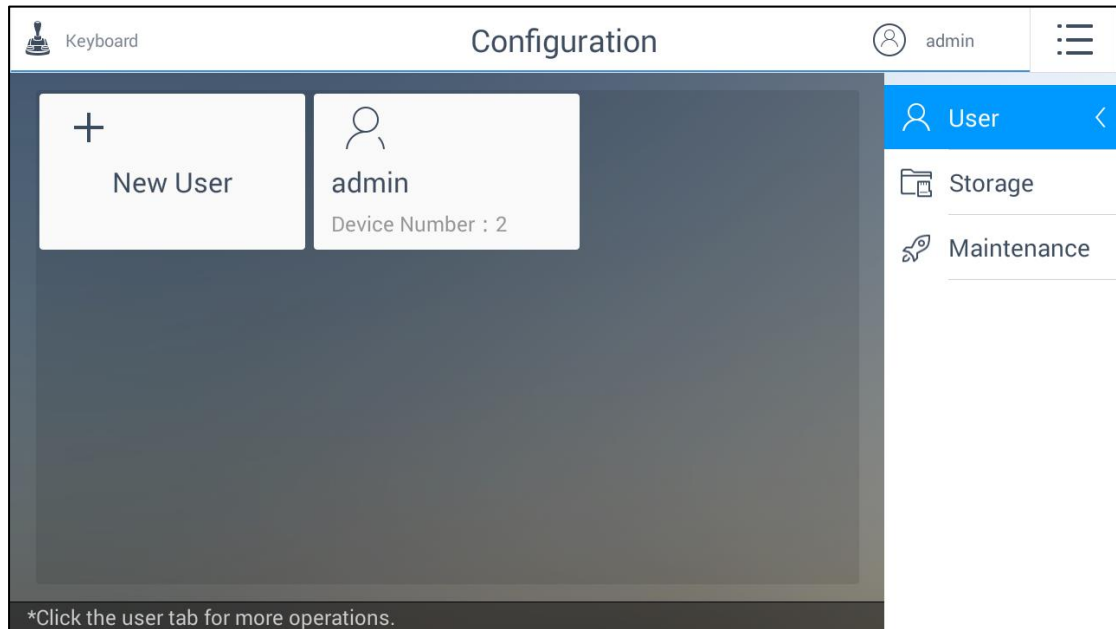


Figure 4.59 User Management Interface for the Admin

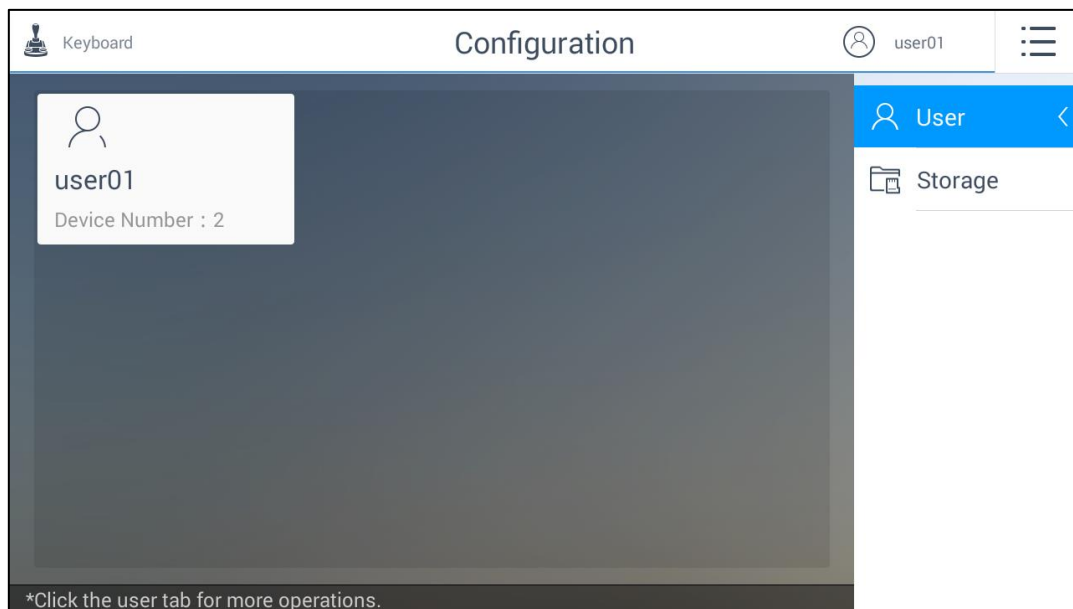


Figure 4.60 User Management Interface for the Operator

Adding a New User by the Admin



Only the admin can add new users.

Steps:

1. Click **New User** in the **User Management** interface for the admin to open the New User dialog box.

Figure 4.61 Adding a New User

2. Enter the user name, password and confirm password as desired.



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.



- The strength level of the password will be displayed when you set the password. Refer to *Chapter 2.1 Activation* for details of the strength level.
 - The keyboard supports adding 15 operators at most. The password cannot be risky password, otherwise it cannot be configured.
3. Click **Add Device** to add device(s) to the new user.

Figure 4.62 Adding Device(s) to the New User



Only the devices which have already been added to the **admin** account will be displayed in the device list.

4. Select the device(s) by clicking and then click to go back to the New User dialog box.
5. If you want to delete a certain device, click .
6. Click to confirm the creation.
7. (Optional) You can click to cancel the adding.



If you have added a new user account and the keyboard has been logged out of, when you log in to the keyboard again, you can select the account to login. Refer to *Chapter 2.2 Login and Logout* for details.

Managing the Accounts

Purpose:

For the admin, after adding users successfully, the user account is added to the user list on the **User Management** interface. You can edit or delete the information of the user accounts. For the operator, you can only change the password.

Editing the Admin Account

Steps:

1. Click admin account on the **User Management** interface for the admin. The **Set Password** dialog box pops up as shown in Figure 4.63.

The image shows a 'Set Password' dialog box with a title bar containing a confirm icon, the text 'Set Password', and a close icon. The dialog has four input fields: 'User Name' (pre-filled with 'admin'), 'Old Password', 'New Password', and 'Confirm'. There is a horizontal line at the bottom of the dialog box.

Figure 4.63 Editing the Admin Account

2. You can change the old password by entering the Old Password, New Password and confirming the password.
3. Click to confirm the editing.
4. (Optional) You can click to cancel the editing.

Editing the Normal User Accounts by the Admin

Steps:

1. Click the normal user account on the **User Management** interface for admin. A box pop up as shown in

Figure 4.64.

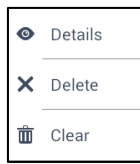


Figure 4.64 Editing the Normal User Account

2. Click **Details** to edit the detailed information of the user account including password and related devices. The details of the user account are shown in Figure 4.65.

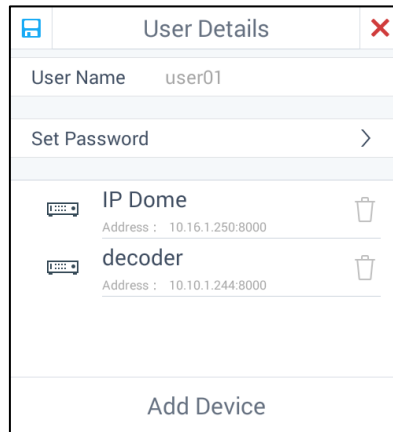


Figure 4.65 Viewing the User Detailed Information

3. Click **>** to set the password

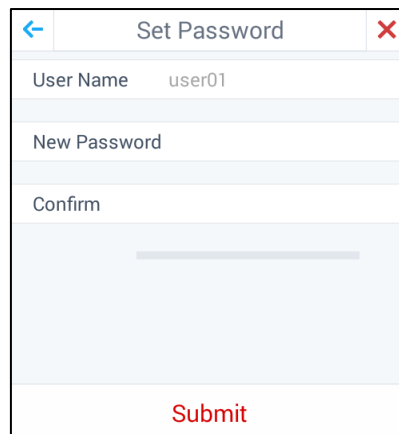


Figure 4.66 Setting the Password

4. Enter the New Password and confirm the password.
5. Click **Submit** to confirm the edit.
6. (Optional) You can click **<** to go back to the User Details dialog box.
7. Click **Add Device** to add device(s) to the selected user.

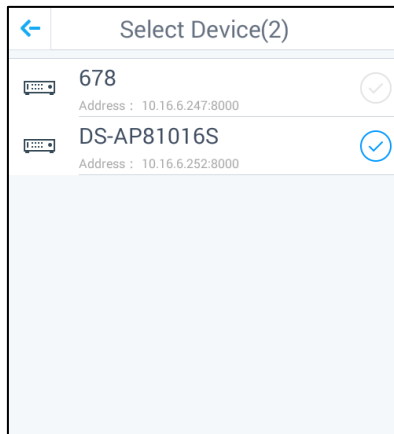







Figure 4.67 Adding Device(s) to the User



Only the devices which have already been added to the **admin** account will be displayed in the device list.

8. Select the device(s) by clicking  and then click  to go back to the User Details dialog box.
9. If you want to delete a certain device, click .
10. Click  to confirm the editing.
11. (Optional) You can click  to cancel the editing.

Deleting the User Accounts by the Admin

Steps:

1. Click **Delete** to delete the selected user. A hint box pops up as follows.

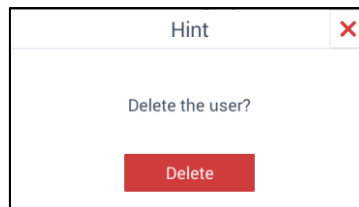



Figure 4.68 Hint Box of Deleting the User

2. Click **Delete** to confirm the deletion.
3. (Optional) You can click  to cancel the deletion.

Clearing the User Accounts by the Admin

Steps:

1. Click **Clear** to delete all the users. A hint box will pop up as follows.

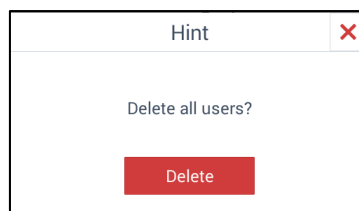


Figure 4.69 Hint Box of Deleting all the Users

2. Click **Delete** to confirm the deletion.
3. (Optional) You can click **✗** to cancel the deletion.

Editing the User Accounts by the Operator

Steps:

1. Click the user account on the **User Management** interface for the operator. The **Set Password** dialog box pops up as shown in Figure 4.70.

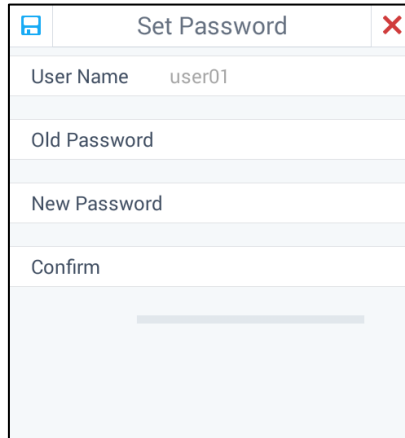



Figure 4.70 Editing the User Account by the Operator

2. You can change the old password by entering the Old Password, New Password and confirming the password.
3. Click **☑** to confirm the editing.
4. (Optional) You can click **✗** to cancel the editing.

Logout

Admin Logout

Steps:

1. Click  **admin** on the upper-right corner of the **User Management** interface for the admin to logout.

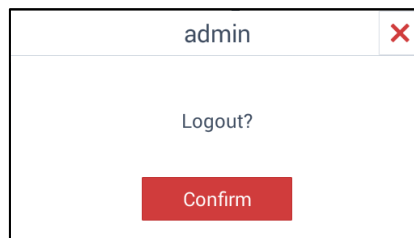


Figure 4.71 Logout Interface for the Admin

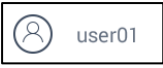
2. Click **Confirm** to logout.
3. (Optional) Click **✗** to cancel the operation.

Operator Logout



This section takes example of the operator account of *user01*.

Steps:

1. Click  on the upper-right corner of the **User Management** interface for the operator to logout.

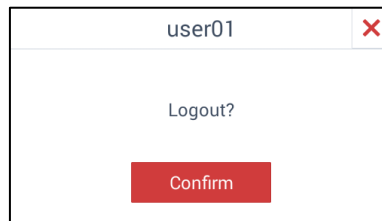



Figure 4.72 Logout Interface for the Operator

2. Click Confirm to logout.
3. (Optional) Click  to cancel the operation.

4.4.2 Storage Management

Purpose:

You can configure the FTP server parameters in **Storage Management** interface. In Live View mode, you can upload captured pictures and records to the FTP server. Otherwise you can save them to the USB disk.

Before you start:

Ensure the network connection of the PC (running FTP server) and the device is valid and correct. Run the FTP server on the PC and copy the firmware into the corresponding directory of your PC.

Configuring FTP server

Steps:

1. Select **Storage** on the right side to enter the **Storage Management** interface.

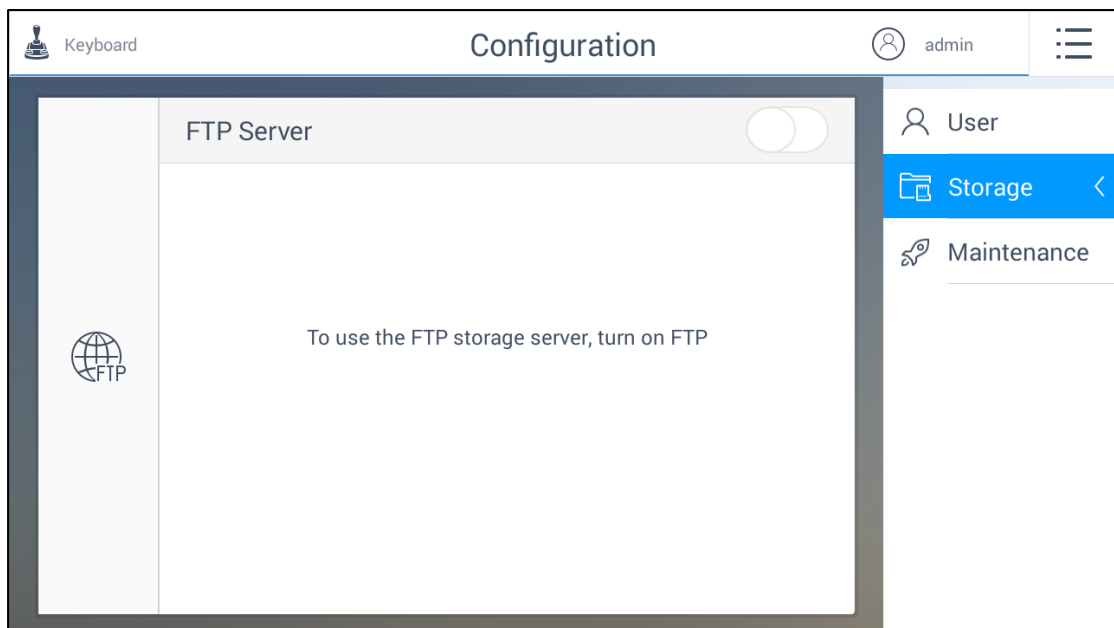


Figure 4.73 Storage Management Interface for the Admin

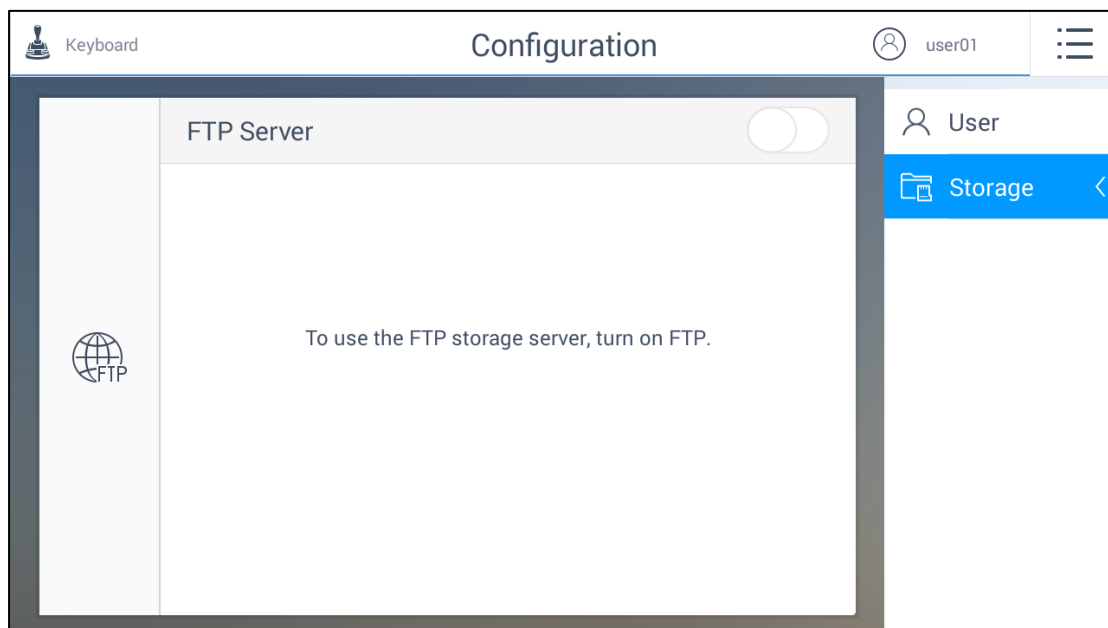




Figure 4.74 Storage Management Interface for the Operator

2. Switch  on the upper-right corner to .
3. Enter the Address, Folder, User Name and Password of the FTP server.





Address	<input type="text" value="10.16.6.46"/>	
Folder	<input type="text" value="ww"/>	
User Name	<input type="text" value="abc"/>	
Password	<input type="password" value="....."/>	
<input type="button" value="Apply"/>		

Figure 4.75 Configuring FTP Server



You can create a new folder in the root directory of the user.

4. Click **Apply**.

4.4.3 System Maintenance



This section is only applicable to the admin.

Purpose:

You can upgrade the system, import and export the configuration files, and restore the defaults of local configurations.

Select **Maintenance** on the right side to enter the **Maintenance** interface.

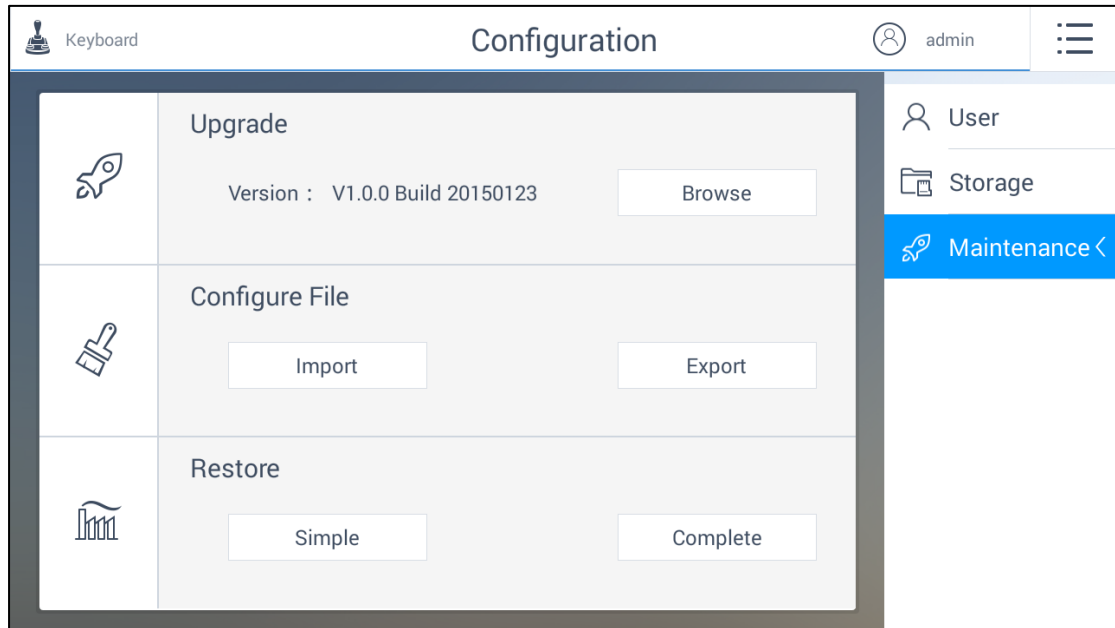


Figure 4.76 System Maintenance Interface

- **Upgrade:** When there is a new version available in the USB disk, you can click Browse to select the upgrade patch to update the system.
- **Import:** You can import the configuration file from the USB disk.
- **Export:** You can export the configuration file to the USB disk.
- **Simple Restore:** You can restore the defaults of local configurations except the network parameters and the admin password.
- **Complete Restore:** You can restore the defaults of all the local configurations except the network parameters and the device will become inactive status.

Chapter 5 Accessing by iVMS Platform

DS-1600KI Network Keyboard can be accessed by iVMS-5200.



You should make proper configuration on the iVMS platform before connecting the keyboard to the iVMS server. Refer to the user manual of corresponding iVMS platform for instructions.

5.1 Configuring iVMS-5200 Platform

5.1.1 Platform Login




Click **Platform** on the home page to enter the **Platform Login** interface.

Figure 5.1 Platform Login

Steps:

1. Enter the IP address, Port, User Name and Password of the accessed platform.
2. (Optional) Select the checkbox of **Remember Password** if you want to save the password.
3. Click **Login**.

5.1.2 Main Menu

After login, you can click  on the upper-right corner to activate the main menu as follows.

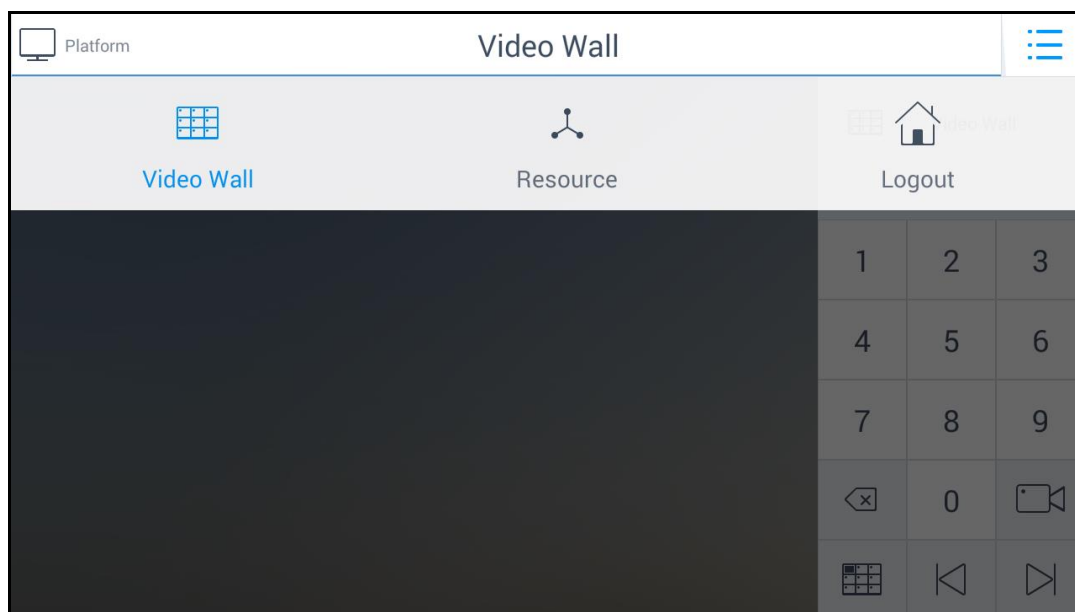


Figure 5.2 Main Menu of Platform Configuration

Refer to Table 5.1 for the description of the main menu.

Table 5.1 Description of Main Menu

Menu	Description
Video Wall	Display the live video of the input channel on the output monitor of the video wall.
Resource	Display the resource list.
Logout	Log out of the platform module.

5.1.3 Managing the Video Wall


After logging in to the platform, you should select the video wall first. Click  **Resource** on the main menu to enter the **Resource List** interface. The resource list contains the resources configured in iVMS 5200platform.



Figure 5.3 Resource List of Video Wall

The number on the upper-right corner of each item stands for the serial number of the video wall. Click a video wall to enter the **Scene List** interface.

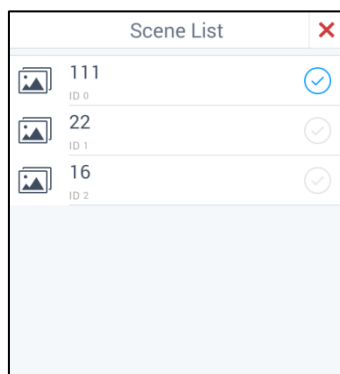




Figure 5.4 Scene List

Steps:

1. Call the scene by clicking .
2. Click  to exit from the **Scene List** interface and return to the **Resource List** interface.

After calling the scene of the video wall, **Using** appears on the right-bottom corner of the selected video wall item, indicating that the video wall is in use.

3. Log in to the iVMS platform, and click **Logical View**->**Camera** to enter the following interface.

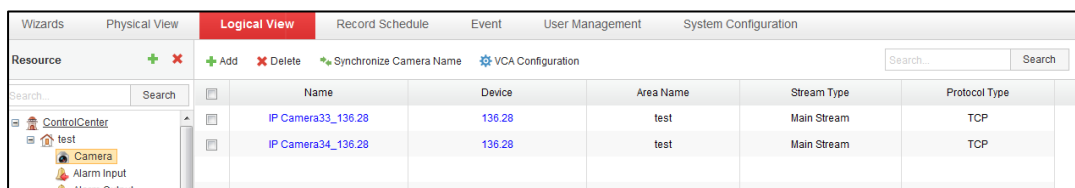


Figure 5.5 Camera List

4. Log in to the iVMS 5200 and click **Live View** to view the screen layout.

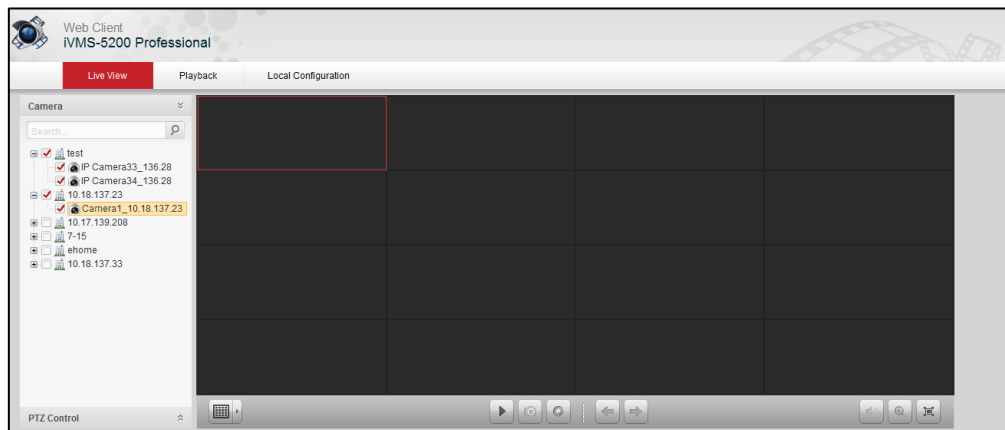


Figure 5.6 Screen Layout Interface

5.1.4 Managing the Input Channel

Steps:




1. Click  or  on the **Resource List** interface to expand the input channel list under the selected tab. The number on the upper-right corner stands for the serial number of the input channel.



Figure 5.7 Resource List of Input Channel



The input channel list of each level contains at most 512 input channels.

2. Click  to return to the resource list.
3. You can modify the serial number of the input channel via the iVMS platform.

Click **Logical View**->**Camera** to enter the following interface to view the list of connected input channels:

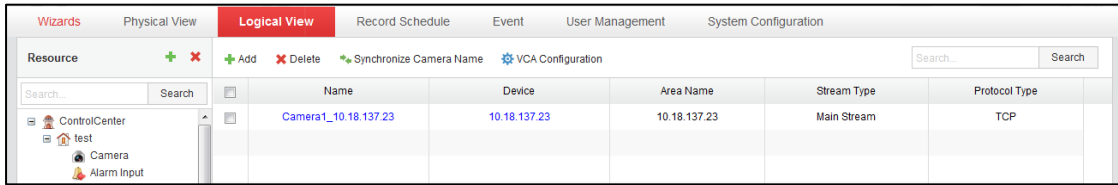


Figure 5.8 Camera List

Select an input channel from the list and click it to enter the **Editing** interface to modify the index No. in the **Keyboard No.** field.

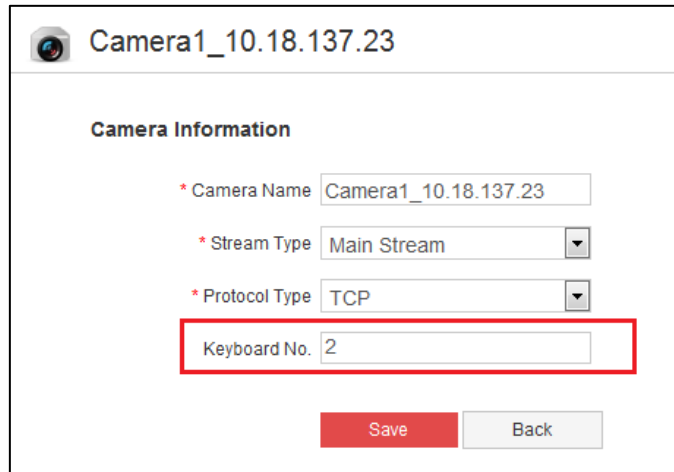


Figure 5.9 Editing Camera Interface



If you do not configure the serial number, you can not operate on the keyboard. The configuration method varies with different platforms.

5.2 Displaying Video on Monitor

You have two ways to display video on the monitor of the video wall.

Task 1:

Steps:

1. On the interface of the **Resource List of Input Channel** as shown in Figure 5.7, select a camera and click the camera tab. If you do not select the video wall first, a dialog will pop up to hint you that “Invalid camera number. Please select the video wall first.” If you have configured the video wall as shown in 5.3.1 *Managing the Video Wall*, the **Monitor Selection** interface pops up.

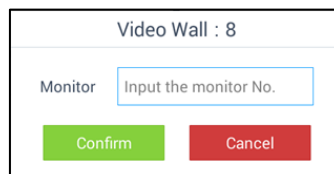



Figure 5.10 Monitor Selection Interface

2. Enter the monitor number in the text field to display the video of the selected camera on the selected monitor directly.

Task 2:

Click  [Video Wall](#) on the main menu to enter the **Video Wall** interface.

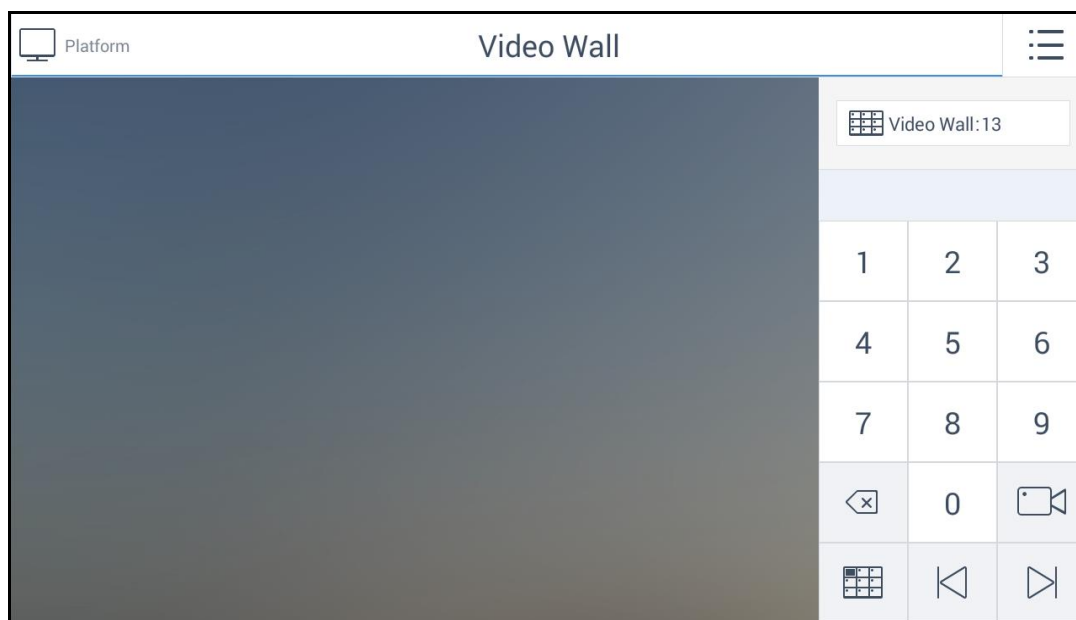



Figure 5.11 Video Wall Interface

 stands for the video wall you have configured in the resource list of video wall. Refer to *Chapter 5.1.3 Managing the Video Wall* for details.

There is a numeric panel on the right with numbers 0 to 9 and five other icons for you to enter the serial number of the device.

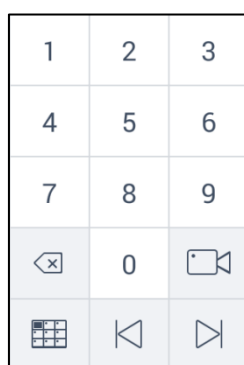






Figure 5.12 Video Wall Numeric Panel

Refer to Table 5.2 for the description of video wall numeric panel icons.



Table 5.2 Description of Video Wall Numeric Panel Icons

Icon	Description
0-9	Number 0 to 9.
	Delete the entered information.

	Preview the live video of the input channel.
	Preview the live video of the input channel on the selected output monitor of the video wall.
	Preview the previous/next input channel.

You can follow the steps as follows to view the video of an input channel on the selected monitor.

Steps:

1. Enter the serial number of the output monitor in the numeric panel, and click .
2. Enter the serial number of the input channel in the numeric panel, and click . Then the information of the output monitor and the input channel appears on the **Video Wall** interface.

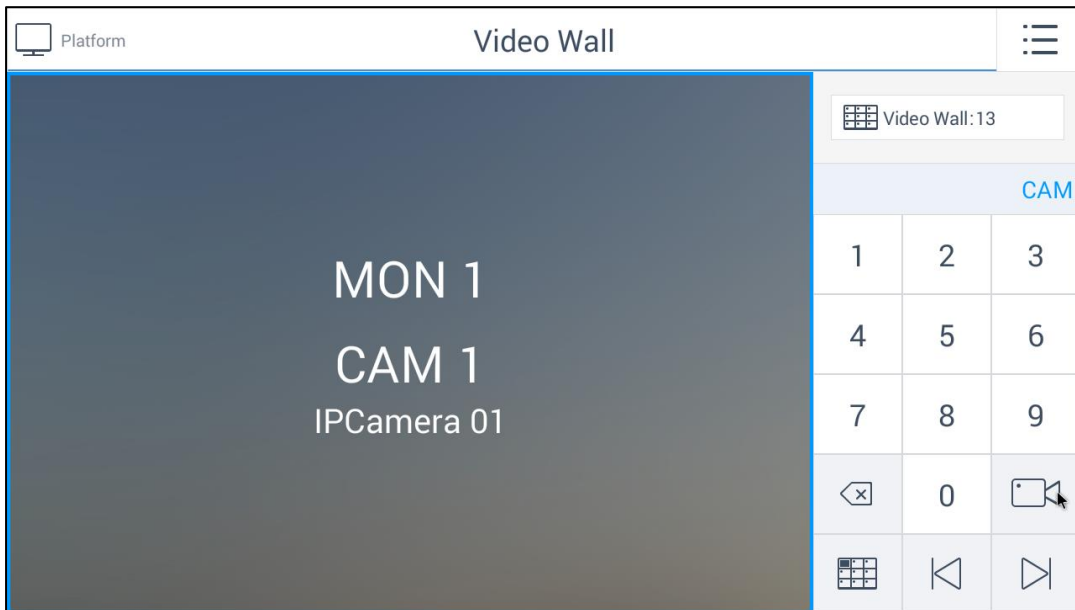





Figure 5.13 Displaying Video on the Selected Monitor


3. (Optional) You can click  to delete the entered information if you entered incorrectly.
4. (Optional) You can click  or  to preview the live video of the previous or next input channel on the selected output monitor.
5. You can realize the PTZ control of the camera via the joystick. You can turn the joystick to realize the pan left/right and tilt up/down movements. You can also rotate the joystick anticlockwise/clockwise to zoom out/in in the live view.



You need to drag the output monitor to the input channel layer on the video wall via the iVMS platform first. Then the operation of displaying video on the video wall via the keyboard can succeed.

5.3 Logout

Steps:

1. Click  Logout on the main menu and a window box pops up as follows.

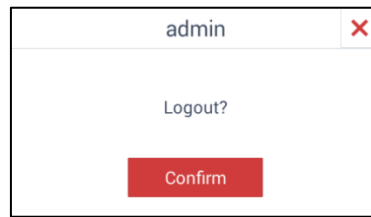


Figure 5.14 Logout Interface

-
2. Click **Confirm** to log out of the **Platform** module.
 3. (Optional) You can click **X** to cancel the logout.

Chapter 6 Accessing by Matrix Access

Gateway

Purpose:

You can get access to the matrix access gateway, realize unified management of the monitors, switch the live video on the video wall and set PTZ control on the **Matrix** module.



The PTZ control should be supported by the added device.

6.1 Matrix Access Gateway Login



Click **Matrix** on the home page to enter the **Matrix Access Gateway Login** interface.

Figure 6.1 Matrix Access Gateway Login Interface

Steps:

1. Enter the IP address, Port, User Name and Password of the matrix.
2. (Optional) Select the checkbox of **Remember Password** if you want to save the password.
3. Click **Login**.

6.2 Configuring the Video Wall

After login, you can enter the **Video Wall** interface.

There is a numeric panel on the right with numbers 0 to 9 and five other icons for you to enter the number of the device.

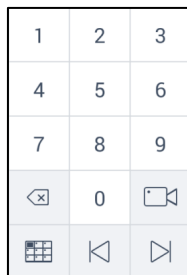






Figure 6.2 Video Wall Numeric Panel



Refer to Table 5.3 for the description of video wall numeric panel icons.

Table 5.3 Description of Video Wall Numeric Panel Icons

Icon	Description
0~9	Number 0 to 9.
	Delete the entered information.
	Preview the live video of the input channel.
	Preview the live video of the input channel on the selected output monitor of the video wall.
	Preview the previous/next input channel.

You can follow the steps as follows to view the video of an input channel on the selected monitor.

Steps:

1. Enter the serial number of the output monitor in the numeric panel, and click . Then you can get the window division mode of the selected monitor.
2. Select a sub-window. Enter the serial number of the input channel in the numeric panel, and click . Then the information of the output window and the input channel appears on the **Video Wall** interface.

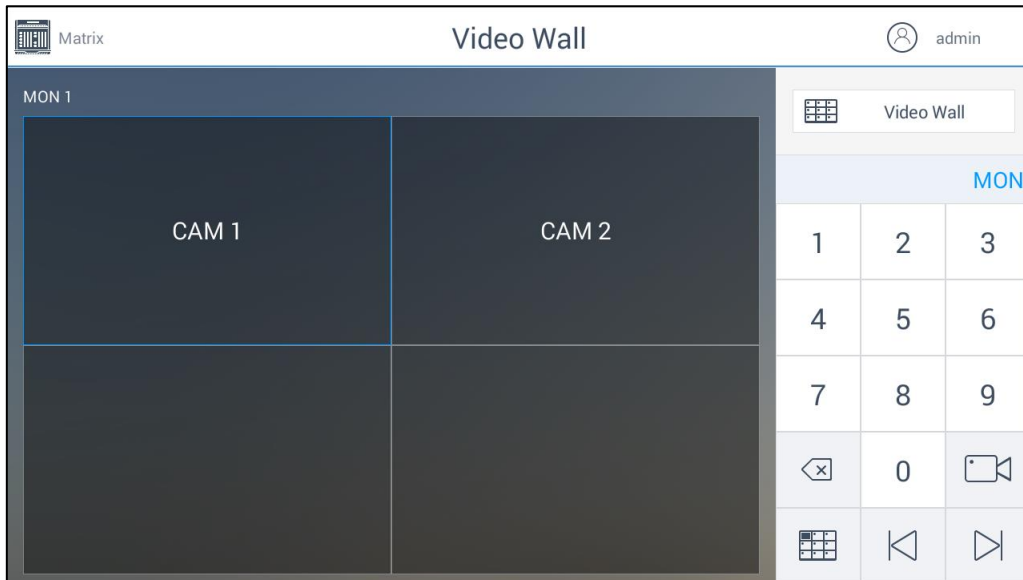





Figure 6.3 Displaying Video on the Selected Window of the Monitor


3. (Optional) You can click  to delete the entered information if you entered incorrectly.
4. (Optional) You can click  or  to preview the live video of the previous or next input channel on the selected output window.
5. You can realize the PTZ control of the camera via the joystick. You can turn the joystick to realize the pan left/right and tilt up/down movements. You can also rotate the joystick anticlockwise/clockwise to zoom out/in in the live view.



For the specific configuration of the matrix access gateway, you can refer to the related user manual.

6.3 Logout

Steps:

1. Click  admin on the upper-right corner of the **Video Wall** interface and a window box pops up as follows.

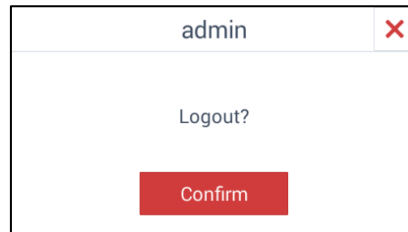



Figure 6.4 Logout Interface

-
2. Click **Confirm** to log out of the **Matrix** module.
 3. (Optional) You can click  to cancel the logout.

Chapter 7 Appendix

7.1 Specifications

Model	DS-1600KI
Operating System	Android 4.4
TFT LCD Screen	10.1" TFT LCD touchscreen
	Resolution: 1024 × 600
Joystick	4-axis joystick
Local Decoding	Local decoding 2-ch at up to 1080p resolution , and up to 16-division window display
Two-way Audio Input	1-ch, 3.5 mm connector (2.0Vp-p, >10kΩ)
Audio Output	1-ch, 3.5 mm connector (2.0 Vp-p, 600 Ω)
Network Interface	1 10M/100M/1000M self-adaptive Ethernet interface
WiFi	Supported
USB Interface	USB 2.0 ×2
Video Interface	1 HDMI, 1 DVI
Power Supply	12 VDC/POE
Consumption	≤ 15W
Working Temperature	-10 ℃ to +55 ℃ (14 ℉ to 131 ℉)
Working Humidity	10% to 90%
Dimensions (W × D × H)	404 × 180 × 163 mm (15.9 × 7.1 × 6.4 inch)
Weight	1.7 Kg

7.2 Summary of Changes

Version 1.1.0

Added:

1. Accessible by iVMS platform and matrix access gateway.
2. Configurable by SADP;
3. Double-click to realize full-screen live view and then double-click to restore to the normal live view mode;
4. Control the front panel of the added DVR/NVR in device management;
5. Optimize the PTZ control via the joystick and support 3D PTZ control;
6. Up to 4 patterns can be configured;
7. Connectable to multiple models of decoders and multi-screen controllers;



First Choice for Security Professionals