



Network Keyboard  
User Manual

Milesight Technology Co.,Ltd.

V1.01

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact your dealer.

This manual is applicable to the Milesight Network Keyboard, MS-K02.

This manual explains how to use and manage Milesight Network Keyboard on your network. Previous experience of networking will be of use when using the products. Please read this manual carefully before operation and retain it for future reference.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual. We will readily improve or update the products or procedures described in the manual.

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## Industry Canada ICES-003 Compliance:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.





## Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. The precaution measures are divided into “Warnings” and “Cautions”

**Warnings:** Serious injury or death may be caused if any of these warnings is neglected.

**Cautions:** Injury or equipment damage may be caused if any of these cautions is neglected.

	
<p><b>Warnings:</b> Please follow these safeguards to prevent serious injury or death.</p>	<p><b>Cautions:</b> Please follow these safeguards to prevent potential injury or equipment damage.</p>



### Warnings

- ◆ This installation must be conducted by a qualified service person and should strictly comply with the electrical safety regulations of the local region.
- ◆ To avoid risk of fire and electric shock, do keep the product away from rain and moisture before installation.
- ◆ Do not touch components such as heat sinks, power regulators, and processors, which may be hot.
- ◆ Source with DC 12V.
- ◆ Please make sure the plug is firmly inserted into the power socket.
- ◆ If the product does not work properly, please contact your dealer. Never attempt to disassemble the device by yourself.



### Cautions

- ◆ Make sure that the power supply voltage is correct before using the keyboard.
- ◆ Do not store or install the device in extremely hot or cold temperatures, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- ◆ Only use the components and parts recommended by manufacturer.
- ◆ Do not drop the keyboard or subject it to physical shock.
- ◆ To prevent heat accumulation, do not block air circulation around the device.
- ◆ Save the package to ensure availability of shipping containers for future transportation

## EU Conformity Statement



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](http://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](http://www.recyclethis.info).

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# Chapter I Product Introduction

## 1.1 Introduction

Milesight Network Keyboard MS-K02 is positioned to be used to control Milesight NVR. It adopts network connection which is a truly convenient way for easy connection and control of Milesight NVR, which eliminates unwanted complexity and simplifies the overall installation process.

Built-in Web Server can support the use of browser to easily manage and maintain the keyboard. Designed with a LCD screen on operation panel, it is easy to display operations. All of the friendly designs offer a better user experience.

## 1.2 Product Key Functions

### Hardware

- Support a LCD screen to display operation
- Keyboard joystick supports 4D operation(up and down, left and right, rotation, confirmation)
- Shortcut keys for PTZ control, such as preset, patrol and pattern
- Shortcut keys for NVR control, such as record, snap and audio operation
- Shortcut keys for wiper and light control operation
- Easy to operate, stable performance

### General

- Support Administrator and Operator user management
- Support IE/ Firefox/ Chrome/ Safari browser to manage the keyboard
- Support auto searching connected devices in the same network segment on web page
- Support to control up to 110 devices
- Support to import and export keyboard configuration files on web page

# 1.3 Appearance

## Network Keyboard

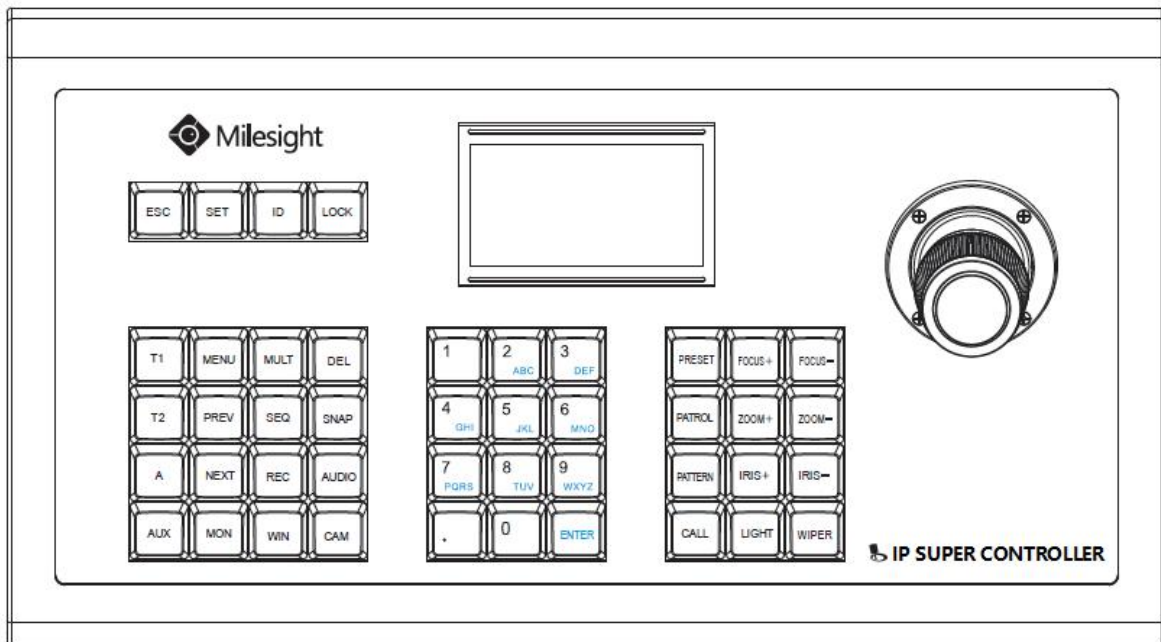


Figure 1.3-1 Milesight Network Keyboard

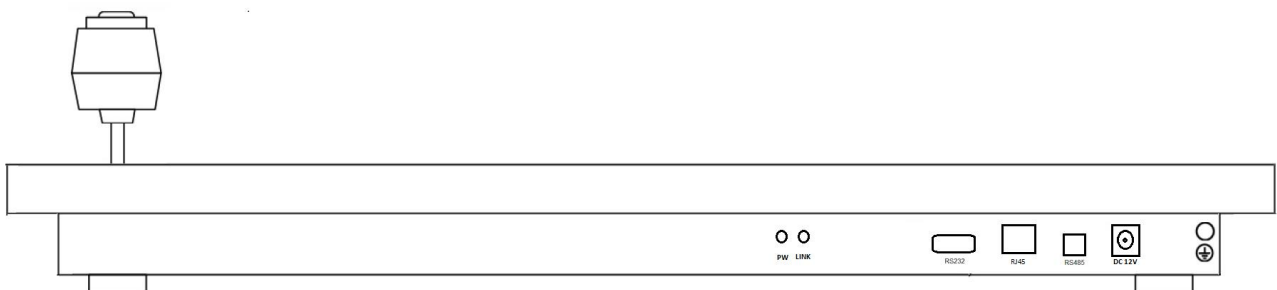


Figure 1.3-2 Milesight Network Keyboard Interface

## 1.4 Keyboard Operation Panel

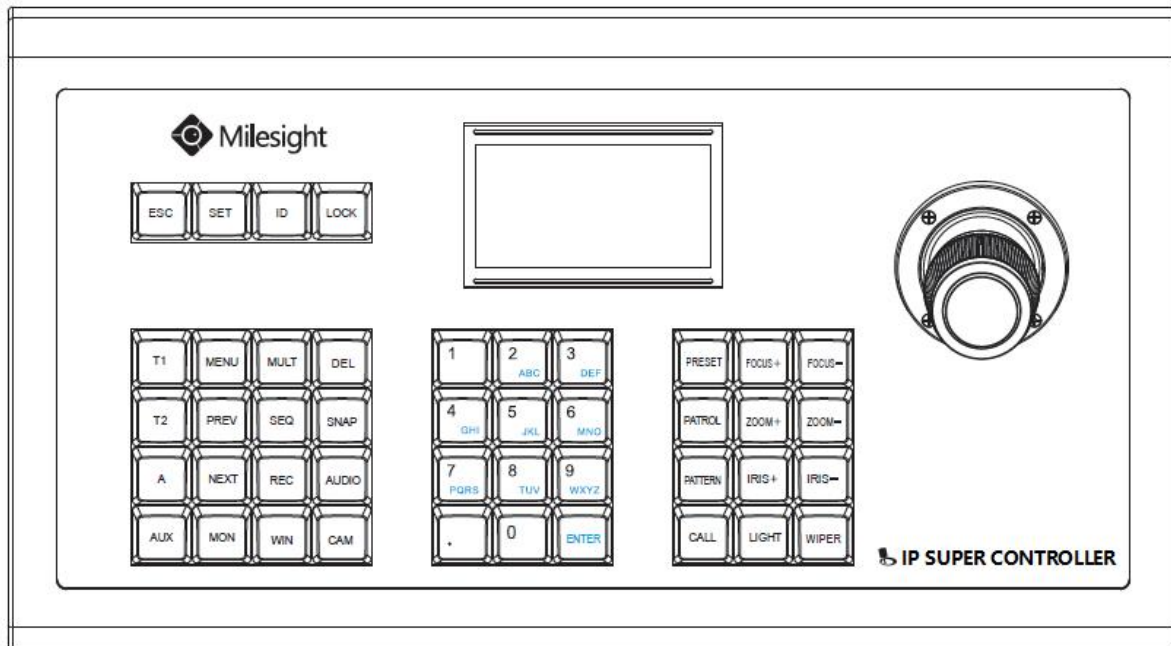


Figure 1.4-1 Operation Panel

Table 1.4-1 Description of Functional Buttons

Item	Button	Description
1	ESC	Return to previous menu; Long press 10s to reset all settings to factory default
2	SET	Long press 2s to enter keyboard settings interface (Only admin user has the permission.)
3	ID	The identifier of the device
4	LOCK	Lock/Unlock the keyboard
5	T1	Switch the page tab
6	T2	Switch the focus in the page tab
7	A	Switch between number and letter; Switch the mode between PTZ and NVR
8	AUX	Auxiliary button(Reserved)
9	MENU	Enter the main Menu of NVR
10	PREV	Previous channel
11	NEXT	Next channel
12	MULT	Switch different multi-screen layouts
13	SEQ	Play/Stop Sequence
14	REC	Emergency Record
15	SNAP	One button screenshot
16	AUDIO	One button to turn the Audio on/off
17	MON	Select the channel (MON+Num) ( <b>Unfulfilment</b> )
18	WIN	Select the window (WIN +Num)
19	CAM	Select a specific camera to make it full screen (CAM+Num)



20	DEL	Clear error input when input the password of the device ; In PTZ mode, delete the defined presets
21	0-9/A-Z	Number input or letter input
22	.	Dot
23	ENTER	Confirm operation
24	PRESET	In PTZ mode, move the pan/tilt/zoom to the desired position, and then press the PRESET+Num buttons to set the preset
25	PATROL	In PTZ mode, select the patrol. CALL+PATROL+Num: select the defined patrol
26	PATTERN	In PTZ mode, select the pattern. CALL+PATTERN+Num: select the defined pattern
27	CALL	Call the defined Preset, Patrol and Pattern in PTZ mode
28	FOCUS+/FOCUS-	In PTZ mode, adjust the focus
29	ZOOM+/ZOOM-	In PTZ mode, adjust the zoom value
30	IRIS+/IRIS-	In PTZ mode, adjust the Iris
31	LIGHT	In PTZ mode, turn on/off the white light
32	WIPER	In PTZ mode, turn on/off the wiper

## 1.5 The Control Function of Network Keyboard Joystick

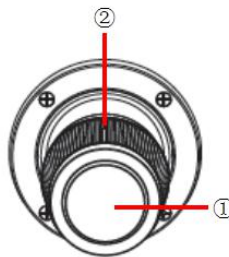


Figure 1.5-1 Joystick

Table 1.5.2 Description of Joystick

Operation	Description
Up	In PTZ mode, control the PTZ to move up
Down	In PTZ mode, control the PTZ to move down
Left	In PTZ mode, control the PTZ to move left
Right	In PTZ mode, control the PTZ to move right
Left up/Left down/ Right up/Right down	In PTZ mode, control the PTZ to move Left up/Left down/ Right up/Right down
Clockwise rotation	In PTZ mode, Zoom in
Counterclockwise rotation	In PTZ mode, Zoom out

**Note:**

1. For the keyboard joystick, the greater the amplitude of the sway is, the greater the speed of the PTZ camera is.
2. Keyboard joystick is a precision part, whose rotation angle is about  $\pm 45^\circ$ . Do not over rotation to avoid doing damage to the joystick.
3. In Figure 1.5-1, '①' is the central button which can be used as Enter button; '②' is used to control the zoom (Clockwise rotation is for zoom in while counterclockwise rotation is for zoom out).

## Chapter II Operation Guide

### 2.1 User Account

There are two types of the keyboard user account: admin and operator.  
The admin user is authorized with the following operation permissions:

- Add a maximum of 9 operator accounts;
- Configure the keyboard parameters;
- Add, edit and delete devices;
- Add, edit and delete operator users;
- Control the Network Keyboard.

The operator user can only control the Network Keyboard.

**Note:**

1. Both admin user and operator user can control the Network Keyboard.
2. Only admin user can access the keyboard through web page.
3. Only admin user can modify the parameters of the keyboard.

### 2.2 Boot and Shut down of Network Keyboard

#### 2.2.1 Boot

**Step1.** Connecting the power supply and cable , several seconds later, boot animation will be shown on the LCD screen;

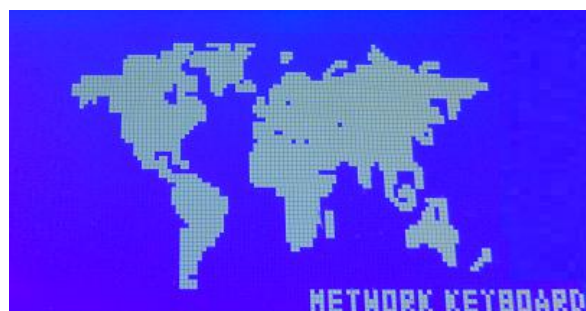


Figure 2.2.1-1 Boot Animation

After the boot animation, the login interface will be shown on the LCD screen.



Figure 2.2.1-2 Locked Interface

**Step2.** Refer to the prompts to log in the keyboard, if you want to configure the parameters of the keyboard, please input the password of admin user to log in.

**Note:**

1. The default user name and password of the Network Keyboard is admin and 1234.
2. Inputting the user name is not compulsory for the keyboard. Just input the password of the user, the Network Keyboard will automatically distinguish the password belongs to which user.
3. If you log in keyboard as operator user, except [SET] function, other functions are the same with admin user.
4. When inputting password of the keyboard, moving joystick to the left could execute Delete action.

## 2.2.2 Shut Down

Unplug the power supply, then the keyboard will power off and shut down.

## 2.3 Local Keyboard Configuration by Admin

### 2.3.1 Login

Input the password of admin user to log in the keyboard.

### 2.3.2 Keyboard Management

**Step1.** Long press 2s on the [SET] button to enter the setting interface like the Figure 2.3.2-1;

**Step2.** Select different configuration items through controlling the joystick, then press the [Enter] button to confirm the settings.

There are three options (NETWORK/DEVICE/SYSTEM) in setting interface.



Figure 2.3.2-1 Setting Interface

- Network

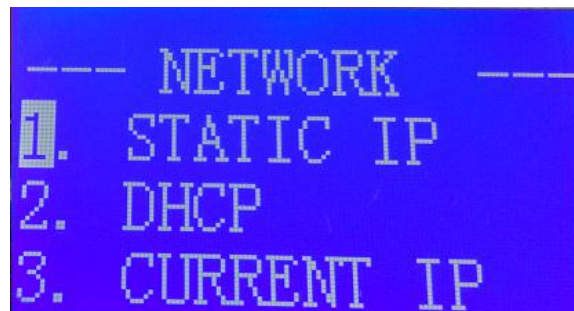


Figure 2.3.2-2 Network Interface

There are three options (STATIC IP/DHCP/CURRENT IP) in Network Interface:

**STATIC IP&DHCP:** STATIC IP or DHCP is available for you to set up a local IP address for the keyboard. After configuring, the keyboard will prompt “REBOOT NOW?”. Then confirm the reboot operation, the setting will take effect;

**CURRENT IP:** Enter the CURRENT IP interface, you can check the current IP address of this keyboard.

- Device



Figure 2.3.2-3 Device Interface

There are three options (INQUIRE/ADD/DELETE) in DEVICE interface:

**INQUIRE:** Inquire the devices which have been added;

**ADD:** Select [ADD] option, press [ENTER] to enter the ADD DEVICE interface, the keyboard will assign an ID to the device, you can vacillate joystick to the left and right to select the device type which contains NVR and PTZ camera, then press the [Enter] button to input the IP address of the device, press [ENTER] button to confirm and save the setting;

**DELETE:** If you want to delete a device, just input the ID of the device and press [ENTER] button to delete it.

- **System**

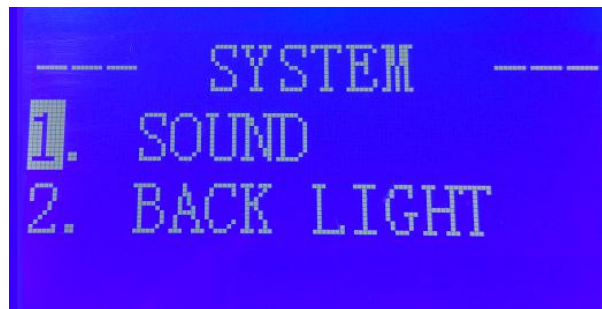


Figure 2.3.2-4 System Interface

There are two options (SOUND/BACK LIGHT) in SYSTEM interface:

**SOUND:** In SOUND interface, you can sway joystick to the left and right to turn on or turn off the keypad tones, then press [ENTER] button to confirm and save the setting;

**BACK LIGHT:** In Back Light interface, you can sway joystick to the left and right to select the retention time of screen back light, then press [ENTER] button to confirm and save the setting.

**Note:**

1. Please make sure the Network Keyboard is connected to the Internet.
2. The default IP address of the Network Keyboard is 192.168.5.180.
3. Only support to add Milesight NVR.
4. When inputting IP address in keyboard, moving joystick to the left could execute Delete action.
5. If you want to abandon the settings, please keep pressing [ESC] to exit configuration.

## 2.4 Keyboard Operation

After adding the devices, you can use the keyboard to control all devices you added.

### 2.4.1 Device Connection

**ID:** Device number.

**Step1.** Press the [ID] button, then input ID number of the device you want to connect;

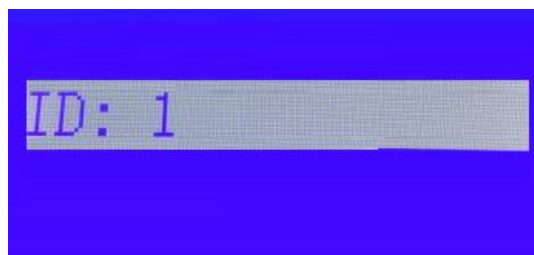


Figure 2.4.1-1

**Step2.** Input the password of user of the device in Device Login interface;



Figure 2.4.1-2 Device Authentication

After the device authentication, the LCD screen will show the connection state;

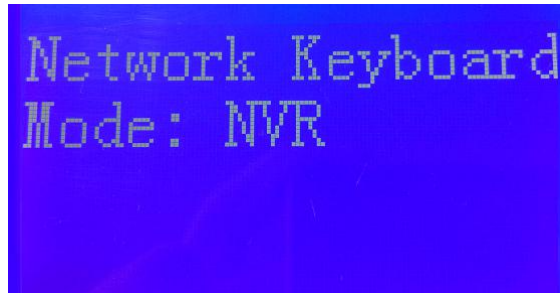


Figure 2.4.1-3 NVR Mode

**Step3.** If the NVR needs local authentication, press [A] button to switch between 'abc' and '123' mode, then input the password to do local authentication.

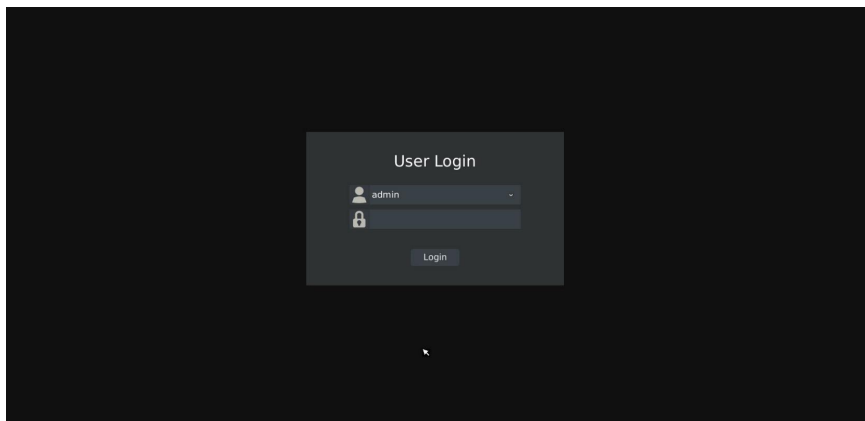


Figure 2.4.1-4 NVR Login Interface

For example, the password is 'ms1234':

**Step1.** Move the joystick up and down to select password input box;

**Step2.** Press [A] button to 'abc' mode, then input 'ms';

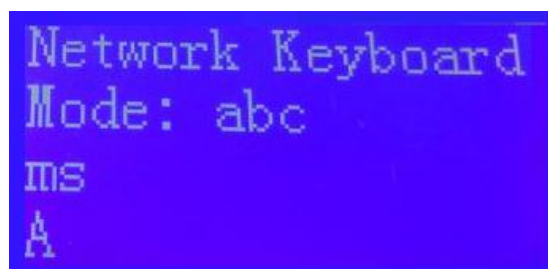


Figure 2.4.1-5

**Step3.** Press [A] button to '123' mode, then input '1234';

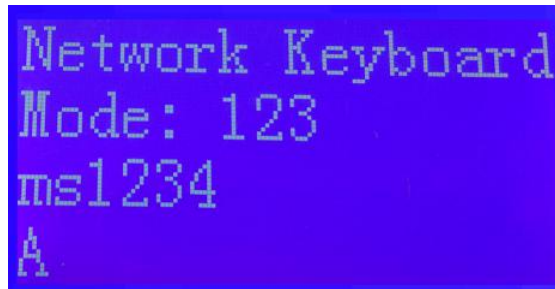


Figure 2.4.1-6

**Step4.** Press [ENTER] button to log in NVR on monitor.

**Note:**

1. Press [ID] button to input different ID numbers, then you can connect the device you wanted.
2. When doing password authentication to connect the NVR, please press the [Del] button to delete the character you want to abandon.
3. Please press [A] button to switch character between numbers and letters.
4. When doing device authentication on keyboard to connect the NVR, please use the same user level as logging in local NVR.

## 2.4.2 PTZ Control

When the keyboard connected the NVR to control the PTZ camera, it can operate the PTZ via the joystick and PTZ function buttons.

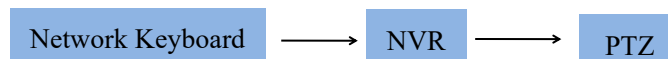


Figure 2.4.2-1 PTZ Control

Press [A] button to enter the PTZ mode:

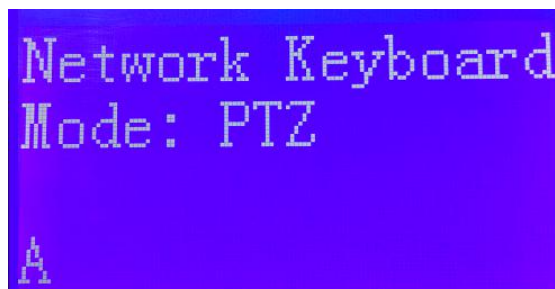


Figure 2.4.2- 2 PTZ Mode

- **PRESET**

Setting : PRESET+Num+ENTER

Delete : CALL+DEL+PRESET+Num+ENTER

Call : CALL+PRESET+Num+ENTER

- **PATROL**

Call : CALL+PATROL+Num+ENTER

Pause : PATROL+PATROL+NUM+ENTER

- **PATTERN**

Call : CALL+PATTERN+NUM+ENTER

Pause : PATTERN+PATTERN+NUM+ENTER

Through the [ZOOM+], [ZOOM-], [FOCUS+], [FOCUS-], [IRIS+], [IRIS-] buttons, you can adjust the lens of the PTZ camera.

**Note:**

1. It is not able to control the PTZ, if the user doesn't enter the PTZ Mode.
2. The steering and the rotation speed of the PTZ camera are controlled by the joystick; The amplitude of joystick movement controls rotation speed; The rotation of joystick is for the zoom operation of PTZ camera.
3. Press [ESC] or [A], exit the PTZ Mode.

## 2.4.3 Shortcut keys Function

- **Menu**

Press the [MENU] button to enter the main menu of NVR as the picture below:

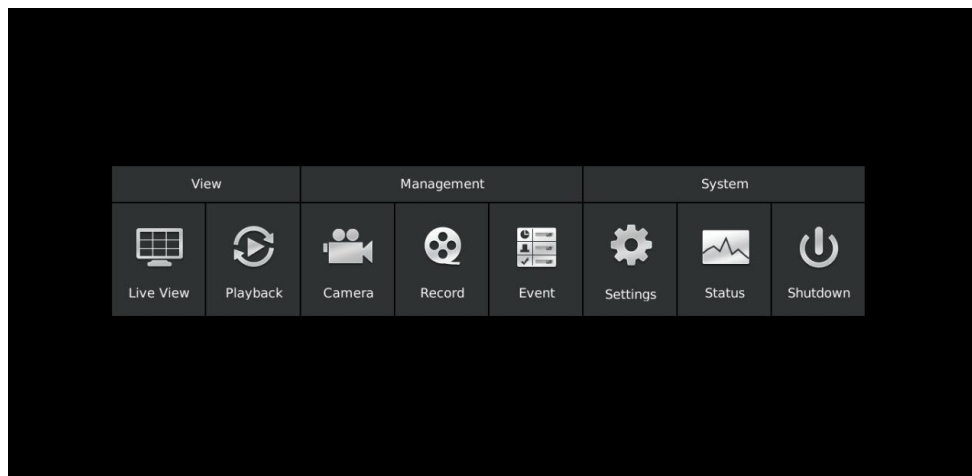


Figure 2.4.3-1 Menu of NVR

Press [T2] button or move the joystick to the left and right to select the item you want;

- **SEQ**

Enable single/multi-screen cruise in live view mode;

- **REC**

Emergency Record, select a specific channel, one button record;

- **SNAP**

Select a specific channel, one button screenshot;



- **AUDIO**

Select a specific channel, a button to turn the Audio on/off;

- **MULT**

Switch different multi-screen layouts;

- **PREV**

Select the previous channel for live view;

- **NEXT**

Select the next channel for live view;

- **WIN**

WIN+Num+ENTER : You can select the window you want by using this combination;

- **CAM**

CAM+Num+ENTER: You can make the camera you want full screen by using this combination;

- **T1&T2**

T1 Switch the page tab;

T2 Switch the focus in the page tab.

**Note:**

1. If the camera is selected, you can use [T2]+[ENTER] to configure the tool bar.
2. In Live view page of NVR, you can move the joystick to left/right/up/down to select the camera you want, also you can double-click on the central button on joystick to make the camera full screen.
3. In other setting pages of NVR, you can use [T1], [T2] and joystick to switch the focus in each page.

## Chapter III Keyboard Configuration by WEB Server

### 3.1 Login

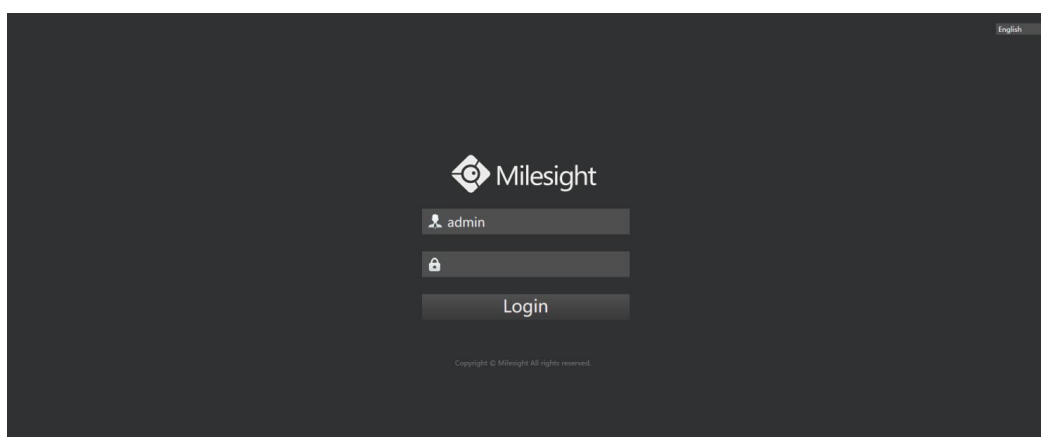


Figure 3.1-1 WEB Login Page

- Step1.** Input the IP address of keyboard in browser.
- Step2.** Input the password of admin user to log in.

### 3.2 Device Management

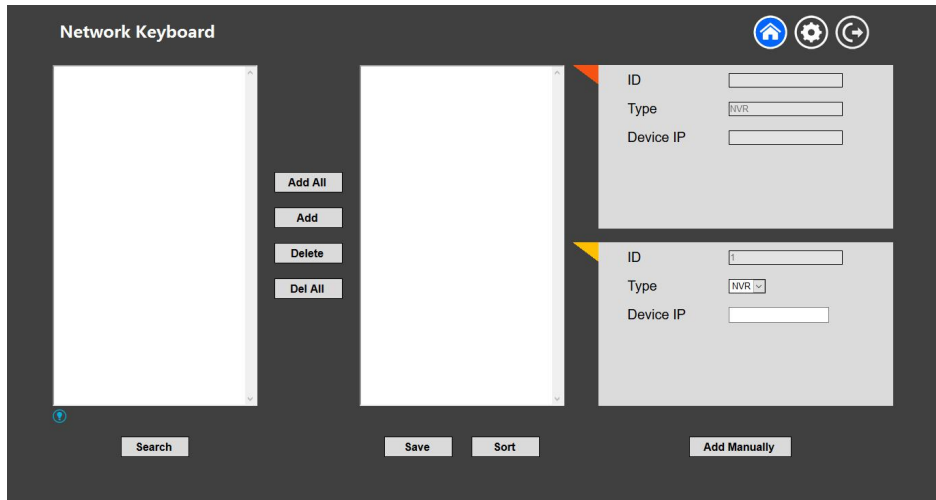


Figure 3.2-1 Device Management

- **Add Devices**

**Method1. Add devices via searching function**

1. Click [Search] button to quickly search the devices in LAN;

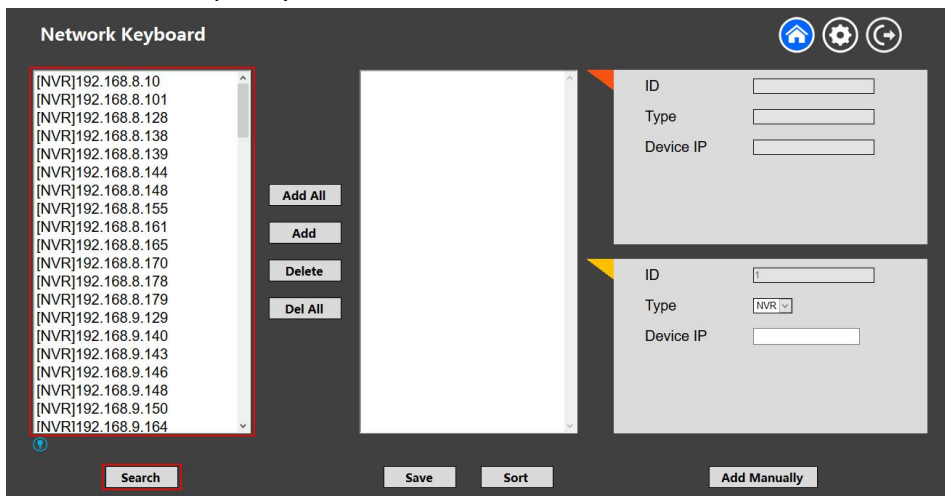


Figure 3.2-2 Search Device

2. Click to select one device, then click [Add] button to add the selected device;

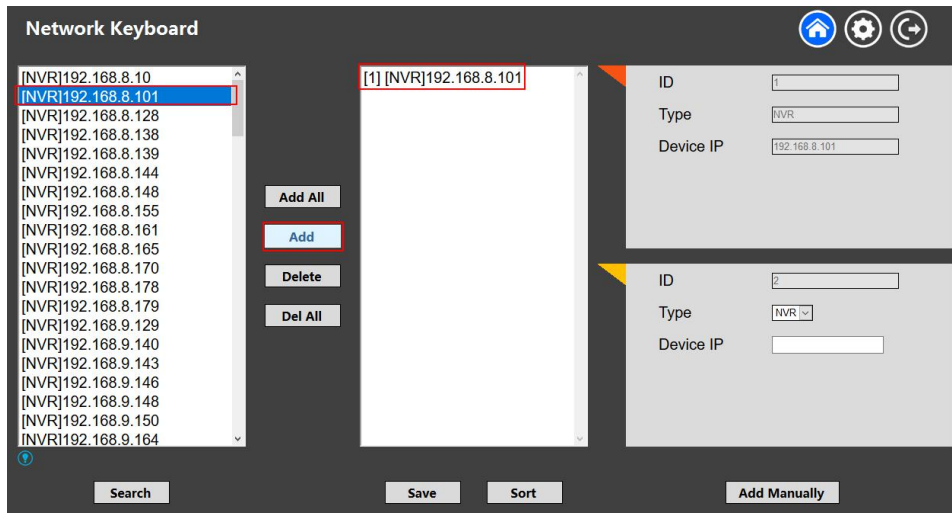


Figure 3.2-3 Add One Device

Click [Add All] button to add all the devices which have been searched out;

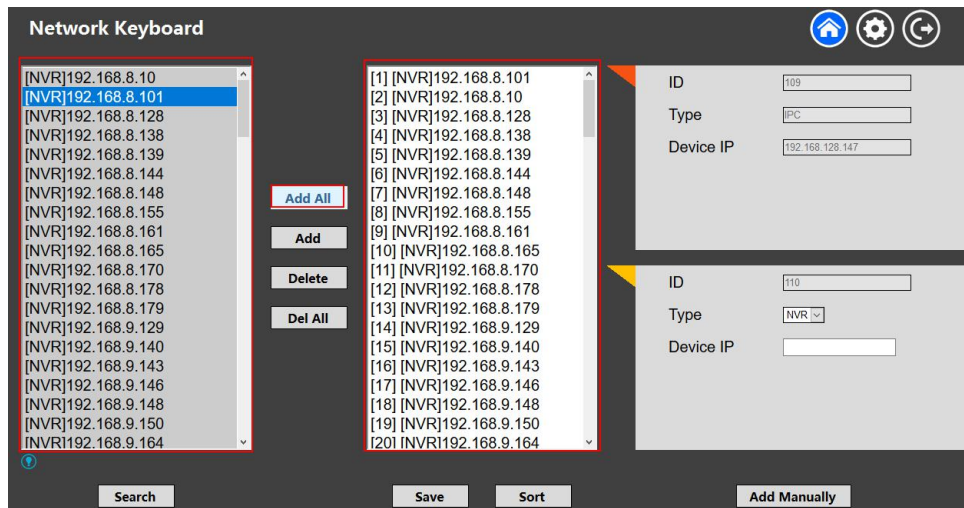


Figure 3.2-4 Add All Devices

3. Click [Save] button to confirm the operations you have done.

### Method2. Add devices manually

1. Select the device type;
2. Input the IP address of the device, then click [Add Manually] to add a device manually.
3. Click [Save] button to confirm the operation.

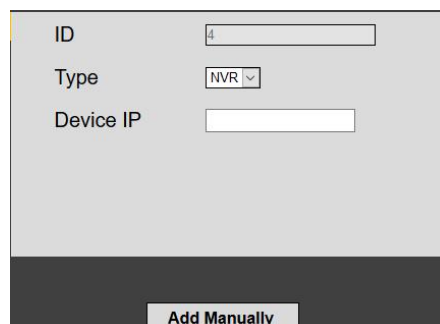


Figure 3.2-5 Add Manually

- **Configure Added Devices**

Click [Delete] button to delete an added device;

Click [Del All] button to delete all devices which have been added;

Click [Sort] button to sort the devices which have been added by ID number, Device type and IP address;

**Note:**

After doing any operation, please click [Save] button to make sure the operation take effect.

### 3.3 Keyboard Management

Click to enter the Setting page.

- **Network**

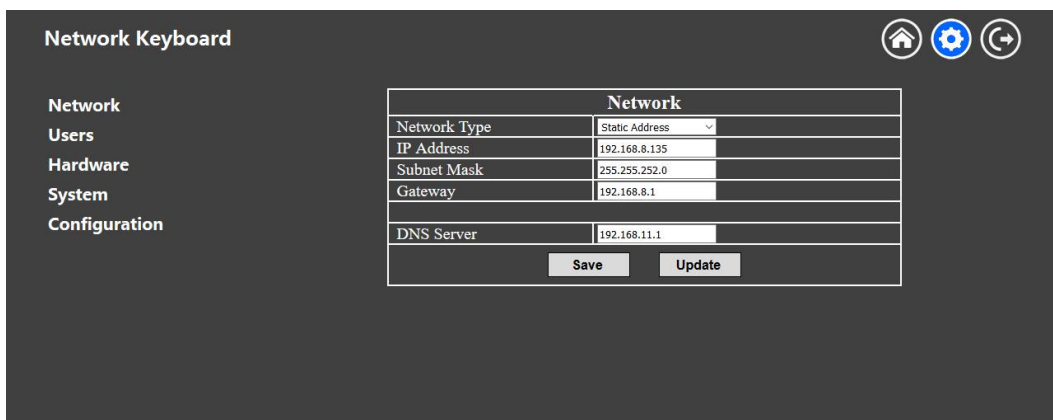


Figure 3.3-1 Keyboard Management

Basic configuration includes Network Type, IP address, Subnet Mask, Gateway, DNS server, etc.

**Note:**

If there has a DHCP server running in networks, you can choose the DHCP Network Type for the keyboard.

- **Users**

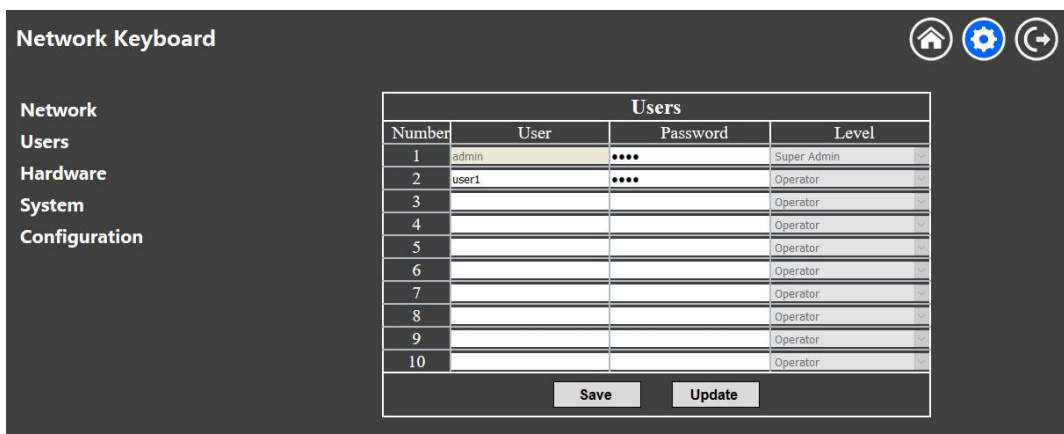


Figure 3.3-2 User

In Users page, you can add, edit and delete operator users; Also, you can edit the password of Admin user.

- Hardware

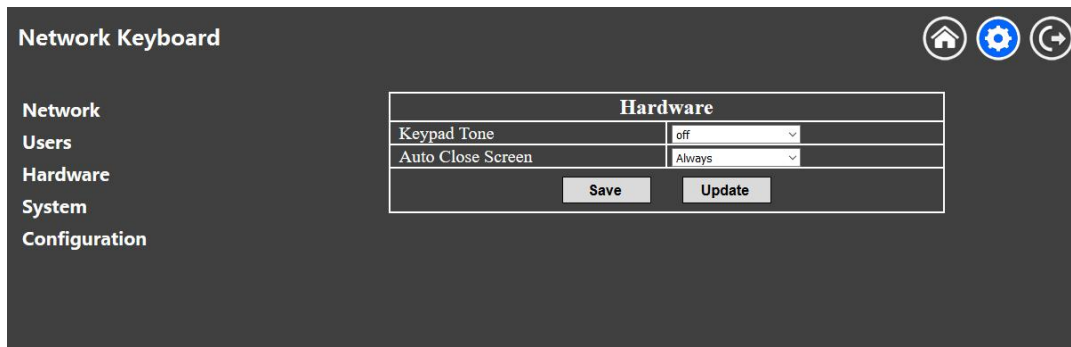


Figure 3.3-3 Hardware

In Hardware page, you can turn on/off the keypad tones;  
Also, you can select the retention time of screen back light;  
Click [Save] button to save the settings.

- System

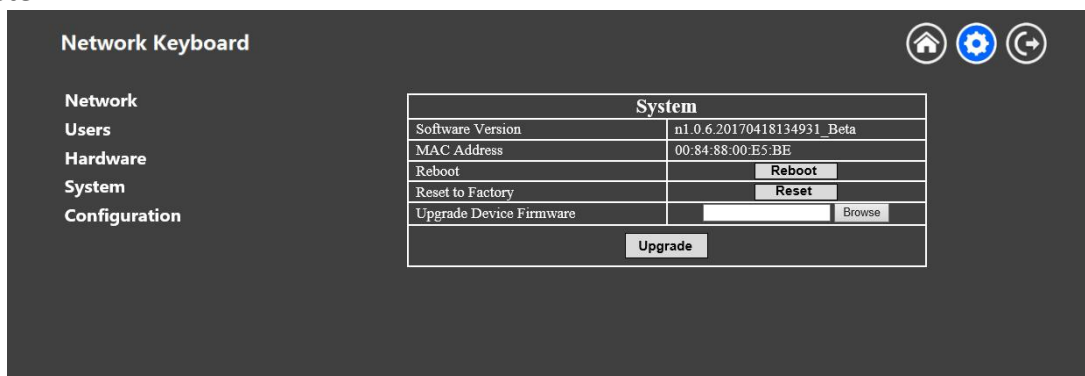


Figure 3.3-4 System

All information about the MAC address and software version of the keyboard can be checked on this page;

Click **Reboot** to reboot the keyboard;

Click **Reset** to reset the keyboard to factory defaults;

#### System Upgrade:

**Step1.** Browse and select the upgrading file;

**Step2.** Click the “upgrade” button after it prompts upload file successfully. After the system reboots successfully, the update is done.

#### Note:

**Do not disconnect the power of the device during the update. The device will be restarted to complete the upgrading.**

- Configuration

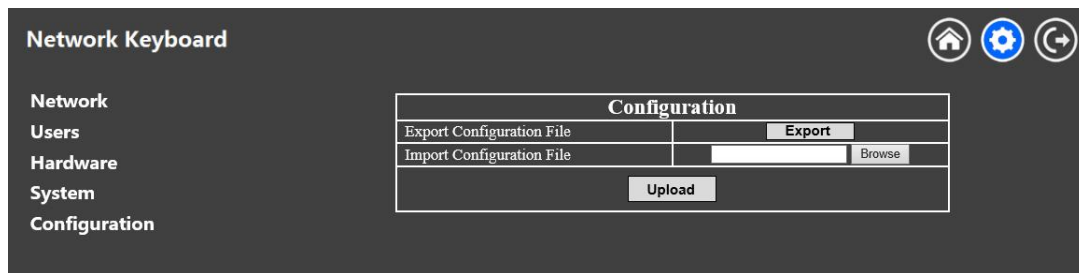


Figure 3.3-5 Configuration

**Export:** Click **Export** to backup present settings;

**Import:** Click **Browse** to select one desired file and click **Upload** to restore the configuration.

## Chapter IV Services

Milesight Technology Co., Ltd provides customers with timely and comprehensive technical support services. End-users can contact your local dealer to obtain technical support. Distributors and resellers can contact directly with Milesight for technical support.

Technical Support Mailbox: [support@milesight.com](mailto:support@milesight.com)

Web: <http://www.milesight.com>

Online Problem Submission System: <http://www.milesight.com/service/feedback.asp>

Address: No.23 Wanghai Road, 2nd Software Park, Xiamen, China

Zip Code: 361006

TEL: +86-592-5922772

FAX: +86-592-5922775

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