

**KEDACOM**

**KDM2410M  
User Guide**

**Version 00  
August 2016**



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# About This Document

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## Intended Audience

This document is intended for the personnel who:

- Work with the Mobile Network Video Recorder (NVR)
- Know video surveillance basics

## Document Versions

### Version 00 (2016-08-23)

This is a draft.

## Compatibility

The following table provides the products and Mobile NVR software version to which this document applies.

<b>Product</b>	KDM2410M-V21
<b>NVR Software Version</b>	V1R1B2

# About the KDM2410M

## Product Introduction

Kedacom Mobile NVR KDM2410M (hereinafter referred to as the Mobile NVR) supports 3G/4G/WiFi/WiFi-AP wireless network transmission, satellite positioning, and H.264 and H.265 encoding formats. The Mobile NVR accommodates two SIM cards, one 2.5-inch hard disk drive (HDD) or solid-state drive (SSD), and one secure digital (SD) card. For storage devices, the Mobile NVR adopts the hard disk vibration damping technology. The Mobile NVR can connect to PTZ cameras and control them. The Mobile NVR can be controlled by Kedacom Video Management System (VMS), which is a comprehensive platform for managing cameras, NVRs, encoders, and decoders.

Specially, the Mobile NVR features the following:

- Embedded design, more stable, reliable and secure
- Support H.264 and H.265 high efficient video compression, with 4 channels high definition IP camera / standard definition analog camera accessible
- Aviation plug design for audio, control signal and power supply simultaneously, more reliable and stable
- Suspension hard disk drawer, easy to change hard disk, also support SD card storage
- Support USB interface, easy to connect to PC directly to back up recordings
- Integrated with 3G/4G network module (WCDMA, EVDO, and TD-LTE)
- Integrated with WIFI module, providing the WIFI-AP function
- Integrated with GPS module, which can locate vehicle position accurately
- Support delay shutdown
- Support 2 SIM cards combined use to increase the bandwidth effectively
- Integrated design with heat dissipation shell and better dust and water proof experience

## Specification

Video	
Encoding Format	H.264, H.265
Resolution	1080, 720P, D1, CIF, QCIF (Dual stream support)
Video Frame Rate	1 - 30 fps
Video Bit Rate	64 kbps - 4 Mbps
Audio	
Encoding Format	G.711A/U, ADPCM
Coding Rate	24 kbps - 64 kbps
Audio Function	Bi-directional audio / acoustic echo cancelling / Mute / Dumb / Remix
Storage	
Max. Internal HDDs	1xSATA, hard disk drawer, 1 x 2.5" hard disk support: 1xSD card Max. 4TB
Network	
Network Protocol	TCP/IP, ARP, FTP, TELNET, HTTP, RTP/RTCP, SNTP, VSIP, KWTP

Function	NAT / Multiple network access / Packet loss recovery / Auto network organizing
Wireless	3G: WCDMA, EVDO (optional) 4G: TD-LTE (optional) WIFI: 2.4 GHz
<b>Interfaces</b>	
Ethernet	1 x RJ45, 10Base-T/100Base-TX
Audio In / Out	1 x Mic In, 1 x Phone Out
Aviation Plug	4 x 10 core: 4xvideo input, 4 x audio input, 4 x 12 V DC output, 4 x RJ45 1 x 4 core: power supply for PTZ 1 x 10 core: local playback 1 x 9 core: wide range input 6-36 V
Alarm In / Out	4 x Inputs / 1 x Outputs
Control	1 x RS485, 1xRS232
Antenna	1 x WIFI Antenna, 1 x GPS Antenna
Extension module	3 x extension module (support 3G, 4G SIM card, GPS)
<b>Environmental</b>	
Operating Temperature	-40°C-70°C
Operating Humidity	10%-85% (no condensation)
Elevation	-60 m-5000 m
<b>Electrical</b>	
Power	9-36 V DC
Power Consumption	15 W (HDD not included)
<b>Mechanical</b>	
Weight	2.45 kg (HDD not included)
Dimensions	252 x 188.4 x 60 mm

# Accessing the Mobile NVR

---

## Preparations

For better user experience, your personal computer (PC) must meet the following fundamental requirements:

- Intel® Core® 2 Duo CPU 2.0 GHz
- 2 GB of RAM
- Windows XP or later
- Internet Explorer 6 or 7

The default IP addresses of three network ports on the Mobile NVR are as follows:

- Front panel: 192.168.0.99
- Rear panel: 192.168.100.199

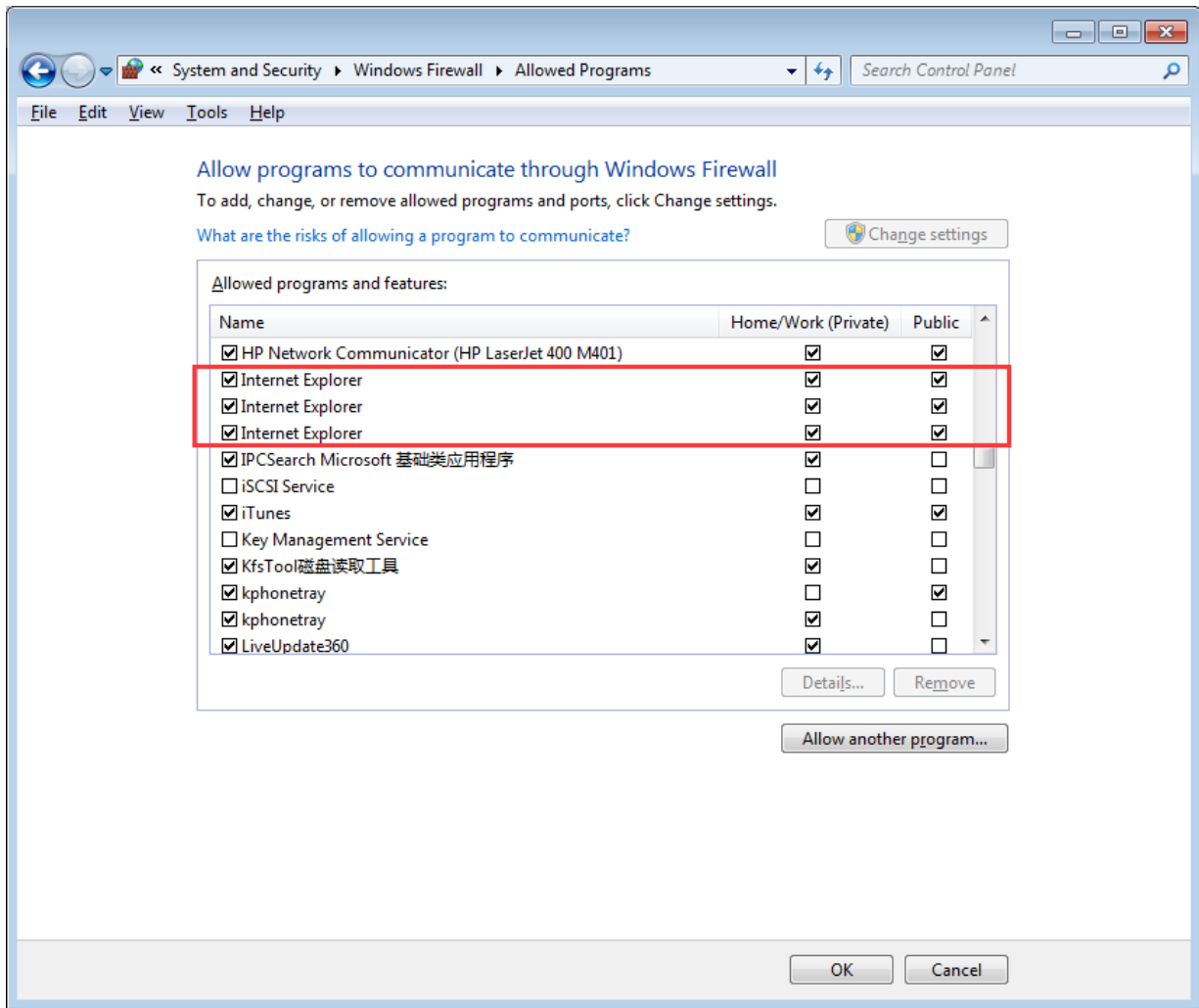
Before accessing the Mobile NVR through your PC, ensure that your PC can reach the Mobile NVR.

### NOTE

- You are not advised to use the Windows XP operating system since Microsoft stops providing security and other updates for Windows XP on April 8, 2014.
- If you use the Windows 7 or 8 operating system and the Windows Firewall is turned on, allow the Internet Explorer to communicate through the Windows Firewall.

To allow the Internet Explorer to communicate through the Windows Firewall, choose **Control Panel > System and Security > Windows Firewall > Allow programs to communicate through Windows Firewall** and then select all Internet Explorers as follows.

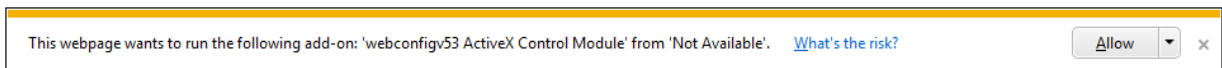




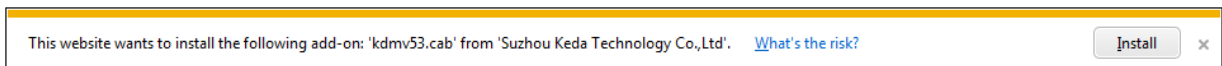
## Login

To log in to the Mobile NVR as an administrator:

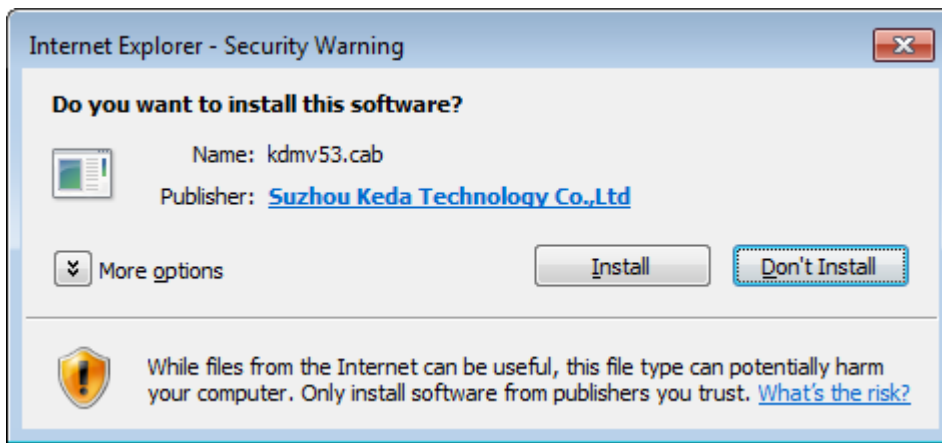
1. Run the Internet Explorer as an administrator.
2. Enter the IP address of the Mobile NVR into the address bar of the Internet Explorer.
3. Run the add-on "**webconfigv53 ActiveX Control Module**".



4. Install the add-on.

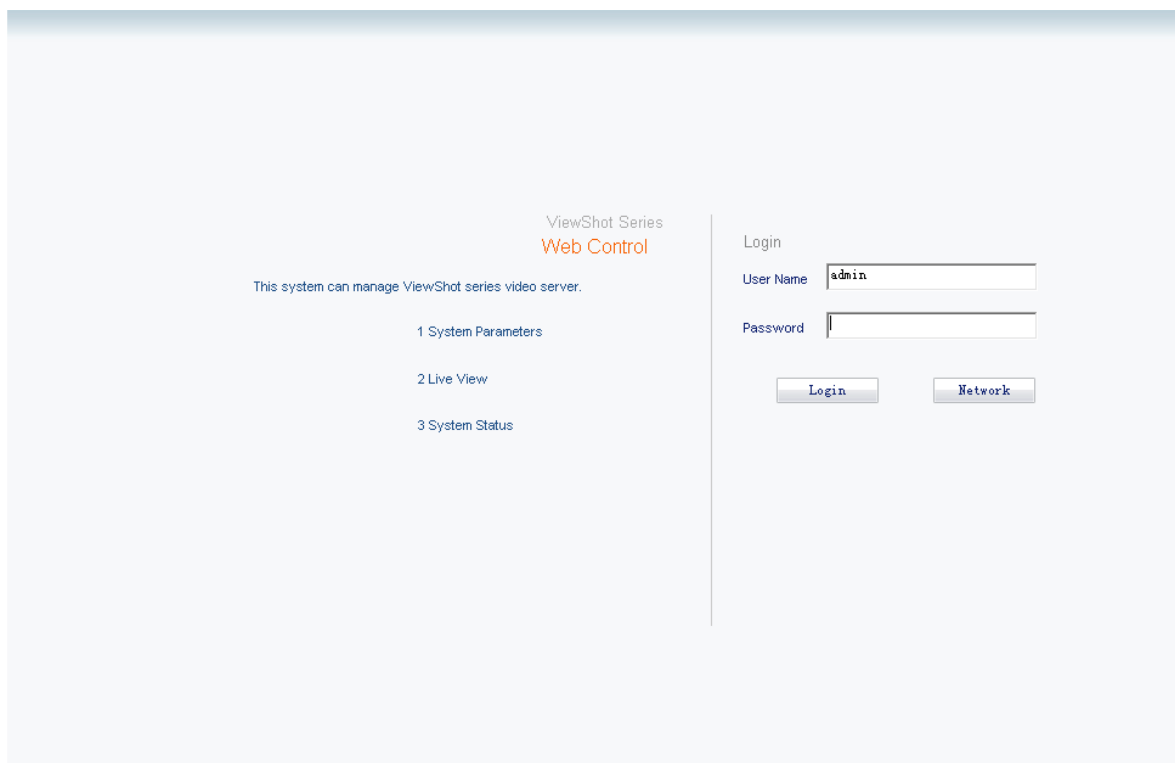


5. Click **Install**.



6. Configure **User** and **Password**.

In this document, the administrator account is applied.



The Mobile NVR comes with the following accounts:

- Administrator: both user name and password are admin.
- Standard user: both user name and password are user.

If you enter an incorrect password, you can keep trying without bothering to be locked.

If you forget your password, press the **Reset** button on the front panel of the Mobile NVR to reset the Mobile NVR to factory defaults.

If you create your own password, enter 1-16 characters.

7. Click **Login**.

**NOTE**

A maximum of 1 administrator and 4 standard users can log in to the Mobile NVR at the same time.

# Getting Started

---

After logging in to the Mobile NVR, click **Configuration** to enable the Configuration Wizard, which will guide you through the initial configuration.

To complete the initial configuration:

1. Enable the Configuration Wizard by clicking **Configuration**.



2. Click **Next**.
3. Configure parameters displayed.

Configuration Wizard

**Welcome**

---

Device Configuration 1/3

Device Name	<input type="text" value="KDM2410m-5c"/>
Assignment IP By	<input type="text" value="Static Assignment"/>
IP	<input type="text" value="192 . 168 . 1 . 160"/>
Subnet Mask	<input type="text" value="255 . 255 . 255 . 0"/>
Default Gateway	<input type="text" value="192 . 168 . 1 . 1"/>

Please log out and then log in to the device because network settings are already changed.

The **Assignment IP By** parameter is unconfigurable.

The Mobile NVR comes with the following default IP addresses:

- Front panel: 192.168.0.99
- Rear panel for WIFI: 192.168.200.199

4. Click **Next**.
5. Configure VMS settings.

Configuration Wizard

Welcome

VMS Settings 2/3

UUID: 8a2d9d482530439691bee2a3b9f36181

VMS

IP: 192 . 168 . 1 . 190

Port: 5510

Load Balancing Server

IP: 0 . 0 . 0 . 0

Port: 5520

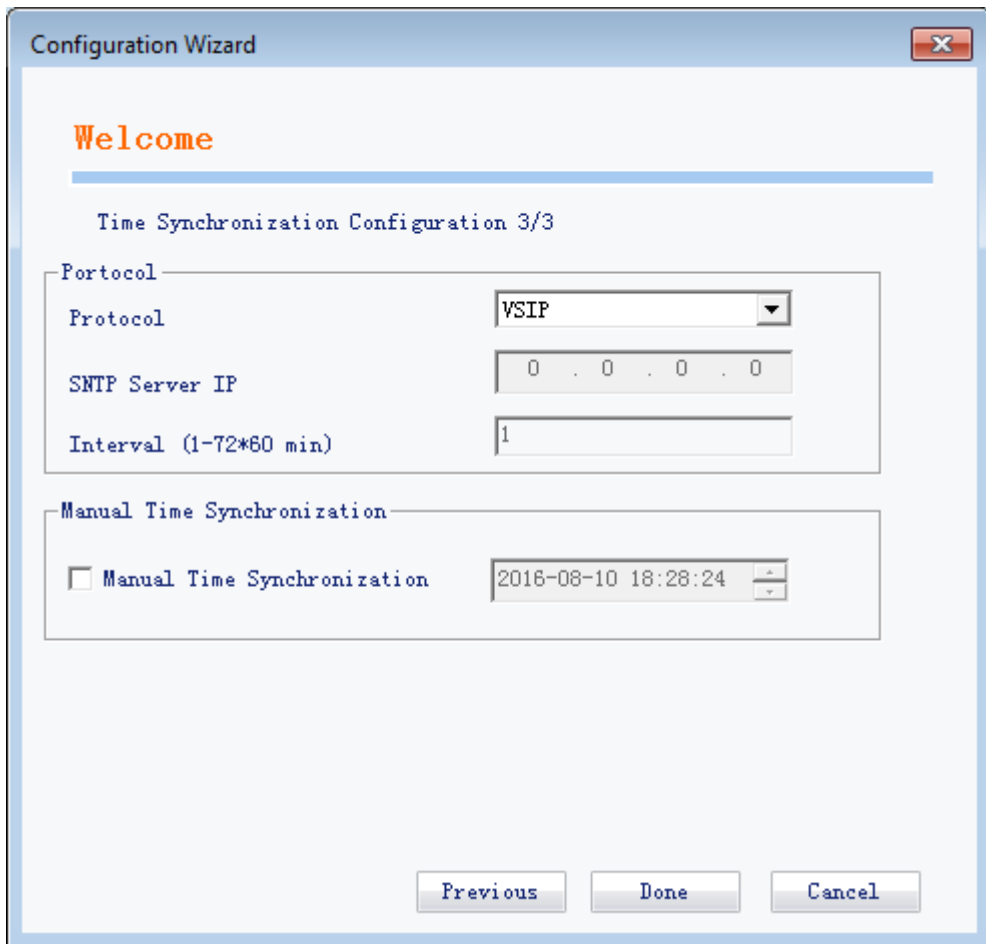
VMS Settings

VMS IP: 192 . 168 . 1 . 190

VMS Port Number: 1727

Previous Next Cancel

- For the **UUID** parameter, you can leave it unconfigured. After registering the Mobile NVR with the VMS, you can enter or update the value for this parameter. For details on how to register the Mobile NVR with the VMS, see chapter Managing Front-End Devices of *VMS Configuration Guide*.
  - Under **VMS**, the **IP** parameter indicates the IP address of the VMS and the **Port** parameter indicates the VSIP-based start listening port of the VMS.
  - Under **VMS Settings**, the **VMS IP** parameter indicates the IP address of the VMS and the **VMS Port Number** parameter indicates the network management port of the VMS.
6. Click **Next**.



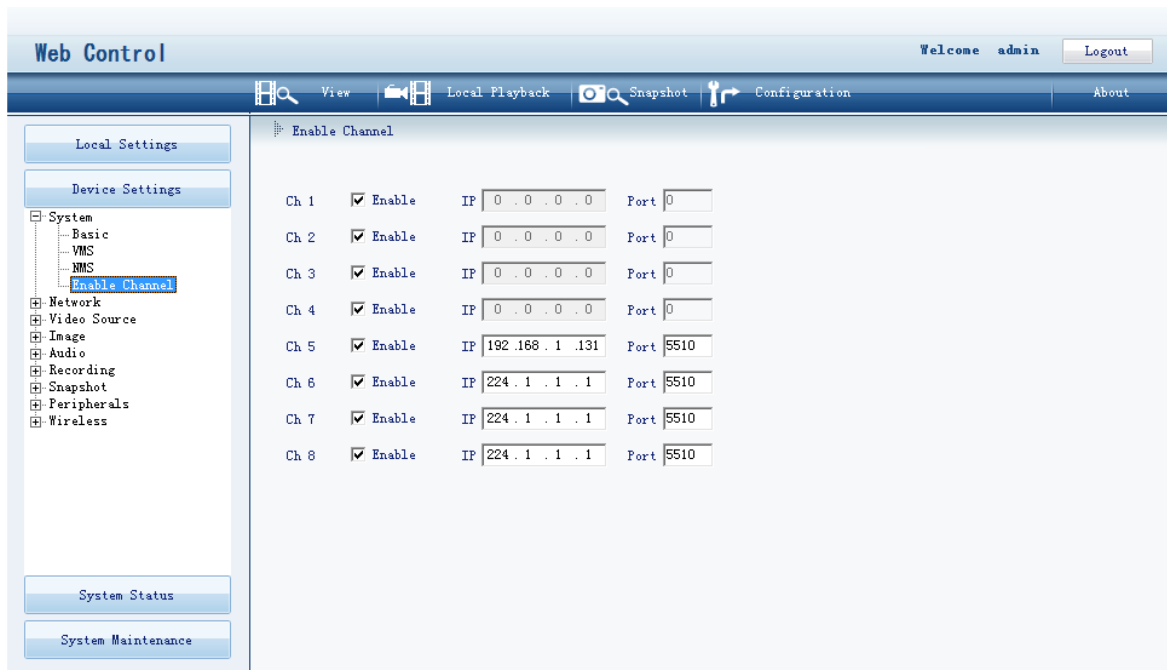
Under **Protocol**, if you set **Protocol** to **VSIP**, the Mobile NVR synchronizes the time with the VMS. If you select the **SNTP** value, configure **SNTP Server IP** and **Interval** which indicates the synchronization interval between the Mobile NVR and the SNTP server. Alternatively, select **Manual Time Synchronization** and enter a time.

7. Click **Done**.

## Adding Cameras

To add a camera:

1. Choose **Device Settings > System > Enable Channel**.
2. Configure a channel from the range of channels 5 through 8. (This is because Channels 1 through 4 are not in use.)



- 1) Select the **Enable** check box.
  - 2) Enter an IP address into the **IP** text field.
  - 3) Enter a port number into the **Port** text box.
3. Click **Apply**.

## Viewing

After a camera is added, you can view the live video sent from the camera, as shown in the following figure.





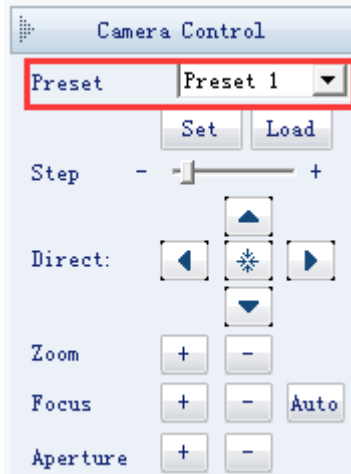


If you add a camera to channel 5 (as described in section Adding Cameras), double-click **SRC 5** to view the live video from the camera.

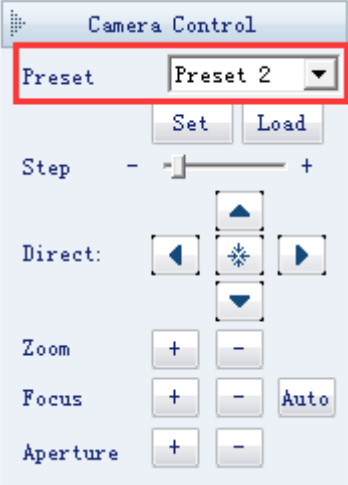





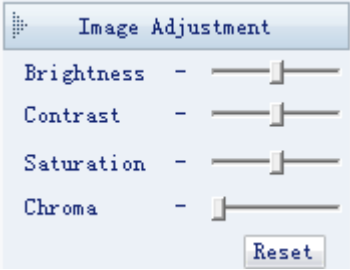
If you double-click the video display area, the video will be displayed in full screen.

## PTZ Control

PTZ controls are described in the following table.

Item	Description
Preset position	<p>To create a preset:</p> <ol style="list-style-type: none"> <li>1. Click     arrow buttons to move the camera to a position.</li> <li>2. Select a preset number.</li> </ol> 



Item	Description
	<p>3. Click <b>Set</b>.</p> <p>To load a preset:</p> <p>1. Select a preset.</p>  <p>2. Click <b>Load</b>.</p>
Adjusting the P/T speed	<p>To adjust the pan/tilt (P/T) speed, adjust the following speed bar.</p> 
Zooming	<p>Click  to zoom in and  to zoom out.</p>
Focusing	<p>Click  to adjust the focus. Click <b>Auto</b> for autofocus.</p>
Adjusting the aperture	<p>Click  to adjust the focus.</p>
Configuring image settings	<p>To configure image settings, adjust the following bars.</p> 
Motion Detection	Not supported
Tampering	Not supported

**NOTE**

The user interface of the Mobile NVR is continuously changed. Therefore, do not be alarmed when you find the screenshots in this document are different from actual ones. We greatly appreciate your understanding.









If you find some options are missing or not functional, contact the system administrator to check whether your Mobile NVR supports these options. If so, contact the local authorized Kedacom agent.

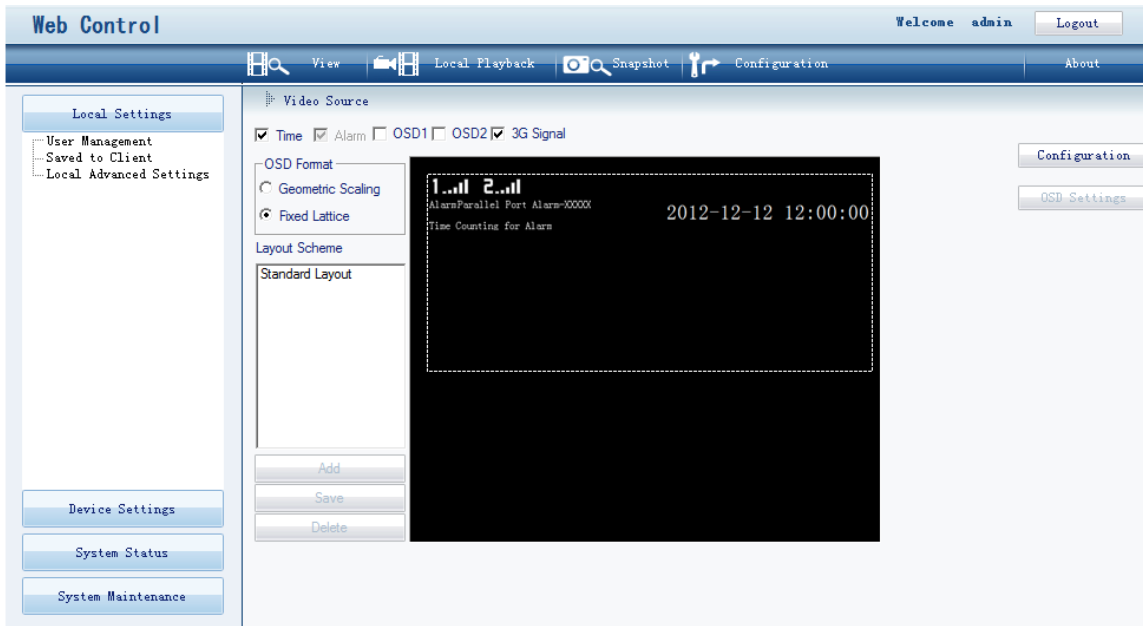
# Other Controls

When you are viewing the live video, you can find the following controls under the video display area.



The following table helps you read these controls.

Item	Description
	Pause the live view.
	Stop the live view.
	Start recordings and save them on your PC. The save path can be configured in section Save Paths.
	Start recordings and save them on the camera.
	Take snapshots and save them on your PC. The save path can be configured in section Save Paths.
	Configure the video source. For details on configuring video sources, see section Video Source.
	View the live video in full screen mode.
	Switch between the main stream and secondary stream.



# Recording

---

Recordings that will be stored on the Mobile NVR can be started in the following ways:

- Triggered by Parallel Port Alarm and Motion Detection Alarm
- Manually started on the mobile client (Wireless Surveillance System) side
- Periodic and scheduled recordings

## Alarm Triggering

For details on how to enable the Parallel Port Alarm to trigger a recording, see section Alarming.

## Manual Starting

For details on how to manually start a recording on the Wireless Surveillance System, see the online help of the Wireless Surveillance System.

## Periodic and Scheduled Recording

For details on how to schedule recordings and enable periodic recording, see section Recording.

# Local Playback

During a local playback, recordings are started in the following ways:

- Triggered by Parallel Port Alarm and Motion Detection Alarm
- Manually started on the mobile client (Wireless Surveillance System) side
- Periodic and scheduled recordings

To start a local playback:

1. Click **Local Playback**.
2. Select a channel from the **Channel** drop-down list.

Channel

3. Select a start time and an end time by specifying **Start** and **End**.

Start

End

4. Specify **Type**.

The following table describes all the parameter values.

Parameter Value	Description
File Recording	All the recordings that are started in the following ways: <ul style="list-style-type: none"><li>• Triggered by Parallel Port Alarm and Motion Detection Alarm</li><li>• Manually started on the mobile client (Wireless Surveillance System) side</li><li>• Periodic and scheduled recordings</li></ul>
All Type	All the recordings that are started in the following ways: <ul style="list-style-type: none"><li>• Triggered by Parallel Port Alarm and Motion Detection Alarm</li><li>• Manually started on the mobile client (Wireless Surveillance System) side</li><li>• Periodic and scheduled recordings</li></ul>
Parallel Port Alarm	Recordings triggered by the Parallel Port Alarm. For details on how to enable the Parallel Port Alarm to trigger a recording, see section Alarming.
Motion Detection Alarm	Recordings triggered by the Motion Detection Alarm. However, the Mobile NVR does not support the Motion Detection Alarm.
Manually Recording	Recordings started on the mobile client (Wireless Surveillance System) side. For details on how to manually start recordings on the Wireless Surveillance System, see the online help of the Wireless Surveillance System.
Scheduled Recording	Scheduled recordings. For details on how to schedule recordings, see section Recording.
Periodic Recording	Periodic recordings.

Parameter Value	Description
	For details on how to enable periodic recording, see section Recording.

- (Optional) Enable the system to automatically play back recordings after recordings are searched by selecting the **Auto Play** check box.  
If you select the **Auto Play** check box, recordings will be played back automatically after you specify **Start** and **End** and click **Search**.
- Click **Search**.
- From the search results, double-click a result entry to play back a recording.

Start Time	End Time
2016-08-07 20:11:57	2016-08-07 21:11:55
2016-08-07 21:11:55	2016-08-07 22:11:52
2016-08-07 22:11:52	2016-08-07 23:11:50
2016-08-07 23:11:50	2016-08-08 00:11:47
2016-08-08 00:11:47	2016-08-08 01:11:45
2016-08-08 01:11:45	2016-08-08 02:11:43
2016-08-08 02:11:43	2016-08-08 03:11:40
2016-08-08 03:11:40	2016-08-08 04:11:38
2016-08-08 04:11:38	2016-08-08 05:11:35
2016-08-08 05:11:35	2016-08-08 06:11:33
2016-08-08 06:11:33	2016-08-08 07:11:30
2016-08-08 07:11:30	2016-08-08 08:11:28
2016-08-08 08:11:28	2016-08-08 09:11:26
2016-08-08 09:11:26	2016-08-08 10:11:23
2016-08-08 10:11:23	2016-08-08 11:11:21
2016-08-08 11:11:21	2016-08-08 12:11:18
2016-08-08 12:11:18	2016-08-08 13:11:16
2016-08-08 13:11:16	2016-08-08 14:11:14
2016-08-08 14:11:14	2016-08-08 15:11:11
2016-08-08 15:11:11	2016-08-08 16:11:09

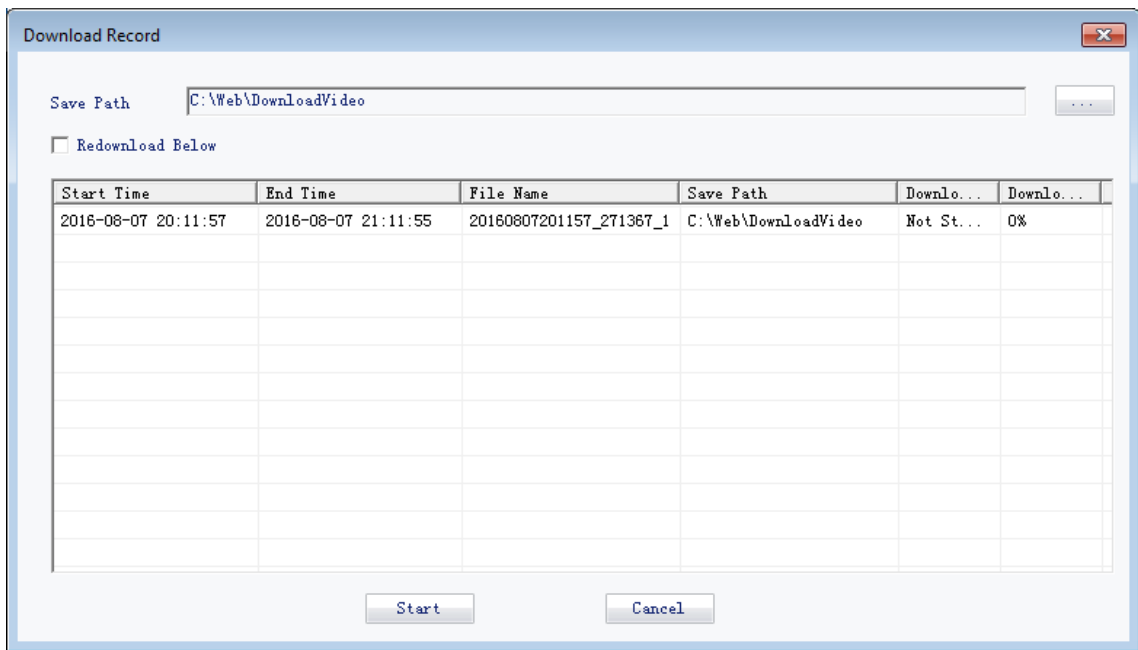
Search Page 1 Total 4

Download Delete

In this step, you can download or delete a recording.

To download a recording:

- Select the recording.
- Click **Download**.
- In the displayed dialog box, specify a save path and click **Start**.



# Snapshots

To query snapshots that are saved on the Mobile NVR:

1. Click **Snapshot**.
2. Select a channel from the **Channel** drop-down list.

Channel

3. Select a start time and an end time by specifying **Start** and **End**.

Start

End

4. Specify **Type**.

The following table describes all the parameter values.

Parameter Value	Description
All Type	All the snapshots that are captured in the following ways: <ul style="list-style-type: none"><li>• Captured due to the generation of the Parallel Port Alarm</li><li>• Captured on the mobile client (Wireless Surveillance System) side</li></ul>
Parallel Port Alarm	Snapshots captured due to the generation of the Parallel Port Alarm. For details on how to enable the Parallel Port Alarm to trigger snapshot capturing, see section Alarming.
Manually Captured	Snapshots captured on the mobile client (Wireless Surveillance System) side. For details on how to manually capture snapshots on the Wireless Surveillance System, see the online help of the Wireless Surveillance System.

5. Click **Search**.
6. From the search results, double-click a result entry to query details of a specific snapshot.

## NOTE

You cannot query snapshots that are saved on your PC. In other words, you cannot query snapshots that are taken by clicking the following button.



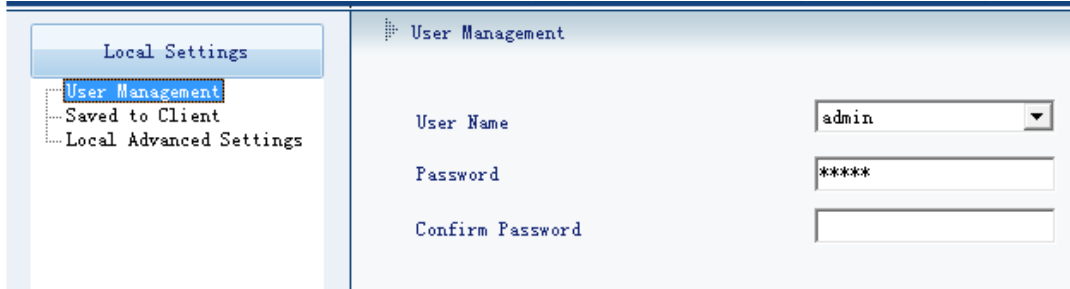
You can query only snapshots that are taken due to the generation of the Parallel Port Alarm and manually taken on the mobile client (Wireless Surveillance System) side.

For details on how to enable periodic snapshot capturing, see section Snapshot.

# Local Settings

## User Management

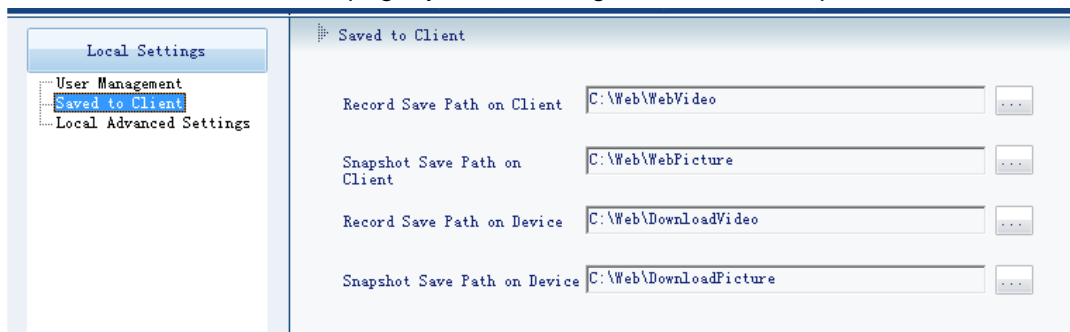
On the **User Management** tab page, you can change the password of an account.



The screenshot shows the 'User Management' tab page. On the left, a navigation pane lists 'Local Settings', 'User Management', 'Saved to Client', and 'Local Advanced Settings'. The 'User Management' tab is active. The main area contains three input fields: 'User Name' with a dropdown menu showing 'admin', 'Password' with a masked field '\*\*\*\*\*', and 'Confirm Password' with an empty field.

## Save Paths

On the **Saved to Client** tab page, you can configure various save paths.



The screenshot shows the 'Saved to Client' tab page. On the left, a navigation pane lists 'Local Settings', 'User Management', 'Saved to Client', and 'Local Advanced Settings'. The 'Saved to Client' tab is active. The main area contains four input fields, each with a browse button (three dots): 'Record Save Path on Client' (C:\Web\WebVideo), 'Snapshot Save Path on Client' (C:\Web\WebPicture), 'Record Save Path on Device' (C:\Web\DownloadVideo), and 'Snapshot Save Path on Device' (C:\Web\DownloadPicture).

The **Record Save Path on Client** stores recordings started by clicking  on the **View** page.

The **Snapshot Save Path on Client** stores snapshots taken by clicking  on the **View** page.

The **Record Save Path on Device** stores recordings downloaded by clicking **Download** on the **Local Playback** page.



Start Time	End Time
2016-08-07 20:11:57	2016-08-08 00:11:47
2016-08-07 21:11:55	2016-08-08 01:11:45
2016-08-07 22:11:52	2016-08-08 02:11:43
2016-08-07 23:11:50	2016-08-08 03:11:40
2016-08-08 00:11:47	2016-08-08 04:11:38
2016-08-08 01:11:45	2016-08-08 05:11:35
2016-08-08 02:11:43	2016-08-08 06:11:33
2016-08-08 03:11:40	2016-08-08 07:11:30
2016-08-08 04:11:38	2016-08-08 08:11:28
2016-08-08 05:11:35	2016-08-08 09:11:26
2016-08-08 06:11:33	2016-08-08 10:11:23
2016-08-08 07:11:30	2016-08-08 11:11:21
2016-08-08 08:11:28	2016-08-08 12:11:18
2016-08-08 09:11:26	2016-08-08 13:11:16
2016-08-08 10:11:23	2016-08-08 14:11:14
2016-08-08 11:11:21	2016-08-08 15:11:11
2016-08-08 12:11:18	
2016-08-08 13:11:16	
2016-08-08 14:11:14	
2016-08-08 15:11:11	

Search Page 1 Total 4

[Download](#) [Delete](#)

The **Snapshot Save Path on Device** stores snapshots downloaded by clicking **Download** on the **Snapshot** page.

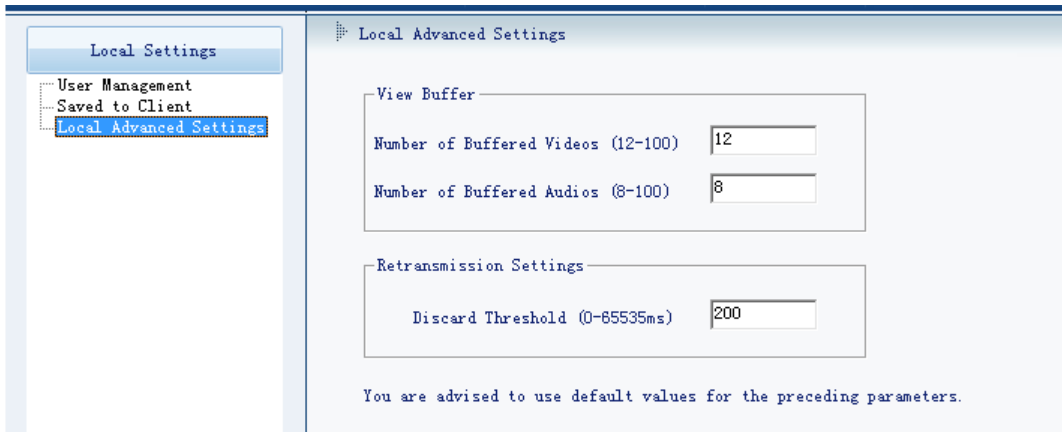
Start Time	End Time
2016-08-07 20:11:57	2016-08-08 00:11:47
2016-08-07 21:11:55	2016-08-08 01:11:45
2016-08-07 22:11:52	2016-08-08 02:11:43
2016-08-07 23:11:50	2016-08-08 03:11:40
2016-08-08 00:11:47	2016-08-08 04:11:38
2016-08-08 01:11:45	2016-08-08 05:11:35
2016-08-08 02:11:43	2016-08-08 06:11:33
2016-08-08 03:11:40	2016-08-08 07:11:30
2016-08-08 04:11:38	2016-08-08 08:11:28
2016-08-08 05:11:35	2016-08-08 09:11:26
2016-08-08 06:11:33	2016-08-08 10:11:23
2016-08-08 07:11:30	2016-08-08 11:11:21
2016-08-08 08:11:28	2016-08-08 12:11:18
2016-08-08 09:11:26	2016-08-08 13:11:16
2016-08-08 10:11:23	2016-08-08 14:11:14
2016-08-08 11:11:21	2016-08-08 15:11:11
2016-08-08 12:11:18	
2016-08-08 13:11:16	
2016-08-08 14:11:14	
2016-08-08 15:11:11	

Search Page 1 Total 4

[Download](#) [Delete](#)

## Miscellaneous

On the **Local Advanced** Settings, you can configure the following.



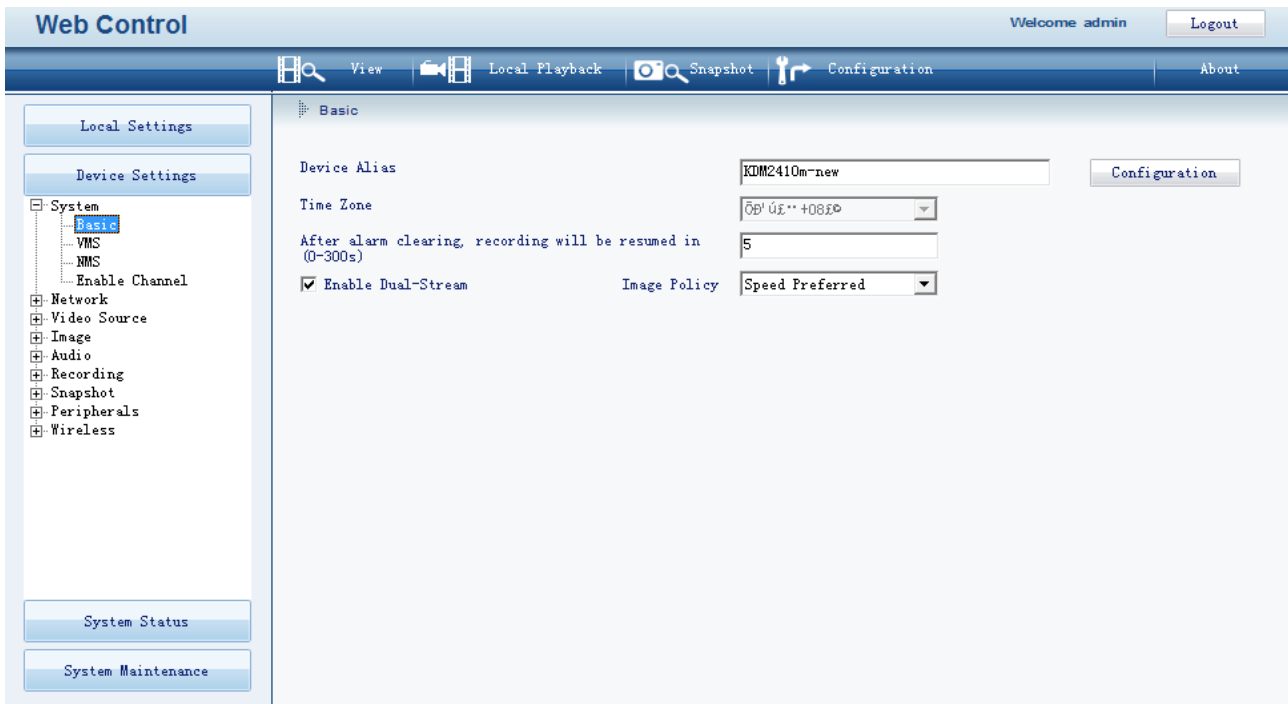
The **Discard Threshold** parameter indicates the threshold for discarding data packets. For example, the receiver is expecting packets 1 through 5 but actually receives packets 1, 3, 4, and 5. If the receiver does not receive packet 2 in 200ms, the receiver will discard packets 1 and 3. You are advised to apply the default values of the preceding parameters.

# Device Settings

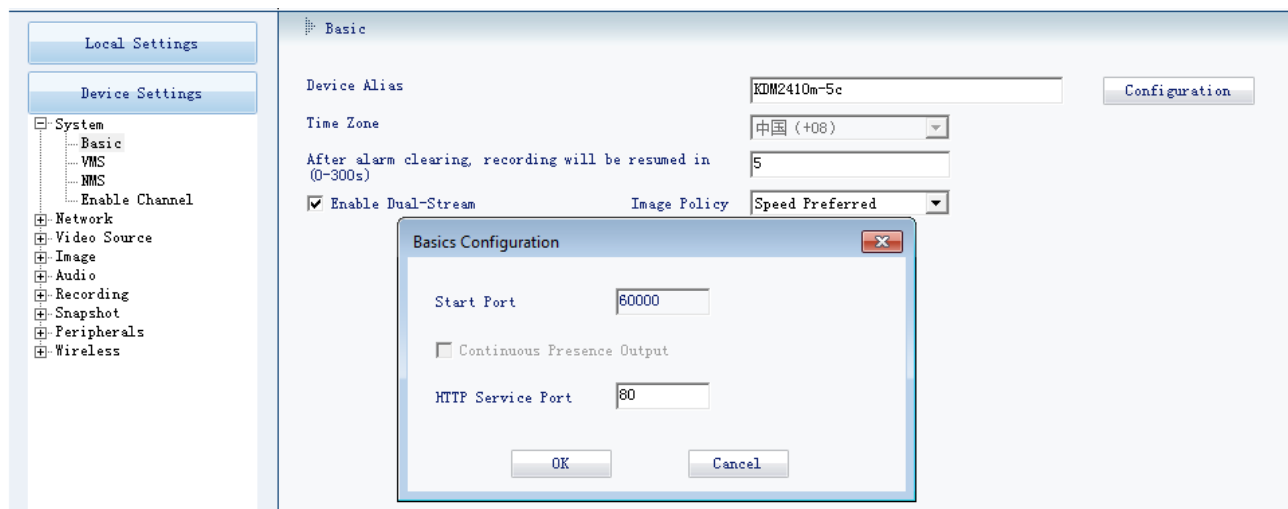
## System

### Basic

On the **Basic** tab page, you can configure the following.



If you click **Configuration**, you can configure the following.



Parameter	Description
<b>Start Port</b>	Number of start port for receiving streams from the Mobile NVR. This port is on your PC.
<b>HTTP Service Port</b>	Number of port for users to access the Mobile NVR. For example, if you want to access the Mobile NVR, you are expected to enter <b>http://192.168.0.99:80</b> in the address bar of a webpage browser.

However, you do not need to enter this port number. Therefore, if you enter **http://192.168.0.99** in the address bar, you can still access the Mobile NVR.

## VMS

On the **VMS** tab page, you can configure the following.

The screenshot shows the 'Web Control' interface with the 'VMS' configuration page selected. The left sidebar contains a tree view with 'VMS' highlighted. The main content area shows the following configuration fields:

- VMS UID:** gdgsfdfsfsd35423423dgsfdfsdfs (with a 'Configuration' button)
- VMS IP:** 192 . 168 . 1 . 190
- VMS Port:** 5510
- Load Balancing IP:** 0 . 0 . 0 . 0
- Load Balancing Port:** 5520

Before accessing the VMS, you must configure **IP** and **Port** under **VMS**. The **Port** parameter indicates the signaling port of the VMS. As for the data port of the VMS, you must configure the **Media Gateway IP** and **Media Gateway Port Number** parameters on the following page.

The screenshot shows the 'Web Control' interface with the 'Wireless Application' configuration page selected. The left sidebar contains a tree view with 'Wireless' highlighted. The main content area shows the following configuration fields:

- Connect to VMS:** Ethernet
- Dial-up Settings:**  Dial-up Through WWAN1,  Dial-up Through WWAN2
- WWAN1 Network Type:** 4G China
- WWAN2 Network Type:** Network Type
- WWAN1 APN Settings:**  Default APN, APN, User Name, Password
- WWAN2 APN Settings:**  Default APN, APN, User Name, Password
- Note:** The default value for APN is cmnet, assuming that you are using a China Mobile SIM card. If you use a China Unicom or China Telecom SIM card, set APN to 3gnet or ctnet, respectively. You do not need to enter a user name and password.
- Stream Transmission:** RTSP
- Media Gateway IP:** 192 . 168 . 1 . 190 (highlighted with a red box)
- Media Gateway Port Number:** 12000 (highlighted with a red box)
- Shutdown Delayed For:** 1 min (Use Together with Vehicle Power Supply)
- Transmission Status:** Audio Preferred
- Auto Disconnection If No Data (Note: Use Fixed Frame Rate is not selected.)
- Alarm Trigger Online/Alarm Clearing Trigger Offline
- Phone Trigger Online:** Whitelist (Call)
- Text Trigger Online:** Whitelist (Message)
- Apply** button

Under **Load Balancing**, **IP** and **Port** indicate the IP address and port number of the load balancing

server, respectively.

If you click **Configuration**, you can configure the following.

The following table helps you read the parameters displayed on the preceding figure.

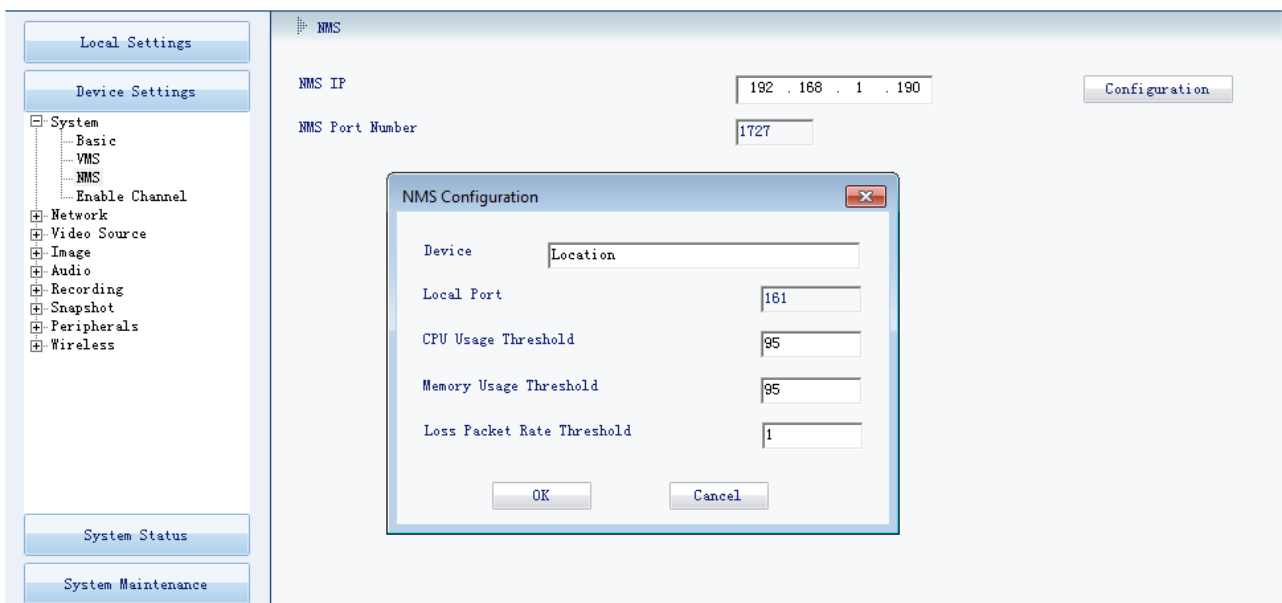
Parameter	Description
Test Duration	This parameter is used to test the connection between the Mobile NVR and VMS.
Number of Tests	Number of tests conducted on the connectivity between the Mobile NVR and VMS
Send NAT Probe Packets	Whether to enable the Mobile NVR to send NAT probe packets to the VMS
Interval	Interval at which the Mobile NVR sends NAT probe packets to the VMS
Password	UUID of the Mobile NVR. You do not need to configure this parameter.
Report Camera Information to VMS	Whether to enable the Mobile NVR to report camera information to the VMS
18-bit UUID	This is an internal parameter. Do not configure it.
Number of Channels	Number of cameras that the Mobile NVR supports

## NMS

On the **NMS** tab page, you can configure the following.



Under **NMS**, the **NMS IP** and **NMS Port Number** parameters indicate the IP address and network management port number (optional) of the VMS, respectively. If you click **Configuration**, you can configure the following.



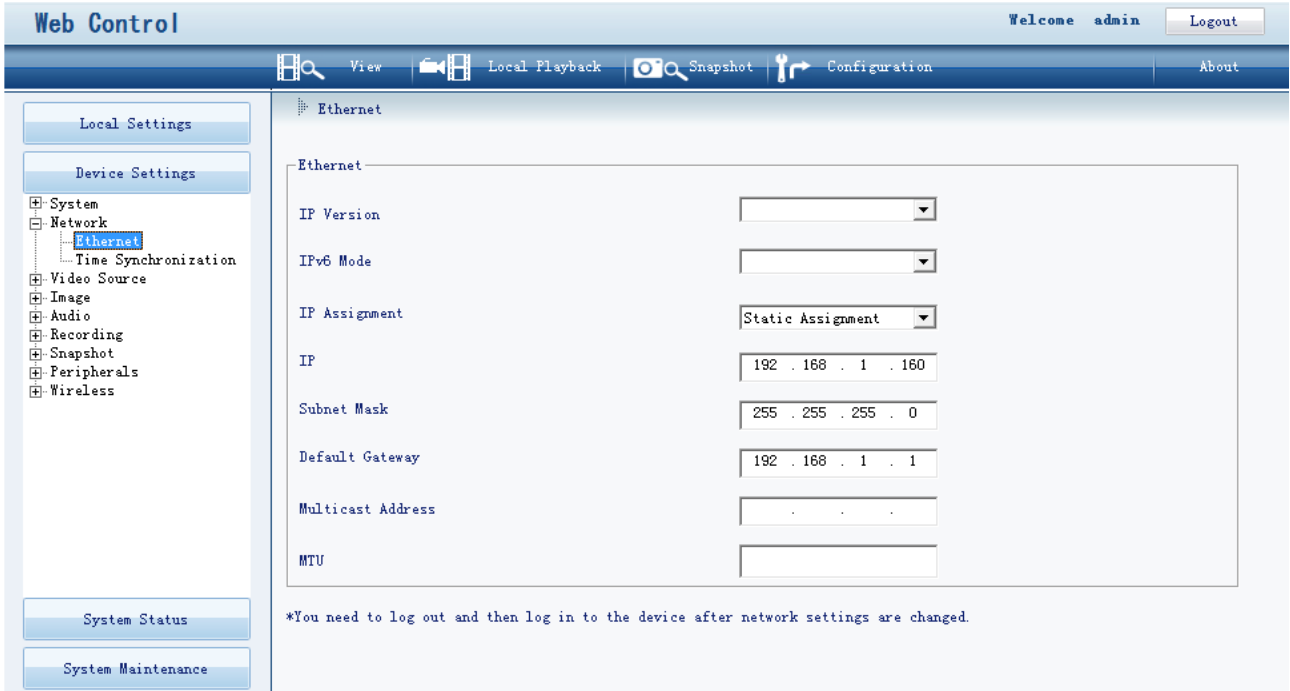
The following table helps you read the parameters displayed on the preceding figure.

Parameter	Description
Device	VMS alias
Local Port	Port for the VMS to manage the Mobile NVR
CPU Usage Threshold	CPU usage threshold of the Mobile NVR. If this threshold is reached, a High CPU Usage message will be sent from the Mobile NVR to the VMS.
Memory Usage Threshold	Memory usage threshold of the Mobile NVR. If this threshold is reached, a High Memory Usage message will be sent from the Mobile NVR to the VMS.
Loss Packet Rate	Loss packet rate threshold of the Mobile NVR.

Threshold	If this threshold is reached, a High Loss Packet Rate message will be sent from the Mobile NVR to the VMS.
-----------	--

## Network

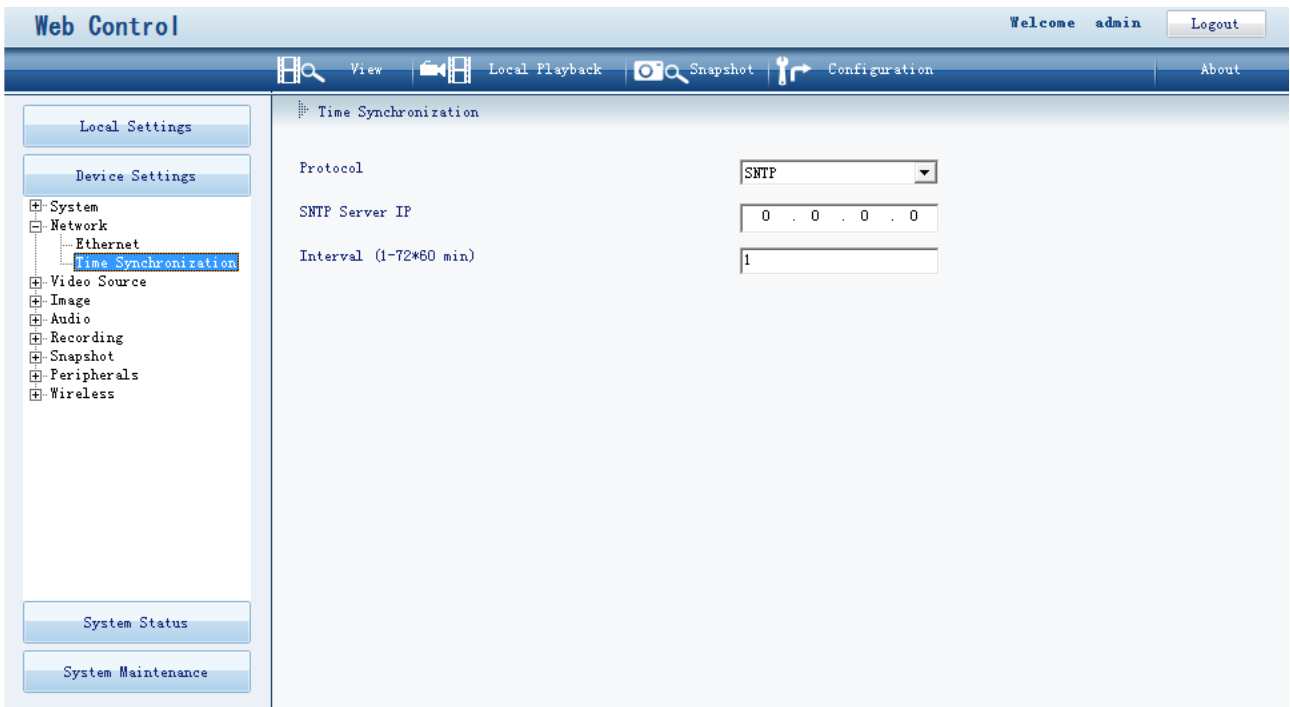
On the **Ethernet** tab page, you can configure the following.



The following table describes the parameters displayed on the preceding figure.

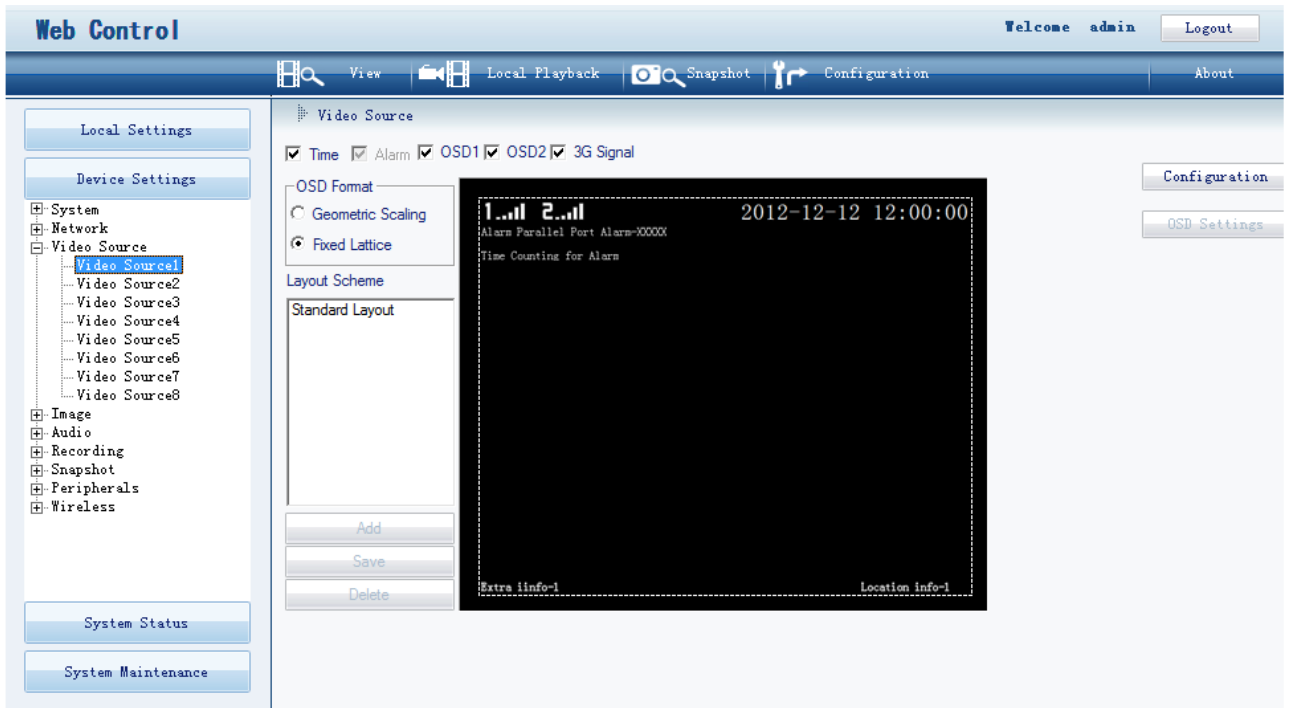
Parameter	Description
IP Version	IP version. This parameter is optional.
IPv6 Mode	IP V6 mode. Currently, the Mobile NVR does not support IPv6.
IP Assignment	Only one parameter value is available.
IP	IP address of the Mobile NVR
Multicast Address	This parameter is optional.
MTU	Maximum transmission unit. This parameter is optional.

On the **Time Synchronization** tab page, you can configure the following.



## Video Source

On the **Video Source** tab page, you can configure each camera.



The following table helps you read the parameters or options displayed on the preceding figure.

Parameter or Option	Description
Time	When this option is selected, the system time will be displayed on the video display area. If you want to change the time display location, move your cursor to the time

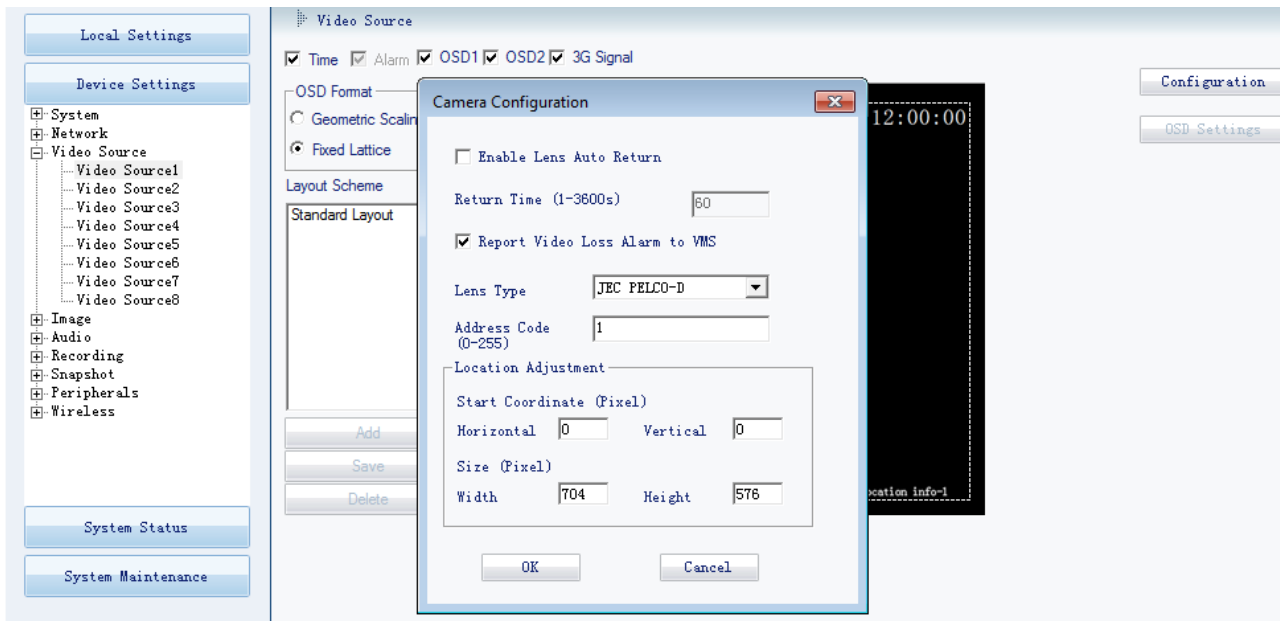


	text box and drag the time text box to the target location.
OSD1	You can use this option to display extra information on the video display area. When this option is selected, the corresponding extra information is displayed. To edit the extra information, double-click the <b>Extra info-1</b> text box.
OSD2	You can use this option to display extra information on the video display area. When this option is selected, the corresponding extra information is displayed. To edit the extra information, double-click the <b>Location info-1</b> text box.
3G Signal	When this option is selected, the 3G signal bar will be displayed on the video display area. If you want to change the signal bar display location, move your cursor to the signal bar and drag it to the target location.
Geometric Scaling	Fit the video image according to the screen size.
Fixed Lattice	Adjust the video image according to the screen size.
Layout Scheme	You can create layout schemes here.

**NOTE**

All the preceding options or parameters take effect only on analog cameras.

If you click **Configuration**, you can configure the following.

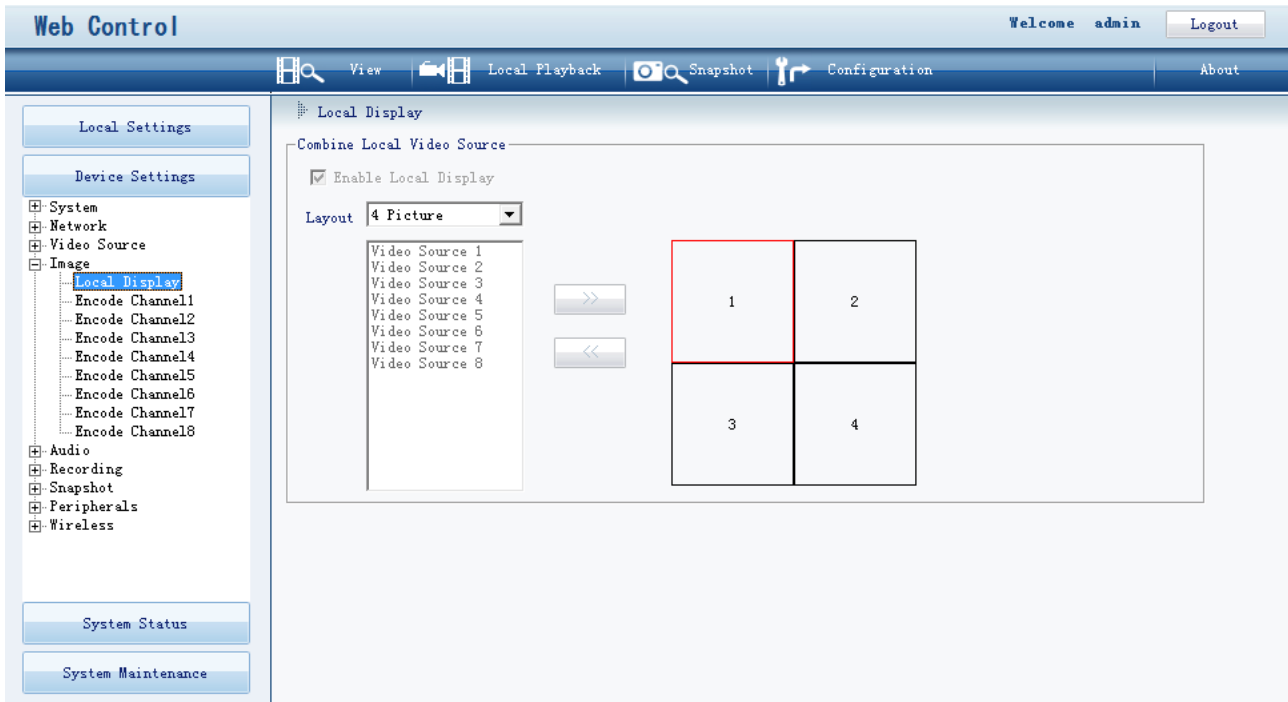


The following table helps you read the parameters or options displayed on the preceding figure.

Parameter or Option	Description
Enable Lens Auto Return	Whether to enable the Lens Auto Return function. This function enables a lens to automatically return to the factory default pan/tilt location. This parameter is used together with the <b>Return Time</b> parameter.
Return Time	Time after which a lens returns to the factory default pan/tilt location. This parameter is used together with the <b>Enable Lens Auto Return</b> parameter.
Report Video Loss Alarm to VMS	Whether to enable the camera to report the video loss alarm to the VMS
Location Adjustment	Adjust the location of the video image.

# Image

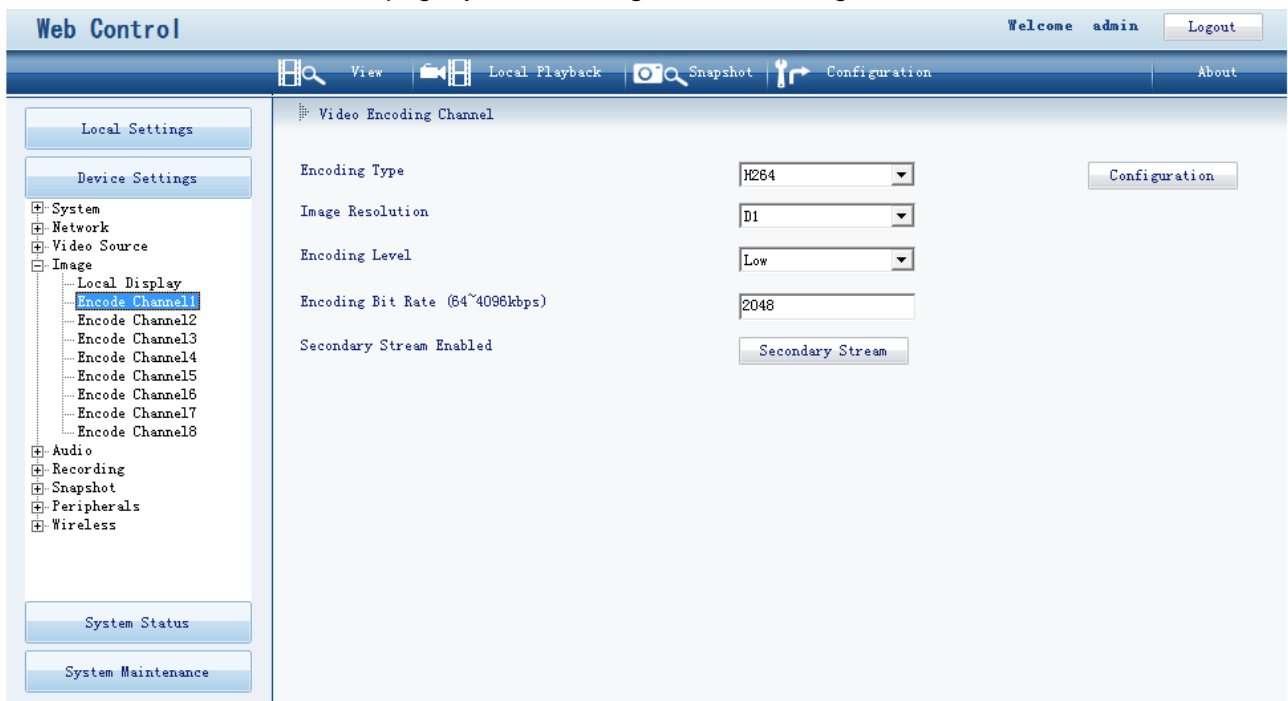
On the **Local Display** tab page, you can configure the following.



## NOTE

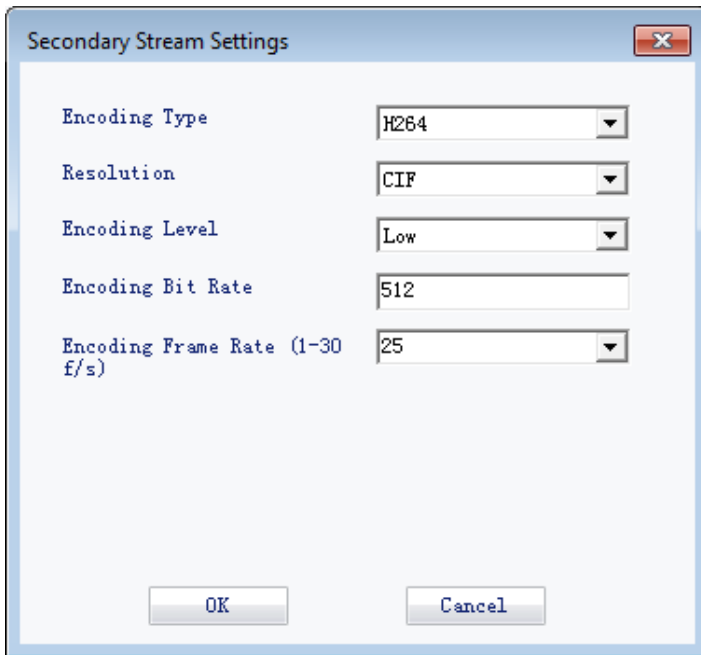
All the parameters or options displayed on the preceding figure take effect only on analog cameras.

On the **Encode ChannelX** tab page, you can configure the following.

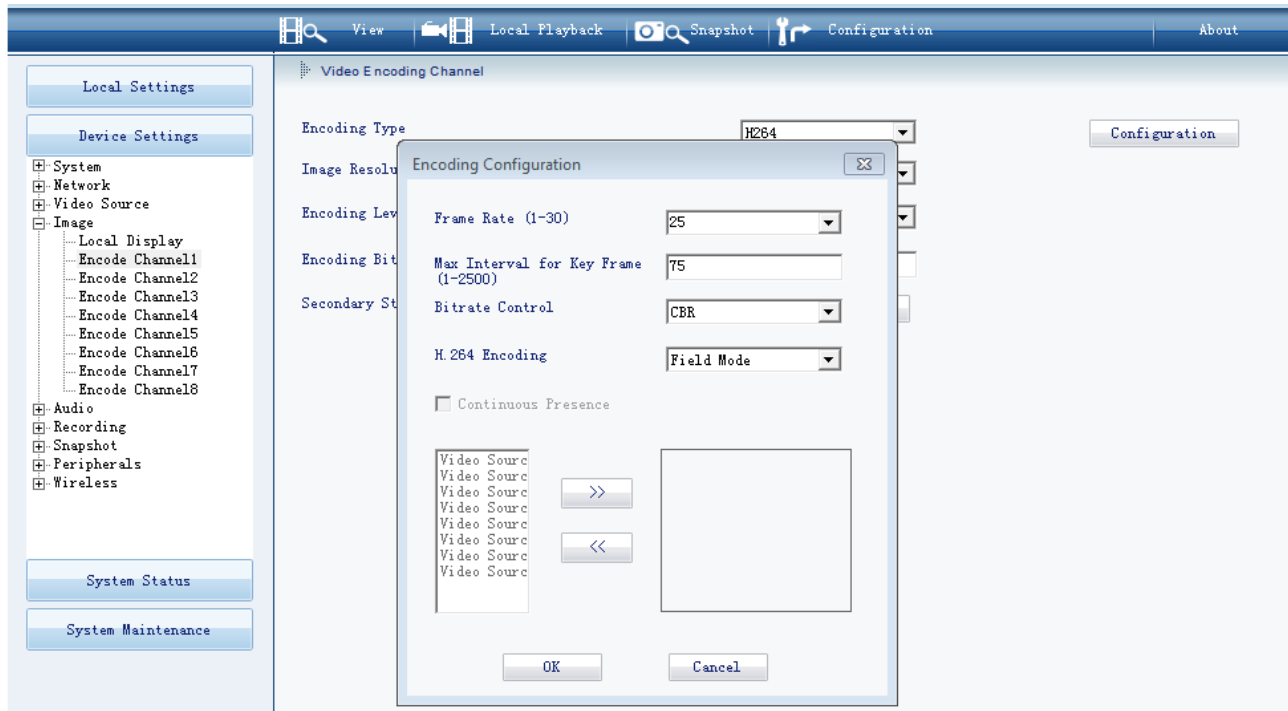


For the **Encoding Level** parameter, the **High** value can guarantee high image quality.

If you click **Secondary Stream**, you can configure secondary streams.



If you click **Configuration**, you can configure the following.



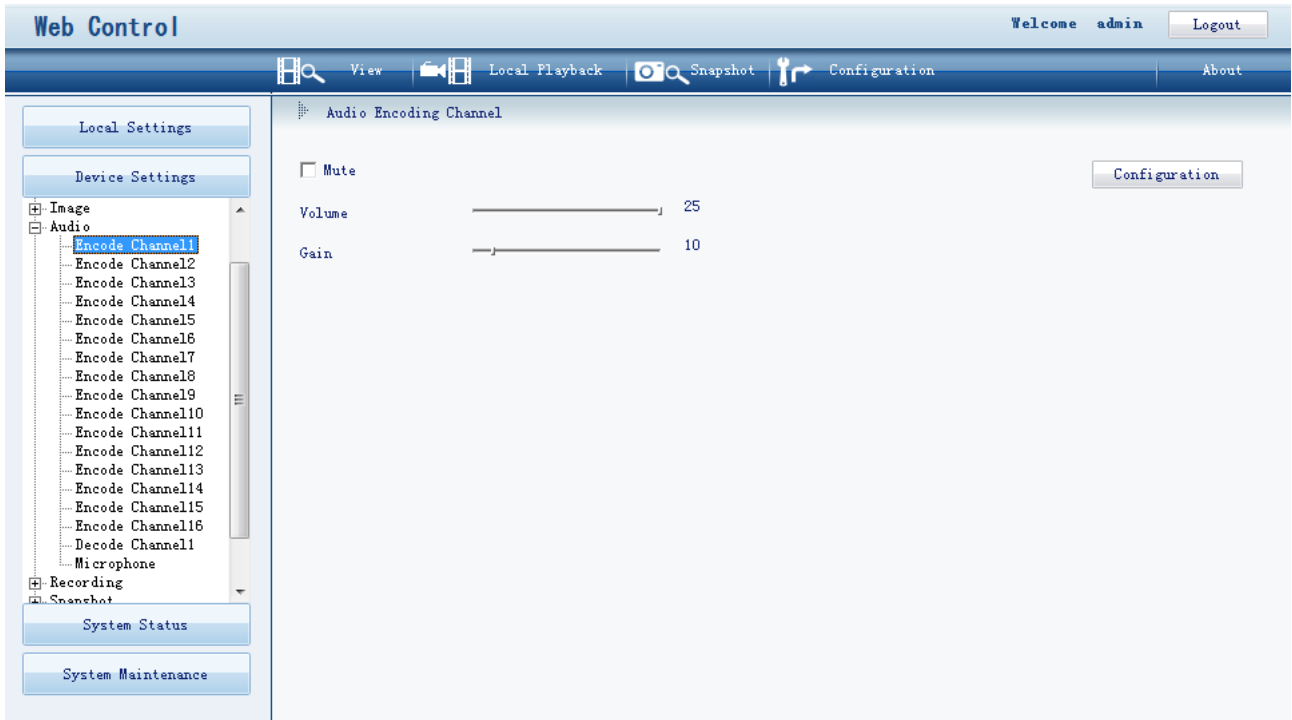
The **H.264 Encoding** parameter takes effect on only analog cameras.

As for parameter values:

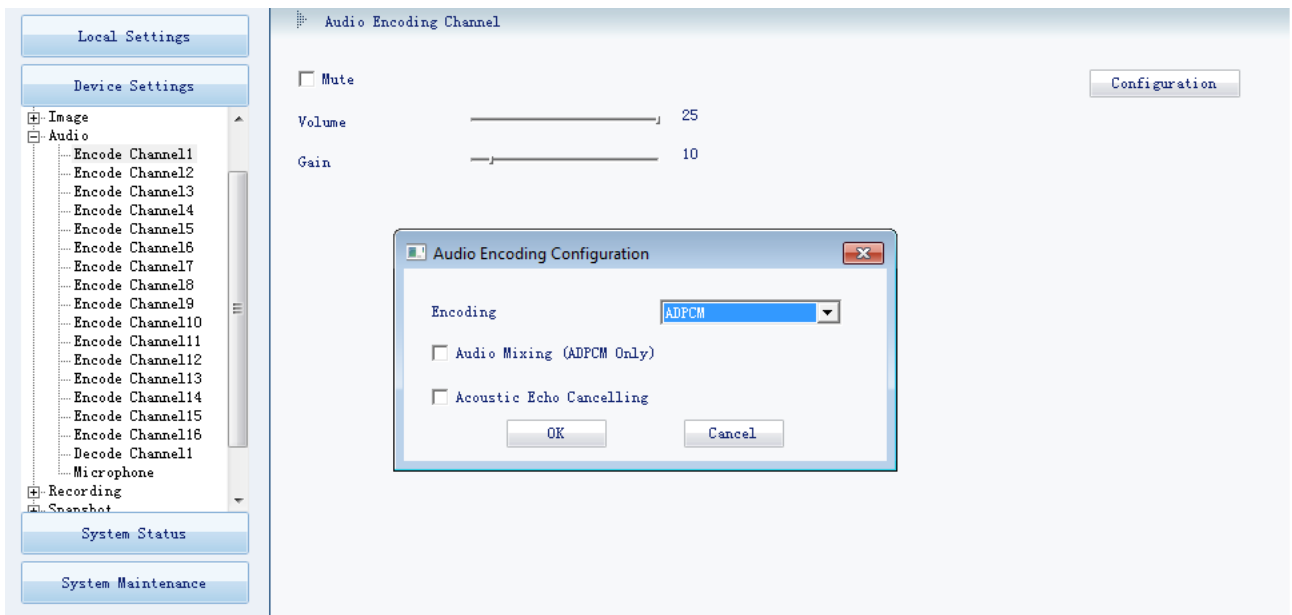
- Field Mode: If you select this mode, bandwidth resources are saved.
- Frame Mode: If you select this mode, image quality is guaranteed.

## Audio

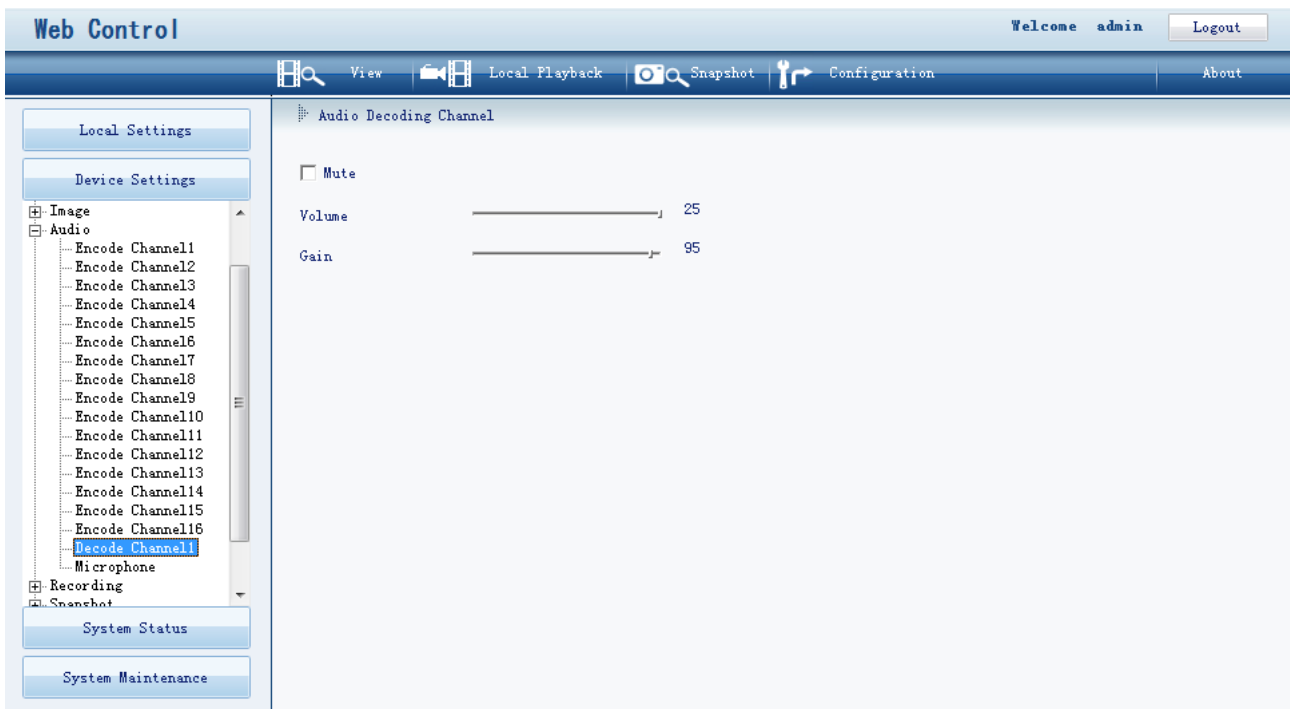
On the **Encode ChannelX** tab page, you can configure the following.



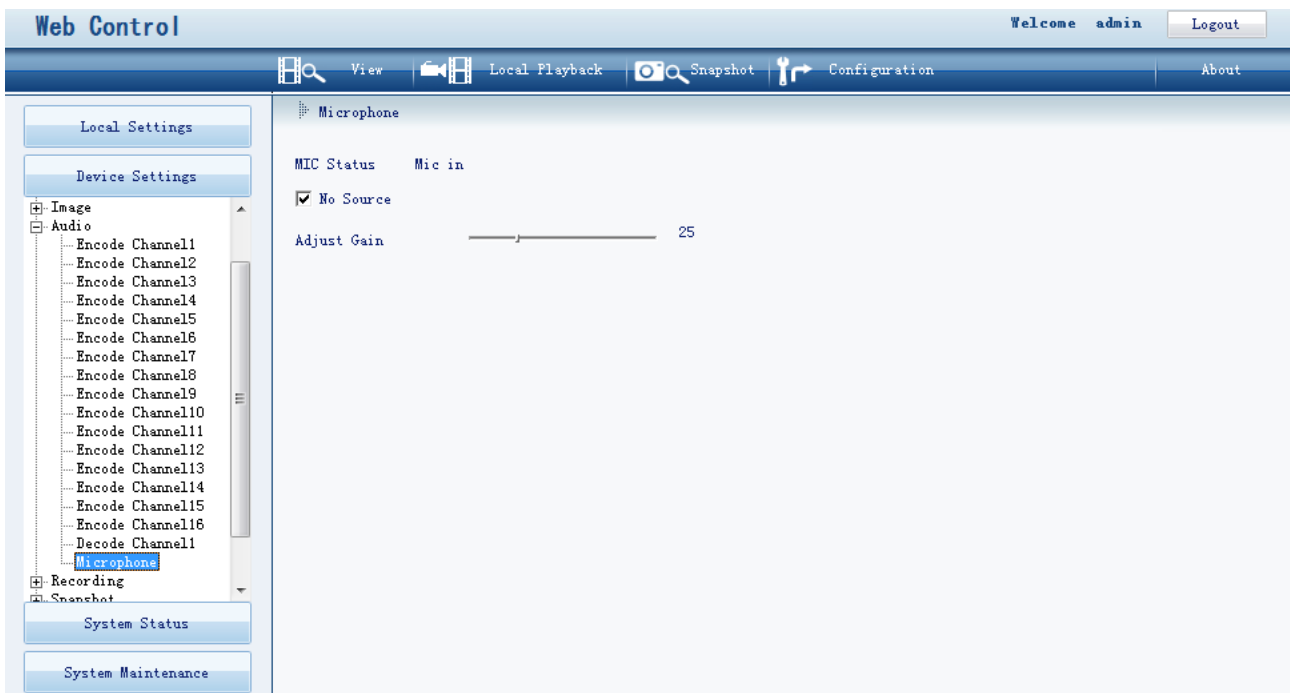
If you click **Configuration**, you can enable the Audio Mixing and Acoustic Echo Cancelling functions.



On the **Decode ChannelX** tab page, you can configure the following.



On the **Microphone** tab page, you can configure the following.



For the **No Source** option, keep the default value.

For the **Adjust Gain** parameter, keep the default value.

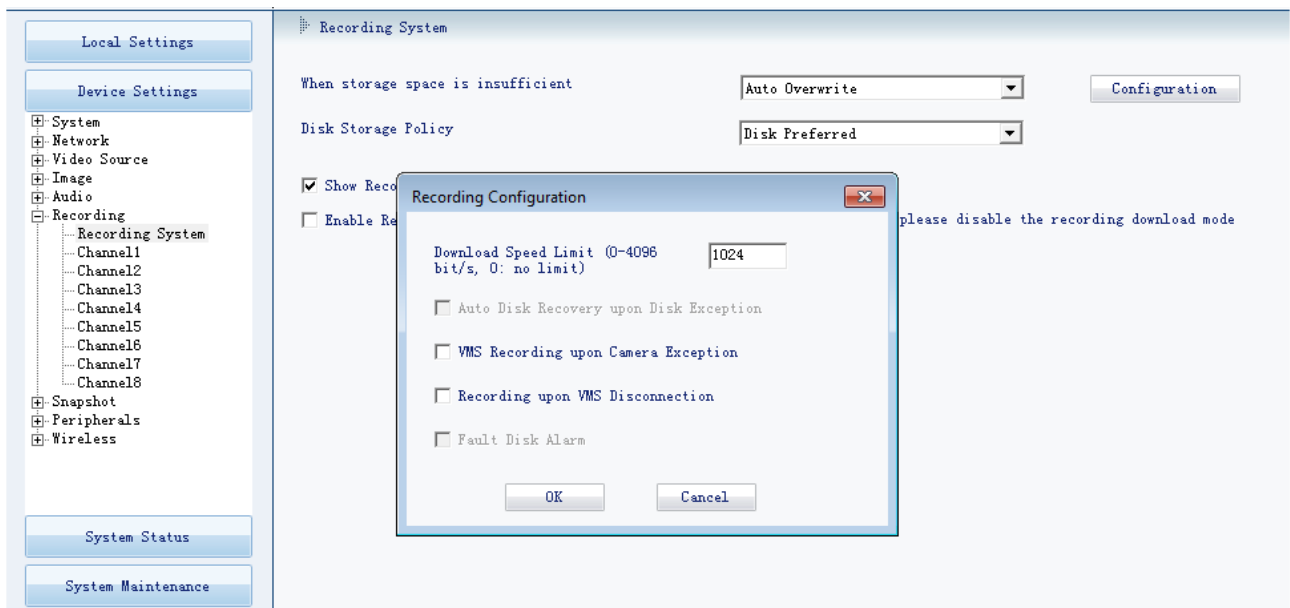
## Recording

On the **Recording System** tab page, you can configure the following.



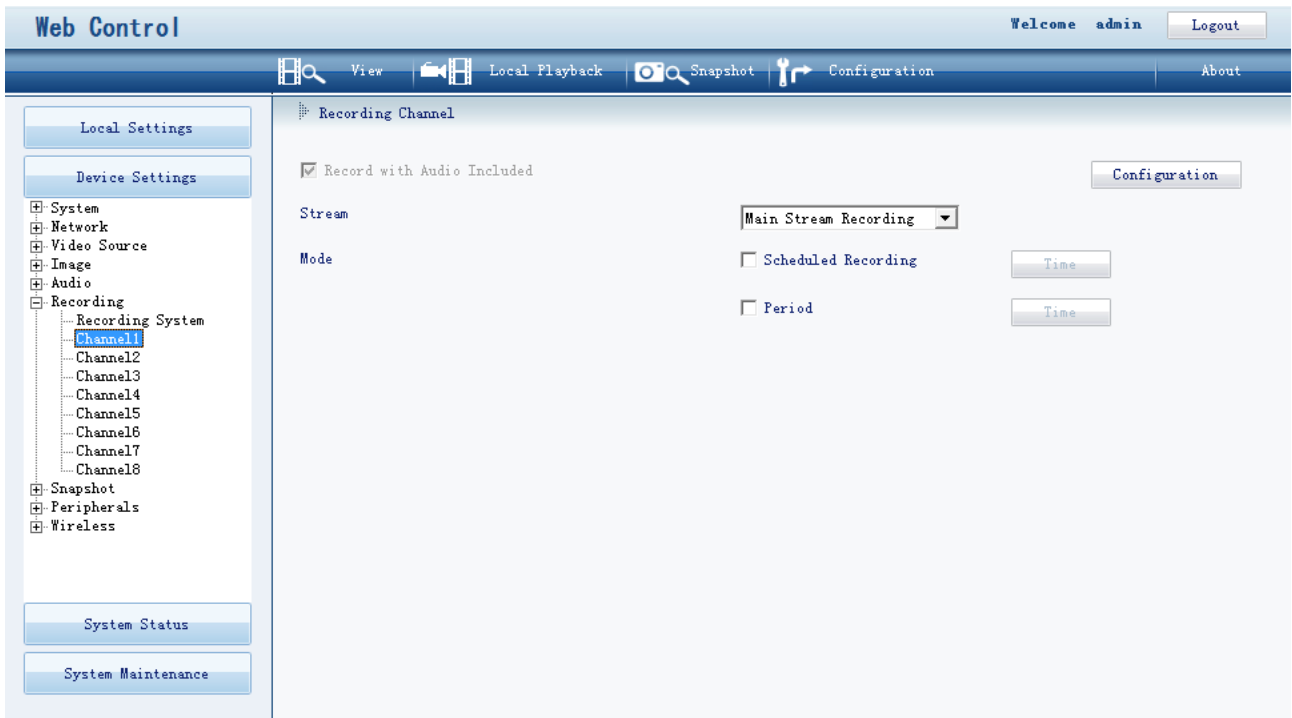
If you select the **Enable Recording Download** option, the download speed can be guaranteed. After records are downloaded, please deselect this option. You are advised to select this option only when you want to download large records.

If you click **Configuration**, you can configure the following.



Option	Description
<b>VMS Recording upon Camera Exception</b>	If this option is selected, the VMS will start a recording when an error occurs on the camera side.
<b>Recording upon VMS Disconnection</b>	If this option is selected, a recording will be started on the camera side when the Mobile NVR disconnects from the VMS.

On the **ChannelX** tab page, you can configure the following.

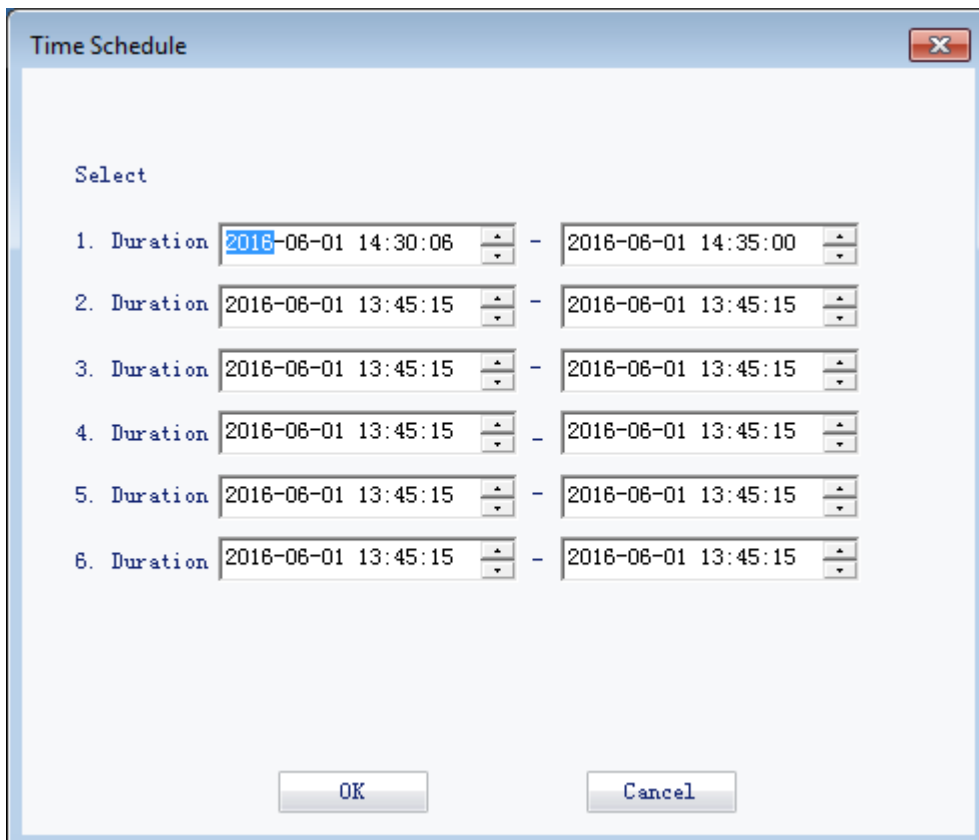


If you select **Scheduled Recording**, you can schedule recordings.

If you select **Period**, you can achieve periodical recordings that can be started and ended at specified time.

To schedule a recording:

1. Select **Scheduled Recording**.
2. Click **Time** next to **Scheduled Recording**.
3. Select durations.



4. Click **OK**.

To enable periodical recording:

1. Select **Period**.
2. Click **Time** next to **Period**.
3. Select days and durations.

Time Schedule

Select **Monday**

1. Duration 13:45:06 - 13:50:06

2. Duration 13:55:00 - 14:00:00

3. Duration 14:32:00 - 14:36:00

4. Duration 00:00:00 - 00:00:00

5. Duration 00:00:00 - 00:00:00

6. Duration 00:00:00 - 00:00:00

Copy To **All Week** **Copy**

**OK** **Cancel**

In this step, you can click **Copy** to copy the settings to specific or all days.

4. Click **OK**.

## Snapshot

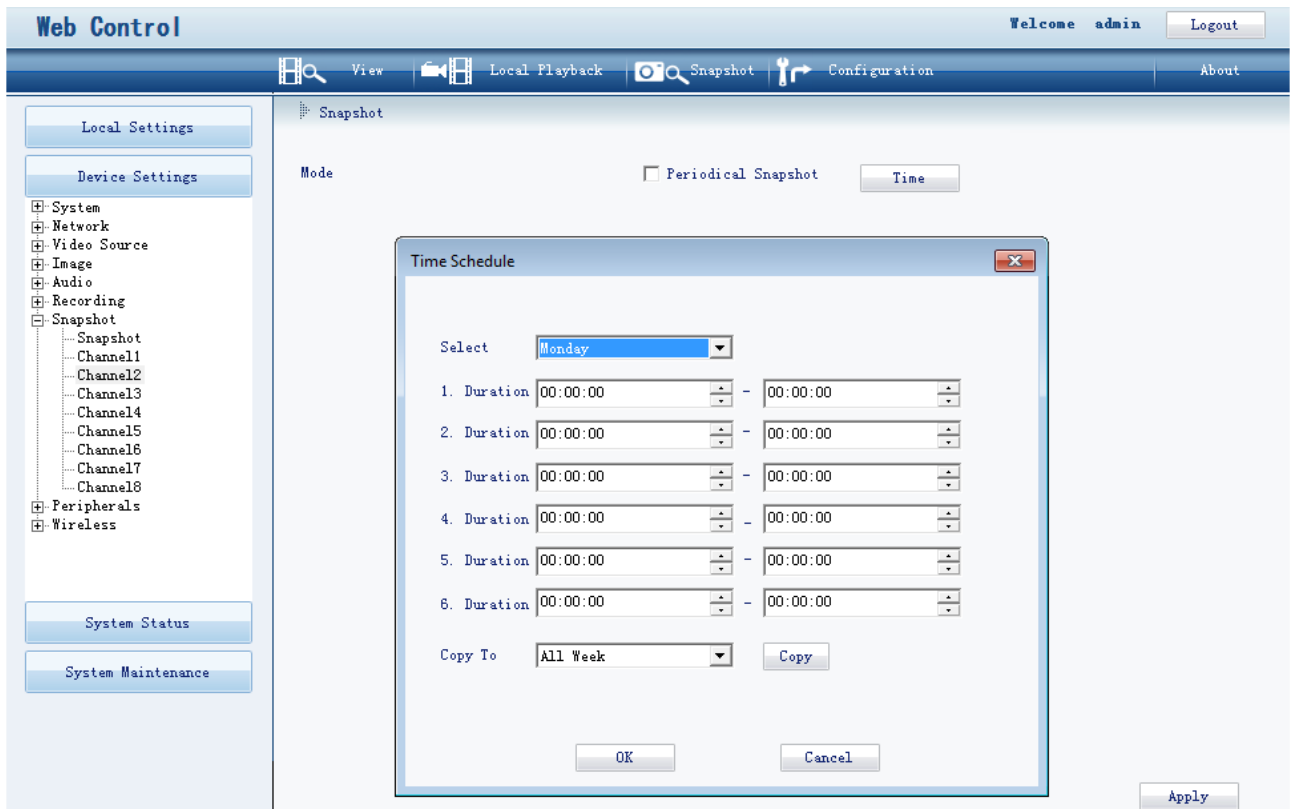
On the **Snapshot** tab page, you can configure the following.





Option	Description
<b>Number of Snapshots for One Alarm</b>	Number of snapshots taken upon the generation of a single alarm
<b>Capturing Interval for One Alarm</b>	Interval at which the system takes snapshots upon the generation of a single alarm

On the **ChannelX** tab page, you can enable periodical snapshot.

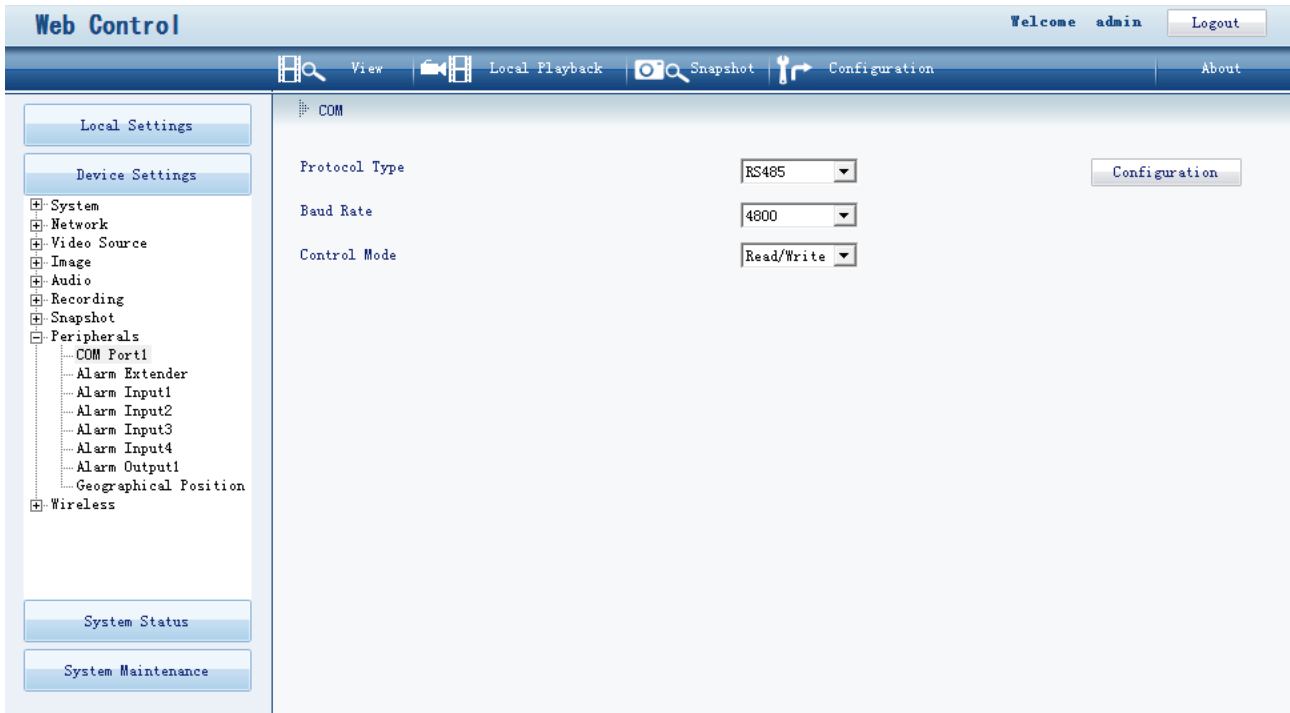


To enable periodic snapshot capturing:

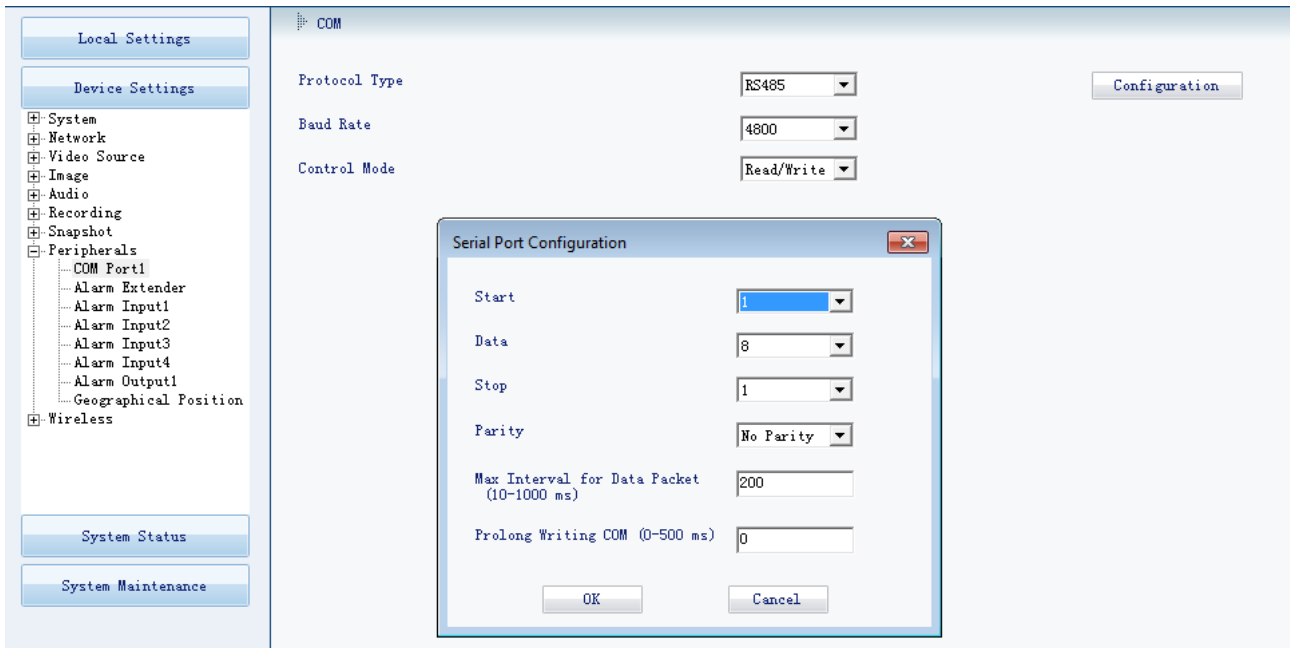
1. Select **Periodical Snapshot**.
2. Click **Time** next to **Periodical Snapshot**.
3. Select days and durations.  
In this step, you can click **Copy** to copy the settings to specific or all days.
4. Click **OK**.

## COM Port

On the **COM Port1** tab page, you can configure the COM port.



If you click **Configuration**, you can configure the following.



The following table helps you read the parameters displayed on the preceding figure.

Parameter	Description
Start	Start bit
Data	Data bit
Stop	Stop bit
Parity	You can set this parameter to <b>No Parity</b> , <b>Even</b> , and <b>Odd</b> .
Prolong Writing COM	Time for prolonging writing data into COM ports

## Alarming

### Alarm Extender

On the **Alarm Extender** tab page, you can configure alarm extenders.

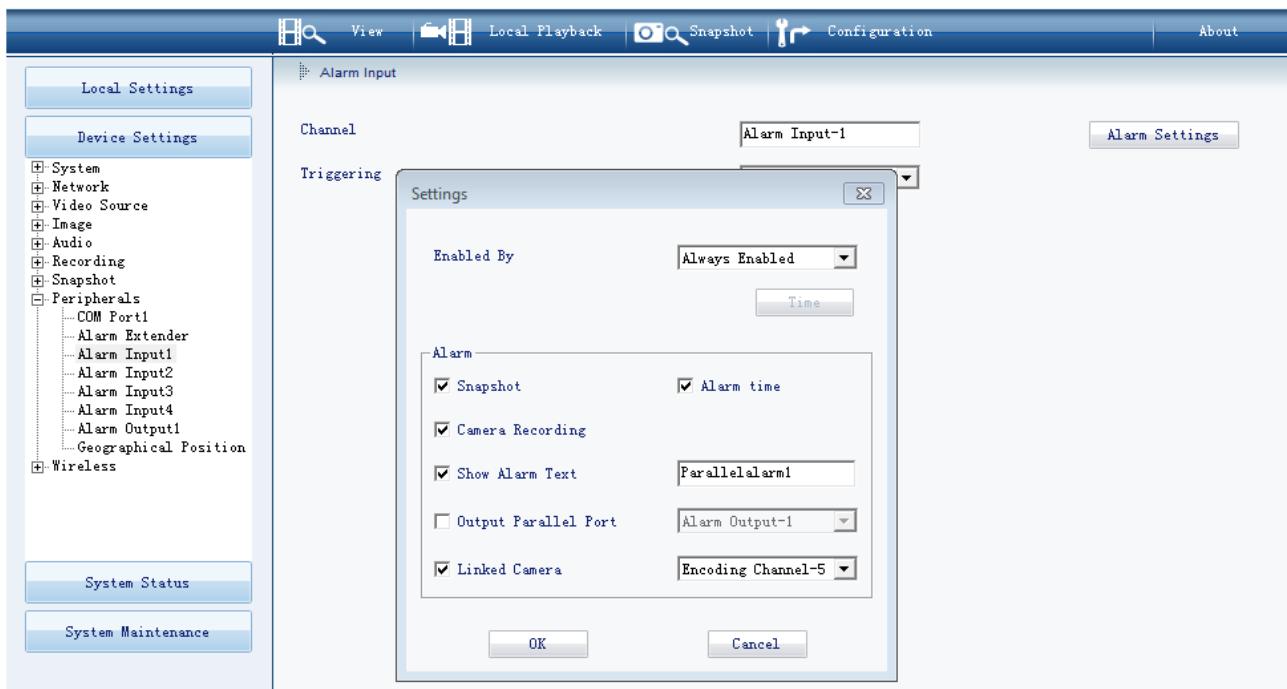
The screenshot shows the 'Web Control' interface. At the top, there's a navigation bar with 'View', 'Local Playback', 'Snapshot', 'Configuration', and 'About'. Below this is a sidebar with 'Local Settings' and 'Device Settings'. Under 'Device Settings', a tree view shows 'Peripherals' expanded to 'Alarm Extender'. The main area is titled 'Alarm Extender' and contains a table for configuring alarm extenders. The 'Alarm Extenders index' is set to 3. The table has two columns: 'COM Port of Alarm X' and 'Address Code X'. Each row has a dropdown menu for the COM port (all set to 'COM Port 1') and a dropdown menu for the address code (all set to 'Address Code 0').

Alarm Extenders index	COM Port of Alarm 1	Address Code 1
3	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0
	COM Port 1	Address Code 0

When you set **Alarm Extenders index** to **2**, you can configure two alarm extenders. If you set to **3**, three alarm extenders can be configured.

### Alarm Inputs

On the **Alarm InputX** tab page, you can configure alarm inputs.



To configure an alarm input:

1. Select the alarm input from the **Channel** drop-down list.
2. Set **Triggering** to **Turn On**.
3. Click **Alarm Settings** to configure alarm notifications.

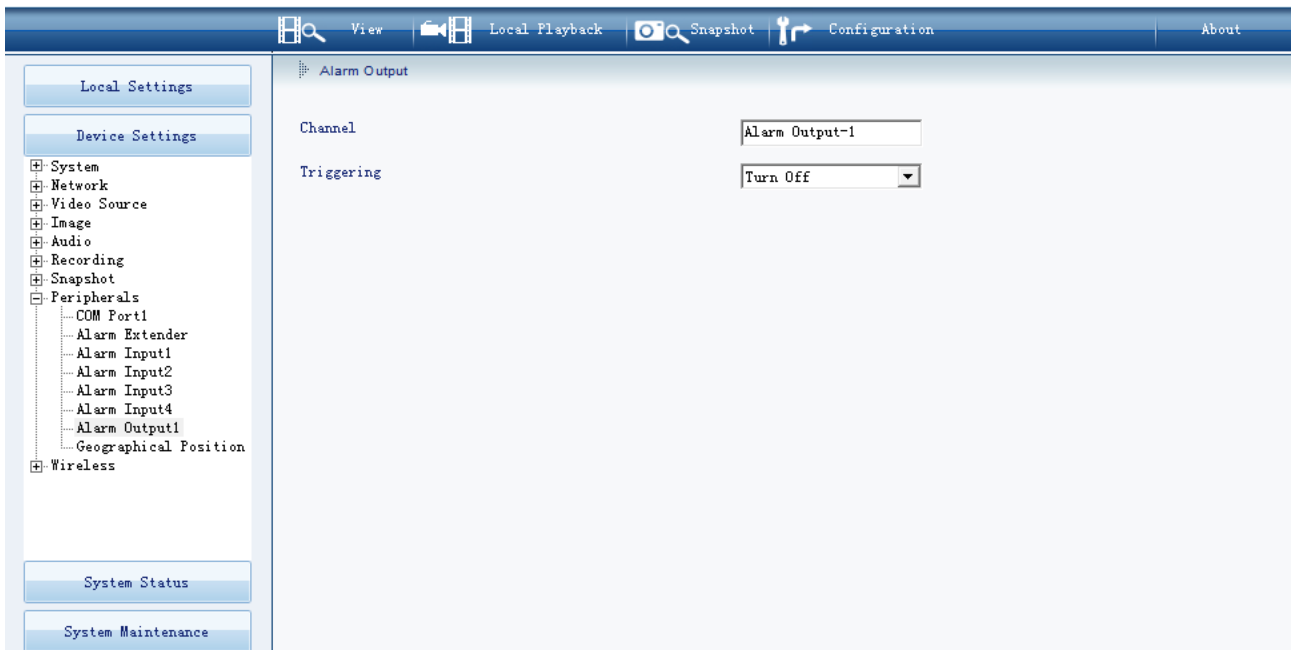
The following table describes each option.

Option	Description
Snapshot	Upon alarm generation, the linked camera will take snapshots.
Alarm time	If this option is selected, the duration the alarm persists will be displayed on the linked camera.
Camera Recording	Upon alarm generation, the linked camera will start a recording.
Show Alarm Text	Upon alarm generation, pre-defined texts will be displayed on the linked camera.
Output Parallel Port	If you select this option, an alarm output is evoked upon alarm generation.
Linked Camera	Linked camera

4. Click **OK**.

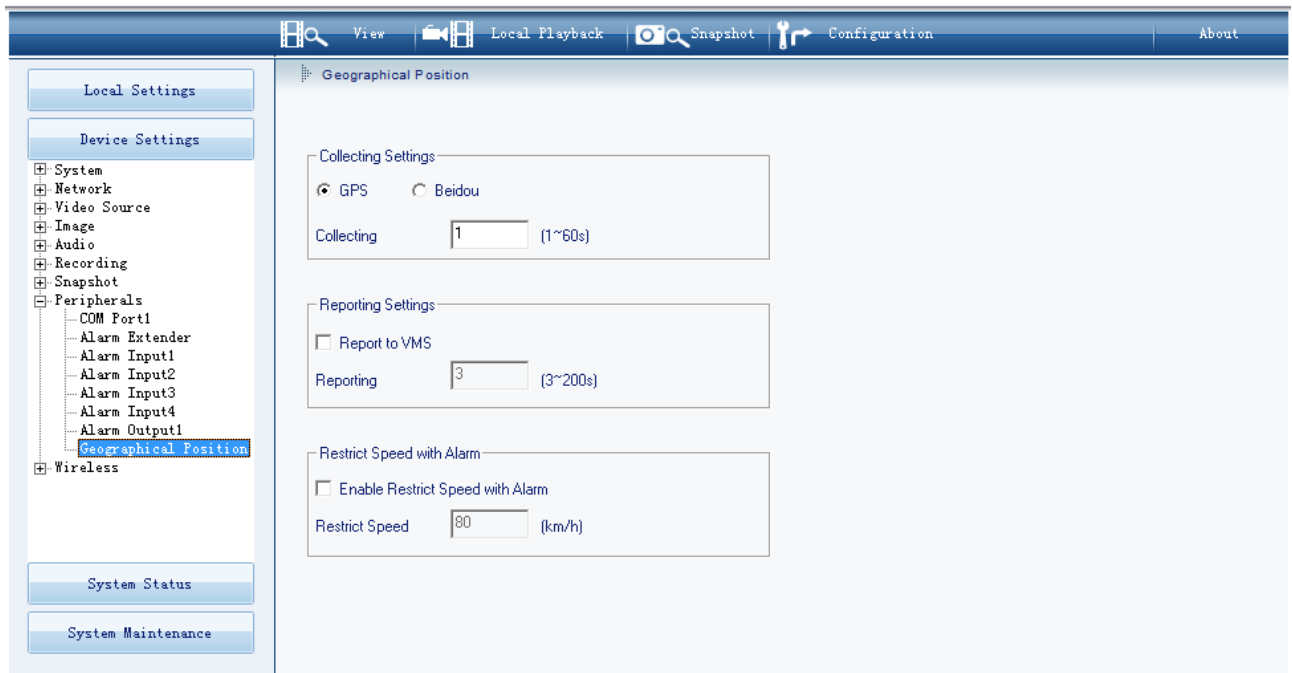
### Alarm Outputs

On the **Alarm OutputX** tab page, you can configure the following.



## Geographical Position

On the **Geographical Position** tab page, you can configure the following.



The following table describes the parameters displayed on the preceding figure.

Item	Parameter	Description
Collecting Settings	GPS	Collecting location information using the GPS.
	Beidou	Collecting location information using the BeiDou Navigation Satellite System.
	Collecting	Collecting interval
Reporting Settings	Report to VMS	Report location information to the VMS
	Reporting	Reporting interval

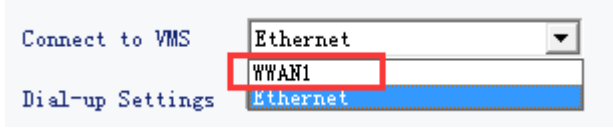
Item	Parameter	Description
Restrict Speed with Alarm	Enable Restrict Speed with Alarm	Whether to generate a High Speed alarm when the Mobile NVR is moving fast.
	Restrict Speed	Speed upper limit for the Mobile NVR

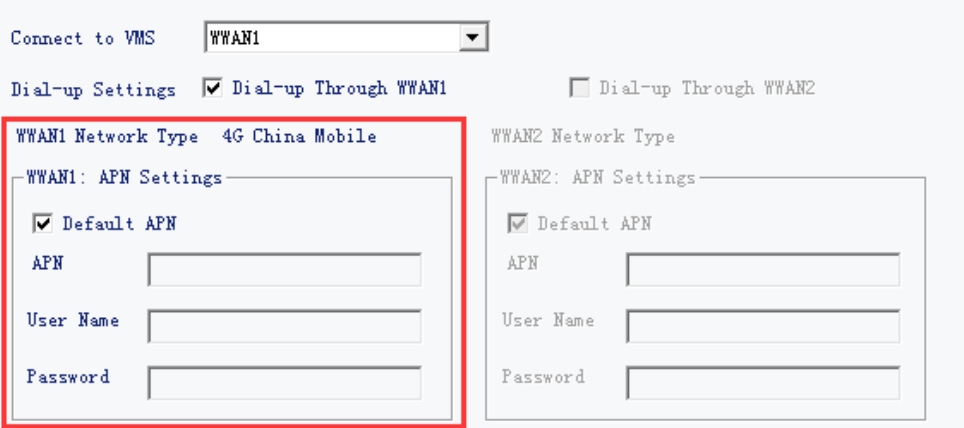
## Wireless


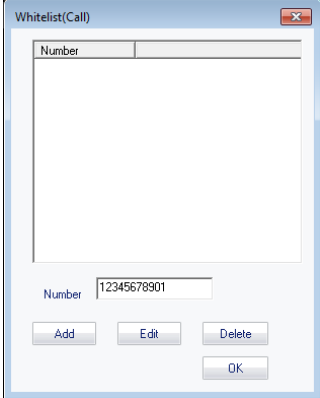

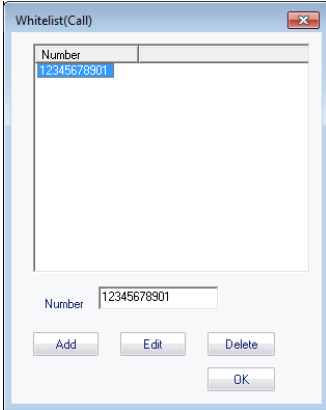
### Wireless Application

On the **Wireless Application** tab page, you can configure WIFI settings.

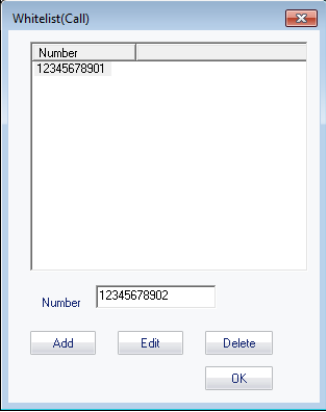
The following table helps you read the parameters displayed in the preceding figure.

Parameter or Option	Description
Connect to VMS	<p>The way how the Mobile NVR connects to the VMS.</p> <p>When one 3G module is inserted to slot 1 of the Mobile NVR, the <b>WWAN1</b> parameter value is available.</p>  <p>When two 3G modules are inserted to slots 1 and 2 of the Mobile NVR, the <b>WWAN1</b> and <b>WWAN2</b> parameter values are available.</p>
Dial-up Settings	<p>When 3G modules are inserted to the Mobile NVR, dial-up settings must be configured.</p>

Parameter or Option	Description
Dial-up Through WWAN1	<p>This option must be selected when <b>Connect to VMS</b> is set to <b>WWAN1</b>. When this option is selected, you do not need to configure the parameters displayed below, as shown in the following figure.</p> 
Dial-up Through WWAN2	For details, see the description for the <b>Dial-up Through WWAN1</b> option.
Stream Transmission	The default value for this parameter is <b>KWTP</b> , which is Kedacom proprietary protocol designed on the basis of the UTP and TCP protocols.
Media Gateway IP	IP address of the media gateway. This parameter is usually set to the IP address of the VMS.
Media Gateway Port Number	Number of the port for the media gateway. This parameter is usually set to the number of the front-end-specific wireless port of the VMS.
Shutdown Delay For	When this parameter is set to <b>1</b> , the Mobile NVR will shut down in one minute after receiving the shutdown command. Note that when you install the Mobile NVR, you must connect the included aviation plug to the vehicle power supply.
Transmission Status	Transmission policy. The parameter values are <b>Audio Preferred</b> , <b>Audio Only</b> , and <b>Video Only</b> .
Auto Disconnection If No Data	If this option is selected, the Mobile NVR will disconnect from the VMS when no data is transmitted between them.
Alarm Trigger Online/Alarm Clearing Trigger Offline	This option is used together with the <b>Auto Disconnection If No Data</b> option. Assuming that the <b>Auto Disconnection If No Data</b> and <b>Alarm Trigger Online/Alarm Clearing Trigger Offline</b> options are selected and currently the Mobile NVR disconnects from the VMS due to no data transmission. In such a case, the Mobile NVR will connect to the VMS upon alarm generation. The Mobile NVR will disconnect from the VMS again upon alarm clearing.
Phone Trigger Online	This option is similar with the <b>Alarm Trigger Online/Alarm Clearing Trigger Offline</b> option. When a specified number calls the Mobile NVR, the Mobile NVR will connect to the VMS. For this parameter, you need to create a call whitelist. To create a call whitelist:

Parameter or Option	Description
	<p>1. Click .</p> <p>2. In the displayed dialog box, enter a number in the <b>Number</b> text filed. The following is an example.</p>  <p>3. Click <b>Add</b>.</p> <p>4. Repeat steps 3 and 4 for all the phone numbers you want to add to the whitelist.</p> <p>5. Click <b>OK</b>.</p> <p>To edit a call whitelist:</p> <p>1. Click .</p> <p>2. In the displayed dialog box, select the number you want to edit. The following is an example.</p>  <p>3. Enter a new number in the <b>Number</b> text filed. The following is an example.</p>



Parameter or Option	Description
	 <p>4. Click <b>Edit</b>.</p> <p>5. Repeat steps 2 through 4 for all the phone numbers you want to edit.</p> <p>6. Click <b>OK</b>.</p>
Text Trigger Online	<p>This option is similar with the <b>Alarm Trigger Online/Alarm Clearing Trigger Offline</b> option.</p> <p>When a specified number sends a text message to the Mobile NVR, the Mobile NVR will connect to the VMS.</p> <p>For this parameter, you need to create a text message whitelist. For details, see the description for the <b>Phone Trigger Online</b> option.</p>

## Wireless Status

On the **Wireless Status** tab page, you can query wireless status.



The screenshot displays the 'Wireless Status' configuration page. The interface includes a top navigation bar with 'View', 'Local Playback', 'Snapshot', 'Configuration', and 'About'. A sidebar on the left lists various settings categories, with 'Wireless Status' selected. The main content area shows two columns of wireless network information:

WWAN1:		WWAN2:	
Network Mode	4G China Mobile	Network Mode	Module Not Detected
SIM Status	SIM card detected	SIM Status	No SIM card found or in arrears
Connection	Disconnected	Connection	Disconnected
Signal Strength	0	Signal Strength	0
Runtime	0 min	Runtime	0 min
Downlink Sum	0 KB	Downlink Sum	0 KB
Uplink Sum	0 KB	Uplink Sum	0 KB
Self IP	0 . 0 . 0 . 0	Self IP	0 . 0 . 0 . 0
DNS1:	0 . 0 . 0 . 0	DNS1:	0 . 0 . 0 . 0
DNS2:	0 . 0 . 0 . 0	DNS2:	0 . 0 . 0 . 0

An 'Apply' button is located at the bottom right of the configuration area.

## Traffic Monitoring

On the **Traffic Monitoring** tab page, you can enable the traffic monitoring function.

The screenshot shows a software interface with a top navigation bar containing icons for 'View', 'Local Playback', 'Snapshot', 'Configuration', and 'About'. On the left side, there is a sidebar with a tree view under 'Device Settings'. The tree view includes categories like System, Network, Video Source, Image, Audio, Recording, Snapshot, Peripherals, and Wireless. Under 'Wireless', there are sub-items: 'Wireless Application', 'Wireless Status', and 'Traffic Monitoring', which is currently selected and highlighted. Below the sidebar are buttons for 'System Status' and 'System Maintenance'. The main content area is titled 'Traffic Monitoring' and contains the following settings:

- Enable Monitor Traffic
- Upper Limit Per Month:  MB
- Precaution Per Month:  %
- Traffic Query Per Month: You already use 33 MB this month.

An 'Apply' button is located at the bottom right of the main content area.

# System Status

## System Service Status

On the **System Service Status** tab page, you can check the basic system information and the system service status.

The screenshot displays the 'Web Control' interface. At the top, there is a navigation bar with 'Welcome admin' and a 'Logout' button. Below this is a menu bar with options: 'View', 'Local Playback', 'Snapshot', 'Configuration', and 'About'. On the left side, there is a sidebar menu with the following items: 'Local Settings', 'Device Settings', 'System Status' (expanded), 'System Service Status' (highlighted), 'Video Channel Status', 'Audio Channel Status', 'Alarm Channel Status', 'Recording Channel Status', and 'System Maintenance'. The main content area is titled 'System Service Status' and contains two panels:

- System Service Status:**

Probe Packet	×
SNTP	×
System Guard	✓
3G	×
GPS	✓
Battery	No
Power	External
- System Information:**

Model	KDM2410M-V21
Alias	KDM2410m-5c
IP	192.168.1.160
MAC	08:88:88:88:88:11
Software Version	V1R1B2 Beta3
	Jul 1 2016 07:50:47
Hardware Version	4259.354.1.1
Connection Status	IPC连接

## Video Channel Status

On the **Video Channel Status** tab page, you can check the status of encoding and decoding channels.

**Web Control** Welcome admin [Logout](#)

View Local Playback Snapshot Configuration About

**Local Settings**

**Device Settings**

**System Status**

- System Service Status
- Video Channel Status**
- Audio Channel Status
- Alarm Channel Status
- Recording Channel Status

**System Maintenance**

**Video Channel Status**

Encoding Channel

Channel...	Sendin...	Encoding Type	Resolu...	Encoding Rate	Number of Lost Frames	Number of Erroneo...
Channel 1	×	H264	D1	57	0	0
Channel 2	×	H264	D1	67	0	0
Channel 3	×	H264	D1	58	0	0
Channel 4	×	H264	D1	57	0	0
Channel 5	×	H264	720P	2048	0	0
Channel 6	×			0	0	0
Channel 7	×			0	0	0

Decoding Channel

Channe...	Receiv...	Decodi...	Resolu...	Decodi...	Number...	Number...
No Channel						

## Audio Channel Status

On the **Audio Channel Status** tab page, you can check the status of audio channels.

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View Local Playback Snapshot Configuration About

**Local Settings**

**Device Settings**

**System Status**

- System Service Status
- Video Channel Status
- Audio Channel Status**
- Alarm Channel Status
- Recording Channel Status

**System Maintenance**

**Audio Channel Status**

Encoding Channel

Channe...	Sendin...	Encoding Type	Acoustic Echo Cancelling	Mute	Volume
Channel 1	×	ADPCM	×	×	25
Channel 2	×	ADPCM	×	×	25
Channel 3	×	ADPCM	×	×	25
Channel 4	×	ADPCM	×	×	25
Channel 5	×	G.711u	×	×	0
Channel 6	×	G.711u	×	×	0
Channel 7	×	G.711u	×	×	0
Channel 8	×	G.711u	×	×	0

Decoding Channel

Channe...	Receiving Status	Decoding Type	Mute	Volume
Channel 1	×	ADPCM	×	25

## Alarm Channel Status

On the **Alarm Channel Status** tab page, you can check whether alarms are generated on alarm input

channels.

When an alarm is generated on an alarm input channel, the status is **Alarm**.

Web Control interface showing Device Status. The page includes a navigation menu on the left with options like Local Settings, Device Settings, System Status, and System Maintenance. The main content area is titled 'Device Status' and contains two tables: 'Alarm Input' and 'Alarm Output'.

Channel ID	Status
Channel 1	No Alarm
Channel 2	No Alarm
Channel 3	No Alarm
Channel 4	No Alarm

Channel ID	Status
Channel 1	No Alarm

## Recording Channel Status

On the **Recording Channel Status** tab page, you can query the status of recording and playback channels.

Web Control interface showing Recording Channel Status. The page includes a navigation menu on the left with options like Local Settings, Device Settings, System Status, and System Maintenance. The main content area is titled 'Recording Channel Status' and contains two tables: 'Recording Channel' and 'Playback Channel'.

Channe...	Manually Recording	Motion Detection Alarm	Parallel Port Alarm	Scheduled Recording	Period...
Channel 1	/	x	x	x	x
Channel 2	/	x	x	x	x
Channel 3	/	x	x	x	x
Channel 4	/	x	x	x	x
Channel 5	/	x	x	x	x
Channel 6	/	x	x	x	x
Channel 7	/	x	x	x	x
Channel 8	/	x	x	x	x

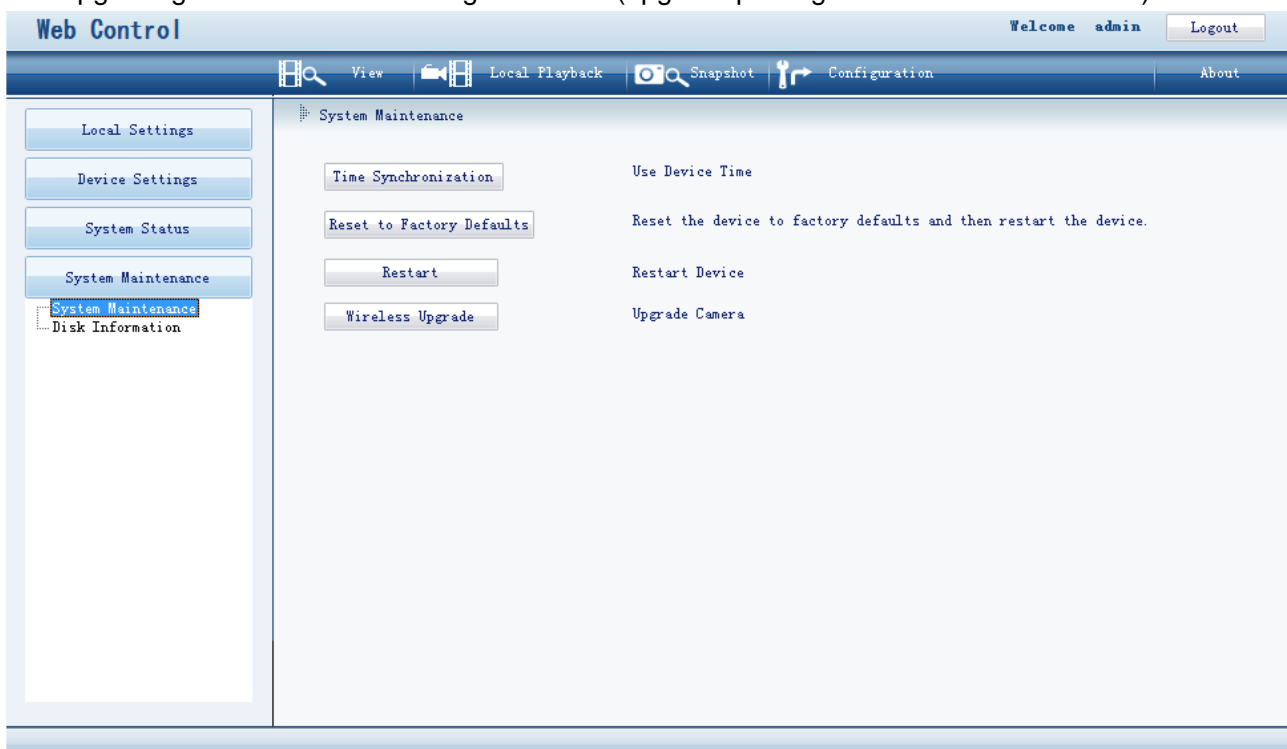
Channe...	Status
Channel 1	x
Channel 2	x
Channel 3	x
Channel 4	x
Channel 5	x
Channel 6	x

# System Maintenance

## System

On the **System Maintenance** tab page, you can perform the following operations:

- Setting your PC time to the Mobile NVR system time
- Resetting the Mobile NVR to factory defaults
- Restarting the Mobile NVR
- Upgrading the Mobile NVR through the VMS (upgrade packages are saved on the VMS)



To set your PC time to the Mobile NVR system time:

1. Click **Time Synchronization**.
2. In the displayed dialog box, you can click **OK** or enter a time.

If you enter a time, both the Mobile NVR system time and your PC time are changed to the time.

To reset the Mobile NVR to factory defaults, click **Reset to Factory Defaults** and click **OK** to confirm your operation.

To restart the Mobile NVR, click **Restart** and click **OK** to confirm your operation.

To upgrade the Mobile NVR through the VMS:

1. Click **Wireless Upgrade**.
2. Select the upgrade package from the **Version List** drop-down list.



3. Click **Upgrade**.

## Disk

On the **Disk Information** tab page, you can query disk information.

**Web Control** Welcome admin

View Local Playback Snapshot Configuration About

**Disk Information**

Partition

Disk ID	Partition Name	Capacity (MB)	Number of Erroneous Blocks	Erroneous Block...	Parti...	Not
0	/dev/sda1	9538	0	0%	Normal	
0	/dev/sda2	38154	0	0%	Normal	
0	/dev/sda3	906186	0	0%	Normal	

SD Backup

Channel:

Start Time:

End Time:

Additionally, you can back up records from cameras to the SD card inserted on the Mobile NVR.

To back up records from a camera:

1. Select the related channel from the **Channel** drop-down list.
2. Specify **Start Time** and **End Time**.
3. Click **Start**.

After the preceding steps are performed, records are backed up on the SD card.

# Abbreviations and Acronyms

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NAT	network address translation
NVR	Network Video Recorder
ONVIF	Open Network Video Interface Forum
PC	personal computer
PMC	Platform Management Client
RTSP	Real Time Streaming Protocol
UUID	Universally Unique Identifier
VMS	Video Management Server
WDR	wide dynamic range