

**HIKVISION**

**Storage System**

**Quick Start Guide**

## **Quick Start Guide**

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-A81016R Management System.

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, the LVD Directive 2006/95/EC.



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)

### 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.

	
<b>Warnings</b> Follow these safeguards to prevent serious injury or death.	<b>Cautions</b> 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.

# Table of Contents

<b>Table of Contents</b> .....	<b>4</b>
<b>Chapter 1 Overview</b> .....	<b>5</b>
<b>Chapter 2 Installation</b> .....	<b>5</b>
2.1 Device Installation .....	5
2.2 Hardware System.....	5
2.2.1 Front View .....	6
2.2.2 Description of Front Panel .....	6
2.2.3 Description of Buttons on Front Panel .....	6
2.2.4 Description of Interfaces on Rear Panel .....	7
<b>Chapter 3 Configuration</b> .....	<b>9</b>
3.1 Accessing by Web Browser .....	9
3.2 Network Configuration .....	9
3.3 One-Touch Creating CVR.....	11
3.4 CVR Configuration .....	12
3.4.1 Adding Encoding Devices .....	12
3.4.2 Configuring Recording Schedule .....	13

# Chapter 1 Overview

DS-A81016R series is a high-performance and highly reliable storage system. Designed with four enterprise-class gigabyte network interfaces, it provides a bandwidth with 4 to 8 Gbps transmission capability and a huge storage space. It is integrated with multiple advanced technology, including a 64-bit hexa-core processors, stable architecture, and the RAID 6 storage technology, thus to run reliably and protect user's data security effectively. Quick start guide walks you through basic CVR settings. You can configure CVR as the recommended way.

# Chapter 2 Installation

**Purpose:**

Connect power cord and network cables to the device. And install hard disks for the device.

**Before you start:**

Prepare the following equipment and accessories.

- Storage system
- Power cord
- Five network cables
- Hard disks
- A pair of anti-static gloves
- Screwdriver

## 2.1 Device Installation

**Steps:**

- Plug the power cord to power supply.
- Plug the network cords to the Management NIC interface and four Data NIC interfaces.

## 2.2 Hardware System

The Network Storage System includes hardware system and software system, which can be installed separately.

The software storage system can manage the network storage devices via network.

The hardware system adopts rack-mounted chassis which provides LED indicators for the status of power, network and HDD.

## 2.2.1 Front View

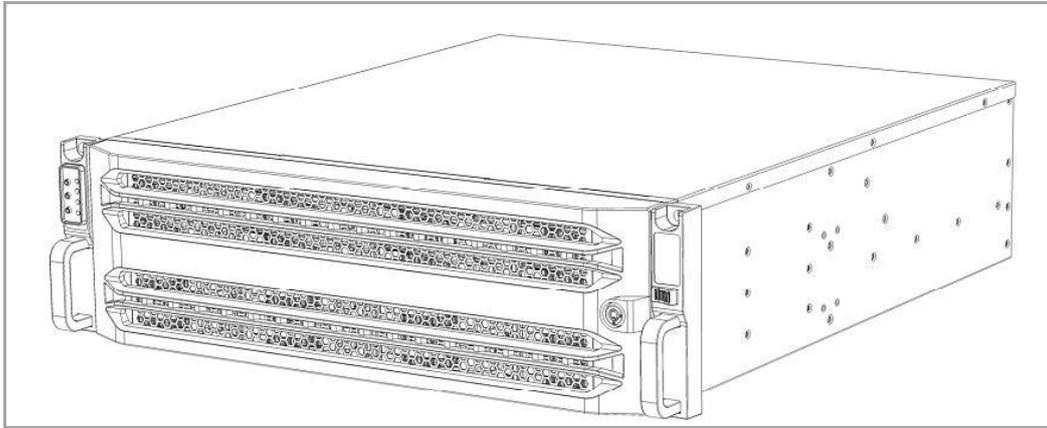


Figure 2.1 Front View of Storage Chassis

## 2.2.2 Description of Front Panel

**Note:** After you open the front cover of the storage chassis with the supplied key, you can see the front panel shown below. After you finish installing the storage chassis and hard disks, please close the front cover with the supplied key.

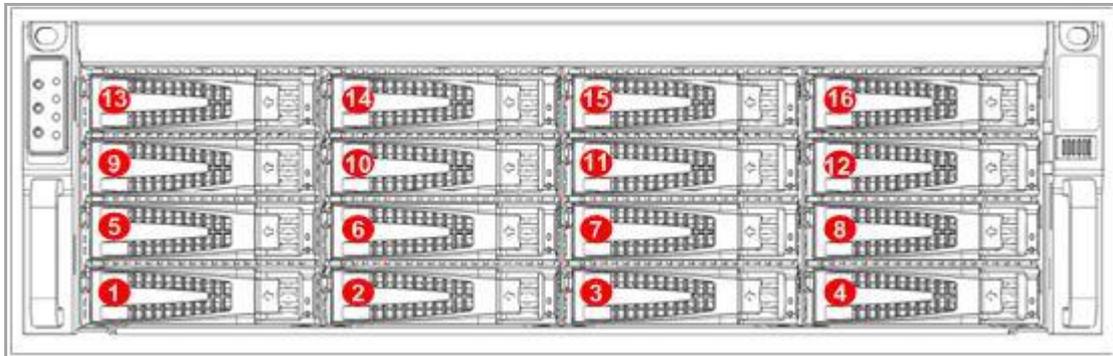


Figure 2.2 Front View of Front Panel

## 2.2.3 Description of Buttons on Front Panel

The buttons on the front panel are shown below.

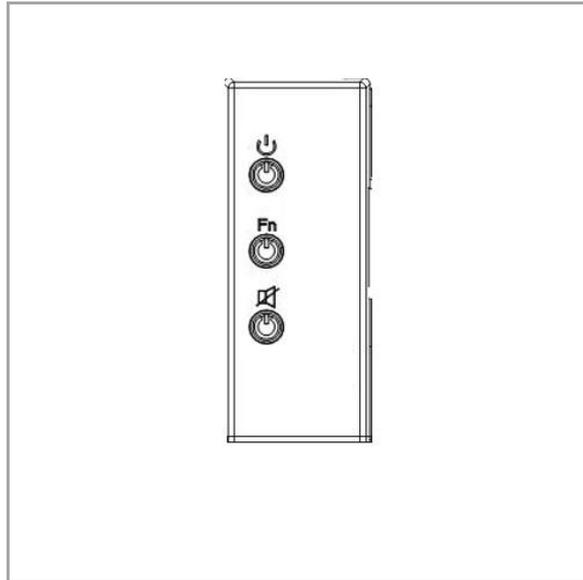


Figure 2. 3 Buttons on Front Panel



Power switch for turning on or off the system. To turn on the system, press this button; and to turn off the system, press and hold the button for 4 seconds; and to force the system to close when the system is



abnormal, press and hold the button for 15 seconds.

: Mute button for clearing the beep sound when the system exception occurs.



: FN device positioning button. Press this button, the power LED indicator on the front panel and I/O FN device positioning LED indicator on the rear panel flicker; press it again to stop the indicators flickering. This button can help to position the specific storage chassis if you have many devices.

## 2.2.4 Description of Interfaces on Rear Panel

The rear panel of the system is shown below.

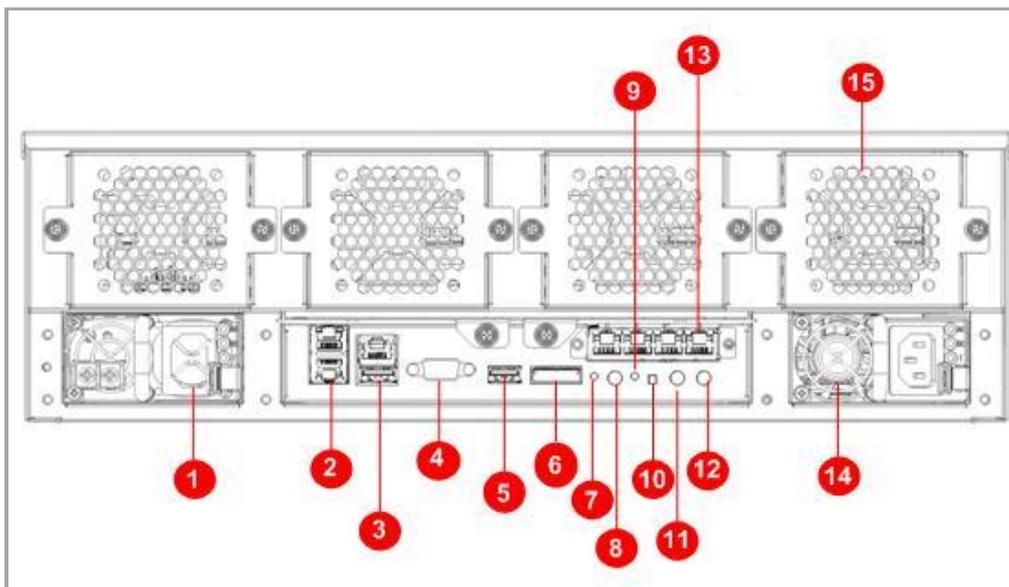


Figure 2. 4 Rear Panel with Redundant Power Supplies

Table 3. 1 Description of Rear Panel

Icon	Description
①	Power supply
②	NIC 2
③	Network management interface
④	VGA interface
⑤	USB port
⑥	Expansion port
⑦	Expansion port LED indicator
⑧	Audio interface
⑨	I/O FN device positioning LED indicator
⑩	FN device positioning button
⑪	COM1 for connecting Hyper Terminal
⑫	COM2 for connecting mobile phone alarm device or UPS (Uninterrupted Power Supply)
⑬	Expansion NIC
⑭	Power supply
⑮	Fan

## Chapter 3 Configuration

### 3.1 Accessing by Web Browser

**Purpose:**

Access via web browser first. You can control and configure the storage system remotely.

**Before you start:**

1. Use a network cable to connect the computer Ethernet port and the storage system Management NIC.
2. Configure the computer IP address. Ensure it is in the same network segment with the Management NIC (the default IP address for Management NIC is 10.254.254.254).
3. Make sure the network communication between your computer and the storage system has been established successfully.

**Steps:**

1. Input the storage system IP address (https://10.254.254.254:2004) in Web browser address bar and press Enter.
2. Input the user name **web\_admin** and the default password **123** to login the system.



#### **CHANGE THE DEFAULT PASSWORD**

The default password (123) for the Admin account is for first-time log-in purposes only. You **must** change this default password to better protect against security risks, such as the unauthorized access by others to the product that may prevent the product from functioning properly and/or lead to other undesirable consequences.

For your privacy, we strongly recommend changing the password to something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product.

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

### 3.2 Network Configuration

**Purpose:**

The storage system provides one Management NIC and four Data NICs. The Management NIC's usages are configuring Data NICs and device maintenance. The Data NIC is used to transmit data.

**Steps:**

1. Enter Network settings interface.  
System > Network

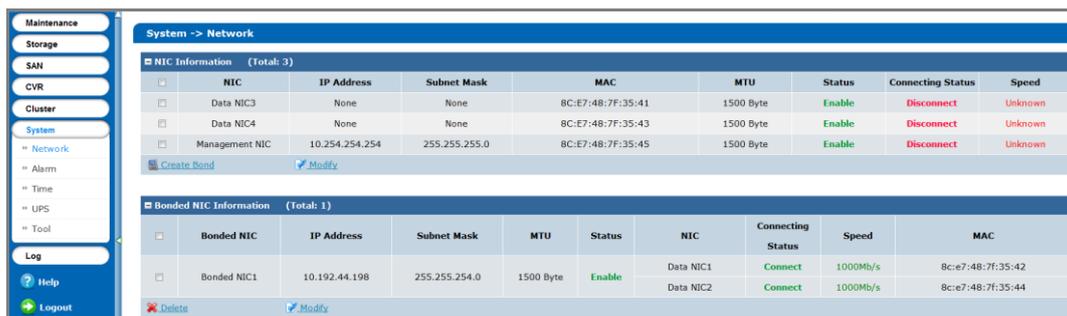


Figure 1. 1 Network Interface

2. Optionally, you can configure the Data NIC.
  - 1) Check the **Data NIC** checkbox and click **Modify** to modify the NIC information.
  - 2) Modify **IP Address, Subnet Mask, Default Gateway** or **MTU**.
  - 3) Click **OK** to save the settings and go back to upper menu.

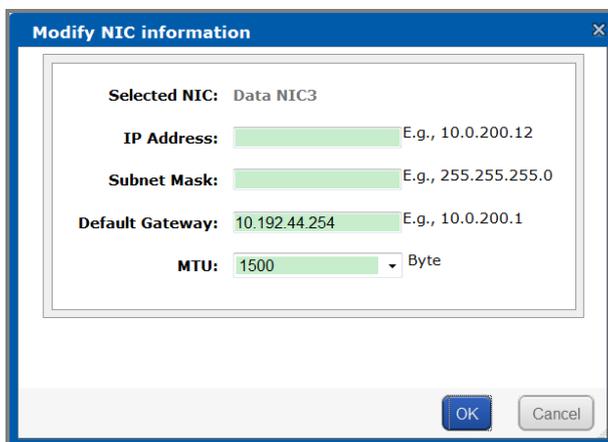


Figure 1. 2 Modify Data NIC Information

3. Bond the four Data NICs into one IP address. When the working one fails, the other ones can take over the tasks.
  - 1) Check the six Data NICs' checkbox.
  - 2) Click **Creating Bonding**.
  - 3) Click **OK** in popup message box to confirm. The bonded Data NIC lists in the Bonded NIC information.



Figure 1. 3 Bonded Data NIC Information

4. Modify Bonded Data NIC Information.
  - 1) Select the Bonded Data NIC to modify by checking its checkbox.
  - 2) Click **Modify** to popup Modify Bonded Data NIC Information interface.

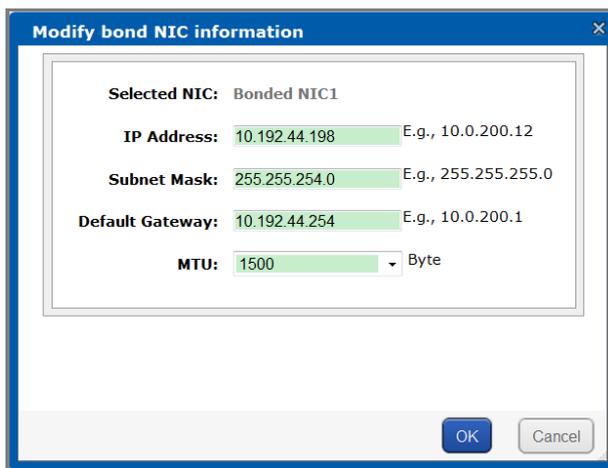


Figure 1. 4 Modify Bonded Data NIC Information

- 3) Modify **IP Address**, **Subnet Mask**, **Default Gateway**, or **MUT**.
- 4) Click **OK** to save the settings and go back to upper menu.

### 3.3 One-Touch Creating CVR

**Purpose:**

One-touch creating helps you to create CVR quickly.

**Steps:**

1. Enter CVR settings interface.  
CVR > CVR

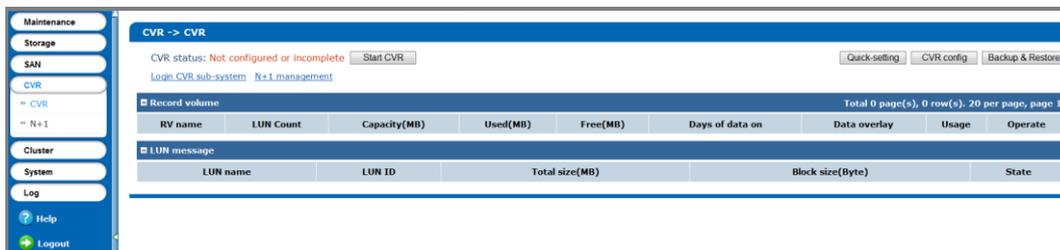


Figure 1. 5 CVR Settings Interface

2. Click **Quick-Settings** to start quick settings.
3. Click **OK** to confirm. Quick-Setting takes 3 to 15 minutes.

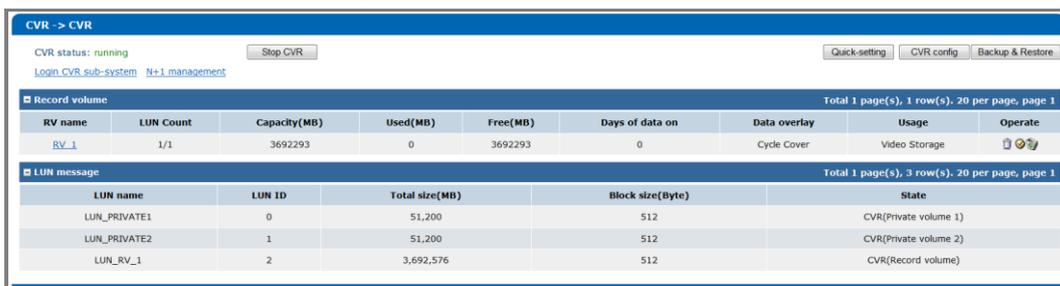


Figure 1. 6 CVR Settings Interface

4. The created Record Volume and Logic Volume separately list in Record Volume list and LUN message list.

Table 1. 1 Created RAID, Volume, and Host-spare Hard Disk Number

Hard Disk.	RAID	Reversed Volume	(LUN) Logical Volume		Hot-Spare Hard Disk
			Record Volume	Private Volume	
1	None	None	1	2	None
2	None	1	2	2	None
3	None	2	3	2	None
4	None	3	4	2	None
5	None	4	4	2	None
6 to 12	1	None	1	3	1
13 to 24	2	1	1	5	1
25 to 36	3	2	1	7	2
37 to 48	4	3	2	10	2
49 to 60	5	4	2	12	3
61 to 72	6	5	2	14	3
73 to 84	7	6	2	16	4

- Click [Login CVR sub-system](#) , input the user name **web\_admin** and the default password **123** to login the CVR Sub-System.

## 3.4 CVR Configuration

**Purpose:**

Add encoding devices and configure recording schedule for added encoding devices.

### 3.4.1 Adding Encoding Devices

**Before you start:**

Log in CVR Sub-system first. For detailed steps, please refer to *step 5* in *Section 3.3 One-Touch Creating CVR*.

**Steps:**

- Enter Device settings interface.  
Device Management > Device



Figure 1. 7 Device Settings Interface

- Click **Add Encoding Device** to pop up adding interface.

Figure 1. 8 Add Encoding Device

3. Input encoding device information.
  - 1) Input nickname for Encoding Device in **Name** text field.
  - 2) Input **IP/Host**, **Port**, **Channel**, **Login Name**, and **Password**.



Some Encoding Devices have more than one channel, input the channel No. you need to add in **Channel** textfield.

- 3) You are recommended to select **Getting Stream on Demand** and **Enable Automatic Network Replenishment**.
  - **Getting Stream on Demand:** Storage system release occupied bandwidth, when no stream requirement for the encoding device. If selected, the encoding device Attribute marks as **P**.
  - **Enable Automatic Network Replenishment:** When storage system disconnect with the encoding device, the encoding device records video and store in its own storage device, like SD card. Once connection recovers, encoding device sends the video to storage system. If selected, the encoding device Attribute marks as **T**.
4. Click **OK** to add the Encoding Device.
5. Repeat the step 2 to 4 to add more.

### 3.4.2 Configuring Recording Schedule

**Purpose:**

Configure recording schedule for added encoding devices.

**Steps:**

1. Enter Schedule setting interface.  
Schedule & Alarm > Schedule

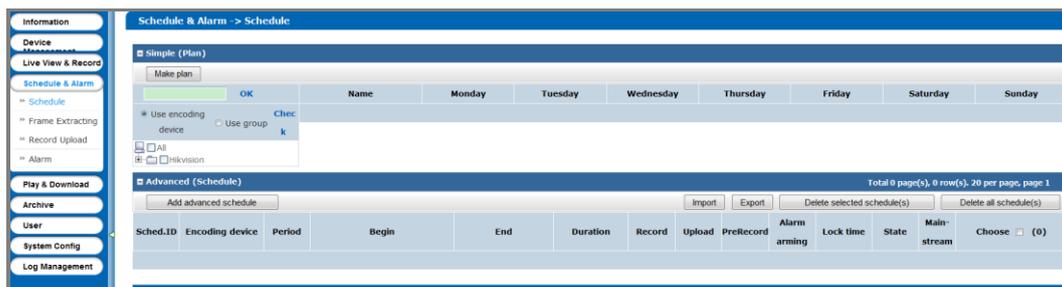


Figure 1. 9 Schedule & Alarm Interface

2. Click **Make Plan** to configure schedule.
3. Select the encoding device to configure.



Figure 1. 10 Select Encoding Device

4. Select **Date** to record by checking its checkbox.
5. Select **Recording Period** as **Full-Day** or other customized periods. You are recommended to select **Full-Day**.



Customized periods: Up to 8 periods can be configured. Overlap between each period is allowed.

6. Click **OK** to save the settings.



First Choice for Security Professionals