F-NVR200 User Manual

This manual applies to the following models：

Model	Product Type
F-NVR200-16C	1 x WAN
F-NVR200-16C8P	1 x WAN/8 x LAN
F-NVR200-16C16P	1 x WAN/16 x LAN

Four-Faith 四信

Hot Line： 400-8838-199
Tel： +86-592-6300320
Fax： +86-592-5912735
Web： www.four-faith.com

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Chapter 1 Product Introduction

1.1 Product description

F-NVR200 is a new generation NVR terminal independently researched and developed by Four-Faith.

It has 8 or 16 channels of Poe power supply and supports up to 16 channels of 1080p video input and 1 channel of intercom input and output, real-time recording local storage/remote viewing, and mobile frame testing. Alarm recording and alarm recording protection and alarm event reporting platform, support video local/remote playback and export functions, hard disk error detection, hard disk health detection, and remote platform error reporting function.There are a series of supporting video server solutions to meet the different needs of small users or large users.

1.2 Features

Outdoor application design

- High-performance processor: hi3536c
- Using metal shell, efficient heat dissipation, anti-impact
- Small and light, flexible for installation
- SATA interface, flexible for installation
- Low power consumption design, data acquisition and upload in video standby state

Stable and reliable

- Use a complete anti-drop mechanism to ensure that the terminal is always online
- Use hard disk storage to ensure high-speed data reading and writing and safe and stable
- Ethernet interface built-in 2.0KV electromagnetic isolation protection
- RS232/RS485 with lightning and surge protection
- 15KV ESD protection for built in SIM/UIM card interface
- Antenna interface lightning protection (optional)

Powerful

- Support up to 8 full-time real-time encoding,
- Standard H.264, H.265 compression format, lower bit stream, better picture quality
- 4-way/8-way display switching, choose according to different needs
- Support 4 or 8 channel video and audio simultaneous recording and playback
- Support up to 8 channels 1080p IPC access, 4 channels 1080P decoding
- support IPC event triggered recording
- Support IPC image capture and video
- Support U disk upgrade/remote upgrade/local web upgrade
- Support up to 8 PSE external power supply, support 802.3AF, 802.3AT
- Supports one RS232/RS485 multiplexing interface, which is convenient for peripheral device access and data transparent transmission
- Support one RS232 debugging interface, convenient debugging and data collection
- Support 2 digital inputs
- Support 1 switching output, support 5V or 12V voltage output, drive current 500mA
- Support 1 relay passive output, electric shock load 5A 250VAC/30VDC
- Support circuit board high temperature alarm, low temperature hard disk heating,
- Rich indicator lights, can quickly grasp the running state of the machine
- Powerful server platform and client tools
- Multiple media transmission methods, applicable to various network environments
- Intelligent bit rate adjustment function to solve the impact of network bandwidth fluctuations in a wireless environment
- Multiple data export methods, U disk local export, remote client download, local network data export
- Removable hard disk, you can directly mount the hard disk through the USB cable to quickly export and preview the data on the hard disk on the computer
- Support multiple video and audio recording modes, manual recording, timing recording, motion detection recording and alarm recording
- Six working modes simultaneously: monitoring, recording, playback, backup, network and PTZ
- Support dual stream, local storage of main stream to ensure high image quality; real-time transmission of auxiliary stream to solve bandwidth bottleneck
- Support HDMI output, HDMI effective resolution up to 3840*2160@30fps
- Local storage supports hard disk, automatically overwrite
- Support alarm recording protection mechanism to protect important recordings
- Stable storage method, it is not easy to be destroyed when power is cut off suddenly
- Power protection function, the machine guarantees the complete preservation of data after power failure
- Low voltage data protection function
- Rich switch mode, timing, normally open mode
- Local configuration graphical interface, easy to operate

- Voice intercom function
- Rich ways to configure device parameters, local UI /network configuration, remote client configuration
- Local plugin supports IE browser
- Support NTP, built-in RTC, support timer restart, timer switch function
- Support 3G/4G network, wired LAN dual link network intelligent switching function, can achieve intelligent switching according to preset priority (optional)

1.3 Product specification

Hardware System

Project	Content
CPU	ARM Cortex A7 Dual Core @1.3GHz
FLASH	128MB
DDR3	1GB

Video and audio parameters

Project		Content
IPC video capture	Input	16 digital HD video inputs
		Up to 8 channels of 1080p digital camera input
	Output	1 x HDMI, (@30fps): 3840x2160, 1920x1080, 1280x720, 1024x768
		1 x VGA, (@30fps): 1920x1080, 1280x720, 1024x768
	Video decoding standard	H.265/H.264
	Network video access protocol	ONVIF (3.0), PELCO, RTSP
	Video decoding performance	4x1080p@30fps H.265/H.264
		8x720p@30fps H.265/H.264
	Video storage resolution	12MP/8MP/6MP/5MP/4MP/3MP/1080P/UXGA/720P/VGA/4CIF/2CIF/CIF/QCIF
	Input	16-channel IPC audio input acquisition

audio capture	Output	16 channel GUI audio playback
	Audio coding standard	G711-Alaw、G711-Ulaw、AAC-LC
	Audio sampling rate	8Khz、16Khz
Voice	Input	1 x RCA input
	Output	1 x RCA output
	Audio compression standard	G726
	Audio code rate	32kbps
	Voice intercom	G726

Storage parameters

Project	Content
Hard disk type	3.5-inch SATA interface HDD/SSD hard disk
Hard drive capacity	HDD: single maximum support 6TB (optional)
Hard disk access	2, standard SATA interface, pluggable, support SATA3.0 rate
Hard disk heating	2 with heating pad (optional)

Wireless parameters

Project	Content
Wireless module	Industrial grade wireless module (optional single module or no module)
standard	Support TDD-LTE/FDD-LTE/EVDO/WCDMA/TD-SCDMA/CDMA1X/GPRS/EDGE Optional single-mode, multi-mode or full network communication
Theoretical bandwidth	FDD LTE (downlink rate 100Mbps, uplink rate 50Mbps) TDD LTE (downlink rate 61Mbps, uplink rate 18Mbps) CDMA2000 1X EVDO RevA (downlink rate 3.1Mbps, upstream rate 1.8Mbps) WCDMA (downlink rate 42Mbps, uplink rate 5.76Mbps) TD-SCDMA (downlink rate 4.2Mbps, uplink rate 2.2Mbps)
Transmit power	<24dBm
Receive sensitivity	<-109dBm

Other external interfaces and indicators

Order	Project	Content
1	WAN	1，RJ45 10M/100M/1000M Adaptive Ethernet port
2	LAN	8，RJ45 10M/100MAdaptive Ethernet port, support POE power AF&AT (optional)
3	Serial	2, 1 of them is time-multiplexed and supports expansion
4	USB	2，USB2.0
5	DI	2
6	DO	2，1 of them supports relay
7	ADC	No
8	Reset button	1, press for 10s to reset
9	Indicators	POWER
		HDD
		Monition

Power Supply

Project	Content
Interface	D13
Range	AC 110~240V
Power Consumption	No load power consumption =2.5W PoE on-board power consumption maximum support 120W

Physical characteristics

Project	Content
Shell	Metal
Size	439.8x281x45mm (W x D x H)
Weight	3.6kg

Others

| Project	Content
Working temperature	-10°C ~ + 55°C（+14°F ~ +131°F）
Storage temperature	-40~+85°C（-40~+185℉）
Relative humidity	95% No condensation

Front Panel：
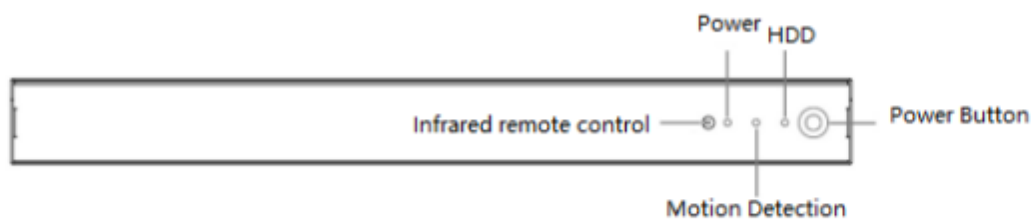
Rear panel：
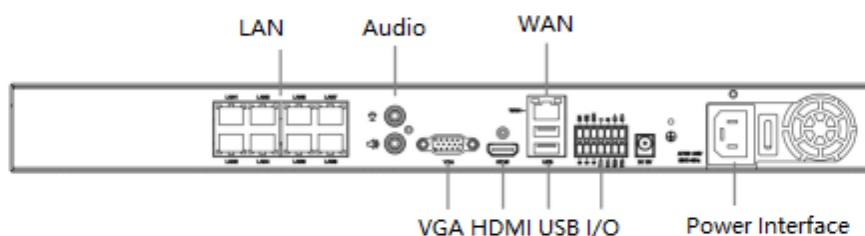
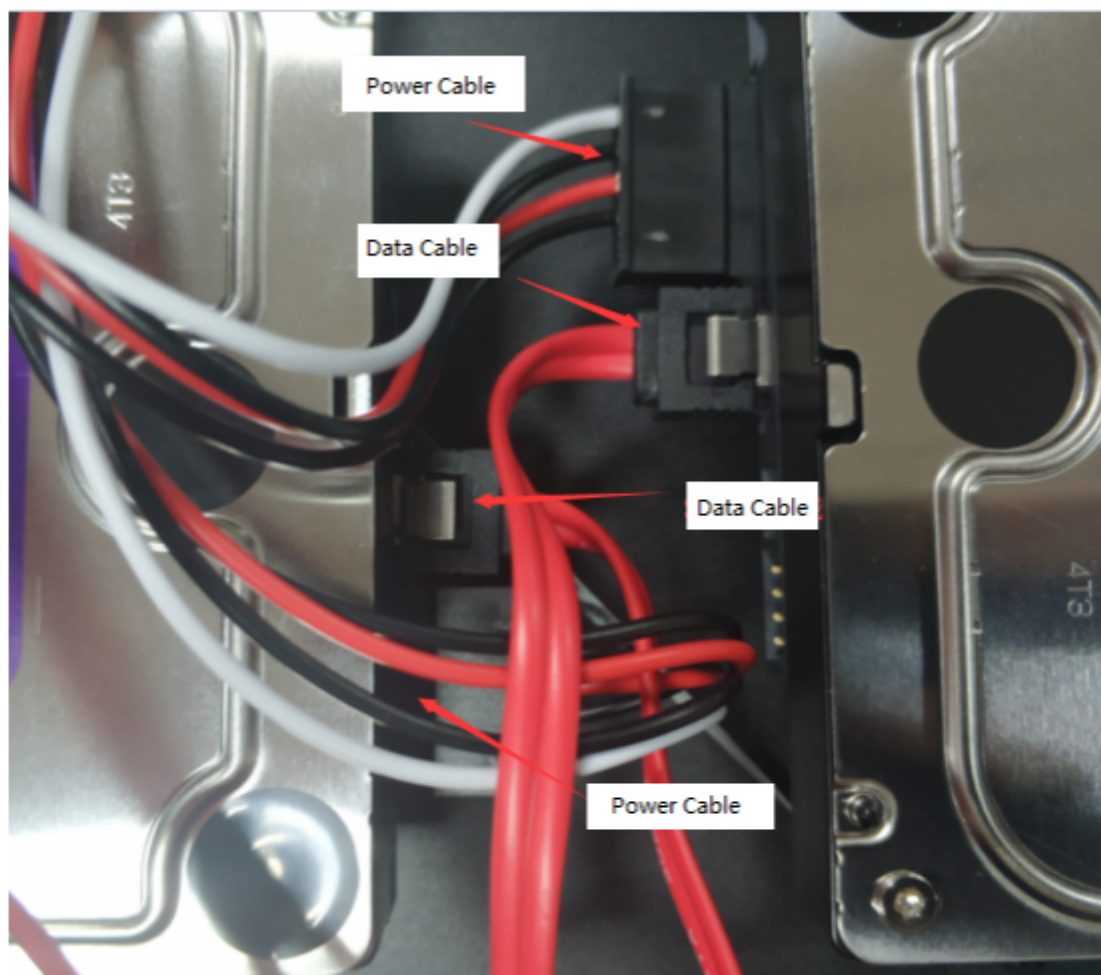# Chapter 2 Equipment Installation

2.1 Hard disk installation

1. Disassemble the machine shell and install M3*5 countersunk head screws in the position shown (in the accessories)

2. Connect the hard disk SATA data cable and power cable to the corresponding socket on the device
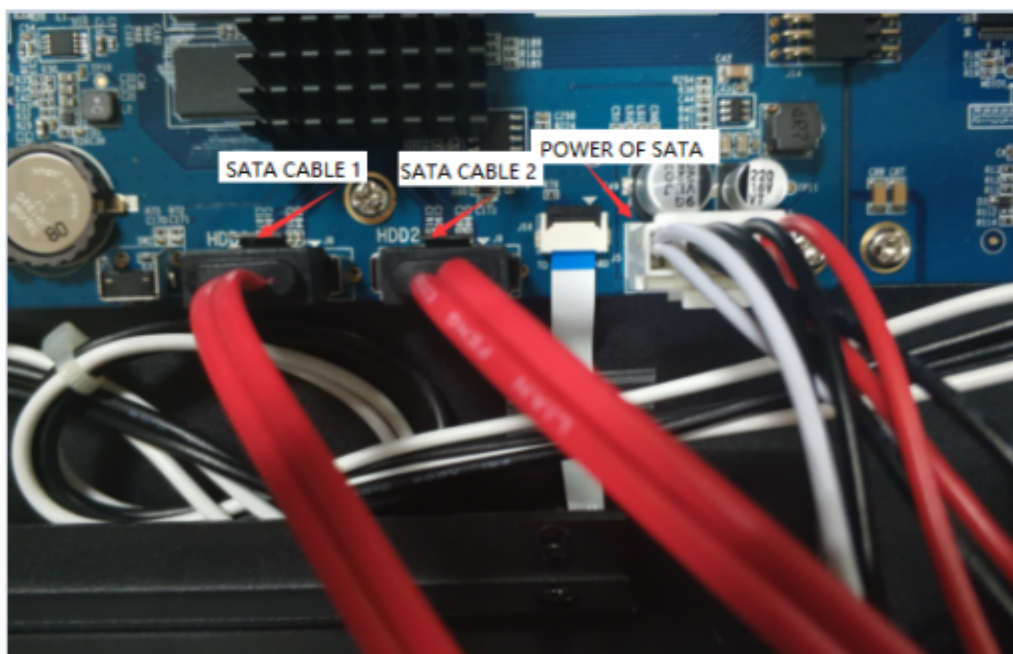
3. Install the SATA data cable and power cable of the HDD

Chapter 3 WEB parameter configuration

3.1 Configure connection

Before configuring the NVR, you need to connect the NVR and the PC for configuration through the factory-configured network cable.

3.2 Login To Configuration Page

3.2.1 IP Setting In PC

Configure the PC IP as 192.168.1.9.
(or other IP in the sub net of 192.168.1.x),Subnet mask 255.255.255.0, default gateway as 192.168.1.1,DNS can be set as local DNS server.

3.2.2 Install Web Plugin

Run FF-video-Plugin.exe, Please use IE web browser

FF-video-Plugin_
2.4.6.exe

3.2.3 Login To Configuration Page

This chapter describes the main functions of each page.

You can use a computer connected to the NVR to access the web tool through a web browser.

There are five first-level pages, namely:

Live View,

Recording settings,

System Settings,

Administration,

System information.

Among them, the Live View page is the OCX control of video-related functions, and the Record Settings has the configuration of the recording parameters.

The System Settings includes second-level pages:

General Settings, Channel Settings,Code Settings, Networking, Servers, Output Configuration, Alarm Settings, Date/Time Settings,Record Upload,Serial Settings.

Administration has the second-level page: Hard disk management, Account, auto Maintenance, Import/Export,Restore Default, Firmware Upgrade, Reboot, and Command Debugging.

System Information also has second-level pages:System Log, Version and Log Info.

Access the device's web-based web management tool, start IE or another browser, and enter the device's default IP address 192.168.1.254 in the "Address" bar. Press the Enter key. If you log in to the Web page for the first time, you can see the page shown below, prompting the user to enter the user name and password.

The default user name and password are: **admin** (can be modified on the user management page)
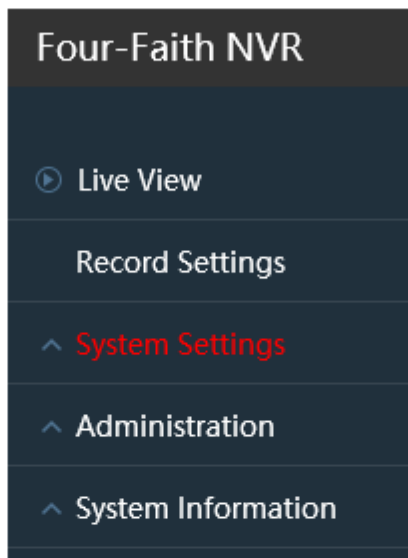
Then you can access the NVR main page
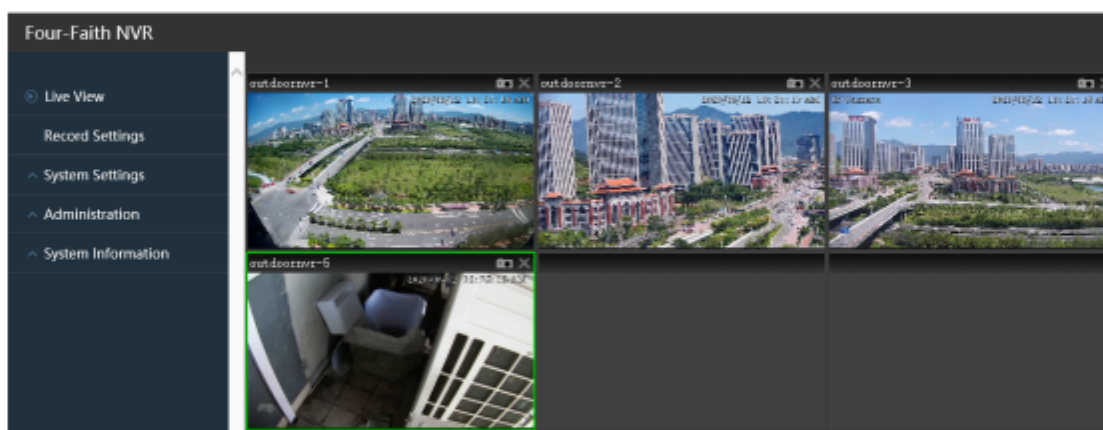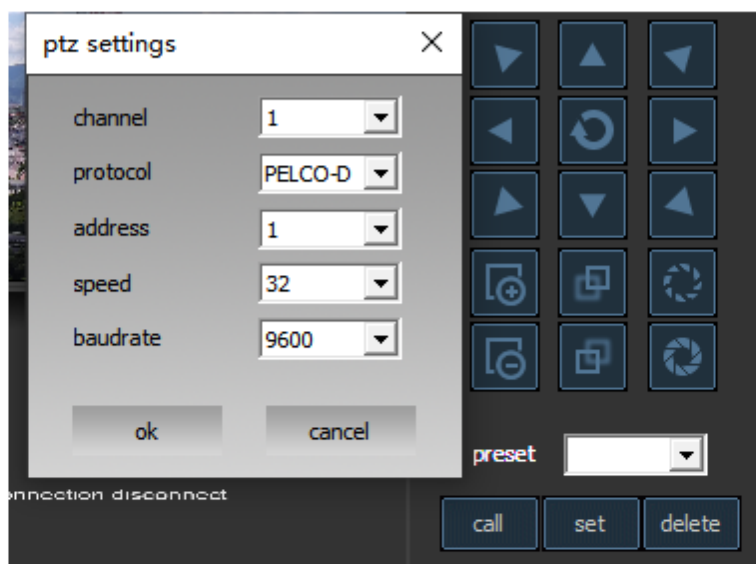
3.3 Management and Configuration

3.3.1 live View

Four-Faith NVR

⊙ Live View

Record Settings

∧ System Settings

∧ Administration

∧ System Information

3.3.1.1 Video Preview

When the plugin is turned on, and the default video preview will show, 4/8 channels are displayed on a split screen according to the configured number of channels.

3.3.1.2 PTZ Operation

Click "PTZ Settings" to set the PTZ channel, PTZ protocol, PTZ address, PTZ speed, and baud rate.

After the settings are completed, "up", "down", "Left" and "Right" on the main interface of the control Buttons can be used for PTZ device operation.

Operation mode: Select the video channel to be played and click the PTZ operation button to perform PTZ operation on the corresponding channel.

3.3.1.3 Video Playback

Click"Video Playback"button,it will show the following picture
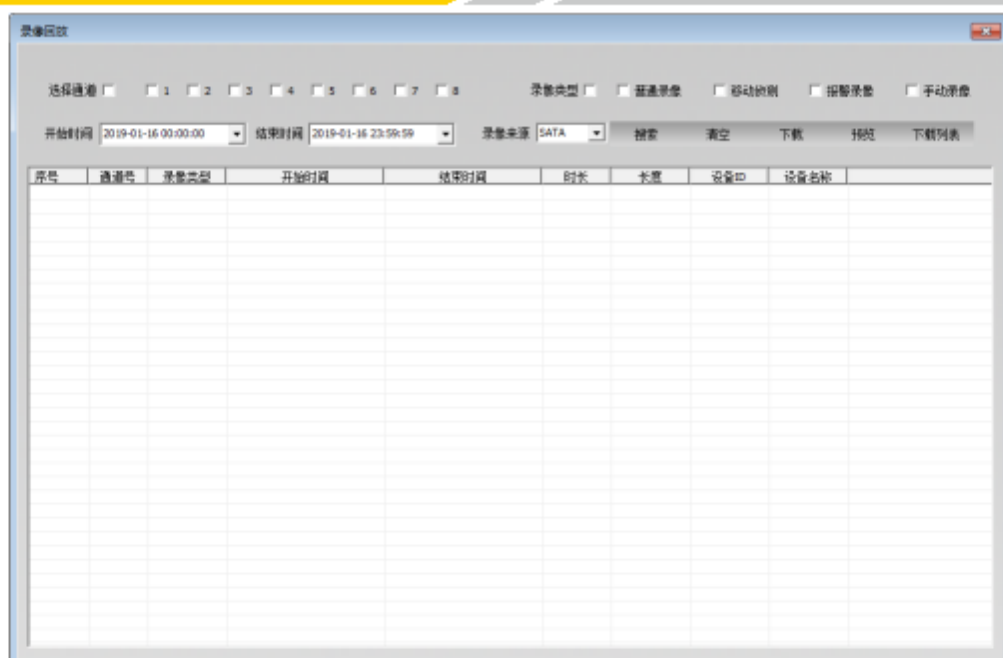
Video Query :

You can select the video channel number to be queried, recording type (general recording, action detection, alarm recording, manual recording), start and end time period, storage type. The query results are as follows:

Video Preview

After querying, the record of the video recording is displayed in the list.

Double-click the selected recording video to play back; during playback of the

recording, you can drag the progress bar to skip or playback (as shown below);

Download the Recording video to your computer

Click on the device list to select it and then press "Download Video" to download

the video file to the PC. Click "Download List" to view the progress of the current

download task, and multiple files can be downloaded at the same time.
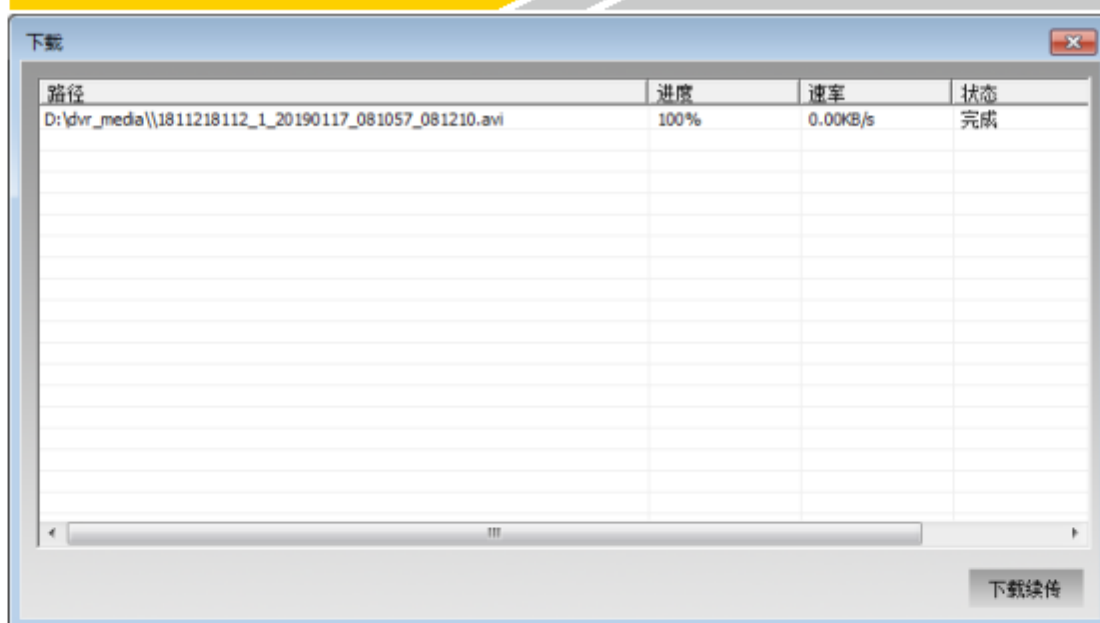
3.3.2 Record Settings
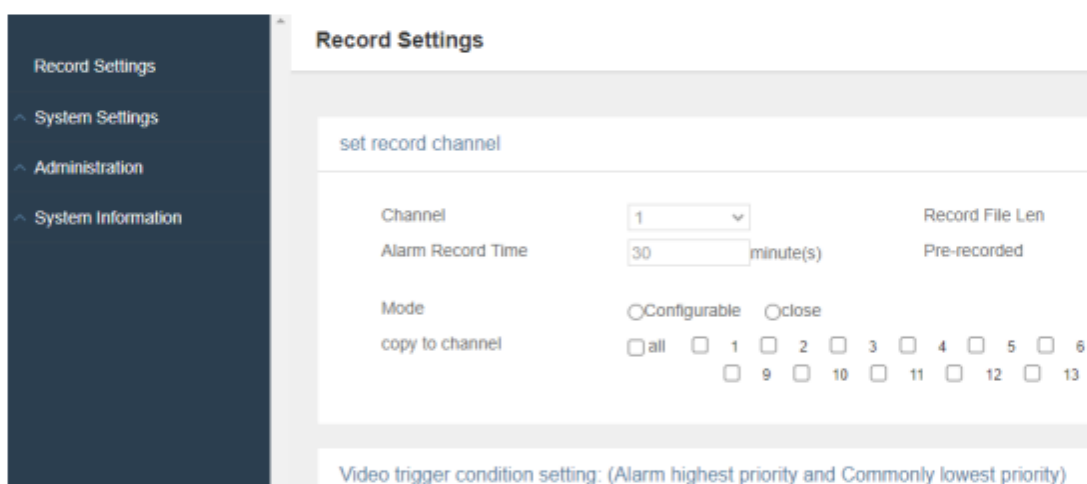
Video Channel Settings:

"Video channel setting" is to set the recording strategy of the currently selected video channel, including action detection sensitivity, file packaging duration, alarm delay recording duration, pre-recording duration, and recording mode.

File packaging time:

In order to facilitate file retrieval and playback, too long packaging time of video files is not good for file retrieval,which will be unfavorable to playback; too short packaging time of video files,or the files are too trivial, both are not conducive to management.

Generally the file packaging time range is 10~30 minutes.

Alarm Delay Recording

Alarm recording duration, you can set the recording duration of the triggered alarm by yourself.

Alarm delay recording range is 1~30 minutes.

Pre-recording duration:

For alarm recording, you may need to know what happened in the period before the alarm was triggered. You can set the pre-recording duration according to your needs. The device stores the video before the alarm according to the duration set by the channel.

Generally the pre-recording time range is 0~10 seconds.

Video mode:

1. The recording parameters of different video channels can be different. When you select "Channel", the parameters on the page will be automatically updated to the parameters of the current channel.

2. When the recording mode is "Configuration", you can configure the recording time period and recording type for the channel (up to four