Network
Audio/Video Encoder
HER503 series Encoder

Quick Operation Guide

Installation

Pre-Installation

The HER503 Series Audio/Video Encoder is a highly advanced surveillance equipment that should be installed with care. Please take into consideration the following precautionary steps before installation of the Encoder.

1. Keep all liquids away from the Encoder.
2. Install the Encoder in a well-ventilated and dust-free area.
3. Ensure environmental conditions meet factory specifications.

Installation

During the installation of the Encoder:

1. Use brackets for rack mounting.
2. Ensure there is ample room for audio and video cables.
3. When installing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
4. Connect both the alarm and RS-485 cable.
5. Allow at least 2cm (≈0.75in) of space between racks mounted devices.
6. Ensure the Encoder is grounded.
7. Environmental temperature should be within the range of -10 ºC ~ 55 ºC, 14ºF ~ 131ºF.
8. Environmental humidity should be within the range of 10% ~ 90%.

Hard Disk Installation (not for HER503 Series)

This section is applicable to SATA models only which can be installed with HDD for recording.

Prior to Installation

The device is factory installed with no hard disk. Refer to the following instructions to install the hard disk according to the total capacity calculated in terms of the *Schedule Recording Settings*. The installation and removal of the hard disk should be operated by qualified professionals.

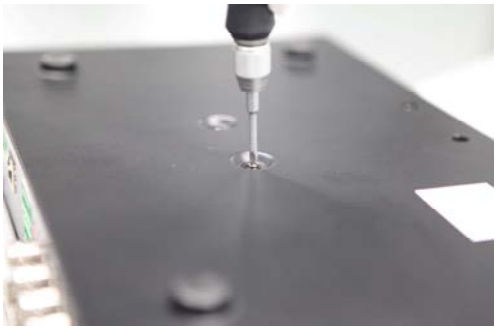
Before installing a hard disk drive (HDD) for SATA model, please make sure the power is disconnected from the device. A factory recommended HDD should be used for this installation.

Tools Required: Screwdriver.

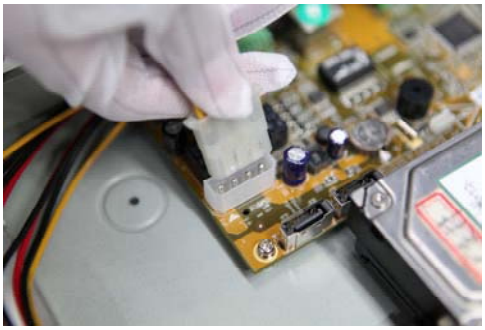
Steps:

1. Use the screwdriver to unfasten the screws on both sides and rear panel of the device, and then remove the cover from the chassis.

2. Place the HDD into the slot of the chassis and then secure it in position by fastening the screws at the bottom of the chassis.



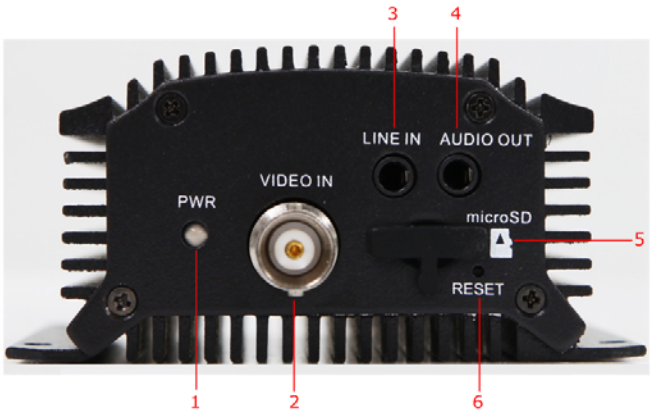
3. Take out the HDD data line from the accessories box. Plug one end of the data line to the circuit board and the other end to the data line port of HDD. Connect the power cord to HDD in the same way.



Replace the cover and then tighten the screws on both sides and rear panel of the device.

Front Panel

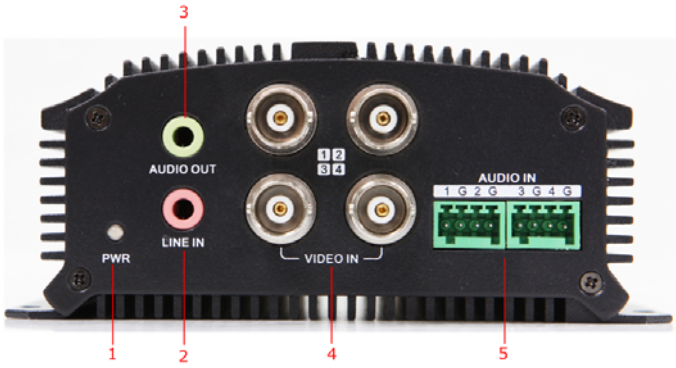
HER503-1:



Description of front panel:

	Item	Description
1	POWER LED Indicator	Light in red when the device is powered on; light in orange when the SD card is inserted.
2	VIDEO IN	BNC connector for video input.
3	LINE IN	3.5mm interface for two-way audio input or audio input; connect to audio input device or active pick-up, microphone, etc.
4	AUDIO OUT	3.5mm interface; connect to audio output device, e.g., loudspeaker, etc.
5	microSD	microSD interface for data storage.
6	Reset	Restore the factory default settings by holding the *RESET* button for more than 15 seconds after power is turned on.

HER503-4:



Description of front panel:

	Item	Description
1	POWER LED Indicator	Light in red when the device is powered on; light in orange when the SD card is inserted.
2	LINE IN	3.5mm two-way audio input interface; connect to active pick-up, microphone, etc.
3	AUDIO OUT	3.5mm interface; connect to audio output device, e.g., loudspeaker, etc.
4	VIDEO IN	BNC interface for video input.
5	AUDIO IN	Line input interface for audio input.

HER503-8:

Description of front panel:

	Indicator	Description
1	POWER	Lights in red when the device is powered on.
2	STATUS	Lights in red when data is being read from or written to HDD. Valid for SATA model.
3	Tx/Rx	1. Does not light when the network is not connected; 2. Blinks in green when the data is transmitting / receiving; 3. Blinks at higher frequency when the data for transmitting / receiving is larger.

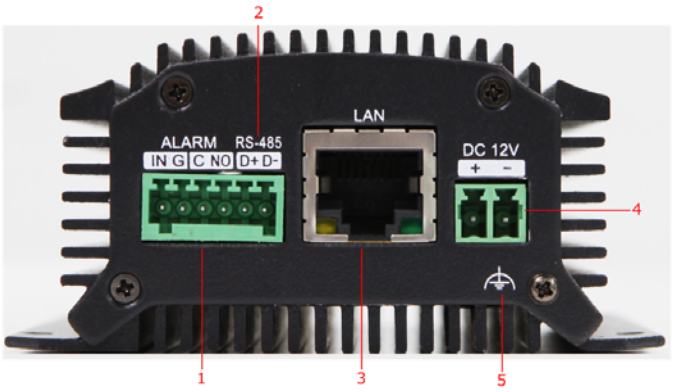
HER503-16:

Description of front panel:

	Indicator	Description
1	POWER	Lights in red when the device is powered on.
2	STATUS	Lights in red when data is being read from or written to HDD. Valid for SATA model.
3	Tx/Rx	1. Does not light when the network is not connected; 2. Blinks in green when the data is transmitting / receiving; 3. Blinks at higher frequency when the data for transmitting / receiving is larger.

Rear Panel

HER503-1:

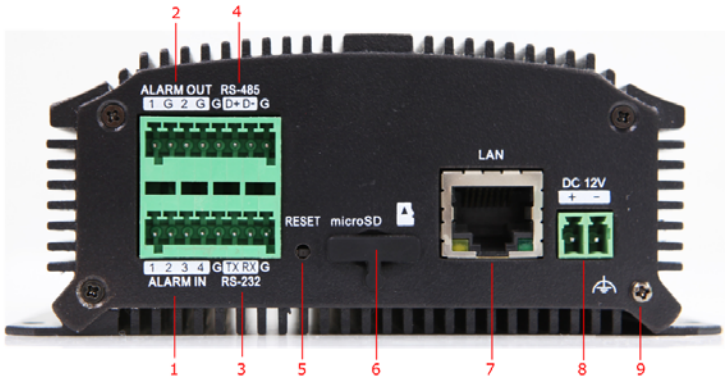


Description of rear panel:

	Item	Description
1	ALARM IN /OUT	Relay alarm input/output. ***Note:*** The alarm output terminal provides no JP2 pin.
2	RS-485	RS-485 serial interface; connect to pan/tilt unit, speed dome, etc.
3	LAN	10M/100Mbps adaptive Ethernet interface (PoE). The right LED indicator lights in green when the network cable is connected, and the left LED indicator blinks in orange when data is transmitting / receiving.
4	DC12V	12V DC power supply.
5	GND	Grounding

Note: The HER503-1 model provides no beeper.

HER503-4:



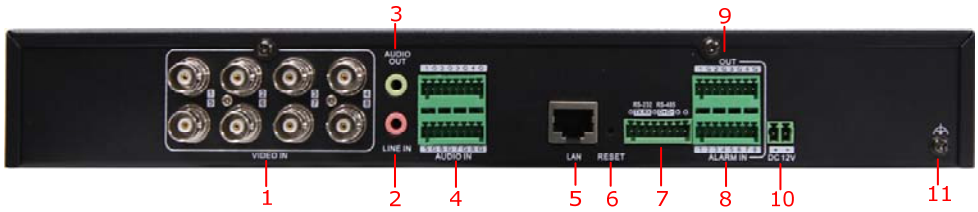
Description of rear panel:

	Item	Description
1	ALARM IN	Relay alarm input.
2	ALARM OUT	Relay alarm output.
3	RS-232	Serial interface for configuration of device's parameters or used as transparent channel.

4	RS-485	RS-485 serial interface; connect to pan/tilt unit, speed dome, etc.
5	RESET	Restore the factory default settings by holding the *RESET* button for more than 15 seconds after the device is turned on.
6	microSD	microSD interface for data storage.
7	LAN	10M/100Mbps adaptive Ethernet interface (PoE). The right LED indicator lights in green when the network cable is connected, and the left LED indicator blinks in orange when data is transmitting / receiving.
8	DC12V	12V DC power supply.
9	GND	Grounding

Note: The HER503-4 provides no beeper.

HER503-8:

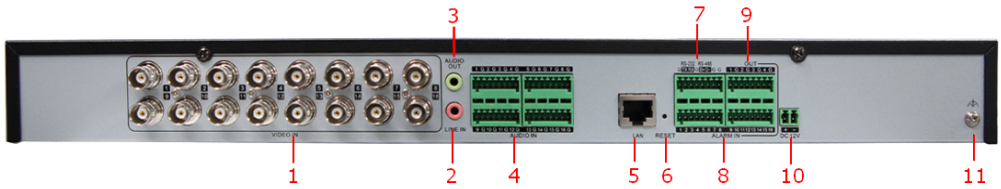


Note: SATA models provide 1/4 video input and 1/4 audio input interfaces on the rear panel.

Description of rear panel:

	Item	Description
1	VIDEO IN	BNC connectors for video input.
2	LINE IN	3.5mm two-way audio input interface; connect to active pick-up, microphone, etc.
3	AUDIO OUT	3.5mm audio output interface; connect to audio output device, e.g., loudspeaker, etc.
4	AUDIO IN	Line input interface for audio input.
5	LAN	10M/100/1000Mbps adaptive Ethernet interface.
6	RESET	Restore the factory default settings by holding the *RESET* button for more than 15 seconds after the device is turned on.
7	RS-232, RS-485	RS-232 serial interface for configuration of device's parameters or used as transparent channel; RS-485 serial interface for connection to pan/tilt unit, speed dome, etc.
8	ALARM IN	Relay alarm input.
9	ALARM OUT	Relay alarm output.
10	DC12V	12V DC power supply.
11	GND	Grounding

HER503-16:



Description of rear panel:

	Item	Description
1	VIDEO IN	BNC connectors for video input.
2	LINE IN	3.5mm two-way audio interface; connect to active pick-up, microphone, etc.
3	AUDIO OUT	3.5mm audio output interface; connect to audio output device, e.g., loudspeaker, etc.
4	AUDIO IN	Line input interface for audio input.
5	LAN	10M/100/1000Mbps adaptive Ethernet interface.
6	RESET	Restore the factory default settings by holding the *RESET* button for more than 15 seconds after power is turned on.
7	RS-232, RS-485	RS-232 serial interface for configuration of device's parameters or used as transparent channel; RS-485 serial interface for connection to pan/tilt unit, speed dome, etc.
8	ALARM IN	Relay alarm input.
9	ALARM OUT	Relay alarm output.
10	DC12V	12V DC power supply.
11	GND	Grounding

Specification

HER503 Series:

Model		HER503-1	HER503-4	HER503-8	HER503-16
Video/ Audio input	Video Compression	H.264/MPEG4/MPEG2/MJPEG			
	Video input	1-ch	4-ch	8-ch	16-ch
		BNC (1.0 Vp-p, 75 Ω)			
	Audio Compression	G.711u			
	Audio Input	1-ch	4-ch	8-ch	16-ch
		1-ch, 3.5mm interface (2.0 Vp-p, 1 kΩ) (LINE IN)	Line input interface (2.0 Vp-p, 1 kΩ)		
	Two-way audio input	1-ch, 3.5mm interface (2.0 Vp-p, 1 kΩ) (LINE IN)	1-ch, 3.5mm interface (2.0 Vp-p, 1 kΩ)		
Video/ Audio output	Audio output	1-ch, 3.5mm interface (Linear, 600 Ω)			
	Recording resolution	WD1 / 4CIF / 2CIF / CIF / QCIF (WD1: 960×576/PAL, 960×480/NTSC)			
	Frame rate	H.264/MPEG4/MPEG2 encoding: 25 fps (P) / 30 fps (N); MJPEG encoding: 15 fps			
	Video bit rate	32 Kbps ~ 3072 Kbps, or user defined (Max. 8192 Mbps)			
	Audio bit rate	64 Kbps			
	Dual Stream	Support			
	Stream Type	Video / Video & Audio			
Data storage	Type	NAS, iSCSI, IPSAN, microSD		NAS, iSCSI, IPSAN	
	Capacity	Up to 4 TB capacity for each disk, and 32G for microSD storage			
External interface	Network interface	1 RJ-45 10 M / 100 Mbps adaptive Ethernet interface (PoE)		1 RJ-45 10 M / 100 M /1000 Mbps adaptive Ethernet interface	
	Protocols and Service	IPv4/v6, HTTP, HTTPS, QoS layer3 DiffServ, FTP, SMTP, Bonjour, UPnP™, Multicast, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, HiDDNS, NTP, RTSP, RTP/RTCP,TCP, UDP, IGMP, ICMP, DHCP, ARP, SOCKSv4/v5, PSIA, ONVIF, HIKCGI, netFilter			
	Serial interface	1 half-duplex RS-485 interface	1 half-duplex RS-485 interface; 1 RS-232 interface		
	Alarm in	1	4	8	16
	Alarm out	1	2	4	4
General	Power supply	12 VDC			
	Power Consumption	≤ 6W	≤ 8W	≤ 10W	≤ 22W
	Working temperature	-10°C ~ +55°C			
	Working humidity	10% ~ 90%			
	Dimensions (W × D × H)	80 × 39 × 90 mm	114 × 48 × 128 mm	315 × 45 × 200 mm	440 × 45 × 274 mm
	Weight	≤ 0.5 Kg	≤ 1 Kg	≤ 2 Kg	≤ 4 Kg

Configuring Network Parameters

Purpose:

If you don't know the IP address of the decoder and this is not the first time you use the decoder, you can use SADP (IP finder) software or the Serial port tools to find out the IP address of the decoder and to configure the IP address or other network parameters of it. It is recommended to change the default IP address for the first time to use it.

This chapter aims to tell the procedures of using the SADP software to find and configure the IP address and other parameters of the device.

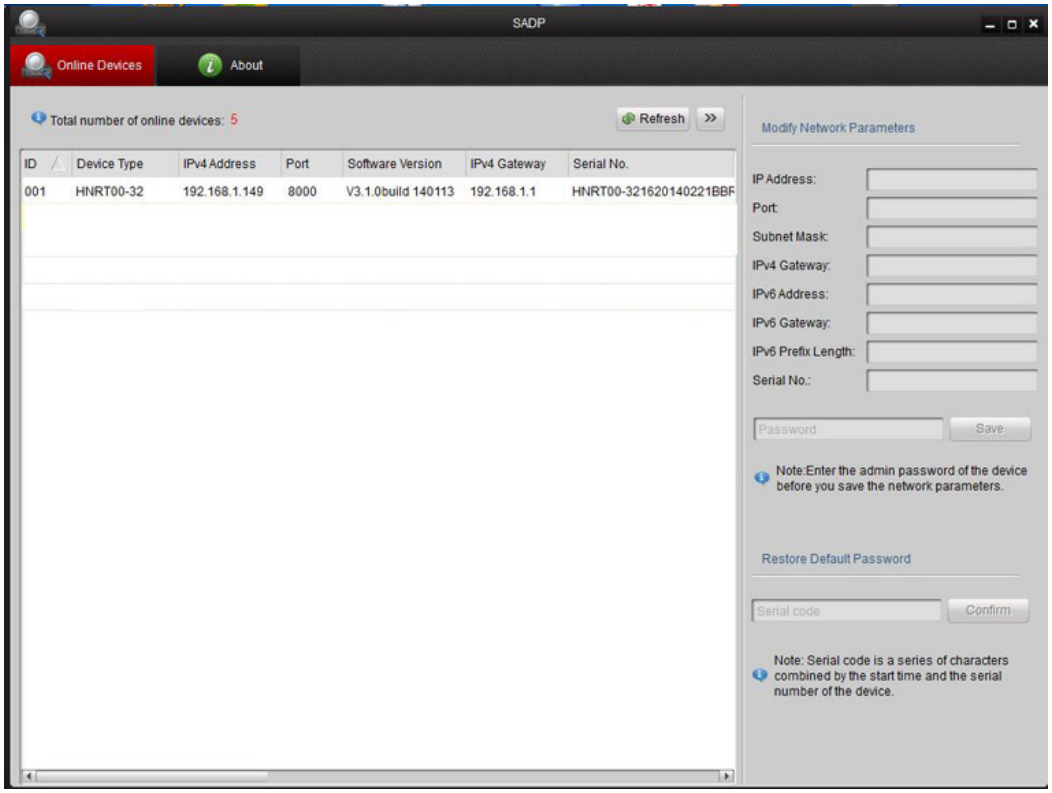
Note:

For the first-time user, the default user name of HER503Series is *admin*, and password is *12345*. And the default IP address is 192.0.0.64.

Searching Online Devices

- **Searching online devices automatically**

Click APT-SADP to run the SADP software and it will automatically search the online devices every 15 seconds from the subnet where your computer locates. It displays the total number and information of the searched devices in the **Online Devices** interface. Device information including the device type, IP address, port number, gateway, etc. will be displayed.



Note: Device can be searched and displayed in the list in 15 seconds after it goes online; it will be removed from

the list in 45 seconds after it goes offline.

- **Searching online devices manually**

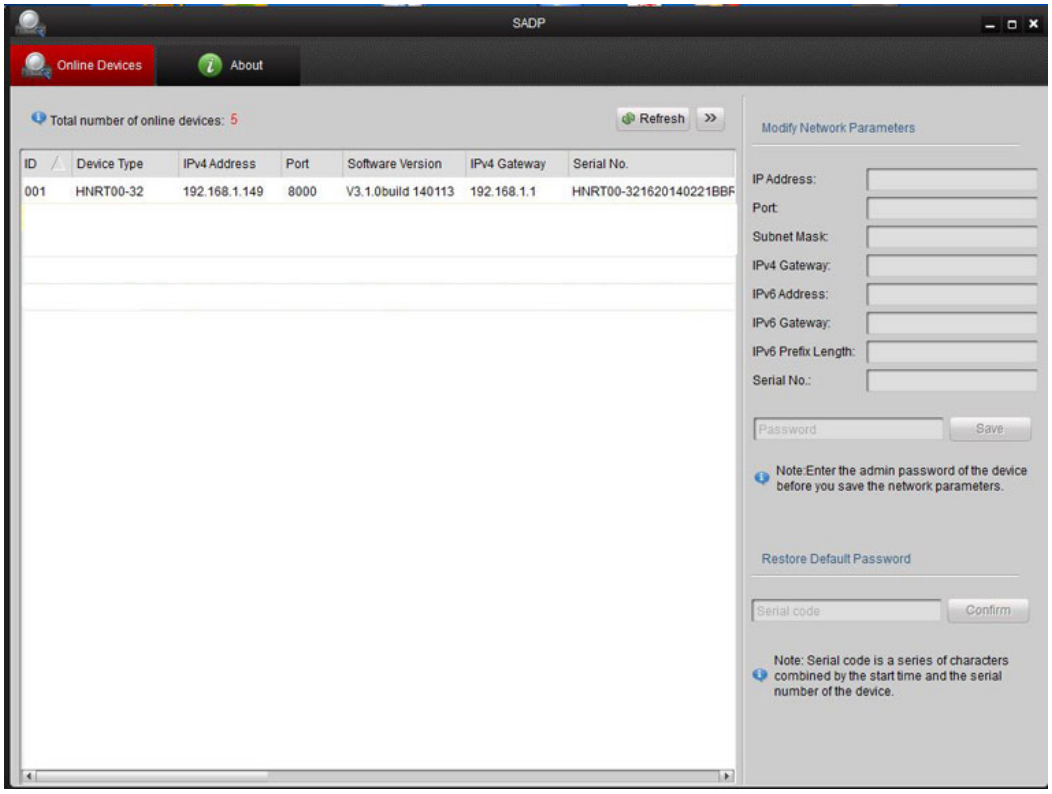
You can also click Refresh to refresh the online device list manually. The newly searched devices will be added to the list.

Note: You can click ▲ or ▼ on each column heading to order the information; you can click » to expand the device table and hide the network parameter panel on the right side, or click « to show the network parameter panel.

Modifying Network Parameters

Steps:

1. Select the device to be modified in the device list and the network parameters of the device will be displayed in the **Modify Network Parameters** panel on the right side.
2. Edit the modifiable network parameters, e.g., IP address, port number and gateway.
3. Enter the password of the admin account of the device in the **Password** field and click Save to save the changes.



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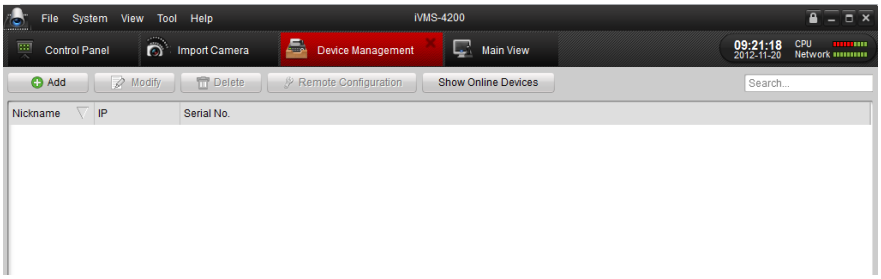
Access to HER503 Series by Client Software

Click **Start→All Programs→iVMS-4200 Client** to start the client software. After successful login, you can enter the following main interface of the client software.

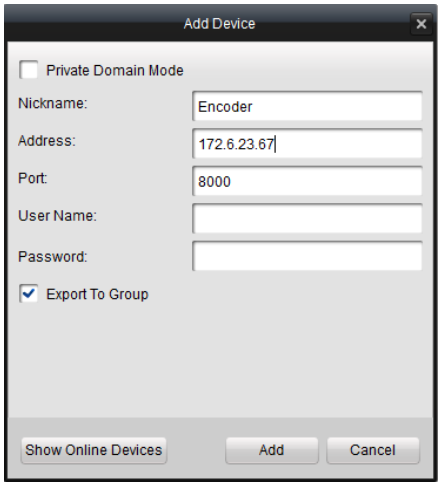
Adding Device

Steps:

1. Click **Control Panel > Device Management** to enter the Device Management page:



2. Click the **Add** button to enter the Add Device interface:

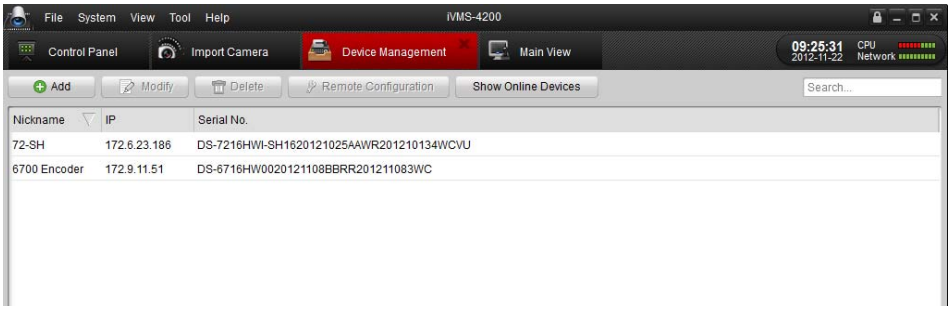


3. Edit a nickname for the device and input the IP address, port number (default: *8000*), login user name (default: *admin*) and password (default: *12345*) of the device.

   Note: If you check the Private Domain Mode checkbox, you can add the device by **IP server** or **HiDDNS**.

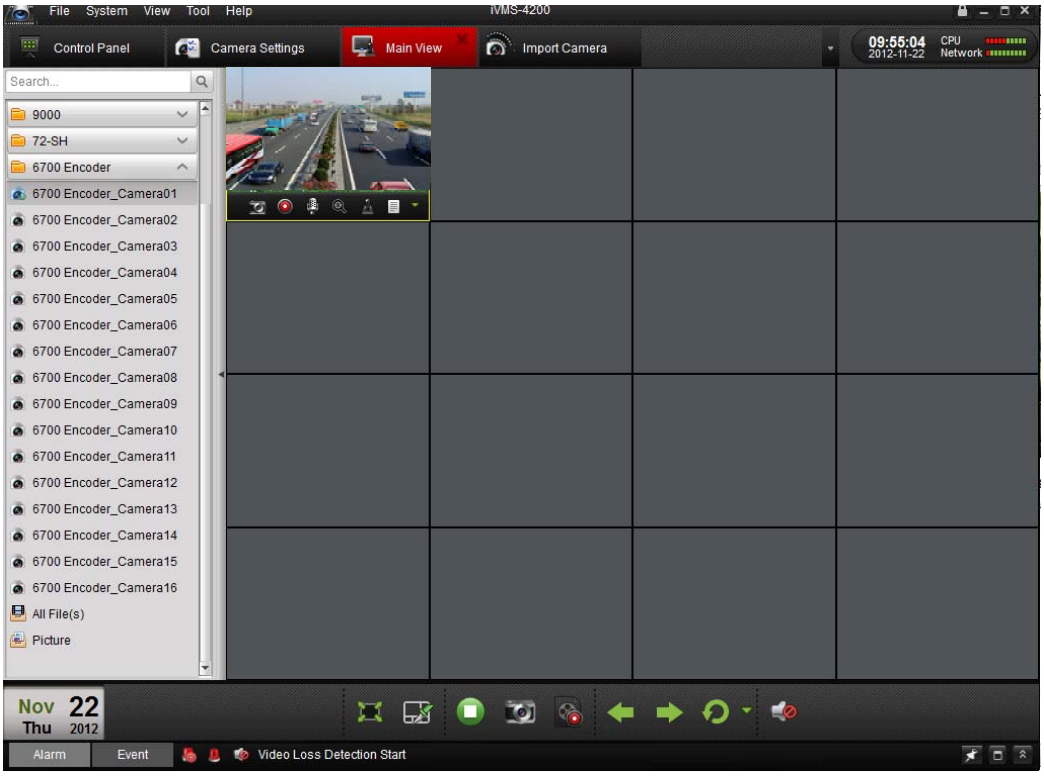
4. Click **Add** to add the device.

5. The successfully added device (s) will be displayed on the device list.



Starting Live View

Click **Control Panel > Main View** to enter the Live View page:



You can click the buttons on the toolbar to operate in the live view mode, e.g., capture picture, start/stop recording, two-way audio, PTZ control (with PTZ camera connected to the encoder), digital zoom, open/close audio, play back video files, etc.

Note: Please refer to the *User Manual of iVMS-4200 Client Software* for the detailed information.

Access to HER503 series by Web Browser

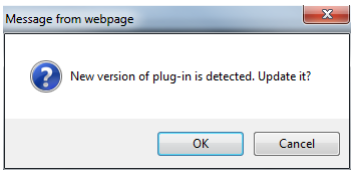
The HER503 Series can also be accessed by WEB Browser for configuration and operation. The supported WEB browsers include: Internet Explorer 6/7/8/9 and above, Firefox 3.5 and above, Chrome 8 and above, Safari 5.0.2 and above.

Open WEB browser, input the IP address of HER503 series (e.g., http://192.0.0.64) and then press the **Enter** key on PC. The login interface is displayed.

Note: When the HTTPS feature is enabled, the system will use the HTTPS login mode (e.g., https://192.0.0.64) by default when you input the IP address. You can also input http://IP address/index.asp (e.g., http://192.0.0.64/index.asp) if you want to use HTTP mode to log into the device.

Input the user name (default: admin) and password (default: 12345) to log into the system.

Note: You should download and install the plug-in for the first time to use.



Starting Live View

1. In the live view window, select a playing window by clicking the mouse.
2. Double-click a camera from the device list to start the live view.

3. You can click the  button on the toolbar to start the live view of all cameras on the device list.

Refer to the following table for the description of buttons on the live view window:

Icon	Description
	Select the window-division mode.
	Star/Stop live view
	Capture pictures in live view mode
	Manually start/stop recording
	Enable e-PTZ (must be supported by the connected camera)
	Previous page
	Next page
	Audio on/off
	Start/Stop two-way audio

Note: Before using two-way audio function or recording with audio, please select the **Stream Type** to **Video & Audio** under **Remote Configuration > Camera Settings >Video Settings**.

Full-screen Mode

You can double click on the live video to switch to the full-screen view mode. To switch back to the normal mode, double click on the live video again.

Operating PTZ Control

Before you start:

1. Make sure the encoder is connected with the camera/dome which supports PTZ function. Connect the *R*+ and *R*− terminals of the pan/tilt unit or speed dome to RS-485 T+ and RS-485 T- terminals of the HER503 series respectively.
2. The baud rate, PTZ control and address configured in the **RS-485 Settings** interface (**Remote Configuration > Serial Port Settings > 485 Serial Port**) must be the same with the parameters of the connected pan/tilt unit or speed dome.

Operating PTZ Control

In live view mode, you can use the PTZ control buttons to realize pan/tilt/zoom control of the camera lens.

There will be 8 directional buttons (up, down, left, right, upper left, upper right, bottom left, bottom right) on the display window when the mouse is located in the relative positions.

Click on the directional buttons to control the pan/tilt movement.

Click the zoom/iris/focus buttons to realize lens control.

Refer to the following table for description of PTZ control buttons:

Button	Description
	Zoom in/out
	Focus near/far
	Iris open/close
	Lighter on/off
	Wiper on/off
	Adjust speed of pan/tilt movement (level 1~ 7 is selectable)

Recording

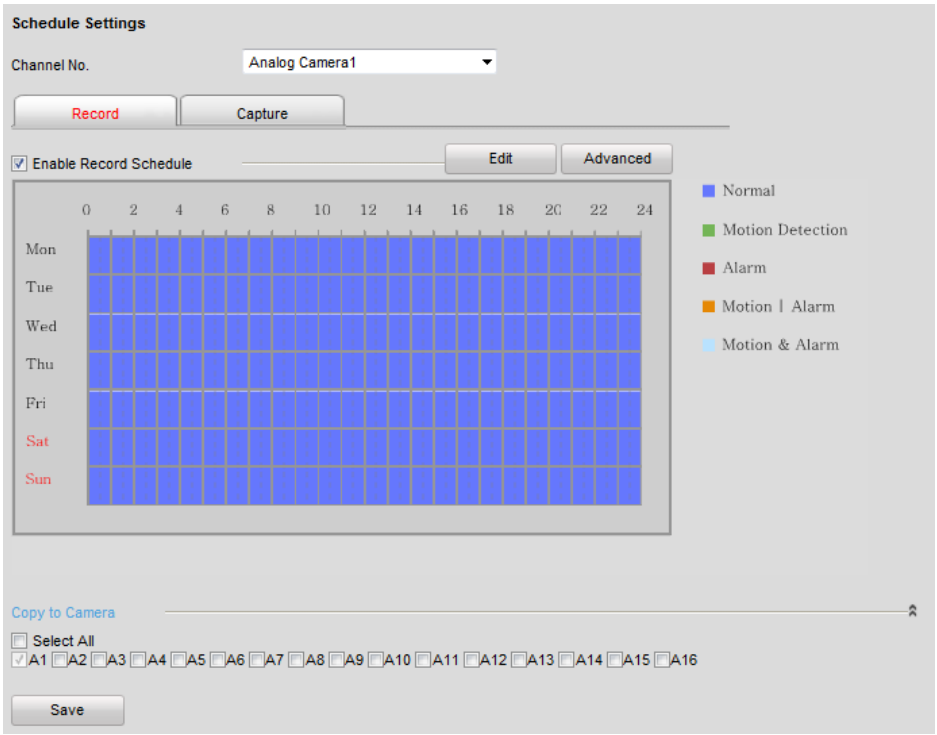
Before you start

Make sure the Encoder is connected with HDD (for SATA model) or network disk, and the HDD or network disk has been initialized for the first time to use.

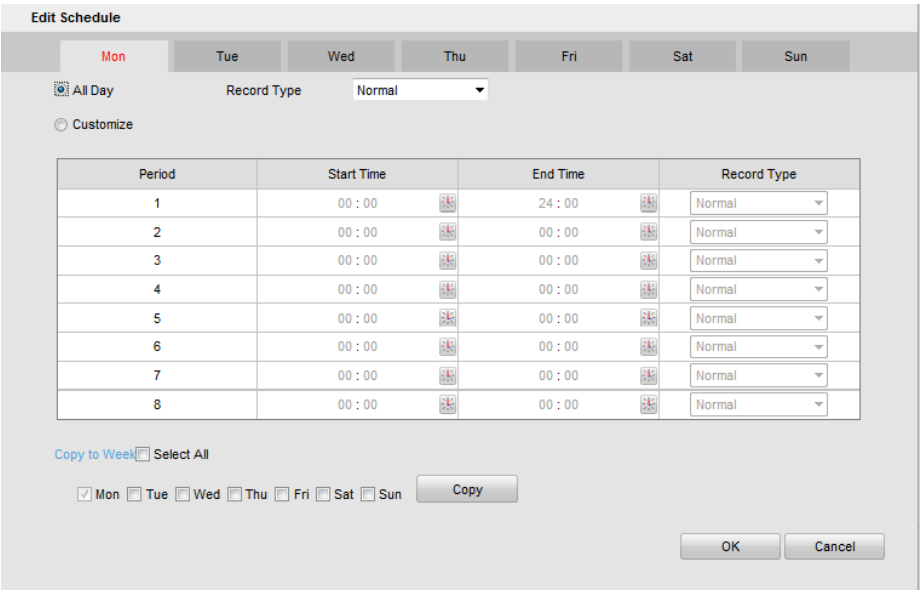
Two recording types can be configured: Manual and Scheduled. The following section introduces the configuration of scheduled recording.

Steps:

1. Click **Remote Configuration> Camera Settings> Schedule Settings** to enter record schedule settings interface.
2. Select the camera to configure the record schedule.
3. Check the checkbox of **Enable Record Schedule** to enable recording schedule.



4. Click **Edit** to enter the Edit Schedule interface**.**
5. Choose the day in a week to configure scheduled recording.



1) Configure All Day or Customized Period Record:

- If you want to configure the all-day recording, please check the **All Day** checkbox.
- If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time** of each period.

Note: The time of each period can't be overlapped. Up to 8 periods can be configured.

2) Select a **Record Type**. The record type can be Normal, Motion, Alarm, Motion & Alarm, and Motion | Alarm.

3) Check the checkbox of **Select All** and click **Copy** to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click **Copy**.

4) Click **OK** to save the settings and exit the **Edit Schedule** interface.

6. On the Schedule Settings interface, click **Advanced** to configure advanced record parameters**.**
7. Click **Save** to validate the above settings.

Playback

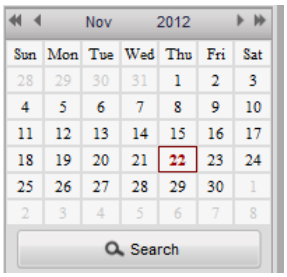
Purpose:

The recorded video files can be remotely played back through the WEB browser.

Steps:

1. Click **Playback** on the menu bar to enter playback interface:

2. Click the camera from the device list for playback.
3. Select the date from the calendar and click **Search**.



4. Click the  button to play the video file searched on the current date.

5. Use the buttons on the toolbar to operate in playback mode

Button	Operation	Button	Operation
	Select window-division mode	/	Play/Pause
	Stop playing		Slow forward
	Fast forward		Play by single frame
	Stop all channels from playing		Capture pictures in playback mode
	Download video files	/	Start/Stop clipping video files
/	Audio on/off		

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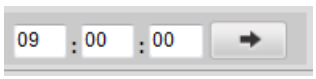
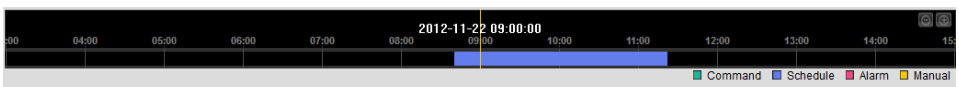
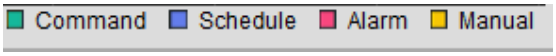
6. You can drag the progress bar with the mouse to locate the exact playback point, or input the time and click  button to locate the playback point.





The color of the video on the progress bar stands for the different video types.



Log

Purpose:

The operation, alarm, exception and information of the device can be stored in log files, which can be viewed and exported at any time.

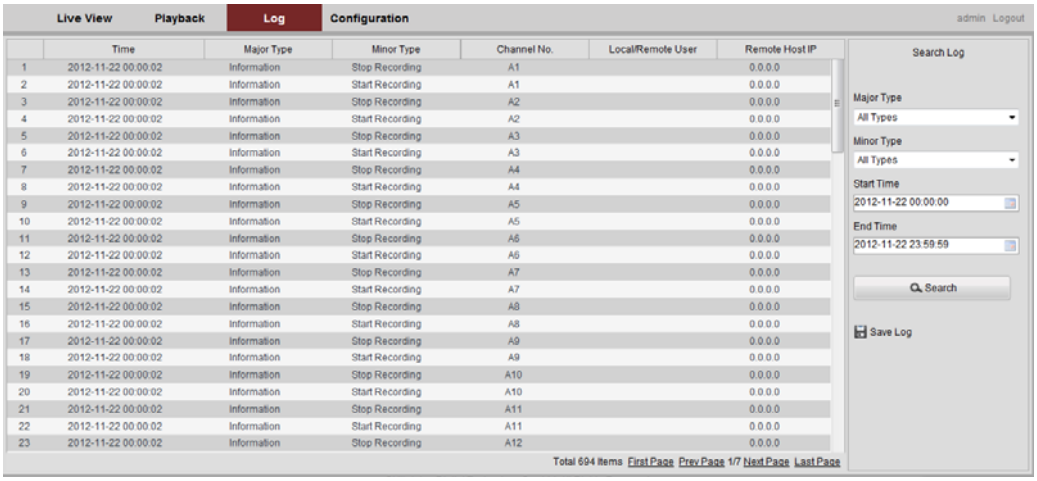
Before you start

The Log function can be realized only when the Encoder is connected with HDD (for SATA model) or network disk. And make sure the HDD or network disk has been initialized for the first time to use.

Steps:

1. Click **Log** on the menu bar to enter the Log interface.
2. Set the log search conditions to refine your search, including the Major Type, Minor Type, Start Time and End Time.
3. Click the **Search** button to start searching log files.
4. The matched log files will be displayed on the list shown below.

   ***Note*:** Up to 100 log files can be displayed each time.



You can click the 

button to save the searched log files to local directory.