



Now you can see!

DVR User Manual



Recording System



Digital Video Recorder User Manual

CAUTION

- Read this user manual carefully to ensure correct and safe use of your PROVISION-ISR DVR.
- The content of this manual could be outdated or incorrect, for any clarification contact PROVISION-ISR support.
- This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using.
- If you plan not to use the DVR for a long time, shutdown and unplug the power cable.
- Do not place this device close to a heat sources (e.g. radiators, heat registers, stoves or other device).
- Do not place this device near water. Clean only with a dry cloth
- Do not block any ventilation openings and make sure the device is in a ventilated place.
- Avoid damaging the HDD, never unplug a DVR! If the DVR is working, the recording must be ended before shutting it down. Press the "shut down" button from the main menu, and wait for this message: "Now you can unplug the DVR".
- This equipment is for indoor use only.
- Do not expose the DVR to rain, to high humidity, or to extreme temperature conditions.
- In case any solid or liquid get inside the DVR: shut down and unplug the power line and call a qualified technician.
- Refer all servicing to qualified service personnel. No any parts repaired by yourself without technical aid or approval.
- This manual is suitable for the PROVISION-ISR 4/8/16/32 channel digital video recorders.
- All examples and pictures used in this manual are from PROVISION-ISR DVRs.

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1 Introduction

1.1 DVR Introduction

These model DVRs (Digital Video Recorder) are designed specifically for CCTV system. The device contains high performance video processing chips and an embedded Linux system, it utilizes advanced standard technologies, such as H.264 with low bit rate, Dual stream, SATA interface, VGA output mouse supported, IE browser supported with full remote control, mobile view (by phones) and more. All those ensure its superior and stable performance. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, irrigation and more.

This manual is for the following DVRs: **the small 1U case DVR:** SA-16400N+, SA-8200N+, SA-4100HDE+, SA-4100HDX+, **the 1U case DVRs:** SA-16400NE+, SA-16400HD+, SA-8200HD+, SA-8100SDI, SA-4025SDI, SA-4100SDI, SA-24600, **and the 2U case DVRs:** SA-32800, SA-8200D1SDI, SA-8200SDI, SA-16200SDI, SA-16400SDI

Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate and better image quality.
- Supports mixed D1 and CIF resolutions.
- SA-32800 supports D1 on four channels: 1, 9, 17 and 25 (25 fps).

LIVE SURVEILLANCE

- Supports VGA output (and zoom X4 option).
- Supports HDMI output (not the SA-24600 DVR model)
- Supports channel security by hiding live display.
- Displays the local record state and basic information.
- Supports USB mouse for full control.

RECORD MEDIA

- 1U case and 2U case DVR supports installation of additional SATA hard drives.

- Supports zoomX4 option during playback.

BACKUP

- Supports USB 2.0 devices for backup.
- Supports installation of a built-in SATA DVD writer for backup (not small 1U case DVR).
- Supports saving recorded files with AVI standard format for a remote computer through internet.
- Supports import/export of definitions/settings.
- Supports E-mail Notification function with (or without) attached snapshot.

RECORD & PLAYBACK

- Record modes: Manual, Schedule, Motion detection and Sensor alarm recording.
- Supports recycle recording after HDD is full.
- Resolution, frame rate and picture quality are adjustable.
- 128MB for every video file packaging.
- Up to 16 audio channels.
- Record search mode: time search and event search.
- Supports playback of all cameras simultaneously.
- Supports deleting or protecting specified recorded files.
- Supports remote playback in Network Client through LAN or internet.

ALARM

- 1 or 4 alarm output channels (4 channels in 2U case DVR) and 4, 8, or 16 alarm input channels.
- Supports schedule for motion detection and sensor alarm.
- Supports pre-recording and post recording.
- Motion or alarm triggers recording/PTZ predefined control/e-mail notification/buzzer of predefined channels.
- Supports linked PTZ preset, auto cruise and track of the corresponding channel.

PTZ CONTROL

- Supports multiple PTZ protocols.
- Supports 128 PTZ presets and 8 auto cruise tracks.
- Supports remote PTZ control through internet.

SECURITY

- User management: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback, PTZ control and remote live view.
- Supports 1 administrator and 63 usernames and linked passwords w/wo associated Mac address.
- Supports event log recording and viewing, unlimited number of events.
- Supports disconnecting online users.
- Supports two-way audio function.

NETWORK

- Supports TCP/IP, DHCP, PPPoE, DDNS protocols.
- Supports IE browser for remote view.
- Supports limiting the maximum number of online clients (5 users for 4/8 channel DVR and 10 users for 16/32 channel DVR).
- Supports dual stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Supports snap picture.
- Supports color adjustment in remote live
- Supports remote time search, event search, and channel playback with picture snap.
- Supports remote PTZ control with preset and auto cruise.
- Supports remote full menu setup, changing all the DVR parameters remotely.
- Supports mobile surveillance by smart phones; iPhone, Android, Symbian, WinCE and blackberry.
- Supports CMS; designated program for remote management of multiple devices
- For NE/HD series DVR supports IP block/allow list via the internet.

2 Hardware Installation

Notice: Check the unit and the accessories after getting the DVR.
shut down the device and unplug the power line before any new connections to other devices. Don't hot plug in/out

Please note:

Small1U case DVR: SA-16400N+, SA-8200N+, SA-4100HDE+, SA-4100HDX+

1U case DVR: SA-16400NE+, SA-16400HD+, SA-8200HD+, SA-8200SDI, SA-4025SDI, SA-4100SDI, SA-24600

2U case DVR: SA-32800, SA8200D1SDI, SA-8200SDI, SA-16200SDI, SA-16400SDI

2.1 Install Hard Drive & DVD Writer

2.1.1 Install the Hard Drive(1U and small 1U DVR case)

Notice: 1. The 1U and 2U DVR units support multiple SATA hard drives (the small 1U case DVR supports one hard drive). Please use the hard drive on the compatible devices list especially for security and safe field.

2. Please calculate HDD capacity according to the recording setting. Please refer to "Appendix B Calculate Recording Capacity".

Step1: unplug the DVR from the power line, then unscrew and carefully open the top cover

Step2: Connect the HDD power and data cables. Place the HDD on the bottom case as Fig2.1.

Step3: Secure the HDD using the appropriate screws(Fig2.2)

Note: For ease of installment: connect the cables before fastening the HDD to the bottom plate.



Fig 2.1 HDD placement



Fig 2.2 Securing the HDD

2.1.2 Install the DVD Writer (1U DVR case)

Notice: 1. The DVD writers must be on the compatible devices list. Please refer to “Appendix C Compatible Devices”

2. This device is only for backup

Step1:unplug from the power line, then unscrew and carefully open the top cover

Step2:Connect the power and data cables, and then place the DVD writer on the bottom case as Fig2.3.

Step3:Secure the DVD writer using the appropriate screws (Fig2.4)



Fig 2.3 DVD Writer placement



Fig 2.4 fasten the Writer

2.1.3 Install the DVD Writer(2U DVR case)

Notice: 1. The writers must be on the compatible devices list. Please refer to “Appendix C Compatible Devices”

2. This device is only for backup

Step1:unplug the DVR from the power line, unscrew and Open the top cover

Step2:Connect the HDD power / data cables. Place the DVD writer onto the bottom case as below.

Step3:Secure the DVD writer using the appropriate screws.



Fig 2.1 Connect HDD Fig 2.2 Connect the DVD Writer (Besides the HDD)

2.1.4 Install the Hard Drive(2U DVR case)

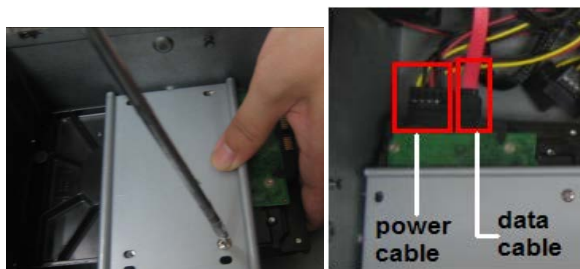
Notice: 1. This series support four SATA hard drives or three SATA hard drives plus one DVD writer. (User can also choose to install eight SATA hard drives or four SATA hard drives plus one DVD writer. Here take eight SATA hard drives installation for example). Use the hard drive on the compatible devices list. Please refer to “Appendix C Compatible devices”.

2. Please calculate HDD capacity according to the recording setting. Please refer to “Appendix B Calculate Recording Capacity”.

Step 1: Unscrew and open the case and then unscrew the screws in the both sides to take out of the upper iron bar as shown below:



Step 2: Place the HDD under the lower iron bar and aim the screw holes of the HDD at the iron bar holes. Then screw firmly and connect the power and data cables. The pictures are shown as follows:

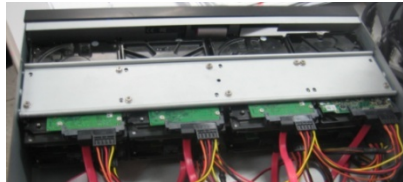


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Step 3: Install other three HDD according to above-mentioned method. Then cover the upper iron bar and screw it firmly. Place the HDD under the iron bar and secure as shown below:



Step 4: Install up to four HDDs under the upper iron bar as shown below:



2.1.5 Install the DVD Writer(2U DVR case)

Step 1: Unscrew and open the case. Then unscrew the screws on both sides to remove the upper bar as shown below:



Step 2: Install the DVD holder that came with the device. Please let the screw holes of the DVD aim and the bolts. Try to place the holder farther away from the front and then screw firmly. Then, put the DVD with the holder into the case and let the screw holes of the case aim at the holder's. Next, tighten the bolts firmly.



Step 3: Connect the power and data cables and install the upper iron bar. Then, screw firmly with screws in the both sides.



Note: The DVD installation uses a space that could be used to install a hard drive.

2.2 Front Panel Descriptions:

2.2.1 Front Panel Description (1U DVR case):



Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Net	When access to network , the light is blue
		Backup	When backup files and data, the light is blue
		Play	When playing video, the light is blue
		REC	When recording, the light is blue
2	Compound button	MENU/+	1. Enter menu in live 2. Increase the value in setup
		BACKUP/-	1. Decrease the value in setup 2. Enter backup mode in live
		RECORD/FOCUS	1. Record manually 2. FOCUS function enables at PTZ mode.
		REW/SPEED	1. Rewind key 2. SPEED function enables at PTZ mode
		SEARCH/ZOOM	1. Enter search mode 2. ZOOM function enables at PTZ mode.
		PLAY /IRIS	1. Enter play interface 2. IRIS function enables at PTZ mode
		FF/ P.T.Z.	1. Fast forward 2. Enter PTZ mode in live
STOP/ESC	1. Quit play mode 2. Exit the current interface or status		
3	Digital button	1-9 or 0/10+	Input number 1-9 or choose camera / Input number 0, 10 and the above number together with other digital keys
4	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like 1/4/9/16 channel
		Enter button	Confirm selection
5	IR receiver	IR	Remote controller receiver
6	USB	USB port	external USB devices for USB flash, USB HDD for backup, firmware update or connect to USB mouse
7	Extension	EXT_IR	To connect to external cable for IR receiver

2.2.2 Front Panel Description(small 1U DVR case):



Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Net	When access to network , the light is blue
		Backup	When backup files and data, the light is blue
		Play	When playing video, the light is blue
		REC	When recording, the light is blue
2	Compound button	MENU/+	1. Enter menu in live 2. Increase the value in setup
		BACKUP/-	1. Decrease the value in setup2. Enter backup mode in live
		RECORD/FOCUS	1. Record manually2. FOCUS function enables at PTZ mode.
		REW/SPEED	1. Rewind key 2. SPEED function enables at PTZ mode
		SEARCH/ZOOM	1. Enter search mode2.ZOOM function enables at PTZ mode.
		PLAY /IRIS	1. Enter play interface2. IRIS function enables at PTZ mode
		FF/ P.T.Z.	1. Fast forward2. Enter PTZ mode in live
STOP/ESC	1. Quit play mode2. Exit the current interface or status		
3	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like 1/4/9 channel
		Enter button	Confirm selection
4	IR receiver	IR	Remote controller receiver
5	USB	USB port	external USB devices (USB flash, USB HDD for backup, update firmware, USB mouse)
6	External IR	EXT_IR	Extension for the IR receiver

2.2.3 Front Panel Description (2U DVR case)



Item	Name	Function	
1	Power Button	Soft switch off to stop firmware running. Do it before power off.	
2	DVD button	Press this button, user can place the DVD to do backup.	
3	Keys 0-9	Input number 1-9 or choose camera	
4	0/—	1. represents decade number. 2. Indicates digital number 0	
5	AUDIO/+	1. Control voice2. Increase the value in setup	
6	P.T.Z./-	1. Enter PTZ mode in live2. Decrease the value in setup	
7	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like 1/4/9/16 channel
		Enter button	Confirm selection
8	Work state indicator	REC	When recording, the light is blue
		HDD	When HDD is writing and reading, the light is blue
		Backup	When backup files and data, the light is blue
		Net	When access to network, the light is blue
		Play	When playing video, the light is blue
9	Function button	Power	Power indicator, when connection, the light is blue
		MENU	Enter menu in live
		INFO	Check data, same as: Main menu=>Information

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Item	Name	Function	
		BACKUP	Enter backup mode in live
		SEARCH	Enter search mode
		REW	Rewind
		FF	Fast forward
		REC	Record manually
		PLAY	Play/Pause
		STOP	Stop/Esc
10	Jog dial	Control rewind/fast forward/frame when playing the image.	
11	USB port	external USB devices (USB flash, USB HDD for backup, update firmware, USB mouse)	
12	IR receiver	IR	Remote controller receiver
13	External IR	EXT_IR	Extension for the IR receiver

2.3 RearPanel Descriptions

2.3.1 Rear Panel Description(SA-4100HDX+)



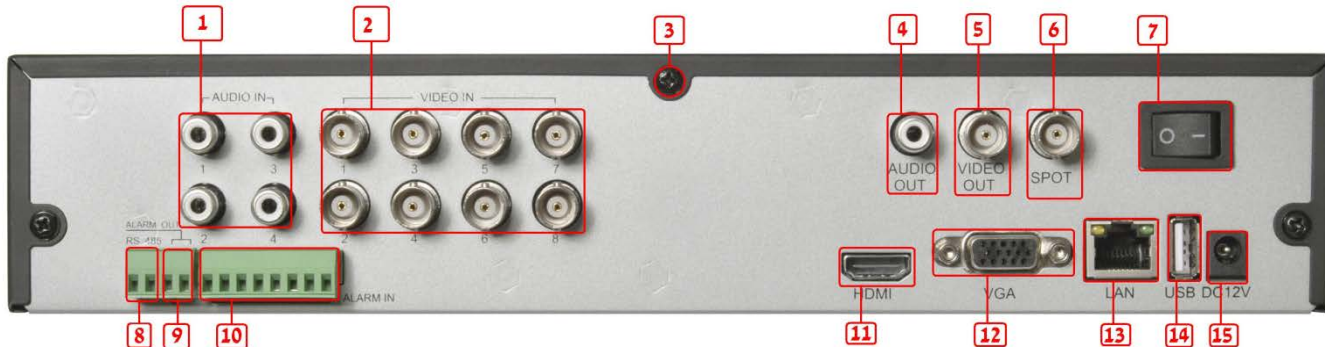
Item	Name	Description
1	Ground connection	Grounding (also for the alarm in ground connection)
2	Video in	Video input channels from 1-4
3	Audio out	Auxiliary audio output
4	Audio in	2 CH Audio input
5	Ground connection	Connect to ground (choose only one ground, do not connect both!)
6	Video out	Video output (BNC)
7	VGA port	VGA output, connect to monitor
8	HDMI	HDMI output, connect to monitor
9	LAN	Network port
10	USB port	Connect USB mouse or connect external USB devices
11	DC12V	POWER INPUT
12	RS485	Connect to speed dome (RS485 PTZ cameras)

2.3.2 Rear Panel Description (SA-4100HDE+)



Item	Name	Description
1	Audio in	4 CH Audio input
2	Video in	Video input channels from 1-4
3	Ground	Grounding (also for the alarm in ground connection)
4	Audio out	Auxiliary audio output
5	Video out	Connect to monitor
6	Spot	Connect to monitor with no menu display
7	Power switch	ON/OFF switch
8	RS485	Connect to speed dome (RS485 PTZ cameras)
9	ALARM OUT	1-ch relay output. Connect to external alarm
10	ALARM IN	Connect to external sensor 1-4
11	HDMI	HDMI output, connect to monitor
12	VGA port	VGA output, connect to monitor
13	LAN	Network port
14	USB	Connect the USB mouse or an external USB device
15	DC12V	POWER INPUT

2.3.3 Rear Panel Description (SA-8200N+)



Item	Name	Description
1	Audio in	4 CH Audio input
2	Video in	Video input channels from 1-8
3	Ground	Grounding (also for the alarm in ground connection)
4	Audio out	Auxiliary audio output
5	Video out	Connect to monitor
6	Spot	Connect to monitor with no menu display
7	Power switch	ON/OFF switch
8	RS485	Connect to speed dome (RS485 PTZ cameras)
9	ALARM OUT	1-ch relay output. Connect to external alarm
10	ALARM IN	Connect to external sensor 1-8
11	HDMI	HDMI output, connect to monitor
12	VGA port	VGA output, connect to monitor
13	LAN	Network port
14	USB	Connect the USB mouse or an external USB device
15	DC12V	POWER INPUT

2.3.4 Rear Panel Description (SA-16400N+)



Item	Name	Description
1	Audio in	4 CH Audio input
2	Video in	Video input channels from 1-16
3	Ground	Grounding (also for the alarm inground connection)
4	Audio out	Auxiliary audio output
5	Video out	Connect to monitor
6	Spot	Connect to monitor with no menu display
7	Power switch	ON/OFF switch
8	RS485	Connect to speed dome (RS485 PTZ cameras)
9	ALARM OUT	1-ch relay output. Connect to external alarm
10	ALARM IN	Connect to external sensor 1-16
11	HDMI	HDMI output, connect to monitor
12	VGA port	VGA output, connect to monitor
13	LAN	Network port
14	USB	Connect the USB mouse or an external USB device
15	DC12V	POWER INPUT

2.3.5 Rear Panel Description (SA-16400NE+)



Item	Name	Description
1	Power switch	ON/OFF switch
2	P/Z	Connect to speed dome (RS485 PTZ cameras)
3	K/B	Connect to keyboard
4	Audio in	4 CH Audio input
5	Video out	Connect to monitor
6	Video in	Video input channels from 1-16
7	VGA port	VGA output, connect to monitor
8	FAN	Fan for ventilation, DO NOT COVER THE FAN.
9	DC12V	POWER INPUT
10	Ground	Grounding (also for the alarm in ground connection)
11	ALARM IN	Connect to external sensor 1-16
12	Audio out	Auxiliary audio output
13	Spot	Connect to monitor with no menu display
14	HDMI	HDMI output, connect to monitor
15	USB	Connect the USB mouse or an external USB device
16	LAN	Network port
17	ALARM OUT	1-ch relay output. Connect to external alarm

2.3.6 Rear Panel Description(SA-8200HD+)



Item	Name	Description
1	Power switch	ON/OFF switch
2	P/Z	Connect to speed dome (RS485 PTZ cameras)
3	K/B	Connect to keyboard
4	Audio in	4 CH Audio input
5	Audio out	Auxiliary audio output
6	Spot	Connect to monitor with no menu display
7	Video out	Connect to monitor
8	FAN	Fan for ventilation, DO NOT COVER THE FAN.
9	DC12V	POWER INPUT
10	Ground	Grounding (also for the alarm in ground connection)
11	ALARM IN	Connect to external sensor 1-8
12	HDMI	HDMI output, connect to monitor
13	VGA port	VGA output, connect to monitor
14	USB	Connect the USB mouse or an external USB device
15	LAN	Network port
16	Video in	Video input channels from 1-8
17	ALARM OUT	1-ch relay output. Connect to external alarm

2.3.7 Rear Panel Description(SA-8100SDI)



Item	Name	Description
1	ALARM OUT	4-ch relay output. Connect to external alarm
2	P/Z	Connect to speed dome (RS485 PTZ cameras)
3	K/B	Connect to keyboard
4	Video out	Connect to monitor
5	Audio out	Auxiliary audio output
6	MIC IN	Auxiliary audio input for personal microphone
7	Audio in	4 CH Audio input
8	Power switch	ON/OFF switch
9	FAN	Fan for ventilation, DO NOT COVER THE FAN.
10	ALARM IN	Connect to external sensor 1-4
12	Video in	HD SDI Video input channels 1-8
13	HDMI	HDMI output, connect to monitor
14	VGA	VGA output, connect to monitor
15	LAN	Network port
16	USB	Connect the USB mouse or an external USB device
17	DC12V	POWER INPUT

2.3.8 Rear Panel Description(SA-4025SDI)



Item	Name	Description
1	P/Z	Connect to speed dome (RS485 PTZ cameras)
2	K/B	Connect to keyboard
3	ALARM IN	Connect to external sensor 1-4
4	HDMI	HDMI output, connect to monitor
5	USB	Connect the USB mouse or an external USB device
6	VGA port	VGA output, connect to monitor
7	Video out	Connect to monitor
8	FAN	Fan for ventilation, DO NOT COVER THE FAN.
9	+ 5V	+5 Volt
10	ALARM OUT	1-ch relay output. Connect to external alarm
11	Ground	Grounding (also for the alarm in ground connection)
12	LAN	Network port
13	Audio in	4 CH Audio input
14	Audio out	Auxiliary audio output
15	Video in	Video input channels from 1-4
16	DC12V	POWER INPUT
17	Power switch	ON/OFF switch

2.3.9 Rear Panel Description(SA-4100SDI)



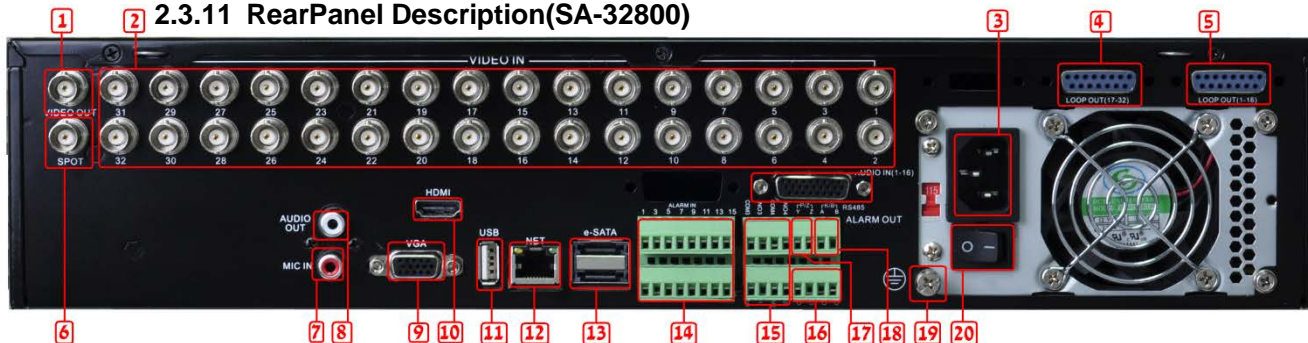
Item	Name	Description
1	ALARM OUT	4-ch relay output. Connect to external alarm
2	P/Z	Connect to speed dome (RS485 PTZ cameras)
3	K/B	Connect to keyboard
4	Video out	Connect to monitor
5	Audio out	Auxiliary audio output
6	MIC IN	Auxiliary audio input for personal microphone
7	Audio in	4 CH Audio input
8	Power switch	ON/OFF switch
9	FAN	Fan for ventilation, DO NOT COVER THE FAN.
10	ALARM IN	Connect to external sensor 1-4
11	Ground	Grounding (also for the alarm in ground connection)
12	Video in	HD SDI Video input channels 1-4
13	HDMI	HDMI output, connect to monitor
14	VGA	VGA output, connect to monitor
15	LAN	Network port
16	USB	Connect the USB mouse or an external USB device
17	DC12V	POWER INPUT

2.3.10 Rear Panel Description(SA-24600)



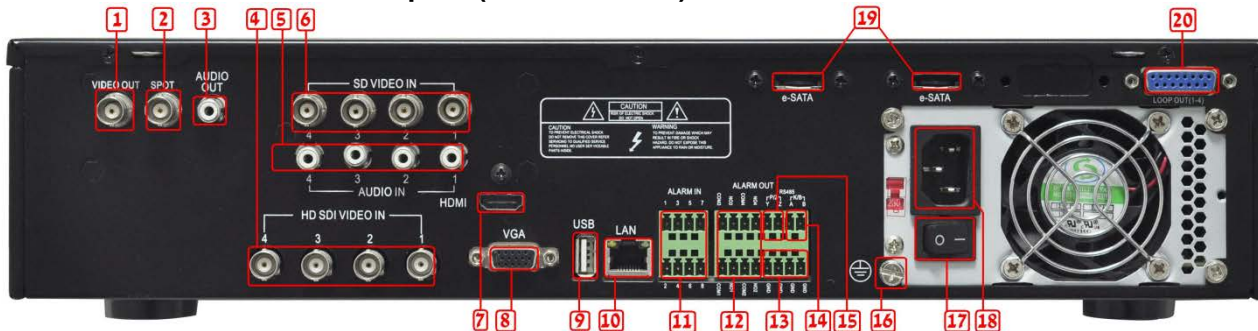
Item	Name	Description
1	VGA	VGA output, connect to monitor
2	Video out	Connect to monitor
3	Video in	Video input channels 1-24
4	P/Z	Connect to speed dome (RS485 PTZ cameras)
5	K/B	Connect to keyboard
6	Audio in	4 CH auxiliary audio input
7	FAN	For cooling the device
8	NET	Network port
9	USB	Connect the USB mouse or an external USB device
10	Spot	Connect to monitor with no menu display
11	ALARM OUT	1-ch relay output. Connect to external alarm.
12	ALARM IN	Connect to external sensor1-16
13	POWER INPUT	DC12V
14	Audio out	Auxiliary audio output

2.3.11 RearPanel Description(SA-32800)



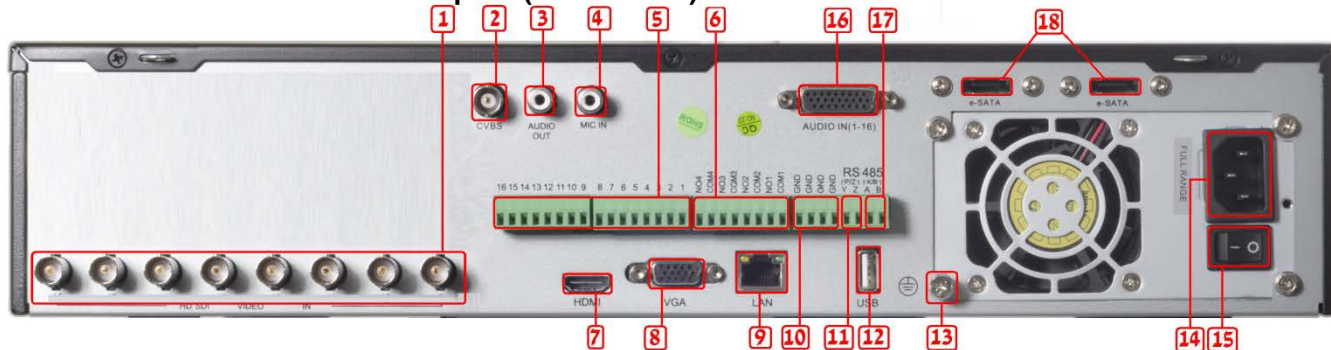
Item	Name	Description
1	Video out	Connect to monitor
2	Video in	Video input channels(1- 32-ch)
3	POWER INPUT	110VAC or 230VAC
4	Loop Out (17-32)	Video out (with a 16 channel plug) for channels 17-32.
5	Loop Out (1-16)	Video out (with a 16 channel plug) for channels 1-16.
6	Spot	Connect to monitor with no menu display
7	MIC IN	Auxiliary audio input for personal microphone
8	Audio out	Auxiliary audio output
9	VGA	VGA output, connect to monitor
10	HDMI	HDMI output, connect to monitor
11	USB	Connect the USB mouse or an external USB device
12	LAN	Network port
13	e-SATA	Connection for external e-SATA HDD for backp
14	ALARM IN	Connect to external sensor1-16
15/16	ALARM OUT/Ground	4ch relay output. Connect to external alarm.
17	P/Z	Connect to speed dome
18	K/B	Connect to keyboard
19	Ground	Grounding (also for the alarm in ground connection)
20	POWER SWITCH	Switch on/off
21	Audio in	16 CH Audio input (with a 16 channel plug)

2.3.12 RearPanel Description(SA-8200D1SDI)



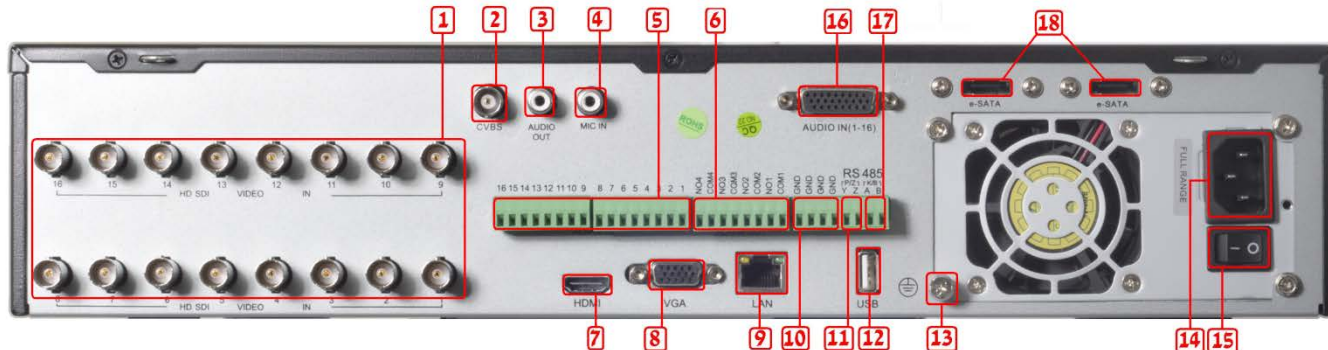
Item	Name	Description
1	Video out	Connect to monitor
2	Spot	Connect to monitor with no menu display
3	Audio out	Auxiliary audio output
4	Video in	HD SDI Video input channels(1-4)
5	Audio in	4 CH auxiliary Audio input
6	Video in	D1 or CIF Video input channels(1-4)
7	HDMI	HDMI output, connect to monitor
8	VGA	VGA output, connect to monitor
9	USB	Connect the USB mouse or an external USB device
10	LAN	Network port
11	ALARM IN	Connect to external sensor1-8
12/13	ALARM OUT/Ground	4ch relay output. Connect to external alarm.
14	K/B	Connect to keyboard
15	P/Z	Connect to speed dome
16	Ground	Grounding
17	POWER SWITCH	Switch on/off
18	POWER INPUT	110VAC or 230VAC
19	e-SATA	Connection for external e-SATA HDD for backup
20	Loop Out (1-16)	Video out (with a 16 channel plug) for channels 1-16.

2.3.13 RearPanel Description(SA-8200SDI)



Item	Name	Description
1	Video in	HD SDI Video input channels(1-8)
2	Video out	Connect to monitor
3	Audio out	Auxiliary audio output
4	MIC IN	Auxiliary audio input for personal microphone
5	ALARM IN	Connect to external sensor1-16
6	ALARM OUT	4ch relay output. Connect to external alarm.
7	HDMI	HDMI output, connect to monitor
8	VGA	VGA output, connect to monitor
9	LAN	Network port
10	Ground	Ground for alarm in
11	P/Z	Connect to speed dome
12	USB	Connect the USB mouse or an external USB device
13	Ground	Ground for DVR
14	POWER INPUT	110VAC or 230VAC
15	POWER SWITCH	Switch on/off
16	Audio in	16 CH Audio input (with a 16 channel plug)
17	K/B	Connect to keyboard
18	e-SATA	Connection for external e-SATA HDD for backup

2.3.14 RearPanel Description(SA-16200SDI/SA-16400SDI)



Item	Name	Description
1	Video in	HD SDI Video input channels(1-16)
2	Video out	Connect to monitor
3	Audio out	Auxiliary audio output
4	MIC IN	Auxiliary audio input for personal microphone
5	ALARM IN	Connect to external sensor1-16
6	ALARM OUT	4ch relay output. Connect to external alarm.
7	HDMI	HDMI output, connect to monitor
8	VGA	VGA output, connect to monitor
9	LAN	Network port
10	Ground	Ground for alarm in
11	P/Z	Connect to speed dome
12	USB	Connect the USB mouse or an external USB device
13	Ground	Ground for DVR
14	POWER INPUT	110VAC or 230VAC
15	POWER SWITCH	Switch on/off
16	Audio in	16 CH Audio input (with a 16 channel plug)
17	K/B	Connect to keyboard
18	e-SATA	Connection for external e-SATA HDD for backup

2.4 Remote Controller

The remote requires two AAA size batteries. For installing the batteries open the battery cover on the Remote Controller, place two batteries according to the correct polarity marked on the remote (+ and -), then fasten the battery cover to back its place.

Notice: if the remote is not working follow those steps:

1. Check batteries poles are according to the marking inside the remote and check the remote.
2. Replace the batteries and check the remote.
3. Check IR sensor is not covered and check the remote.

if you suspect the remote is malfunctioned contact your dealer to replace your remote control unit

The interface of remote controller is shown in Fig.2.8 Remote Controller.

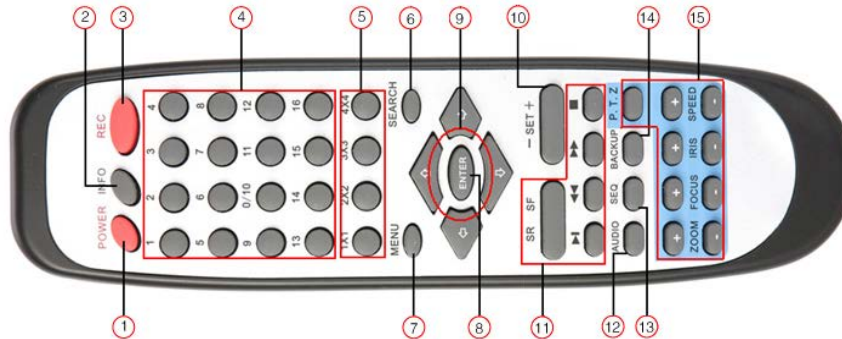


Fig 2.8 Remote Controller

Digital Video Recorder User Manual

Item	Name	Function
1	Power Button	Soft switch off to stop firmware running. Do it before power off.
2	INFO Button	Get information about the DVR like firmware version, HDD information
3	REC Button	To record manually
4	Digital Button	Input digital or choose camera
5	Multi-Screen Button	To choose multi-screen display mode
6	SEARCH Button	To enter search mode
7	MENU Button	To enter menu
8	ENTER Button	To confirm the choice or setup
9	Direction Button	Move cursor in setup or pan/tilt/zoom PTZ
10	+/- Button	To increase or decrease the value in setup
11	Playback Control Button	To control playback, Fast forward/rewind/stop/single frame play
12	AUDIO Button	To enable audio output in live mode
13	Auto Dwell Button	To enter auto dwell mode
14	BACKUP Button	To enter backup mode
15	PTZ Control Button	To control PTZ camera: Move camera/zoom/focus/iris/speed control

Operation processes with remote controller to control multi-DVR systems:

The device ID of the DVR can be changed. The default device ID is 0 (DVR and remote). To use the remote controller for a single DVR, don't reset the device ID, You can operate the DVR (with ID=0) directly. In case of multiple DVR systems follow these steps:

Step1: Activate remote controller to control DVR: enable DVR; point the IR led of the remote controller to the IR receiver on the front panel of the DVR. Press the number key 8 twice. Input device ID (Range from: 0-65535) with other digital number: 0-9. Press the ENTER button to confirm.

Step2: User may change the device ID of the DVR: main menu => System configuration => Basic configuration => device ID. It is not recommended to set other DVRs with the same device ID if it is in the same room. Please note that longer IDs are less convenient to operate.

Step3: To cancel controller ⇔ DVR connection: aim the IR remote controllers led to the IR receiver that on the front panel, press the number key 8 twice, then input the device ID that needs to be cancelled from controlling, press ENTER button to confirm. After that, the DVR will not be controlled by that remote controller.

Digital Video Recorder User Manual

The "small 1U" DVR models contain the small remote controller.



Item	Name	Function
1	REC	Start or stop manual recording
2	SEARCH	Go to the search screen
3	MENU	Go to the main menu
4	Exit	Go back (without saving, the same as cancel)
5	Arrows	Move cursor (menu) or move (PTZ mode)
6	ENTER	confirm the choice or setup
7	PIP	Start or stop picture in picture mode
8	ZOOM	Zoom mode (ON/OFF)
9	Play control	During playback controls the movie
10	Multi	Multi-screen display mode (ON/OFF)
11	NEXT	Go to next selection
12	SEQ	Sequence mode (ON/OFF)
13	INFO	Go to the INFO menu

2.5 Control with Mouse

2.5.1 Connect Mouse

The DVR supports USB mouse through the ports on the rear panel, please refer to Fig2.8.

Notice: *If mouse is not detected or doesn't work:*

1. Make sure the mouse is plugged to the correct USB mouse port not the USB port2. Replace the mouse

2.5.2 Use Mouse

In live:

Double-click (left button) on one camera screen for full screen display. Double-click again to return to the previous screen display.

Click right button to show the control bar at the bottom of the screen. Here are all control and setup. Click right mouse again to hide the control bar.

In setup:

Click left button to enter or accept. Click right button to cancel, or to return to the previous menu. To input a value, move cursor to the blank area and click left button once. A virtual keyboard will appear as in Fig2.9. It supports digitals, letters and symbols input.

Some values can be modified by the wheel, such as time. Move the cursor above the value, and roll the wheel to change the value.

Mouse drag; i.e. Set motion detection area: click customized, hold and drag to set motion detection area. Set schedule: hold and drag left button to set schedule time

In playback or backup:

Click left button to choose the options. Click "X" button to return to live mode.

In PTZ control:

Click left button to choose the buttons to control the PTZ. Click right button to return to live.

Notice: *Mouse is the default tool in all the operation below unless indicated otherwise.*



Fig 2.9 virtual keyboard

3 Basic Function Instruction

3.1 Power On/Off

Before you power on the unit, please make sure **all the cables** are connected properly.

3.1.1 Power on

Step1: Plug in the power; switch on the power button (16-channel DVR only)

Step2: The device will start loading, and the power indicator will have blue color.

Step3: Before loading the camera view, a WIZZARD window will be pop-up and you could change the time zone, time setup, network configuration, record configuration, disk management and more. User may or may not perform initial setup here or perform the setup from the menu as described on the relevant chapters. The setup Wizard is optional, to skip this step click on the "Exit" button. To disable the wizard mark the option "startup wizard" on the first page of the startup.


Notice: this serial device displays the menu either on VGA monitor or on the BNC monitor. To switch between the two outputs press the "ESC" button until you hear a long beep.

If there is no display or you can only see the cameras without the main menu after clicking the right button on the mouse press the "esc" button until a beep sounds. The VGA and video out (BNC) displays will switch.

3.1.2 Power off

You can power off the device by using remote controller, keyboard or mouse.

By remote controller: Press the "Power" button, the Shutdown window will appear, click "OK", the unit display a message on the screen, "it is now safe to unplug the DVR". Now you may disconnect the power line.

By keyboard and mouse: Step1: enter the Menu,  then select "System Shut Down" icon, the Shutdown window will appear, click OK, the unit display a message on the screen, "it is now safe to unplug the DVR". Now you may disconnect the power line.

3.2 Login

You can login and logout from the DVR system. After logout the user cannot operate except changing the multi-screen display.

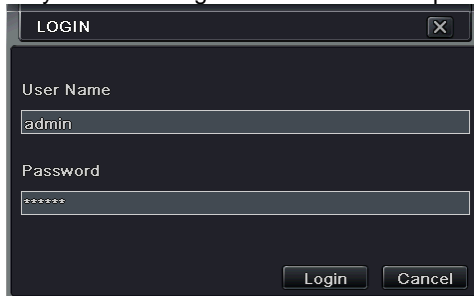


Fig 3-1 Login

Notice: The default user name is "admin" and the password is "123456"

To change the password, or to add or delete a user refer to Fig 4.7 "User management configuration".

3.3 Live preview

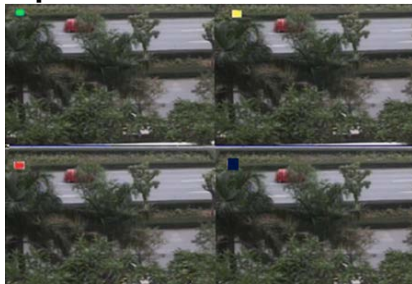


Fig 3-2 live preview interface

Symbol	Meaning
Green	Manual record
Yellow	Motion detection record
Red	Sensor Alarm record
Blue	Schedule record

3.3.1 Live playback


Click Play  button to playback recordings. You can change settings by clicking on the buttons on screen.




Fig 3-3 live playback

4 Main menu setup guide

Click right mouse or press ESC button on the front panel: the control bar will appear on the bottom of the screen, refer to Fig 4-1:



Fig 4-1 main menu toolbar

Click the  icon beside "screen mode" to select the channels. There is an option for 6/8/13 channels with a main channel in the middle of the screen. You can arrange the order by drag and drop for the live display.

Dwell: this mode is used to display a 1/4/6/9/16 picture-screen that alternate every few seconds. To modify the settings go to main menu=>setup=>live=>main monitor.

Color: this mode is used to adjust the color of the live pictures.

E-Zoom: this mode is used to digitally magnify an image on live or recorded data: Left click the picture, right click and select Zoom. Simply press left mouse and drag the picture to view different parts of the image. Double-click the left mouse to exit E-Zoom mode.

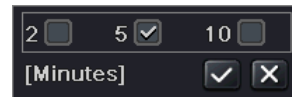
Volume: this mode is used to mute or unmute and to select the audio channel if the audio out is connected to an amplified monitor.

PTZ: this mode is used to control pan/tilt/zoom and to access the menu of some smart PTZ cameras. The control will change rotation position, speed of the dome and start track, auto scan or cruise in this interface. Refer to PTZ manual for more details.

Snap: (NE series) click this button to create a snapshot of the live cameras. These pictures will be saved on the SATA disk.

Record: this mode is used to start or stop continuous record.

Playback: this mode is used to start playback of the latest 2, 5 or 10 minutes recorded on the DVR =>



Move tool: this mode is used to move the menu.

PIP: All models have PIP  (picture in picture), activated from the taskbar (Screen mode)

Function menu: this mode is used to reach the main menu as Fig 4-2; you can also press MENU button on the front panel or operate with remote control to display the main menu. Click Setup icon will pop-up the configuration menu:



Fig 4-2 main menu

configuration menu

4.1 Basic configuration

The basic configuration has three sub menus: system, date& time and DST.

4.1.1 System

Step1: enter into system configuration=>basic configuration=>system; refer to Fig 4-3:

Step2: in this interface you can setup the device name, device ID, video format, max network users, VGA resolution and language. The definitions for every parameters display as below:

Device name: the device name can be displayed on the client end or CMS; which helps recognizing the device remotely.

Video format: there are two modes: PAL and NTSC. Selection of the video format must be identical to that of cameras.

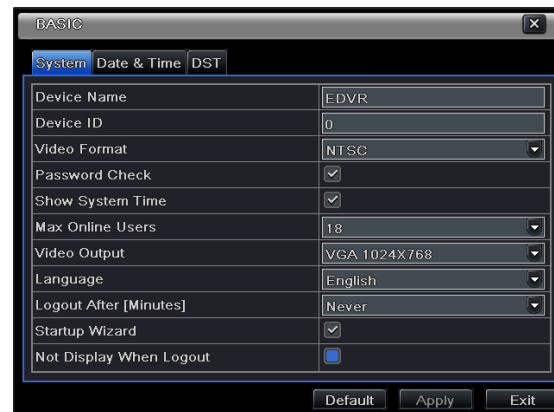


Fig 4-3 basic configuration-basic

Password check: enabling this option prompts user name and password before user can perform operations on the DVR.

Show System time: displays the time in live view.

Startup wizard: This option enables the wizard on startup.

Max network uses: set the maximum simultaneous users via network connection.

VGA resolution: the resolution of live display interface, range from: **VGA800*600**, **VGA1024*768**, **VGA1280*1024** and **CVBS**.

Note : When switching between VGA and CVBS connect to relevant monitor. (Also see 3.1.1)

Language: setup the menu language.

"Not Display When Logout": an option to hide all live channels before logging in locally.

Note: after changing the language or video output, the device will reboot.

4.1.2 Time & date

System configuration=>basicconfiguration=>time&date;
refer to Fig 4-4.

Set the date format, time format, time zone in this interface; mark "sync time with NTP server" to refresh NTP server date or adjust system date manually.

Reset default setting; click the "default" button and then "apply" button to save the setting. click the "exit" button to exit current interface.

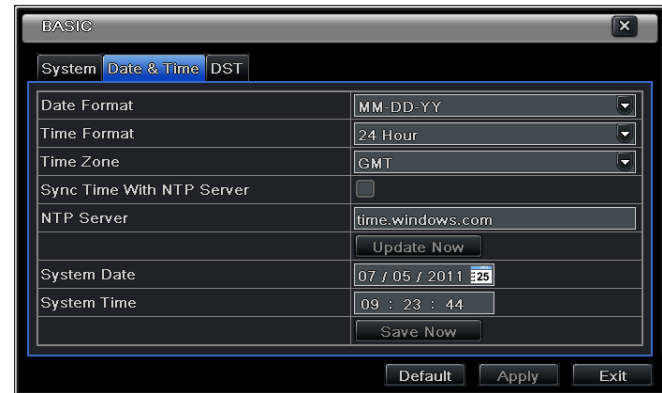


Fig 4-4 basic configuration-time & date

4.1.3 DST

System configuration=>basic configuration=>DST; refer to Fig 4-5:

In this interface you can enable daylight saving time, set the DST time offset, mode, start & end month/week/date.

Reset default setting; click the“default” button and then“apply” button to save the setting.Pressthe “exit” button to exit current interface.



Fig 4-5 basic configuration-DST

4.2 Live configuration

The live configuration has four submenus: live, host monitor, Spot and mask.

4.2.1 Live

This option is used to change camera name, adjust colors: brightness, hue, saturation and contrast.

Step1:System configuration=>live configuration=>live; refer to Fig 4-6:

Note: Clicking on a camera Name will pop up a soft keyboard. Now you can change the camera name.

Step2: if you unmark camera name the name will be hidden.

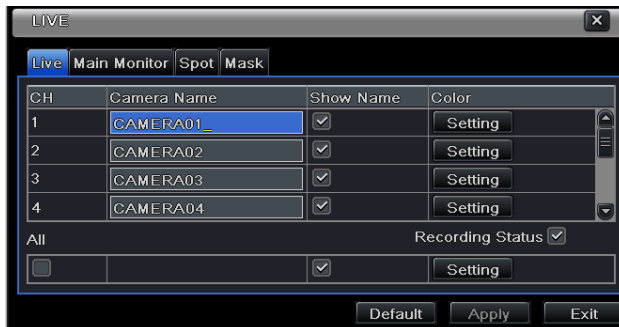


Fig 4-6 live configuration→live

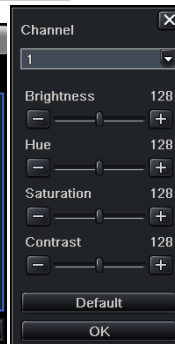


Fig 4-7 live-color adjustment

Step3:clicking the“setting” button will pop-up a window(Fig 4-7) in this interface, you can adjust brightness, hue, saturation and contrast in live.The“default” button will restore the DVR to default live setting, click “OK” button to save the setting.

Step4:you can setup all channels with same parameters by marking“all”, and then“Apply”.

4.2.2 Main monitor

System configuration=>live configuration=>main monitor;
refer to Fig 4-8. Select group size: 1×1,2×2,2×3,3×3,4×4
and channels on each group.

Dwell time: the time interval for a picture group before switching to the next group.

After selecting the split mode setup the picture groups.



Click  button to setup the previous channel groups of dwell picture.



Fig 4-8 live configuration-host monitor

Click  button to set the next channel group.

Step5: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.


4.2.3 Spot

Step1: enter into system configuration→live configuration→Spot; refer to Fig 4-9:

Step2: select split mode: 1×1and channel

Step3: dwell time: the time interval for a certain dwell picture display switching to next dwell picturedisplay

Step4: select the split mode and then setup current picture group. Click  button to setup the previous

channel groups of dwell picture. Click  button to set the latter channel groups of dwell picture.

Reset default setting; click the “default” button and then “apply” button to save the setting. Pressthe “exit” button to exit current interface.

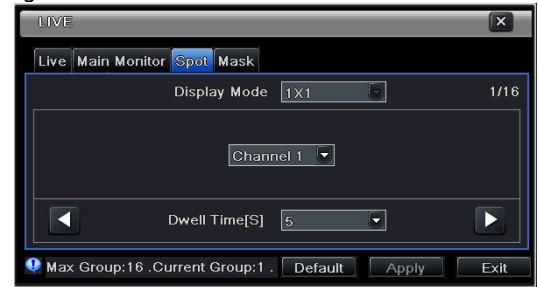


Fig 4-9 live configuration-Spot

4.2.4 Mask

You can add up to three privacy mask areas on the live image picture, to block view and recording.

Setup mask area: click setting button, enter live image and press left mouse tocreate or move a privacy mask, refer to the picture on the next page. Pressthe "Apply" button to save your setting.

Delete mask area: double click on the mask area you want to delete. Click Apply button to save the setting.

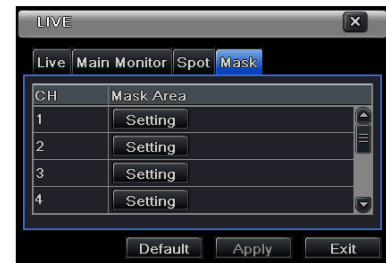


Fig 4-10 live configuration-mask



Setup mask area



Live image mask area

4.3 Record configuration

Record configuration includes six sub menus: enable, record bit rate, time, recycle record, stamp and snap for NE orHD series.

4.3.1 Enable

Step1: enter into system configuration→record configuration→enable; refer to Fig 4-11:



Fig 4-11 record configuration-enable

Step2: mark record, audio and record time to enable audio/video record.

Step3: user can setup all channels with the same parameters by marking "all", then "apply".

Parameter	Meaning
Record	Record switch of every channels
Audio	Enable live record audio

4.3.2 Record stream

Step1: go to system configuration → record configuration → record bit rate; refer to Fig 4-12:

Step2: setup rate, resolution, quality, encode and max bit stream

Step3: setup every channel with the required parameters, or mark “All” and set to apply the changes to all channels.

Reset default setting; click the “default” button and then “apply” button to save the setting. Press the “exit” button to exit current interface.

Note: if the rate value set is over high the maximum resources of the device, the value will be adjusted automatically.

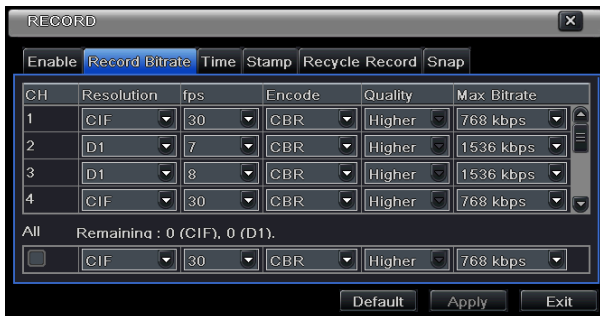


Fig 4-12 record configuration-record bit rate

Parameter	Meaning
Rate	Range from: 1-30 (NTSC) 1-25(PAL)
Resolution	Support CIF, D1, and HD1 (D1, 12fps)
Quality	The higher the value is, the clearer the recorded image is. Six options: lowest, lower, low, medium, higher and highest.
Encode*	VBR and CBR
Max bit stream*	Range from: 64 Kbps, 128 Kbps, 256 Kbps, 512 Kbps, 768 Kbps, 1Mbps, 2 Mbps

*Only in NE or HD Series

4.3.3 Time

Step1: go to system configuration ⇒ record configuration ⇒ time; refer to Fig 4-13:

Pre-alarm record time: pre-record time before being triggered; (motion/sensor) triggering.

Post-alarm record: recording time after the alarm has stopped. There five options: 10s, 15s, 20s, 30s, 60s, 120s, 180s and 300s.

Expire time:the maximum time a recording will be in the system. If the set date is overdue, the record files will be deleted automatically. To setup all channels with the same parameters mark“all”and then click "apply".

Reset default setting; click the“default” button and then“apply” button to save the setting.Pressthe “exit” button to exit current interface.



Fig 4-13 record configuration-time

4.3.4 Stamp

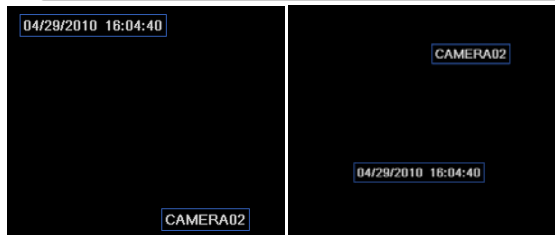
Stamp: Change the position of the camera name or the time stamp.

Step1: configuration=>record configuration=> stamp; refer to Fig 4-14:mark camera name, time stamp; click Setting button. Use cursor to drag the camera name and time stamp to the desiredpositions. To setup all channels with the same parameters mark“all” and then click "apply".

Reset default setting; click the“default” button and then“apply” button to save the setting.Pressthe “exit” button to exit current interface.



Fig 4-14 record configuration-stamp



Before repositioningafter repositioning

4.3.5 Recycle record

System configuration=>record configuration=>recycle record; mark"recycle record" to enable recycle recording. When the disk is full the new files will overwrite the earliest files and keep recoding after the HDD is full; if You disable this function the DVR will stop recording when the HDD is full.

Reset default setting; click the"default" button and then"apply" button to save the setting.Pressthe "exit" button to exit current interface.

4.3.6 Snap

This option is used to set up Resolution, quality, snap shot interval andthe number of pictures taken.

4.4 Schedule configuration

Schedule configuration includes three sub menus: schedule, motion and alarm.

4.4.1 Schedule

This table representsthe days in a week from Sunday to Saturday, and on the top the 24 hours of a day. Click the grid to do relevant setup. Blue means checked area and gray means unchecked area.

Step1: enter into system configuration→schedule configuration→schedule; referring to Fig 4-15:

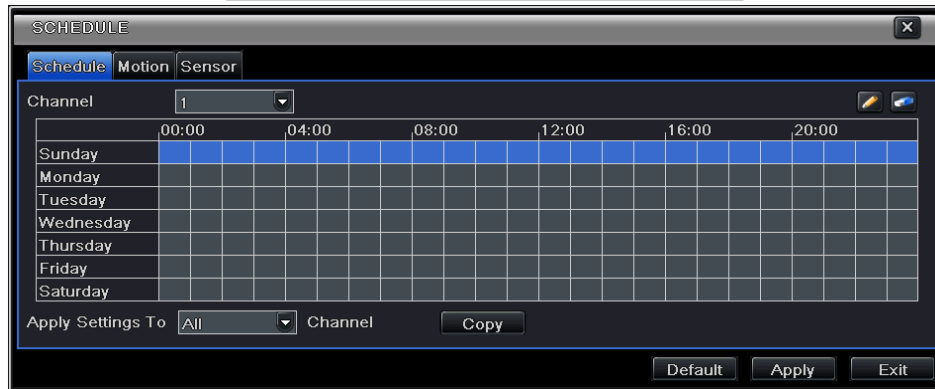


Fig 4-15 schedule configuration-schedule

Step2: select channel and double-click to pop up a window as Fig 4-16. Now you can edit week schedule:

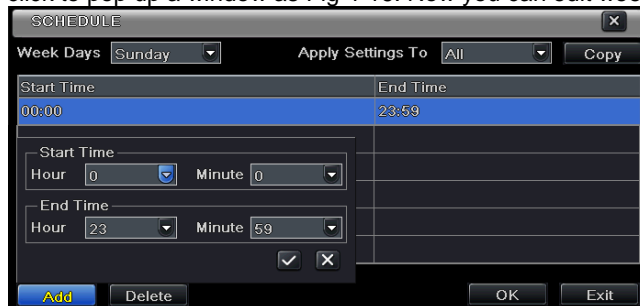


Fig 4-16 schedule-week schedule

- Press the "add" button to add a certain day schedule or press the "delete" button to delete the selected schedule; Copy: You can copy this schedule to other day by pressing "copy" then "ok".

Click “OK” button to save the setting; click “Exit” button to exit current interface.

- If the user wants to apply the schedule setting of certain channel to other or all channels, he needs to select channel and click “Copy” button.

4.4.2 Motion

Step1: enter into system configuration→schedule configuration→motion; refer to Fig 4-17:

Step2: the setup steps of motion are Similar to the schedule; Refer to 4.4.1 Schedule for details.

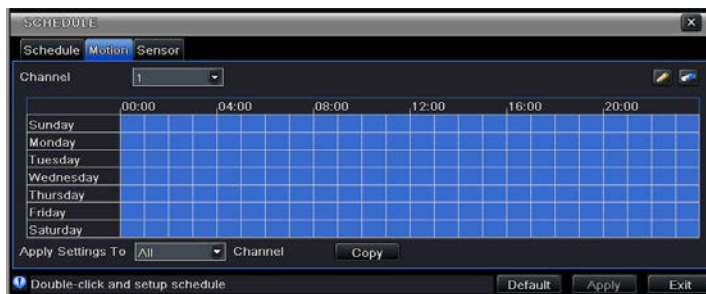


Fig 4-17 schedule configuration-motion

Note: the default schedule of motion detection is full-selected, that is, the color of schedule setting interface is blue.

4.4.3 Sensor

Step1: enter into system configuration→schedule configuration→alarm; refer to Fig 4-18:

Step2: the setup steps of alarm are Similar to the schedule; Refer to 4.4.1 Schedule for details.

Note: the default schedule of motion detection is full-selected, that is, the color of schedule setting interface is blue.



Fig 4-18 schedule configuration-sensor

4.5 Alarm configuration

Alarm configuration includes five sub menus: sensor, motion, video loss, other alarm and alarm out.

4.5.1 Sensor

Sensor includes three sub menus: basic, alarm handling and schedule.

- Basic

system configuration =>alarm configuration =>sensor =>basic; Refer to Fig 4-19: Enable sensor alarm and then set the alarm type according to triggered alarm type. Two option: NO and NC (Normally open/closed).

To setup all channels with the same parameters mark "all" then apply to save relevant setup to all channels.

Reset default setting; click the "default" button and then "apply" button to save the setting. Press the "exit" button to exit current interface.

- Alarm handling

Step1: enter into system configuration->alarm configuration->sensor->alarm handling; refer to Fig 4-20:



Fig 4-19 alarm configuration-sensor-basic

- Alarm handling

system configuration =>alarm configuration =>sensor =>alarm handling; refer to Fig 4-20: select hold time, click Trigger button, and a dialog box will pop-up as Fig 4-21: If Buzzer is selected, the sensor will prompt an alarm.

Note: there will be no alarm menu for DVRs that do not have an alarm system (for example the SA-4100HDX+ DVR model)



Fig 4-20 alarm handling-trigger Fig 4-21 alarm configuration-sensor-alarm handling

Full screen alarm: when alarm is triggered, there will pop up full screen alarm;

Email: Select this function. When an alarm is triggered, a notification email will be sent to the designated email box including trigger events, time, snap pictures, device name, ID camera name etc.

Snap (for NE or HD series): Select channels. When an alarm is triggered, the system will automatically save the captured pictures from the selected channel. If user activates the Email function, these pictures will also be sent to the designated email.

To alarm out: After selecting the channel, there will be triggered alarm out in the designated channel. Click OK button to save the setting; click Exit button to exit the current interface.

To record: Select recording channels. It will record the camera when alarm is triggered. Click OK button to save the setting; click Exit button to exit the current interface.

To P.T.Z: set linked preset and cruise for alarm. User can select any channel or multi channels as linked channels. Click OK button to save the setting; click Exit button to exit the current interface.

To setup all channels with the same parameters mark "all" then apply to save relevant setup to all channels.

Reset default setting; click the "default" button and then "apply" button to save the setting. Press the "exit" button to exit current interface

- Schedule

System configuration =>alarm configuration =>sensor =>schedule; Refer to Fig 4-22: The setup steps of sensor schedule are similar with all schedules; Refer to 4.4.1 Schedule for details.

Note: the default schedule of sensor is to be always on: the color of schedule setting interface is blue.

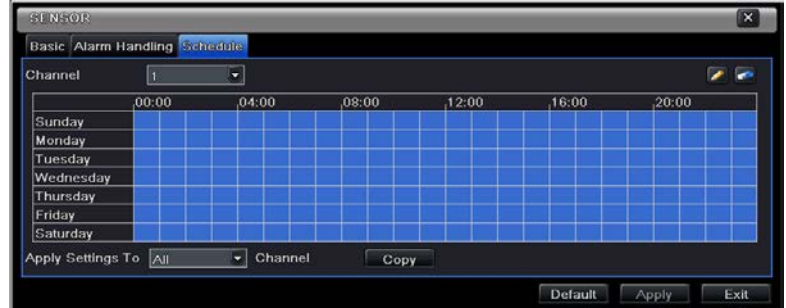


Fig 4-22 sensor-schedule

4.5.2 Motion

Motion includes two sub menus: motion and schedule.

- Motion

System configuration =>alarm configuration =>motion; refer to Fig 4-23: Enable motion alarm, set alarm hold time (time interval between two adjacent detective motions). If there is an additional motion detected during the interval period which is considered continuous movement; otherwise, it will be considered that those two adjacent detective motions are two different motion events. Click Trigger button, a dialog box will pop-up: The setup steps for motion trigger are similar to the alarm handling; Refer to Chapter 4.5.1 Sensor =>alarm handling for more details.

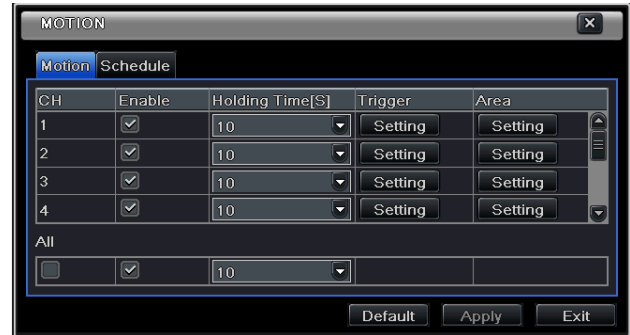








Fig 4-23 alarm configuration-motion

Next: click Area button, a dialog box will pop-up as Fig 4-24 a and 4-24b.

To set the sensitivity value (1-8)drag the slide bar in the Area interface, the default value is 6. The higher the value the higher the sensitivity to movement, meaning more events will be recorded. Due to the sensitivity is influenced by color and time (day or night), adjust its value according to the practical conditions; click  icon, set the whole area as detection area; click  icon, the set detection area will be cleared; click  icon, user can test if the sensitivity value and motion area are suitable accordingly (refer to following picture) ; Click  icon, to save the setting; click  icon, exit current interface.

Note: to set the area drag the mouse to the desired detection area, click  icon to clear all set detection area firstly, and only then set the area.

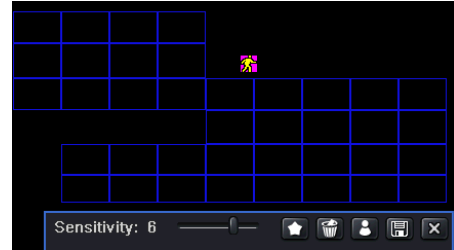


Fig 4-24b motion-area



Fig 4-24 motion-area

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To setup all channels with the same parameters choose “all” then apply to save relevant setup to all channels.

Reset default setting; click the “default” button and then “apply” button to save the setting. Press the “exit” button to exit current interface.

- Schedule
system configuration => alarm configuration
=> schedule; refer to Fig 4-25: the setup steps of alarm schedule are similar to those in 4.4.1

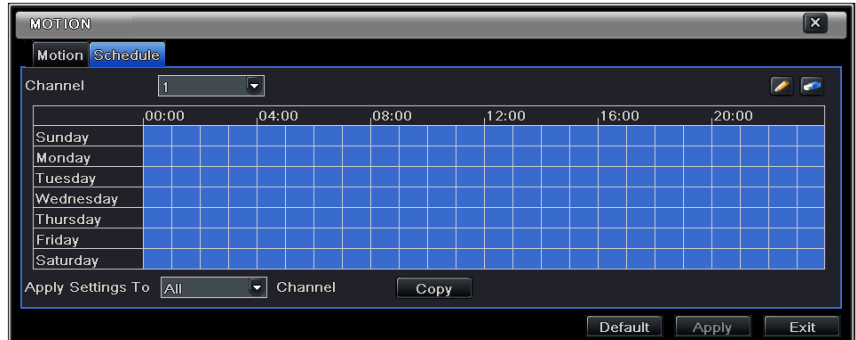


Fig4-25 alarm configuration-schedule

4.5.3 Video loss

System configuration => alarm configuration => video loss; refer to Fig 4-26: the setup steps of video loss trigger are similar to the alarm handling; Refer to Chapter 4.5.1 Sensor => alarm handling for more details.

To setup all channels with the same parameters choose “all” then apply to save relevant setup to all channels. Reset default setting; click the “default” button and then “apply” button to save the setting. Press the “exit” button to exit current interface.



Fig 4-26 alarm configuration-video loss

4.5.4 Other alarm

Select system configuration→other alarm (as shown in Fig 4-27)

Disk full: You can choose the capacity of the disk storage and select the related alarm. If the disk is full, the system will perform according to the setup.

IP conflict: if there is an IP address conflict within the same network, the system will perform according to the setup.

Disconnect: if the system recognizes a network disconnection the system will perform according to the setup.

Disk Warning: if the disk sends a warning the system will perform according to the setup

Disk Disconnected (an important improvement): when there is no recognized disk the system will perform according to the setup.



Fig4-27 other alarm

Reset default setting; click the “default” button and then “apply” button to save the setting. Press the “exit” button to exit current interface.

Select a hard disk in the list box. When the disk capacity is lower than that in the value, a message will appear on the lower right of the live image.

4.5.5 Alarm out

Alarm out includes three sub menus: alarm out,schedule and buzzer

- Alarm out

System configuration =>alarm out; refer to Fig 4-28: You can set relay alarm out name and select hold time (the interval time between the two adjacent alarms).

To setup all channels with the same parameters choose“all”then apply to save relevant setup to all channels.

Reset default setting; click the“default” button and then“apply” button to save the setting.Pressthe “exit” button to exit current interface.

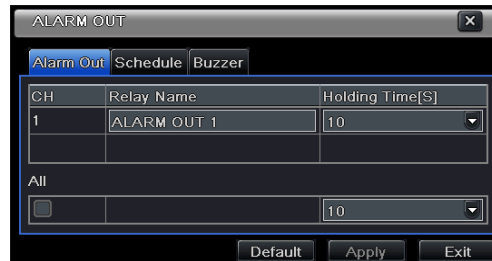


Fig 4-28 system configuration-alarm out

- Schedule

Configuration =>schedule;the setup steps of alarm out schedule are similar to those in4.4.1

Note: the default schedule of motion detection is set to always on: the color in the schedule is blue.

- Buzzer

Configuration =>buzzer;mark Buzzer and set buzzer alarm hold time.

4.6 Network configuration

Network configuration includes four submenus: network, sub stream, Email and other settings.

4.6.1 Network

Step 1: Main menu =>system configuration =>network configuration =>network; refer to Fig4-29:

The default HTTP port is 80. If the value has changed, you need to add the port number after the IP address; if the HTTP port is set to 82, and the IP address is 192.168.0.25 the full address is: http://192.168.0.25:82 (both LAN and WAN)

The server port is the communication port.

If the option "Obtain an IP address automatically" is marked, the device will obtain the IP address, Subnet Mask, Gateway and DNS servers from the DHCP (e.g. a router).

You can use PPPoE protocol to directly connect the DVR to an ADSL modem. Mark the "PPPoE" checkbox, and add the user name and password, click "Apply" then "Test" to see if there is a problem with the data or connection.

Tip: to connect multiple systems use consecutive IP and ports.

For example: use 10.0.0.95 with ports 95 and 6095,
and 10.0.0.96 with ports 96 and 6096,
and 10.0.0.97 with ports 96 and 6097.

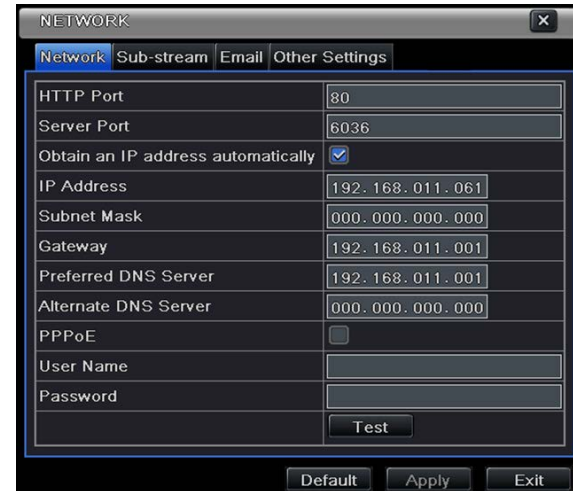


Fig 4-29 network configuration-network

4.6.2 Sub stream



Fig 4-30 network configuration-sub stream

System configuration =>network configuration =>sub stream; refer to Fig 4-30:select fps, resolution, quality, encode and max bit rate

To setup all channels with the same parameters choose“all”then apply to save relevant setup to all channels.

Reset default setting; click the“default” button and then“apply” button to save the setting.Pressthe “exit” button to exit current interface.

Definitions and descriptions of Sub stream:

Parameter	Meaning
FPS	Range from: 1-25
Resolution	Support CIF
Quality	The quality of the clients' image. The higher the value is, the clearer the record image. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR
Max bit rate	Range from: 64/128/256/512/768 Kbps, 1 and 2 Mbps

4.6.3 Email

system configuration =>network configuration =>email; refer to Fig 4-31

SMTP Server/Port: the name and port number of SMTP server. After selecting “This server requires a secure connection (SSL)”, you can setup mail servers (such as Gmail/Yahoo/Hotmail) according to the e-mail provider requirements

Note: Gmail SMTP server is "smtp.gmail.com", the port is 465 and the SSL Checkbox is marked [v].

Send address and password: sender's account details.

Receive address: receiver's email address. Here you can add at most three e-mail addresses.

Click TEST button to test the validity of the mailbox.

Attaching image: when checked the mail sent will contain snap (also see 4.3.6).



Fig 4-31 network configuration-email

4.6.4 Other settings

To enable the DDNS server option fill in the DDNS account location and validation. The host domain name is the final address of the registered website. Click TEST to test if the information is correct and the service works.

Reset default setting; click the “default” button and then “apply” button to save the setting. Press the “exit” button to exit current interface.

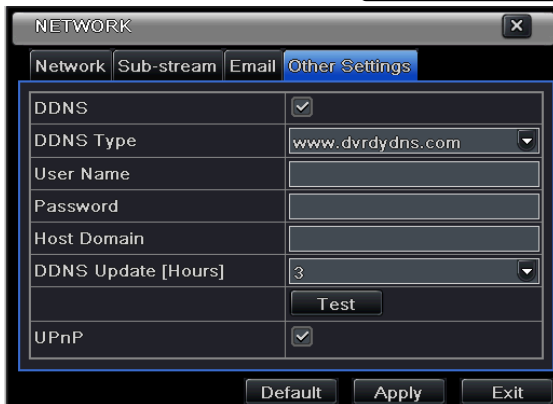


Fig 4-32 network configuration-other settings

Note: The domain name server selected makes it possible to use a domain name for the DVR instead of using the DVR's "external" IP address. First register for a user name and password (at the DDNS website), and then apply for a domain name. After completing the registration (and only if the correct port forwarding rules are in effect) you will be able to access your DVR from the internet. Simply write your domain name in the internet browser's address bar.

Using UPnP: A technician may prefer to use UPnP to access the DVR remotely from the WAN: enable UPnP function in the user's router and the DVR. When accessing the DVR through IE, user can check the IP address by the following method: Double-click the "My Network Places" icon on the desktop in PC, select "Show icons for networked UPnP devices" in the "Network Tasks" list box, a information window will pop up, click "YES" button, "Windows Components Wizard" dialog box will pop up as shown as below picture, press "Next" to continue. After finished the installation of configuring components, the UPnP icons will display. Users can double-click certain icon and check the IP address of the device.

If “Show icons for networked UPnP devices” can’t display in the “Network Tasks” list box, please follow the below operation:

- Click “Tools”- “Folder options” (figure 4-33)
- Select the “Show common tasks in folders” in the “Tasks” check box to display the UPnP icon (figure 4-34)

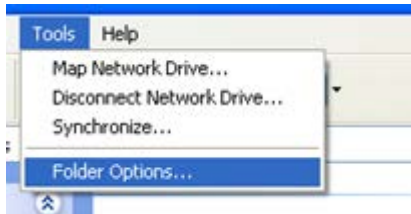


Figure 33

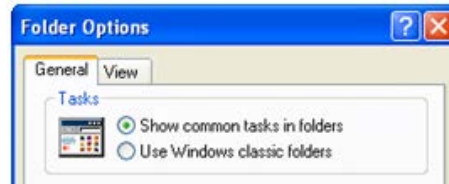


Figure 34

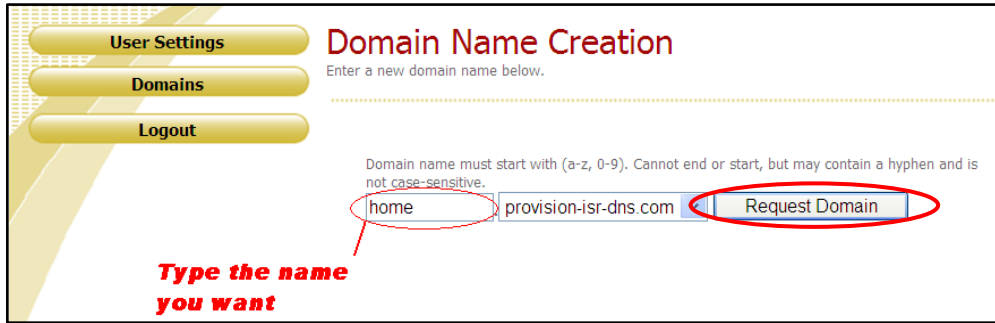
(a) To register a domain with Provision-ISR DDNS server follow these steps:

- 1) Visit our website: <http://provision-isr-dns.com> and register for a domain name by clicking "Registration" (figure 4-35)



Figure 35

- 2) Fill in the registration form, then click "**Submit**" (figure 4-36)
- 3) Fill in the host name you want to apply for. Now press "**Request Domain**", for example "**home**"(figure 4-37)



User Settings

Domains

Logout

Domain Name Creation

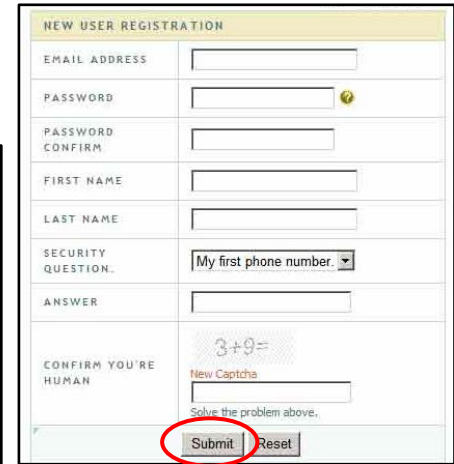
Enter a new domain name below.

Domain name must start with (a-z, 0-9). Cannot end or start, but may contain a hyphen and is not case-sensitive.

home provision-isr-dns.com Request Domain

Type the name you want

Figure 37



NEW USER REGISTRATION

EMAIL ADDRESS

PASSWORD

PASSWORD CONFIRM

FIRST NAME

LAST NAME

SECURITY QUESTION: My first phone number

ANSWER

CONFIRM YOU'RE HUMAN

3+9=

New Captcha

Solve the problem above.

Submit Reset

Figure 36

If there is no problem with the domain registration you will see the following message: "**Your domain was successfully created.**" If you do not see this message, the domain name you requested is already in use and you will be requested to provide an alternate domain name (figure 4-37). You can create up to 35 domain records under a single account. The domain name is your DVR's address prefix, for example the domain "*home*" will appear as "**home**.provision-isr-dns.com".

Note: *domain name* is sometimes called *host name*.

User management configuration

Step 1: enter into system configuration =>user management configuration; refer to Fig 4-38:

Step 2: click Add button to display a dialog box as Fig 4-39:

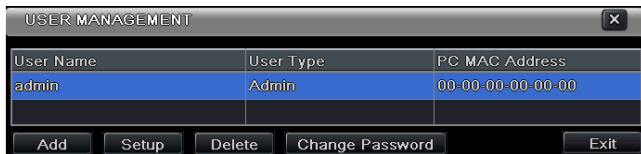


Fig 4-38 user-management



Fig 4-39 add-general

① General: Input user name, password; select user type: normal and advance, input the MAC address of the PC; click OK button. Then this user will be added into the user list box; click Exit button to exit the current interface.

Note: when the default value of binding PC MAC address is 0, the user is not bound to a computer; the user can log to the DVR with that account only if the computer has a specific MAC address.

② Authority:

After adding a user, go to authority (Fig 4-40): In the authority interface, assign the operation limitations for that user. Click the Setup button to modify user name, user type and MAC binding address.

To delete a user choose that user in the user list box and then click "Delete" button. To change a password click the "Change Password" button and modify the password; click Exit button to exit the current interface (Fig 4-38)



Fig 4-40 add user-authority

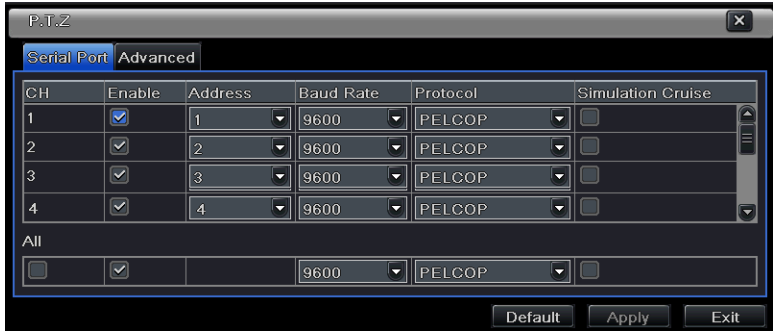


Fig 4-41 P.T.Z configuration-serial port

4.7 P.T.Z configuration

P.T.Z configuration includes two submenus: serial port and advance①Serial port

System configuration => P.T.Z configuration =>serial port; Refer to Fig 4-41:mark"Enable" and then setup the value of that camera (address, baud rate and protocol according to the settings of the speed dome).

To setup all channels with the same parameters choose"all"then apply to save relevant setup to all channels.

Reset default setting; click the"default" button and then"apply" button to save the setting.Pressthe "exit" button to exit current interface.

"Simulative Cruise": the DVR will send presets in loop and not send the single "Cruise" command

Definitions and descriptions of network stream:

Parameter	Meaning
Address	The address of the PTZ device
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from: NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA,

③ Advance

Configuration => P.T.Z configuration =>advance; Refer to Fig 4-42: click preset “Setting” button to see a dialog box as Fig 4-43:



Fig 4-42 P.T.Z configuration-advance



Fig 4-43 advance-preset setting

a. in the preset set interface, while clicking Setting button, a dialog will pop-up as Fig 3-44:

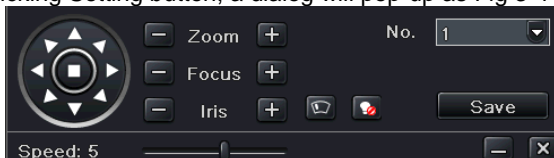




Fig 4-44 preset set-setting

b. user can control the dome rotates up, up left, down, right down, left, left down, right and up right and stop rotating; adjust the rotate speed and the value of zoom, focus and iris of the dome;

c. select the serial number of the preset point. If relevant click  button to enable the PTZ wiper and click  button to enable the PTZ light.

Note: PTZ must support wiper and light for these two functions to work. These two buttons are available only when using PELCOP or PELCOD.

Click Save button to save the settings, click  icon to hide the tool bar, right-key can remerge it; click  icon to exit the current interface.

d. in the preset interface, click OK button to save the setting; click Exit button to exit current interface without saving.

Step 3: in the Advance interface, click the cruise "Setting" button, a dialog box will pop-up as in Fig 4-45:

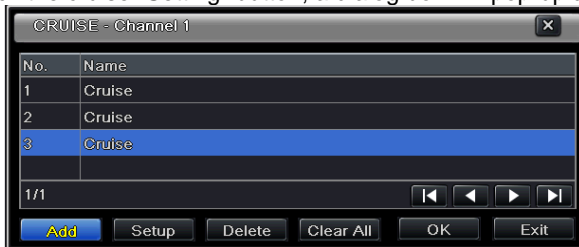









Fig 4-45; cruise set

a. click the "Add" button to add cruise line in the list box (max 8 cruise line can be added); select a cruise line and click Setup button to see a dialog box as Fig 4-46:

b. click Add icon  to set the speed and time of preset point; select a preset point and then click Delete icon  to delete that preset point; click the "Modify" icon  to modify the setting of the highlighted preset point. Click     to

adjust the position of the preset point. Click Preview button to preview the cruise line; click OK button to save the setting; click Exit button to exit current interface without saving.

c. select a preset point in the cruise line list box. Click "Delete" button to delete that cruise line; click Clear all button to clear all cruise line from the list box; click OK button to save the setting; click Exit button to exit current interface.

Step4: in the Advance interface click "Setting" button, a dialog box will pop-up as Fig 4-47:

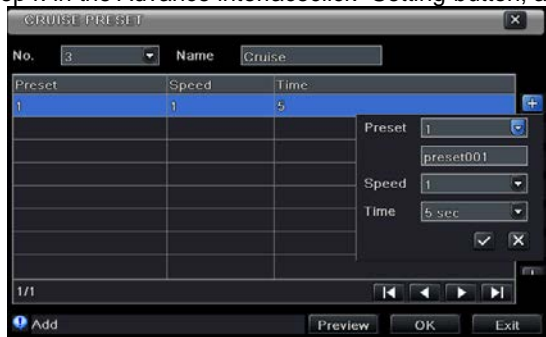


Fig 4-46 cruise set-modify cruise line

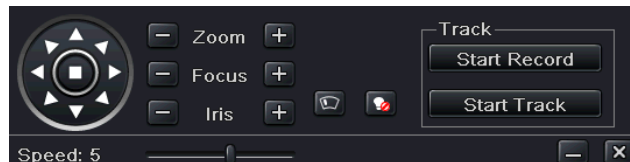




Fig 4-47 track setting

d. user can control the dome rotation up, up left, down, right down, left, left down, right and up right and stop rotating; adjust the rotate speed and the value of zoom, focus and iris of the dome; click Start Record button to record the move track of PTZ; click this button again can stop record; click Start track button to play recorded track; click this button again can stop play.

e. click  icon to hide the tool bar, right-key can remerge it; click  icon to exit the current interface without saving.

4.8 Advanced

Advanced configuration includes three submenus: reset, import/export and Block/Allow list for the NE or HD series.

4.8.1 Reset

Reset all settings the device will reboot, please note: perform the reset only after consulting with a technician.

4.8.2 Import/Export

User can export the data files into mobile storage devices as backup function, and then import specified data files from mobile storage device to DVR.

4.8.3 Block/Allow list



Fig 4-48 Block/Allow list

The authorized user can block/allow users from accessing the DVR according to their IP address. For example, if an authorized user wants to block computer users with IP addresses from 196.168.000.002 to 196.168.000.004, the authorized user can mark Block list, and then input such IP address segment. After clicking Apply the settings will be saved. If authorized users allow computer users within a certain IP address segment to access DVR, they can mark Allow-list, and add the IP to the allow list. All other users will be blocked.

5 Record search & playback and backup

Search configuration includes four submenus: time search, event search, file management and image.

5.1 Time search

Search configuration =>time search; Refer to Fig 5-1:

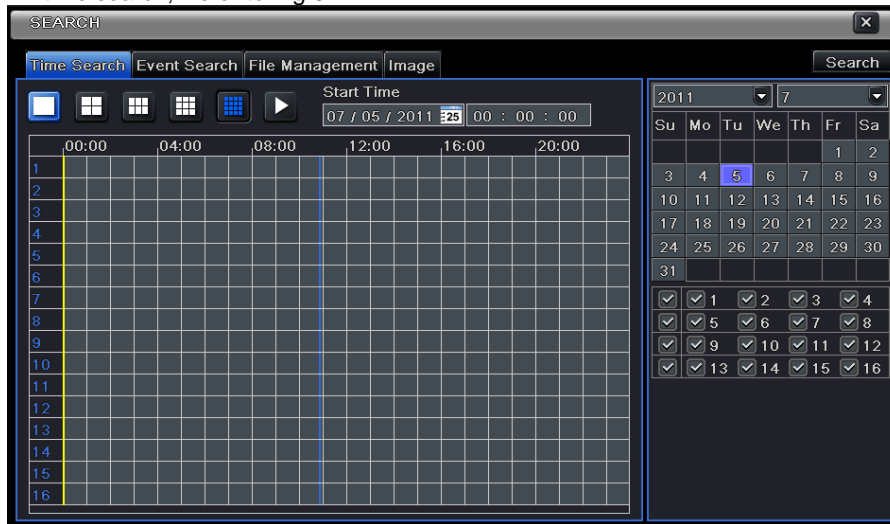

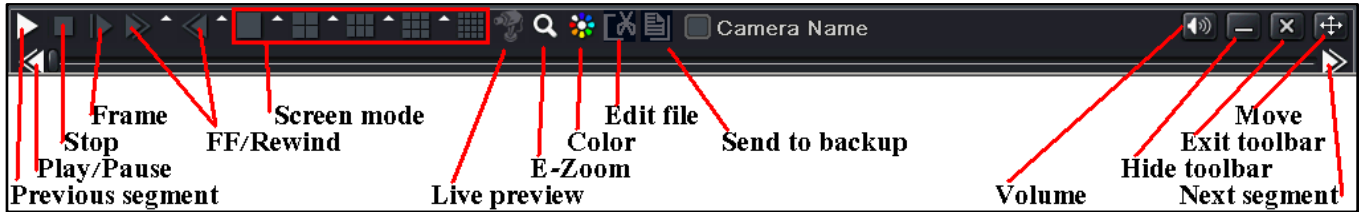


Fig 5-1 Search configuration-time search




select channel/s, screen display mode, (highlighted date in the calendar means there are recording on that date) . Select the date, press the"Search" button, click on the time grid to set the play start time or input play record time manually.

Note: the vertical column represents the time (hours), while the horizontal column represents the channels.

Another option is to click Play  button to playback record on the main screen to start play of last 30 minutes.



Note: when the monitor resolution is VGA800*600, the time search interface will appear a hide button, click this button, the whole interface can be expanded.

- During playback edit file  to send a short movie for quick backup  (minimum length is one minute)
- DVRs with 8 or more channels have 4CH live preview when playback , activated from the taskbar

5.2 Event search

Configuration =>event search; refer to Fig 5-2:

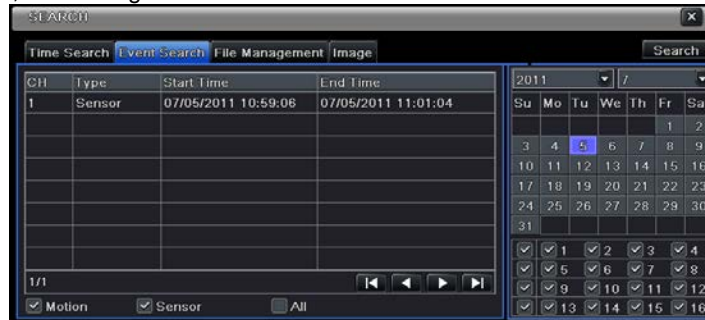


Fig 5-2 Search configuration-event search

Click on the "Search" button to display the event information in the event list box. Here you can select the date and channel. You can choose events by motion, sensor or All accordingly. Double clicking on a certain record file will start playback.

Note: when the monitor resolution is VGA800*600, the event search button will appear as a small line. Place the mouse on the line then click this button to expand the whole interface.

5.3 File management

Search configuration =>file management; Refer to Fig 5-3:

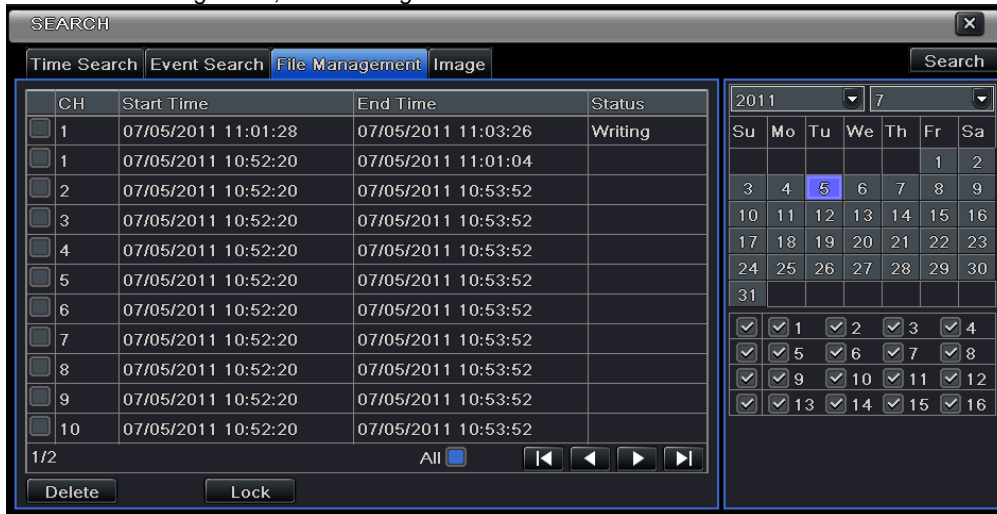


Fig 5-3 Search configuration-file management

After clicking the "Search" button, the files will be displayed in the file list box. You can make the selection according to date and channel number accordingly.

Lock: select a file and click the "Lock" button to lock this file, that file will not be deleted until unlocked.

Unlock: select a locked file and click the "Lock" button to unlock this file.

Delete: select an unlocked file and click Delete button to delete this file. After selecting the "All" button user can lock, unlock or delete all files in the file management column. Double clicking an unlocked item will playback the event.

5.4 Image

This option is used to set start, end time and channels to search the captured images and save, lock or delete these images. The capacity set is 2000 images which can be saved in the SATA disk. If there are more images saved in the SATA, those additional images will override prior images (first in first out). Double clicking an image will start playback from the time the image captured.

5.5 Backup

This unit supports backup by built-in SATA DVD Writer with USB Flash. User can also backup remotely using IE or safari browser via internet. Refer to 7.3.2 Remote backup. Enter backup configuration; refer to Fig 5-4:

Set the start & end time, select channels, and click on thesearch button, the searched data will be displayed on the data backup list. Selecting a data file or marking "All" to select all data files then clickingthe "Backup" button will display thebackup information window. In the backup information window you can check the relevant information of the backed up files, the storage type, the file type, etc. Clicking the"Start" button will start the backup.

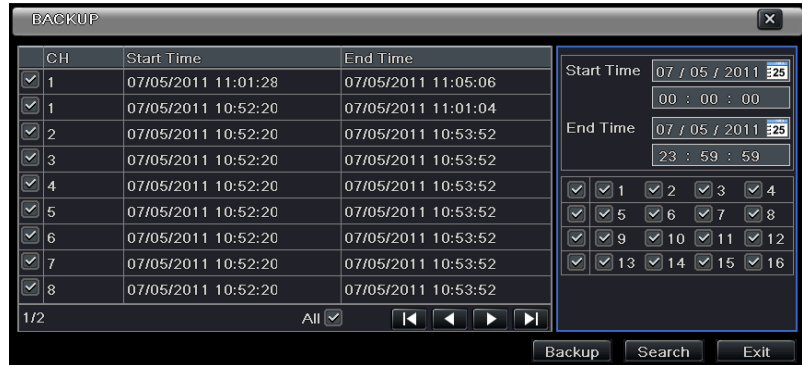


Fig 5-4 backup configuration

6 Manage DVR

6.1 Check system information

Displays the system information. This includes five submenus: system, event, log, network and online user.

6.1.1 System information

In this interface, user can check the hardware version, MCU version, kernel version, device ID, etc.

6.1.2 Event information

This option is used to check data about recorded events according to the set date.

Note: if there are overlapping files, a “+” character will show behind the channel ID.

6.1.3 Log information

This option is used to check relevant log information according to time and date.

Data files can be exported into a mobile storage device such as a USB pen-drive.

6.1.4 Network information

This option is used to check relevant parameters of the network.

6.1.5 Online information

This option is used to check the details of the current connection of online users.

Refresh: refresh the current interface.

Disconnect (NE series): the administrator authorized to disconnect the client terminal. After disconnected this way the PC will not be able to access the device for the next five minutes.

6.1.6 Recording data: displays frame rate for each channel, HDD status, HDD usage, current record mode (motion, manual, alarm, schedule); display Video format: PAL or NTSC

6.2 Manual alarm

This option is used to activate the alarm manually, this option also activates the buzzer.

6.3 Disk management

1. Format the disk

Go to "disk management"

Note: please format the hard disk before starting a recording. If the disk is not formatted, it will show the status of the disk-free space, and total space show OM at the bottom of screen but the DVR will not record.

Clicking the "Refresh" button will refresh the disk information in the list. Set the property of a disk and click Apply. To format a hard disk(s), select the relevant drives on the list and click "Format".

Note: all recorded files in the hard disk will be lost after formatted.

2. Advanced

User may check model, S/N, firmware, health status of the disk in this interface. User also can monitor the temperature, internal circuit, dielectric material of the disk, analysis the potential problems of the disk and warn so as to protect its data.

6.4 Upgrade

At present, the DVR only supports update via USB. Download the software from your vendor and make sure it matches the DVR. You can check the USB information in Disk management; the USB must be recognized and formatted (FAT32).

Upgrade method: the user needs to copy the upgrade software into the USB storage device and then connect it to the USB port. Enter Menu → Upgrade, the upgrade software name is displayed in the upgrade list box, select that software and then click upgrade button. It will upgrade automatically. Never disconnect the power line during backup! Please wait for a while when the system is rebooted.

6.5 Logoff

Click Log off icon, a log off dialogue box will popup, click OK to log off. Click any button and the login menu will appear.

7 Remote Surveillance

7.1 IE Remote Surveillance

To view the DVR from a network it must be connected to a modem or router through the LAN/WAN. The network setup should be done accordingly. Please refer to 4.6 Network Setup. This DVR supports IE browser, Firefox and Chrome on Windows XP and Vista platform.


7.1.1 On LAN

Step 1: Enter into the DVR's Main Menu → Setup → Network interface to input IP address, Subnet Mask, etc. If using DHCP, enable DHCP in both the DVR and the router.

Step 2: Enter Record Setup to set network video parameters like resolution, frame rate etc.

Step 3: Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter.

Step 4: IE will download ActiveX component automatically. Enter the username and password in the subsequent window

 **Notice:** If you use an HTTP that is not 80, you will need to add the port number after IP address. For example, set HTTP port as 82, need input IP address like 192.168.0.25:82

User name and password here are the same with that used on the DVR. The default is admin and 123456.

7.1.2 On WAN

There are two ways for the DVR to connect to internet.

1. Connect the DVR to internet through router or virtual server

Step 1: Enter into the DVR's Main Menu → Setup → Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and router.

Step 2: Forward IP address and port number in Virtual Server setup of the router or virtual server. Configure the firewall to allow accessing the DVR. (If the user has enabled the UPnP function in both the DVR and router, he can skip this step.)

Step 4: If users want to utilize dynamic domain name, please apply for a domain name in a DNS server supported by the DVR or router. Then add to the DVR or router.

This DVR supports www.dns2p.com, www.meibu.com, www.dyndns.com and www.no-ip.com.

Step 5: Open IE browser, input IP address, or dynamic domain name and enter.

Step 6: IE will download ActiveX automatically. Then a window pops up and asks for user name and password. Input user name and password correctly, and enter to view.

Note: If you cannot download and install ActiveX, please refer to Q&A.

2. Connect the DVR to internet directly.

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to enable PPPoE and then input user name and password received from your ISP. Next, click 'Apply'. The DVR will connect to the server and would give a confirmation message.

Step 2: When accessing the remote interface of DVR, user can input WAN IP to access directly (user can enter into Main menu→Information→Network interface to check IP address). The browser will download Active X control

Step 3: The following setting steps are as the same as Step4, Step 5 and Step 6 in Point 1.

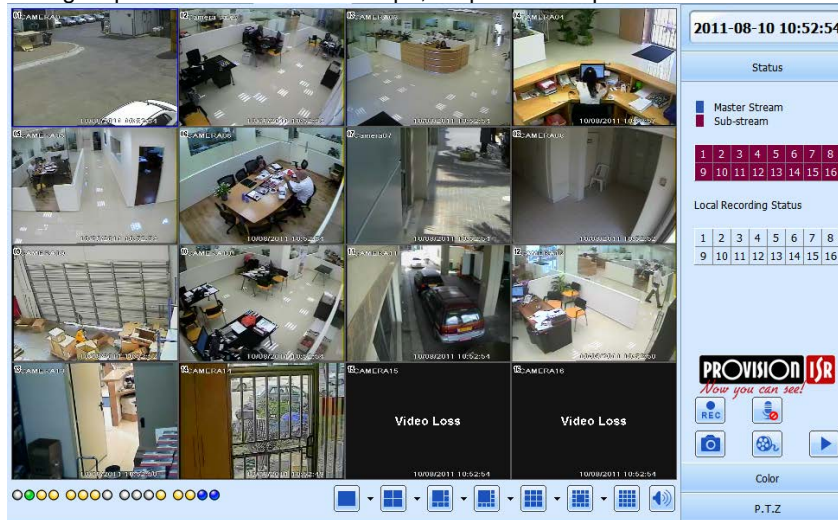


Fig 7-1 View with IE browser

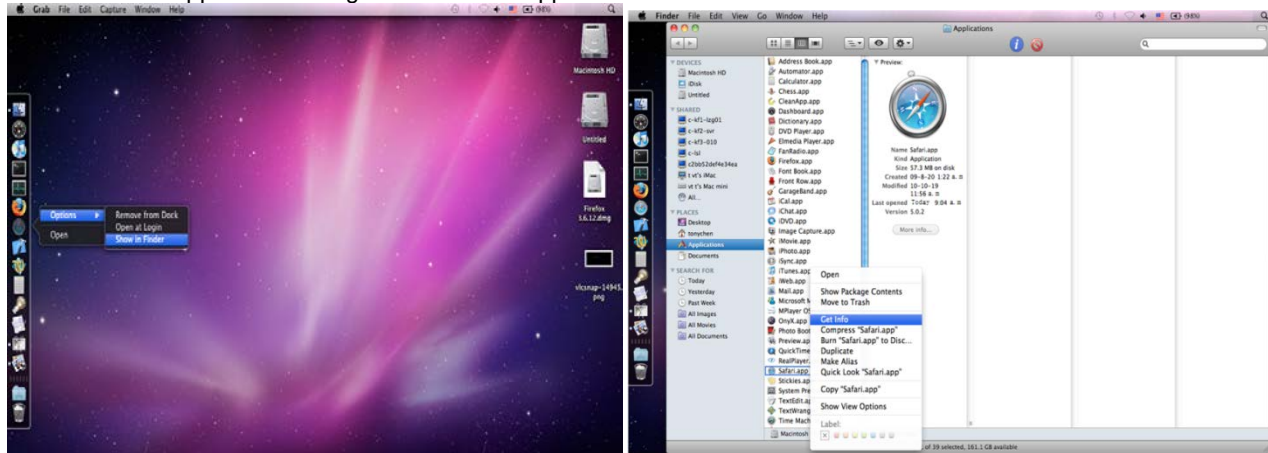
7.2 Remote Surveillance through Macintosh with Safari:

Note: the current plug-in version supports only the 32-bit mode, so the safari browser must work on 32-bit mode. This works for Lion OS, with Safari 5.1, though upgrading your computer may cause failure to use Safari.

The Setting steps are as follows:

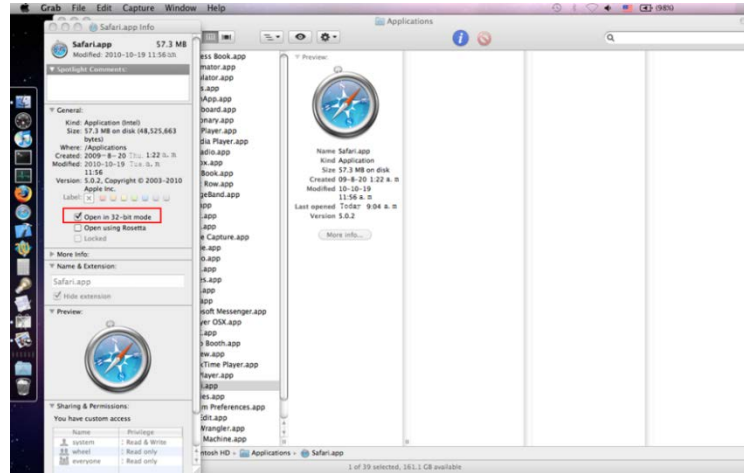
First: Right click safari icon  and select "Show in Finder".

Second: Select Applications → Right click "Safari. App" → Select "Get Info".




Third: Select "open in 32-bit mode".

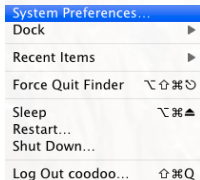
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7.2.1 On LAN

Step 1: After starting Apple computer, click  icon. The following window will pop up. Please select “System Preferences”→“Internet & Wireless”→click “Network”

About This Mac
Software Update...
Mac OS X Software...



Internet & Wireless



MobileMe



Network



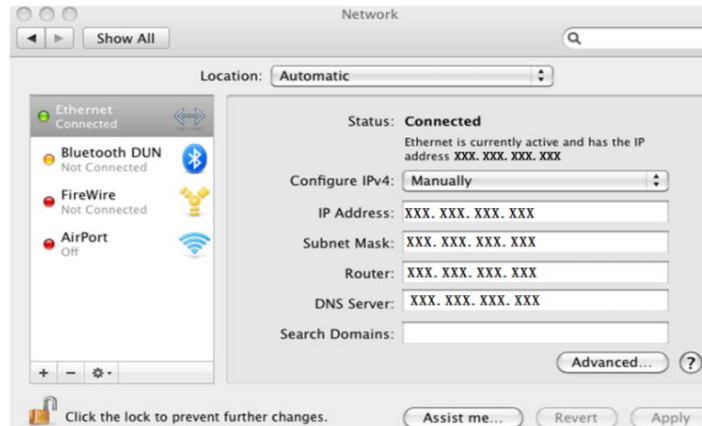
Bluetooth




Sharing

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Step 2: Enter into Network interface and then click “Ethernet Connected” to check the internet connection of Apple PC.

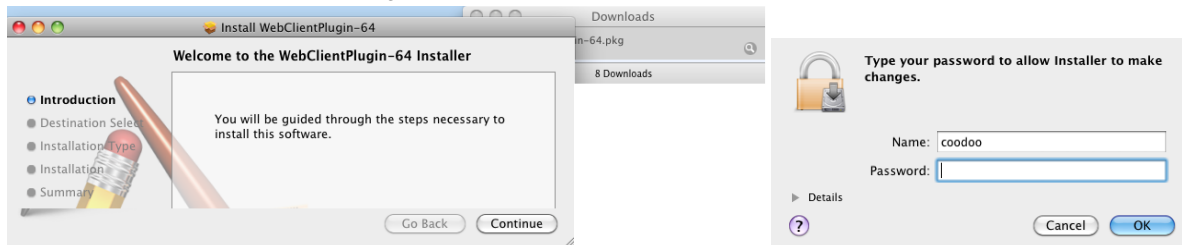


Step 3: After acquiring the IP address, Subnet Mask and so on, please enter into the DVR's Main Menu→Setup→Network interface to manually input IP address, Subnet Mask and Gateway according to the configuration of PC. The network segment should be the same as the PC. If using DHCP, please enable DHCP in the DVR and router.


Step 4: After finishing the above information, users can enter LAN IP and http port in the Safari browser. For example: input `http://192.168.1.100:81` (here 192.168.1.100 is LAN IP of DVR, 81 is the http port of DVR). Click “” button, the browser will download Active X control as shown below:



Step 5: Click  icon and then select the Active X control, the welcome interface will be shown. Click “Continue”→”Install” button , the following window will pop up :



Input the name and password of Apple PC and then click “OK” to install this Active X control.

Step 6: After finishing installing the Active X control, please quit from the Safari browser. Right click  icon on the desktop and then select “Quit” button to quit the browser. Then restart Safari browser. Input the IP address and http port to enter into the login interface of DVR.

7.2.2 On WAN

There are also two ways for DVR to connect to Internet.

1. Connect the DVR to internet through router or virtual server

Step 1: The network setups are the same as step one to step four of point 1 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

2. Connect the DVR to internet directly.

Step 1: The network setups are the same as step one of point 2 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

7.3 The remote live preview interface

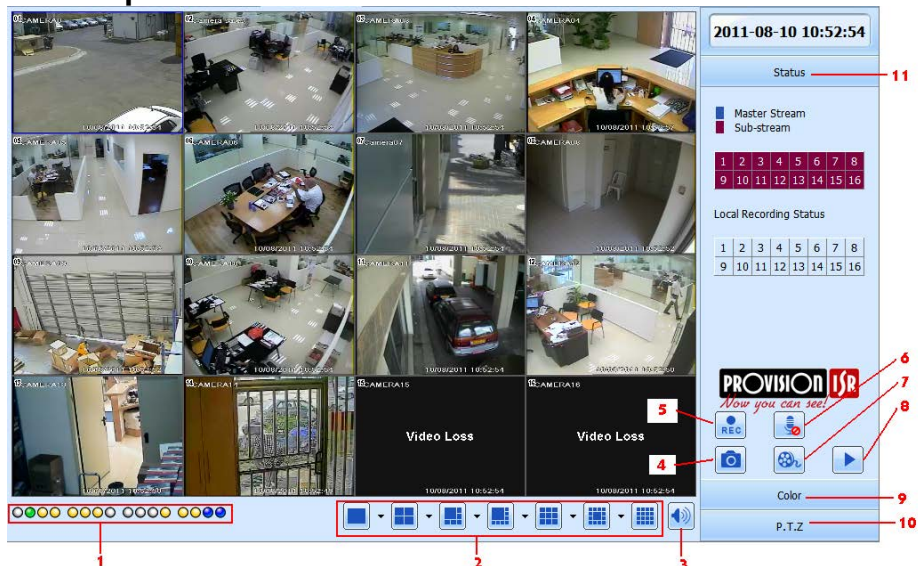



Fig 7-2 Remote live preview interface

Symbol and function Definitions:

①	Channel indicator	②	Screen display mode	③	Volume
④	Snapping picture	⑤	Start record	⑥	Two way audio
⑦	Start client record	⑧	Playback	⑨	Color menu
⑩	PTZ control menu	⑪	Master/sub stream /record status		

Note: click  button to record manual and the record file will be saved in user's PC.

Screen display mode:

Click the  icon beside the screen display mode, channel select dialog will appear as below:

Take 8-channel DVR for example: user can mark channels form 1-ch to 16-ch at random to display the live pictures, 8 channels can be selected at most. Then click OK button to confirm the setting.

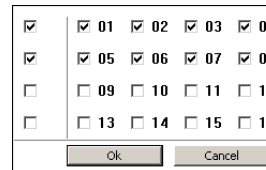













Fig 7-3 Channel select dialog

Snap pictures

Click“Snap”  icon, the system will automatically capture pictures and save those pictures in the computer. User should set up the save path for those picture in the Remote Preview interface→Configuration→Local configuration.

Color adjustment:

Drag the slide bar to adjust Brightness, Contrast, Hue, and Saturation. Click Default to reset them to original value.












Buttons	Description
 	Drag the scroll bar to adjust the brightness of channel
 	Drag the scroll bar to adjust the contrast of channel
 	Drag the scroll bar to adjust the saturation of channel
 	Drag the scroll bar to adjust the hue of channel
	Click this button to recover the default value of brightness, contrast, saturation and hue.
	Save the adjustment

PTZ control (next page)

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Please connect speed dome to the device via RS485 firstly, make sure the protocol of the speed dome is supported by the device and set the relative parameters manually. User can control the dome up, down, right, left or stop rotating on ControlCenter, adjust rotation speed, Iris and zoom, focus on the dome, and set the presets, etc.

Buttons definition:

Buttons	Description
	▲ means the dome rotate up. ▼ means the dome rotate up left. ▽ means the dome rotate up right. ▾ means the dome rotate down. ◀ means the dome rotate left down. ▶ means the dome rotate right down. ◀ means the dome rotate left. ▶ means the dome rotate right. ■ means the dome stop rotating.
	Drag the scroll bar to adjust rotating speed of the dome.
	'Iris' button. Click + button near 'Iris' button to increase light of the dome. Click - button near 'Iris' button to decrease light of the dome.
	'Zoom' button. Click + button near 'Zoom' button to zoom in the locale picture of this camera. Click - button near 'Zoom' button to zoom out the locale picture of this camera.
	'Focus' button. Click + button near 'Focus' button to have long focus. Click - button near 'Focus' button to have short focus.
	Go to the Preset
	Select and do auto cruise
	Track
	Auto scan
	Wiper button
	Light button

Click the right mouse on the live interface, a pull-down menu will appear as below

Stream: this DVR supports master stream and sub stream. Master stream has higher frame rate, max 25FPS (PAL) /30 FPS (NTSC) for every channel, but it needs higher network bandwidth simultaneously; second stream has low frame rate, max 6FPS (PAL) /7FPS (NTSC) for every channel, it requires low network bandwidth. Therefore, users can select the stream according to their bandwidth.

All to master/sub stream: set all channel to master stream or sub stream.

Enable audio: enable or disenable audio

Full screen: In full screen status, the live preview picture will display with full screen and the tool bar will be hided; double click left mouse or click right mouse to return

Zoom in: Single channel large screen electronic amplification

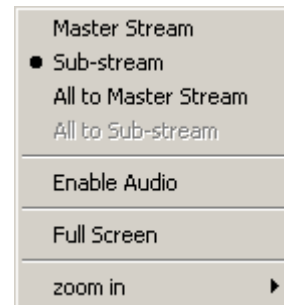


Fig 7-4 right key menu

7.4 Remote playback & backup

7.4.1 Remote playback

Click  button to enter into record playback interface, refer to Fig 7-5:

Select the record date and channels and double-click the file name in the record file list box. Then user can play that file and preview the picture.

Note: the video and sound quality from a remote location could be poor if there is a connectivity problem, in those cases try consulting with a network engineer.

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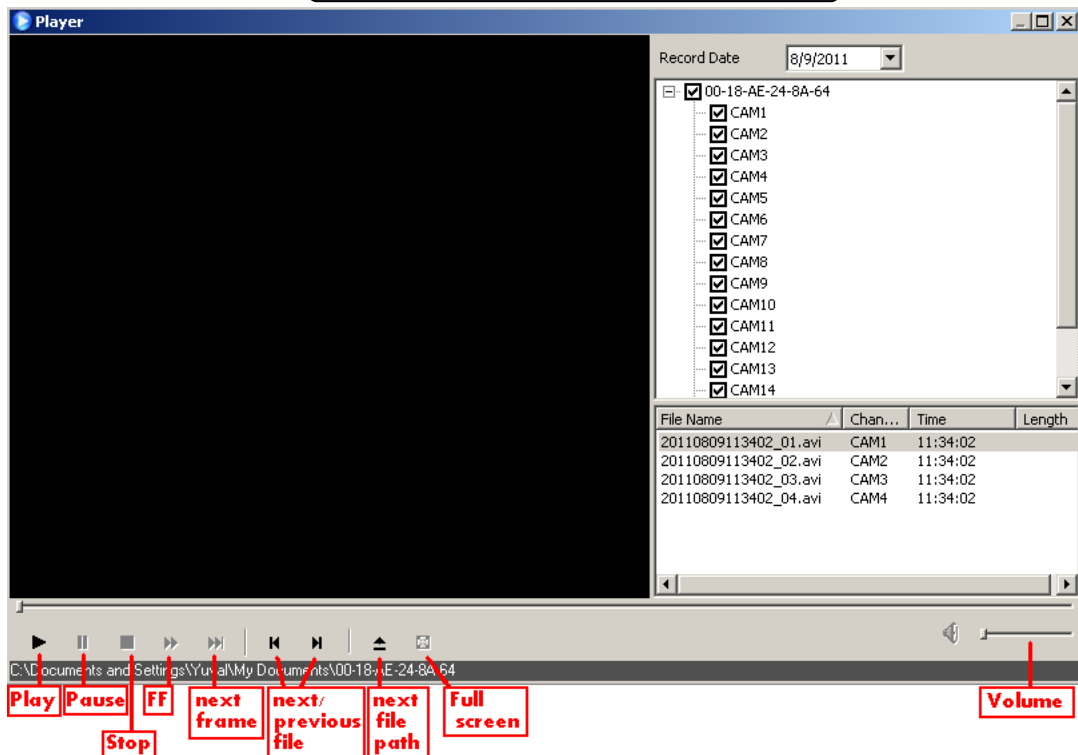


Fig 7-5 Play record file interface

This DVR supports remote time search, event search and file management.

By Time Search:

Step1: Enter into Search→time search; refer to Fig 7-6:

Time Search

Event Search

File Management

Play

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Start Time

2011-08-03 25

00 : 00 : 00

▶

Play

Data Information

	00:00	04:00	08:00	12:00	16:00	20:00
CH 1						
CH 2						
CH 3						
CH 4						
CH 5						
CH 6						
CH 7						
CH 8						
CH 9						
CH 10						
CH 11						
CH 12						
CH 13						
CH 14						
CH 15						
CH 16						

Search

2011 Aug

Sun	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Channel

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Fig 7-6 time search interface

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Step2: click “Search” button. The record data will be displayed in the data information list box; the highlight date in the area② means have record data, click those data; select the record channels in area③

Step3: User can set the data playing time and display mode in the area① as required

Step4: Select certain item from the data information list box. Click “play” button to playback

Step5: Click the relevant buttons in the interface and then user can do some operations such as: FF, pause, change channel mode, research, etc. refer to Fig 7-7:

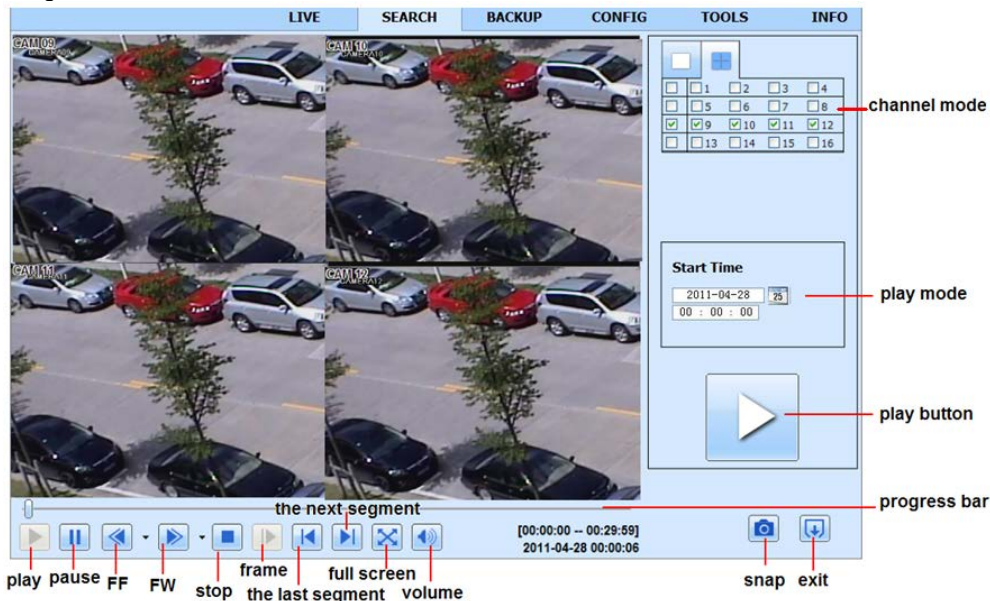


Fig 7-7 Time search playback

By Event Search:

Step1: Enter into Search→event search; refer to Fig 7-8:

The screenshot displays the event search interface. On the left is an 'Event list' table with columns for Channel (CH), Start time, End time, and Type. On the right is a search panel featuring a magnifying glass icon, a 'Search' button, a calendar for January 2010, a grid of checkboxes for selecting channels (1-16), and checkboxes for selecting event types (Motion and Sensor).

CH	Start time	End time	Type
1	2010-01-09 00:01:07	2010-01-09 00:02:16	motion
1	2010-01-09 00:03:28	2010-01-09 01:24:11	manual
1	2010-01-09 00:08:36	2010-01-09 00:09:31	motion
1	2010-01-09 00:10:10	2010-01-09 00:10:58	motion
1	2010-01-09 00:11:30	2010-01-09 00:12:15	motion
1	2010-01-09 00:14:48	2010-01-09 00:15:43	motion
1	2010-01-09 00:15:45	2010-01-09 00:17:09	motion
1	2010-01-09 01:24:11	2010-01-09 02:46:11	manual
1	2010-01-09 02:46:11	2010-01-09 03:19:45	manual
1	2010-01-09 17:39:52	2010-01-09 17:57:12	manual
2	2010-01-09 00:01:07	2010-01-09 00:01:53	motion
2	2010-01-09 00:02:18	2010-01-09 00:03:01	motion
2	2010-01-09 00:03:01	2010-01-09 00:04:12	motion
2	2010-01-09 00:03:32	2010-01-09 00:54:27	manual
2	2010-01-09 00:14:22	2010-01-09 00:15:03	motion
2	2010-01-09 00:21:54	2010-01-09 00:22:35	motion
2	2010-01-09 00:23:51	2010-01-09 00:24:33	motion
2	2010-01-09 00:25:12	2010-01-09 00:25:54	motion
2	2010-01-09 00:26:57	2010-01-09 00:28:43	motion
2	2010-01-09 00:31:48	2010-01-09 00:32:30	motion

1/31

Fig 7-8 event search interface

Step2: click the highlight date and select record channels and then mark the event type: motion and sensor. Then click “search” button

Step3: the events will be display in the event list box and then double-click certain item to playback

File Management

Step1: Enter into Search→file management; refer to Fig 7-9:

Check	Channel	Start time	End time	Status
<input type="checkbox"/>	1	2010-01-09 00:01:07	2010-01-09 00:02:16	motion
<input type="checkbox"/>	1	2010-01-09 00:03:28	2010-01-09 01:24:11	manual
<input type="checkbox"/>	1	2010-01-09 00:08:36	2010-01-09 00:09:31	motion
<input type="checkbox"/>	1	2010-01-09 00:10:10	2010-01-09 00:10:58	motion
<input type="checkbox"/>	1	2010-01-09 00:11:30	2010-01-09 00:12:15	motion
<input type="checkbox"/>	1	2010-01-09 00:14:48	2010-01-09 00:15:43	motion
<input checked="" type="checkbox"/>	1	2010-01-09 00:15:45	2010-01-09 00:17:09	motion
<input type="checkbox"/>	1	2010-01-09 01:24:11	2010-01-09 02:46:11	manual
<input type="checkbox"/>	1	2010-01-09 02:46:11	2010-01-09 03:19:45	manual
<input type="checkbox"/>	1	2010-01-09 17:39:52	2010-01-09 17:57:12	manual
<input type="checkbox"/>	2	2010-01-09 00:01:07	2010-01-09 00:01:53	motion
<input type="checkbox"/>	2	2010-01-09 00:02:18	2010-01-09 00:03:01	motion
<input type="checkbox"/>	2	2010-01-09 00:03:01	2010-01-09 00:04:12	motion
<input type="checkbox"/>	2	2010-01-09 00:03:32	2010-01-09 00:04:27	manual
<input type="checkbox"/>	2	2010-01-09 00:14:22	2010-01-09 00:15:03	motion
<input type="checkbox"/>	2	2010-01-09 00:21:54	2010-01-09 00:22:35	motion
<input type="checkbox"/>	2	2010-01-09 00:23:51	2010-01-09 00:24:33	motion
<input type="checkbox"/>	2	2010-01-09 00:25:12	2010-01-09 00:25:54	motion
<input type="checkbox"/>	2	2010-01-09 00:26:57	2010-01-09 00:28:43	motion
<input type="checkbox"/>	2	2010-01-09 00:31:48	2010-01-09 00:32:30	motion

0/0

All None Inverse

Lock Unlock Delete

Fig 7-9 file management interface

Lock: select certain file item in the file list box and then click “Lock” button to lock this file that ca not be deleted or overlaid

Unlock: select a locked file and then click “unlock” button to unlock this file

Delete: select an unlock file and then click “delete” button to delete this file from file list

7.4.2 Remote backup

Click Backup button to enter into backup interface, refers to Fig 7-10:

The screenshot displays the remote backup interface. On the left is a table with columns for selection, channel (CH), start time, end time, and status. The table contains 20 rows of data. Below the table are buttons for 'All', 'Null', and 'Invert', a 'File path' input field, and 'Browse' and 'Backup' buttons. On the right is a search panel with a magnifying glass icon and a 'Search' button. Below the search panel are 'Start time' and 'End time' selection fields, each with a date and time input and a '25' button. At the bottom right is a grid of 8 checkboxes, all of which are checked.

	CH	Start time	End time	Status
<input type="checkbox"/>	1	2010-01-09 00:01:07	2010-01-09 00:02:16	
<input type="checkbox"/>	1	2010-01-09 00:03:28	2010-01-09 01:24:11	
<input type="checkbox"/>	1	2010-01-09 01:24:11	2010-01-09 02:46:11	
<input type="checkbox"/>	1	2010-01-09 02:46:11	2010-01-09 03:19:45	
<input type="checkbox"/>	1	2010-01-09 17:39:52	2010-01-09 17:57:12	
<input type="checkbox"/>	2	2010-01-09 00:01:07	2010-01-09 00:01:53	
<input checked="" type="checkbox"/>	2	2010-01-09 00:02:18	2010-01-09 00:03:01	
<input type="checkbox"/>	2	2010-01-09 00:03:01	2010-01-09 00:54:27	
<input type="checkbox"/>	2	2010-01-09 00:54:27	2010-01-09 01:47:11	
<input type="checkbox"/>	2	2010-01-09 01:47:12	2010-01-09 03:09:10	
<input type="checkbox"/>	2	2010-01-09 03:09:10	2010-01-09 03:19:45	
<input type="checkbox"/>	2	2010-01-09 15:11:08	2010-01-09 15:11:54	
<input type="checkbox"/>	2	2010-01-09 15:16:17	2010-01-09 15:17:03	
<input type="checkbox"/>	2	2010-01-09 15:19:30	2010-01-09 15:20:17	
<input type="checkbox"/>	2	2010-01-09 15:21:54	2010-01-09 15:22:41	
<input type="checkbox"/>	2	2010-01-09 15:23:20	2010-01-09 15:24:04	
<input type="checkbox"/>	2	2010-01-09 15:28:09	2010-01-09 15:28:53	
<input type="checkbox"/>	2	2010-01-09 15:37:23	2010-01-09 15:38:09	
<input type="checkbox"/>	2	2010-01-09 15:46:09	2010-01-09 15:46:52	
<input type="checkbox"/>	2	2010-01-09 15:53:33	2010-01-09 15:54:19	

Search panel details:

Start time: 2010-01-12 00 : 00 : 00 (25)

End time: 2010-01-12 23 : 59 : 59 (25)

Selected channels: 1 2 3 4 5 6 7 8

Fig 7-10 remote backup interface

Step1: select channels, set the start and end time and then click “search’ button to display the file information in the file list box
 Step2: select backup files and click “browse” button to set the save path. Then click “backup” button to start backup. The backup files will be saved on user’s PC.

7.5 Remote System configuration

User can remote setup the parameters of the device. Functions of remote configurations include: basic configuration, live configuration, record configuration, schedule configuration, alarm configuration, network configuration, PTZ configuration and user configuration. User should firstly select an item in the menu list on the left, and then setup the relative parameters. When one user setup parameters of a certain item, others cannot setup this one. Click Config to enter into the below interface refer to Fig 7-11:

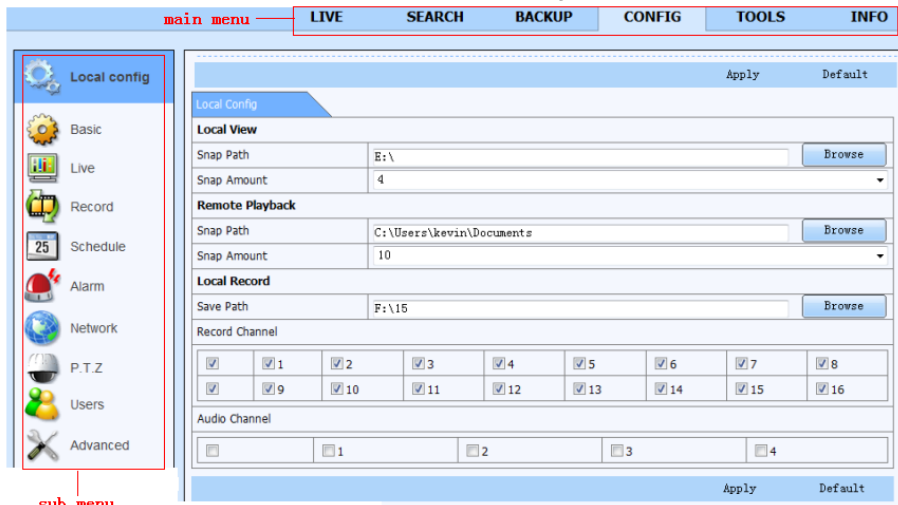


Fig 7-11 remote menu setup

The sub menu lists and the options in every item are similar with those on the DVR. Please refer to Chapter 3 Main Menu Setup Guide for more details.

Click "Apply" button to save above settings; click "default" button will recover the original settings.

7.6 Remote Management

Remote Information Search

The system will automatically record the working condition and operation process during the period of work. User can view information, such as username, IP address and so on. Enter into INFO→Log. User can set the start time to view the log record as follows:

The screenshot shows the 'INFO' tab selected in the top navigation bar. The left sidebar has 'Log' highlighted. The main area displays a table of log entries with columns for Type, User Name, Time, and IP Address. The right sidebar contains a search configuration panel with 'Start Time' and 'End Time' fields, and a list of checked search criteria.

Type	User Name	Time	IP Address
Backup Finished	admin	2010-08-09 11:09:42	172.0.0.1
Logon	admin	2010-08-09 11:07:58	172.16.31.232
Logoff	admin	2010-08-09 11:07:53	172.16.31.232
Logon	admin	2010-08-09 11:07:25	172.16.31.232
Logon	admin	2010-08-09 11:07:23	172.16.31.232
Logoff	admin	2010-08-09 11:07:13	172.16.31.201
Logoff	admin	2010-08-09 11:07:13	172.16.31.201
Modify Settings To Handle Vid...	admin	2010-08-09 10:39:48	172.16.31.201
Change Settings To Handle Se...	admin	2010-08-09 10:39:16	172.16.31.201
Change Settings To Handle Se...	admin	2010-08-09 10:39:16	172.16.31.201
Change Settings To Handle Se...	admin	2010-08-09 10:39:16	172.16.31.201
Change Settings To Handle M...	admin	2010-08-09 10:38:51	172.16.31.201
Change Settings To Handle M...	admin	2010-08-09 10:38:51	172.16.31.201
Change Settings To Handle M...	admin	2010-08-09 10:38:51	172.16.31.201
Modify Area For Motion Detect...	admin	2010-08-09 10:38:51	172.16.31.201
Change Settings Of Inbox	admin	2010-08-09 10:37:24	172.16.31.201
Change Settings Of Outbox	admin	2010-08-09 10:37:24	172.16.31.201
Logon	admin	2010-08-09 10:34:26	172.16.31.201
Add User	admin	2010-08-09 10:33:40	172.16.31.201
Add User	admin	2010-08-09 10:33:35	172.16.31.201
Add User	admin	2010-08-09 10:33:29	172.16.31.201

Search Configuration Panel:

- Start Time:** 2010-08-09 00 : 00 : 00
- End Time:** 2010-08-09 23 : 59 : 59
- System Control
- Config
- Playback
- Backup
- Media Search
- View Information
- Error

Fig 7-12 Remote information search

Note: There may be subtle differences with respect to functions of remote surveillance from different sources.

Important: Use "Tools" => "Manual Alarm" to activate the manual alarm (and an audible beep from the DVR: shown in chapter 6.2)

8 Mobile Surveillance

This DVR supports mobile surveillance by iPhone, Android, blackberry or smart phones with Windows mobile and Symbian OS, though the service may depend on the cellular service provider and 3G network availability and function. Dopod D600 (WM5) and Dopod S1 (WM6) was tested and work fine with the DVR.

To enable mobile surveillance, first enable network service on the DVR and router, please refer to Chapter 4.6 Network configuration. The next chapter is the instructions for mobile clients according to the phones OS.

8.1 iPhone/iPad app (SuperLivePro for iOS):

1. Install from iPhone.

Open App Store in your iPhone (Fig 8.1.1).

Enable “search”  function to search “SuperLivePro” (Fig 8.1.2)

Click SuperLivePro, enter into “introduce” interface and then click “FREE”, it will change into “INSTALL” (Fig 8.1.3)

Input iTunes Store password and then click “OK”, the software will be installed automatically.

Note: if there is no Store account, you must register.



Fig 8.1.1



Fig 8.1.2



Fig 8.1.3

8.2 SuperLivePro 1.0 Manual (for iOS)

Login interface

Input server's IP address (or domain name), user name and password

Click "Remember server" to save the setting; click ▼ button user can quick input saved server address, user name and password.;

If failed connecting, please check below points;

- 1.) Check the network connection to your iPad/iPhone.
- 2.) Check if the server address input is invalid.
- 3.) Check the username and password, please note that they are case sensitive;

Note: do not use spaces in the username or password.

- 4.) Try changing the DVR's HTTP port and DATA port; in some countries, some ports may be blocked by carriers.

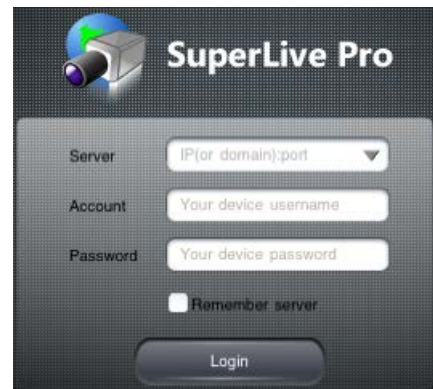


Fig 8.1.4

Live View Interface(Fig. 2)

After the log in, enter the live interface, then tap the proper key for the different function. (main screen, enlarge picture, 2-way audio, color adjustment, PTZ and PTZ presets.

Digital Video Recorder User Manual



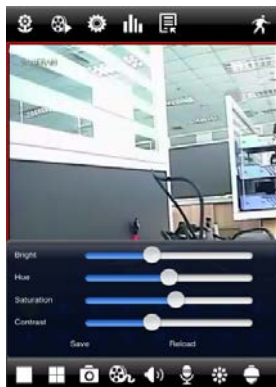
Main screen



Enlarge picture



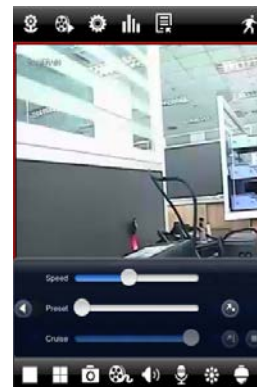
2-way audio



Color adjustment



PTZ



PTZ Presets

NavBarIcon meaning:

Quick Launch Bar Instruction:

Gestures instruction :

- 1.) Tap to select the current channel, double tap the live image to switch to single channel or multi-channel displaying.
- 2.) Press for 2+ seconds and drag to swap the position of a live channel.
- 3.) Tap to go back to normal mode when in full screen

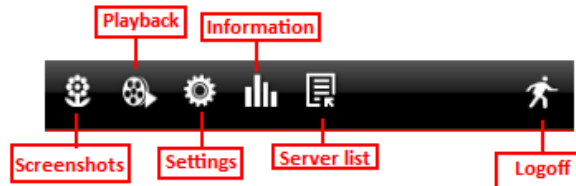


Fig. 8.1.5

Snapshots interface

You can see the captured images in the Image interface (Fig. 8.1.7), tap the thumbnail to check the full image.

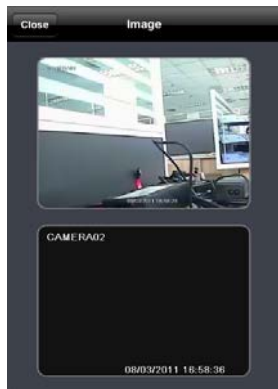


Fig. 8.1.7



Fig. 8.1.6

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Using the playback interface you can playback files on the DVR, follow the next steps just like on the web or local interface:



Search menu



Time search



Remote file search



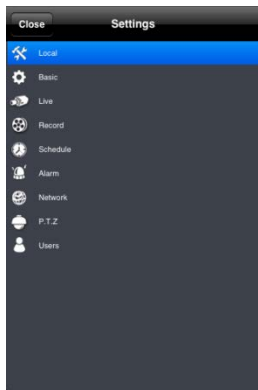
Event search



Local file search

Digital Video Recorder User Manual

Configuration and information interface to change DVR settings:



Settings menu



Basic menu



Record menu



Network menu



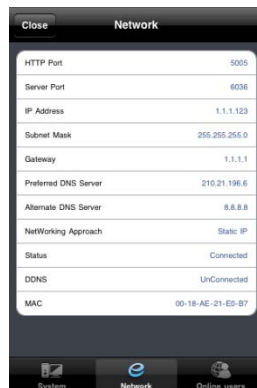
Email menu



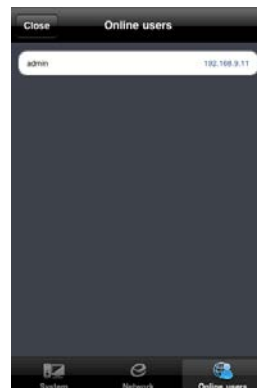
PTZ menu



System menu



Network menu



Online users

Device list interface for quick login (figure 8.1.8-8.1.9):

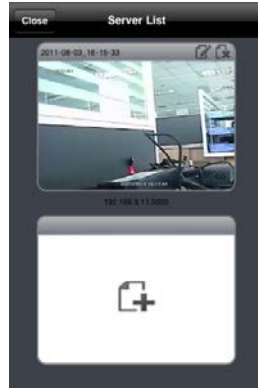


Fig. 8.1.8

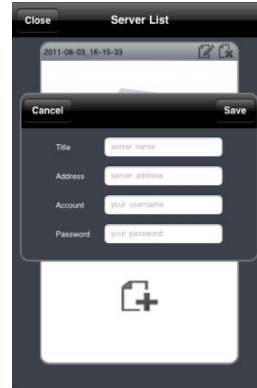


Fig. 8.1.9

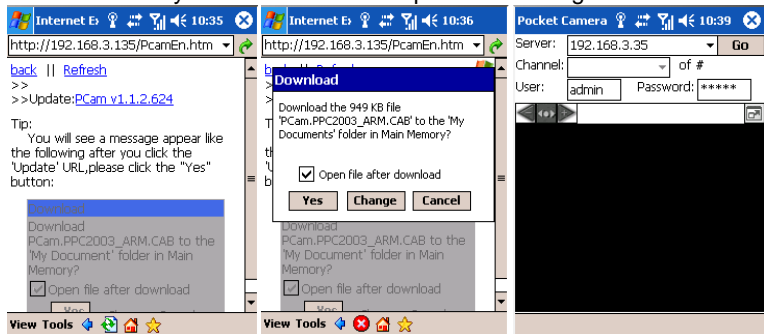
8.4 Windows Mobile application

Step1 : Firstly activate the network access on mobile phone and then run “Internet Explorer”. Input the server’s address and the connection is built up shown as below picture in the left:

Step2 : Click on the software name. A dialog box pops up as below picture in the middle:

Step3 : Click “Yes” to start downloading and installing:

Step4 : PCam will be opened automatically after installed. Refer picture in the right:



Step5 : Input the server’s address, ID and password respectively in the columns of “Server”, “User” and “Password”, and click “Go” to log on the server. It will show the picture if access successfully. Refer below picture in the left:

Step6 : Camera 1 is the default channel after login. Change the channel in rolling-down menu of “Channel”: refer below picture in the right:

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Notice: User name and password here are the same with that used on the DVR. The default is admin and 123456.

8.5 Symbian OS application

Please use the smart phones with symbian version supported by this unit. The detail information is as follows:

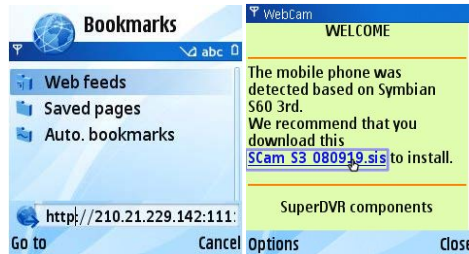
Symbian S40	support
Symbian UIQ	support
Symbian S80	support
Symbian S60	support
Symbian S60 3 rd Edition-Symbian OS v9.1	support
Symbian S60 3 rd Edition with FP 1-Symbian OS v9.2	support
Symbian S60 3 rd Edition with FP2-Symbian OS v9.3	support
Symbian S60 5 th Edition-Symbian OS v9.4	support
Symbian S60 5.1 Edition-Symbian OS v9.5	support

Step1 : Firstly enable the network access on mobile phone. Then run Web browser.

Step2 : Input the DVR server's IP address in a new-built bookmark. Click this bookmark to connect to the DVR.Refer picture in the left:

Digital Video Recorder User Manual

Step3 : A welcome window will pop up and requires a package. Click the software name to download. Refer picture in the right:



Step4 : A security windows will pop up after downloading and ask if install the package. Click YES to install.

Step5 : A Scam shortcut icon appears on the system menu after finished.

Step6 : Run Scam program.It will enter a function interface. Refer picture in the left:

Step7 : Click System setting--->Login Setting to enter login interface.Refer picture in the right:

Live view: to do mobile live view.

Image view: to check the pictures Snapped in live view.

System setting: Login setting
And Alarm setting.

Help: function indication and help.



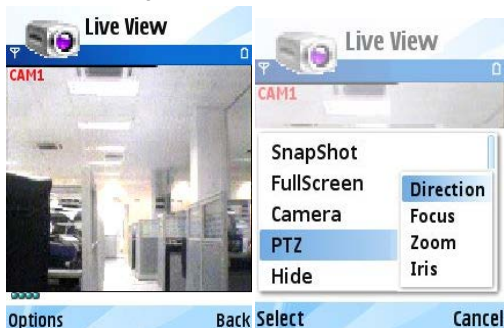
Step8 : Input the server's address, ID and password respectively. Then save.

Notice: About Access point, there may be different access points in different countries or from service providers.

Step9 : Enter Live View, it will connect the server and display pictures. Refer picture in the left:

Notice: User name and password here are the same with that used on the DVR. The default is admin and 123456.

Step10 : In Live View, users can do snapshot, change channels and control PTZ. Refer picture in the right:



8.6 BlackBerry OS application installation guide

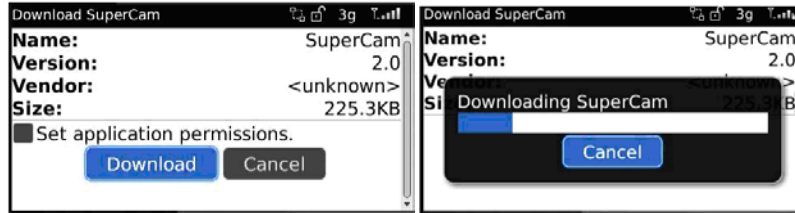
8.6.1 Installation instruction for BlackBerry Mobile phone Client

1. Open the browser of BlackBerry phone and enter sever address
2. Click "SuperCam" to link

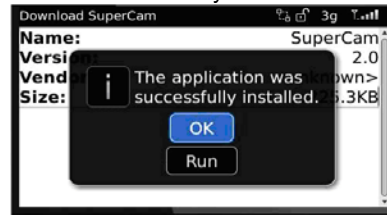


3. Click "Download" button on the popup interface and the download progress will be shown.

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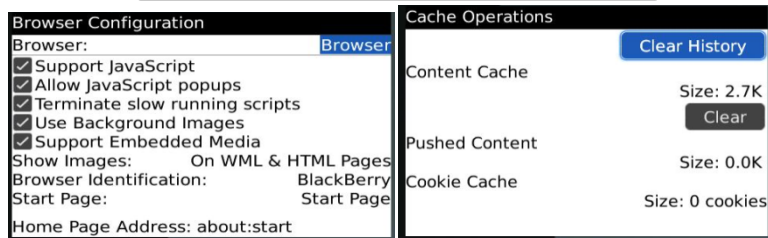
4. Finished downloading, the software will be installed automatically.



Note: If the software fails to download, please check in accordance with the following steps:

1. Check whether the network of mobile phone is normal or not
2. Check whether DVR server connect network normally or not
3. Modify the option of Browser Configuration.
 - (1) Enter into Menu->Option->Browser Configuration; configure referring to the following figure in the left.
 - (2) Enter into Menu->Option->Cache Operations, clear up browser cache. Refer below picture in the right:

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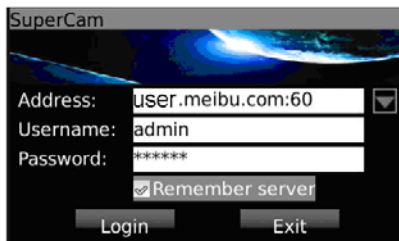


Note : When user used the SuperCam software in mobile phone with touch screen, there will be compatible problem.

Solution: Enter into Options Menu->Advance options->Applications->SuperCam and click “Disable Compatibility” button. This problem will be solved.

8.6.2 BlackBerry OS application guide

1. Login



Enter server's IP address (or domain name), user's ID and password.

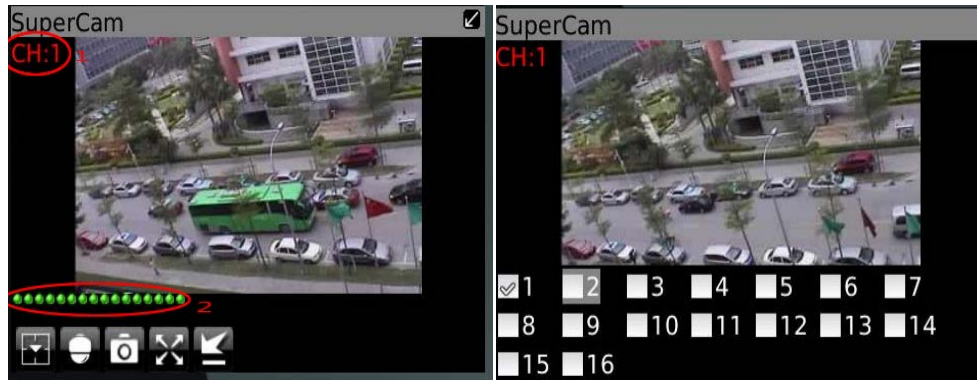
Click “Remember server” to save the setting; click ▼ button can quick input saved server address, user name and password.

2. Main interface

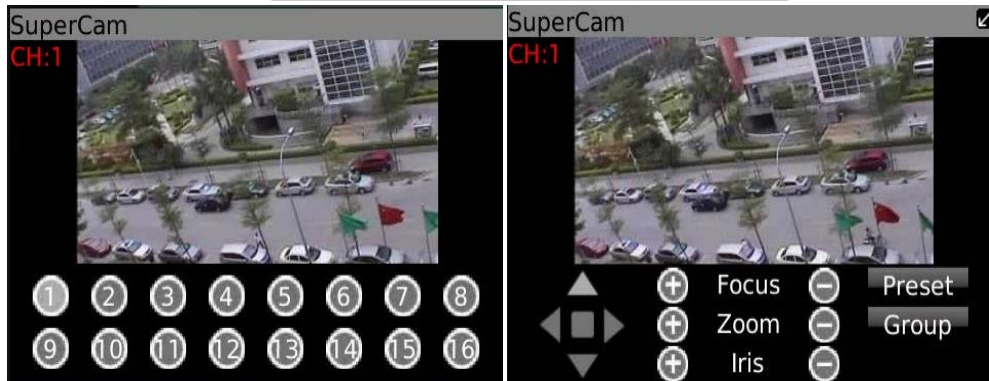


Playback	playback record file	Image	image view
Log	log record	Server List	device list
Information	device information view	Help	software help center
Logoff	logoff and return to login interface	Settings	software setting
Live	live view		













3. Live view



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Note: User can click  Return button on the Blackberry phone to return the previous interface.

Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap		Full screen
	Background alarm		Stop rotating the PTZ
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Zoom In/Focus In/Iris Add		Zoom Out/Focus Out/Iris Sub
Preset	Select the preset point	Group	Set the cruise line

4. Server list

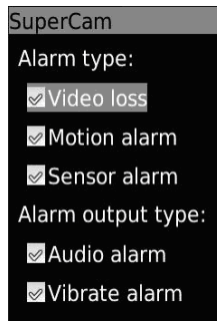
5. Software configuration



[Add] Add a server list

[Modify] Modify a server list

[Delete] Delete a server list



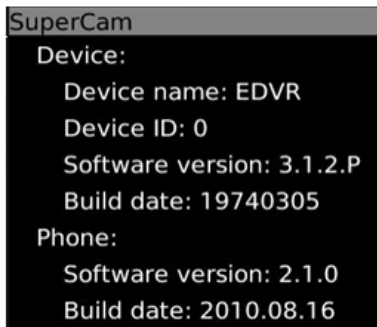
Alarm type: Setup the type of background alarm

(Video Loss/Sensor/Motion)

Alarm output type: Setup prompt type of background

Alarm (sound alarm/ bibrate alarm)

6. Information view



Device ID: the current connection device ID

Software version: the current connection device software version

Build date: the current connection device build date

Software version: the software version of mobile phone in use

Software build date: the software build date of mobile phone in use

Appendix A Q&A

Q1. Why can't the DVR start after connecting to the power?

- a. The adapter has been damaged or is malfunctioned, change power adapter.
- b. The HDD might be malfunctioning Please remove the HDD to check.

Q2. The menu is missing from the live image display

- a. Right click on the attached mouse or click the "menu" button on the DVR or remote.
- b. Press the ESC button for 5 seconds until you hear a beep.

Q3. The led power indicator is on, but the screen is black

- a. The power of the adapter is malfunctioned; try removing the HDD or change the power adapter.
- b. The video format of the DVR is not compatible to that of the monitor.
- c. Connection problem. Please check the integrity and placements of all cables and ports of the monitor and DVR.
- d. The monitor is malfunctioning, check the monitor.

Q4. Why are there missing images on some or all of the channels of the DVR?

- a. Connection problem. Please check the cable and the ports of all cameras to the DVR.
- b. Camera problem. Please check the cameras and their power supply.
- c. The video format of the DVR is different from that of the cameras. Please change DVR system format.

Q5. Cannot find HDD

- a. The power of the adapter is not supplying enough power. Change the adapter.
- b. Connection problem. Check the power and data cables.
- c. The HDD is damaged. Change the HDD.

Q6. Cannot record

- a. HDD not formatted. Format it manually to FAT32 first.
- b. The record function is disabled or the setup is not correct. Please refer to Chapter 5 Record, search, playback and backup.
- c. HDD is full and the recycle function is turned off. Please refer to 4.3 Record configurations. Change the HDD or enable recycle.
- d. The HDD is damaged. Change to a new one.

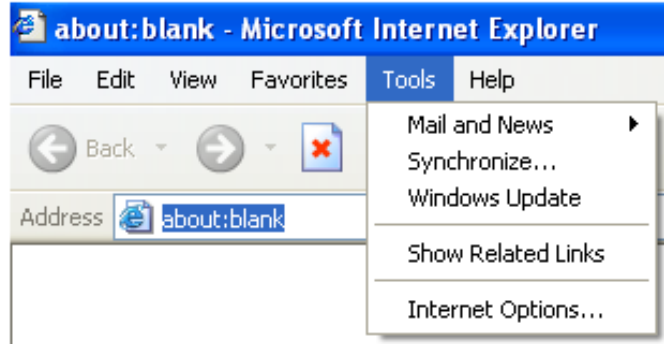
Q7. The mouse is not working.

- a. wait 1-2 minutes after the mouse is connected. Try pressing up/down on the remote control to activate the mouse.
- b. mouse not detected. Unplug then plug again.
- c. The mouse is incompatible or malfunctioned. Please change the mouse.

Q8. Cannot download ActiveX control.

a. IE browser blocks activeX. Please do setup following below.

① Open IE browser. Click Tools-----Internet Options....



②select Security-----Custom Level....Refer to Fig 8-1

③Enable all the sub options under “ActiveX controls and plug-ins” refer to Fig 8-2

④ Then click ok to finish setup.

b. Other plug-ins or anti-virus block activeX. Please uninstall or close them.

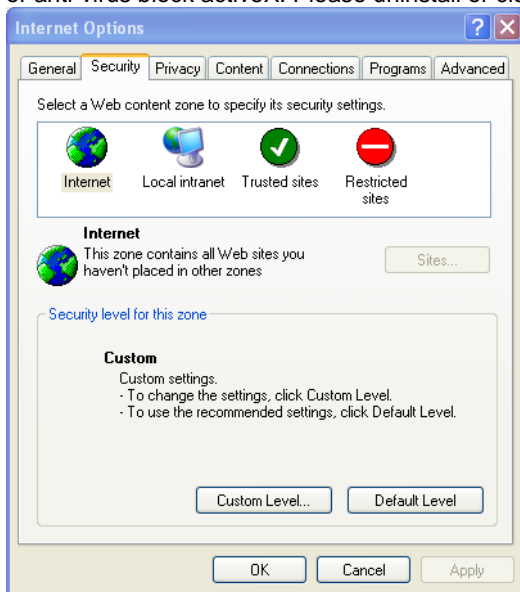


Fig8-1

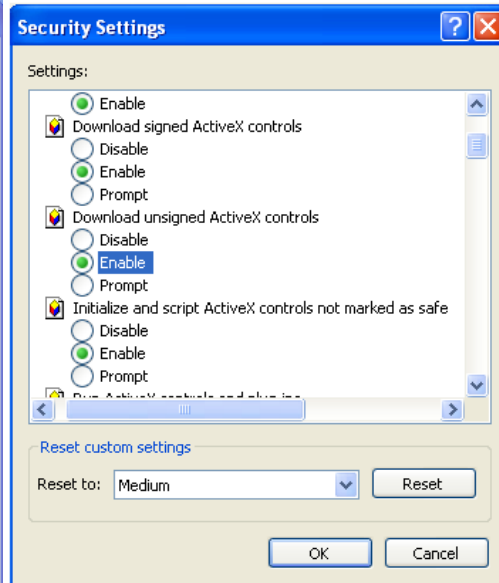


Fig8-2

Q9: when DVR starts, it displays “please wait...”all the time

First option: hard-disk data cable is causing the problem.

Solution: shut down and unplug the DVR from the power, check the cables connected to the hard-disk are connected. If this does not solve the problem try using different cables.

The second possible reason: DVR is forced to stop because hard disk has disabled track which causes the system checking hard while the disk cannot skip. Solution: Change another new hard disk or reformat the HDD.

Q10: How to input password and digital numbers

The method to input password and digital numbers is to click the *password* box, and then a virtual keyboard will appear. Select the desired character (the initial password is 123456). To add the password, use the digital keys in the front panel or the digital keys on the remote controller.

Q11: Why is the hard disk used in a DVR identified as a new hard disk if directly used to another same type DVR? And why must we format it again?

When a DVR only uses one hard disk, the hard disk removed from one to another same type DVR can work normally without format. However, when a DVR adds a new hard disk, it will identify the hard disk as a new one and inquire whether to format no matter whether this hard disk was used or not in another same type DVR before. In this condition, it can be used normally after formatted according to the guide; if two or more hard disks are used in different DVRs, when used in another DVR with the same type, they will be identified to be two or more new hard disks, and all of them need to be formatted. In general, please do not try using disks removed from a different DVR because the data may be lost.

Q12: What are the minimum configurations of PC for clients connecting?

PC Module	Parameters
CPU	Intel Celeron 2.4G
Motherboard	Intel 845
HDD	80G
RAM	512M
VGA	NVIDIA GeForce MX440/FX5200 ATIRADEON 7500/X300
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) /VISTA
DirectX	9.0

Q13: What are the PC configurations for 16-ch real time product with fully open channel mainstream?

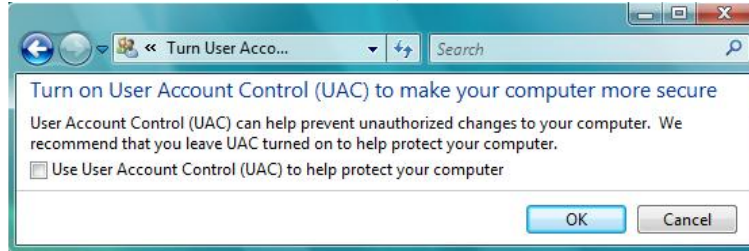
PC Module	Parameters
CPU	Intel Core(TM)2 Duo CPU E4600
Motherboard	G31/P31 chip
HDD	80G
RAM	1GB
VGA	GMA3100/NVIDIA GeForce 8400/ ATIRADEON HD3450
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) VISTA
DirectX	9.0

Q14: How to handle the situation when codec Control is blocked to install in the VISTA or Win7 system?

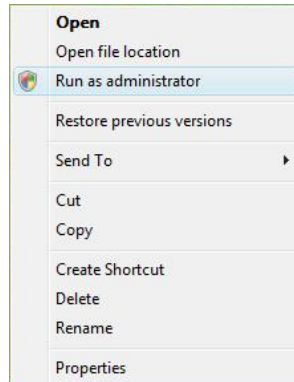
If user gets this problem, may have two ways to fix it:

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a. Enter Control Panel→User Account and Family Safety → User Account Control(refer to below picture); click Turn User Account on or off. Cancel Use User Account Control (UAC) to help protect your computer.



b. Right click IE browser (refer to Fig 14-2), select Run as administrator to run browser.



Appendix B Calculate Recording Capacity

Users can calculate the size of hard disk according to the saving time and DVR recording settings. The DVR uses fixed video bit rate. The below are the details at different settings.

Video Format	Resolution	Frame Rate Totally(FPS)	Video Quality	Bit Rate(kbps)	Used Space(MB/h)
NTSC	CIF	30	Highest	1M	465
			Higher	768k	297
			Medium	512k	230
			Low	384k	173
			Lower	256k	115
			Lowest	128k	56
PAL	CIF	25	Highest	1M	466
			Higher	768k	295
			Medium	512k	235
			Low	384k	175
			Lower	256k	112
			Lowest	128k	56.4

The calculation format is: **Total Recording capacity =Usedspace perhour (MB/h) (coverage rate of hard disk) × recording time (hour) ×channel numbers (D1 resolution uses 4 times more space then CIF resolution)**

For instance, one customer uses PAL cameras, set resolution to CIF, video quality toLowest, frame rate to 25fps for enabling total 16 channels. He wants the unit to record continuously in a month. Below is the calculation:

Total Redocing capacity =56.4(mb/h) X 24(hours/day) X30(days) X16(channels)= 649728(MB)≈650(GB)

Therefore, customers just install two SATA HDDs with 320GB, it can almost record for one month.

Appendix C Compatible Devices

1. Verified & compatible USB drives (Format only to FAT32)

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB, 4GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB

2. Verified & compatible SATA CD/DVD writers (only for backup)

Brand	Model
TECLAST	GH22NP20/TL-22XD
BENQ	DW220S-0K4
LITEON	DH—20A6S01C
LITEON	DH-20A4P02C
SAMSUNG	TS-H653B

3. Verified & compatible HDD list

Brand	Capacity
WD AV-GP 20EURS-73S48Y0	2.0T
WD AV-GP 10EURS-630AB1	1.0T
WD 1002FAEX-00Z3A0	1.0T
WD AV-GP 5000AVDS-63U7B1	500G
WD 5000AADS-00L4B1	500G
WD AV-GP 3200AVVS-63L2B0	320G
WD 3200AAJS	320G
Seagate Barracuda LP ST2000DL003	2.0T
Seagate Barracuda LP ST3200542AS	2TB
Seagate Barracuda 7200.11 ST31500341AS	1.5T
Seagate SV35.3 ST31000340SV	1T
Seagate Pipeline HD.2 ST3500312CS	500G
Seagate Barracuda 7200.10 ST3500630AS	500G
Seagate Barracuda 7200.10 ST3250310AS	250G
Seagate Barracuda 7200.10 ST3320620AS	320G
Seagate Barracuda 7200.10 ST3250310AS	250G
HITACHI Deskstar HDT725025VLA380	250G
HITACHI Deskstar HDT725032VLA360	320G

Appendix D 4CH DVR Specifications

	SA-4100HDE+	SA-4100HDX+	SA-4025SDI	SA-4100SDI (1U)
Format	D1	D1	HD-SDI	SDI 1080P
Number of Inputs	4	4	4	4
Playback Channels	4	4	4	4
Remote Playback Channels	4	4	1	1
Live Preview While Playback	No	No	No	No
Loop	No	No	No	No
Image Capture	Yes	Yes	Yes	Yes
Output Type	CVBS, VGA, HDMI, Spot	CVBS, VGA, HDMI	CVBS, VGA, HDMI	CVBS, VGA, HDMI
Dual Display	YES	YES	Yes	Yes
Case	Small 1U	small 1U	1U	1U
Audio Input(Output)	4(1)	2(1)	4(1)	4(1)
Two Way Audio	Yes	Yes	No	Yes
Mic In	No	No	No	Yes
Alarm In(out)	4(1)	No(No)	4(1)	4(4)
PTZ Control	RS485	RS485	RS485	RS485
Recording CIF	100/120 FPS (Total)	100/120 FPS (Total)	No	No
Recording Channels CIF	4ch @ 25/30 FPS	4ch @ 25/30 FPS	No	No
Recording D1	100/120 FPS (Total)	100/120 FPS (Total)	No	No
Recording Channels D1	4ch @ 25/30 FPS	4ch @ 25/30 FPS	No	No
Recording 1080P	No	No	25/30 FPS (Total)	100/120 FPS (Total)
Recording Channels 1080P	No	No	4ch @ 6/7 FPS	4ch @ 25/30 FPS
H.264 Compression	Baseline	Baseline	Advanced	High profile
HDD	1 (3TB each)	1 (3TB each)	3 (2TB each)	2 (3TB each)
HDD USB Port (E-SATA)	1(0)	1(0)	1(0)	1(0)
Ethernet	100Mbps	100Mbps	1000 Mbps	1000 Mbps
DVD Burner	No	No	Optional	Optional
Master Stream	25/30fps @CIF	25/30fps @CIF	1-6/7 FPS @1080P	25/30fps 1080P
Network Stream	12/15fps @CIF	12/15fps @CIF	1-25/30 FPS @CIF	25/30fps @CIF
IR Remote	Yes	Yes	Yes	Yes
IR Extention	Optional	Optional	Optional	Optional
Mouse	Yes	Yes	Yes	Yes
Power Supply	DC 12V/2A	12V/2A	DC 12V/4A	12V 4A

Appendix E 8CH DVR Specifications

	SA-8200N+	SA-8200HD+ (1U)	SA-8200D1SDI	SA-8200SDI	SA-8100SDI (1U)
Format	D1 + CIF	D1	HD-SDI + D1	SDI 1080P	SDI 1080P
Number of Inputs	4 D1 + 4 CIF	8	4 SDI + 4 D1	8	8
Playback Channels	8	8	4	4	8
Remote Playback Channels	4	4	1	1	1
Live Preview While Playback	No	Yes	No	No	No
Loop	No	No	4	No	No
Image Capture	Yes	Yes	Yes	Yes	Yes
Output Type	CVBS, VGA, HDMI, Spot	CVBS, VGA, HDMI, Spot	CVBS, VGA, HDMI, Spot	CVBS, VGA, HDMI	CVBS, VGA, HDMI
Dual Display	Yes	Yes	Yes	Yes	Yes
Case	Small 1U	1U	2U	2U	1U
Audio Input	4	4	4	8	4
Audio Output	1	1	1	1	1
Two Way Audio	Yes	Yes	No	Yes	Yes
Mic In	No	No	No	Yes	No
Alarm In	8	8	8	8	4
Alarm Out	1	1	4	4CH	1
PTZ Control	RS485	RS485	RS485 X2	RS485	RS485
Recording CIF	200/240 FPS (Total)	200/240 FPS (Total)	No	No	No
Recording Channels CIF	8ch @ 25/30 FPS	8ch @ 25/30 FPS	No	No	No
Recording D1	100/120 FPS (Total)	200/240 FPS (Total)	100/120 FPS (Total)	No	No
Recording Channels D1	4ch@25/30FPS + 4ch@6/7FPS	8ch @ 25/30 FPS	4ch @ 25/30 FPS	No	No
Recording 1080P	No	No	100/120 FPS (Total)	200/240 FPS (Total)	100/120 FPS (Total)
Recording Channels 1080P	No	No	4ch @ 25/30 FPS	4ch @ 25/30 FPS	4ch @ 12/15 FPS
H.264 Compression	Baseline	Advanced	Advanced	High profile	High profile
HDD	1 (3TB)	2 (2TB)	4 (2TB)	8 (3TB)	2 (3TB)
HDD USB Port	1	1	1	1	1
E-SATA	No	No	2	2	No
Ethernet	100 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000Mbps
DVD Burner	No	Optional	Optional	Optional	Optional
Master Stream	1-25/30 FPS @CIF	1-25/30 FPS @CIF	1-25/30 FPS @1080P	1-25/30 FPS @1080P	12/15Fps@1080P
Network Stream	12/15FPS@CIF	1-25/30 FPS @CIF	1-25/30 FPS @CIF	1-25/30 FPS@CIF	12/15Fps@CIF
IR Remote	Yes	Yes	Yes	Yes	Yes
IR Extention	Optional	Optional	Optional	Optional	Optional
Mouse	Yes	Yes	Yes	Yes	Yes
Power Supply	12V/2A	DC 12V/4A	100-240 VAC	100-240 VAC	DC 12V/4A

Appendix F 16CH DVR Specifications

	SA-16400N+	SA-16400NE+	SA-16400HD+ (1U)	SA-16200SDI	SA-16400SDI
Format	CIF	D1 + CIF	D1	SDI 1080P	SDI 1080P
Number of Inputs	16	4 D1 + 12 CIF	16	16	16
Local Playback Channels	16	16	16	4	4
Remote Playback Channels	4	16	4	1	1
Live Preview While Playback	Yes	No	Yes	No	No
Loop	No	No	No	No	No
Image Capture	Yes	Yes	Yes	Yes	Yes
Output Type	CVBS/VGA/HDMI/Spot	CVBS/VGA/HDMI/Spot	CVBS/VGA/HDMI/Spot	CVBS/VGA/HDMI	CVBS/VGA/HDMI
Dual Display	YES	No	Yes	Yes	Yes
Case	Small 1U	1U	1U	2U	2U
Audio Input (Output)	4(1)	4(1)	4(1)	16(1)	16(1)
Two Way Audio	Yes	Yes	Yes	Yes	Yes
Mic In	No	No	No	Yes	Yes
Alarm In	16	16	16	16	16
Alarm Out	1	1	1	4	4
PTZ Control	RS485	RS485 X2	RS485	RS485	RS485
Recording CIF	400/480 FPS (Total)	400/480 FPS (Total)	400/480 FPS (Total)	No	No
Recording Channels CIF	16ch @ 25/30 FPS	16ch @ 25/30 FPS	16ch @ 25/30 FPS	No	No
Recording D1	100/120 FPS (Total)	135/165 FPS (Total)	400/480 FPS (Total)	No	No
Recording Channels D1	16ch @ 6/7 FPS	4ch@25/30FPS + 12ch@6/7FPS	16ch @ 25/30 FPS	No	No
Recording 1080P	No	No	No	200/240 FPS (Total)	400/480 FPS (Total)
Recording Channels 1080P	No	No	No	16ch @ 12/15 FPS	16ch @ 25/30 FPS
H.264 Compression	Baseline	Baseline	Advanced	High profile	High Profile
HDD	1 (3TB Max)	2 (3TB each)	2 (3TB each)	8 (3TB each)	8 (3TB each)
HDD USB Port (E-SATA)	1(0)	1(0)	1(0)	1(2)	1(2)
Ethernet	100M	1000 Mbps	1000 Mbps	1000Mbps	1000Mbps
DVD Burner	No	Optional	Optional	Optional	Optional
Master Stream	1-25/30 FPS @CIF	1-25/30 FPS @CIF	1-25/30 FPS @CIF	12/15fps @1080P	1-25/30 FPS @1080P
Network Stream	12/15Fps @CIF	1-6/7 FPS@CIF	1-25/30 FPS @CIF	12/15Fps @CIF	1-25/30 FPS @CIF
IR Remote/Extention socket	Yes	Yes	Yes	Yes	Yes
Mouse	Yes	Yes	Yes	Yes	Yes
Power Supply	12V/2A	DC 12V/4A	DC 12V/4A	220V	220V

Appendix G

24CH/32CH DVR Specifications

	SA-24600	SA-32800
Format	CIF	D1* + CIF
Number of Inputs	24	4 D1* + 28 CIF
Local Playback Channels	16	16
Remote Playback Channels	4	16
Live Preview While Playback	Yes	No
Loop	No	32
Image Capture	Yes	Yes
Output Type	CVBS/VGA/HDMI	CVBS/VGA/HDMI/Spot
Dual Display	No	No
Case	1U	2U
Audio Input	4	16
Audio Output	1	1
Two Way Audio	Yes	Yes
Mic In	No	1
Alarm In	16	16
Alarm Out	1	4
PTZ Control	RS485 X2	RS485 X2
Recording CIF	600/720 FPS (Total)	800/960 FPS (Total)
Recording Channels CIF	No	32ch @ 25/30 FPS
Recording D1	No	260/310 FPS (Total)
Recording Channels D1	No	4ch@25/30FPS + 28ch@6/7FPS
Recording 1080P	No	No
H.264 Compression	Baseline	Baseline
HDD	3 (2TB each)	8 (2TB each)
HDD USB Port (E-SATA)	1(0)	1(2)
Ethernet	1000 Mbps	1000 Mbps
DVD Burner	Optional	Optional
Master Stream	1-25/30 FPS @CIF	1-25/30 FPS @CIF
Network Stream	1-6/7 FPS@CIF	1-6/7 FPS@CIF
IR Remote/Extention socket	Yes	Yes
Mouse	Yes	Yes
Power Supply	DC 12V/5A	100-240 VAC