H.264 Network DVR

User Manual

GUI Display with USB Mouse Control

Please read instructions thoroughly before operation and retain it for future reference. For the actual display & operation, please refer to your DVR in hand.

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IMPORTANT SAFEGUARD



CAUTION

RISK OF ELECTRIC SHOCK



CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



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This apparatus is manufactured to comply with the radio interference requirements.

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Grounding

This is a Safety Class 1 Product (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the instrument is likely to make the instrument dangerous. Intentional interruption is prohibited.

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We are pleased to provide our modifications to the Linux Kernel, as well as a few new commands, and some tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

http://download.dvrtw.com.tw/GPL/076D_Series/arm-linux-2.6.tar.gz

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1. BEFORE USING THIS DVR

1.1 Package Content

> Standard Package

- \Box DVR
- □ Adapter & Power cord
- □ IR Remote Controller
- \Box Manual for IR Remote Controller
- □ IR Receiver Extension Cable

- □ HDD screws
- CD Manual
- \Box USB Mouse
- □ DSUB Connector

1.2 Front Panel

1) LED Indicators

- HDD is reading or recording.
- An alarm is triggered.
- Timer recording is on.
- Under playback status.
- **U** DVR is powered on.

2) <u>II (\blacktriangle) / \blacksquare (\triangledown) / \nleftrightarrow (\blacklozenge) / \ggg (\blacktriangleright)</u>

Press \blacktriangle / \blacktriangledown / \blacklozenge / \blacklozenge to move up / down / left / right.

In the playback mode:

Press " II " to pause playback.

- Press "■" to stop playback.
- Press "▶" to fast forward.

Press "◀ " to fast rewind.

- 3) <u>MENU</u> Press "MENU" to enter the main menu.
- 4) <u>ENTER</u>

Press "ENTER" to confirm the setting.

5) LIST (Event List Search)

Press to quickly search the recorded files by event lists: RECORD / MOTION / ALARM / TIME, or select FULL to show all the event logs.

To quickly search the time you want, select "QUICK SEARCH". Set the time range you want, and select "Start" to play the recorded video clip during the specified time.

6) <u>PLAY</u>

Press to playback the latest recorded data.

7) <u>SLOW</u>

In the playback mode, press to show slow playback.

8) <u>ZOOM</u>

Press to enlarge the picture of selected channel in the FRAME or FIELD recording mode.

9) <u>SEQ</u>

Press to display each channel in full screen one by one starting from CH1. When the last channel is displayed, it will repeat from CH1 again. To exit this mode, press "SEQ" again.

10) 🗄

Press to show the 4-channel display mode.

11) <u>CH1 ~ 16 / 1 ~ 8 / 1 ~ 4</u>

Press the channel number keys to select the channel to display.

12) <u>SEARCH</u> (For Selected Models Only)

Press to enter the time search menu. Set the time range you want, and select "START" to play the recorded video clip during the specified time.

13) AUDIO (SLOW + ZOOM)

Press "SLOW" + "ZOOM" to select live or playback audio from audio channel 1~4.

0)	Live audio from audio channel 1~4 (indicated in white)	4	Playback audio from audio channel 1~4 (indicated in yellow)
	Audio channel unselected		

14) <u>P.T.Z. (+ + SEQ)</u>

Press " \blacksquare " + "SEQ" at the same time to enter / exit the PTZ control mode.

15) USB port

There are two USB ports on the front panel, one for connecting your USB mouse for mouse control, and the other one for connecting your USB flash drive for video backup.

Note: It's not allowed to have two USB mice or two USB flash drives connected on the front panel.

For the compatible USB flash drive list, please refer to "APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST" at page 60.

16) \triangleq (For selected models only)

Press "▲" to open / close the DVD writer.

1.3 Rear Panel

1) <u>75Ω / HI-IMPEDANCE</u> (For Selected Models Only)

When using Loop function, please switch to HI-IMPEDANCE. When you don't use Loop function, please switch to 75Ω .

<u>VIDEO IN (1 ~ 16 / 1 ~ 8 / 1 ~ 4)</u>: Connect to the video connector of a camera.
<u>VIDEO LOOP (1 ~ 16 / 1 ~ 8)</u>: Video output connector.

- **Note:** The DVR will automatically detect the video system of the camera, please make sure that the cameras are properly connected to the DVR and power-supplied before the DVR is turned on.
- 3) <u>AUDIO IN (1 ~ 4)</u>

Connect to the audio connector of a camera if the camera supports audio recording.

Note: To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.

4) AUDIO OUT

Connect to a speaker with 1 mono audio output.

- **Note:** To know how many audio outputs your DVR supports, please refer to its specifications.
- 5) MONITOR

Connect to a CRT monitor for video output.

6) <u>CALL</u>

Connect to a monitor specific for sequence display.

- 7) <u>VGA</u> Connect to a LCD monitor directly.
- 8) <u>IR</u>

Connect the optional IR receiver extension cable for remote control.

9) EXTERNAL I/O

This port is used to connect external devices (such as speed dome cameras or external alarm, etc).

For detailed I/O port PIN configuration, please refer to "APPENDIX 6 PIN CONFIGURATION" at page 65.

10) <u>LAN</u>

Connect to Internet by LAN cable.

11) <u>DC 19V</u>

Connect to the supplied adapter.

12) **Dever Switch**

Switch to "I" to turn on the power, and "O" to turn off the power.

2. CONNECTION AND SETUP

Before the DVR is powered on, make sure you have installed a hard disk and connected at least one camera. For details, please refer to the following sections.

Note: The DVR is designed to automatically detect the video system of the connected cameras (NTSC or PAL). To make sure the system detection is correct, please check if the cameras are connected to the DVR and power-supplied before the DVR is powered on.

2.1 SATA HDD Installation

A SATA HDD must be installed before the DVR is powered on.

Note: It's recommended to clear all data in the hard disk when the DVR is powered on and the date & time are set correctly to ensure the recorded data are not mixed with other data previously saved in the same hard disk. For details, please refer to "5.6.6 Clear All HDD Data" at page 29.

For 16CH & 8CH Models

Step1:Loose the screws on the upper cover and open the upper cover of the DVR.

Note: The DVR cover is made of metal. Please be careful with its edge when you remove the cover.

Step2: There are two HDD brackets for this DVR as indicated on the right picture. <u>2-1 To install on the first bracket</u> Remove the bracket, and align the screw holes of the bracket with the HDD's screw holes. Make sure the PCB side of the HDD is facing up. Fasten the HDD to the bracket, and connect the power connector and data bus connector to the HDD. Then, replace the bracket to DVR.



<u>2-2 To install on the second bracket</u> Connect the power connector and data bus connector to the HDD.

When connecting the power cable, make sure the cable is passed through the power cable of DVD writer if your DVR is equipped with a DVD writer. This is to prevent the HDD power cable from interfering with the fan spinning.

Align the screw holes of the bracket with the HDD's screw holes. Make sure the PCB side of the HDD is facing up. Then, fasten the HDD to the bracket.



Step3: Close the upper cover of the DVR, and fasten all the screws you loosened in Step1.

For 4CH Model

- Step1: Remove the screws on the top cover of DVR, and remove the top cover.
- Step2: Remove the HDD bracket. Then, with the PCB side facing up, connect the compatible HDD to the power connector and data bus connector.
- Step3: Put the compatible HDD in the bracket, and fasten it with the supplied screws, two for each side.

Step4: Replace the bracket back to the DVR.



Step5: Replace the top cover and fasten the screws you loosened in Step1.

2.2 Camera Connection

The cameras must be connected and power-supplied before the DVR is powered on. Connect the camera with the indicated power supply. Then, connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connectors.

Note: For detailed DVR video input ports, please refer to "1.3 Rear Panel" at page 2.

2.2.1 Normal Camera Connection

Note: For detailed camera installation and connection, please refer to its own user manual.

1) Connecting to DVR video input

Connect the camera video output to the DVR video input port with a coaxial cable or RCA line with BNC connector.

2) Connecting to DVR audio input (Optional)

Connect the camera audio output to the DVR audio input port with a coaxial cable or RCA cable with BNC connectors.

3) Connecting to power

Connect the camera with indicated power supply and make sure it's power-supplied.

2.2.2 DCCS Camera Connection (For 4CH Models Only)

The cameras must be connected and power-supplied before the DVR is powered on. Connect the camera with the indicated power supply. Then, connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connectors.

Note: Only video channel 1 supports DCCS camera connection.

1) Video cable connection

Connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connector.

2) <u>Power connection</u>

Connect the camera with indicated power supply and make sure it's power-supplied.

3) Signal Transmission Examination

When the DVR is powered on, right-click to display the main menu, and select "ADVANCED CONFIG" \rightarrow "DCCS".

ADVANCED CONFIG			
CANERA DETECTION ALERT NETWORK DISPLAY RECORD DEVICES	CH1 CH2 CH3 CH4 C DIAGNOSTIC MENU	H5 CH6 CH7 CH8 CH9 CH10 CH11 ◀ START SETUP	
DCCS IVS NOTIFY	DEVICE CONNECTION	AVK523 OK	
EXIT			

- a) Make sure the model number of your DCCS camera is shown in "DEVICE". If not, please check your camera connection.
- b) Select the channel which connects to your DCCS camera, and click "START" in "DIAGNOSTIC" to examine the signal transmission between the DCCS camera and the DVR.

2.2.3 PTZ Camera Connection

The following description is taking our brand's PTZ camera as an example.

For DVR setting to control the PTZ camera, please refer to "5.5 PTZ Camera Setting" at page 25. For detailed PTZ camera control and operation, please refer to its own user manual.



STEP 1: Get a RJ11 cable with the proper length to your connection.

Different RJ11 connector may have different wire layout, so the connection might be different. If you cannot control the DVR after connection, please reverse the RJ11 cable connection with the DVR.

STEP 2: Remove one end of the insulating coating of the RJ11 cable.

Remove one end of the insulating coating of the RJ11 cable to find the RS485-A and the RS485-B wires, and remove the insulating coating to reveal the naked wires for further connection.

STEP 3: Twist the RS485-A and RS485-B wires of the RJ11 cable and the speed dome camera together.

Twist the RS485-A (red) and RS485-B (green) wires of the RJ11 cable to the RS485-A (brown) and RS485-B (orange) wires of the speed dome camera. To protect the naked wires, use the insulation tape to cover on the twisted wires.

STEP 4: Connect the other end of the RJ11 cable to DVR.

Solder the RS485-A (red) and RS485-B (green) wires of the RJ11 cable to the corresponding pins on the solder side of the optional D-Sub connector.

For DVR PIN configuration, please refer to "APPENDIX 6 PIN CONFIGURATION" at page 65. For connection details, please check with your installer.

STEP 5: Set the speed dome camera at the DVR side.

When the DVR is powered on, go to "ADVANCED CONFIG" \rightarrow "DEVICES" to set the speed dome camera.

- a) Select the device to "PTZ".
- b) Set the ID to the value the same as the one set in the speed dome camera. The default ID of the camera is 000.
- c) Select the protocol to "NORMAL".
- d) Set the baud rate to the value the same as the one set in the speed dome camera. The default baud rate of the camera is 2400.

ADVANCED CONFIG			
CAMERA DETECTION ALERT NETWORK DISPLAY RECORD	CH1 CH2 CH3 C DEVICE ID PROTOCOL RATE	CH4 CH5 CH6 CH7 CH8 CH9 CH10 CH11 ◀ PTZ 000 NORMAL 2400	
EXIT			

2.3 DVR Power On

This device should be operated only with the type of power source indicated on the manufacturer's label. Connect the indicated AC power cord to the power adapter, and plug into an electrical outlet. The power LED will be on.

- **Note:** Before the DVR is powered on, make sure the cameras are connected and power-supplied for the detection of the camera video system to be correct, and check the monitor (either LCD or CRT monitor) is connected to the DVR before the DVR is powered on for correct video output detection.
- **Note:** To ensure that your DVR works constantly and properly, it's recommended to use an UPS, Uninterruptible Power Supply (Optional), for continuously operation.

2.4 Date and Time Setting

Before operating your DVR, please set the date and time on your DVR **<u>FIRST</u>**.

- **Note:** Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.
- **Note:** For the first time to use the DVR, please power it on for at least 48 hours continuously after the date & time is set correctly. It helps to prevent DVR time from resetting after the disconnecting of DVR power. If the DVR time resets after the disconnecting of DVR power, for example, caused by a power outage, the battery might run out and please replace the battery as described in "APPENDIX 5 DVR BATTERY REPLACEMENT" at page 64.

Right-click to enter the DVR password with the password keypad. The default administrator password is 0000. The status will be changed from \bigcirc (key lock) to \bigotimes (administrator). Then, right-click to show the main menu, and select "QUICK START" \rightarrow "TIME SETUP" to set the date & time.

	QUICK ST	ART
GENERAL TIME SETUP	DATE TIME	2009 / NOV / 17 15 : 35 : 53
EXIT		

2.5 Clear Hard Disk

It's recommended to clear all data in the hard disk for the first time to user this DVR to ensure the recorded data are not mixed with other data previously saved in the same hard disk.

Right-click to show the main menu, and select "SYSTEM" \rightarrow "SYSTEM INFO" \rightarrow "CLEAR HDD". The DVR will reboot when HDD data are cleared.

SYSTEM			
TOOLS SYSTEM INFO BACKUP DATA (USB) BACKUP LOG (USB)	BAUD RATE HOST ID R.E.T.R AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION	2400 000 5 NEVER HDD-0 SUBMIT 000 RS485 NTSC 1025-1011-1011-1012	
EXIT			

2.6 Password Setting

Right-click to show the main menu, and select "SYSTEM" \rightarrow "TOOLS" to change the DVR password.

There are two user levels: ADMIN & OPERATOR. For details, please refer to "4.4 User Level Switch" at page 17.

	SYSTEM	
TOOLS SYSTEM INFO BACKUP DATA (USB) BACKUP LOG (USB)	LANGUAGE ADMIN PASSWORD OPERATOR PASSWORD UPGRADE BACKUP CONFIG RESTORE CONFIG	ENGLISH SETUP SETUP SUBMIT SUBMIT SUBMIT
EXIT		

3. GUI DISPLAY WITH USB MOUSE CONTROL

3.1 Connect USB Mouse

Connect your USB mouse to one of the USB ports on the DVR front panel, and check if there's a mouse icon ($^{\circ}$) on the screen, indicating the USB mouse is detected properly.

Move your mouse to enter the DVR password with the password keypad. The default administrator password is **0000**. The status will be changed from (key lock) to (administrator), and the quick menu bar appears on the left side of the screen.

Note: There are two user levels for DVR access which can be set in the main menu "SYSTEM" → "TOOLS". For details, please refer to "4.4 User Level Switch" at page 17.





Quick Menu: Close



3.2 Quick Menu Bar

Move to the arrow mark to extend the quick menu bar and show the five functions as follows:

Quick Menu: Open



Click to show the channel switch panel and select the channel you want. For details, please refer to "3.2.1 Channel Switch" at page 13.

Click to display the playback control panel, and click to play the latest recorded video clip, or click to enter the search list. For details, please refer to "4.3 Playback" at page 16.



Switch to the channel you want first, and click to enter the zoom-in mode. In this mode, click and drag the red frame on the bottom left of the screen to move to the place you want to see. To exit this mode, click 🗵.

GUI DISPLAY WITH USB MOUSE CONTROL



Click to select the audio channel you want: In the live mode, only the live audio channels can be selected. In the playback mode, live and playback



1

Click to enter the PTZ mode and show the PTZ camera control panel. For details, please refer to "3.2.2 PTZ Control Panel" at page 13.

Click to show the power off panel to either halt or reboot the system.

3.2.1 Channel Switch

Click ^{CD} on the quick menu bar to display the panel as follows:

Note: The buttons available depend on the model you have.

1 5 9	ROL PANEL Image: Constraint of the second	
1~16	Video Channel Number	Click to switch to the channel you want in full screen.
đ	Sequence Display	Click to display each channel in full screen one by one starting from CH1. When the last channel is displayed, it will repeat from CH1 again. When this function is on, will be shown on the status bar.
\blacksquare	Quad Display	Press to show the 4-channel display mode.
	9-Cut Display	Press to show the 9-channel display mode.
	16-Cut Display	Press to show the 16-channel display mode.

3.2.2 PTZ Control Panel

Note: In the PTZ control mode, hot point is supported to move the camera view to the specified point after a click.

Click 🗐 on the quick menu bar to display the panel as follows:



	Camera Menu	Click to enter the camera main menu. For details about each camera menu, please refer to its own user manual.
↓	Enter	Click to confirm your selection / enter the menu.
	Up / Down / Left / Right	Click to move your selection up / down / left / right, or change settings.
9 / 0	Iris + / Iris -	This two buttons are designed for the PTZ camera which uses Pelco-D to control. To know the actions after clicking Iris + and Iris -, please refer to the camera's user manual.
• / •	Zoom in / out max	Click to zoom in on the image to the largest / zoom out on the image to its original size.
•	Zoom in / out	Click to zoom in / out the image.
¥ / Ξ	Focus near / far	Click to adjust the focus of the image.
(†)	Auto mode	Click to activate the auto function. Before using it, you need to assign a specific function that will be enabled when "Derronder" is clicked. For details, please refer to the user manual of the PTZ camera.
R	Preset point	Click to enter the PTZ preset point you want to see.

3.3 Main Menu

Right-click anywhere on the screen to show the main menu as follows, and right-click again to exit.

For details about the menu structure, please refer to "APPENDIX 4 MAIN MENU STRUCTURE" at page 62.

QUICK START	٢	QUICK START	Click to set the status display, image settings, and date & time.
	1	DATE SETUP	Click to set the date display and daylight saving.
		SYSTEM	Click to set the system configurations.
		EVENT INFORMATION	Click to enter the event search menu.
	Yi	ADVANCED CONFIG	Click to set CAMERA, DETECTION, ALERT, NETWORK, DISPLAY, RECORD, DEVICES & DCCS.
	٩	SCHEDULE SETTING	Click to set record timer, detection timer & alarm timer.

Main Menu

4. BASIC OPERATION

4.1 Live Page



Icon **Function** Function Icon Function lcon Playback audio channel 1 Live audio channel (1~4) ٩ d) Audio channel off (1~4) 0 0 Digital zoom on Q Digital zoom off Timer recording 县 喝 ø Network disconnected Internet connected LAN connected USB flash drive / device No USB device **õ** Ø ¢ USB mouse connected connected connected മ (5) Key lock 5 PTZ mode on HDD overwrite മ P Administrator Operator Sequence 見 **(m)** Motion Recording Alarm * Ľ Record mode: Frame Record mode: Field Record mode: CIF DCCS connection OK DCCS connection failed (For Selected Models Only) (For Selected Models Only)

4.2 Record Icon

1) Manual Recording

By defaults, manual recording is on (\mathbb{R}) when the DVR is powered on and a HDD is installed.

2) Event Recording

When the motion detection or alarm is on, the motion icon ($^{\textcircled{}}$) or alarm icon ($^{\textcircled{}}$) shows on the screen for any motion or alarm event.

3) Timer Recording

When timer recording is on, you will see """ on the screen.

4) HDD Overwritten

Be defaults, the HDD overwritten function is set to ON, and """ will be shown on the screen.

4.3 Playback

Click "O" on the quick menu bar to display the playback control panel, and click I to

play the latest recorded video clip, or click <a>[to enter the search list.



- **Note:** There must be at least 8192 images of recorded data for playback to work properly. If not, the device will stop playback. For example, if the IPS is set to 30, the recording time should be at least 273 seconds (8192 images / 30 IPS) for the playback to work properly.
- **Note:** During playback, the image size of the recording (FRAME, FIELD or CIF) will be shown on the screen.

4.3.1 Playback Control

¥	Fast Forward	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 32X.
¥	Fast Rewind	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Play / Pause	Click to play the latest recorded video clip immediately, and click again to pause. In the pause mode, click once to get one frame forward, and click to get one frame rewind.
	Stop	Click to stop the video playback.
*	Slow Playback	Click once to get 1/4X speed playback, and click twice to get 1/8X speed playback.
¥ /	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.
A↔B	Repeat	Click to set point A and point B in a video clip, and the system will play only the specified range in that clip.
	Backup	Click to open the backup menu for video backup.

4.3.2 Event Search

Click Distance Click Cli

ALARM / TIME, or select FULL to show all the event logs.

To guickly search the time you want, select "QUICK SEARCH". Set the time range you want, and select "SUBMIT" to play the recorded video clip during the specified time.

4.3.3 Audio Playback

In the playback mode, click 🖤 on the quick menu bar as many times as needed to select live or playback audio from audio channel 1~4.

Live audio from audio channel 1~4 බො (indicated in white).

Audio channel unselected

Playback audio from audio channel 1~4 (indicated in yellow).

Note: For the 4CH models, "VGA OUTPUT" appears only when "PRIORITY" is set to "DISPLAY FIRST". For details, please refer to "4.5 System Sources Reallocation (For 4CH Models Only)".

Note: To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.

4.4 User Level Switch

In the key lock mode (^(C)), move your USB mouse to display the password input keypad. There are two user levels for accessing the DVR: Administrator ($\stackrel{()}{\simeq}$) & Operator ($\stackrel{()}{\simeq}$).

When the administrator password is entered, $\stackrel{\mbox{\ensuremath{\mathbb{S}}}}{=}$ will be shown on the status bar of the screen and all operations are allowed. The default administrator password is 0000.

When the operator password is entered, \triangle will be shown on the status bar of the screen, and the main menu is NOT allowed to access. The operator user level needs to be set in the main menu "SYSTEM" \rightarrow "TOOLS".

To switch between these two user levels, click the current user level icon to switch to the key lock mode, and move your mouse to show the password input keypad, and enter the password of the user level you want.

4.5 System Sources Reallocation (For 4CH Models Only)

Go to "QUICK START" \rightarrow "GENERAL", and select "PRIORITY" to reallocate the system sources to live display and record.

There are three options for this function: RECORD FIRST / DISPLAY FIRST.

	QUICK START	
GENERAL	CHANNEL TITLE	ON
TIME SETUP	EVENT STATUS	ON
	DATE DISPLAY	ON
	DCCS DISPLAY	ON
	MOUSE SENSITIVITY	- +
		_
	PRIORITY (For 4CH Models Only)	RECORD FIRST
	RECORD CONFIG	SETUP
EXIT		

- RECORD FIRST: When this option is selected, Full D1 at real-time record on all channels is available, and the VGA output resolution is fixed to 1024 x 768.
- DISPLAY FIRST: When this option is selected, three VGA output resolutions will be available to choose (1024 x 768 / 1280 x 1024 / 1600 x 1200), but Full D1 real-time recording on all channels will not be available.

5. FREQUENTLY-USED FUNCTIONS

5.1 Quick Search

Press "LIST" on the DVR front panel to enter the time search menu as follows:

			EVE	NT INFORM	ATION				
	HARD DISH CHANNEL	<			☑ 01 ☑ 05 ☑ 09 ☑ 13	ALL 02 06 10 14	HDD 03 07 11 015	□ 04 □ 08 □ 12 □ 16	
	■ SUN 1 8 15 22 29	2009 MON 2 9 16 23 30	TUE 3 10 17 24	N0 WED 4 11 18 25	OV THU 5 12 19 26	FR 6 13 20 27	;	SAT 7 14 21 28	
00		06		12 		18 			24
		15:20				SUBM	IT		

Step1: Select the hard disk and channel including the video data you want to search.

- Step2: Select the month including the video data you want to search from the calendar, and the date with recorded data will be highlighted.
- Step3: Select the date you want from the calendar, and the time with recorded data will be highlighted from the time scale bar.

Step4: To immediately play the video clip, click "SUBMIT".

To choose the start time for video playback, move your mouse cursor to the highlighted time, and click to confirm the time when the time display below is the time you want. The video playback is activated right away when you confirm the time.

5.2 Record

5.2.1 Quick record setting

Right-click to display the main menu, and select "QUICK START" \rightarrow "GENERAL" \rightarrow "RECORD CONFIG".

Click "SETUP" to enter the setting page individually for manual record, event record and timer record.

	QUICK START	
GENERAL TIME SETUP	CHANNEL TITLE EVENT STATUS DATE DISPLAY DCCS DISPLAY (For Selected Models Only) MOUSE SENSITIVITY PRIORITY (For Selected Models Only) RECORD CONFIG	ON ON ON - IIII IIII + RECORD FIRST SETUP
EXIT		

- a) Select the record type you want to set.
- b) In "CHANNEL", select "ALL" to apply the changes here to all channels.

		QUICK STAR	RT	
MANUAL EVENT	TIMER			
CHANNEL	IMAGE SIZ	ZE I.P.S.	QUALITY	
ALL	CIF	100	SUPER BEST	
				EXIT

Or, select "BY CHANNEL" to set the image size, image per second & image quality individually for each channel.

	QUICK START								
MANUAL EVENT	TIMER								
CHANNEL	IMAGE SIZE	I.P.S.	QUALITY						
CH1	CIF	25	SUPER BE	ST					
CH2	CIF	25	SUPER BE	ST					
CH3	CIF	6	HIGH						
CH4	FIELD	25	SUPER BE	ST					
AVAILABLE IPS: 0	CIF 69 / FIELD 34 /	FRAME 17							
		A	APPLY	EXIT					

5.2.2 Detailed record setting

Right-click to display the main menu, and select "ADVANCED CONFIG" \rightarrow "RECORD".

Note: Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.

ADVANCED CONFIG								
CAMERA DETECTION ALERT NETWORK DISPLAY RECORD DEVICES	MANUAL RECORD EVENT RECORD TIMER RECORD PRE-ALARM RECORD OVERWRITE EVENT RECORD ALL CH. KEEP DATA LIMIT (DAYS) RECORD CONFIG	ON ON ON ON OFF OFF SETUP						
EXIT								

1) MANUAL RECORD

Set the manual recording function on / off.

2) EVENT RECORD

Set the event recording function on / off.

3) TIMER RECORD

Set the timer recording function on / off.

4) <u>PRE-ALARM RECORD</u>

Select to enable or disable the pre-alarm function (ON / OFF). When pre-alarm and event recording functions are both activated, the DVR will record 8MB data before an alarm / motion event is triggered.

5) <u>OVERWRITE</u>

Select "ON" to overwrite previous recorded data in your HDD when the HDD is full. When this function is on and the HDD is full, the DVR will clear 8GB data from the oldest for continuous recording without notice.

6) EVENT RECORD ALL CH.

Select to record all channels (ON) or record the channel with an event only (OFF) for any event.

7) KEEP DATA LIMIT (DAYS)

Assign the maximum recording days from 01 to 31 after which all the recorded data will be removed, or select "OFF" to disable this function.

8) <u>RECORD CONFIG</u>

Please refer to "5.2.1 Quick record setting".

5.3 Schedule Setting

Right-click to display the main menu, and select "SCHEDULE SETTING".

5.3.1 Record Timer

Click "RECORD". In "RECORD TIMER", select "ON" to enable record timer, and select the day and time for this function.

			S	СН	IE	DU	ILE	E S	E.	ГТ	II	N	G											
RECORD DETECTION		IM 2	ER	4		6		8			10			12	1	10	N 16		18	20)	2	2	24
ALARM	SUN MON TUE WED THU FRI SAT																							
EXIT]																							

X axis 0 ~ 24 hours. Each time bar is 30 minutes.

Yaxis Monday ~ Sunday.

5.3.2 Detection Timer

Click "DETECTION". In "DETECTION TIMER", select "ON" to enable record timer, and select the day and time for this function.



X axis 0 ~ 24 hours. Each time bar is 30 minutes.

Yaxis Monday ~ Sunday.

5.3.3 Alarm Timer

Click "ALARM". In "ALARM TIMER", select "ON" to enable record timer, and select the day and time for this function.



X axis $0 \sim 24$ hours. Each time bar is 30 minutes.

Yaxis Monday ~ Sunday.

5.4 Detection Setting

Right-click to display the main menu, and select "ADVANCED CONFIG" \rightarrow "DETECTION".

	ADVANCED CONFIG
CAMERA DETECTION ALERT NETWORK DISPLAY RECORD	CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8 CH9 CH10 CH11 ▲ ▲ LS 07 SS 03 TS 02 MOTION OFF ALARM OFF ARFA EDIT EDIT
EXIT	AREA EDIT

1) LS (Level of Sensitivity)

"LS" is to set the sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default value is 07.

2) <u>SS (Spatial Sensitivity)</u>

"SS" is to set the sensitivity for detecting the size of one object (the number of the grids) on the screen. The smaller the value is, the higher sensitivity for motion detection.

The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 03.

Note: The default setting of SS is 03, which means once an object is detected more than 3 grids, the system will get triggered. So the value of SS must be less than the number of grids that you set up for the motion detection area.

3) TS (Time of Sensitivity)

"TS" is to set the sensitivity regarding how long one object stays in the detection area and triggers the recording. The smaller the value is, the higher sensitivity for motion detection.

The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 02.

4) <u>MOTION</u>

Select if you want to activate the motion detection function for the selected channel (ON/OFF).

5) <u>ALARM</u>

Select N.C./ N.O depending on your installation need. The default alarm value is OFF.

6) <u>AREA</u>

Click "EDIT" to set the motion detection area.

There are 16×12 grids per camera for all channels. Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.

5.5 PTZ Camera Setting

Right-click to display the main menu, and select "ADVANCED CONFIG" \rightarrow "DEVICES".

ADVANCED CONFIG									
CAMERA DETECTION ALERT NETWORK DISPLAY RECORD DEVICES	CH1 CH2 DEVICE ID PROTOC RATE	· · · · · ·	0-15 0-16	CH7	018 01 PTZ 00 NORM 2400		<u>CH11</u>		
EXIT									

1) <u>DEVICE</u>

For the PTZ camera, select "PTZ".

2) <u>ID</u>

Click the current value to set the ID number (0 \sim 255) for the connected PTZ camera if necessary.

Make sure the ID setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

Note: To know the default ID of the PTZ camera, please refer to its user manual.

3) PROTOCOL

Select NORMAL (our protocol), P-D (PELCO-D) or P-P (PELCO-P) protocol.

4) <u>RATE</u>

Select the baud rate for the connected PTZ camera (2400 / 4800 / 9600 / 19200 / 57600 / 115200).

Make sure the baud rate setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

Note: To know the default baud rate of the PTZ camera, please refer to its user manual.

5.6 System Setting

5.6.1 Password Setting

Right-click to display the main menu, and select "SYSTEM" \rightarrow "TOOLS".

	SYSTEM	
TOOLS SYSTEM INFO BACKUP DATA (USB) BACKUP LOG (USB)	LANGUAGE ADMIN PASSWORD OPERATOR PASSWORD UPGRADE BACKUP CONFIG RESTORE CONFIG	ENGLISH SETUP SUBMIT SUBMIT SUBMIT
EXIT		

1) ADMIN PASSWORD

Click "SETUP" to change the administrator password. The default administrator password is **0000**.

When you're prompted to enter the DVR password, enter the administrator password, and a will be shown on the status bar of the screen and all operations are allowed.

2) OPERATOR PASSWORD

Click "SETUP" to set or change the operator password. .

When you're prompted to enter the DVR password, enter the operator password, and \triangle will be shown on the status bar of the screen and the main menu is **NOT** allowed to access.

5.6.2 System Upgrade

Note: DVR system upgrade might cause all HDD data cleared when your current system version is too old from the latest version. Therefore, before upgrading the DVR system, check your current firmware version with your installer or distributor, and make video backup if necessary.

Right-click to display the main menu, and select "SYSTEM" \rightarrow "TOOLS" \rightarrow "UPGRADE".

Save the upgrade files obtained from your installer or distributor in a compatible USB flash drive, and insert it into the USB port at the front panel.

Then, click "SUBMIT" to start upgrading.

Note: Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST" at page 60.

5.6.3 Backup & Restore Configurations

Right-click to display the main menu, and select "SYSTEM" \rightarrow "TOOLS" \rightarrow "BACKUP CONFIG" or "RESTORE CONFIG".

These two functions allows users to keep the current configurations after DVR upgrade, or copy one DVR configurations to another DVR if necessary.

Insert a compatible USB flash drive into the USB port *before upgrading DVR*, and select "SUBMIT" in "BACKUP CONFIG" to copy the current DVR configurations to a file "System.bin" and save to your USB flash drive.

To restore DVR configurations after upgrading DVR, insert the USB flash drive including "System.bin" to the USB port, and select "SUBMIT" in "RESTORE CONFIG".

5.6.4 Video Backup

Right-click to display the main menu, and select "SYSTEM" \rightarrow "BACKUP DATA (USB)" or "BACKUP DATA (DVD)".

Note: "BACKUP DATA (DVD)" is only available for the model with a DVD writer built-in. Please check the specifications of your DVR model for details.

Insert a compatible USB flash drive to the USB port at the front panel, or press **A** to eject the DVD writer and place a DVD-ROM or CD-ROM to it.

Note: Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST" at page 60.

Note: For the compatible CD- / DVD-ROM list, please refer to "APPENDIX 7 DVD-/ CD-ROM COMPATIBLE LIST" at page 68.

	SYSTEM			
TOOLS SYSTEM INFO BACKUP DATA (USB) BACKUP DATA (DVD) BACKUP LOG (USB)	START DATE START TIME END DATE END TIME CHANNEL HARD DISK BACKUP REQUIRE SIZE: 554MB	08: 200 17: ☑ 01 ☑ 05 ☑ 09 ☑ 13 ALL SUE	_ • •	□ 04 □ 08 □ 12 □ 16
EXIT	AVAILABLE SIZE: 378	8.0MB		

- 1) <u>START DATE / START TIME</u> Select the start date & time.
- 2) <u>END DATE / TIME</u> Select the end date & time.
- 3) <u>CHANNEL</u> Click to select the channel(s).
- HARD DISK Select the hard disk containing the video data you need or "ALL HDD".
- 5) <u>BACKUP</u> Click "SUBMIT" to start backup.
- 6) <u>REQUIRE SIZE</u>

To know the size of the expected backup video before backup, click "SUBMIT" to start calculating.

Backup File Playback

During the backup process, a file player installer "PLAYER.EXE" will also be copied into your USB flash drive or disk, and you will see the message "CHECK PLAYER" shown on the screen.

Note: The maximum number of backup files in the CD-ROM or DVD-ROM is 41.

Insert your USB flash drive or place the CD or DVD into the DVD-ROM drive of your PC. Install the file player "PLAYER.EXE", and double click a backup file to play it directly in your PC and see if the backup is successful.

Note: The supported PC operating systems are Windows 7, Vista, XP & 2000.

5.6.5 Event Log Backup

Right-click to display the main menu, and select "SYSTEM" \rightarrow "BACKUP LOG (USB)" This function is used to backup the event log.

Insert a compatible USB flash drive to the USB port at the front panel.

Note: Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST" at page 60.

	SYSTEM	
TOOLS	START DATE	2009/NOV/19
SYSTEM INFO	START TIME	08:30:21
BACKUP DATA (USB)	END DATE	2009/NOV/19
BACKUP DATA (DVD)	END TIME	17:59:29
BACKUP LOG (USB)	CHANNEL	☑ 01 □ 02 □ 03 □ 04
		☑ 05 □ 06 □ 07 □ 08
		☑ 09 □ 10 □ 11 □ 12
		☑ 13 □ 14 □ 15 □ 16
	DATA TYPE	SETUP
	BACKUP	SUBMIT
EXIT		

1) <u>START DATE / START TIME</u>

Select the start date & time.

2) END DATE / TIME

Select the end date & time.

3) <u>CHANNEL</u>

Click to select the channel(s).

4) DATA TYPE

Click "SETUP" to select the event type you want: MANUAL / MOTION / ALARM / SYSTEM / TIMER, or select "SELECT ALL" to choose all event types.

5) <u>BACKUP</u>

Click "SUBMIT" to start backup. You'll see a log file (.csv) in the flash drive.

5.6.6 Clear All HDD Data

Right-click to show the main menu, and select "SYSTEM" \rightarrow "SYSTEM INFO" \rightarrow "CLEAR HDD".

SYSTEM		
TOOLS SYSTEM INFO BACKUP DATA (USB) BACKUP LOG (USB)	BAUD RATE HOST ID R.E.T.R. AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION	2400 000 5 NEVER HDD-0 SUBMIT 000 RS485 NTSC 1010-1005-1006-1007
EXIT		

Select the HDD you want to clear, and click "YES" to confirm or "NO" to cancel.

It's recommended to clear all data in the hard disk when:

- It's the first time to use this DVR to ensure the recorded data are not mixed with other data previously saved in the same hard disk.
- DVR date and time are changed accidentally when the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search.

5.7 Network

5.7.1 STATIC

ADVANCED CONFIG		
CANERA DETECTION ALERT NETWORK DISPLAY RECORD	NETWORK SNTP FTP E-MAIL DDNS NETWORK TYPE STATIC IP 192.168.001.010 GATEWAY 192.168.001.254 NETMASK 255.255.255.000 PRIMARY DNS 168.095.001.001	
DEVICES DCCS IVS NOTIFY	SECONDARY DNS 139.175.055.244 PORT 0080	
EXIT		

1) <u>NETWORK TYPE</u>

Select the network type as STATIC and set all the information needed in the DVR.

2) NETWORK INFORMATION (IP / GATEWAY / NETMASK)

Key in all the network information obtained from your ISP (Internet Service Provider).

3) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

4) <u>PORT</u>

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

5.7.2 PPPOE

Note: When PPPOE configuration is completed, please move to "DDNS" to configure the DDNS service.

ADVANCED CONFIG			
CANERA DETECTION	NETWORK SNTP FTP E-MAIL DDNS NETWORK TYPE PPPOE ID 168.001.010		
ALERT NETWORK DISPLAY	IP192.168.001.010GATEWAY192.168.001.254NETMASK255.255.255.000		
RECORD DEVICES DCCS	PRIMARY DNS 168.095.001.001 SECONDARY DNS 139.175.055.244 PORT 0080		
IVS NOTIFY	USER NAME OFFICE PASSWORD •••••		
EXIT			

1) <u>NETWORK TYPE</u>

Select the network type as PPPOE and set all the information needed in the DVR.

2) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

3) <u>PORT</u>

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

4) USER NAME / PASSWORD

Set "username" and "password" subscribed from your ISP supplier
Note: When DHCP configuration is completed, please move to "DDNS" to configure the DDNS service.

ADVANCED CONFIG					
CANERA	NETWORK SNTP FTP E-MAIL DD	NS			
DETECTION	NETWORK TYPE	DHCP			
ALERT	IP	192.168.001.010			
NETWORK	GATEWAY	192.168.001.254			
DISPLAY	NETMASK	255.255.255.000			
RECORD	PRIMARY DNS	168.095.001.001			
DEVICES	SECONDARY DNS	139.175.055.244			
DCCS	PORT	0080			
IVS NOTIFY EXIT					

1) <u>NETWORK TYPE</u>

Select the network type as DHCP.

2) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

3) <u>PORT</u>

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

5.7.4 DDNS

You need to additionally set DDNS when your network type is PPPOE or DHCP.

We have our own DDNS server for quick DDNS service configuration. You don't need to additionally apply a DDNS service.

- To use our own DDNS server, select "default" in "SYSTEM NAME".
- The default host name is the MAC address of the DVR. Then, note down the whole address under "CURRENT HOST ADDRESS", such as MAC000E5318B3F0@ddns.dvrtw.com.tw. This is the default IP address used to access your DVR remotely.
- **Note:** Please at least use the default address to access your DVR remotely once. This is to ensure our DDNS server has your DVR registered. Then, you may change the host name to a more meaningful name to memorize later here.

Note: If you want to additionally apply a DDNS service instead of using ours, please refer to <u>http://www.surveillance-download.com/user/CMS.pdf</u> and check "Appendix 2" for details.

ADVANCED CONFIG					
CANERA DETECTION ALERT NETWORK DISPLAY RECORD DEVICES DCCS IVS NOTIFY	NETWORKSNTPFTPE-MAILDDNSDDNSONSYSTEM NAMEdefaultHOST NAMEMAC000E5318B3F0EMAILEMPTY				
	CURRENT HOST ADDRESS				
EXIT	MAC000E5318B3F0@ddns.dvrtw.com.tw				

5.8 Event Notifications

It's available to set event notifications to FTP / E-Mail from this DVR.

Note: This function requires Internet access. Please make sure your Internet access is available for this function to work properly.

5.8.1 FTP

When this function is enabled and an event occurs, a html file including a link will be sent to the specified FTP site. Click the link to access to this DVR and check the event recording.

ADVANCED CONFIG				
CANERA DETECTION ALERT NETWORK DISPLAY RECORD DEVICES DCCS IVS NOTIFY	NETWORKSNTPFTPE-MAILDDNSFTPALERTONUSERNAMEMANAGERPASSWORDImage: Comparison of the second			
EXIT				

5.8.2 E-MAIL

When this function is enabled and an event occurs, a html file including a link will be sent to the specified E-mail address. Click the link to access to this DVR and check the event recording.

ADVANCED CONFIG					
CANERA DETECTION	NETWORK SNTP FTP E	-MAIL DDNS			
ALERT	SMTP SERVER	SMTP.GMAIL.COM			
NETWORK	PORT	465			
DISPLAY	MAIL FROM	MANAGER			
RECORD	SSL ENCRYPTION	ON			
DEVICES	VERIFY PASSWORD	ON			
DCCS	USER NAME	MANAGER			
IVS	PASSWORD	•••••			
NOTIFY	RECEIVER	SETUP			
EXIT					

1) <u>E-MAIL ALERT</u>

Select "ON" to enable this function, or "OFF" to disable this function.

2) <u>SMTP SERVER</u>

Enter the SMTP server address provided from your e-mail system supplier.

3) <u>PORT</u>

Enter the port number provided from your e-mail system supplier. If this column is left blank, the e-mail server will use port 25 to send e-mails.

4) MAIL FROM

Enter the sender's name.

5) SSL ENCRYPTION

Select "ON" if your e-mail server is using SSL encryption to protect your e-mail content from unauthorized access.

6) <u>VERIFY PASSWORD</u>

Some mail servers are required to verify the password. Please enter the "user name" and "password".

7) USER NAME / PASSWORD

Enter the "user name" and "password" when "VERIFY PASSWORD" is set to "ON".

8) <u>RECEIVER</u>

Select "SETUP" to add up to 15 e-mail addresses of the assigned recipients.

5.9 VGA Output Resolution Support

Users are allowed to change the resolution depending on their display monitor.

Right-click to display the main menu, and select "ADVANCED CONFIG" \rightarrow "DISPLAY".

	ADVANCED CONFIG	
CAMERA	DE-INTERLACE	OFF
DETECTION	FULL SCREEN DURATION	03
ALERT	QUAD SCREEN DURATION (For Selected Models Only)	03
NETWORK	DWELL SCREEN DURATION	03
DISPLAY	DISPLAY COVERT	ON
RECORD	HDD DISPLAY MODE	HDD SIZE
DEVICES	VIDEO OUTPUT (For Selected Models Only)	BOTH
	ALPHA BLENDING	200
	VGA OUTPUT	1024 x 768
	VGA DEINTERLACE (For Selected Models Only)	ON
	COMPOSITE DEINTERLACE (For Selected Models Only)	ON
EXIT		

Move to "VGA OUTPUT", and select the VGA resolution you want. There are three options as follows:

- ➤ 1024 x 768 (default)
 ➤ 1280 x 1024
 ➤ 1600 x 1200
- **Note:** For the 4CH models, "VGA OUTPUT" appears only when "PRIORITY" is set to "DISPLAY FIRST". For details, please refer to "4.5 System Sources Reallocation (*For 4CH Models Only*)" at page 18.
- **Note:** To have the best image quality on your LCD monitor, make sure (1) the selected DVR VGA output resolution is supported by your monitor, and (2) the VGA output settings on both the LCD monitor and DVR are consistent. If the image is not positioned or scaled properly, please go to your monitor's menu for adjustment. For details, please refer to the user manual of your LCD monitor.

5.10 System Sources Reallocation (For 4CH Models Only)

This function is used to reallocate the system sources to live display and record.

There are three options for this function: RECORD FIRST / DISPLAY FIRST.

QUICK START					
GENERAL	CHANNEL TITLE	ON			
TIME SETUP	EVENT STATUS	ON			
	DATE DISPLAY	ON			
	DCCS DISPLAY (For 4CH Models Only)	ON			
	MOUSE SENSITIVITY	- +			
	PRIORITY (For 4CH Models Only)	RECORD FIRST			
	RECORD CONFIG	SETUP			
EXIT					

- RECORD FIRST: When this option is selected, Full D1 at real-time record on all channels is available, and the VGA output resolution is fixed to 1024 x 768.
 DISPLAY FIRST: When this option is selected, three VGA output resolutions will be
- available to choose (1024 x 768 / 1280 x 1024 / 1600 x 1200), but Full D1 real-time recording on all channels will not be available.

6. REMOTE OPERATION

You can also control the DVR remotely via the supplied licensed software "Video Viewer", web browser, and your smart phones.

Note: For more details about mobile surveillance via your smart phones, please visit our official website <u>www.eagleeyescctv.com</u>, or download the instructions of EagleEyes installation and configuration from <u>www.surveillance-download.com/user/eagleeyes_quick.pdf</u>.

6.1 Supplied Licensed Software

The sections below describe frequently-used functions of the Video Viewer. For details about this software and network settings, please download its extended user manual from the following link:

http://www.surveillance-download.com/user/CMS.pdf

6.1.1 Installation & Network Connection

- 1) Install the software
 - Step1: Place the supplied CD into your CD-ROM or DVD-ROM drive. The program will be automatically run.
 - Step2: Click "Download The Latest Version" under "Licensed Software AP" to download the latest version of Video Viewer from the Internet.
 - Step3: Follow the on-screen instructions to finish the installation. When the installation is completed, a shortcut icon "22" will be placed on your PC desktop.
- 2) <u>Network Connection</u>
 - Local Connection (via LAN)

LAN is used when it's the first time to remotely access the DVR and you need to configure the network setting of your DVR based on your network type in advance.

a) Connect the DVR to your PC via a RJ45 network cable. The default DVR values are as follows:

ltem	Default Value
IP address	192.168.1.10
User name	admin
Password	admin
Port	80

- b) Set the PC's IP address as "192.168.1.XXX" (1~255, except 10) in order to make the PC and DVR under the same domain.
- c) Double-click "???" icon on your PC desktop to enter the control panel. By defaults, the "Address Book" panel will be displayed on the right side of the control panel.
- d) Click " \square " \rightarrow " \blacksquare " to key in the default IP address, user name, password, and port number of the DVR you intend to connect.

OR

Click " \square " \rightarrow " \square " to search the available IP address(es) of other DVR(s)

under the same domain as your PC's IP address. The found address(es) will be listed, and can be added into the address book by clicking "

- e) Double-click the IP address you just added into the address book to log in.
- Remote Connection (via Internet)

When the network configuration of your DVR is completed, you can access your DVR remotely via Internet.

- a) Double-click "???" icon on your PC desktop to enter the control panel. By defaults, the "Address Book" panel will be displayed on the right side of the control panel.
- b) Click " \blacksquare " \rightarrow " \blacksquare " to key in the IP address, user name, password, and port number of the DVR you intend to connect.

OR

Click " \square " \rightarrow " \blacksquare " to search the available IP address(es) of other

DVR(s) under the same domain as your PC's IP address. The found address(es) will be listed, and can be added into the address book by clicking "

c) Double-click the IP address you just added into the address book to log in.

6.1.2 Control Panel Overview

Two control panels are available and can be switched depending on your use habit.

Simplified Version (Default)



Display Mode Switch

REMOTE OPERATION

Full Function Version



Main Button Overview

But	Button				
Simplified	Full Function	Function	Des	cription	
Harris	â	Address Book	can a		e predefined IP address(es). You e or search the IP address to log tely.
		Miscellaneous	Ś	Remote Config	Click to go into the detailed DVR setting.
				Record Setting	Click to go to the detailed record setting.
		Control		Custom Setting	Click to choose the language of this program. The language change will take effect when this program is closed and executed again.
-		Log			event and recording logs, search b) by date, or playback the

REMOTE OPERATION

Button				
Simplified	Full Function	Function	Description	
			recording of the selected log.	
i 🚳 (& }	Record / Record Stop	Click to start / stop the manual recording.	
ra i	O	Snapshot	Click to take a snapshot of the current view. The snapshot will be saved in the path you specified in "Record Setting".	
Q.	0	Information	Click to show the current network connection details.	
		DVR Control	Click to go to the DVR control panel to operate the DVR remotely.	

6.1.3. General Operation

Record

To record remotely at the same time for any event or alarm at the DVR side, click "

👰 Record Setting Prev/Post Event Record Record On/Off 🗆 Manual 🔽 Timer ✓ Motion ☐ Alarm ✓ Pre-Record F Post-Record Verwrite Hard Disk Record Time Range Weekly Custom 💻 Timer 💻 Alarm Motion + 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Sun Mon Tue Wed Thu Fri Sat **Record Path** Total(MB) Free(MB) Reserve(MB) Video Path Picture Path Drive 29996 10867 22242 23637 2048 2048 2048 C:\temppicture\ C:\tempvideo\ 78528 76316 D:\ E:\ D:\ E:\ F:\tempvideo\ F:\temppicture\ 45472 2048 0K Cancel Apply

or " \mathbb{I} " \rightarrow " \mathbb{I} " to go to the "Record Setting" page.

In the "Record Setting" page, you can set the following items:

- Record type
- Hard disk overwriting
- Pre- / post-alarm record
- Record time setting
- Record path

If "Manual" is checked, click "

manual recording immediately, and the recordings will be saved in the specified location.

If "Motion" and / or "Alarm" are checked, the recording function will also be enabled at the remote side when any event is triggered at the DVR side, and the recordings will be saved in the specified location.

Playback

To play a recording, click "**I** or "**I**, and select the "Record" tab or "Backup" tab. A

list of all the recordings will be shown by defaults, and you can also sort out the logs you want to speed up the search time.

ime Ra Ra	°	Week 💌 P	rev. Ne:	xt Record Type I User		larm
	Start Time:		÷.	Motion	F	RETR
	End Time:	2010/11/27	÷ -			
lecord	Backup Event				Qu	ery
Event	IP	Start Time	End Time	File Path	Reserve	Error
User	192.168.1.12	09/23/08 20:41:07	09/23/08 20:41:07	C:\tempvideo\20080923204107_off:	· · · · · · ·	
User	192.168.1.12	09/23/08 20:36:45	09/23/08 20:36:45	C:\tempvideo\20080923203645_off:		
User	192.168.1.12	09/23/08 20:18:56	09/23/08 20:41:07	C:\tempvideo\20080923201856_off:	· · · · · ·	
User	192.168.1.12	09/23/08 20:13:22	09/23/08 20:36:45	C:\tempvideo\20080923201322_off:		
Motion	192.168.1.12	09/23/08 20:05:30	09/23/08 20:05:35	C:\tempvideo\20080923200530_off:		
Motion	192.168.1.12	09/23/08 20:05:30	09/23/08 20:05:35	C:\tempvideo\20080923194836_off:		
Motion	192.168.1.12	09/23/08 20:05:30	09/23/08 20:05:35	C:\tempvideo\20080923195524_off:		
User	192.168.1.12	09/23/08 19:55:24	09/23/08 20:18:56	C:\tempvideo\20080923195524_off:		
User	192.168.1.12	09/23/08 19:48:36	09/23/08 20:13:22	C:\tempvideo\20080923194836_off:		
User	192.168.1.12	09/23/08 19:32:55	09/23/08 19:55:24	C:\tempvideo\20080923193255_off:	-	
User	192.168.1.12	09/23/08 19:24:51	09/23/08 19:48:36	C:\tempvideo\20080923192451_off:	Present line	
User	192.168.1.12	09/23/08 19:10:26	09/23/08 19:32:55	C:\tempvideo\20080923191026_off:		
User	192.168.1.12	09/23/08 19:01:05	09/23/08 19:24:51	C:\tempvideo\20080923190105_off:		
User	192.168.1.12	09/23/08 18:47:57	09/23/08 19:10:26	C:\tempvideo\20080923184757_off:		
				-		
Tota	Records:	1 Delete	Delete All	Play Repair	Ap	ply

To immediately play a recording, select a log from the list, and click "Play", or double-click the selected log.

Network Backup

Click " \blacksquare " \rightarrow " \blacksquare ", or click " \blacksquare " to go into the "Backup" page as follows, and you

can select a specific time range or event to make a video backup remotely.

The file(s) you backup will be from the currently selected IP address.

REMOTE OPERATION

HDD Number:	MASTER	_	,		CH4 CH5 CH6 CH7 CH
st Calendar			СН9 🗆 С	H10 T CH11 T CH12	2 CH13 CH14 CH15 CH16
	NO.	Event	CH	Time	
	1	MOTION	4	2010/11/24 17:56:41	
Reload	2	MOTION	3	2010/11/24 17:56:38	Event Filter:
ricioau	3	MOTION	4	2010/11/24 17:54:01	2.5801800
	4	MOTION	4	2010/11/24 17:51:42	
	5	MOTION	3	2010/11/24 17:51:40	System, Manual, Timer, Alarm 🔻
Prev. Page	6	MOTION	4	2010/11/24 17:46:42	
3 -	7	MOTION	4	2010/11/24 17:43:57	
	8	MOTION	3	2010/11/24 17:43:50	
	9	MOTION	3	2010/11/24 17:43:26	
Next Page	10	MOTION	4	2010/11/24 17:43:23	
	11	MOTION	4	2010/11/24 17:42:32	
	12	MOTION	4	2010/11/24 17:41:34	
	13	MOTION	3	2010/11/24 17:40:55	
	14	MOTION	4	2010/11/24 17:40:26	
	15	MOTION	4	2010/11/24 17:40:15	
	16	MOTION	4	2010/11/24 17:39:17	
	17	MOTION	4	2010/11/24 17:38:22	
	18	MOTION	4	2010/11/24 17:37:24	
	19	MOTION	4	2010/11/24 17:36:23	
	20	MOTION	3	2010/11/24 17:36:21	
Start Time:	2010/11/2	2 15:14:47	÷ -	End Time:	2010/11/22 16:14:47
Start Time: File Path:	2010/11/2		<u>÷</u> ▼	End Time:	2010/11/22 16:14:47

Function	Description
HDD Number / Channel	Specify the hard disk (HDD Number) and channel number (Channel) within which have the video data you need.
Download by Time	Specify the time range within which has the video data you want in the "Start Time" and "End Time" columns.
Download by Event	 Select an event log from the event list. This list shows all logs in the specified DVR from the latest to the earliest. To quickly find the events you need, check or uncheck the event type "System" / "Manual" / "Alarm" / "Motion", and select the log you want. To view the earlier or later logs that are not shown in the current page, click "Prev. Page" or "Next Page". To refresh the event list, click "Reload".
File Path	Assign the location where the backup files are saved.
Simultaneous Playback	To view the backup images simultaneously when the download process is in progress, select the checkbox "Simultaneous Playback". You will see the backup images while the images are being downloaded to the PC or notebook.
	To simply backup images without previewing, deselect the checkbox "Simultaneous Playback". You will only see a message box indicating the total time needed, the current status and the saving location.
Download / Cancel	Click "Download" to start or "Cancel" to discard the video backup.

Firmware Upgrade

This function is used to grade your DVR for function scalability.

Note: Before using this function, make sure you have the correct upgrade files provided by your installer or distributor.

Step1: Click "[1]]", and select the IP address of your device in the address book.

Step2: Click "Step2: Click "Step2" to show the upgrade page, "Update Server".



Step3: Click "Add" to browse to the upgrade files.

👰 Update Server(IVS-4CH.d	yndns.org)		X
Current version: 100	8-1003-1004-1002		
Firmware Language L	.ogo		
		Add Remove	
C:\1008-1003-1004-100 C:\1008-1003-1004-100 C:\1008-1003-1004-100 C:\1008-1003-1004-100 C:\1008-1003-1004-100	12\fboot_4.bin 12\kernel_4.bin		
Config. File System Backup:	Upgrade Firmwa	nre	

Step4: Click "Upgrade Firmware" to start firmware upgrade.

Note: It takes a few minutes to finish the upgrade process. Do not disconnect the power during firmware upgrade, or the upgrade may be failed. The device will reboot after the upgrade.

Step5: Select the IP address of the device and click "SSSS" again to check if the firmware is upgraded.

6.1.4. E-Map

Video Viewer is also a Central Management System (CMS) software, which allows network device control & management for up to 16 devices simultaneously.

Note: Before using this function, make sure Video Viewer is connected to all the devices (up to 16) you want to monitor.

E-Map is **ONLY** available when the control panel is switch to the full function version.

How to Add an E-Map Group

STEP1: In the simplified version, click "

version, and click """ to enter the E-Map page as follows.

Note: To know where the buttons are, please refer to "Simplified Version (Default) at page 39, and "Full Function Version" at page 40.



STEP2: Right-click to show the shortcut menu on the top-left panel, and select the E-Map group you want to add. There are three E-Map groups you can add: Google E-MAP, Single E-MAP, and Building E-MAP.



How to add a Google E-Map group:

- Enter the name of this Google E-Map group.
- Enter a specific address or landmark, and click "Search". OR Move to the map and drag to the

location you want.

- 3 Click and drag the IP address to where it's located in the current level.
- Click "Apply" to save and finish.



How to add a single E-Map group:

Enter the name of this single
 E-Map group.



- Click and drag the IP address to where it's located in the current level.
- Click "Apply" to save and finish.



How to add a building E-Map group:

- Enter the name of this building E-Map group.
- 2 Enter the total levels of this building.
- 3 Select the level of the building from the drop-down list.
- A Enter the name of the level.
- G Click "..." to browse the map file in BMP or JPEG.
- Click and drag the IP address to where it's located in the current level.
- Go back to STEP 3 to select other level of the building, and repeat from STEP 3 to 6 until the setup for all levels are finished.
- Click "Apply" to save and finish.

STEP3: When the E-Map group is created, you will see the tree on the top-left panel, showing all the devices you've added to this group.

branch office ipcamipcam.dyndns.o branch office is 60.251.8.56 ist floor ipcamipcam.dyndns.o incamipcam.dyndns.o incamipcam.dyndn 2nd floor incamipcam.dyndn camipcam.dyndn incamipcam.dyndn impcam.dyndn impcamipcam.dyndn impc		Currently Selected Device Group: head quarter Level: 1st floor Device: 60.251.8.56		

lcon	Description
	The connected device is camera. When it's selected, it will become red.
	The connected device is DVR. When it's selected, it will become red.
Å	For any motion or alarm event, it will appear on the screen to catch your attention. To know what's happening quickly, double-click the device icon on the E-Map to show the live view.

How to Edit / Remove an Existing E-Map Group

For Google E-Map Group

Right-click on the group name to show the shortcut menu list, and select "Edit E-MAP" or "Remove E-MAP" as needed.

You can also add a single E-Map group (Add Single E-MAP) or Building E-Map group (Add Building E-MAP) into the existing Google E-Map group.



For Single E-Map Group

Right-click on the group name to show the shortcut menu list, and select "Edit E-MAP" or "Remove E-MAP" as needed.

 branch office avtechipcam.dyndns branch office avtechipcam.dyndns branch qui Remove E-MAP ard floor avtechipcam.dyndn ard floor avtechipcam.dyndn cho.251.8.56 ast floor cho.251.8.56 ast floor cho.251.8.56 ast floor cho.251.8.56 		star ber sage - e	

For Building E-Map Group

Right-click on the group name to show the shortcut menu list, and select "Edit Building E-MAP" or "Remove E-MAP" as needed.



To edit or remove a certain level of the building E-Map group, right click on the level name, and select "Edit E-MAP" or "Remove E-MAP" as needed.



6.2 Web Browser

You can view the images or operate your DVR with a web browser, such as Internet Explorer, Mozilla Firefox or Google Chrome.

Note: The supported PC operation systems are Windows 7, Vista, XP and 2000.

- **Note:** To use Mozilla Firefox or Google Chrome for remote access, please go to Apple's official website (http://www.apple.com/quicktime/win.html) to download and install QuickTime first.
- **Note:** The illustration below is just for your reference and may be different from what you actually see on your DVR. Some functions and buttons are for selected models only.
- Step 1: Key in the IP address used by your DVR in the URL address box, such as 60.121.46.236, and press Enter. You will be prompted to enter the user name and password to access the DVR.
 If the port number your DVR used is NOT 80, you need to key in the port number additionally. The format is *ipaddress:portnum*. For example, for IP address 60.121.46.236 and port No. 888, please key in "http://60.121.46.236:888" into the URL address box, and press "Enter".
- Step 2: Enter the user name and password, the same as the ones used for video viewer login, and click "OK". You will see a similar screen as the following when the login information is correct.



lcon	Description
	Click to go to the live view of the DVR.
0	Click to enter the playback panel where you can search or select the event you want to play and download to your PC simultaneously. For details, please refer to "6.2.1 Event Download & Playback" at page 52.
	Click to go to the detailed DVR setting.
	Click to enter the PTZ mode.
Video / Audio Control	
Format	H.264 / QuickTime
	QuickTime is Apple Inc.'s multimedia software. You need to have QuickTime installed in you operation system first. When "QuickTime" is selected, you will be promoted to enter the user name and password to access the server of the DVR.
Quality	BEST / HIGH / NORMAL / BASIC
	Select the image quality.
Resolution	4CIF: 704*480 pixels / CIF: 352*240 pixels
Audio	Select the audio channel you want for listening to the live audio.
	Note: Your camera must support audio recording, and connect to the video channel which supports audio recording and the audio input of the DVR. For details, please refer to "1.3 Rear Panel" at page 2.
	🔪 means mute.
	To disable the mute status, click this icon again and select the audio channel you want.
Channel Control	
(For Selected Models Only)	Click to enable the remote independent operation. This icon will turn to blue and only the available function icons will be shown.
Channel Selection	Click one of the channel numbers to switch to the channel you want to see ir full screen.
÷, =	Click to go to the previous / next channel, or change setting.
6	Click to take a snapshot of the current view, and save it to the specified
	path in your PC set in " \blacksquare " \rightarrow "General".
I 1	Click to display four channels at a time. When the last channel is displayed, it will start from CH1 again.
	Click to display each channel one by one, starting from CH1. When the last channel is displayed, it will start from CH1 again.
	To exit from this display mode, press any other channel display button
⊞,⊞,∭	Click to show 4-cut / 9-cut / 16-cut display.
Playback Control	
	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 16X.
DD	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 16X.
	Click to play the current video clip.

lcon	Description
	Click to pause the video playback.
	Click to stop the video playback.
	Click to play the video clip slowly, once to get 4X slower, twice get 8X slower.
Q	Click to open the playback search panel.

6.2.1 Event Download & Playback



	Audio	Click to mute the playback if necessary, and click again to restore. Note: Audio is available when your camera supports audio recording, and connects to the video channel which supports audio recording and the audio input of the DVR. For details, please refer to "1.3 Rear Panel" at page 2.
	Snapshot	Click to take a snapshot of the current view, and save it to the specified path in your PC set in " \blacksquare " \rightarrow "General".
2	Download	Click to download the current video clip to the specified path in your PC.

APPENDIX 1 SPECIFICATIONS

For 16CH Models

		Model 1		Model 2	
Video System			NTSC / PAL (auto detection)		
Video Compression Format			H.264		
Video Input (composite video signal 1 \	/р-р	75 Ω BNC)	16 channels		
Video Loop Output (composite video signal 1 \	/p-p	75 Ω BNC)		16 ch	annels
Video Output (BNC)		ain Monitor		For stab	le display
	С	all Monitor			nce display
Video Output (VGA)			Built-in (Res		oport up to 1600 x 1200)
Audio Input / Output			4 audio i	nputs / 2 au	udio outputs (Mono)
Maximum Recording Ra	te	Frame	704×480 pixels with 120	IPS <ntsc< td=""><td>> / 704×576 pixels with 100 IPS <pal></pal></td></ntsc<>	> / 704×576 pixels with 100 IPS <pal></pal>
		Field	704x240 pixels with 240	IPS <ntsc< td=""><td>> / 704×288 pixels with 200 IPS <pal></pal></td></ntsc<>	> / 704×288 pixels with 200 IPS <pal></pal>
		CIF	352×240 pixels with 480	IPS <ntsc< td=""><td>> / 352×288 pixels with 400 IPS <pal></pal></td></ntsc<>	> / 352×288 pixels with 400 IPS <pal></pal>
Image Quality Setting			SUPER	BEST / BE	ST / HIGH /NORMAL
Hard Disk Storage**				2 SAT	A HDDs
Quick Search			Time /	Motion / A	larm search mode
SATA Interface				Bui	lt-in
Recording Mode			Manual / Timer / Motion / Alarm / Remote		
Multiplex Operation			Live display / record / playback / backup / network operations		
USB Mouse Control			YES		
Motion Detection Area			16 × 12 g	grids per ca	mera for all channels
Motion Detection Sensiti	vity		3 adjustable	e paramete	rs for accurate detection
Pre-alarm Recording				YI	ES
Backup Device			DVD Writer / Flash drive / Network Flash drive / Network		Flash drive / Network
Web Transmitting Comp	ress	sion Format	H.264		
Ethernet			10/100 Base-T. Supports remote control and live view via Etherne		
Remote Surveillance			CMS:	Our self- "Video V	developed and free software, iewer"
(Operating System:			Web Browser:		Explorer, Mozilla Firefox, Google Safari & Opera
Windows 7 / Vista / XP)			Media Player:	QuickTin	าย
			Max. on-line user:	10	
Network Protocol		TCP/IP, PPPOE, DHCP and DDNS			
Remote Independent Operation		YES			
Remote Live Audio		YES			
Remote Event Download & Playback		YES			
Event Notification		FTP / E-Mail			
IR Remote Control		YES (IR receiver built-in)			
Mobile Surveillance		YES			
Picture Zoom		2X digital zoom			
PTZ Control				YI	ES

APPENDIX 1 SPECIFICATIONS

	Model 1 Model 2			
Alarm I/O	16 inputs	s, 1 output		
Key Lock (Password Protection)	YE	ES		
Local User Level	Administrato	r & Operator		
Video Loss Detection	YE	ES		
Camera Title	Supports up to 12 letters			
Video Adjustable	Hue / Saturation / Contrast / Brightness			
Date Display Format	YY/MM/DD, DD/MM/YY & MM/DD/YY			
Daylight Saving	YES			
Power Source (±10%)	DC	19V		
Power Consumption (±10%)	< 64 W			
Operating Temperature	10 °C ~ 40 °C (50 °F~104°F)			
Dimensions (mm)***	432(W) × 90(H) × 326(D)			
System Recovery	System auto recovery after power failure			
Optional Peripherals	Keyboard	controller		

* The specifications are subject to change without notice.
** 1 HDD capacity up to 2TB
*** Dimensional Tolerance: ±5mm

For 8CH Models

			Model 3 Model 4		
Video System			1	NTSC / PAL (a	auto detection)
Video Compression Format			H.264		
Video Input (composite video signal 1 V	√p-p	75 Ω BNC)	8 channels		
Video Loop Output (composite video signal 1				8 cha	annels
Video Output (BNC)		ain Monitor		For stab	le display
		all Monitor			nce display
Video Output (VGA)			Built-in (F	Resolution sup	oport up to 1600 x 1200)
Audio Input / Output			4 audi	o inputs / 2 au	udio outputs (Mono)
Maximum Recording Ra	te	Frame	704×480 pixels with 1	20 IPS <ntsc< td=""><td>> / 704×576 pixels with 100 IPS <pal></pal></td></ntsc<>	> / 704×576 pixels with 100 IPS <pal></pal>
	ĺ	Field	704x240 pixels with 2	40 IPS <ntsc></ntsc>	> / 704×288 pixels with 200 IPS <pal></pal>
	ĺ	CIF	352×240 pixels with 4	80 IPS <ntsc< td=""><td>> / 352×288 pixels with 400 IPS <pal></pal></td></ntsc<>	> / 352×288 pixels with 400 IPS <pal></pal>
Image Quality Setting			SUPE	R BEST / BES	ST / HIGH /NORMAL
Hard Disk Storage**				2 SAT	A HDDs
Quick Search			Tim	e / Motion / Al	arm search mode
SATA Interface				Bui	lt-in
Recording Mode			Manua	ll / Timer / Mo	tion / Alarm / Remote
Multiplex Operation			Live display / record / playback / backup / network operations		
USB Mouse Control			YES		
Motion Detection Area			16 × 12 grids per camera for all channels		
Motion Detection Sensit	ivity		3 adjustable parameters for accurate detection		
Pre-alarm Recording					ES
Backup Device			DVD Writer / Flash drive / Flash drive / Network		
Web Transmitting Comp	ress	sion Format		H.2	264
Ethernet			10/100 Base-T. Supports remote control and live view via Etherne		
Remote Surveillance		CMS:	"Video Viev		
(Operating System: Windows 7 / Vista / XP)			Web Browser:		plorer, Mozilla Firefox, Google afari & Opera
			Media Player:	QuickTime	
Network Desta			Max. on-line user:		
Network Protocol		tion	TCP/IP, PPPOE, DHCP and DDNS		
Remote Independent Op	Jera	uon	YES		
Remote Live Audio			YES		
Remote Event Download & Playback Event Notification			YES FTP / E-Mail		
IR Remote Control					
Mobile Surveillance			YES (IR receiver built-in) YES		,
Picture Zoom			2X digital zoom		
PTZ Control		YES			
Alarm I/O		8 inputs, 1 output			
Key Lock (Password Protection)		YES			
Local User Level		Administrator & Operator			
Local User Level					

APPENDIX 1 SPECIFICATIONS

	Model 3	Model 4		
Video Loss Detection	YE	ËS		
Camera Title	Supports up	to 12 letters		
Video Adjustable	Hue / Saturation / C	Contrast / Brightness		
Date Display Format	YY/MM/DD, DD/MM/YY & MM/DD/YY			
Daylight Saving	YES			
Power Source (±10%)	DC 19V			
Power Consumption (±10%)	< 64 W			
Operating Temperature	10 °C ~ 40 °C (50 °F~ 104 °F)			
Dimensions (mm)***	432(W) × 90(H) × 326(D)			
System Recovery	System auto recovery after power failure			
Optional Peripherals	Keyboard controller			

* The specifications are subject to change without notice. ** 1 HDD capacity up to 2TB *** Dimensional Tolerance: ±5mm

> For 4CH Model

	Model	5	Model 6		
Video System	1	NTSC / PAL (auto detection)		
Video Compression Format		H.264			
Video Input			4 cha	annels	
(composite video signal 1 \					
	in Monitor			le display	
	I Monitor		•	nce display	
VGA Output (VGA)			•	tion up to 1600 x 1200)	
Audio Input / Output	_		•	audio output (Mono)	
Maximum Recording Rate	Frame			> / 704×576 pixels with 100 IPS <pal></pal>	
	Field	704×240 pixels with 120 IPS <ntsc> / 704×288 pixels with 100 IP</ntsc>			
	CIF	352×240 pixels with 1		> / 352×288 pixels with 100 IPS <pal></pal>	
DCCS Support			-		
Image Quality Setting		SUPE	R BEST / BES	ST / HIGH /NORMAL	
Hard Disk Storage (One HDD capacity up to 2	TB)	2 SATA H	DDs	1 SATA HDD	
Quick Search		Tim	e / Motion / A	larm search mode	
SATA Interface				ilt-in	
Recording Mode		Manual / Timer / Motion / Alarm / Remote			
Multiplex Operation		Live display / record / playback / backup / network operations			
USB Mouse Control		YES			
Motion Detection Area		16 × 12 grids per camera for all channels			
Motion Detection Sensitivity	y	3 adjustable parameters for accurate detection			
Pre-alarm Recording	YES				
Backup Device		USB 2.0 flash driv	ve / Network	DVD Writer / USB 2.0 flash drive / Network	
Web Transmitting Compres	sion Format	H.264			
Network Live Audio		YES			
Ethernet		10/100 Base-T. Supports remote control and live view via Ethernet			
		CMS:	Our self-developed and free software, "Video Viewer"		
Web Interface (Operating System:		Web Browser:		plorer, Mozilla Firefox, Google afari & Opera	
Windows 7 / Vista / XP)		Media Player:	QuickTime	·	
		Max. on-line user:			
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS				
Remote Independent Opera	YES				
Event Notification		FTP / E-Mail			
R.E.T.R. (Remote Event Tr					
IR Remote Control	YES (IR receiver built-in)				
Mobile Surveillance	YES				
Picture Zoom	2X digital zoom				
PTZ Control	YES				
Alarm I/O	4 inputs, 1 output				

APPENDIX 1 SPECIFICATIONS

	Model 5	Model 6	
Key Lock (Password Protection)	Y	ES	
Local User Level	Administrato	or & Operator	
Video Loss Detection	Y	ES	
Camera Title	Supports up	to 12 letters	
Video Adjustable	Hue / Saturation / C	Contrast / Brightness	
Date Display Format	YY/MM/DD, DD/M	M/YY & MM/DD/YY	
Daylight Saving	YES		
Power Source (±10%)	DC 19V		
Power Consumption (±10%)	< 42 W		
Operating Temperature	10 °C ~ 40°C (50°F~104°F)		
Dimensions (mm)**	343(W) × 59(H) × 223(D)		
System Recovery	System auto recovery after power failure		
Optional Peripherals	Keyboard controller		

* The specifications are subject to change without notice. ** 1 HDD capacity up to 2TB *** Dimensional Tolerance: ±5mm

APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table. If the USB flash drive is not supported by the DVR, the "USB ERROR" message will be shown on the screen.

Note: Please use your PC to format the USB flash drive as "FAT32".

Note: You can backup up to 2GB video data for one-time USB backup. To backup more data, please set the time & channel(s) you want, and start USB backup again.

MANUFACTURER	MODEL	CAPACITY
Transcend	JFV35	4G
	JFV30	8G
Kingston	DataTraveler	1G
PQI	U172P	4G
Apacer	AH320	2GB
	AH320A	8GB
	AH220	1GB
	AH320	4GB
A-data	RB-18	1GB
Sandisk	Cruzer Micro	2G
	Cruzer Micro	4G
	Cruzer4-pk	2G
Netac	U208	1G
MSI	F200	4G
SONY	Micro Vault Tiny 2G	2G
	Micro Vault Tiny 4G	4G
	Micro Vault Tiny	1G

APPENDIX 3 COMPATIBLE SATA HDD LIST

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table.

MANUFACTURER	MODEL	CAPACITY	ROTATION
Seagate	ST3320613AS	320GB	7200 rpm
	ST33500320AS	500GB	7200 rpm
	ST3500410SV	500GB	7200 rpm
	ST3750330AS	750GB	7200 rpm
	ST31000525SV	1000GB	7200 rpm
	ST31000340AS	1000GB	7200 rpm
WD	WD3200AAKS	320GB	7200 rpm
	WD5000AACS	500GB	7200 rpm
	WD6400AAKS	640GB	7200 rpm
	WD7500AAKS	750GB	7200 rpm
	WD10EADS	1TB	7200 rpm
	WD15EADS	1.5TB	7200 rpm
	WD20EADS	2TB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
HITACHI	HDT725032VLA360	320GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm

APPENDIX 4 MAIN MENU STRUCTURE

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	ALARM DURATION (SEC)				
					HDD BUZZER
HDD NEARLY FULL (GB)	HDD NEARLY FULL (GB)				

APPENDIX 4 MAIN MENU STRUCTURE

	ADVANCED CONFIG	NETWORK	NETWORK
			SNTP
			FTP
			E-MAIL
			DDNS
		DISPLAY	DE-INTERLACE (For Selected Models Only)
			FULL SCREEN DURATION
			QUAD SCREEN DURATION (For Selected Models Only)
			CALL SCREEN DURATION
			DISPLAY COVERT
			HDD DISPLAY MODE
			VIDEO OUTPUT (For Selected Models Only)
			ALPHA BLENDING
			VGA OUTPUT
			VGA DEINTERLACE (For Selected Models Only)
			COMPOSITE DEINTERLACE (For Selected Models Only)
		RECORD	MANUAL RECORD
			EVENT RECORD
			TIMER RECORD
			PRE-ALARM RECORD
			OVERWRITE
			EVENT RECORD ALL CH.
			KEEP DATA LIMIT (DAYS)
			RECORD CONFIG
		DEVICES	
		(For Selected Models Only)	
		DCCS	
		(For Selected Models Only)	
	SCHEDULE SETTING	RECORD	
G		DETECTION	
		ALARM	

APPENDIX 5 DVR BATTERY REPLACEMENT

DVR time reset after power failure, for example, caused by a power outage, will cause the disorder of the recorded data, and users may have problems in searching the event clip they want. To keep the DVR time from resetting, a non-chargeable lithium battery, *CR2032*, is installed in the DVR.

However, the DVR time might still get reset when the DVR battery is low or even running out of power. If so, please replace the DVR battery, CR2032, **right away** as instructed below.

- ➢ How to replace CR2032
 - **Note:** The lithium battery, CR2032, is a non-chargeable battery, and should be purchased separately. Please replace only with the same or equivalent type battery in case of danger.
 - Step1: Stop all DVR recording **immediately** to prevent the disorder of the recorded data. Then, back up the recorded data if necessary.
 - Step2: Power off the DVR, and disconnect the DVR power.

Step3: Remove the DVR cover, and find the battery on the mainboard.

Step4: Push the release as indicated below to remove the battery.



Step5: Get a new battery with the side of "CR2032" facing up, and install it to the mainboard.

Step6: Replace the DVR cover and connect to power.

Step7: Set DVR date & time, and resume recording. For details, please refer to "2.4 Date and Time Setting" at page 9, and "5.2 Record" at page 20.

APPENDIX 6 PIN CONFIGURATION

• For 16CH Model



* The D-Sub connector shown above is optional.

Siren:

When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact:

When the magnetic contact is opened, the alarm will be triggered and the recording is on.

PIN	FUNCTION			DESCRIPTION	
1	GND	GROUND			
		an alarm is trig PIN PIN 2 PIN 3	gered, the Alarm 1 3	(PIN 2 9) and GND (PIN 1) connector with wires e DVR will start recording and the buzzer will be on Corresponding video channel CH1 CH3	
2~9	ALARM INPUT	PIN 4 PIN 5 PIN 6 PIN 7 PIN 8 PIN 9	5 7 9 11 13 15	CH5 CH7 CH9 CH11 CH13 CH15	
10~11	PIN OFF	NA			
12	RS485-A				
13	EXTERNAL ALARM NO	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.			
14	PIN OFF	NA			
15~22	ALARM INPUT	Connect ALARM INPUT (PIN 15 – 22) and GND (PIN 1) connector with wires.Once an alarm is triggered, the DVR will start recording and the buzzer will be on.PINAlarmCorresponding video channelPIN 152CH2PIN 164CH4PIN 176CH6PIN 188CH8PIN 1910CH10PIN 2012CH12PIN 2114CH14PIN 2216CH16			
23~23	PIN OFF	NA			
24	RS485-B				
25	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.			

For 8CH Model



* The D-Sub connector shown above is optional.

Siren:

When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact:

When the magnetic contact is opened, the alarm will be triggered and the recording is on.

PIN	FUNCTION	DESCRIPTION		
1	GND	GROUND		
2~5	ALARM INPUT	Connect ALARM INPUT (PIN 2 – 5) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on.PINAlarmCorresponding video channelPIN 21CH1PIN 33CH3PIN 45CH5PIN 57CH7		
6 ~ 11	PIN OFF	NA		
12	RS485-A			
13	EXTERNAL ALARM NO.	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.		
14	PIN OFF	NA		
15~18	ALARM INPUT	Connect ALARM INPUT (PIN 15 – 18) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN Alarm Corresponding video channel PIN 15 2 CH2 PIN 16 4 CH4 PIN 17 6 CH6 PIN 18 8 CH8		
19~23	PIN OFF	NA		
24	RS485-B			
25	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.		

• For 4CH Model

PIN Connection Application



Siren:

When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact:

When the magnetic contact is opened, the alarm will be triggered and the recording is on.

* The D-Sub connector shown above is optional.

PIN	FUNCTION			DESCRIPTION	
		Once an a	Connect ALARM INPUT (PIN1 – 4) and GND (PIN5) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on.		
1~4	ALARM INPUT	PIN	Alarm	Corresponding video channel	
		PIN 1 PIN 2	1 2	CH1 CH2	
		PIN 2	3	CH3	
		PIN 4	4	CH4	
5	GND	GROUND			
6	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.			
7	EXTERNAL ALARM NO	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.			
8	RS485-A				
9	RS485-B				
10~11	GND	GROUND			

APPENDIX 7 DVD- / CD-ROM COMPATIBLE LIST

• DVD-ROM List

Disc Type	Manufacturer	Disc MID-TID Code
20X DVD+R	RITEK	RITEK R05 (rev:och)
16X DVD+R	SONY	SONYD21
	TAIYO YUDEN	YUDEN000-T03
	MITSUBISHI	MCC004
	TDK	TDK003
	MAXELL	MAXELL003
	MBI	MBIPG101-R05
	CMC	CMC MAGM01
	DAXON	DAXONAZ3
	RITEK	RITEKR05
	PRODISC	PRODISCR05
8X DVD+R	TAIYO YUDEN	YUDEN000-T02
	MITSUBISHI	MCC003
	CMC	CMC MAGE01
	PRODISC	PRODISCR03
8x DVD+RW	Ritek	RITEK008
	MITSUBISHI	MKMA03
4X DVD+RW	SONY	SONYS11
	MITSUBISHI	MKMA02
	RITEK	RITEK004
16X DVD+R9	RITEK	RITEK S06
8X DVD+R9	MITSUBISHI	MKM003
	CMC	CMC MAG-D02
	RITEK	RITEKD03
2.4X DVD+R9	MITSUBISHI	MKM001
20X DVD-R	RITEK	RITEKF-2
16x DVD-R	SONY	SONY16-D1
	TAIYO YUDEN	TYG03
	MITSUBISHI	MCC 03 RG20
	TDK	TTH02
	MAXELL	MXL RG04
	MBI	MBI 01-RG40
	CMC	CMC MAG.AM3
	RITEK	RITEK F1
8X DVD-R	RITEK	RITEKG 05
	SONY	SONY08 D1
	PRODISC	PRODISCS04
	TAIYO YUDEN	TYG02
	MITSUBISHI	MCC 02RG20
	TDK	TTH01
	MAXELL	MXL RG03
	CMC	CMC MAG.AE1

Disc Type	Manufacturer	Disc MID-TID Code
6X DVD-RW	MITSUBISHI	MCC 01RW6X01
	JVC	JVC1Victord7
	RITEK	RITEK W06
4X DVD-RW	MITSUBISHI	MCC 01RW4X
	TDK	TDK601saku
	RITEK	RITEKW04
2X DVD-RW	MITSUBISHI	MCC 01RW11N9
	JVC	JVC_VictorW7
	TDK	TDK502 sakuM3
	CMC	CMCW02
	RITEK	RITEK W01
12X DVD-R9	МКМ	MKM 04 RD30
8X DVD-R9	TY	TYG11
	MITSUBISHI	MKM 03 RD30
	RITEK	RITEKP 02
4X DVD-R9	MITSUBISHI	MKM 01 RD30
	RITEK	RITEKP 01
12X DVD-RAM	MAXELL	MXL22.
5X DVD-RAM	Matsushita	Matsushita-M01J5006
	MAXELL	MXL16.
3X DVD-RAM	MAXELL	MXL9.
	Matsushita	Matsushita-M01J3003

CD-ROM List

Disc Type	Manufacturer	Disc Type	Manufacturer
52X CD-R	MCC	12X CD-RW	MCC
	MBI		MBI
	TAIYO YUDEN		DAXON
	RITEK		RITEK
	UME		MCC
	PRODISC		DAXON
	DAXON		Lead Data
	TDK		PRINCO
	CMC	10X CD-RW	CMC
	Princo	4X CD-RW	MCC
	Lead Data		DAXON
	Postec		CMC
	Giga		RITEK
32X CD-R	TAIYO YUDEN		DAXON
24X CD-RW	MCC	4X CD-RW (8 cm)	INFODISC
	INFODISC		

APPENDIX 8 DVD WRITER INSTALLATION

Some DVR models allow users to install a DVD writer by themselves. To know whether your DVR supports this feature, please check with your local distributor or retailer.

The supported DVD writer models are as follows. Please use only the suggested DVD writer models to ensure the compatibility.

Туре	ype Brand Model	
SATA	Liteon	iHAS120
	SONY	AD-7240S

Note: Before installing the DVD writer, make sure your DVR is powered off and your DVR supports this feature.

Step1: Remove the DVR cover, and find the DVD writer bracket to remove it.

- Step2: Put the DVD writer in the bracket, and fix it to the bracket with two screws (optional) on each side.
- Step3: Connect the data bus and power cables* to the SATA DVD writer.



*Data bus & power cables are optional.

- Step4: Connect the data bus and power cables to the data bus and power jack on the DVR main board.
- **Note:** Make sure the power cable of the DVD writer is plugged into the **black** jack on the DVR main board. This power jack can supply power to one hard disk and one DVD writer simultaneously. The white jack is used to supply power to only one hard disk.



Step5: Replace the bracket to the DVR base and fix it.