— DVR —

Notice: This content is subject to be change without notice.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of unprotected “Dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

NOTE: This equipment has been tested and found to comply with the limits for a class digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Notice: Ghosting or fractured images may occur on the screen when there is a suddenly surge or lightning stroke which cause damage on IC in the DVRs.

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Note： The number of channels, sensors, relays, and split screen, and the resolution in the following figures are for reference. The actual screen output may be different by different models.

Chapter 1 LIVE OPERATIONS

In the live mode, you may monitor all channels of the DVR, listen to live audio from cameras, and configure the DVR. The DVR can support 4:3 and 16:9 aspect ratios of the screen layout. There is a shortcut toolbar on the top of the screen for users to logout, to access system information, to change screen aspect ratio, to make the DVR window full-screen, and to configure network stream quality. In the 16:9 mode, there are two major panes, the configuration menu and channel pane for video of channels. In the 4:3 mode, a user may access the configuration pane by right-clicking the mouse on the screen splits and a channel status pane will appear when the mouse cursor moves to the bottom of the screen

RHD Series:.

16：9 display - Operation screen

4：3 display - Operation screen

HHD Series :

16：9 display - Operation screen

4：3 display - Operation screen

960H Series:

16：9 display - Operation screen

4：3 display - Operation screen

Table 1-1 Icon description in live mode

Icon	Description
	Recording of a channel is activated.
	Live audio of a channel is activated.
	Live audio of a channel is not activated.
	Video signal of a channel is available.
	Event recording of a channel is active in this channel.
	Motion detection of a channel is triggered.
	Alarm is triggered of a channel. The number of available alarms depends on models.
	Alarm is not triggered of a channel.
	The channel video-loss alarm of a channel has been triggered.
	USB device has been detected.
	DVD device has been detected.
	Network connection is available
	Network connection is not available
	Displays the current user
38°C 748.59GB/753.32GB 99%	Displays the current disk space and usage. (The figure shows 99% of the disk space has been used, and 1% is available.). The current disk temperature is also shown.
2009/09/23 14:05:02	Each channel shows the time stamp for local playback, remote live, remote playback, and backup-video.

Chapter 2 MAIN MENU SETUP

To enter the main menu and set up a DVR, log-in account and user password are required. The default password of the administrator is “**123456**”. Please check the “Account Setup” for management of other log-in users.

Table 2-1 Definition of keys of virtual keyboard

Icon	Description
/	Switch between capital letters and lower-case letters.
.?123 / ABC	Switch between numbers and letters
	Delete the last character。
	Enter to verify the password. The DVR shows the setup menu, if the password is accepted.
	Space key

Table 2-2 Available keys on the remote control in the main menu mode

Item	Description
◄ ►	Switch to previous or next options of an item
▲ ▼	Switch to different items
MENU	Save setup and back to the LIVE mode
ESC	Back to upper level of menu without saving
ENTER	Enter the menu, or display virtual keyboard

There are icons within the configuration pane on the live mode to operate different features of the DVR. The configuration pane is always on the left or right side of the screen in the 16:9 mode and can to be evoked by right-click in the 4:3 mode.

16:9 display, the main menu is on the right side of the screen

4:3 display, right-click on the screen to evoke the main menu.[1]

[1] Icons may be slightly different by different models

Table 2- 3 Description of icons

Icon	Description
	Evoke the auto sequential menu
	Set the backup menu to backup video data from DVR HDD.
	Set the configuration menu to access recording settings, event settings, camera settings, account settings, network settings, storage settings, system configuration, and information
	Set the time search menu to choose a specific time of the recorded video to playback
	Play Back menu
	Set the event search menu to access the list of events recorded by the DVR. The event list will show the event occurrence time, event category, channel events, and other information.
	Set the PTZ mode
	Focus Mode *1
	Set the Zoom-in function. The DVR supports zoom-in from 2x to 8x digital zoom
	Set image freeze function

	Disable image freeze function
	Enable/Disable PIP *2
	Switch to single split
	Switch to 4-split display
	Switch to 9-split display
	Switch to 10-split display
	Switch to 13-split display
	Switch to 16-split display
	Switch to 20-split display
	Switch to 25-split display
	Switch to 32-split display

*1.Maya V2 Series not support focus mode

*2 PIP not Support RHD-813B、RHD-1613B、HHD-2013B & DVR-3213B

2-1 Auto Sequential

16:9 display

4:3 Display

Item	Description
Interval	The time interval between each channel display
All Channels	The DVR automatically switches between channels with designated interval. The DVR shows each channel in a single-split mode.
Quad-Screen Division	The DVR automatically switches between channels with designated interval. The DVR shows channels in 4-split mode.
9-Screen Division	The DVR automatically switches between channels with designated interval. The DVR shows channels in 9-split mode.
10-Screen Division	The DVR automatically switches between channels with designated interval. The DVR shows channels in 10-split mode.
16-Screen Division	The DVR automatically switches between channels with designated interval. The DVR shows channels in 16-split mode.
20-Screen Division	The DVR automatically switches between channels with designated interval. The DVR shows channels in 20-split mode.
32-Screen Division	The DVR automatically switches between channels with designated interval. The DVR shows channels in 32-split mode.

2-2 Backup

User can backup recorded video data of a specified time frame. The DVR can backup video data to either direct-attached storage, such as DVR or USB drive, or remote folder of a PC.

2-2.1 Selection

Item	Description
From	The start time of video data to be backed up
To	The end time of video data to be backed up
Duration	The time duration of backup file
All	It can select all channels or clear all selected channels to backup
Required Space	Show the size of the backup file

2-2.2 Select Backup Device

Item	Description
Backup Device	Select target device of backup (USB/DVD-RW/remote folder) 。
Status	The status of target backup device
Free Space	The available space in the target backup device. (not available for remote folder backup)
Backup	Start backup operation. **Be sure to calculate the size of backup file BEFORE operating backup.**

Do not unplug the USB device or turn off the DVR during the backup process to avoid unrecoverable error.

2-3 Configure

Evoke the configuration menu, recording settings, event settings, camera settings, account settings, network settings, storage settings, system configuration, and information. Please refer to chapter 3 for detail.

2-4 Time Search

Time search can search for the specific time of recorded data to playback. Note that dates with recording data are marked with a blue box. System will start playing video of specified time slot. Calendar will be shown by using mouse to click on “year” and “month”.

Click “date” to display recording time of that specific date with time bar. You can change time (hour/minute/second) or click on a specific pint of time bar by mouse then press “ok”. DVR will playback the recorded data of the specific time.

Item	Description
	Playback button, start playback.
	Select playback time by sliding the position of the cursor to the specified time. The timeline scale is 24 hours. The blue chart represents available video data.

16:9 Display

Playback configuration

4:3 Display

Table 2-4 Available keys on the remote control functions in the PLAYBACK mode

Button	Description
ENTER/ MODE	Switch to full screen or multi split display.
MENU / ❚❚	Turn on/off PAUSE.
PLAY	Playback at normal speed.
▲ / SLOW	Playback at slower speed. The speed will be slowed to 1/2, 1/4, 1/8 playback speed, by each pressing of the button till the slowest speed.
◀◀ / ◀	Fast rewind. Each press increases the rewind speed to the next level. There are six speeds: 2x, 4X, 8X, 16x, 32X and 64X.
▶▶ / ▶	Fast forward. Each press increases the forward speed to the next level. There are six speeds: 2x, 4X, 8X, 16x, 32X and 64X.
▼ / ■	Stop playback.

Table 2-5 the mouse operation under the PLAYBACK mode.

Icon	Description
	Stop playback, and go to previous page
	Play
	Pause
	Fast rewind, speed 4x, 8x, 16x, 32x
	Fast forward, speed 4x, 8x, 16x, 32x
	Slow playback, speed 1/2x, 1/4x, 1/8x
	Step playback
	Zoom-in display, 2x~8x digital zoom
	Full screen display
	Quad display
	9 screen display
	10 screen display

	16 screen display
	20 screen display
	25 screen display
	32 screen display

If you want to monitor single channel, please double-click the preferred channel.

16:9 Display

4:3 Display

P.S Can drag a small window

2-5 System Logs

The DVR logs events automatically. The event list shows the logged events, event type, event detail, event filter (criteria), and page number of the event list. If the event video is logged, there is a gray video symbol "►" on the left of the event. Move the cursor to event line and press "ENTER", or double-click mouse button, DVR playback this record video related to the event.

Note: If the hard disk is not installed or has not started recording, the DVR will produce the event list, but the user cannot playback the video of a specific event by clicking the event.

Item	Description
Criteria	Set the conditions for the event search
	Slide the slider to choose a page of the event list. The right numbers will show the corresponding page number
1	Press left and right arrow keys or enter the page number directly. It will go to the select event page.
	Refresh the event list.

2-5.1 Search Criteria

The number of event is up to thousands, therefore, to set "search criteria" to facilitate rapid classification of events. If the checkbox of start time and end time is checked, the event list will only display the events within the specific time slot. If the user unchecks some events and press the "OK ", the lists will only shows checked events. If you uncheck the channels, the event list will filter out un-checked the channels.

2-6 PTZ Operation

Set up the camera PTZ settings in advance (refer to 3-3.1). Enter the PTZ configuration page, PTZ control panel displays the camera PTZ setting. There is a red cross on the center of the screen. Move the mouse to the Red Cross and hold down the left mouse button to the preferred location of the screen. The DVR will move the camera to the preferred place by placing the preferred place to the center of the screen. On the screen to move in any direction. It can control the PTZ camera in the direction.

Rotate only for remote used

16:9 Display

4:3 Mode PTZ configuration

Table 2-6 Function description

Item	Description
	ZOOM. Press + / - or move the slider to adjust the zoom level.
	FOCUS. Press + / - or move the slider adjust the PTZ focus
	IRIS. Press + / - or move the slider to adjust the PTZ iris
	Press left and right arrow keys to move the camera to the preset locations, and then press to set current camera location to default point.
	Press left and right arrow keys to move the camera to the preset locations, and then press to change the camera to next preset point.
Rotate Video	Make the display upside down

2-7 Zoom

In the digital zoom mode, users may use the mouse to move the red rectangle of the zoom area.

16:9 display zoom

4:3 display zoom

P.S Can drag a small window

Item	Description
	Zoom-in the area specified by the red rectangle.
	Zoom-out the area specified by the red rectangle.
	Exit zoom mode

2-8 Shortcut toolbar

Real-time monitoring mode, move your mouse over the window function column appears above its fast operation

ICON	Description
	User login / logout: Auto lock is used.
	System Information: The host model, version, IP location, MAC values and hard disk information.
	Wide screen switching: Switch 4:3 / 16:9 monitor display.
	Screenshot.
	Turn on / off recording.
	Full screen.
	Options: Change the PC side screen shots, video storage path.
	Network Video Quality: You can follow the PC network bandwidth, adjust the image transfer traffic.
	Displacement Windows settings.
	Relays. The user can control the behavior of the relay on the DVR.

※ recording function, full-screen, options, image quality network for remote use of these four functions

※ screenshots, video features, options, these three features are only available in "iWatchDVR" use, IE 7/8/9 NOT support

2-8.1 network image quality

Option	Description
Low Quality Single Image	Low quality static mode: insufficient bandwidth used for one second about running 1 ~ 2FPS.
Low quality	Low quality Dynamic mode: According to the DVR recording settings.
High-quality	High-definition single image under static mode: insufficient bandwidth to use for one second about running 1 ~ 2FPS.
High-quality	High-definition Dynamic mode: According to the DVR recording settings.

※ image fluency: To all actual field-based network environment

2-8.2 Preference

2-8.3 Popup Setup

Item	Description
Event	Prompt window displays the channel status。
OSD	Display time, HDD status, channel information, channel border.

2-8.4 Relay Setup

Option	Description
Relay 1 ~ 4	Relay J Series x1, N Series x2, B Series x4.
Functional	open, close, automatically

Chapter 3 CONFIGURATION MENU

*PS. The initialization of new-installed HD is required before recording, please refer to "**UTILITY SETUP**" for detail.*

3-1 Record Setup

Item	Description
Record Mode	Continuous Record/ Schedule Record/ Stop Record

3-1.1 Continuous Record

Item	Description
Video	Click icon, it will go to the video setting menu of this channel (below). In settings menu, press to save, press to go back to the original video settings menu *1
Record	Enable / Disable recording for this channel
Resolution	Recording resolution selection *2
FPS	Select recording frame rate, from 1 to 30
Quality	Recording quality, from 10 to 100. The larger number means the better quality
Audio	Enable / Disable recording audio

Note 1: Channel Source is "HD signal" no function

3-1.1.1 Video Settings

16:9 display video settings

4:3 display video settings

Item	Description
Sharpness	Adjust sharpness from 0 to 255
Brightness	Adjust brightness from 0 to 255
Contrast	Adjust contrast from 0 to 255
Saturation	Adjust saturation from 0 to 255
Hue	Adjust hue from 0 to 255
Volume	Adjust volume from 0 to 255

3-1.1.2 Event Recording

Item	Description
Record	Enable / Disable recording of a channel
Resolution	Recording resolution selection *2
FPS	Select recording frame rate from 1 to 30
Quality	Recording quality from 10 to 100. The larger number means the better quality
Pre-Alarm	Set the record seconds before the event, from 0 to 5.
Post-Alarm	Set the playback seconds after the event, from 0 to 100
Audio	Enable / Disable audio recording of event record of the specified channel.

Note 2: Different models have different resolution settings

Input Setting	Resolution		
NTSC (HD)	1920 x 1080	1280 x 720	640 x 360
NTSC (960H)	944 x 480	704 x 480	472 x 240
NTSC (D1)	704 x 480	704 x 240	352 x 240
PAL (HD)	1920 x 1080	1280 x 720	640 x 360
PAL (960H)	944 x 576	704 x 576	472 x 288
PAL (D1)	704 x 576	704 x 288	352 x 288

3-1.2 Schedule Recording

Schedule recording can configure recording time by days of a week and hour. With the A, B, C, D four settings, users can set different recording scheme according to different configuration needs. In the day and time grid map, select the schedule time zone, and then press A, B, C, D one of the buttons to specify the video settings.

3-1.2.1 Configuration

Item	Description
Name	Change the recording name of the channel

For the rest, please refer to 3-1.1 Continuous Record

3-1.2.2 Holiday Configuration

The number of holiday is up to 50. When the time comes to the specified holidays, the DVR will start recording according to holiday configuration.

Since holidays are different by different country and region, users can setup holidays according to user needs.

3-2 Event Setup

3-2.1 Video Loss

3-2.1.1 Configuration

Item	Description
Enable	Enable / Disable video loss detection function

3-2.1.2 Event Handling

Item	Description
Log	Write to event log when the video loss event happens.
Event Record	Select channel for event recording when event occurs. The video setup corresponds to the "Configuration → Recording Settings → Event Video Recording" (refer to 3-1-1-2 Event Record).
Popup	In the live mode, if video loss of a channel is detected, it will pop up the channel full screen. You can specify a warning window display, 1: the main screen, 2: the second screen.*1
Popup Channel	When an event occurs, pop up the specified channel.
Buzzer	Specify the DVR behavior of whether to activate the buzzer when an event occurs.
Relay	Specify the DVR behavior of whether to activate the relay when an event occurs.
PTZ	Specify the DVR behavior of whether to change to the PTZ control mode to the specified channel when an event occurs.
Go Preset	Moves the camera to the specified preset point when an event occurs.
Resume Preset	Moves the camera back to the specified preset point when an event is finished.

*1 Only for Maya V2 Series

3-2.1.3 Receiver Setup

Item	Description
Enable	Specify whether the DVR sends e-mail notice to specified users when an event occurs.
Admin / Users	Specify the receiver of e-mail notices

3-2.2 Motion Detection

3-2.2.1 Configuration

Item	Description
Enable	Enable / Disable the motion detection function of this channel
Sensitivity	The sensitivity value is from 0 to 100. The higher value means higher sensitivity.
Motion Area	Enter to setup motion detection area

3-2.2.1.1 Motion Area Setup

The motion detection has been divided into 22 x18 grids. The default detection area is f ull screen. The screen is marked in transparent for detection area and grey for disabled area of motion detection.

16：9 display

Right click on the screen appears the setup menu.

4:3 display

Item	Description
CH01~ CH32	Select channel motion detection。
Mask Mouse Selection	Switch between “select” and “deselect” for cursor-dragging function
Detect All Area	Select entire screen as detection area.
Mask All Area	Deselect entire detection area.
Apply to All	Apply the current settings to all channels
Exit	To leave and save settings
Close	Close and save the area settings menu.

3-2.2.2 Event Handling

Please refer to 3-2.1.2 Event Handling

3-2.2.3 Receiver Setup

Please refer to 3-2.1.3 Receiver Setup

3-2.3 Sensor

※ Each sensor name can be modified and remotely can enter various languages

3-2.3.1 Configuration

Item	Description
Enable	Enable/Disable sensor
Polarity	N.C: Sensor has not been triggered. When connected, sensor will be turned on
	N.O: Sensor has been triggered. When connected, sensor status will be turned off

3-2.3.2 Event Handling

Please refer to 3-2.1.2 Event Handling

3-2.3.3 Receiver Setup

Please refer to 3-2.1.3 Receiver Setup

3-2.4 System

When the system event occurs, give a notice or warning according to the settings of relay, buzzer, and receiver. If the buzzer box is checked, the buzzer continually beeps for only errors related to the video (such as hard drives cannot write or not install the hard drive). The buzzer does not beep when other system events, such as login, log out or boot, etc., occurs.

Item	Description
Buzzer	Specify whether the buzzer beeps when a recording error occurs.
Relay	Specify the relay to be Set when an event occurs.

3-2.4.1 Receiver Setup

Please refer to 3-2.2.3 **Receiver Setup**.

3-3 Camera Setup

Item	Description
Mask	Check the box to Enable/Disable mask function for the camera in the LIVE mode
Name	Channel name
Timestamp	Click on the blue screen to set position of the timestamp.

3-3.1 PTZ Setup

Item	Description
Enable	Click the box to Enable/Disable PTZ function.
Protocol	Set up the protocol of PTZ cam. The supported protocol are: PELCO-D、PELCO-P、Merit LiLin 1、Merit LiLin 2、SAMSUNG、LG-MultixE
PTZ ID	Set up PTZ ID. The valid ID value is from 0 to 255.
Baud Rate	Select Baud Rate of PTZ control protocol from 2400, 4800, 9600,19200

3-4 Account Setup

You can set the user password and permissions of 10 user accounts (1 admin + 10 users). These different accounts gives users different permissions of DVR features.

3-4.1 Administrator

The default admin account and password is **"admin"** and "**123456**"

Item	Description
Enable	Check to activate the user's account.
Expire	Set the expire date of the user account
Name	Set up the username
Password	Set up the password. The password can be mixed of letters and numbers and is case-sensitive.
e-Mail	Set up user email

3-4.2 Other Users

Item	Description
Enable	Check to activate the user's account.
Expire	Set the expiration date of the user account
Name	Set up username
Password	Set up the password. The password can be mixed of letters and numbers and is case-sensitive.
e-Mail	Set up user email

3-4.2.1 Permission

The Account Setup is set to provide individual user role-based permissions, including access to Setup menu, Network operation, PTZ function, Playback, Utility, Backup, Password expiration date and Mask on specific channels while playing back.

Item	Description
Console Playback	Allow the permissions to playback channel in local side
Remote Live & Play-back	Allow the permissions to live monitor/playback channel in remote side
Console	Allows the permissions to operate in local side (Live, Playback, Backup, Configure, System, PTZ)
Remote	Allow the permissions to operate in remote side (Live, Playback, Backup, Configure, System, PTZ)

※ use of local, remote permissions, respectively, the option must be checked, otherwise it will not work

3-5 Network Setup

Item	Description
DHCP	The DVR retrieves from a DHCP server automatically.
Static IP	Set up a Static IP address of the DVR.
PPPoE	Set up the username and password for PPPoE connection.
3G Setup	Set up the login configuration of 3G connection
HTTP Setup	Set up the HTTP configuration for remote access.
DDNS	Set up the DDNS configuration.
NTP	Set up the NTP configuration
Mail Setup	Set up the mail sending configuration
FTP Setup	Set up the FTP configuration

3-5.1 Networking Setup

There are three ways to connect to the network.

3-5.1.1 DHCP Setup

When DHCP is selected, IP address will be assigned by DHCP server automatically.
Notice: The IP address shown in this page is not the IP address obtained from the DHCP server.
The IP obtained from the DHCP server shown in the System Information Page.

3-5.1.2 Static IP Setup

Setup Static IP for network connection, the following information is required.

Item	Description
Enable	Enable / Disable Static IP function。
IP	Enter the static IP address provided by ISP

Subnet Mask	Enter IP address of Subnet Mask provided by ISP
Gateway	Enter IP address of the Gateway provided by ISP
DNS	Enter the DNS address provided by ISP. **(Note: The correct DNS address must be entered for DDNS function).**

3-5.1.3 PPPoE Setup

Select PPPoE for network connection, the following information is required.

Item	Description
Enable	Enable / Disable PPPoE function。
User	Enter user name provided by ISP
Password	Enter password provided by ISP

3-5.1.4 3G Setup

Using the USB 3G dongle to access the network

PS: only specific chip of 3G dongle is supported and the 3G dial-up features may not be compatible to some ISPs.

Item	Description
Enable	Enable / Disable 3G function.
Dial Number	Dial-up Number, offer by the ISP
PIN	Enter SIM card password
APN	Enter “internet” or other value offered by the ISP.
User	Enter ISP username
Password	Enter ISP password

3-5.1.5 Bandwidth Limited

Option	Description

Bandwidth Limited	Range : 1~9999
	Kbps 、Mbps

3-5.2 HTTP Setup

Item	Description
Enable	Check to enable HTTP server. Users can remotely access into the DVR over the network if the HTTP function is activated.
Port	Enter a valid port value from 1 up to 65535. The default value is 80.

3-5.3 DDNS Setup

Item	Description
Enable	Enable / Disable DDNS function.
Server	Enter the registered DDNS Server: ez- dns.com、i-dvr.net、dyndns.org **ez- dns.com、i-dvr.net Supports automatic assignment DDNS** When these two DDNS service, The system will automatically bring up to C + DVR Mac Address last six yards at the beginning of a host site, Such as the Mac end of the six yards of FD5CCD, Then bring out the host site at CFD5CCD.i-dvr.net or CFD5CCD.ez-dns.com
Host	Enter the full DDNS address. (Including username + Server) If the user name is h.264 and you choose i-dvr as your server, you should enter: h.264.i-dvr.net
User	Enter user name.
Password	Enter password.

＊For more detailed I-DVR.NET operation instruction, please refer to appendix Ⅰ、Ⅱ

3-5.4 NTP Setup

Setup he feature of network time synchronization.

Item	Description
Automatically Synchro-nize	Check to enable DVR automatic synchronization function when rebooting
Update Interval (Hours)	Setup interval for time synchronization

Server	Setup time server address
Update Now	Update the time information from the NTP server immediately.

3-5.5 Mail Setup

The Mail Setup tab controls the email-sending configuration when the DVR needs to send e-mail to specified users.

Item	Description
Enable	Check the box to enable/disable E-mail Notification function
SMTP Server	Set up SMTP Server name and port
User	Enter to set up the username.
Password	Enter to set up the password.
Sender's e-Mail	Enter to set up e-mail address of the sender.

3-5.6 FTP Setup

Item	Description
Enable	Check the box to enable/disable FTP function
Server	Set up FTP Server name and port
User	Enter to set up the username.
Password	Enter to set up the password.
Directory	Upload FTP directory path

3-6 Storage Setup

3-6.1 HDD Setup

※ Click the status bar to change the attributes of the hard disk

Item	Description
Video Preservation (Hours)	Setup the video preservation period. Recorded video will be deleted automatically after expiry of preservation period.
Model	Display HDD model
Status	Display HDD status (Recording/Error)
Attribute	Display HDD Attribute (Overwritable/Writable/Read-Only)
Free/Capacity	Display HDD capacity (Free/Capacity)
Format	Check the hard disk drive and press "Format", there are four options to set the HDD. Start Format HDD DVR. Status bar "successful" HDD initialization! Enter the menu, there will be all of the hard disk information (model, capacity).
Overwritable	Set the hard disk to be replicated state will start to overwrite the hard disk is full.
Writable	Set the hard disk as writable state, after the hard disk is full stop writing.
Read-Only	Set the hard disk is read-only, read-only cannot be written to the hard disk.

3-6.2 USB Flash Derive Setup

Item	Description
Model	Display USB flash drive model
Free/Capacity	Display USB flash drive capacity (Free/Capacity)

3-6.3 DVD-RW Setup

Item	Description
Model	Display DVR-RW model
Media Type	Display disk type
Free/Capacity	Display DVR-RW capacity (Free/Capacity)

3-7 System Setup

RHD Series:

HHD Series

960H Series

Item	Description
DVR Name	The name of DVR to be shown while users login from remote site.
Language	Specify the OSD language.
Video Format Detec-tion	Specify the format of video signal (auto-detect, NTSC, PAL). The configuration requires DVR reboot to take effect

3-7.1 Auto Lock

Item	Description
Enable	Enable / Disable Auto Lock
Timeout（Seconds）	Set the number of seconds to wait. It there is no action, the panel will be automatically locked and the DVR logs out current user. When DVR logs out automatically, it only supports basic operations, such as picture freezing, picture, zoom, and auto switch channel, screen-split. To enter the setup menu, search menu, backup menu, status query, playback, and other operations, users need to input the username and password to login in. Available timeout value is from 10 to 9999 seconds

3-7.2 Auto Reboot

Item	Description
Disable	Enable / Disable Auto Reboot.
Every day	Setup the time of daily auto-reboot.
Every Week	Setup the time of weekly auto-reboot.

3-7.3 Date/Time Setup

Item	Description
Hour Format	12HOURS/ 24HOURS
Date Format	MM-DD-YY/DD-MM-YY/YY-MM-DD

3-7.3.1 Time zone

Item	Description
Time Zone Setup	Set up the time zone of the DVR, from GMT - 13 ～ GMT+ 13。
Daylight Saving Time	Enable / Disable Daylight Saving Time

3-7.3.2 Daylight Saving Time Setup

Item	Description
Beginning	Setup the beginning time of Daylight Saving Time.
Ending	Setup the ending time of Daylight Saving Time.

3-7.3.3 Change Date and Time

Setup date and time of the DVR.

3-7.4 Monitor Setup

This feature is only support "Maya v2" series models.

Users have to decide which one is the main screen, which is the second screen.
In the setting can be used when there are three configurations.
In duplicate mode, both monitors display the same content.
In the HDMI (1) VGA (2) mode, HDMI will be the screen 1, VGA will be the screen 2.
In VGA (1) HDMI (2) VGA mode, VGA will be the screen 1, HDMI will be the screen 2.
BNC output terminals are the same as with the contents of a screen 1.
Screen 1 and Screen 2 output can be set separately in the upper left corner of the scr
een will show the current number.

Monitor setup

Item	Descrption
1、2	set the main screen (1), the second screen (2) screen display setup menu
Resolution	selection screen resolution
Border Color	Set the color of border
Luminance	setting brightness, from 0 to 100.
Contract	setting screen display color contrast, from 0 to 100.
Saturation	setting screen display color saturation from 0 to 100.
Hue	Tone color tone setting screen displayed from 0 to 100

Administrators can set up two separate configuration screen, you can display a live view screen contents, and another replay content. When managers are controlling them one screen, in the upper left corner of CH1 have a mouse icon appears. To switch between the two screens, you can press the shortcut bar dual screen switching button.

3-7.5 Input Setup

The Input Setup allows user's setup input device (Key Tone, Remote control, Panel, Mouse, Keyboard, Touch screen).

Item	Description
Key Tone	Enable / Disable Key Tone.

3-7.5.1 Remote Control Setup

Item	Description
Enable	Enable / Disable remote control.
IR ID	Default ID is 0. DVR is controlled by standard remote control; For one to many remote control, remote control on the number corresponding to the DVR numbers (DVR1 → IC01, DVR2 → IC02).
Test	Enable / Disable test function.
Pressed Key	Display pressed key information.

3-7.5.2 Panel Setup

Item	Description
Test	Enable / Disable panel button test function.
Press Key	Display information of the pressed key.

3-7.5.3 Mouse Setup

Item	Description
Speed	Setup the mouse cursor speed. The right side of the slider means f aster mouse speed. (Only valid for local configuration)

3-7.5.4 PTZ Keyboard Setup

Item	Description
RS-485 ID	RS-485 ID, valid values range from 1 to 64
RS-485 Baud rate	RS-485 Baud rate from 2400, 4800, 9600, 19200
Keyboard	Select PTZ Keyboard
Test	Enable / Disable keyboard test function
Press Key	Display press key information

3-7.5.5 Touch Screen Setup

Detects the touch screen

Users can calibrate the touch screen which needs recalibration.

3-7.6 Utility Setup

Item	Description
Export Configuration	Export DVR configuration to a USB flash drive or a remote PC.
Import Configuration	Import configuration from a USB flash drive or a remote PC to DVR.
Reset Configuration	Reset system configuration.
Export Logs	Save DVR system log to a USB flash drive or a remote PC.
Clear Logs	Clear all DVR system log.
Upgrade Firmware	Upgrade DVR firmware through a USB drive. Please stop recording and backup DVR configuration before upgrading **System will reboot automatically when the upgrade is done.**

3-7.6.1 Export Configuration

There are several options for target storage of DVR configuration.

a. Export to a USB Flash Drive: The default filename is “dvr.cfg”

b. Save *.cfg as PC

3-7.6.2 Import Configuration

Import configuration to the DVR from a USB drive or a remote computer.

a. Import from USB Flash Drive: Import the configuration from a USB flash drive.

b. Open *.cfg from PC

3-7.6.3 Reset Configuration

Reset the DVR to default settings.

3-7.6.4 Export Logs

a. Export to USB Flash Drive: Export logs to a USB flash drive. The default file name is “log.csv”

b. Save *.csv as PC

3-7.6.5 Clear Logs

Clear the system logs.

3-7.6.6 Upgrade Firmware

Notice! DO NOT TURN OFF POWER OR UNPLUG USB DEVICE DURING THE UPGRADE because that may cause incomplete firmware upgrade and damage the DVR.

a. Upgrade from USB Flash Drive...: Choose the firmware from USB flash drive to upgrade

b. Upgrade from PC : Choose the firmware from PC

3-8 System Information

3-8.1 DVR Information

Item	Description
Model	DVR model name and video type
Version	DVR firmware version

3-8.2 Network Information

Item	Description
IP	DVR IP address If there is no network connection, it will show "Network is not connected.
MAC	The DVR MAC address

3-8.3 HDD Information

Item	Description
Recording Scheme	Display installed HDD recording type
Model	Display installed HDD model
Status	Display installed HDD recording status
Attribute	Display installed HDD attribute (Overwritable/Writable/Read-Only)
Capacity	Display installed HDD capacity (Free/Capacity)

3-8.4 S.M.A.R.T Information

ID	Value/Worst/Threshold	Raw
01 Raw Read Error Rate	116 / 99 / 6	117233968
03 Spin Up Time	97 / 97 / 0	0
04 Start/Stop Count	100 / 100 / 20	8
05 Reallocated Sector Count	100 / 100 / 10	0
07 Seek Error Rate	76 / 60 / 30	46952251
09 Power-On Hours Count	98 / 98 / 0	2588
0A Spin-up Retry Count	100 / 100 / 97	0
0C Power Cycle Count	100 / 100 / 20	8
B7 Unkown	60 / 60 / 0	40
B8 Unkown	100 / 100 / 99	0

Close

ID	Value/Worst/Threshold	Raw
BB Unkown	100 / 100 / 0	0
BC Unkown	100 / 100 / 0	0
BD Unkown	39 / 39 / 0	61
BE Unkown	68 / 53 / 45	538902560
BF G-Sense Error Rate	100 / 100 / 0	0
C0 Power-Off Retract Cycle	100 / 100 / 0	8
C1 Load/Unload Cycle Count	100 / 100 / 0	129
C2 HDA Temperature	32 / 47 / 0	103079215136
C5 Current Pending Sector Count	100 / 100 / 0	0
C6 Uncorrectable Count	100 / 100 / 0	0

Close

REMOTE SOFTWARE INSTALLATION and SETUP

The DVR allows users remotely access and control the DVR from a PC by 「iWatchDVR」or IE v6.0 or above.

p.s. The DVR currently supports Windows XP SP2 or above and Windows Vista, Windows 7.

3-9 Application Software Connection

Step 1：Enter the IP address of DVR in IE browser.

Step 2：Windows as below will show up. Please enter the user name and password. Default user name and password is **admin/123456**. Other related setup about user account and password, please check the section **"Account Setup**. "

Step 3：Click on the link ”**iWatchDVR for Windows XP/Vista/7”** to start downloading the AP software.

Step 4：The program can be run directly, or save the program to the remote PC and execute later. If you choose to run the software, Start window will be shown up. Please enter information of login DVR: IP, Port, Username and Password.

The drop-down menu can be used to record IP address. Press “Clear” to clear IP address.

Step 5：You've logged into the DVR

3-10 IE Connection

Step 1：Enter the IP address of DVR in IE browser. The address appeared in this image is only for demonstration. Actual address is depending on the setup of on-site DVR

Step 2：Windows as below will show up. Please enter the user name and password. Default user name and password is **admin/123456**. Other related setup about user account and password, please check **"Account Setup**. " The user name and password appeared in this image is only for demonstration. Actual user name and password depend on the setup of on-site DVR.

Step 3：Click on**" iWatchDVR for Internet Explorer 7/8/9 ".**

p.s. There will be IE connection security issue when clicking this link for the first time. Please refer to index III for Remote Monitoring IE ActiveX Control Installation Instruction.

Step 4：DVR images appear。Default is 4:3 display.

3-11 AP Software and IE Connection Operation

Table 4-3.1 System Requirements

CPU	Intel Core 2 Due above
OS	Microsoft Windows 7, Windows Vista, Windows XP SP2 above
RAM	4G above
VGA Card	Needed to support DirectX9.0 (Above) Note 1
Anti-virus soft-ware (firewall)	The TCP destination port 80 should be available.
Others	DirectX 9.0 above

Note 1:
Known VGA card that support DirectX9.0 currently:
NVIDIA: GeForce FX series, GeForce 6series, GeForce 7series, GeForce 8series, GeForce 9series, GeForce 200series, etc.
Or visit: http://en.wikipedia.org/wiki/Comparison_of_Nvidia_graphics_processing_units
ATI: Radeon R300series, Radeon R400series, Radeon R500series, Radeon R600series, Radeon R700series, Radeon HD 3xxx IGP series, Mobility Radeon series (9500 above), Mobility Radeon X series, Mobility Radeon HD series, or FireGL V series etc.
Or visit: http://en.wikipedia.org/wiki/Comparison_of_ATI_graphics_processing_units
SiS: SiS 67Xseries, or SiS 77Xseries etc.
Or visit: http://www.sis.com/support/support_compare.htm
Intel: 91Xseries, 94Xseries, 96Xseries, G3Xseries, or G4Xseries, etc.
Or visit: http://en.wikipedia.org/wiki/Intel_GMA