TECHNAXX®

WiFi NVR-Recorder PRO TX-64 User Manual

Table of Contents

1	Featu	res and Specifications	1
	1.1 O	verview	1
	1.2 Fe	eatures	1
	1.3 Sp	pecifications	3
2	Front	Panel and Rear Panel	5
	2.1 Fr	ont Panel	5
	2.2 Re	ear Panel	6
	2.3 M	ouse Operation	7
3		e Installation	
		heck Unpacked TX-64	
		oout Front Panel and Rear Panel	
		DD Installation TX-64	
		Basic Operation	
		oot up and Shutdown	
		Boot up	
	4.1.2	Shutdown	
		Log out	
		artup Wizard	
		avigation Bar	
	4.3.1	Main Menu	
	4.3.2	Dual-screen operation	
	4.3.3	Output Screen	
	4.3.4	Tour	
	4.3.5	PTZ	
	4.3.6	Color	
	4.3.7	Search	
	4.3.8	Alarm Status	
	4.3.9		
	4.3.10		
	4.3.11		
	4.3.12	3	
	4.3.13	5	
	4.4 Re	emote Device	
	4.4.1	Short-Cut Menu	
	4.4.2		
	4.4.3 4.4.4	ImageChannel Name	
		eview	
	4.5 Pi	Preview	
	_	Preview control interface	
	4.0.2		10

4.5.3 Right Click Menu	10
4.5.4 Preview Display Effect Setup	
4.5.4.1.1 Video Color	
4.5.4.1.2 Display	
4.5.5 Preview Tour Parameters	
4.6 PTZ	
4.6.1 PTZ Control	
4.6.1.1 PTZ Function Setup	
4.6.1.2 Call PTZ Function	
4.7 Record and Snapshot	
4.7.1 Encode	
4.7.1.1 Encode	
4.7.1.2 Overlay	
4.7.1.3 Snapshot	
4.7.2 Schedule	
4.7.2.1 Schedule Record	
4.7.2.2 Schedule Snapshot	
4.7.3 Motion detect record/snapshot	
4.7.3.1 Motion detect record	
4.7.3.2 Motion Detect Snapshot	
4.7.4 Alarm Record/Snapshot	
4.7.4.1 Alarm Record	
4.7.4.2 Alarm Snapshot	
4.7.5 Manual Record/Snapshot	
4.7.5.1 Manual Record	
4.7.5.2 Manual Snapshot	
4.7.6 Holiday Record/Snapshot	
4.7.6.1 Holiday Record	
4.7.6.2 Holiday Snapshot	
4.7.7 Other Record/Snapshot	
4.8 Playback and Search	
4.8.1 Real-time Playback	
4.8.2 Search Interface	
4.8.2.1 Smart Search	
4.8.2.2 Accurate playback by time	
4.8.2.3 Mark Playback	
4.8.3 Picture Playback	
4.9 Backup	
4.9.1 File Backup	
4.9.2 Backup Log	
4.9.3 USB Device Auto Pop-up	
4.10 Alarm	
4.10.1 Detect Alarm	

4.10.1.1.1 Motion Detect	50
4.10.1.1.2 Tampering	53
4.10.1.1.3 Video Loss	54
4.10.2 Alarm Setup	54
4.10.3 Abnormality	58
4.11 Network	59
4.11.1.1 TCP/IP	59
4.11.1.2 Connection	60
4.11.1.3 WIFI AP	61
4.11.1.4 DDNS	62
4.11.1.5 UPnP	63
4.11.1.6 IP Filter	64
4.11.1.7 Email	65
4.11.1.8 Alarm Centre	66
4.11.1.9 P2P (EASY4IP)	67
4.11.2 Network Test	67
4.11.2.1 Network Test	67
4.11.2.2 Network Load	67
4.12 STORAGE MEDIA	68
4.12.1 Format	68
4.12.2 HDD Information	68
4.12.3 HDD Detect	70
4.12.3.1 Manual Detect	70
4.12.3.2 Detect Report	70
4.13 Device Setups	71
4.13.1 General	71
4.13.2 Data and Time	72
4.13.3 Holiday	73
4.14 Device Maintenance and Manager	73
4.14.1 System Info	73
4.14.1.1 Version	73
4.14.1.2 BPS	73
4.14.1.2.1 Online User	74
4.14.1.3 EVENT Information	74
4.14.1.3.1 Remote	74
4.14.2 Log	75
4.14.3 Account	75
4.14.3.1.1 Add/Modify Group	
4.14.3.1.2 Add/Modify User	
4.14.3.1.3 Secure Question	
4.14.4 Update	
4.14.5 Default	
4.14.6 Auto Maintain	

4.14.7 Logout /Shutdown/Restart	79
5 Web Operation	80
5.1 General Introduction	80
5.1.1 Network Connection	80
5.1.2 Log in	80
5.2 LAN Mode	81
5.3 Real-time Monitor	
5.4 PTZ	
5.5 Image/Alarm-out	
5.5.1 Image	
5.6 Zero-channel Encode	
5.7 WAN Login	
5.8 Setup	
5.8.1 Camera	
5.8.1.1 Remote Device	
5.8.1.2 Image	
5.8.1.3 Encode	
5.8.1.3.1 Encode	
5.8.1.3.2 Snapshot	
5.8.1.3.3 Overlay	
5.8.1.3.4 Path 5.8.1.4 Channel Name	
5.8.1.4 Channel Name	
5.8.2 Network	
5.8.2.1 TCP/IP	
5.8.2.2 Connection	
5.8.2.3 HTTPS	
5.8.2.4 PPPoE	
5.8.2.5 DDNS	
5.8.2.6 IP filter	
5.8.2.7 Email	
5.8.2.8 FTP	
5.8.2.9 UPnP	
5.8.2.10 Multicast	102
5.8.2.11 Alarm Center (optional)	102
5.8.2.12 P2P	
5.8.3 Event	103
5.8.3.1 Video detect	103
5.8.3.1.1 Motion Detect	103
5.8.3.1.2 Video Loss	107
5.8.3.1.3 Tampering	107
5.8.3.2 Alarm	
5.8.3.2.1 IPC External Alarm (optional)	108

5.8.3.2.2 IPC Offline	108
5.8.3.3 Abnormality	109
5.8.4 Storage	110
5.8.4.1 Schedule	110
5.8.4.2 Storage Media	112
5.8.4.2.1 Local Storage	112
5.8.4.2.2 HDD Setting	
5.8.4.3 Record	
Main Stream, Sub Stream & Snapshot	
5.8.4.4 ADVANCED	
5.8.4.4.1 Main Stream	
5.8.4.4.2 Extra Stream	
5.8.4.4.3 Image Storage	
5.8.5 Setting	
5.8.5.1 General	
5.8.5.1.1 General	
5.8.5.1.2 Date and time	
5.8.5.1.3 Holiday	
5.8.5.2 Account	
5.8.5.2.1 User	
5.8.5.2.2 Group	
5.8.5.3 Display	
5.8.5.3.1 Display	
5.8.5.3.2 Tour	
5.8.5.4 Default	
5.8.5.5 Import/Export	
5.8.5.6 Auto maintain	
5.8.5.7 Upgrade	
5.9 Information	
5.9.1 Version	
5.9.2 Log	
5.9.3 Online User	
5.10 Playback	
5.10.1 Search Record	
5.10.2 File List	
5.10.3 Playback	
5.10.4 Download	
5.10.5 More	
5.10.5.1 Download By File	
5.10.5.2 Download by Time	
5.10.5.3 Watermark	
5.11 Alarm	
5.12 Log out	127

,	5.13	Uninstall Web Control	127
6	Glos	ssary	128
7	FAC)	129

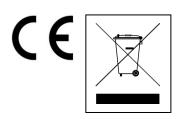
This device complies with the requirements of the standards referred to the Directive **R&TTE 2014/53/EU**. The Declaration of Conformity you find here: **www.technaxx.de/** (in bar at the bottom "Konformitätserklärung"). Before using the device the first time, read the user manual carefully.

Service phone No. for technical support: 01805 012643 (14 cent/minute from German fixed-line and 42 cent/minute from mobile networks). Free Email: **support@technaxx.de**

If you drill a hole in the wall, please make sure that power cables, electrical cords and/or pipelines are not damaged. When using the supplied mounting material, we do not take the liability for a professional installation. You are entirely responsible to ensure that the mounting material is suitable for the particular masonry, and that the installation is done properly. When working at higher altitudes, there is danger of falling! Therefore, use suitable safeguards.

Important Hint regarding the uer mnuals:

All languages of the user manual are on the CD enclosed.



Hints for Environment Protection: Packages materials are raw materials and can be recycled. Do not disposal old devices or batteries into the domestic waste. Cleaning: Protect the device from contamination and pollution (use a clean drapery). Avoid using rough, coarse-grained materials or solvents/aggressive cleaner. Wipe the cleaned device accurately. Distributor: Technaxx Deutschland GmbH & Co.KG, Kruppstr. 105, 60388 Frankfurt a.M., Germany

1 Features and Specifications

1.1 Overview

This series TX-64 is a high performance network video recorder. This series product support local preview, multiple-window display, recorded file local storage, remote control and mouse shortcut menu operation, and remote management and control function.

This series product supports centre storage, front-end storage and client-end storage. The monitor zone in the front-end can be set in anywhere. Working with other front-end devices such as IP-CAM, NVS, this series product can establish a strong surveillance network via the CMS. In the network system, there is only one network cable from the monitor centre to the monitor zone in the whole network. There is no audio/video cable from the monitor centre to the monitor zone. The whole project is featuring of simple connection, low-cost, low maintenance work.

This series TX-64 can be widely used in many areas such as public security, water conservancy, transportation and education.

1.2 Features

1.2 Feature				
Real-time Surveillance	 VGA, HDMI port. Connect to monitor to realize real-tim surveillance. Some series support TV/VGA/HDMI output at th same time. Short-cut menu when preview. Support popular PTZ decoder control protocols. Support preset, to and pattern. 			
Playback	 Support each channel real-time record independently, and at the same time it can support search, forward play, network monitor, record search, download and etc. Support various playback modes: slow play, fast play, backward play and frame by frame play. Support time title overlay so that you can view event accurate occurred time Support specified zone enlargement. 			
User	Each group has different management powers that can be edited			
Management	freely. Every user belongs to an exclusive group.			
Storage	 Via corresponding setup (such as alarm setup and schedule setup), you can backup related audio/video data in the network video recorder. Support Web record and record local video and storage the file in the client end. 			
Alarm	 Respond to external alarm simultaneously (within 200MS), based on user's pre-defined relay setup, system can process the alarm input correctly and prompt user by screen and voice (support pre-recorded audio). Support central alarm server setup, so that alarm information can remotely notify user automatically. Alarm input can be derived from 			

	various connected peripheral devices. • Alert you via email/sms.		
Network Monitor	 Through network, sending audio/video data compressed by IP-CAM or NVS to client-ends, then the data will be decompressed and display. Support max 128 connections at the same time. Transmit audio/video data by HTTP, TCP, UDP, MULTICAST, RTP/RTCP and etc. Transmit some alarm data or alarm info by SNMP. Support WEB access in WAN/LAN. 		
Window Split	 Adopt the video compression and digital process to show several windows in one monitor. Support 1/4-window display when preview and 1/4 window display when playback. 		
Record	 Support normal/motion detect/alarm record function. Save the recorded files in the 3.5" HDD, USB device, client-end PC, or network storage server. You can search or playback the saved files at the local-end or via the Web/USB device. 		
Backup	 Support network backup, USB2.0 record backup function, the recorded files can be saved in network storage server, peripheral USB2.0 device, burner and etc. 		
 Network Management Supervise TX-64 configuration and control power via Ethernet. Support management via WEB. 			
Auxiliary	 Support switch between NTSC and PAL. Support real-time system resources information and running statistics display. Support log file. Local GUI output. Shortcut menu operation via mouse. Support IP-CAM or NVS remote video preview and control. 		

1.3 Specifications

Model	ications	TX-64
Model		-
System	System Resources	4-channel series product support 4HD connection. Total bandwidth supports 28Mbps.
	OS	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	Video Decode Type	H.264/MJPEG/MJPEG4
	Decode Capability	Max. 2-ch 5M 25fps or
		Max. 4-ch 3M 25fps or
Video	Video Input	Max. 4-ch 1080P 30fps
video	Video Input	4-ch network compression video input
	Video Output	1-ch VGA analog video output
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4-window
Audio	Audio Input	1-ch bidirectional talk input
	Audio Output	1-ch bidirectional talk output
	Audio Compression Standard	G.711a
Alarm	Alarm Input	N/A
	Alarm Output	N/A
Funciton	Storage	1 built-in SATA port
	Multiple-Channel Playback	Max 4-channel 1080P playback
	WIFI AP	Yes
Port and	USB Port	2 peripheral USB2.0 ports. (1X front; 1x back)
Indicator	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V /2A power.
	Clock	Built-in clock.
	Indicator Light	One power status indicator light.
		One network status indicator light.
	D	One HDD status indicator light.
General	Power Consumption	<10W (Exclude HDD)
	Working Temperature	- 10°C∼ + 55°C
	Working Humidity	10%~90%

Model		TX-64
A	ir pressure	86kPa∼106kPa
D	Dimension	260mm×264mm×48mm
M	Veight	0.5kg (Exclude HDD)
In	nstallation Mode	Desk installation

2 Front Panel and Rear Panel

2.1 Front Panel

The front panel is shown as in Figure 2-1.



Figure 2-1

Refer to the following sheet for detailed information.

SN	Name	Function
1	HDD status indictor light	The blue light becomes on when HDD connection is abnormal.
2	Network indicator light	The blue light becomes on when when the network connection is abnormal.
3	Power status indicator light	The blue light becomes on when the Power connection is ok.
4	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.

2.2 Rear Panel

The TX-64 rear panel is shown as below. See Figure 2-2.

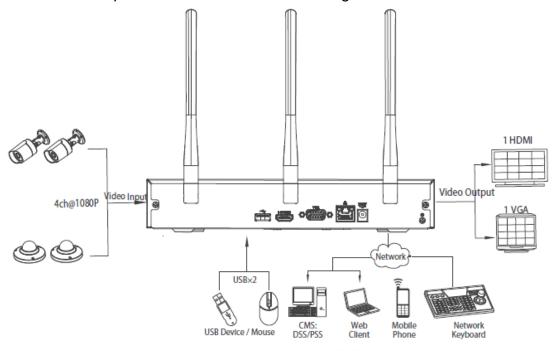


Figure 2-2

Refer to the following sheet for detailed information.

Port Name	Connection	Function
•	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
000	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
НДМІ	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
DC 12V 	Power input port	Power socket. input DC 12V/2A
Wireless AP		Support wireless hotspot function. Use WIFI to connect to the network cameras TX-65 to TX-67.

2.3 Mouse OperationRefer to the following sheet for mouse operation instruction.

	When you have colosted one many item left click mayor to view many					
	When you have selected one menu item, left click mouse to view menu content.					
	ify checkbox or motion detection status.					
	combo box to pop up dropdown list					
	put box, you can select input methods. Left click the corresponding					
	on the panel you can input numeral/English character					
	(small/capitalized). Here ← stands for backspace button stands for					
	ace button.					
· · · · · · · · · · · · · · · · · · ·	n English input mode: _ stands for input a backspace icon and ←					
	stands for deleting the previous character.					
į	? @ # \$ % = + * ← 1 2 3 q w e r t y u i o p / 4 5 6 a s d f g h j k l : Enter 7 8 9 z x c v b n m , . Shift □ 0 & □					
[? @ # \$ % = + * ←					
	umeral input mode: _ stands for clear and ← stands for deleting					
	previous numeral.					
	' ' '					
	the file list to playback the video.					
	In multiple-window mode, double left click one channel to view in full-window.					
	Double left click current video again to go back to previous					
	multiple-window mode.					
	·					
	Exit current menu without saving the modification.					
	In numeral input box: Increase or decrease numeral value.					
middle Swit	Switch the items in the check box.					
button Page	Page up or page down					
Move mouse						
Move mouse	Select current control or move control					
Drag mouse	Select current control or move control Select motion detection zone					

3 Device Installation

Note: All the installation and operations here should conform to your local electric safety rules.

3.1 Check Unpacked TX-64

The protective materials used for the package of the TX-64 can protect most accidental clashes during transportation. Then you can open the box to check the accessories. Check the items in accordance with the list. Finally you can remove the protective film of the TX-64.

3.2 About Front Panel and Rear Panel

The model number on the label on the bottom of TX-64 is very important; check according to your purchase order. (The label in the rear panel is very important too.) Usually we need you to represent the serial number when we provide the service after sales.

3.3 HDD Installation TX-64

Important: Turn off the power before you replace the HDD. The pictures listed below for reference only. For the first time install, be aware that whether the HDDs have been installed. Use 3.5" HDD of 7200rpm or higher. Usually we do not recommend the PC HDD. Follow the instructions below to install hard disk. The following pictures can differ from the actual product.



1. Loosen the screws of the upper cover and side panel.



2. Fix four screws in the HDD (Turn just three rounds).



3. Place the HDD in accordance with the four holes in the bottom.



4. Turn the device upside 5. Fix the HDD firmly. down and then turn the screws in firmly.





6. Connect the HDD cable and power cable.



7. Put the cover accordance with the clip and then place the upper cover back.



8 Secure the screws in the rear panel and the side panel.

4 Local Basic Operation

4.1 Boot up and Shutdown

4.1.1 Boot up



Before the boot up, make sure:

- For device security, connect the TX-64 to the power adapter first and then connect the device to the power socket.
- The rated input voltage matches the device power on-off button. Make sure the power wire connection is OK. Then click the power on-off button.
- Always use the stable current, if necessary UPS is a best alternative measure.

Follow the steps listed below to boot up the device.

- Connect the device to the monitor and then connect a mouse.
- Connect power cable.
- Click the power button at the front or rear panel and then boot up the device. After device booted up, the system is in multiple-channel display mode by default.

4.1.2 Shutdown

Note

- When you see corresponding dialogue box "System is shutting down..." Do not click power on-off button directly.
- Do not unplug the power cable or click power on-off button to shutdown device directly when device is running (especially when it is recording.)

4.1.3 Log out

Main menu (RECOMMENDED)

From Main Menu->Shutdown, select shutdown from dropdown list.

Click OK button, you can see device shuts down.

4.2 Startup Wizard

After device successfully booted up, it goes to startup wizard. See Figure 4-1. Click Cancel/Next button, you can see system goes to login interface.

Tip:

Check the box Startup button here, system goes to startup wizard again when it boots up the next time.

Cancel the Startup button, system goes to the login interface directly when it boots up the next time.



Click Cancel button or Next button, system goes to login interface. See Figure 4-2. System consists of four accounts:

- **Username**: admin. **Password**: admin. (administrator, local and network)
- Username: 888888. Password: 888888. (administrator, local only)
- Username: default. Password: default (hidden user). Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.



Figure 4-2

Note: For security reason, modify password after you first login.

Within 30 minutes, three times login failure will result in system alarm and five times login failure will result in account lock! For General interface settings of the setup wizard see Figure 4-3.



Figure 4-3

Click Next button, you can go to network interface. See Figure 4-4. For detailed information, refer to chapter 4-11.



Figure 4-4

Click Next button, you can go to remote device interface. See Figure 4-5. For detailed information, refer to chapter 0.



Figure 4-5

Click Next button, you can go to Schedule interface. See Figure 4-6. For detailed information, refer to chapter 4.7.2.



Figure 4-6

Click Finish button, system pops up a dialogue box. Click the OK button, the startup wizard is complete. See Figure 4-7.



Figure 4-7

4.3 Navigation Bar

You need to go to the Main menu->Setting->System->General to enable navigation bar function; otherwise you can not see the following interface. The navigation bar is shown as below. See Figure 4-8.



Figure 4-8

4.3.1 Main Menu

Click button to go to the main menu interface.

4.3.2 Dual-screen operation

Important

This function is for some series only.

Click to select screen 2, you can view an interface shown as below. See Figure 4-9. It is a navigation bar for screen 2.



Figure 4-9

Click any screen split mode; HDMI screen can display corresponding screens. Now you can control two screens. See Figure 4-10.



Figure 4-10

Note

- Screen 2 funciton is null if tour is in process. Disable tour funciton first,
- Right now, the screen 2 operation can only be realized on the navigation bard. The operations on the right-click menu are for screen 1 only.

4.3.3 Output Screen

Select corresponding window-split mode and output channels.

4.3.4 Tour

Click button to enable tour, the icon becomes, you can see the tour is in process.

4.3.5 PTZ

Click, system goes to the PTZ control interface. Refer to chapter 4.6.

4.3.6 Color

Click button system goes to the color interface. Refer to chapter 4.5.4.1.1.

Make sure system is in one-channel mode.

4.3.7 Search

Click button , system goes to search interface. Refer to chapter 4.8.2.

4.3.8 Alarm Status

Click button . system goes to alarm status interface. It is to view device status and channel status. Refer to chapter 4.10.

4.3.9 Channel Info

Click button , system goes to the channel information setup interface. It is to view information of the corresponding channel. See Figure 4-11.



Figure 4-11

4.3.10 Remote Device

Click system goes to the remote device interface. Refer to chapter 0

4.3.11 **Network**

Click system goes to the network interface. It is to set network IP address, default gateway and etc. Refer to chapter 4.11.

4.3.12 HDD Manager

Click system goes to the HDD manager interface. It is to view and manage HDD information. Refer to chapte 4.3.12.

4.3.13 USB Manager

Click system goes to the USB Manager interface. It is to view USB information, backup and update. Refer to chapter 4.3.13 USB Manager and chapter 4.9 Backup.

4.4 Remote Device

4.4.1 Remote Device Connection

From Main menu-> Setting-> Remote device or right click mouse on the preview interface and then select remote device item, you can see the following interface. See

Figure 4-12.





Click Device search button, you can view the searched IP addresses at the top pane of the interface. Double click an IP address or check one IP address and then click Add button, you can add current device to the bottom pane of the interface. System supports **batch** add function.

Click Manual Add button, you can add a device directly. Here you can set TCP/UPD/auto connection mode. The default setup is TCP. See Figure 4-20.



Figure 4-20

4.4.2 Short-Cut Menu

In the preview interface, for the channel of no IP-CAM connection, you can click the icon "+" in the centre of the interface to quickly go to the Remote Device interface. See Figure 4-21.



Figure 4-21

4.4.3 Image

From main menu->setting->camera->image, you can see the image interface is shown as below. See Figure 4-22.

- **Channel**: Select a channel from the dropdown list.
- **Saturation**: It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
- **Brightness**: It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number is, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- **Contrast**: It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
- **Auto Iris**: It is for the device of the auto lens. You can check the box before ON to enable this function. The auto iris may change if the light becomes different. When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control. This function is on by default.
- Mirror: It is to switch video up and bottom limit. This function is disabled by default.
- Flip: It is to switch video left and right limit. This function is disabled by default.
- BLC:It includes several options: BLC/WDR/HLC/OFF.
- ♦ BLC: The device auto exposures according to the environments situation so that the darkest area of the video is cleared
- ♦ WDR: For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time. The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.
- → HLC: After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.
- ♦ **OFF**: It is to disable the BLC function. Note this function is disabled by default.
- **Profile**: It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default. You can select the different scene mode such as auto, sunny, cloudy, home, office, night, disable and etc to adjust the video to the best quality.

- Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the vide color is proper.
- ♦ Sunny: The threshold of the white balance is in the sunny mode.
- ♦ Night: The threshold of the white balance is in the night mode.
- ♦ Customized: You can set the gain of the red/blue channel. The value reneges from 0 to 100.
- → Day/night. It is to set device color and the B/W mode switch. The default setup is auto.
- ♦ Color: Device outputs the color video.
- ♦ Auto: Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.)
- ♦ B/W: The device outputs the black and white video.
- ♦ Sensor: It is to set when there is peripheral connected IR light.



Figure 4-22

4.4.4 Channel Name

From main menu->Setting->Remote-Modify, here you can modify the Channel name, you can see an interface shown as in Figure 4-23. It is to modify channel name. It max supports 31-character. Note you can only modify the channel name of the connected network camera.



Figure 4-23

4.5 Preview

After device booted up, the system is in multiple-channel display mode. See Figure 4-24. Note the displayed window amount may vary. The following figure is for reference only. Refer to chapter 1.3 Specifications for the window-amount your product supported.



Figure 4-24

4.5.1 Preview

If you want to change system date and time, you can refer to **general settings** (Main Menu->Setting->System->General). If you want to modify the channel name, refer to the display settings (Main Menu->Camera->CAM name)
Refer to the following sheet for detailed information.

1		Recording status	3	?	Video loss
2	M	Motion detection	4		Camera lock

Tip:

- Preview drag: If you want to change position of channel 1 and channel 2 when you are previewing, you can left click mouse in the channel 1 and then drag to channel 2, release mouse you can switch channel 1 and channel 2 positions.
- Use mouse middle button to control window split: You can use mouse middle button to switch window split amount.

4.5.2 Preview control interface

Move you mouse to the top centre of the video of current channel, you can see system pops up the preview control interface. See Figure 4-25. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.



Figure 4-25 Digital Channel

1) Realtime playback

It is to playback the previous 5-60 minutes record of current channel.

Go to the Main menu->Setting->System->General to set real-time playback time. System may pop up a dialogue box if there is no such record in current channel.

2) **Digital zoom**: It is to zoom in specified zone of current channel. It supports zoom in function of multiple-channel.

Click button (12), the button is shown as (13).

There are two ways for you to zoom in.

Drag the mouse to select a zone, you can view an interface show as Figure 4-26.



Figure 4-26

• Put the middle button at the centre of the zone you want to zoom in, and move the mouse, you can view an interface shown as in Figure 4-27.



Figure 4-27

Right click mouse to cancel zoom and go back to the original interface.

3) Manual record function: It is to backup the video of current channel to the USB device. System can not backup the video of multiple-channel at the same time.

Click button system begins recording. Click it again, system stops recording. You can find the record file on the flash disk.

4) Manual Snapshot: Click to snapshot 1-5 times. The snapshot file is saved on the USB device or HDD. You can go to the Search interface (chapter 4.8.2) to view.

4.5.3 Right Click Menu

After you logged in the device, right click mouse, you can see the short cut menu. See Figure 4-28.

- Window split mode: You can select window amount and then select channels.
- PTZ: Click it to go to PTZ interface.
- Auto focus: It is to set auto focus function. Make sure the connected network camera supports this function.
- Color setting: Set video corresponding information.
- Search: Click it to go to Search interface to search and playback a record file.
- Record control: Enable/disable record channel.
- Alarm output: It is to set alarm output mode.
- Remote device: Search and add a remote device.

- Alarm output: Generate alarm output signal manually.
- Main menu: Go to system main menu interface.

Tip: Right click mouse to go back to the previous interface.



Figure 4-28

4.5.4 Preview Display Effect Setup

4.5.4.1.1 Video Color

Here you can set hue, brightness, contrast, saturation, gain, white level, color mode and etc. See Figure 4-29.



Figure 4-29

Refer to the following sheet for detailed information.

Item	Note
Period	There are two periods in one day. You can set different sharpness, brightness, and contrast setup for different periods.
Effective Time	Check the box here to enable this function and then set period time.
Sharpness	The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clear the edge is and vice versa. Note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
Brightness	It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark

Item	Note
	or too bright. Note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
Contrast	It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50.
	The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50.
	The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
Gain	The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the low the noise. But the brightness is also too low in the dark environments. It can enhance the video brightness if the value is high. But the video noise may become too clear.
Color mode	It includes several modes such as standard, color, bright, gentle. Select a color mode, the sharpness, brightness, contrast and etc can automatically switch to corresponding setup.

4.5.4.1.2 Display

From Main Menu->Setting->System->Display, you can go to the following interface. See Figure 4-30.

Here you can set menu and video preview effect. All you operation here does not affect the record file and playback effect.



Figure 4-30

Now you can set corresponding information.

- Resolution: There are five options: 1280×1024 (Default), 1280×720, 1920×1080, 1024×768 and 3840×2160. Note the system needs to reboot to activate current setup.
 Note 3840×2160 is for some series only.
- VGA+HDMI2: It is for dual-screen operation. Select from the dropdown list according to your actual situation. Click Apply button, system needs to restart to activate new setup. For example, 4+4 means for VGA, system max supports 4-window split and for HDMI2, system max supports 4-window split.
- Transparency: Here is for you to adjust transparency. The value ranges from 128 to 255.
- Channel name: Here is for you to modify channel name. System max support 25-digit (The value may vary due to different series). Note all your modification here only applies to TX-64 local end. You need to open web or client end to refresh channel name.
- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to channel name or not when system is playback.
- Image enhance: Check the box; you can optimize the margin of the preview video.
- Original scale: Check the box here to restore video original scale.

Click OK button to save current setup.

4.5.5 Preview Tour Parameters

Set preview display mode, channel display sequence and tour setup.

Set preview display mode: On the preview interface, right click mouse, you can view right-click menu. Now you can select preview window amount and channel.

- Set channel display mode: On the preview interface, if you want to change channel 1 and channel 4 position, right click channel 1 video window and then drag to the channel 4 video window, release button, you can change channel 1 and channel 4 position.
- Tour setup: Here you can set preview window channel display mode and interval. Follow the steps listed below.

From Main menu->Setting->System->Display->Tour, you can see an interface shown as in

Figure 4-31.

Here you can set tour parameter.

- Enable tour: Check the box here to enable tour function. The general tour supports all types of window split mode.
- Interval: Input proper interval value here. The value ranges from 1-120 seconds.
- Motion tour type: System support 1/4-window tour. Note you need to go to the main menu->Setting->Event->Video detect->Motion detect to enable tour function.
- Alarm tour type: System support 1/4-window tour. Note you need to go to the main menu->Setting->Event->Alarm to enable tour function.
- Window split:It is to set window split mode.



Figure 4-31

Tip: On the navigation bar, click to enable/disable tour. Click save button to save current setup.

4.6 PTZ

Note: Before you control the PTZ, make sure the PTZ camera and the TX-64 network connection is OK and the corresponding settings are right.

4.6.1 PTZ Control

After completing all the setting click save button. Right click mouse (click "Fn" key in the remote control). The interface is shown as in Figure 4-32. Note you can only go to the PTZ control interface when you are in 1-window display mode.



Figure 4-32

The PTZ setup is shown as you see in Figure 4-33.

Note the commend name is grey once device does not support this function.

The PTZ operation is only valid in one-window mode.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light and wiper, rotation and etc.

Speed is to control PTZ movement speed. The value ranges from 1 to 8. The speed 8 is faster than speed 1. You can use the remote control to click the small keyboard to set.

You can click and of the zoom, focus and iris to zoom in/out, definition and brightness.

The PTZ rotation supports 8 directions. If you are using direction buttons on the front panel, there are only four directions: up/down/left/right.



Figure 4-33

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-34. Make sure your protocol supports this function and you need to use mouse to control.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. It can realize PTZ automatically. The smaller zone you dragged, the higher the speed.



Figure 4-34

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom	ikey 👝	Near	l.	•	Far	→
Focus		Near			Far	▶
Irio		alaaa		•	Onon	
Iris		close	◀	•	Open	► II

In Figure 4-33, click to open the menu, you can set preset, tour, pattern, scan and etc. See Figure 4-35.



Figure 4-35

Refer to the following sheet for detailed information. Note the above interface may vary due to different protocols. The button is grey and can not be selected once the current function is null.

Icon	Function	Icon	Function
•	Preset		Flip
	Tour	(1)	Reset
	Pattern		Aux
	Scan	0	Aux on-off button
	Rotate	0	Go to menu

4.6.1.1 PTZ Function Setup

Click you can go to the following interface to set preset, tour, pattern, and scan. See Figure 4-36.



Figure 4-36

Preset Setup

In Figure 4-36, click preset button and use eight direction arrows to adjust camera to the proper position. The interface is shown as in Figure 4-37. Click Set button and then input preset number. Click Set button to save current preset.



Figure 4-37

Tour Setup

In Figure 4-36, click tour button. Input tour value and preset No. Click Add preset button to add current preset to the tour. See Figure 4-38.

Tip:: Repeat the above steps to add more presets to the tour. Click Del preset button to remove it from the tour. Note some protocols do not support delete preset function.



Figure 4-38

Pattern Setup

In Figure 4-36, click Pattern button and input pattern number. Click Begin button to start direction operation. Or you can go back to Figure 4-39 to operate zoom/focus/iris/direction operation.



Figure 4-39

Border Setup

In Figure 4-36, click Border button. Use direction buttons to set camera left limit and then click Left button.

Use direction buttons to set camera right limit and then click Right button. Now the border setup process is complete. See Figure 4-40.



Figure 4-40

4.6.1.2 Call PTZ Function

Call Preset

In Figure 4-36, input preset value and then click to call a preset. Click again to stop call.

Call Pattern

In Figure 4-36, input pattern value and then click to call a pattern. Click again to stop call.

Call Tour:

In Figure 4-36, input tour value and then click to call a tour. Click again to stop call.

Call Scan:

In Figure 4-36, input Scan value and then click to call a tour. Click again to stop call.

Rotate:

In Figure 4-36, click to enable the camera to rotate.

System supports preset, tour, pattern, scan, rotate, light and etc function.

Note:

- Preset, tour and pattern all need the value to be the control parameters. You can
 define it as you require.
- You need to refer to your camera user's manual for Aux definition. In some cases, it can be used for special process.

Aux:

Click , system goes to the following interface. The options here are defined by the protocol. The aux number is corresponding to the aux on-off button of the decoder. See Figure 4-41.

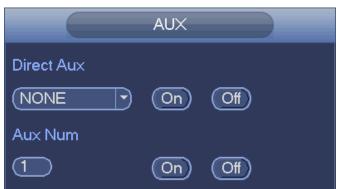


Figure 4-41

4.7 Record and Snapshot

The record/snapshot priority is: Alarm->Motion detect->Schedule.

4.7.1 Encode

4.7.1.1 Encode

Encode setting is to set IP-CAM encode mode, resolution, bit stream type and etc From Main menu->Setting->System->Encode, you can see the following interface. See Figure 4-42 and Figure 4-45.

- Channel: Select the channel you want.
- Type: Select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- Compression: System supports H.264, MPEG4, MJPEG and etc.
- Resolution: The mainstream resolution type is IP-CAM's encoding config. Generally there is D1/720P/1080P. The main stream supports 2048×1536 (3M) ,1920×1080 (1080P) , 1280×1024 (S×GA) , 1280×960 (1.3M) ,1280×720 (720P) ,704 ×576 (D1) and the sub stream supports 704×576 (D1) ,352×288 (CIF) .
- Frame rate: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- Bit rate type: System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Video/audio: You can enable or disable the video/audio. Note, once you enable audio function for one channel, system may enable audio function of the rest channels by default.
- Copy: After you complete the setup, you can click Copy button to copy current setup to other channel(s). You can see current channel number is grey. Check the number to select the channel or you can check the box ALL. Click the OK button to complete the setup. Note, once you check the All box, you set same encode setup for all channels. Audio/video enable box, overlay button and the copy button is shield.

Highlight icon



to select the corresponding function.



Figure 4-42

4.7.1.2 Overlay

Click overlay button, you can see an interface is shown in Figure 4-43 and Figure 4-45.

- Cover area: Here is for you to cover area section. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel.
- Preview/monitor: The cover area has two types. Preview and Monitor. Preview means
 the privacy mask zone can not be viewed by user when system is in preview status.
 Monitor means the privacy mask zone can not be view by the user when system is in
 monitor status.
- Time display: You can select system displays time or not when you playback. Click set button and then drag the title to the corresponding position in the screen.
- Channel display: You can select system displays channel number or not when you playback. Click set button and then drag the title to the corresponding position in the screen.

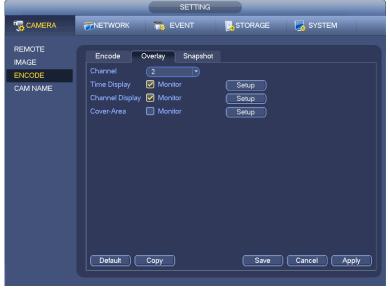


Figure 4-43

4.7.1.3 Snapshot

Here you can set snapshot mode, picture size, quality and frequency. See Figure 4-44.

- Snapshot mode: There are two modes: regular and trigger. If you set regular mode, you need to set snapshot frequency. If you set trigger snapshot, you need to set snapshot activation operation.
- Image size: Here you can set snapshot picture size.
- Image quality: Here you can set snapshot quality. The value ranges from 1 to 6.
- Interval: It is for you to set timing (schedule) snapshot interval.

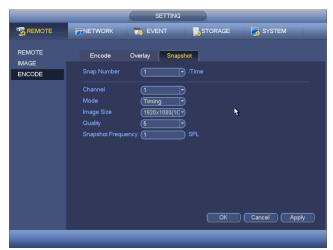


Figure 4-44



Figure 4-45

4.7.2 Schedule

The record type priority is: Alarm>Motion detect>Regular.

4.7.2.1 Schedule Record

Set record time, record plan and etc. Note system is in 24-hour record by default after its first boot up.

In the main menu, from Main menu->Setting->Storage->Schedule, you can go to schedule menu. See Figure 4-50. There are total six periods.

- Channel: Select the channel number first. You can select "all" if you want to set for the whole channels.
- Sync connection icon. Select icon of several dates, all checked items can be edited or together. Now the icon is shown as.
- ♦ Click it to delete a record type from one period.
- Record Type: Check the box to select corresponding record type. There are four types: Regular/MD (motion detect)/Alarm/MD&Alarm.

- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Holiday: It is to set holiday setup. Note you need to go to the General interface (Main Menu->Setting->System->General) to add holiday first. Otherwise you can not see this item.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. It allows you backup recorded file in two disks. You can highlight Redundancy button to activate this function. Note, before enable this function, set at least one HDD as redundant. (Main menu->Setting->Storage->HDD Manager). Note this function is null if there is only one HDD.
- ANR: It is to save video to the SD card of the network camera in case the network connection fails. The value ranges from 0s~43200s. After the network connection resumed, the system can get the video from the SD card and there is no risk of record loss.
- Period setup: Click button after one date or a holiday, you can see an interface shown as in Figure 4-52. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

Following the steps listed below to draw the period manually.

a) Select a channel you want to set. See Figure 4-46.



Figure 4-46

b) Set record type. See Figure 4-47



Figure 4-47

c) Draw manually to set record period. There are six periods in one day. See Figure 4-48.



Figure 4-48

Check the box to select the corresponding function. After completing all the setups click save button, system goes back to the previous menu. There are color bars for your reference. Green color stands for regular recording, yellow color stands for motion detection and red color stands for alarm recording. The white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will not record neither motion detect occurs nor the alarm occurs.



Figure 4-49



Figure 4-50

Quick Setup

Copy function allows you to copy one channel setup to another. After setting in channel 1, click Copy button, you can go to interface Figure 4-51. You can see current channel name is grey such as channel 1. Now you can select the channel you wan to paste such as channel 3/4. If you wan to save current setup of channel 1 to all channels, you can click the first box "ALL". Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.

Note, if you select ALL in Figure 4-51, the record setup of all channels are the same and the Copy button becomes hidden.



Figure 4-51

Click OK button to save current setup.

4.7.2.2 Schedule Snapshot

From Main menu->Setting->Storage->Record or on the preview interface, right click mouse and then select record item, you can see Figure 4-52.

Select snapshot channel and enable snapshot function. Click save button.

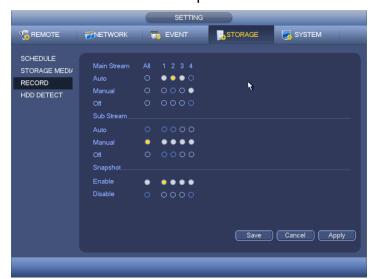


Figure 4-52

From Main menu->Setting->Camera->Encode->Snapshot, you can go to snapshot interface. See Figure 4-53.

Select the snapshot channel from the dropdown list and then select snapshot mode as Timing (Schedule) from the dropdown list and then set picture size, quality and snapshot frequency.

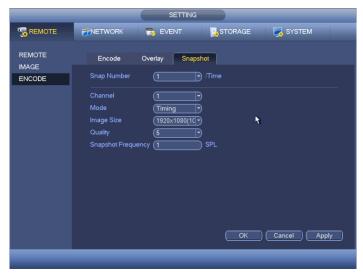


Figure 4-53

In the main menu, from Main menu->Setting->Storage->Schedule, you can go to schedule menu. See Figure 4-54. Here you can set snapshot period. There are total six periods in one day. The setup steps are general the same.

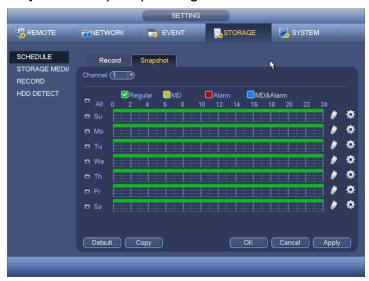


Figure 4-54

Note

- Note the trigger snapshot has the higher priority than regular snapshot. If you have enabled these two types at the same time, system can activate the trigger snapshot when an alarm occurs, and otherwise system just operates the regular snapshot.
- Only the trigger snapshot supports this function. The regular snapshot function can not send out picture via the email. But you can upload the picture to a FTP.

4.7.3 Motion detect record/snapshot

4.7.3.1 Motion detect record

a) From Main menu->Setting->Event->Detect, you can go to the following interface. See Figure 4-55.



Figure 4-55

b) Select motion detect from the event type dropdown list. Select a channel from the dropdown list and then check the enable button to enable motion detect function. Here you can set motion detection regions. There are four regions for you to set (red, yellow, blue and green). Select one of the colored regions first. Then click the left

mouse button on the start point of the area you want to select and drag the mouse to select the area.

In the test area the best setting for sensitivity and threshold is 60 and 10 respectively. Depending on your given environment this settings can be vary. Sensitivity and threshold can be set in the range from 0 to 100. The higher the sensitivity and the lower the threshold are set the more motion is detected. For example: When a leaf falls or a cat is running in the selected area a motion will be detected.

In this case a subjective setting by the customer is requested!

After you completed the setup remember to click the save button to save current setup. If you click the right button of the mouse to exit the region setup interface system will not save your zone setup.

- c) Period: Click set button, you can see an interface is shown as in Figure 4-57. Here you can set motion detect period. System only enables motion detect operation in the specified periods. It is not for video loss or the tampering. There are two ways for you to set periods. Note system only supports 6 periods in one day. See Figure 4-57.
- ♦ In Figure 4-56, Select icon of several dates, all checked items can be edited together. Now the icon is shown as Click to delete a record type from one period.
- ♦ In Figure 4-56. Click button after one date or a holiday. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
 - d) Set sensitivity. Note the sixth level has the highest sensitivity.
 - e) Click Save button to complete motion detect setup.
 - f) From Main menu->Setting->Storage->-Schedule. See Figure 4-56
 - g) Set motion detect record channel, period and the record type shall be motion detect (MD).
 - h) Click Copy button to copy current setup to other channel(s).
 - i) Click OK button to complete motion detect record setup.



Figure 4-56



Figure 4-57

4.7.3.2 Motion Detect Snapshot

- a) From Main menu->Setting->Camera->Encode->Snapshot, you can go to snapshot interface. See Figure 4-58.
- b) In Figure 4-60, select trigger snapshot from the dropdown list and then set picture size, quality and snapshot frequency. Click OK button to save current setup.
- c) From Main menu->Setting->Event->Detect, here you can select motion detect type, motion detect channel and then check the enable box.
- d) Click OK button to complete motion detect setup.

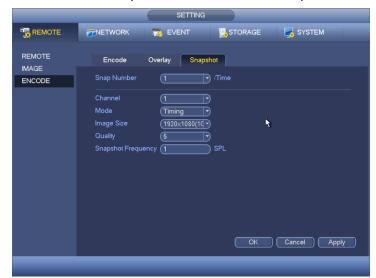


Figure 4-58

4.7.4 Alarm Record/Snapshot

4.7.4.1 Alarm Record

- a) Optional: (Alarm setup information, to connect alarm input and alarm output cable (such as light, siren and etc)).
- b) The record priority is: Alarm>Motion detect>Regular.

In the main menu, from Setting->Event-> Alarm, you can see alarm setup interface. See Figure 4-59.

- Alarm in: Here is for you to select channel number.
- Event type: There are four types. Local input/network input/IP-CAM external/IP-CAM

offline alarm.

- Local input alarm: The alarm signal system detects from the alarm input port.
- Network input alarm: It is the alarm signal from the network.
- IP-CAM external alarm: It is the on-off alarm signal from the front-end device and can activate the local TX-64.
- IP-CAM offline alarm: Once you select this item, system can generate an alarm when the front-end IP-CAM disconnects with the local TX-64. The alarm can activate record, PTZ, snapshot and etc. The alarm can last until the IP-CAM and the TX-64 connection resumes.
- Enable: You need to highlight this button to enable current function.
- Type: normal open or normal close.
- c) Click Save button to complete alarm setup interface.



Figure 4-59

- d) From Main menu->Setting->Storage->Schedule, you can go to Figure 4-54.
- e) Select alarm channel, period and the record type shall be alarm.
- f) Click Copy button to copy current setup to other channel(s).
- g) Click OK button to save alarm record information.

4.7.4.2 Alarm Snapshot

- a) Refer to chapter 4.7 to enable timing snapshot.
- b) From Main menu->Setting->Storage->schedule, you can go to Figure 4-54 to enable snapshot function.
- c) From Main menu->Setting->Event->Alarm, you can go to Figure 4-60 to set alarm parameter and enable snapshot function.
- d) Click Save button to save alarm snapshot setup.

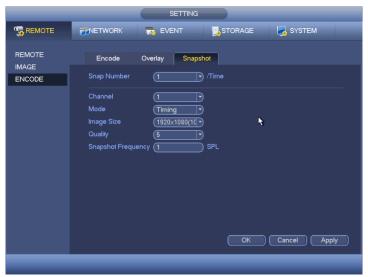


Figure 4-60

4.7.5 Manual Record/Snapshot

You need to have proper rights to implement the following operations. Make sure the HDD has been properly installed.

4.7.5.1 Manual Record

a) Right click mouse and select manual record or in the main menu, from Setting->Storage->Manual Record. Manual record menu is shown as in Figure 4-61.

Tip: You can click Rec button on the front panel (if possible) to go to the Manual Record interface.



Figure 4-61

- b) Check the box here to select manual record channel(s). You can see the corresponding indicator light on the front panel is on.
- Channel: It is to display device all channels.
- Manual: It has the highest priority. Enable corresponding channel to record no matter what period applied in the record setup. Now system is record general file.
- Auto: System enables auto record function as you set in chapter 4.7.2 schedule interface (General/Motion detect/Alarm)
- Stop: Stop current channel record/Snapshot no matter what period applied in the record setup.

- All: Check the All box to select all channels.
 - c) Click OK button to complete manual record setup.

4.7.5.2 Manual Snapshot

Click button at the preview control bar, you can snapshot 1-5 picture(s). From main menu->Setting->Camera->Encode->Snapshot, you can set snapshot times.

4.7.6 Holiday Record/Snapshot

It is for you to set holiday record or snapshot plan. Note the holiday record/snapshot setup has the higher priority than the ordinary date record/snapshot setup.

4.7.6.1 Holiday Record

a) From Mani menu->Setting->System->General, you can go to the following interface.
 See Figure 4-62.

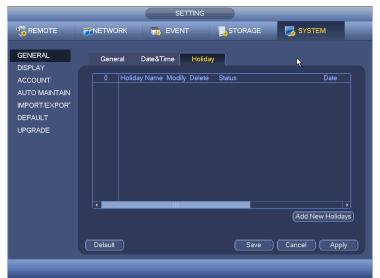


Figure 4-62

b) Click Add new holiday button, you can see an interface shown as in Figure 4-63. Here you can set holiday date name, repeat mode, start time/end time and etc.

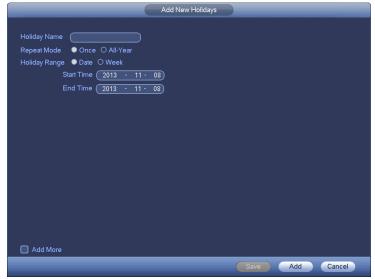


Figure 4-63

- c) Click Add button to complete holiday setup. Now you can enable holiday setup and then click Apply button.
- d) From Main menu->setting->Storage->schedule, you can go to schedule interface. See Figure 4-64. Now you can set period and record type of holiday time. Refer to chapter 4.7.6 for detailed setup information.



Figure 4-64

e) Click OK button to set holiday record setup.

4.7.6.2 Holiday Snapshot

Set Holiday date first. Refer to step a) to step c) of chapter 4.7.6.1.

From Main menu->Setting->Storage->Schedule, you can go to schedule interface. See Figure 4-64. Click Holiday item to set snapshot period.

Set holiday snapshot type (Trigger/Regular).

4.7.7 Other Record/Snapshot

Motion detects & Alarm record or snapshot, refer to chapter 4.7.

Video loss or tampering record or snapshot function, refer to chapter 4.7.3.

4.8 Playback and Search

4.8.1 Real-time Playback

Refer to chapter 4.5.2 for real-time playback information.

4.8.2 Search Interface

From Main menu->Search, or on the preview interface right click mouse and then select search item, you can go to the following interface. See Figure 4-65.

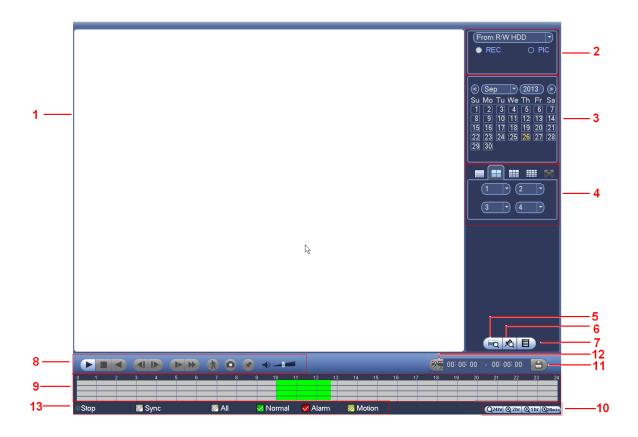


Figure 4-65

Refer to the following sheet for more information.

SN	Name	Function
SIN		
1	Display	 Here is to display the searched picture or file.
	window	 Support 1/4-window playback.
2	Search type	 Here you can select to search the picture or the recorded file. You can select to play from the read-write HDD, from peripheral device or from redundancy HDD. Before you select to play from the peripheral device, connect the corresponding peripheral device. You can view all record files of the root directory of the peripheral device. Click the Browse button; you can select the file you want to play. Important Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures on the redundancy HDD.
3	Calendar	• The blue highlighted date means there is picture or file. Otherwise, there is no picture or file.
		 In any play mode, click the date you want to see, you can see
		the corresponding record file trace in the time bar.
4	Playback	Playback mode: 1/4. (It may vary due to different series.)

	mode and channel selection pane.	 ♦ In 1-window playback mode: you can select 1-X channels (X depends on the product channel amount). ♦ In 4-window playback mode: you can select 4 channels according to your requirement. • The time bar will change once you modify the playback mode or the channel option.
5	Card number search	The card number search interface is shown as below. Here you can view card number/field setup bar. You cam implement advanced search. Current series product supports this function.
6	Mark file list button	Click it to go to mark file list interface. You can view all mark information of current channel by time. Refer to chapter 4.8.2.3 for detailed information.
7	File list switch button	 Double click it, you can view the picture/record file list of current day. The file list is to display the first channel of the record file. The system can display max 128 files in one time. Use the and ▶ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback. You can input the period in the following interface to begin accurate search. File type: R—regular record; A—external alarm record; M—Motion detect record. Lock file. Click the file you want to lock and click the button to lock. The file you locked will not be overwritten.
8	Playback control pane.	Play/Pause There are three ways for you to begin playback. In play button Double click the valid period of the time bar. Double click the item in the file list. In slow play mode, click it to switch between play/pause. Stop Backward play In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ▶/ II to restore normal play. In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel.

		In normal play mode, when you pause current play, you can click ◀ and ▶ to begin frame by frame playback. In frame by frame playback mode, click ▶/ II to restore normal playback.
		Slow play In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc.
		Fast forward In playback mode, click to realize various fast play modes such as fast play 1,fast play 2 and etc.
		Note: The actual play speed has relationship with the software
		version.
		Smart search
		The volume of the playback
		Click the snapshot button in the full-screen mode, the system can snapshot 1 picture. System supports custom snap picture saved path. Connect
		the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.
		Mark button. Note this function is for some series product only. Make sure there is a mark button in the playback control panel.
	Time bar	 It is to display the record type and its period in current search criteria.
9		 In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar. Use the mouse to click one point of the color zone in the time bar, system begins playback.
		 The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file. The green color stands for the regular record file. The red
		color stands for the external alarm record file. The yellow stands for the motion detect record file.
10	Time bar	•The option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record.
10	unit	• The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.

11	Backup	 Select the file(s) you want to backup from the file list. You can check from the list. Then click the backup button, now you can see the backup menu. System supports customized path setup. After select or create new folder, click the Start button to begin the backup operation. The record file(s) will be saved in the specified folder. Check the file again you can cancel current selection. System max supports to display 32 files from one channel. After you clip on record file, click Backup button you can save it. For one device, if there is a backup in process, you can not start a new backup operation.
12	Clip	 It is to edit the file. Play the file you want to edit and then click this button when you want to edit. You can see the corresponding slide bars in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time. After you set, you can click Clip button again to edit the second period. You can see the slide bar restore its previous position. Click Backup button after clip, you can save current contents in a new file. You can clip for one channel or multiple-channel. The multiple-channel click operation is similar with the one-channel operation. Note: System max supports 1024 files backup at the same time. You can not operate clip operation if there is any file has been checked in the file list.
13	Record type	In any play mode, the time bar will change once you modify the search type.
	, , , , , , , , , , , , , , , , , , ,	Other Functions
		When system is playing, you can select a zone in the
14	Smart search	 window to begin smart search. Click the motion detect button to begin play. Once the motion detect play has begun, click button again will terminate current motion detect file play. There is no motion detect zone by default. If you select to play other file in the file list, system switches to motion detect play of other file. During the motion detect play process, you can not

	1	
		implement operations such as change time bar, begin backward playback or frame by frame playback.
15	Other channel synchroniz ation switch to play when playback	When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.
16	Digital zoom	When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.
17	Manually switch channel when playback	During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse. This function is null if there is no record file or system is in smart search process.

Note: All the operations here (such as playback speed, channel, time and progress) have relationship with hardware version. TX-64s do not support some functions or playback speeds.

4.8.2.1 Smart Search

During the multiple-channel playback mode, double click one channel and then click the

button, system begins smart search. System supports 396(22*18 PAL) and 330(22*15 NTSC) zones. Left click mouse to select smart search zones. See Figure 4-66.

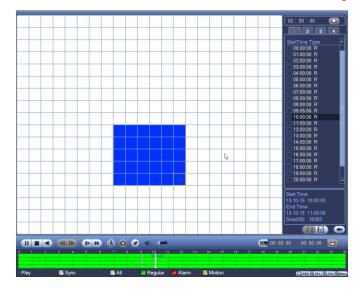


Figure 4-66

Click the , you can go to the smart search playback. Click it again, system stops smart search playback.

Important

- System does not support motion detect zone setup during the full-screen mode.
- During the multiple-channel playback, system stops playback of rest channels if you implement one-channel smart search.

4.8.2.2 Accurate playback by time

Select records from one day, click the list, you can go to the file list interface. You can input time at the top right corner to search records by time. See image on the left side of the

Figure 4-67. For example, input time 11:00.00 and then click Search button view all the record files after 11:00.00 (The records includes current time.). See image on the right side of the Figure 4-67. Double click a file name to playback.

Note

- After you searched files, system implement accurate playback once you click Play for the first time.
- System does not support accurate playback for picture.
- System supports synchronization playback and non-synchronous playback. The synchronization playback supports all channels and non-synchronous playback only supports accurately playback of current select channel.





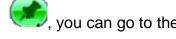
Figure 4-67

4.8.2.3 Mark Playback

Make sure your purchased device support this function. You can use this function only if you can see the mark playback icon on the Search interface.

When you are playback record, you can mark the record when there is important information. After playback, you can use time or the mark key words to search corresponding record and then play. It is very easy for you to get the important video information.

Add Mark: When system is playback, click Mark button following interface. See Figure 4-68.



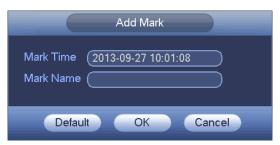


Figure 4-68

- Playback Mark: During 1-window playback mode, click mark file list button ,you get to mark file list interface. Double click one mark file, you can begin playback from the mark time.
- Play before mark time: Here you can set to begin playback from previous N seconds of the mark time.

Note

Usually, system can playbacks previous N seconds record if there is such kind of record file. Otherwise, system playbacks from the previous X seconds when there is such as kind of record.

Mark Manager: Click the mark manager button
 4-66); you can go to Mark Manager interface. See Figure 4-69. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.

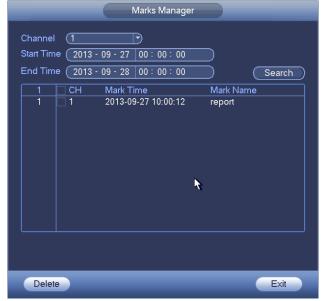


Figure 4-69

 Modify: Double click one mark information item, you can see system pops up a dialogue box for you to change mark information. You can only change mark name here. Delete: Here you can check the mark information item you want to delete and then click Delete button, you can remove one mark item.

Note

- After you go to the mark management interface, system needs to pause current playback. System resume playback after you exit mark management interface.
- If the mark file you want to playback has been removed, system begin playbacking from the first file in the list.

4.8.3 Picture Playback

- a) From Main menu->Search, or on the preview interface right click mouse.
- b) At the top right pane, you can check the box to select picture and then select playback interval.

4.9 Backup

4.9.1 File Backup

In this interface, you can backup record file to the USB device.

- a) Connect USB burner, USB device or portable HDD and etc to the device.
- b) From Main menu->Backup, you can go to the Backup interface. See Figure 4-70.

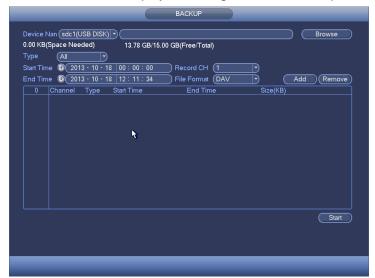


Figure 4-70

- c) Select backup device and then set channel, file start time and end time.
- d) Click add button, system begins search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 4-71.
- e) System only backup files with a $\sqrt{}$ before channel name.
- f) Click backup button, you can backup selected files. There is a process bar for you reference.
- g) When the system completes backup, you can see a dialogue box prompting successful backup.

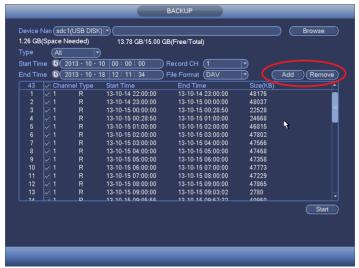


Figure 4-71

h) Click backup button, system begins burning. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom.

Note

- During backup process, you can click ESC (right mouse click) to exit current interface for other operation (For some series product only). The system will not terminate backup process.
- The file name format usually is: Channel number+Record type+Time. In the file name, the YDM format is Y+M+D+H+M+S. File extension name is .dav.

4.9.2 Backup Log

a) From Main menu->Info->Log, the interface is shown as below. See Figure 4-73.



Figure 4-73

- b) Select log type and then set start time/end time, click Search button, you can see log time and event information. Click to view detailed log information.
- c) Select log items you want to save and then click backup button, you can select a

folder to save them. Click Start to backup and you can see the corresponding dialogue box after the process is finish.

4.9.3 USB Device Auto Pop-up

After you inserted the USB device, system can auto detect it and pop up the following dialogue box. It allows you to conveniently backup file, log, configuration or update system. See Figure 4-74. Refer to chapter 4.9 Backup.



Figure 4-74

4.10 Alarm

4.10.1 Detect Alarm

In the main menu, from Setting to Detect, you can see motion detect interface. There are three detection types: motion detection, video loss, tampering.

4.10.1.1.1 Motion Detect

After analysis video, system can generate a motion detect alarm when the detected moving signal reached the sensitivity you set here.

Detection menu is shown as below. See Figure 4-75.

- Event type: From the dropdown list you can select motion detection type.
- Channel: Select a channel from the dropdown list to set motion detect function.
- Enable: Check the box here to enable motion detect function.
- Region: Click select button, the interface is shown as in Figure 4-76. Here you can set motion detection regions. There are four regions for you to set (red, yellow, blue and green). Select one of the colored regions first. Then click the left mouse button on the start point of the area you want to select and drag the mouse to select the area.

In the test area the best setting for sensitivity and threshold is 60 and 10 respectively. Depending on your given environment this settings can be vary. Sensitivity and threshold can be set in the range from 0 to 100. The higher the sensitivity and the lower the threshold are set the more motion is detected.

For example: When a leaf falls or a cat is running in the selected area a motion will be detected.

In this case a subjective setting by the customer is requested!

After you completed the setup remember to click the save button to save current setup. If you click the right button of the mouse to exit the region setup interface system will not save your zone setup.

- Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.
- Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal

activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.

- Period: Click set button, you can see an interface is shown as in Figure 4-78. Here you can set motion detect period. System only enables motion detect operation in the specified periods. It is not for video loss or the tampering. There are two ways for you to set periods. Note system only supports 6 periods in one day.
- ♦ In Figure 4-78, Select icon of several dates, all checked items can be edited together. Now the icon is shown as click to delete a record type from one period.
- ♦ Click button after one date or a holiday, you can see the schedule interface. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
- Alarm output: when an alarm occurs, system enables peripheral alarm devices.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function.
- Send email: System can send out email to alert you when an alarm occurs.
- Record channel: System auto activates motion detection channel(s) to record once an alarm occurs. Make sure you have set MD record in Schedule interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- PTZ activation: Here you can set PTZ movement when an alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 4-77.
- Record Delay: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
- Tour: Here you can enable tour function when alarm occurs. System one-window tour.
- Snapshot: You can enable this function to snapshoot image when a motion detect alarm occurs.
- Video matrix (optional): Check the box here to enable this function. When an alarm

occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.

Buzzer: Highlight the icon to enable this function. The buzzer beeps when alarm occurs.

Highlight icon to select the corresponding function. After all the setups click save button, system goes back to the previous menu.

Note:

In motion detection mode, you can not use copy/paste to set channel setup since the video in each channel may not be the same.

You can left click mouse and then drag it to set a region for motion detection. After setting, click enter button to exit.



Figure 4-75



Figure 4-76



Figure 4-77



Figure 4-78



Figure 4-79

Motion detect here only has relationship with the sensitivity and region setup. It has no relationship with other setups.

4.10.1.1.2 Tampering

When someone viciously masks the lens, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Tampering interface is shown as in Figure 4-81. You can enable "Alarm output "or "Show message" function when tampering alarm occurs.

Sensitivity: The value ranges from 1 to 6. It mainly concerns the brightness. The level
 6 has the higher sensitivity than level 1. The default setup is 3.

Tip:

You can enable preset/tour/pattern activation operation when video loss occurs. Refer to chapter 4.10.1.1.1 motion detection for detailed information.

Note:

- In Detect interface, copy/paste function is only valid for the same type, which means you can not copy a channel setup in video loss mode to tampering mode.
- About Default function. Since detection channel and detection type may not be the same, system can only restore default setup of current detect type. For example, if you click Default button at the tampering interface, you can only restore default tampering setup. It is null for other detect types.
- System only enables tampering function during the period you set here. It is null for motion detect or video loss type.



Figure 4-81

4.10.1.1.3 Video Loss

In Figure 4-82, select video loss from the type list. You can see the interface is shown as in Figure 4-82. This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function. You can refer to chapter 4.10.1.1.1Motion detect for detailed information.

Tip:: You can enable preset/tour/pattern activation operation when video loss occurs.



Figure 4-82

4.10.2 Alarm Setup

In the main menu, from Setting->Event->Alarm, you can see alarm setup interface. See Figure 4-83.

There are two alarm types. See Figure 4-83 to Figure 4-87

- ♦ IP-CAM external alarm: It is the on-off alarm signal from the front-end device and can activate the local TX-64.
- ❖ IP-CAM offline alarm: Once you select this item, system can generate an alarm when the front-end IP-CAM disconnects with the local TX-64. The alarm can activate record, PTZ, snap and etc. The alarm can last until the IP-CAM and the TX-64 connection resumes.

Important

• If it is your first time to boot up the device, the disconnection status of the

front-end network camera will not be regarded as offline. After one successfully connection, all the disconnection events will be regarded as IP-CAM offline event.

- When IP-CAM offline alarm occurs, the record and snapshot function of digital channel is null.
- Enable: You need to highlight this button to enable current function.
- Type: normal open or normal close.
- Period: Click set button, you can see an interface is shown as in Figure 4-83. There are
 two ways for you to set periods. There are max 6 periods in one day. There are four
 record types: regular, motion detection (MD), Alarm, MD & alarm.
- ♦ In Figure 4-86, Select icon of several dates, all checked items can be edited together. Now the icon is shown as Click to delete a record type from one period.
- ♦ Click button after one date or a holiday. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
- PTZ activation: When an alarm occurred, system can activate the PTZ operation. The PTZ activation lasts an anti-dither period. See Figure 4-85.
- Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated.

During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.

- Alarm output: The number here is the device alarm output port. You can select the corresponding ports(s) so that system can activate the corresponding alarm device(s) when an alarm occurred.
- Latch: When the anti-dither time ended, the channel alarm you select in the alarm output
 may last the specified period. The value ranges from 1 to 300 seconds. This function is
 not for other alarm activation operations. The latch is still valid even you disable the
 alarm event function directly.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Alarm upload: System can upload the alarm signal to the network (including alarm

centre and the WEB) if you enabled current function. System only uploads the alarm channel status. You can go to the WEB and then go to the Alarm interface to set alarm event and alarm operation. Go to the Network interface to set alarm centre information.

- Send email: System can send out the alarm signal via the email to alert you when alarm occurs. Once you enable the snap function, system can also send out an image as the attachment. Go to the Main Menu->Setting ->Network->Email interface to set.
- Record channel: you can select proper channel to record alarm video (Multiple choices).
 - You need to set alarm record mode as Schedule in Record interface (Main Menu->Storage->Storage->Record). Note the manual record has the highest priority. System record all the time no matter there is an alarm or not if you select Manual mode.
 - ♦ Now you can go to the Schedule interface (Main Menu->Setting->Storage->Schedule) to set the record type, corresponding channel number, week and date. You can select the record type:Regular/MD/Alarm/MD&Alarm. Note, you can not select the MD&Alarm and MD(or Alarm) at the same time.
 - ♦ Now you can go to the Encode interface to select the alarm record and set the encode parameter (Main Menu->Setting->Camera->Encode).
 - ❖ Finally, you can set the alarm input as the local alarm and then select the record channel. The select channel begins alarm record when an alarm occurred. Note system begins the alarm record instead of the MD record if the local alarm and MD event occurred at the same time.
- Tour: Here you can enable tour function when an alarm occurs. System supports 1/4-window tour. Note the tour setup here has higher priority than the tour setup you set in the Display interface. Once there two tours are both enabled, system can enable the alarm tour as you set here when an alarm occurred. If there is no alarm, system implements the tour setup in the Display interface.
- Snapshot: You can enable this function to snapshoot image when an alarm occurs.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.



Figure 4-83



Figure 4-84

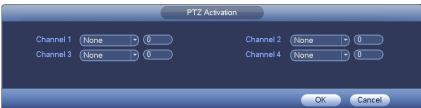


Figure 4-85



Figure 4-86



Figure 4-87

Highlight icon to select the corresponding function. After setting all the setups click save button, system goes back to the previous menu.

4.10.3 Abnormality

There are two types: HDD/Network.

- ♦ HDD: HDDerror, no HDD, no space. See Figure 4-88 and Figure 4-89.
- ♦ Network: Disconnection, IP conflict, MAC conflict. See Figure 4-90.
- Less than: System can alarm you when the HDD space is less than the threshold you set here (For HDD no space type only).
- Show message: system can pop up the message in the local screen to alert you when alarm occurs.
- Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function. For disconnection event, IP conflict event and MAC conflict event, this function is null.
- Send email: System can send out email to alert you when alarm occurs.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.



Figure 4-88



Figure 4-89



Figure 4-90

4.11 Network

4.11.1.1 TCP/IP

The single network adapter interface is shown as in Figure 4-91.

- Network Mode: Includes multiple access, fault tolerance, and load balancing
- IP Version: There are two options: IPv4 and IPv6. Right now, system supports these two IP address format and you can access via them.
- MAC address: The host in the LAN can get a unique MAC address. It is for you to access in the LAN. It is read-only.
- IP address: Here you can use up/down button (▲▼) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
- Default gateway: Here you can input the default gateway. Note system needs to check
 the validity of all IPv6 addresses. The IP address and the default gateway shall be in the
 same IP section. That is to say, the specified length of the subnet prefix shall have the
 same string.
- DHCP: It is to auto search IP. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- MTU: It is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes. Note MTU modification may result in network adapter reboot and network becomes off. That is to say, MTU modification can affect current network service. System may pop up dialog box for you to confirm setup when you want to change MTU setup. Click OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the TX-64 shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for reference only.

♦ 1500: Ethernet information packet max value and it is also the default value. It is the

typical setup when there is no PPPoE or VPN. It is the default setup of some router, switch or the network adapter.

- ♦ 1492: Recommend value for PPPoE.
- ♦ 1468: Recommend value for DHCP.
- Preferred DNS server: DNS server IP address.
- Alternate DNS server: DNS server alternate address.
- Transfer mode: Here you can select the priority between fluency/video qualities.
- LAN download: System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.

After completing all the setups click save button, system goes back to the previous menu.



Figure 4-91

4.11.1.2 Connection

The connection setup interface is shown as in Figure 4-92.

- Max connection: system support maximal 128 users. 0 means there is no connection limit.
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- HTTPS port: Default value is 443.
- RTSP port: Default value is 554.

Important: System needs to reboot after you changed and saved any setup of the above fiveports. Make sure the port values here do not conflict.



Figure 4-92

4.11.1.3 WIFI AP

Note

This function is for some series product only.

The WIFI AP interface is shown as below. See Figure 4-93. Here you can set WIFI hotspot, so that the network camera can use the hotspot to connect to the network.

- SSID: It is to set SSID name. You can use this name to search the device.
- Password: It is to set SSID password. You can use this password to connect to the network.
- Authentication mode: Select authentication from the dropdown list.
- Encrypt type: Select encryption type from the dropdown list.
- Start IP/End IP: Input start IP and end IP. The TX-64 can allocate the IP address in the range you specified here.
- WPS: Click WPS button to enable WPS function. After the network camera enabled this function, it can automatically connect to the network.
- Remote device: In the list, you can view the network camera(s) that connected to the TX-64. It includes signal intensity, IP, MAC address, bit rate, channel number, type, status and etc.



Figure 4-93

WIFI working status: Here you can view current connection status.

Note:

- After successful connection, you can see WIFI connection icon at the top right corner of the preview interface.
- When the hotspot verification type is WEP, system displays as AUTO since the device can not detect its encryption type.
- System does not support verification type WPA and WPA2. The display may become abnormal for the verification type and encryption type.

After device successfully connected to the WIFI, you can view the hotspot name, IP address, subnet mask, default gateway and etc.

4.11.1.4 DDNS

DDNS setup interface is shown as in Figure 4-94.

You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

In network DDNS, select DDNS type and highlight enable item. And then input your PPPoE name you get from you IPS and server IP (PC with DDNS). Click save button and then reboot system.

Click save button, system prompts for rebooting to get all setup activated.

After rebooting, open IE and input as below:

http://(DDNS server IP)/(virtual directory name)/webtest.htm

e.g.: http://10.6.2.85/TX-64_DDNS/webtest.htm.)

Now you can open DDNSServer web search page.

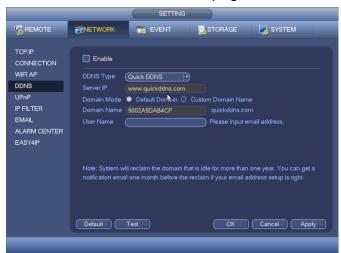


Figure 4-94

Note DDNS type includes: CN99 DDNS, NO-IP DDNS, Quick DDNS, Dyndns DDNS and sysdns DDNS. All the DDNS can be valid at the same time, you can select as you requirement. Private DDNS function shall work with special DDNS server.

Quick DDNS and Client-end Introduction

1) Background Introduction

Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the TX-64 via the registered domain name. Besides the general DDNS, the Quick DDNS works with the device from the manufacturer so that it can add the extension function.

2) Function Introduction

The quick DDNS client has the same function as other DDNS client end. It realizes the bonding of the domain name and the IP address. Right now, current DDNS server is for our own devices only. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name, password or the ID registration on the server. At the same time, each device has a default domain name (Generated by MAC address) for your option. You can also use customized valid domain name (has not registered.).

3) Operation

Before you use Quick DDNS, you need to enable this service and set proper server address, port value and domain name.

- Server address: www.quickddns.com
- Port number: 80
- Domain name: There are two modes: Default domain name and customized domain name.

Except default domain name registration, you can also use customized domain name (You can input your self-defined domain name.) After successful registration, you can use domain name to login installed of the device IP.

• User name: It is optional. You can input your commonly used email address.

Important

- Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in server attack.
- System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.

4.11.1.5 UPnP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN interface see Figure 4-95. Input the router IP address in the LAN setting under TCP/IP in Figure 4-91.

- UPNP on/off: Turn on or off the UPNP function of the device.
- Status: When the UPNP is offline, it shows as "Unknown". When the UPNP works it shows "Success"
- Router LAN IP: It is the router IP in the LAN.
- WAN IP: It is the router IP in the WAN.
- Port Mapping list: The port mapping list here is the one to one relationship with the router's port mapping setting.
- List:
 - ♦ Service name: Defined by user.
 - ♦ Protocol: Protocol type
 - ♦ Internal port: Port that has been mapped in the router.
 - ♦ External port: Port that has been mapped locally.
- Default: UPNP default port setting is the HTTP, TCP and UDP of the TX-64.
- Add to the list: Click it to add the mapping relationship.
- Delete: Click it to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 4-95.

Important:

When you are setting the router external port, use 1024~5000 port. Do not use well-known port 1~255 and the system port 256~1023 to avoid conflict. For the TCP and UDP, make sure the internal port and external port are the same to guarante the proper data transmission.



Figure 4-95



Figure 4-96

4.11.1.6 IP Filter

IP filter interface is shown as in Figure 4-97. You can add IP in the following list. The list supports max 64 IP addresses. System supports valid address of IPv4 and IPv6. **Note system needs to check the validity of all IPv6 addresses and implement optimization.** After you enabled trusted sites function, only the IP listed below can access current TX-64. If you enable blocked sites function, the following listed IP addresses can not access current TX-64.

- Enable: Highlight the box here, you can check the trusted site function and blocked sites function. You can not see these two modes if the Enable button is grey.
- Type: You can select trusted site and blacklist from the dropdown list. You can view the IP address on the following column.
- Start address/end address: Select one type from the dropdown list, you can input IP address in the start address and end address. Now you can click Add IP address or Add IP section to add.
 - a) For the newly added IP address, it is in enable status by default. Remove the $\sqrt{}$ before the item, and then current item is not in the list.
 - b) System max supports 64 items.

 - d) System automatically removes space if there is any space before or after the newly

- added IP address.
- e) System only checks start address if you add IP address. System check start address and end address if you add IP section and the end address shall be larger than the start address.
- f) System may check newly added IP address exists or not. System does not add if input IP address does not exist.
- Delete: Click it to remove specified item.
- Edit: Click it to edit start address and end address. See Figure 4-98. System can check the IP address validity after the edit operation and implement IPv6 optimization.
- Default: Click it to restore default setup. In this case, the trusted sites and blocked sites are both null.

Note:

- If you enabled trusted sites, only the IP in the trusted sites list can access the device.
- If you enabled blocked sites, the IP in the blocked sites can not access the device.
- System supports add MAC address.



Figure 4-97



Figure 4-98

4.11.1.7 Email

The email interface is shown as below. See Figure 4-99.

- SMTP server: Input your email SMTP server IP here.
- Port: Input corresponding port value here.
- User name: Input the user name to login the sender email box.
- Password: Input the corresponding password here.
- Sender: Input sender email box here.
- Title: Input email subject here. System support English character and Arabic number.
 Max 32-digit.

- Receiver: Input receiver email address here. System max supports 3 email boxes.
 System automatically filters same addresses if you input one receiver repeatedly.
- SSL enable: System supports SSL encryption box.
- Interval: The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.
- Test email enable: Check the box here to enable this function. This function allows the system to send out the test email to check the connection is OK or not.
- Interval: Check the above box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here. Click the Test button, you can see the corresponding dialogue box to see the email connection is OK or not.

Note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormity event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormity events, which may result in heavy load for the email server.



Figure 4-99

4.11.1.8 Alarm Centre

This interface is reserved for you to develop. See Figure 4-100.

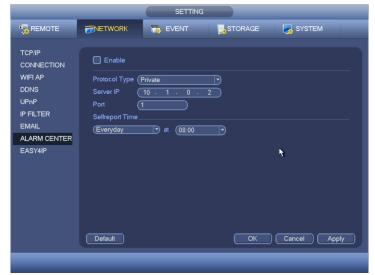


Figure 4-100

4.11.1.9 P2P (EASY4IP)

The EASY4IP interface is shown as in Figure 4-101. You can scan the QR code to connect the device over the My Secure Pro App.



Figure 4-101

4.11.2 Network Test

In this interface, you can see network test and network load information.

4.11.2.1 Network Test

From main menu->Info-Network->Test, the network test interface is shown as in Figure 4-102.

- Destination IP: Input valid IPV4 address.
- Test: Click it to test the connection with the destination IP address. The test results can display average delay and packet loss rate and you can also view the network status as OK, bad, no connection and etc.

4.11.2.2 Network Load

From main menu->Info-Network->Load, network load is shown as in Figure 4-102. Here you can view the follow statistics of the device network adapter. Here you can view information of all connected network adapters. The connection status is shown as offline if connection is disconnected. Click one network adapter, you can view the flow statistics such as send rate and receive rate at the top panel

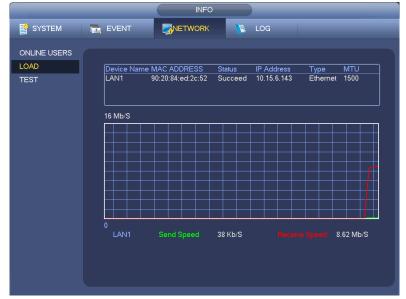


Figure 4-102

4.12 STORAGE MEDIA

Here you can view STORAGE MEDIA (HDD information) such as type, status, total capacity, record time and etc. The operation includes format, resume from error, change HDD property (Read write, Read-only). Here you can also set alarm and HDD storage position.

4.12.1 Format

a) From Main-menu->Setting->Storage->HDD Manager, you can go to HDD management interface. See Figure 4-103.

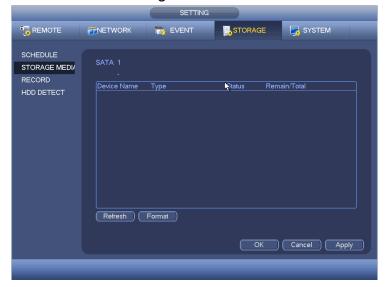


Figure 4-103

- b) Select a HDD and then select format from the dropdown list. Click Execute button.
- c)Click OK button to complete the setup. You can see system needs to restart to activate current setup.

4.12.2 HDD Information

Here is to list hard disk type, total space, free space, and status. See Figure 4-104 o means current HDD is normal.. -means there is no HDD.

If disk is damaged, system shows as "?". Remove the broken hard disk before you add a new one.



Figure 4-104

In Figure 4-105, click one HDD item, the S.M.A.R.T interface is shown as in Figure 4-105.

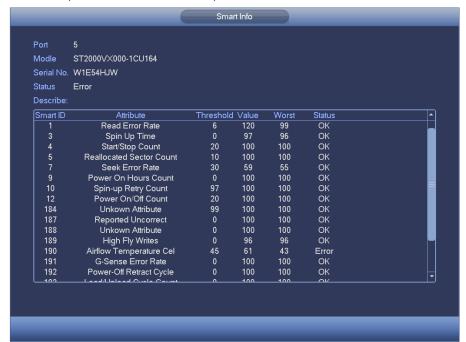


Figure 4-105

Parameter	Function	
SATA 3.5"	1 here means there is 1 HDD.	
SN	You can view the HDD amount the device connected to;	
	* means the second HDD is current working HDD.	
Туре	The corresponding HDD property.	
Total space	The HDD total capacity.	
Free space	The HDD free capacity.	
Status	HDD can work properly or not.	
Bad track	Display there is bad track or not.	
Page up	Click it to view previous page.	
Page down	Click it to view the next page.	
View recording time	Click it to view HDD record information (file start time and end time).	
View HDD type and capability	Click it to view HDD property, status and etc,	

4.12.3 HDD Detect

Note: This function is for some series product only.

The HDD detect function is to detect HDD current status so that you can clearly understand the HDD performance and replace the malfunction HDD.

There are two detect types:

- Quick detect is to detect via the universal system files. System can quickly complete
 the HDD scan. If you want to use this function, make sure the HDD is in use now. If
 the HDD is removed from other device, make sure the write-data once was full after
 it installed on current device.
- Global detect adopts Windows mode to scan. It may take a long time and may affect the HDD that is recording.

4.12.3.1 Manual Detect

From main menu->Setting->Storage->HDD Detect->Manual Detect, the interface is shown as below. See Figure 4-106.

Select detect type and HDD. Click start detect to begin. You can view the corresponding detect information.

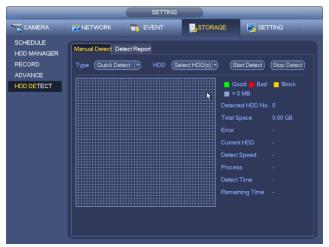


Figure 4-106

4.12.3.2 Detect Report

After the detect operation, you can go to the detect report to view corresponding information. From main menu->Setting->Storage->HDD Detect->Manual Detect, the interface is shown as below. See Figure 4-107.



Figure 4-107

Click View, you can see the detailed information such as detect result, backup and S.M.A.R.T. See Figure 4-108 and Figure 4-109.

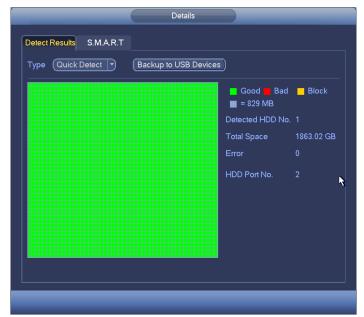


Figure 4-108



Figure 4-109

4.13 Device Setups

4.13.1 General

From Main menu->Setting->System->General, you can go to the general interface. See Figure 4-110.

- Device ID: Input a corresponding device name here.
- Device No: When you are using one remote control (not included in the accessory bag) to control several TX-64s, you can give a name to each TX-64 for your management.
- Language: System supports various languages: English, Italian, Spanish, German, Polish, Hungarian, Czech and Dutch (All languages listed here are optional. Slight difference maybe found in various series.)
- Video standard: There are two formats: NTSC and PAL.
- HDD full: Here is for you to select working mode when hard disk is full. There are two

options: stop recording or rewrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.

- Pack duration: Here is for you to specify record duration. The value ranges from 1 to 120 minutes. Default value is 60 minutes.
- Realtime play: It is to set playback time you can view in the preview interface. The value ranges from 5 to 60 minutes.
- Auto logout: Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- Navigation bar: Check the box here, system displays the navigation bar on the interface.
- IP-CAM Time Sync: You can input an interval here to synchronize the TX-64 time and IP-CAM time.
- Startup wizard: Once you check the box here, system will go to the startup wizard directly when the system restarts the next time. Otherwise, it will go to the login interface.
- Mouse property: You can set double click speed via dragging the slide bard. You can Click Default button to restore default setup.



Figure 4-110

4.13.2 Data and Time

From Main menu->Setting->System->General, you can go to the general interface. See Figure 4-111.

- System time: Here is for you to set system time
- Date format: There are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY (default).
- Date separator: There are three denotations to separate date: dot, beeline and solidus.
- DST: Here you can set DST time (Day Light Saving Time) and date by week or by date.
 Enable DST function and then select setup mode. Input start time and end time and click "Save" button.
- Time format: There are two types: 24-hour mode (default) or 12-hour mode.
- NTP: It is to set NTP server, port and interval.

Note:

Since system time is very important, do not modify time casually unless there is a must!

Before your time modification, stop record operation first! After completing all the setups click save button, system goes back to the previous menu.



Figure 4-111

4.13.3 Holiday

Refer to chapter 4.7.6 for detailed information.

4.14 Device Maintenance and Manager

4.14.1 System Info

4.14.1.1 Version

From main menu->Info->System->version, you can go to version interface. Here is for you to view some version information. See Figure 4-112.

Channel, System version, Build Date, Web, Serial number



Figure 4-112

4.14.1.2 BPS

Here is for you to view current video bit rate (kb/s) and resolution. See Figure 4-113.

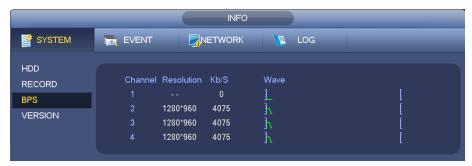


Figure 4-113

4.14.1.2.1Online User

Here is for you manage online users connected to your TX-64. See Figure 4-114.

You can click button Lead to disconnect or block one user if you have proper system right.

System detects there is any newly added or deleted user in each five seconds and refresh the list automatically.



Figure 4-114

4.14.1.3 EVENT Information

From main menu->info-Event, here you can view the channel status of the remote device, connection log and etc. See Figure 4-115.



Figure 4-115

4.14.1.3.1Remote

Device Status

Here you can view the IP-CAM status of the corresponding channel such as motion detects video loss, tampering, alarm and etc. See Figure 4-116.

- IP-CAM status: Front-end does not support.

 There is alarm event from current front-end.

 Front-end supports.
- Connection status: Connection succeeded.
 Connection failed.
- Refresh: Click it to get latest front-end channel status.



Figure 4-116

4.14.2 Log

From Main menu->Info->Log, you can go to the following interface. See Figure 4-118.

Start time/end time: Select start time and end time, then click search button. You can
view the log files in a list. System max displays 100 logs in one page. It can max save
1024 log files. Use page up/down button on the interface to view more.

Tip:

Double click a log item to view its detailed information. See Figure 4-119. Click PgUp/PgDn to view more logs.

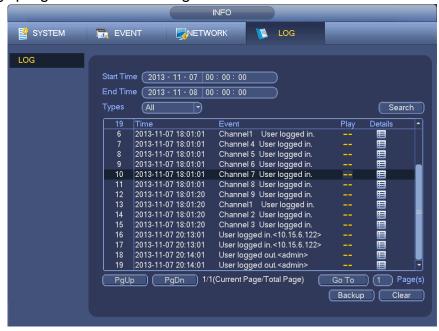


Figure 4-118



Figure 4-119

4.14.3 Account

Here is for you to implement account management. See Figure 4-120 and Figure 4-121. Here you can:

Add new user

- Modify user
- Add group
- Modify group
- Modify password.

For account management note:

- For the user account name and the user group, the string max length is 6-byte. The backspace in front of or at the back of the string is invalid. There can be backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are three default users: admin/888888 and hidden user "default".
- Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.
- One user should belong to one group. User right can not exceed group right.
- About reusable function: this function allows multiple users use the same account to login.

After all the setups click save button, system goes back to the previous menu.



Figure 4-120



Figure 4-121

4.14.3.1.1 Add/Modify Group

Click add group button, the interface is shown as below. See Figure 4-122. Here you can input group name and then input some memo information if necessary. There are many rights such as control panel, shut down, real-time monitor, playback, record, record file backup, PTZ, user account, system information view, system setup, log view, clear log, upgrade system, control device and etc.

The modify group interface is similar to the Figure 4-122.



Figure 4-122

Tip:

In modify interface, check the modify password box and then input old password and new password. Input new password again to confirm the modification. The password max has 6-byte and the space in the front or at the end of the string is null. The space is valid only in the middle of the string. For the account of the Account function, it can change the password of other users too.

4.14.3.1.2Add/Modify User

Click add user button. Input the user name, password; select the group it belongs to from the dropdown list. Then you can check the corresponding rights for current user. For convenient user management, usually we recommend the general user right is lower than the admin account. The modify user interface is similar to Figure 4-123.



Figure 4-123

4.14.3.1.3 Secure Question

With this under menu set the security question so that you can find the password of the "admin" later in emergency case! The modify user interface is similar to Figure 4-124.

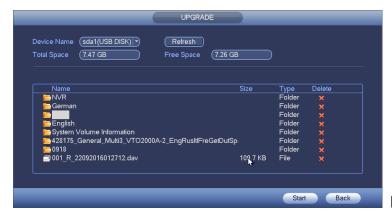


Figure 4-124

4.14.4 Update

From Mani menu->Setting->System->Update, you can go to the following interface. See Figure 4-125.

- a) Insert USB device that contain the upgrade file.
- b) Click Start button and then select the .bin file.
- c) You can see the corresponding dialogue box after the update process is complete.



Figure 4-125

4.14.5 **Default**

You can restore factory default setup to fix some problems when the device is running slowly. Configuration error occurred. From Main menu->Setting->System->Default, you can go to the default interface. See Figure 4-126.

Click default icon, system pops up a dialogue box. You can highlight to restore factory default setup. All, Camera, Network, Event, Storage, System

Highlight icon to select the corresponding function. After all the setups click OK button, system goes back to the previous menu.

Warning!

After you use default function, some your customized setup may lose forever! Think twice before you begin the operation!



Figure 4-126

4.14.6 Auto Maintain

Here you can set auto-reboot time and auto-delete old files setup. You can set to delete the files for the specified days. See Figure 4-127. You can select proper setup from dropdown list. After all the setups click save button, system goes back to the previous menu.

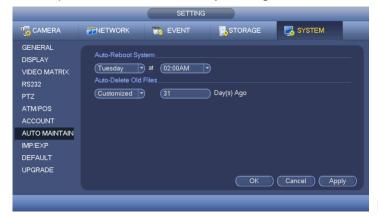


Figure 4-127

4.14.7 Logout /Shutdown/Restart

From Main menu->Operation->Shutdown, you can see an interface shown as in Figure 4-128.

- Shutdown: System shuts down and turns off power.
- Logout: Log out menu. You need to input password when you login the next time.
- Restart: reboot device.

If you shut down the device, there is a process bar for your reference, system waits for 3 seconds and then shut down (You can not cancel). Note: sometimes you need to input the proper password to shut down the device.



Figure 4-128

5 Web Operation

5.1 General Introduction

The TX-64 supports access via Browser after installing a web plugin. The Web function provides the following settings: Channel monitor menu tree, search/playback, alarm setup, system setup, PTZ control and monitor window and etc.

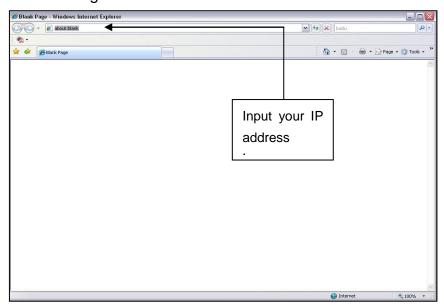
5.1.1 Network Connection

Before log in, make sure:

- Network connection is right
- TX-64 and PC network setup is right. Refer to network setup (main menu-> setting-> network)
- System can automatically download latest web control and the new version can overwrite the previous one.

5.1.2 Log in

Open IE/ Mozilla/ Chrome/ Safari and then input the TX-64 IP address in the address column. For example, if your TX-64 IP address is 192.168.1.108, then input http:// 192.168.1.108 in IE address column. See Figure below.



The login interface is shown on the right.

Please input your user name and password.

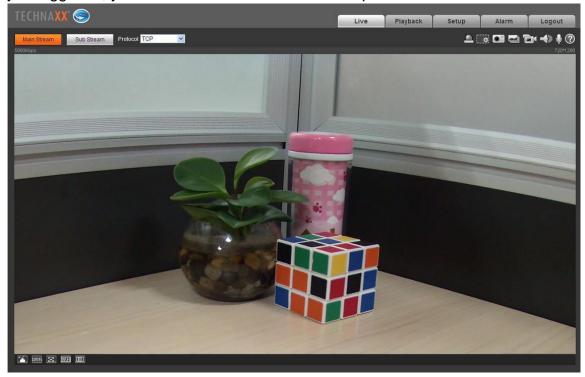
Default factory <u>name is admin</u> and password is admin.

Note: For security reasons, please modify your password after you first login.



If it is your first time to log in, the system pops up a warning information to ask you whether you like to install the web plug-in or not. Install the web plug-in.

After you logged in, you can see the main window. See picture below.



Web monitoring window

Note:

- This quick start guide is for reference only. Slight difference may be found in user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective owners.
- If there is any uncertainty or controversy, refer to the final explanation of us.
- Visit our website or contact your local service engineer for more information.

5.2 LAN Mode

For the LAN mode, after you logged in, you can see the main window. See Figure 5-5. This main window can be divided into the following sections.

- Section 1: There are six function buttons: Live (chapter 0), Setup (chapter 5.8), Info (Chapter 5.9), playback chapter (5.10), alarm (chapter 5.11), and logout (chapter 5.12).
- Section 2: There are monitor channels successfully connected to the TX-64.

Refer to Figure 5-1 below for main stream and extra stream switch information.

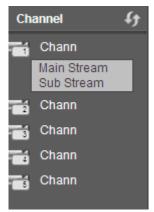


Figure 5-1

• Section 3: Open all. Open all button is to enable/disable all-channel real-time monitor. Here you can select main stream/sub stream too. See Figure 5-2.



Figure 5-2

 Section 5: Instant record button. Click it, the button becomes yellow and system begins manual record. See Figure 5-3. Click it again, system restores previous record mode.



Figure 5-3

Section 6: Local play button.

The Web can playback the saved (Extension name is dav) files in the PC-end. Click local play button, system pops up the following interface for you to select local play file. See Figure 5-4.



Figure 5-4

Section 7: Zero-channel encoding. Refer to chapter 5.6 for detailed information.

- Section 8: PTZ operation panel. Refer to chapter 5.4 for detailed information.
- Section 9: Image setup and alarm setup. Refer to chapter 5.5 for detailed information.
- Section 10: From the left to the right, you can see video quality/fluency/ full screen/1-window/4-window. You can set video fluency and real-time feature priority.

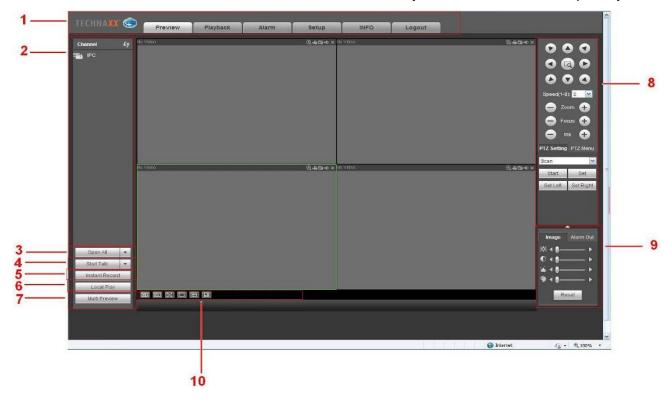
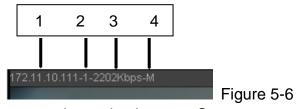


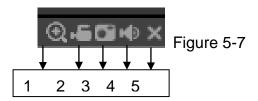
Figure 5-5

5.3 Real-time Monitor

In section 2, left click the channel name you want to view, you can see the corresponding video in current window. On the top left corner, you can view device IP(172.11.10.11)(1), channel number(2), network monitor bit stream(2202Kbps)(3) and stream type(M=main stream, S=sub stream)(4). See Figure 5-6.



On the top right corner, there are six unction buttons. See



• 1: Digital zoom: Click this button and then left drag the mouse in the zone to zoom in. right click mouse system restores original status.

- 2: Local record. When you click local record button, the system begins recording and this button becomes highlighted. You can go to system folder RecordDownload to view the recorded file.
- 3: Snapshot picture. You can snapshot important video. All images are memorized in system client folder PictureDownload (default).
- 4: Audio :Turn on or off audio.(It has no relationship with system audio setup)
- 5: Close video.

5.4 PTZ

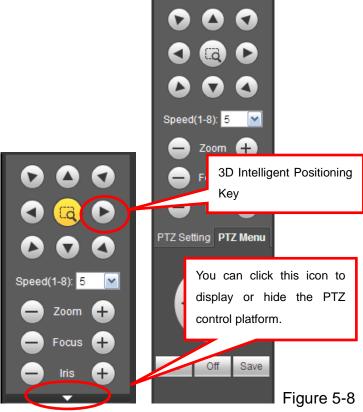
Before PTZ operation, make sure you have properly set PTZ protocol.

There are eight direction keys. In the middle of the eight direction keys, there is a 3D intelligent positioning key.

Click 3D intelligent positioning key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.

Refer to the following sheet for PTZ setup information.

	bllowing sheet for PTZ setup information.	
Parameter	Function	
Scan	 Select Scan from the dropdown list. Click Set button, you can set scan left and right limit. Use direction buttons to move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit. 	
Preset	 Select Preset from the dropdown list. Turn the camera to the corresponding position and Input the preset value. Click Add button to add a preset. 	
Tour	 Select Tour from the dropdown list. Input preset value in the column. Click Add preset button, you have added one preset in the tour. Repeat the above procedures you can add more presets in one tour. Or you can click delete preset button to remove one preset from the tour. 	
Pattern (optional)	 Select Pattern from the dropdown list. You can input pattern value and then click Start button to begin PTZ movement such as zoom, focus, iris, direction and etc. Then you can click Add button to set one pattern. 	
Aux (optional)	 Input the corresponding aux value here. You can select one option and then click AUX on or AUX off button. 	
Light (optional)	You can turn on or turn off the light.	



5.5 Image/Alarm-out

Select one monitor channel video and then click Image button in section 9, the interface is shown as Figure 5-9

5.5.1 Image



Here you can adjust its brightness, contrast, hue and saturation. (Current channel border becomes green). Or you can click Reset button to restore system default setup.

Figure 5-9

5.6 Zero-channel Encode

Select a window and then click zero-channel encode button, the interface is shown as below. See Figure 5-10.

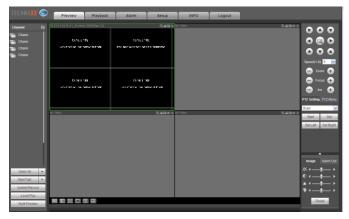


Figure 5-10

5.7 WAN Login

In WAN mode, after you logged in, the interface is shown as below. See Figure 5-11.

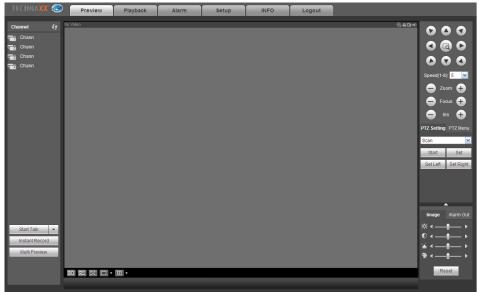


Figure 5-11

Refer to the following contents for LAN and WAN login difference.

- 1) In the WAN mode, system opens the main stream of the first channel to monitor by default. The open/close button on the left pane is null.
- 2) You can select different channels and different monitor modes at the bottom of the interface. See Figure 5-12.

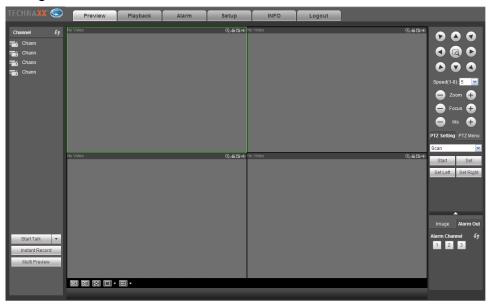


Figure 5-12

Important

The window display mode and the channel number are by default. For example, for the 4-channel, the max window split mode is 4.

3) Multiple-channel monitor, system adopts extra stream to monitor by default. Double click one channel, system switches to single channel and system uses main stream to monitor. You can view there are two icons at the left top corner of the channel number for you

reference. M stands for main stream. S stands for sub stream (extra stream).

4) If you login via the WAN mode, system does not support alarm activation to open the video function in the Alarm setup interface.

Important

- For multiple-channel monitor mode, system adopts extra stream to monitor by default.
 You can not modify manually. All channels are trying to synchronize. Note the synchronization effect still depends on your network environments.
- For bandwidth consideration, system can not support monitor and playback at the same time. System auto closes monitor or playback interface when you are searching setup in the configuration interface. It is to enhance search speed.

5.8 Setup

5.8.1 Camera

5.8.1.1 Remote Device

Remote device interface is shown as below. See Figure 5-13.

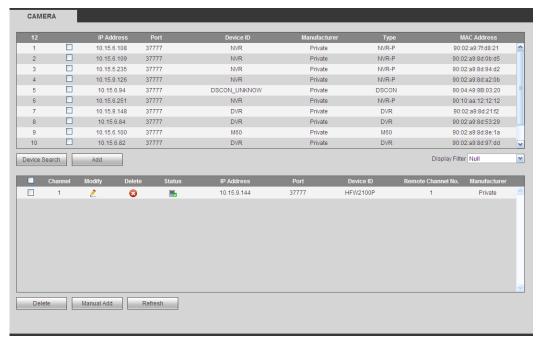


Figure 5-13

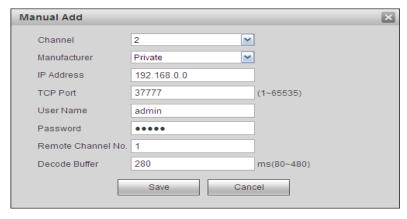


Figure 5-14

Refer to the following sheet for log parameter information.

Parameter	Function
Device search	Click Device search button, you can view the searched device information on the list. It includes device IP address, port, device name, manufacturer and type.
Add	Select a device in the list and then click Add button, system can connect the device automatically and add it to the Added device list. Or you can double click one item in the list to add a device.
Modify	Click or any device in the Added device list, you can change the corresponding channel setup.
Delete	Click (2), you can delete the remote connection of the corresponding channel.
Connection status	: Connection succeeded.
	: Connection failed.
Delete	Select a device in the Added device list and then click Delete button, system can disconnect the device and remove it from the Added device list.
Manual Add	Click it, the interface is shown as in Figure 5-14. Here you can add network camera manually. You can select a channel from the dropdown list (Here only shows disconnection channel.)
	 Note: System supports manufactures such as Panasonic, Sony, Dynacolor, Samsung, AXIS, Arecont, Dahua and Onvif standard protocol. If you do not input IP address here. System uses default IP 192.168.0.0 and system does not connect to this IP. Can not add two devices at the same time. Click OK button here, system only connect to the corresponding device of current channel.

5.8.1.2 Image

Note:

Slight difference may be found since the connected network camera may not be same model.

Here you can view device property information. The setups become valid immediately after you set. See Figure 5-15.

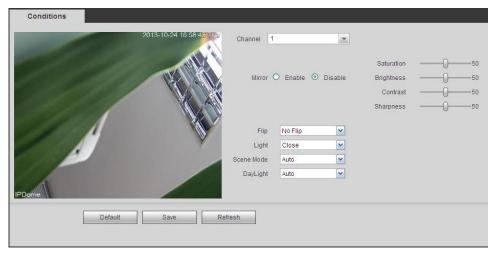


Figure 5-15

Parameter	Function	
Channel	Select a channel from the dropdown list.	
Period	It divides one day (24 hours) to two periods. You can set different hue, brightness, and contrast for different periods.	
Hue (optional)	It is to adjust monitor video brightness and darkness level. The default value is 50.	
	The bigger the value is, the large the contrast between the bright and dark section is and vice versa.	
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50.	
	The larger the number is, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.	
Brightness	It is to adjust monitor window brightness. The default value is 50.	
	The larger the number is , the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Note the video may become hazy if the value is too high. The value ranges from 0 to 100. The recommended value ranges from 40 to 60.	
Contrast	It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50.	
	The larger the number is, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.	

	_		
Sharpness	It is to	adjust sharpness. The default value is 50.	
	The larger the number is, the sharper the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Note the video may become hazy if the value is too high. The value ranges from 0 to 100. The recommended value ranges from 40 to 60.		
White level (optional)	It is to	enhance video effect.	
Color mode (optional)	corres	It includes several modes such as standard, color. You can select corresponding color mode here, you can see hue, brightness, and contrast and etc will adjust accordingly.	
Auto Iris (optional)	It is to	It is to enable/disable auto iris function.	
Flip		It is to switch video up and bottom limit. This function is disabled by default.	
Mirror	It is to switch video left and right limit. This function is disabled by default.		
BLC Mode (optional)	BLC	The device auto exposures according to the environments situation so that the darkest area of the video is cleared	
	WDR	For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time.	
		The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.	
	HLC	After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.	
	Off	It is to disable the BLC function. Note this function is disabled by default.	
Profile (optional)	video.	set the white balance mode. It has effect on the general hue of the This function is on by default.	
	You can select the different scene mode such as auto, sunny, cloudy, home, office, night, disable and etc to adjust the video to the best quality.		
	 Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the vide color is proper. 		
		inny: The threshold of the white balance is in the sunny mode.	
	`	ght: The threshold of the white balance is in the night mode. Istomized: You can set the gain of the red/blue channel. The value	
		istornized. The barroot the gain of the real blue charmer. The value	

	reneges from 0 to 100.	
Day/Night	It is to set device color and the B/W mode switch. The default setup is auto.	
	Color: Device outputs the color video.	
	 Auto: Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.) 	
	B/W: The device outputs the black and white video.	
	Sensor: It is to set when there is peripheral connected IR light.	

5.8.1.3 Encode

5.8.1.3.1 Encode

The encode interface is shown as below. See Figure 5-16.

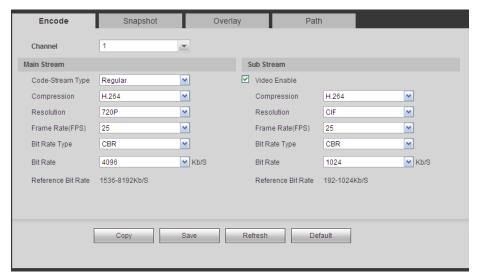


Figure 5-16

Parameter	Function
Channel	Select a channel from the dropdown list.
Video enable	Check the box here to enable extra stream video. This item is enabled by default.
Code stream type	It includes main stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events.
	System supports active control frame function (ACF). It allows you to record in different frame rates.
	For example, you can use high frame rate to record important events, record scheduled event in lower frame rate and it allows you to set different frame rates for motion detection record and alarm record.
Compression	The main bit stream supports H.264 with 1080P as max. resolution. The extra stream supports H.264, MJPEG with D1

	as max. resolution.
Resolution	The resolution here refers to the capability of the network camera.
Frame Rate	PAL: 1 \sim 25f/s; NTSC: 1 \sim 30f/s.
Bit Rate Type	 Main stream: You can set bit rate here to change video quality. The larger the bit rate is, the better the quality is. Refer to recommend bit rate for the detailed information. Extra stream: In CBR, the bit rate here is the max value.
	In dynamic video, system needs to low frame rate or video quality to guarantee the value. The value is null in VBR mode.
Reference bit rate	Recommended bit rate value according to the resolution and frame rate you have set.
Audiod	Enable Audio for Main Stream or Extra Stream
Watermark enable	This function allows you to verify the video is tampered or not.
	Here you can select watermark bit stream, watermark mode and watermark character. The max length is 85-digit. The character can only include number, character and underline.

5.8.1.3.2 Snapshot

The snapshot interface is shown as in Figure 5-17.

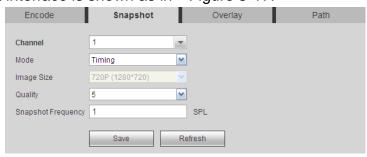


Figure 5-17

Parameter	Function
Snapshot type	 There are two modes: Regular (schedule) and Trigger. Regular snapshot is valid during the specified period you set. Trigger snapshot only is valid when motion detect alarm, tampering alarm or local activation alarm occurs.
Image size	It is the same with the resolution of the main stream.
Quality	It is to set the image quality. There are six levels.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s. Or you can set customized value. The max setup is 3600s/picture.
Сору	Click it; you can copy current channel setup to other channel(s).

5.8.1.3.3 Overlay

The video overlay interface is shown as in Figure 5-18.

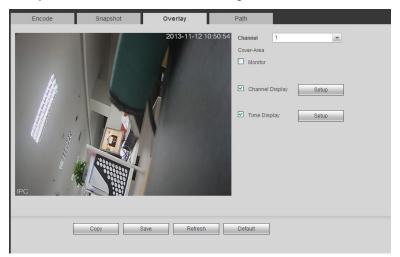


Figure 5-18

Refer to the following sheet for detailed information.

Parameter	Function
Cover-area	Check Preview or Monitor first. Click Set button, you can privacy mask the specified video in the preview or monitor video. System max supports 4 privacy mask zones.
Time Title	You can enable this function so that system overlays time information in video window. You can use the mouse to drag the time title position. You can view time title on the live video of the WEB or the playback video.
Channel Title	You can enable this function so that system overlays channel information in video window. You can use the mouse to drag the channel title position. You can view channel title on the live video of the WEB or the playback video.

5.8.1.3.4 Path

The storage path interface is shown as in Figure 5-19.

Here you can set snap image saved path (in the preview interface) and the record

storage path (in the preview interface). The default setup is C:\PictureDownload and C:\RecordDownload.

Click the Save button to save current setup.

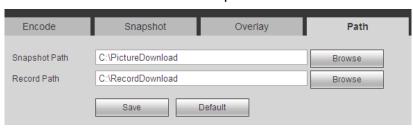


Figure 5-19

5.8.1.4 Channel Name

Here you can set channel name. See Figure 5-20.

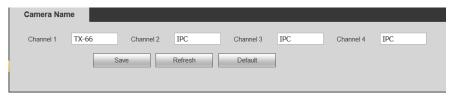


Figure 5-20

5.8.1.5 IP-CAM Upgrade

This interface is to upgrade network camera. See Figure 5-21.

Click Browse button to select upgrade file. Or you can use filter to select several network cameras at the same time.

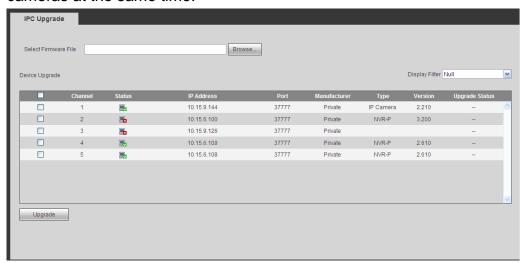


Figure 5-21

5.8.2 Network

5.8.2.1 TCP/IP

The TCP/IP interface is shown as in Figure 5-22.

TCP/IP	
Modus	O Statisch DHCP
MAC Adresse	90 : 02 : a9 : da : b5 : 0d
MTU	1500
IP Version	IPv4 V
IP Address	192 . 168 . 1 . 145
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 1 . 1
Preferred DNS	8 . 8 . 8 . 8
Alternate DNS	8 . 8 . 4 . 4
✓ LAN Download	
	Save Refresh Default

Figure 5-22

Refer to the following sheet for detailed information.

Parameter	Function	
Mode	There are two modes: static mode and the DHCP mode.	
	 The IP/submask/gateway are null when you select the DHCP mode to auto search the IP. 	
	 If you select the static mode, you need to set the IP/submask/gateway manually. 	
	 If you select the DHCP mode, you can view the IP/submask/gateway from the DHCP. 	
	 If you switch from the DHCP mode to the static mode, you need to reset the IP parameters. 	
	 Besides, IP/submask/gateway and DHCP are read-only when the PPPoE dial is OK. 	
Mac Address	It is to display host Mac address.	
IP Version	It is to select IP version. IPV4 or IPV6.	
	You can access the IP address of these two versions.	
IP Address	Use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.	
Subnet Mask	If modus set to DHCP than the subnetmask is filled in automatically.	
Default Gateway	Mostly this is the IP of your router. Under DHCP Default gateway is filled in automatically.	
Preferred DNS	DNS IP address.	
Alternate DNS	Alternate DNS IP address.	
For the IP address of IPv6 version, default gateway, preferred DNS and alternate DNS, the input value shall be 128-digit. It shall not be left in blank.		
LAN Download	System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.	

5.8.2.2 Connection

The connection interface is shown as in Figure 5-23.

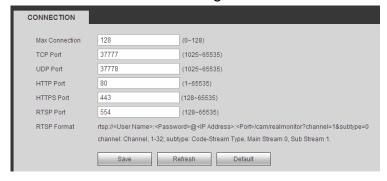


Figure 5-23

Refer to the following sheet for detailed information.

Parameter	Function
Max connection	It is the max Web connection for the same device. The value ranges from 1 to 128. The default setup is 128.
TCP port	The default value is 37777. You can input the actual port number if necessary.
UDP port	The default value is 37778. You can input the actual port number if necessary.
HTTP port	The default value is 80. You can input the actual port number if necessary.
HTTPS	The default value is 443. You can input the actual port number if necessary.
RTSP port	The default value is 554.

5.8.2.3 HTTPS

In this interface, you can set to make sure the PC can successfully login via the HTTPS. It is to guarantee communication data security. The reliable and stable technology can secure the user information security and device safety. See Figure 5-24.

Note

- You need to implement server certificate again if you have changed device IP.
- You need to download root certificate if it is your first time to use HTTPS on current PC.

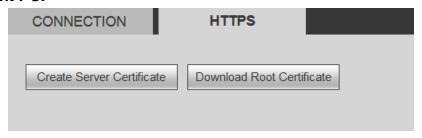


Figure 5-24

5.8.2.4 PPPoE

The PPPoE interface is shown as in Figure 5-25. Input the PPPoE user name and password you get from the IPS (internet service provider) and enable PPPoE function. Save current setup and then reboot the device to get the setup activated. Device connects to the internet via PPPoE after reboot. You can get the IP address in the WAN from the IP address column. Note, you need to use previous IP address in the LAN to login the device. Go to the IP address item to via the device current device information. You can access the client-end via this new address.

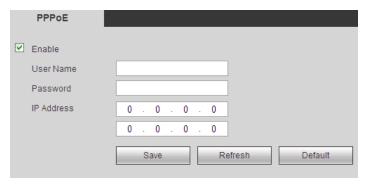


Figure 5-25

5.8.2.5 DDNS

The DDNS interface is shown as in Figure 5-26.

The DDNS is to set to connect the various servers so that you can access the system via the server. Go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address has changed. Select DDNS from the dropdown list (Multiple choices). Before you use this function, make sure your purchased device support current function.



Figure 5-26

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.
Domain Name	Your self-defined domain name.
User	The user name you input to log in the server.
Password	The password you input to log in the server.
Update period	Device sends out alive signal to the server regularly. You can set interval value between the device and DDNS server here.

Quick DDNS and Client-end Introduction

1) Background Introduction

Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the TX-64 via the registered domain name. Besides the general DDNS, the quick DDNS works with the device from the manufacturer so that it can add the extension function.

2) Function Introduction

The quick DDNS client has the same function as other DDNS client end. It realizes the bonding of the domain name and the IP address. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name, password or the ID registration on the server. At the same time, each device has a default domain name (Generated by MAC address) for your option. You can also use customized valid domain name (has not registered.).

3) Operation

Before you use Quick DDNS, you need to enable this service and set proper server address, port value and domain name.

Server address: www.quickddns.com

Port number: 80

 Domain name: There are two modes: Default domain name and customized domain name.

Except default domain name registration, you can also use customized domain name (You can input your self-defined domain name.) After successful registration, you can use domain name to login installed of the device IP.

User name: It is optional. You can input your commonly used email address.

Important

- Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in server attack.
- System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.

5.8.2.6 IP filter

The IP filter interface is shown as in Figure 5-27.

After you enabled trusted sites function, only the IP listed below can access current TX-64. If you enable blocked sites function, the following listed IP addresses can not access current TX-64.

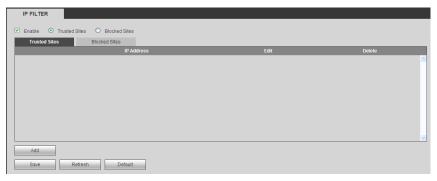


Figure 5-27

5.8.2.7 Email

The email interface is shown as in Figure 5-28.

Email	
✓ Enable	
SMTP Server	10.1.0.97
Port	25
Anonymous	
User Name	ge_xiaoxia
Password	•••••
Sender	ge_xiaoxia@it.com
Encrypt Type	NONE
Subject	NVR ALERT ✓ Attachment
Receiver	(+)
	ge_xiaoxia@it.com
Interval	120 Second(0~3600)
Health Enable	60 Minute (30~1440)
	Test
	Save Refresh Default

Figure 5-28

Parameter	Function
Enable	Check the box here to enable email function.
SMTP Server	Insert the SMTP server address of your mail account.
Port	Default value is 25. You can modify it if necessary.
Anonymity	For the server supports the anonymity function. You can auto login anonymously. You do not need to input the user name. password and the sender information.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address who should receive the message.
Authentication (Encryption mode)	You can select TLS, SSL or none. (Look up which authentication your E-mail host (gmail; outlook, etc.) supports and fill it in.)
Subject	Input email subject here.
Attachment	System can send out the email of the snapshot picture once you check the box here.
Receiver	Input receiver email address here. Max three addresses. It supports SSL, TLS email box.
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. Note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormity event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormity events, which may result in heavy load for the email server.

Parameter	Function
Health mail enable	Check the box here to enable this function.
Update period (interval)	This function allows the system to send out the test email to check the connection is OK or not. Check the box to enable this function and then set the corresponding interval. The value ranges from 30 minutes to 1440 minutes. System can send out the email regularly as you set here.
Email test	The system will automatically sent out a email once to test the connection is OK or not .Before the email test, save the email setup information.

5.8.2.8 FTP

The FTP interface is shown as in Figure 5-29. It is to set FTP IP, port and etc for remote storage.

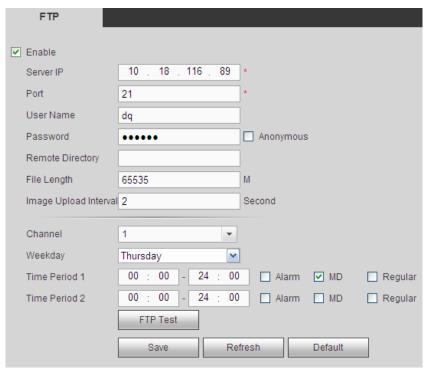


Figure 5-29

5.8.2.9 UPnP

It allows you to establish the mapping relationship between the LAN and the public network. Here you can also add, modify or remove UPnP item. See Figure 5-30.

- In the Windows OS, From Start->Control Panel->Add or remove programs. Click the "Add/Remove Windows Components" and then select the "Network Services" from the Windows Components Wizard.
- Click the Details button and then check the "Internet Gateway Device Discovery and Control client" and "UPnP User Interface". Click OK to begin installation.
- Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the TX-64 can auto detect it via the "My Network Places"

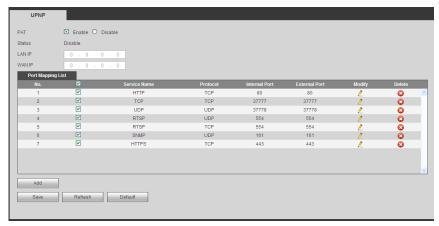


Figure 5-30

Refer to the following sheet for detailed information.

Parameter	Function
PAT	Check the corresponding box to enable PAT function.
Status	Dsiplay UPnP function status.
Port mappling list	It is corresponding to the UPnP mapping information on the router. Check the box before the service name to enable current PAT service. Otherwise, the service is null. • Service name: Custmozied name. • Prptocol: Protocol type. • Internal port: The port maped to the port. • External port: The port current device needs to map. • Device has three mapping items: HTTP/TCP/UDP. Note When you set the external port (outport) of the router, the value ranges from 1024 to 5000. Do not use port 1~255 or system port 256~1023, in case there is conflict.
Add	Click Add button to add map relationship. Note For the data transmission protocol TCP/UDP, the external port and the internal port shall be the same to guarantee proper data transmission.
Delete	Select ona service and then click it o delete map relationship.

Parameter	Function
SNMP Port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the

Parameter	Function
	managers. Make sure the device and the proxy are the same. The read community will read all the objects the SNMP supported in the specified name. The default setup is public.
Write Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Make sure the device and the proxy are the same. The read community will read/write/access all the objects the SNMP supported in the specified name. The default setup is write.
Trap address	The destination address of the Trap information from the proxy program of the device.
Trap port	The destination port of the Trap information from the proxy program of the device. It is for the gateway device and the client-end PC in the LAN to exchange the information. It is a non-protocol connection port. It has no effect on the network applications. It is a UDP port not TCP port. The value ranges from 1 to 165535. The default value is 162.
SNMP version	 Check V1, system only processes the information of V1. Check V2, system only processes the information of V2.

5.8.2.10 Multicast

The multicast interface is shown as in Figure 5-31 Multicast is a transmission mode of data packet. When there is multiple-host to receive the same data packet, multiple-cast is the best option to reduce the broad width and the CPU load. The source host can just send out one data to transit. This function also depends on the relationship of the group member and group of the outer.



Figure 5-31

5.8.2.11 Alarm Center (optional)

The alarm center interface is shown as below. See Figure 5-32. This interface is reserved for you to develop. System can upload alarm signal to the alarm center when local alarm occurs. Before you use alarm center, set server IP, port and etc. When an alarm occurs, system can send out data as the protocol defined, so the client-end can get the data.



Figure 5-32

5.8.2.12 P2P

The P2P interface is shown as in Figure 5-33.

You can scan the QR code to connect the receiver with the MY Secure Pro App.



Figure 5-33

5.8.3 **Event**

5.8.3.1 Video detect

5.8.3.1.1 Motion Detect

Tip: Set the sensitivity and the threshold under region in order to get an alarm when the detected moving signal reached the threshold you set in the device.

The motion detect interface is shown as in Figure 5-34.

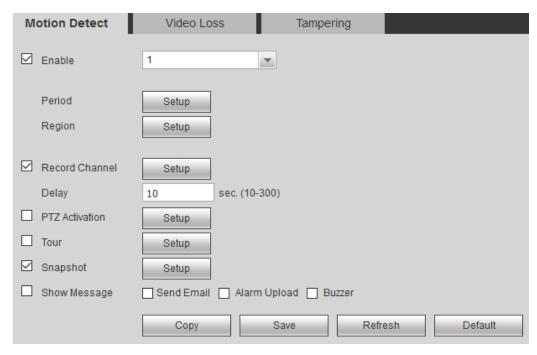


Figure 5-34

Refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable motion detection function.
	Select a channel from the dropdown list. See Figure 5-35.
Period	Motion detection function becomes activated in the specified periods. See Figure 5-35 below.
	There are six periods in one day. Draw a circle to enable corresponding period.
	Click OK button, system goes back to motion detection interface; click save button to exit.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 5s to 600s.
Region	If you select motion detection type, you can click this button to set motion detection zone. The interface is shown as in Figure 5-36. Here you can set motion detection regions. There are four regions for you to set (red, yellow, blue and green). Select one of the colored regions first. Then click the left mouse button on the start point of the area you want to select and drag the mouse to select the area. In the test area the best setting for sensitivity and threshold is 60 and 10 respectively. Depending on your given environment this settings can be vary. Sensitivity and threshold can be set in the range from 0 to 100. The higher the sensitivity and the lower the threshold are set the more motion is detected. For example: When a leaf falls or a cat is running in the selected area a motion will be detected. In this case a subjective setting by the customer is requested! The corresponding colored area displays different detection areas. After you completed the setup remember to click the save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.
Record channel	System auto activates motion detection channel(s) to record once an alarm occurs. Note you need to set motion detect record period and go to Storage-> Schedule to set current channel as schedule record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Alarm out (optional)	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when an alarm occurs.
Latch (optional)	System can delay the alarm output for specified time after an alarm ended. The value ranges from 1s to 300s.
Show message	System can pop up a message to alarm you in the local host screen if you enabled this function.

Parameter	Function
Buzzer	Check the box here to enable this function. The buzzer beeps when an alarm occurs.
Alarm upload	System can upload the alarm signal to the centre (Including alarm centre.
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
PTZ Activation	Here you can set PTZ movement when alarm occurs. Such as go to preset X. See Figure 5-37.
Tour	You need to click setup button to select tour channel. System begins 1-wiindow or multiple-window tour display among the channel(s) you set to record when an alarm occurs. See Figure 5-38.
Snapshot	Click setup button to select snapshot channel. See Figure 5-39.
Video Matrix (optional)	This function is for motion detect only. Check the box here to enable video matrix function. Right now system supports one-channel tour function. System takes "first come and first serve" principle to deal with the activated tour. System will process the new tour when a new alarm occurs after previous alarm ended. Otherwise it restores the previous output status before the alarm activation.

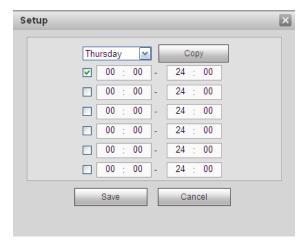


Figure 5-35

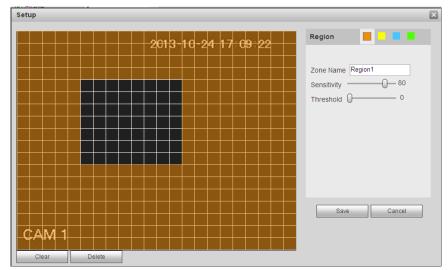


Figure 5-36



Figure 5-37

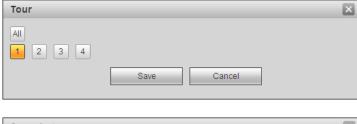


Figure 5-38

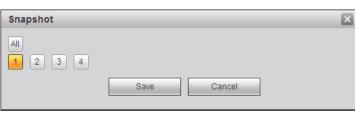


Figure 5-39

5.8.3.1.2 Video Loss

The video loss interface is shown as in Figure 5-40. Note video loss does not support anti-dither, sensitivity, region setup. For rest setups, refer to chapter 5.8.3.1.1 motion detect for detailed information.

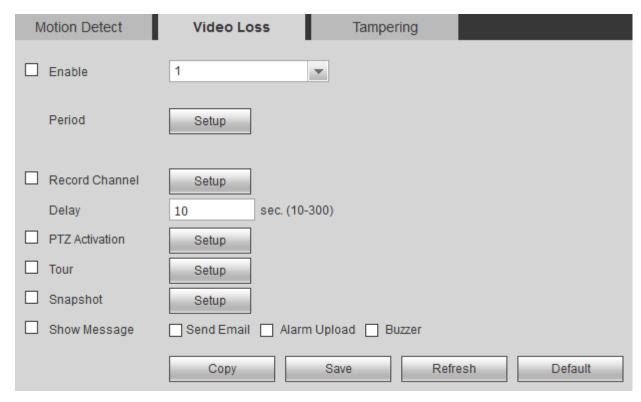


Figure 5-40

5.8.3.1.3 Tampering

The tampering interface is shown as in Figure 5-41. After analysis video, system can generate a tampering alarm when the detected moving signal reached the sensitivity you set here. For detailed setups, refer to chapter 5.8.3.1.1 motion detect for detailed information.

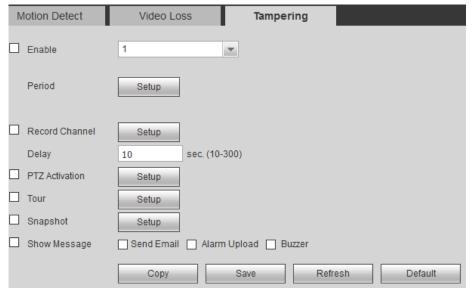


Figure 5-41

5.8.3.2 Alarm

Before operation, make sure you have properly connected alarm devices such as buzzer.

5.8.3.2.1 IPC External Alarm (optional)

The IPC External Alarm interface is shown as in Figure 5-42. Network alarm refers to the alarm signal from the network. System does not anti-dither and sensor type setup.

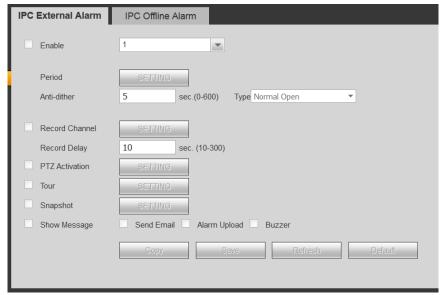


Figure 5-42

5.8.3.2.2 IPC Offline

The IPC offline alarm interface is shown as in Figure 5-43

56. System can generate an alarm once the network camera is offline.

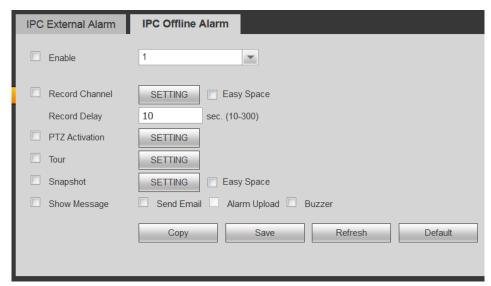


Figure 5-43

5.8.3.3 Abnormality

It includes six types: No HDD, HDD error, no space, disconnect, IP conflict, MAC conflict. See Figure 5-44 through Figure 5-49

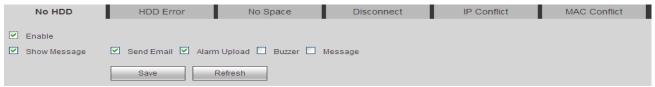


Figure 5-44

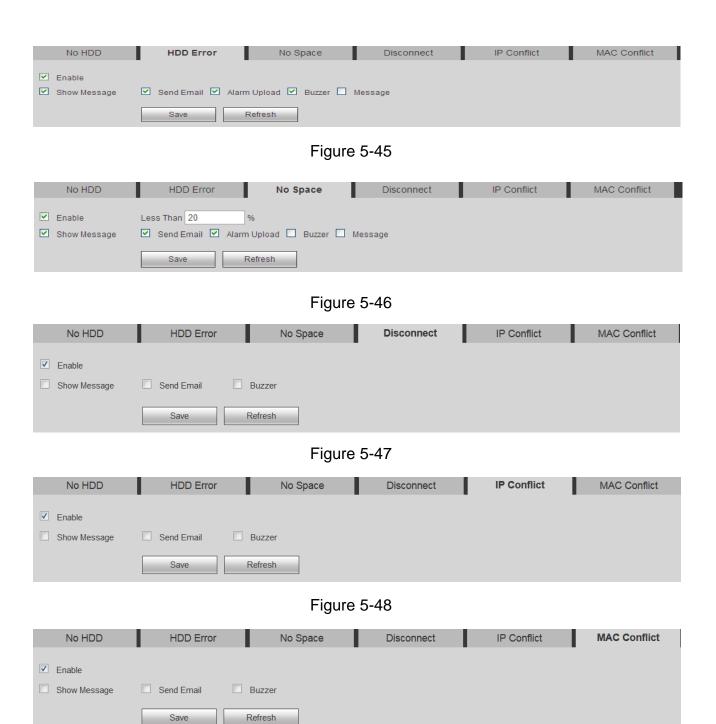


Figure 5-49

Refer to the following sheet for detailed information.

Parameter	Function
Event Type	The abnormal events include: No disk, disk error, disk no space, net disconnection, IP conflict and MAC conflict.
	You can set one or more items here.
	Less than: You can set the minimum percentage value here (For disk not space only). The device can alarm when capacity is not sufficient.
	You need to draw a circle to enable this function.

Parameter	Function
Enable	Check the box here to enable selected function.
Show message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Alarm upload	System can upload the alarm signal to the centre (Including alarm centre.
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
Buzzer	Check the box here to enable this function. The buzzer beeps when an alarm occurs.

5.8.4 Storage

5.8.4.1 Schedule

In this interfaces, you can add or remove the schedule record setup and snapshot. See Figure 5-50.

There are four record modes: **general (auto)**, **motion detect**, **alarm and MD & alarm**.

There are six periods in one day. You can view the current time period setup from the color bar.

- Green color stands for the general record/snapshot.
- Yellow color stands for the motion detect record/snapshot.
- Red color stands for the alarm record/snapshot.
- Blue color stands for MD & alarm record/snapshot.

Click on the button "Setting" in Figure 5-50 to see Figure 5-51. Refer to the table below to see the describtion of the functions.

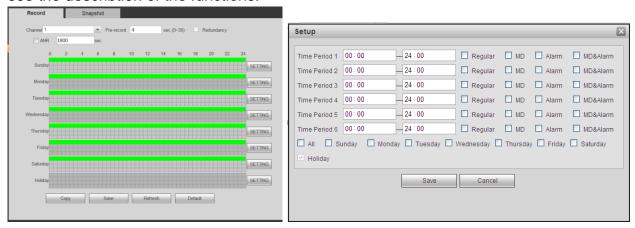


Figure 5-50 Figure 5-51

Click on the button "Copy" in Figure 5-50 and you get the option to copy the settings from on camera to all or just one other. See Figure 5-52.

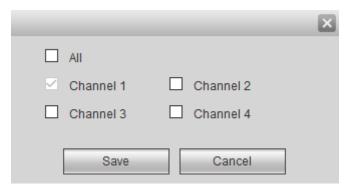


Figure 5-52

Refer to the following sheet for detailed information.

Parameter	Function
Channel	Select a channel from the dropdown list. Figure 5-50
Pre-record	Input pre-record time here. The value ranges from 0 to 30. Figure 5-50.
Redundancy	Check the box here to enable redundancy function. Note this function is null if there is only one HDD. Figure 5-50.
Snapshot	Check the box here to enable snapshot function.
Holiday	Check the box here to enable holiday function.
Setup	Click the Setup button, you can set record period. See Figure 5-50. There are six periods in one day. If you do not check the date at the bottom of the interface, current setup is for today only. Click Save button and then exit.
Сору	Copy function allows you to copy one channel setup to another. After setting in channel, click Copy button, you can go to interface Figure 5-52. You can see current channel name is grey such as channel 1. Now you can select the channel you wan to paste such as channel 2/3/4. If you wan to save current setup of channel 1 to all channels, you can click the first box "ALL". Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.

5.8.4.2 Storage Media

5.8.4.2.1 Local Storage

The local interface is shown as in Figure 5-53. Here you can see HDD information. You can also operate the read-only, read-write, redundancy (if there are more than on HDD) and format operation.

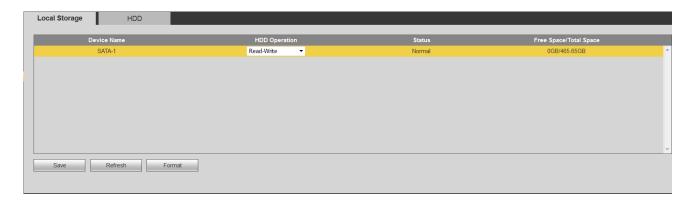


Figure 5-53

5.8.4.2.2 HDD Setting

The HDD interface is to set HDD group. See Figure 5-54.



Figure 5-54

5.8.4.3 Record

Main Stream, Sub Stream & Snapshot

The main stream, sub stream & snapshot interface is shown as in Figure 5-55. Here you can set corresponding HDD group to save main stream.

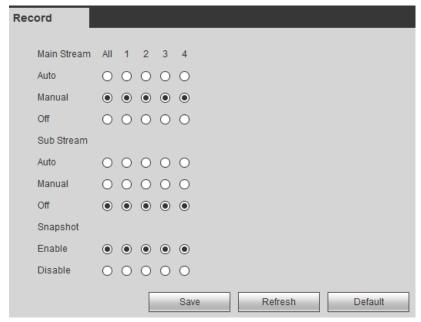


Figure 5-55

Refer to the following sheet for detailed information.

Parameter	Function
Channel	Here you can view channel number. The number displayed here is the max channel amount of your device.

Status	There are three statuses: schedule, manual and stop.
Schedule	System enables auto record function as you set in record schedule setup (general, motion detect and alarm).
Manual	It has the highest priority. Enable corresponding channel to record no matter what period applied in the record setup.
Stop	Stop current channel record no matter what period applied in the record setup.
Start all/ stop all	Check the corresponding All button; you can enable or disable all channels record.

5.8.4.4 ADVANCED

5.8.4.4.1 Main Stream

The main stream interface is shown as in Figure 5-56. Here you can set corresponding HDD group to save main stream.

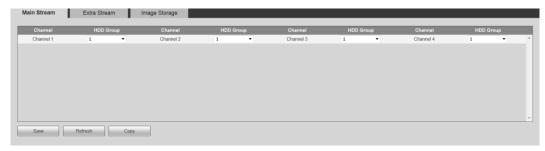


Figure 5-56

5.8.4.4.2 Extra Stream

The extra stream interface is shown as in Figure 5-57. Here you can set corresponding HDD group to save extra stream.



Figure 5-57

5.8.4.4.3 Image Storage

The Image Storage interface is shown as in Figure 5-58. Here you can set corresponding HDD group to save image storage.



Figure 5-58

5.8.5 Setting 5.8.5.1 General

The general interface includes general, date/time and holiday setup.

5.8.5.1.1 General

The general interface is shown as in Figure 5-59.

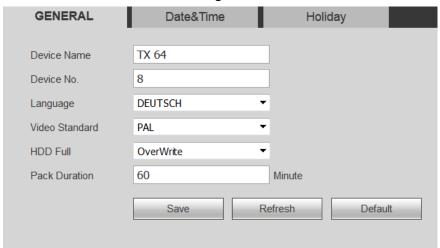


Figure 5-59

Refer to the following sheet for detailed information.

Parameter	Function
Device Name	It is to set device name.
Device No.	It is device channel number.
Language	You can select the language from the dropdown list.
	Note the device needs to reboot to get the modification activated.
Video Standard	This is to display video standard such as PAL.
HDD full	Here is for you to select working mode when hard disk is full. There are two options: stop recording or overwrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
Pack duration	Here is for you to specify record duration. The value ranges from 1 to 120 minutes. Default value is 60 minutes.

5.8.5.1.2 Date and time

The date and time interface is shown as in Figure 5-60 can be configured on this page.

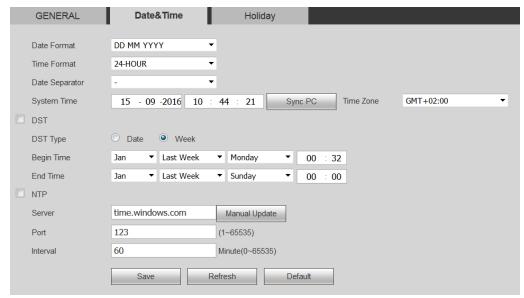


Figure 5-60

Refer to the following sheet for detailed information.

Parameter	Function
Date format	Here you can select date format from the dropdown list.
Time Format	There are two options: 24-H and 12-H.
Date Separator	Select the date separator from the dropdown list.
Time zone	The time zone of the device.
System time	It is to set system time. It becomes valid after you set.
Sync PC	You can click this button to save the system time as your PC current time.
DST	Here you can set day night save time begin time and end time. You can set according to the date format or according to the week format.
NTP	You can check the box to enable NTP function.
NTP server	You can set the time server address.
Port	It is to set the time server port.
Interval	It is to set the sync periods between the device and the time server.

5.8.5.1.3 Holiday

Holiday setup interface is shown as in Figure 5-61.

Here you can click Add holidays box to add a new holiday and then click Save button to save.

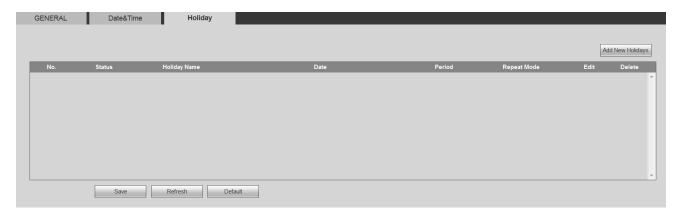


Figure 5-61

5.8.5.2 Account

Note:

- For the character in the following user name or the user group name, system max supports 6-digits. The space in the front or at the end of the string is null. The valid string includes: character, number, and underline.
- The user amount default setup is **64** and the group amount default setup is **20**. The factory default setup includes two levels: user and admin. You can set the corresponding group and then set the rights for the respective user in the specified groups.
- User management adopts group/user modes. The user name and the group name shall be unique. One user shall be included in only one group. See Figure 5-76.

5.8.5.2.1 User

In this interface you can add/remove user and modify user name. See Figure 5-62.

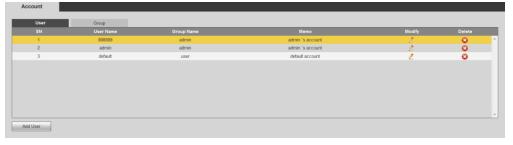


Figure 5-62

Add user: It is to add a name to group and set the user rights. See Figure 5-63.

There are four default users: admin/888888 and hidden user "default". Except user 666666, other users have administrator right. Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login. Here you can input the user name and password and then select one group for current user. **Note**: the user rights shall not exceed the group right setup. For convenient setup, make sure the general user has the lower rights setup than the admin.

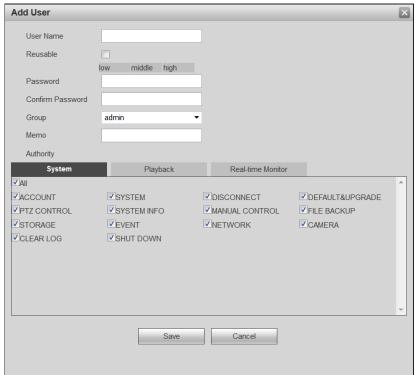


Figure 5-63

Modify user

It is to modify the user property, belonging group, password and rights. See Figure 5-64

Modify password

It is to modify the user password. You need to input the old password and then input the new password twice to confirm the new setup. Click the OK button to save. **Note**: the password ranges from 1-digit to 6-digit. It shall include the number only. For the user of the account rights, he can modify the password of other users.

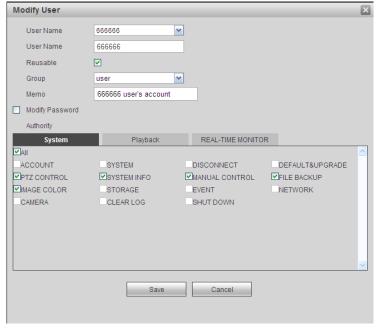


Figure 5-64

5.8.5.2.2 Group

The group management interface can add/remove group, modify group password and etc.

The interface is shown as in Figure 5-56.



Figure 5-65

Add group: It is to add group and set its corresponding rights. See Figure 5-66 Input the group name and then check the box to select the corresponding rights. It includes: shutdown/reboot device, live view, record control, PTZ control and etc.

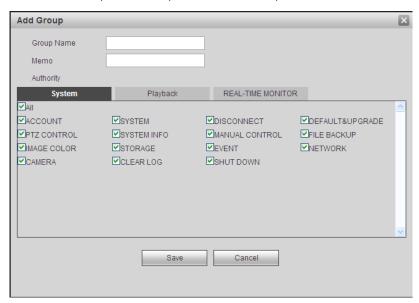


Figure 5-66

Modify group

Click the modify group button, you can see an interface is shown as in Figure 5-67 Here you can modify group information such as remarks and rights.

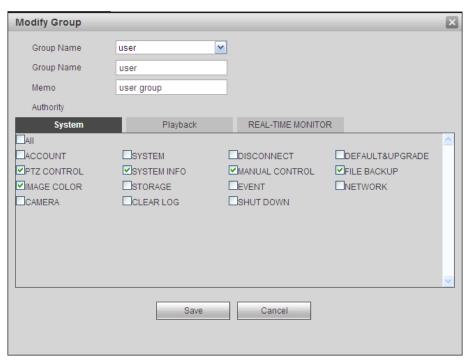


Figure 5-67

5.8.5.3 Display

Display interface includes GUI, TV adjust, Tour and zero-channel encoding. 5.8.5.3.1 Display

Here you can set background color and transparency level. See Figure 5-68.

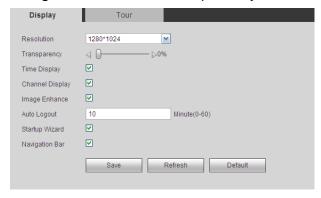


Figure 5-68

Refer to the following sheet for detailed information.

Parameter	Function
Resolution	There are four options: 1920×1080, 1280×1024(default), 1280×720,1024×768. Note the system needs to reboot to activate current setup.
Color Mode	Choose from he dropdown menu, standard, bright, soft or Colorful.
Transparency	Here is for you to adjust transparency. The value ranges from 128 to 255.
Time Display/ Channel Display	Check the box here, you can view system time and channel number on the monitor video.
Image enhance	Check the box; you can optimize the margin of the preview video.

5.8.5.3.2 Tour

The tour interface is shown as in Figure 5-69. Here you can set tour interval, split mode, motion detect tour and alarm tour mode.

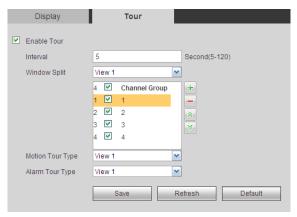


Figure 5-69

Refer to the following sheet for detailed information.

	-
Parameter	Function
Enable tour	Check the box here to enable tour function.
Interval	Here is for you to adjust transparency. The value ranges from 5 to 120s. The default setup is 5s.
Split	Here you can set window mode and channel group. System can support 1/4-window according to device channel amount.
Motion tour/ Alarm tour	Here you can set motion detect tour/alarm tour window mode. System supports 1/4-window now.

5.8.5.4 Default

The default setup interface is shown as in Figure 5-70. Here you can select Network/Event/Storage/Setting/Camera. Or you can check the All box to select all items.



Figure 5-70

5.8.5.5 Import/Export

The interface is shown as in Figure 5-71. This interface is for you to export or import the configuration files.

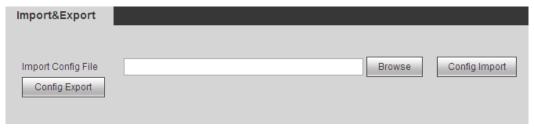


Figure 5-71

Refer to the following sheet for detailed information.

Parameter	Function	
Browse	Click to select import file.	
Import	It is to import the local setup files to the system.	
Export	It is to export the corresponding WEB setup to your loca PC.	

5.8.5.6 Auto maintain

The auto maintains interface is shown as in Figure 5-72. Here you can select auto reboot and auto delete old files interval from the dropdown list. If you want to use the auto delete old files function, you need to set the file period. Click Manual reboot button, you can restart device manually.

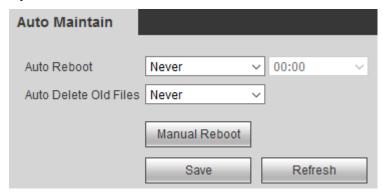


Figure 5-72

5.8.5.7 Upgrade

The upgrade interface is shown as in Figure 5-73. Select the upgrade file and then click the update button to begin update. Note the file name shall be as *.bin. During the upgrade process, do not unplug the power cable, network cable, or shutdown the device.

Important

<u>Improper upgrade program may result in device mal function! Make sure the</u> operation is operated under the supervision of the professional engineer!



Figure 5-73

5.9 Information

5.9.1 Version

The version interface is shown as in Figure 5-74_1 Here you can view record channel, alarm input/output information, software version, release date and etc. Note the following information is for reference only.



Figure 5-74_1

5.9.2 Log

Here you can view system log. See Figure 5-74

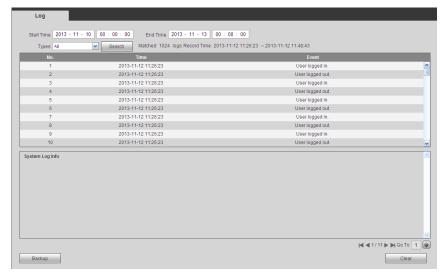


Figure 5-74

Refer to the following sheet for log parameter information.

Parameter	Function
Туре	Log types include: all, system operation, configuration operation, data
	operation, event operation, record operation, user management, log
	clear, playback and connection.
Start time	Set the start time of the requested log.
End time	Set the end time of the requested log.
Search	You can select log type from the drop down list and then click search
	button to view the list.
	You can click the stop button to terminate current search operation.
Detailed information	You can select one item to view the detailed information.
Clear	You can click this button to delete all displayed log files. Note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

5.9.3 Online User

The online user interface is shown as in Figure 5-75.



Figure 5-75

5.10 Playback

Click Playback button, you can see an interface is shown as in Figure 5-76.

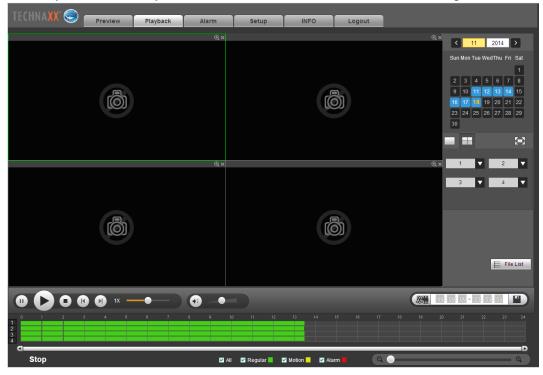


Figure 5-76

5.10.1 Search Record

Set record type, record date, window display mode and channel name.

Select Date

You can click the date on the right panel to select the date. The yellow highlighted date is system current date and the blue highlighted date means it has record files.

Window Split

Select window split mode. Click to display in **full screen**. Click ESC button to exit. See Figure 5-77.



- Select Channel
- $1\sim4$ means main stream and A1 \sim A4 means sub stream.
- Select Record Type

Check the corresponding box to select record type. See Figure 5-78.



5.10.2 File List

Click File list button, you can see the corresponding files in the list. See Figure 5-79.

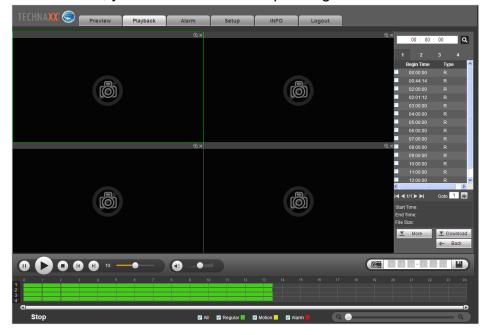


Figure 5-79

5.10.3 Playback

Select a file you want to play and then click Play button, system can begin playback. You can select to playback in full-screen. **Note:** for one channel, system can not playback and download at the same time. You can use the playback control bar to implement various operations such as play, pause, stop, slow play, fast play and etc. See Figure 5-80.

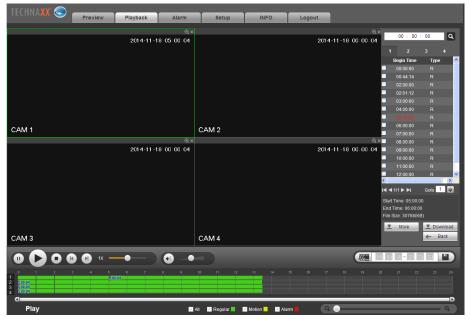


Figure 5-80

5.10.4 Download

Select the file(s) you want to download and then click download button, you can see an interface shown as in Figure 5-81. The Download button becomes Stop button and there is a process bar for your reference. Go to you default file saved path to view the files.

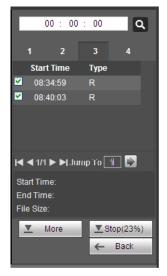


Figure 5-81

5.10.5 More

It is for you to search record or picture. You can select record channel, record type and record time to download. Or you can use watermark function to verify file.

5.10.5.1 Download By File

Select channel, record type, bit stream type and then input start time and end time. Click Search button, the download by file interface is shown as in Figure 5-82.

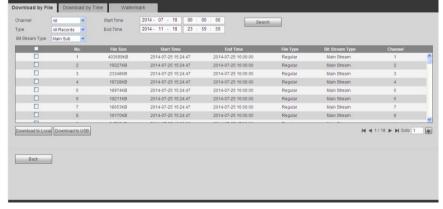


Figure 5-82

Check the file(s) you want to download and there are two options for you to save the file(s).

- Download to local
- Download to Flash Drive

Click Download to local, system pops up the following interface for you to set record format and saved path. See Figure 5-83.

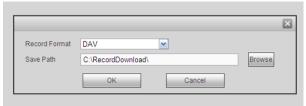


Figure 5-83

You can click OK to download and view the download process. After the download operation, you can see corresponding dialog box.

5.10.5.2 Download by Time

Select channel, bit stream type, start time and end time. Click Download to Local button, you can see download by time interface is shown as in Figure 5-82.

Set record format (DAV or ASF) and path, you can click OK to download and view the download process. After the download operation, you can see corresponding dialog box.

5.10.5.3 Watermark

Watermark interface is shown as in Figure 5-82. Select a file and then click Verify button to see the file has been tampered with or not

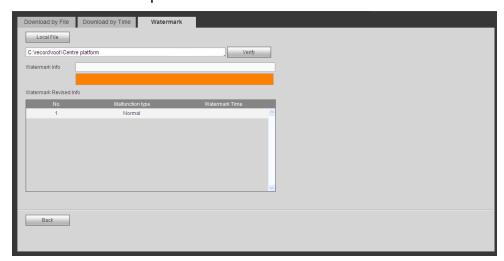


Figure 5-84

5.11 Alarm

Click alarm function, you can see an interface is shown as Figure 5-85. Here you can set device alarm type and alarm sound setup (Make sure you have enabled audio function of corresponding alarm events.).

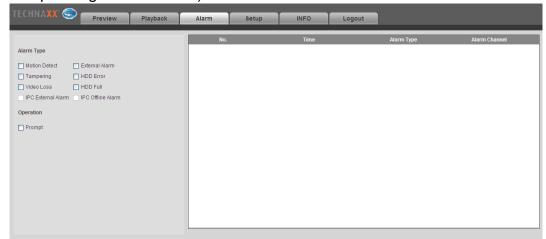


Figure 5-85

Refer to the following sheet for detailed information.

Туре	Parameter	Function
Alarm Type	Video loss	System alarms when video loss occurs.
	Motion detection	System alarms when motion detection alarm occurs.
	Tampering	System alarms when camera is viciously masking.
	HDD full	System alarms when disk is full.
	HDD error	System alarms when disk error occurs.
	IP-CAM external	It refers to the on-off signal from the network camera. It
	alarm (optional)	can activate the TX-64 local activation operation.
	IP-CAM offline	System can generate an alarm when the network
	alarm (optional)	camera and the TX-64 are disconnected.
Operation	Prompt	Check the box here, system can automatically pops up
		an alarm icon on the Alarm button in the main interface
		when there is an alarm.
Alarm Sound	Play alarm	System sends out alarm sound when an alarm occurs.
(optional)	sound	You can specify as you wish.
	Sound path	Here you can specify alarm sound file.

5.12 Log out

Click log out button, system goes back to log in interface. See Figure 5-86. You need to input user name and password to login again.



Figure 5-86

5.13 Uninstall Web Control

You can use web un-install tool "uninstall web.bat" to un-install web control.

Note: before you un-installation, close all web pages, otherwise the un-installation might result in error

6 Glossary

- DHCP: DHCP (Dynamic Host Configuration Protocol) is a network protocol. It is one of the TCP/IP protocol cluster. It is principally used to assign temporary IP addresses to computers on a network.
- DDNS: DDNS (Dynamic Domain Name Server) is a service that maps Internet domain names to IP addresses. This service is useful to anyone who wants to operate a server (web server, mail server, ftp server and etc) connected to the internet with a dynamic IP or to someone who wants to connect to an office computer or server from a remote location with software.
- eSATA: eSATA(External Serial AT) is an interface that provides fast data transfer for external storage devices. It is the extension specifications of a SATA interface.
- **GPS:** GPS (Global Positioning System) is a satellite system, protected by the US military, safely orbiting thousands of kilometers above the earth.
- PPPoE: PPPoE (Point to Point Protocol over Ethernet) is a specification for connecting
 multiple computer users on an Ethernet local area network to a remote site. Now the
 popular mode is ADSL and it adopts PPPoE protocol.
- WIFI: Wi-Fi is the name of a popular wireless networking technology that uses radio
 waves to provide wireless high-speed Internet and network connections. The standard is
 for wireless local area networks (WLANs). It is like a common language that all the
 devices use to communicate to each other. It is actually IEEE802.11, a family of standard
 The IEEE (Institute of Electrical and Electronics Engineers Inc.)
- Dual-stream: The dual-stream technology adopts high-rate bit stream for local HD storage such as QCIF/CIF/2CIF/DCIF/4CIF encode and one low-rate bit stream for network transmission such as QCIF/CIF encode. It can balance the local storage and remote network transmission. The dual-stream can meet the difference band width requirements of the local transmission and the remote transmission. In this way, the local transmission using high-bit stream can achieve HD storage and the network transmission adopting low bit stream suitable for the fluency requirements of the 3G network such as WCDMA, EVDO, TD-SCDMA..
- On-off value: It is the non-consecutive signal sampling and output. It includes remote sampling and remote output. It has two statuses: 1/0.

7 FAQ

Questions	Solutions
TX-64 can not boot up properly.	 Input power is not correct. Power connection is not correct. Power switch button is damaged. Program upgrade is wrong. HDD malfunction or something wrong with HDD ribbon. Seagate DB35.1, DB35.2, SV35 or Maxtor 17-g has compatibility problem. Upgrade to the latest version to solve this problem. Front panel error. Main board is damaged.
TX-64 often automatically shuts down or stops running.	 Input voltage is not stable or it is too low. HDD malfunction or something wrong wit the ribbon. Button power is not enough. Front video signal is not stable. Working environment is too harsh, too much dust. Hardware malfunction.
System can not detect hard disk.	 HDD is broken. HDD ribbon is damaged. HDD cable connection is loose. Main board SATA port is broken.
There is no video output whether it is one-channel, multiple-channel or all-channel output.	 Program is not compatible. Upgrade to the latest version. Brightness is 0. Restore factory default setup. Check your screen saver. TX-64 hardware malfunctions.
I can not search local records.	 HDD ribbon is damaged. HDD is broken. Upgraded program is not compatible. The recorded file has been overwritten. Record function has been disabled.
Video is distorted when searching local records.	 Video quality setup is too low. Program read error, bit data is too small. There is mosaic in the full screen. Restart the TX-64 to solve this problem. HDD data ribbon error. HDD malfunction. TX-64 hardware malfunctions.
Time display is not correct.	 Setup is not correct Battery contact is not correct or voltage is too low. Crystal is broken.

Questions	Solutions
TX-64 can not control	 Check first if the camera is PTZ compatible! PTZ decoder setup, connection or installation is not correct. Cable connection is not correct. PTZ setup is not correct.
PTZ.	 PTZ decoder and TX-64 protocol is not compatible. PTZ decoder and TX-64 address is not compatible. When there are several decoders, add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control is not stable. The distance is too far.
I can not log in client-end or web.	 For Windows 98 or Windows ME user, update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Note right now, our TX-64 is not compatible with Windows VISTA control. ActiveX control has been disabled. No dx8.1 or higher. Upgrade display card driver. Network connection error. Network setup error. Password or user name is invalid. Client-end is not compatible with TX-64 program.
There is only mosaic no video when preview or playback video file remotely.	 Network fluency is not good. Client-end resources are limit. Current user has no right to monitor.
Network connection is not stable.	 Network is not stable. IP address conflict. MAC address conflict. PC or device network card is not good.
Burn error /USB back error.	 Burner and TX-64 are in the same data cable. System uses too much CPU resources. Stop record first and then begin backup. Data amount exceeds backup device capacity. It may result in burner error. Backup device is not compatible. Backup device is damaged.
Keyboard can not control TX-64.	 TX-64 serial port setup is not correct Address is not correct When there are several switchers, power supply is not enough. Transmission distance is too far.

Questions	Solutions
Alarm signal can not been disarmed.	 Alarm setup is not correct. Alarm output has been open manually. Input device error or connection is not correct. Some program versions may have this problem. Upgrade your system.
Alarm function is null.	 Alarm setup is not correct. Alarm cable connection is not correct. Alarm input signal is not correct. There are two loops connect to one alarm device.
Record storage period is not enough.	 Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct. HDD capacity is not enough. HDD is damaged.
Can not playback the downloaded file.	 There is no media player. No DXB8.1 or higher graphic acceleration software. There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player. No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.
Forgot local menu operation password or network password	Contact your local service engineer or our sales person for help. We can guide you to solve this problem.
There is no video. The screen is in black.	 IP-CAM IP address is not right. IP-CAM port number is not right. IP-CAM account (user name/password) is not right. IP-CAM is offline.
The displayed video is not full in the monitor.	Cheek current resolution setup. If the current setup is 1920*1080, then you need to set the monitor resolution as 1920*1080.
There is no HDMI output.	Displayer is not in HDMI mode.HDMI cable connection is not right.
The video is not fluent when I view in multiple-channel mode from the client-end.	 The network bandwidth is not sufficient. The multiple-channel monitor operation needs at least 100M or higher. Your PC resources are not sufficient. For 16-ch remote monitor operation, the PC shall have the following environment: Quad Core, 2G or higher memory, independent displayer, display card memory 256M or higher.

Questions	Solutions
I can not connect to the IP-CAM	 Make sure the IP-CAM has booted up. IP-CAM network connection is right and it is online IP-CAM IP is in the blacklist. The device has connected to the too many IP-CAM. It can not transmit the video. Check the IP-CAM port value and the time zone is the same as the TX-64. Make sure current network environment is stable.
My admin account has been changed and I can not log in.	Use telnet and then input the following command: cd /mnt/mtd/Config/ rm -rf group rm -rf password Reboot the device to restore the default password.
After I login the Web , I can not find the remote interface to add the IP-CAM.	Clear the Web controls and load again.
There is IP and gateway, I can access the internet via the router. But I can not access the internet after I reboot the TX-64.	Use command PING to check you can connect to the gateway or not. Use telnet to access and then use command "ifconfig –a" to check device IP address. If you see the subnet mask and the gateway has changed after the reboot. Upgrade the applications and set again.
I use the VGA montior.I want to know if I use the multple-window mode, I see the video from the main stream or the sub stream?	 For 32-channel series product, the 9/16-window is using the sub stream. For 4/8/16 series product, system is using the main stream no matter you are in what display mode.

This product includes software developed by third parties, including software which is released under the GNU General Public License Version 2 (GPL v2). This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version. You may obtain a complete machine-readable copy of the source code for the above mentioned software under the terms of GPL v2 without charge except for the cost of media, shipping, and handling, upon written request to Technaxx GmbH & Co. KG, Kruppstraße 105, 60388 Frankfurt am Main, Germany.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details. You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA. (Notice from Technaxx: A copy of the GPL is included below).

GNU GENERAL PUBLIC LICENSE: Version 2, June 1991 / Copyright (C) 1989, 1991 Free Software Foundation, Inc. / 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA. Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- **2.** You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
- **a)** You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- **b)** You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works.

But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it. Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program. In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

- **3.** You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
- **a)** Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- **b)** Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- **c)** Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable.

However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

- **4.** You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- **5.** You are not required to accept this License, since you have not signed it. Nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
- **6.** Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
- **7.** If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License.

If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all.

For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices.

Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- **8.** If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- **9.** The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

- 11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
- 12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

HOW TO APPLY THESE TERMS TO YOUR NEW PROGRAMS

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

This manual is for better understanding the product (TX-64, TX-65, TX-66, TX-67)!

Copyright (C) 2016 Technaxx

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.

This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names: Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<Signature of Ty Coon>, 1 April 1989, Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.