Digital Video Recorder

Quick Start Guide

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Quick Start Guide

About this Manual

This Manual is applicable to LTD83XXK-ET/ETC and LTD85XXK-ST Series HD-TVI Digital Video Recorder (DVR).

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website.

Please use this user manual under the guidance of professionals.

Legal Disclaimer

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. OUR COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

Applicable Models

This manual is applicable to the models listed in the following table.

Series	Model
83XXK-ET	LTD8304K-ET
	LTD8308K-ET
	LTD8316K-ET
83XXK-ETC	LTD8308K-ETC
85XXK-ST	LTD8504K-ST
	LTD8508K-ST
	LTD8516K-ST

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
NOTE	Provides additional information to emphasize or supplement important points of the main text.
WARNING	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 100~240 VAC or 12 VDC according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Chapter1 Panels Description

1.1 Front Panel

NOTE

The front panel vaires according to different models. Please refer to the actual product.

Figure 1-1 Front Panel

Table 1-1 Description of Front Panel

No.	Name		Function Description
1	Status Indicators		POWER: The POWER indicator turns green when NVR is powered up.
			STATUS: 1.The light is green when the IR remote control is enabled; 2.The light is red when the function of the composite keys (SHIFT) are used; 3. The light is out when none of the above condition is met/
			Tx/Rx: TX/RX indicator flickers green when network connection is functioning normally.
2	USB Interfaces		Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
3	Composite Keys	1/MENU:	Enter numeral “1”;
			Access the main menu interface.
		2/ABC/F1:	Enter numeral “2”;
			Enter letters “ABC”;
			The F1 button when used in a list field will select all items in the list.
			In PTZ Control mode, it will turn on/off PTZ light and when the image is zoomed in, the key is used to zoom out.
		3/DEF/F2:	Enter numeral “3”;
			Enter letters “DEF”;
			The F2 button is used to change the tab pages.
			In PTZ control mode, it zooms in the image.
		4/GHI/ESC:	Enter numeral “4”;
			Enter letters “GHI”;
			Exit and back to the previous menu.

No.	Name		Function Description
		5/JKL/EDIT:	Enter numeral “5”;
			Enter letters “JKL”;
			Delete characters before cursor;
			Check the checkbox and select the ON/OFF switch;
			Start/stop record clipping in playback.
		6/MNO/PLAY:	Enter numeral “6”;
			Enter letters “MNO”;
			Playback, for direct access to playback interface.
		7/PQRS/REC:	Enter numeral “7”;
			Enter letters “PQRS”;
			Open the manual record interface.
		8/TUV/PTZ:	Enter numeral “8”;
			Enter letters “TUV”;
			Access PTZ control interface.
		9/WXYZ/PREV:	Enter numeral “9”;
			Enter letters “WXYZ”;
			Multi-channel display in live view.
		0/A:	Enter numeral “0”;
			Shift the input methods in the editing text field. (Upper and lowercase, alphabet, symbols or numeric input).
			Double press the button to switch the main and auxiliary output.
4	**SHIFT**		Switch between the numeric or letter input and functions of the composite keys. (Input letter or numbers when the light is out; Realize functions when the light is red.)
5	**Control Buttons**		Directional buttons: In menu mode, the direction buttons are used to navigate between different fields and items and select setting parameters. In playback mode, the Up and Down buttons are used to speed up and slow down record playing, and the Left and Right buttons are used to move the recording 30s forwards or backwards. In the image setting interface, the up and down button can adjust the level bar of the image parameters. In live view mode, these buttons can be used to switch channels.
			Enter: The Enter button is used to confirm selection in menu mode; or used to check checkbox fields and ON/OFF switch. In playback mode, it can be used to play or pause the video. In single-frame play mode, pressing the Enter button will play the video by a single frame.

No.	Name	Function Description
		And in auto sequence view mode, the buttons can be used to pause or resume auto sequence.
6	IR Receiver	Receiver for IR remote.

1.2 Rear Panel

NOTE

The rear panel vaires according to different models. Please refer to the actual product.

- **Rear Panel 1**

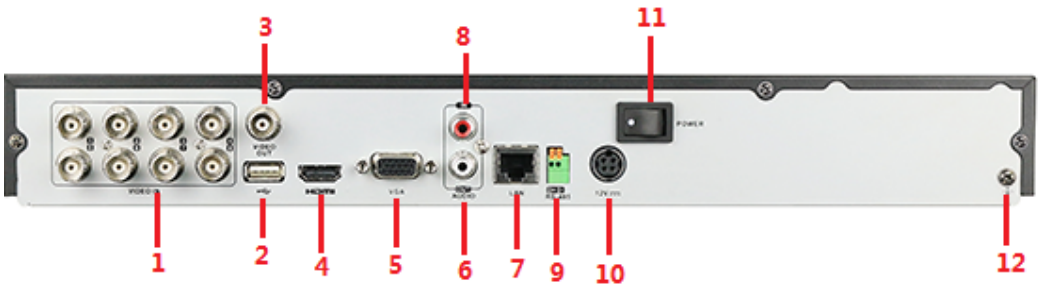

Figure 1-2 Rear Panel of LTD83XXK-ET/ETC

- **Rear Panel 2**

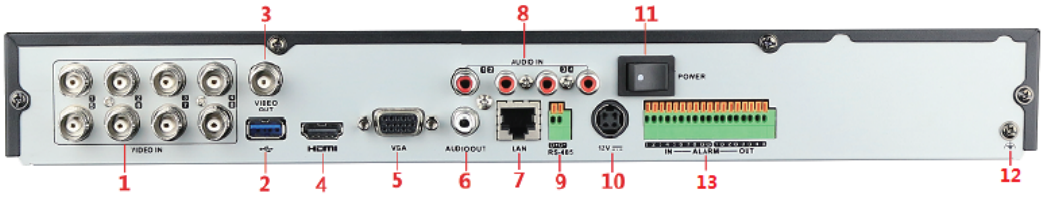

Figure 1-3 Rear Panel of LTD85XXK-ST

Table 1-2 Description of Rear Panel

No.	Item	Description
1	VIDEO IN	BNC interface for TVI and analog video input.
2	USB Port	Universal Serial Bus (USB) port for additional devices.
3	VIDEO OUT	BNC connector for video output.
4	HDMI	HDMI video output connector.
5	VGA	DB15 connector for VGA output. Display local video output and menu.
6	AUDIO OUT	RCA connector.
7	LAN Network Interface	Connector for network

8	**AUDIO IN**	RCA connector
9	**RS-485**	Connector for RS-485 devices.
10	**Power Supply**	DC 12V power supply.
11	**Power Switch**	Switch for turning on/off the device.
12	**GND**	Ground.
13	**Alarm In/Out**	Connector for alarm input/output.

Chapter 2 Installation and Connections

2.1 DVR Installation

During installation of the DVR:

- Use brackets for rack mounting.
- Ensure ample room for audio and video cables.
- When routing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
- Connect the alarm cable.
- Allow at least 2 cm (≈0.75-inch) of space between racks mounted devices.
- Ensure the DVR is grounded.
- Environmental temperature should be within the range of -10 to +55º C, +14 to +131º F.
- Environmental humidity should be within the range of 10% to 90%.

2.2 Hard Disk Installation

Before you start

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

One or two SATA hard disks can be installed depending on different models.

Tools Required: Screwdriver.

NOTE

As the installation steps of HDD are similar among different models, here we just take an example.

Step 1 Remove the cover from the DVR by unfastening the screws on the back and side.

Figure 2-1 Remove Cover

Step 2 Connect one end of the data cable to the motherboard of DVR and the other end to the HDD.

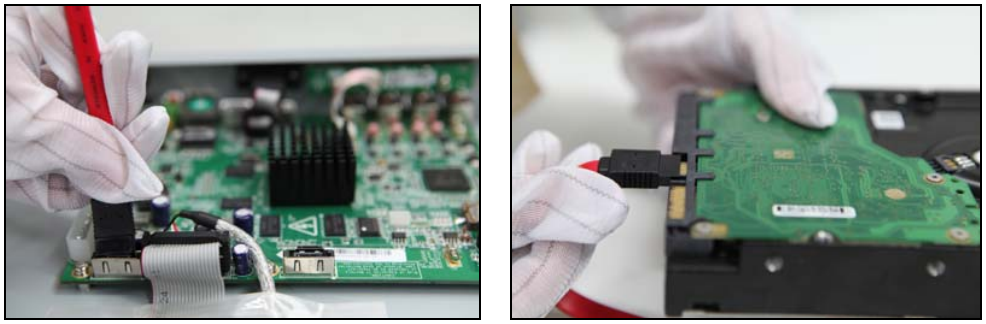

Figure 2-2 Connect Data Cable

Step 3 Connect the power cable to the HDD.

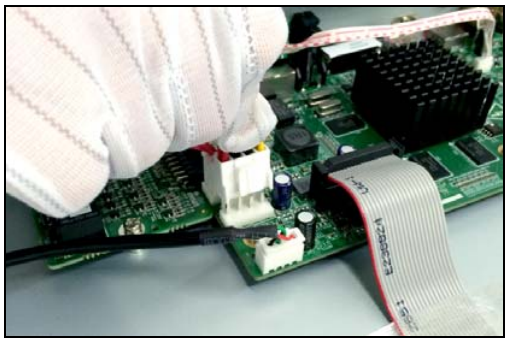

Figure 2-3 Connect Power Cable

Step 4 Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.

Figure 2-4 Fix Hard Disk

Step 5 Re-install the cover of the DVR and fasten screws.

2.3 RS-485 and Controller Connection

Typical Connection:

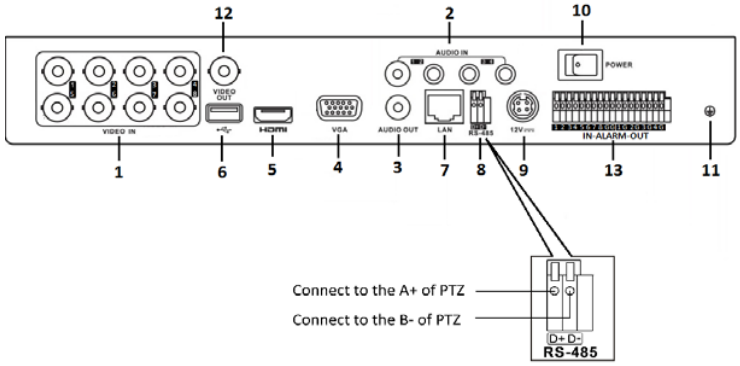

Figure 2-5 Controller Connection A

To connect PTZ to the DVR:

Step 1 Disconnect *pluggable block* from the RS-485 terminal block.

Step 2 Press and hold the orange part of the pluggable block; insert signal cables into slots and release the orange part. Ensure signal cables are in tight.

Step 3 Connect A+ on PTZ to D+ on terminal block and B- on controller to D- on terminal block. Fasten stop screws.

Step 4 Connect pluggable block back into terminal block.

NOTE

Make sure both the controller and DVR are grounded.

2.4 HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for an hour at a fixed bit rate.

Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	84M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M
1536K	675M
1792K	787M
2048K	900M
4096K	1.76G
8192K	3.52G
16384K	7.03G

Please note that supplied values for storage space used is just for reference. The storage values in the chart are estimated by formulas and may have some deviation from actual value.

Chapter 3 Menu Operation

3.1 Menu Structure

NOTE

The menu structure varies according to different models.

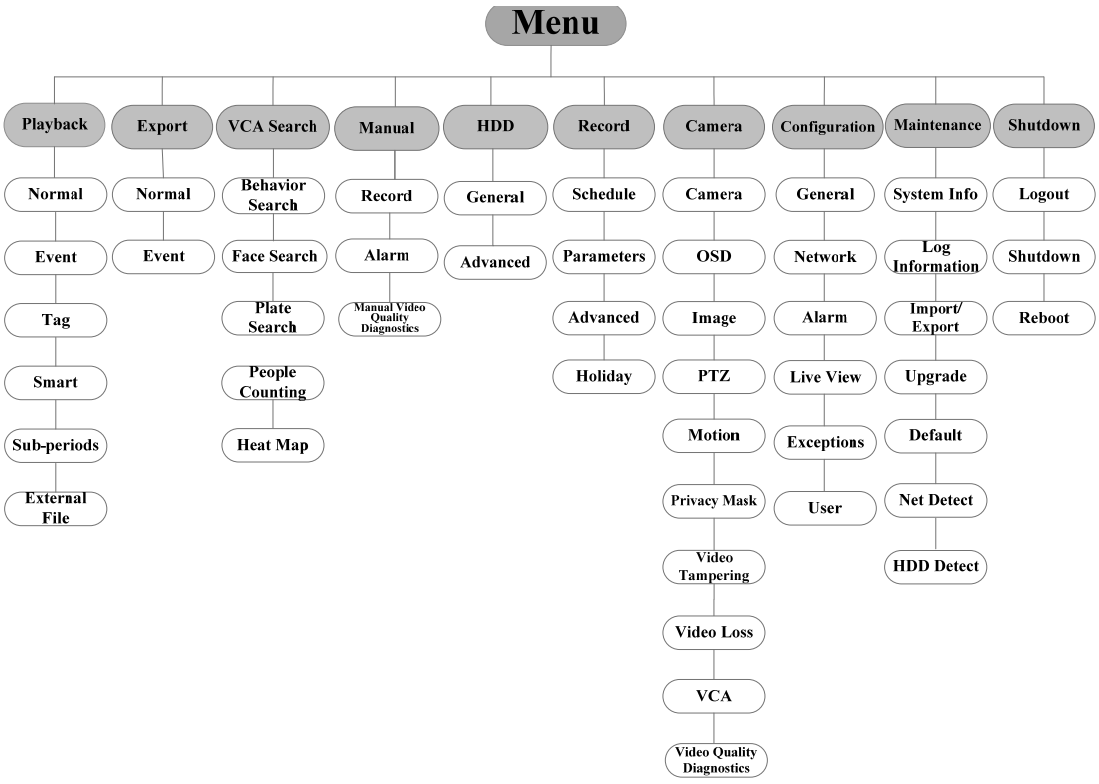

Figure 3-1 Menu Structure

3.2 Startup and Shutdown

Proper startup and shutdown procedures are crucial to expanding the life of the DVR.

To start your DVR:

Step 1 Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power button on the front panel should be red, indicating the device is receiving the power.

Step 2 Press the POWER button on the front panel. The Power LED should turn blue. The unit will begin to start.

After the device starts up, the wizard will guide you through the initial settings, including modifying password, date and time settings, network settings, HDD initializing, and recording.

To shut down the DVR:

Step 1 Enter the Shutdown menu.

Menu > Shutdown

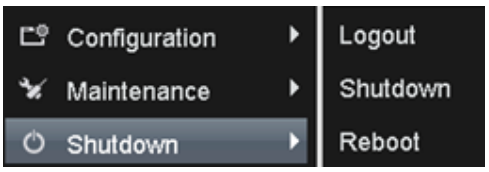

Figure 3-2 Shutdown

Step 2 Select the **Shutdown** button.

Step 3 Click the **Yes** button.

3.3 Activating Your Device

Purpose:

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. You can also activate the device via Web Browser, SADP or client software.

Step 1 Input the same password in the text field of **Create New Password** and **Confirm New Password**.

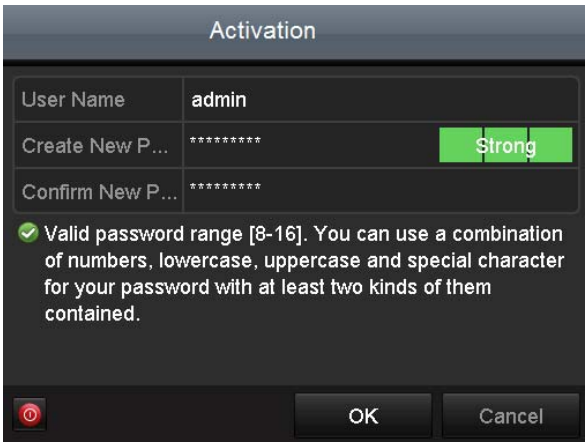

Figure 3-3 Set Admin Password

WARNING

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 2 Click **OK** to save the password and activate the device.

NOTE

- Clear-text password is supported. Click the icon and you can see the clear text of the password. Click the icon again and the content of the password restores invisible.
- For the old version device, if you upgrade it to the new version, the following dialog box will pop up once the device starts up. You can click **YES** and follow the wizard to set a strong password.

Figure 3-4 Warning of Weak Password

Step 3 After the device is activated, the Attention box pops up as below.

Figure 3-5 Attention

Step 4 (Optional) Click **Yes** to export GUID. The Reset Password interface pops up. Click **Export** to export GUID to the USB flash disk for password resetting.

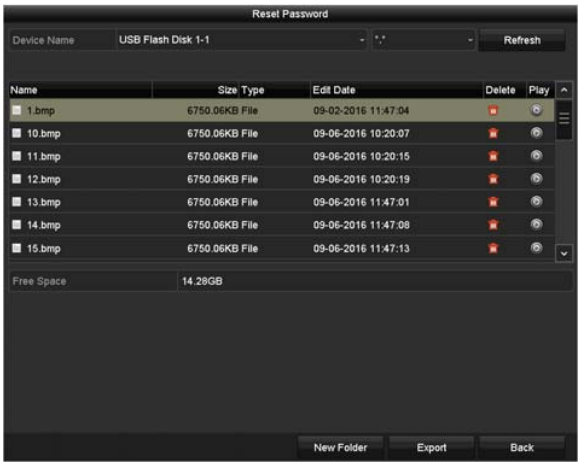

Figure 3-6 Export GUID

Step 5 After exporting GUID, the Attention box pops up as below. Click **Yes** to duplicate the password or **No** to cancel it.

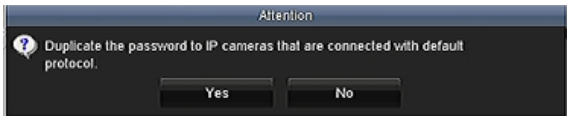

Figure 3-7 Duplicate the Password

3.4 Using the Unlock Pattern for Login

For the Admin user, you can configure the unlock pattern for device login.

After the device is activated, you can enter the following interface to configure the device unlock pattern.

Step 1 Use the mouse to draw a pattern among the 9 dots on the screen. Release the mouse when the pattern is done.

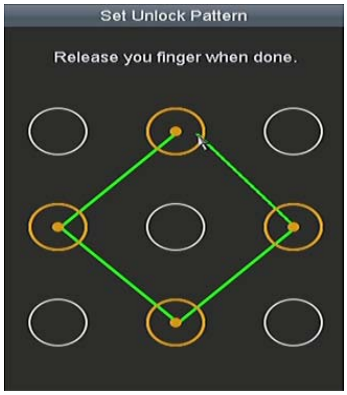

Figure 3-8 Draw the Pattern

NOTE

- Connect at least 4 dots to draw the pattern.
- Each dot can be connected for once only.

Step 2 Draw the same pattern again to confirm it. When the two patterns match, the pattern is configured successfully.

Step 3 You can use the configured unlock pattern for future login.

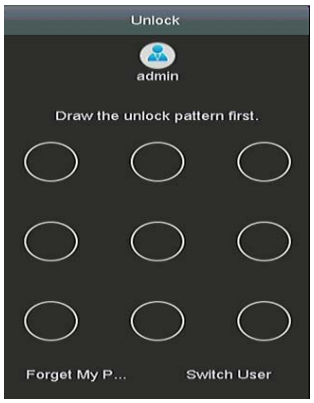

Figure 3-9 Draw the Unlock Pattern

3.5 Login and Logout

3.5.1 User Login

Purpose:

If DVR has logged out, you must log in to the device before operating the menu and other functions.

Step 1 Select the **User Name** in the dropdown list.

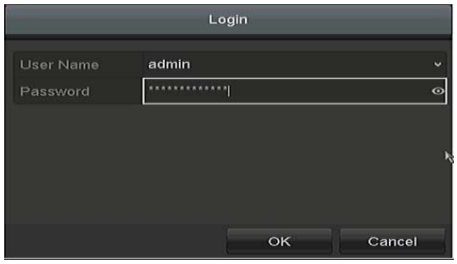

Figure 3-10 Login

Step 2 Input **Password**.

Step 3 Click **OK** to log in.

NOTE

- Clear-text password is supported. Click the icon and you can see the clear text of the password. Click the icon again and the content of the password restores invisible.
- In the Login interface, for the admin, if you have entered the wrong password for 7 times, the account will be locked for 60 seconds. For the operator, if you have entered the wrong password for 5 times, the account will be locked for 60 seconds.

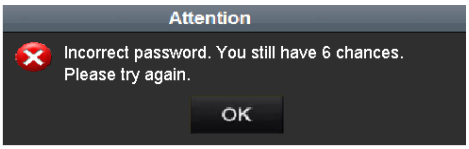

Figure 3-11 User Account Protection for the Admin

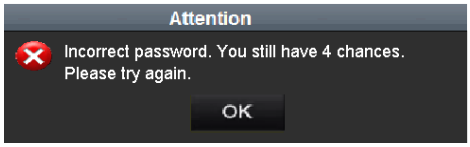

Figure 3-12 User Account Protection for the Operator

Step 4 (Optional) If you forget the password, click **Forget Password** to pop up the Import GUID interface.

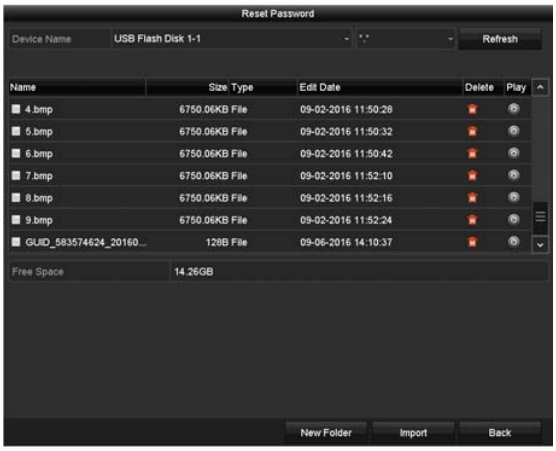

Figure 3-13 Import GUID

1) Select the GUID file from the USB flash disk and click **Import** button to pop up the Reset Password interface

Figure 3-14 Reset Password

2) Input the new password and confirm the password.

3) Click **OK** to save the new password. Then the Attention box pops up as shown below.

Figure 3-15 GUID File Imported

4) Click **OK** and the Attention box as below pops up to remind you to duplicate the password of the device to IP cameras that are connected with default protocol. Click **Yes** to duplicate the password or **No** to cancel it.

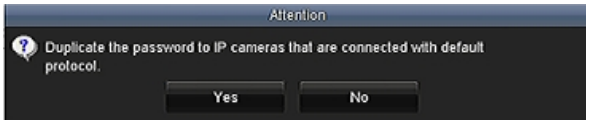

Figure 3-16 Duplicate the Password

NOTE

- If you want to retrieve the password when you forget it, you must export the GUID file first.
- Once the password is reset, the GUID file becomes ineffective. You can export a new GUID file.

3.5.2 User Logout

Purpose:

After logging out, the monitor turns to the live view mode and if you want to perform any operations, you need to enter user name and password log in again.

Step 1 Enter the Shutdown menu.

Menu > Shutdown

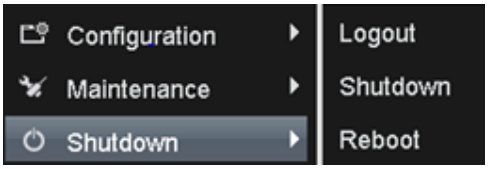

Figure 3-17 Logout

Step 2 Click **Logout**.

NOTE

After you have logged out the system, menu operation on the screen is invalid. It is required to input a user name and password to unlock the system.

3.6 Using the Setup Wizard

The Setup Wizard can walk you through some important settings of the device. By default, the Setup Wizard starts once the device has loaded.

Check the checkbox to enable Setup Wizard when device starts. Click **Next** to continue the setup wizard. Follow the guide of the Setup Wizard to configure the system resolution, system date/time, network settings, HDD management, record settings, etc.

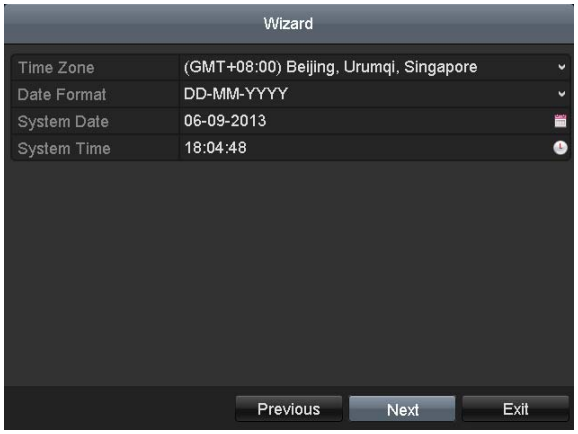

Figure 3-18 Wizard

3.7 Viewing Signal Input Status

NOTE

5 MP long distance transmission is available for LTD85XXK-ST series DVR.

Step 1 Enter the **Signal Input Status** interface.

Menu > Camera > Signal Input Status

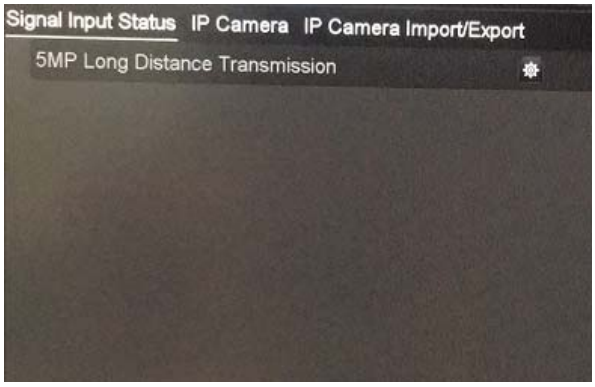

Figure 3-19 View Signal Input Type

Step 2 You can enable **5 MP Long Distance Transmission** for the HD and AHD signal input. Follow the steps below to enable the function.

1) Click to enter the 5 MP Long Distance Transmission Settings interface.

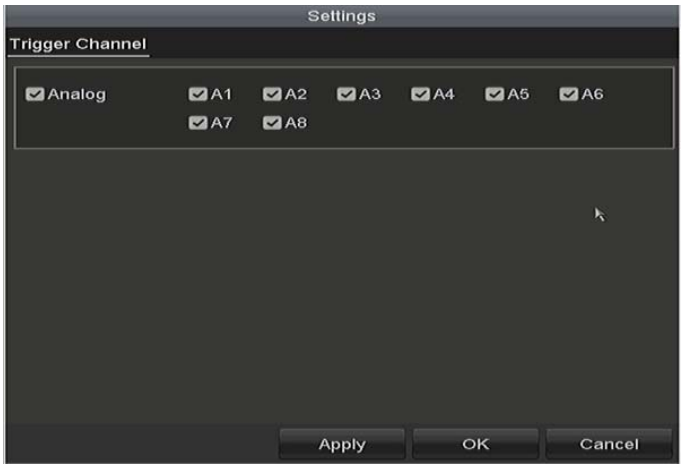

Figure 3-20 5 MP Long Distance Transmission Settings

2) Check the checkbox to enable 5 MP Long Distance Transmission of the selected channel.

3) Click **Apply** to save the settings and **OK** to return to the Signal Input Status interface.

3.8 Network Settings

Purpose:

Network settings must be properly configured before you operate DVR over network.

Step 1 Enter the Network Settings interface.

Menu > Configuration > Network

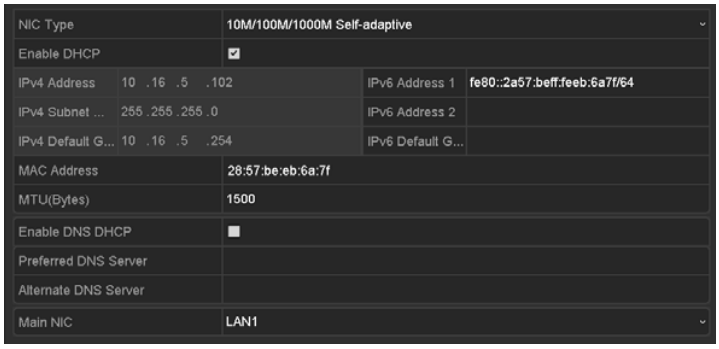

Figure 3-21 Network Settings

Step 2 Select the **General** tab.

Step 3 In the General Settings interface, you can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

If the DHCP server is available, you can check the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.

Step 4 After having configured the general settings, click the **Apply** button to save the settings.

NOTE

- 1 self-adaptive 10M/100M/1000M network interface is provided for LTD8316K-ET and LTD85XXK-ST series DVR.
- 1 self-adaptive 10M/100M network interface is provided for LTD8304K-ET, LTD8308K-ET/ETC series DVR.
- If DHCP is enabled, you can check the checkbox of **Enable DNS DHCP** or uncheck it and edit the **Preferred DNS Server** and **Alternate DNS Server**.

3.9 Adding IP Cameras

Purpose

Before you can get live video or record the video files, you should add the network cameras to the connection list of the device.

Before you start

Ensure the network connection is valid and correct, and the IP camera to add has already been activated. Please refer to the *User Manual* for activating the inactive IP camera.

You can select one of the following three options to add the IP camera.

- OPTION 1:

Step 1 Select the **Add IP Camera** option from the right-click menu in live view mode or click Menu> Camera> Camera to enter the IP camera management interface.

Figure 3-22 Add IP Camera

Step 2 Select the IP camera from the list and click the button to add the camera (with the same admin password of the DVR's).

Step 3 (Optional) Check the checkbox of **Enable H.265** (For Initial Access) for the connected IP camera supporting H.265. Then the IP camera will be encoded with H.265.

- OPTION 2:

Step 1 Click the **Custom Adding** button to pop up the Add IP Camera (Custom) interface.

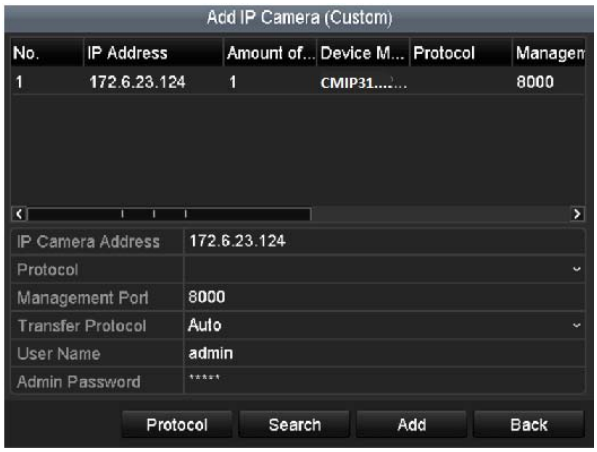

Figure 3-23 Add IP Camera

Step 2 Select the detected IP camera and click the **Add** button to add it directly, and you can click the **Search** button to refresh the online IP camera manually.

- OPTION 3:

You can choose to custom add the IP camera by editing the parameters in the corresponding text field and then click the **Add** button to add it.

3.10 Live View

Icons are provided on screen in Live View mode to indicate camera status. These icons include:

Live View Icons

In the live view mode, there are icons at the upper-right corner of the screen for each channel, showing the status of the record and alarm in the channel for quick reference.

Alarm (video loss, tampering, motion detection, VCA or sensor alarm)

Record (manual record, continuous record, motion detection, VCA or alarm triggered record)

Alarm and Record

Event/Exception (event and exception information, appears at the lower-left corner of the screen.)

3.11 Recording Settings

Before you start

Make sure that the disk has already been installed. If not, please install a disk and initialize it. You may refer to the user manual for detailed information.

Purpose

Two kinds of record types are introduced in the following section, including Instant Record and All-day Record. And for other record types, you may refer to the user manual for detailed information.

After rebooting all the manual records enabled are canceled.

Step 1 On the live view window, right lick the window and move the cursor to the **Start Recording** option, and select **Continuous Record** or **Motion Detection Record** on your demand.

Step 2 Click the **Yes** button in the pop-up Attention message box to confirm the settings. All the channels will start to record in the selected mode.

3.12 Playback

The recorded video files and pictures on the hard disk can be played back in the following modes: instant playback, all-day playback for the specified channel, and playback by normal/event/smart/tag/system logs/sub-periods/external file search/picture.

Step 1 Enter playback interface.

Menu > Playback

Or select **Playback** from the right-click menu.

Step 2 Check the checkbox of channel(s) in the channel list and then double-click to select a date on the calendar.

Step 3 (Optional) Use the toolbar in the bottom part of Playback interface to control playing progress.

Figure 3-24 Playback Interface

NOTE

For LTD85XXK-ST series DVR, you can click to show the VCA information in smart playback. Then the configured line or quadrilateral in VCA configuration and target frame(s) will be shown on the playback interface. Click to hide the VCA information.

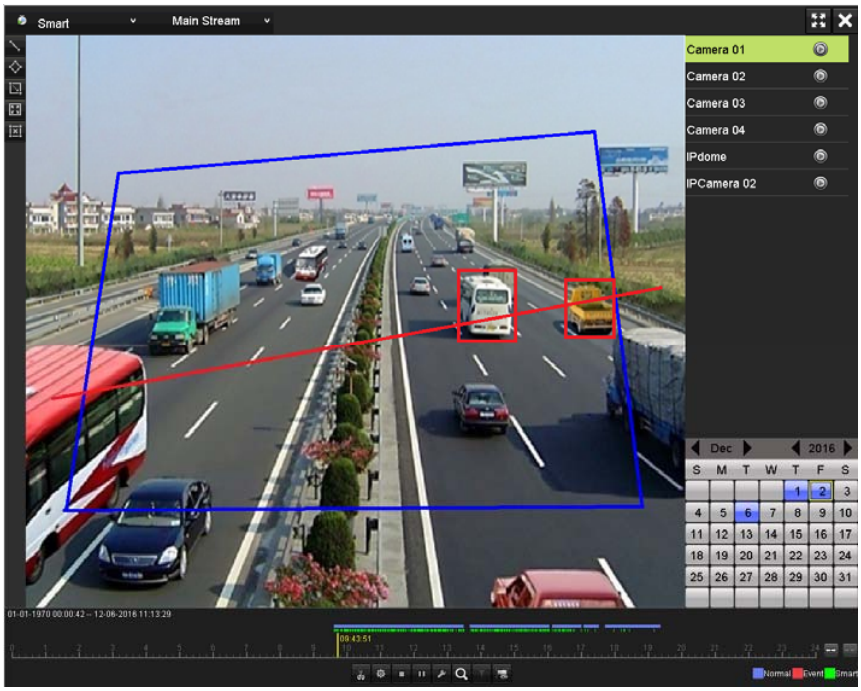

Figure 3-25 Show VCA Information in Smart Playback

Step 4 (Optional) Select the channel(s) to execute simultaneous playback of multiple channels.

Chapter 4 Accessing by Web Browser

NOTE

You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact with your dealer or the nearest service center.

Purpose

You can get access to the device via web browser. You may use one of the following listed web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome. The supported resolutions include 1024*768 and above.

Step 1 Open web browser, input the IP address of the device and then press Enter.

Step 2 Login to the device.

- If the device has not been activated, you need to activate the device first before login.

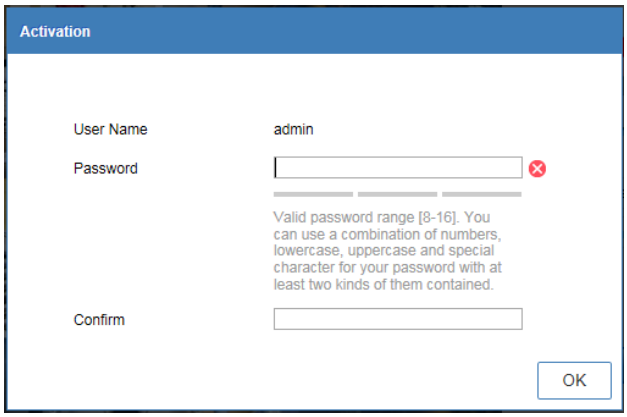

Figure 4-1 Set Admin Password

1) Set the password for the admin user account.
2) Click **OK** to login to the device.

WARNING

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

- If the device is already activated, enter the user name and password in the login interface, and click the **Login** button.

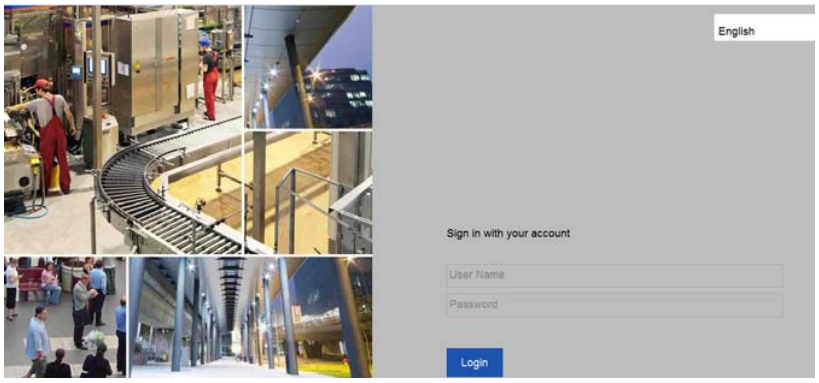

Figure 4-2 Login

Step 3 Install the plug-in before viewing the live video and managing the camera. Please follow the installation prompts to install the plug-in.

NOTE

You may have to close the web browser to finish the installation of the plug-in.

After login, you can perform the operation and configuration of the device, including the live view, playback, log search, configuration, etc.