

# 4K UHD Network Video Recorder User Manual

# Table of Contents

About this document	3
Disclaimer	3
Caution	3
Introduction	4
Features	
Trademarks and registered trademarks	
Chapter 1 Getting Started	5
Chapter 1-1 NVR Settings Quick Guide	6
Chapter 1-2 Freeze	
Chapter 1-3 Alarm Event	7
Chapter 1-4 Playback / Backup	8
Chapter 1-4-1 Playback	9
Chapter 1-4-2 Backup	
Chapter 1-5 Context Menu	
Chapter 1-5-1 Streaming Information	
Chapter 1-5-2 Cancel Alarm	
Chapter 1-5-3 PTZ Control On/Off	
Chapter 1-5-4 Imaging Setting	
Chapter 1-5-5 Account Login/Logout	
Chapter 2 NVR Settings	
Chapter 2 System Setup	
Chapter 2-1 General	
Chapter 2-2 Time	
Chapter 2-3 User	
Chapter 2-3 Oser	
Chapter 2-4-1 HDD MGT ( Raid NVR )	
Chapter 2-4-2 S.M.A.R.T.	
Chapter 2-4-3 USB MGT	
Chapter 2-4-9 COD MC1	
Chapter 2-5 Event	
Chapter 2-5-1 System	
Chapter 2-5-7 System	
Chapter 2-5-2 Operating Chapter 2-5-3 Alarm	
Chapter 2-6 Maintenance	
•	
Chapter 2-6-1 Firmware Update	
Chapter 3 Network Setup	
Chapter 3-1 General	
Chapter 3-1-1 Configuring HTTPs PORT	
Chapter 3-2 Advance	
Chapter 3-2-1 TCP/IP	
Chapter 3-2-2 Mobile	
Chapter 3-2-3 P2P	
Chapter 3-2-4 Wi-Fi	
Chapter 3-2-5 Bonding	
Chapter 3-3 E-Mail	
Chapter 3-4 FTP	
Chapter 3-5 DDNS	
Chapter 3-6 Other	
Chapter 3-6-1 SNMP	
Chapter 4 Camera Setup	
Chapter 4-1 General	. 32



Chapter 4-2 Video	33
Chapter 5 Record Setup	33
Chapter 5-1 General	
Chapter 5-2 Schedule	34
Chapter 5-3 Advanced	34
Chapter 6 Alarm Setup	35
Chapter 6-1 General	
Chapter 6-2 Motion Area	35
Chapter 6-3 Output	
Chapter 6-3-1 Alarm Led	36
Chapter 6-3-2 Buzzer	36
Chapter 6-3-3 E-Mail	36
Chapter 6-3-4 FTP	36
Chapter 6-3-5 Notification	
Chapter 6-3-6 DO#1-N (manual DO control)	37
Chapter 7 Display Setup	37
Chapter 7-1 General	37
Chapter 7-2 Advance	38
Chapter 7-3 Sequence	38
Chapter 8 PTZ Setup	
Chapter 8-1 General	
Chapter 8-2 NVR Cascade	
Chapter 9 Metadata Setup	40
Chapter 9-1 General	40
Chapter 9-2 Event	
Chapter 10 Other Setup	41
Chapter 10-1 Smartphone	42
Chapter 11 Stream	42
Chapter 11-1 Live	
Chapter 11-2 Play	
Chapter 11-3 Backup	44
Chapter 11-3-1 Backup Manager	
Chapter 11-3-1-1 Backup Manager NVR Backup	
Chapter 11-3-1-2 Backup Manager NVR Playback	47
Chapter 11-3-1-3 Convert Files to AVI Format	47
Chapter 11-3-1-4 AVI File Playback	
Chapter 11-3-1-5 USB Storage	48
Appendix	49
Install LILINHome	49



### About this document

This document includes instructions for operating the 4K UHD Network Video Recorder Series.

### Disclaimer

Please be aware that this user manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable or available to all models. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.

## Caution

- Do not drop or strike the equipment
- Do not install the equipment near naked flames or heat sources
- Do not expose this unit to rain, moisture, smoke or dusty environments
- Do not cover the opening of the unit with cloth or plastic or install this unit in a poorly-ventilated place. Allow 10cm between this unit and its surroundings
- Do not continue to operate the unit under abnormal conditions such as detection of smoke, strange smell or no display on screen whilst power is turned on
- Do not touch the power connection with wet hands
- Do not damage the power cord or leave it under pressure
- To avoid unnecessary magnetic interference, do not operate this unit near magnets, speaker system, etc.
- All connection cables must be grounded properly

RISK OF EXPLOSION IF BATTERY IS REPLACED WITH AN INCORRECT TYPE.

CAUTION





### Introduction

The NVR 4K UHD Series are network video recorders that offer a standalone solution for managing IP cameras and systems. The built-in high-quality decoder can deliver 4K/ 5MP/ 3MP/ 1080p/ 720p/ D1/ VGA/ CIF IP camera streams. Each channel can be individually configured to record in SD or HD resolution to suit your needs.

The internal HDMI and VGA engine supports adaptive motion refinement technology, which provides HDMI output with maximum resolution of 4K and VGA output with 1080p resolution. The NVR Series can be easily installed in all environments through the TCP/IP network, and the support of IPScan utility and Web Services Dynamic Discovery (WS-Discovery) protocol allows for locating all the cameras on the network and can generate a preview thumbnail of each channel. The self-diagnostic feature can estimate remaining recording time and monitor S.M.A.R.T status, network status, and other information.

Files recorded by the NVR can be exported to DVD and USB flash drive, or the files can be downloaded via Backup Manager, Remote Player, FTP client software, or Network Places. Mobile support for iOS, and Android allows for remote viewing of connected cameras at high frame rates. Browser-based live monitoring and video playback features are also supported.

The NVR also supports external METADATA device, such as POS, ATM, GPS, etc. METADATA can be embedded within videos and saved as a database where you can search for METADATA history according to content, date, and time.

### Features

- Standalone NVR
- Supports up to 4K UHD, and 1080p 120 FPS IP cameras
- Each channel up to 12 Mbps incoming network throughput
- 4K HDMI and 1080P VGA output
- Compatible with iOS and Android devices
- Metadata can be embedded into videos
- Supports Setup Wizard
- HTML5 streaming multiple browser supported
- P2P easy remote access supported

### Trademarks and registered trademarks

Microsoft, Windows, Internet Explorer are registered trademarks of Microsoft Corporation in the U.S and/or other countries.

Adobe and Adobe PDF are registered trademarks of Adobe Systems Incorporated in the U.S and/or other countries.

JavaScript and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S and/or other countries.

Linux, Macintosh, and Mozilla are registered trademarks of the respective holders.

Other names of companies and their products mentioned in this manual may be trademarks or registered trademarks of their respective owners.



## Chapter 1 Getting Started

You will see the following screen through HDMI or VGA connection once you power on the NVR:



The information shown on the top of the screen is described as follows:

- Division/Sequential Name: Click to select a camera division to display.
- System Date/Time
- HDD: The top shows the current number of hard drives being used for recording. And on the bottom shows the storage capacity used.
- Network Status (Mbps): The top side Rx is received throughput in Mbps and the bottom side Tx is transmission throughput in Mbps. Circle color represents:



Note: This information is available depending on models.

Move mouse cursor slightly to display the NVR controls (as shown in the image below):





Below controls can be seen at the bottom of the screen:

Icons	Description
	Controls for the number of split-screens.
SEQ	Click to activate the sequential mode, which will show videos channels in the order you specify.
	Indicates whether the current split-screen controls are for HDMI or VGA. Note: Available only when VGA Spot mode is on
с()»	Click to turn on/off the audio.
<u>Ф</u>	Click to broadcast your message through a microphone.
ෂ් ජ් ජ් ජ්	Click to activate a specific DO output.

Note: This information is available depending on models.

Below are NVR controls that are at the upper-left corner of the screen:

Icons	Description
ŝ	NVR Settings
00	Freeze
<u>ن</u>	Alarm Event
$\triangleright$	Playback / Backup
to the second se	Schedule/Manual: Indicates whether the current recording setting is scheduled recording or manual recording. Click to switch.

## Chapter 1-1 NVR Settings Quick Guide

If you access the **NVR SETTINGS** for the first time, you will see **Setup Wizard** on the screen as below, which provides you with quick configurations for the NVR, including language, password, date, time, storage, network, P2P, and camera. Please follow the instructions to finish necessary setup and start recording. To prevent the wizard from appearing again, be sure to check **No longer use Setup Wizard**. Whenever you want to run **Setup Wizard** again, go to **NVR SETTINGS> SYSTEM > MAINTENANCE**, and click **Run** to start **Setup Wizard**.

🗮 Setup Wizard ( 1/10 ) - Welcome	×
Setup Wizard will assist you to complete the basic configurations quickly, please continue.	click [Next >] button to
	Next >



Or, you may see the setting menu below:

LILIN	GENERAL						admin 🖠
STREAM		Camera Name	CAM01	Security Protocol	IPScan	Cancel	Auto Adjust IP
		Camera Source			(Discover Devices) Select	(Abort Discover) Snapshot	Set IP
	3. CAM03	IP Address	(Stream source) 192.168.113.109	Test	(Apply To Channel)	C Model	ImageStatu
		HTTP Port	80	(ONVIF Device Info) Assign RTSP URL	192.168.3.191		
j alarm		RTSP Port	(1~65535) 554	RTSP/TCP -	169.254.226.167	0	24
DISPLAY		User	(1-65535) admin	RTSP Multicast Setting	192.168.113.117	IP Camera	
NETWORK		Password	(Max. length 15)	Show	192.168.5.99	IP Camera	2
, } system		Stream Type	(Max, length 15) Dual Stream	Apply To All Channels	192.168.5.97	IP Camera	
		Primary Stream (For Multi-Channel Display)		10			_
₹ PTZ		Primary Stream Bitrate	(5=120 PP5) 3072 ~ (512-12288 kbps)				
META DATA		Secondary Stream	(512-12288 KDps) 20 (5-120 FPS)	20			
OTHER		Sec. Stream Bitrate	(3-140 PP3) 3072 = (512-12288 kbps)				
		Decode Ref.		Immediate -			
		Display	Off v	ADMIN -			
		Sync Time With NVR	off			+IP+Camera	
		200 / 960 FPS (Primary Stream)	225 / 960 FPS (Secondary Stream)	48.0 / 300 Mbps (Total Sitrate)		5 entries	
						Apply	Undo

**Note:** Click the gear icon at the upper-right corner of the screen to change the NVR language.

### Chapter 1-2 Freeze

Click to freeze the real-time video, and the icon will be highlighted in blue.

## Chapter 1-3 Alarm Event

Click to enter the ALARM EVENT page. If alarm function is enabled for your camera, any alarms triggered will be recorded in the event history. And when the recording mode is switched from the **Schedule** to **Manual**, a record entry will also be saved in the event history. The list shall be according to the sequence of events triggers.





- 1. Start Time Picker: Select event start time to search
- 2. End Time Picker: Select event end time to search
- 3. Event Period: Recorded event duration
- 4. Search Period: Display search duration
- 5. Channel Number: Select channel number to search
- 6. Event Type Search: Select event type to search
- 7. Preview: A snapshot of event triggered
- 8. Event Date Time: Time of event has been recorded
- 9. Event channel number and channel name
- 10. Event Type: Type of event has been recorded
- 11. Pages Number: Number of pages on display
- 12. Playback: Click to play selected video
- 13. Backup: Click to export the recorded video to USB storage
- 14. Search: Click to start event search
- 15. Cancel: Click to leave event page and go back to live view

# Chapter 1-4 Playback / Backup

Click calendar icon to enter the PLAYBACK page as shown below:



- 1. Recorded Period: Recorded data duration
- 2. Month Picker: Select the month by clicking on the left/right arrow
- 3. Date Picker: Select a date by clicking on it

15	No recording
15	The date has recorded data

Current date

- <sup>15</sup> Selected data
- 4. Time Picker: Select hours/minutes/seconds by clicking on up/down arrow
- 5. Play Time: selected date/time for playback
- 6. Playback: Click to play the selected video recording
- 7. Cancel: Click to go back to playback page



## Chapter 1-4-1 Playback

Please select a date and time from the calendar and time picker respectively, to start playing desired recorded video or alarm video to enter the Playback as following screen:



Details of the controls at the bottom of the **PLAYBACK** screen are described as follows:

Icons	Description
$\triangleleft$	Slow Rewind
$\ll$	Rewind: click repeatedly to adjust the speed of respective actions
	(up to 64x)
	Stop
00	Pause
$\triangleright$	Play
	Fast Forward: click repeatedly to adjust the speed of respective
	actions (up to 64x)
$ \triangleright$	Slow Forward
	Choose the number of split-screens according to your needs
1	Indicates whether the current split-screen controls are for
	HDMI(1) or VGA(2)
ıر)»	Audio on/off
ŧ <sup>®</sup>	Click to export the recorded video to a USB device.
	Calendar: Click to enter playback page
С Г	Return: Click to return to previous page

Note: This information is available depending on models.



## Chapter 1-4-2 Backup

If you need to back up recorded files, click the backup icon to enter the BACKUP page as shown below and select the backup range, channel number and the file format as desired.

Reco	Record Period 2019/12/15 01:00:00 ~ 2019/12/25 20:43:11 1 2 Not Installed : 🔅											Ŷ	
4 3 December, 2019 🛛 🕨					•	4	Dece	ember, i	2019		►		
SUN	MON	TUE	WED	тни	FRI	SAT	SUN	MON	TUE	WED	тни	FRI	SAT
1						7	1						
8		10		12	13	14	8		10			13	14
15						21	15						
22			• 25	26		28	22			25	26		28
29	30					4	29	30					
5						11	5						
	20 0 0 0 0 0 20 43 0 0 0 10 Hours Minutes Seconds												
Back	up Perio	d 201	9/12/2	5 20:00	:00				2019/1	2/25 20	:43:00		5
	01 09	.02 .10	.03		.04 .12	.05 .13	0 1	_	.07 .15	.08 .16		ALL	6
7	THD AVI												
File Fo	mat						Эв	ackup		10	Car	ncel	

- 1. Recorded Period: Recorded data duration
- 2. USB Status: USB flash drive status detection, click for server to re-detect the USB device.
- 3. Start Time Picker: Select start time to backup
- 4. End Time Picker: Select end time to backup
- 5. Backup Period: Selected backup duration
- 6. Channel Number: Select channel number to backup
- 7. Backup File Format: Select backup file format
- 8. Estimate File Size: Estimate file size of selected period
- 9. Backup: Click to start backup
- 10. Cancel: Click to go back to previous page

## Chapter 1-5 Context Menu

Mouse right-click on live view screen and will display below image:

1 Streaming Information On
2 Cancel Alarm
3 PTZ Control On
4 Imaging Setting
5 'ADMIN' Logout

- 1. Streaming Information On/Off: Click to turn on/off the streaming information in live view.
- 2. Cancel Alarm: Click to turn off the channel display pop up view and resume to previous view temporarily.
- 3. PTZ Control On: Click to display the PTZ control page in live view page, single screen.
- 4. Imaging Setting: Click to turn on the image setting page in live view page, single screen.
- 5. "Account" Login/Logout: Click to login/logout manually.



## Chapter 1-5-1 Streaming Information

When streaming information is turned on, the video resolution and frame rate will be on display.



Note: Displayed information is according to camera setting.

### Chapter 1-5-2 Cancel Alarm

When alarm popup is enabled, specific view will pop up when alarm is triggered. Click **Cancel Alarm** to disable alarm view and resume to previous view for 5 seconds.

## Chapter 1-5-3 PTZ Control On/Off

To control PTZ camera, display the specific channel on single screen and turn on the PTZ control.

1 ртд 🔹	PANEL
2 Auto	AUTO PAN
3 <del>Q</del> Q	ZOOM
④ [_][+][AF]	FOCUS
5 0 8 0	IRIS
6	
7 1 :	PRESET
5 🛟	DWELL
4 🛟	SPEED
<sup>8</sup>	>

- 1. Panel: PTZ/Fisheye mode switch
- 2. Autopan: 🔤 Auto Pan Start 🔳 Auto Pan Stop
- 3. Zoom: 🖸 Zoom In 🖾 Zoom Out
- 4. Focus: 📓 Focus Near 📓 Focus Far 📓 Auto Focus
- 5. Iris: Iris Open M Iris Close Auto Iris
- 6. Flip: 🖾 180° Instant Flip
- 7. Preset Position Settings:
  - Preset: 1~255 preset position programmable

Dwell: Dwell time at preset position during autopan. Speed: Moving speed from one preset position to

another during autopan.

Save Preset Delete Preset

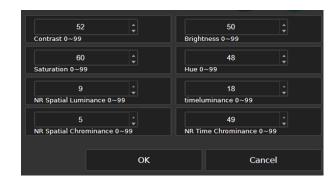
8. Joystick: Click on any arrow key to move the PTZ camera and click on the **O** icon to display PTZ OSD control.





### Chapter 1-5-4 Imaging Setting

In this page, you can adjust the camera parameters including **Contrast**, **Brightness**, **Saturation**, and **Hue** by clicking on **up/down** arrow and press **OK** to save changes.



## Chapter 1-5-5 Account Login/Logout

If user wants to login or logout of the system, please click on Account Login/Logout and fill in below fields.



Chapter 2 NVR Settings Chapter 2 System Setup

Click to enter NVR SETTINGS and click SYSTEM SYSTEM in the left pane, where you are allowed to adjust system configurations of the NVR. The details of the tabs are described as follows:

## Chapter 2-1 General

<b>O GENERAL</b>		Subser User	A STORAGE	🖾 EVENT	( MAINTENANCE
GENERAL	Device ID	None			
	Audio Out Volume				
	Live OSD	On			
	System Lock	Off	- Effect at next logi	n	
	Sound On Button Press	On			
	Buzzer	Off			
	Last Boot Time	2020/01/20 07:45:11			
	Automatic Logout	Off (Automated logout after			
	Automatic Login	ADMIN (Automated login when			
	Device Name	NVR5832 (Max. le			
	KBD Input Baud Rate	9600	-		

- Device ID: Assign an ID for the NVR to be controlled by the remote controller.
- Audio Out Volume: Adjust the volume of the NVR.
- Live OSD: On, off, or no camera name.
- System Lock: Switch on/off the system lock.
   Note: This information is available depending on models.



- Sound On Button Press: Switch on/off the sound when pressing remote control buttons.
- Buzzer: Switch on/off the sound when an alarm is triggered.
- Last Boot Time: Shows the last time the system is rebooted.
- Power Supply Status: Shows the status of the power supply currently in use.
   Note: This information is available depending on models.
- Automatic Logout: Log out automatically after 30 minutes of inactivity.
- Automatic Login: Specify user account to log on automatically when the system power on.
- RS-232: Press **Test** to test the functionality of the RS-232 port.
   Note: This information is available depending on models.

Note: The remote controller is an optional item.

Chapter 2-2 Time

🏷 GENERAL		🚨 USER 🛛	STORAGE	👼 EVEN	лт Q. м.	AINTENANCE
TIME	Datetime	2020 / 12 / 09		02	2020/12/09 11:20:49	Sync Time With PC
	Date Format	YYYY/MM/DD				
	Time OSD	On				
	Time Zone	GMT:+8	- Asia/Taipei			
	Time Sync Mode	NTP				
	NTP Server	time.stdtime.gov.tw				
	Time Sync Interval					
	NTP Status	Connect NTP Server Of				
					Apply	Undo

- Date/Time: Set the date/time of the NVR.
- Date Format: Modify the date display format.
- Time OSD: Switch on/off the time to be displayed on the screen.
- Time Zone: Change the time zone of the location where the NVR is installed.
- Time Sync Mode: Choose how you would like the time to be synced.
- NTP Server: Enter the NTP server you want to use.
- Time Sync Interval: Choose the interval for the time to be synced.
- NTP Status: The status of connection to selected NTP server will appear here.

Chapter 2-3 User

o general	🛅 TIME	🗟 USER 🛛	STORAGE	🗟 EVENT	<b>MAINTENANCE</b>
ADMIN	User	ADMIN			
	Old Password		132) Show	1	
				lay password)	
	New Password		Show		
	Confirm Password		Show		
	User Permission	(Max. lengt) Admin	Effect at next log	lay password) <b>gin</b>	
	Setup				
	Playback				
USER05	Event				
USER06	PTZ				
	Backup				
	Shutdown				
	Alarm				
	Remote Live Video				
USER11	Remote Playback				
	Load Default	Default			
ACCOUNT	Apply	Apply			



The NVR supports up to 15 sets of individual user settings (including default user administrator, operator, and guest), to which you can assign different access privileges.

- User: Enter the name of the user (applicable only to User01–12).
- Old Password, New Password, and Confirm Password: If you would like to change the password, enter your previous password and enter the new password and confirm the password. Press **Show** to reveal the password.
- User Permission: Set the access privileges of the user to administrator, operator, or guest.
- Load Default: Restore to the default settings.

Chapter 2-4 Storage HDD MGT ( Non-RAID NVR )

o general	📷 TIME	📩 USER		A STORAGE	EVEN	
HDD MGT.	Port	Model	Size	Status	Select	
S.M.A.R.T.	1. 6	WDC WD5000AVDS-73U	488 GB	Formatted		Parameters
USB MGT.		None	0 GB	Not Installed		Parameters
		None	0 GB	Not Installed		Parameters
	4.	None	0 GB	Not Installed		Parameters
	Storage 1	ools				_
		Format File S	System Def	rag. Bad Bloc	ks Check	Regular Check
	Unmo	ount All HDD(s) Mot	unt All HDI	D(s)		

In **HDD MGT.**(Non RAID NVR), there are HDD format, file system defrag, check HDD malfunctioned blocks, and HDD periodic inspection. Select a desired HDD and click **Format**, **File System Defrag**, **Bad Block Check**, or **Regular Check**.

Regular Check:



Allows you to set the interval between system checks: Parameters: Click each device to enter the screen below.

WDC WD10PURZ-85U8XY0	)	*
System Reserve Ratio	15%	
Mount Option		
Used Space	85%	l
Record Start/End Time	2018/08/01 10:00:00 ~ 2	018/08/15 17:33:00
	ОК	Cancel

**System Reserve Ratio** allows you to allocate the percentage of HDD space that will not be occupied by recorded files. In **Mount Option**, choose the writing mode for the hard drive.



# Chapter 2-4-1 HDD MGT ( Raid NVR )

o GENERAL	TIME	🚨 U	ISER		AGE	🗟 EVEN	IT	🔍 MAIN	TENANCE		admin	۵	
HDD MGT.	Port	Model		Size	Status		RAID ID	Level	Size	Select			
S.M.A.R.T.	No.1	ST6000VX0003-1	ZH110	5860 GB	Formatted		RAID ID-1	RAID-5	11679 GB		Parameters		
	No.2	ST6000VX0003-1	ZH110	5860 GB	Formatted		RAID ID-1	RAID-5					
	No.3	ST6000VX0003-1	ZH110	5860 GB	Formatted		RAID ID-1	RAID-5					
	No.4			0 GB	Not Installe	d							
	No.5			0 GB	Not Installe	d							
	No.6			0 GB	Not Installe	d							
	No.7			0 GB	Not Installe	d							
	No.8			0 GB	Not Installe	d							
	e-SATA1			0 GB	Not Installe	d							
	e-SATA2			0 GB	Not Installe	d							
	Storage To	ols											
							Regular C	heck	Unmount A	ll HDD(s)			
	HDD Maint Unmount A Before swap Mount All F After hard d Add HDD(s) Add specific ex Repair a	Torring         The System Detroy         Exceeded Decession         Regular Creek         Onthous Call Product Air Pobly         Module Air Pobly           HDD Maintenance Note Ummount All HDD(s):         Delete RAID         Delete RAID         Mount All HDD(s):         Mount All HDD(s): <td< td=""></td<>											

In **HDD MGT.**( RAID NVR ), able to create RAID, delete RAID, format, defrag, check HDD malfunctioned blocks and HDD periodic inspection, allow recording with single HDD(s) or RAID group. Create RAID:

Click **Create RAID** to pop-up a HDD list dialog as below, the dialog list all HDD that free to use for building a RAID group.

Create RAID					×
Port	Model	Size	Status		
No.1	ST6000VX0003-1ZH110	5589 GB	Formatted		
No.2	ST6000VX0003-1ZH110	5589 GB	Formatted		
No.3	ST6000VX0003-1ZH110	5589 GB	Unformatted		
RAID ID-1	RAID Level	Level-5	Estimate Size:	11158 GB	
Note:					
The limititation of RAID siz	e is 16TB.				
			Create RAID	Cancel	



Select desired HDD, then choose available **RAID level** and click **Create RAID** to build, after building process finished, there will be a new RAID group that show in the **HDD MGT.** 

Port	Model	Size	Status	RAID ID	Level	Size	Select	
No.1	ST6000VX0003-1ZH110	5860 GB	Unformatted	RAID ID-1	RAID-5	11679 GB		
No.2	ST6000VX0003-1ZH110	5860 GB	Unformatted	RAID ID-1	RAID-5			
No.3	ST6000VX0003-1ZH110	5860 GB	Unformatted	RAID ID-1	RAID-5			
No.4		0 GB	Not Installed					
No.5		0 GB	Not Installed					
No.6		0 GB	Not Installed					
No.7		0 GB	Not Installed					
No.8		0 GB	Not Installed					
e-SATA1		0 GB	Not Installed					
e-SATA2		0 GB	Not Installed					
Storage To	nols							
	Format File System Defr			Regular C	heck			Mount All HDD(s)
Cre			Delete RAID					

Select desired RAID then click Format to format or click Delete RAID to delete.

#### Note:

- 1. The limitation size for each RAID group is 16TB.
- 2. For more detail about RAID level, please refer to https://en.wikipedia.org/wiki/RAID
- 3. Availability depends on models.

For details about File System Defrag, Bad Blocks Check, Regular Check please refer to the descriptions above.

Note: When HDD error happened, raid's status will change to degrade.

Port	Model	Size	Status	RAID ID	Level	Size	Select	
No.1		0 GB	Not Installed					
No.2	ST6000VX0003-1ZH110	5860 GB	Degrade	RAID ID-1	RAID-5	11679 GB		Parameters
No.3	ST6000VX0003-1ZH110	5860 GB	Degrade	RAID ID-1	RAID-5			
No.4	ST6000VX0001-1SH17Z	5860 GB	Formatted					Parameters
No.5		0 GB	Not Installed					
No.6		0 GB	Not Installed					
No.7		0 GB	Not Installed					
No.8		0 GB	Not Installed					
e-SATA1		0 GB	Not Installed					
e-SATA2		0 GB	Not Installed					
Storage To	ols							
	ormat File System Defra			Regular Ch	eck	Unmount All	HDD(s)	Mount All HDD(s)
	ate RAID Add HDD(s) to R	AID	Delete RAID					



## Unmount All HDD(s)

Port	Model	Size	Status	RAID ID	Level	Size	Select	
No.1	ST6000VX0003-1ZH110	5860 GB	Unformatted	RAID ID-1	RAID-5	11679 GB		
No.2	ST6000VX0003-1ZH110	5860 GB	Unformatted	RAID ID-1	RAID-5			
No.3	ST6000VX0003-1ZH110	5860 GB	Unformatted	RAID ID-1	RAID-5			
No.4		0 GB	Not Installed					
No.5		0 GB	Not Installed					
No.6		0 GB	Not Installed					
No.7		0 GB	Not Installed					
No.8		0 GB	Not Installed					
e-SATA1		0 GB	Not Installed					
e-SATA2		0 GB	Not Installed					
Storage To	ols							
F	ormat File System Defr			Regular C	heck			Mount All HDD(s)
Cre	ate RAID Add HDD(s) to R	AID	Delete RAID					

### Mount All HDD(s)

Port	Model	Size	Status	RAID ID	Level	Size	Select	
No.1		0 GB	Not Installed					
No.2	ST6000VX0003-1ZH110	5860 GB	Degrade	RAID ID-1	RAID-5	11679 GB		
No.3	ST6000VX0003-1ZH110	5860 GB	Degrade	RAID ID-1	RAID-5			
No.4	ST6000VX0001-1SH17Z	5860 GB	Formatted					Parameters
No.5		0 GB	Not Installed					
No.6		0 GB	Not Installed					
No.7		0 GB	Not Installed					
No.8		0 GB	Not Installed					
e-SATA1		0 GB	Not Installed					
e-SATA2		0 GB	Not Installed					
Storage To	ols							
	ormat File System Defr			Regular C	heck	Unmount A	ll HDD(s)	Mount All HDD(s)
Cre	eate RAID Add HDD(s) to R	AID	Delete RAID					

### Add HDD to RAID(s)

RAID ID 1 Level 5					×
Port	Model	Size	Status		
No.4	ST6000VX0001-1SH17Z	5589 GB	Formatted		
			Add HDD(s) to RAID	Cancel	



### Add success

Port	Model	Size	Status	RAID ID	Level	Size	Select	
No.1		0 GB	Not Installed					
No.2	ST6000VX0003-1ZH110	5860 GB	Recovering	RAID ID-1	RAID-5	11679 GB		
No.3	ST6000VX0003-1ZH110	5860 GB	Recovering	RAID ID-1	RAID-5			
No.4	ST6000VX0001-1SH17Z	5860 GB	Recovering	RAID ID-1	RAID-5			
No.5		0 GB	Not Installed					
No.6		0 GB	Not Installed					
No.7		0 GB	Not Installed					
No.8		0 GB	Not Installed					
e-SATA1		0 GB	Not Installed					
e-SATA2		0 GB	Not Installed					
Storage To	ols							
	Format File System Defi	ag.	Bad Blocks Check	Regular C	heck	Unmount A	ll HDD(s)	
Cr	eate RAID Add HDD(s) to R	AID	Delete RAID					

### Chapter 2-4-2 S.M.A.R.T.

o general	🛅 TIME	<b>&amp;</b> (	JSER		\GE	EV	ENT	🔍 MAIN	ITENANCE		admin 🋱
HDD MGT.	HDD S.M.A.	R.T. Analysis					HDD S.M.A.R.T. Ir	nformation	(Port:6 WDC V	ND5000AVDS-73U7B1)	
S.M.A.R.T.	Port	Model	Analysis	Spe	nding	Status	Status	н	DD Info.	Attributes	Event
USB MGT.	6	WDC WD5000	Short	– 2M	in		Result		Normal		

The S.M.A.R.T. status of your hard drive is displayed in **S.M.A.R.T.**, where you can run analysis (either short or extended) on the HDD. Choose between **Short** or **Extended** analysis and click **Analysis** to start the process. You will see HDD status, information, attributes, and event history under **HDD S.M.A.R.T. Information**.

Chapter 2-4-3 USB MGT.

C GENERAL			🚨 USER	STORAGE		🗟 EVENT		C MAIN	ITENANCE
HDD MGT.		Model		Size	Status		Select		
S.M.A.R.T.	1.	None		OMB	None				
USB MGT.		None		OMB	None				

Connect a USB device (flash drive or hard drive) to the NVR, and check the one you want to format under this page, and then click **Format**.

### Chapter 2-4-4 Digital Watermark Checker

LILIN NVR support digital watermark feature to ensure the backup footage is not getting forged and modified. A user can use the tool WaterMarkChecker.exe to verify if the backup footage gets forged or not.



- 1. Backup video footage to the USB flash drive
  - 1.1 Insert an USB flash drive into the NVR.
  - 1.2 Click the Playback button.



1.3 Click playback button.



1.4 Click USB button





Recor	d Perioi	1 2	020/09/	08 08:3	4:34 -	- 2020/0	9/08 1	4 51,16		,	lot Insta	s)/ed	°Ç°
Martin													
SUN													
-30													
6													
13	14		16	17		19	13	14					
20				24	25	26	20						
27	28	29	30					28					
4													
[		<b>▲</b> urs	50	Sec	16			14 Ho	<b>↓</b> urs	50 Minutes		16	
Back	up Peric	d 20		8 14:50	):16					9/08 14			
	01	.02	.03	C	.04	.05	.0	the state	.07	.08			
	.17	.10 .18	.11	100	.12 .20	.13	.1	inter i com	.15 .23	.16			
	25	.26	.27		.28	.29	.3	0	.31	.32		ALL	
File Fo	HD I armat	MP4		Est	timate	File Size							
-				-			8	ackup			Can	cel	

1.5 Select the date, time and file format, and then click Backup button

- 2. To verify each backup footage by the tool WaterMarkChecker.exe
  - 2.1 Insert the USB flash drive into PC.
  - 2.2 Execute WaterMarkChecker.exe.
  - 2.3 Click Select File to verify button.

	×
Select File to verify	
C	ОК

2.4 Select backup folder from the USB flash drive, file format, and choose one file.

	N (I:) > backup			∨ Ö Sea	rch backup		۶
Organize 👻 New fold	er				-		(
backup ^	Name	Date modified	Туре	Size			
Lilin_Plus	2020	9/8/2020 1:48 AM	File folder				
- Temp	A 20200908083400_CAM01	9/8/2020 1:47 AM	VLC media file (.m	9,988 KB			
Xprotect VMS 20	📥 20200908083600_CAM01	9/8/2020 3:00 AM	VLC media file (.m	12,662 KB			
<ul> <li>OneDrive</li> </ul>	🛓 20200908083700_CAM01	9/8/2020 3:01 AM	VLC media file (.m	6,952 KB			
💻 This PC							
Desktop							
Documents							
Downloads							
Music							
E Pictures							
Videos							
🏪 Local Disk (C:)							
Local Disk (D:)							
LOCALDISK (D:)						_	_
- · · · ·	ame: 20200908083400 CAM01			~ m	p4 files (*.mp4)		

Note: File format supports mp4 and AVI only.



2.5 The verify status will show OK if the backup footage is not modified.

ag	×
Select File to verify	
I:\backup\20200908083400_CAM01.mp4	
2020/09/08 01:47:31 Verify Status: OKI Model:8193, last checksum:50	
	ОК

## Chapter 2-5 Event Chapter 2-5-1 System

🕲 GENERAL	🛅 ТІМЕ	Å USER	🚔 s	TORAGE	🗟 EVENT		admin	۵	*
SYSTEM	Time <b>Carlos</b>		Content						
OPERATING	2020/12/09 10:4	0:38	DDNS succeed	ed		^			
ALAKIM	2020/12/09 10:4		NTP time sync			<b>~</b>			
	2020/12/05 00.4		295 / 295						
	Download	R	Reload						

The search field in this page allows you to search for specific event reports at different time and of different content. Press **Download** to export the event report, **Reload** to update.

# Chapter 2-5-2 Operating

O GENERAL	🛅 ТІМЕ	🚨 USER 🧯	STORAGE	C MAINTENANCE	admin 🗱 🗱
SYSTEM	Time <b>Time</b>	qI	User <b>State</b>	Content	
OPERATING	2020/12/09 11:02:14		ADMIN	Net close	^
	2020/12/09 11:01:58		ADMIN ADMIN	Net connect Net close	
	2020/12/09 11:01:48	3 192.168.3.153	ADMIN	Net connect	
	2020/12/08 11:19:08	3 192.168.3.111		Net close	<u> </u>
			171 / 171 ent	tries	
	Download	Reload			

You can examine the operating status of different users under this page. Press **Download** to export the event report, **Reload** to update.



## Chapter 2-5-3 Alarm

The event history is displayed in alarm log.

🕲 GENERAL		ИE		*	USER		🖆 ST	ORAGE	STENT EVENT		admin 🔅 🗶
	Even	nt Pe	riod	2020/0	)5/26 18:	00 ~ 202	20/06/1	1 20:57	2020/06/11 20:56:42	.12 CAM12	Motion Event
	Sear	ch T	ime						2020/06/11 20:56:42	.17 CAM17	Motion Event
				J	une, 202	0			2020/06/11 20:56:41	.2 CAM02	Motion Event
									2020/06/11 20:56:41	.16 CAM16	Motion Event
	SU	N	MON	TUE	WED	THU	FRI	SAT	2020/06/11 20:56:41	.27 CAM27	Motion Event
									2020/06/11 20:56:22	.12 CAM12	Motion Event
					10	11			2020/06/11 20:56:17	.2 CAM02	Motion Event
	14		15	16	17	18	19	20	2020/06/11 20:56:17	.16 CAM16	Motion Event
									2020/06/11 20:56:17	.27 CAM27	Motion Event
					24				2020/06/11 20:56:10	.2 CAM02	Motion Event
	28								2020/06/11 20:56:10	.27 CAM27	Motion Event
									2020/06/11 20:56:10	.29 CAM29	Motion Event
									2020/06/11 20:56:08	.16 CAM16	Motion Event
		X .0	1	X .02	<b>X</b> .03	×	.04	X.05	2020/06/11 20:55:46	.12 CAM12	Motion Event
		0. X	6	X.07	80. 🗙	X	.09	X.10	2020/06/11 20:55:35	.2 CAM02	Motion Event
		X .1	1	X.12	X.13		.14	X.15	2020/06/11 20:55:35	.27 CAM27	Motion Event
		X .1	6	X .17	X.18	X		20.20	<		>
		X .2	1	<mark>X</mark> .22	<mark>X</mark> .23	X	.24	X.25			
		X .2	6	<mark>X</mark> .27	<mark>X</mark> .28		.29	<mark>X</mark> .30		▼ 1-100 / 5300 (#5300)	
		X .3	1	X.32				X.ALL			Search

- Event Period: Recorded event duration.
- Search Time: Display search duration.
- Calendar: Select date to search
- Channel: Select channel number to search

### Chapter 2-6 Maintenance

o general	🛅 TIME	🛃 USER	A STORAGE	📩 EVENT	
MAINTENANCE	Firmware Update	Upd	ate ashnvr5832.bin)		
	Export Settings	Exp			
	Import Settings	Imp	ort (NVR5832.xml)		
	Restore	Rest Reset all paramet	ore ers, except the IP and monitor resc		
	Default	Defa Reset all paramet	ult ers to the original factory settings.		
	Schedule Reboot	Schedule	Reboot		
	Soft Reboot	Reb	pot		
	Watchdog Test	Te:	st		
	Kernel Version Setup Wizard	3.10.0 #2817			
	Support	Ru Too			
	Third Party Licenses	Licen			

- Firmware Update: Choose a firmware file and click **Update** to proceed firmware update.
- Export Settings: Click Export to copy system settings to a USB flash drive.
- Import Settings: Click **Import** to apply a system setting that is stored in the plugged USB flash drive.
- Factory Reset: Click **Reset** to restore the system to the factory settings.
- Soft Reboot: Click to soft reset the system.
- Watchdog Test: Click to test the system watchdog function. This will reboot the NVR.
- Kernel Version: The kernel version of the system.
- Setup Wizard: Click to execute the quick setup wizard.
- Support: Click to open server execution log options dialog, record system execution details.



## Chapter 2-6-1 Firmware Update

The local NVR firmware update method is as follows:

Create a "firmware" folder to the root directory of the USB flash drive.

- 1. Put the firmware of the NVR to the created "firmware" folder.
- 2. Plug the flash drive into the USB Port in the NVR rear panel.
- 3. Click the gear icon in the upper left corner of the NVR to enter the NVR's Menu.



4. Click **SYSTEM** > **MAINTENANCE**, select the correct firmware file, then click the **Update** button to firmware update, and press **Submit** to start the firmware update.

Chapter 3 Network Setup

Click is to enter NVR SETTINGS, and click NETWORK retwork in the left pane.

## Chapter 3-1 General

9LILINI	<b>O</b> GENERAL	advanced	E-MAIL 🖷	FTP	🖨 DDNS	to ther
STREAM		IP Mode	Static	Port Forward (Router Suppor		
CAMERA		IP Address	192.168.3.105	IP Test		
QO RECORD		Subnet Mask	255.255.255.0			
*		Default Gateway	192.168.3.254			
کُلُ alarm		Primary DNS	8.8.8.8			
		Secondary DNS	8.8.4.4			
င်္ဂီ NETWORK		HTTP Port	80	Basic Authentic		
င်္ဂြို့ SYSTEM		HTTPS Port	443	Certificate		
		FTP Port	12321	Off		
TZ PTZ		RTSP Port	(1~65535 <b>554</b>	RTSP URI		
Г::: META DATA		MAC Address	(1~65535 00:0F:FC:10:43:5C			
CTHER		PPPoE Account	user (Max. length 64			
		PPPoE Password	(Max. length 64	Show	de autorea	
		PPPoE IP	(Max. length 64	,) (Dispidy		
		Hot-spot IP		I		
				Apply	Undo	

Enter the required information in the fields:

- IP Mode: Select the connection type of the NVR from **Static**, **DHCP**, and **PPPoE**.
- IP Address: Enter the IP address you want to use, and press IP Test if necessary.
- Subnet Mask: Enter the desired subnet mask.
- Default Gateway: Enter the desired default gateway.
- Primary DNS: Enter the first priority DNS server.
- Secondary DNS: Enter the secondary DNS server in case the primary DNS is not available.
- Video Port: Specify a desired video port.
- HTTP Port: Specify a desired HTTP port.



- HTTPS Port: Specify a desired HTTPS port and configure HTTPS.
- FTP Port: Specify the desired FTP port.
- MAC: This is the MAC address of your NVR.
- PPPoE Account: If you choose to connect through PPPoE, enter the account name here.
- PPPoE Password: Enter the required password for PPPoE connection.
- PPPoE IP: Your PPPoE IP will be displayed here.
- Hotspot IP: Your hotspot IP will be displayed here.

**Note:** When connected to an Android device via a USB connector, please turn on the USB tethering function to assign a hotspot IP to the NVR.

### Chapter 3-1-1 Configuring HTTPs PORT

LILIN DHD DVR series support HTTPs (Hypertext Secure Transmission Protocol) service. HTTPs is an Internet protocol that ensures the integrity and confidentiality of data as it travels between users' computers and websites. When users visit any website, they want a secure and private online experience.

HTTPs can be regarded as the advanced security version of HTTP. The SSL protocol is added as a security certificate. Therefore, the website can prevent data thief from directly seeing the transmitted data even if they intercept the transmitted information by using the encryption on the agreement.

There are three options to set HTTPs service:

1. The first option is to create a free self-signed certificate by filling-in the blank field below. Then, click **Create Self-signed Certificate.** 

HTTPS Certificate			×
Country Code	TW		
State or Province	Taiwan		
Locality	Taipei		
Organization	Meritli		
Organization Unit	Lilin		
Common Name	www.m	(Max. length 64)	
Validity	365		
Create Self-signed Certifi	cate	Create Certificate Request	Export Certificate Request CSR not created.
Using Wild Card		Import Signed Certificate	
			Exit

2. The second option is to use the wild card by clicking Using Wild Card.

HTTPS Certificate		×
Country Code		
State or Province		
Locality		
Organization		
Organization Unit		
Common Name		
Validity		
Validity		
Create Self-signed Certificate	Create Certificate Request	Export Certificate Request
Using Wild Card	Import Signed Certificate	CSR not created.
		Exit



3. The third option is to purchase an SSL certificate by filling-in the blank field below and click on Create Certificate Request. Then, click on the Export Certificate Request to download the request into a PC and use to apply for official certification. After purchasing the SSL certificate from a third party company, click on the Import Signed Certificate.

HTTPS Certificate		×
Country Code	TW	
Chata an Danala an		
State or Province	Taiwan (Max. length 64)	
Locality		
Locality	(Max, length 64)	
Organization	Meritlilin	
- <b>J</b>		
Organization Unit	Lilin	
Common Name	www.meritlilin.com	
Validity		
Create Self-signed Certil	icate Create Certificate Request	Export Certificate Request
		CSR not created.
Using Wild Card	Import Signed Certificate	-
		Evit

Chapter 3-2 Advance Chapter 3-2-1 TCP/IP

C GENERAL	<b>O</b> ADVANCED	🖂 E-MAIL	🚇 ЕТР	) Di	DNS	OTHER
	1st TCP/IP	On				
	1st IP Address	192.168.113.127		IP Test		
	1st Subnet Mask	255.255.255.0				
	2nd TCP/IP					
	2nd IP Address	192.168.26.130		IP Test		
	2nd Subnet Mask	255.255.255.0				
	3rd TCP/IP	Off				
	3rd IP Address	192.168.3.111		IP Test		
	3rd Subnet Mask	255.255.255.0				

NVR supports three sets of virtual IP addresses. When **TCP/IP** is switched **On**, the NVR can access the camera or another NVR using the specific IP.

For 4K PoE NVR series, 4K PoE NVR series use Advanced TCP/IP for automatically setting cameras' IP addresses.

9LILINI	o general	advanced	🖂 E-MAIL 🛛 🖶 F	TP 🌐 DDNS
() STREAM		1st TCP/IP	On -	
🗔 camera		1st IP Address	192.168.113.127	IP Test
OLO RECORD		1st Subnet Mask	255.255.255.0	
أُثُلَّ alarm		2nd TCP/IP	On -	
		2nd IP Address 2nd Subnet Mask	192.168.5.130	IP Test
Se NETWORK		2nd Subnet Mask 3rd TCP/IP	255.255.255.0	
		3rd IP Address	192.168.110.111	IP Test
ڋؽٷ system 		3rd Subnet Mask	255.255.255.0	
TZ 🗑				
💬 META DATA				
CTHER OTHER			Apply	Undo

**Note:** For 4K PoE NVR series, when **Auto** is selected as the camera source, the IP addresses of the cameras will be changed automatically. The IP addresses of the cameras will be in sequence assigned after the IP address of the NVR.



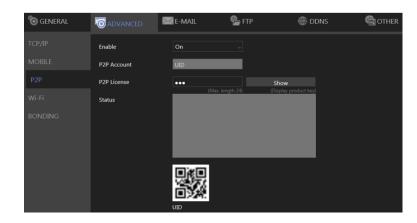
Chapter 3-2-2 Mobile

o general		E-MAIL	🖶 FTP	🖶 DDNS	ther other
TCP/IP	Enable	Off			
MOBILE	SIM PIN Code	••••			
P2P	IP Mode		2G/3G/4G		
Wi-Fi	IP Address	0.0.0.0	20,000,10		
BONDING	Signal Strength				

The NVR is compatible with several mobile data adapters (D-Link DWM-221, HUAWEI E3372h, ALCATEL L800, etc.). Plug in the device and adjust the settings below.

- Enable: Choose **On** to activate the service.
- SIM PIN Code: Enter the PIN of the SIM card you use to connect to the mobile network.
- IP Mode: The connection status of your mobile network.
- IP Address: The IP address of your connection.
- Signal Strength: The signal strength of your connection.

### Chapter 3-2-3 P2P



### Note:

- 1. You can purchase a P2P account from your dealer.
- 2. Availability depends on models.
- 3. When activated successfully, a QR code will appear on the screen, and you can access the NVR with a dedicated App by scanning the QR code.
- Enable: Choose **On** to activate the service.
- P2P Account: Enter your account ID.
- P2P License: Enter your license code.

## Chapter 3-2-4 Wi-Fi

o general		E-MAIL	🖶 ГТР	DDNS	CTHER
TCP/IP	Enable	Off			
MOBILE	SSID	default			
Р2Р	Password	••••		Show	
Wi-Fi	IP Mode	DHCP			
BONDING	IP Address	192.168.201.12	3		
	Subnet Mask	255.255.255.0			
	Default Gateway	192.168.201.1			
	Search	Searc	h		



The NVR is compatible with several Wifi dongle( EDIMAX EW-7811Un, ASUS USB-N13, TP-LIINK TL-WN822M, Bointec CUB811K or others with 8192cu/mt7601cu chip set etc. )

- Enable: Choose **On** to activate the service.
- SSID: Service set identifier, enter required network name.
- Password: Enter the password that you use to connect to the WiFi host.
- IP Mode: Choose STATIC or DHCP to suit your WiFi network.
- IP Address: DHCP chosen, display assigned IP address, STATIC enter required IP address.
- Subnet Mask: DHCP chosen, display assigned subnet mask, STATIC enter required subnet mask.
- Default Gateway: DHCP chosen, display assigned gateway, STATIC enter required gateway address.

Chapter 3-2-5 Bonding

o general	The second secon	E-MAIL	🟪 FTP	DDNS 💮	ther other
TCP/IP	Mode	Redundancy			
MOBILE		Redundancy Sharing			
P2P					
Wi-Fi					
BONDING					

Choose Redundancy or Sharing mode for dual Ethernet NVR.

Note: Availability depends on models.

### Chapter 3-3 E-Mail

When an alarm is triggered, the NVR can automatically send e-mail notifications to the recipients you designated. The setting options are described below:

o General	advanced	E-MAIL	🚰 FTP	DDNS	CTHER 0THER	admin	•	*
E-MAIL	E-Mail List	1:to@example.com 2: 3:		Candidate				
	Edit Contact	to@example.com (Max. le	Modify					
	Authentication							
	SSL/TLS	Off		Receiver(s)	1:to@example.com			
	E-Mail Account	user (Max. le						
	E-Mail Password	(Max. le		Annotation y password)			^	
	Sender	from@example.com (Max.le						
	E-Mail Host	192.168.0.1 (Max. le					~	
	Port							
	JPEG File			E-Mail Test		(roden er e		
	Trigger Conditions	Channel Event	s System Eve	nts				
					Send	Clear		
					Apply	Undo		

- Send E-Mail: Check the box to enable sending e-mail notifications when an alarm is triggered.
- E-Mail List: The list shows all saved e-mail addresses.
- Edit Contact: Enter the email address you want to save as contacts and click Modify.
- Authorization: Check if your e-mail account requires login authorization.



- SSL/TLS: Check if your e-mail sever requires encryption.
- E-Mail Account: Enter the account name of your e-mail.
- E-Mail Password: Enter the password of your e-mail.
- Sender: Enter the name you would like to display in the e-mail.
- E-Mail Host: Enter the IP address of your e-mail server.
- Port: Enter the port of your e-mail server.
- JPEG File: Check to also attach JPEG photos when an alarm is triggered.
- Candidate: Choose an email address and press Down or Up arrows to add contacts as recipients.
- Receiver: The list of recipient(s).
- Annotation: Content of the email notification.
- Trigger Conditions: Designate when to send the notification email by **Channel Events** and **System Events.**
- Channel Events: Click to open the dialog below.

🗱 E-MAIL - Channel Ev	ents 🗱
1. CAM01	🗌 Motion 🗹 Alarm 🗌 Video Loss 🗌 Denial 🗌 Allowed 🗌 Visitor
2. CAM02	Motion Alarm Video Loss
3. CAM03	🗌 Motion 🗌 Alarm 🗌 Video Loss
4. CAM04	🗌 Motion 🗌 Alarm 🗌 Video Loss
5. CAM05	🗌 Motion 🗌 Alarm 🗌 Video Loss
6. CAM06	🗌 Motion 🗌 Alarm 🗌 Video Loss
7. CAM07	🗌 Motion 🗌 Alarm 🗌 Video Loss
8. CAM08	🗌 Motion 🗌 Alarm 🗌 Video Loss
9. CAM09	🗌 Motion 🗌 Alarm 🗌 Video Loss
10. CAM10	🗌 Motion 🗌 Alarm 🗌 Video Loss
11. CAM11	🗌 Motion 🗌 Alarm 🗌 Video Loss
12. CAM12	🗌 Motion 🗌 Alarm 🗌 Video Loss
13. CAM13	🗌 Motion 🗌 Alarm 🗌 Video Loss
14. CAM14	🗌 Motion 🗌 Alarm 🗌 Video Loss
15. CAM15	🗌 Motion 🗌 Alarm 🗌 Video Loss
16. CAM16	🗌 Motion 🗌 Alarm 🗌 Video Loss
Channel 17~32	Select/Clear All
	Apply Cancel

Note: How many channels depend on models.

- Motion: Check to send e-mail when movements are detected.
- Alarm: Check to send e-mail when external alarms are set off.
- Video Loss: Check to send e-mail when connection with IP Camera is lost.
- Metadata: Check to send e-mail when metadata is received.
- System Events: Click to open the dialog below.

🗱 E-MAIL - System Events		×
HDD S.M.A.R.T. abnormal HDD track error		
	Apply	Cancel

- HDD S.M.A.R.T. abnormal: Check to send E-Mail when an S.M.A.R.T. error is detected.
- HDD track error: Check to send E-Mail when an HDD error is detected.
- E-Mail Test: Click to send the testing email to verify out the settings.



### Chapter 3-4 FTP

When an alarm is triggered, the NVR can automatically send snapshots to the FTP server you designated. The setting options are described below:

GENERAL	advanced	E-MAIL FTP	di	ONS 👘 OT			
	FTP Server	FTP IPAddr		1. CAM01	/CAM01		
	Port	(Max. length 127) 21		2. CAM02	/CAM02		
	Account	FTP Account (Max. length 63)		3. CAM03	/CAM03		
	Password		Show	4. CAM04	/CAM04		
				5 611105			
	Prefix			5. CAM05	/CAM05		
	Postfix			6. CAM06	/CAM06		
	File Name Format	(Max. length 63)		7. CAM07	/CAM07		
	File Name Format			7. CAIMO7	/CAM07		
	FTP Test			8. CAM08	/CAM08		
				9. CAM09	/CAM09		
				10.118	/CAM10		
				11.213	/CAM11		
		Send	Clear	12. CAM12	/CAM12		
	Trigger Conditions	Channel Events		13. CAM13	/CAM13		
				14. CAM14	(21) (2)		
				14. CAM14	/CAM14		
				15. CAM15	/CAM15		
				16. CAM16	/CAM16		
				10. 011110	/CAWIO		
				Channel 17~32			
				Apply		Undo	

- FTP Server: Enter the IP address of the FTP server.
- Port: Enter the port of the FTP server.
- Account: Enter the account name of the FTP server.
- Password: Enter the password of the FTP server
- Prefix & Postfix: Specify the prefix and postfix of snapshot files.
- File Name Format: Change the file name format to suit your need.

1. CAM 01	/CAM01	
	(Max. length 63)	
2. CAM02	/CAM02	
	(May Jonath 63)	

Check the cameras that you want to send notifications to the FTP when an alarm is triggered, and specify the folder name where the images are saved.

For details about Trigger Conditions and Channel Events, please refer to the descriptions above.

### Chapter 3-5 DDNS

With DDNS, you can access an NVR connected to the Internet through the DDNS URL, whatever the actual IP is. The setting options are described below:

o general	advanced	E-MAIL	🖶 FTP	DDNS	CTHER
DDNS	Server	ddnsipcam.com			
	Hostname	10435C		35C.ddnsipcam.com/	
	Account	10435C			
	Password	••••		Show	
	WAN IP				
	Check Interval				
		egularly update the DDNS serv			
	Status	Status: Update Su			



- Server: Choose the DDNS server you want to use.
- Hostname: Enter the hostname of the DDNS server.
- User: Enter the username to log in to the DDNS server.
- Password: Enter the password to log in to the DDNS server.
- WAN IP: Enter your **WAN IP** if the NVR cannot automatically get the correct address.
- Check Interval: Choose the time interval you want the system to check theDDNS connection. **Note:** The DDNS feature requires Internet connection.

### Chapter 3-6 Other

The NVR also supports other protocols such as UPnP and SDDP, and related configurations can be modified in the **OTHER** tab. The setting options are described below:

C GENERAL	advanced	E-MAIL	骨 ЕТР	dine DE	DNS 💼	OTHER
	UPnP Device Name	LILIN NVR5832 0	00FFC10435C			
SNMP	UPnP Service	Off				
	Network Places	Off				
	Workgroup (Network Places)	workgroup (Ma				
	Device Name (Network Places)	NVR5832 (Ma				
	Description	NVR5832_000FF	C10435C	$\widehat{}$		
				(Max. length 31)		
	IE Default Liveview	H.264				
	Reset On Ethernet Error	Off				
	JPEG Mode	Single JPEG				
	Max Connections	10				
	Browser Auto Logout	Off				
	SDDP Device Name	NVR5832_104350				
	SDDP Service	On				
	IP Address Filtering	Off		Setup		
	Over Bitrate Protection	On				
	WS Discovery Response	e Off				
				Apply	Undo	

- UPnP Device Name: The device name shown on the UPnP network.
- UPnP Service: Switch on/off the UPnP service.
- Network Places: Switch on/off **Network Places** to display shortcuts to shared devices.
- Workgroup: The workgroup name displayed in **Network Places**.
- Device Name: The device name displayed in Network Places.
- IE Default Live View: Select the default streaming type (H.264 or MJPEG) when streaming using Internet Explorer.
- Reset on Ethernet Error: Reset the PHY when an Ethernet error is detected, and leave a record entry in the event table
- Max Connections: Set the maximum number of simultaneous connections when streaming using Internet Explorer.
- Browser Auto Logout (30 Minutes): Log out automatically after 30 minutes of inactivity.
- SDDP Device Name: The device name shown on the SDDP network.
- SDDP Service: Switch on/off the SDDP service.
- IP Address Filtering:Switch on/off the IP filtering function, press Setup to open the filtering IP address setting dialog.
- Over Bitrate Protection: Switch on/off protection function that when network input throughput over the limitation reducing live video decode to protect recording data.
- WS Discovery Response: Enable/disable device detection on network.

Note: Availability depends on model.



## Chapter 3-6-1 SNMP

C GENERAL	🗑 ADVANCED	E-MAIL	🖶 FTP	DDNS	OTHER
	Enable	Off			
SNMP	SNMP v1/v2				
	Read Only Community	public			
	Read/Write Community	private			
	SNMP v3				
	User	admin (Max. I			
	Authentication Password				
	Privacy Password				
	Read Only User				
	Read/Write User Heartbeat Trap	private (Max.)			
	Heartbeat Interval	10			
	Trap Destination IP				
	Export MIB File	Export			
		ŀ	Apply	Undo	

Simple Network Management Protocol, you can use for collecting information from NVR .

- Enable: Switch on/off SNMP service.
- SNMP v1/v2 Read Only Community: Enter a "read-only" information for remote device to retrieve.
- SNMP v1/v2 Read/Write Community: Used in responses for information from device and to modify settings on device.
- SNMP v3 User: Username with authentication.
- SNMP v3 Authentication Password: Password use to authentication, communication with authentication and without privacy.
- SNMP v3 Privacy Password: Password use to authentication, communication with authentication and privacy.
- SNMP v3 Read Only User: Users with security level noAuthnoPriv and context name as noAuth.
- SNMP v3 Heartbeat Trap: An SNMP trap is a notification, switch on/off.
- SNMP v3 Heartbeat Interval: Use this property to specify the length (in seconds) of the heartbeat period.
- SNMP v3 Trap Destination IP: Specify the IP address for the SNMP trap destinations.

## Chapter 4 Camera Setup

Click to enter NVR SETTINGS, and press CAMERA CAMERA in the left pane to enter the CAMERA SETUP page. The setting options are described below.



## Chapter 4-1 General

<i>SLILINI</i>	C GENERAL						admin 🇱
STREAM		Camera Name	CAM01	Security Protocol	IPScan	Cancel	Auto Adjust IP
		Camera Source	(Max. length 12)		(Discover Devices) Select	(Abort Discover) Snapshot	Set IP
		Califiera Source	(Stream source)		(Apply To Channel)	snapsnot	Set IP
o record		IP Address	192.168.113.109	Test (ONVIF Device Info)	CH 💠 IP Address	Model	ImageStatus
1 ALARM		HTTP Port	<b>80</b> (1~65535)	Assign RTSP URL	10.130.97.16	SG1122	
_		RTSP Port	554 (1~65535)	RTSP/TCP (RTSP Type)	169.254.226.167		
DISPLAY		User	admin (Max. length 15)	RTSP Multicast Setting			
& NETWORK		Password	(Max. length 15)	Show (Display password)			
SYSTEM		Stream Type	Dual Stream (Stream type)	Apply To All Channels (Stream Properties)			
		Primary Stream					
PTZ		(For Multi-Channel Display) Primary Stream Bitrate	(5~120 FPS) 3072 ~ (512~12288 kbps)				
🗉 META DATA		Secondary Stream	20	20			
OTHER		Sec. Stream Bitrate	(5~120 FPS) 3072 ~ (512~12288 kbps)				
		Decode Ref.		Immediate			
		Display	Off ~ (Camera Disable)	ADMIN ~ (Network Permission)			
		Sync Time With NVR	Off				
		200 / 960 FPS (Primary Stream)	225 / 960 FPS (Secondary Stream)	48.0 / 300 Mbps (Total Bitrate)		2 entries	
rsion: 4.1.25.4615	<b>\$</b>					Apply	Undo

- Camera Name: Enter the camera name to be displayed on the streaming screen.
- Camera Source: Allocate a NVR channel for the camera. Select Off, IP camera, or Auto. Note: The Auto mode is only supported by 4K PoE NVR series.
- IP Address: Enter the IP address of the camera you want to connect.
- HTTP Port: Enter the port for HTTP connection.
- RTSP Port: Enter the port for RTSP connection.
- User: Enter the username required for camera authorization.
- Password: Enter the password required for camera authorization.
- Stream Type: Choose whether to stream only the primary video or dual (primary & secondary) videos.
- Primary Stream: Select the FPS and GOP for the primary stream.
- Primary Stream Bitrate: Select the bitrate for the primary stream.
- Secondary Stream: Select the FPS and GOP for the secondary stream (available only if **Dual** Stream is activated in Stream Type).
- Sec. Stream Bitrate: Select the bitrate for the secondary stream.
- Decode Ref. : Select the number of reference frame for the decoder, and choose **Immediate** for lower latency or **Smooth** for smoother but higher latency video.
- Display: Disable the video function (live feeds and playback) of the selected camera.
- Sync Time with NVR: Turn **On** for the camera to sync time with the NVR.
- Security Protocol: Check box to allow HTTPS connections to the IP camera. The recommended HTTP port setting is 443.
- Test: Press to check ONVIF device information including manufacturer, model #, firmware version, serial # and hardware ID.
- Assign RTSP URL: Assign required RTSP URL, NVR will connect to camera via required RTSP URL but not Onvif.
- RTSP Multicast Setting: Assign required RTSP multicast port.

IPScan	Cancel	Auto Adjust IP
Select	Snapshot	Set IP

- IPScan: Click IPScan to scan for connected devices on the network.
- Cancel: Click **Cancel** to stop scanning.
- Auto Adjust IP: Automatically assign IP for connected cameras.
- Snap: Show snapshot thumbnails for all the cameras.
- Set IP: Assign an IP address to the camera.



# Chapter 4-2 Video

C GENERAL	S VIDEO			admin 🌣 🗱
			Focus Mode	
			Focus Default Speed	• o
			Focus Far Limit	Unsupport 0
			Focus Near Limit	Unsupport 0
			Exposure Mode	Unsupport MANUAL  v LowNoise  v
			Exposure Gain	Priority mode 0
	Contrast	50	Exposure Min Gain	Unsupport 0
	Brightness	(0:Low ~ 100:High)	Exposure Max Gain	Unsupport 42
	Saturation	(0:Low ~ 100:High)	Exposure Time	(6:Low ~ 36:High)
10. CAM10	Sharpness	(0:Low ~ 100:High) 36	Exposure Min Time	Unsupport 0
11. CAM11	WDR Mode		Exposure Max Time	Unsupport 0
	WDR Level	o 0	Exposure Iris	Unsupport 0
	White Balance Mode	Unsupport	Exposure Min Iris	Unsupport 0
	White Balance Cb		Exposure Max Iris	Unsupport 0
	White Balance Cr	(1:Low ~ 255:High)		Unsupport
	BLC Mode		Default	Refresh
	BLC Level	128		Kerresh
<b>A</b>	BLC Lever	Unsupport	Apply	

In this page, you can adjust several camera parameters including **Contrast**, **Brightness**, **Saturation**, and **Sharpness**.

Click **Default** to restore the NVR to its factory settings. Click **Refresh** to update the preview image.

## Chapter 5 Record Setup

Click to enter NVR SETTINGS, press RECORD in the left pane to enter the RECORD SETUP page. To adjust recording or schedule settings, the setting options are described below.

## Chapter 5-1 General

9LILINI	<b>O</b> GENERAL	E SCHEDULE	ADVANCED
👰 STREAM	1. CAM01	Record Mode	Schedule
CAMERA	2. CAM02	Audio	Off
QO RECORD	3. CAM03	Post-alarm Record	5
	4. CAM04	Weighted Record	Off -
â alarm	5. CAM05		(Only for always record)

- Record Mode: Switch on/off scheduled recording.
- Audio: Switch on/off audio recording.
- Post-alarm Record: Enable to record after an event takes place. Set the time (second) for the NVR to record after the alarm is triggered.
- Weighted Record: If any alarm is triggered when Weighted Record is turned on, the recording frame rate will be adjusted to the pre-determined value (which can be set in CAMERA SETUP). Otherwise, the NVR will record at a lower frame rate (approximately 4–5 FPS).

### Note: System Recording Mode must set to Schedule and Recording schedule set to Always.



## Chapter 5-2 Schedule

o general	SCHEDULE	To AD	VAN	CED															ad	min	\$
					04			08													
	Monday																				
	Tuesday																				Γ
	Wednesday																				Γ
	Thursday																				Γ
	Friday																				
	Saturday																				
	Sunday																				
			Always	;		Al Al	arm		C	No I	Record	1		A	pply A	JI	Арр	ily To	All Chi	annels	
															Ar	ply			Und	0	

To modify the recording schedule, switch the recording type from **Always** (continuous recording), **Alarm** (record only when an alarm is triggered), or **No Record** (disable recording), and highlight the desired date and time accordingly. Click **Apply All** to apply your selection of recording type to all dates and time.

## Chapter 5-3 Advanced

C GENERAL	SCHEDULE	ADVANCED
ADVANCED	System Recording Mode	Schedule
	Overwritten	On -
	Pre-alarm Record	Off
	Limited Recording	Off
	Protected Recording	(0~365 Day(s)) Off
	Estimate Recording Time	(0~365 Day(s)) Estimate

- System Recording Mode: Choose between Manual or Scheduled recording.
- Overwritten: Switch on to overwrite old files when the storage is full.
- Pre-alarm Record: Switch on to start recording for a period before an alarm occurs.
- Limited Recording: Set the number of days to record (from now to the designated day).
- Protected Recording: Set how many days of video the NVR will preserve.
- Estimate Recording Time: The estimate number of days that can be recorded based on the hard disk size.

Estimate Recording Time								
Average Recording Bitrate	1,568							
Available Recording Size	433,581	(Kbps)						
Estimate Recording Time	26 Day(s) 5 Hour(s)	(MB)						
Estimate	Cancel							

- Average Recording Bitrate: The average video stream size based on the current bandwidth received by the NVR.
- Average Recording Size: The available recording space according to the current installed hard disk.
- Average Recording Time: The estimate number of days that can be recorded based on the hard disk size.



Chapter 6 Alarm Setup

Click is to enter NVR SETTINGS, press ALARM

in the left pane to enter the ALARM

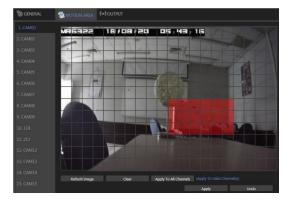
SETUP page. The setting options are described below:

## Chapter 6-1 General

9LILINI	10 GENERAL	TO MOTION AREA				admin 🄅
💓 STREAM		Alarm Input Type	Off	Motion Popup	Off	
🗔 camera		Motion Enable		Specify Alarm Text	off	
Q.O RECORD		Motion Sensitivity	Standard	Display View		(Max length 32)
	4. CAM04	Save Event Snapshot		Display Type		
	5. CAM05	Apply To All Channels		Display Content		
				Alarm Popup	off	
or Network				Specify Alarm Text	Off	
င့်ဦ system				Display View	Off -	(Max. length 32)
TZ PTZ				Display Type		
💬 META DATA				Display Content		
E OTHER				Metadata Popup	Off	
				Specify Alarm Text	off v	
				Display View	Off 🚽	(Max length 32)
				Display Type		
				Display Content		
					Apply	

- Alarm Input Type: Set the alarm sensor to **Normally Open** (NO), **Normally Closed** (NC), or **IP Camera**. The last option will trigger the alarm only when receiving a signal from IP cameras.
- Motion Enable: Switch on/off motion detection. Remember also to set the motion detection area in the tab **MOTION AREA**.
- Motion Sensitivity: Adjust the sensitivity of motion detection. Higher sensitivity indicates that the alarm can be more easily triggered.
- Save Event Snapshot: Enable to store a snapshot on the hard drive when an alarm is triggered.
- Motion Popup: The display view pops up when the motion is triggered.
- Specify Alarm Text: The alarm text displays on the channel when the alarm is triggered
- Display View: Turn on/off the display view when the alarm is triggered.
- Display Type: Switching display view to camera/view when alarm is triggered.
- Alarm Popup: The display view pops up when the alarm input is triggered
- Metadata Popup: The display view pops up when the metadata event is triggered
- Display Content: Camera: Switch display to the selected channel. View: Switch display to the selected split view group.

Chapter 6-2 Motion Area



Click and drag across the grid to highlight motion detection areas. Click **Apply All Channels** to apply the areas to all camera channels.



Chapter 6-3 Output Chapter 6-3-1 Alarm Led

C GENERAL	TOTION AREA	(=))OUTPUT	
ALARM LED	Enable	On	
BUZZER	Trigger Conditions	Channel Events	System Events
E-MAIL	Alarm Send Interval	5 (5~100 Seconds)	

- Enable: Turn **On** to activate the alarm LED.
- Trigger Conditions: See **Channel Events** and **System Events** above for more details.
- Alarm Send Interval: Set the frequency of LED blinking when an alarm is triggered.

## Chapter 6-3-2 Buzzer

o general	TOTION AREA	() OUTPUT	
ALARM LED	Enable	On	
BUZZER	Trigger Conditions	Channel Events System Events	
E-MAIL	Alarm Send Interval	5	

- Enable: Turn **On** to activate the buzzer.
- Trigger Conditions: See **Channel Events** and **System Events** above for more details.
- Alarm Send Interval: Set the frequency of buzzer beeping when an alarm is triggered. Note: SYSTEM SETUP > GENERAL > Buzzer must be enabled.

### Chapter 6-3-3 E-Mail

CENERAL	MOTION AREA	<b>©=)</b> OUTPUT	
ALARM LED	Enable	On -	
BUZZER	Trigger Conditions	Channel Events	System Events
E-MAIL	Alarm Send Interval	30 (5-100 Seconds)	

- Enable: Turn **On** to activate e-mail sending.
- Trigger Conditions: See **Channel Events** and **System Events** above for more details.
- Alarm Send Interval: Set the frequency of sending alarm notification e-mail.

## Chapter 6-3-4 FTP

o General	MOTION AREA	<b>(=)</b> OUTPUT
ALARM LED	Enable	Off
BUZZER	Trigger Conditions	Channel Events
E-MAIL	Alarm Send Interval	10
FTP		

- Enable: Turn **On** to activate FTP sending.
- Trigger Conditions: See Channel Events and System Events above for more details.
- Alarm Send Interval: Set the frequency of sending image files to an FTP server when an alarm is triggered.



### Chapter 6-3-5 Notification

C GENERAL	🎆 MOTION AREA	(-)OUTPUT
ALARM LED	Enable	Off
BUZZER	Trigger Conditions	Channel Events
E-MAIL	Alarm Send Interval	
FTP		
NOTIFICATION		

- Enable: Turn **On** to activate app push notification sending.
- Trigger Conditions: See **Channel Events** above for more details.
- Alarm Send Interval: Set the frequency of sending the app push notification when an alarm is triggered.

o general	MOTION AREA	() OUTPUT	
ALARM LED	Enable	Off -	
BUZZER	Manual DO Control	Off	
E-MAIL	Trigger Conditions	Channel Events	System Events
FTP	Alarm Send Interval		
NOTIFICATION			
DO#1			

Chapter 6-3-6 DO#1-N (manual DO control)

Manual DO control: Turn **On** to enable directly DO control, in live video window will show the corresponding DO number icon, click to control.

For other options, please refer to the descriptions above.

### Chapter 7 Display Setup

**DISPLAY** Provides several adjustable NVR parameters such as resolution, default number of split views, and more other options. The details of these settings are described as follows:

### Chapter 7-1 General

9LILINI	<b>O GENERAL</b>	⊈ advanced	SEQUENCE
👰 STREAM		HDMI Mode	HDMI
CAMERA		HDMI Resolution	1920 X 1080 🚽
QO RECORD		VGA Mode	SPOT -
道 alarm		VGA Resolution	1920 X 1080
]		OLED IP Address	Off 🚽
		Camera Name	Default
RETWORK		Status Area	Top of Screen - FFFFFF (HEX:RGGBB)
င်္သို့ system		Date / Time	On v
जि PTZ		View/SEQ Name	On -
		Alarm Text Color	(HEX:RGGBB)
META DATA		Error Message	On FF00FF (HEX:RGG88)
CTHER		Split Border Line	Off = 808080 (HEX:RGG88)
		Startup Display	Def.Div.32-1



- HDMI Mode: Switch the output mode between DVI and HDMI.
- HDMI Resolution: Select a screen resolution that fits your screen.
- VGA Mode: Choose HDMI Sync to synchronize the videos for VGA and HDMI outputs. Choose SPOT to display an HDMI/VGA switch button in the real-time view. Click the switch button to switch control of split views between HDMI/VGA.
- VGA Resolution: Select a screen resolution that fits your screen
- OLED IP Address: Turn on/off IP address display on front panel OLED.
- Camera Name: Adjust the channel name OSD position on local live view display. Opposite field is to select channel name text color for on-screen display.
- Status Area: Adjust the status OSD position on local live view display. Opposite field is to select status text color for on-screen display.
- Date / Time: Enable or disable the date and time OSD from the local live view screen.
- View/SEQ Name: Turn on/off View/Sequence OSD on split screen view
- Alarm Text Color: Select alarm text color for on-screen display.
- Error Message: Turn on/off error message in live view.
- Split Border Line: Select borderline size/color on split screen view
- Startup Display: Specify video to display after the DVR startup is completed.

Note: Availability depends on model.

#### Chapter 7-2 Advance

C GENERAL	ADVANCED	SEQUENCE	
ADVANCED	Brightness	·	(0:Low ~ 99:High)
	Contrast		(0:Low ~ 99:High) (0:Low ~ 99:High)
	Saturation		(0:Low ~ 99:High) (0:Low ~ 99:High)
	Hue		50
	Load Default	Default	(0:Low ~ 99:High)

In this page, you can adjust brightness, contrast, saturation and hue of the NVR output. Click **Load Default** to restore to the factory settings.

Note: Availability depends on model.

#### Chapter 7-3 Sequence

o general	I ADVANCED	
SEQUENCE	Split 1 Interval	7
	Split 4 Interval	(5 ~ 30 Seconds) 7 (5 ~ 30 Seconds)
	Split 6 Interval	7 (5 ~ 30 Seconds)

You are allowed to view videos of multiple cameras in sequence. Specify the **Sequence Interval** for the NVR to switch to the next camera or camera group for monitoring.



Chapter 8 PTZ Setup

Click to enter NVR SETTINGS, press PTZ in the left pane to enter the PTZ SETUP page. The setting options are described below:

Chapter 8-1 General

9LILIN	<b>O GENERAL</b>	CASCADE	
👰 STREAM	1. CAM01	Transfer Mode	НТТР
Camera		RS-485 Protocol	HTTP ONVIF Fish Eye
O RECORD		Control ID (PTZ Device ID)	R5485 (1 ~ 255 and Auto)
×		Control Panel	Joystick
۲) ALARM		Baud Rate	9600 -
RETWORK			
System			
TZ 🐨	10. 118		

- Transfer Mode: Choose a PTZ communication protocol from HTTP, ONVIF, or Fish Eye. Otherwise use RS-485.
- RS-485 Protocol: Choose a RS-485 control protocol for your RS-485 PTZ device. Note: Transfer Mode must be set to RS-485. Availability depends on models.
- Control ID: Choose the corresponding device ID to control the camera.
- Control Panel: The type of PTZ control panel.
- Baud Rate: The baud rate of RS-485 communication.

Chapter 8-2 NVR Cascade

o general	<b>F</b> CASCADE					admin 🌣 🗱
CASCADE	IP Address	_	нттр	User	Password	
	1. 192.168.5.1			ADMIN		^
	2. 192.168.5.2		80	ADMIN		
	3. 192.168.5.3		80	ADMIN		
	4. 192.168.5.4		80	ADMIN		
	5. 192.168.5.5		80	ADMIN		
	6. 192.168.5.6		80	ADMIN		
	7. 192.168.5.7		80	ADMIN		
	8. 192.168.5.8		80	ADMIN		
	9. 192.168.5.9		80	ADMIN		
	10. 192.168.5.10		80	ADMIN		×
			255 / 255	entries		
	192.168.5.1	80	ADMIN	••••	Show	Modify
	Default	Search	Cancel			
	Enable	Off 👻				
	Export	Import				
					Apply	Undo

This tab allows you to cascade multiple NVRs or adjust relevant settings. For detailed instructions on how to use the NVR cascade function, visit our official website. Enter **Support > SDK**, and download the document named **DVR/NVR IR/keyboard serial commands over HTTP**. The settings listed in this tab are described in details as follows:



192.168.5.1	80	ADMIN	••••	Show	Modify
Default	Search	Cancel			
Enable	Off				
Export	Import				
				Apply	Undo

- Show/Hide: Reveal or hide the password.
- Modify: Apply the changes you've made.
- Default: Restore to factory settings.
- Search: Find all other NVR(s) connected to your network.
- Export: Export the settings to the USB flash drive connected to the NVR.
- Import: Load the settings from the USB flash drive connected to the NVR.

Chapter 9 Metadata Setup

Click to enter NVR SETTINGS, and press METADATA In the left pane to enter the METADATA SETUP page. The setting options are described below:

Chapter 9-1 General

9LILIN	C GENERAL	🖾 EVENT			
STREAM	1. CAM01	Serial Input	Off		Event
CAMERA		Metadata Service	Off		Metadata
QO RECORD		Serial Device Server	192.168.127.25		
		Server Data Port	950	fax. length 31)	
â alarm		Server Command Port	966	(1~65535)	
		Emulated Mode	ESC/POS		
RETWORK		Encoding Mode	ASCII		
င်္သို system		Baud Rate	9600		
_		Data Size	8		
T PTZ		Parity	None		
[;::] META DATA		Stop Bit			
CTHER		Flow Control	None		
]		OSD Font Color	FFFFF	HEX: RRGGBB)	
Version: 4.1.25.4615				Apply	Undo

The NVR supports various external devices such as GPS or POS, and in this page you are allowed the change the settings for these devices. The setting options are described as follows:

- Serial Input: Select the USB port to which your external device is connected.
- Metadata Service: Turn **On** to enable using external devices.
- Serial Device Server: Enter the server IP for your serial device.
- Server Data Port: Enter the port of your serial device.
- Server Command Port: Enter the command port of the device.
- Emulated Mode: Choose an emulation type from the drop-down menu (see image below).





- Encoding Mode: Choose between ASCII and UTF-8.
- Baud Rate: Select an option suitable for your device.
- Data Size: Select an option suitable for your device.
- Parity: Select an option suitable for your device.
- Stop Bit: Select an option suitable for your device.
- Flow Control: Select an option suitable for your device.
- OSD Font Color: Choose a color for the OSD font from the spectrum (see image below).



• Event Metadata: Enable/disable recording of events triggered by Metadata in the event log.

#### Chapter 9-2 Event

EVENT	
Date CH Time Content	
	^
	~
/ entries / entries /	entries

This tab displays a history of received metadata. You are allowed to search for events based on time, channel, or content.

### Chapter 10 Other Setup

Click to enter NVR SETTINGS, and press OTHER FOR in the left pane to enter the OTHER SETUP page. The setting options are described below:



# Chapter 10-1 Smartphone

9LILINI	SMARTPHONE																		admin	•	*
💮 STREAM			00				04		06		08	09									
□ amera		Monday																			
QLO RECORD		Tuesday																			
ألمَنُ alarm		Wednesday																			
_		Thursday																			
		Friday																			
ည္ကိ NETWORK		Saturday	H																		
ද්ටී} system		Sunday		2				Of	6												
- जि PTZ		Trigger Conditions		Chan	nel Ev	vents			Syster	n Ever	its	i,	Apply	All							
💬 META DATA		Push Device List			Show																
THER OTHER		APP Download																			
					(5)/(3)/E																
Version: 4.0.26.6038																Ар	ply		Und	0	

This tab provides settings for sending alarm notifications to your smartphone that is paired with the NVR. You can download **LILINHOME** in App Store or Google Play for your iPhone, iPad, and other Android devices.

- Trigger Conditions: See **Channel Events** and **System Events** above for more details.
- Push Device List: Click **Show** to open a dialog, display all registered mobile devices that required push notification.
- APP Download: Scan the QR code to download LILINHome.

#### Chapter 11 Stream

Once the network configurations are completed and cameras connected, you can remotely view live streams of cameras via an Internet browser, and access other functions such as playing recorded video and backing up video files.

Note: IE 10 or above, or Chrome are recommended.

Enter the NVR IP address or domain name in the address bar:

http://192.168.3.195:1950

Enter the NVR username and password required for login authorization



Then log into the **STREAM** menu.

Note: NVR remote access requires corresponding access privileges.



# Chapter 11-1 Live



The **LIVE** tab displays the streams of all connected cameras. With the control buttons and joystick you can control the movement of the selected camera.



# Chapter 11-2 Play

In **PLAYBACK**, you can view recorded videos according to date/time, alarm/manual history table, and timeline.

			×
			+
		 	Q.
16	18	JAN. 20	Q

**Note:** Clicking the *I* icon at the upper right of the **TimeLine** reverts to **Playback** menu.



# Chapter 11-3 Backup

une Tine	D PLAY		⊎ васк	(UP					admin 🕇	¢: *
	Date / Time							File(s)		
			- <b>2020</b> Year							^
	Sun	Mon	Tue	Wed	Thu		Sat			
							4			
		6		8	9	10	11			
			14		16					
	19					24				
			28							
	2		4	5						1.1
	2020 - Start Time	1	▼ 10	▼ 16	- 52					
	2020 - End Time	1	▼ 10	▼ 16	- 52					
	Channel									
	1.			<ul> <li>✓ 5.</li> <li>✓ 13.</li> </ul>			<ul> <li>✓ 8.</li> <li>✓ 16.</li> <li>✓</li> </ul>			
	17. 🗹 18	. 🗹 19	. 🗹 20.	21.	<b>2</b> 22. [	✓ 23.	🗹 24. 🗹			
	25. 26	. 🗹 27 Clear All	. 🗹 28.	29.	30. [	31.	🖌 32. 🗹			
	File Format									~
	SD H.26X Ra	aw Data						0 / 0 entries		
Backupman	Ba	ckup								

In BACKUP, you could back up recorded videos by choosing the date/time, channel, and file format. Click Backup to start the backup process.

#### Chapter 11-3-1 Backup Manager

To reduce the NVR loading, user may back up the NVR files to a PC and playback from the PC independently. Click on **Stream** -> **Backup** -> **Backupman** to download the software. Please follow the instructions to install the Backup Manager.





Chapter 11-3-1-1 Backup Manager NVR Backup

1. Launch the Backup Manager on a PC, click on Start -> Backupman and will display the below image.

💩 Backupman 1.1.0.6														
File View Help														
<b>#</b>	0	Ø		X	•	•		(1)	$\odot$	$(\bullet)$				
FTP Connect Disconnect	Cancel	Refresh	Download CAM 01	Delete FTP	Properties	Fast Rewind	Stop	Pause CAM 02	Play	Fast Forward	4	9 CAM 03	16	36
USB Storage:														

Below are the Menu descriptions:

- **File**: To select file properties
- **Open File**: To select a file for playback.
- **Open Folder**: To select a folder for playback.
- Open Folder with HD Files: To playback the HD files.
- Convert AVI File: Convert a file to AVI.
- Add NVR/DVR FTP Connection: Add an NVR/DVR.
- Connect NVR/DVR FTP Connection: Connect to the NVR/DVR.
- Delete NVR/DVR FTP Connection: Delete an NVR/DVR.
- Exit: Leave the Backup Manager window.
- View: To select display properties.
- **Toolbar**: Display or hide the tools icon.
- Video Size 1:1: Enlarge or reduce the image.
- Hardware Graphics Acceleration: Accelerate the hardware graphics. (Note: Make sure the computer support this function to utilize this feature.)
- Help (H): Main menu for About Backup manager.
- About Backup Manager: Displays the Backup Manager version number.
- 2. Connect the Backup Manager to the NVR.
  - 2.1 Click on File
  - 2.2 Click on Connect NVR/DVR FTP connection, and a window will pop up

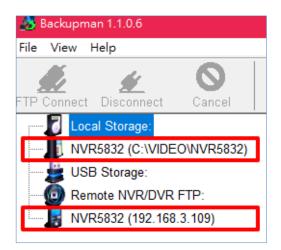
Profile Name <sup>-</sup> Host	NVR5832		OK
	192.168.3.109		Cancel
Address NVR FTP Port	12321		
Login:	admin		
Passwor	••••		
Download Path	C:\VIDEO\NVR5832		
Descriptio		^	
		~	

2.3 Please fill in the same information as NVR/DVR you want to back up (Please refer to NVR: **Network -> General**)

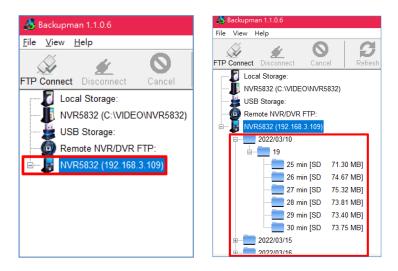
- **Profile Name**: Enter the name of the NVR.
- Host Address: Enter the IP Address of the NVR.
- **NVR FTP Port**: Enter the FTP Port of the NVR. (**Note:** Please turn ON the NVR FTP Port to enable to connect).
- Login: Enter the NVR login account name.
- **Password**: Enter the NVR login password.
- Press Submit

After filling in the information, It will show on the tree diagram.

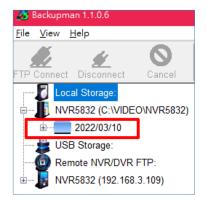




2.4 Click on the added remote NVR and press **File** -> **Connect NVR/DVR FTP Connection** and all NVR recorded files will be displayed in Backup Manager Remote NVR/DVR FTP tree diagram.



2.5 Select a file for download to the Backup Manager and click on **Download** icon. The user may select a date, hour, or minutes. Once download is complete, the file name will be displayed under Local Storage.





### Chapter 11-3-1-2 Backup Manager NVR Playback

To playback the downloaded NVR backup file on a PC, click on the **Local Storage** -> the selected Device Name -> the selected date/time and click on **Play** () icon.

Details of the Playback controls are described as follows:

Icons	Description
$\odot$	Rewind
۲	Stop
0	Pause
$\odot$	Play
	Forward
	Select the number of split-screens according to your needs

### Chapter 11-3-1-3 Convert Files to AVI Format

To convert to AVI file, click File -> Convert AVI File -> Select a file, destination and channel and click OK.

Select a file	)			Open				
Select a destination Browse								
ct Channel								
Channel 1	Channel 2	Channel 3	Channel 4					
Channel 5	Channel 6	Channel 7	Channel 8					
Channel 9	Channel 10	Channel 11	Channel 12	Select All				
Channel 13	Channel 14	Channel 15	Channel 16	Clean All				
Channel 17	Channel 18	Channel 19	Channel 20					
Channel 21	Channel 22	Channel 23	Channel 24					
Channel 25	Channel 26	Channel 27	Channel 28					
Channel 29	Channel 30	Channel 31	Channel 32					

#### Chapter 11-3-1-4 AVI File Playback

To playback the AVI file, go to the selected destination folder on the PC, and mouse double right click on the file name.

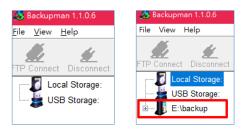




### Chapter 11-3-1-5 USB Storage

For USB flash drive file playback or convert to AVI format, please follow below:

- 1. Download the NVR recorded files to USB flash drive
- 2. Insert the USB flash drive to local PC
- 3. Launch the backup manager software and the USB flash drive will be displayed in the tree diagram automatically.



4. The user may select date/hour/minutes for playback or convert the files to AVI format.



# Appendix

Install LILINHome

Search and download LILINHome in the iOS App Store or Android Play Store. Or you can scan the QR code below:



### 1. Live View

Click on the Menu button and the Live button for accessing live video of cameras. Entering the Live page is going to show the last accessed view page.

Quad button: Click on the Quad button is to show 4 cameras in a sequence of a view page. Swipe the cameras for next quad view. Click on a camera for full screen.

☆

View button: Click on the View button that allows choosing a view page.



# 2. Playback

Click on the Playback button from the menu. Enter playback page. Playback is able to play SD card on an IP camera, NVR/DVR, and Navigator.

Click on the calendar button. The calendar control shows up. Select the date and time for playback. Click on the date control on the bottom for entering a date. Click on the timebar control for the time of playback.





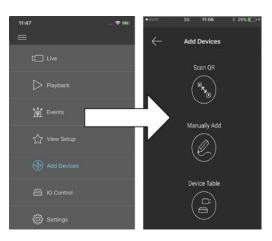
For controlling the playback video for LILIN products, click fast rewind, pause, fast forward, audio, video download, or quad view.

Video download: Click on the video download button for downloading video from LILIN products. Click on the quad view button for switching 4 camera views.



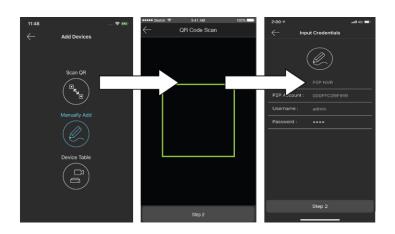
#### 3. Add Devices

LILINHome can support NVR/DVR for remote access.



### 3.1 Add Devices for LILINHome App

Click on Scan QR for adding a NVR. Point to the QR code of a NVR for scanning QR code license ID for adding the NVR Once a NVR gets added, the NVR goes to the View automatically. Enter Windows division is set automatically. If you are a home owner, you can just use LILINHome for easy access purpose.





#### 3.2 IPScan via Device Table

Use IPScan for all LILIN devices within a network. Enter username and password for the device. Click on Test button for accessing the video. This is to use cameras and NVRs that are in a network. For Internet access, make sure that the IP addresses of cameras and NVRs are Internet IP addresses.



### 3.3 Manually Add Devices

A user can manually add device via Manually Add feature for entering the global IP address or LILIN DDNS of LILIN IP camera or NVR at the URL field. Enter the Port number for the camera or NVR. Finally, enter username and password to gain Internet access.

00000	3G 10:05	∦ 100% 📻 ≁	00000	3G	10:05	🕴 100% 💴 <del>/</del>
$\leftarrow$	Add Devices					
			$\leftarrow$	Manua	ally Add	
	Device Table			1		
	T T			(E		
	Scan QR		Device N	lame :	Cam	
			URL :			
			Port :		80	
	Manually Add		Usernam	ie :	admin	
	$( \bigcirc )$		word	d :	••••	



# 4. View Setup

A camera view is to create a group of cameras for IP cameras or NVRs. This allows choosing cameras from different IP cameras or NVRs to form a view. Once a view is created, choose cameras from Device Table.

Icon	Description
÷	Click on New View button to create a new viewing group of cameras.
	Delete button: Click on Delete button for deleting a camera view.
(L)	Edit button: Click on Edit button for choosing cameras from Device Table after
	selecting a camera view.

#### 5. Help

Click on Help button. You are able to get the user manual for using LILINHome Apps.

