

Navigator User Manual

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Overview

LILIN Navigator (hereafter referred to as "Navigator") is a comprehensive solution to the management of LILIN's network products, including IP cameras, DVRs/NVRs, and a wide range of applications. Navigator consists of (1) network video recording software, (2) eMap Manager, (3) Database Manager, (4) Web Server, and (5) Remote DVR/NVR playback and file download.

Major functions of this software include the management of videos and images recorded by a wide range of cameras produced by LILIN, recording video clips in the SD card of remote IP cameras and DVRs/NVRs, and supporting video playback and file download. Navigator can be installed at various sites for camera management. According to geographical locations and functionalities, the software can also divide IP cameras and DVRs/NVRs into groups to help users view group images and videos.

eMap Manager is an innovative central management system for live monitoring, alarm snapshots, and map management. Devices installed at different locations can be displayed and managed with simple clicks on user-defined maps. One of the many highlights of this function is the dual screen design, which ease the management of DVRs/NVRs and IP cameras.

Navigator is designed for hybrid installment of IP camera, video server, IP Fast Dome, and DVRs. Its diverse functions provide the necessary flexibility in managing record storage devices and deliver a comprehensive solution to digital surveillance. Major features of Navigator are listed as followed.

Navigator Main Features

- Record and manage the videos recorded by an infinite number of IP H.264/MJPEG cameras and DVRs/NVRs
- Scheduled, continuous, and motion detection recording support
- eMap live video with alarm snapshots
- Integrated alarm management for alarm output
- Web server for live video and PTZ control
- iPhone and Android devices support
- Innovative solutions for retail and transportation industries
- Video groups that allow easy management
- IP Fast Dome control and PTZ control
- Recorded videos can be exported to AVI file format
- Easy-to-use calendar and time selections for video playback
- Secure user access configurations
- Complete event logs
- Two-way audio and audio recording
- Digital zoom, ePTZ, and region of interest (ROI) support
- Dynamic drag-and-drop swapping of video channels

General Notations

The terms of IP-based devices or products used in this document refer to H.264 HD/MJPEG IP Fast Domes, Video Servers, or IP Cameras. The terms of DVR devices/products refer to DVR 3 and 5 series

Copyrights

Merit LILIN Enterprise Co. Ltd. holds exclusive ownership of the software and all intellectual property rights embodied therein, including copyrights and valuable trade secrets incorporated in the software's design and coding methodology. The software is protected by international treaty. This agreement provides you with only a limited use license, and does not grant you any intellectual property rights in the software. Adobe and Acrobat Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. Windows, Windows 2000, Windows XP, Windows Vista, and Windows 7 are registered trademark of Microsoft Corporation in the United States and other countries.

Caution

Do not use the number plate recognition system with the gate or barrier control for vehicle speed over 10KM/h or 6MPH due to recognition rate limitation. This will cause a vehicle crash or accident to the gate or barrier control.



Windows Change User Account Control Settings

Before installing Navigator on Windows 7 and Windows 10, go to Control Panel \rightarrow System Security \rightarrow User Accounts \rightarrow Change User Account Control Settings and lower the setting to "Never Notify." This will confirm that when the watchdog timer reboots the system, Navigator will automatically open and log in.

File Edit View Tools Help	System and Security
Control Panel Home • System and Security Network and Internet Hardware and Sound Programs User Accounts and Family Safety Appearance and Personalization Clock, Language, and Region Ease of Access	Action Center Review your computer's status and resolve issues Troubleshoot common computer problems Restore your computer to an earlier time Image: System System Vindows Firewall Image: System Vindows Date Image: Windows Experience Index Image: System View amount of RAM and processor speed Check the Windows Experience Index Image: System View amount of RAM and processor speed Check the Windows Experience Index Image: System View amount of RAM and processor speed Check the Windows Experience Index Image: Windows Update Image: See the name of this computer Image: View Options Require a password when the computer wakes Image: When the computer sleeps Change what the power buttons do Image: Walk up our computer Restore files from backup Image: BitLocker Drive Encryption Protect your computer Network lides for by our disk. Manage BitLocker Administrative Tools Free up disk space Defragment your hard drive Create and format hard disk partitions Image: View event logs Image: Schedule tasks Schedule tasks

User Account Control Settings Choose when to b User Account Control h Itell me more about Use Always notify	e notified about changes to your computer elps prevent potentially harmful programs from making changes to your computer. r Account Control settings
 Never notify	 Never notify me when: Programs try to install software or make changes to my computer I make changes to Windows settings I make changes to Windows settings Not recommended. Choose this only if you need to use programs that are not certified for Windows 7 because they do not support User Account Control.
	OK Cancel



System Optimization

Automatically Login In Windows 10

This method applies to Windows 10 account. You do not need to enter your account password each time you turn on your PC. Windows 10 will automatically boot to the desktop.

Please be aware that enabling automatic login makes your computer more convenient to use but anyone can simply turn on the computer and access your personal data, so it's less secure than logging on manually. That needs to be taken into account.

In addition, if it is "System logout" or "Account Lock", you have to enter the password to log in again. Which means this method is suitable for operating system booting only. And it is possible that entering a password is required in other operations.

The areas with unstable power, or Windows updates in the middle of the night, may reboot the system. In order to quickly restore system operation and maintain the LAN connection security, you can apply the following methods.

Note: Navigator does not support switching between multiple Windows accounts.

1. Windows 10 User Account Settings

- 1. Type **netplwiz** into the Search bar and enter the username account.
- After open User Accounts, you will see Users must enter a user name and password to use this computer option is checked by default. This means a username and password must be entered to log in.

All Apps Documents Settings Photos	More 💌 \cdots	User Accounts Users Advanced	
Run command	See	Use the list below to grant or deny users access to your con and to change passwords and other settings.	nputer,
†	netplwiz	Users must enter a user name and password to use this computer	9
	Run command	Users for this computer:	-
	C Open C Run a administrator C Open file location	Use Name Group Wat Administrators Add Bernove Prg	operties
, Z netplwid		Persound for NAV To change your personnel, press Ctri-Alt-Del and select C Personnel Personnel Reset Personnel	ihange d

- 3. If " Users must enter a user name and password to use this computer " is not available, the reason is that Windows 1803 is a newer version and Microsoft hides this option. To enable this function, please refer to the following:
 - Type **regedit** in the search bar and enter the Register Editor.





• Navigate to the following path

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\PasswordLess\ Device and change the DevicePasswordLessBuildVersion decimal value to 0.

Note: If there is no DevicePasswordLessBuildVersion option, please create DWROD.

• Run "netplwiz" again and Users must enter a user name and password to use this computer option will show up.

ers	Advanced				
8	Use the and to	e list below to gr change passwor	ant or deny us ds and other s	ers access to yo ettings.	ur computer,
∕ Use	ers must <u>e</u>	nter a user name	and password	l to use this con	nputer.
<u>J</u> sers i	for this co	mputer:			
User	Name		Group		
💐 N	JAV		Admin	istrators	
			A <u>d</u> d	<u>R</u> emove	Pr <u>o</u> perties
Pass	sword for N	NAV	4 <u>d</u> d	<u>R</u> emove	Pr <u>o</u> perties
Pass	sword for N To c Pass	NAV hange your pass sword.	A <u>d</u> d	Remove	Pr <u>o</u> perties elect Change



2. Disable and Change User Accounts and Password Settings

For user accounts, please click the Advanced tab. Then, click Advanced on Advanced User Management.

Jser Accou	ints							
Users Ac	lvanced							
\$	Use the and to	list belo change p	w to grant o asswords a	or deny nd othe	users ac r setting	cess to you Is.	r computer,	
Users	must <u>e</u> r	nter a use	r name and	passwo	ord to us	e this com	puter.	
<u>U</u> sers for	r this co	mputer:						
Automat	ically sig	yn in						
ध्रा 🦄 User nar	name a autom me:	and passv atically si	vord to sigr gned in bel NAV	n in. To ow:	do this,	specify a us	er that will be	-
Passwor	d:		•••••					
Confirm	Passwo	ord:	•••••					
						ОК	Cancel	
						Reset <u>P</u> as	sword	
				C	к	Cancel	Appl	y

Note 1: NAV server default user account: NAV; password: blank. **Note 2:** NAV server has the highest privilege by default.

- Click Advanced.
- Click Advanced user management, and click on Advanced.
- Enter Local Users and Groups. Then click on Users on the console tree.
- Enter the redundant user account and check **Account is disabled**.

User Accounts ×	Iusrmgr - [Local Users and Grou File Action View Hale	ps (Local)\Users]		- 🗆 ×
Users Advanced		2 🖬		
Passwords You can manage the passwords you have stored on this computer	Local Users and Groups (Local)	Name Full Name	Description	Actions
······································	Groups	ABC1234 ABC1234	Built-in account for adm	Users More Actions
Manage Passwords		DefaultAcco	A user account manage Built-in account for que	ABC1234
Advanced user management Local Users and Groups can be used to perform advanced user management tasks.		S NAV WDAGUtility ABC1234 Properties	A user account manage	More Actions
Advanced		General Member Of Profile		
For added security, you can require users to press Ctri+At+Delete before signing in. This guarantees that the authentic Windows sign-in screen appeare, protecting the system from programs that mimic a sign-in to retrieve password info.		Full name: ABC1234 Description:		
Require users to press Ctrl+Alt+Delete		User must change password at next logon		
OK Cancel Apply		Password never expires Account is disabled Account is locked out		
			AL. Hate	
		< Cancel	Appry Help	

Note 1: Attention! Windows requires at least one set of user account to log in. Disable all accounts will cause Windows login failure.

Note 2: For non-original NAV server users, it is recommended to keep at least one set of user accounts with the highest system administrator authority, and close the other user accounts.



3. User Account Control Settings as Administrator

When only software license or a non-original NAV server is purchased, the user account does not necessarily have the highest privilege. Hence, have to configure the user rights through the following settings:

- Click User Accounts, and click on the Users must enter a user name and password to use this computer check box.
- Click Properties.
- Click Group Membership.
- Select Administrator.
- Click Apply to save the settings.

User Accounts	\times	X11SPA-TF\NAV Properties	\times
Users Advanced		General Group Membership	
Use the list below to grant or deny users access to your computer, and to change passwords and other settings. Users must enter a user name and password to use this computer. Users for this computer:		What level of access do you want to grant this user? Standard user Users Group) Standard account users can use most software and change system settings that do not affect other users. Administrator (Administrators Group)	
Itee Name Group NAV Administrators		Administrators have complete access to the computer and can make any desired changes. Based on notification settings, administrators may be asked to provide their password or confirmation before making changes that affect other users. Other: Administrators	
Add Remove Properties Password for NAV To change your password, press Ctrl-Alt-Del and select Change Password. Reset Password,		_	
OK Cancel Apply	,	OK Cancel	Apply

4. Change User Account Name

When renaming the user account name arises, it can be modified as follows:

- Click User Accounts, and click on the Users must enter a user name and password to use this computer check box.
- Click Properties.
- Under General, modify the user name.
- Click Apply to save the settings.

User Accounts	\times	X11SPA-TF\NAV Properties	
Users Advanced		General Group Membership	
Use the list below to grant or deny users access to your computer, and to change passwords and other settings.		User name: ABC	
Users must enter a user name and password to use this computer.			
Users for this computer:		Description:	
User Name Group			
NAV Administrators			
Add Remove Properties	i		
Password for NAV			
To change your password, press Ctrl-Alt-Del and select Change Password. Reset Password			
OK Cancel Apply	,	OK Cancel Apply	

Note: After modifying the user name, make sure to restart the computer. Otherwise, the account cannot be passed to execute some programs (For example: MegaRAID login)



5. Store Username and Password in Computer Settings

- In the User Accounts dialog, select your user account first and then uncheck Users must enter a user name and password to use this computer. Click the Apply button and Automatically sign in box pops up.
- Type your password, and then re-enter the password to confirm the same.
- Click OK to save the settings.

The next time the computer restarts, it will remember this set of passwords and automatically log in to the desktop.

User Accounts			\times
Users Advanced			
Use the list belo and to change	ow to grant o passwords an	r deny users access to your c Id other settings.	omputer,
Users must <u>e</u> nter a us	er name and	password to use this compu	ter.
Users for this computer:			
User Name		Group	
NAV NAV		Administrators	
Automatically sign in			×
You can set up name and pass automatically s	your comput word to sign igned in belo	er so that users do not have in. To do this, specify a user t w:	to type a user hat will be
User name:	NAV		
Password:	•••••		
Confirm Password:	•••••		
		ОК	Cancel
		OK Cancel	Apply

Note: After modifying the user password, make sure to restart the computer. Otherwise, the account cannot be passed to execute some programs (For example: MegaRAID login).

Turn off Hard Drive Defragment

In Windows OS, please go to Control Panel->System and Security->Defragment your Hard Drive->Configure Schedule->Uncheck "Run on a schedule (Recommended)".





In Windows 10 OS, please go to Control Panel-> Security and Setting-> Defragment and optimize your drives, click on Change Setting and uncheck "Run on a schedule (Recommended)".



Note: SSD (Solid State Disk) principle is different than traditional HDD. SSD does not have magnetic head and disk does not have physical moving parts latency, when a command gets issued to access a magnetic zone, the circuit can be transmitted as soon as the circuit is turned on. The time required to read any magnetic zone is the same or much faster than traditional HDD, but traditional HDD can configure RAID5/50, there is no need to disk defragment to speed up. Therefore, it is recommended to turn off Hard Hard Drive Defragment to reduce system's loading.

Turn off creating file content index

The indexing is mainly to establish contents of all computer files into searchable keywords, so as to quickly find the required files. Because the contents of the file are constantly confirmed, the hard disk reading is continuous resulting to high CPU usage rate. Turning off this feature doesn't make it impossible to find the file, it will only look for the name of the file.

Click on the recording HDD and right click \rightarrow Properties.

Uncheck the checkbox "Allow files on this drive to have contents indexed in addition to file properties" and apply all folders and files.

Computer Vi	New Manage	Uninstall or change a program		-	(
operties Open Rename	Access Map network Add a network	Open System properties		Security	Previous Versions	Quota	Customize
Location	Network	System		General	Tools	Hardware	Sharing
⊢ → + † 🛄 > Th	nis PC 0	V 👌 Search This PC	9				
Quick access Deskton	 Folders (6) 			-	Disk (E:)		
Downloads #	Desktop	Documents					
 Documents * Pictures * 	Downloads	Music		Type:	Local Disk		
20180710 FACE	Pictures	Videos		File system:	NTFS		
Setup (3)	Devices and drives (3)			Used spa	ce: 924,429,0	52,144 bytes	860 GB
This PC	S0.4 GB free of 111 GB	(0.) f9.3 GB free of 931 GB		Free space	xe: 75,774,00	25,728 bytes	70.5 GB
Documents Downloads Music Sictures	(E) 70.5 Open Open in new wind	Sow		Capacity:	1,000,203,0	37,872 bytes	931 GB
Videos	Turn on Bitlocker Open AutoPlay Share with Restore pre-rous v	versions					
Network	7-Zip CRC SHA Include in lib ary Pin to Start	>			Drive	• E:	Disk Cleanup
	Avira Ma Ma				this drive to save dis	< space	
	Format Copy			Allow files file propert	on this drive to have ies	contents indexe	ed in addition to
	Create shortcut Rename						
	Properties				OK	Cancel	Apply

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Apply changes to the driver and files.



Note: You can apply the changes to the recording disks.

Turn off Power Saving Mode

In Windows 7&10 Operating System, press Control Panel→System and Security →Power Option

- Put the computer to sleep: set to Never.
- Turn off hard disk after: set to 0.

	Change settings for the plan: High performance Choose the sleep and display settings that you want your computer to use.
Power Options	Turn off the display: 30 minutes •
Advanced settings Select the power plan that you want to customize, and then choose settings that reflect how you want your	Put the computer to sleep: Never
computer to manage power. High performance [Active] Breinie a postport on walking	Restore default settings for this plan Save changes Cano
Setting: Yes ⊟ Hard disk ⊟ Turn of hard disk after <u>Setting Minutes</u> 0 ⊡⊕:	
initement topioner Desktop becargoround settings Wireless Adapter Settings Steep URR	
Restore plan defaults	

Note: Turn off hard disk time setting can effectively reduce hard disk wake up time.



NVIDIA Graphics Card Maximum Performance

If NVIDIA graphic card is use, mouse right click \rightarrow NVIDIA control panel \rightarrow Manage 3D setting \rightarrow Global Settings \rightarrow Power management mode \rightarrow Prefer maximum performance \rightarrow Apply.



Note: If NVIDIA graphic card driver gets updated, it might restore default automatically.

Set up Windows Manual Update

Windows Server Pack Update is used for maintenance and fixing known security vulnerability issues improving the operating environment. Since the system is recording, to avoid the video instability caused by the system update, it is recommended that the user customize the time maintenance, manually update and restart the computer.

For **Windows 7** OS, please go to Control Panel→System and Security→Windows Update→Change Setting.

- 1. Important updates: select "Check for updates but let me choose whether to download and Install them."
- 2. Recommended updates: check "Give me recommended updates the same way I receive important updates."
- 3. Who can install updates: check "Allow all users to install updates on this computer."

Tools Help	
Choose how Windows can install updates	
When your computer is online, Windows can automatically check for important updates and install them using these settings. When new updates are available, you can also install them before shutting down the computer.	
How does automatic updating help me?	
Important updates	
Install new updates Every day + at 上午 03:00 +	
Recommended updates	
Give me recommended updates the same way a receive important updates	
Who can install updates	
Microsoft Update	
Give me updates for Microsoft products and check for new optional Microsoft software when I update Windows	
Software notifications	
Show me detailed notifications when new Microsoft software is available	
Note: Windows Update might update itself automatically first when checking for other updates. Read our privacy statement online.	



For Windows 10 OS please select A, key-in **gpedit.msc**, mouse right click, run **gpedit.msc** as system administrative, in Local Group Policy Editor, go to Computer Configuration-> Administrative Templates-> Windows Components-> Windows Update-> Configure Automatic Updates-> Tick on Enabled-> Select "2-Notify for download and notify for install".

i Lotal Geosp Palely Efforts
Ela Artino Viny Hele
The Passel rear They
Carl Computer Policy
V 💀 Computer Configuration
Configure Automatic Updates Setting State Comment
> Windows Settings
V CAdministrative Templates Construction Con
> Control Panel Requirements: E Do not adjust default option to Install Updates and Shut Do Not configured No
Sign State Stat
Printers Pack 1 or At least Windows 2000 El Turn off auto-restart for updates during active hours Not configured No
Server Service FACK 3 E Always automatically restart at the scheduled time Not configured No
Start Menu and Taskbar Description: 21 Specify deadline before auto-restart for update installation Not configured No
System Specifies whether this computer Configure Automatic Updates Enabled No
V Will receive security updates and Specify intranet Microsoft update service location Not configured No
ActiveX installer Service other important downloads
Add features to Windows 10 unobject in the window backmade
App Package Deployment
App Privacy Note: This policy does not apply Use Previous Setting Next Setting
App runtime to Windows K1.
Application Compatibility ON to Configured Comment
Automa Poincies whether automatic updates are
> Bit metrics enabled on this computer. If the
> BetLocker brive Encryption service is enabled, you must select Disabled V
Carried a Graup Policy Station in the Supported on: Windows XP Professional Service Pack 1 or At least Windows 2000 Service Pack 3 A
Conset
2 = Notify before
Data Childrein and Preview Brilds downloading and installing any Options: Help:
Delivery Consistence and Constant Const
Desition Generatis When Windows finds updates Configure automatic unduling Specifies whether this computer will receive security updates and A
> Desitor Window Manager that apply to this computer, users the second s
Device and Driver Compatibility will be notified that updates are 2 - Notify for download and notify for install v updating service.
Device Registration prior to Windows III Index users
Digital Locker can download and install any applicable (4 is selected.
Edge UI available updates. This setting lets you specify whether automatic updates are
Event Forwarding
S = Event Log Service Download the undertain Scheduled install day:
Event Logging automatically and notify when a function of a function
Event Viewer they are ready to be installed
> In the splorer Scheduled install time: 01:00 V When Windows finds updates that apply to this computer.
File History Windows Incs updates that Users will be noticed that updates are ready to do
Game Explorer downloads them in the
HomeGroup background (the user is not
> internet Explorer notified or internupted during this 3 = (Default setting) Download the updates automatically
Internet Information Services process). When the downloads are control to be installed control of the contro
> Location and Sensors that they are ready to install. After Windows finds updates that apply to the computer and
Maintenance Scheduler going to Windows Update, users
Maps can install them.
MDM V Cancel (7.1.1.1)
Kinderd / Standard /

Note: Windows Update will temporarily stop some services, suggest during your idle time, wait until update is complete and reboot the computer.

Before Using Navigator

LILIN Navigator is a video recording application. Although Navigator supports multiple hard drives recording, when the overwrite setting is enabled, the oldest recorded video clips will be deleted first if the designated storage is full. Should you want logical partitions in your hard disk drive, allocate at least **30 GB** for each drive.

To change the hard drive setting, click System Settings Select the hard drive(s) to which you want Navigator to save the recorded videos. It is recommended not to choose the system disk as the destination drive.

ystem Settings					
System Settings Grouping	Schedule Recording Time	Network Failover			
Drive Fri C1 27% ✓ D1 ✓ D2 ✓ D3 ✓ E1	ee Space Circular Re 911.6GB 90 GB 931.5GB 90 GB	Auto run this application when system starts Auto sequence after reboot Original video resolution at full screen mode Auto login when system starts Force to enter the reason for backup and playback Low latency mode Enable "Applications" after reboot			
		Snapshot Path D/\\ Snapshot File Prefix Synchronize Time with 1 ~ Hour			
Circular Recording	GB	Language English ~			
Video Reserved Days	30 (1 - 365) Appl)	Graphics Hardware Acceleration Display(Default) Smart anti-aliasing			
RAID System Monitor	s 30 (1 - 365)	Memory Management			
System reboot	Reboot time 15 : 50	NAV ID OFF V Keyboard			
GUID: 22B0C905-36E5-4	354-BB1F-9C38E298056B	OK Cancel			

Furthermore, each logical HDD drive should contain at least **10%** empty space for storing video data. Navigator deletes the oldest files first until it reaches 90% of the logical drive, and it proceeds to the next logical hard disk drive for recording.



User Manual

This Navigator user manual is in the PDF format. To access the manual, go to Start→All Programs→LILIN Navigator→User Manual. You must install Acrobat Reader or use Google Chrome for opening the manual.

Uninstall Navigator

To uninstall Navigator, select Start→All Programs→LILIN Navigator->Uninstall LILIN Navigator. Before you continue, be sure to back up your database, and you can import the database to the new installation. Please see Database Manager in this document for details.

Getting Started

Start Using LILIN Navigator

You can follow either of the following steps to explore the world of Navigator:

Go to Start \rightarrow All Programs \rightarrow LILIN Navigator \rightarrow LILIN Navigator Click the Navigator icon on the desktop.

To log in to Navigator:

For first-time users, enter "admin" for the username and leave the password in blank; for existing users, enter the combination of your username and password. Click OK.

Username	admin		
Password			

Chapter 1 User Settings

In user settings, you can add users, delete users, change passwords, and change access rights for users. Up to 64 users can be set.

To add, delete, and modify a particular user, click the User icon and the right side of the main screen of Navigator, and the User Setting dialog box will appear.



Chapter 1.1 Add a User

To add a user, click the Add button. In the Add User Group dialog box, enter the required information. Remember to choose user access level before you press OK.



Chapter 1.2 Modify an Existing User

To modify an existing user, choose a user and click the Modify button. Here you may change the password of this user.

Chapter 1.3 Delete a User

To delete a user, choose a user, press Delete, and click OK.

Ober c	ype :	2:Guest		\sim	Modify	Delete
No. 1	Userna Guard	me				
		DeleteUser	Are you sure to	delete th	nis user ?	×
			G	uard Ca	ancel	
			/			

Chapter 1.4 User Authorization

Features supported by Navigator can be assigned to each user. To enable a feature for a user, click Operation, and check whichever boxes to which you want the user to have access.

Operation	Device		
Option		Annotation	
🛛 🗹 Enable	access rights		
🛛 🖂 Navigi	ator The Software Camera Setting		
🛛 🖂 Navigi	ator Monitor Matrix Setting		
🛛 🖂 Navigi	ator The Software Record Start/Stop		
🛛 🖂 Navig	ator The Central System Settings		
Navig	ator The Software Playback		
Navig	ator Database Manager		
Navig	ator The Software PTZ Setting		
Navig	ator The Software PTZ Control		
	ator The Software Grouping Setting		
	ator The Software User Setting		
	ator eMap Manager		
	ator eMap PTZ Control		
	ator The Software Power Down		
	ator Web Manager		
	ator TV Wall Logout		
	ator Control Center		
Remo	e Navigator Media Streaming Server		
			×
<		2	>
Default	Select all Clear all		
berduit	erection erection		



Please refer to following:

Option	lcon	Function Description		
Navigator Camera Setting	•	Navigator camera properties access		
Navigator Multi-screen Matrix Setting	Ţ	Navigator multi-screen matrix access		
Navigator Recording Start/Stop	REC	Navigator recording start/stop		
Navigator System Setting	Ö	Navigator system setting access		
Navigator Playback	▶ Playback	Navigator local/network playback access		
Navigator Database administrator	R	Navigator database administrator access		
Navigator PTZ setting	,	Navigator PTZ setting access		
Navigator PTZ control	✓ PTZ	Navigator live display PTZ control access		
Navigator Group Setting	System Settings System Settings Grouping	Navigator group setting access		
Navigator User Setting	*	Navigator user setting access		
Navigator E-map Manager	\odot	Navigator e-map manager access		
Navigator E-map PTZ Control		Navigator e-map PTZ control access		
Navigator software turn off	? – 🗆 🗙	Navigator software turn off access		
Navigator Web Server Administrator	\bigotimes	Navigator web page 8080 8021 port access		
Navigator TV Wall Logout		Navigator VD022 TV Wall log out access		
Navigator Control Center Main software		Control Center log in access		
log in				
Navigator MStreaming Server		Navigator MStreaming server access		
Navigator Monitoring Station		Temporarily not supported		
Navigator PC Base TV Wall Control		Temporarily not supported		
Navigator & Control Center User	•	Navigator&Control Center user management		
Management		access		
Client & Viewer Device Management	-	Client&Viewer Device Management property		
	<u> </u>	access		
Client & Viewer Property	☎,,	Client & Viewer property access		
Client & Viewer Playback	Þ	Client & Viewer playback access		
Viewer Management		Viewer Management access		
Client Device Management		Control Center client management access		
Alarm Management		Control Center alarm management access		
eMap Center	~	Control Center eMap access		
Task Manager Login	N/A	Temporarily not supported		



Chapter 2 System Settings

In System Settings vou will find a number of tabs that allow you to change the configurations of this software. Configure the settings to fit your requirements.

stern settings	Grouping	Schedule Re	cording Time Ne	twork Failover	
Drive	Free	e Space	Circular Re	Auto run this applicatio	on when system starts
C:\	25%	111.8GB		Auto sequence after re	eboot
✓ D:\	9%	931.5GB	90 GB	Original video resolutio	on at full screen mode
✓ E:\	9%	931.5GB	90 GB	Auto login when syster	m starts
				Force to enter the reas	on for backup and playback
				Low latency mode	
				Enable "Application	ons" after reboot
				Snapshot Path	D:\Capture\
				Snapshot File Prefix	
				Synchronize Time with	1 v Hour
				Language	English ~
Circular Reco	ording	GB		GPU Decode And Displa	ay, Display High Priority.
Video Res	erved Days	30 (1 -	365) Apply	Smart anti-aliasing	~
🖂 Image Res	erved Days	30 (1 -	365)	Mamon Managamar	at
RAID System	Monitor			mennory managemen	in
System rebo	ot	Reboottime	15 : 50	NAV ID OFI	F 🗸 Keyboard

- Auto run this application when system starts—launch Navigator automatically on system startup.
- Auto sequence after reboot—perform group sequential display after a system reboot.
- Original video resolution at full screen mode—use original video resolution in full screen mode.
- Auto login when system starts—log in to Navigator automatically when the system starts.
- Limit max CPU usage—set CPU loading to a particular value.
- Turn off graphics hardware acceleration—if you are using an older computer or experience system performance slowdown, check this option to turn off graphics hardware acceleration.
- Force to enter the reason for backup and playback—check to enter reasons for backup and playback.
- Enable TV Wall after reboot—when Navigator is launched, check this option to automatically turn on the TV wall.
- Low latency mode—when CPU load is too high, check this option to make the video smoother.
- Enable Archive Manager after reboot—click to automatically launch Archive Manager after reboot.
- System reboot—check and set the time you want the system to reboot every day.
- Language—choose your language from the drop-down list.

Note:

1. It is recommended that system drive is not set as video destination drive.

2. Snapshot Path Please specify C: Drive other than the system hard drive and create a new folder for alarm snapshot storage.



Chapter 3 Programming Tool

Provide unique software tools, users can decide whether to automatically enable below functions after the Navigator main program is turned on.

	×
t	

- Navigator VD022 TVWall : VD022 video decoder can be used as a virtual matrix system in large monitoring systems (Virtual Matrix System); Check on NAV NETStreaming Type box, you can pull the Navigator image directly into the group for monitoring and construct the entire large surveillance TV wall. When Navigator is opened, VD022 TVWall will be enabled automatically.
- Navigator Archive Manager : You can back-up the PC image of Navigator Software to the network storage device. When Navigator is opened and this option is enabled, the archive manager will be automatically opened.
- NAV QRCode Decoder Server : A new program will be launched soon. When Navigator is turned on and this option is enabled, the QRCode server will be automatically connected.
- USB Scanner Tool : Handheld scanners support 1D and 2D barcodes, and bring more rapid productivity and performance to the retail industry. They are suitable for a wide range of applications in retail, healthcare and post offices. When you open Navigator and check this option will USB Scanner Tool automatically.
- Navigator eMAP Manager : When you open Navigator and this option is checked, the eMAP Manager will be automatically enabled.
- Recording health Checker : If the power is off due to abnormal power failure, the image may not be stored or the data may be damaged. If this option is checked, the recording health checker tool will be automatically enabled. Support manual custom time check and generate health status report

😽 Recordir	ig health Chi	ecker 64 bits	-		×
Start Year End Year Low CPU I	2018 2018 Jsage Mode y Report	Month 9 Month 9	Day Day	10]
			ОК	Car	ncel

Note: The first time user installed, the default is to automatically check and repair everyday at 03:00; and the user who upgraded from the old version is every 08:30



Chapter 3.1 GPU Graphics Decode Setting

ste	misettings	Grouping	Schedule Re	cording Time Ne	twork Failover	
	Drive	Fre	e Space	Circular Re	Auto run this application	on when system starts
	C:\	27%	111.8GB		Auto sequence after re	eboot
~	D:\	9%	931.5GB	90 GB	Original video resoluti	on at full screen mode
~	E:\	5%	931.5GB	90 GB	Auto login when system	m starts
					Force to enter the reas	son for backup and playback
					Low latency mode	
					Enable "Application	ons" after reboot
						Dill
					Snapshot Path	D.w
					Snapshot File Prefix	
					Synchronize Time with	1 v Hour
_					Language	English
ZC	ircular Rec	ording	GB		Craphics Hardware Acc	eleration Display(Default)
	Video Res	erved Days	30 (1-3	Apply	Turn Off Graphics Hardw	ware Acceleration
	Image Res	erved Davs	20 (4 1	(CE)	Graphics Hardware Acc	eleration Display(Default)
	inage i tea	icived Days	30 (1-3	(00)	GPU Decode And Displa	ay, Display High Priority.
⊿R	AID System	Monitor			GPU Decode And Displa	ay, Decode High Priority.
٦s	vstem rebo	ot	Reboot time	15:50	A NAV ID OF	F 🗸 Keyboard
_ 0	Jaternitebu	01		15.50	•	

With hardware advancement in high-resolution movies, in addition to bringing better picture quality, it also brings more CPU usage. The GPU decoding method enables the system to perform multitasking operations while viewing CCTV. At present, GPU decoding supports NVIDIA 1030-level graphics cards and Intel® 530-level built-in displays. It also supports GPU hardware decoding functions for both NVIDIA graphics cards and built-in Intel displays. When the host has both NVIDIA graphics cards and motherboard Intel® built-in, Navigator optimizes resources based on system usage to achieve more channels or high-frame devices.

- Turn Off Graphics Hardware Acceleration Turn off Direct3D software decode acceleration, GDI traditional graphics mode display, and support old type without Direct3D graphic card.
- Graphics Hardware Acceleration Display(Default) Turn on CPU software decode acceleration, Direct3D graphic mode display, and supports new Direct3D graphic card.
- GPU Decode And Display, Display High Priority Turn on GPU hardware decode acceleration, graphic display is prioritized.
- GPU Decode And Display, Decode High Priority Turn on GPU hardware decode acceleration, decode display is prioritized.

Note: If you want to experience more live image channels and high-frame video cameras, please upgrade the graphic card and computer memory, recommended NVIDIA graphic card memory is 4GB or more, and computer memory is 16GB or more.





Chapter 3.2 Memory Protection

When a computer system has multiple programs running at the same time, the system often divides the main memory into several areas and assigns them to each program. In order to avoid mutual interference when the program is running, the Navigator watchdog memory protection control mode must be used to limit the activity in the memory area of each program. This is the memory protection.

Memory Management		×
System Reboot Setting		
System memory use limit	80 🗘	%
"Navigator 64 Bits" memory use limit	4096 🔹	MB/Megabytes
"Navigator MStreaming Server 64 Bits" memory use limit	2048 🔹	MB/Megabytes
"Navigator Archive Manager 64 Bits" memory use limit	2048	MB/Megabytes
"Navigator eMap Manager 64 Bits" memory use limit	2048	MB/Megabytes
Instant ~		
System Limit Setting		
Limit max CPU usage	80 +	%
Disk queue length limit	5 +	counts
Disk response time limit	200	ms
Disk active time percentage limit	85	%
Network packets output queue length limit	2	packets
Network IO throughput limit	70	%
"Navigator Playback Manager 64 Bits" memory use limit	2048	MB/Megabytes
"Navigator Remote Playback Manager 64 Bits" memory use limit	2048	MB/Megabytes
	ОК	Cancel

Memory Protection Setting

- System memory use limit: preset is 80%
- "Navigator 64 Bits" memory use limit: NVR Software preset max limit is 4096MB.
- "Navigator MStreaming Server 64Bits" memory use limit: Streaming Server, preset max limit 2048MB.
- "Navigator Archive Manager 64Bits" memory use limit: Archive Manager , preset max limit 2048MB .
- "Navigator eMap Manager 64Bits" memory use limit: eMap , preset max limit 2048MB.

Watchdog detection reopening mechanism:

- Instant : When the system detects an abnormality, the software restarts immediately.
- Reboot at system reboot time: When the system detects an abnormality, the software automatically restarts at preset 00:00 night time.

Host status database

- Limit max CPU usage: Set CPU usage to 80%
- Disk queue length limit: preset limit 5 counts
- Disk response time limit: preset max limit 200ms
- Disk active time percentage limit: preset max limit 85%
- Network packets output queue length limit: preset max limit 2 packets
- Network IO throughput limit: preset max limit 70%
- "Navigator Playback Manager 64 Bits": preset max limit 2048MB.
- "Navigator Remote Playback Manager 64 Bits": preset max limit 2048MB.

Note: When the system detects an abnormality 3 times consecutively, and still detected within 10 minutes, the computer will restart.



Chapter 3.3 Add a New Device

To add a new device, select any channel and click the Properties icon . Click the Find Device button to open IPScan, a tool that helps you find all devices in your network. Choose the device you want to use and press Close, and you will see a prompt window asking "Do you want to auto set the IP/DNS and the host post?" Click Yes, and the application will automatically complete all the settings for you.

Display/Record		Preview	
Activate this device			
Name	#001 UFG1122		
Channel Location			
Device Type	ONVIF Camera 👻 Detect		
Channel	Cam 001 - Setting		
	Auto import DVR Import		
Streaming Mode	Dual Streaming Mode for the Channel 🔹		
Record Mode F	Record dual stream 🔹 1 FPS 👻		
Vetwork			
IP/DNS	192.168.3.219		
HTTP Port (ex. 80)	80	Find Device	Video
Video Port	554	Assign Recording Disk	
Username	admin		
Password	••••	Auto switch the audio	Alarm Management
Camera/485 ID	1	ONVIF	ePOS/OSD
		Device Type: IP Cam	ANPR Group Setting
	ith PC Apply	Alarm Input (DI): 1	
Synchronize Time w		A STATE OF A	Object Counting
Synchronize Time w	rver connection 0.05 FPS +	Relay Output (DO): 1	

The configurable settings in Properties are listed as followed:

- Find device : IPScan scans IP network area, all Navigator/DVR/NVR/IPCAM and other devices
- Video : After inputting device IP setting, click on "Video" to see the live image preview.
- Activate this device check or uncheck to enable or disable the camera
- Name—camera name displayed on top of the live video channel
- Location—location of the camera installed
- Device type—type of the device; RTSP is for H.264 D1 or H.264 HD IP cameras.
- ONVIF—settings related to the ONVIF protocol
- Streaming Mode- it can select single or dual stream output with two different bit rate image.
- Record mode it can select main stream/sub stream recording or dual stream, and low bitrate recording mode.
- Assign recording mode assign different hard disk for recording, channel distribution mode recording.
- IP/DNS (required)—IP address of the device
- HTTP Port—HTTP port number of the device
- Video Port—DVR's video port number/IP camera's RTSP port number
- Username
- Password
- Image size—the source video size of the device
- Camera/485 ID—IP Fast Dome RS-485 ID.
- Synchronize Time with PC—synchronize time with the local PC.
- Low Bitrate client server connection when check, save live image bandwidth of IP channel connected to HTTP Port.
- Alarm Management adjust input and output for alarm management setting.
- ePOS/OSD set up connected ePOS/OSD device.
- ANPR Group Setting can add license plate's allowed list and denial list.
- Object counting set up object counting function.



- Facial recognition when a face is detected, will take screenshot of detected face.
- Reboot device re-start the device.
- Launch browser device web page setting.

Chapter 3.4 Set up hard disk recording

When the system is a non-RAID hard disk, you can select different channels to record on other hard disks. The purpose is to reduce the recording load of a single hard disk, or to save video of important channels.

Select Channel		×	Assign Recordi	ng Disk		×
Select Channel	Channel Name Select All / No Select #001 Cam 001 #002 #002 cmx 6.228 (1 #003 #003 ZR8022EX20 #004 Cam 004 #005 #005 IPS420A #006 NVRS832S #007 #007 IPS420 #008 Cam 008		Assigned I Select C	oy System oy User Drive Number D E	Free Space 90.6 GB 54.2 GB	
	#010 #010 UHG1182-4K	~	Apply Came	ras	Apply Cano	el

Note: RS-485 camera ID (1 to 128) must match the ID setting of the IP Fast Dome. The software may not control PTZ movement if the ID setting is incorrect.

Once you complete the above settings, you can click Video to test if the device is working properly. For information of the default username and password, please see Appendix for details.

Chapter 3.5 Device Type

For video streaming, there are several device types to choose from:

Device Type	Description
H.264 AVC IP Mini Dome	D1 H.264 IP PTZ camera stream
DVR004	DVR004 DVR stream
ONVIF Camera	Lilin IP Camera with H.264 stream
DVR/NVR-JPEG	DVR/NVR low bandwidth snapshot stream
DVR/NVR-H.264	DVR/NVR H.264 stream
DVR 2B/2C Series	DVR 2B/2C series stream
AHD/DHD Series	AHD/DHD DVR series stream
Other brand AHD/DHD	Other brand AHD/DHD DVR series stream
NAV Live Streaming	NAV live image streaming
NAV USB/P2P Live Streaming	USB camera or NAV P2P live streaming
NAV-JPEG	NAV JPEG stream
Low Bitrate IP Camera	Low bandwidth I frame camera connection
Low Bitrate DVR Camera	Low bandwidth I frame NVR/DVR camera connection
Snapshot Device	Low bandwidth JPEG snapshot stream
Manual	Manual input of camera URL stream



Other brand ONVIF Camera	Other brand ONVIF protocol stream
Manual RTSP	RTSP image stream
Screen Capture	Screen capture streaming features

Chapter 3.6 ONVIF Settings

To use RTSP streaming, first you need to set up the ONVIF protocol:

			×
ONVIF Setting ONVIF Profile Codec Resolution Video Source Protocol	H2841080P ~ H264 ~ 1920X1080 ~ 0 ~ RTP/TCP ~	Video Settings IP/DNS RTSP Port Username Password	192.168.3.158 554 admin •••••
Frame Rate = 48 (1 ~ 50) Bil Rate=3072(64~14336) Quality = 20 (20 ~ 80)		Brightness = 50 (0 ~ 100) Contrast = 50 (0 ~ 100) Saturation = 50 (0 ~ 100) Sharpness = 54 (0 ~ 100)	Apply
			OK Cancel

- Profile: a user can select different streaming profiles such as H.264 1080p/480p or MJPEG 480p/CIF.
- Protocol: streaming protocol such as RTP/UDP, RTP/TCP, or RTP/TCP/HTTP.
- Resolution: live image picture resolution
- Brightness
- Saturation
- Contrast
- Sharpness
- Frame rate: live image frame rate
- Bitrate : image transmission bitrate
- Quality: live image picture quality

Note: ONVIF settings are only available for LILIN's ONVIF camera.

Chapter 3.7 Find Device

IPScan utility can scan through all IP address in the LAN to locate devices.

	Name	IP Address	Subnet Mask	Gateway	Port	Assign	Mac Address	Mode *	Name	
	561122/40FPS-D	192.168.123.142 192.168.26.151	255.255.255.0 255.255.255.0	192.168.0.1 192.168.25.254	80	Static IP Static IP	000ffc143001	516	P Address Subnet Mask Gateway HTTP Port No. Static DHCP PPPGE Account PPPGE Passion Scan Denke Type S Authentication Listemane Passiond	C PEPOE C CN
6			W.						Refresh	Apply
tus									Firmware Update	Batch IP Setting
E.									Set as Default	Time Adjust
										SDOP
										Cione

Select a device in IPScan and click Close to set up the device. All the device information such as IP address and port number will be automatically detected by Navigator.

You can also manually add devices of IP Fast Dome, IP camera, video server, or DVR .

Note: IPScan can only work under a LAN environment and does not support an Internet environment.



Chapter 3.8 Alarm Input Management

Navigator supports a wide range of alarm inputs, which may be different according to various camera models:



Alarm input management	Description
Remote Alarm In	If the camera supports digital input, once triggered,
	Navigator shall be notified
Remote Motion/Tripwire Detection	If camera supports motion/tripwire detection, once
	triggered, Navigator shall be notified.
Remote Face Detection	If camera supports face detection, once triggered,
	Navigator shall be notified.
Remote Tamper Detection	If camera supports tamper detection, once triggered,
	Navigator shall be notified.
Remote Audio Detection	If camera supports audio detection, once triggered,
	Navigator shall be notified.
External IO device	If external IO is use, Navigator shall be notified.
Motion Detection	This is local Navigator motion detection setting.
Nav CGI Triggering	Navigator CGI triggering
Video Loss Detection	The navigator image has no signal detected, if channel
	suddenly video loss, navigator shall be notified.
LPR Detection	Navigator license plate recognition detection, once
	triggered, navigator will have license plate recognition
	OSD notification.
Face Recognition Detection	Navigator face recognition detection, once triggered,
	navigator will have face recognition OSD notification.
Remote LPR Detection	Navigator remote license plate recognition detection,
	once triggered, navigator will have license plate
	recognition OSD notification.



Chapter 3.9 Alarm Output Management The alarm output features support various alarm reactions for motion and remote motion alarm detection management. Alarm options may be subject to camera models:

Alarm Output (DO)	
Play Sound	^
🔲 Send Email	
PTZ Preset Recall	
🔲 Signal Digital Output	
Alarm Full Screen	
Post-alarm Record	
Pre-alarm Record	
Advanced Alarm DO	
Alarm ACK	~
<	>
Options	

Alarm Output Management	Description
Play Sound	When an alarm triggers or an event occurs, a user defined
	wav audio file will be played.
Send Email	Send email notification
PTZ Preset Recall	Set PTZ to move to preset position
Signal Digital Output	Send IPC digital output
Alarm Full Screen	When alarm triggered or an event occurs, the channel is
	displayed in full screen.
Post-alarm Record	After alarm occurs, will record for 5 seconds.
Pre-alarm Record	Before alarm occurs, will record for 1~10 seconds.
Advanced Alarm DO	Turn on DO device, i.e. IP Camera's DO, MOXA 1200
	Series
Alarm ACK	Alarm acknowledgement after the alarm occurs, if the
	user has two monitors, it will automatically pop up.
Alarm Snapshot	Alarm snapshot
Text Overlay	Users can custom input Chinese and English special
	symbols displayed in the channel screen
App Cloud Push Notification	When an alarm triggers or an event occurs, navigator will
	send push notification to mobile app.



Advanced Alarm DO

You can set IP Camera's DO and MOXA Uport on advanced alarm outputs, triggering warning lights or buzzers and gate control switches.

Number		1:	~
DO Device		MOXA 1200 Series	~
Alarm DO Device		Disable IP Camera's DO	
Device Type		MOXA 1200 Series	
Relay Interval		ANPR CGI DO Message LED Panel CGI DO	
IP Address			Conned
Password			
D0-00	D0-01	D0-02	D0-03
	-		

Chapter 4 MOXA-ioLogik-E1212 Control Box

The ioLogik E1200 industrial Ethernet remote I/O has two embedded Ethernet switch ports that allow information to flow to another local Ethernet device or connect to the next ioLogik in the daisy-chain. Applications such as factory automation, security and surveillance systems, and tunnel monitoring, can make use of daisy-chained Ethernet for building multi-drop I/O networks over standard Ethernet cables.



Note: The Reset button restarts the server and resets all settings back to factory default. Use a sharp object, such as a straightened paper clip, and press down the RESET button for 5 seconds. Once the READY LED turns green again, the factory defaults will be loaded. Then you can release the RESET button

Chapter 4.1 MOXA General Settings

In General Settings page, you can specify the server name and location to help you distinguish between different ioLogik E1200 devices. You can also configure the Modbus / TCP timeout interval or enable communication watchdog function.

General Settings			
I/O Server Settings			
Server Name			
Server Location			
Enable Server Socket Idle Connection Timeout Interval	60	sec (1-65535,	default = 60, disable = 0)
Enable communication watchdog	0	sec (1-65535,	default = 0, disable = 0)
Locate 1/0 Server	Enable I/O Locate		
Submit			



Chapter 4.2 MOXA Ethernet configuration

In Ethernet Configuration page, you can set a static or dynamic IP address for the ioLogik E1200 and configure subnet masks and gateway addresses.

thernet Parameters	
IP Configuration	Static
IP Address	192.168.127.254
Subnet Mask	255.255.255.0
Gateway	0.0.0.0

Chapter 4.3 MOXA Web Console IOSetting

The status of each DI (digital input) channel appears on the DI channel setup page.

DI Channel Settir	igs			
Refresh page				
DI Channel	Mode	Status	Filter	Counter Trigger
DI-00	DI	OFF	100.0 ms	
DI-01	DI	OFF	100.0 ms	
DI-02	DI	OFF	100.0 ms	
DI-03	DI	OFF	100.0 ms	
DI-04	DI	OFF	100.0 ms	
DI-05	DI	OFF	100.0 ms	
DI-06	DI	OFF	100.0 ms	
DI-07	DI	OFF	100.0 ms	
DI-08	DI	OFF	100.0 ms	
DI-09	DI	OFF	100.0 ms	
DI-10	DI	OFF	100.0 ms	
			100.0	

Chapter 5 IP Camera IE Webpage IVS Tripwire Detection

In IP camera web page settings, please go to Advanced mode \rightarrow IVS \rightarrow Advanced Tripwire Detection



Enable the Advanced Tripwire Detection to edit, and then set the tripwire area. When an object passes the tripwire, it will trigger, and the tripwire will change from green to red.



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Chapter 5.1 Navigator Alarm Management Settings

- 1. Select IVS Camera Channel → Right mouse click→ Camera Properties
- 2. In Camera Setting Page, press Alarm Management

X 182 18/04/10 15.08.94	720+480,25.0FPS, 9,339Kbps#014()	Camera Settings=014 DisplayRecord Advate this device Name Channel Location Device Type	IPCAM-120FP8	Preview	×
	Add Camera Camera Properties Pause Playback Remote Playback of IP Cam SD Card	Channel Streaming Mode Dua Record Mode Rec Network P/CNS HTTP Port (ex. 00) Video Port Literarea	Cam 001 Setting Auto import D/R Import Streaming Blode for the Channel V ord dual stream Stream Stream 1922 108 28: 101	Find Device Assign Recording Date	Video
74	Advanced Alarm DO Full Screen Mode Normal Mode Text Overlay	Contraine Password Camera/485 ID Synchronize Time with F	PC Acoly r connection 0.05 FPS	Auto switch the audio ON/IF Dexics Type: IP Cam Alarm input (DI): 0 Relay Output (DO): 0 On/If Port 9999	Alarm Management ePOSIOSD ANPR Group Setting Object Counting Facial Recognition

- 3. Alarm Input Management →Check **Remote IVS (Motion) Detection**, Check at least one alarm output, For example: **Post Alarm Record**, if you need MOXA DO action, then check **Advanced Alarm DO** and **Options**.
- 4. Press **Device Scan**→MOXA Device Connection



Note: The position of DO and MOXA box must correspond to each other to have normal DO output.

Chapter 5.2 External IO device

- 1. Please check External IO Device \rightarrow Options \rightarrow Select Device Type MOXA 12XX \rightarrow Device Scan
- 2. Press Device Scan \rightarrow MOXA Device Connection

larm Management Cam#014								Advanced Alarm DO S	etting Dialog	Je .			×	
Condition#1 Condition#2	Conditio	🔩 External IO Device				<	Others	Number		1:			~	
Alarm Input Management	Number		1:	~			DO Device		MOXA 12	00 Series		~		
Remote Digital Input Bemote IVS (Motion) Detection	^	Device Type		MOXA 12XX	~			Alarm DO Device						
Remote Face Detection		Alarm DO Device						Device Type		E1212				
Remote Tamper detection		IP Address		192.168.26.62	Connect			Relay Interval		Always			~	
External ID Device Motion Letection NAV CCI Triggering Video Loss Detection Options	, `	MAC Address Device Type DI Port Number	V DI-01	DI-02	DL03		Device S	pe IP Address 192.168.26.60	MAC /	uddress IF-C 8	DI Port Num 8	DD Port No 8) u DIO	
Enable Alarm Input (DI)		DI-04	DI-05	DI-06	DI-07									
AND Logic Alarm Notification							3							
Detection Dwell (Sec)	~													
- Oservor Logic		Device Scan		ОК	Cancel		4				OK	C	Cancel	
	Apply C	ameras Alarn	n setting	rrom remote device				Device Scan	Save				ок	

Note: DI stands for MOXA switch device.



Chapter 5.3 Alarm Acknowledgment

You need two monitors to enable alarm acknowledgment, one for Navigator and the other for alarm acknowledgment. Click the Monitor Setting icon and set the Alarm ACK Monitor to the second monitor.

Default arouning									
Delault grouping					1	Main Group	oing		~
Default window divis	sion				3	36			\sim
Auto minimize when	system starts				C	Off			~
Full screen mode af	ter reboot				C	Off			~
Low CPU usage mo	de				(Off			~
Alarm ACK Monitor					0	Off			~
Enable 2X2 Monitor					C	Off			
					1				
									usage
Sub Monitor	Quad dis	splay	Default group	Sequ time	ience	Division	1	Low CPU mode	usag
Sub Monitor The spot monitors #02: Monitor(Na #03: Monitor	Quad dis	splay ~	Default group 36-Division IP Cam.	Sequ time	ience ~	Division	~	Low CPU mode	usag
Sub Monitor The spot monitors # #02: Monitor(N- #03: Monitor #04: Monitor #05: Monitor	Quad dis	splay ~ ~	Default group 36-Division IP Cam.	Sequ time	ience ~	Division	• •	Low CPU mode Off On	usag
Sub Monitor The spot monitors #02: Monitor(N- #03: Monitor #04: Monitor #05: Monitor #06: Monitor #07: Monitor	Quad dis	splay ~ ~	Default group 36-Division IP Cam Main Grouping Main Grouping	Sequ time Off Off Off	ience ~ ~	Division 16 36 36	• •	Low CPU mode Off On On	usag
Sub Monitor The spot monitors #02: Monitor(N) #03: Monitor #04: Monitor #05: Monitor #06: Monitor #07: Monitor	Quad dis	splay ~ ~	Default group 36-Division IP Cam Main Grouping Main Grouping Main Grouping	Sequ time Off Off Off Off	v v v	Division 16 36 36 36	• • •	Low CPU mode Off On On On	usag



Navigator main monitor

Alarm acknowledgement monitor

Video is displayed on the Navigator alarm acknowledgement monitor you designated. To acknowledge the alarm, click the ACK OFF button at the bottom left corner of the Navigator alarm acknowledge monitor.



To setup the acknowledgement feature, check Alarm ACK in the alarm output list.

Chapter 5.4 Notify Navigator installed on other computers (Enterprise Only)

Third-party software can enable or disable videos on the alarm acknowledge monitor using the CGI commands provided by Navigator. See HTTPAPI.PDF on our official website for more details.



Chapter 6 Recording Settings

By default, Navigator starts continuous recording after an IP camera is connected. To change recording configurations, please read the following sections.

Chapter 6.1 Schedule Recording Settings

The recording schedule of Navigator can be set to Always, No Record, and Motion, and the time increment can be set down to an hour. To designate which hours to record, first choose the recording type (Always, No Record, and Motion), and then highlight as many boxes as you like in System Settings→Schedule.

Click Apply next to Apply All Schedule to apply the selected recording type to all days and hours. To apply a recording type to all channels, click Apply All for apply schedule to all channels.

Channel																								
(Cam 003) #003 MR8322																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																								
Monday																								
Tuesday																								
Wednesday	1																							
Thursday																								
Friday																								
Saturday																								
Aways No Record Save																								
pply All Schedule									[5	Appl	y]											
pply Schedule to	All C	han	nels						[Ą	pply	all												

Chapter 6.2 Motion Detection Recording

To enable motion detection recording, click is to open the Properties dialog box. Next, click Alarm Management and check Remote Motion Detection. Click Options to configure the settings. Navigator provides up to four user-configurable motion detection areas. Simply drag across any areas on the screen to define a motion detection area. Right-click to clear one or all designated areas. To adjust motion detection sensitivity, use the scroll bar at the bottom of the window. Motions that are detected within the highlighted areas will send an alarm to the system. Click Apply for the settings to take effect.

Alarm Input Management	Alarm Output (DO)	Remote Motion Detection
Remote Digital Input Remote IVS (Motion) Detection Remote Face Detection Remote Tamper detection Remote Audio Detection External IO Device Motion Detection NAV CGI Triggering Video Loss Detection Options	Play Sound Send Email PTZ Preset Recall Signal Digital Output Alarm Full Screen Post-alarm Record Pre-alarm Record Advanced Alarm D0 Alarm ACK Options	Close



In the live monitoring mode, a 🕺 "yellow man" appears in the channel if any motion events are detected.



Note: The use of remote motion detection can further reduce the CPU load of a Navigator PC, for this function utilizes the motion detection engine of the IP camera.

Chapter 6.3 Recording at System Startup

Check this option to start recording automatically every time you boot the system. It is not required to start recording manually. If a schedule is set, Navigator will begin recording according to the schedule at startup.



Chapter 6.4 Estimated Recording Days

To estimate the remaining storage capacity (days), a user can click System Setting and switch to the Record Time tab. Estimated recording day and time information will be displayed on the right side of the pane.

ystem Settings		
System Settings Gr	ouping Schedule Recording Time Network	Failover
Dime Numb. C1 C1 D1 D1 E1 E1	Free Space 294 111.800 974/931 SSG99eed (fm. Guewe 0.0 944/931 SSG95peed 12ms Guewe 0.5	Total Recording HDDs: 2 Available Recording Space: 1907734MB / 1863G Average Frame Size: 6949 XBGec Total Recording Hours: 3 Days 6 Hours 5 Minutes Left Recording Hours: 0 Days 7 Hours 34 Minutes
GUID: 22(568	OK Cancel



Chapter 6.5 Network Storage NAS (Enterprise Only)

You are allowed to save recorded files on network storage such as iSCSI or NAS if the network storage supports "Network Neighborhood" protocol.

Local Host Name	NAV		Add network drive							
Streaming Serve	r Listen Port	8021	Mapped drive of NVR softw	ware PC		Browsing				
Enable SDDP Broadcast										
			Drive: Username Password		Apply	Network				
			Drive Number	Free Space		▷ 1 TF-CLONE	l			
			P C1	46% 59.508		F-DENAEL-ACER				
			E1	99% 931.4G	5 <u>.</u> 3	▷ 1 7F-DLINK-1061				
HTTP Port	8080		E FA	99% 931.4GE	3	> 1 7F-F16				
TTP Link	http://192.168.3.199:808		1.01	8876 851,450						
itatus:	ок	Apply				T-GENERAL				
TTP Timeout	5	-				> 🖡 7F-JERRY				
lost IP	192.168.3.199									
							TLINK			

To do so, go to the Network tab. Click Add Network Drive, and select any network storage by clicking Mapped Drive of Navigator Software PC. Choose Apply when the network storage is selected. Check the storage you just added at the bottom of this window. Navigator will begin circular recording and save the files to the drive you selected.

Otherwise, you can go to My Computer→Tools→Map Network Drive. Please make sure that the Reconnect at logon option is checked to avoid losing connectivity.

a un comontos		Sa Map Network Drive
з му computer		Map Network Drive
File Edit View Favorites	Tools Help 🥂	
🕞 Back - 🌍 - 🎓	Map Network Drive	What network folder would you like to map?
Address 😼 My Computer	Synchronize V D Go	Specify the drive letter for the connection and the folder that you want to connect to:
	Folder Options Type To A	
System Tasks	Files Stored on This Computer	Drive: Z:
View system information Add or remove programs	Shared Documents File Folder Administrator's Documents File Folder Hard Disk Drives	Folder: Browse Example: \\sever\share F Reconnect at logon
Others Planers	Second Disk (C:) Local Disk ε	Connect using different credentials Connect to a Web site that you can use to store your documents and pictures.
other Places	Devices with Removable Storage	
My Network Places	CD Drive (D:) 31/2-Inch Floppy Disk	
Control Panel	Network Drives	Tritic Cancel

Chapter 7 Group Settings

Chapter 7.1 Grouping

Users are allowed to divide cameras or DVRs into groups based on their geographic locations or functions. You can easily view the videos recorded by the grouped devices. To create groups, enter System Settings and click Grouping and follow the followings steps:

Select a group type from the left pane and click the Right Arrow to create a group. Click OK to save the settings.



Once the groups are set, you can easily switch between different groups.



Chapter 7.2 Group Naming

To name a group, right-click a group and choose Property. Enter the name you want to use into the text field.

Grouping	Grouping		×
Main Grouping SeDivision IP Cam/DVR Grouping SeDivision IP Cam/DVR Grouping SeDivision IP Cam/DVR Grouping SeDivi SeDivi Property SeDivi Se	Grouping Name	9-Division IP Cam/DVR Grouping	OK Cancel

Note: Main grouping is system default name and cannot be modified.

Chapter 7.3 Auto add Devices in a Group

For saving time and convenient operation, user can automatically import IP Camera, DVR and other multiple devices in each grouping by clicking Add Camera . Each group support 36 devices.

Baren Berging Groupes Backale Records Time Hanker, Faitere Portisa Course C	tem Settings							_	
Segunce Time 20 Sec.	ystem Settings	Grouping	Schedule	Recording Time	Networ	k Failover			
Bill Colombian Control Biologia Sections of Candidition Grand Sections of Candidition Grand	Devices				G	rouping			
Bagesno Time 20 - Sec. Delete Import Property Add Camer	1-Division IP	CanvDVR Gr	suping		8	e- 🛄 🛃 Mai	Grouping		
B Kolinis P Can Off Biogen S Kolinis P Can Off Biogen S Kolinis P Can Off Biogen S Kolinis P Can Off Biogen Sequence Time 20 Beguence Time 20 Sec. Delete mont Property Add Camer	9-Division IP	CanvDVR Gr CanvDVR Gr	xuping Xuping						
B Schward P CardOff Board B Schward P CardOff Board Sequence Time 20 - Sec. Delifie Import Property Add Camera	16-Division IP	Can/DVR G	rouping						
Bequence Time 20 - Sec. Delete Import Property Add Camera	25 Division IP	Can/DVR 6	iouping						
Sequence Time 20 - Sec. Delitie Import Property Add Camera									
Seguence Time 20 Bec. Detelle Import Property Add Camera									
Sequence Time 20 - Sec. Delete import Property Add Camera					+				
Segunce Time 20 - Sec. Delete Import Property Add Camera									
Sequence Time 20 - Sec. Delete import Property Add Camera									
Sequence Time 20 - Sec. Delete Import Property Add Camera									
Sequence Time 20 - Sec. Delete import Property Add Camera									
Sequence Time 20 - Sec. Delete Import Property Add Camera									
Sequence Time 20 - Sec. Delete Import Property Add Camera									
Sedieloo Ilime 30 - Sec.						Delete	Import	Property	Add Camera
	Sequence III	10 20	- Sec.			Delete	impon	riopeng	Hoo Camera
UID: OK Cancel	UID:							ОК	Cancel

Chapter 7.4 Quickly Add device

After clicking on Add Camera, and IP auto search is finished, you can quickly find the desired device by selecting Scan Device Type.

ican Device Type	BOAM		4	υ,	ername	admin		
R23.	192,168,5,231	85	104	1,605	00-1010	25		
] = \$F(192.168.26.221	80	170	1.005	00-	19		
R22.	1921685238	85	130	1,855	00-	-25	This device has been set in #1,	
F22	192 168 5 226	85	106	1,855	00	-45		
F22	192.168.5.222	85	104	1.856	00-	-62		
Alfriday	192168.110.100	80	213	2.1112.1	74-	-00		
R212)	192.168.5.233	85	213	2.1.17	00-	-52		
No. on	102160.102100	80	142	1.008	40-10-1	6-59		
F22	192,168,5,220	05	104	1,8000	00	40		
F22	192,168,5,224	85	102	1,805	00	-12		
4.X.	192,160,123,102	80	490	4,102	00	-47		
Card	192,168,25,206	80	42	1,805	00	-00	This device has been set in #2.	
And in case	197 168 26 148	80	55	0.1.04	00	11	This device has been set in #13	
and interior?	19216525.49	80	27	0.040	00	-01		
all	1921688211	80	211	2 1 42	00	1.24	This device has been set in \$7,\$12	
Latin State	192 168 8 224	80	222	1.000	00.	.76	This device has been set in #1	
Z	10314813168	**	44	1.0000	00.000			
lame	IP Address	Port	Model	Vesion	Mac Ade	kess	Status	

Auto detect Onvif device connection status. If the connection fails, it instantly correct account password and network port. Manually press Onvif will detect the connection again.

sect Device	Name	IP Address	Port	Username	Password	Profile	Connection state	Options
	Select All / No S							
	PDxxdES	192.168.3.201	85	admin		H2641080P	Connected succ	Advanced
								_
	_							



After confirming the device is connected, the devices listed above can be imported into the specified group.

Channel Name		Channel Number	
JPDxxxES		#001	
Group Name	Main Grouping	-	
	4-Division JP Cam/DVR Grouping		

Chapter 7.5 Group Authentication

To assign access rights to particular users, please check Device checkbox to allow access to groups or channels. The default setting allows every user full access to every device in the group. Group access rights also apply to web servers. Users with different access levels can only see the videos of their corresponding groups.



Chapter 7.6 User Authentication

To assign access rights to particular users, please check Operation checkbox to allow access to groups or channels. The default setting allows every user full access to every device in the group. Group access rights also apply to web servers. Users with different access levels can only see the videos of their corresponding groups.

ser type :	4:Military Cont	rol Zone 🔹	Modify Delete			
le.				Operation Device		
v.	luce					
	Lucy					
-	carey			Outine .	AnnahaKan	
	01			Option	Annotation	
				Enable access rights		
				Navigator The Software Camera Setting		
				Navigator Monitor Matrix Setting		
				Navigator The Software Record Start/Stop		
				Navigator The Central System Settings		E
				Navigator The Software Playback		
				Navigator Database Manager		
				Navigator The Software PTZ Setting		
				Navigator The Software PTZ Control		
				Navigator The Software Grouping Setting		
				Navigator The Software User Setting		
				Navigator eMap Manager		
				Navigator eMap PTZ Control		
				Navigator The Software Power Down		
				Navigator Web Manager		
				Navigator TV Wall Logout		
				Navigator Control Center		
				Remote Navigator Media Streaming Server		Ŧ
				· · · · · · · · · · · · · · · · · · ·		



Chapter 7.7 View a Group

To view the videos of a group, click Groupings and chose the group you want to see.



Chapter 7.8 Group Sequential Playback

To adjust the group sequential playback interval (seconds), go to the Grouping tab in System Settings.



Chapter 7.9 Main Grouping

Main Grouping is a group consisting of 36 devices, which are displayed in a split view in Navigator. To add a device to the main grouping, please follow these steps:

- 1. Select Main Grouping in grouping dropdown list.
- 2. Right-click one of the cameras.
- 3. Select Properties.

Chapter 7.10 Split View

Currently, Navigator supports four types of split views including full screen view, 4-channel view, 16-channel view, and 36-channel view. To open the full screen view, double-click a camera to maximize the screen. Click Windows, and choose the type of view you want to see.



Chapter 7.11 Dynamic Video Channel Swapping

If you want to move a camera channel around, you can simply drag a camera to another video channel. This operation swaps these two cameras' positions dynamically in the software. For users who want to adjust the display position after site installation, they do not need to re-assign the IP settings.





Chapter 7.12 Digital Zoom

To zoom in a specific area, click and drag to create an area for digital zoom. Then you can move the zoom-in area (green area) at will.



The digital zoom function is also available in the playback mode.

Chapter 8 Playback in Navigator

Navigator can playback the videos recorded by all IP-based products including H.264 HD IP Cameras, Full D1 IP Cameras, IP Fast Domes, Video Servers, LAN Cameras, and DVRs.

Chapter 8.1 Playback

First of all, select a camera channel or a DVR. Press the Playback icon Playback and choose Playback Playback new window will open.



Chapter 8.2 Playback for an IP Camera within the Main Grouping

Video recorded in the main grouping can be saved to a local PC. Stored video clips can be played by specified date and time. To do so, follow below steps:



1. Choose a date in the calendar.



- 2. Specify the starting time and ending time.
- 3. Click **Search** to search the video clips.



When a video clip is playing, click Stop 0, Play 0, Pause 0, << (Rewind) 0, >> (Fast Forward) 0, and Snapshot 0 icons to perform the corresponding function. You can also click the time-bar or drag the scrollbar to jump to a specific time.

Chapter 8.3 Multi-Channel Playback

You can choose a group for multi-channel playback. Just click the multi-channel playback icon 1, and a playback window appears as below:



Navigator supports up to 36-channel playback at the same time. A number of settings can be changed for multi-channel playback: (1) NAV/CMX I frame only (2) I frame only. I frame only is only available when multi-channel playback is activated, and activate this option will force Navigator to show only 1 frame/sec in



the background to reduce CPU load. For less powerful workstations, we suggest you activate this option. However, you may uncheck the option if CPU usage is low.

tting			
NAV I Frame Only			
I Frame Only			
All channels set I-Frame			
Original video resolution a	at full screen mode		
GPU Decode And Display, D	isplay High Priority.		`
Smart anti-aliasing			`
Default Windows Division	16		~
Language	English		~
POS Text		Font Settings	
SNAP			
Capture a single frame			~
Total capture number	1		
Capture Frequency	Low		
			Cancel

Chapter 8.4 Remote Multi-Channel Playback

You may also connect to another Navigator host remotely and play videos saved on that host. To enable

remote playback, click Playback, then select Remote Playback 🗵. Click the Connect button and enter IP/DNS address, port number, username, and password to access Navigator.

Select a group for multi-channel playback. Moreover, you can add Navigator hosts as bookmarks to instant login in the future.

🖺 Server Login	
Bookmark	1:
Server Type	NAV/CMX Streaming Server 💌
Server Name	My Server
Server IP/DNS	127.0.0.1
Server Port	8021
Username	admin
Password	
High Quality Type	
Save	Connect Close

Chapter 8.5 Remote DVR/NVR Playback

For playback videos on a remote DVR/NVR, right-click the DVR/NVR channel and select DVR/NVR Remote Playback.





Then you will see the DVR/NVR Playback dialog box. Specify the date and time information in the dialog box to start remote DVR/NVR playback.



Chapter 8.6 SmartSearch

SmartSearch is available in multi-channel playback. This search function provides quick video search in selected motion detection zones.

To perform SmartSearch, enable full screen mode for a particular camera. Select SmartSearch in the drop-down list of Select Mode and press Search. A SmartSearch dialog box will appear. Drag the motion detection area on the screen inside the SmartSearch dialog box. Click Start, and the system automatically performs a quick scan for any signs of motion activities in the video clip.

In the event list, snapshots of the motion activities will be displayed. Click on the snapshots to jump to the time when a particular event happened.



Then you will see the DVR/NVR Playback dialog box. Specify the date and time information in the dialog box to start remote DVR/NVR playback.

Chapter 8.7 AVI File Export & Play from a File

Export AVI with OSD

Users are allowed to export an AVI file recorded by a main grouping device. First you need to open the playback interface and search for a recorded video. Click the Backup button, choose Destination Directory, and press Convert AVI with OSD on the right side of the screen to export the AVI file.



Export AVI without OSD

Export an H.264 AVI file without an OSD timestamp can be much faster than rendering an AVI file with a timestamp.

Navigator stores its video clips in a GUID folder inside the default Video folder. The GUID folder is named by a 32-digit hex string. The videos are saved under year, month, day, hour, and minute.

퉬 Video	*				
2011		How I	HEAT	HEAT	
F5EEC030-F935-483c-8CC5-C266517353DC					
2011					
07		MPEG	MPEG	MPEG	
21		ch01	ch02	ch03	
00					
)) 05					
Jacob 58					
) 59					
06					

Chapter 8.8 Multi-Channel Backup

Multi-channel backup features (1) multiple channel playback through MPlayer, which is a comprehensive media player; and (2) AVI backup for multiple channels.

To back up your files, click the Backup icon and select channels. Specify the date, time, and destination directory. Finally, choose Start Backup or Covert AVI for multi-channel video backup to begin.

Backup		k –
Chec. Channel F Select All / No Sel F Cam 001 F Cam 002 F Cam 003 F Cam 005 F Cam 003 F Cam 003 F Cam 003 F Cam 003 F Cam 004 F Cam 004 F Cam 004 F Cam 004 F Cam 003 F Cam 004 F Cam 004 F Cam 004 F Cam 010 F Cam 011	22/07/2014 Calendar Calendar Image: Star MonTuc Went The Fit Sate 2014 [S] San MonTuc Went The Fit Sate Priority Setue 1 1 2 3 14 15 13 14 16 13 14 19 20 21 22 23 24 25 27 28 29 30 31 1 Start Time: 00 1:00 15 Fit Fit Sate 250/6 Image Sate Convert AVI Stop	
Backup Status	0 %	1
	EXT	

Chapter 8.9 Snapshot

In a system consisting of IP based services, you may want to capture images in a particular video. You can utilize this function in Navigator by simply clicking the Snapshot icon . The picture will be saved as a JPEG file.



Chapter 8.10 Alarm Event Playback

To playback motion detection events, choose Alarm in the Select mode drop-down list, and click Search to display all motion detection events. Click any of the events to play associated videos.

 Start Time:
 00 : 00
 ↓

 End Time:
 14 : 28
 ↓

 Select mode:
 Alarm
 ✓

 Smart Event
 Search
 Search

 In / 4271
 Search
 Search

 Time
 Channel
 Event
 ✓

 07:48:21
 Cam 018
 A Local mc
 ✓

 07:48:33
 SG1122
 A Remote 1
 Ør:48:35
 SG122

 07:48:54
 SG1122
 A Remote 1
 Ør:48:45
 SG122
 Remote 1

 07:48:51
 SG1122
 A Remote 1
 Ør:48:54
 SG122
 Remote 1
 Ør:48:54
 SG122
 Remote 1

 07:48:54
 SG1122
 A Remote 1
 Ør:48:54
 SG122
 Remote 1
 Ør:48:54
 SG122
 A Remote 1
 Ør:49:02
 SG122
 A Remote 1

Chapter 8.11 Tagging (Enterprise Only)

To tag important video clips, click **Tagging** to tag the video. The tagged time video clip will be retained even when have exceeds recycle recording number of days.

Selected Channel	3
Playback Time	2014/07/23 00:05:01
Postevent Reserved Time	0 + Minutes 5 Seconds
Tagging Reason	No overwrite vidoo dip

Select **Tagging** to playback event and you can playback important clips. If you don't want to occupy recording space, right click \rightarrow **Clear** or **Clear All** tagged time in the tag period.



Chapter 9 Audio

Chapter 9.1 Two-way Audio

Navigator supports two-way audio enabled surveillance cameras. To activate this feature, select a particular channel and click the Speaker icon at the top-right corner to listen to the audio of the channel. You can also move the volume bar to adjust the volume. To speak to a remote site, please click the Microphone icon

left next to the speaker icon.

NOTE: Audio monitoring is only available in the full screen mode. Double-click a channel to enter the full screen mode.



Chapter 9.2 Two-way Audio Auto Switching

Navigator supports two-way audio for IP cameras. Check Audio Auto Switch in Properties will automatically enable audio when the camera is triggered by a remote IP camera's digital input.

Chapter 9.3 Audio Recording

Navigator supports audio recording using IP camera models equipped with audio input. The Playback interface can play audio (if any) simultaneously with the recorded video.

Chapter 10 Archive Manager (Enterprise Only)

Archive Manager, a built-in feature in every copy of Navigator, can archive videos to a central network storage device. Archive Manager delivers a hassle-free experience that automatically saves your video clips to a secure location. To open Archive Manager, please go to Start \rightarrow All Programs \rightarrow LILIN Navigator \rightarrow Archive Manager.

Chapter 10.1 Archive Source

To start video archiving, select the cameras you want to archive. You can either keep the video clips in the local PC (duplicate archiving), move the local data to a remote archive destination, or stop archiving for a specific time frame. After the configuration is completed, you can schedule the archive task by choosing the hours and days you want the archiving to take place. Also, you can apply all settings to the schedules of other cameras.

Chapter 10.2 Archive Destination

You can choose the Archive Drive where video clips will be archived. The Archive Drive could either be a network RAID drive or an internal SATA RAID for large data storage. To choose a NAS RAID as the archive destination, click Setup Network Disk to mount a remote drive to Navigator. After the disk is chosen, select Real-Time Archiving or Scheduled Archiving. The former will start archiving immediately the next minute, and the latter will start archiving in the designated time.

(a) Navigator Archive Manager 64 Bits	– – ×
Archive Archive Log Sync Source Titaed Source Camera: #001 #001 SG1122 V Refresh	
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 2 12 2 2 0 Duplicate Archiving Sunday Monday Image: Control of the second s	Apply Week anneis
Reserved Archiving Days 90 Day (1 - 385) Only Once Start time 13 : 32 Real-time Archiving Scheduled Archiving Scheduled Archiving Sunday Priority Setup 5 me Remove Drive Close	Apply
Start Stop Copy MPayback	Exit



Chapter 10.3 Synchronization

NAV recorded file sync

- **Data overwrite:** When different servers are connected to the Internet, the image data is overwritten back to the host.
- Data no overwrite: The system checks for missing video clip but does not overwrite.
- **Data recovery:** The remote server has a storage device in IP Camera SD card. When the network is disconnected, it will recover disconnected portion from the SD card.



Note: When the device is disconnected, it can also pass through the storage device. For example: IP camera SD card for backup to the Navigator host

Chapter 10.4 Back up calendar

After completing the above steps, you can see the synchronized information in the Archive log.

chive Archive Log	Sync		
Backup Status		Backup Log	
Channel #001 #001 IRP72	Status [2018/6/1 1]	AD1 PEG22 systems 21500041 10.0 AD1 PEG23 systems 21600041 10.0 AD1 PEG23 systems 21600041 10.0 AD1 PEG23 systems 21600041 11.0	
			Clear

Chapter 11 PTZ Control Panel

In Navigator, you are able to control the movements of PTZ cameras. Select the channel of a PTZ camera

(e.g., IP Fast Dome) and click PTZ Setting it to control the movements freely using a PC keyboard and/or the PTZ control panel

Chapter 11.1 Preset Point Settings

To set up preset points, please invoke Presets dialog box. Follow the following steps:

- 1. Select preset point dropdown list.
- 2. Type the time field.
- 3. Type the speed field.



- 4. Click up, down, left, or right to move the IP Fast Dome to specific position.
- 5. Click Apply button to set the position.

Groups and preset point:	S				— ×	
Preset Group Preset Point	Fast dome adjustment				Auxiliary	000
	Up Left Rigt	nt	Auto focus Auto IRIS Auto pan		Wiper	Device Type: PTZ V
Time (0~255): 3	Down				Washing	Preset 1 Preset 2 Preset 3 Preset 4 Preset Point:
Speed (0~255):	Low H	ligh Focus	+ Zoom	IRIS	Patrol	1 Vide Tele
200	Speed	N	-	S	OSM	Auto Pan Stop Pan
					Apply	Focus Focus Auto Focus Focus IRIS IRIS Auto
					Exit	PTZ Setting Exit

Chapter 11.2 Navigator Status Panel



Chapter 11.3 Control PTZ via a PIH-931D Keyboard

Many Navigator functions can be activated with PIH-931D keyboards. Connect a PIH-931D keyboard to a Navigator host through an RS-232<->RS-485 adapter.



First, enter the DVR/NVR control mode by pressing SHIFT and DVR.





To use Navigator features, simultaneously press Navigator ID, DVR, and ENT.



To select a group, press and hold the monitor ID and MON before pressing the group ID and PRESET.



Chapter 11.4 Split View

To switch split views, launch Navigator and press the following icons:

16-channel	8-channel	Navigator ID + DVR + ENT	36-channel
9-channel	4-channel		

To enter the 36-channel view, simultaneously press the Navigator ID, DVR, and ENT. The operation is the same as operating a Navigator host.

Chapter 11.5 Control a Camera

For control a camera, simultaneously press the camera number and CAM buttons.

Example: Control camera #8



PTZ and Lens control

		_	
	Zoom in	J	Zoom out
•	Pan left)	Pan right
	Tilt up	+	Tilt down
•	Zoom in		Zoom out
FOCUS	Focus far	FOCUS	Focus near
	Iris close	0	lris open

Chapter 11.6 IP Camera ePTZ or ROI Feature

Several models of IP cameras provide ePTZ or ROI features. With the help of Navigator, you can use a keyboard controller to access ePTZ or ROI feature.



Chapter 11.7 Switch between Navigator and Virtual Matrix Monitors See Control PTZ via PIH-931D keyboard to use Navigator features. Now you can select a monitor for Navigator.



Press button 1 and MON simultaneously to control #5 Navigator monitor.

Chapter 11.8 Keyboard Playback

See Control PTZ via PIH-931D Keyboard to use Navigator features.

To access multi-channel playback, click the Step Forward icon vote to enter the playback mode.

To access single-channel playback, click the Play icon

In Playback Timer Setup, use the joystick to enter date and time. Press ENT button to search through videos. Press ESC to exit and press ESC again to exit the playback dialog box. Below are the control icons to playback with a PIH-931D keyboard.

Option	lcon	Description
Pause		Pause playback.
Play		Start or continue playback video.
Fast Forward		Fast forward the playback video.
Fast Rewind		Fast rewind the playback video.
Stop		Stop playback and return to playback menu.

Select various split display modes on live and playback monitoring.

Chapter 11.9 eMap Manager

eMap is an application that can manage devices such as IP camera, IP Fast Dome, and DVRs/NVR on any maps. With eMap, user can easily locate a particular device on a map. Launch eMap Manager in Navigator—eMap Manager.

Chapter 11.10 Access eMap





Chapter 11.11 Find Devices

To find a device within eMap Manager, go to View \rightarrow Find or click the Find Device icon \swarrow and a list of found devices appears at the bottom right corner of the screen. Choose any of the found devices.

Chapter 11.12 PTZ Control Panel

To control PTZ device, double-click a PTZ device, and operate PTZ function on the PTZ control panel.



Chapter 11.13 Toolbar

The icons from left to right are described as follows:

Device list		Display the device list.
Find device		Switch to the Find Device panel.
Refresh	W	Refresh the map and device information.
PTZ control		Switch to the PTZ control panel.
Edit PTZ control	P	Supports 4 basic presets.
eMap edit mode		Add or modify devices on the map.
eMap control mode		For PTZ control and live monitoring mode.
eMap alarm switching mode	(Switch to the map where an alarm is detected.
Division		Switch to quad screen in eMap Manager mode.

Chapter 11.14 eMap Alarm Options

- Continuous snapshots: the number of continuous snapshots is taken for each alarm.
- Alarm snapshot interval (sec): the time interval between photos to be taken.
- Alarm video output time: triggering interval between alarm detections.
- Number of snapshots stored: the buffer size for storing JPEG snapshots.





Chapter 11.15 Add a Map

To add a new map, go to File-> Add Map. Or you can press the New button at the top-right corner. Select the JPEG map file representing the installation site and enter map name and location information.

#	Name	Description
1	Airport	Airport
2	Bridge	Japan
3	Floor Plan11	Rooms
4	Oil Plant	New Orleans
5	Train Station	Europe
6	Hightway	Los Angeles
	low Dolo	to Property

To delete a map, select the map in the Map List, and go to File -> Delete Map or click Delete at the top-right corner.

Click Property to change the name and location of a map.

Chapter 11.16 Add a Device to the Map

To add a device to a map, switch to the eMap edit mode before you drag-and-drop a device from Device List to its associated map. You will see a check next to the name of the added device.

Chapter 11.17 Delete a Device from the Map

To delete a device from the map:

- 1. Select and right-click the device.
- 2. Select Delete Device.

Or, uncheck the device in the device list.



Chapter 11.18 Modify a Device

To modify a device, go to $Edit \rightarrow Device$ Property or right-click a device and choose Device Property. In the popup dialog box, you are allowed to make changes to several configurations, including display color and camera coverage.

Device Properties		x
Camera Name	Cam 007	ОК
IP Address	-	Cancel
Port	0	
Set Text Color	ngle	0
D	30	
	200	

The circular shape on the right of the Device Properties window allows you to control the direction and angle of a camera. Click and rotate the camera view control clockwise/counter-clockwise to change the camera angle and move the two scrollbars at the bottom to adjust camera coverage.

Chapter 11.19 Find a Device

You can easily add DVR, DVR camera, or IP-based devices to different maps. However, finding a particular device for video playback can be difficult and time consuming. eMap Manager provides easy access to any device you want to monitor. Click Find Device P, or go to View \rightarrow Find in the menu bar. A list of all devices in all maps will be shown at the bottom-right corner of eMap Manager. Double-click a device in that list for eMap to automatically switch to the map and show the device as well as its live video.

#	Name	Location
1	Cam 001	Airport
2	Cam 007	Airport
3	Cam 013	Airport
4	Cam 002	Airport
5	Cam 039	Bridge
6	Cam 048	Bridge
7	Cam 053	Bridge
_		Greet

Chapter 11.20 Alarm on eMap

If a motion or digital input alarm sent by Navigator is detected, the camera will start blinking on the associated map, and the live video will be displayed, too.

Chapter 11.21 Quick Map Reference

In the eMap edit mode, drag any map from the list into the map view. This allows quick switching from one map to another by clicking on the map thumbnail.



Chapter 11.22 Alarm Control Mode & Switching Mode

In eMap Manager, it is possible to switch quickly and frequently between maps and videos. A user can manually double-click on the camera icons for its live video. There are up to 4 windows that can be opened at same time. When switching from one map to another, the video window(s) will be closed, and previously opened video(s) will be played automatically in the map that just opens The feature is very useful if you need to open the maps frequently



In the alarm switching mode, videos will appear on the associated map while an alarm is received. The videos will be shown in a pop-up window to attract your attention.



Chapter 12 Web Server

Navigator can work as a web server to stream live video. To enable the service, go to System Settings→Network and enter the HTTP pot you want to use.

System Settings					
System Settings Gr	ouping Schedule Record	ding Time N	etwork Failover		
Local Host Name	NAV		Add network drive		
Streaming Server	Listen Port	8021	Mapped drive of NVR s	software PC	
Enable SDDP Bro	adcast				
			Drive:	-	
			Username		
			Password	Apply	
			Drive Number	Free Space	
			C:\	49% 59.5GB	
				96% 931.4GB	
			✓ F:\	99% 931.4GB	
HTTP Port:	8080		G:\	99% 931.4GB	
HTTP Link:	http://192.168.3.241:8080				
Status:	ок	Apply			
HTTP Timeout	5	•			
Host IP	192.168.3.241	•			
GUID:				OK Cancel	



Then, you may either click the HTTP link or copy the link to the address bar of your Internet browser to view the video.



Note: HTTP streaming may require username and password.

Chapter 13 Database Manager

Database Manager can generate user log report and event report. In addition, this built-in feature allows database import, export, and repair.





Lloor Log Poport		Click User Log Report to show a complete user log. Press
User Log Report		File→Export Log to export a CSV log file.
Event Penert		Click Event Report to show a complete event report. Press
	Ð	File→Export Log to export a CSV log file.
		Click POS Event Report to show the full POS record. Press
POS Event Report		"Export Log" to export the CSV log file.
ANDR Event Report	AB-12	Click ANPR Event Report to show the complete license plate
ANPR Event Report		record. Press Export Log to export the CSV log file.
Object Counting Report		Click Object Counting Report to show the full object counting
		record. Press Export Log to export the CSV log file.
		Click on Tag Report to show full tag record. Press Export Log to
	-61	export the CSV log file.



NAV/ Status	r a	Click NAV Status to show the complete NAV host status record.
NAV Status	1869	Press Export Log to export the CSV log file.
CDC Deport	*	Click GPS report to show the complete satellite positioning
GPS Report	×4	record. Press Export Log to export the CSV log file.
Face Depart		Click Face Report to show the full face recognition record. Press
Гасе кероп		Export Log to export the CSV log file.
Server Depart	re-	Click on Server Report to show the full server log record. Press
Server Report		Export Log to export the CSV log file.
	S)	XML format database can be imported into Database Manager.
Import Database		Click Import Database and choose the database you want to
		import.
		Database Manager supports database export to XML format
Export Database	€)))	files. Click Import DB and choose the database you want to
		import.
Export Log		Various event transfer report.
Statiation	IVS	Click on Statistics Chart and the object counting record will be
Statistics		converted to chart mode.
Refresh Database	¢	Click Refresh Database to refresh the new event message.
Search Settings	₽	Customizable search events

Chapter 14 Multiple Monitors

Multiple monitors support is a native feature in Windows 7 or higher. This feature allows you to view different applications of Navigator on separate monitors.

Settings	-	×
Home Find a setting	Customize your display	1
System	1 2	
🖵 Display	2 1	
IΞ Apps & features	5 4	
i⇒ Default apps	Identify Detect	
Notifications & actions	Change the size of text, apps, and other items: 100% (Recommended)	
O Power & sleep	Orientation	
📼 Storage	Landscape \checkmark	
段 Offline maps	Multiple displays	
- Tablet mode	Extend desktop to this display \sim	
D Multitasking	Make this my main display	
Apps for websites	Apply Cancel	
O About	Advanced display settings	

Note:

- 1. NVIDIA two graphics cards support up to four outputs, combine with motherboard built-in graphic card shall be up to six outputs.
- 2. E-ATX motherboard built-in graphics card and NVIDIA two or more graphics card, if supported by hardware, up to 8 outputs.



Chapter 14.1 Navigator Multi-Screen Matrix Output

The Navigator can support up to four screen outputs, including one main monitor and three sub-monitors. Once the display card is properly installed, click on **Multi-monitor output** to display all connected and detected screens.

Once all the screens are properly connected, please click **Identify Monitor** to display the respective number on each screen.





The multi-screen output function is detailed below

- Quad display: Navigator can squeeze four 36 channel views into one large LCD screen
- Default group: the group to be shown on the main monitor.
- Default window division: the default number of split views.
- Auto minimize division: auto minimize division..
- Low CPU usage mode: enable I frame to reduce CPU load

Chapter 14.2 Alarm Acknowledgement

You can cancel the alarm acknowledgement on any screen that displays an alarm image. Before you manage the camera, you must first click confirm to clear an alarm.



Note: To enable the acknowledgement function, click **Alarm ACK** in the alarm output management list.



Chapter 14.3 Notify Navigator on Another Computer (Enterprise Version only)

Third-party software can enable or disable videos on the alarm acknowledgement monitor using the CGI commands provided by Navigator. See HTTPAPI.PDF on LILIN website for more details

Chapter 14.4 Navigator Software 2x2 Video Wall (Enterprise Only) Four of the six monitors supported by Navigator can form a 2x2 video wall.

Go to Control Panel→Display→Screen Resolution to combine four 1920*1080 monitors to create a 3840*2160 resolution video wall.



After you finish with the settings, a 2x2 icon will appear at the top-right corner of Navigator, which supports three windows consisting of thirty-six split views and one eMap view.



Chapter 15 Retail and Distribution Business Solutions

When connecting to a Point of Sale (POS) terminal ready, Navigator can retrieve POS transaction data, which will be displayed on live video and video playback. Navigator also provides smart transaction search for specific video clips.



Chapter 15.1 Retail POS Application

Navigator listens to the ASCII output of a POS system via an RS-232/COM serial port. Check if your POS LCD or printer is compatible with ASCII or printer output for ASCII data of your POS system. Consult your POS provider for more details.



Please refer to the figure below to connect RS-232 RX/TX wires, a POS register/terminal, and Navigator host.



To connect more than one POS terminals, add more RS-232/COM ports into the Navigator host.

Chapter 15.2 POS Connection via TCP/IP for Retail Business (Enterprise Only)

Navigator can connect to an RS-232 POS system through the network using a CYT-100SC RS-232 to TCP/IP converter. The driver disk enclosed in the box of CYT-100SC provides a RS-232 to TCP/IP conversion driver that allows you to establish a virtual COM port on a Windows-based PC. The virtual COM port can be adopted by Navigator to communicate with the POS system.



Chapter 15.3 Test the Communication between a POS system and Navigator

After the connection between the POS system and the *Navigator* host is established, use HyperTerminal or other alternative applications to test and verify whether the POS data can be captured by Navigator.





Chapter 15.4 Link POS to a Camera Channel

To link a POS system to a camera channel, click Properties and choose ePOS/OSD to open the POS Setting dialog box.

In POS Setting, please specify the following information to capture POS transactions.



Once the above information is set correctly, Navigator will capture and display POS transactions on live video.



Chapter 15.5 POS Transaction Playback

Navigator supports video playback with associated onscreen transaction data. When you choose a POS transaction entry of any time, the video clip of that transaction will be played from that time.

Note: To demonstrate POS functions, press F3 to show POS transactions.

Chapter 15.6 Search POS Transactions

To search a particular transaction entry such as amount of product, product name, subtotal, or total, you can enter search keywords in the Condition search box. Transactions containing the keyword will be displayed on the screen. You can click any of the search items to playback the videos.

Chapter 15.7 Scanner Connection for Logistic Business

Barcode scanners are widely used in logistic business. When connected to a PC via a PS/2 connector, this device works as an input tool that reads numbers of 0–9 and sends the information to Navigator.

To use a barcode scanner in the transaction process, connect the scanner to the PS/2 port on your PC and choose Barcode Scanner in POS Setting. Information read by the scanner will be sent to this camera. Only one barcode scanner can be connected to one PC.

To search for data corresponding to the barcode scanner, refer to POS Transaction Playback and Search POS Transactions for more details.



Chapter 16 Mobile Device Support

To meet your mobile surveillance requirement, LILIN provides a mobile version of Navigator that supports iOS and Android devices. You can download LILINViewer in App Store or Google Play for your iPhone, iPad, and other Android devices.



Chapter 17 Navigator Software Streaming Client & Server

Navigator's built-in software server allows video streaming to Navigator clients. Live streaming to clients may reduce CPU load of the IP camera.



Chapter 17.1 Navigator Streaming Server

To enable the streaming function of Navigator, you may either check Streaming Server in the Network tab in System Settings and specify the port number therein, or go to Start \rightarrow All Programs \rightarrow LILIN Navigator \rightarrow Streaming Server.

Navigator MStreaming Server 64 Bits		- 🗆 X
Log Setup		
Net Streaming Server	Listen Port	8021
☑ IPScan Discovery Support		
Service Configuration		
Setup Screen Capture		
		Server Start
		Server Stop
		Exit

Note: Do not turn off streaming server if you want to perform live streaming.



Chapter 17.2 Navigator Software Streaming Client

To connect to a Navigator live streaming server as client, click Properties and select Navigator Live Streaming from the drop-down list in Device Type. Then, enter the IP address and port number of the Navigator streaming server.

Due to bandwidth management, SD streaming and HD streaming can be selected. If the bandwidth is very low such as the Internet, Low bitrate mode is recommended.

IO/GPS/POS/ license plate information, etc.

Make sure that each NAV host has LILIN Navigator and LILIN Control Center installed.



Please click on the icon at the bottom right of the computer toolbar, then mouse left click on Streaming Server 64 bits.

- 1. In the lower right of the computer toolbar, click on **Streaming Server 64 bit** and then left click on it.
- 2. Click on Settings and click on Service Configuration



- 3. Check Enable Navigator Control Center
- 4. Select Service Type: Navigator Control Center service
- 5. Create Chinese/English Verification Code and Service Code
- 6. Click on Setting

Service Configurat	tion		×
Enable Navigator	Control Center Easy mode	Parents	
Local Host Name	NAV-Recorder	01: Control Center	Service \checkmark
GUID	11CA13AD-C15E-4DFF-936B-5370D74A5ABD	Service Name	Control Center Service
Verification Code		Service Code	servicecode001
IP	192.168.3.62	Service Type	Navigator Control Center service V
Auto Scan Code	0	AD Failover Se	Navigator Control Center service
		AD Failover Cl	ient Enable
		Auto Charle	
		Auto Check	Setting Delete
			OK Cancel



Chapter 17.3 How to set Mosaic TV Wall

In second group, please set the service type to Navigator TV Wall service, select Setting and TV Wall set up is complete.

When host has multiple monitors, one server group can only set one Mosaic TV Wall Server, assuming there are 2 monitors, server group 3 have to set second group monitor.

Please select Identify Monitor, and the screen will prompt the number for the user to confirm.

Service Configura	ation	х
Enable Navigator	r Control Center Easy mode	
Local Host		Parents
Local Host Name	5F-	03: NAV TWVal service #1
GUID	2280 i68	Service Name NAV TVWall service #1
Verification Code		
IP	192.168.26.57	Service Type NAV TWWall service
Auto Scan Code	0	#1: Position(0, 0), 1920*1080
		Identify Monitor
		Auto Check Setting Delete
		or curcu
Service Configura	ation	
Enable Navigato	or Control Center Easy mode	
Local Host		Parents
Local Host Name	5F-冠博電腦	04: NAV TVWall service #2
GUID	22B0C905-36E5-4354-BB1F-9C38E298056B	Service Name NAV TVWall service #2
Verification Code		
IP	192.168.26.57	Service Type NAV TVWall service V
Auto Scan Code	0	#2: Position(1920, 0), 1920*1080
	L	Identify Monitor
		Auto Charles Cutting Dulying
		Auto circix Setting Delete

Chapter 17.4 Auto set TV viewer setting

Check Auto set TV viewer setting, Mosaic TVWall is automatically evoked when Control Center is turned on.

Note: You may set each TV Wall server group to automatically evoke or not.

Service Configurat	tion		
Enable Navigator	Control Center Easy mode	Parents	
Local Host Name	NAV-Recorder	02: Mosaic TVWall	Service 🗸
GUID	11CA13AD-C15E-4DFF-936B-5370D74A5ABD	Service Name	Mosaic TVWall Service
Verification Code			
Ib	192.168.3.62	Service Type	Navigator TVWall service V
Auto Scan Code	0	Auto set TV v	i≠1: Position(0, 0), 1920*1080 ∨ iewer Identify Monitor
		Auto Check	Setting Delete
			OK Cancel



Chapter 17.5 Easy Mode

Check Easy mode and apply Auto Check, will automatically skip verification code and service code, this will enable to import Control Center Service and TV wall mode easily and quickly, click on Setting to complete easy setting.

Service Configurat	tion		×
Enable Navigator	Control Center	Parents	
Local Host Name	NAV-Recorder	01: Navigator Control Center Service	Ň
GUID Verification Code	11CA 13AD-C 15E-4DFF-9368-5370D74A 5A8D	01: Navigator Control Center Service 02: Navigator Management Service 03: Navigator TVWall service #1 04: Navigator TVWall service #2	
IP	192.168.3.62	06 07	-
Auto Scan Code	0	08 10 11 12 13 14 15 15	
		Auto Check	Setting Delete
			OK Cancel

Note: When main host have many monitors, will automatically enter all present connected screen settings.

Chapter 18 Automatic Number Plate Recognition (ANPR) (Enterprise Only)

The Navigator central management software supports Automatic Number Plate Recognition (ANPR) system. LILIN ANPR license plate recognition system can support setting blacklist and white list. The main purpose of the blacklist is to prevent unauthorized vehicles from entering and to transmit warning window in the system. The white list function is to allow gate access to specific license plate. LILIN ANPR license plate recognition can also set an exclusion list to avoid misreading vehicle brand logo as registration plate thereby improving the recognition rate. ANPR software are able to capture license plate numbers and transit images back to Navigator in central control room for identifying and screening each vehicle to enter the property

Chapter 18.1 Supported countries license plate

LILIN's intuitive ANPR system supports US and Canada, Australia, mainland China, Europe, Saudi Arabia, Malaysia, Singapore, Iran, Russia, Japan, Turkey, Mongolia, Tajikistan, Taiwan and other countries. And LILIN provide pre-sale license plate number verification service to ensure that LILIN ANPR license plate recognition system support and recognize your area vehicle license plate

Chapter 18.2 Types of license plate supported

In general, each country license plate can be divided into two types: reflective and retroreflective. Reflective license plate have higher recognition rate and are mostly use in majority of European countries and the UK. Meanwhile, other countries use retroreflective license plate which has low recognition rate, hence, it is highly recommended to either install an additional infrared IP camera or exterior light sensor to complement the insufficient lighting, and to improve its recognition rate.







Note: After inserting the USB Dongle into USB port, the Navigator can automatically recognize the license plate. Supported ANPR features include white lists, blacklists, and exclusion lists. For more details, please refer to the LPR ANPR manual.

Chapter 19 Failover (Enterprise Only)

The Navigator recording server can be configured for failover mode. If one or more Navigator recording servers lose the network connection for cameras or need to be switched off for maintenance purpose, the Navigator recording server (failover server) with failover enabled can record videos for these cameras of Navigator recording servers.

One failover server can connect to 8 Navigator recording servers for failing over the task.





One Navigator failover server can rescue 36 channels of a Navigator recording server. This Navigator recording server cannot accept second failover server, so you have to decide which cameras are very critical for failover feature.



Failover server number of channels cannot exceed its specification where NAV1108 at failover mode can rescue 108 cameras.

Example:

One NAV16108B at failover mode can only rescue 3 units NAV16108B recorders, each NAV16108B user chooses 36 channels to rescue.



Or one NAV16108B can rescue 8 NAV16108B average 13 channels per server





Chapter 19.1 Enable Failover Monitoring Service

To enable failover on the failure over machine, please click System Settings and go to the Failover tab. Select Failover server mode if you want the Navigator recorder to operate as a failover server; select Failover client mode if you want your workstation to operate as a client.

For failover server, choose one of the clients (Navigator recorders) from the list, and specify the host IP address, port number, username, and password to enable the monitoring service. The default port for Navigator is 8080. To enable failure alarm, please select Auto Alarm Loop.

Chapter 19.2 Failover Client Setting

For the Navigator recording server that will be rescued, choose Failover Client mode. Press OK button and re-launch Navigator application.

stem Settings Grouping	Schedule Record	ding Time Network Fallove	r.	
Disable failover				
Failover Server mode	HOST IP HTTP Port Username Password	8080		
Failover client mode	Audio a	larm loop	Failover camera	Inquiry

For failover client, enable Failover in Properties of the camera you want to use as the failover client, as below picture.

Display/Record			Preview	
Activate this device	Failover enabled 1/36			
Name	SG1122LPR			
Channel Location				
Device Type	LILIN IP Camera 🗸 🗸	Detect		
Channel	Cam 001 \vee	Setting		
	Auto import DVR	Import		
Streaming Mode Dua	al Streaming Mode for the Char	nnel v		
Record Mode Rec	cord dual streams 🗸 🗸 1 FF	PS V		
Network				
IP/DNS	192.168.150.38			
HTTP Port (ex. 80)	80	×	Find Device	Video
Onvif Port (Optional)	80		Assign the Recording Disk	
HTTPS Port (ex. 443)	443		, and git the recording block	
Video Port	554		Auto switch the audio	Alarm Management
Username	admin		ONVIF	ePOS/OSD
Password	••••		Device Type: IP Cam	1100 0000 0000
Camera/485 ID	1	~	Alarm Input (DI): 0	ANPR Group Setting
			Relay Output (DO): 0	Object Counting
Synchronize Time with	PC	Apply		Facial Recognition
Low bit rate client serv	er connection 0.05 I	FPS 🔍 🗸		Set the privacy mask
				control privacy mass

🎩 Camera Settings#001	
Display/Record Activate this device	Failover enabled 1/36



Do the same for the cameras you want to rescue.

🌆 Camera Settings#00	2			×
Display/Record			Preview	
Activate this device	Failover enabled 2/36]		
Name	#002 Z3R8922X3			
Channel Location				
Device Type	LILIN IP Camera	~ Detect		
Channel	Cam 001	Setting		
	Auto import DVR	Import		
Streaming Mode	Dual Streaming Mode for the Ch	iannel v		
Record Mode	Record the main stream $~~$ 1	FPS		
Network				
IP/DNS	192.168.110.107			
HTTP Port (ex. 80)	80	\mathbf{X}	Find Device	Video
Onvif Port (Optional)	80		Assign the Recording Disk	
HTTPS Port (ex. 443)	443			
Video Port	554		Auto switch the audio	Alarm Management
Username	admin		ONVIF	ePOS/OSD
Password	•••••		Device Type: IP Cam	ANPR Group Setting
Camera/485 ID	1	~	Alarm Input (DI): 0	Object Counting
			Relay Output (DO): 0	Escial Recognition
Synchronize Time	with PC	Apply		Facial Recognition
Low bit rate client	server connection 0.0	5 FPS 💛		Set the privacy mask
Lens Code	~			
Reboot Device	Launch Bro	wser		OK Cancel
	Log Camera Setting Display/Record Activate this of	gs#002 device	Failover enabled	2/36

Chapter 19.3 Failover Server Setting

For the failover server, please fill in failover client 01, the IP info of the server, which will be rescued, press ok to validate and you will be asked to re-launch the Navigator application

	Schedule	Recording Time	Network	Failover		
O Disable failov	er					
Failover serve	er mode	HOST IP	192.1	168.150.233		
Failover Client	01	HTTP Port	8080	ES		
Failover Re	note Clier 🔺	Username	admi	in		
Client 0	2	Password	••••	••••		
Client 0	3					
Client 0	5					
Client 0	, , , , , , , , , , , , , , , , , , , ,				Failover camera	Inquiry
-	-		annioop			
Failover clien	mode					

Note: The failover server cannot be used for normal recording, if you had a previous setting on this server, they will be inactive.



In the group page you will see 8 new groups.

OLILIN						?	ПX
oLILINI	n 801 Cann 802 9 L. IL IN I	Curr 601 O L.H.LINI	Gen X	21 Can 12 O <i>L IL IN</i> 1	s ⊂un∞ @ <i>L.IL.IP</i> d	2005/ 14:21 D 364 CPU: REC MICC MUTE admin R DA	1109 55 48% FF Y 3.04
¢LILINI	007 Can 00 O L.H.IN.I	Cam 03	Cent 6 L.ILINI	6 Cent	1 Can 112 © L. IL. IP.d	1 210 No 🗄	•) •) •••
oLILINI	n ti) Can (% OʻLILINI	Cuntis OLILINI	GLILINI	6 Cant	Main Grouping Failover Group 1 Failover Group 2	₽₽₽	opications Groupings Windows Playback
ol il ini	n (19 Can (63 GLILINI	GLILINI	GLILINI	a G	Failover Group 3	● ↓	6 • •
oLILINI	n 185 Cann 103 GLILINI	Cm®7	GLILINI		Failover Group 6	SEQ	÷
oLILINI	n 011 Can 02 @ <i>L.IL.I</i> ∿J	Can 03) © L.ILINI	GLILINI	n centi	5 Can 516		U



After re-launching Navigator, go back to failover setting you will see on the right all cameras selected for failover server.

	-				
) Disable failover					
) Failover server mode	HOST IP	192.168.150.233	#01: #F(1-1)SG1122LPR #02: #F(1-2)#002 73P8922X3		
Failover Client 01	HTTP Port:	8080	#02. #F(1-2)#002 Z3R8922X3	1	
Failover Remote Clier	Username	admin			
Client 02	Password				
Client 03					
Client 05					
			Egilover comora	Inquiry	
< >	Audio a	alarm loop			
Eailover client mode	Audio a	alarm loop			
Failover client mode	Audio a	alarm loop			
) Failover client mode	Audio a	alarm loop			
) Failover client mode	Audio a	alarm loop			
Failover client mode	Audio a	alarm loop			
Failover client mode	Audio a	alarm loop			



Press inquiry



To test this function, for example, the Navigator recorders (failover clients) suddenly power down at 13:57:00, failover server will start recording selected channel until failover clients are recovered.



Go to failover server playback interface, you will see a new group

Main Group – Main Group – Failover Group 1 2020/11

	Failover Group 1		~
	2020/11// Sun MonTue' 1 2 3 8 9 10 15 16 17 22 23 24 29 30 	09 Ca ≥ ≤ 20 Wen Thu Pri 4 5 6 11 12 13 18 19 20 25 26 27 ↓ ↓	lendar)20 ≥ Sat 7 14 21 28 5 5 5 5 5 5 5 5 5 5 5 5 5
	Start Time: End Time:	00 : 00 14 : 04	* *
	Select mode:	Record	Search
/09 Calendar ⊡ ≤ 2020 ⊡	2020/11/09 13:57: 2020/11/09 13:58: 2020/11/09 13:58: 2020/11/09 14:00: 2020/11/09 14:01: 2020/11/09 14:02: 2020/11/09 14:03: 2020/11/09 14:04:	00 00 00 00 00 00 00 00 00	



You can now playback data on the server.



Note: That data on failover server want not be copied to the original failover client, so you need to know at what time the issue happens to check the correct server to find the data.

If you need the failover client has the missing data, you need to use the archive manager function, but it will be very slow and it will backup one channel at a time and also bandwidth consuming.



Appendix

Minimum System Requirement

Minimum System Requirement		Recommended System Requirement	
Operating System	Windows 7	Windows 10	
Processor	Intel® Core™ 6th, Xeon E3	Intel® Core 8th, Xeon E5 or above	
Builtin Graphic Card	Intel® HD Graphics 530	Intel® HD Graphics 630	
Independent Graphic	Nvidia 1030	Nvidia 1050 or above	
Cards			
Memory	8 GB DRAM	16GB DRAM or above	
Harddisk Space	100GB	250GB	
Network Connection	Gigabit Hub	Gigabit Hub	
Resolution	1024 X 768 Minimum Resolution	1920 X 1080 Recommended Resolution	

NOTE: 1. GPU decoder does not support AMD display cards2. Windows 2012 R2 operating system is not recommended

Username and password

Default username and password for various devices are listed as in the table.

Device	Admin	Admin pass.	Operator	Oper pass.	Guest	Guest pass.
IP Cameras	admin	pass	None	None	guest	guest
DVR/NVR	admin	1111	None	None	guest	2222
Navigator	admin	EMPTY	operator	EMPTY	guest	EMPTY

Hardware Accessories Support List

Hardware Supported List		
Supported Devices	Supported Models	
PIH-931D Keyboard	Use USB to RS-232/RS-485 converter, PMH-RS485/USB to RS-232/485 converter, RS-232 convert to TCP/IP network support	
RS-232 POS System	PIH-931D Keyboard or RS-232 POS. CYT-100SC RS485/RS232 to TCP/IP converter	
Ethernet Cash Drawer	APG-480/APG-490	
MOXA Remote I/OControl Box	ioLogik E1210, E1211, E1212, E1214	
Video Decoder	LILIN VD022	
Display Graphics Accelerator Card	ZOTAC GeForce GTX 1050 Ti OC Edition x 2	