

Software User Manual

BEWARD IPS

www.beward.eu

- User friendly interface
- Quick search and setting of N series IP cameras



Table of Contents

CHAPTER 1. QUICK START	3
1.1. System Requirements	3
1.2. INSTALLATION	3
1.3. QUICK START	
CHAPTER 2. MAIN CONSOLE	11
2.1. Start Menu	
2.2. INFORMATION WINDOW	13
2.3. PTZ CONFIG	13
2.4. ON SCREEN MENU	14
CHAPTER 3. PLAYBACK	16
3.1. INFORMATION WINDOW	16
3.2. Audio Volume Control	17
3.3. SCREEN DIVISION	17
3.4. BROWSE MODE	17
3.5. Open Record	17
3.6. ENHANCEMENT / POST PROCESSING TOOL	18
3.7. SAVE VIDEO	18
3.8. SAVE IMAGE	18
3.9. PRINT	19
3.10. BACKUP	19
3.11. LOG VIEWER	20
CHAPTER 4. SCHEDULE	22
4.1. DAY MODE	
4.2. LOAD PRESET MODES	22
4.3. INSERT A NEW SCHEDULE MANUALLY	23
4.4. COPY SCHEDULE	23
4.5. WEEK MODE	
4.6. ADJUST THE SCHEDULED SETTING	
4.7. ENCODING OPTION	
CHAPTER 5. CONFIGURATION	
5.1. Setting – General	27
5.1. SETTING – GENERAL	27 28
5.1. SETTING – GENERAL	27 28 28
 5.1. SETTING – GENERAL	27 28 28 30
 5.1. SETTING – GENERAL	
5.1. SETTING – GENERAL	
5.1. SETTING – GENERAL 5.1.1. Startup 5.1.2. Storage 5.1.3. Status Display 5.1.4. Miscellaneous 5.1.5. Audio Preview 5.1.6. Auto Reboot	
5.1. SETTING – GENERAL 5.1.1. Startup 5.1.2. Storage 5.1.3. Status Display 5.1.4. Miscellaneous 5.1.5. Audio Preview 5.1.6. Auto Reboot 5.2. SETTING – CAMERA	
5.1. SETTING – GENERAL	
5.1. SETTING – GENERAL	
5.1. SETTING – GENERAL	
 5.1. SETTING – GENERAL	
 5.1. SETTING – GENERAL	27 28 28 30 30 30 30 31 32 32 33 33 34 34 35
 5.1. SETTING – GENERAL	27 28 28 30 30 30 31 32 32 33 32 33 34 34 35 36
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 31 32 32 32 33 33 34 34 34 35 36 37
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 33 34 34 34 35 36 37 38
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 33 34 34 34 35 36 37 38 39
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 34 34 34 35 36 37 38 39 39
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 34 34 34 35 35 36 37 38 39 39 39 40
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 33 32 33 34 34 34 34 35 36 37 38 39 39 39 40 40
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 34 34 34 34 35 36 37 38 39 39 40 40 41
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 34 34 34 34 35 36 37 38 39 39 39 40 40 41 41
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 32 33 34 34 34 34 35 35 36 37 38 39 39 40 40 40 41 41 41 43
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 32 33 34 34 34 34 35 36 37 38 39 39 39 40 40 40 41 41 41 43 55
 5.1. SETTING - GENERAL	27 28 28 30 30 30 30 30 30 30 30 30 30 30 30 30 30 31 32 32 32 32 32 32 33 34 35 36 37 38 39 39 40 41 42 43 45 45
5.1. SETTING - GENERAL	27 28 28 30 30 30 30 30 30 30 30 30 30 30 30 30 30 31 32 32 32 32 32 32 32 33 34 35 36 37 38 39 39 40 41 42 43 45 45 48
 5.1. SETTING - GENERAL	27 28 28 30 30 30 31 32 32 32 33 34 34 34 35 36 37 36 37 38 39 39 39 40 40 40 41 41 41 41 41 41 43 45 45 45 48 49

6.1.1. General Setting	50
6.1.2. Server Setting	50
6.1.3. Group Setting	51
6.1.4. Camera Setting	
6.1.5. Monitor Display Setting	
6.1.6. Notification Setting	53
6.2. SHOW CAMERA(S) ON THE DISPLAY SCREEN	54
6.2.1. Log In/ Log Out:	54
6.2.2. Server and Camera List:	54
6.2.3. PTZ Camera Control:	54
6.2.4. Zoom Tele	54
6.2.5. Play/ Stop/Drop	54
6.2.6. Information Display Window	54
CHAPTER 7. WEB VIEW	55
7.1. Server IP	55
7.2. REMOTE LIVE VIEWER	55
7.3. REMOTE PLAYBACK	55
APPENDIX	
A. SYSTEM LOADING	56
B. STORAGE REQUIREMENTS TABLE (VGA)	57
C. STORAGE REQUIREMENT TABLE (MEGA)	33

Chapter 1. Quick Start

1.1. System Requirements

Total FPS at VGA	150	360	570	1080	1380
CPU	Intel Core 2	Intel Pentium	Intel Core	Intel Core	Intel Core
010	Duo E5200	G620	i3-2100	i5-2500k	i7-3770k
RAM	2GB	2GB	2GB	4Gb	4Gb
Motherboard		Intel	Chipset recomm	ended	
Display	AMD HE	05450, nVIDIA G	T430, Intel HD	Graphics 2000, c	or above
Ethernet		100 BaseT or Ab	oove, Gigabit LA	N Recommende	d
Hard Disk		7200	RPM, 250GB or	above	
OS	MS Win	dows 2003 / XP	(32-bit) / 2008(6	4-bit) / Vista / W	indows 7

1.2. Installation

Step 1: Insert the Installation CD. (Pic 1.0)



Pic. 1.0

Step 2: Run [BEWARD IPS] to install.

Step 3: Check the option "I accept the terms of the license agreement" (Pic. 1. 1.).

amGraba Lite IP System - InstallShield Wiz	zard		X
License Agreement Please read the following license agreemen	it carefully.		2
End User License Agreement ("EULA") Do not install or use the software until you terms. Permission to use the software is of terms. Installation or use of the software to the license terms. Acceptance will bind yo contract with company. * SOFTWARE LICENSE AND LIMITED WAR This is an agreement between you, the en software, you agree to become bound by	conditional upon your a by you will be deemed ou to the license terms RRANTY nd user, and company.	greeing to the license to be acceptance of in a legally enforceabl By using this	
I accept the terms of the license agreem I do not accept the terms of the license stallShield		Prin	t

Pic. 1.1

Step 4: Please enter your name and the company name for which you work (Pic. 1.2.).

Cam	Graba Lite IP System - InstallShield Wizard
	ustomer Information Please enter your information.
	Please enter your name and the name of the company for which you work.
	User Name:
	Test
	Company Name:
	Beward
nsta	allShield
	< Back Next > Cancel

Pic. 1.2

Complete Setup Type:

Install all program features into the default directory.

Check the option "**Complete**" (*Pic.1.3*). All program features will be installed. This requires the most disk space.



Pic. 1.3

Press the "**Install**" to start the installation (*Pic.1.4*).



Pic. 1.4

Custom Setup Type:

Install the system to a preferred directory. Or select whichever feature(s) you wish to install.

Check the option "Custom" (Pic. 1.5).

Select which program features you want to install. This is recommended for advanced users.





Select folder where setup will install files (*Pic.1.6*).



Pic. 1.6

Select the features setup will install (*Pic.1.7*).

NOTE:

For example, select only Playback and LiveView for installation. Install and use only these features on multiple remote sites at home or anywhere with a PC.



Pic. 1.7

Press "Finish" to finish the installation (*Pic.1.8*).



Pic. 1.8

Execute the Main Console (*Pic.1.9*).

🕌 Zavio CamGraba IP System	Backup System
	DBTools
	Main Console
	Playback System
	Remote Live Viewer
	Uninstall Surveillance System
	Verification tool



Enter the password you like into the edit box. And then press "OK". Now enjoy our Intelligent Surveillance Solution (*Pic. 1.10*).

.ogin	
Video Surve	eillance Solutions
	राज्य
Please enter user na	ame and password
User Name:	admin
Password:	****
	✓ OK X Cancel

Pic. 1.10

1.3. Quick Start

Install IP camera(s)

Step 1: Setup the IP camera(s) following by the instruction manual provided by the manufacturer.

Step 2: Check the network between the IP camera(s) and the system.

Step 3: Add the IP camera(s) to the system following below steps.

Add IP camera(s)

Step 1: Go to Start > All Programs > CamGraba IP System > Main Console.

Step 2: Type in user name and password and log on to the system.

Step 3: In Main Console, go to General Setting > Setting > System Setting to obtain the Setting panel (*Pic. 1.11*).





Step 4: Go to Camera tab (*Pic.1.12*). If your IP cameras support UPnP. Follow step 5. Otherwise, follow step 8.

Step 5: Click "**Search**" to search for the IP cameras that are available at this point (*Pic. 1.12*).

NOTE:

Search function just support the IP cameras with UPnP supported.

Step 6: Select one of the IP cameras that are available; check the option and enter the username and password (*Pic.1.13*).

Step 7: Click OK to add the camera.





Camera Search Co	mpleted		Start Scan
(P	Vendor	Model	MAC
192.168.1.150 192.168.1.104	Beward Beward	N1251 N6602	00-4b-10-00-3e-e9 00-4b-10-00-5d-78
Camera Name:			
P Camera Option — Camera Name: User Name: Password:			

Pic. 1.13

Step 8: Click "Insert" to insert the IP cameras (*Pic.1.12*).

Step 9: Enter the IP address or domain name (check the "Use DNS" option), Http Port, Username, and Password (*Pic.1.14*).

Step 10: Click "Auto Detect"

Step 11: Click **OK** to add the camera. Click **OK** to exit the Setting panel.

IP Camera / Video Server Setting	9		X
Network			
Name:			
IP Address:			
Http Port:	80		
User Name:			
Password:			
Protocol:	C TCP	C UDP . O HT	TP
Device			
Vendor:	Beward	–	Auto Detect
Camera Model:	BP-100	-	
Video Channel:	☑ 1		
Description			
Description			
Video Codec:MJPEG Audio Codec:G.711			
Camera:1, DI:0, DO:0			
		🗸 ок	X Cancel

Pic. 1.14

Set Schedule

Step 1: Go to Start > All programs > CamGraba IP System > Main Console.

Step 2: Type in user name and password and log on to the system.

Step 3: In the Main Console, go to Schedule Configuration

Step 4: By default, when inserting a camera to the system, the recording schedule is automatically set to be 24 hours a day, always record (*Pic.1.15*).

•

Step 5: Click Configure on the selected camera schedule or double click on any schedule bar to modify the recording mode.

Schedule Configuration		× (
🔮 Load 🏠 Copy to 🐑 🖄 🖾 Default 🔤 01 CD121	■ Default 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	
	Insert ➤ Defete Configure Start Time End Time Record FPS Quality Resolution 00:00 23:59 Always	Y
Default Custom Day Mode Week Mode		
	V OK X Cancel	

Pic. 1.15

Step 6: When satisfied with the schedule setting, click OK to update the recording schedule.

Step 7: Click OK again to go back to the Main Console.

Start Recording

Step 1: Go to Start > All Programs > CamGraba IP System > Main Console

Step 2: Type in user name and password and log on to the system.

Step 3: In the Main Console, go to Start

Step 4: Click on "Start Recording Schedule" to enable the functions (Pic. 1. 16).



Pic. 1.16

Execute Playback System

Step 1: Go to Start > All programs > CamGraba IP System > Main Console.

Step 2: Type in user name and password and log on to the system.

Step 3: In the Main Console, go to Execute Playback System

Step 4: In Playback, click on Date Time Search Dialog.

Step 5: Select a specific day from the calendar, left click on mouse and drag to select a video clip to reply; user can also select multiple channels to replay at the same time (*Pic.1.17*).

B DateTime Search Dialog [Local Mach	ine]	
Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system	Date Time Period Start Time: 2013/05/17 100:00:00 End Time: 2013/05/17 00:00:00 Set	Video Preview ↓ ↓ ↓ ↓
05/17 0 1 2 CD121		
) ه <i>ر هر</i>		✓ OK X Cancel

Pic. 1.17

Step 6: The recorded files are ready to view now.

Chapter 2. Main Console

This is the main operation system - to activate, schedule recording, and configure system setting (*Pic.2.1*).



Pic. 2.1

EXIT: Shut down the Surveillance System or log out current user (Pic.2.2).

Video Surveillance Solution
Please select the operation you want to do
Exit Main Console
Exit Main Console
Logout admin
V OK X Cancel

Pic. 2.2

MINIMIZE: Minimize the Main Console window.

SCREEN DIVISION: Allocate the sub-screen display by clicking on the desired layout icon. To switch to single camera display, double click on a particular sub-screen. Double click on the screen again to regain previous screen division layout (*Pic.2.3*).



START: Click on the Start Menu icon and select from the drop down menu to activate/ deactivate: Recording Schedule System. Select Start/Stop Monitor All to activate/ deactivate all the functions at once (*Pic.2.4*).

NOTE:

When activating any of the monitor functions, system considers the current screen status as normal. Therefore, if you want to, for example, detect Missing Object, be sure the object needed to be protected is in its position at the moment you click Start button.

Playback: Click on the icon to get Playback Console. You can watch recorded video, search recorded video, adjust image of the stored data, save video/ pictures, print images, check log information and event records, and set up recording function configuration.

Schedule: Organize recording time schedule and setup recorder configuration.

General Setting: Select from the drop down menu to modify general setting, save/ load configuration settings, start counting application, access log viewer and backup files, or network services.

2.2. Information Window

Display date, time, free HD space, CPU temperature, fan speed, and customized text. To customize Information about window's setting, go to General Setting > Setting

2.3. PTZ Config

Control the movement of PTZ cameras. With cameras that support PTZ control, you can move, zoom, patrol, adjust the focus, and set preset points of the cameras.

• **Preset/ Go**: Adjust the camera view until you are satisfied. Click on the "Add Present Point" icon and set up the view as the preset point 01. Adjust the camera view again and set up the preset point 02. Repeat the process until finish setting up all preset points. You can enter any names you like to instead of the preset point 01, preset point 02, preset point 03.

Click on the "Go to Present Point" icon and view the result of your setting.

- **Zoom**: Click on the + and signs to zoom in and zoom out the view.
- Focus: You can select to have the camera focused near or far. To focus near means objects that are closer will be clearer than the objects that are further away. On contrast, to focus far means objects that are further will be clearer than the objects that are closer. Click on the Focus icon and select auto focus if you want the system to decide the focus point for you.
- **Patrol**: Go to Set Preset Point- Set Patrol to obtain the Patrol Setup dialog. From the left window, select the cameras that you would like to have in the patrol group. Align the cameras in order in the right window and adjust the time. Rename the group name if required. After completing the setup, check the Active option, and then click OK (*Pic.2.5*).

Patrol Setup	
->	Group 1 Group 2 Group 3 Group 4 Group Name : Group 1 Period: -j 5 Sec Active V
• ок	Cancel

Pic. 2.5

You can define up to four groups of auto patrol. To start or stop, click on Go to Preset Point in the Main Console, and select Start Patrol or Stop Patrol.

2.4. On Screen Menu

Right click on the camera screen and get the On Screen Menu, from which you can enable move, enable digital PTZ, and connect/ disconnect the camera (*Pic.2.6*).





Camera Setting: Click to go to the camera setting page for configuration.

Enable Move/Area Zoom: With cameras that support PT function, click the Enable Move function to adjust the current camera's view by clicking on the display screen. To cancel this function, right click on the screen and select Disable Move.

With cameras that support Area Zoom function, click the Enable Move/Area Zoom function to adjust the current camera's view by dragging a rectangle on the display screen. To cancel this function, right click on the screen and select Disable Move/Area Zoom.

Enable Talk: With cameras that support two-way audio, you may select enable talk to utilize the function.

Connect/ Disconnect: Right click on the display screen and select Connect/Disconnect to modify the connecting status of the camera.

Show Camera: Select the camera from the Show Camera Menu to display video on selected screen.

Snapshot: Select the snapshot function to capture a specific video image immediately. You have the options to copy the image to the clipboard or to save it.

Manual Record: Start recording video by selecting manual record.

Toggle Full Screen: Select to view a specific channel with full screen. Press "ESC" to go back to original window.

Chapter 3. Playback



Pic. 3.1

Watch the recorded video, view and/or search for unusual events and recorded system information (*Pic.3.1*).

MINIMIZE: Minimize the Playback console.

EXIT: Shut down the Playback console.

SCROLL BAR: Indicate the status of the playing video; drag it to where you want to review. **CONTROL**: Play, pause and stop the video.

Screen Division: Allocate the sub-screen display by clicking on the desired layout icon. To switch to single camera display, double click on a particular sub-screen. Double click on the screen again to go to previous screen division layout. To view in the full screen mode, right click on the screen for the Toggle Full Screen function.

ZOOM: Zoom in and zoom out. Get a close up view of the re¬corded video; move to the spot you want to view by dragging the screen.

SPEED: Control the speed of the playing video. Click + to speed up and – to speed down.

CUE: When playing video, click on the Cue In/ Cue Out icon at where you want to set as the starting/ ending point of a saved video clip. The Cue In and Cue Out time will be displayed on the Playback Information Window once they are set.

3.1. Information Window

Display video date and time, current video status, cue in/ out points' time, and speed.

3.2. Audio Volume Control

Adjust the sound level

3.3. Screen Division

Allocate the sub-screen display by clicking on the desired layout icon. To switch to single camera display, double click on a particular sub-screen. Double click on the screen again to regain previous screen division layout.

3.4. Browse Mode

Play the recorded video.

3.5. Open Record

Click on Date Time button to access the Date-Time Panel and withdraw the video record that you want to review (*Pic.3.2*).

Withdraw the records:



Pic. 3.2

Step 1: From the window at the top left of the Date-Time Panel, select the date you want to check, and you will see red/green lines show on the time table implying available recorded video.

Step 2: You can select the day. If the day has record files, that would show red icon.

Step 3: In Select Camera(s) section, select the camera(s)/channel(s) from which you want to see the video. You can select all cameras by clicking Select All button.

Step 4: Check Enable Preview to get the preview of the video you select.

Step 5: Click OK when you are done with the settings.

3.6. Enhancement / Post Processing Tool

General Setting: Check the option and chose whether you want to apply the setting to all the channels or only to those currently shown on the screen.

Visibility: Check the option and adjust the gamma value of the image to enhance the image and make it cleaner.

Sharpen: Check the option to activate the function. Move the slider control to the right to sharpen the image, to the left to soften it.

Brightness: Check the option to activate the function. Move the slider control to the right to make the image brighter.

Contrast: Check the option to activate the function. Move the slider control to the right to increase contrast.

Grey Scale: Check the option to show the record in grey scale mode so the image displays in black and white.

3.7. Save Video

Step 1: Click on the display screen to choose the camera display that you want to save as a video clip.

Step 2: Set up the cue in and cue out points; the cue in and cue out time will show on the information window.

Step 3: Click Save Video icon, choose the folder where you want to save the file at, enter the file name and click SAVE. You may export (i.e. save) the record with both audio and video or video only.

Step 4: Choose the compression format and then save the video.

3.8. Save Image

Step 1: Click on the display screen to choose the camera display from which you want to save pic-tures.

Step 2: Click Save Image button when the image you want is shown on the screen. You may click Pause to freeze the video, use Step Forward/ Step Backward function to find the picture(s) that you want to save.

Step 3: Choose the folder and the format of image (BMP or JPEG) you prefer and then click save.

NOTE:

You may skip step 3 by pre-setting a folder and format that you want to save the images.

3.9. Print

Print the current image of the video you choose (Pic.3.3)..

Print Content: Print the image from the current selected channel or all the channels shown on the screen. Select to print original view or selected region on camera.

Page Setting: Set to print the image with original size or fit to page. Set Align image to Top, Center, or Bottom.

Print Setup		x
Print Content		
Select channels :		
 Print active channel image 		
O Print all channels in the current v	view	
Select printed region of images		
C Original		
Selected region		
Page Setting		
 Original size 		
C Fit to page		
Align Image:	Тор	•
	Print	
	Print	X Cancel

Pic. 3.3

3.10. Backup

Different from Save Video, the Backup function saves everything from the Playback panel, including log information (*Pic.3.4*).

You can start a full function Playback Console and load the backup files into it on any PC with Windows operating system. This means you may monitor the real time video and work on the backup files on separate computers simultaneously.

Step 1: Press the "Open Record" to select data and press "Backup".

Step 2: You can adjust the Start Time and End Time you want to backup.

Step 3: You can adjust the Cameras you want to backup.

Step 4: You can calculate the size of the backup data.

Step 5: Select the directory you want to save the backup data.

Step 6: Check the log you want to backup.

Step 7: Press the "Backup" to start backing up.

Backup Dialog	×
Date Time Period	
Start Time: 2009/ 4/21 🔹 17:29:00 👗	
End Time: 2009/ 4/21 👘 17:29:02 👘	
Select Camera(s)	
1-16 17-32 33-48 49-64	
<u>X 1 X 2 X 3 X 4 X 5 X 6 X 7 X 8</u>	
× 9 √10 × 11 × 12 × 13 × 14 × 15 × 16	
Calculate Size Select All Deselect All	
Media	
Backup using CDROM	
C Backup using DVD	
O Backup on HardDisk	
- URL	Y
Option	
☑ Backup Event Log	
🔽 Backup System Log	
🗖 Backup Counter Log	
E Backup POS Transaction	
✓ Backup X Cance	

Pic. 3.4

3.11. Log Viewer

System Log: Select Log Type form the drop-down menu. There are total 21 types of log types, including (*Pic.3.5*):

1	C Log Viewer				
	System Log Export a	All			
	Date:	2011/11/29 - 🔅			Export to
1	Date Time:	2011/11/29 16:22:28 -	* to	2011/11/29 16:22:28 * *	Search
	Event Time	Event Type	Camera	Description	
	2011/03/29 16:02:23 2011/03/29 16:02:28 2011/03/29 16:02:28 2011/03/29 16:02:28 2011/03/29 16:02:28	Main Console Startup		admin	

Pic. 3.5

Main Console Startup Main Console Shutdown User Login Start Live Streaming Server Stop Live Streaming Server Modify Live Streaming Server

User Login Failed	Start Remote Playback Server
Start Schedule	Stop Remote Playback Server
Stop Schedule	Modify Remote Playback Server
Execute Recycle	IP Camera Connection Lost
Enable Channel	Restart Windows
Disable Channel	IP Camera Connection Regained
Modify Schedule	IP Camera Parameter Changed
Modify Configuration	

Step1: Choose the type of event you wish the check or select "All" from the drop-down menu and view all types of events.

Step 2: You can either view the events that happened on a particular date or during a given time period. To search and view unusual event on a particular date, check the option right next to "Date" and select a specific date.

You may also point out two different time points and search for unusual event happened during the period. Check the options in the Date &Time columns and enter the date and time.

Step 3: Click Search.

Step 4: Save the System log.

Export and Backup Log: View the Export and Backup Log history that had been operated by local or remote user.

Step1: Choose the type of event you want to check or select All from the drop-down menu for all types of events (*Pic.3.6*).

System Log Export and	1										
Log Type: A	2011/11/29 •										Export to
			to 🔽	2011/11/30 11:48:08 * 🗄						-	Search
Event Time	Event Type	Success	Username	Start Time	End Time	Length	Camera Index	File Path	DB	Audio	
2010/01/25 18:35:05 2010/01/25 18:35:46 2010/01/25 18:36:24	Export Video Backup Backup	Yes Yes Yes	admin admin admin	2009/07/06 17:43:17 2009/07/06 17:43:17 2009/07/06 17:43:17	2009/07/06 17:43:28 2009/07/06 17:43:28 2009/07/06 17:43:28	Odays 00:00:11.000 Odays 00:00:11.000 Odays 00:00:11.000	3 2,5 2,3,4,5		N/A 2 2	No N/A N/A	
					100						

Pic. 3.6

Step 2: View the events that happened on a particular date or during a given time period by selecting search period.

For a particular data: check the Date box right and indicate the date.

For a period: check the Date Time and then enter the date and time.

Step 3: Click Search.



Chapter 4. Schedule



Click on the Schedule icon on the Main Console and set up the time duration for video recording on the schedule configuration panel (*Pic.4.1*).

4.1. Day Mode

Schedule the cameras to turn the recorder on and off at the same time every day according to your setting.

To setup the time schedule for each camera, you may

1. Load the preset modes or

2. Insert a new schedule manually

4.2. Load Preset Modes

Click on the Load icon for the drop-down menu.

Regular Mode: Video recording 24 hours a day with the setting of 30 FPS (frames per second), Normal video quality and Normal resolution.

Office Mode: Video recording from 8 am to 8 pm (08:00 – 20:00, shown on the red bar in the Schedule Configuration panel) with 30 FPS, Normal video quality, and Normal resolution.

Shop Mode: Video recording from 10 am to 10 pm (10:00–22:00) with 30 FPS, Normal video quality and Normal resolution.

High Security Mode: Video recording 24 hours a day with the setting of 30 FPS, the highest video quality, and High resolution.

Disk Saving Mode: The system will start recording only when a motion is detected on the screen, 24 hours a day (shown on the green bar in the Schedule Configuration panel), with the

setting of 30 FPS, Normal quality, and Normal resolution. You can adjust the sensitivity, interval, and area of motion detection in the Schedule Configuration.

Minor Mode: The system will start recording only when a motion is detected on the screen, 24 hours a day (shown on the green bar in the Schedule Configuration panel), with the setting of 15 FPS, Low quality, and Low resolution. You can adjust the sensitivity, interval and area of motion detection in the Schedule Configuration.

4.3. Insert a New Schedule Manually

Step 1: Left-click and draw the bar you want to the time table. The scheduled time will show as a grey bar (*Pic.4.2*).

	Step 1	
Schedule Configuration	X	
🛃 Losi 🔮 Copy to 📩 📩	Default 0 1 2 3 4 5 6 7 8 9 10 Camera 1	11 12 13 14 15 16 17 18 19 20 21 22 23 24
🧧 01 Camera 1		
	😁 Insert 🐮 Delete 📹 Configure	2010/09/03 PH06: 3482
	Start Time End Time Record FPS Quality Resolu 00:00 23:59 Aways	ution The second s
<]		a Burn
Default Custom		
Day Mode Week Mode		
		OK X Cance
	Stop 2	Step 4
Ste	p 2 Step 3	1-



Step 2: Click the Insert icon and add a new schedule in the Regular Mode, i.e. to record video during the time period you set with 30 FPS, Normal video quality, and Normal resolution.

Step 3: Change the setting if wished by clicking on the Configure icon (See page 28) or double click the schedule information.

Step 4: Click OK.

4.4. Copy Schedule

You may set up the schedule for each channel/camera by repeating the process above, or simply apply the setting of a single camera to all the others (*Pic.4.3*).

Copy to



Pic. 4.3

4.5. Week Mode

Schedule the cameras for each day of the week differently. In addition, you may assign extra holidays under the Week Mode (*Pic.4.4*).





Default: Follow the same process to setup the schedule for every day in a week.

Holiday: You may assign holidays where the system will work according to the setting of Sunday.

Custom: You can assign a particular date(s) on which the system will work according to a special schedule(s) different from the others.

4.6. Adjust the Scheduled Setting

You can manually change the setting at any time after you insert or load a period of schedule (*Pic.4.5*).

Option 1: Move the cursor to the **Time Bar** and change the length or move the bar sideway to change the start and end points.

Schedule Configuration	Time Bar																	
 ■ E Default ■ Monday ■ Od Camera1 ■ Od Camera3 ■ Od Camera4 ■ Thursday ■ Monday ■ Sturday ■ Monday ■ Sturday ■ Monday ■ Sturday ■ Monday ■ Sturday ■ Sturday		🚈 Schedule Configuration																X
 Berland Berland		🛃 Load 🔮 Copy 🐱 📩 🕅	🛅 Camera4	0 1 2	3 4	56	7 8	9	10 11	12 1	13 14	15	16 17	18	19 20	21 22	23	24
Dey Mode Week Mode		Carbonaut Carbonaut Carbonaut Carbonau Ca	Sunday Monday Tuesday Wednesday Thrusday Thrusday Saturday Saturday Start Time End	lete Con Time Rec	ord FP	5 6	7 8 Quality							18		21 22	23	24

Pic. 4.5

Option 2: Click on the Configure icon or double click on schedule information on the screen (highlighted in blue) to obtain the Encoding Option panel and change the setting as wished.

Configure: Click on the configure icon to obtain the Encoding Option panel.

ncoding Options		
Original Video	V Encode	d Video
	3 54	21.409/2012 19 19 54 UNICOU
Time Start Time: 00:00		Video Encoder
End Time: 23:55	Record on Motion:	Adjust MJPEG video frame rate
Pre-record: 5 sec. (Max: Post-record: 3 sec. (Max:	60) Sensitivity	Normal C Keep key frame only (for MPEG4, H.264, MxPEG)
Audio		
	All	Default
Record Audio		

4.7. Encoding Option

Pic. 4.6

Always Record: Select this option to record the video at all time.

Record on Motion: Select this option to start recording when there are motions detected. To detect Motion, you have to define a detection zone. Left-click and drag the mouse to draw a detection zone. You may define more than one zone on the screen by repeating the same process. User can also click on "All" button to select the entire detection zone. You may adjust the sensitivity and the frame interval.

Pre-record/ Post-record Time: The pre-record/ post-record function saves the recording data accordingly. For instance, to set up a 5 second pre-record time means the system will start saving the recording data 5 seconds before the event happens.

Encoded Options: This option sets up the quality of the recorded video. The "Original Video" window is the original stream from the camera. The "Encoded Video" is preview of the recorded video corresponding with the encode settings below.



Chapter 5. Configuration

Setting Save/Load Configuration → Survey Setting Save/Load Configuration → Survey Setting Survey Load Configuration → Survey Setting	2011/11/30 16:25:09 admin Free:2.0 GB ♥ ♥ ♥ ♥ ♥ ♥ ♥ ♥
Log Viewer Backup Network Service	
About Main Console	

Pic. 5.1

Modify the setting, log viewer, backup, and network services. Click on the Config icon, select from the drop-down menu and open the Configuration panel (*Pic.5.1*).

5.1. Setting - General

Startup	Storage	Status Display
Main Console	Location	Current Date
Schedule Recording System Live Streaming Server Remote Playback Server Full Screen Auto Lock System Auto Locin Setup	C:\Program Files\Zavio CamGraba IP System Automatic Recycle: © Recycle when disk space is less than 10 % 7 Only keep video for 7	 ☞ Current Time ☞ Login User ☞ Free Disk Space □ IP Camera Bitrate □ User Defined Text 1 □ User Defined Text 2
Miscellaneous	Log Recycling Audio Preview Default Channel [Not Used]] Enable Audio on Active Channel Volume	Auto Reboot Enable Auto Reboot Every Day at 01:00 AM

Pic. 5.2

5.1.1. Startup

Check the box and activate the functions as the system starts. You may start/stop the function in Monitor panel on the Main Console (*Pic.5.2*).

Setup Auto login: Enable "Auto login" and click the Setup button to obtain the Auto Login Setup panel, insert the User Account and Password to login automatically when the system starts. Enable the Minimize after login to minimize the Main Console window after login (*Pic.5.3*).

∆uto Login Setup	$\overline{\mathbf{X}}$
User Account:	admin
Password:	
Password Confirm:	
🔽 Minimize after login	
	V OK X Cancel

Pic. 5.3

5.1.2. Storage

Location: Assign the default folder (you can setup several directories for storage) for the system to store all data files. Recommend not to save in system HD (C :\) to avoid PC efficiency drop when free storage is low (*Pic.5.4*).

If you have more than one drive available for recording, you may check "Enable Disk Load Balance" to evenly distribute recording to multiple drives.

This will increase efficiency of the system.

Startup	Storage	Status Display
Main Console	Location 🔛 🔀 🛊 🔹	Current Date
Schedule Recording System Uve Streaming Server Remote Playback Server Full Screen Auto Lock System Auto Login Setup	C:\Program Files\Zavio CamGraba IP System Automatic Recycle:	
Miscellaneous	Audio Preview	Auto Reboot
Minimize to system tray Synchronize video frames	Default Channel (Not Used)	Enable Auto Reboot Every Day

Pic. 5.4

Automatic Recycle: The system will automatically delete out-dated data to save storage space.

Recycle when disk space is: Set the standard limit to let the system recycle automatically.

Less than _ %: The system will start to recycle if the disk space is less than the indicated percentage (default is 10%).

NOTE:

1. The system will detect the storage space of default location firstly, if the default storage space is exhausted, the video will be stored to the next directory.

2. If all the status of locations exceeds the storage rule, the system will start recycling in an hour progress.

Only keep video for: Delete the video records that are older than the number of days set.

NOTE:

If the default storage spaces exhausted (disc space is less than 3%), the system will start to recycle by hourly period.

Log Recycling: Click the button to obtain the Advanced Recycle Setting panel. Set the days that you want to keep the event or Keep all event logs within interval of video files (*Pic.5.5*).

Event Log: Delete the event log data that is older than the number of days set.

System Log: Delete the system log data that is older than the number of days set.

Counting: Delete the counting application data that is older than the number of days set.

Metadata Transaction: Delete the metadata transaction data that is older than the number of days set.

Resource Report: Delete the Resource report data that is older than the number of days set.

Event Log	
 Keep event log within interval of vio 	ien files
 Keep event log for 	7 days
System Log	
C Keep system log within interval of	video files
Keep system log for	14 days
Counting	
C Keep counting log within interval o	f video files
Keep counting log for	90 days
Metadata Transaction	
C Keep Metadata transaction within	nterval of video files
Keep Metadata transactioin for	90 days
Resource Report	
C Keep resource report within interv	al of video files
Keep resource report for	90 days
Export and Backup Log	
C Keep export and backup log within	interval of video files
Keep export and backup log for	14 days
C Keep export and backup log foreve	r

Pic. 5.5

5.1.3. Status Display

Check the boxes of the information that you wish to see in the information display window in the Main Console (*Pic.5.6*).



Pic. 5.6

5.1.4. Miscellaneous

Minimize to system tray: Enable the Option to minimize the Main console to be an icon in notification area of windows task bar when pressing the minimize button (*Pic.5.7*).



NOTE:

Insert the username and password of MainConsole again when clicking the minimized MainConsole icon in notification area of windows task bar to start monitoring.

Synchronize video frames: Select to avoid image tearing problems that may occur while CPU loading is increased.

5.1.5. Audio Preview

Default Channel: Select the audio channel that you wish to hear from in "Default Channel".

Enable Audio on Active Channel: Select the "Enable Audio on Active Channel" option to hear the audio from the selected video channel (selected by mouse) on each video grid of Main Console. The default channel will play if no specific video channel is selected.

Volume: Adjust the volume with the "volume bar."



System plays the audio of "default channel"



System plays the audio of the upper-left "selected channel"

5.1.6. Auto Reboot

Check the option of "Enable Auto Reboot" so that you can reboot the system on the time you select (*Pic.5.8*).

Step 1: Check the option of "Enable Auto Reboot."

Step 2: Select the time you want to reboot.

NOTE:

Enable "Main Console", "Auto Login", "Setup login account" and check other status in Startup section so when PC reboots the system will run normally.



Pic. 5.8

5.2. Setting – Camera

	s Comparison of the second sec	
CAM10 CAM10 CAM11 CAM12 CAM12 CAM13 CAM14 CAM2	CAM2 Go to Web Interface	Miscellaneous F Enable Date Time AM11:15:00 Camera Number
	Camera Settings Video Parameter Stream Profile	

Pic. 5.9

5.2.1. Add Camera

Four function buttons will be included in the Setting/Camera panel if you have our Hybrid Surveillance System license for IP camera.

Search: Click on the Search icon to obtain the Search IP Camera panel. The system will start scanning automatically once the panel is opened; feel free to stop scanning by clicking on the Stop Scan button (*Pic.5.10*).

Camera Search Co	mpleted		Start Scan
IP	Vendor	Model	MAC
192.168.1.150	Beward	N1251	00-4b-10-00-3e-e9
192.168.1.104	Beward	N6602	00-4b-10-00-5d-78
192.168.1.106	Beward	N100	00-1b-fe-04-33-60
P Camera Option — Camera Name:	Bewa	rd N100 (192.16	8.1.106)
P Camera Option — Camera Name: User Name:	Bewa		8.1.106)

Pic. 5.10

Fill in the user name and password for each IP camera found and click OK to add it to the camera list.

Insert: Click on the Insert icon to obtain the IP/Video Server Setting panel and add IP cameras to the list.

Delete: Click on the delete button to remove the selected IP camera(s) from the system. Click OK to finalize the modification.

Config: Click on the Config button to obtain the IP/Video Server Setting panel. You can modify the IP camera settings with the Setting panel.

👍 Setting		
General Camera VO Device PTZ Config M	onitor Display	
Search 🚵 Insett 🐚 Deiete 📄 Config	Setting CD121 Go to Web Interface Camera Settings Video Parameter	Miscellaneous F Enable Date 2013/05/17 Time AM10.51:00 Camera Number Camera Name Bitrate Font Apply All
		OK Cancel

Pic. 5.11

5.2.2. Setting

Camera List: The camera(s) connected to the system will show on the panel, click the name of the camera to adjust the set¬ting.

Camera Name: Name the camera for your convenience.

Go to Web Interface: Go to vendor's website interface to configure the camera setting (optional).

Camera Settings: Set the camera parameter offered by camera vendor (*Pic.5.12*).

Camera Settings	×
Image Quality	
RTSP: • On C Off	
Video Format: C Motion JPEG	○ MPEG4 ④ H264
Frame Rate: 30 fps	•
Resolution: 1920x1080	•
Rotate Image: None	•
Quality:	
C Auto	
Fixed Quality Good	•
C Fixed BitRate 8M	T
Audio	
Audio Codec: g.711_u-law	•
Bitrate: 4.75k	-
🗸 ок 🗶	Cancel

Pic. 5.12

Video Parameter: Adjusts the video's brightness, contrast, saturation, and color hue values.

Stream Profile: Stream profiles are pre-defined to preferred settings which will respond from the query of the remote live view function. Each profile has different Format, Frame, Resolution, Quality and Bit rate (Kbps) settings.

5.2.3. Miscellaneous

Select the information that you wish to see in the on-screen display, or the sub-screen of the camera.

Network				
Name:				
IP Address:				DNS
Http Port	80			
User Name:				
Password:				
Protocol:	C TCP	C UDP	⊙ нт	ТР
Vendor: Camera Model: Video Channel:	 ▼ 1		•	Auto Detect
Description Video Codec:MJPEG I Audio Codec:G.711 AI Camera:1, DI:1, DO:1				

5.2.4. IP Camera / Video Server Setting Panel

Pic. 5.13

Network: Fill up the Network field (including Name, IP Address, Http Port, User Name, Password and Protocol) referring to the instruction provided by the camera manufacture. Check "Use DNS" to use domain name instead of IP address.

Device: Choose the IP camera manufacturer from the drop-down menu. Click on "Auto Detect" and the model name will show in the box.

Description: Show information of the IP camera.

I/O Device Setti	ng				Digital inpu	Voutput pins of sele	ected I/O module	,	
Module:	Came ra1				Name:		Input 0		
Device:	SCB-C24	v	Ad	b	Type:		N/O		
COM Port	None	~	Mo	dify					
ID:	Addr:00	-							
		_			Pin	Name		Signal Type	1
					☑ D10	Input 0		N/O	
Module			Device	ID	☑ D11	Input 1		N/O	
Camera1	(10.0.0.79)		IP Camera		DO0	Output 0		N/O	
Camera2	(10.0.0.45)		IP Camera			Output 1		N/O	
Caneraz	(10:0:0:45)		P Camera		₽ D01	Output 1		N/O	
California Digital Input Mo	mitor					ut Simulation			

5.3. Setting - I/O Device

Pic. 5.14

Module Setting: Name the module device and ID that has been connecting the digital input/output device(s) to your system.

Device: This column displays the device(s) already installed to the system.

ID: Select the number of the I/O port to which you plug the ribbon cable.

Input Monitor: The device(s) is turned on if the dot is in red. By triggering the digital input device, the related icon will light up. This is used to check if the device is correctly connected or not.

Output Monitor: The device(s) is turned on if the dot is in red. By clicking on the icon, you may trigger the digital device connecting to the system. This can be used to test if the output device is correctly connected.

Device Setting

Name: Insert the name of the device (input and output).

Type: Select the device type from the drop-down menu.

N/O: Normal Open.

N/C: Normal Close.
5.4. Setting - PTZ Config

☑ ∰ CAM01 Cameral (10.0.0.79) ☑ ∰ CAM02 Camera2 (10.0.0.45)	Basic Setting Carriera Model: Com Port: Baud Rate.	IP Camera	•	
	Address:			
	Advanced Setting			
	Pan Speed:		. 50	
	Tilt Speed:		. 50	
	Zoom Speed		. 50	
	Auto Pan Speed:		, 50	
	Miscellaneous			
	Default PTZ Preset		Setup	
	Patrol Group		Setup	
	User-Define Preset			

Pic. 5.15

Install PTZ cameras following the instruction of the camera manufacturers. A PTZ camera is usually connected to the PC with RS-485/RS-422.

Check the box on the camera list to activate the PTZ control function of a PTZ camera.

Basic Setting: Select the camera model, com port, baud rate, and address according to your PTZ camera.

Advanced Setting: You may setup the pan speed, tilt speed, zoom speed and auto pan speed. Adjust the settings by dragging the bars.

Miscellaneous:

Patrol Group: You can setup the Patrol Group, please see page 12 for detail.

Default PTZ Preset: By enabling this function, the PTZ camera will automatically go back to a default preset point when no PTZ commands are under action. To enable this option, check "Back to PTZ preset after idle" and define idle periods and a default preset point (*Pic.5.16*).

Default PTZ Preset Tool				X
PTZ preset default setting				
Back to PTZ preset after idle				
Time interval of idle timeout:	30	Sec.		
Back to preset point after idle:	PTZ home	•		
	✓	ок	🗶 Cancel	

Pic. 5.16

User-Defined Preset: User-Defined Preset for the analog speed dome can trigger the extra-function of the speed dome itself, for example auto-tracking, login menu of camera, etc. You can refer to the detailed description of each analog speed dome on its user manual (*Pic.5.17*).

-Cor Pri Pri	efined Preset Dia nfiguration aset Name: aset Number: aset Type:	[[[Set Pres	
ID 1 2 3 4	Add Name point 17 function 1 function 2 function 3	Delete	Preset 80 99 95 65	Update Type Set Set Go Go
		~	ОК	X Cancel

Pic. 5.17

Step1: Type the Preset Name.

Step 2: Type the Preset Number.

Step 3: Select the Preset Type.

Step 4: Press the buttons to Add, Delete, or Update preset setup.

5.5. Setting – Monitor Display

Primary	
E01 Camera1 (10.0.079)_3 E02 Camera2 (10.0.0.45)_1	Auto Scan Primary Channel Secondary Channel (Not Used) Auto-scan Indenval 2 sec. Layout NeW Type: 5x5

Pic. 5.18

Playback Option: Execute Playback on the secondary monitor by checking the box. Make sure to adjust the display setting of your computer in advance to avoid system error. **Cameras List**: The left side displays a list of all cameras; modify the cameras shown on primary/ secondary monitor in the right window.

Auto Scan: Activate auto scan to rotate the channels/ cameras on the display screen.

For instance, you may select to show only 4 sub-screens on the main console while having 16 channels connected to the system. With auto scan function, you will be able to see all 16 channels by turns. You can set up a primary channel that will always be on the screen and a secondary channel that has secondary priority.

Layout: Choose the number of divisions for NxN division on the Main Console screen.

5.6. Save/ Load Configuration

The Save/ Load Configuration function allows system users to save any specific setting as a CFG (config) file. You may save up several different CFG files at any time (*Pic.5.19*).

Save Configuration: To save a specific setting, go to Config > Save/ Load Configuration > Save. In the popup window, type in the file name and then save it as a CFG file.

Load Configuration: To load a specific setting, go to Config > Save/ Load Configuration > Load. In the popup window, go to the directory that you saved the CFG files at, select any one of them and then click OK to load the file. Main Console will be automatically shut down after loading a new configuration. Please re-start Main Console manually.



NOTE:

Main Console will be automatically shutdown after loading a new configuration. Please re-start Main Console manually.

5.7. Log Viewer

5.7.1. Log Viewer – System Log

	ort and Backup Log				
Log Type:	JAII	_			
Date:	2011/11/17	•			Export to
Date Time:	2011/11/17 1	6:19:46 * *	0 2011/11/	7 16:19:46 👻 🔺	Search
Event Time	Event Type		Camera	Description	
2011/11/17 16:0					
2011/11/17 16:0			1	CAM1	
2011/11/17 16:0					
2011/11/17 16:0		Connection Lost	1	10.0.0.70	
2011/11/17 16:0		Connection Regain	ed 1	10.0.70	
2011/11/17 16:0		Connection Lost	1	10.0.0.70	
2011/11/17 16:0		Connection Regain	ed 1	10.0.70	
2011/11/17 16:1					
2011/11/17 16:1					
2011/11/17 16:1					
2011/11/17 16:1	0:55 Stop Sched	ule			

Pic. 5.20

System Log: View the history and export reports of unusual events detected by the Smart Guard System. (*Pic.5.20*)

Step 1: Choose the type of event you want to check or select All from the drop-down menu for all types of events. Select Log Type form the drop-down menu. There are in total 21 types of log types, including:

Main Console Startup	Start Live Streaming Server
Main Console Shutdown	Stop Live Streaming Server
User Login	Modify Live Streaming Server
User Login Failed	Start Remote Playback Server
Start Schedule	Stop Remote Playback Server
Stop Schedule	Modify Remote Playback Server
Execute Recycle	IP Camera Connection Lost
Enable Channel	Restart Windows
Disable Channel	IP Camera Connection Regained
Modify Schedule	IP Camera Parameter Changed
Modify Configuration	

Step 2: View the events that happened on a particular date or during a given time period by selecting search period.

For a particular date: check the **Date** box right and indicate the date.

For a period: check the **DateTime** and then enter the date and time.

Step 3: Click Search

You may also point out two different time points and search for unusual events happened during the period. Mark the box in the Date&Time column and then enter the date and time.

Step 4: Save the System Log

5.7.2. Export and Backup Log

Step 3: Click Search (Pic.5.21).

View the Export and Backup Log history that had been operated by local or remote user.

Step 1: Choose the type of event you want to check or select All from the drop-down menu for all types of events.

Step 2: View the events that happened on a particular date or during a given time period by selecting search period.

For a particular data: check the **Date** box right and indicate the date.

For a period: check the **DateTime** and then enter the date and time.

🔑 Log Viewer									1		- 🗆 🛛
System Log Export an	nd Backup Log										
Log Type:	All	•									
Date:	✓ 2010/01/25 ▼	*									Export to
Date <u>T</u> ime:	2010/01/25 18	8:47 × 📩	to 20	10/01/2518:47 💌 🛎							Search
Event Time	Event Type	Success	Username	Start Time	End Time	Length	Camera Index	File Path	DB	Audio	
2010/01/25 18:35:05 2010/01/25 18:35:46 2010/01/25 18:36:24	Export Video Backup Backup	Yes Yes Yes	admin admin admin	2009/37/06 17:43:17 2009/37/06 17:43:17 2009/37/06 17:43:17	2009/07/06 17:43 2009/07/06 17:43 2009/07/06 17:43	228 Odays 00:00:11.000	3 2,5 2,3,4,5	C:\Documents and Set C:\Documents and Set C:\Documents and Set	2	No N/A N/A	

Pic. 5.21

5.8. Export

After each log search, export needed info to .xls or .txt files (Pic.5.22).

🔎 Log Viewer 🧹				_ 🗆 🛛
System Log Export a	nd Backup Log			
Log Type:	All			
Date:	2011/03/29 •			Export to
Date Time:	2011/03/29 17:13:11 🗨 🚆	to 2011/0	3/29 17:13:11 💌 🗮	Search
Event Time	Event Type	Camera	Description	
2011/03/29 16:02:23 2011/03/29 16:02:28 2011/03/29 16:02:28 2011/03/29 16:02:28 2011/03/29 16:02:28	Main Console Startup User Login Start Live Streaming Server Start Remote Playback S Start Remote Desktop Start Central Management		admin	

Pic. 5.22

Step 1: Press the button Export to.

Step 2: Type the file name and choose the file format: .xls (*Pic.5.23*) or .txt (*Pic.5.24*).

	A	В	C	D	E
1	Even/Time	EventType	Description		
2	2007/09/12 00:45:41	Main Console Startup			
3	2007/09/12 00:45:44	User Login	admin		
4	2007/09/12 01:11:10	Main Console Shutdown			
5	2007/09/12 01:27:04	Main Console Startup			
6	2007/09/12 01 :27:05	User Login	admin		
7	2007/09/12 01:28:27	Main Console Shutdown			
8	2007/09/12 15:06:51	Main Console Startup			
9	2007/09/12 15:06:52	User Login	admin		
10	2007/09/12 15:07:04	Main Console Shutdown			
11	2007/09/12 15:08:28	Main Console Startup			
12	2007/09/12 15:08:40	Main Console Shutdown			
13	2007/09/12 15:08:54	Main Console Startop			
14	2007/09/12 15:09:01	Main Console Shutdown			
15	2007/09/12 15:14:11	Main Console Startup			
16	2007/09/12 15:14:12	Main Console Shutdown			
17	2007/09/12 15:14:31	Main Console Startup			
18	2007/09/12 15:15:20	Main Console Shutdown			
19	2007/09/12 19:44:15	Main Console Startup			
20	2007/09/12 19:44:58	Main Console Shutdown			
21	2007/09/12 22:51:57	Main Console Startup			
22	2007/09/12 22:51:59	Main Console Shutdown			
23	2007/09/12 22:52:14	Main Console Startup			
24	2007/09/12 22:52:18	User Login	admin		
25	2007/09/12 22:52:24	Main Console Shutdown			
26	2007/09/12 22:53:19	Main Console Startup			

Pic. 5.23

00:45:41, 00:45:44, 01:11:10, 01:27:04,	User	Login, a	
01:11:10,			admin .
	Main		
84 - 97 - 84		Console	Shutdown,
01.27:04,	Main	Console	Startup,
01:27:05,	User	Login, a	admin .
01:28:27,	Main	Console	Shutdown,
15:06:51,	Main	Console	Startup,
15:06:52,	User	Login, a	admin
15:08:28,	Main	Console	Startup,
15:08:40,	Main	Console	Shutdown,
15:08:54,	Main	Console	Startup,
15:09:01,	Main	Console	Shutdown,
15:14:11.	Main	Console	Startup,
15:14:12,	Main	Console	Shutdown,
15:14:31,	Main	Console	Startup,
19:44:15.	Main	Console	Startup,
19:44:58			
22:51:57,			
22:51:59,			
22:52:14.	Main	Console	Startup,
22:52:18,			
	01:28:27, 15:06:51, 15:06:52, 15:07:04, 15:08:28, 15:08:54, 15:08:54, 15:14:11, 15:14:12, 15:14:13, 15:14:15, 19:44:15, 19:44:15, 22:51:57, 22:52:14, 22:52:14, 22:52:24,	01:28:27, Main 15:06:52, User 15:07:04, Main 15:08:28, Main 15:08:24, Main 15:08:24, Main 15:08:24, Main 15:08:24, Main 15:14:11, Main 15:14:12, Main 15:14:15, Main 19:44:58, Main 19:44:58, Main 12:51:57, Main 22:51:57, Main 22:52:14, Main 22:52:18, User 22:52:24, Main	01:28:27, Main Console 15:06:52, User Login, a 15:08:52, User Login, a 15:08:28, Main Console 15:08:24, Main Console 15:08:44, Main Console 15:08:44, Main Console 15:09:01, Main Console 15:14:11, Main Console 15:14:12, Main Console 15:15:15:20, Main Console 19:44:15, Main Console 19:44:58, Main Console 22:51:57, Main Console

Pic. 5.24

5.9. Backup

5.9.1. Backup

The backup function saves recorded video and other log information. Backup files may be reloaded on any PC with the Playback System installed. Follow the instructions below for more information on obtaining backup files.

Step 1: Click on "New Period" to obtain the Select Date/Time Period panel (Pic.5.25).



Step 2: Select the data you want to backup by highlighting the time period. Besides the time-table, you may also set up start time and end time in the Date Time Period section (*Pic.5.26*).



Pic. 5.26

Step 3: Click on the camera number icon to add camera(s) or click Select All to add all the cameras.

Step 4: Check the box of Enable Preview to get the preview of the video you select.

Step 5: Click OK when the settings are complete and go back to the Backup panel.

Step 6: If there is any data period not wanted, click Remove Period to remove the data period on the backup list (*Pic.5.27*).

🛃 Backup System [Localhost]				_ 🗆 ×
Backup Help				
New Period	Kemove Period 💈 B	ackup 🔀 Delete		
Start Date Time	End Date Time	Camera(s)	Size	
) 2009/5/14 下午 01:09:00	2009/5/14 下午 01:32:00	1,2,3,4	843,322KB	
▶ 2009/5/15 上午 10:33:00	2009/5/15 上午 10:46:00	1,3	111,185KB	

Pic. 5.27

Step 7: Click the Backup icon to obtain Backup panel.

Beward

3ackup 🛛 🔀	1
Summary	
Total backup data size: 79,487KB	
_ Media	
Backup using CDROM	
C Backup using DVD	
C Backup on HardDisk	
Option	
✓ Backup System Log	
E Instude Dischastication	
Include Playback application	
✓ OK 🗶 Cancel	

Pic. 5.28

Step 8: Summary: Check the summary section to see the size of the file(s).

Step 9: Media: Choose the path you want to save the file or burn the file into a CD (direct CD burning for Windows XP only), DVD or on Hard Disk.

Step 10: Option: Select the log information you would like to backup (Event Log, Sys¬tem Log, Counter Log and Metadata Transaction), and then click OK.

5.9.2. Delete Recorded Information from the System

Step 1: Click on "New Period" to obtain the Select Date Time Period panel (*Pic.5.29*).

🛃 Backup System [Localhost] 👘				
Backup Help				
🚮 🔹 🔎 New Period	Remove Period	ackup 🔀 Delete		
Start Date Time	End Date Time	Camera(s)	Size	
	2009/5/14 下午 12:19:00	1,2,3,4	914,584KB	
2009/5/11 下午 08:41:00	2009/5/11 下午 08:54:00	1,2,3,4	606,411KB	
1				

Pic. 5.29

Step 2: From the record date section, select the date you want to delete the file from. You will see color lines appear in the time table implying available data. Red, green, and blue stands for record always, record on motion, and record on event data files, respectively.

Step 3: Select the data you want to delete by highlighting the time period. Besides the time-table, you may also set up start time and end time in the Date Time Period section (*Pic.5.30*).



Pic. 5.30

Step 4: Click on the camera number icon to add camera(s) or click Select All to add all the cameras.

Step 5: Check the box of Enable Preview to get the preview of the video you select.

Step 6: Click OK when the settings are complete and go back to the Backup panel.

DateTime Search Dialog [Loc	al Machine	1											
27 28 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Sta	te Time Perio art Time: d Time:	rd F	100/03/22 100/03/22	17:13			deo Previ F Enable Har / 22/1	Preview			17:1:	3:10
13 20 21 22 23 24 25 26 14 27 28 29 30 31 1 2 15 3 4 5 6 7 8 9 Show Recording Schedule 3 1 2 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9								all all		- 			
								and and	n L	1	P		P
- 07/15 8 9	10	11 12	13	14 15		17	18	19	20	21	22	23	24
Camera 1	10	11 12	13	14 14		17	18	19	20	21	22	23	24
Camera 1 Camera 2	10	11 12	13			17	18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3	10	11 12	13			17	18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3 Camera 4	10	11 12	13	20 20 20 20 20 20 20 20 20 20		17 17 1 1 1 1	18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3 Camera 3 Camera 4 Camera 5	10	11 12	13	22 22 22 22 22 22 22 22 22 22 22 22			18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3 Camera 3 Camera 4 Camera 5 Camera 6	10	11 12	13	20 20 20 20 20 20 20 20 20 20		17 8 8 8 9 8 8	18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3 Camera 3 Camera 4 Camera 5 Camera 6 Camera 7	10	11 12	13			17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3 Camera 4 Camera 4 Camera 5 Camera 6 Camera 7 Camera 8	10	11 12	13	22 22 22 22 22 22 22 22 22 22 22 22		17 8 8 9 9 9 9 9 9 9 9	18	19	20	21	22	23	
Camera 1 Camera 2 Camera 2 Camera 3 Camera 4 Camera 5 Camera 6 Camera 7 Camera 8	10					17 8 8 9 9 9 9 8 9	18	19	20	21	22	23	24
Camera 1 Camera 2 Camera 3 Camera 4 Camera 4 Camera 5 Camera 6 Camera 7 Camera 8	10		13			17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18	19	20	21 21			

Pic. 5.31

Step 7: Click on the "Delete" icon and delete the data.

NOTE:

The deleted video cannot be recovered.

🛃 Backup System [Localhost]				_ D ×
Backup Help				
🕜 - 🔎 New Period	Remove Period	3ackup 🙁 Delete		
Start Date Time	End Date Time	Camera(s)	Size	
▶ 2009/5/14 上午 11:54:00 ▶ 2009/5/11 下午 08:41:00	2009/5/14 下午 12:19:00 2009/5/11 下午 08:54:00	1,2,3,4 1,2,3,4	914,584KB 606,411KB	
	r	0ia 5 22		

Pic. 5.32

5.10. Network Service

There are 3 types of network services: live streaming server, remote playback server, and 3GPP service. From the Main Console, go to Config > Network Service to obtain the Network Service panel (*Pic.5.33*).



Pic. 5.33

5.10.1. Live Streaming Server

When starting the live streaming function of your computer, you allow remote users to log on to the specific computer and view cameras that are connected to it (*Pic.5.34*). As system administrator, you are able to monitor these accounts in order to maintain the system efficiency.

Main: On Live Streaming Server panel, you can see the clients who are currently logging on to your computer and watching the live video from the remote side.

Start: By starting the system, you turn the computer into a live streaming server; thus allow remote users to log on to the system.

Client Count	0 Kill	Kil
State IP	Camera Bi	trate (Kbps)
Service Server Status: Stopped		Start St
Options Port:	5150	Default
Maximum Connections:	4	
Vise Default Web Server Port:	80	-
Save Log	LiveServer.log	
🔽 Enable Audio		

Pic. 5.34

Kill: Highlight an IP address and click on the "Kill Client" button to block a client from your system.

Kill All: By clicking on this button, you may block all the clients logging to your system.

Stop: Stop broadcasting live stream video.

Options: You may only adjust the setting when the server is stopped.

Port: Assign a port for the clients to connect to your system to the network.

Maximum Connections: Number of connections that are allowed to connect to your system. One camera video counts as one connection.

Use Default Web Server: Activate the Web server by checking the box; clients will be able to watch live video via Internet Explorer. The port for live streaming server is set to 80 by default. (*must check this item for system access via IE)

Save Log: Save the log information at appoint folder.

Network Service - 1	0.0.0.115 / 10.0.0.115	X
Live Streaming	Main Black / White List Performat	nce
Remote Playback	Add to White List Add to Black List	to
	ID IP Range	Access
		Apply to All Network Servers
		V OK X Cancel

Pic. 5.35

White List: Check the "Enable White List" box to activate the white list filter. Only IP from the white list is allowed to log in.

Black List: Check the "Enable Black List" box to activate the black list filter. IP from the black list will be blocked.

IP Address: Enter an IP address into the IP address field on the left. To add an IP address range to the system, enter 2 sets of IP address to indicate a series of IPs.

Add/Delete: To Add the IP(s) onto the list or remove it from the list.

Apply to All Network Servers: To apply the setting to both live streaming server and remote playback server.



Performance

Pic. 5.36

5.11. About Main Console

Go to About Main Console to view the version of your surveillance system and the hardware information (*Pic.5.37*).



Pic. 5.37

You will see this window displaying information about installed surveillance software (*Pic.5.38*).

About Main Console	
CamGraba Lite IP System 3.5.8 2004-2011 CamGraba Lite Surveillance System All right	✓ OK
Product Information	
Model Type: CamGraba Lite	
IP Camera License Number: 16 POS License Number: 0 LPR License Number: 0 Access Control License Number: 0 Device Pack Version: 2.10.0	
	Build 3.5.8 0

Pic. 5.38

Chapter 6. Remote Live Viewer



Pic.6.1

With the Remote Live Viewer console, remote users may watch real-time video from remote live streaming servers (*Pic.6.1*).

NOTE:

Only support 1 channel at the same time for Remote Live Viewer.

6.1. Setup Panel

Click General Setting to obtain setting dialog (Pic.6.2).





6.1.1. General Setting

General Server Group Camera Monitor Display Notification Audio preview
Enable audio on active channel Miscellaneous
Miscellaneous
Experimentary video frames
Synchronize video frames
Run Remote Live Viewer On Monitor
Monitor 1
V OK X Cancel

Pic.6.3

Audio preview: Enable audio on active channel: Select to enable audio streaming on active channel (*Pic.6.3*).

Miscellaneous: Synchronize video frames: Select to avoid image tearing problems that may occur while CPU loading is increased (*Pic.6.3*).

6.1.2. Server Setting

LiveView Setting General Server Group Camera Monitor Dis Server Setting Server Name: Address: Port 5150 User Name: Password: Save Password: Auto Login: Test Server	splay Notification Support - NVRmini (support.nuuo.cor Eric (192.168.1.47) Internal - NVRmini (192.168.3.101) dhsalias (nuuo.dhsalias.com) jimmy (192.168.1.99) QA (192.168.1.176) many (192.168.3.101) Demo Site (192.168.3.101) Demo Site (192.168.3.101) Customer (212.143.234.227) Cus (217.128.1.174) localhost (localhost) mini wan (nuuo.dhsalias.com) DEMO (192.168.1.68)
Add Delete Update]
	✓ OK X Cancel

Pic.6.4

Step 1: Enter the Server Name.

- Step 2: Enter the Address, Port, User Name, and Password to log in the server.
- Step 3: Enable "Save Password" to login without entering the password again.
- Step 4: Enable "Auto Login" to login automatically when starting Remote Live Viewer.
- Step 5: Click on Test Server to check if the server is available.
- Step 6: Click Add to insert the setting to server list (*Pic.6.4*).

NOTE:

To change the setting, select a server on server list and click "Update" after modify setting. To remove the server, select a server on server list and then click "Delete".

6.1.3. Group Setting

Allocate different cameras into each appointed group (Pic.6.5).



Pic.6.5

Step 1: Log in to all the servers that contain the camera(s) you would like to put into the group(s).

Step 2: Click Insert to create a new group; name the group for future reference.

Step 3: From the window at the right, highlight the camera(s) that you would like to add to a group and then click on the " <-- " button. Repeat the process until satisfied with the group setting.

Step 4: Click on the Delete and Rename button to remove or rename a specific group.

Step 5: Repeat Steps 2 to 4 to adjust the group setting until satisfied.

Step 6: Click OK.

6.1.4. Camera Setting

Select the preferred stream type of each camera as default live view profile (*Pic.6.6*).

😰 LiveView Setting	
General Server Group Camera	Monitor Display Notification
a Login	
	Stream Profile Info Stream profile: Video format: Frame rate: Resolution: Quality: Bitrate: Copy to
	✓ OK X Cancel



Stream profile: List differs according to different types of video inputs and licenses.

Auto: The system will adjust the stream type automatically to fit different screen divisions.

Recoded: The system will follow the stream profile set in Main Console >Schedule > Encoding Options.

Original (IP only): The system will display the streaming directly from the IP camera and video server.

High / Normal / Low/ Minimum / H.264: The system will follow the stream profile set in Main Console - Setting - Camera - Stream Profile.

Copy to: Select in order to copy the preferred stream profile of a channel to all of the listed channels.

6.1.5. Monitor Display Setting

Activate auto scan to rotate the channels/ cameras on screen (Pic.6.7).

Aonitor	Resolution	Monitor 1	
1	1280 x 800	Auto scan	
		Auto scan group:	All Camera 🔻
		Primary channel:	(Not Used)
		Secondary channel:	(Not Used) 👻
		Auto scan interval:	2 sec.
		Layout NxN type:	5x5 -

Pic.6.7

Step 1: Select the Monitor connected to the system.

Step 2: Auto scan group: Select appointed server group to activate auto scan settings.

Step 3: Primary channel: Select appointed channel that will always be on the screen when auto scan is activated.

Step 4: Secondary channel: Select appointed channel with secondary priority behind primary channel when auto scan is activated.

Step 5: Layout: Select the screen division of "NxN type" in Remote live viewer panel.

6.1.6. Notification Setting

General	Server Gr	oup Camera	Monitor Dis	olay Notificat	ion	
-Status o	display ow recording :	etatue				
	ow camera ev					
	on oundra of	0112				
				_		🗶 Ca

Pic.6.8

Status display: Show recording status: Check to show the crystal ball with recording status on monitor display.

6.2. Show Camera(s) On the Display Screen

Select a camera(s) from the server/ camera list on the right and then drag it to where you want the image to be displayed (*Pic.6.9*).

On the server/ camera list, right click on a camera to connect/ disconnect it.





6.2.1. Log In/ Log Out:

Select a server or a group and click on the log in/ out icon to access/ leave the server. You may also log in/ out from the server by right clicking on it.

6.2.2. Server and Camera List:

Display a complete list of the server(s) and camera(s) that are added to the system.

6.2.3. PTZ Camera Control:

You may control the camera view by utilizing the PTZ camera control panel to adjust the camera's view. This is only available with cameras that support PTZ function.

6.2.4. Zoom Tele

Click on the + and – signs to zoom in and out the view.

6.2.5. Play/ Stop/Drop

Select a camera/ video and click on this button to play/stop/disconnect a particular channel.

6.2.6. Information Display Window

Display video information including server name, video current status, and bit rate for a selected channel.

Chapter 7. Web View



Pic.7.1

NOTE:

Make sure the Live Streaming Server is enabled. Check 5.10.1 Network Service for more detail. Only support 1 channel at the same time for Remote function.

7.1. Server IP

Open an Internet Explorer browser and enter the IP address or DDNS "name" of the server followed by the connecting port.

Example: http://localnet:8080/

NOTE:

Localnet is the IP address of the server.

8080 is the port specified in "Use Default Web Server" in Network Service.

7.2. Remote Live Viewer

Press this icon to use Remote Live Viewer which functions are the same as Live Viewer.

7.3. Remote Playback

Press this icon to use Remote Playback which functions are the same as Playback.

Appendix

A. System loading

Here are some testing results of multi-channel IP camera viewing:

1. 16 Channel IP Camera with VGA/D1 Performance

Equipment Configuration

Software:	MainConsole Version 3.5.8 Professional		
CPU:	Intel Core i3-2100		
Memory:	2Gb (2x1Gb)		
Ethernet:	Gigabit Ethernet Controller		
Hard Disk:	ST3250410AS (250 GB)		
Graphic card:	Intel HD Graphics 2000		
Operating System:	Windows 7 Professional		

Results from Test with a Resolution of 640×480 CMOS IP Camera.

640x480	Quality	Frame Rate	CPU Load	Bandwidth
16 IP camera	Detailed	30	80%	30 Mbps
16 IP camera	Excellent	30	85%	40 Mbps

2. 16 Channel IP Camera with 1M (1280x720) Performance

Equipment Configuration

Software:	MainConsole Version 3.5.8 Professional	
CPU:	Intel Core i7-3770K	
Memory:	4Gb (2x2Gb)	
Ethernet:	Gigabit Ethernet Controller	
Hard Disk:	WD1002FAEX (1TB)	
Graphic card:	AMD HD7750 1Gb DDR5	
Operating System:	Windows 7 Professional	

Results from Test with a Resolution of 1280×720 CMOS IP Camera

1280x720	Quality	Frame Rate	CPU Load	Bandwidth
16 IP camera	Detailed	30	70%	90 Mbps
16 IP camera	Excellent	30	75%	110 Mbps

B. Storage Requirements Table (VGA)

Please refer to the following table to find out the capability for recording into your hard disk.

- B.1. NTSC CCD IP Camera
- B.1.1. MPEG4 Storage Requirement GB / channel / day @ 30fps

Quality	704*480	352*240	176*120
Excellent	21.1	8.4	2.1
Detailed	9.0	2.6	0.8
Good	4.7	1.6	0.6
Standard	3.7	1.2	0.5
Medium	2.6	0.9	0.4

B.1.2. MPEG4 Storage Requirement GB / channel / day @ 15fps

Quality	704*480	352*240	176*120
Excellent	10.5	4.2	1.1
Detailed	4.5	1.3	0.4
Good	2.3	0.8	0.3
Standard	1.8	0.6	0.2
Medium	1.3	0.5	0.2

B.1.3. MPEG4 Storage Requirement GB / channel / day

Image-Size	Bitrate Setting	Frame-Rate Setting	Storage Requirement
704*480	2048	30	23.0
704*480	2048	15	22.1
704*480	1536	30	18.5
704*480	1536	15	17.9
704*480	1024	30	11.1
704*480	1024	15	11.6
704*480	512	30	5.5
704*480	512	15	6.9
352*240	1536	30	15.8
352*240	1536	15	16.9
352*240	1024	30	11.6
352*240	1024	15	11.6
352*240	512	30	5.6
352*240	512	15	6.3

176*120	1024	30	10.5
176*120	1024	15	9.5
176*120	512	30	5.6
176*120	512	15	5.8
176*120	128	30	1.6
176*120	128	15	1.6

B.1.4. MJPEG Storage Requirement GB / channel / day @ 15fps

Quality	704*480	352*240	176*120
Excellent	79.1	29.5	10.5
Detailed	52.7	15.8	7.4
Good	36.9	10.5	5.3
Standard	21.1	8.4	4.2
Medium	13.7	5.3	3.2

B.1.5. MJPEG Storage Requirement GB / channel / day

Image-Size	Quality Setting	Frame-Rate Setting	Current Bitrate
704*480	Excellent	15	79.1
704*480	Excellent	5	42.2
704*480	Good	15	36.9
704*480	Good	5	15.8
704*480	Medium	15	13.7
704*480	Medium	5	5.8
352*240	Excellent	15	29.5
352*240	Excellent	5	12.7
352*240	Good	15	10.5
352*240	Good	5	4.7
352*240	Medium	15	5.3
176*120	Medium	5	2.3
176*120	Excellent	15	10.5
176*120	Excellent	5	4.2
176*120	Good	15	5.3
176*120	Good	5	2.1
176*120	Medium	15	3.2
176*120	Medium	5	1.1

B.2. PAL CCD IP Camera

B.2.1. MPEG4 Storage Requirement GB / channel / day @ 30fps

Quality	704*480	352*240	176*120
Excellent	19.4	4.3	1.1
Detailed	6.5	1.6	0.5
Good	4.3	1.1	0.4
Standard	3.2	0.9	0.3
Medium	2.2	0.6	0.2

B.2.2. MPEG4 Storage Requirement GB / channel / day @ 15fps

Quality	704*480	352*240	176*120
Excellent	9.7	2.2	0.5
Detailed	3.2	0.8	0.3
Good	2.2	0.5	0.2
Standard	1.6	0.4	0.2
Medium	1.1	0.3	0.1

B.2.3. MPEG4 Storage Requirement GB / channel / day

Bitrate Setting	Frame-Rate Setting	Storage Requirement
2048	30	21.6
2048	15	22.7
1536	30	17.3
1536	15	18.4
1024	30	11.9
1024	15	13.0
512	30	5.9
512	15	7.0
1536	30	16.2
1536	15	17.3
1024	30	11.9
1024	15	11.9
512	30	5.9
512	15	6.5
1024	30	10.8
1024	15	10.8
512	30	5.9
	2048 2048 1536 1536 1024 1024 512 512 512 1536 1536 1024 1024 512 512 512 512 1024 1024	2048 30 2048 15 1536 30 1536 30 1536 15 1024 30 1024 15 512 30 512 15 1536 15 1024 15 512 30 512 15 1536 30 1536 30 1536 15 1024 30 1024 30 1024 15 512 30 512 30 512 15 1024 30 1024 30 1024 30 1024 30 1024 15

176*120	512	15	6.5
176*120	128	30	1.6
176*120	128	15	1.6

B.2.4. MJPEG Storage Requirement GB / channel / day @ 15fps

Quality	704*480	352*240	176*120
Excellent	84.2	18.4	7.0
Detailed	46.4	10.8	4.9
Good	27.0	7.0	3.8
Standard	14.0	4.9	2.7
Medium	10.8	3.2	1.9

B.2.5. MJPEG Storage Requirement GB / channel / day

Image-Size	Quality Setting	Frame-Rate Setting	Current Bitrate
704*480	Excellent	15	84.2
704*480	Excellent	5	43.2
704*480	Good	15	27.0
704*480	Good	5	13.0
704*480	Medium	15	10.8
704*480	Medium	5	5.4
352*240	Excellent	15	18.4
352*240	Excellent	5	9.7
352*240	Good	15	7.0
352*240	Good	5	3.6
352*240	Medium	15	3.2
176*120	Medium	5	1.7
176*120	Excellent	15	7.0
176*120	Excellent	5	3.2
176*120	Good	15	3.8
176*120	Good	5	1.6
176*120	Medium	15	1.9
176*120	Medium	5	0.8

B.3. CMOS IP Camera

B.3.1. MPEG4 Storage Requirement GB / channel / day @ 30fps

Quality	640*480	320*240	160*120
Excellent	10.5	3.2	0.9
Detailed	4.2	1.6	0.5
Good	3.2	1.1	0.3
Standard	2.6	0.7	0.3
Medium	2.6	0.6	0.2

B.3.2. MPEG4 Storage Requirement GB / channel / day @ 15fps

Quality	640*480	320*240	160*120
Excellent	5.3	1.6	0.4
Detailed	2.1	0.8	0.3
Good	1.6	0.6	0.2
Standard	1.3	0.4	0.1
Medium	1.3	0.3	0.1

B.3.3. MPEG4 Storage Requirement GB / channel / day

Image-Size	Bitrate Setting	Frame-Rate Setting	Current Bitrate
640*480	2048	30	23.0
640*480	2048	15	22.2
640*480	1536	30	18.5
640*480	1536	15	17.9
640*480	1024	30	10.5
640*480	1024	15	10.5
640*480	512	30	5.3
640*480	512	15	6.3
320*240	1536	30	15.8
320*240	1536	15	16.9
320*240	1024	30	10.5
320*240	1024	15	10.5
320*240	512	30	5.8
320*240	512	15	6.3
160*120	1024	30	10.0
160*120	1024	15	7.9
160*120	512	30	5.3

160*120	512	15	0.5
160*120	128	30	1.4
160*120	128	15	1.5

B.3.4. MJPEG Storage Requirement GB / channel / day @ 15fps

Quality	640*480	320*240	160*120
Excellent	42.2	15.8	6.3
Detailed	25.3	9.5	4.2
Good	16.9	6.9	3.2
Standard	13.7	5.3	2.5
Medium	9.5	3.7	1.8

B.3.5. MJPEG Storage Requirement GB / channel / day

Quality Setting	Frame-Rate Setting	Current Bitrate
Excellent	15	42.2
Excellent	5	16.9
Good	15	16.9
Good	5	6.9
Medium	15	9.5
Medium	5	3.8
Excellent	15	15.8
Excellent	5	5.8
Good	15	6.9
Good	5	2.7
Medium	15	3.7
Medium	5	1.4
Excellent	15	6.3
Excellent	5	2.4
Good	15	3.2
Good	5	1.2
Medium	15	1.8
Medium	5	0.7
	Excellent Good Good Medium Medium Excellent Excellent Good Medium Excellent Excellent Excellent Excellent Good Good Medium	Excellent15Excellent5Good15Good5Medium15Medium5Excellent15Good15Good5Medium15Excellent5Good5Medium15Excellent15Good5Medium5Excellent15Good15Good15Medium5Excellent5Good15Good5Medium15Medium15Medium15

C. Storage Requirement Table (Mega)

Please refer to the following table to find out the capability for recording into your hard disk.

C.1.1. H.264 Storage Requirement GB	/ channel / day @ 30fps
-------------------------------------	-------------------------

Quality	1280*1024	1280*720	640*480	320*240
Excellent	464,8	315,4	49,8	15
Detailed	282,8	215,8	33,2	12,6
Good	215,8	149,4	28,4	10
Standard	132,8	99,6	25	9,2
Medium	99,6	74,8	21,6	7,6

C.1.2. H.264 Storage Requirement GB / channel / day @ 15fps

Quality	1280*1024	1280*720	640*480	320*240
Excellent	232.4	157.7	24.9	7.5
Detailed	141.4	107.9	16.6	6.3
Good	107.9	74.7	14.2	5
Standard	66.4	49.8	12.5	4.6
Medium	49.8	37.4	10.8	3.8

C.1.3. H.264 Storage Requirement GB / channel / day @ 10fps

Quality	1280*1024	1280*720	640*480	320*240
Excellent	157.7	116.2	20.8	5.9
Detailed	99.6	74.7	15	5
Good	74.7	54	13.3	4.7
Standard	54	37.4	10.8	4.2
Medium	37.4	29.1	10	3.4

C.1.4. MPEG4 Storage Requirement GB / channel / day

	Ditroto Sotting	Frame-Rate	Storage
Image-Size	Bitrate Setting	Setting	Requirement
1280*1024	6144	15	522.9
1280*1024	6144	10	522.9
1280*1024	2048	15	182.6
1280*1024	2048	10	182.6
1280*1024	512	15	45.7
1280*1024	512	10	45.7
1280*720	6144	15	522.9

1000		4.0	
1280*720	6144	10	522.9
1280*720	2048	15	182.6
1280*720	2048	10	182.6
1280*720	512	15	45.7
1280*720	512	10	45.7
640*480	6144	15	522.9
640*480	6144	10	522.9
640*480	2048	15	182.6
640*480	2048	10	182.6
640*480	512	15	45.7
640*480	512	10	45.7
320*240	6144	15	423.3
320*240	6144	10	298.8
320*240	2048	15	182.6
320*240	2048	10	182.6
320*240	512	15	45.7
320*240	512	10	45.7

C.1.5. MPEG4 Storage Requirement GB / channel / day @ 15fps

Quality	1280*1024	1280*720	640*480	320*240
Excellent	315.4	249	49.8	10.8
Detailed	240.7	182.6	37.4	9.2
Good	149.4	116.2	24.9	7.5
Standard	99.6	74.7	20.8	5.9
Medium	74.7	49.8	16.6	5

C.1.6. MPEG4 Storage Requirement GB / channel / day @ 10fps

Quality	1280*1024	1280*720	640*480	320*240
Excellent	249	190.9	41.5	9.2
Detailed	182.6	132.8	33.2	8.3
Good	116.2	91.3	20.8	6.7
Standard	78.9	58.1	16.6	5.4
Medium	58.1	45.7	14.5	4.2

C.1.7. MPEG4 Storage Requirement GB / channel / day

Image-Size	Quality Setting	Frame-Rate	Storage
image-Size		Setting	Requirement
1280*1024	6144	15	431.6
1280*1024	6144	10	522.9
1280*1024	2048	15	182.6
1280*1024	2048	10	182.6
1280*1024	512	15	45.7
1280*1024	512	10	45.7
1280*720	6144	15	522.9
1280*720	6144	10	522.9
1280*720	2048	15	182.6
1280*720	2048	10	182.6
1280*720	512	15	45.7
1280*720	512	10	45.7
640*480	6144	15	522.9
640*480	6144	10	522.9
640*480	2048	15	182.6
640*480	2048	10	182.6
640*480	512	15	45.7
640*480	512	10	45.7
320*240	6144	15	182.6
320*240	6144	10	149.4
320*240	2048	15	182.6
320*240	2048	10	149.4
320*240	512	15	45.7
320*240	512	10	45.7

2.VGA Mode

C.2.1. H.264 Storage Requirement GB / channel / day @ 30fps

Quality	640*480	320*240
Excellent	66.4	10
Detailed	37.4	8.3
Good	24.9	5.9
Standard	16.6	5
Medium	15	4.2

C.2.2. H.264 Storage Requirement GB / channel / day @ 15fps

Quality	640*480	320*240
Excellent	41.5	8.3
Detailed	24.9	6.7
Good	20.8	5
Standard	15	4.6
Medium	12.5	4.2

C.2.3. H.264 Storage Requirement GB / channel / day

Image-Size	Bitrate Setting	Frame-Rate Setting	Current Bitrate	Storage Requirement
640*480	6144	30	6300	522.9
640*480	6144	15	6300	522.9
640*480	2048	30	2200	182.6
640*480	2048	15	2200	182.6
640*480	512	30	550	45.7
640*480	512	15	550	45.7
320*240	6144	30	6300	522.9
320*240	6144	15	5500	456.5
320*240	2048	30	2200	182.6
320*240	2048	15	2200	182.6
320*240	512	30	550	45.7
320*240	512	15	550	45.7

C.2.4. MPEG4 Storage Requirement GB / channel / day @ 30fps

Quality	640*480	320*240
Excellent	116.2	20.8
Detailed	83	13.3
Good	49.8	10
Standard	33.2	7.5
Medium	24.9	6.7

C.2.5. MPEG4 Storage Requirement GB / channel / day @ 15fps

Quality	640*480	320*240
Excellent	74.7	15
Detailed	54	11.7

Good	37.4	8.3
Standard	25	6.7
Medium	16.6	5.9

C.2.6. MJPEG Storage Requirement GB / channel / day

Image-Size	Bitrate Setting	Frame-Rate Setting	Current Bitrate	Storage Requirement
640*480	6144	30	6300	522.9
640*480	6144	15	6300	522.9
640*480	2048	30	2200	182.6
640*480	2048	15	2200	182.6
640*480	512	30	550	45.7
640*480	512	15	550	45.7
320*240	6144	30	5100	423.3
320*240	6144	15	2800	232.4
320*240	2048	30	2200	182.6
320*240	2048	15	2200	182.6
320*240	512	30	550	45.7
320*240	512	15	550	45.7