# **NUUO**<sup>®</sup>

# **The Intelligent Surveillance Solution**

# **NVRsolo** User Manual (Remote)

Ver. 1.2.0.131023.00

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# **1.Installation**

# **1.1 Installation Process**

# Step 1: Unpack the Unit

This package contains the following items:

	1bay Package	8bay Package
The unit	V	V
Remote control, 1.5M IR extender cable	V	V
Disk screws	V (for 2.5" and 3.5" disk)	V (for 3.5" disk)
Pad and stand	[Horizontal] foot pads; [Vertical] Stand, foot pads and screws	Foot pads
Power	12V 4A 48W power adapter, power cord	Power cord
Warranty card, Quick Start Guide, CD	V	V
Rackmount kit, screws	-	V
Key	-	V

\*CD content: Install Wizard, Remote Live Viewer, Playback System, Backup System, Verification Tool and Offline License Tool application, user manual, and quick start guide

Q

Battery spec is 1.5V, AAA, R03. Two batteries are required for a remote control.

To configure the unit, you must install the software onto a desktop/ laptop running Windows XP-SP3 32bit, Windows 7 32/64bit, Windows 8 32/64bit.

# Front View (1 Bay Unit)



#### Status LED:

No.	Description	Status Notice	Remark
1	Power Status LED	<ul><li>Power-on: blue</li><li>Power-off: dark</li></ul>	-

2	System Status LED	<ul> <li>Healthy: blue</li> <li>Unhealthy: orange</li> <li>Abnormal temperature status: orange with blinking</li> <li>Off: dark</li> </ul>	1) 2) 3)	Orange: System is abnormal (including RAID) Orange with blinking: CPU temperature/fan rpm is beyond the normal range Blinking (200 ms On/ 200 ms Off)
3	HDD Status LED	<ul> <li>Healthy: blue</li> <li>Failed: orange</li> <li>No disk: dark</li> <li>Rebuilding: orange with blinking</li> </ul>	1) 2)	LED for all disks Blinking (200 ms On/ 200 ms Off)
4	Ethernet Status LED	<ul> <li>Linking: blue</li> <li>Accessing: blue with blinking</li> <li>No linking: dark</li> </ul>	1) 2)	LED for Ethernet port (1*output for detecting connection status of switch) Blinking (200 ms On/ 200 ms Off)
5	Alarm LED	<ul> <li>No event happened: dark</li> <li>Event detected: orange with blinking</li> </ul>	Blir 200	iking (200 ms On/ ) ms Off)

#### External Control and I/O Ports:

No.	Description
1	Power button
6	Remote control IR receiver
7	USB 2.0 connector

# Rear View (1 Bay Unit)



#### Status LED:

No.	Description	Status Notice	Remark
5	Ethernet Activity LED	<ul> <li>Linking: green</li> <li>Accessing: green with blinking</li> <li>No linking: dark</li> </ul>	<ol> <li>LED for Ethernet port</li> <li>Blinking (200 ms On/ 200 ms Off)</li> </ol>

#### **External Control and I/O Ports:**

No.	Description
1	DC-in power connector
2	3.5 mm mic-in (reserved)
3	3.5 mm audio out (headphone jack)
4	VGA connector
5	RJ-45 LAN ports 1 / 2
6	eSATA connector
7	COM port (RS-232 reserved)
8	USB 2.0 connectors
9	HDMI connector
10	Connection of IR extender
11	3.5 mm line-in (reserved)
12	Reset toggle

# Horizontal



Vertical



# Front View (8 Bay Unit)



#### Status LED:

No.	Description	Status Notice	Remark	
2	Power Status LED	<ul><li>Power-on: blue</li><li>Power-off: dark</li></ul>		
5	System Status LED	<ul> <li>Healthy: blue</li> <li>Unhealthy: orange</li> <li>Abnormal temperature</li> </ul>	1) Orange: System is abnormal (including RAID)	

		•	status: orange with blinking Off: dark	2) 3)	Orange with blinking: CPU temperature/fan rpm is beyond the normal range Blinking (200 ms On/ 200 ms Off)
6	HDD Status LED	* * * *	Healthy: blue Failed: orange No disk: dark Rebuilding: orange with blinking	1) 2)	LED for all disks Blinking (200 ms On/ 200 ms Off)
8	Ethernet Status LED	* * *	Linking: blue Accessing: blue with blinking No linking: dark	1) 2)	LED for Ethernet port (1*output for detecting connection status of switch) Blinking (200 ms On/ 200 ms Off)
7	Alarm LED	•	No event happened: dark Event detected: orange with blinking	Blir 200	iking (200 ms On/ ) ms Off)

#### External Control and I/O Ports:

No.	Description
1	Lock
2	Power button
3	USB 2.0 connector
4	Remote control IR receiver
9	(For local display)

# Rear View (8 Bay Unit)



#### Status LED:

No.	Description	Status Notice	Remark
12	Ethernet Activity LED	<ul><li>Linking: green</li><li>Accessing: green with</li></ul>	1) LED for Ethernet port

blinking No linking: dark	2)	Blinking On/ 200	(200 ms Off	ms <sup>7</sup> )
---------------------------	----	---------------------	----------------	----------------------

#### External Control and I/O Ports:

No.	Description
1	Power cord connector
2	Cooling fan
3	COM port (RS-232 reserved)
4	Reset toggle
5	Relay output*4
6	Digital input*16
7	3.5 mm audio out (headphone jack)
8	3.5 mm line-in (reserved)
9	3.5 mm mic-in (reserved)
10	HDMI connector
11	VGA connector
12	RJ-45 LAN ports 1 / 2
13	USB 2.0 connectors
14	Connection of IR extender
15	eSATA connector

# **Step 2: Install Hard Drives**

Refer to compatibility list and install HDDs. For optimal performance consideration, install disks with the same model and storage capacity. The available RAID level depends on the amount of disks installed.

- 1. Open the lid of the unit.
- 2. Carefully lock the disks into the HDD tray with screws. 4 screws for each disk. Lock the lid of the unit once you finished.

# Screw\*4 (3.5" HDD used) HDD bracket

## 1 bay unit: install 3.5" HDD

#### 1 bay unit: install 2.5" HDD





# Step 3: Connect the Unit and Devices within the Network

- 1. Connect the unit, cameras, and router/switch.
- 2. If you need to make the video visible over the Internet, please connect to a "router" with Internet connection, and the unit will retrieve an IP address through DHCP by default.

The unit processes built-in DHCP service, which takes the job of router to assign IP addresses, which is suitable for the pure LAN environment.

# Step 4: Connect the Monitor (Local)

1. The unit processes two display interfaces, VGA and HDMI. Connect the monitor to the unit.

The supporting display resolutions are 1920x1080, 1280x1024, 1280x720, and 1024x768. Please confirm that one of the resolutions is supported by your monitor.

# **Step 5: Connect the Power**

1bay:

- 1. Attach the power cord from the power source to the power adapter.
- 2. Connect the power adapter to the back of the unit enclosure. See the rear

view figure.

3. On the front of the unit, press the power button. See the front view figure.

8bay:

- 1. Connect the power cord directly to the back of the unit. See the rear view figure.
- 2. On the front of the unit, press the power button. See the front view figure.

It takes about a minute for the unit to fully power up. Once it is powered up:

- The System Status LED turns blue. See the front view figure.
- The buzzer beeps one time.

# Step 6: Install the Software

Please be noticed that you can choose to start up system on the local side or from the remote side. Here is the introduction of remote startup. If you are interested in the local part, please refer to "User Manual (Local)".

- 1. Insert the CD into your CDROM.
- 2. Double-click **Setup.exe** to begin installation.
- 3. Follow the instruction of **Setup.exe**, and click the **Finish** button to close the installer.

# Step 7: Set up the Unit

The software **Installation Wizard** performs the setup procedures on the unit. After the procedure, you can begin using it.

- 1. Go to Start > NUUO NVRsolo > NUUO Installation Wizard.
- 2. This program will show the default language setting and initiation mode.
- 3. Choose your preferred language and initiation mode, and then click the button.

Λυυο™	NVF	R Instal	latio	n Wiz	zard
		$\odot$	[≪III		1
	Choosing a language				
		English		Ţ	
	Initiation Mode				
		<ul> <li>Express</li> <li>Advance</li> </ul>	Mode d Mode		
Version: 1.0.0 ©2004-2013 NUUO Inc.					
					CLOSE

- **Express Mode**: you don't need to set up the network and RAID level.
- Advanced Mode: configure all settings manually: network, license, camera, Date/Time, upgrade notification, and RAID level.
- 4. The **Installation Wizard** program starts searching for all the units on the internet currently. Choose one of them, and then click the **button**.

Λυυο <sup>™</sup>	NVF	R Installation	Wizard
		$\odot$	
Search			
MAC	IP Address	Port Model	Server Name
20:12:10:29:14:55	192.168.4.83	80 NS-1040	solo_1040
Select a server to begin th	e setting process.		CLOSE

5. Type in the password, and then click the **OK** button.

<b>192.168.4.83</b> User name:	admin -
Password:	
	OK CANCEL



The default Administrator password is "admin".

6. Name this server and select the network type, and then click the button.

Λυυο™	NVR Installation Wizard
	• • • • •
Network	
192.168.4.83	
Server Name	solo_1040
<ul> <li>Obtain network settings automatic</li> <li>Configure network settings manu</li> </ul>	cally from external DHCP server. ally.
IP Address	192.168.4.83
Port	
Subnet Mask	255.255.252.0
Default Gateway	192.168.4.1
Primary DNS	192.168.4.1
Secondary DNS	
Name the server, and select the net	work type.
External DHCP: connect this server a	nd IP cameras to a router with embedded DHCP server.
Click the NEXT button to apply setting	gs and go to the next page.
	CLOSE

- Obtain network settings automatically from external DHCP server: apply all settings which are automatically generated by the DHCP server, such as IP, subnet mask, gateway, and DNS.
- **Configure network settings manually**: configure the preferred settings one by one.
- 7. There are several base licenses differed by models. Activate camera license to have more channel capacity, and click the **button**.



 Add cameras for this server. There are two ways of adding cameras, selecting the searched cameras and manually configuring the cameras. Click the button after completing camera list.



	∩ []	υυο <sup>∞</sup>			R Ir	nstalla D	tion W	Vizaro	d T		
lut 192	uto camera search										
	Search	Current channel ca	pacity: O(Max:	4)				45%			
	Selected	MAC Address	IP Address	Port	Vendor	Model	Camera Name	Video Channel	Admini:		
		00-0F-7C-05-1E-2C-	192.168.2.56	80	ACTI	тсм7811		1 -			
		00-1A-80-8F-C3-46-	192.168.2.128	12345	Sony	SNC-RX530		1 •			
		00-40-8C-AA-74-7D	192.168.1.158	80	Axis	Q7404		1 -			
4		00-40-8C-AA-74-7E	192.168.2.142	80	Axis	Q7404		1 -			
		00-1C-F0-79-5E-E1	192.168.2.73	80	D-Link	DCS-6620		1 -			
6		00-40-8C-AA-74-7C	192.168.2.140	80	Axis	Q7404		1 •	<u> </u>		
Ma On Clic	ake a can ly cameras ck the "NE)	nera list for this set s supporting search m (T" button to apply set	r <b>ver by select</b> echanism and b tings and add c	<b>ing se</b> a eing eq ameras	arched ( uipped in manually.	cameras. subnet are sea	rchable.	- C	LOSE		

	nuu	D™	NVI	NVR Installation Wizard					
				$\odot$		1			
Ma	Manual camera setting								
19	2.168.4.83	IP Address	Port	Administrator Name	Password	Vendor			
1	Camera 1	192.168.4.218	80	admin	admin	Sony			
2	Camera 2	192.168.4.214	80	admin	admin	Sony			
3			80			none			
4			80			none			
			·						
				_					
м	ake a camera lis	t for this server	by adding camer	as manually.					
С	ick the Auto Dete	ction button to ob	tain vendor/mode	l automatically after fi	lling in other field	ts.			
C	ick the NEXT but	ton to apply settin	igs and go to the i	next page.					
						CLOSE			

 Set up the time zone, date, and time, and adjust daylight saving changes if needed. Once daylight saving function is enabled, the time change will activate automatically every year based on the recurrence you set. Click the button.

٩U	JUO™		NV	R Insta	allatio	n Wiz	ard
			) · C	$\odot$	[⊗III		1
DateTime							
192.168.4.83							
Time Zone	(GMT+08	:00) Beijing, H	long Kong,	Kuala Lumpu	r, Perth, Singar	oore, Taipei	, Urumqi 🔸
Date	1/17/201	2					
		, 					
Time	5:48:28 F	M					
📄 Adjust	clock for daylig	ht saving cha	nges	+2		hour(s)	every year
	Start Time:	1:00					
		01-01			(MM-DD)		
		1 📫	First -	Mondav			
	End Time:	1:00					
		01-02			(MM-DD)		
		1 *	First -	Monday			
						l	CLOSE

10.Check **"Enable Upgrade Notification**" box if you want to receive notification when there is a newer FW version. Click the **button**.

Λυυο™	NVR Installation Wizard	
Auto Upgrade		
192.168.4.83	using this function, you agree to be bound by the agreement below)	
This is an agreement between you, agree to become bound by the term please uncheck the "Enable Upgrad	the end user, and NUUO Inc. ("NUUO"). By using this function, you is of this agreement. If you don't agree to the teams of agreement, de Notification function".	Î
What info is collected?		
When NUUO Upgrade Notification i including hardware configurations. or email addresses; however this ir	s enabled, it will collect info related to the upgrade process, Some info may contain identifiable personal data, including names ifo will not be used to identify or contact you.	
How is the info used?		
This info will be submitted to NUUC NUUO's solution. This information v efficiency.	) and used to generate reports, which are focused on fluency of will help improve NUUO's product in terms of third party support and	
Information collected by NUUO will conglomerate or representative dist personal info under law restrictions	be saved and processed in NUUO, its subsidiaries within the ribution partners around the world. NUUO has the right to reveal or due to the following requirements: (a) when required by lawful	Ţ
Click the NEXT button to apply setting	s and go to the next page.	
	CLOSE	

11.Follow the following instruction and select the RAID type you want to create. Click the **button**.



The available RAID level depends on the amount of disks installed.

12. Review your settings. If the settings are correct, click the **Finish** button to exit the settings procedure and activate the system.

Λυυο™	NVR Installation Wizard
Setting List	
192.168.4.83	
ltem	Settings
Server Name	solo_1040
Time Zone	GMT+8
Date/Time	2013/01/17 17:51:55
IP Address	192.168.4.83
Port	80
RAID Type	There is no volume created.
Recording Schedule	No
Click the "FINISH" button to activate the confi	guration, which takes time. Please wait
	FINISH CLOSE



Once the "FINISH" button is clicked, the unit will start working. In order to ensure the stability of the unit, never pull any disks out when the system is running.

# 2.Settings

After setting up the unit, log in to the system by entering its IP address in the browser (Internet Explorer 8 and later). When connecting, choose your language, enter the username and password, and then begin using this system.



There are five main functions of this unit: settings, live view, playback, help, and logout. They will be shown on the top of the page. Current firmware version and free storage capacity are shown above the function list.



# 2.1 Camera Setup

# 2.1.1 Add Cameras by Camera Search

The function enables user to automatically search and add cameras in the same network. There are two search mechanisms, one is UPnP, another is camera search tool. Before searching UPnP cameras, make sure that the cameras possess UPnP function. Refer to **camera support list**.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera/ Camera Settings.
- 3. Click the Camera Search tab.

4. Click the **Search** button.



5. The system will list all the currently available cameras. The inserted cameras are shown in blue. Click the 🔹 icon to add a camera into your camera list.

	The second se				
mera Settings Ca	mera Search	_	_	_	
Search Search	rch Complete				
Address	Vendor	Model	MAC	1	

- 6. After clicking the 🔹 icon, the camera setting page will pop up. Click the item to which you want to add a camera.
- 7. Insert the camera name, username, and password.

	12			1
Camera Name			47	
Address	192.168.0.72	Port	80	
lministrator Name		Password		
Add to channel	2 ~	Protocol	TCP	
Vendor	Mandan	112222-2211	Contraction of the second s	
Add	Cancel	Model	Model	
Add	Cancel	Model	Model	
Add Current Channel	Cancel Camera Settings Camera Name	Address	Vendor	Model
Add Current Channel	Cancel Camera Settings Camera Name Camera Name	Address 192.168.0.180	Vendor Vendor	Model Model
Add Current Channel 1 2	Cancel Camera Settings Camera Name Camera Name	Address 192.168.0.180	Model Vendor Vendor - none	Model Model none
Add Current Channel 1 2 3	Cancel Camera Settings Camera Name Camera Name	Address. 192.168.0.180	Model Vendor Vendor - none none	Model Model none none



To have better compatibility between camera and system, please make sure the privilege of camera credential is admin-level.

8. Click the **Add** button to add it.

9. After clicking the **Add** button, the updated camera list will be displayed in the **Camera Setting** tab.

10.	Camera Name	Address	Port	Vendor	Model
	Camera Name	192.168.0.180	80	Vendor	Model
2	Camera Name	192.168.0.181	80	Vendor	Model
3			80	none	none
4			80	- none	none

#### 2.1.2 Add Cameras Manually

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera / Camera Settings.
- 3. Click the **Camera Settings** tab, and the camera list will be displayed on the bottom of the page.
- 4. Click on the camera list for the channel you want to add and enter the camera's information.

amera Li	st				
No.	Camera Name	Address	Port	Vendor	Model
1			80	none	none
2	lb.		80	- none	- none
3			80	none	none
4			80	none	none

Camera Set	ttings				
Camera Settings	Camera Search				
🧭 Camera Settings					
Camera Nam	e				
Addres	5	Port	80		
Administrator Nam	e	Password			
Video Channe	I 🔽	Protocol			
Vendo	r none 💌	Model	none 👻		
Save	Reset Clear		Auto Detection		

- **Camera name**: The name of the camera.
- Address: The IP address.
- **Port**: The transmission port.
- Administrator Name: Login username.
- **Password**: Login password.
- Video Channel: Select the number of analog cameras supported by one video server or select the number of IP cameras possessing multiple

lens/channels.

- **Protocol**: Data transmission protocol.
- Vendor: Camera vendor name.
- Model: Camera model name.



To have better compatibility between camera and system, please make sure the privilege of camera credential is admin-level.

## 5. Click the **Save** button.

- **Save**: Save the information of this camera.
- **Reset**: Return to the latest saved settings of the selected camera.
- **Clear**: Set all the settings to default value.
- Auto Detection: After inserting IP address, port, username, and password, click this button to automatically detect other camera information, including Channel, Protocol, Vendor, and Model.

# 2.1.3 Modify Camera Information

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera / Camera Settings.
- 3. Click the **Camera Settings** tab.
- 4. Click the camera which you want to modify.
- 5. Modify the information of this camera.
- 6. Click the **Save** button.
- 7. Use the same method to replace a camera if needed.

# 2.1.4 Modify Camera Parameters

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera / Camera Parameters.
- 3. Click the **Camera Parameter** tab.
- 4. Click the camera which you want to modify on the camera list.
- 5. Modify the information of this camera.
- 6. Click the **Save** button.

Camera Parameter	Lens Settings 2nd Stream Settings
🎯 Camera Paran	neter
Camera Name	Location1
Video Format	⊙ Motion JPEG ○ MPEG4 ○ H.264
Frame Rate	1fps 💌
Resolution	720x576 💌
Quality	High 💌
Audio	Enable Audio

- **Camera Name**: The name of the camera.
- Video Format: Choose the type of format which this camera supports.
- Frame rate: Select the frame rate of the camera.
- **Resolution**: Select the resolution of the camera.
- **Quality**: Select the image quality of the camera.
- Audio: Check the Enable Audio option to view and enable audio recording.

#### 2.1.5 Set up Lens Settings

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera / Camera Parameters.
- 3. Click the Lens Settings tab.
- 4. Click the camera which you want to modify in the camera list.
- 5. Modify the information of this camera.
- 6. Click the **Save** button.

amera Parameter	Lens Settings	2nd Stream Settings	5		
) Lens Settings					
Camera Name	Location 1 (im	mervision lens)			
Lens Type	ImmerVision I	ImmerVision IMV1-1/3			
Lens	Enable O	Disable			
	Wall -				
Save	Wall •				
Camera Position Save Camera List No.	Wall ▼ Came	era Name	Immer/vision Lens	Camera Position	
Camera Position Save Camera List No.	Came Location 1 (im	era Name mervision lens)	ImmerVision Lens Enable	Camera Position Wall	
Camera Position Save Camera List No. 1 2	Wall  Came Location 1 (im Location 2	era Name mervision lens)	ImmerVision Lens Enable Disable	Camera Position Wall none	
Camera Position Save Camera List No. 1 2 3	Came Location 1 (im Location 2 Location 3 (Viv	era Name mervision lens) votek FE8171)	ImmerVision Lens Enable Disable Enable	Camera Position Wall none Ceiling	

- **Camera Name**: The name of the camera.
- Lens Type: There are two types of lens currently, ImmerVision and

Vivotek (FE8171V). You are not allowed to select type so far, type depends on camera model.

- Lens: Enable or disable lens function.
- **Camera Position**: Select the position of the camera.

If users enable the lens while lens is not installed correctly or not even installed, a warning message will pop up as a notification if users are trying to operate lens on liveview page.

# 2.1.6 Set up 2nd Stream

Stream profile is designed for mobile client and lower fps live stream display. Without stream profile integration, users cannot watch live video on mobile client nor select lower fps stream on live view. Further, for performance consideration, we fix the resolution and frame rate for each brand/series. Refer to <u>camera support list</u>.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera / Camera Parameters.
- 3. Click the **2nd Stream Settings** tab.

amera Parameter	Lens Settings 2r	nd Stream Settings		
🧿 2nd Stream Se	ettings			
Channel	1			
Camera Name	Location 1			
Stream Profile	⊙ Enable ◯ Disa	able		
) Stream Profile				
	Form	nat MJPEG		
Low Profile	Frame R	ate 1		
	Resoluti	ion VGA		
	Form	nat MJPEG		
Minimum Profile	Frame R	ate 0.5		
	Resoluti	ion VGA		
Save				
Channel	Camera Name	Camera Vendor	Camera Model	Sub-Streaming

- **Stream Profile**: If you want mobile client user to access to this camera, you can select **Enable** (default), and click **Save** button in the middle of the page.
- Low Profile: The stream profile, under 300kbps, is designed for mobile client single-view.
- Minimum Profile: The stream profile, under 100 kbps, is designed for mobile client multi-view.

# 2.1.7 View Camera Status

- 1. Open Internet Explorer and log in to the unit.
- 2. Click IP Camera / Camera Status.

amera Status							
nera	Status	_	_		_		
🧭 Camera Status							
Vo.	Name	Address	Connection Status	Rec. Status	Frame Rate	Bit Rate	
1	Location 1	192.168.4.47	& <del>8</del>	R	4.9 fps	3023.4 Kbps	
2	Location 2	192.168.2.153	8 🖉	R	0.0 fps	0.0 Kbps	
3	Location 3	202.238.124.56	Ø 🛛 🕺	R	8.0 fps	895.1 Kbps	
4	Location 4	202.238.124.34	I 🛛 🕺	R	30.0 fps	1011.3 Kbps	
						4929.8 Kbps	
timat	ed Remaining Rec	ording Time: 12 day(	(s) 1 hour(s)				
our t	otal bit rate becom	nes <b>red</b> , it means tha	at the system load is t	oo heavy			
stUp	date at Wednesda	, September 12, 201	2 11:50:01 AM				
	me nera Car No. 1 2 3 4 timat our t st Up	Name         Location 1         2       Location 1         3       Location 2         3       Location 3         4       Location 4	Name       Address         1       Location 1       192.168.4.47         2       Location 2       192.168.2.153         3       Location 3       202.238.124.56         4       Location 4       202.238.124.34         timated Remaining Recording Time:       12 day         rour total bit rate becomes red, it means the st Update at Wednesday, September 12, 201	mera Status         Camera Status       Address       Connection Status         1       Location 1       192.168.4.47       Image: Connection Status         2       Location 2       192.168.2.153       Image: Connection Status         3       Location 3       202.238.124.56       Image: Connection Status         4       Location 4       202.238.124.34       Image: Connection Status         5       Location 4       202.238.124.34       Image: Connection Status         6       Image: Connection Status       Image: Connection Status       Image: Connection Status         6       Image: Connection Status       Image: Connection Status       Image: Connection Status       Image: Connection Status         10       Location 4       202.238.124.34       Image: Connection Status       Image: Connection Status         110	Mera Status         Location 1       192.168.4.47       Image: Connection Status       Rec. Status         1       Location 1       192.168.2.153       Image: Connection Status       <	Mera Status         Camera Status         Vo.       Name       Address       Connection Status       Rec. Status       Frame Rate         1       Location 1       192.168.4.47       Image: Connection Status       Rec. Status       Frame Rate         2       Location 2       192.168.2.153       Image: Connection Status       Rec. Status       Frame Rate         3       Location 3       202.238.124.56       Image: Connection Status       Rec. Status       Rec. Status         4       Location 4       202.238.124.34       Image: Connection Status       Rec. Status       Rec. Status         4       Location 4       202.238.124.34       Image: Connection Status       Rec. Status       Rec. Status         4       Location 4       202.238.124.34       Image: Connection Status       Rec. Status       Rec. Status         4       Location 4       202.238.124.34       Image: Connection Status       Rec. Status       Rec. Status         4       Location 4       202.238.124.34       Image: Connection Status       Rec. Status       Rec. Status         5       Location 4       202.238.124.34       Image: Connection Status       Rec. Status       Rec. Status         4       Location 4       202.238.124.34       Image: Conne	

• **Connection Status**: The status of the connection. Click the **Connect** or **Disconnect** button to change the connection status.

	Status	Icon
Connection Status	Connected	G
Connection Status	Disconnected	8
Connection Status	Connecting	Ø
Connection Button	Connected: Normal	Ø
	Connected: Over	S
Connection Button	Disconnected: Normal	8
	Disconnected: Over	8

#### • **Rec. Status**: The set recording schedule of this camera in this time.

	Status	Icon
Recording Status	No Recording	R

Recording Status	Always Recording – Recording	R
Recording Status	Always Recording – Stopped	R
Recording Status	Schedule Recording – Recording	
Recording Status	Schedule Recording – Stopped	

- Frame Rate: The frame rate of this camera.
- **Bit Rate**: The transmission bit rate of this camera.
- Estimated Remaining Recording Time: Estimated remaining recording time is dividing the current free capacity by dynamic total bit rate.



If your total bit rate becomes red, it means that the loading of the system is too heavy.

# 2.2 Recording & Event Setup

# 2.2.1 Recording Mode Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Recording settings.
- 3. Click the **Recording Mode** tab.
- 4. If selecting **Always Record**, the chosen cameras will begin to record immediately.

Recording Mode	Recording Schedule			
-				
😸 Recording M	ode			
	◎ No Recording			
Pacarding Mada	de O Record by Schedule			
i toooranig no	Always Record			
	V All V Camera 1 V Camera 2 V Camera 3 V Camera 4			
Automatic Recy	cle			
Keep Vid	eo 🗌 Keep Video 🔤 7 Days			
Save				

- **No Recording**: Turn off the recording.
- **Record by Schedule**: Recording by schedule.

- Always Record: Permanently turn on the chosen cameras.
- Automatic Recycle: Check the Enable option and select the timing of automatic recycle works. We strongly suggest recycling the disk(s) when the storage space is less than 10%. (default: 10%)
- Keep Video: Set a period during which the recorded video clips will be kept intact. (max: 365)

The privilege of automatically recycle is higher than keep video if you select both.

#### 2.2.2 Recording Schedule / Event Setup

Instead of **Always Record**, you can begin the recording by setting the **Recording Schedule**.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Recording Settings.
- 3. Click the **Recording Schedule** tab.
- 4. Check the **Day** or **Week** mode.
- **Day**: Schedule the recording to turn the recorder on and off at the same time every day according to your setting.
- Week: Schedule the recording for each day of the week differently.
- 5. Click the schedule of the camera which needs to be modified.
- 6. Click the column at the bottom of the page.



• **Insert**: Insert new schedules.

- **Delete**: Delete the selected schedule.
- **Configure**: Modify the schedule and recording mode settings.
- **Copy**: Copy current **Day Schedule** to other channel(s); copy current **Week Schedule** to other day(s) of a week or to other channel(s).

Copy Day Schedule									
Apply current Day Schedule to other channels									
Channel 1	Channel 2	🔲 channel 3	🔲 channel 4						
Select: all none									
				OK Cancel					
Copy Week Sch	iedule								
Copy Curre	ent Schedul	e							
Apply currer	nt Week Schedul	e to other weeks							
Sunday	🔲 Monday 🔲 Friday	🔲 Tuesday 🔲 Saturday	🔲 Wednesday						
C Apply all We	ek Schedule to (	other channels							
channel 1	channel 2	channel 3	channel 4						
Select: all none									
				OK Cancel					

 The default setting of the camera's recording schedule is from 00:00 to 24:00. If you want to modify the time slot, click the **Configure** button to modify the default settings first.

Schedule Configura	ation		
- Time Start Time: End Time:	00 • : 00 • 24 • : 00 •	Mode Always Record Motion Digital Input	OK Cancel

8. Choose the recording mode.

Schedule Configu	ration	
Time Start Time: End Time:	00 v 24 v 00 v	Mode Always Record Motion Digital Input OK Cancel
		OK

- Always Record: Always record.
- Motion: Record when camera motion is detected. Go to the "Motion" tab to define which camera's motion detection to associate with this channel of camera to start recording.

Camera Setting							
Recording Mode	Recording	Schedule	Motion	Input			
😸 Profile of Re	ecord on Me	otion					
Camera List	F	Profile					
<ul> <li>Camera List</li> </ul>		F	re-Record	15	•	Sec.(Max.: 180)	
Camera 1		D	ot Decord	15	_		
Camera 2		FC	JSI-Record	15	-	Sec.(Max.: 180)	
Camera 3				<b>M</b>	lotic	n on Camera 1	
Camera 4			Motion	<b>M</b>	lotic	n on Camera 2	
			Modoli	<b>M</b>	lotic	n on Camera 3	
				<b>M</b>	lotic	n on Camera 4	
Save	Reset						

• **Digital Input**: Record when digital input is triggered. Go to the "Input" tab to define which input triggering to associate with this channel of camera to start recording.

Camera Setting									
Recording Mode	Recording Scl	hedule	Motion	Input					
🖉 Profile of Re	Profile of Record on Input								
Camera List	Pro	file							
😑 Camera List		F	Pre-Record	15	•	Sec.(Max.: 180)			
Camera 1		P	ost-Record	15	•	Sec.(Max.: 180)			
Camera 3 Camera 4				Expa + C	nd A am	ul Digital Inputs' era 1			
		C	)igital Input	ĒC	am []	era 2 ] Digital Input#1 ] Digital Input#2			
Save Reset									



When setting the event Motion, please first ensure that the motion detection function of the camera has been enabled.

9. If you want to add another new schedule, click the **Insert** button to add a new one.

Recording Settings											
Recording Mode	Record	ing Schedule	Motion	Input							
😸 Recording S	Schedule	•									
Camera List		Schedule									
Camera List     Camera List     Camera 1     Camera 2     Camera 3     Camera 4		00 01 Cam1 Cam2 Cam3 Cam3 Cam4 00 01 Insert D	02 03 04	05 06 07 05 06 07 05 06 07	08 09		13 14 10 10 13 14		7 18 19	20 21 22	23 24
		00:00	ne	14:00	ne	Alwavs	cora	-			
	•	16:00		21:00		Always			>		
Save         Reset         Before setting record on motion, remember to enable the motion detection function in the camera web first.											

#### 10. Click the **Save** button.

When changing the motion detection settings of a camera, make sure to disconnect your unit and that camera first. Once you have finished, re-connecting them will update the settings in your unit.



There is another way to set the schedule. If you want to change the recording time length, drag the end of the time bar from 24:00 back to the length you wish, and then drag the beginning of the time bar to the point at which you would like it to commence recording. (You may also click the **Insert** button to add new schedules.)

#### 2.2.3 Camera Events and Responding Actions Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Event & Action Management.
- 3. Choose the camera, and then select one of the events. The event list depends on camera its own ability.

Event & Action Mana	gement
Event & Action	
🕑 Event & Action	
Camera List	Event & Action
Configure	Add Del Configure
+ Camera 1	Action Options
Camera 2	
Connection lost	
Motion from Camera	
the Camera 3	
+ Camera 4	
+ System	
Save Reset	Before setting <i>Motion from Camera</i> , please enable the motion detection function on the camera's web interface first.

- **Connect lost**: When a connection between the camera and this unit is lost, the system will trigger an action.
- Motion from Camera: When video motion is detected, the camera triggers an action.
- **Input**: Any external input can trigger an action.



When setting the event **Motion from Camera**, make sure to set up the camera's motion detection function first. Besides, event log will be recorded only if event is selected on this page.

4. Click the **Configure** button to enable the event and select the active period.

Event Configuration	×
Enable Event     Active Period     Abways Active	
Active only in the following period       0     0       0     0       0     0	
IO Type	
N/O	
© N/C	
	OK Cancel

- Always Active: The selected event is always active.
- Active only in the following period: The selected event is only active in the designated time, which able to cover two days e.g. from 18:00 to 09:00.
- **I/O Type**: Check one of the options of I/O type. N/O means normal open, while N/C means normal close.
5. Click the **Add** button to set up the responding actions of this event.

Event & A	ction Mana	gement	
Event & Action			
🕑 Event & A	ction		
Camera List		Event & Action	
Configure	Output	Add Del Configure	
+ Location 1	Email CMS	Action Options	
	Push Notification E-map popup		
Motion     Motion     Input#0     Location 3     Location 4     I/O Box 51003     System	(B Block)		
Save Before settin Users have to with the new	Reset Ig Motion from Came o sign in on mobile c password to start th	era, please enable the motion detection function on the camera's web interface first. :lients to start push notification service. If the user password is changed, please sign he service again.	in

- **Output**: When an event occurs, the system will send an output signal to other connected devices.
- Email: When an event occurs, the system will send Email notifications. Make sure to add an Email address first.
- **CMS**: When an event occurs, the system will send out a signal to CMS. CMS will highlight this event.
- Push Notification: When an event occurs, the system will send instant message to the registered mobile clients as a notification. Mobile users can check the recording videos on mobile client to watch what just happened. Refer to <u>Push Notification</u>.
- **E-map popup**: When an event occurs, the system will pop up E-map with an event indicator to show users the location of the scene clearly.
- 6. Click the action, and then click the **Configure** button to modify the details of that action if necessary.
- 7. Click the **Save** button.



After selecting camera events, the event information will display on the screen when it's triggered.

# 2.2.41/O Box Input and Responding Action Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Event & Action Management.

- 3. Select an input of I/O Box from list.
- 4. Click the **Add** button to set up the responding actions of this event.
- 5. Click the action, and then click the **Configure** button to modify the details of that action if necessary.

Event & Action	_		
🕑 Event & Ac	tion		
Camera List		Event & Action	
Configure	Output	Add Del Configure	
+ Location 1 + Location 2 + Location 3	Email CMS Push Notification E-map popup Show on Compress	Action	Options
+ Location 4	B Block)		
Gate Cobby First Flor	or Floor		
+ System			
Save Before setting	Reset Motion from Cam	era, please enable the motion detection	n function on the camera's web interface first.

- **Output**: When an event occurs, the system will send an output signal to other connected devices.
- Email: When an event occurs, the system will send Email notifications. Make sure to add an Email address first.
- **CMS**: When an event occurs, the system will send out a signal to CMS. CMS will highlight this event.
- Push Notification: When an event occurs, the system will send instant message to the registered mobile clients as a notification. Mobile users can check the recording videos on mobile client to watch what just happened. Refer to <u>Push Notification</u>.
- **E-map popup**: When an event occurs, the system will pop up E-map with an event indicator to show users the location of the scene clearly.
- Show on Camera: When an event occurs, the system will show an alert message on selected camera(s) of screen.

Show Notification on Camera		
🗌 Camera 1 🔲 Camera 2 🔲 Camera 3 🔲 Camera 4		
🗌 Camera 5 🔲 Camera 6 📄 Camera 7 📄 Camera 8		
	Ok	Cancel

6. Click the **Save** button.

## 2.2.5 System Events and Responding Actions Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Event & Action Management.
- 3. Click the **Event & Action** tab.
- 4. Click **System** to unfold the list of system events, and then select one of the five events.

Event & Action	
🕑 Event & Action	
Camera List	Event & Action
Configure	Add Del Configure
Camera 1 Camera 2 Camera 3 Camera 4 System Abnormal disk status Daily system report Unable to access FTP Backup unfinished Power-on notification	Action Options
Auto power-off notification (overheat)	

- Abnormal disk status: When there is no enough disk space for recording or when disk is abnormal for accessing, the system will trigger an action.
- **Daily system report**: Enable users to know the system information, HDD usage, and Disk status everyday through Email without accessing to the unit to check.
- Unable to access FTP: The action will be triggered when the connection between the unit and FTP server is lost.
- **Backup unfinished**: If there is any file which the system didn't complete the backup process, the file(s) name will be listed and send out through Email after finishing the last file of this backup schedule.
- **Power-on notification**: Record the time as power was turning on.
- Auto power-off notification: If overheat was happened, users will be notified that power is auto off via Email.
- 5. Click the **Add** button to set up the responding actions of this event. Follow the steps in the previous section.
- 6. Click the **Save** button.



Email and Push Notification are the only two actions to the event **Daily system** report, Unable to access FTP, Backup unfinished, Power-on notification and Auto power-off notification (overheat). In addition to select a contact, remember to insert the time of sending daily system report.

Automatically Send Daily System Report	
00:00	
Contact List	
Guard <guard@xxx.com></guard@xxx.com>	

## 2.2.6 Push Notification

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Event & Action Management.
- 3. Add **Push Notification** as a responding action for an event. Configure the rearm interval and assign user(s).

Notification Configuration	
Frequency	
Rearm interval:	10 Sec.(Max:300)
User List	
🔲 admin	
🔲 guard	
📝 supervisor	
	OK Cancel

- Frequency Rearm interval: The minimum interval of notifications as the event occurs. (default: 10, max: 300) For example, you set up push notification as the responding action for motion detection. When motion detected, it may trigger several alarms. In this case, you may not want to receive several push notifications frequently, then you can define the suitable rearm interval.
- User List: All user accounts in this unit.
- 4. Click the **Save** button.

Event & Action Mana	gement	
Event & Action		
🕑 Event & Action		
Camera List	Event & Action	
Configure	Add Del Configu	re
- Location 1	Action	Options
Connection lost	Push Notification	supervisor
Motion from Camera		
+ Location 2		
+ Location 3		
+ Location 4		
+ System		
Save Reset		
Before setting Motion from Cam	era, please enable the mo	tion detection function on the camera's web interface first.
Users have to sign in on mobile o with the new password to start t	clients to start push notific he service again.	cation service. If the user password is changed, please sign in

5. Sign in the unit on NUUO mobile client with the user account assigned with push notification service.

_		18 PM	70% 🖿
Cano	ncel C Bl	ock 102	Save
	Server Name		
	C Block 102		
	Server Address		
	220.132.124.68		
	Live Streaming Port		
	5150		
	Playback Port		
	5160		
	Username		
	supervisor		
	Password		
	•••••		

6. When an event occurs, the user will get the push notification instantly. The user can click the "View" icon to watch the recording videos.





If the user password is changed, please sign in with the new password to start the service again.



If users don't want to **receive** notifications anymore, users can turn off this feature on NUUO mobile client. There is one possibility of de-registering failed, that is, users have ever logged in to the mobile client by typing both LAN IP and WAN IP of the NVR, but only do de-registering on one side.



If users don't want to **send** notifications to certain user account, users can de-select the user account in Event & Action Management page.



User account won't be exported as saving configuration, which implies the user list of push notification won't be saved as well.

# 2.2.7 SMTP Server Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Email.
- 3. Click the **SMTP Server** tab.

Email			
SMTP Server	Contacts		
SMTP Serv	er		
Server Address		Port	🔲 use SSL
Sender			
Subject	NVR Event		
Body	Event occurs! Please check your system.	×	
SMTP Authentication			
Username		Password	
Save	Reset Send	Test Mail	

- Server Address: SMTP (Simple Mail Transport Protocol) server IP address.
- **Port**: SMTP port.
- **Sender**: Sender information.
- **Subject**: The subject of the mail.
- **Body**: Email content.
- **SMTP Authentication**: Before sending out an Email, enter the username and password for SMTP authentication.
- Username
- Password
- 4. Click the **Send Test Mail** button and the system will send a test mail to the sender. Check it after testing.
- 5. Click the **Save** button.

## 2.2.8 Add Event Contacts

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Recording & Event / Email.
- 3. Click the **Contacts** tab.

Email SMTP Server	Contacts			
Name				
Email				
Add Cor	ntact			
Name		Email	Delete	
Save	Reset			

- Add Contact: Add this new contact into the contact list. (Maximum: 40 contacts)
- **Reset:** Return to the latest saved settings of the contact list.
- **Save**: Save this time modification of the contact list.
- 4. Insert the name of a new contact.
- 5. Insert the Email address of this new contact.
- 6. Click the **Add Contact** button.
- 7. Click the **Save** button to save this modification of the contact list.

# 2.3 RAID & File Settings

#### 2.3.1 Create a RAID Volume

In this system, the term RAID volume refers to one or more disk drives working together as a RAID logical drive. You must create a RAID volume before starting to record.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. Click the **Create** tab.

RAID Manage	ement	
RAID Status Modify	Create Delete Form	nat
😸 Create RAID		
	RAID Level	○ RAID 0
Embedded	Assign Disk(s)	Disk 1 Disk 2
Create Reset	$\supset$	

- 4. Choose the RAID level you prefer for your disk array.
- 5. Check boxes of disks and click the >> button to assign disk drives for this volume.
- 6. Click the **Create** button.
- 7. A confirmation dialog pops up. Check the **Yes, I want to create volume** with those disk(s) box, and click the **Yes, create it** button.

Jse those dis	k(s):		
Disk Name	Model	Capacity	
Disk 1	ST31000525SV	931 GB	
Disk 2	ST31000525SV	931 GB	

8. Creating RAID volume takes a while, depending on the size of disks and the RAID level you choose. You can start recording during RAID creation.

RAID Status Modify CI	até Delete Format
😸 RAID Status	
List	Status
	RAID Name VOLUME1
- VOLUME1	RAID Level RAID1
Disk 1	RAID Status Functional
Disk 2	Total Capacity 931.51 GB (953868 MB)
S.G. L	Free Capacity N/A
	Used Capacity N/A
	Usage
	Update Time 2011 / 4 / 26 PM 12:37:37
	Total Devices 2
	Active Devices 2
	Failed Devices 0
	Spare Devices 0
	Format Progress
	Recovery Progress



The RAID Volume will be functional on another unit if **all** disks of this volume are moved to the unit.



After setting RAID level, you are not allowed to change neither the RAID level nor the number of disks containing in this volume.



Separate embedded disk(s) and external disk (DAS) from two groups, which implies there is no way to create a single volume with both embedded and external disks inside.



To reduce the possibility of having problems to access public folder via My Network Places, before creating new disk volume or modifying volume, please delete the invalid volume if any.



If you choose Express Mode when using the **Installation Wizard**, the disk(s) will be set to RAID 0 automatically unless the number of disks is not enough for this RAID level.

# 2.3.2 View RAID Volume Status

RAID status refers to the disk drives on your unit and how they are arranged into a RAID volume.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. Click the **RAID Status** tab to view the status of your RAID Volume.

RAID Status Modify Cr	eate Delete Format		_
RAID Status			
ist	Status		
- Volumes	RAID Name	VOLUME1	
- VOLUME1	RAID Level	RAID0	
Disk 1	RAID Status	Functional	
- VOLUME2	Total Capacity	233 GB	
Disk 2	Free Capacity	216 GB	
0.012	Used Capacity	13 GB	
	Usage		6%
	Update Time	2011 / 3 / 24 PM 09:17:00	80
	Total Devices	1	
	Active Devices	1	
	Failed Devices	0	
	Spare Devices	0	
	Format Progress		
	Recovery Progress		

- **RAID Name**: Name of your RAID, automatically assigned when it was created.
- **RAID Level**: RAID 0, 1, 5, or 10, specified when it was created.
- **RAID Status:** *Functional* is normal. *Critical* means there are some problems on RAID volume, but the recording status is normal. *Offline* means that no volume is found, so recording is stopped and you cannot access your data either. *File system error* means that RAID volume is existed but unmounted, so recording is stopped and you cannot access your data either.
- **Capacity**: Total, free, used data capacity of the RAID volume.
- **Update Time**: The time of volume created/updated.
- **Devices**: Total number of disks and the number of active, failed, spare disks.
- Format Progress: The status of RAID format
- **Recovery Progress**: The status of RAID recovery

### 2.3.3 View Disk Drive Information

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. Click the **RAID Status** tab.
- 4. Click on a disk directly to view the information.

RAID Management								
RAID Status Modify C	reate Delete Format							
👸 RAID Status								
List	Status							
	Vendor	Hitachi						
- VOLUME1	Model	HDP725050GLA360						
Disk 2	Capacity	465 GB						
	Firmware Version	GM4O						
	Serial No.	GEC534RJ0HK9ME						
	Smart Support	Yes						
	Smart Enable	Enable						
	RAID Status	Active						

# 2.3.4 Modify RAID Volume

This function is designed for replacing a broken hard drive with a new one, instead of modifying RAID level.

In the condition of critical RAID status, it's a warning to show that one of disks of this RAID volume may be damaged. Even though it's no impact on the recording function, you'd better to replace a new disk to make sure the volume with data protection mechanism.



This function is not applied to RAID 0, since there is no data protection mechanism by its nature.



In case of any unexpected damage, we recommend users to unplug running HDD by this method, which can be viewed as security hard drive remove.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. Click the **Modify** tab.

AID Status	Modify	Create Del	ete Fo	rmat		_	
3 RAID Lis	st						
V	/olume	RAID L	evel	RAID Capacity	RAID	Status	Details
VOLU	ME1	RAID1		931.51 GB	Critical		Details
				and the second sec			Table Street South St.
Dis Disk 2	sk Name	ST310005	Mo 25SV	del	Capacity 931 GB	Det	Details ails
Disk 2 Disk 2 Modify 1	sk Name Volume	ST310005	Mo 258V	del	Capacity 931 GB	Det	Details ails
Disk 2 Disk 2 Modify 1	sk Name Volume	ST310005: RAID Name RAID Level	Mo 25SV	del	Capacity 931 GB	Det	Details ails
Disk 2	sk Name Volume	RAID Name RAID Level Capacity	Mo 25SV	del	Capacity 931 GB	Det	Details ails
Disk 2	sk Name Volume	RAID Name RAID Level Capacity RAID Status	Mo 25SV	del	Capacity 931 GB	Det	Details ails
Disk 2 Disk 2	ok Name	RAID Name RAID Level Capacity RAID Status	Mo 25SV	del ove Disk	Capacity 931 GB	Det	Details ails
Disk 2	volume	RAID Name RAID Level Capacity RAID Status Actions	Mo 25SV Rem	del ove Disk	Capacity 931 GB	Det	Details ails

4. Click on the volume you want to modify. The information of this volume will be displayed under the **Modify Volume** section.

o status mouny	Create De	lete Form	nat				
RAID List							
Volume	RAID	_evel	RAID Capacity		RAID Sta	tus	Details
VOLUME1	RAID1	ę	931.51 GB		Critical		Details
0							
Free Disk List				10			
Disk Name		Mode	1		Capacity		Details
Disk Name Disk 2	ST310005	Mode 25SV	Ĩ	931 (	Capacity 38	Detai	Is
Disk Name Disk 2 Modify Volume	ST310005	Mode 25SV VOLUME1	1	931 (	Capacity 38	Detail	Is
Disk Name Disk 2 Modify Volume	ST310005 RAID Name RAID Level	Mode 25SV VOLUME1 RAID1	1	931 (	Capacity 38	Detai	Details Is
Disk Name Disk 2 Modify Volume	ST310005 RAID Name RAID Level Capacity	VOLUME1 RAID1 931.51 GB	1	931 (	Capacity 38	Detai	Details Is
Disk Name Disk 2 Modify Volume	ST310005 RAID Name RAID Level Capacity RAID Status	Mode 225SV VOLUME1 RAID1 931.51 GB Critical		931 (	Capacity 38	Detai	Is
Disk Name Disk 2 Modify Volume	ST310005 RAID Name RAID Level Capacity RAID Status	VOLUME1 RAID1 931.51 GB Critical Remove	I B Disk	931 (	Capacity 38	Detai	Details Is
Disk Name Disk 2 Modify Volume	ST310005 RAID Name RAID Level Capacity RAID Status Actions	VOLUME1 RAID1 931.51 GB Critical Remove	i e Disk :k ⊙ Di	931 (	Capacity 38 31 GB ST3100	Detail 00525SV	Is

- 5. After removing the damaged disk. Add a free disk to replace the damaged, and click the **Modify** button.
- 6. A confirmation dialog pops up. Check the **Yes**, **I want to modify this volume** box, and click the **Yes**, **modify it** button.

Modify Volume		×
Are you sui	e you want to modify t	his volume?
RAID Name	VOLUME1	
RAID Level	RAID1	
Capacity	931.51 GB	
RAID Status	Critical	
Assigned Disks	Disk 1 931 GB ST31000525S	
Action for n Add Disk	10difying volume:	
Disk 2 931 GB	nodify this volume.	

7. Modifying RAID volume takes a while, depending on the size of disks you choose. Recording won't be stopped during the modification, and the data of this RAID volume is fully accessible.

RAID Status Modify C	neate Delete Format					
🧭 RAID Status						
List	Status					
	RAID Name	VOLUME1				
- VOLUME1	RAID Level	RAID1				
Disk 1	RAID Status	Functional				
Disk 2	Total Capacity	931.51 GB (953868 MB)				
	Free Capacity	N/A				
	Used Capacity	N/A				
	Usage					
	Update Time	2011/4/26 PM 04:00:29				
	Total Devices	2				
	Active Devices	1				
	Failed Devices	0				
	Spare Devices	1				
	Format Progress					
	Recovery Progress	7%				

#### 2.3.5 Delete a RAID Volume

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. Click the **Delete** tab.

Statue				_	_
RAID	List				
-	Volume	RAID Level	RAID Capacity	RAID Status	Details
2	VOLUME1	RAID1	931.51 GB	Functional	Details

- 4. Click the option button beside the RAID Volume you want to delete.
- 5. Click the **Delete** button.
- 6. A confirmation dialog pops up. Check the **Yes, I want to delete this volume** box, and click the **Yes, delete it** button.

re you sure y	ou want to del	ete this volume?		
/olume	VOLUME1		1	
	Disk Name	Model	Capacity	
ssigned Disks	Disk 1	ST31000525SV	931 GB	
	Disk 2	ST31000525SV	931 GB	
Yes. I want to delete	Disk 2	ST31000525SV	931 GB	

7. System will restart automatically after RAID volume is deleted



When you delete a RAID Volume, all the folders in the RAID volume and all the data saved in the folders will be deleted. Backup any important data before deleting a RAID Volume.

### 2.3.6 Format

Neither pressing reset button nor loading default setting, the data of RAID volume won't be deleted, which implies that format is the only way to clean the RAID information from disks.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. Click the **Format** tab.

AID	List				
	Volume	RAID Level	RAID Capacity	RAID Status	Details
۲	VOLUME1	RAID0	1863.02 GB	Functional	Details

- 4. Click the option button beside the RAID Volume you want to format.
- 5. Click the **Format** button.
- 6. A confirmation dialog pops up. Check the **Yes**, **I want to format this volume** box, and click the **Yes**, **format it** button.

ou want to for	mat this volume?	•	
VOLUME1		1	
Disk Name	Model	Capacity	
Disk 1	ST31000525SV	931 GB	
Disk 2	ST31000525SV	931 GB	
	VOLUME1 Disk Name Disk 1 Disk 2	VOLUME1           Disk Name         Model           Disk 1         ST31000525SV           Disk 2         ST31000525SV	VOLUME1         Capacity           Disk Name         Model         Capacity           Disk 1         ST31000525SV         931 GB           Disk 2         ST31000525SV         931 GB

7. System will restart automatically after volume format is complete.

## 2.3.7 Modify the FTP Protocol Settings

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / Protocol Control.

- 3. Click the **FTP Sharing** tab.
- 4. Check and enter the settings of this unit.
- 5. Click the **OK** button.

Protocol Control				
TIP Settings				
Services	🔿 Enable 💿 Disable			
Command Port	21			
Passive Ports	1024 ~ 65535			
OK Cancel				

- **Services**: Whether users can access this unit through FTP or not.
- **Command Port**: The port for commands between a server and a client.
- **Passive Ports**: The data transmission port of passive mode.

# 2.4 Auto Backup

This feature enables you to automatically backup the recorded video of the previous date to FTP site. There are two steps to enable the function, one is **Set up Backup Schedule**, another is **Set up Backup Server**.

# 2.4.1 Set up Backup Schedule

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / Auto Backup Management.
- 3. Click the **Backup Schedule** tab.
- 4. Set up backup schedule, select the backup channels, and check the **Enable** option to enable **Auto Backup**.

Auto Backup Ma	nagement
Backup Schedule Backu	p Server
Backup Schedule	
Auto Backup	C Enable
Daily Backup Time	00 : 00
Video Start Time	07 : 00
Video End Time	18 : 00
Camera	select: all / none V Camera 1 V Camera 2 V Camera 3 V Camera 4
🗑 Current Event Setti	ıgs
Unable to access FTF	Enable
Backup Unfinished	Enable
Save Reset	

- Auto Backup: Check the **Enable** option to enable this function.
- **Daily Backup Time**: The daily scheduled time to start backup process.
- Video Start Time: The start time of recorded video of the previous date.
- Video End Time: The end time of recorded video of the previous date.
- **Camera**: Select the channel(s) to backup.
- Current Event Settings shows the condition of the events of auto backup – enable or disable. Follow the steps of <u>System Events and</u> <u>Responding Actions Setup</u> to configure the event & action.



The system backups recorded video files one by one. If the connection between the unit and FTP server is normal, but some problems of FTP causes the system unable to write files on FTP, the system would try each file three times before starting to backup the next file. If the connection is lost, the system would wait for the connection, so no file would be skipped.

# 2.4.2 Set up Backup Server

- 1. Open Internet Explorer and log in to the unit.
- 2. Click RAID & File System / Auto Backup Management.
- 3. Click the **Backup Server** tab.
- 4. Set up the FTP server and create a folder for backup files. The folder format is "FolderName", "FolderName/SubFolderName", and so on.

For example: AutoBackup/NVR

Backup Schedule Backu	p Server	_
🕜 Backup Server		
FTP Site	nuuo.dnsalias.com	
FTP Port	21	
Username	FAE	
Password	•••••	
Backup to Remote Folder	AutoBackup/NVR	

5. After setting up all the information, click the **Test FTP** button and the system will create a folder to FTP. Check it after testing. In this case, the route of the tested file will be:

ftp://nuuo.dnsalias.com/AutoBackup/NVR/NVRsolo\_ComputerNam
e



6. Click the **Save** button.



Make sure the FTP account with privileges of administrator who is able to upload, rewrite, delete files, and create new folder. Besides, make sure the FTP server has enough space for auto backup.

To avoid the failure of auto backup, please check the normality of FTP server regularly (e.g., enough space for video, system conditions.)

# 2.5 Network Setup

## 2.5.1 View Network Status

1. Open Internet Explorer and log in to the unit.

- 2. Click Network Setup / Network Setup.
- 3. Click the **Information** tab to view the unit's network information.

Network	Setu	р	
Information	Setup	DDNS Setup	UPnP Port Forwarding
Commor	n Inform	ation	
	\$	Server Name	solo_1040
🧭 Etherne	t Adapt	ter 1 Informa	ition
		IP Address	192.168.4.96
	1	Subnet Mask	255.255.252.0
Defau	lt Gatewa	y IP Address	192.168.4.1
Primary DNS			192.168.4.1
	Sec	condary DNS	
🧭 Etherne	t Adapt	ter 2 Informa	ition
		IP Address	
		Subnet Mask	
Defau	lt Gatewa	y IP Address	
	1	Primary DNS	
	Sec	condary DNS	
🎯 Built-in	DHCP In	formation	
	S	etting/Status	Always disable (Disable)
		IP Address	192.168.4.96

# 2.5.2 Network Settings

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Network Setup / Network Setup.
- 3. Click the **Setup** tab to set up the network settings of your unit.

Network Setup	
Information Setup DDNS Setup	UPnP Port Forwarding
🗑 Common Setting	
Server Name	NVS-4
Internet Interface (WAN)	LAN 1 -
🧭 LAN 1 Setting	
Internet Protocol	Obtain an IP address automatically      ○ Specify an IP address
IP Address	192.168.1.100
Subnet Mask	255.255.255.0
Default Gateway IP Address	192.168.1.1
Primary DNS	192.168.1.1
Secondary DNS	
🗭 LAN 2 Setting	
Internet Protocol	Obtain an IP address automatically ○ Specify an IP address
IP Address	192.168.2.100
Subnet Mask	255.255.255.0
Default Gateway IP Address	192.168.2.1
Primary DNS	192.168.2.1
Secondary DNS	
🕑 Built-in DHCP Setting	
Setting	🛇 Smart enable 🔘 Always disable
IP Address	
Subnet Mask	
Default Gateway IP Address	
Primary DNS Secondary DNS	
Starting IP Address	
Ending IP Address	
OK Cancel	

#### • Server Name: Name your unit.

Because of the internal data modifications required, it takes a few seconds to change the name of your unit. Log in again after configuration activated.

- Internet Interface (WAN): The selection is for 4bay unit to choose which LAN is connected to the internet, which implies that there is no longer to fix the Internet access to LAN 1 for sending mails, activating license online, receiving auto upgrade notification, etc.
- **Internet Protocol**: Choose to obtain an IP address from external DHCP server automatically, or configure the IP address manually.
- **IP Address**: IP address of this unit.
- **Subnet Mask**: Subnet mask address.
- **Default Gateway IP Address**: Gateway IP address.
- **Primary DNS**: Primary DNS (Domain Name System) address.
- **Secondary DNS**: Secondary DNS address.

The unit specifies two Giga LANs. We recommend using them under the scenario of two subnets, one is for cameras/devices, and the other is for remote access. If you deploy two LANs on the same subnet, it's likely to make parts of camera disconnected as either one of LAN is disconnected.

If all cameras are disconnected, please check if the network settings are

- LAN 1: static IP 192.168.1.100 (default) / not connected
  - LAN 2: DHCP / connected to switch, which subnet is 192.168.1.X
  - or static IP 192.168.1.X / connected to switch, which subnet is 192.168.1.X

The reason of disconnection is that system transmits package via LAN 1 in such condition. The solution is changing the LAN 1 settings to DHCP or connecting network cable on LAN 1.

- 4. The unit possesses built-in DHCP service, which enables the system to dynamically assign IP addresses to the connected camera clients within the same subnet.
  - Setting: Two options of built-in DHCP service, smart enable and always disable. When you have router in your network, we strongly recommend choosing "always disable" to avoid any IP conflicts. If you are not sure if there is any router in your network, please choose "smart enable", which detects the network environment then decide to enable or disable the service.
  - **Starting IP Address**: The IP address for the built-in DHCP to start assigning from.
  - Ending IP Address: The end of the IP address that the built-in DHCP assigns.
- 5. If you are using ezNUUO service. You can skip the DDNS setup. For more information, please refer to <u>ezNUUO</u>.
- 6. Click the **DDNS Setup** tab to enable Dynamic Domain Name Server function, allowing you to connect unit with dynamic IP address.

formation	Setup	DDNS Setup	UPnP Port Forwarding	
🜖 Dynami	ic DNS Se	etting		
	DDNS	Enable		
	Provider	DynDns 🔒		
Us	ername			
P	assword			
Ho	stname			
Updat	e Period	16 v minu	les	

## 2.5.3 Auto Port-Forwarding

If you are using ezNUUO service. You can skip this section. For more information, please refer to <u>ezNUUO</u>.

This function is designed for saving time in port configuration on router if users want to access the unit (in LAN) from WAN. Once enabling UPnP Service on router, users can do port-forwarding for setting page (default: 80), liveview (default: 5150), playback (default: 5160), and CMS (default: 5170) automatically.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Network Setup / Network Setup.
- 3. Click the **UPnP Port Forwarding** tab.
- 4. Click the **Search** button, and the searched routers will be listed.

ormation	Setup	DDNS Setup	UPnP Port Forwarding		_
UPnP R	outer Sea	arch	ite		
No.		Device	Name	IP Address	1
1	D-Link D	DIR-300		192.168.8.1	+
No. 1 UPnP P	D-Link D	Device DIR-300 arding List	e Name	IP Address 192.168.8.1	
FIF F	orcrorwa	irong Lise			

5. Select the searched router, and all UPnP ports configured on this router will show under the **UPnP Port Forwarding List**.

formation	Setup	DDNS Setup	UPnP Port Forwarding		
👌 UPnP Re	outer Sea	arch			
Search		Search complete	•		
No.		Device 1	lame	IP Address	
1	D-Link D	)IR-300		192.168.8.1	+
1 <b>OUPnP Po</b> Physic	D-Link D ort Forwa	ording List Virtu:	al IP Virtu	192.168.8.1	*
1 DPnP Po Physic 51673	D-Link D ort Forwa	VIR-300 Irding List Virtu: 192.168.8.63	al IP Virtu 2 51673	192.168.8.1 al Port	*
1 DPnP Po Physic 51673 47500	D-Link D ort Forwa	VIR-300 urding List Virtu: 192.168.8.6: 192.168.8.2:	al IP Virtu 2 51673 23 47500	192.168.8.1	•
1 <b>UPnP Po</b> Physic 51673 47500 47500	D-Link D ort Forwa	DIR-300  Irding List  Virtu:  192.168.8.6  192.168.8.2  192.168.8.2	al IP Virtu 2 51673 23 47500 23 47500	192.168.8.1	

6. After selecting one of searched routers, click the 🔹 icon to set up port-forwarding to this router automatically. You will find ports of setting, liveview, playback and CMS are listed.

formation	Setup	DDNS Setup	UPnP Por	rt Forwarding		_	
👌 UPnP Ro	outer Sea	arch	Ċ.				
Search		Search comple	ete				
No.	1	Device	e Name		IP	Address	
	D-Link D	DIR-300			192.168.8.1		+
Physic 51673	cal Port	Vir 192.168.8	tual IP .62	Virtu 51673	al Port		
J UPnP Po	ort Forwa	arding List	tuol ID	Vietu	al Dart		
47500		192.168.8	.223	47500			
47500		192.168.8	.223	47500			
1234		192.168.9	.55	1234		100	
80		192.168.3	.50	80			
5150		192.168.3	.50	5150			
5160		192.168.3	.50	5160			



For security reason, the privilege of UPnP port-forwarding is LOWER than port-forwarding configured on router. Therefore, if the ports have been used on router, we are unable to know before finding out access failure.



UPnP port-forwarding is for temporarily use only. Most of UPnP router will clean up all UPnP ports after router reboots. Furthermore, for some routers, if the port you want to add has already been used for other devices in the same way (UPnP port forwarding), this "enable" action will cover over the settings.

#### 2.5.4 Network Service Setup

1. Open Internet Explorer and log in to the unit.

- 2. Click Network Setup / Network Service.
- 3. Click the **Web Service** tab
- 4. Set up a port for this unit and click the **Save** button.

eb Service	Live View & Playbac	ck Service	CMS Service	_
Web Ser	ver			
	Management Port	80		

5. Click the Live View & Playback Service tab.

eb Service Live V	iew & P	layback Service	CMS Service		
j Live Streaming	Serve	r			
	Port	5150			
Maximum Connections 16					
) Playback Serve	r				
	Port	5160			
Maximum Users 4					
Log Access Enable					
) Black/White Lis	t				
White List	Enab	le			
Black List	Enab	le			
			to		
ID Danas	Add	to White List	Add to Black List		
ir Kange		Index	IP	Access	Delete

#### • Live Streaming Server

- > Port: Live streaming transmission port.
- Maximum Connections: Maximum connections from remote access. (Max: 64)
- Playback Server
  - > Port: Playback transmission port.
  - Maximum Users: The number of users who can access playback functions at the same time. (Max: 8)
  - Log Access: Check to record playback access information on NVR Log page, including access time, playback video channels, and time frame.
- Allowed/ Blocked List

- Allowed List: Only IP addresses from the allowed list are allowed to log in.
- Blocked List: IP addresses from the blocked list will be unable to log in.



When setting Maximum Connections in Live Streaming Server settings, 1 connection means that one user connects to one camera. If the maximum connections value is set to 16, and each user connects to 4 cameras, the allowed connections per user will become 4, rather than 16.

## 2.5.5 CMS Service Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Network Setup / Network Service.
- 3. Click the **CMS Service** tab.

Web Service	Live View 8	Playback Service	CMS Service	
CMS Serve	er			
С	MS Server	Enable		
	Port	5170		
Maximum Co	nnections	8		

- **CMS Server**: Check the **Enable** option to enable CMS service.
- **Port**: the port number through which the CMS connects to this unit.
- Maximum Connections: The maximum number of allowed CMS connections.

#### 2.5.6 ezNUUO

ezNUUO is designed to truly simplify the process of establishing Internet access to NUUO systems. It eliminates the need for setting up port forwarding and configuring DDNS. Simply register a server ID on the setting page, then go to ezNUUO website or sign in NUUO iViewer App to watch live videos and playback from wherever you are.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Network Setup / ezNUUO Registration.
- 3. Click the **Registration** tab.

ezNUUO R	egistration
Registration	
😸 Registratio	n
Register a use this fe	server ID and access to NVR via web browser and mobile phone without router setting. To ature, you need Internet access to the LAN where the unit is installed
Server ID	
	Test
Save	Reset

- 4. Enter a desired server ID in the Server ID field.
- 5. Click the **Test** button to check the availability of the desired server ID.
- 6. Click the **Save** button.
- 7. Now you can login to <u>www.eznuuo.com</u> on a web browser to configure, watch live videos and playback with any other settings, such as port forwarding or DDNS setup. All you need to know is the server ID, username and password. What's more, you can also sign in to NUUO mobile app iViewer to watch live videos and playback from everywhere you are.





# 2.6 Management

#### 2.6.1 View the List of Users

- 1. Open Internet Explorer and login the unit.
- 2. Click Management/ User Management.
- 3. Click the Create New Users tab.
- 4. The list will be displayed on the bottom of the page.

🍪 Us	🖉 User List									
No.	Name	Group	Live View	Playback	Local Sign-in	Local Configuration	Backup Data	Delete Data		
1	supervisor	power user	1,2,3,4	1,2,3,4	0	0	0	0		
2	guard	user	1,2,3,4	1,2,3,4	0	Х	0	х		
3	temp	guestuser	1,2,3,4		Х	Х	х	X		

## 2.6.2 Create New Users

- 1. Open Internet Explorer and login the unit.
- 2. Click Management/ User Management.
- 3. Click the **Create New Users** tab.

User Manag	User Management					
Create New Users	Modify Use	rs Change Password				
🧭 Create User						
	Username					
	Password					
	Group	power user 💌				
Live V	iew Access	All Channel 1 Channel 2 Channel 3 Channel 4				
Playb	ack Access	All Channel 1 Channel 2 Channel 3 Channel 4				
Loc	cal Privilege	☑ Local Sign-in ☑ PTZ Control ☑ Configuration				
Remo	ote Privilege	<ul> <li>✓ PTZ Control</li> <li>✓ IO Control</li> <li>✓ E-map Settings</li> <li>✓ Backup Data</li> <li>✓ Delete Data</li> </ul>				
Create New L	Jser C	lear				

- 4. Insert the username of this new user.
- 5. Insert the password of this new user.
- 6. Choose the group of this user.
  - **Power user**: Power user can do all the settings except the **Network Settings**, **RAID Settings**, and **Management function**.
  - **User**: User just can change his/her password and do the live view and playback functions.
  - **Guest user**: User can do live view and playback function only.
- 7. Select the live view cameras which this user can access.
- 8. Select the playback channels which this user can access.
- 9. Check whether this user can backup or delete recorded data.
- 10. Click the **Create New User** button to finish it.

The Administrator will be the only user who can use all of the functions. There is a

default administrator account in the system, and you cannot create neither another "Administrator" account, nor another username named "admin".

## 2.6.3 Modify User Information

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / User Management.
- 3. Click the **Modify Users** tab.
- 4. Click one of the users in the User List on the bottom of this page.

Create N	lew Users	Modify Users	Change Passwo	rd	_	_	_	_	
Modify Users									
	ι	Jsername g	juard						
		Group	user 🔻						
	Live Vie	ew Access	All 🗹 Channel 1	Channel 2 🗵	Channel 3	Channel 4			
	Playba	ck Access	All 🗹 Channel 1	Channel 2 🗵	Channel 3	Channel 4			
	Loca	al Privilege	☑ Local Sign-in						
Remote Privilege			✓ PTZ Control ✓ I ✓ Backup Data	O Control	nap Settings				
Use	Modify User er List	Cle	ear						
No.	Name	Group	Live View	Playback	Local Sign-in	Local Configuration	Backup Data	Delete Data	
1	supervisor	power user	1,2,3,4	1,2,3,4	0	0	0	0	e
2	guard	user	1,2,3,4	1,2,3,4	o	х	0	х	6
									-

- 5. Change the group of this user.
- 6. Select the live view cameras which this user can access.
- 7. Select the playback channels which this user can access.
- 8. Check whether this user can backup or delete recorded data.
- 9. Click the **Modify User** button to finish it.

#### 2.6.4 Change a User's Password

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / User Management.
- 3. Click the **Change Password** tab.

User Management				
Create New Users	Modify Users	Chang	ge Password	
🧭 Change Password				
	Username	guard	•	
Ne	w Password			
Retyp	e Password			
ОК	OK Clear			

- 4. Choose the user.
- 5. Enter a new password.
- 6. Enter this new password again.
- 7. Click the **OK** button.

### 2.6.5 Delete Users

Except for the administrator, you can delete any users with the following steps.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / User Management.
- 3. Click the **Modify Users** tab.
- 4. Click the Delete icon of the user you want to delete.

🕑 Us	er List								
No.	Name	Group	Live View	Playback	Local Sign-in	Local Configuration	Backup Data	Delete Data	
1	supervisor	power user	1,2,3,4	1,2,3,4	0	0	0	0	୍କୁ
2	guard	user	1,2,3,4	1,2,3,4	0	х	0	х	é
3	temp	guestuser	1,2,3,4		х	х	х	х	0

5. In the confirmation box, click the **OK** button.

## 2.6.6 Online License Activation

There are two types of license currently, camera license and POS license. With the camera license upgrade, the 4ch-device will possess up to 8ch capacity, while the 6ch-device will possess up to 16ch. With the POS license upgrade, users can use **POS function**.

There are two ways to activate license, online and offline.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / License Management.

License Managen	nent			
Activate Transfer				_
🕑 Online Activation				
Input S/N				
Activate				
Ø Offline Activation				
Step 1: Export server i	information file			
Export				
Step 2: Copy exported	offline.reg to a PC connec	cted to the Internet, and u	se "OffLineTool.exe" to activ	ate
Step 3: Import offline I	icense file			
Import License File		Brov	NSe	
Import				
🧭 License List				
S/N	Channel	Product	Status	
There are no licenses yet.				

- 3. Input serial number under the section of **Online Activation**, and click the **Activate** button.
- 4. The license will be updated in License List if activated successfully.

) License List			
S/N	Channel	Product	Status
XXXX-XXXX-XXXXX-XXXXX	2	NVRsolo	Activated

#### 2.6.7 Offline License Activation

If the device is set up in Intranet (Local LAN) without Internet connection, there is another way to activate license.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / License Management.

License Managen	nent	Statement Statement	
Activate Transfer			
🕑 Online Activation			
Input S/N			
Activate			
Ø Offline Activation			
Step 1: Export server i	nformation file		
Export			
Step 2: Copy exported	offline.reg to a PC connec	ted to the Internet, and u	se "OffLineTool.exe" to activate
Step 3: Import offline li	icense file		
Import License File		Brow	wse
Import			
🕑 License List			
S/N	Channel	Product	Status
There are no licenses yet.			

- 3. Click the **Export** button under the section of **Offline** Activation to export the information of this unit.
- Download dialog pops up. Save the request file and take it to other PC which is connected to the Internet. Furthermore, the PC should be installed OffLineTool.exe which can be found from NVRsolo toolkit.



5. Execute the OffLineTool.exe in that PC with Internet connection, and select the request file **offline.req**.



6. Input the serial number, click the **Activate** button, and save the .dll file **offline\_license.dll**.

ion addition.		
Activate new SN.	*	
Please input SN:		
Can not load request file.		
Input type		( and the second s
Server Information file path:	C:\Users\jimmy\Deskte	Confirmation
SN input		
Input SN:	2000(-2000(-2000(	Complete! Please copy the license file
C Import SN file:		program.

7. Import the license file to the unit.

Import License File	C:\Users\Miranda\Documents\QI Browse
Import	

8. The license will be updated in License List if activated successfully.

License List			
S/N	Channel	Product	Status
XXXX-XXXX-XXXX-XXXX	2	NVRsolo	Activated

#### 2.6.8 Online License Transfer

There are two ways to transfer license, online and offline.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / License Management / Transfer.

License Management								
Activate Transfer				_				
🕲 Online Transfer/Offline Export								
Input S/N XXXX	(-XXXX-XXXX-XXXX							
Online Transfer: Click the Transfer button to transfer license(s). Transfer Offline Export: Click the Export button to export the server information file, copy the exported offline.reg file to a PC connected to the Internet, and execute "OffLineTool.exe" to transfer license (s). Export License List								
S/N	Channel	Product	Status					
XXXX-XXXX-XXXX-XXXX	2	NVRsolo	Activated					

- 3. Select the license you want to transfer from the License List below, and click the **Transfer** button.
- 4. The license will be removed from License List if transferred successfully.

#### 2.6.9 Offline License Transfer

If the device is set up in Intranet (Local LAN) without Internet connection, there is another way to transfer license.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / License Management / Transfer.

License Management						
Activate Transfer						
🧭 Online Transfer/Offline Export						
Input S/N	XXXX-XXXX-XXXX-XXXX					
Online Transfer: Click the Transfer button to transfer license(s). Transfer Offline Export: Click the Export button to export the server information file, copy the exported offline.reg file to a PC connected to the Internet, and execute "OffLineTool.exe" to transfer license (s). Export License List						
S/N	Channel	Product	Status			
XXXX-XXXX-XXXX-XX	XX 2	NVRsolo	Activated	ding.		
				<u> </u>		

- 3. Select the license you want to transfer from the License List below, and click the **Export** button.
- 4. Download dialog pops up. Save the request file. The license will be removed from License List temporarily, but the transfer process is not finished yet.
- 5. Take it to other PC which is connected to the Internet. Furthermore, the PC

should be installed **OffLineTool.exe** which can be found from NVRsolo toolkit.

6. Execute the OffLineTool.exe in that PC with Internet connection, and select the request file **offline.req**.



7. The license you are going to transfer is listed. Click the **Transfer** button to finish the transfer process.

Transfer activated SN	
mansier activated on.	
Transfer SN: xxxx-xxxxx-xxxx	
Can not load request file.	
Input type	
Input type	C:\Users\Miranda\Des
Input type Server Information file path: SN input:	C:\Users\Miranda\Des
Input type Server Information file path: SN input: © Input SN:	C:\Users\Miranda\Des
Input type Server Information file path: SN input: Input SN: C Import SN file:	C:\Users\Miranda\Des

## 2.6.10 View the Event Log

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / Log System to find the event list of your unit.

dware Log	NVR Log	NVR Event Log	Export	and Backup Log
ardware	e Log List			
ast 20 <u>:</u> << < 1	100 <u>500 1</u> > >>	<u>000</u> <u>all</u> logs		
	Date / Tim	ne	Level	Message
2011/0	3/30 (Wed)	14:15:43	info	web service start
		14.15.43	info	web service stop
2011/0	3/30 (Wed)	14.13.43		and a second state
2011/0	3/30 (Wed) 3/30 (Wed)	14:09:56	info	web service start
2011/0 2011/0 2011/0	3/30 (Wed) 3/30 (Wed) 3/30 (Wed)	14:09:56 14:09:56	info info	web service start web service stop
2011/0 2011/0 2011/0 2011/0	3/30 (Wed) 3/30 (Wed) 3/30 (Wed) 3/30 (Wed)	14:09:56 14:09:56 14:07:29	info info info	web service start web service stop start network interface eth0 with static ip=192.168.3.123
2011/03 2011/03 2011/03 2011/03 2011/03	3/30 (Wed) 3/30 (Wed) 3/30 (Wed) 3/30 (Wed) 3/30 (Wed)	14:09:56 14:09:56 14:07:29 10:10:08	info info info info	web service start web service stop start network interface eth0 with static ip=192.168.3.123 samba service start

There are four kinds of event which will be listed on this page.

- Hardware Log: The log information of the operations to your unit, such as reboot or shut down.
- NVR Log: The log information of the NVR system, such as system, recording, user access information, POS and auto backup.
- **NVR Event Log**: The log information of the "Event & Action Management", such as motion detection or camera connection lost.
- **Backup and Export Log**: The log information of the track of video data exported and backup.



The NVR Event Log will be recorded only if event is selected on **Event & Action Management** page. As for user access information, please go to **Network Service** to check **Log Access** box to enable this function.

## 2.6.11 Save Unit Configuration

Save configuration can let you save the settings of this unit. These settings can be applied to other units, which will let you set other units more easily.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click Management / Save / Load Configuration.
- 3. Click the **Save Configuration** tab.

202	
🧭 Save Configurati	on
Nick the Paus button to a	ous the configuration of Compare Cottings, Departing Cottings, Event & Action Cottings, E Mail Cotting
nd Server Settings.	ave the configuration of Camera Setungs, Recording Setungs, Event & Action Setungs, E-mail Setung:
Optional	E-Map Settings POS Settings

- 4. Check the box of **E-Map Settings** or **POS Settings** if you want to keep the configuration.
- 5. Click the **OK** button.
- 6. The configuration file will be generated into the chosen folder.

## 2.6.12 Load Unit Configuration / Default Settings

Load configuration can let you apply another unit's settings to the current unit; Load Default Settings will revert all of the unit's settings back to the default factory settings.

- 1. Click Management / Save / Load Configuration.
- 2. Click the **Load Configuration** tab.

Save/Load Configuration				
Save Configuration	Load Configuration			
Coad Default Settings				
Click the Load button to load default factory settings. Uncheck the following box if you want to keep the network settings.				
Optional	Vetwork Settings			
Load				
🧭 Load Configuration				
Click the Load button to load the configuration of Camera Settings, Recording Settings, Event & Action Settings, E-Mail Settings and Server Settings.				
File Name	Browse			
Optional	E-Map Settings POS Settings			
Load				

- 3. Follow the direction to Load Default Settings or Load Configuration. For the former, uncheck the box of Network Settings to keep the IP address; for the latter, check the box of E-Map Settings or POS Settings if you want to restore the configuration.
- 4. Click the **Load** button.
- 5. A confirmation dialog pops up. Click the **OK** button to begin to load the
settings into your unit.



If there is POS database existed in the unit, loading configuration with different POS application config is likely to make the original POS data unsearchable.



If the saved configuration is without E-map or POS settings, selecting loading configuration with E-map/POS settings will lead you get the default. The original E-map/POS settings (if any) are covered and untraceable.



**User account and privilege** will be kept even if loading default settings, while camera settings, recording schedule, event & action settings, Email setting and server settings won't be. **RAID information** will always be kept whether loading default settings or loading configuration.

# 2.7 System

#### 2.7.1 View System Information

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / System Information.

System Information			
System Information			
information			
Operating System	Linux		
NVR Version	01.00.0004.0178		
Device Pack Version	02.07.0000.0020		
CPU	ARMv7 Processor rev 0 (v7I)		
MAC Address 1	20:12:10:29:14:53		
MAC Address 2	20:12:10:29:14:54		
CPU Temperature	38.000 °C		
System Fan Speed	0 RPM		
Locate	Locate Locate		

The system information includes the following items.

- **Operating System:** Embedded Linux
- NVR Version: NVR system version
- **Device Pack Version**: Camera package version
- **CPU**: CPU model number
- MAC Address: MAC address of this unit
- CPU Temperature
- System Fan Speed

• Locate: Click to trigger the buzzer to let you know where the unit is

#### 2.7.2 Smart Fan Control

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / System Settings.
- 3. Click the Fan Control tab.

an Control	Buzzer	APC UPS	
👩 Fan Cor	ntrol		
	CPU T	emperature	32.000 °C
	System	Fan Speed	2652 RPM
		Setting	⊙ Enable ○ Disable

- 4. Check the **Enable** or **Disable** option.
- 5. Click the **OK** button.

#### 2.7.3 Buzzer Configuration

There is a buzzer in the unit. When the unit finishes booting or when a problem is detected, this buzzer will sound. This buzzer is enabled by default. You can disable/enable this buzzer with the following steps. (We recommend that this buzzer should be enabled.)

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / Settings.
- 3. Click the **Buzzer** tab.

an Control	Buzzer	APC UPS	
👌 Buzzer	Settings		
	Bu	izzer Notice	

- 4. Check the **Enable** or **Disable** option.
- 5. Click the **OK** button.

#### 2.7.4 UPS Setup

This feature enables you to tell your unit how long to run on APC Uninterruptable Power Supply (UPS) battery power and when to shut down, after power failure.

- 1. Attach the APC UPS to one of the unit's USB ports.
- 2. Open Internet Explorer and log in to the unit.
- 3. Click System / Settings.
- 4. Click the **APU UPS** tab.
- 5. Check one of the options:

Fan Control Bu	zzer APC UPS		
😸 Information	1	x	
	Manufacturer	APC	
	Product Name	Smart-UPS 3000 FW:655.18.D U	SB FW:7.4
	Serial Number	180939022759	
	Genariaumber	00000022100	
	Service Status	ON	
🥑 Power Failu 🔿	Service Status re Action Disable	ON	
<b>O Power Failu</b>	Service Status re Action Disable System shutdown	ON	96

- **Disable**: Run until the UPS battery is depleted
- System shutdown as power of the UPS remains \_\_\_\_\_ %: Run until the UPS battery remains this percentage.
- System shutdown as power of the UPS remains \_\_\_\_\_ min.: Run until the UPS battery remains the certain period of time.
- 6. Fill in the specific value if you choose the last two options.
- 7. Click the **OK** button.

#### 2.7.5 Upgrade the System

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / Upgrade.
- 3. Click the **Firmware Upgrade** tab.

System Upgrade		
Firmware Upgrade	Upgrade Notification	
🧭 Upgrade		
	Current NVR Version	01.00.0004.0178
	Current Device Pack version	02.07.0000.0020
	Select file	Browse
OK Cancel		

- 4. Browse the FW for upgrading and click the **OK** button.
- 5. A confirmation dialog pops up. Click the **OK** button to start upgrade process.
- 6. After upgrade, the system will restart. You need to re-access the unit again after this.

#### 2.7.6 Upgrade Notification

Enable this function to allow us to notify you automatically when there are firmware updates (Recommended). This will help keep your system up to date. The updater will also collect info from your system that will be used for future system improvements.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / Upgrade.
- 3. Click the **Upgrade Notification** tab.



- 4. Check the option if you agree to be bound by the agreement.
- 5. Click the **OK** button.

#### 2.7.7 System Date and Time Setup

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / Date/Time.

Date/Time			
Setup			
🧭 Time Zone			
Time Zone	(GMT) Coordinated Universal Time, Greenwich Mean Time: Dublin, Lisbon, London		
😸 Date/Time			
Year	2012 💌		
Month	9 👻		
Day	19 👻		
Time	12 -: 14 -: 54 -		
🕑 Daylight Saving	lime		
Daylight Saving Time	Adjust the clock for daylight saving changes +2  hour(s)		
Start Time	March ▼ 25 ▼ 1:00 ▼		
	⊘ January ▼ First ▼ Sunday ▼ 1:00 ▼		
End Time	October ▼ 28 ▼ 2:00 ▼		
100 mm o 1	C January First Sunday I.00		
Setup			
Network Time	C Enable		
Time Server	Server pool.ntp.org (e.g. pool.ntp.org)		
Update Time Interval	Every week   Saturday  23:00		
	Update Now		
OK Cance			

- 3. Choose the time zone.
- 4. Configure the year, month, day and time manually, or enable NTP server to synchronize time automatically. When NTP server enabled, the date/time settings will be grayed out.
- 5. Check the **Adjust clock for daylight saving changes** option and select the time change of daylight saving time in your location. Choose the start time and end time of recurrence.
- 6. Click the **OK** button to restart system to activate the changes.



Clicking the **Update Now** button will save the settings automatically before restarting system.

#### 2.7.8 Restart the Unit

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / Reboot/Shut down.

Reboot/Shut	Reboot/Shut down		
Options			
🕑 Options List			
Options	● Reboot <sup>©</sup> Shut down		
OK Cancel			

- 3. Check the **Reboot** option.
- 4. Click the **OK** button.
- 5. A confirmation dialog pops up. Click the **OK** button to reboot the unit.

The restart procedure runs automatically. When the unit is fully online:

- The System Status LED turns blue.
- The buzzer beeps one time (if the buzzer is enabled).

During system restart, none of your files will be accessible from your desktops/laptops.

#### 2.7.9 Shut down the Unit

The only time you need to shut down the unit is to replace the disk drive cooling fan or the power supply. During and after the shutdown, none of your files will be accessible from your desktops/laptops. There are two ways to shut down the unit.

#### • Shut down by Software

- 1. Open Internet Explorer and log in to the unit.
- 2. Click System / Reboot / Shut down.



- 3. Check the **Shut down** option.
- 4. Click the **OK** button.
- 5. A confirmation dialog pops up. Click the **OK** button to shut down the unit.

#### • Direct Shutdown

- 1. Press and hold the power button for 2 seconds and release your hands when the buzzer is beeping once.
- 2. System will begin the shut down process, which takes about 30 seconds to few minutes depends on number of recording channels and other factors.



If the system is crashed and stocked, you can press the power button and hold it for 10 seconds to force to cut off the power directly. We don't recommend to do it if the system work properly.

# 3.POS

### 3.1 Introduction

#### **3.1.1 System Introduction**

NUUO POS, a Point of Sales Systems based on NUUO NVR/DVR/NVDR/NVRmini 2/NVRsolo, provides financial transaction's surveillance solution in one central system. The architecture is as below; POS transaction data flows to NVRmini 2/NVRsolo by Ethernet. Each Cash Register with an external receipt printer is connected by DB9 cable. The transaction information delivered in R232 format can be converted to Ethernet through SCB-C31A POS data capture converter.



#### **Definition of Terms**

Terms		Definition
POS	Original	Original data from POS. Usually with a lot of
Data		symbols and no line feed.
POS		Filtered result by user-defined tag-filter.
Transa	ction	

#### **Product Specification**

	NUUO POS Box	
SCB-C31A		
Input	RS232	
Output	Ethernet	
DC In	DC +10V to +15V	
Power consumption	500 mA	
Operating	-20 to 65°C	
Temperature		

<b>Operating Humidity</b>	0-90 % Non-Condensing
Baud Rate	110 bps to 230.4 kbps
Data Bits	5, 6, 7 or 8
Stop Bits	1, 1.5 or 2
Parity	None, Even, Odd, Mark, Space
Flow Control	None, RTX/CTS, XON/XOFF, DTR/DSR

#### 3.1.2 Hardware Installation – SCB-C31A

To connect Cash Register, Printer, and SCB-C31A POS data capture converter together, please follow below steps:

- Step 1: Please refer the user manual to setup Cash Register and printer.
- Step 2: Using a "Y-shape" DB-9 cable, one DB-9 female connect to POS system and one DB-9 male connect to the receipt printer Y-shape (provided by Printer vendor).
- Step 3: Using another DB-9 female connect to SCB-C31A POS Data Capture R232/Ethernet converter with Null modem.

There are two kinds of serial cable: Straight pass-through and Null-Modem. The connection between SCB-C31 POS Data capture box and Y-cable must be null modem (in package).

- Step 4: Check the system switch of the SCB-C31A is switched to OFF-OFF position.
- Step 5: Connect SCB-C31A with power source.
- Step 6: Connect SCB-C31A with internet port by RJ45 LAN cable.





The LED Indicators: LINK LED: Ethernet cable connection and data active. RUN LED: System is ready (Blinking). Serial 1: Transiting/Receiving Indicator.

#### 3.1.3 Software Installation – SCB-C31A

Step 1: Use IE-browser to setup SCB-C31A, the default IP address is **192.168.1.1** 

🕙 Server Page - Microsoft	Internet Explorer	
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorite	s <u>T</u> ools <u>H</u> elp	
Addre:s 🙋 192.168.1.1		🕶 ラ Go
		<u>~</u>

Step 2: Setup IP address and password in **Server** page, and click the **Save** button.



Each time you switch the page of the web, please click Save at first. If you leave this page without saving, all changes will be ignored.

Step 3: Setup Password if needed. Password is only using to activate a security feature on the serial server. Once a password is entered it will be required to access the menu and make change of configuration when access.



Please write down the Serial number and MAC address, these two parameters are necessary when user forget your password.

SCB-C31A Web Configuration - SCB-C31A		
	Note: If you leave this pa	ge without saving, all changes will be ignored!
Server	Server name:	SCB-C31A
Serial Port	Serial number:	00814
Operation	Version & Date:	1.8.30 & 050910
operation	Password:	
	DHCP:	Enable
	IP address:	192.168.1.29
	Netmask	255.255.252.0
	Gateway:	192.168.1.1
	-	
	MAC address:	00:0B:B4:81:12:B8
	MAC address: Link status:	00.0B:B4:81:12:B8 100/Full Duplex
	MAC address: Link status: Hardware ID:	00.0B:B4:81:12:B8 100/Full Duplex PP-1001-A2

- Step 4: Setup according to your POS or Cash Register. Usually all devices are default setting, you can reserve your time to pass this step.
- Step 5: Please **restart/reset** the box after changing configurations to active setup.

To reset the unit manually apply power, insert a small plastic tool, and press lightly depressing reset located between the switch. Hold for 3 seconds and release. The Link and Run light will go out and turn back on. The SCB-C31A will revert to the last setting.



#### 3.1.4 Connection via TCP Client

If the cash register possess network, please install system according to following diagram and purchase a POS license to activate this function.



# 3.2 Software Setup

#### 3.2.1 Activate POS License

If you are not the SCB-C31 user, you need to activate POS license before starting the following settings, please refer to **License Activation** for details.

#### 3.2.2 NVR POS Setting

- 1. Open Internet Explorer and log in to the unit.
- 2. Click POS & I/O / POS Settings.

POS Settings					POS Setting
					POS Settings
POS Name Address Serial Box Tag Filter	r I	Tag Filter	Serial Box	Address	POS Name
records found.					records found.

3. Click the **Settings** tab to set POS application.



- **Data Source**: List of all the data sources.
  - Insert: Click to insert POS and do the POS settings. See <u>Insert</u>
    <u>POS Setting</u> for details.
  - Delete: Click to remove the selected POS from the list. See <u>Delete</u> <u>POS Device</u> for details.
  - Configure: Click to configure the selected POS and modify the POS settings. See <u>Configure POS Setting</u> for details.
- **POS info**: The setting information of the selected POS on this window.
  - > Name: Name of the POS data source.
  - > IP: IP of the POS data source.
  - Serial Box: The serial box data source used.
  - Tag Filter: Tag type to filter the data from POS. See <u>Tag Filter</u> for details.

• Associated Cameras: List of all the associated cameras of the selected POS.

4. Click the OK button to finalize the modification.

#### **3.2.3 Insert POS Setting**

- 1. Click 🖆 **Insert** button to open the **POS Setting** window.
- Set up basic data source, including Name, Model, IP address, and Port. There are three types of models.

- **SCB-C31**: The device possesses one POS license, and should be equipped with the cash register not working as TCP server.
- **SCB-C31A**: The difference from SCB-C31 is not possessing one POS license, so user should activate POS license.
- **TCP Client**: Cash register possesses with network, so no need to have SCB-C31A as a converter. POS license is needed.
- 3. After setting, click **Test Connection** to test POS device connection.

POS Setting	
Data Source Setting Name: Model: SCB-C31 IP Address: Port: 4000 Test Connection	Miscellaneous Record POS Transaction Display on Video Preview Always Display C Last for 10 seconds
Tag Filter	Import Export
Associate Cameras	splay Region Definition Default C User Define
	OK Cancel

- 4. Set up Miscellaneous options, including **Record POS Transaction** and **Display on Video Preview**.
  - **Record POS Transaction**: Select this checkbox to record POS transaction data. Users are allowed to search the POS data.
  - **Display on Video Preview**: Select this checkbox to display POS transaction overlay on associated camera live video. Two types of transaction data display time:
    - > Name: Name of the POS data source.
    - Always: Keep transaction data on video until receiving next transaction date.
    - Last for \_\_\_\_\_ seconds: Each transaction data only lasts on video for \_\_\_\_\_ seconds after receiving the last data of transaction.

- 5. Select **Tag Filter**. See **<u>Tag Filter</u>** for details.
- 6. Select the camera of **Associated Cameras** to display POS transaction data overlay on live video.
- 7. Set up display area for each camera video in **Display Region Definition**.
- **Default**: The default display area is in the upper left corner of video image.
- User Define: Enable User Define, and define display area by dragging rectangle
- 8. Click the **OK** button to save.

#### 3.2.4 Delete POS Device

- 1. Choose POS device.
- 2. Click 🎽 **Delete** button to remove this POS device from the system.

#### 3.2.5 Configure POS Setting

- 1. Choose POS device.
- 2. Click domination 2. Click domination of the POS Setting window.
- 3. Refer to **Insert POS Setting** to modify configuration.

# 3.3 Tag Filter

The original transaction data from POS system is hard to read. Users can define filters to make the POS strings meaningful. The system also provides a simple default tag filter to filter out same common EPSON commands, users can base on this default tag filter to edit their customized filters.

#### 3.3.1 Add New Tag Filter

- 1. Click **Insert** button or choose a device and click **Configure** button to open the **POS Setting** window.
- 2. Click **New** to open tag filter window.
- **General**: Name of Tag Filter and Connect button.
- **Original Data**: Original transaction data from POS device.
- Filtered Data: Filtered data after definition.
- Filter Functions: Tool used for defining filter type.
- Filter List: List of all filters.
- **Data Tools**: Clear/import/export buttons to clear/import/export the

original and filtered data.

• Filter Tools: Upper/down buttons to arrange the priority of each filter; remove button to remove the filter from list.

Tag Filter					
General Name:	Ge	neral		Connect	
Transaction Definition		Cillage d Datas	Data	a Tools 🔀 🛓 🛓	
Original Data	a		Filtered	d Data	
Omit Substitute Ad	dd New Line	Cash Drawer	Opened	Filter Tools	
StartEnd	Filter F	unctions		1 ÷ ×	
Filter Substitution		r List			
Encoding: Default	<b>•</b>				
	OK Cancel				

- 3. Enter name of this tag filter.
- 4. Click **Connect** button to capture POS transaction data from POS device. The original transaction data will be shown on the left window.



- 5. Data Tools
  - Clear: Remove data from Original Data window and Filtered Data window.
  - Import: Reload exported binary data.
  - Export: Capture and export original binary data.
- 6. Start to edit tag filters. Click and drag to select text from Original Data window, and then use the below six buttons to define filters. The filtered transaction data will be shown on the right window.

Driginal Data:	Filtered Data: 🛛 🗱 🏄 🏦
===== WELCOME TO NUUO MARKET =====<0d><0d>	===== WELCOME TO NUVO MARKET =====
	2009-05-01(五) 12:06:33
	APPLE JUICE \$31 TX
	ORANGE JUICE \$31 TX
	COKE \$31 TX
	TOTAL \$150
<	THANK YOU VERY MUCH!

 Omit: Neglect the selected text which is meaningless or not important. The text will disappear on the right window.



 Substitute: Use another word(s) to replace the selected text. The system will pop up a substitution panel for replacing word(s) users want. The replaced text will be shown on the right window.



• Add New Line: Define the selected text as the symbol for changing to new line. The result will be shown on the right window.



• **Start**: Define the selected text as the symbol for transaction beginning. The filtered data will be separated line as below.

Transaction Definition Original Data:	Filtered Data:	¥ 🕹 🏦
===== WELCOME TO NUUO MARKET =====<0d><0a>	 NUUO MARKET	<u>^</u>

 Cash Register Opened: Define the selected text as the symbol for opening cash register. The filtered data will be shown the <Cash Drawer Open> mark as below.



• End: Define the selected text as the symbol for transaction ending. The filtered data will be separated line as below.

Original Data:	Filtered Data:	🗙 🛓 🏦
WELCOME TO NUUO MARKET<8d><8a>	NUUO MARKET	2
<mark>&lt;0d&gt;&lt;0a&gt;</mark> 2009-05-01(fri) 12:06:33 <u>&lt;0d&gt;&lt;0a&gt;</u>	2009-05-01(FRI) 12:06:33	ſ
<u><ud><ud></ud></ud></u> APPLE JUICE<09>\$31 TX <u><od><ba></ba></od></u> ORANGE JUICE<09>\$31 TX <u><od><ba></ba></od></u>	APPLE JUICE \$31 TX Orange Juice \$31 TX	
COKE<09><09>\$31 TX <u>&lt;0d&gt;&lt;0a&gt;</u>	СОКЕ \$31 ТХ	
TOTAL<09><09>\$150<00><80>	<cash drawer="" open=""></cash>	
THANK YOU_VERY_MUCH!<0d><0a>	THANK YOU	

- 7. Filter Tools
  - >  $1 \oplus 10^{\circ}$  Move a tag filter up; the upper filter will be operated earlier.
  - Down: Move a tag filter down; the lower filter will be operated later.
  - > Solution Delete: Remove a filter from this tag filter list.

Filter	Substitution	
<b>@</b> =====		
🗑 fri	FRI	
	<new line=""></new>	
WELCOME TO	<transaction start=""></transaction>	
🐨 TOTAL<09><09>\$150	<cash drawer="" open=""></cash>	
VERY MUCH	<transaction end=""></transaction>	

8. Click the **OK** button to save.

#### 3.3.2 Edit Tag Filter

- 1. Select Tag Filter name from drop-down menu.
- 2. Click Edit button.
- 3. Configure the Tag Filter window.
- 4. Click the **OK** button to save.

#### 3.3.3 Delete Tag Filter

1. Select Tag Filter name from drop-down menu.

2. Click **Delete** button to delete it.

### 3.3.4 Import/Export Tag Filter

- 1. Click **Import/Export** button and select Import/Export URL.
- 2. Click **Open/Save** to Import/Export Tag Filter.
- 3. After importing tag filters, users can simply select tag filter from drop-down menu without editing new tag filter.

# 3.4 POS Display Font

The system allows users to set up the fonts of POS transaction data on live view video and playback video.

#### 3.4.1 Live View

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View**.
- 3. Click the **General Setting** button to open **Live View Setting** window.



4. Select the font, font size, font color and background for the POS transaction data overlaid the video.

General Camera	OSD Metadata	Monitor Display   Notific	cation Joystick
Enable Metadata	overlay		
Foreground			
Font	Tahoma	<b>•</b>	
Size:	10 👻		
Color:			
Bold	Edge		
Background			
Color:			
Transparency:		40	
		Default	Apply

5. Click the **OK** button to save.

#### 3.4.2 Remote Live Viewer

- 1. Startup > NUUO NVRsolo > Remote Live Viewer
- 2. Click the **General Setting** button to open **Live View Setting** window.



3. Select the font, font size, font color and background for the POS transaction data overlaid the video.

General Server	Group   Camera   OS	SD Metadata	Monitor Display	Notification 4
Enable Metadata o Foreground	verlay			
Font:	™r Tahoma	•		
Size:	10 💌			
Color:				
I Bold	✓ Edge			
Background				
Color:				
Transparency:		40		
		Default		Apply

4. Click the **OK** button to save.

#### 3.4.3 Playback

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button.
- 3. Click the **Setting** button to open **Setting** window.

١	

4. Select the font, font size, font color and background for the POS transaction data overlaid the video. Also, select the type of transaction data display time.

Setting		×	
General OSD Meta	idata		
Enable Metadata overlay     Foreground			
Font:	Tahoma 💌		
Size:	10 💌		
Color:			
I Bold	I <b>✓</b> Edge		
Background			
Color:			
Display on Video Pre	u - u - u - u - u - u - u - u - u - u -		
<ul> <li>Always Display</li> </ul>	- YIC YY		
C Last for	10 seconds		
	Default Apply		
	OK Cano	el	

#### 3.4.4 Playback System

- 1. Startup > NUUO NVRsolo > Playback System
- 2. Click the **Setting** button to open **Setting** window.

3. Select the font, font size, font color and background for the POS transaction data overlaid the video. Also, select the type of transaction data display time.

Setting	
General Server OSD Metadata	
✓     Enable camera OSD       Foreground     72r Tahoma       Size:     9       Oclor:     •       ✓     Bold       ✓     Edge	•
Background Color: Transparency:	40
Info ✓ Camera Name ✓ Camera Number ✓ Date ✓ Time 11:28:27 ▼	
	Default Apply
	✓ OK X Cancel

## 3.5 POS Transaction Data Search

**POS Search** tool is used to search key word of all transaction data.

#### 3.5.1 Search POS Transaction Data through Playback

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button.
- 3. Click the **Open Record** button to open **Data Time Search Dialog** window.

) (	111/05/10 STOP

4. Click the **POS Search** button 🗱 to open **POS Search Dialog** window.

Cashier							the second se	
					Sep/20	2012-11-3	ILDOX CHIDINU	
	Start fime:	2012/0	9/20 🕂  00:00:00	) <u>÷</u>	CALEN	CER		
	End Time:	2012/0	9/20 11:44:37	7 -		un Mon Tup-We	I The FEL Set	
		100.000	•	•			1 2 3	1
	Pearch					4 5 6 7	8 9 10	
	Search					R 12 15 14	1 15 16 17	
	Keyword:	APPLE				26 27 2	22 23 24	Real of
						D 20 27 2	29 50 11	16
	Using regi	ilar expression					G	b
	C Search wit	hin result	Searc	ch	24	INUTS Line	SNOOPY	
					a 199	THE SHALL		
ansacuon								
Date Time	Metad Trai	nsaction		*		2012-09-20	11:39:39	
2012/09/20 11:39:41	-Cashier	2012-09-20	11:39:39 C		C01	MC#01	003630	
2012/09/20 11:39:42	-Cashier	2012-09-20	11:39:40 C			1 1 4	PPLE JUICE	
2012/09/20 11:39:43	-Cashier	2012-09-20	11:39:41 C					
2012/09/20 11:39:44	-Cashier	2012-09-20	11:39:42 C					
2012/09/20 11:39:45	-Cashier	2012-09-20	11:39:43 C					
2012/09/20 11:39:46	-Cashier	2012-09-20	11:39:44 C					
2012/09/20 11:39:47	-Cashier	2012-09-20	11:39:45 C					
2012/09/20 11:39:48	-Cashier	2012-09-20	11:39:46 C					
2012/09/20 11:39:49	-Cashier	2012-09-20	11:39:47 C					
2012/09/20 11:39:50	-Cashier	2012-09-20	11:39:48 C					
2012/09/20 11:39:51	-Cashier	2012-09-20	11:39:49 C					
2012/09/20 11:39:52	-Cashier	2012-09-20	11:39:50 C					
2012/09/20 11:39:53	-Cashier	2012-09-20	11:39:51 C					
2012/09/20 11:39:54	-Cashier	2012-09-20	11:39:52 C	-	۲.			
					,			

- 5. Select a POS device(s) from the POS list.
- 6. Set up Start Time and End Time in **Data Time Period** section.
- 7. Enter the keyword you want to search.
- 8. Click the **Search** button, the results will be shown in Transaction table.
- 9. Select an item from Transaction table, the transaction detail will be shown in the table of lower right corner, and the recorded video of associated camera will be shown in the upper right corner.
- 10. Select the checkbox of **Search within result**, and enter a keyword, you can search the data within the results.

#### 3.5.2 Search POS Transaction Data through Playback System

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button to open **Data Time Search Dialog** window.
- 3. Click the **Remote Server Site** icon on the top of the window to select the server users want to access.
- 4. Follow the step 4 through 10 of **Search POS Transaction Data by Playback** to search the data.

# 3.6 Playback Video with POS Data

Enable POS overlay in **Setting** window to view recorded video with POS transaction data (Refer to **POS Display Font**). If the option is enabled, the system will auto display transaction data when playing recorded video. There are two modes to select video period.

#### 3.6.1 Select Period by POS Search

- 1. Refer to **POS Transaction Data Search**.
- 2. Select the transaction data from the result list, and click **OK**.

Date Time	Metad	Transaction	
2012/09/20 11:39:41	-Cashier	2012-09-20	11:39:39 C
2012/09/20 11:39:42	-Cashier	2012-09-20	11:39:40 C
2012/09/20 11:39:43	-Cashier	2012-09-20	11:39:41 C
2012/09/20 11:39:44	-Cashier	2012-09-20	11:39:42 C
2012/09/20 11:39:45	-Cashier	2012-09-20	11:39:43 C
2012/09/20 11:39:46	-Cashier	2012-09-20	11:39:44 C
2012/09/20 11:39:47	-Cashier	2012-09-20	11:39:45 C
2012/09/20 11:39:48	-Cashier	2012-09-20	11:39:46 C
2012/09/20 11:39:49	-Cashier	2012-09-20	11:39:47 C
2012/09/20 11:39:50	-Cashier	2012-09-20	11:39:48 C
2012/09/20 11:39:51	-Cashier	2012-09-20	11:39:49 C
2012/09/20 11:39:52	-Cashier	2012-09-20	11:39:50 C
2012/09/20 11:39:53	-Cashier	2012-09-20	11:39:51 C
2012/09/20 11:39:54	-Cashier	2012-09-20	11:39:52 C

3. The period you select from POS search results will be selected automatically.

<b>+-</b>	05/04	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Came	ra 1																	×.
Came	era 2	-									-					_		
🛅 Came	ra 3																	
🛅 Came	ra 4																	
🛅 Came	ra 5																	
🛅 Came	ra 6																	
🛅 Came	ra 7																	
🛅 Came	ra 8																	Ŧ
9-r	<u> </u>																	•

4. Click **OK** to playback videos.

#### **3.6.2 Select Period by Data & Time through Playback**

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button.
- 3. Click the **Open Record** button to open **Data Time Search Dialog** window.
- Highlight the video clip you want to review by left-clicking and dragging the time period. You may also utilize the Start Time and End Time in **Date Time Period** section after choosing cameras.
- 5. Click **OK** to playback videos.

## 3.6.3 Select Period by Data & Time through Playback System

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the Open Record button to open Data Time Search Dialog

window.

- 3. Click the **Remote Server Site**  $\oint$  icon on the top of the window to select the server users want to access.
- Highlight the video clip you want to review by left-clicking and dragging the time period. You may also utilize the Start Time and End Time in **Date Time Period** section after choosing cameras.
- 5. Click **OK** to playback videos.

# 3.7 Backup Video with POS Data

There are three ways to backup video with POS transaction data.

### 3.7.1 Backup through Internet Explorer

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Open Record** button to select data.
- 3. Click the **Backup** button.

🛱 Backup Dialog 📃
- Date Time Period
Start Time: 2012/09/20 - 11:18:00 -
┌ Select Camera(s)
1-16
Calculate Size Select All Deselect All
Media
C Backup using CDROM
Backup using DVD     C Backup on HordDisk
C:\Users\Miranda\Desktop\123
Reckup Event Log
Backup Gystern Log
Rackup Metadata Transaction
Backup Adv. IVS Counting Log
Backup IVS Event Log
OK Cancel

- 4. Check the **Backup POS Transaction** option.
- 5. Set the Start Time and End Time you want to backup.

- 6. Select the cameras you want to backup.
- 7. Select the directory you want to save the backup data.
- 8. Click the **Backup** button.
- 9. The system will then begin backup process automatically.

#### 3.7.2 Backup through Playback System

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button to select data.
- 3. Click the **Backup** button.
- 4. Check the **Backup POS Transaction** option.
- 5. Set the Start Time and End Time you want to backup.
- 6. Select the cameras you want to backup.
- 7. Select the directory you want to save the backup data.
- 8. Click the **Backup** button.

#### 3.7.3 Backup through Backup System

Please refer to step 1 to 14 of the content of **<u>Backup and Delete Records</u>**, and check the **Backup POS Transaction** option.

# **4.I/O**

## 4.1 Introduction

#### 4.1.1 System Introduction

NUUO provides remote I/O solution for NVRsolo by connecting SCB-C31 with NUUO I/O Box SCB-C24/26/28. Refer to the below architecture, I/O device is connected directly with I/O Box, and input/output signal delivered in RS485 format are converted to Ethernet through SCB-C31. NVRsolo can use the signals to do more sophisticated setup, such as starting recording when input triggered, triggering output as an event happened, and much more.



#### 4.1.2 HW Installation

SCB-C24/26/28 must work with SCB-C31 (Ethernet-RS485 converter).

Further, **the C31 Box cannot be used for POS and converter at the same time, and one C31 Box can be paired with one NVR unit only.** Please follow the steps below to configure the devices.

Step 1: Check the system switch of SCB-C31 is switched to OFF-OFF position.

Step 2: Connect SCB-C31 with power source.

Step 3: Connect SCB-C31 with internet by RJ45 LAN cable.

Step 4: Connect I/O Box with power source.

Step 5: Connect SCB-C31 and I/O Box with cable, positive connection

(TX+/D+ and DATA+) and negative connection (TX-/D- and DATA-). Take SCB-C31 with I/O Box SCB-C24 for example as below.



**Multiple I/O Boxes can be connected to a single SCB-C31. However, series connection of I/O boxes is forbidden**. Furthermore, the default ID for each I/O Box is the same. Please follow the direction to setup I/O Box one by one.

#### 4.1.3 Software Installation – SCB-C31

Step 1: Open Internet Explorer to setup SCB-C31. The default IP address is 192.168.1.1.

Serv	er Page - M	licrosoft l	nternet	Explorer	
Eile	<u>E</u> dit <u>V</u> iew	F <u>a</u> vorites	Tools	Help	<b></b>
Address	🥘 192.168	3.1.1			💌 🄁 Go
					<b>~</b>

Step 2: Setup IP address and port.

1. Static IP Address

2. **Server Listening Port**: The default port is 4000, which is not the port for setting page, but for signal transmission.

Serial Settings	
Data Baud Rate	9600 🗸
Data Bits	8 🗸
Data Paritiy	None 👻
Stop Bits	1 +
Flow Control	None 👻
Network Settings	
	🗹 Enable DHCP
Static IP Address	192.168.1.1
Static Subnet Mask	255.255.255.0
Static Default Gateway	192.168.1.3
Static DNS Server	168.95.1.1
Connection Type	TCP 👻
Transmit Timer	30
Server/Client	Server 🗸
Server:	
Server Listening Port	4000
Client:	
Destination IP	192.168.1.2
Destination Port	4000
	Enable Reboot
	Firmware Upgrade

Step 3: Click the **Apply** button to activate configuration.

Due to the stability of data transmission, one SCB-C31 can be paired with one NVR unit only.

#### 4.1.4 Software Installation – SCB-C24/26/28

The default ID of I/O Box is identical. To avoid the conflict between Boxes, please connect only one Box with SCB-C31 and execute the setup application to change the ID from the default value (1).

1. Execute IOConfig.exe, type in the IP address and port of SCB-C31, and click the **Scan** button.

canning	options	Scanning results	<u>.</u>	
Configur	ation via C31	Address / ID	Name	Baud rate
IP:	192.168.8.95			
Port:	6666			
Starting address	0	New address:	0	Update device



IOConfig.exe starts scanning the ID from 0 to 255, and it may take around a minute to finish scan.

2. When the I/O Box is discovered, click on the item and change the ID from the **New Address** field. Click the **Update device** button to activate the settings.

	opuono	ocanning results	-	
onfigura	tion via C31	Address / ID	Name	Baud rate
<b>?</b> :	192.168.8.95	1	C26	9600
ort:	6666			
tarting ddress:	8	New address:	1	Update device

3. Scan again to make sure the configuration is validated. In this case, we changed the ID to 10, so we can modify the number of "Starting address" to 10 to save the searching time.

canning	options	Scanning results		
Configura	tion via C31	Address / ID	Name	Baud rate
IP:	192.168.8.95	10	C26	9600
Port:	6666			
Starting address:	12	New address:	10	Update device
	Coop	hloru bourd roto:		

4. Refer to the **<u>HW Installation</u>** section to connect other I/O Box and repeat the steps 1 through 3 above to configure more I/O Boxes.

## 4.2 Software Setup

#### 4.2.1 Add I/O Box

- 1. Open Internet Explorer and log in to the unit.
- 2. Click POS & I/O / I/O Settings / I/O Box Settings.
- 3. Enter the information of I/O box.

I/O Settin	ngs						
I/O Box Settings	I/O Pin Se	ttings	_	_		_	
😸 I/O Box Set	ttings						
[	Device No.						
Dev	vice Name						
D	evice Type	SCB-C31 + S0	CB-C24 👻				
I	P Address			Port	t		
	ID	Addr:000 -					
Create							
🕑 I/O Box Lis	t						
No.	1	Name	Туре	IP Address	Port	ID	Delete
1	C Block		SCB-C28	192.168.8.2	4000	Addr:000	0
Save	Reset						

- **Device No:** The unique ID system distributes in sequence automatically.
- **Device Name**: The name of the I/O box.
- **Device Type**: The types of I/O box, including SCB-C24, SCB-C26, and SCB-C28.
- **IP Address**: The IP Address of SCB-C31.
- **Port**: The transmission port of SCB-C31.

- **ID**: The ID of the I/O box.
- 4. Click the **Create** button, and the information will be updated in I/O Box List.
- 5. Repeat steps 3 and 4 to add more I/O boxes in the list.
- 6. Click the **Save** button to activate the settings. Meanwhile, system will distribute an unique ID to each device.

#### 4.2.2 Modify I/O Box Information

- 1. Open Internet Explorer and log in to the unit.
- 2. Click POS & I/O / I/O Settings / I/O Box Settings.
- 3. Click the I/O box which you want to modify from the list.
- 4. Modify the information of this I/O box, and click the **Modify** button.
- 5. Click the **Save** button to activate the settings.

#### 4.2.3I/O Pin Setting

- 1. Open Internet Explorer and log in to the unit.
- 2. Click POS & I/O / I/O Settings / I/O Pin Settings.
- 3. All input and output pins are shown in this page, including the ones from cameras and I/O boxes. Check the box to enable a pin (defaulted), and type a name in the field for each I/O pin.

I/O Settings					
I/O Box Settings I/O Pin Se	ttings	_			
🧭 I/O Pin Settings					
Device Name		I/O Pin	Name	Output Duration	Associated Camera
Location 1		Input #0			Location 1 -
	<b>V</b>	Output #0		N/A 🔻	
I/O BOX 51001(C Block)		Input #0	Gate		Location 1 -
		Input #1	Lobby		N/A 👻
		Input #2	Ground		N/A 👻
		Input #3			N/A 👻
		Output #0		10 sec. 🔻	
		Output #1		N/A ▼	
		Output #2		N/A 🔻	
		Output #3		N/A 🔻	
Save Reset					

4. For input pin, you can select an associated camera for it, which will be the communication media for server and client. (e.g. when an input was

triggered and pushed a notification to mobile, users can playback the videos of its associated camera.)

- 5. For output pin, you can configure its duration time to control how long output acts after it's triggered. The duration range is 3 sec~60 sec. N/A stands for unlimited.
- 6. Click the **Save** button.

If the box of I/O pin is unchecked, this pin won't be shown on relative application pages. In other words, you cannot do any setting/operation with this pin. See details in next section.

## 4.3 Relative Configuration and Application

#### 4.3.1 Record on Input Trigger

Refer to **Recording Schedule / Event Setup**.

#### 4.3.2 Input and Responding Actions

Refer to **I/O Box Input and Responding Action Setup**.

#### 4.3.31/O Control Panel in Live View

Refer to Live View Control Panel.

# **5.Live view**

There are two ways to execute the live view function: with Internet Explorer or with the **Remote Live Viewer** application.

# 5.1 Internet Explorer

#### 5.1.1 Live View Control Panel



- **PTZ Camera Control**: You may control the camera view by using the PTZ camera control panel to adjust the camera's view. This is only available with cameras that support the PTZ function.
- Set Preset Point / Go to Preset Point: Adjust the camera view and click the *interview* button to set up this view as preset point. Repeat the process to add more preset points. Click the *interview* button to see the preset view.
- **Zoom**: Click the + or button to zoom in or zoom out the view.
- Play / Stop / Drop: Select a camera / video and click this button to play/stop/disconnect a particular channel.
- Information Display Window: Display video information including
server name, video current status, and bit rate for a selected channel.

- Start Menu > E-Map: Upload map and drag camera or I/O on it to track device location and alarm status with instant response when an event occurred. See details in the chapter of <u>E-Map</u>.
- Start Menu > I/O Control Panel: Utilize I/O device function remotely. User can remotely adjust the Output Pins by turning it on or off.

	🧃 IO Devices		
Click to turn on/off the "Output" pins	Servers:	192.168.4.223	▼ Show name

- **Playback**: View playback video remotely.
- Auto Scan: Activate auto scan to rotate the channels on the display screen. For instance, you may select to show only 4-split screen on the liveview, while connecting 16 channels to the system. With auto scan function, you are able to see all 16 channels by turns.
- Layout: Click to change the multiple-split layout.



You can right click on the camera screen to enable the following function.

Enable Audio
Enable Digital PTZ Fisheye Lens Setting
Fix Aspect Ratio Stream Profile
Snapshot Toggle Fullscreen

- Enable Move: Adjust the current view of camera which supports PT function by dragging the 
   the button on the display screen.
- Enable Digital PTZ: Click the + or button to zoom in or zoom out the view. The lower right square flashing on the video grid indicates the correspondent view of the camera.
- Fisheye Lens Setting: Select the mode of lens. There are four modes for Generic Dewarp, including Original, Rectilinear mode, Quad mode and Dual-view panorama mode; four modes for ImmerVision, including Original, PTZ mode, Quad mode and Perimeter mode; and other four modes for Vivotek Fish Eye, including Original, Rectilinear mode, Full-view panorama mode, Dual-view panorama mode. Type of modes depends on lens location.
- **Stream Profile**: Select the stream profiles, original, low, minimum.
- Enable Audio: Enable audio on active channel(s).
- **Snapshot**: Select the snapshot function to capture a specific video image immediately.
- **Toggle Fullscreen**: Select it to view cameras with full screen. Press "Esc" or right click un-select full screen to go back to the original view.

Also, right click on camera list to duplicate and connect/disconnect designate cameras, and do other functions.

Duplicate Camera
Connect
Disconnect
Login Server
Logout Server
Connect All
Disconnect All

- **Duplicate Camera**: Select the duplicate camera function to create multiple views. The duplicated camera will be shown with green indicator as the right picture. Combine this function with digital PTZ, users are allowed to enlarge different spots and view them in different channels without failing to record the whole view.
- **Connect / Disconnect**: Click to connect or disconnect the designate camera.
- Login / Logout Server: Click to login or logout.

• **Connect All / Disconnect All**: Click to connect or disconnect all cameras.

## 5.1.2 Live View Setting

- 1. Open Internet Explorer and log in to the unit.
- 2. Set the cameras.
- 3. Click the **Live View** button on the top of the page.
- 4. Select a camera(s) from the camera list on the right and then drag it to where you wish the image to be displayed.



When running Internet Explorer, do not use the function "Open in New Window". Using this function may cause Internet Explorer to become unstable.

## 5.1.3 General Setting

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **General Setting** button.
- 4. Click the **General** tab.

😰 LiveView Setting	×
General Camera OSD Metadata Monitor Display Notification Joystick	
Miscellaneous	
OK Car	ncel

- 5. Check the **Enable audio on active channel** option to enable audio streaming on active channel. This function synchronizes with right click on camera to enable audio.
- 6. Check **Synchronize video frames** to avoid the tearing problem occurring in video display while increasing the CPU loading.
- 7. Click the **OK** button.

#### 5.1.4 Stream Profile Setting

Select the preferred stream type of each camera as default live view profile.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **General Setting** button.
- 4. Click the **Camera** tab.

E LiveView Setting		×
Cameral Camera OSD Metadata	Monitor Display Notification Location 1 Stream Profile Info Stream profile: Video format: Frame rate: Resolution: Quality: Bitrate:	Low Low MJPEG 2 fps CIF Low - Copy to
		DK Cancel

- Adjust the stream profile of every camera with stream profile enabled in the <u>setting page</u>.
- 6. Click a camera and select its stream profile, and click the **Copy to...** button to apply this profile to other channels.
- 7. Click the **OK** button.

#### 5.1.5 OSD (On-screen display) Setting

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **General Setting** button.
- 4. Click the **OSD** tab.

😰 LiveView Setting		×
General Camera	OSD   Metadata   Monitor Display   Notification   Joystick	
Foreground	ISD	
Font:	Tahoma 💌	
Size:	9 -	
Color:		
🔽 Bold	Iv Edge	
Background		
Color:		
Transparency:	40	
Info Camera Nam	e	
Date	2012/09/19 🔽	
Time	19:38:15 💌	
I ■ Bitrate		
	Default Apply	
	ОК	Cancel

- 5. Check the **Enable camera OSD** option.
- 6. Set the foreground and background settings of the OSD.
- 7. Select which kinds of information will be displayed on the screen.
- 8. Click the **Apply** button to preview the result.
- 9. Click the **Default** button to back to the default settings if necessary.
- 10. Click the **OK** button.

#### 5.1.6 Monitor Display Setting

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **General Setting** button.
- 4. Click the **Monitor Display** tab.

6	LiveView Setting		×	
	General Camera OSD Metadata	Monitor Display Notification	Joystick	
	Monitor Resolution	Monitor 1		
	#1 1366 x 768	Auto scan		
		Auto scan group:	All Camera 🔻	
		Primary channel:	(Not Used)	
		Secondary channel:	(Not Used) 💌	
		Auto scan interval:	2 sec.	
		NxN type:	5x5 💌	Auto Scan
				Layout
		ОК	Cancel	

- 5. Select **Primary channel** which will always be on the screen when activating auto scan; while select **Secondary channel** which has second priority when activating auto scan. Enter the time interval for auto scan.
- 6. Select the screen division of NxN type.
- 7. Click the **OK** button.

#### 5.1.7 Notification

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **General Setting** button.
- 4. Click the **Notification** tab.

	play			
J∕ Sho	recording status			
Shov	camera event			
E Show	counting result			
Play Sour	d alert			
🔽 Enat	le playing sound on ever	nt		
Sound F	le			
• D	fault			
0 U	ser defined wave file			
Life Cyc	е	,		
AL	tomatic cancel sound ale	ert when event disappe	ar	
⊖ St	p sound alert after	10	Sec.	
Miscellan	ous			
	n system event			

- 5. Check **Show recording status** to show the crystal ball with recording status on monitor display.
- 6. Check **Show camera event** to display the words of detected camera event on the correspondent screen.
- 7. Check the **Enable playing sound on event** option. Select sound file, default sound or user defined sound (.wav), and define the cycle.
- 8. Check **Popup system event** to pop up system event message dialog as a warning when a system event occurred.
- 9. Click the **OK** button.



The "playing sound" function only activates on event, which means you have to setup camera motion, camera I/O and I/O Box I/O as an event. Refer to **Event & Action Management** to do the setting.

## 5.1.8 Set up Joystick Control

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **General Setting** button.
- 4. Click the **Joystick** tab.



• **Function**: You can choose the function from the drop-down menu for the button of the joystick.

Active Joyst	ick: Logitech Atta	ick 3	
Button	Function	Parameter	
Button 1	Goto Preset Point	▼ 1	
Button 2	N/A	2	
Button 3	Goto Preset Point	3	
Button 4	Goto View	4	
Button 5	Goto Previous Camera		
Button 6	Goto Next Camera		
Button 8	Switch Screen Layout		
Button 9	Toggle Single Camera view		
Button 10	Zoom Out		
Button 11	Zoom In		
	Start/Stop Patrol		
	Export	Import	Default

- **Parameter**: Choose the preset point from the drop-down menu.
- **Default**: Click to back to default setting.
- **Import**: Click to import the settings.
- **Export**: Click to export the settings.
- 5. Click the **OK** button.

# 5.2 Remote Live Viewer Application

#### **5.2.1 Remote Live Viewer Application Control Panel**



Start Monitor Playback Live View Setting

- **PTZ Camera Control**: You may control the camera view by using the PTZ camera control panel to adjust the camera's view. This is only available with cameras that support the PTZ function.
- Set Preset Point / Go to Preset Point: Adjust the camera view and click the Dutton to set up this view as preset point. Repeat the process to add more preset points. Click the Dutton to see the preset view.
- **Zoom**: Click the **+** or **-** button to zoom in or zoom out the view.
- **Minimize**: Minimize the Remote Live Viewer window.
- Exit: Shut down the application.
- Play / Stop / Drop: Select a camera/ video and click this button to play/stop/disconnect a particular channel.
- **Information Display Window**: Display video information including server name, video current status, and bit rate for a selected channel.
- **Start Monitor > Monitor**: Select Open Monitor to append monitor to view more live videos on multiple monitors.

- Start Monitor > E-Map: Upload map and drag camera or I/O on it to track device location and alarm status with instant response when an event occurred. See details in the chapter of <u>E-Map</u>.
- **Start Monitor > I/O Control Panel**: Utilize I/O device function remotely. User can remotely adjust the Output Pins by turning it on or off.

	🧃 IO Devices			
Click to turn on/off the "Output" pins	Servers: DI Input#0 DO Output#0	192.168.4.223	•	Show name

- **Playback**: View playback video remotely.
- Auto Scan: Activate auto scan to rotate the channels on the display screen. For instance, you may select to show only 4-split screen on the liveview, while connecting 16 channels to the system. With auto scan function, you are able to see all 16 channels by turns.
- Layout: Click to change the multiple-split layout.



You can right click on the camera screen to enable the following function.



- Enable Move: Adjust the current view of camera which supports PT function by dragging the 
   the button on the display screen.
- Enable Digital PTZ: Click the + or button to zoom in or zoom out the view. The lower right square flashing on the video grid indicates the correspondent view of the camera.
- Fisheye Lens Setting: Select the mode of lens. There are four modes for Generic Dewarp, including Original, Rectilinear mode, Quad mode and Dual-view panorama mode; four modes for ImmerVision, including Original, PTZ mode, Quad mode and Perimeter mode; and other four modes for Vivotek Fish Eye, including Original, Rectilinear mode, Full-view panorama mode, Dual-view panorama mode. Type of modes depends on lens location.
- **Stream Profile**: Select the stream profiles, original, low, minimum.
- **Enable Audio**: Enable audio on active channel(s).
- **Snapshot**: Select the snapshot function to capture a specific video image immediately.
- **Toggle Fullscreen**: Select it to view cameras with full screen. Press "Esc" or right click un-select full screen to go back to the original view.

Also, right click on camera list to duplicate and connect/disconnect designate cameras, and do other functions.

Duplicate Camera
Connect
Disconnect
Login Server
Logout Server
Connect All
Disconnect All

- **Duplicate Camera**: Select the duplicate camera function to create multiple views. The duplicated camera will be shown with green indicator as the right picture. Combine this function with digital PTZ, users are allowed to enlarge different spots and view them in different channels without failing to record the whole view.
- **Connect / Disconnect**: Click to connect or disconnect the designate camera.
- Login / Logout Server: Click to login or logout.
- **Connect All / Disconnect All**: Click to connect or disconnect all

cameras.

#### 5.2.2 Unit Connection Setting

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.



- 3. Click the **Server** tab.
- 4. Insert the unit name.

LiveView S	etting
General	Server Group Camera OSD Metadata Monitor Display Notification Setting Server Name: Department 1 (192.168.4.223) Server Name: Department 2 (192.168.4.54)
	Address: Port 5150
	User Name: Password:
	Save Password:
	Test Server
	Add Delete Update

- 5. Insert the IP address.
- 6. Modify the port if necessary.

- 7. Insert the user name.
- 8. Insert the password.
- 9. Check the **Save Password / Auto login** option.
- 10. Click the **Test Server** button to test the connection between the local application and the remote unit.
- 11. Click the **Add** button to add this unit into your remote server list.
- 12. Click the **OK** button.

#### 5.2.3 General Setting

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.



3. Click the **General** tab.

🕼 LiveView Setting
General   Server   Group   Camera   OSD   Metadata   Monitor Display   Notification Audio preview Enable audio on active channel
Miscellaneous           Synchronize video frames
Run Remote Live Viewer On Monitor
✓ OK X Cancel

- 4. Check the **Enable audio on active channel** option to enable audio streaming on active channel. This function synchronizes with right click on camera to enable audio.
- 5. Check **Synchronize video frames** to avoid the tearing problem occurring in video display while increasing the CPU loading.
- 6. Select monitor(s) to run LiveView.
- 7. Click the **OK** button.

#### 5.2.4 Camera Group Setting

You can put different cameras into the same group.

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **Group** tab.



- 4. Log in to all the servers that contain the camera(s) you would like to put into the group(s).
- 5. Click the **Insert** button to create a new group.
- 6. Name this group.
- Highlight the camera(s) that you would like to add into this group and then click the <-- button.</li>
- 8. Repeat step 6 to establish the group.
- 9. Repeat steps 3 through 7 to establish other groups.
- 10. Click the **OK** button.

#### 5.2.5 Delete/ Rename Camera Groups

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **Group** tab.
- 4. Click the group which you want to modify.
- 5. Click the **Delete** or **Rename** button to remove or rename that group.
- 6. Repeat steps 3 and 4 to modify other groups.
- 7. Click the **OK** button.

#### 5.2.6 Stream Profile Setting

Select the preferred stream type of each camera as default live view profile.

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **Camera** tab.

🕼 LiveView Setting		×
General Server Group Camera Login Cogin Comment 1 Contin 1 Contin 2 Contin 2 Contin 3 Contin 4 Department 2	OSD Metadata Monitor Dis Department 1 - Location 1 Stream Profile Info Stream profile: Video format: Frame rate: Resolution: Quality: Bitrate:	play Notification
		OK Cancel

- Adjust the stream profile of every camera with stream profile enabled in the <u>setting page</u>.
- 5. Click a camera and select its stream profile, and click the **Copy to...** button to apply this profile to other channels.
- 6. Click the **OK** button.

#### 5.2.7 OSD (On-screen display) Setting

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **OSD** tab.

🔁 LiveView Setting	
General Server	Group Camera OSD Metadata Monitor Display Notification 📕
Foreground	SD
Size:	
Color:	
I Bold	✓ Edge
Background	
Color:	
Transparency:	40
Info Camera Nam	e
Date	2012/09/19 🔽
Time	21:01:48 💌
🔲 Bitrate	
	Default Apply
	V OK Cancel

- 4. Check the **Enable camera OSD** option.
- 5. Set the foreground and background settings of the OSD.
- 6. Select which kinds of information will be displayed on the screen.
- 7. Click the **Apply** button to preview the result.
- 8. Click the **Default** button to back to the default settings if necessary.
- 9. Click the **OK** button.

#### 5.2.8 Monitor Display Setting

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **Monitor Display** tab.

F	LiveView Setting		×	
	General Camera OSD Metadata	Monitor Display Notification	Joystick	
	Monitor Resolution	Monitor 1		
	#1 1366 x 768	Auto scan		
		Auto scan group:	All Camera 👻	
		Primary channel:	(Not Used)	
		Secondary channel:	(Not Used) 💌	
		Auto scan interval:	2 sec.	
		Layout		
		NxN type:	5x5 💌	Auto Scan
	I			Layout
		C	OK Cancel	

- 4. Select appointed server group to activate auto scan.
- 5. Select **Primary channel** which will always be on the screen when activating auto scan; while select **Secondary channel** which has second priority when activating auto scan. Enter the time interval for auto scan.
- 6. Select the screen division of NxN type.
- 7. Click the **OK** button.

#### 5.2.9 Notification

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **Notification** tab.

Server   Group   Camera   OSD   Metadata	Monitor Display	Nouncation	JOYSUCK	_
Status display				
Show recording status				
Show camera event				
C Show counting result				
Play Sound alert				
Enable playing sound on event				
Sound File				
O Default				
O User defined wave file		×		
Life Cycle				
<ul> <li>Automatic cancel sound alert when event</li> </ul>	disappear			
C Stop sound alert after	10 \$	Sec.		
Miscellaneous				
Popup system event				

- 4. Check **Show recording status** to show the crystal ball with recording status on monitor display.
- 5. Check **Show camera event** to display the words of detected camera event on the correspondent screen.
- 6. Check the **Enable playing sound on event** option. Select sound file, default sound or user defined sound (.wav), and define the cycle.
- 7. Check **Popup system event** to pop up system event message dialog as a warning when a system event occurred.
- 8. Click the **OK** button.



The "playing sound" function only activates on event, which means you have to setup camera motion and camera I/O as an event. Refer to **Event & Action Management** to do the setting.

## 5.2.10 Set up Joystick Control

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **General Setting** button.
- 3. Click the **Joystick** tab.

Active Joysu	ck: Lo	tech Attack 3
Button	Function	Parameter
Button 1	Goto Preset Point	1
Button 2	Goto Preset Point	2
Button 3	Goto Preset Point	3
Button 4	Goto Preset Point	4
Button 5	Goto Previous Camera	
Button 6	Goto Next Camera	
Button 7	Toggle Single Camera Vi	/
Button 8	Toggle Full Screen	
Button 9	Switch Screen Layout	
Button 10	N/A	
Button 11	N/A	
	Export	Import Default

• **Function**: You can choose the function from the drop-down menu for the button of the joystick.

	ICK	Logitech Attack 3			
Button	Function		Parameter		
Button 1 Button 2 Button 3 Button 4 Button 5 Button 6 Button 7 Button 8 Button 9 Button 10 Button 11	Goto Preset Point N/A Goto Preset Point Goto View Goto Previous Camera Souto Next Camera Switch Screen Layout Toggle Single Camera Toggle Full Screen Zoom Out Zoom In Start/Stop Patrol	View	1 2 3 4		

- **Parameter**: Choose the preset point from the drop-down menu.
- **Default**: Click to back to default setting.
- **Import**: Click to import the settings.
- **Export**: Click to export the settings.
- 4. Click the **OK** button.

#### 5.2.11 Set up Remote Live Viewer

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the unit you wish to access in your remote server list.
- 3. Click the **LOG IN** button to access your unit.
- 4. Select a camera(s) from the camera list on the right and then drag it to where you wish the image to be displayed.

# 6.E-Map

There are two ways to execute the live view function: by Internet Explorer or by **Remote Live Viewer** application.

With E-map, user can easily track the device location and alarm status with instant response when an event occurs. The arrows and lightening icon on E-map represent cameras and I/O devices. These icons will turn red as being triggered by alarms.

There are two modes in E-map application, Edit Mode and Browse Mode.

- **Edit Mode**: The function buttons on the bottom of this E-map dialog will be active. Users can add/edit/delete maps and indicators of devices.
- Source Browse Mode: Users are not allowed to do any configuration but check the map hierarchies and device list to see indicators and related information.

# 6.1 Internet Explorer

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live View** button on the top of the page.
- 3. Click the **Start Menu** button and select **Open E-Map**.



# 6.1.1 E-Map Control Panel

Map: Select a map you want to show on E-map Window.

• 🧈 Camera: Select the camera to see preview video or mark indicator on

E-map.

- **Digital Input**: Select it to highlight the device with green ring on map and show status on Information Window. If the Digital Input is from IP camera, the preview window will display live video of the camera.
- **Digital Output**: Select it to highlight the device with green ring on map and show status on Information Window. If the Digital Output is from IP camera, the preview window will display live video of the camera.
- Map Indicator: Clicking the indicator will lead to the next map layer. If you want to move to the upper layer, select it by mouse directly or click
   icon on the map.
- Camera Indicator: The indicator of cameras dragged from Device and Map Tree List to show preview video and related information. When event occurs, the color of indicator will turn red.
- **Jigital I/O Indicator**: The indicator of I/O devices dragged from Device and Map Tree List to show related information. When event occurs, the color of indicator will turn red.

• **Information Window**: The window shows the related information of each indicator.

- Map: Show map name.
- Camera: Show camera name and connecting status.
- Digital Input: Show Digital Input name and status (0 or 1).
- Digital Output: Show Digital Output name and status (0 or 1).

#### 6.1.2 Add Map

- 1. Make sure being in "Edit Mode" and all devices are inserted and connected.
- 2. Right click on the Map icon <sup>™</sup> in Device and Map Tree List to obtain the option menu to add map, or just click the **Add Map** button to configure.

Map Config		×
Map Image File:	1	
Map Name:		
	ОК	Cancel

3. Select a map file and insert a name. Click the **OK** button, and then the map you added appears in the Device and Map Tree List.

- 4. The map indicator so appears on the upper left of map. Drag it to the position you want on appointed map.
- 5. Repeat steps 2 through 4 to add more maps.
- 6. Click the **Upload** button to activate all the settings.

The maximum file size of each map is 500KB. There are 10 layers of map, and the map capacity of each layer is 10.

## 6.1.3 Edit Map

- 1. Make sure being in "Edit Mode" and all devices are inserted and connected.
- 2. Right click on the Map icon <sup>™</sup> in Device and Map Tree List to obtain the option menu to edit map, or just click the **Edit Map** button to configure.
- 3. Repeat step 2 to edit more maps.
- 4. Click the **Upload** button to activate all the

settings.

### 6.1.4 Delete Map

- 1. Make sure being in "Edit Mode" and all devices are inserted and connected.
- 2. Right click on the Map icon <sup>₩</sup> in Device and Map Tree List to obtain the option menu to delete map, or just click the **Delete** button.
- 3. Repeat step 2 to delete more map.
- 4. Click the **Upload** button to activate all the settings.

#### 6.1.5 Add/Rotate Device Indicator

- 1. Make sure being in "Edit Mode" and all devices are inserted and connected.
- 2. Select the map which you want to add device indicator on.
- 3. Select a device from list and directly drag it to the desired location on the map.
- 4. Select a camera indicator and right click on the indicator or click the **Rotate** button to adjust the direction of camera indicator if needed.
- 5. Repeat steps 2 and 4 to add more indicators on.
- 6. Click the **Upload** button to activate all the settings.

#### 6.1.6 Delete Device Indicator

- 1. Make sure being in "Edit Mode" and all devices are inserted and connected.
- 2. Select the indicator and right click on the indicator or click the **Delete** button.
- 3. Repeat step 2 to delete more indicators.
- 4. Click the **Upload** button to activate all the settings.



- Adjust the Layout: Click the triangular indicator to hide the Device and Map Tree List / Preview and Information Window on right and left side of the window. Click the indicator again to back to the default.
- Maximize the Map: Click the icon on the upper right to get the full screen display of E-map.

# 6.2 Remote Live Viewer Application

- 1. Startup > NUUO NVRsolo > Remote Live Viewer.
- 2. Click the **Start Monitor** button and select Open E-Map.



## 6.2.1 E-Map Control Panel

Device and Man Tree List E-Man Picture Preview Window and Information

• **Server List**: Select a server to display the E-map of the server.



The E-Map function of Remote Live Viewer is quite similar with the one in Internet Explorer, so you can refer to the section of **Internet Explorer** for the details.

# 7.Playback

There are two ways to execute the playback function: with Internet Explorer or with the **Playback System** application.

# 7.1 Internet Explorer

#### 7.1.1 Playback Control Panel



- Information Display Window: Displays video date and time, cue-in / cue-out point times, and speed.
- Audio Volume Control: Adjust the sound level.
- Screen Division: Allocate the sub-screen display by clicking on the desired layout icon. To switch to single camera display, double click a particular sub-screen. Double click the screen again to regain previous screen division layout.
- **Browse Mode**: Play the recorded video when in Search Mode.

- **Open Record**: Click the **Open Record** button to access the Date-Time Panel and select the video records which you want to review.
- General Setting
  - Record Display
    - Calendar View: view the Record Display Window as a calendar.
    - List Control: view the Record Display Window as a list control.
  - Play
    - Play when open: check this option to set the system to start playing the video clip every time a record is withdrawn.
    - Auto-skip when recording in motion-only mode: check this option to set up the system to automatically skip to the points where there were motions recorded.
    - Next interval: set the interval with which the video goes forward when you click the **Next** button on the control panel.
    - Previous interval: set the interval with which the video goes backward when you click the **Previous** button on the control panel.
  - Capture Image
    - Save in clipboard: the image will be saved in the clipboard and can be pasted to other application software.
    - Manually save the image file: you can manually select where you want to save the image, name the saved file, and choose the format you want to save the image.
    - Automatically save the image file: by presetting a path/URL and the image format, the system will automatically save the image accordingly when you click the **Save Image** button on the control panel.

You can right click on the camera screen to enable the following function.

#### Toggle Fullscreen

Enable ImmerVision PTZ

ImmerVision Lens Setting 🕨

Toggle Fullscreen Enable Vivotek FishEye PTZ Vivotek FishEye Lens Setting

- **Toggle Fullscreen**: Select it to view cameras with full screen. Press "Esc" or right click un-select full screen to go back to the original view.
- Enable ImmerVision PTZ: Adjust PTZ in PTZ mode.
- **ImmerVision Lens Setting**: Select the mode of lens, original, PTZ mode, Quad mode and Perimeter mode.
- Enable Vivotek Fish Eye PTZ: Adjust PTZ in PTZ mode.
- Vivotek Fish Eye Setting: Select the mode of lens, Original, Rectilinear

mode, Full-view panorama mode, Dual-view panorama mode. Type of modes depends on lens location.





- 🜌: refresh the Record Display Window.
- $\mathbf{O}$  or  $\mathbf{O}$ : go to previous or next recording date.
- **Record Display Window**: Display the available recorded video records.
- **Date Time Period**: Select the start and end time points that indicate the time period you would like to view after choosing cameras.
- Video Preview: Check the Enable Preview option to view the selected video.
- Time Table (preset recording schedule): Click the 
   icon to select all channels; click the
   icon to deselect all channels. Finally, use the

scale bar to modify the scale of the time table.

• **Recording Types**: Red line in bold represents always record. Blue line in bold represents record on event. Red thin line represents recording data. Black thin line represents that there are multiple video clips within the same period due to system time change (e.g. daylight saving time)

----- Record Always ------ Record on Event ------ Overlapped videos

• Show Recording Schedule: Show the period of recording schedule in the time table.

• Show Event Log: Show the time of event detection in the time table. Color of event type can be defined by preference.



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-			-

 From the Record Display Window at the top left of the Date Time Panel, select the date you want to search the record from. The red lines shown on the time table indicate available recorded video records.



- 2. Use color bars to differentiate recording types from each other. This will help you select video clips.
- 3. Highlight the video clip you want to review by left-clicking and dragging the time period. You may also utilize the Start Time and End Time in Date Time Period Section after choosing camera. In addition, modify the scale of the time table with the 🔎 or 🔎 icon on the bottom left.
- 4. If there are multiple videos of the time period you select, the following dialog may popup to guide you to select one to play.

nere are multiple video nange. Please select oi	clips within the sam le to play.	e period due to syst	em time
			-
Camera Name: Loca	tion 2		
Ist: from 2012/0	3/26 12:45:18 to 2	012/03/26 12:50:1	8
C 2nd: from 2012/	)3/26 12:44:07 to 2	2012/03/26 12:49:0	)7

- 5. Check the **Enable Preview** option to get the preview of the video you select.
- 6. Click the camera name to increase or decrease cameras you want to playback.
- 7. Click the **OK** button.



The Record Display Window can be shown in (a) calendar view or (b) list control view. To modify the settings of the record display window, click the **General Setting** button at the right of the page.

### 7.1.3 Play the Recorded Video

- 1. Be sure that you have set the schedule / recording event first.
- 2. Open Internet Explorer and log in to the unit.
- 3. Click the **Playback** button on the top of the page.
- 4. Click the **Open Record** button.
- 5. The Record Display Window will show the information of the available video clips. Select the date you want to search the record from.
- 6. Highlight the video records that you want to review.
- 7. Click the **OK** button.

#### 7.1.4 Intelligent Search

After opening the recorded video, click the **Search Mode** button to obtain the Intelligent Search Tool panel. You can search for unusual events during the recording period.

There are 5 types of unusual events: *General Motion*, *Foreign Object*, *Missing Object*, *Focus Lost*, and *Camera Occlusion*.

- **General Motion**: Detect all movements in the defined area.
- Define detection zone by dragging to draw a detection zone. You may define more than one zone by repeating this step.
- Modify the sensitivity setting by changing the slider control. Moving toward the right will increase the sensitivity level, which means a relatively small movement will trigger the alarm.
- 3. Set the interval. Moving toward right will increase time interval so that the alarm will only be triggered when the movement lasts longer.

Smart Search	×
Alarm Event Type	
General Motion	•
Sensitivity:	
Interval:	· · · · · ·
Region Definition	
Output Define detection zo	one
C Define object size	
All	Clear
<ul> <li>✓ Draw Region</li> <li>✓ Stop when found</li> </ul>	
Search	Stop

- 4. Check the **Stop when found** option. If unchecked, the search tool will list all the events it found, instead of stopping at the moment the event found.
- 5. Click the **Search** button.
  - Foreign Object: Alarm is set on when any additional object appears in the defined area on the screen.

- 1. Define detection zone by dragging to draw a detection zone.
- 2. Modify the sensitivity setting.
- 3. Set the Interval.
- 4. Check the **Stop when found** option. If unchecked, the search tool will list all the events it found, instead of stopping at the moment the event found.
- 5. Click the **Search** button.
- **Missing Object**: Alarm is set on when the selected object is removed from the defined area on the screen.
- 1. Define detection object by dragging to draw a detection zone.
- 2. Modify the sensitivity setting.
- 3. Set the Interval.
- 4. Check the **Stop when found** option. If unchecked, the search tool will list all the events it found, instead of stopping at the moment the event found.
- 5. Click the **Search** button.
- **Focus Lost**: System will inform you when the camera(s) lose its focus.
- **Camera Occlusion**: Alarms when the camera is blocked.

#### 7.1.5 Recorded Video Enhancement

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button on the top of the page.
- 3. Click the **Open Record** button.
- 4. The Record Display Window will show the information of the available video clips. Select the date you want to search the record from.
- 5. Highlight the video clip you want to review, and then click the **OK** button.
- 6. Click the **Enhancement** button.
- 7. Check the General Setting.
- Apply active channel: The settings will only be applied to the selected channel.
- Apply all channels: The settings will be applied to those currently shown on the screen.
- 8. Set the Filter Setting.
  - Visibility: Check the option and adjust the gamma value of the image to enhance the image and make

Post Processing Tool
General Setting
Apply active channel
C Apply all channels
- Filter Setting
☐ Visibility
· · · · · · ·
☐ Sharpen
🗖 Brightness
□ Contrast
OK Default

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 gray-scale mode so the image displays in black and white.
- 9. Click the **OK** button.
  - **Stop**: Stop the enhancement function and close the enhancement tool. (The system will automatically back to the default settings.)
  - **Default**: Back to the default settings, however, the enhancement tool still works.
  - **OK**: Apply the modifications of the settings.

## 7.1.6 Save a Video

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button on the top of the page.
- 3. Click the **Open Record** button.
- 4. The Record Display Window will show the information of the available video clips. Select the date you want to search the record from.
- 5. Highlight the video clip you want to review, and then click the **OK** button.
- 6. Choose the camera display that you want to save as a video clip.
- 7. Set up the cue in and cue out points; the cue in and cue out time will be shown on the information window.



8. Click the **Save Video** button.

Export Video/Audio
Export File Path:
I I I I I I I I I I I I I I I I I I I
Export Format:
ASF
Use Profile:
Windows Media Video 8 for Local Area Network (384 Kbps) 💌
Start Time: 2012/09/20 09:30:00
End Time: 2012/09/20 09:30:08
🗔 Export Audio
✓ Export OSD
Export Metadata Transaction
OK Cancel

- 9. Choose the folder where you want to save the file.
- 10. Insert the file name and click the **Save** button.
- 11. Choose the export format.
- 12. Choose the use profile.
- 13. Check to export the recorded video with Audio, OSD and POS Transaction.
- 14. Click the  $\mathbf{OK}$  button.



We recommend that you export to the .asf format when saving video. In exporting to the .avi format, the frame rate will be increased when playing in the video player, causing the video to run faster than normal.

## 7.1.7 Save an Image

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button on the top of the page.
- 3. Click the **Open Record** button.
- 4. The Record Display Window will show the information of the available video clips. Select the date you want to search the record from.
- 5. Highlight the video clip you want to review, and then click the **OK** button.
- 6. Choose the camera display that you want to save pictures.
- 7. Click the **Save Image** button when the image you want is shown on the screen.
- 8. Choose the folder where you want to save the file at.
- 9. Choose the folder and the image format (BMP or JPEG) you prefer.
- 10. Insert the file name.
- 11. Click the **Save** button.



You may skip step 3 by presetting the folder where you want to save the images and the format you want to save them in.

#### 7.1.8 Print an Image

Print the current image of the video you choose.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Playback** button on the top of the page.
- 3. Click the **Open Record** button.
- 4. The Record Display Window will show the information of the available video clips. Select the date you want to search the record from.
- 5. Highlight the video clip you want to review, and then click the **OK** button.
- 6. Choose the camera display from which you want to print pictures.
- 7. Click the **Print** button when the image you want is shown on the screen.
- 8. Set print settings.

🍐 Print Setup	×
Print Content	
Select channels :	
Print active channel image	
O Print all channels in the current view	
Select printed region of images	
O Original	
Selected region	
Page Setting	
<ul> <li>Original size</li> </ul>	
O Fit to page	
Align Image: Top	-
Print Cancel	

- **Print Content**: Print the image from currently selected channel or all the channels shown on the screen.
- Page Setting
  - > Print in original size: Check to have the image print in original size.
  - > Fit the page: Check to have the image fit the page.
  - > Align Image: Top, center, or bottom
- 9. Click the **Print** button.

### 7.1.9 Backup the Recorded Video

Different from Save Video, the Backup function will save all the recorded videos which belong to the time slot you set, instead of the clips.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Open Record** button to select data.
- 3. Click the **Backup** button.

Start Time:	2012/09/20	÷ 09:30:00 ÷
End Time:	2012/09/20	• 09:40:00 •
Select Camera(s)		
1-16		
☑ 1 □ 2 □ 3	□4 □5 □6	□ 7 □ 8
9 🗖 10 🗖 11	🗖 12 🔲 13 🔲 14	🗖 15 🗖 16
Calculate Size	SelectAll	DeselectAll
Media C Backup using CDROM C Backup using DVD G Backup on HardDisk		
Media C Backup using CDROM C Backup using DVD C Backup on HardDisk		
Media C Backup using CDROM C Backup using DVD C Backup on HardDisk		<u> </u>
Media C Backup using CDROM C Backup using DVD C Backup on HardDisk Option V Backup Event Log		
Media C Backup using CDROM C Backup using DVD C Backup on HardDisk Option Z Backup Event Log Dackup System Log		
Media C Backup using CDROM Backup using DVD Backup on HardDisk Coption Backup Event Log Backup System Log Backup System Log Backup Counter Log		
Media C Backup using CDROM Backup using DVD Backup on HardDisk Coption Backup Event Log Backup System Log Backup System Log Backup Counter Log Backup Metadata Tran	saction	
Media C Backup using CDROM C Backup using DVD C Backup on HardDisk Coption E Backup Event Log Backup System Log Backup System Log Backup Counter Log Backup Adv. IVS Count	saction	

- 4. Set the Start Time and End Time you want to backup.
- 5. Select the cameras you want to backup.
- 6. Select the directory you want to save the backup data.
- 7. Click the **Backup** button.
- 8. The system will then begin backup process automatically.

J Backup	Progress			×
ackup		7		
No.	File Name	Status	Size	
1 2 3 4 5 6	C:\Users\Miranda\Desktop\123\backup\C00000\09\C00000A2012 C:\Users\Miranda\Desktop\123\backup\20120920\C00000.rcd C:\Users\Miranda\Desktop\123\backup\C0000\09\C0000A2012 C:\Users\Miranda\Desktop\123\backup\C0000\09\C0000A2012 C:\Users\Miranda\Desktop\123\backup\20120920\record.log C:\Users\Miranda\Desktop\123\backupEventLog.db	Done Done Copying	76925KB 1KB	
		Pause	Car	cel

# 7.2 Remote Playback System Application

## 7.2.1 Playback System Application Control Panel

The **Playback System** control panel is similar to the playback panel in Internet Explorer. Check **Playback Control Panel** for more details about those buttons.



# 7.2.2 Set up Unit Connections

Before using the **Playback System** application, you need to set a connection to your unit first.

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **General Setting** button.
- 3. Click the **Server** tab.
| General Server 05 | SD   Metadata |                              |
|-------------------|---------------|------------------------------|
| Server Setting    |               | 🔚 Gangway 211 (192.168.4.223 |
| Server Name:      |               |                              |
| Address:          |               |                              |
| Port:             | 5160          |                              |
| User Name:        |               |                              |
| Password:         |               |                              |
|                   | Save Password |                              |
|                   | Test Server   |                              |
| Add               | Delete Update | 1                            |
|                   |               |                              |
|                   |               |                              |
|                   |               |                              |

- 4. Insert the name of your unit.
- 5. Insert the IP address of that unit.
- 6. Modify the port if necessary.
- 7. Insert the user name.
- 8. Insert the password.
- 9. Check the **Save Password** option.
- 10. Click the **Test Server** button to test the connection between the local application and the remote unit.
- 11. Click the **Add** button to add this unit into the remote server list.
- 12. Click the **OK** button.

#### 7.2.3 Search the Recorded Video

	) DateTime Search Dialog [Gangway 211]
Remote Playback Site Management	Image: Second system       Image: Second system <td< td=""></td<>

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button.
- 3. Click the 🕥 icon on the top of the Date-Time Panel to obtain the Remote Playback Site Management dialog, and then select the server you want to access.
- 4. Highlight the records you want to view in the Time Table.
- 5. Set the Date Time Period.

The search process in the **Playback System** application is similar to that of Internet Explorer. Check **Search the Recorded Video** for more details about the setting process.

### 7.2.4 Play the Recorded Video

- 1. Be sure that you have set up the recording schedule / response first.
- 2. Startup > NUUO NVRsolo > Playback System.
- Click the General Setting button and the Server tab to set connections to your unit. See <u>Set up Unit Connections</u> for more details.
- 4. Click the **Open Record** button.
- The Record Display Window will show the information of the available video clips. Select the date you want to search the record from. Check <u>Search</u> <u>the Recorded Video</u> for more details.
- 6. Highlight the video records that you want to review.
- 7. Select the start and end points in Date Time Period to adjust the time slot.
- 8. Click the **OK** button.

#### 7.2.5 Intelligent Search

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button.
- The Record Display Window will show the information of the available video clips. Select the date you want to search the record from. Check <u>Search the Recorded Video</u> for more details.
- 4. Highlight the video records that you want to review.
- 5. Choose the camera display for which you want to implement smart search.
- 6. Click the **Search Mode** button to open the Intelligent Search Tool panel.
- 7. Set up unusual events here to detect abnormalities occurring during the

recoding period. Check **Intelligent Search** for more details.

8. The searched events will be listed. Click to find that event.

There are 5 types of unusual events: *General Motion*, *Foreign Object*, *Missing Object*, *Focus Lost*, and *Camera Occlusion*.

- **General Motion**: Detect all movements in the defined area.
- Foreign Object: Alarm when any additional object appears in the defined area on the screen.
- **Missing Object**: Alarm when the selected object is removed from the defined area on the screen.
- Focus Lost: System will inform you when the camera(s) lose focus.
- **Camera Occlusion**: Alarm when the camera is blocked.

The intelligent search in the **Playback System** application is similar to that of Internet Explorer.

### 7.2.6 Recorded Video Enhancement

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button.
- The Record Display Window will show the information of the available video clips. Select the date you want to search the record from. Check <u>Search the Recorded Video</u> for more details.
- 4. Highlight the video records that you want to review.
- 5. Choose the camera display that you want to implement video enhancement.
- 6. Click the **Enhancement** button.
- 7. Check the General Setting.
- Apply active channel: The settings will only be applied to the selected channel.
- Apply all channels: The settings will be applied to those currently shown on the screen.
- 8. Set the Filter Setting.
  - 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 gray-scale mode so the image displays in black and white.
- 9. Click the **OK** button.
  - **Stop**: Stop the enhancement function and close the enhancement tool. (The system will automatically revert back to the default settings.)
  - **Default**: Back to the default settings, however, the enhancement tool still works.
  - **OK**: Apply the modifications of the settings.

### 7.2.7 Save a Video

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button.
- The Record Display Window will show the information of the available video clips. Select the date from which you want to search the record. Check <u>Search the Recorded Video</u> for more details.
- 4. Highlight the video records that you want to review.
- 5. Choose the camera display that you want to save as a video clip.
- 6. Set up the cue in and cue out points; the cue in and cue out time will show on the information window.



- 7. Click the **Save Video** button.
- 8. Choose the folder where you want to save the file.
- 9. Insert the file name and click the **Save** button.
- 10. Choose the export format.
- 11. Choose the use profile.
- 12. Check the **Export Audio** option.
- 13. Click the **OK** button.

#### 7.2.8 Save an Image

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button.
- The Record Display Window will show the information of the available video clips. Select the date from which you want to search the record. Check <u>Search the Recorded Video</u> for more details.
- 4. Highlight the video records that you want to review.
- 5. Choose the camera display from which you want to save pictures.
- 6. Click the **Save Image** button when the image you want is shown on the screen.
- 7. Choose the folder where you want to save the file at.
- 8. Choose the format of image (BMP or JPEG) you prefer.
- 9. Insert the file name.
- 10. Click the **Save** button.



You may skip step 7 by presetting a folder where you want to save the images and a format which you want to save the images in.

### 7.2.9 Print an Image

Print the current image of the video you choose.

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button.
- The Record Display Window will show the information of the available video clips. Select the date you want to search the record from. Check <u>Search the Recorded Video</u> for more details.
- 4. Highlight the video records that you want to review.
- 5. Choose the camera display that you want to print pictures.
- 6. Click the **Print** button.
- 7. Set the print settings.
- **Print Content**: Print the image from currently selected channel or all the channels shown on the screen.
- Page Setting
  - > Print in original size: Select to have the image print in original size.
  - > Fit the page: Select to have the image fit the page.
  - > Align Image: Top, center, or bottom

### 7.2.10 Backup the Recorded Video

Different from Save Video, the Backup function will save all the recorded videos which belong to the time slot you set, instead of the clips.

- 1. Startup > NUUO NVRsolo > Playback System.
- 2. Click the **Open Record** button to select data.
- 3. Click the **Backup** button.
- 4. Set the Start Time and End Time you want to backup.
- 5. Select the cameras you want to backup.
- 6. Select the directory you want to save the backup data.
- 7. Click the **Backup** button.

# 8.Backup and Delete Records

## 8.1 The Backup System Application

In addition to the ways mentioned in the previous chapters, you can apply the application to backup your files.

1. Startup > NUUO NVRsolo > Backup System.



2. Click the **Remote Server Site** 🚳 button to set up remote server.

Server Setting Server Name: Address: Port:	5160	
User Name: Password:		
	Save Password	
Add	Delete Lindate	1

- 3. Insert the name of your unit.
- 4. Insert the IP address of that unit.
- 5. Modify the port if necessary.

- 6. Insert the user name.
- 7. Insert the password.
- 8. Check the **Save Password** option.
- 9. Click the **Test Server** button to test the connection between the local application and the remote unit.
- 10. Click the **Add** button to add this unit into the remote server list.
- 11. Click the **OK** button.
- Click the ▼ button next to Remote Server Site button, and select one of servers you added.

Backup 🗙 Delete	
Camera(s)	
	Size

13. Click the **New Period** button to select the record date.

B DateTime Search Dialog [192.168.4.22	3]	X
✔ ₩ 0 0 S M T W T F S 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6	Date Time Period         Video Preview           Start Time:         2012/09/20 - 00:00:00:00 - 00:00:00:00 - 00:00:00:00 - 00:00:00:00:00:00:00:00:00:00:00:00:00:	
Show Recording Schedule     Show Event Log		15 10
Cocation 4      P	Overlapped videos	Cancel

- 14. Set the Start Time and End Time you want to backup. (or highlight the video records which you want to backup)
- 15. Select the cameras you want to backup.
- 16. Click the **OK** button.
- 17. Select the time slot which you want to backup.



- 18. Click the **Backup** button.
- 19. Select the way and directory you want to save the backup data.
- 20. Check the **Include Playback application** option, which will add **Playback** application into the backup folder.

Backup on HardDi	sk
	<b>É</b>
C Backup using CDF	ROM
Option	
Backup Event Log	3
🔲 Backup POS Tran	isaction
✓ Include Playback	application
Include Playback	application

21. Click the **OK** button.

## 8.2 Backup the Recorded Video through Windows Explorer

- Find your unit through Windows Explorer (insert "\\" plus the IP address of your unit)
- 2. Open the "public" folder.
- 3. Insert the name and password of the administrator.
- 4. Select the volume and open the "VIDEODATA" folder.

5. Copy the date folder which you want to backup to your desktop / laptop.

# 8.3 Backup the Recorded Video through FTP

- 1. Find your unit through Windows Explorer (insert "ftp://" plus the IP address of your unit)
- 2. Insert the name and password of the administrator.
- 3. Select the volume and open the "VIDEODATA" folder.
- 4. Copy the date folder which you want to backup to your desktop / laptop.

## 8.4 Playback the Backup Records

### 8.4.1 With Playback Application

- 1. Use the Backup System application to backup your records.
- 2. Check the **Include Playback application** option, which will add the **Playback** application into the backup folder.
- 3. Open that folder.
- 4. Double-click the Playback application icon.
- 5. Select the recorded data to play back.

### 8.4.2 Without Playback Application

- 1. Use the Playback function to backup your records.
- Put your backup folder into the program folder of NVRsolo. (Default directory is "C:\Program Files\NUUO\NVRsolo".)
- 3. Startup > NUUO NVRsolo > Playback System.
- 4. Click the **Open Record** button.
- 5. Select the recorded data to play back.

## 8.5 Delete the Recorded Video

### 8.5.1 With Backup Application

1. Startup > NUUO NVRsolo > Backup System.



2. Click the **Remote Server Site** 🚳 button to set up remote server.

Server Setting		
Server Name:		
Address:		
Port	5160	
User Name:		
Password:		
	Save Password	
	Test Server	
Add		

- 3. Insert the name of your unit.
- 4. Insert the IP address of that unit.
- 5. Modify the port if necessary.
- 6. Insert the user name.
- 7. Insert the password.
- 8. Check the **Save Password** option.
- 9. Click the **Test Server** button to test the connection between the local application and the remote unit.
- 10. Click the **Add** button to add this unit into the remote server list.
- 11. Click the **OK** button.
- Click the ▼ button next to Remote Server Site button, and select one of servers you added.

Backup System		
Backup Help		
🚺 🖌 New Period 👷 Remove Period	🖉 Backup 🙁 Delete	
192.168.4.223 (192.168.4.223)	Camera(s)	Size

13. Click the **New Period** button to select the record date.

B DateTime Search Dialog [192.168.4.22	23]	×
<ul> <li>✓ Control Contro</li></ul>	Date Time Period           Start Time:         2012/09/20 - 00.00.00 - 1           End Time:         2012/09/20 - 00.00.00 - 1           Set         Set           Color         Event Type           General Motion(Device)         Signal Lost	
09/19 0 1 2     Location 1     Location 2     Location 3     Location 4		10
<u>,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Record Always - Record on Event	Overlapped videos	;el

- 14. Set the Start Time and End Time. (or highlight the video records which you want to delete)
- 15. Select the cameras you want to delete the records.
- 16. Click the **OK** button.
- 17. Select the time slot which you want to delete.



- 18. Click the **Delete** button.
- 19. Confirm the check dialog.

### 8.5.2 Without Backup Application

- Find your unit through Windows Explorer (insert "\\" plus the IP address of your unit).
- 2. Open the "public" folder.
- 3. Insert the name and password of the administrator.
- 4. Select the volume and open the "VIDEODATA" folder.
- 5. Select the date folder which you want to delete.
- 6. Delete the folder.



In order to keep the system stable, do not delete recorded data from the day in which you do the delete process.

# 9.Verification Tool

The Verification Tool verifies whether the data created by the system has been tampered with. It's the process by which a digital watermark (a digital signature) is added to each recorded video frame to ensure its authenticity.

There are three types of data could be verified by Verification Tool:

- 1. File in (.dat) (.264) format will be displayed as  $\checkmark$ .
- 2. File in (.avi) (.asf) format will be displayed as *m*.
- 3. File in (.bmp) (.jpg) format will be displayed as 🛸.

# 9.1 Execute Verification Tool

- 1. Startup > NUUO NVRsolo > Verification Tool.
- 2. Verification Tool Overview



- Add File: Insert the single file to list for verification.
- Add Folder: Choose the folder with multiple files to list for verification.
- **Remove File**: Remove indicated file(s) from list.
- **Select All**: Select all files in list for verification.

Choose the file type first before selecting files. Only (.dat) (.264) (.avi) (.asf) (.bmp) (.jpg) are available to open.

Video Preview: Preview designate file in verification list. Select the buttons below to play ▶, pause ■, and stop ■ the video file.

## 9.2 Verify Image / Video

- 1. Select single or multiple files for verification.
- 2. Click the **Verify button** to start verification.
- 3. The verification result will show on watermark column. If a file was tampered with, it will show **≭**; if a file passed verification, it will show **✓**.

) 🖨 🔒					Į	🕽 👘 Video Previe	w
ile Name	Watermark	Start Time	End Time	Camera Name	Path		
091119 Image	*	2009/11/ 2009/11/	2009/11/ 2009/11/	Camera 5 Camera 5	C:\Documents C:\Documents	an	
Trange						dii	
	*				C:\Documents	an an	
€	*	10)			C:\Documents		
Status :	*		Verify		C:\Documents		
Status : Number o	Yerified Files	: 3 file:	S Time	: e lapsed :	C:\Documents		

**Verification report** 

4. The verification report will indicate the information related to the verification.

# **10. External Storage**

Total recording space can be expanded largely by connecting DAS through eSATA port. Follow the directions to enlarge your recording space.

### **10.1 Create a Volume on DAS**

The current compatible DAS is AXUS FiT Series. We don't guarantee the quality of other DAS models. Please refer to the manual of AXUS FiT Series to create a single volume on DAS.



We are unable to create a volume on external storage in NVR setting page, so do NOT skip this step before connecting to NVR device.

### 10.2 Create an External Storage

- 1. Log in to the unit.
- 2. Click RAID & File System / RAID Management.
- 3. You will find External SATA Disk displayed in Disk List.

RAID Status Modify Creat	e Delete Format		_
😸 RAID Status			
List	Status		
- Volumes	RAID Name	VOLUME1	
- VOLUME1	RAID Level	RAID0	
Disk 2	RAID Status	Functional	
- Free Dicke	Total Capacity	298.08 GB (305244 MB)	
FILE DISKS	Free Capacity	290.24 GB (297208 MB)	
Disk 6 (eSATA)	Used Capacity	3.16 GB (3244 MB)	
	Usage		2%
	Update Time	Friday, November 18, 2011 4:15:29 PM	
	Total Devices	1	
	Active Devices	1	
	Failed Devices	0	
	Spare Devices	0	
	Format Progress		
	Recovery Progress		

4. Click on the eSATA disk directly to check the disk drive information.

RAID Managemen	I <b>t</b> le Delete Format	
List	Status	
Volumes VOLUME1 Disk 2 Free Disks Disk 5 (65010)	Vendor Model Capacity Firmware Version Serial No.	Seagate ST32000542AS 1929GB 0957 6RY6GK1T
	Smart Support Smart Enable	Yes Enable

Refer to the section of **<u>Create a RAID Volume</u>** to create a volume for it.

# 11. Log out

Click the **Logout** button on the top of the page to log out of the system. If there is no action in 10 minutes, the system will log out automatically to avoid unauthorized access.

# **12. Remote PC System Requirements**

Remote PC Minimum Requirements			
Model	1/8 bay		
OS	Windows XP 32 bit, Windows 7 32/64 bit,		
Supported	Windows 8 32/64 bit		
CPU	Intel Core 2 Duo, 2.6GHz		
RAM	1GB		
User	1. HTTP Web browser - Internet Explorer 8, 9,		
Interface	10 (32 bit)		
	2. NUUO client application program		

# 13. Troubleshooting

## 13.1 Replace a Failed Disk Drive

If a disk drive fails, the Disk Status LED becomes orange. If the disk drive belongs to a RAID Volume, the Volume goes Critical or Offline, depending on RAID level. See **Check RAID Volume Status** for details.

Replace the failed disk drive with a new disk drive of the same or slightly greater capacity. You do not have to power down the unit. Refer to **Modify RAID Volume** to remove the failed disk and replace it with a new one.

## **13.2 Respond to a Critical RAID Volume**

How the unit responding to a Critical RAID Volume depends on the RAID level of your Volume:

- For **RAID 1, 5, and 10** volumes, you must replace the failed disk drive with a new one. The RAID Volume will begin rebuilding itself when you install the new disk drive. See **Replace a Failed Disk Drive** for details.
- **RAID 0** volumes go offline after a disk drive failure. A **RAID 0** Volume cannot be recovery. All data of the volume is lost.

## 13.3 Respond to a File System Error RAID Volume

When encountering file system error, you are unable to keep the data anymore. It's likely due to abnormal usage and disk damage. In this case, if you want to keep recording, we suggest replacing new disks, or try the following methods.

- Format this volume, and check if the status becomes *functional*. If yes, you can start recording. If it doesn't, try the second method.
- Delete this volume, and create volume again to see if the status is *functional*.

## **13.4 Restore the Default Administrator's Password**

If you forget the password, and want to reset the Administrator's password to the default password: **admin**, follow the following steps.

- 1. Verify that the system is fully booted.
- 2. Insert your reset tool into the reset button hole on the back of the device.

- 3. Press and hold the reset button for 8 seconds, release your hands until the buzzer beeps one time and the System Status LED flashes in blue.
- 4. System will restart and the Administrator's password is now reset to **admin**.

## 13.5 Restore All Default Configuration

If you want to restore all configurations to default setting, follow the following steps.

- 1. Verify that the system is fully booted.
- 2. Insert your reset tool into the reset button hole on the back of the device.
- 3. Press and hold the reset button for 14 seconds, release your hands until the buzzer beeps twice and the System Status LED flashes in orange.
- 4. System will restart and all settings are reset to default.



RAID volume and data within the volume won't be reset to default. Refer to **Format** for the details.

## 13.6Install ActiveX

If you cannot see the complete page of the system when using Internet Explorer, it may be because the ActiveX installation process is not completed.

- 1. Open Internet Explorer and log in to the unit.
- 2. Click the **Live view / Playback** button on the top right.
- 3. The browser will ask whether to install ActiveX.



- 4. Click the upper bar to begin the installation process.
- 5. Click the **Install** button to complete the process.

## **13.7**Cannot Log in to the Unit with Internet Explorer

- 1. Check the settings of your antivirus software.
- 2. Change to appropriate settings or turn off this antivirus software.

Please visit NUUO wiki for more information. http://support.nuuo.com/mediawiki/index.php/Main\_Page

# Appendix – RAID System

## Introduction to RAID

RAID (Redundant Array of Independent Disks) allows multiple disk drives to be combined together into a RAID Volume. You will create a RAID Volume on your unit when you perform the setup procedure.

The benefits of a RAID can include:

- Higher data transfer rates for increased server performance
- Increased overall storage capacity for a single Volume
- Data redundancy/fault tolerance for ensuring continuous system operation in the event of a disk drive failure

Different RAID levels use different organizational models and have varying benefits. The following outline breaks down the properties for each RAID level supported on this unit:

## **RAID 0 – Stripe**

When a RAID Volume is striped, the read and write blocks of data are interleaved between the sectors of multiple disk drives. Performance is increased, since the workload is balanced between drives or "members" that form the RAID Volume. Identical drives are recommended for performance as well as data storage efficiency.



The RAID Volume's data capacity equals the capacity of the smallest disk drive times the number of disk drives. For example, one 100 GB and three 120 GB drives will form a 400 GB (4 x 100 GB) RAID Volume instead of 460 GB.

If disk drives of different capacities are used, there will also be unused capacity on the larger drives.

Because RAID 0 does not offer Fault Tolerance, meaning that you cannot recover your data after a disk drive failure, we do not recommend a RAID 0 Volume for your unit.

RAID 0 Volumes on this unit consist of one or more disk drives.

## RAID 1 – Mirror

When a RAID Volume is mirrored, identical data is written to a pair of disk drives, while reads are performed in parallel. The reads are performed using elevator seek and load balancing techniques where the workload is distributed in the most efficient manner. Whichever drive is not busy and is positioned closer to the data will be accessed first.

With RAID 1, if one disk drive fails or has errors, the other mirrored disk drive continues to function. This is called Fault Tolerance. Moreover, if a spare disk drive is present, the spare drive will be used as the replacement drive and data will begin to be mirrored to it from the remaining good drive.



The RAID Volume's data capacity equals the smaller disk drive. For example, a 100 GB disk drive and a 120 GB disk drive have a combined capacity of 100 GB in a mirrored RAID Volume.

If disk drives of different capacities are used, there will also be unused capacity on the larger drive.

RAID 1 Volumes on this unit consist of two disk drives.

If you want a mirrored RAID Volume with more than two disk drives, see **RAID 10 – Mirror / Stripe** for details.

## **RAID 5 – Block Striping with Distributed Parity**

RAID 5 organizes block data and parity data across the disk drives. Generally, RAID level 5 tends to exhibit lower random write performance due to the heavy workload of parity recalculation for each I/O. RAID 5 works well for file, database, application and web servers.



The capacity of a RAID 5 Volume equals the smallest disk drive times the number of disk drives, minus one. Hence, a RAID 5 Volume with four 100 GB disk drives will have a capacity of 300 GB. A RAID Volume with two 120 GB disk drives and one 100 GB disk drive will have a capacity of 200 GB.

RAID 5 is generally considered to be the most versatile RAID level.

RAID 5 requires a minimum of three disk drives.

## RAID 10 - Mirror / Stripe

Mirror/Stripe combines both of the RAID 0 and RAID 1 types. RAID 10 can increase performance by reading and writing data in parallel while protecting data with duplication. At least four disk drives are needed for RAID 10 to be installed. With a four-disk-drive RAID Volume, one drive pair is mirrored together then striped over a second drive pair.



The data capacity RAID 10 Volume equals the capacity of the smallest disk drive times the number of disk drives, divided by two.

In some cases, RAID 10 offers double fault tolerance, depending on which disk drives fail.

RAID 10 Volumes on this unit consist of four disk drives.

Because all of the available disk drives are used for the RAID Volume, you cannot set up a spare drive with RAID 10.

### Choosing a RAID Level

There are several issues to consider when choosing the RAID level. The following summarizes some advantages, disadvantages and applications for each choice.

#### • RAID 0

	Advantage		Disadvantage
•	Implements a striped disk RAID Volume, the data is broken down	•	Not a true RAID because it is not fault tolerant
	into blocks and each block is written to a separate disk drive	•	The failure of just one drive will
•	I/O performance is greatly		result in all data in a RAID Volume

	improved by spreading the I/O		being lost
	load across many channels and	•	Should not be used in mission
	drives		critical environments
•	No parity calculation overhead is		
	involved		

### • RAID 1

	Advantage		Disadvantage
•	Simplest RAID storage subsystem design	•	Very high disk overhead - uses only 50% of total capacity
•	Can increase read performance by		
	processing data requests in		
	parallel since the same data		
	resides on two different drives		

### • RAID 5

	Advantage		Disadvantage
•	High Read data transaction rate	•	Disk failure has a medium impact
•	Medium Write data transaction	(	on throughput
	rate		
•	Good aggregate transfer rate		
•	Most versatile RAID level		

#### • **RAID 10**

Advantage	Disadvantage
<ul> <li>Implemented as a mirrored RAID</li> </ul>	<ul> <li>Very high disk overhead – uses</li> </ul>
• Volume whose segments are RAID	only 50% of total capacity
0 RAID Volumes	
• High I/O rates are achieved	
thanks to multiple stripe	
segments	

# **Appendix – Camera Integration**

## **Camera Support List**

Any information about camera integration, including camera model and its spec, please refer to NUUO website at www.nuuo.com

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