

# ELAN<sup>®</sup>



## EL-NVR Owner's Manual

# CONTENTS

- About this document ..... 4
- Electromagnetic Compatibility (EMC) ..... 4
  - Compliance.....4
  - Features.....5
  - Caution .....5
- Hard Drives Install Instruction..... 6
  - EL-NVR 1U 19" 4-Bay NVR Installation .....6
- Remote control..... 7
- PRODUCT OVERVIEW ..... 8
  - EL-NVR 1U 19" 4-Bay NVR .....8
- Beginning using the NVR ..... 9
  - Important! .....9
- OVERVIEW AND SUPPORTED FEATURES ..... 10
  - The ELAN Surveillance System Supports the Following Features ..... 10
- Locating NVR IP Address ..... 11
- Language Setup/Switch Users ..... 12
- NVR System ..... 13
  - NVR System > General ..... 13
  - NVR System > Time..... 14
  - NVR System > User ..... 15
  - NVR System > Storage ..... 16
  - NVR System > Event..... 18
- Network setup ..... 20
  - Network Setup > Advance ..... 21
  - Network Setup > E-Mail ..... 25
  - Network Setup > FTP ..... 28
  - Network Setup > DDNS..... 29
  - Network Setup > Other ..... 30
- Camera Setup ..... 31
  - Camera Setup > General ..... 31
  - Camera Setup > Video..... 33
- Record Setup ..... 34
  - Record Setup > General ..... 34
  - Record Setup > Schedule ..... 35
  - Record Setup > Advanced..... 35
- Alarm Setup ..... 36
  - Alarm Setup > General..... 36
  - Alarm Setup > Motion Area ..... 37
  - Alarm Setup > Output ..... 38

- Display Setup .....41
  - Display Setup > General..... 41
  - Display Setup > Advanced ..... 42
  - Display Setup > Sequence ..... 43
- PTZ Setup .....44
  - PTZ Setup > General ..... 44
  - PTZ Setup > NVR Cascade..... 45
- Meta data Setup .....46
  - Meta Data Setup > General..... 46
- Other Setup.....48
  - Other Setup > Smart Phone..... 48
- Other Setup (Cont.) .....49
  - Other Setup > IVS..... 49
- Stream Setup .....50
  - Stream Setup > Live ..... 51
  - Stream Setup > Play ..... 51
  - Stream Setup > Backup..... 52
- Appendix .....53
  - Hard Reset..... 53
  - Specifications..... 53

## ABOUT THIS DOCUMENT

This document includes instructions for basic operation of the EL-NVR 5-Megapixel Series Network Video Recorder.

## ELECTROMAGNETIC COMPATIBILITY (EMC)

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to attempt correcting the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit to the receiver
- Consult your dealer or an experienced radio/TV technician for assistance
- Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards

**Note:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.



## Features

- Standalone NVR
- Supports 5-megapixel and 1080p 60 FPS H.264 IP cameras
- Up to 96 Mbps incoming network throughput
- Full HD 1080p HDMI and VGA output
- Compatible with iOS and Android devices via the ELAN mobile app

## Caution

- Do not drop or strike the equipment
- Do not install the equipment near open flames or heat sources
- Do not expose this unit to rain, moisture, smoke or dusty environments
- Do not cover the opening of the unit with cloth or plastic or install this unit in a poorly ventilated place

**Note:** Allow 10 cm between this unit and its surroundings.

- Do not continue to operate the unit under abnormal conditions such as detection of smoke, strange smell, or malfunctioning screen while power is turned on
- Do not touch the power connection with wet hands
- Do not damage the power cord or leave it under pressure
- To avoid unnecessary magnetic interference, do not operate this unit near magnets, speaker systems, etc.
- All connection cables must be grounded properly

## CAUTION

Risk of explosion if battery is replaced with an incorrect type.  
Dispose of batteries according to the instructions.



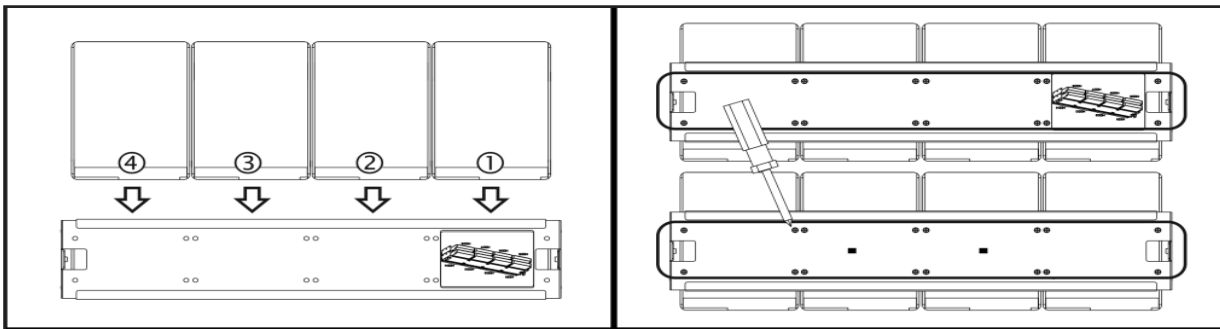
# HARD DRIVES INSTALL INSTRUCTION

## EL-NVR 1U 19" 4-Bay NVR Installation

1. Remove the upper casing.
2. Loosen the screws on the both sides of the hard drive bracket to remove it.
3. Install hard drives.
4. Tighten the hard drive screws as shown:

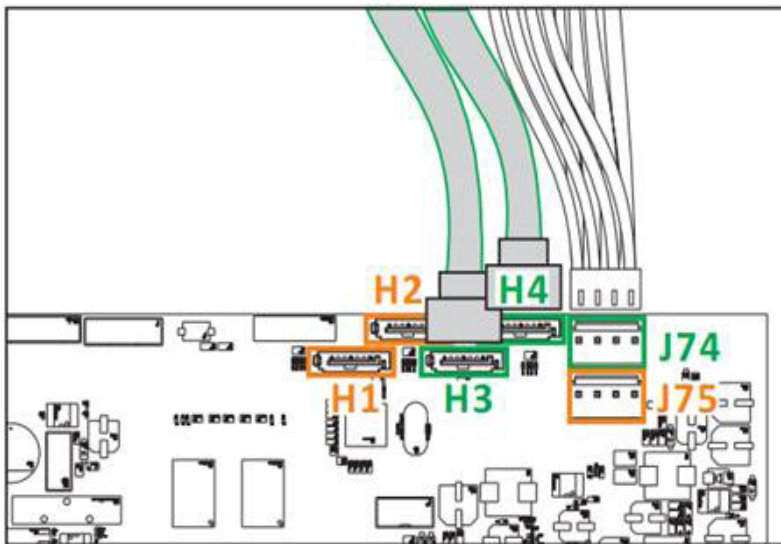
*Screws loosened*

*Screws tightened*



5. Connect the SATA cables and power cables to the connectors following the instruction:

*Wiring Configuration*



**Note:** H1&H2 match to J75 and H3&H4 match to J74.

6. Close the hard drive upper casing.
7. Tighten screws.

## REMOTE CONTROL

The primary interface to the ELAN NVR and Cameras is through the ELAN User Interfaces: touch panels, remotes, Mac & PC Viewers and iOS & Android Applications. The Remote included can be used for operation outside of the ELAN experience, such as the On Screen Display via the HDMI output on the NVR.

Keys and functions of the remote control are described as follows:



KEY	FUNCTION
	Power switch
	Start/stop manual recording
MENU	Setup menu
ESC	Escape/exit/stop
PIP (SHIFT)	Switch between split and full screen
ZOOM	Digital video zoom
FREEZE	Freeze video
	Pause
	Playback
	Stop
	Fast forward
	Rewind
	Next channel
	Previous channel
	4 split screens
	8 split screens
	9 split screens
	13 split screens
	16 split screens
SEARCH	View event log
SEQ	Sequential display
AUDIO	Audio on/off
BACKUP	Video backup
DVR/NVR	Addressable NVR control
LANGUAGE	Language selection
BACKSPACE	Delete character
	Move up/tilt up
	Move down/tilt down
	Move left/pan left/fast rewind
	Move right/pan right/fast forward
<b>ENTER</b>	Enter/set
FREEZE	Pause live video
AUTO PAN	Perform auto pan feature
ZOOM IN	Zoom in
ZOOM OUT	Zoom out
PRESET	Call preset point

# PRODUCT OVERVIEW

## EL-NVR 1U 19" 4-Bay NVR

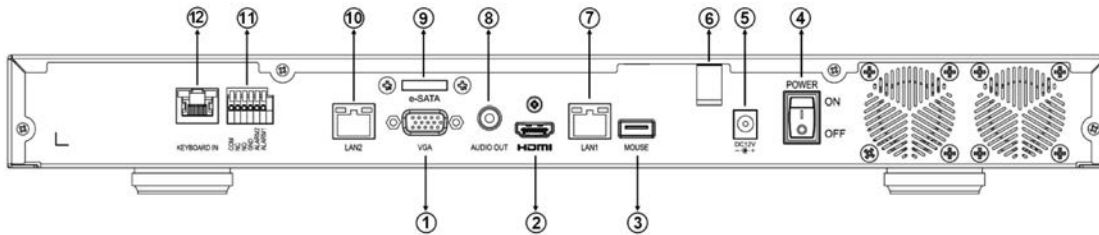
Front View



1. POWER LED, blue, power ON/OFF indicator

2. USB port

Rear View



1. VGA output connector

2. HDMI output connector

3. USB port

4. Power switch

5. Power socket

6. Power Cord Retainer Clip

7. RJ-45 Gigabit connector

8. AUDIO OUT

9. eSATA connector

10. RJ-45 Gigabit connector

11. Digital I/O

12. Keyboard-in connector



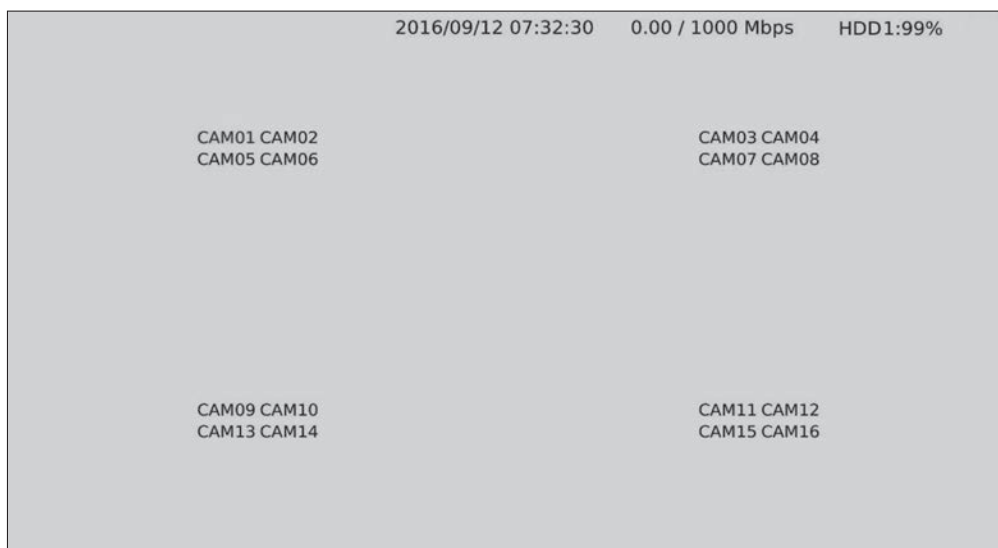
## BEGINNING USING THE NVR

### Important!

- It is recommended to use the ELAN Controller for setup of ELAN NVR and Cameras
- If installing an ELAN Cameras and/or ELAN NVR with an ELAN Controller, please refer to the “ELAN Surveillance” Integration Note for setup and software configuration
- ELAN Integration Notes are served through the ELAN tools and on [elanhomesystems.com/dealer-resources](http://elanhomesystems.com/dealer-resources)

The software configuration information in this document can be used to extend device control parameters for use within an ELAN controller environment, or for operating this hardware independent of an ELAN controller.

You will see the following screen through the HDMI or VGA connection when the NVR is powered ON:



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

#### **0.00/1000 (100) Mbps:**

The left side of the slash is the combined transmission rate of all channels, and the right side is the your network speed.

#### **HDD (1):(2)%:**

1. Shows the current number of the hard drive being used for recording
2. The storage capacity used as a percent (%)

## OVERVIEW AND SUPPORTED FEATURES

The ELAN Surveillance devices include a variety of IP Cameras and NVRs that provide live and recorded video review from within the ELAN interface via local touchscreens and/or remote mobile devices.

### The ELAN Surveillance System Supports the Following Features

#### **Auto-Discover/Auto-Configure:**

All ELAN IP Cameras and ELAN NVRs support fast and simple configuration within ELAN systems using the Configurator Discovery feature.

#### **Live Video:**

ELAN IP Cameras may be viewed live from any ELAN interface, local or remote.

#### **Recorded Video:**

ELAN NVRs provide up to 16 camera stream recordings per chassis and recordings may be reviewed from any ELAN interface, local or remote.

#### **HDMI OSD Interface:**

The NVR includes an HDMI output that provides live and recorded video viewing that may be controlled by the built-in ELAN interface and the ELAN HR Series remotes.

#### **Motion Detection/Indication:**

Video recorded from ELAN IP Cameras will provide motion event indications on the ELAN NVR within the ELAN interface that may be reviewed on a timeline or as individual events.

#### **NON-ELAN ONVIF IP Camera Recording:**

NON-ELAN ONVIF IP Cameras may be configured for full time recording on the ELAN NVR for playback and review from the ELAN interface (no motion events).

#### **Motion Detection/Indication:**

Video recorded from NON-ELAN IP Cameras do not provide motion event indications within the ELAN interface.

#### **NON-ONVIF and Third Party Camera Recording:**

IP Cameras that use streaming protocols other than ONVIF are not supported for connection or recording with the ELAN NVR.

**Important Note:** 3rd party cameras are not recommended for setup with ELAN NVR. Always test 3rd party cameras before deployment.

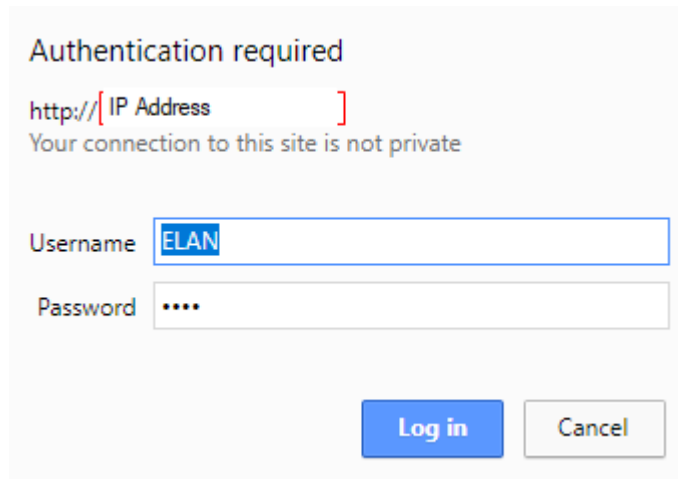
## LOCATING NVR IP ADDRESS

ELAN NVRs are set to DHCP out of the box. Connect your ELAN NVR to the network, using your preferred network scanning app, and scan for the NVR. The NVR's name is EL-NVR-XTB, where 'X' represents the number of TB.

**Integrators TIP:** Look for an ELAN MAC address with the following pattern "F8-57-2E-XX-XX-XX"

Once the IP address is determined, type the IP address into your browsers' address bar and press Enter.

Authentication pop-up will appear requesting username and password to log in. For logging in the first time use the default username and password.

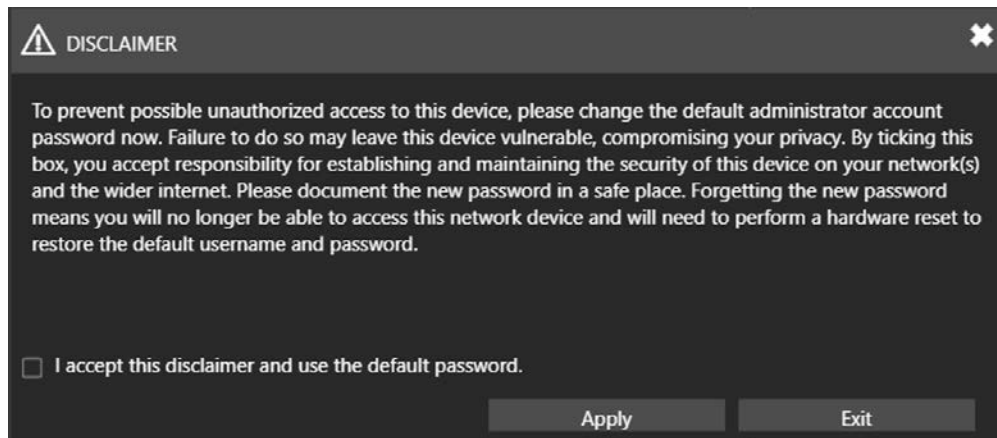


The image shows a web browser authentication dialog box. At the top, it says "Authentication required" in red. Below that, it displays "http://[ IP Address ]" and "Your connection to this site is not private". There are two input fields: "Username" with "ELAN" entered and "Password" with four dots. At the bottom, there are two buttons: "Log in" (blue) and "Cancel" (grey).

**Default Username: ELAN      Default Password: 3526**

**Important:** It's recommended you change the default password. See section on how to change password.

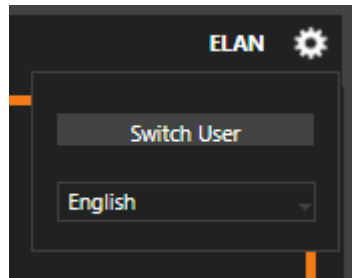
Password Change Pop-Up Box



The image shows a dark-themed dialog box titled "DISCLAIMER" with a warning icon and a close button. The text inside reads: "To prevent possible unauthorized access to this device, please change the default administrator account password now. Failure to do so may leave this device vulnerable, compromising your privacy. By ticking this box, you accept responsibility for establishing and maintaining the security of this device on your network(s) and the wider internet. Please document the new password in a safe place. Forgetting the new password means you will no longer be able to access this network device and will need to perform a hardware reset to restore the default username and password." At the bottom, there is a checkbox labeled "I accept this disclaimer and use the default password." and two buttons: "Apply" and "Exit".

## LANGUAGE SETUP/SWITCH USERS

When setting the NVR up for the first time, click on the **gear icon** in the upper-right corner of the user interface. A dialog box with two options will appear, switch user and language.

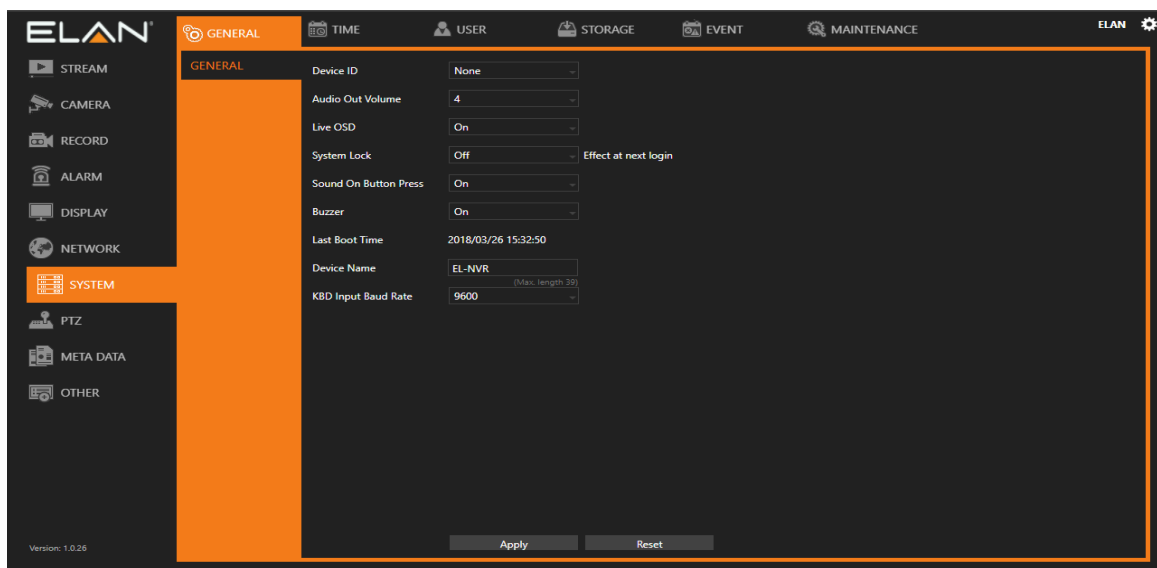


To change the language of the NVR, select the drop-down menu and choose your preferred language.

## NVR SYSTEM

### NVR System > General

To enter NVR settings, click system in the left pane where you are allowed to adjust the NVR's configuration.



#### Device ID:

Assign an ID for the NVR to be controlled by the remote controller.

#### Audio Out Volume:

Adjust the volume of the NVR.

#### Live OSD:

On, off, or no camera name.

#### System Lock:

Switch on/off the system lock.

#### Sound On Button Press:

Switch on/off the sound when pressing remote control buttons.

#### Buzzer:

Switch on/off the sound when an alarm is triggered.

#### Last Boot Time:

Shows the last time the system is rebooted.

#### Device Name:

Name of the NVR

#### KBD Input Baud Rate:

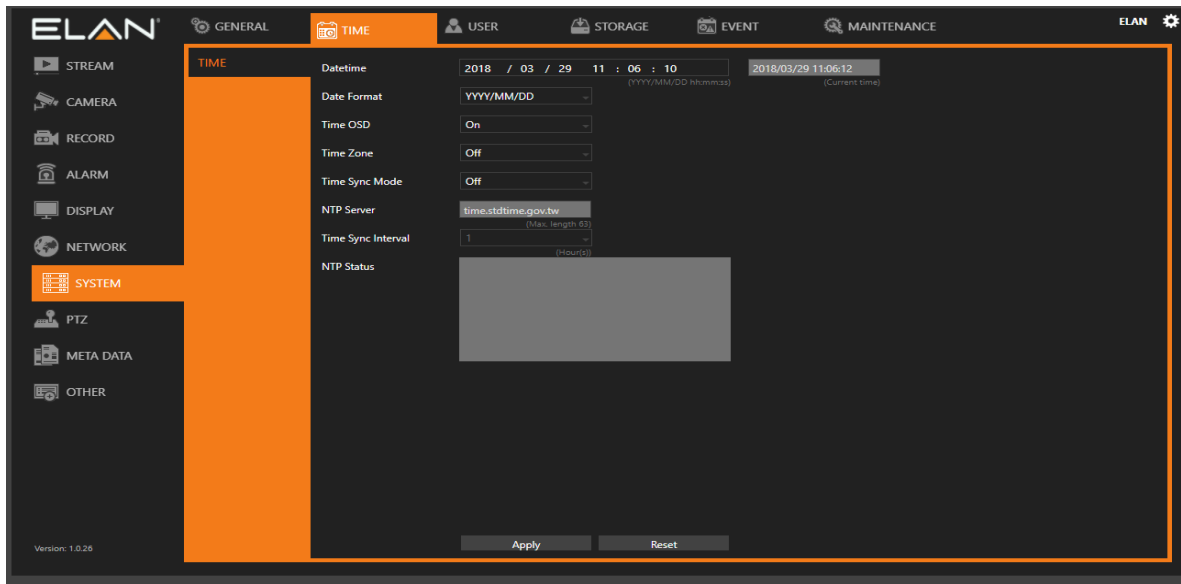
Adjust Baud Rate, default is 9600.

**Important:** Click **Apply** to save settings.

## NVR SYSTEM (CONT.)

### NVR System > Time

To enter NVR settings, click system in the left pane where you are allowed to adjust the NVR's configuration.

**Date/Time:**

Set the date/time of the NVR.  
ELAN Controller will sync time and date of the NVR automatically.

**Date Format:**

Modify the date display format.

**Time OSD:**

Switch on/off the time to be displayed on the screen.

**Time Zone:**

Change the time zone of the location where the NVR is installed.

**Time Sync Mode:**

Choose how you would like the time to be synced.

**NTP Server:**

Enter the NTP server you want to use.

**Time Sync Interval:**

Choose the interval for the time to be synced.

**NTP Status:**

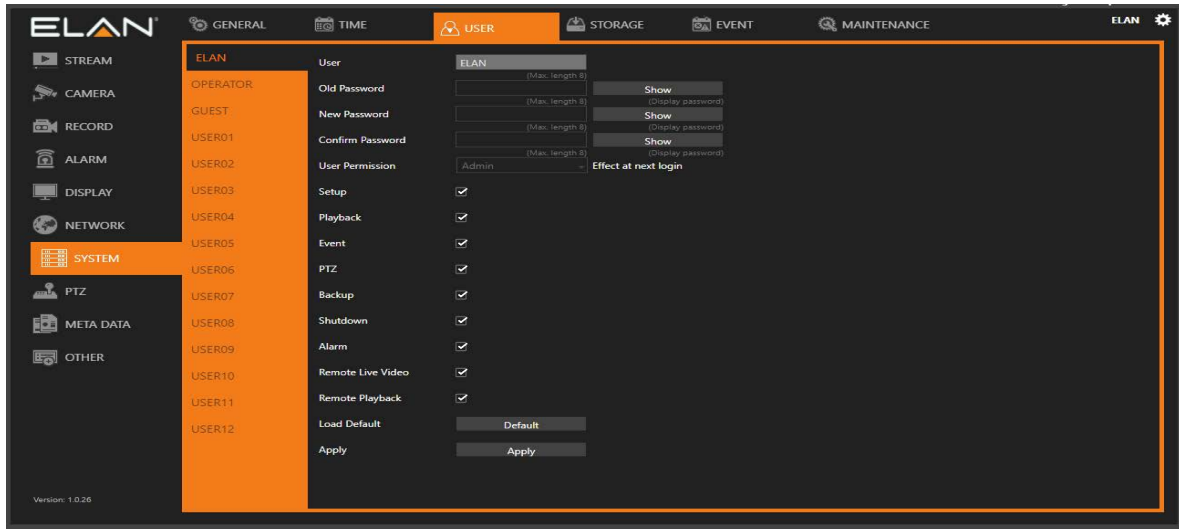
The status of connection to selected NTP server will appear here.

**Important:** Click **Apply** to save settings.

## NVR SYSTEM (CONT.)

### NVR System > User

To enter NVR settings, click **SYSTEM** in the left pane. This allows you to adjust the NVR's configuration.



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

#### User:

Enter the name of the user (applicable only to User01–12).

#### Old Password, New Password, and Confirm Password:

If you would like to change the password, enter your previous password and enter the new password and confirm the password. Press Show to reveal the password. The default passwords for administrator, operator, and guest are 1111, 2222, and 3333, respectively.

#### User Permission:

Set the access privileges of the user to administrator, operator, or guest.

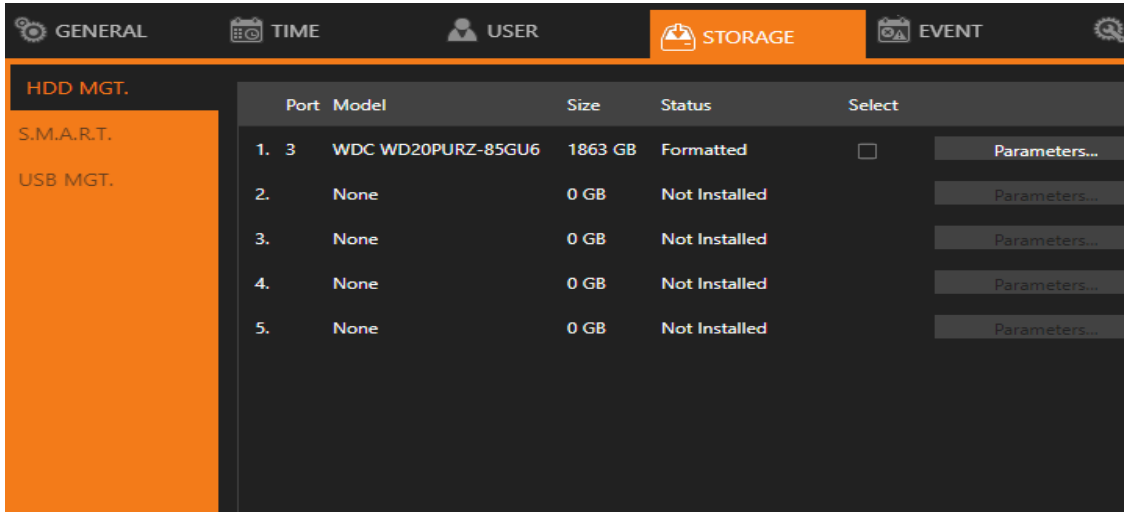
#### Load Default:

Restore to the default settings.

## NVR SYSTEM (CONT.)

### NVR System > Storage

To enter NVR settings, click system in the left pane where you are allowed to adjust the NVR's configuration.

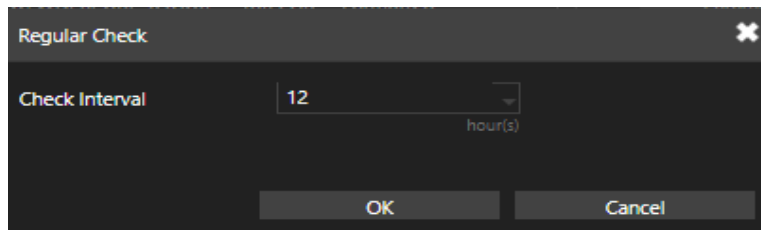


#### HDD Management:

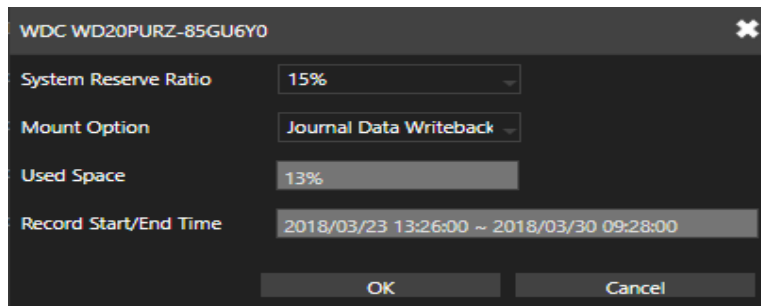
In **HDD MGT.**, you are allowed to format, defrag, check malfunctioned blocks, or run an overall system check on any of the devices. Select a desired device and click Format, File System Defrag, Bad Block Check, or Regular Check.

#### Regular Check:

Allows you to set the interval between system checks.



#### Parameters...:



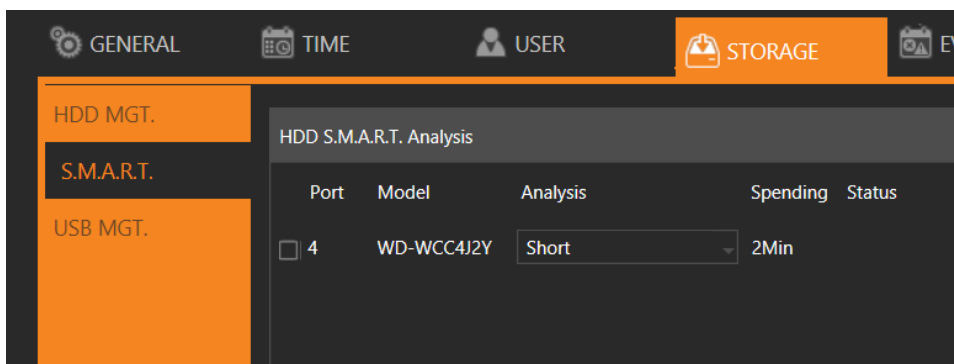
Click each device to enter the screen above. **System Reserve Ratio** allows you to allocate the percentage of HDD space not occupied by recorded files. In **Mount Option**, choose the writing mode for the hard drive.



## NVR SYSTEM (CONT.)

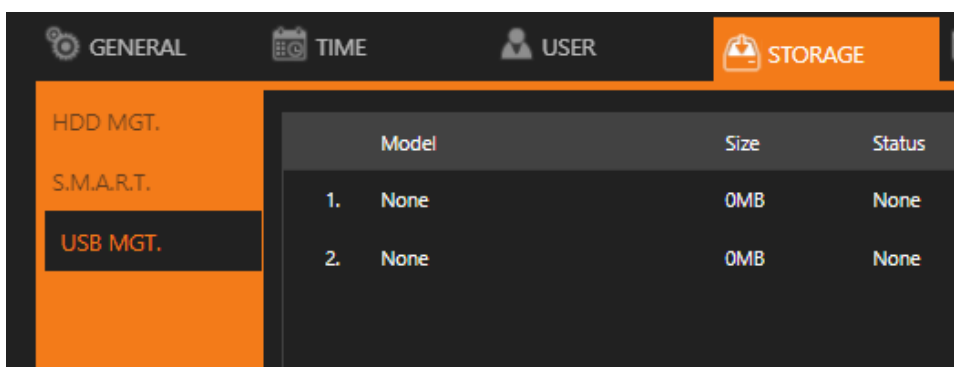
### NVR System > Storage (Continued)

#### S.M.A.R.T.:



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

#### USB MGT.



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

## NVR SYSTEM (CONT.)

### NVR System > Event

System:

The screenshot shows the 'EVENT' tab selected in the top navigation bar. On the left, there is a sidebar with 'SYSTEM' and 'OPERATING' options. The main area contains a table with search filters for 'Time' and 'Content'. The table lists several 'DDNS succeeded' events.

Time	Content
2018/03/30 08:37:43	DDNS succeeded
2018/03/30 07:37:43	DDNS succeeded
2018/03/30 06:37:40	DDNS succeeded
2018/03/30 05:37:37	DDNS succeeded
2018/03/30 04:37:33	DDNS succeeded

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

Operating:

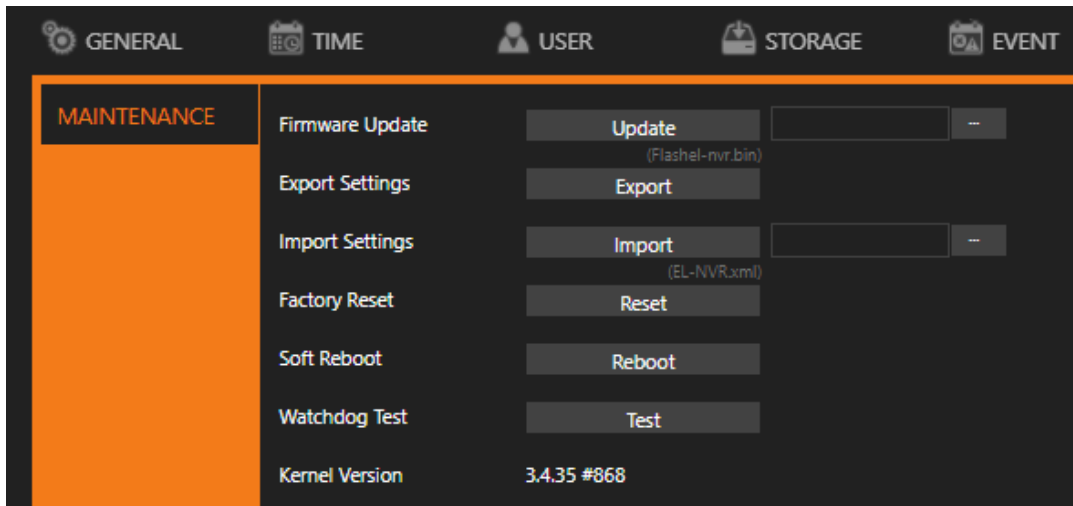
The screenshot shows the 'OPERATING' tab selected in the sidebar. The main area contains a table with search filters for 'Time', 'IP', and 'User'. The table lists operating status for the user 'ELAN'.

Time	IP	User
2018/03/30 09:27:07	10.5.16.68	ELAN
2018/03/30 09:27:07	10.5.16.68	ELAN
2018/03/30 09:27:06	10.5.16.68	ELAN
2018/03/30 09:27:05	10.5.16.68	ELAN

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

## NVR SYSTEM (CONT.)

### System > Maintenance



#### Firmware Update:

Choose a firmware file and click Update to proceed firmware update.

#### Export Settings:

Click Export to copy system settings to a USB flash drive.

#### Import Settings:

Click Import to apply a system setting that is stored in the plugged USB flash drive.

#### Factory Reset:

Click Reset to restore the system to the factory settings.

#### Soft Reboot:

Click to soft reset the system.

#### Watchdog Test:

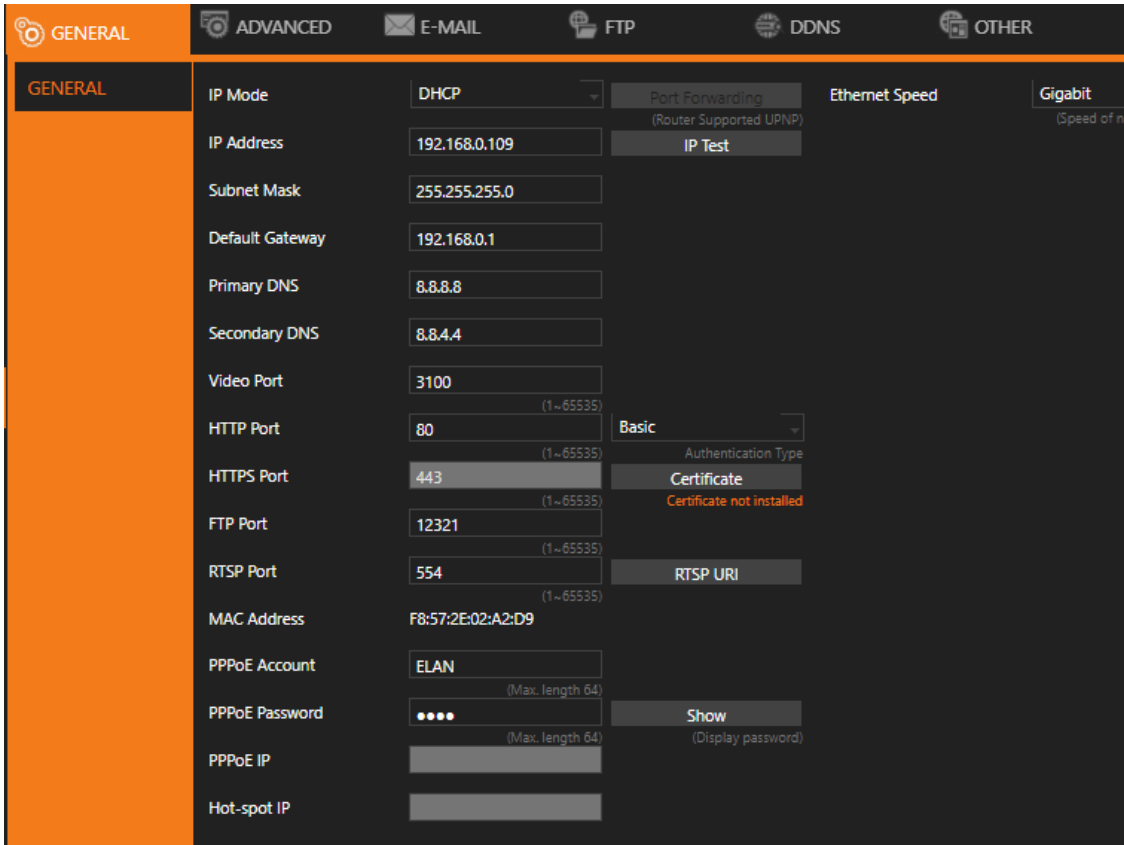
Click to test the system watchdog function. This will reboot the NVR.

#### Kernel Version:

The kernel version of the system.

# NETWORK SETUP

## Network Setup > General



Enter the required information in the fields:

**IP Mode:**

Select the connection type of the NVR from Static, DHCP, and PPPoE.

**IP Address:**

Enter the IP address you want to use, and press IP Test if necessary.

**IP Test Button:**

Clicking on **IP Test** prompts NVR to scan and verify if the IP address you entered is available.

**Subnet Mask:**

Enter the desired subnet mask.

**Default Gateway:**

Enter the desired default gateway.

**Primary DNS:**

Enter the first priority DNS server.

**Secondary DNS:**

Enter the secondary DNS server in case the primary DNS is not available.

**Video Port:**

Specify a desired video port.

**HTTP Port:**

Specify a desired HTTP port.

## NETWORK SETUP (CONTINUED)

### Network Setup > General (Continued)

**FTP Port:**

Specify the desired FTP port.

**MAC:**

This is the MAC address of your NVR.

**PPPoE Account:**

If you choose to connect through PPPoE, enter the account name here.

**PPPoE Password:**

Enter the required password for PPPoE connection.

**PPPoE IP:**

Your PPPoE IP will be displayed here.

**Hotspot IP:**

Your hotspot IP will be displayed here.

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

### Network Setup > Advance

TCP/IP:

The screenshot shows the 'ADVANCED' tab of the network setup interface. The 'TCP/IP' section is selected in the left sidebar. The main area displays three sets of virtual IP addresses, each with a 'TCP/IP' toggle set to 'Off', an IP address field, a Subnet Mask field, and an 'IP Test' button.

Section	Setting	Value	Action
TCP/IP	1st TCP/IP	Off	
	1st IP Address	192.168.1.111	IP Test
	1st Subnet Mask	255.255.255.0	
TCP/IP	2nd TCP/IP	Off	
	2nd IP Address	192.168.2.111	IP Test
	2nd Subnet Mask	255.255.255.0	
TCP/IP	3rd TCP/IP	Off	
	3rd IP Address	192.168.3.111	IP Test
	3rd Subnet Mask	255.255.255.0	

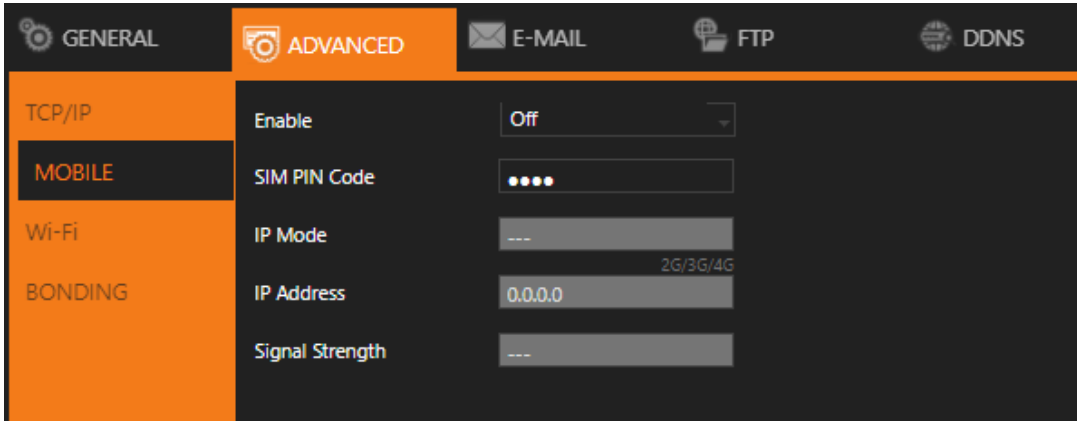
NVR supports three sets of virtual IP addresses. When **TCP/IP** is switched **On**, the NVR can access the camera or another NVR using the specific IP.

**Note:** For VLAN application only.

## NETWORK SETUP (CONTINUED)

### Network Setup > Advance (Continued)

Mobile:



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

**Enable:**

Choose **On** to activate the service.

**SIM PIN Code:**

Enter the PIN of the SIM card you use to connect to the mobile network.

**IP Mode:**

The connection status of your mobile network.

**IP Address:**

The IP address of your connection.

**Signal Strength:**

The signal strength of your connection.

## NETWORK SETUP (CONTINUED)

### Network Setup > Advanced (Continued)

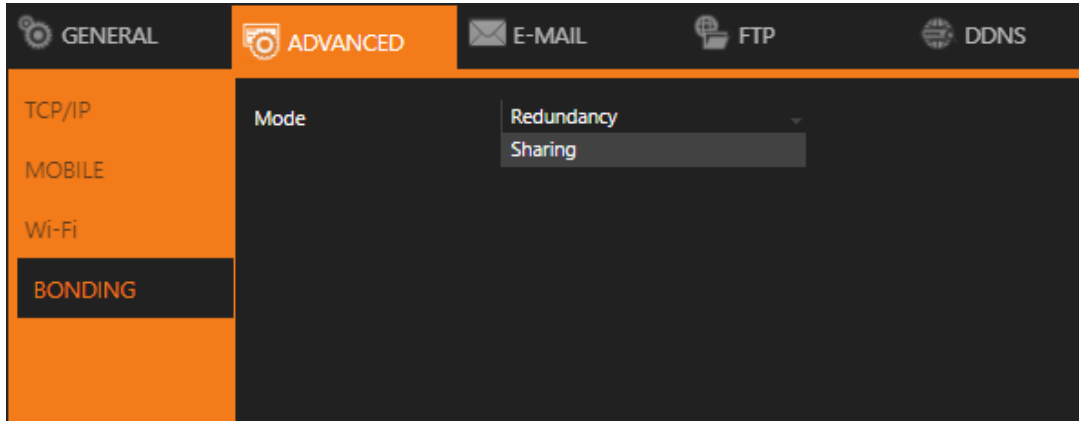
WiFi:

GENERAL	ADVANCED	E-MAIL	FTP	DDNS
TCP/IP	Enable	Off		
MOBILE	SSID	default		
Wi-Fi	Password	••••	Show	
		(Max. length 64)	(Display password)	
BONDING	IP Mode	DHCP		
	IP Address	192.168.201.123		
	Subnet Mask	255.255.255.0		
	Default Gateway	192.168.201.1		

## NETWORK SETUP (CONTINUED)

### Network Setup > Advanced (Continued)

Bonding:



Choose **Redundancy** or **Sharing** mode for dual Ethernet NVR.

**Note:** Availability depends on models.



## NETWORK SETUP (CONTINUED)

### Network Setup > E-Mail

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

#### Send E-Mail:

Check the box to enable sending e-mail notifications when an alarm is triggered.

#### E-Mail List:

The list shows all saved e-mail addresses.

#### Edit Contact:

Enter the email address you want to save as contacts and click Modify.

#### Authorization:

Check if your e-mail account requires login authorization.

#### SSL/TLS:

Check if your e-mail sever requires encryption.

#### E-Mail Account:

Enter the account name of your e-mail.

#### E-Mail Password:

Enter the password of your e-mail.

#### Sender:

Enter the name you would like to display in the e-mail.

#### E-Mail Host:

Enter the mail server address of your e-mail server.

## NETWORK SETUP (CONTINUED)

### Network Setup > E-Mail (Continued)

**Port:**

Enter the port of your e-mail server.

**JPEG File:**

Check to also attach JPEG photos when an alarm is triggered.

**Candidate:**

Choose an email address and press Down or Up arrows to add contacts as recipients.

**Receiver:**

The list of recipient(s).

**Annotation:**

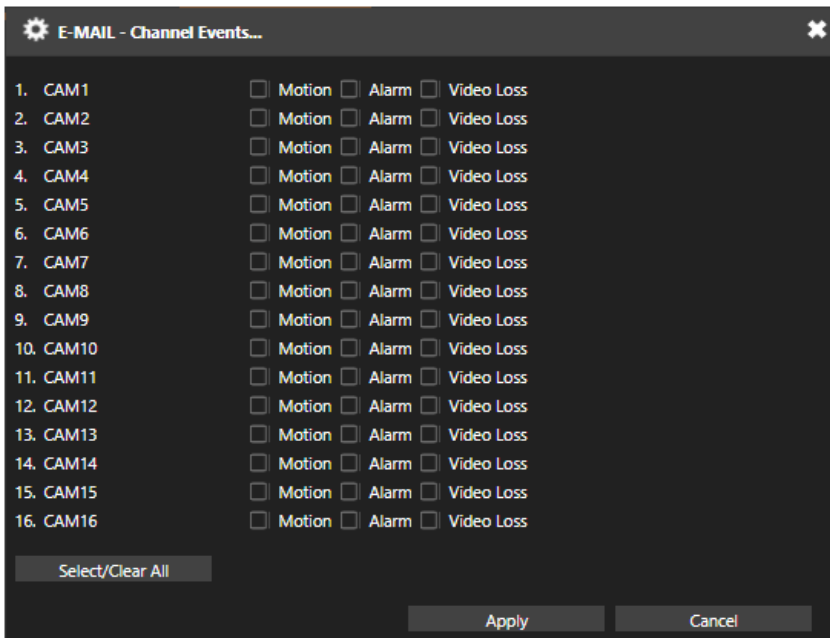
Content of the email notification.

**Trigger Conditions:**

Designate when to send the notification email by Channel Events and System Events.

Channel Events:

Click to open the dialog below.



**Motion:**

Check to send e-mail when movements are detected.

**Alarm:**

Check to send e-mail when external alarms are set off.

**Video Loss:**

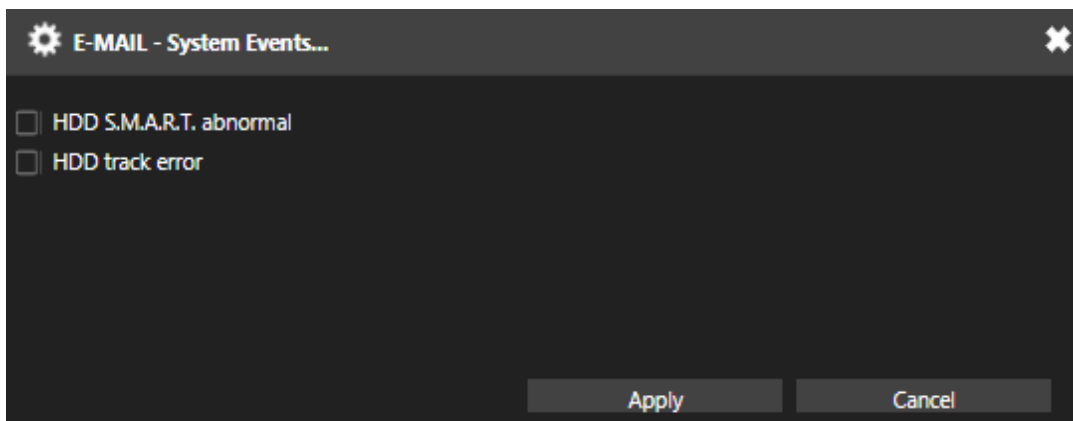
Check to send e-mail when connection with IP Camera is lost.

System Events:

Click to open the dialog below.

## NETWORK SETUP (CONTINUED)

### Network Setup > E-Mail (Continued)

**HDD S.M.A.R.T. abnormal**

Check to send E-Mail when an S.M.A.R.T. error is detected.

**HDD track error:**

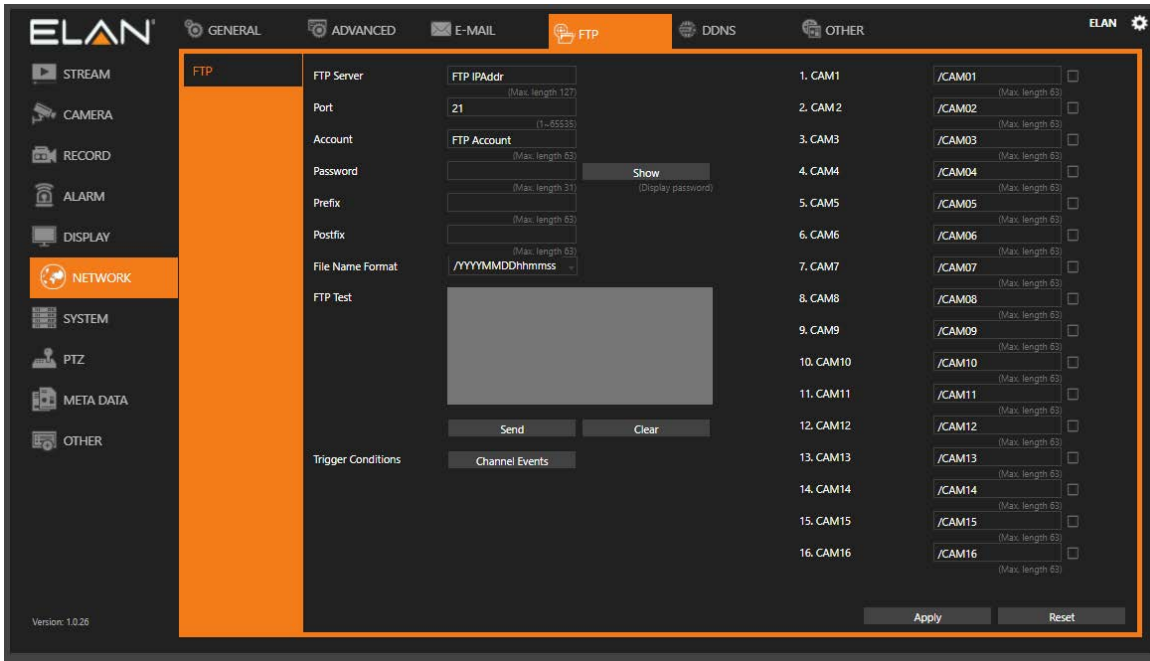
Check to send E-Mail when an HDD error is detected.

**E-Mail Test:**

Click **Apply** to send the testing email to verify the settings.

# NETWORK SETUP (CONTINUED)

## Network Setup > FTP



**FTP Server:**

Enter the IP address of the FTP server.

**Port:**

Enter the port of the FTP server.

**Account:**

Enter the account name of the FTP server.

**Password:**

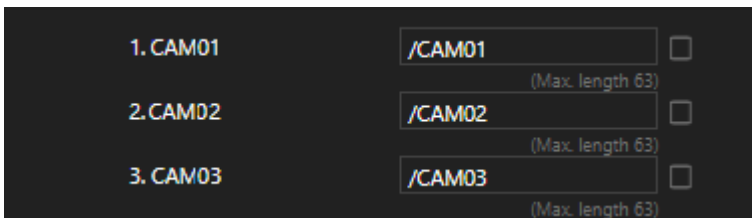
Enter the password of the FTP server

**Prefix & Postfix:**

Specify the prefix and postfix of snapshot files.

**File Name Format:**

Change the file name format to suit your need.



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

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

## NETWORK SETUP (CONTINUED)

### Network Setup > DDNS

The screenshot displays the DDNS configuration page in the ELAN NVR web interface. The page has a dark theme with orange accents. At the top, there are navigation tabs: GENERAL, ADVANCED, E-MAIL, FTP, and DDNS (which is currently selected). On the left side, there is a sidebar with the label 'DDNS'. The main content area contains the following fields and options:

- Server:** A dropdown menu with 'ddnsipcam.com' selected. Below it is the text 'DDNS server to register domain name'.
- Hostname:** A text input field containing '02A2D9'. To its right is a blue link: <http://02A2D9.ddnsipcam.com/>. Below it is the text 'Assign a domain name for easy access NVR. (Max. Length 64)'.
- Account:** A text input field containing '02A2D9'. Below it is the text 'Authorization account of DDNS server. (Max. Length 64)'.
- Password:** A text input field with four dots representing a masked password. To its right is a 'Show' button. Below it is the text 'Authorization password of DDNS server. (Max. Length 16)'.
- WAN IP:** A text input field. Below it is the text 'Assign IP address if that automates the discovery and registration public IP address failed. (Max. Length 15)'.
- Check Interval:** A dropdown menu with '1' selected. Below it is the text 'Set interval at which to regularly update the DDNS service. (Hour(s))'.
- Status:** A text area displaying 'Status: Update is successful.'

Choose the DDNS server you want to use.

**Hostname:**

Enter the hostname of the DDNS server.

**User:**

Enter the username to log in to the DDNS server.

**Password:**

Enter the password to log in to the DDNS server.

**WAN IP:**

Enter your **WAN IP** if the NVR cannot automatically get the correct address.

**Check Interval:**

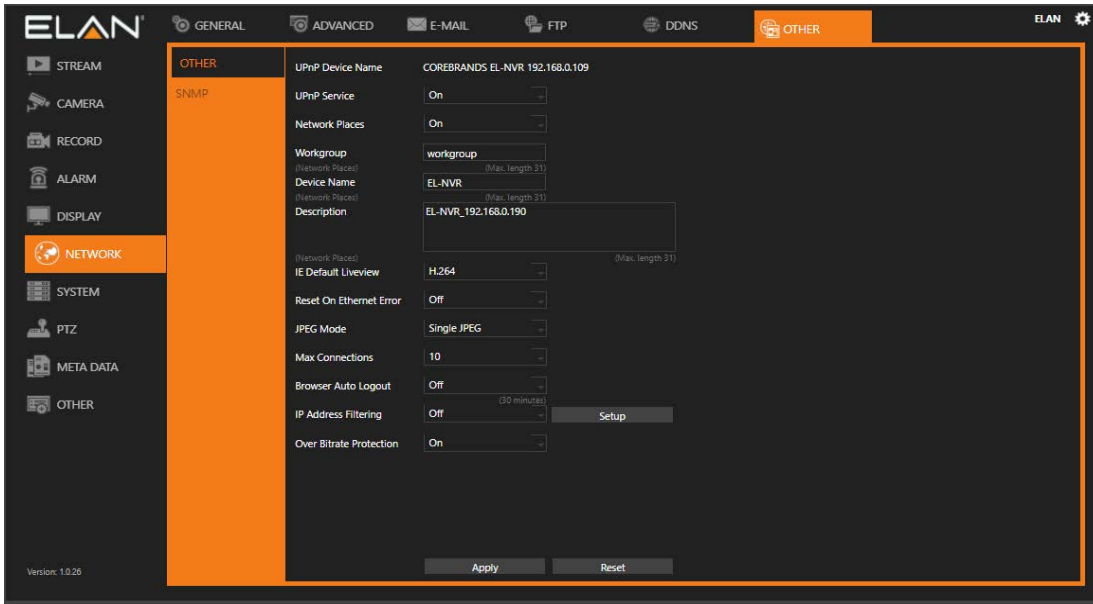
Choose the time interval you want the system to check the DDNS connection.

**Note:** The DDNS feature requires Internet connection.

## NETWORK SETUP (CONT.)

### Network Setup > Other

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



Choose the DDNS server you want to use.

**UPnP Device Name:**

The device name shown on the UPnP network.

**UPnP Service:**

Switch on/off the UPnP service.

**Network Places:**

Switch on/off Network Places to display shortcuts to shared devices.

**Workgroup:**

The workgroup name displayed in Network Places.

**Device Name:**

The device name displayed in Network Places.

**IE Default Live View:**

Select the default streaming type (H.264 or MJPEG) when streaming using Internet Explorer.

**Reset on Ethernet Error:**

Reset the PHY when an Ethernet error is detected, and leave a record entry in the event table

**Max Connections:**

Set the maximum number of simultaneous connections when streaming using Internet Explorer.

**Browser Auto Logout (30 Minutes):**

Check to log out after 30 minutes of inactivity.

**SDDP Device Name:**

The device name shown on the SDDP network.

**SDDP Service:**

On/Off switch for SDDP service.

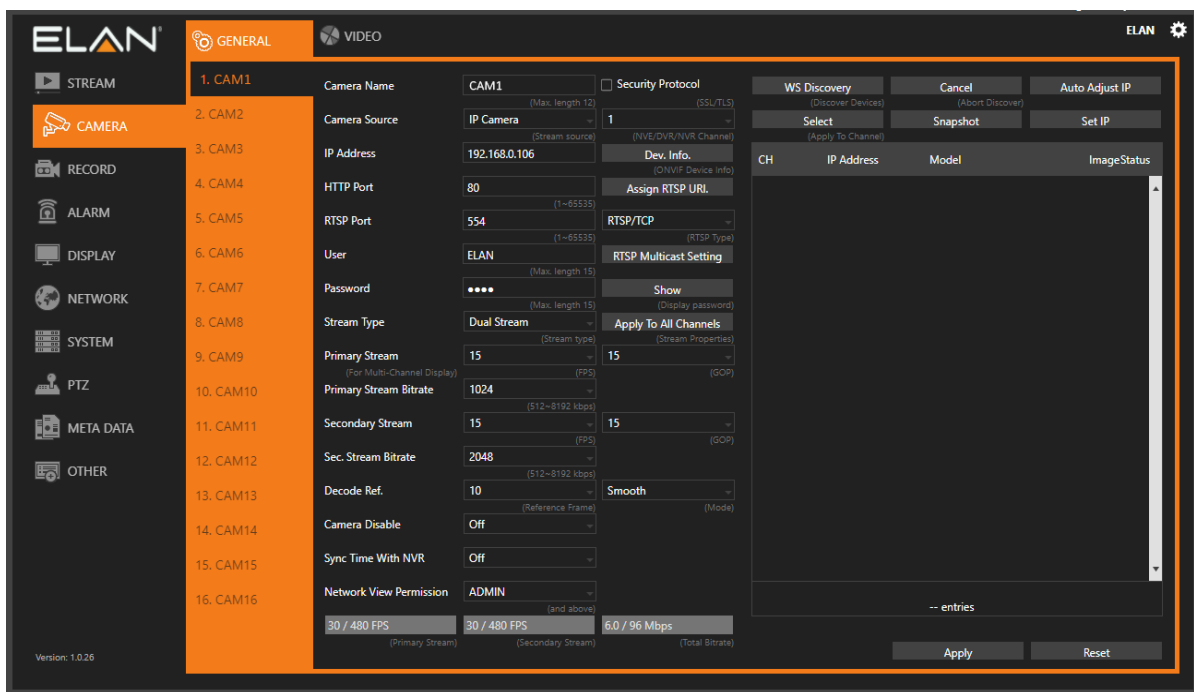
## CAMERA SETUP

### Camera Setup > General

If you are installing an ELAN Cameras and/or ELAN NVR with an ELAN Controller, please refer to the “ELAN Surveillance” Integration Note for setup and software configuration. ELAN Integration Notes are served through the ELAN tools and on [elanhomesystems.com/dealer-resources](http://elanhomesystems.com/dealer-resources).”

The software configuration information in this document can be used to extend device control parameters for use within and ELAN controller environment, or be used to operate this hardware independent of an ELAN controller.

Click settings (⚙️) to enter **NVR SETTINGS**, and press **CAMERA** (📷 CAMERA) in the left pane to enter the **CAMERA SETUP** page. The setting options are described below.



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

#### Camera Name:

Enter the camera name to be displayed on the streaming screen.

#### Camera Source:

Allocate a NVR channel for the camera.

#### IP Address:

Enter the IP address of the camera you want to connect.

#### Dev. Info:

Press to check ONVIF capability.

#### HTTP Port:

Enter the port for HTTP connection.

#### RTSP Port:

Enter the port for RTSP connection.

## CAMERA SETUP (CONT.)

### Camera Setup > General (Continued)

**User:**

Enter the username required for camera authorization.

**Password:**

Enter the password required for camera authorization.

**Stream Type:**

Choose whether to stream only the primary video or dual (primary & secondary) videos.

**Primary Stream:**

Select the FPS and GOP for the primary stream.

**Primary Stream Bitrate:**

Select the bitrate for the primary stream.

**Secondary Stream:**

Select the FPS and GOP for the secondary stream (available only if **Dual Stream** is activated in **Stream Type**).

**Sec. Stream Bitrate:**

Select the bitrate for the secondary stream.

**Decode Ref. :**

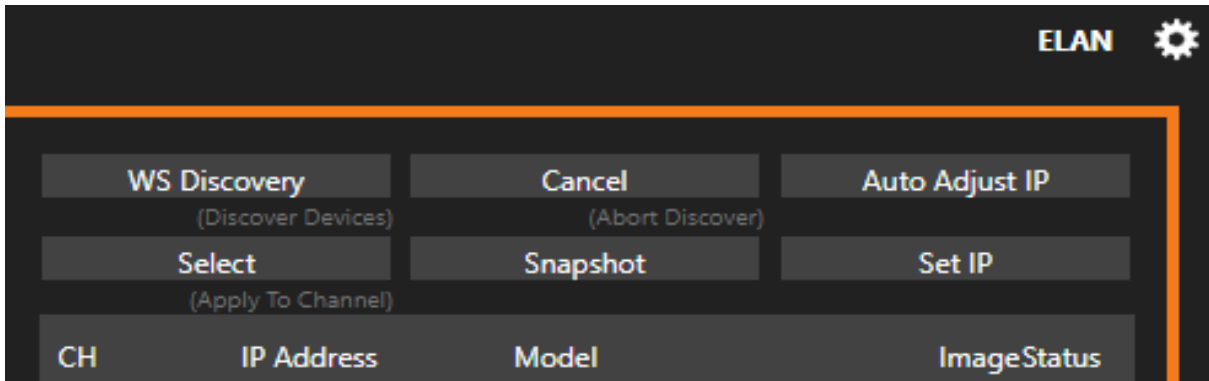
Select the number of reference frame for the decoder, and choose **Immediate** for lower latency or **Smooth** for smoother but higher latency video.

**Camera Disable:**

Disable the video function (live feeds and playback) of the selected camera.

**Sync Time with NVR:**

Turn **On** for the camera to sync time with the NVR.



**WS Discovery:**

Click **WS Discovery** to scan for connected devices on the network. Click **Cancel** to stop scanning. Click on camera, if found.

Click Apply to save connected cameras.

**Auto Adjust:**

Automatically assign IP for connected cameras.

**Snap:**

Show snapshot thumbnails for all the cameras.

**Set IP:**

Assign an IP address to the camera.



## CAMERA SETUP (CONT.)

### Camera Setup > Video

The screenshot displays the 'VIDEO' configuration page for the NVR. On the left, a vertical list of cameras from CAM1 to CAM13 is shown, with CAM1 selected. The top navigation bar has 'GENERAL' and 'VIDEO' tabs. The main content area features a live camera preview of a room. Below the preview, four sliders are visible: Contrast (set to 50), Brightness (set to 48), Saturation (set to 50), and Sharpness (set to 75). Each slider has a range of '(0:Low ~ 99:High)'. At the bottom of the settings, there are three buttons: 'Default', 'Refresh', and 'Apply'.

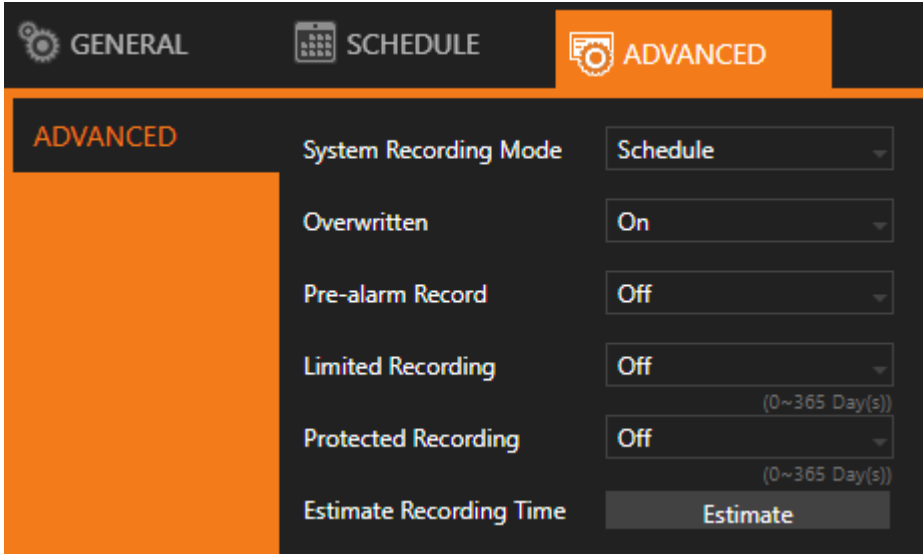
On this page, you can adjust several camera parameters including **Contrast**, **Brightness**, **Saturation**, and **Sharpness**.

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

## RECORD SETUP

### Record Setup > General

Click settings (⚙️) to enter **NVR SETTINGS**, and press **RECORD** (📹 RECORD) in the left pane to enter the **RECORD SETUP** page. The setting options are described below.



**Record Mode:**

Switch on/off scheduled recording.

**Audio:**

Switch on/off audio recording.

**Post-alarm Record:**

Enable to record after an event takes place. Set the time (second) for the NVR to record after the alarm is triggered.

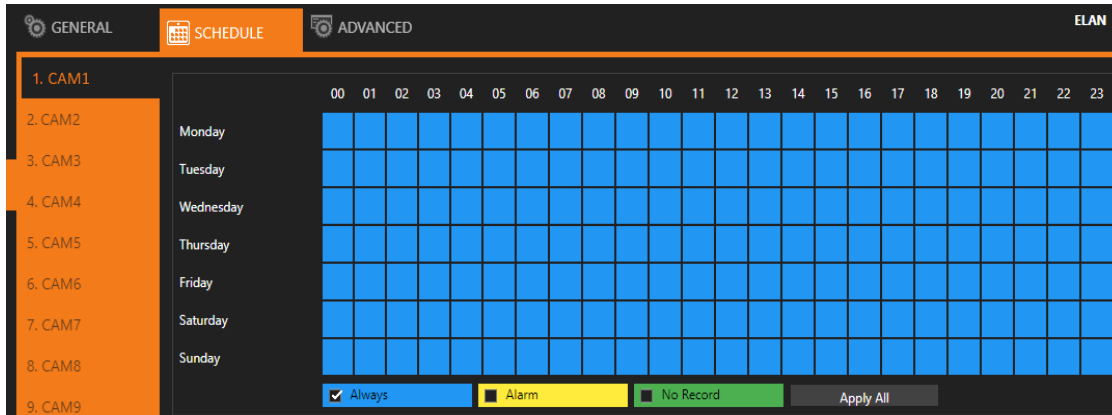
**Weighted Record:**

If any alarm is triggered when **Weighted Record** is turned on, the recording frame rate will be adjusted to the pre-determined value (which can be set in **CAMERA SETUP**). Otherwise, the NVR will record at a lower frame rate (approximately 4–5 FPS).

**Note:** System Recording Mode must set to Schedule and Recording schedule set to Always for 24/7 recording.

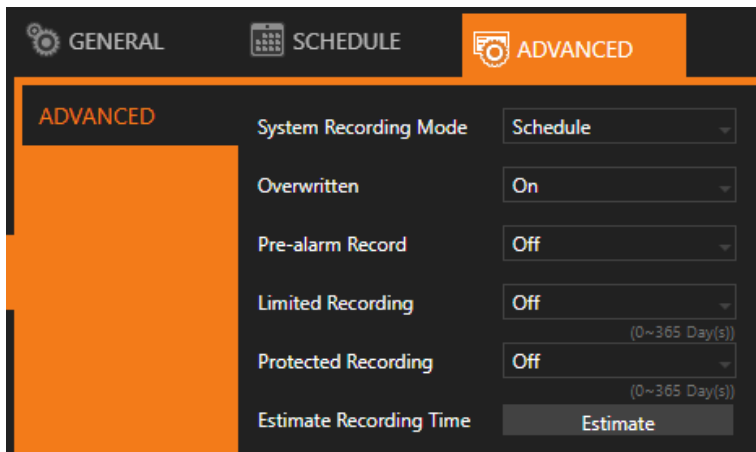
## RECORD SETUP (CONT.)

### Record Setup > Schedule



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

### Record Setup > Advanced



#### System Recording Mode:

Choose between **Manual** or **Scheduled** recording.

#### Overwritten:

Switch on to overwrite old files when the storage is full.

#### Pre-alarm Record:

Switch on to start recording for a period before an alarm occurs.

#### Limited Recording:

Set the number of days to record (from now to the designated day).

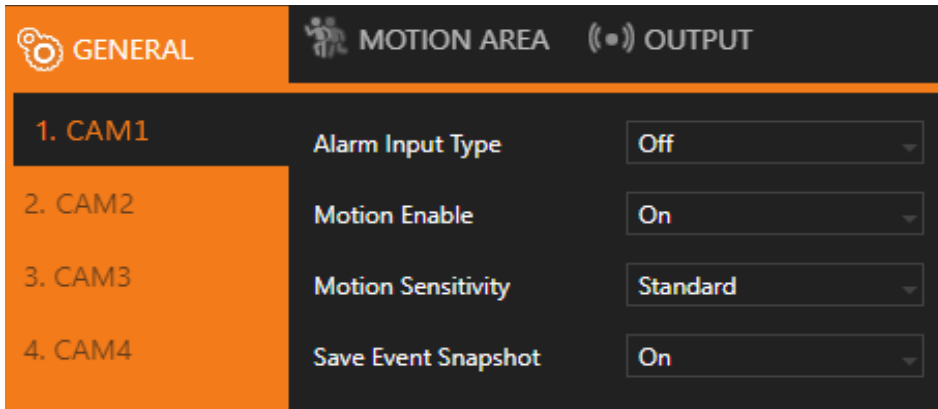
#### Protected Recording:

Set how many days of video the NVR will preserve.

## ALARM SETUP

Click settings (⚙️) to enter **NVR SETTINGS**, and press **ALARM** (🔔) in the left pane to enter the **ALARM SETUP** page. The setting options are described below.

### Alarm Setup > General



**Alarm Input Type:**

Set the alarm sensor to Normally Open (NO), Normally Closed (NC), or IP Camera. The last option will trigger the alarm only when receiving a signal from IP cameras.

**Motion Enable:**

Switch on/off motion detection. Remember also to set the motion detection area in the tab **MOTION AREA**.

**Motion Sensitivity:**

Adjust the sensitivity of motion detection. Higher sensitivity indicates that the alarm can be more easily triggered.

**Save Event Snapshot:**

Enable to store a snapshot on the hard drive when an alarm is triggered.

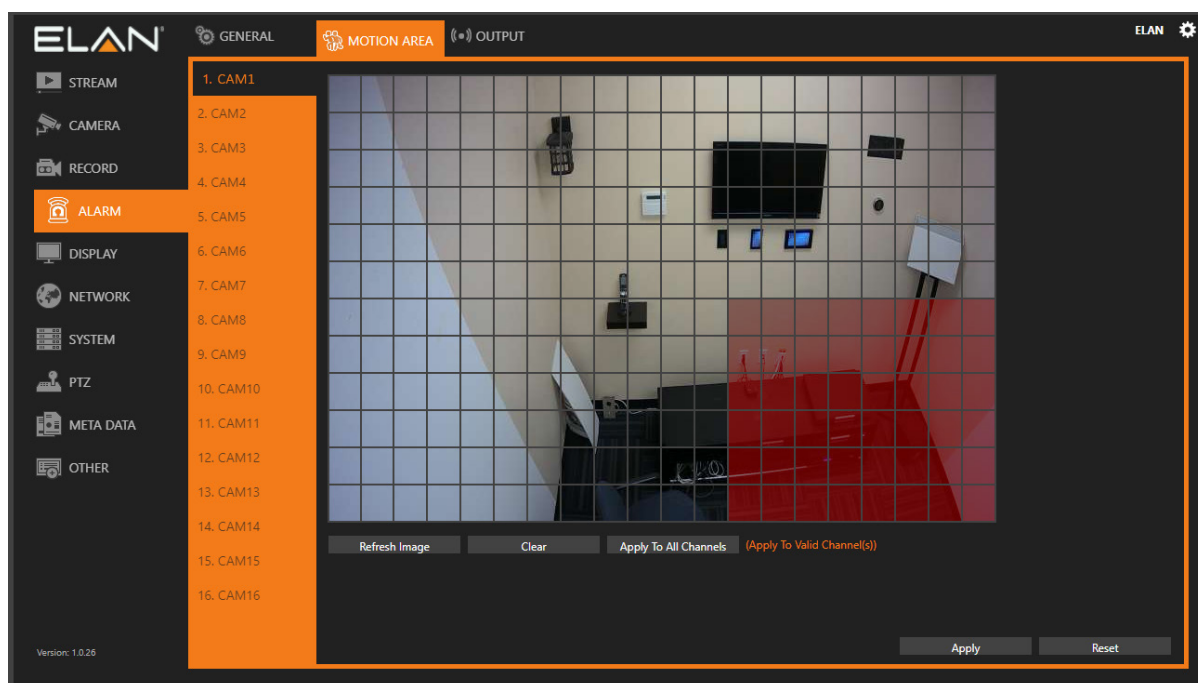
## ALARM SETUP (CONT.)

Click settings (⚙️) to enter **NVR SETTINGS**, and press **ALARM** (ALARM) in the left pane to enter the **ALARM SETUP** page. The setting options are described below.

### Alarm Setup > Motion Area

Selecting Motion Detection Areas:

- Activating individual or multiple Motion Detection Zones
  - Clicking on individual cells or dragging multiple cells using mouse activates selected motion detection areas, turning the cells red.
  - When finished selecting zones, click **Apply**.
  - Clicking **Apply All Channels** applies selected areas to all camera channels.



#### Select Motion Detection Areas

- Clicking individual zones or clicking while dragging the cursor across the grid highlights the motion detection areas. Click and Apply All Channels to apply the areas to all camera channels.

#### Alarm Input Type:

Set the alarm sensor to Normally Open (NO), Normally Closed (NC), or IP Camera. The last option will trigger the alarm only when receiving a signal from IP cameras.

#### Motion Enable:

Switch on/off motion detection. Remember also to set the motion detection area in the tab **MOTION AREA**.

#### Motion Sensitivity:

Adjust the sensitivity of motion detection. Higher sensitivity indicates that the alarm can be more easily triggered.

#### Save Event Snapshot:

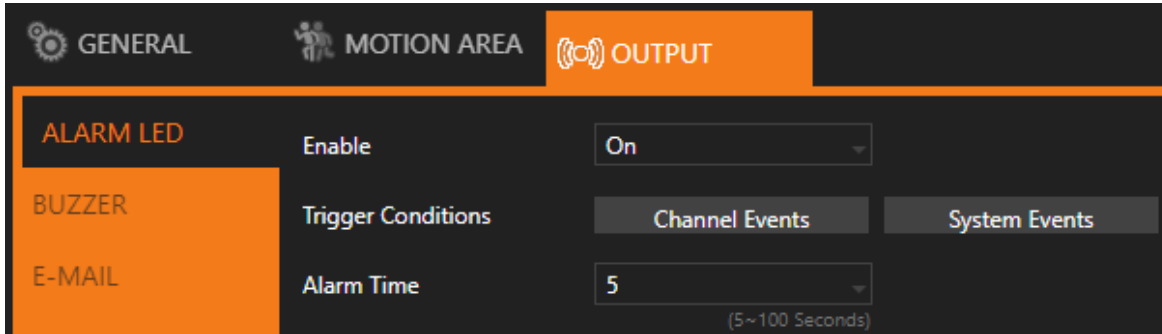
Enable to store a snapshot on the hard drive when an alarm is triggered.

## ALARM SETUP (CONT.)

Click settings (⚙️) to enter **NVR SETTINGS**, and press **ALARM** (🚨) in the left pane to enter the **ALARM SETUP** page. The setting options are described below.

### Alarm Setup > Output

#### ALARM LED



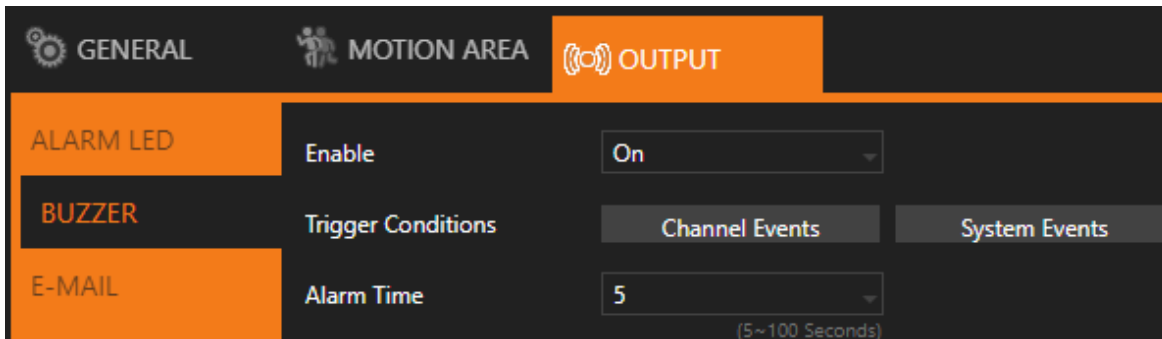
**Enable:**

Turn **On** to activate the alarm LED.

**Trigger Conditions:**

See **Channel Events** and **System Events** above for more details.

#### BUZZER:



**Enable:**

Turn **On** to activate the buzzer.

**Alarm Time:**

Beeping duration of the buzzer when an alarm is triggered.

**Note:** **SYSTEM SETUP > GENERAL > Buzzer** must be enabled.

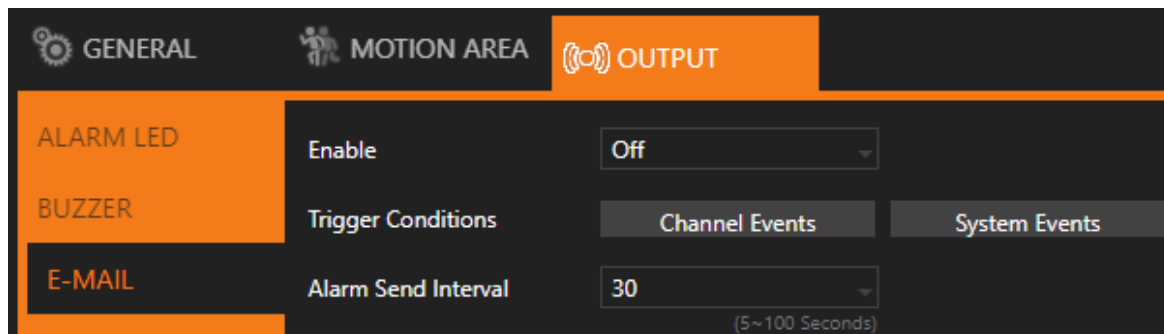
**Trigger Conditions:**

See **Channel Events** and **System Events** above for more details.

## ALARM SETUP (CONT.)

### Alarm Setup (Cont.) > Output (Cont.)

#### E-Mail

**Enable:**

Turn **On** to activate e-mail sending.

**Trigger Conditions:**

See **Channel Events** and **System Events** above for more details.

**Alarm Send Interval:**

Set the frequency of sending alarm notification e-mail.

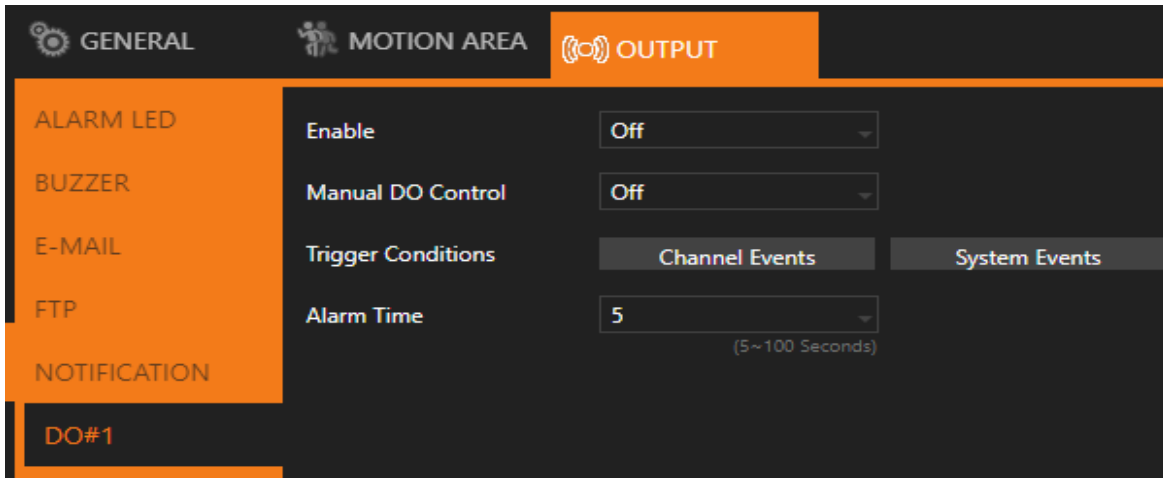
**NOTIFICATION:**

Push notifications are sent from the ELAN Controller.

## ALARM SETUP (CONT.)

### Alarm Setup (Cont.) > Output (Cont.)

DO#1-N (Manual DO control)




#### Manual DO control:

Turn **On** to enable DO, the live video of which will show the corresponding alarm output number.

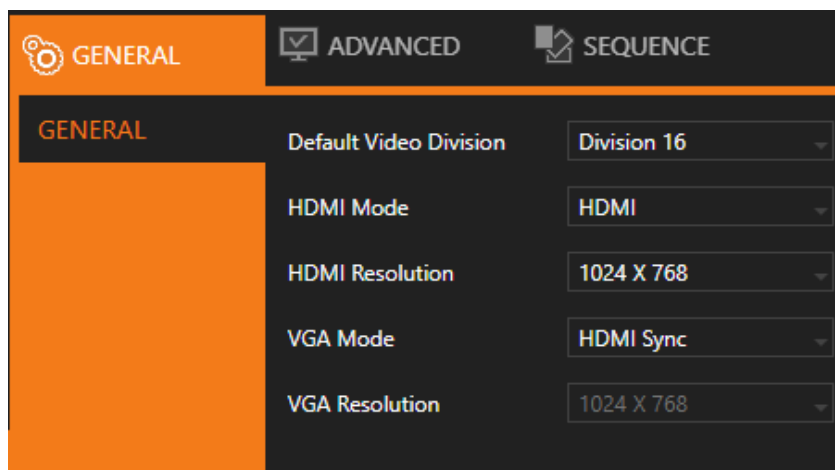
**Note:** For other options, please refer to the descriptions above.



## DISPLAY SETUP

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

### Display Setup > General



#### Backlight Saving:

Adjust the level of screen brightness reduction once the time specified in **Monitor Standby Time** is reached.

#### Monitor Standby Time:

Set the time of inactivity for the monitor to enter the standby mode.

#### Default Video Division:

Select the number of split views you see when the NVR boots up.

#### HDMI Mode:

Switch the output mode between DVI and HDMI.

#### HDMI Resolution:

Select a screen resolution that fits your screen.

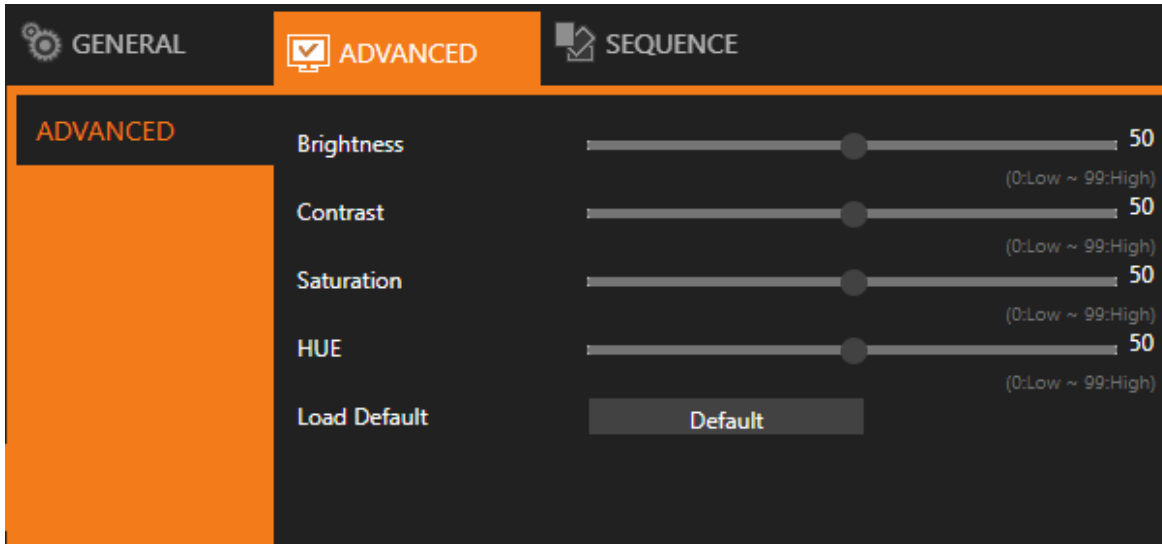
#### VGA Mode:

Choose **HDMI Sync** to synchronize the videos for VGA and HDMI outputs. Choose **SPOT** to display an HDMI/VGA switch button in the real-time view. Click the switch button to switch control of split views between HDMI/VGA.

**Note:** Availability depends on models.

## DISPLAY SETUP (CONT.)

### Display Setup > Advanced



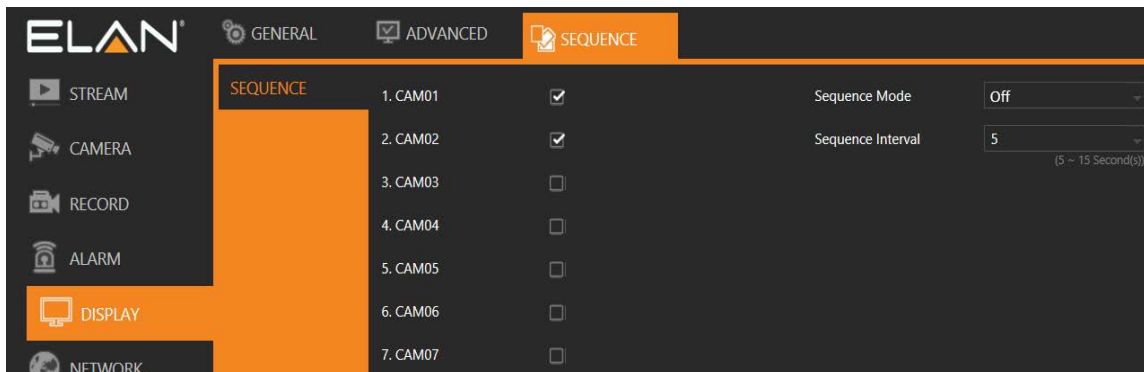
In this page, you can adjust brightness, contrast, and saturation of the NVR output. Also, it is possible to change of intensity of the 2DNR and 3DNR noise reduction feature.

Click **Load Default** to restore to the factory settings.

**Note:** Availability depends on models.

## DISPLAY SETUP (CONT.)

### Display Setup > Sequence

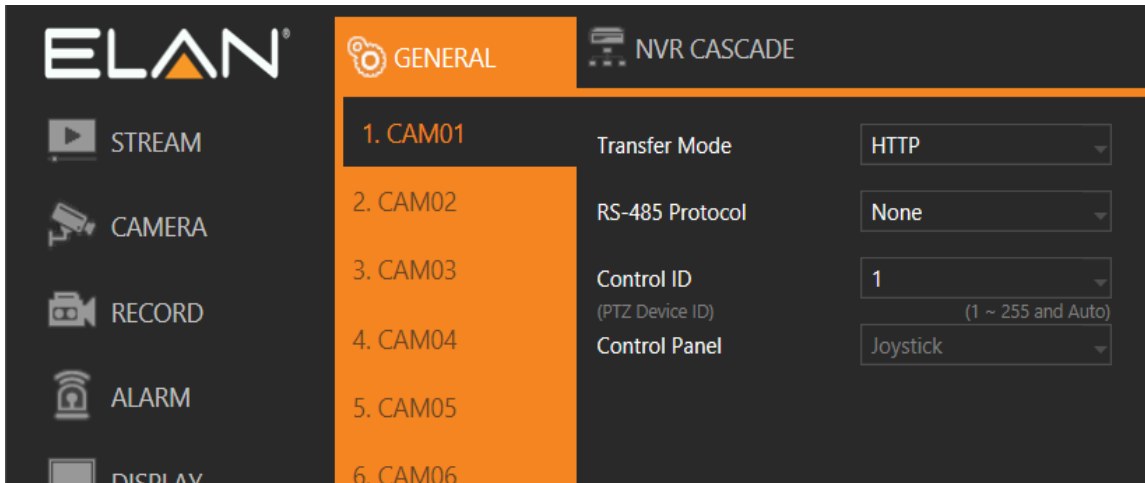


You are allowed to view videos of multiple cameras in sequence. Check the cameras you want to monitor and choose the number of split views in the drop-down menu in **Sequence Mode**. Specify the **Sequence Interval** for the NVR to switch to the next camera for monitoring.

## PTZ SETUP

Click settings (⚙️) to enter **NVR SETTINGS**, and press **PTZ** (📹) in the left pane to enter the **PTZ SETUP** page. The setting options are described below.

### PTZ Setup > General



#### Transfer Mode:

Choose a PTZ communication protocol from HTTP, ONVIF, or Fish Eye. Otherwise use RS-485.

#### RS-485 Protocol:

Choose a RS-485 control protocol for your RS-485 PTZ device.

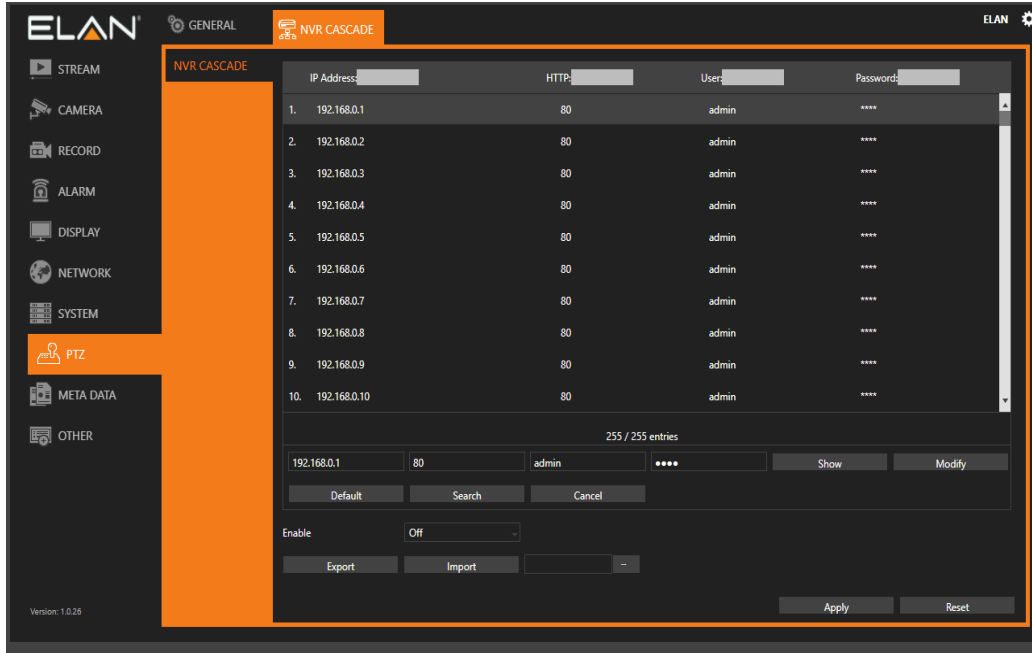
**Note:** Transfer Mode must be set to **RS-485**. Availability depends on models.

#### Control ID:

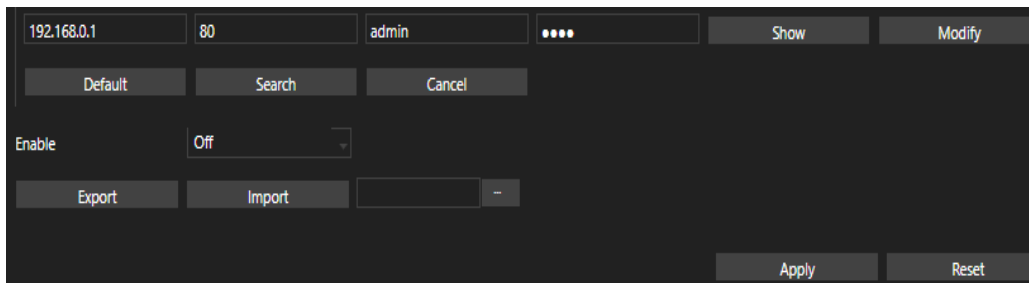
Choose the corresponding device ID to control the camera.

## PTZ SETUP (CONT.)

### PTZ Setup > NVR Cascade



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



**Show/Hide:**

Reveal or hide the password.

**Modify:**

Apply the changes you've made.

**Default:**

Restore to factory settings.

**Search:**

Find all other NVR(s) connected to your network.

**Export:**

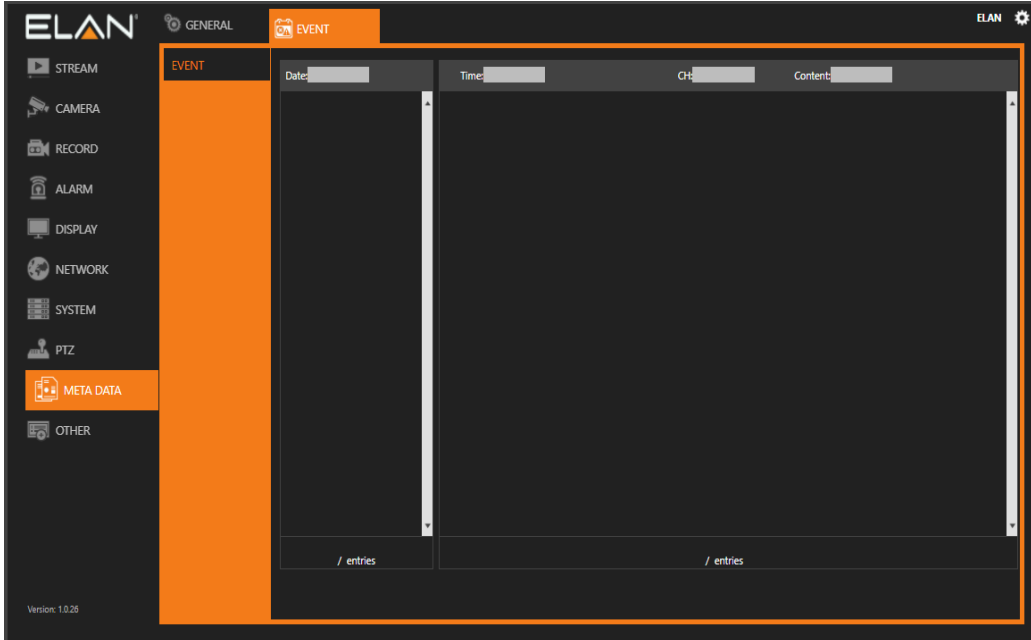
Export the settings to the USB flash drive connected to the NVR.

**Import:**

Load the settings from the USB flash drive connected to the NVR.

# META DATA SETUP

## Meta Data Setup > General



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

**Serial Input:**

Select the USB port to which your external device is connected.

**Metadata Service:**

Turn On to enable using external devices.

**Serial Device Server:**

Enter the server IP for your serial device.

**Server Data Port:**

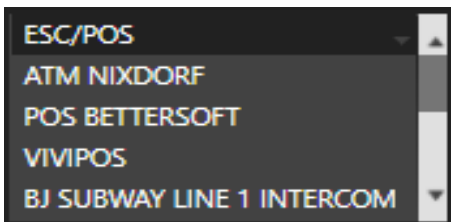
Enter the port of your serial device.

**Server Command Port:**

Enter the command port of the device.

**Emulated Mode:**

Choose an emulation type from the drop-down menu (see image below).



**Encoding Mode:**

Choose between ASCII and UTF-8.

**Baud Rate:**

Select an option suitable for your device.

## META DATA SETUP (CONT.)

### Meta Data Setup > General (Cont.)

**Data Size:**

Select an option suitable for your device.

**Parity:**

Select an option suitable for your device.

**Stop Bit:**

Select an option suitable for your device.

**Flow Control:**

Select an option suitable for your device.

**OSD Font Color:**

Choose a color for the OSD font from the spectrum (see image below).

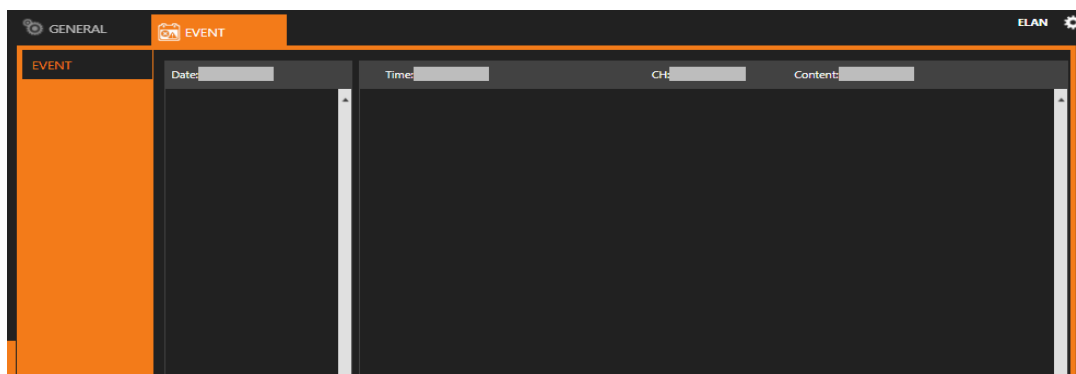
**OSD Font Size:**

Enter a value as the font size.

**OSD Rows Displayed:**

Determine the number of rows for the OSD.

### Meta Data Setup > Event

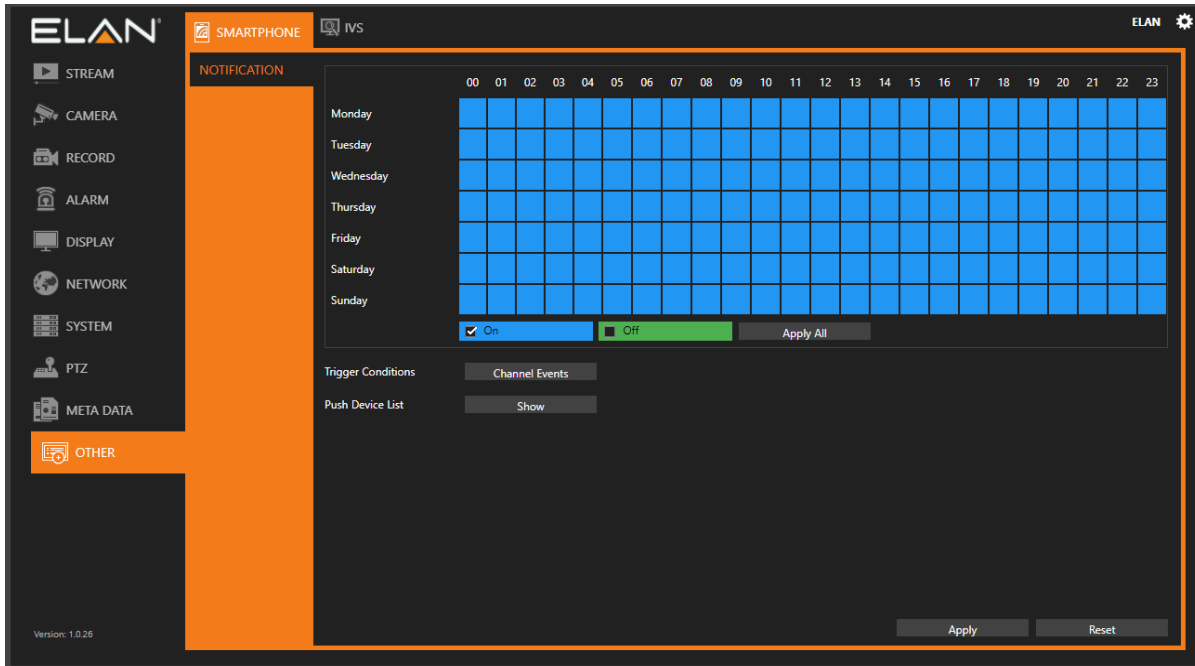


This tab displays a history of received metadata. You are allowed to search for events based on time, channel, or content.

## OTHER SETUP

Click settings (⚙️) to enter **NVR SETTINGS**, and press **OTHER** (OTHER) in the left pane to enter the **OTHER SETUP** page. The setting options are described below:

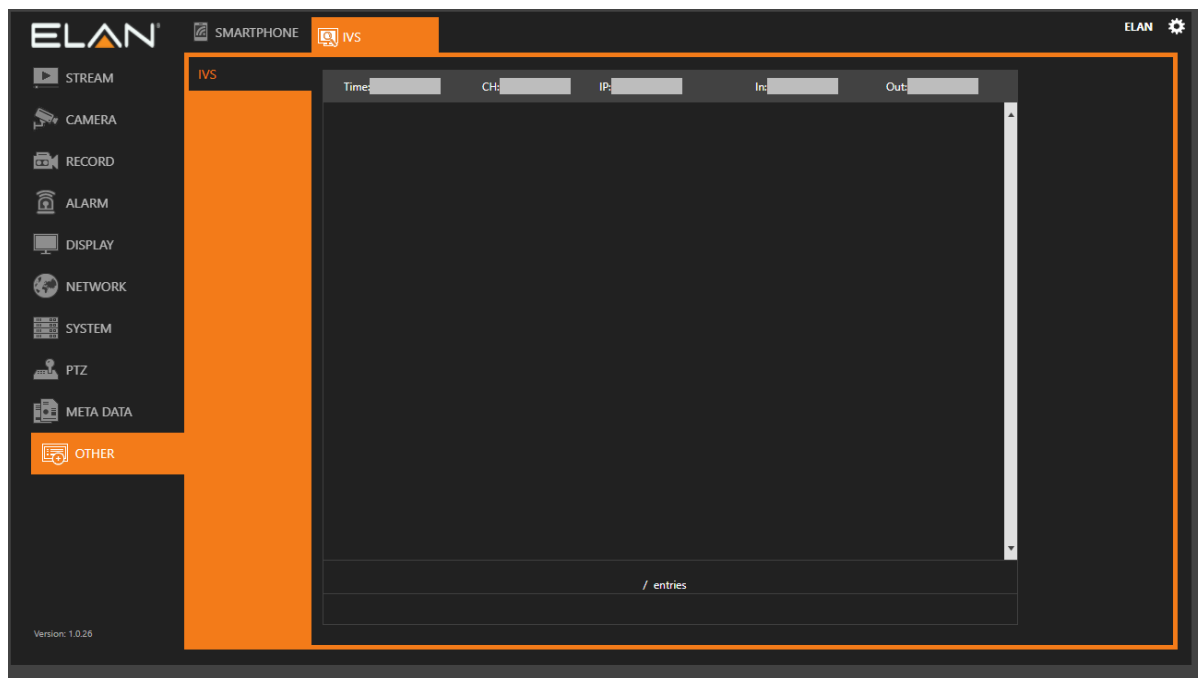
### Other Setup > Smart Phone





## OTHER SETUP (CONT.)

### Other Setup > IVS



The NVR supports IVS-enabled cameras. Connect an IVS-enabled IP camera to the NVR and turn on the IVS function. Go to **ALARM SETUP > GENERAL > Alarm Input Type > IP Camera**, and the NVR will receive and record IVS information in the history table.

## STREAM SETUP

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

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



http://192.168.3.195:1950

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

### Authentication Required ×

The server http://192.168.3.195:1950 requires a username and password.

User Name:

Password:

Cancel

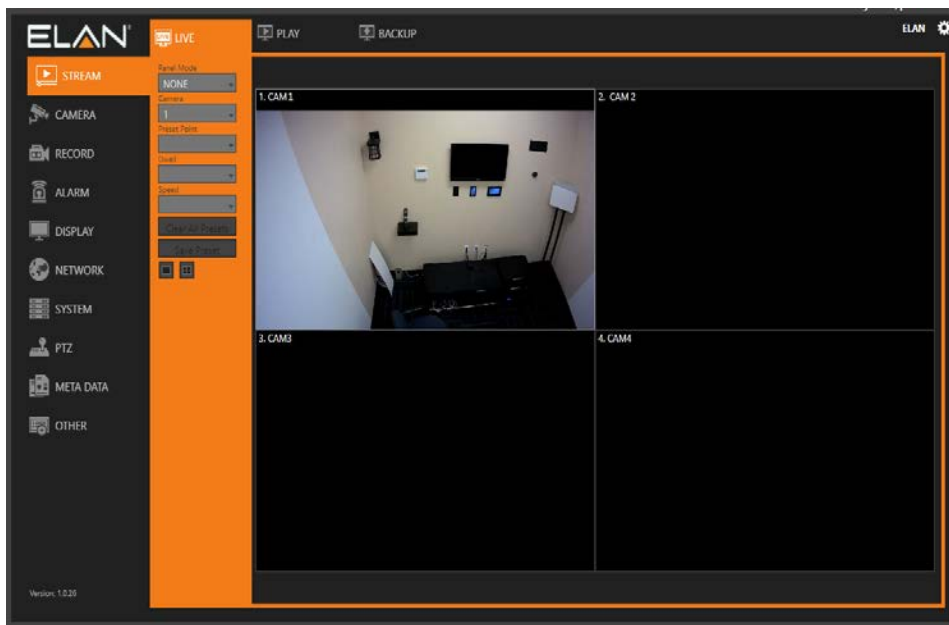
Log In

2. Log into the **STREAM** menu.

**Note:** NVR remote access requires corresponding access privileges.

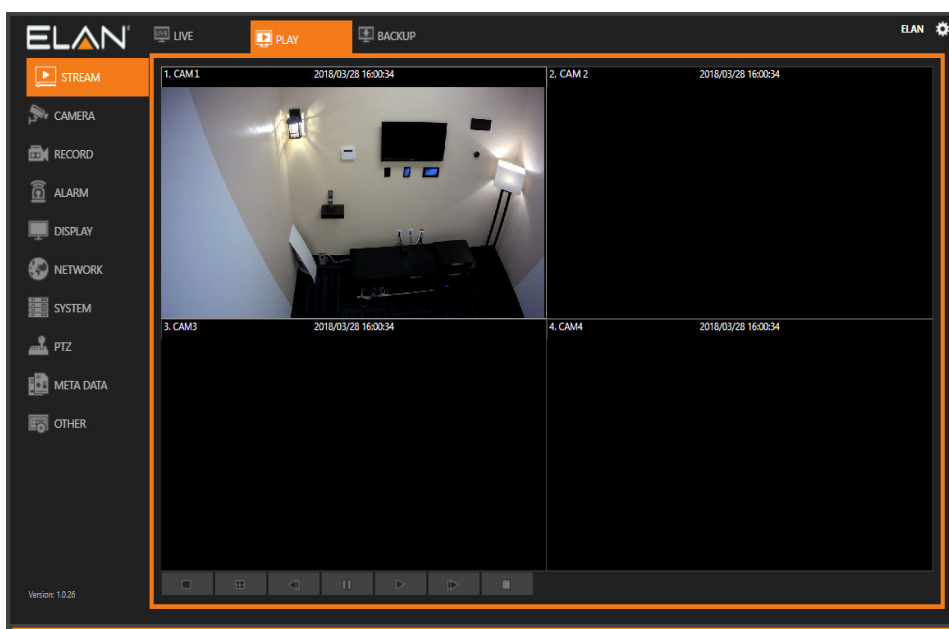
## STREAM SETUP (CONT.)

### Stream Setup > Live



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

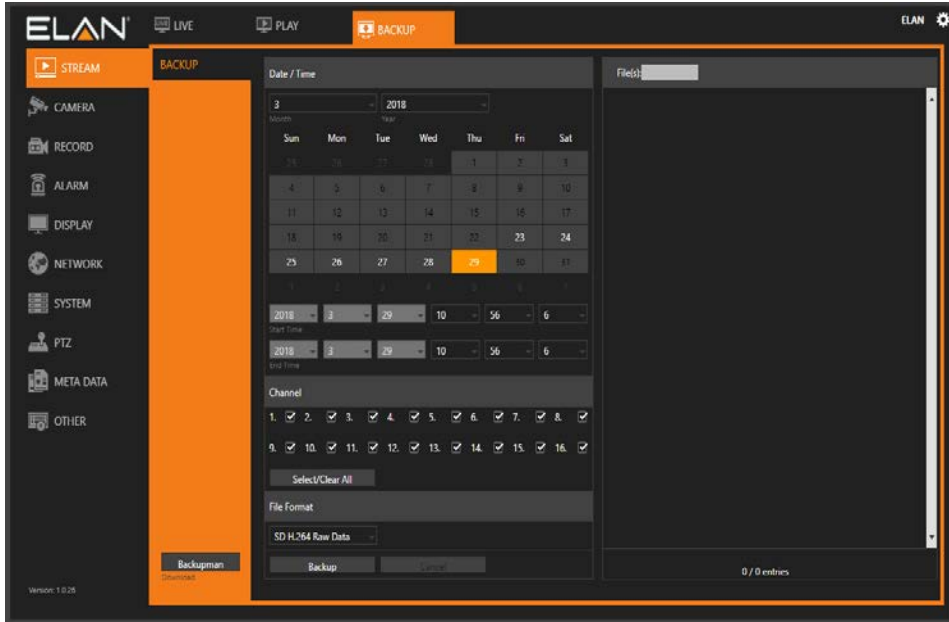
### Stream Setup > Play



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

## STREAM SETUP (CONT.)

### Stream Setup > Backup



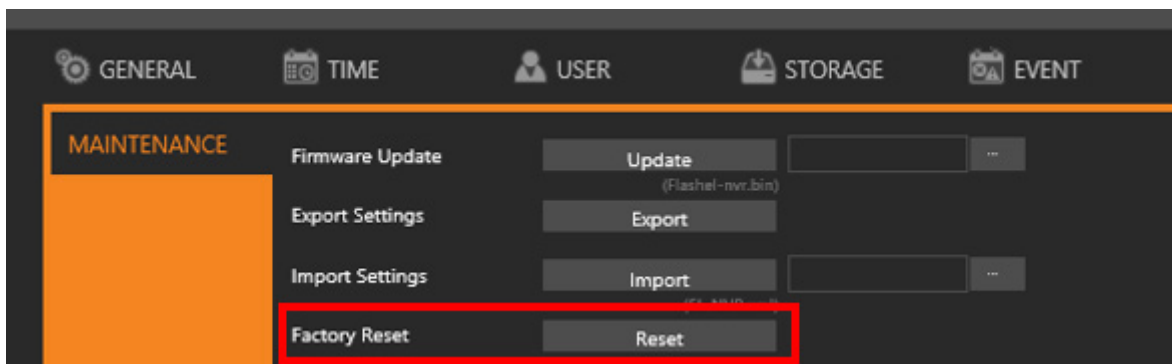
In **BACKUP**, you can back up recorded videos by choosing the date/time, channel, and file format. Click **Backup** to start the backup process.

## APPENDIX

### Hard Reset

Perform the *hard reset* to restore NVR to the factory settings.

1. Navigate to **System>Maintenance>Factory Reset** through HDMI out to Monitor.



2. 'Click' **Reset** (  ) to restart the NVR.

The device will restart and restore to the factory settings.

### Specifications

EL-NVR 5MP 1U 16CH 4Bay Specification	
<b>IP Video Input</b>	
Supports	Network camera / ONVIF Profile S / DVR / NVR / Video encoder / Navigator
Input	16 CH
Resolution	CIF / VGA / D1 / 960H / 1M / 1.3M / 1080P / 3M / 5M
Maximum Frame Rate	480 FPS
<b>Video Output</b>	
Output	HDMI / VGA 1080P
Spot monitor	HDMI or VGA selectable (Spot or sync.)
Split Screen	1 / 4 / 8 / 9 / 13 / 16 split division, sequence mode, freeze
Digital Zoom	Up to 64× on live and playback
<b>Recording</b>	

<b>EL-NVR 5MP 1U 16CH 4Bay Specification</b>	
Encode Format	H.264
<b>Recording (Continued)</b>	
Maximum Network Throughput	96Mbps
Resolution	CIF ~ 5Mega
Frame Rate	Single channel up to 1080P 60 FPS
Recording Mode	Manual, schedule ( continue, event, none )
Recording Schedule	Each channel 7day × 24 hours time table, recording mode configurable
Alarm Event Actions	Motion grid (20×12, multi-level sensitivities) / network camera event / DI
Alarm Notification	Alarm notification iOS, android / E-Mail / FTP / buzzer / DO
<b>Playback</b>	
Search	Alarm event / Operation event / System event / Meta data event / Time search
Display	16CH synchronous playback
Resolution	CIF ~ 5Mega
Max. Frame Rate	Up to 1080P 60FPS
Speed	Fast rewind 2×~64× / Fast forward 2×~64× / Step Forward / Slow motion 1/2 ~ 1/16
<b>Storage</b>	
Internal HDD	4 × 3.5"HDD ( Up to 8TB supported )
eSATA	eSATA connector × 1 ( Up to 16TB external storage supported )
<b>Backup</b>	
USB Flash Disk	Up to 32 GB supported
Network Backup	Via HTTP / FTP / Network Places

<b>EL-NVR 5MP 1U 16CH 4Bay Specification</b>	
DVD DVD/RW	External USB DVD/RW
<b>Audio</b>	
Audio Input	16 CH ( network camera ), G.711 8K
Audio Output	RCA × 1
Network Camera Two Way Audio	Yes
<b>Network</b>	
Ports	RJ-45 Gigabit Ethernet × 2 ( Ethernet failure redundancy or sharing supported )
Protocols	ARP / TCP/IP / UDP / HTTP / HTTPS / SMTP / SNMP / FTP / DDNS / PPPoE / NTP / RTP / RTSP / DHCP/ Onvif Profile S
Web	Direct internet browser access / Multiple users access
Mobile Phone	iOS / Android supported
P2P	APP scan QR Code / UID connection
RTSP Service	RTP UDP/ RTSP TCP supported
WS-Discovery	WS-Discovery automatically quick IP address setup for network cameras
<b>Software</b>	
VMS	Navigator
Backup / Playback	Remote Playback Manager / Backup Manager, multiple NVRs file download and multi-channel playback
<b>Alarm</b>	
Ports	DI × 2 and DO × 2 ( NO/NC )
<b>System</b>	
Reports	Alarm event, operation, configuration and system execution log full reports exporting over HTTP or USB
Authentication	User authentication with feature configurable and IP address blocking

<b>EL-NVR 5MP 1U 16CH 4Bay Specification</b>	
Language	Arabic, Chinese( Traditional ), Chinese( Simplified ), English, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Turkish
<b>System (Continued)</b>	
HDD Inspection	S.M.A.R.T monitoring / File system de-fragmentation/ IO read write error
Recording Day	Automatic recording day calculator
Time	Daylight saving / NTP / External USB GPS time sync / Keyboard
<b>Accessories</b>	
PTZ Protocols	HTTP / ONVIF
Keyboard	Keyboard input
USB to RS-232	Record external metadata via USB to RS-232 cable, display at live and playback
Remote Control	Remote controller addressable up to 255 NVRs
Mouse	Mouse click, drag and scroll
Microphone	USB Mic. support (Need additional option)
WiFi / 4G Dongle	WiFi and 4G external USB dongle supported (Certified brand only)
<b>Others</b>	
CPU	ARM Cortex A9 Dual Core
OS	Embedded Linux Kernel 3.0
WDT	Hardware watchdog timer
<b>Power and Working Environment</b>	
Power	Adapter DC 12V, 5A, 60W × 1
Operating Temperature	0°C ~ 45°C
Operating Humidity	5% ~ 80%
Dimension (W×L×H)	435 × 420 × 44 mm
Weight	≈4 kg ( Without hard drive )







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