

TRENDnet[®]

User's Guide



8-Channel H.265 4K (8MP) PoE NVR

TV-NVR1508

User's Guide

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About this document

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

Disclaimer

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

Caution

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

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



Introduction

The TV-NVR1508 NVR is network video recorders that offer a standalone solution for managing IP cameras and systems. The built-in high-quality decoder can deliver 4K/ 5MP/ 3MP/ 1080p/ 720p/ D1/ VGA/ CIF IP camera streams. Each channel can be individually configured to record in SD or HD resolution to suit your needs.

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

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

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

Features

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

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Chapter 1 Stream

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



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

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

 Green: Giga  Orange: 100Mbps  Red: Error Status

Note: This information is available depending on models.

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



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

Icons	Description
	Controls for the number of split-screens.
	Click to activate the sequential mode, which will show videos channels in the order you specify.
	Indicates whether the current split-screen controls are for HDMI or VGA. Note: Available only when VGA Spot mode is on
	Click to turn on/off the audio.
	Click to broadcast your message through a microphone.
	Click to activate a specific DO output. (not supported)

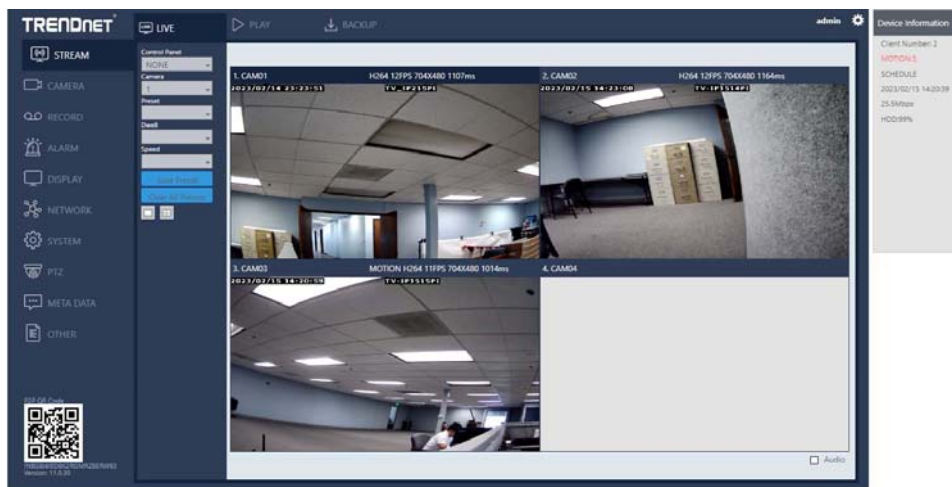
Note: This information is available depending on models.

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


Icons	Description
	NVR Settings
	Freeze
	Alarm Event
	Playback / Backup
	Schedule/Manual: Indicates whether the current recording setting is scheduled recording or manual recording. Click to switch.

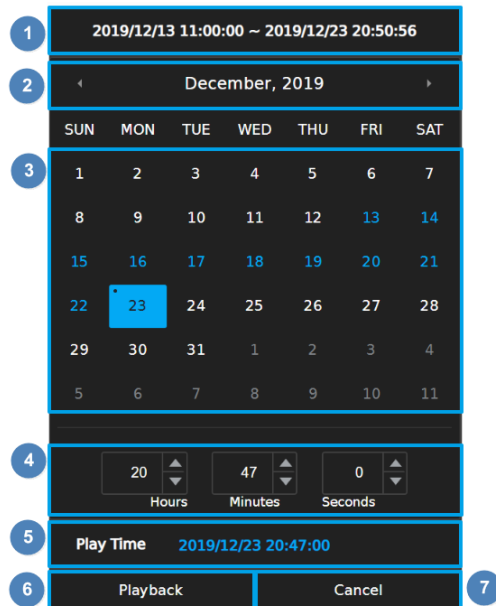
Chapter 1-1 Live





Live video will display on this page.



Chapter 1-2 Play / Backup

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



1. Recorded Period: Recorded data duration
2. Month Picker: Select the month by clicking on the left/right arrow
3. Date Picker: Select a date by clicking on it
 -  No recording
 -  The date has recorded data
 -  Current date
 -  Selected data
4. Time Picker: Select hours/minutes/seconds by clicking on up/down arrow
5. Play Time: selected date/time for playback
6. Playback: Click to play the selected video recording
7. Cancel: Click to go back to playback page

Chapter 1-2-1 Playback

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




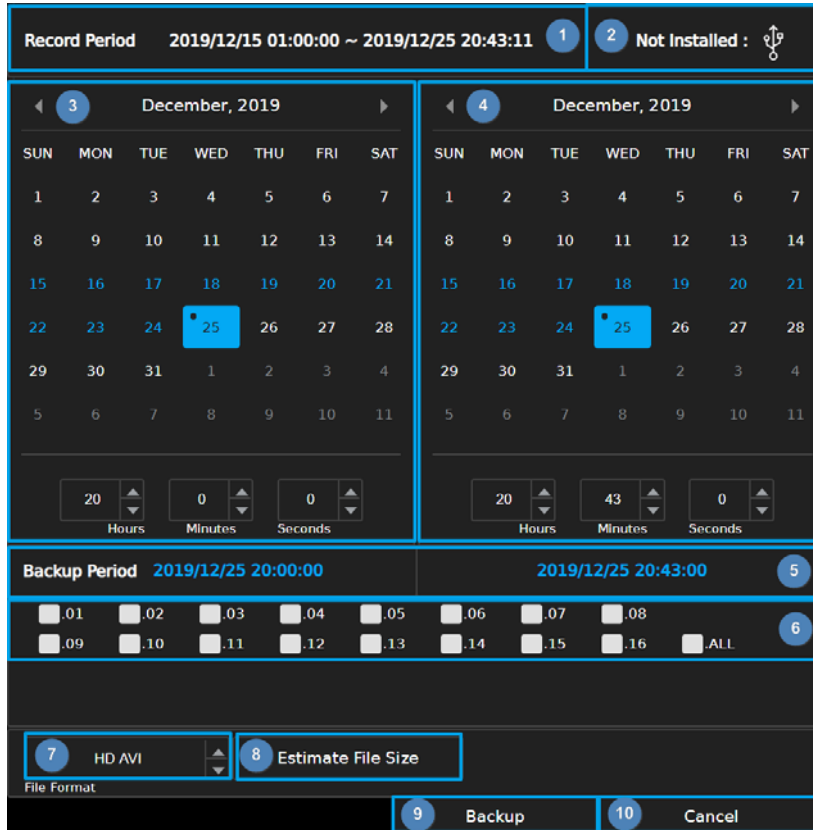
Details of the controls at the bottom of the **PLAYBACK** screen are described as follows:

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

Note: This information is available depending on models.

Chapter 1-2-2 Backup

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




The screenshot shows a backup configuration interface with the following elements:

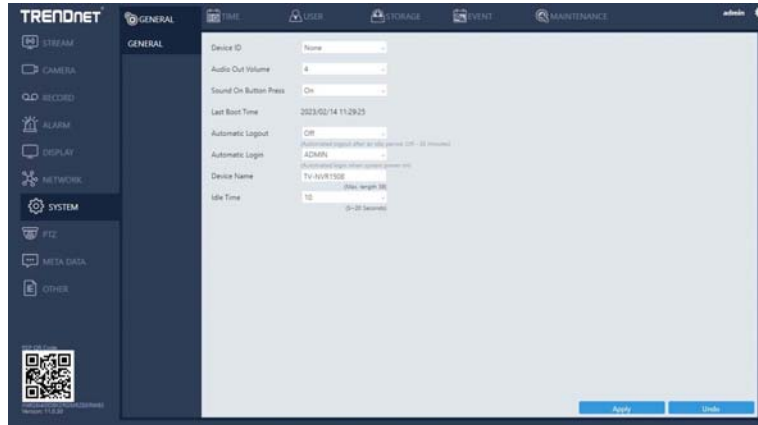
- Record Period:** 2019/12/15 01:00:00 ~ 2019/12/25 20:43:11 (1)
- USB Status:** Not Installed (2)
- Start Time Picker:** December, 2019 calendar with date 25 selected (3)
- End Time Picker:** December, 2019 calendar with date 25 selected (4)
- Backup Period:** 2019/12/25 20:00:00 (5)
- Channel Number:** Selection grid with options .01 through .16 and ALL (6)
- Backup File Format:** HD AVI (7)
- Estimate File Size:** Button (8)
- Backup:** Button (9)
- Cancel:** Button (10)

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

Chapter 2 Settings

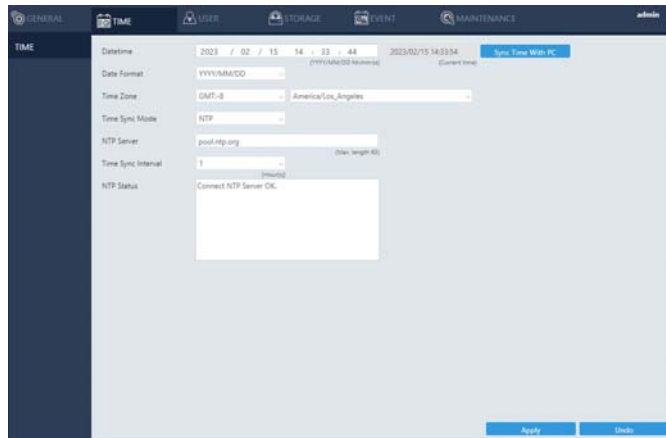
Click  to enter **NVR SETTINGS** and click **General** on the top panel, where you are allowed to adjust system configurations of the NVR. The details of the tabs are described as follows:

Chapter 2-1 General



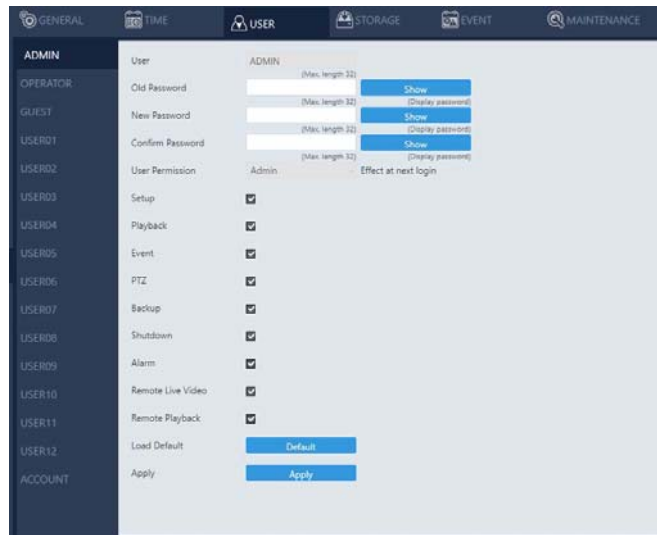
- Device ID: Assign an ID for the NVR to be controlled by the remote controller.
- Audio Out Volume: Adjust the volume of the NVR.
- Sound On Button Press: Switch on/off the sound when pressing remote control buttons.
- Last Boot Time: Shows the last time the system is rebooted.
- Automatic Logout: Log out automatically after 30 minutes of inactivity.
- Automatic Login: Specify user account to log on automatically when the system power on.

Chapter 2-2 Time



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

Chapter 2-3 User

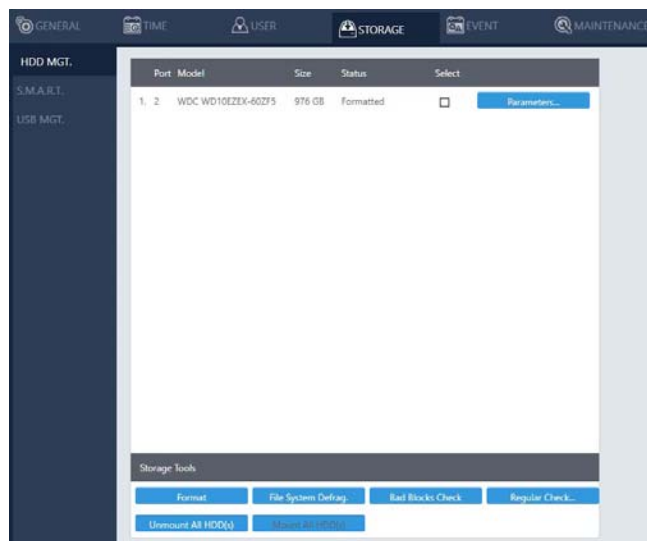


The NVR supports up to 15 sets of individual user settings (including default user administrator, operator, and guest), to which you can assign different access privileges.

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

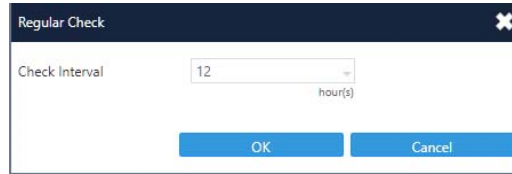
Chapter 2-4 Storage

Chapter 2-4-1 HDD MGT

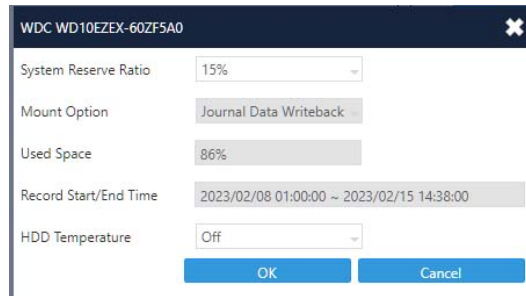


In **HDD MGT**, there are HDD format, file system defrag, check HDD malfunctioned blocks, and HDD periodic inspection. Select a desired HDD and click **Format**, **File System Defrag**, **Bad Block Check**, or **Regular Check**.

Regular Check:

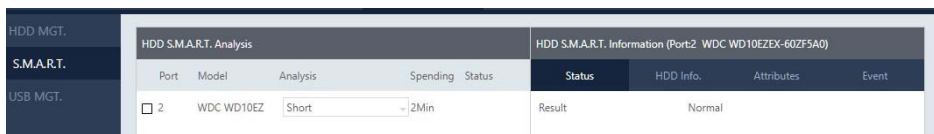


Allows you to set the interval between system checks:
Parameters: Click each device to enter the screen below.



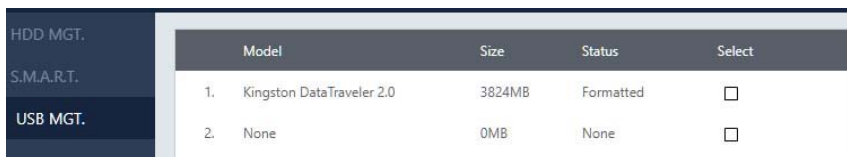
System Reserve Ratio allows you to allocate the percentage of HDD space that will not be occupied by recorded files. In **Mount Option**, choose the writing mode for the hard drive.

Chapter 2-4-2 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**.

Chapter 2-4-3 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**.

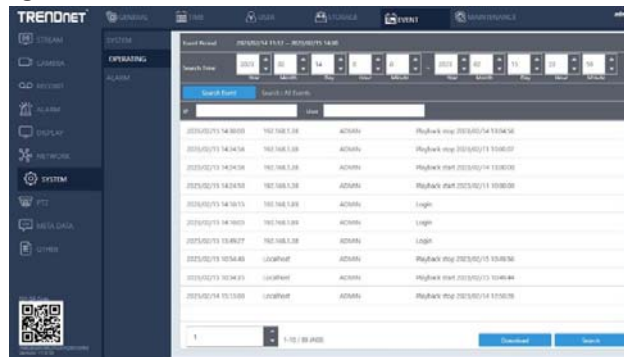
Chapter 2-5 Event

Chapter 2-5-1 System



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

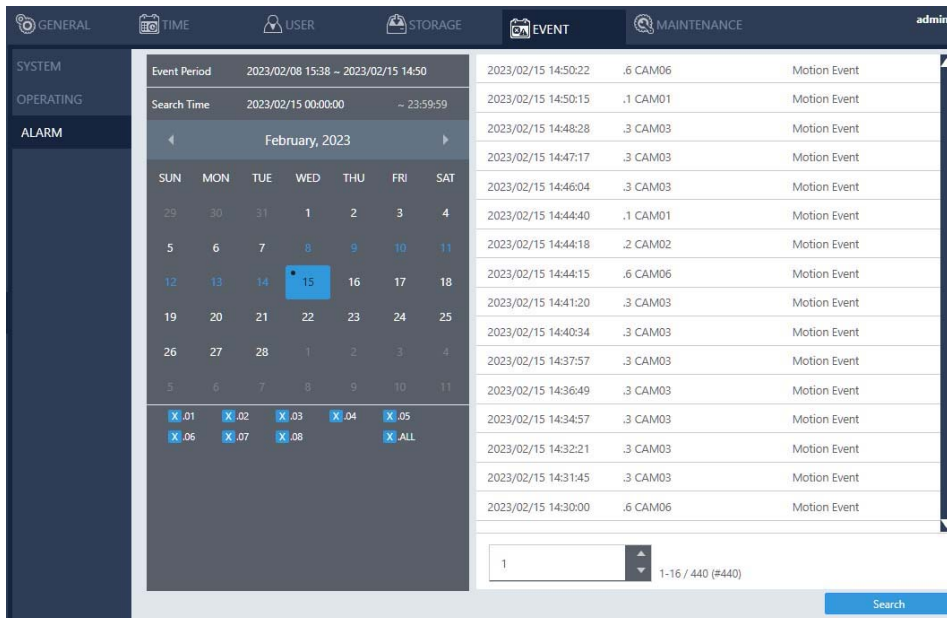
Chapter 2-5-2 Operating



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

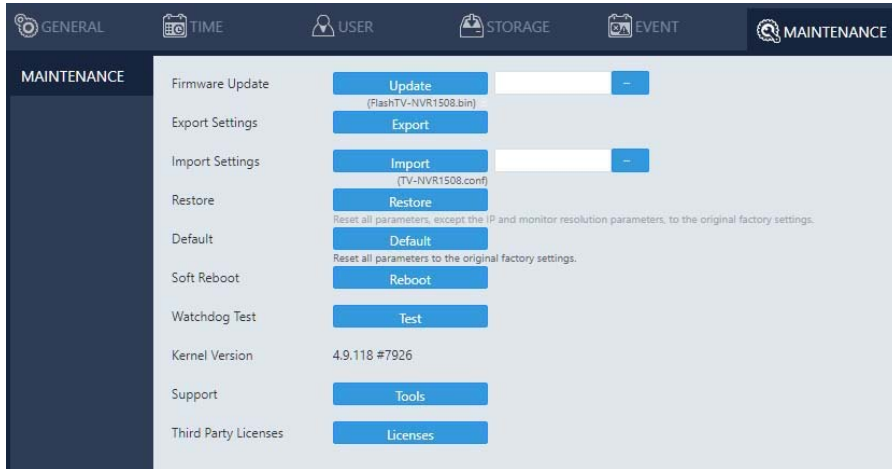
Chapter 2-5-3 Alarm

The event history is displayed in alarm log.



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

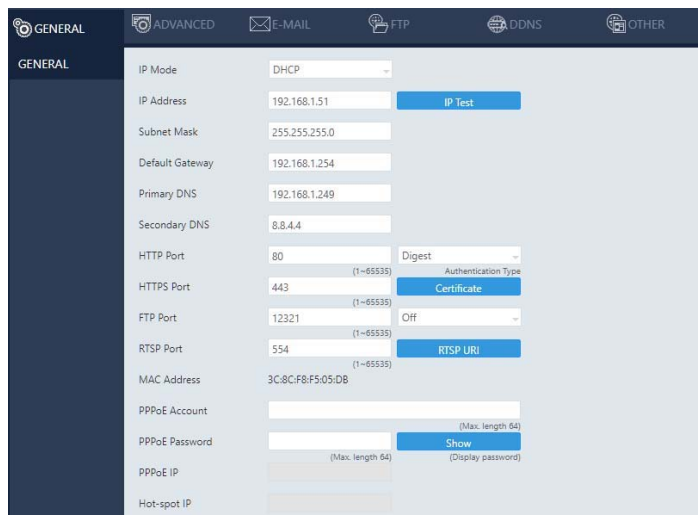
Chapter 2-6 Maintenance



- 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.
- Support: Click to open server execution log options dialog, record system execution details.

Chapter 3 Network

Chapter 3-1 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.

- Subnet Mask: Enter the desired subnet mask.
- Default Gateway: Enter the desired default gateway.
- Primary DNS: Enter the first priority DNS server.
- Secondary DNS: Enter the secondary DNS server in case the primary DNS is not available.
- Video Port: Specify a desired video port.
- HTTP Port: Specify a desired HTTP port.
- HTTPS Port: Specify a desired HTTPS port and configure HTTPS.
- FTP Port: Specify the desired FTP port.
- MAC: This is the MAC address of your NVR.
- PPPoE Account: If you choose to connect through PPPoE, enter the account name here.
- PPPoE Password: Enter the required password for PPPoE connection.
- PPPoE IP: Your PPPoE IP will be displayed here.
- Hotspot IP: Your hotspot IP will be displayed here.

Chapter 3-1-1 Configuring HTTPS Port

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

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

There are two options to set HTTPS service:

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

The screenshot shows a configuration window titled "HTTPS Certificate". It contains the following fields and values:

Country Code	US	(Max. length 2)
State or Province	California	(Max. length 64)
Locality		(Max. length 64)
Organization	TRENDnet, Inc.	(Max. length 64)
Organization Unit	Information Technology	(Max. length 64)
Common Name	app.trendnet.com	(Max. length 64)
Validity	7303	(1 ~ 3650 Day(s))

Buttons at the bottom:

- Create Self-signed Certificate
- Create Certificate Request
- Export Certificate Request
- Import Signed Certificate
- Exit

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


The screenshot shows the 'ADVANCED' configuration page for TCP/IP. The left sidebar has 'TCP/IP' selected. The main area contains the following settings:

Setting	Value	Action
1st TCP/IP	On	
1st IP Address	192.168.219.111	IP Test
1st Subnet Mask	255.255.255.0	
2nd TCP/IP	Off	
2nd IP Address	192.168.2.111	IP Test
2nd Subnet Mask	255.255.255.0	
3rd TCP/IP	Off	
3rd IP Address	192.168.3.111	IP Test
3rd Subnet Mask	255.255.255.0	

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

Chapter 3-2-2 P2P

The screenshot shows the 'P2P' configuration page. The left sidebar has 'P2P' selected. The main area contains the following settings:

Setting	Value	Action
Enable	On	
P2P Account	IN6G8I4I0D8K2RGMZBEI	
P2P License (Max. length 24)	Show (Display product key)
Status	Registration done!	
		
	IN6G8I4I0D8K2RGMZBERW63	

1. When activated successfully, a QR code will appear on the screen, and you can access the NVR with **Sentinel** app by scanning the QR code.

- Enable: Choose **On** to activate the service.

Chapter 3-3 E-Mail

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

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

Channel #1	Event #1 (Generic)	Motion	Alarm	Primary Stream Video Loss	Secondary Stream Video Loss
1. CAM01	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
2. CAM02	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
3. CAM03	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
4. CAM04	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
5. CAM05	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
6. CAM06	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
7. CAM07	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	
8. CAM08	<input type="checkbox"/> Motion	<input type="checkbox"/> Alarm	<input type="checkbox"/> Primary Stream Video Loss	<input type="checkbox"/> Secondary Stream Video Loss	

- 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.

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

Chapter 3-4 FTP

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

- 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.

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

Chapter 3-5 DDNS

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

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

Chapter 3-6 Other

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

- UPnP Device Name: The device name shown on the UPnP network.
- UPnP Service: Switch on/off the UPnP service.

- 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
- Browser Auto Logout (30 Minutes): Log out automatically after 30 minutes of inactivity.
- SDDP Device Name: The device name shown on the SDDP network.
- SDDP Service: Switch on/off the SDDP service.
- IP Address Filtering: Switch on/off the IP filtering function, press **Setup** to open the filtering IP address setting dialog.
- Over Bitrate Protection: Switch on/off protection function that when network input throughput over the limitation reducing live video decode to protect recording data.
- ONVIF Service: Turn on ONVIF support when using with other ONVIF equipments.
- IPScan Service: Turn on to work with Camera Search Tool

Chapter 4 Camera

Chapter 4-1 General

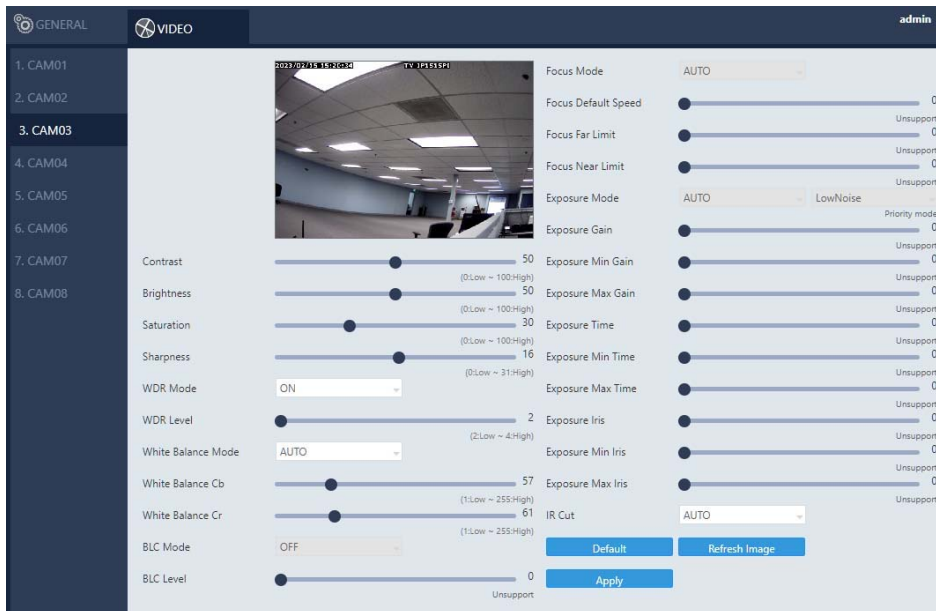
The screenshot shows the 'VIDEO' configuration page for 'CAM01'. The interface includes a sidebar with camera selection (CAM01-CAM08) and a main configuration area. The 'CAM01' configuration is as follows:

Camera Name	CAM01 (Max. length 12)	<input type="checkbox"/> Security Protocol (SSL/TLS)	IPScan (Discover Devices)
Camera Source	IP Camera (Stream source)	1 (NVE/DVR/NVR 1~720 Ch)	
IP Address	192.168.219.112 (ONVIF Device Info)	Test	
HTTP Port	80 (1~65535)	Assign RTSP URL	
RTSP Port	554 (1~65535)	RTSP/TCP (RTSP Type)	
User	admin (Max. length 15)	RTSP Multicast Setting	
Password	**** (Max. length 15)	Show (Display password)	
Stream Type	Dual Stream (Stream type)	Apply To All Channels (Stream Properties)	
Primary Stream (For Multi-Channel Display)	25 (5~60 FPS)	25 (GOP 1~120)	
Primary Stream Bitrate	1024 (128~12288 kbps)	--- (Video Encoding)	
Secondary Stream	15 (5~60 FPS)	15 (GOP 1~120)	
Sec. Stream Bitrate	3072 (128~12288 kbps)	--- (Video Encoding)	
Decode Ref.	5 (Reference Frame)	Immediate (Mode)	
Hide Display	Off (Camera Disable)	ADMIN (View Permission)	
Sync Time With NVR	Off	Configure Setting	
200 / 240 FPS (Primary Stream)		120 / 240 FPS (Secondary Stream)	32.0 / 64 Mbps (Total Bitrate)

- Camera Name: Enter the camera name to be displayed on the streaming screen.
- Camera Source: Allocate a NVR channel for the camera. Select Off, IP camera, or Auto.
- IP Address: Enter the IP address of the camera you want to connect.
- HTTP Port: Enter the port for HTTP connection.
- RTSP Port: Enter the port for RTSP connection.
- User: Enter the username required for camera authorization.
- Password: Enter the password required for camera authorization.
- Stream Type: Choose whether to stream only the primary video or dual (primary & secondary) videos.
- Primary Stream: Select the FPS and GOP for the primary stream.
- Primary Stream Bitrate: Select the bitrate for the primary stream.
- Secondary Stream: Select the FPS and GOP for the secondary stream (available only if **Dual Stream** is activated in **Stream Type**).
- Sec. Stream Bitrate: Select the bitrate for the secondary stream.
- Decode Ref. : Select the number of reference frame for the decoder, and choose **Immediate** for lower latency or **Smooth** for smoother but higher latency video.

- Display: Disable the video function (live feeds and playback) of the selected camera.
- Sync Time with NVR: Turn **On** for the camera to sync time with the NVR.
- Security Protocol: Check box to allow HTTPS connections to the IP camera. The recommended HTTP port setting is 443.
- Test: Press to check ONVIF device information including manufacturer, model #, firmware version, serial # and hardware ID.
- Assign RTSP URL: Assign required RTSP URL, NVR will connect to camera via required RTSP URL but not Onvif.
- RTSP Multicast Setting: Assign required RTSP multicast port.
- IPScan: Click **IPScan** to scan for connected devices on the network.
- Cancel: Click **Cancel** to stop scanning.
- Auto Adjust IP: Automatically assign IP for connected cameras.
- Snap: Show snapshot thumbnails for all the cameras.
- Set IP: Assign an IP address to the camera.

Chapter 4-2 Video

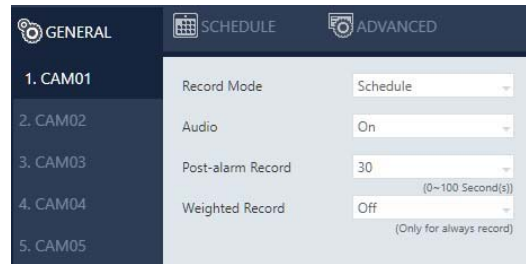


In this page, you can adjust several camera parameters including **Contrast**, **Brightness**, **Saturation**, and **Sharpness**.

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

Chapter 5 Record

Chapter 5-1 General



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

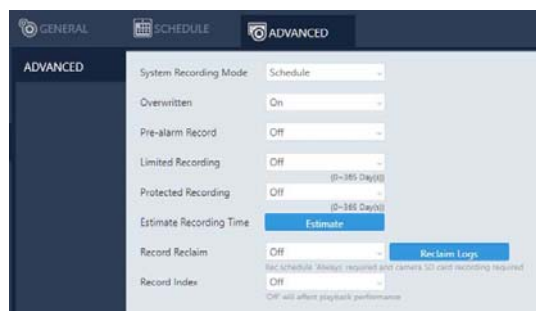
Note: System Recording Mode must set to **Schedule** and Recording schedule set to **Always**.

Chapter 5-2 Schedule



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

Chapter 5-3 Advanced

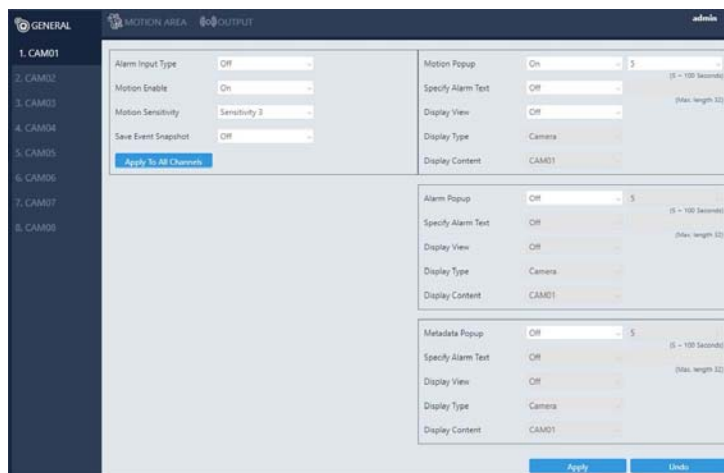


- System Recording Mode: Choose between **Manual** or **Scheduled** recording.

- Overwritten: Switch on to overwrite old files when the storage is full.
- Pre-alarm Record: Switch on to start recording for a period before an alarm occurs.
- Limited Recording: Set the number of days to record (from now to the designated day).
- Protected Recording: Set how many days of video the NVR will preserve.
- Estimate Recording Time: The estimate number of days that can be recorded based on the hard disk size
- Average Recording Bitrate: The average video stream size based on the current bandwidth received by the NVR.
- Average Recording Size: The available recording space according to the current installed hard disk.
- Average Recording Time: The estimate number of days that can be recorded based on the hard disk size.

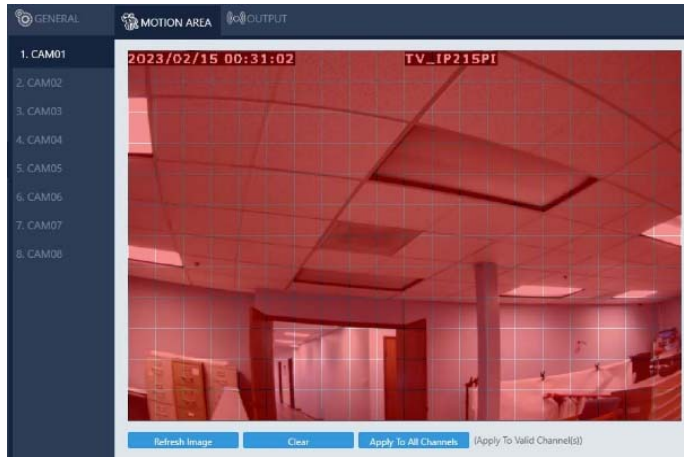
Chapter 6 Alarm

Chapter 6-1 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.
- Motion Popup: The display view pops up when the motion is triggered.
- Specify Alarm Text: The alarm text displays on the channel when the alarm is triggered
- Display View: Turn on/off the display view when the alarm is triggered.
- Display Type: Switching display view to camera/view when alarm is triggered.
- Alarm Popup: The display view pops up when the alarm input is triggered
- Metadata Popup: The display view pops up when the metadata event is triggered
- Display Content: Camera: Switch display to the selected channel. View: Switch display to the selected split view group.

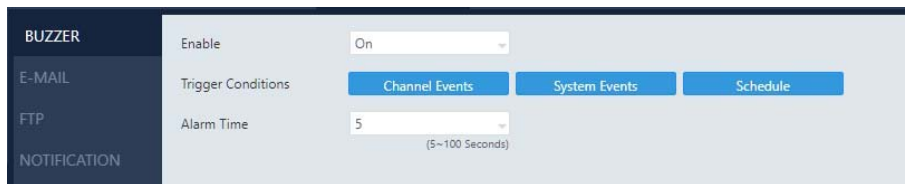
Chapter 6-2 Motion Area



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

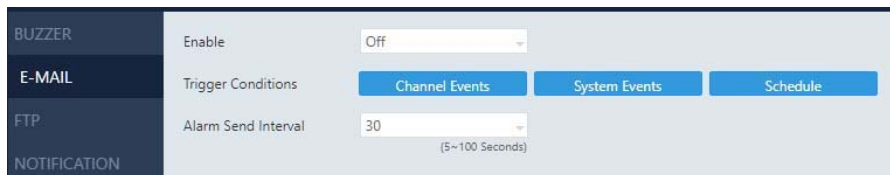
Chapter 6-3 Output

Chapter 6-3-1 Buzzer



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

Chapter 6-3-2 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.

Chapter 6-3-3 FTP

BUZZER	Enable	Off
E-MAIL	Trigger Conditions	Channel Events
FTP	Alarm Send Interval	10 (5~100 Seconds)
NOTIFICATION		

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

Chapter 6-3-4 Notification

BUZZER	Enable	Off
E-MAIL	Trigger Conditions	Channel Events System Events Schedule
FTP	Alarm Send Interval	5 (5~100 Seconds)
NOTIFICATION		

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

Chapter 7 Display

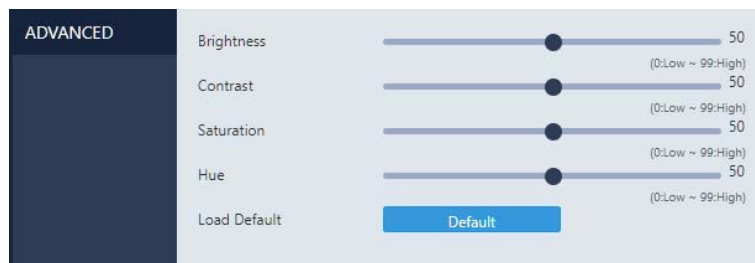
Chapter 7-1 General

GENERAL	HDMI Mode	HDMI
	HDMI Resolution	1280 X 1024
	Camera Name	Default
	Status Area	Top of Screen
	Date / Time	On
	View/SEQ Name	Off
	Alarm Text Color	FF0000
	Error Message	On
	Split Border Line	Off
	Startup Display	Div.9-1

- HDMI Mode: Switch the output mode between DVI and HDMI.
- HDMI Resolution: Select a screen resolution that fits your screen.
- VGA Mode: Choose **HDMI Sync** to synchronize the videos for VGA and HDMI outputs. Choose **SPOT** to display an HDMI/VGA switch button in the real-time view. Click the switch button to switch control of split views between HDMI/VGA.
- VGA Resolution: Select a screen resolution that fits your screen

- OLED IP Address: Turn on/off IP address display on front panel OLED.
- Camera Name: Adjust the channel name OSD position on local live view display. Opposite field is to select channel name text color for on-screen display.
- Status Area: Adjust the status OSD position on local live view display. Opposite field is to select status text color for on-screen display.
- Date / Time: Enable or disable the date and time OSD from the local live view screen.
- View/SEQ Name: Turn on/off View/Sequence OSD on split screen view
- Alarm Text Color: Select alarm text color for on-screen display.
- Error Message: Turn on/off error message in live view.
- Split Border Line: Select borderline size/color on split screen view
- Startup Display: Specify video to display after the DVR startup is completed.

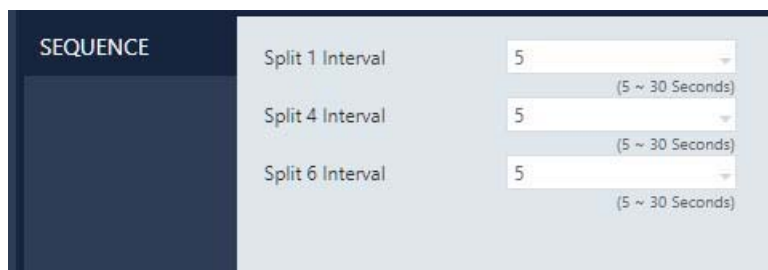
Chapter 7-2 Advanced



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

Note: Availability depends on model.

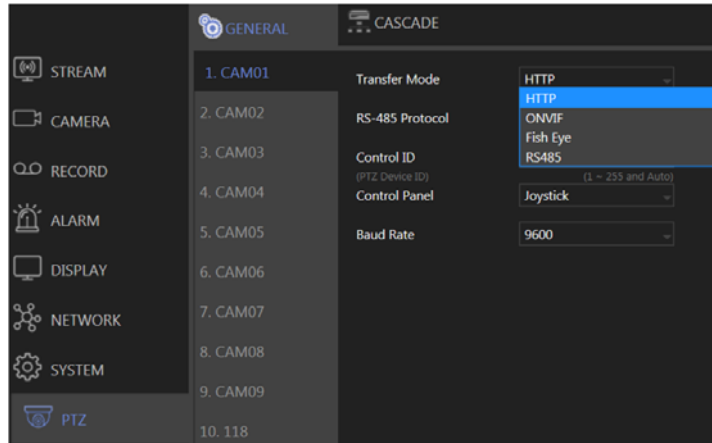
Chapter 7-3 Sequence



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

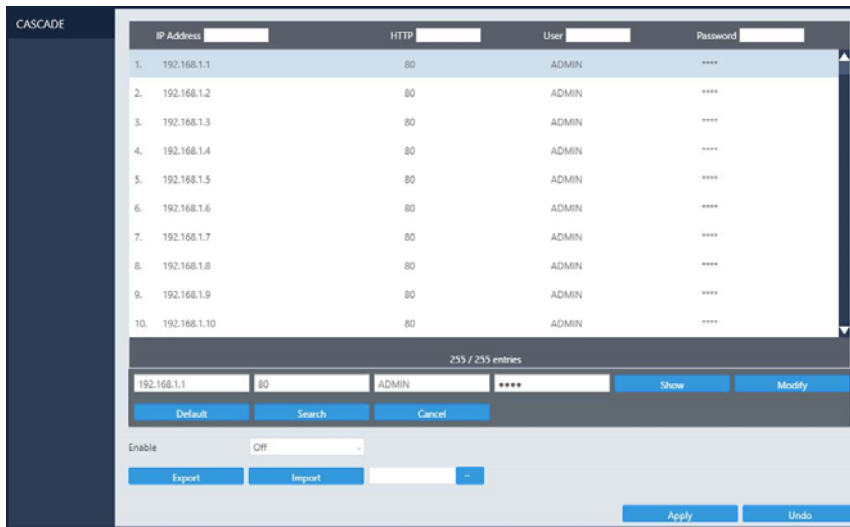
Chapter 8 PTZ

Chapter 8-1 General (For PTZ cameras only)



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

Chapter 8-2 NVR Cascade



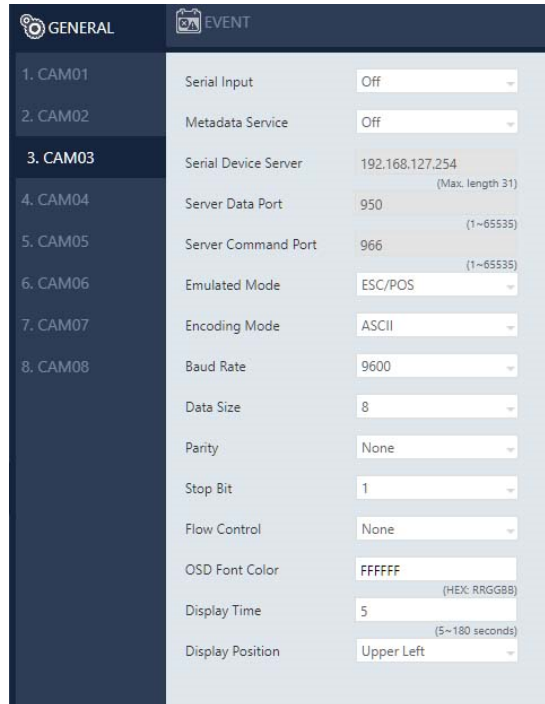
This tab allows you to cascade multiple NVRs or adjust relevant settings. For detailed instructions on how to use the NVR cascade function, visit our official website. Enter **Support > SDK**, and download the document named **DVR/NVR IR/keyboard serial commands over HTTP**. The settings listed in this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

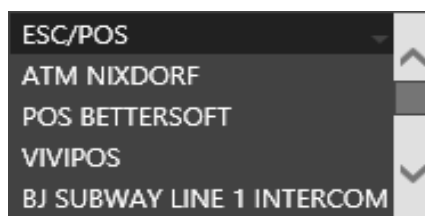
Chapter 9 Metadata

Chapter 9-1 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.
- **Data Size:** Select an option suitable for your device.

- Parity: Select an option suitable for your device.
- Stop Bit: Select an option suitable for your device.
- Flow Control: Select an option suitable for your device.
- OSD Font Color: Choose a color for the OSD font from the spectrum (see image below).



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

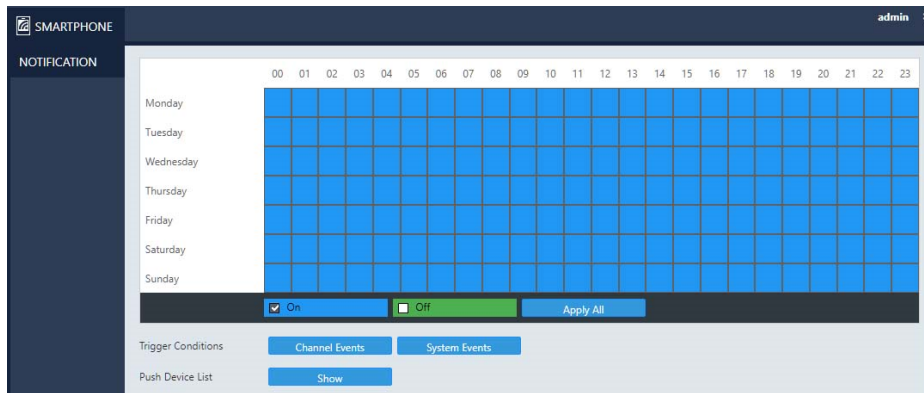
Chapter 9-2 Event



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

Chapter 10 Other

Chapter 10-1 Smartphone



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

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

Sentinel App Download

iOS



Android



Europe – EU Declaration of Conformity

This device complies with the essential requirements of the Directive 2004/108/EC and 2006/95/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the Directive 2004/108/EC and 2006/95/EC:

Safety: EN60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

EMC: EN 55022:2010 CLASS B

EN50130-4:2011

EN 61000-3-2:2014

EN 61000-3-3:2013

Directive: EMC Directive 2004/108/EC, RoHS Directive 2011/65/EU

WEEE Directive 2012/19/EU, REACH Regulation No.1907/2006

Česky [Czech]	TRENDnet tímto prohlašuje, že tento NVR je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2004/108/ES a 2006/95/ES.
Dansk [Danish]	Undertegnede TRENDnet erklærer herved, at følgende udstyr CAMERA overholder de væsentlige krav og øvrige relevante krav i direktiv 2004/108/EF og 2006/95/EF.
Deutsch [German]	Hiermit erklärt TRENDnet, dass sich das Gerät NVR in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2004/108/EG und 2006/95/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab TRENDnet seadme NVR vastavust direktiivi 2004/108/EÜ ja 2006/95/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, TRENDnet, declares that this NVR is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC and 2006/95/EC.
Español [Spanish]	Por medio de la presente TRENDnet declara que el NVR cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2004/108/CE y 2006/95/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑΤRENDnet ΔΗΛΩΝΕΙ ΟΤΙ ΝVR ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2004/108/ΕΚ, 2006/95/ΕΚ καλ.
Français [French]	Par la présente TRENDnet déclare que l'appareil NVR est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2004/108/CE, 2006/95/CE et.
Italiano [Italian]	Con la presente TRENDnet dichiara che questo NVR è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2004/108/CE e 2006/95/CE.
Latviski [Latvian]	AršotRENDnetdeklarē, ka CAMERA atbilstDirektīvas 2004/108/EK un 2006/95/EC būtiskajāmprasībām un citiemar to saistītājiemnoteikumiem.
Lietuvių [Lithuanian]	Šiuo TRENDnet deklaruoja, kad šis NVR atitinka esminius reikalavimus ir kitas 2004/108/EB ir 2006/95/EB Direktyvos nuostatas.

Nederlands [Dutch]	Hierbij verklaart TRENDnet dat het toestel NVR in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2004/108/EG en 2006/95/EG.
Malti [Maltese]	Hawnhekk, TRENDnet, jiddikjara li dan NVR jikkonforma mal-ftigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 2004/108/KE u 2006/95/KE.
Magyar [Hungarian]	Alulírott, TRENDnet nyilatkozom, hogy a NVR megfelel a vonatkozó alapvető követelményeknek és az 2004/108/EK és a 2006/95/EK irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym TRENDnet oświadcza, że NVR jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2004/108/WE i 2006/95/.
Português [Portuguese]	TRENDnet declara que este NVR está conforme com os requisitos essenciais e outras disposições da Directiva2004/108/CE e 2006/95/CE.
Slovensko [Slovenian]	TRENDnet izjavlja, da je ta NVR v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive2004/108/ES in 2006/95/ES.
Slovensky [Slovak]	TRENDnettýmto vyhlasuje, že NVR spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2004/108/ES a 2006/95/ES.
Suomi [Finnish]	TRENDnet vakuuttaa täten että NVR tyyppinen laite on direktiivin2004/108/EY ja 2006/95/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar TRENDnet att denna NVR står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2004/108/EG och 2006/95/EG.

Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

TV-NVR1508 – 3 Years Warranty

If a product does not operate as warranted during the applicable warranty period, TRENDnet shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original date of purchase. All products that are replaced become the property of TRENDnet. Replacement products may be new or reconditioned. TRENDnet does not issue refunds or credit. Please contact the point-of purchase for their return policies.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product by any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting TRENDnet within the applicable warranty period and providing a copy of the dated proof of the purchase. Upon proper submission of required documentation a Return Material Authorization (RMA) number will be issued. An RMA number is required in order to initiate warranty service support for all TRENDnet products. Products that are sent to TRENDnet for RMA service must have the RMA number marked on the outside of return packages and sent to TRENDnet prepaid, insured and packaged appropriately for safe shipment. Customers shipping from outside of the USA and Canada are responsible for return shipping fees. Customers shipping from outside of the USA are responsible for custom charges, including but not limited to, duty, tax, and other fees.

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