Air Live ®
Powered by OvisLink Corp.

MD-3025/MD-3025-IVS

3-Megapixel IR Vandal Mini Dome
IPCAM /
3-Megapixel IR Vandal Mini Dome
IPCAM with Video Analytics

User's Manual

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This product contains some codes from GPL. In compliance with GPL agreement, AirLive will publish the GPL codes on our website. Please go to www.airlive.com and go to the "Support->GPL" menu to download source code.

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FCC Statement

Federal Communication Commission Interference Statement
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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the A user is encouraged to try to correct the interference by one of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.
This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

WEEE Marking Warning:
The crossed out wheeled bin indicates the product must not be disposed together with household waste. For the sake of the environment, the product should only be given to entities involved in the reception of waste electronic and electrical equipment. The lists of entities entitled to receive used equipment can be found on the websites of municipalities. Some components of devices such as external wiring, circuit boards and liquid crystal displays have a negative impact on the environment.

Table of Contents

1   Overview

This user's manual explains how to operate this camera from a computer. A user should read this manual completely and carefully before you operate the device.

1.1 Introduction

AirLive MD-3025/MD-3025-IVS is a high-end 3.0 Megapixels network camera which is designed for vandal surveillance and security applications. This 3.0MP IP camera offers many improvements in image quality when comparing to conventional surveillance cameras. Users are able to view live video streaming over the Internet, and it is not only one of benefits for using AirLive MD-3025/MD-3025-IVS IP cameras. It is also designed to offer high-performance surveillance by being equipped with PoE switch which allows power and data to be transmitted via a single Ethernet cable. This useful function provides an easier installation, lower cabling costs and allows placement of AirLive PoE cameras in locations without access to electrical source. With the IP66 water and vandal proof housing, AirLive MD-3025/MD-3025-IVS suits for environments such as office, elevators, campus, chain stores, and boutique stores.

1.2 Features

This manual will illustrate the steps of how to setup and operate this IP camera, so you'll also soon be enjoying the benefits of these product features:

- ❑ Miniature Size Dome with Vandal Proof and IP-66 Protection
- ❑ 3.0 Megapixel 1/2.5" CMOS Sensor
- ❑ Support 25FPS at 2048x1536 or 30FPS at 1080P
- ❑ 802.3af PoE
- ❑ 2.6mm Wide Angle Lens
- ❑ Low Lux Sensor for Ultra Bright Images
- ❑ 15m IR LEDs
- ❑ Mechanical IR-Cut Filter Removable
- ❑ MicroSD Card Slot for Local Storage
- ❑ Built-in MIC, Two-Way Audio, DI/DO
- ❑ Clear Motion Technology for Moving Objects
- ❑ WDR Enhanced
- ❑ Compatible with ONVIF Standard
- ❑ Built-in Video Analytics (Equipped only for MD-3025-IVS)
- ❑ Free 64-Channel Recording Software

1.3 Product Specification

Model		MD-3025/MD-3025-IVS
Camera	Camera Type	Mini Dome Type
	Max Resolution	2048x1536
	Image Sensor	1/2.5" CMOS Sensor
	Lens Type	Board Lens
		2.6mm, F1.6
	Night Vision	Yes
	IR Distance	15m
	Minimum Illumination	0.2 Lux at F1.6 (Color)
	Mechanical IR-Cut Filter	Yes
	Auto Iris	None
	Viewing Angle	160 °(D), 105 °(H), 72 °(V)

	Pan/Tile Control	Lens Adjustment: Pan: 0~350° Lens Adjustment: Tilt: 53~106°
	Analog Video Out	None
Video	Video Compression	H.264 MPEG-4 MJPEG
	Video Profile	Yes
	Resolution and Frame Rate	25 fps @ 2048 X 1536
		30 fps @ 1920 X 1080
		30 fps @ 1280 x 1024
		30 fps @ 1280 X 960
		30 fps @ 1280 X 720
		30 fps @ 720 X 480
		30 fps @ 640 X 480
		30 fps @ 320 X 240
		30fps @ 160 X 120
	Streaming	Streaming over UDP, TCP, or HTTP
		3GPP mobile view
		Configurable frame rate and bandwidth
		Support both CBR and VBR
	Region of Interest	Yes
	Image Processing	AE, BLC, AW
		Brightness, Sharpness, Contrast, Saturation
		Mirror/Flip
		Privacy Masks
		Text, time and date OSD
	Digital Zoom	10x
Audio	Audio Encoder	G.711 / AMR (Only for 3GPP)
	Audio Streaming	Two-way
	Audio Input/Output	Built-in microphone, 1 Line out
Network	Ethernet	Ethernet (10/100 Base-T), RJ-45
	PoE	IEEE802.3af
	Wireless	None

	Supported Protocols	TCP/IP, IPV6, UDP, ICMP, DHCP, NTP, DNS, DDNS, SMTP, FTP, HTTP, HTTPs, Samba, PPPoE, UPnP, Bonjour, RTP, RTSP, RTCP, DLNA, ISCSI, ONVIF 2.2
	Security	Password protection
		IP filter, HTTPS encrypted data transmission
	Users	Up to 10 users simultaneous
LED and Button	Power LED	Yellow Color
	Link/Act. LED	Orange Color
	Reset Button	Reset to Factory Default (Push and Hold Over 5 Sec)
General	Network Processor	DSP Base
	System ROM	128M byte NAND Flash
	System RAM	128M byte DDR SDRAM
	Power Supply	Optional (DC 12V/1.08A)
	Power Consumption	IR on: 6 Watts max. , IR off: 4 Watts max.
	Connector	RJ-45 10BaseT/100BaseTX
		Audio, DI/DO, DC jack, Ethernet/PoE
	Operating temperature and humidity	-20°C~55°C (-4°F~131°F), 20%~85%
	SD card slot	MicroSD
	Dimension	108 Ø X 62 H (mm)
System Integration	Software	CamPro Express 64, CamPro Professional
		Search & Installation-IP Wizard II
	Event Triggers	MD-3025: Motion detection, External input via DI interface, Tamper detection. MD-3025-IVS: Motion Detection, External input via DI interface, Tamper detection, Face Detection, iMotion Detection, Trip Zone, Object Counting, Face recognition, e-Fence.

	Motion Detection	3
	Event handler	FTP, Samba Server, SD card file upload
		E-mail alter
		HTTP and TCP notification
		DO (digital output) alarm
		Audio File Playback
	UPnP	Yes
	Application Programming Interface	ONVIF 2.2
		Open API for software integration
		SDK
	Video Buffer	Pre- and post- alarm buffering
	Alarm Triggers	MD-3025: Motion Detection, External input via DI interface, Tamper detection MD-3025-IVS: Motion Detection, External input via DI interface, Tamper detection, Face detection, iMotion detection, Trip zone, Object counting, Face recognition, e-Fence.
	Continuous recording	Yes
Viewing System	OS	Windows® XP, Vista, 7, 8
	Browser	Internet Explorer 7 or later; Apple Safari 2 or above; Firefox 2.00 or above; Google Chrome
	iOS/Android Device	With 3GPP player, CamPro Mobile for iOS/Android device
	Video Player	VLC, Quick Time, Real Player, Core Player

1.4 System Requirement

For normal operation and viewing of the network camera, it's recommended that your system meets these minimum requirements for proper operation:

Item	Requirements
CPU	Pentium-4 2.0 GHz or higher
VGA Monitor	Resolution1024 x 768 or higher
RAM	1 GB or more
Operating System	Windows XP, Vista, 7, 8
Web Browser	Internet Explorer 7 or later; Apple Safari 2 or above; Firefox 2.00 or above; Google Chrome

Note: Please keep updating the latest Windows software and service package.
(Ex: Net Framework, Windows Media Player, Enhance ActiveX Security)

2   Package Contents and Installation

2.1 Package Contents

User can find the following items in the package as below:
1. AirLive MD-3025/MD-3025-IVS is the main element of the product.
2. Bundled CD includes AirLive IP Wizard II, CamPro Express64, Quick Start Guide, User Manual, and Video clip.
3. Quick Start Guide provides important information and instructions for installing this device.
4. Accessory Package (Screws / Plastic Anchors)

Note: The power adapter is optional.

2.2 Connections

Power Source Requirement
This camera can work with 802.3af PoE switches. However, if you don't have the PoE switch, you can use a power adapter to provide power to camera.

Connector
There are various connectors of AirLive MD-3025/MD-3025-IVS as shown in the figures below. Please refer to the diagrams and tables for using of each connector.

Internal MIC

PoE / RJ-45   DIDO   Audio Out   DC In

Reset Button   Mirco SD Card Slot

1. DC Jack: The input power is DC 12V.
If you don't have the PoE switch, you can use a power adapter to provide power to camera.

2. PoE/RJ45 LAN Socket: Connect to PC or Hub/Switch.
This Ethernet port built N-Way protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 cable to connect the Network Camera to a 100Mbps Fast Ethernet network switch or hub.

3. Alarm Digital I/O:
AirLive MD-3025/MD-3025-IVS supports 2 digital alarm inputs and 1 digital alarm output.

Please make sure the alarm connections are properly wired. Please refer to the pin definition table below.

PIN		SPECIFICATION
1	GPIO In #2	Action high voltage: 9~40 VDC
2	GPIO In #1	Dropout voltage: 0 VDC
3	GPIO Out	Close circuit current maximum: 70mA AC or 100mA Output resistance: 30 ohm Open circuit voltage maximum: 240V AC or 350V DC
4	Ground (Common)	GND
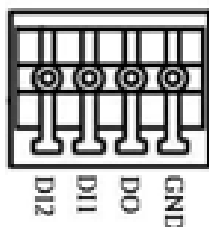
4. Audio Output: 3.5mm phone jack.

5. Audio Input: Built-in MIC.

6. MicroSD Card Slot: MicroSD Card Slot allows you to insert a memory card for expansion of storage.

7. Reset Button: This button is used to restore all the factory default settings. Sometimes, restarting the device will make the system back to a normal state.

2.3 Mounting the Camera

1. Disassembling

Loosen the screw on top and then take off the cover.

Top Cover

Camera Body

2. Installation

- Use the provided template to drill one hole for the camera, and one for the screw, and insert the plastic anchor to the end of the screw hole.
- Connect and arrange the necessary cables last that they should be damaged or twisted while installing the camera.
- Insert the camera body into the hole so that it fits to the camera hole, and fix the body using the ASSY tapping screws.
- Refer to "**Adjusting the monitoring direction for the camera**" to adjust the lens in a desired direction.
- Close the top cover.

3. **Adjusting the monitoring direction for the camera**
   You can adjust the camera direction only when the camera is fixed on the ceiling. Where rotating the camera unit to the left or right is called Pan, adjusting the tilt is called Tilt, and turning the lens on its axis is called Rotation.
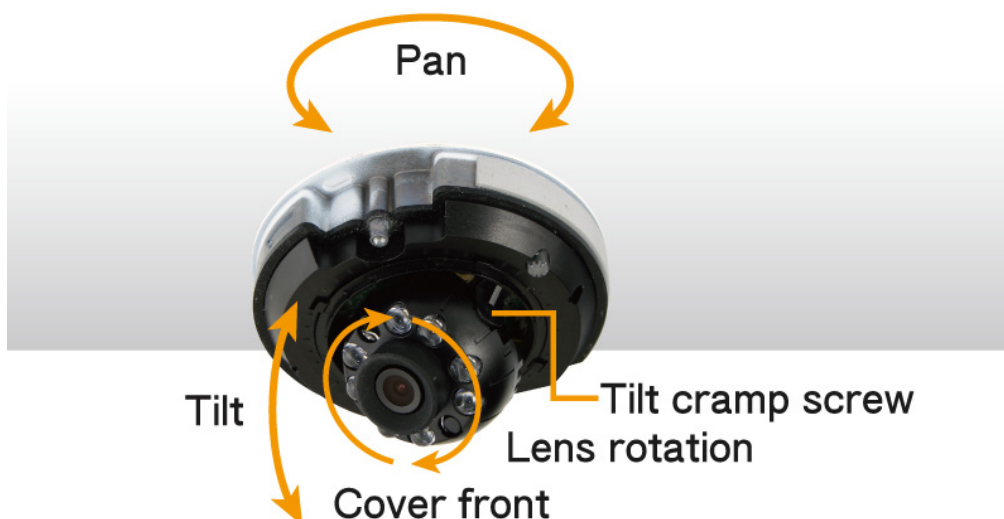
- After installing the camera, adjust the panning angle in consideration of the monitoring direction. When tilting the camera, you should adjust the horizontal angle lest that the image be displayed reversely.

- Adjust the rotation angle to correct the image display position (up/down/left/right).
- Adjust the tilt angle and let the camera faces toward the monitoring object.

2.4 Connect to IP Camera

1. Insert the bundled CD into your PC/Laptop.
2. Auto Run screen shows up, click "Install Software → AirLive IP Wizard II" to install the configuration tool.

3. After completed the installation, run the "Air Live IP Wizard II" to start to search the IP camera.
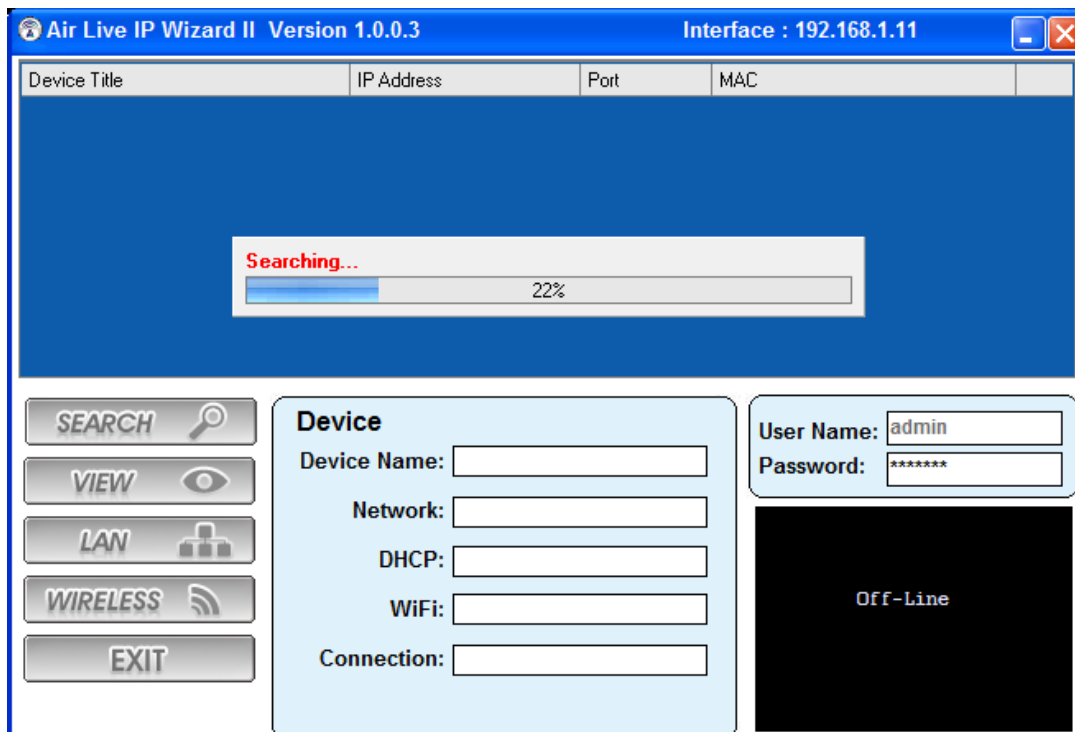
4. The entire detected IP camera will be listed out.
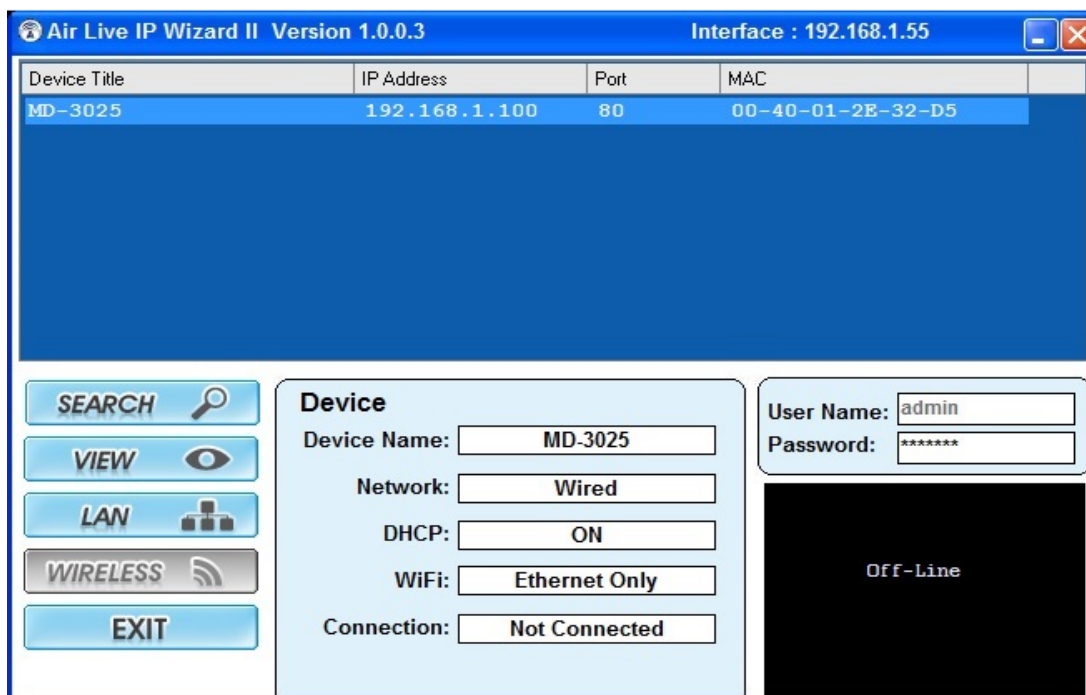
5. If the Camera's IP address is in the same IP segment as your LAN, select the founded IP Camera and double click on the item. Then, the default browser will show up and connect to the IP camera's Web automatically.

3 Using IP Camera via Web Browser

3.1 Windows Web Browser

1. Open your web browser and enter the IP address or host name of the IP camera in the Location / Address field of your browser.

2. Use the default account "**admin**" and default password "**airlive**".

*Note: The default user name "**admin**" and the password "**airlive**" are the default values. You can change them in the Account Menu. (Please check "System → Account")*

3. The monitor image will be displayed in your browser. In the left side of main window, you can configure the settings you want. For more details, please refer to the following chapters.

4

Operating IP Camera via iOS/Android device

4.1 Using IP Camera via iOS/Android device

You can access into your IP camera via the iOS/Android device. Please follow the setup steps below.

1. Download AirLive CamPro Mobile from APP store/Android market.

2. Execute the **AirLive CamPro Mobile** program
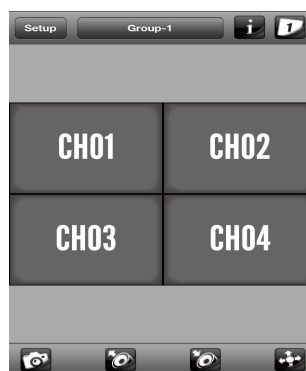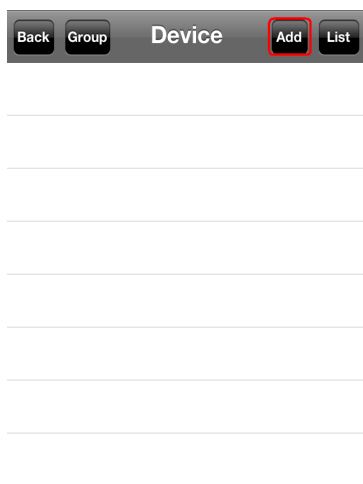
3. Click Setup button.
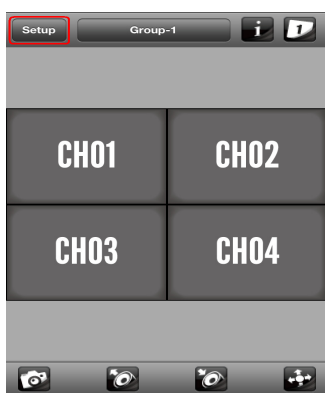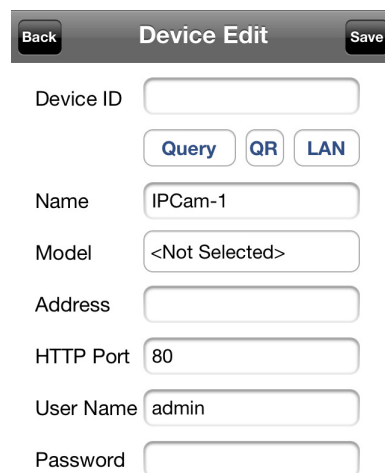
4. Setup page appears
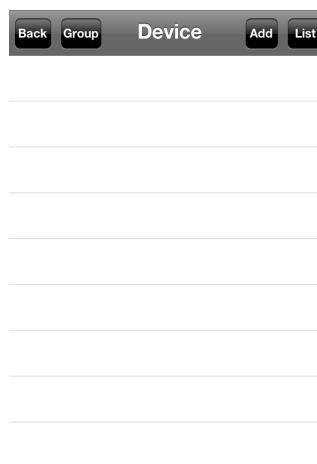
5. Click Add button

| Back | Group | Device | Add | List |

| Back | Device Edit | Save |

Device ID [   ]

[Query] [QR] [LAN]
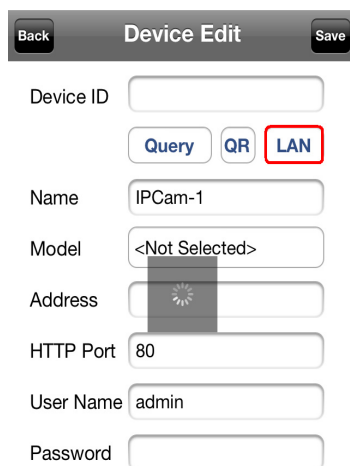
Name   IPCam-1

Model   <Not Selected>

Address   [   ]

HTTP Port   80

User Name   admin

Password   [   ]

6. Click LAN button and select the camera.

| Back | Device Edit | Save |

Device ID [   ]

[Query] [QR] [LAN]
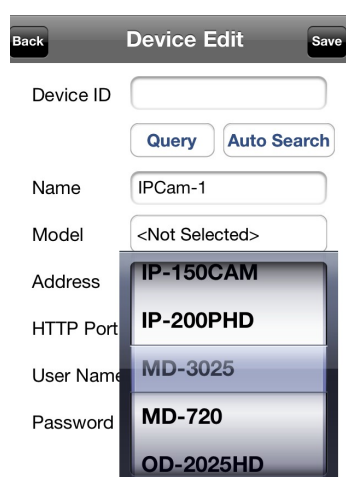
Name   IPCam-1

Model   <Not Selected>

Address   [   ]

HTTP Port   80

User Name   admin

Password   [   ]

| Back | Device Edit | Save |

Device ID [   ]

[Query] [Auto Search]

Name   IPCam-1

Model   <Not Selected>

Address   IP-150CAM

HTTP Port   IP-200PHD
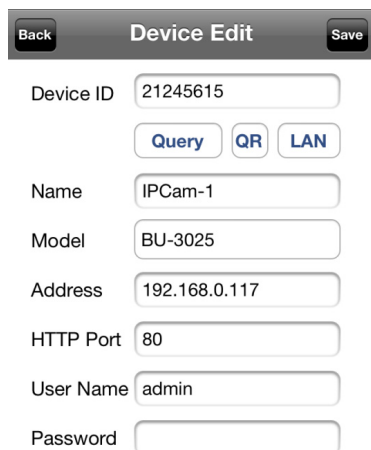
User Name   MD-3025

Password   MD-720

            OD-2025HD
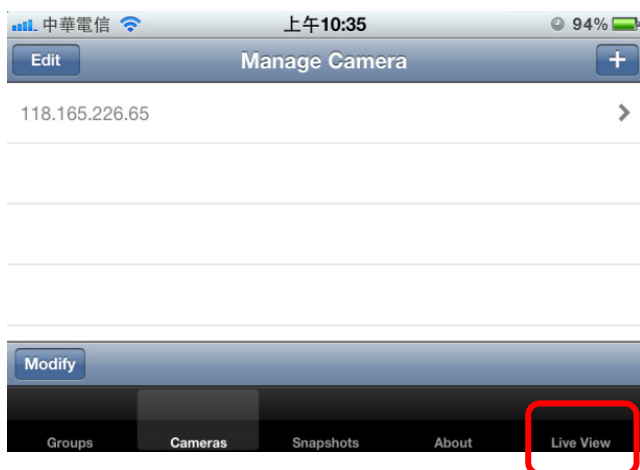
7. Model, Address, HTTP Port info appear on the page.

8. Key-in Username and Password then click OK button.

9. Click Live View button.

10. The video appears on the main screen.
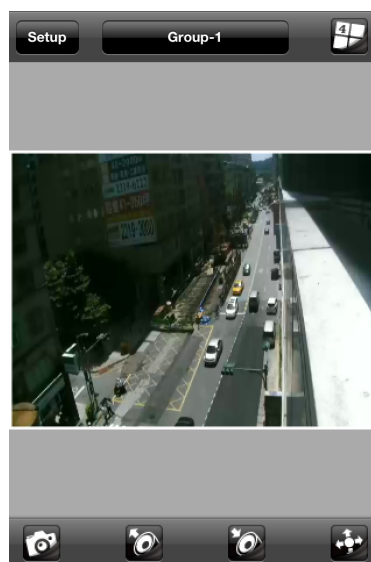
Note: The image is continuous snapshots, not video. Thus, live image can't be recorded here.

5 Operating the Network Camera

Start-up screen will be shown once you access into the IP camera.
In the left side, you can control Live View function as below:
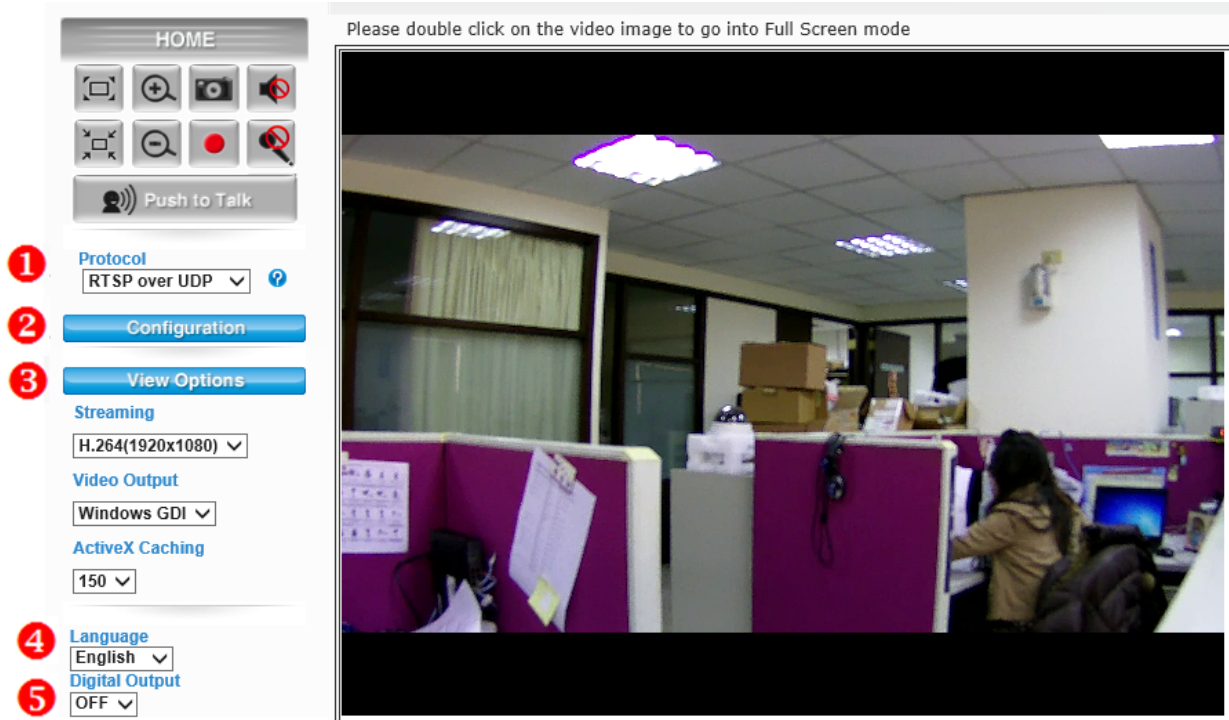
5.1 Live View

1. **Protocol:** Select the protocol type:
   RTSP over UDP / TCP / RTSP over TCP / RTSP over HTTP
2. **Configuration:** Click for configuring the detail camera settings.
3. **View Options:** The device supports multi-profile function for H.264, MPEG4 and JPEG simultaneously. User can choose the proper and/or preferred profile which is listed here.
4. **Language:** AirLive MD-3025/MD-3025-IVS provide multiple languages to meet customer's requirement.
5. **Digital Output:** Switch digital output interface on or off.

6. **2-Way Audio**: The device supports 2-way audio function. User can choose to enable or disable this function by toggling the icon below.

: Disable speaker function.

: Enable speaker function.

: Disable microphone function.

: Enable microphone function.

Volume: Click Speaker/Microphone button to activate this function. Scroll the control bars to adjust the audio attribute.

7. **Original size / Preview Size:** Switches live image view between original size and preview size (smaller size).

8. **Digital Zoom:** From 1X to 10X. Click to full screen first.

Click to enable this function. Click to disable it.

Note: Digital zoom uses computer algorithm to enlarge the video and may lose some details.

9. **Snapshot:** Take a snapshot or a video file. Browse the folder in your computer and save the file.

10. **Record:** Click it to start recording an AVI file in local storage. Press to stop the recording process.

5.2 Configuration

Click "Configuration" for the camera detail settings. For more information, please refer to Chapter 6.
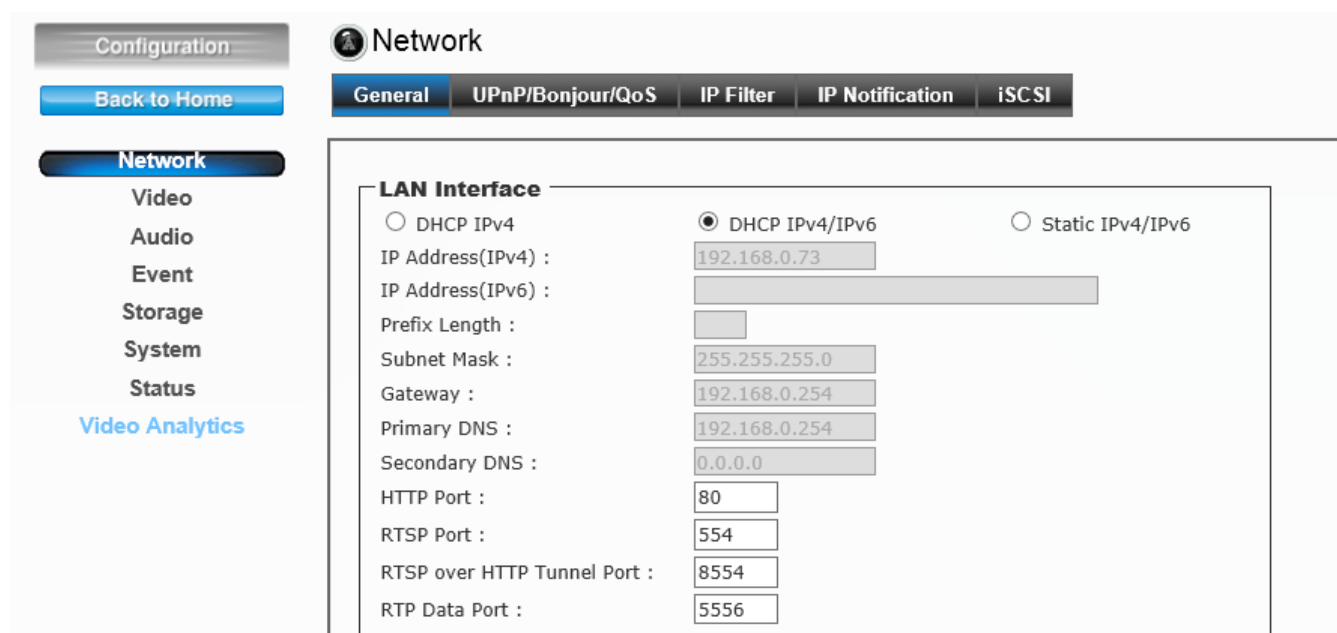
6 Configuration

Click the **"Configuration"** to display sub-menus included

Network / Video / Audio / Event / Storage / System / Status / Video Analytics.

Note: Video Analytics function is only for MD-3025-IVS.

6.1 Network

1. General

● **LAN Interface:** This field allows you to setup the IP network protocol.

- **DHCP IPv4:** Select this option when your network uses the DHCP server. When the camera starts up, it will be assigned an IP address from the DHCP server automatically.

- **DHCP IPv4/IPv6:** DHCP for IPv6 enables the DHCP server to pass the configuration parameters (e.g. the IPv6 network addressed) to the IPv6 nodes, which offers the capability of automatic allocation of reusable network addresses and additional configuration flexibility. Select this option if your network supports DHCP IPv6 protocol. When the camera starts up, it will be assigned an IP address from the DHCP server automatically.

- **Static IPv4/IPv6:** Select this option to assign the IP address to the camera directly. You can use "AirLive IP Wizard II" to obtain the related setting values.

IP Address (IPv4/IPv6)	Enter the IP address of the camera. The default setting is 192.168.1.100.
Subnet Mask	Enter the Subnet Mask of the camera. The default setting is 255.255.255.0.
Default Gateway	Enter the Default Gateway of the camera. The default setting is 192.168.1.254.
Primary/ Secondary DNS	DNS (Domain Name System) translates domain names into IP addresses. Enter the Primary and Secondary DNS provided by ISP.
HTTP Port	The default HTTP port is **80**.
RTSP Port	The default RTSP Port (Real Time Streaming Protocol) is **554**.
RTP Data Port	RTP (Real-time Transport Protocol) is a data transfer protocol defined to deliver live media to the clients at the same time, which defines the transmission of video and audio files in real time for Internet applications. The default RTP Data Port is **5556**.

● **Enable Multicast:** Select this option to enable the multicast function of the camera. Complete the following settings so that you can deliver information from your camera to multi receivers.

- **Multicast Group Address:** Assign a category of IP addresses to receive the information from the camera.

- **Multicast Video Port:** Assign a multicast port for video in the text box. The default port is **5560**.
- **Multicast RTCP Video Port:** Assign a multicast port for RTCP (real-time transport control protocol) video in the text box. The default port is **5561**.
- **Multicast Audio Port:** Assign a multicast port for audio in the text box. The default port is **5562**.
- **Multicast RTCP Audio Port:** Assign a multicast port for RTCP (real-time transport control protocol) audio in the text box. The default port is **5563**.
- **Multicast TTL:** Set the value from 1 to 255. TTL (time to live) is used to specify the time to live in the IP header so that the system is able to decide whether or not the packet has been in the network too long and should be discarded.
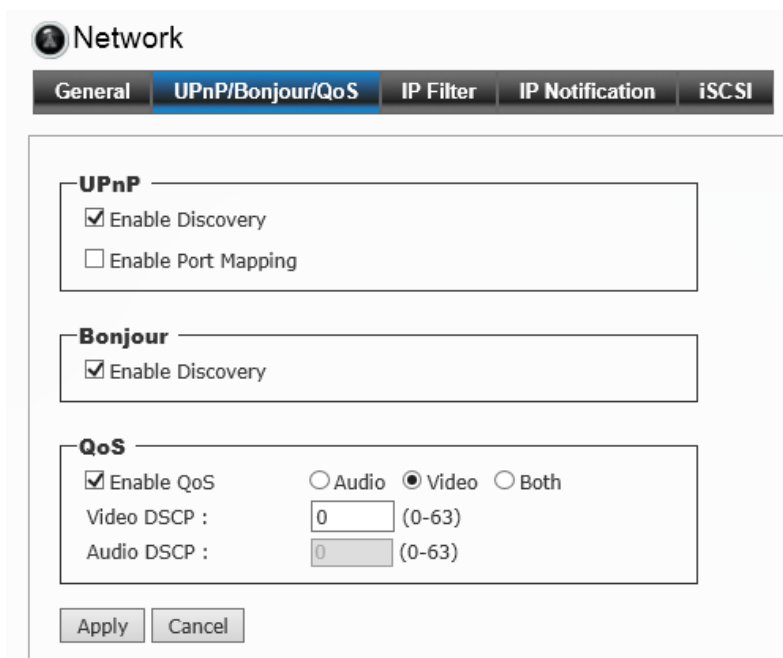
● **Enable PPPoE:** Select this option when you use a direct connection via the ADSL modem. You need the User Name and Password of the PPPoE account to complete the setting. The camera will get an IP address from the ISP as starting up.

Note: Once the camera get an IP address from the ISP as starting up, it automatically sends a notification email to you. Therefore, when you select PPPoE as your connecting type, you have to set up the email or DDNS configuration in advance.

● **Enable DDNS:** Select this option to enable DDNS service. With the Dynamic DNS feature, you can assign a fixed host and domain name to a dynamic Internet IP address. To set up the DDNS, select the **Provider** from the pull-down menu and then enter the required information in the **Host Name**, **User Name** and **Password** text boxes.

Note: You have to sign up for DDNS service with the service provider before configuring this feature.

2. UPnP/Bonjour/QoS

- **UPnP:** The camera supports UPnP (Universal Plug and Play), which is a set of computer network protocols that enable the device-to-device interoperability. Select the **Enable Discovery** option to enable the feature.

  In addition, it supports port auto mapping function so that you can access into the camera if it behind an NAT router or firewall. Select the **Enable Port Mapping** option to enable the feature.
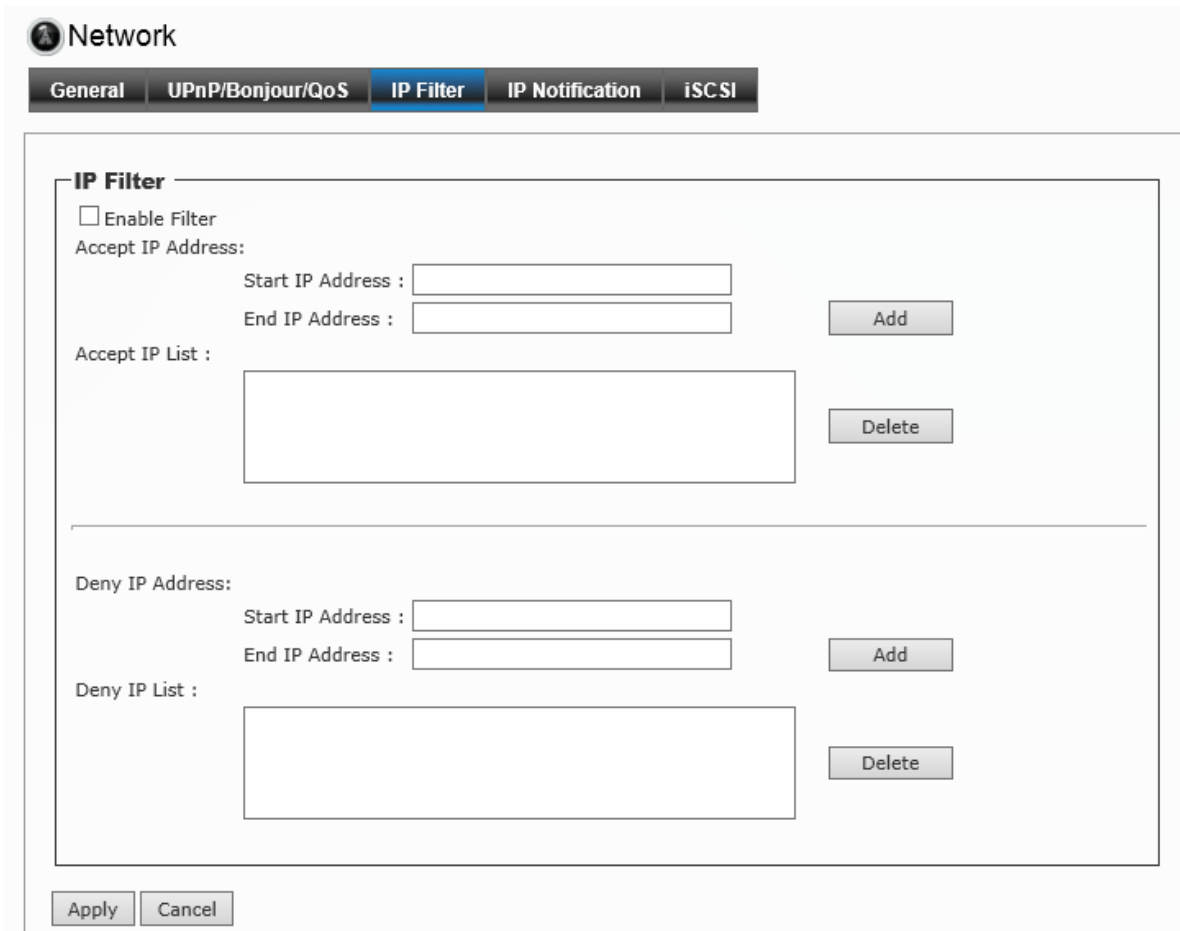
- **Bonjour:** The devices with Bonjour will automatically broadcast their own services and listen for services being offered for the use of others. Select the **Enable Discovery** option, you can find the camera through the browser with Bonjour and no need to know the IP address.

  The Apple Safari is already with Bonjour. You can download the complete Bonjour for Internet Explorer browser from Apple's website by visiting: http://www.apple.com/bonjour/

- **QoS** (quality of service)**:** It is the ability to provide different priority to different applications or data flows.

  - **Video DSCP:** Assign the DSCP (DiffServ Code Point) of the stream video from the camera by setting the value from 0 to 63.

  - **Audio DSCP:** Assign the DSCP (DiffServ Code Point) of the stream audio from the camera by setting the value from 0 to 63.

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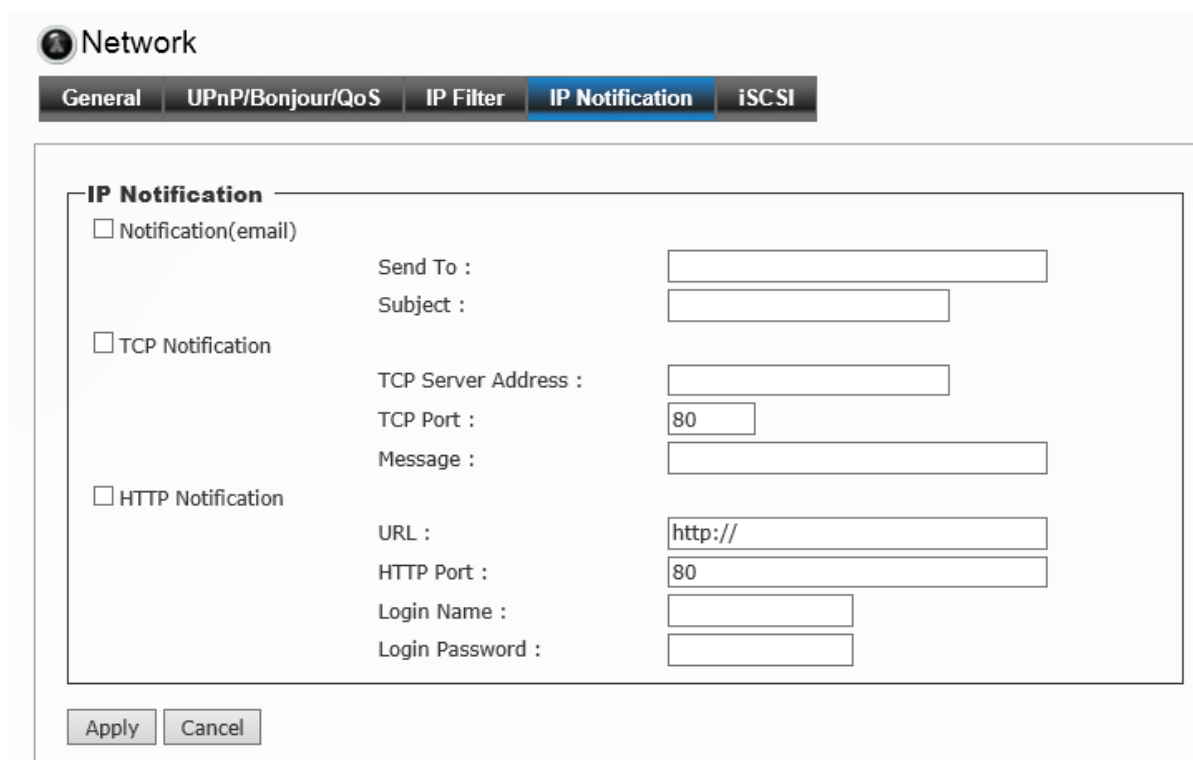
3. IP Filter

The IP Filter allows the administrator of the camera to restrict the users within a certain range of IP addresses to access into the camera. Select the **Enable Filter** option and assign the range of IP addresses that are allowed to access into the camera in the **Accept IP Address** field; or assign the range of IP addresses that are blocked to access into the camera in the **Deny IP Address** field.

For example, when you enter *192.168.0.50/192.168.0.80* in **Start/End IP Address** of **Accept IP Address** and then click **Add**, the user whose IP address located within *192.168.0.50 ~ 192.168.0.80* will be allowed to access into the camera. On the other hand, if you enter the IP range in **Start/End IP Address** of **Deny IP Address** and then click **Add**, the user whose IP address located within the range will not be allowed to access into the camera.

To remove the assigned range of IP addresses for IP Filter, select the setting in the **Accept/Deny IP List** and then click **Delete**.

4. IP Notification

To prevent from the IP address been changed, system is able to send out an alarm. Configure the email setting first if the function is enabled.
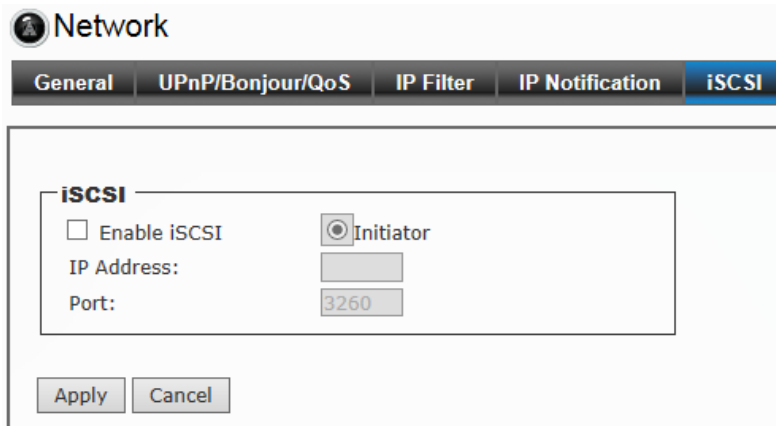
- **Notification (email):** Select to enable this function.
    - Send To: Type the receiver's E-mail address.
    - Subject: Type the subject/title of the E-mail.
- **TCP Notification:** Select to enable this function.
    - TCP Server Address: Type the server name or the IP address of the TCP server.
    - TCP Port: Set port number of TCP server.
    - Message: The message will be sent to FTP server.

- **HTTP Notification:** Select to enable this function.
    - URL: Type the server name or the IP address of the HTTP server.
    - HTTP Port: Change it only when needed.
    - HTTP Login name: Type the user name for the HTTP server.
    - HTTP Login Password: Type the password for the HTTP server.

5. iSCSI
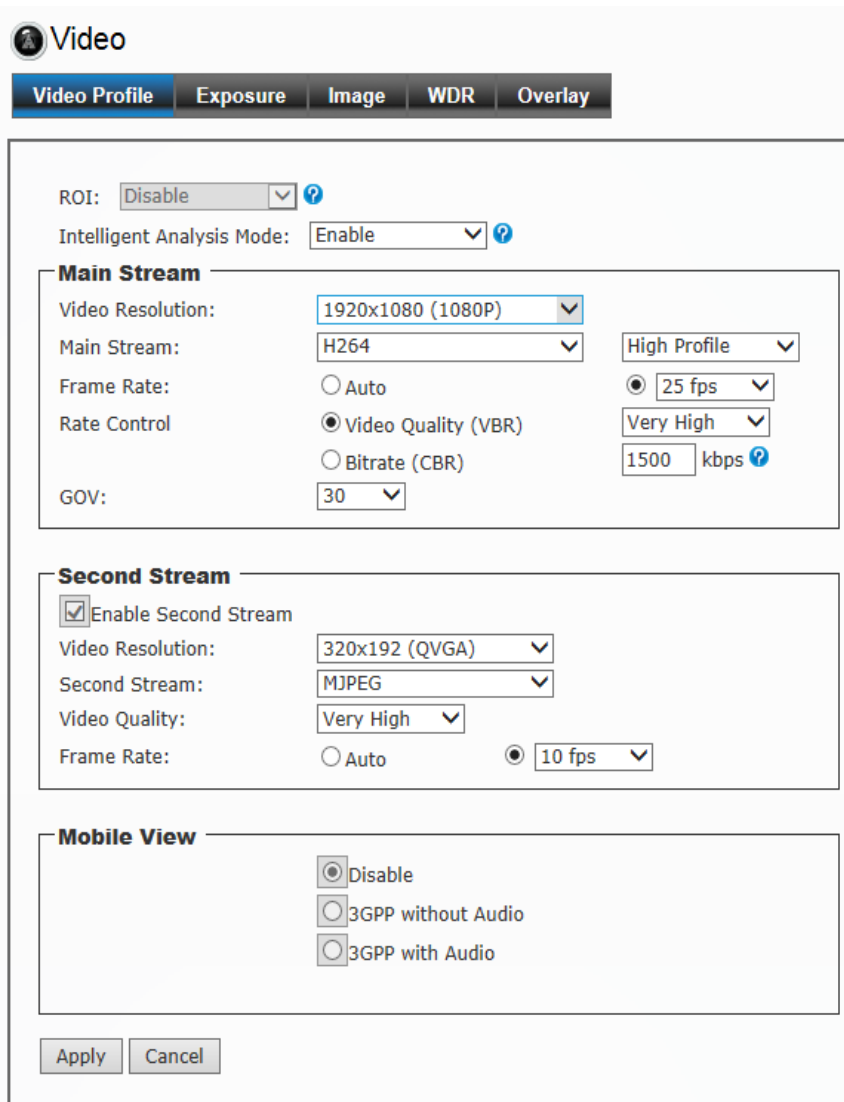
Enable the iSCSI and key-in server IP address and Port number. The disk of the server will be the storage in IP camera setting.

6.2 Video

1. **Video Profile**

● **ROI:** ROI means Region of Interest. When the main stream is set to High Resolution, user can select specified region for monitoring, this can save the bandwidth if there are too many collision on the network.

● **Intelligent Analysis Mode:** You can select Enable or Disable to switch the IVS function.

Note: This item will appear on MD-3025-IVS

● **Main Stream & Second Stream:** It enables the encoder to deliver two totally independent streams of video, separately configured for different frame rates and video resolutions.

- **Video Resolution:** Select the resolution that you want to see the image on screen from the pull-down menu. It supports several resolution as below:

  1. 2048 x 1536 (3M)

  2. 1920 x 1080 (1080P)

  3. 1280 x 1024 (SXGA)

  4. 1280 x 960 (960P)

  5. 1280 x 720 (720P)

  6. 720 x 480 (D1)

  7. 640 x 480 (VGA)

  8. 320 x 240 (QVGA)

  9. 176 x 144 (QCIF)

  You also need to select a proper **Frame Rate** setting.

  In Intelligent Analysis Mode:

  1. 2048 x 1536 (3M)

  2. 1920 x 1080 (1080P)

  3. 1280 x 1024 (SXGA)

  4. 1280 x 960 (960P)

  5. 1280 x 720 (720P)

  Please be noted that higher resolution and frame rate gets better video quality but larger network bandwidth.

- **Main Stream / Second Stream:** Select the streaming format as H.264 (High/Main/Baseline Profile) / MPEG4 / MJPEG.

- **Rate Control:** Set the proper image quality by selecting **Video Quality (VBR)** or **Bitrate (CBR)** and then select the desired settings from the pull-down menu.

  Select Very Low, Low, Normal, High or Very High for VBR.

  Input a bitrate range from 384Kbps to 6Mbps for CBR.

- **GOV:** Set the GOV value by 1~100 seconds.
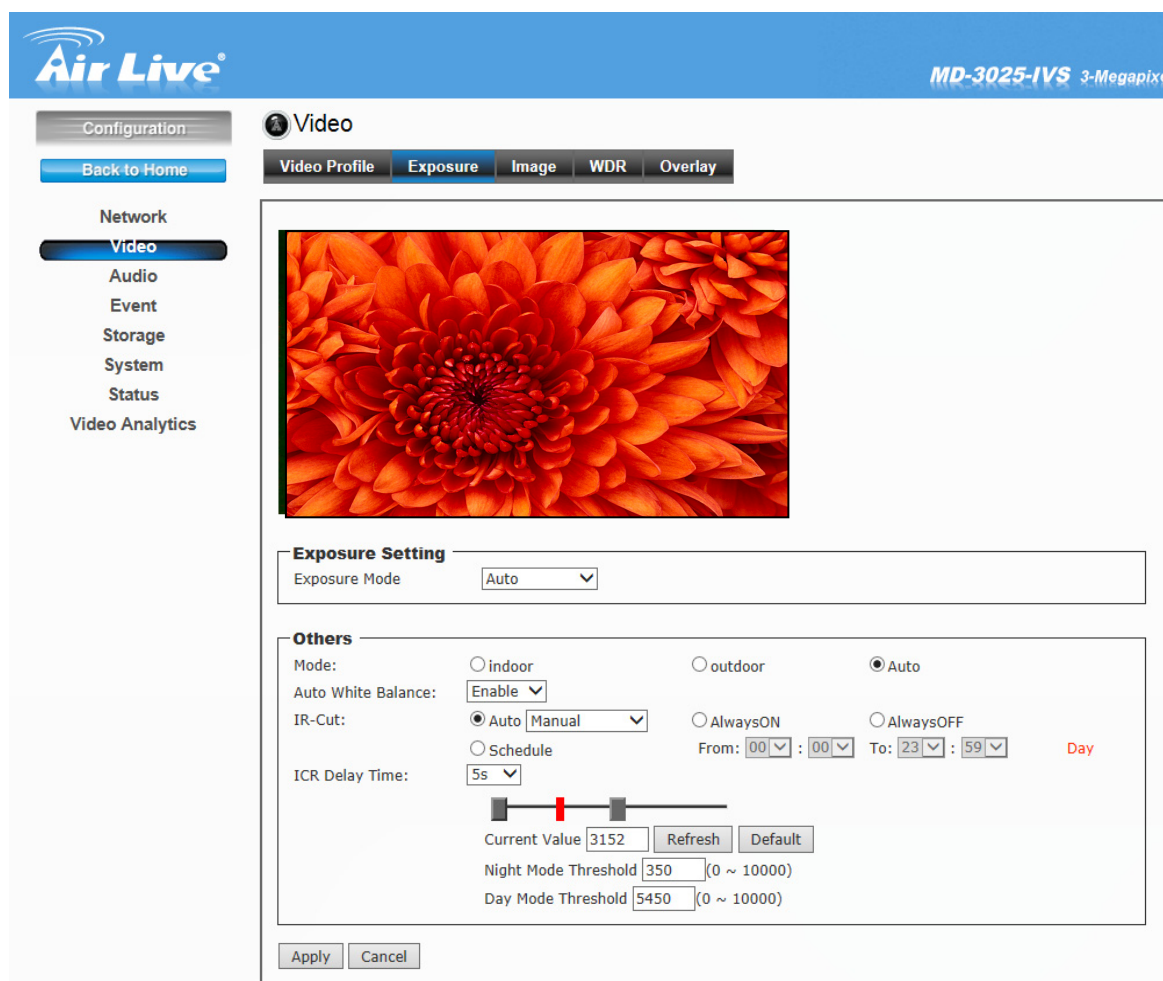
● **Mobile View** (Not supported by MPEG4)**:** The camera supports 3GPP specification. Select the **Disable** option to disable this feature. Otherwise, select **3GPP Without Audio** or **3GPP With Audio** to transfer the video clips without or with audio.

  If you use a mobile phone that supports 3GPP, you can also view the real-time streaming image captured by the camera on your phone (with the default player on the phone) by entering the RTSP link:

rtsp://(IP address of the camera)/3gp

Note: Your mobile phone and the service provider must support 3GPP function. Please contact your service provider when you are failed to use this service.

2. Exposure

- **Exposure Setting:** There are three options (Auto / Manual / Clear Motion). When you select Manual mode, you can adjust Exposure Value, Exposure Time and Gain value of the day and night mode.

  - **Mode:** There are three modes (Indoor / Outdoor / Auto) to fit your environment

  - **Auto White Balance:** You can enable or disable the function.

  - **IR-Cut:** The camera can automatically or manually remove the IR-cut filter to let IR light into the sensor during low light conditions.

Auto:

Photo Sensor: The camera automatically removes the filter based on the photo sensor.

Manual: User can use this function to determine the threshold, and the camera switches between day mode and night mode based on this specified threshold.

Always ON:

The camera switches on the IR cut filter at all times to block infrared light.

Always OFF:

The camera switches off the IR cut filter at all times for the sensor to accept infrared light.

Schedule:

The camera switches between day mode and night mode based on a specified schedule. Enter the start and end time for day mode.
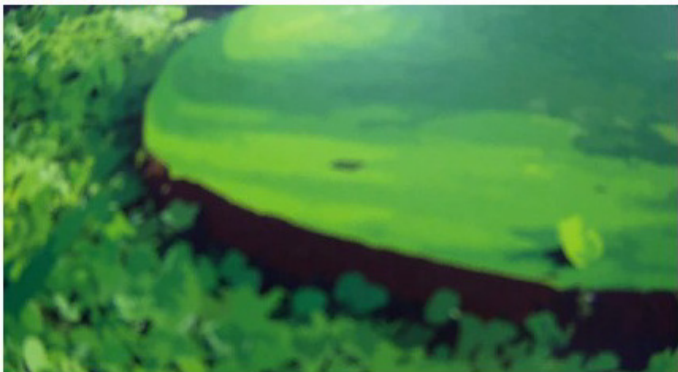
- **ICR Delay Time:** Select from 5s to 30s.

3. Image

Image Setting:

● **Brightness:** Adjust the brightness level from 0~255.

● **Contrast:** Adjust the contrast level from 0~255.

● **Saturation:** Adjust the colors level from 0~255.

● **Sharpness:** Adjust the sharpness level from 0~255.

● Click **Default** to restore the default value.

Others:

● **Mirror:** Select **Vertical** to mirror the image vertically, or select **Horizontal** to mirror the image horizontally.

● **Power Line Frequency:** Select the proper frequency according to the camera's location to reduce the flicker: **NTSC/60Hz** or **PAL/50Hz**.

4. WDR

● **WDR Setting:** WDR is intended to provide clear images even under backlighting, where the intensity of illumination varies a lot.

● **BLC Setting:** Backlight compensation can get ideal exposure of object which is in front of the strong luminance background

● **Advance:**
Digital Noise Reduction: A digital filter designed to reduce visible noise for improving visibility of images.
Fog Compensation: Improve visibility of images in fog or smoke by using the Fog compensation function.

5. Overlay: This option is used to set the image overlay and mask feature of the camera.
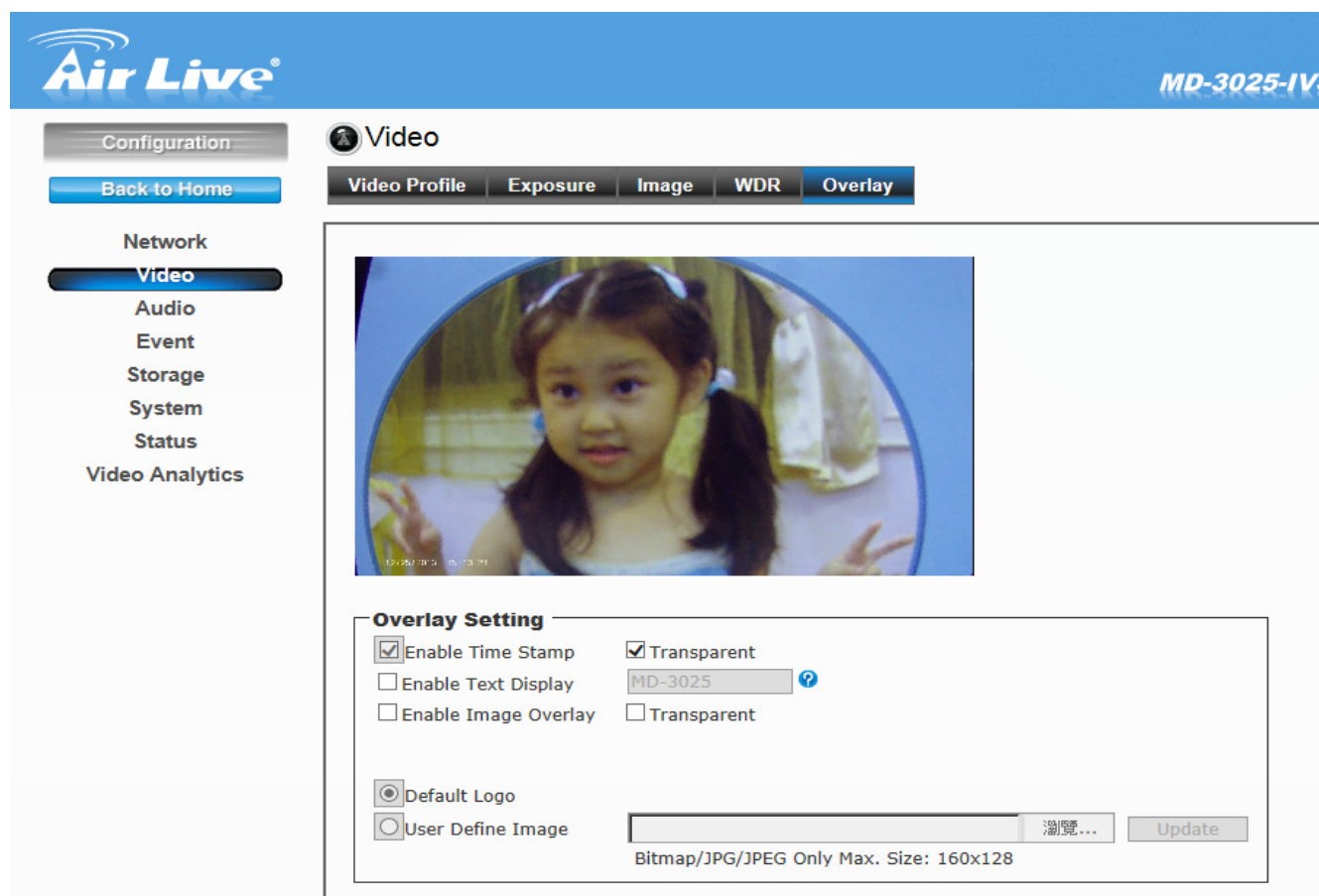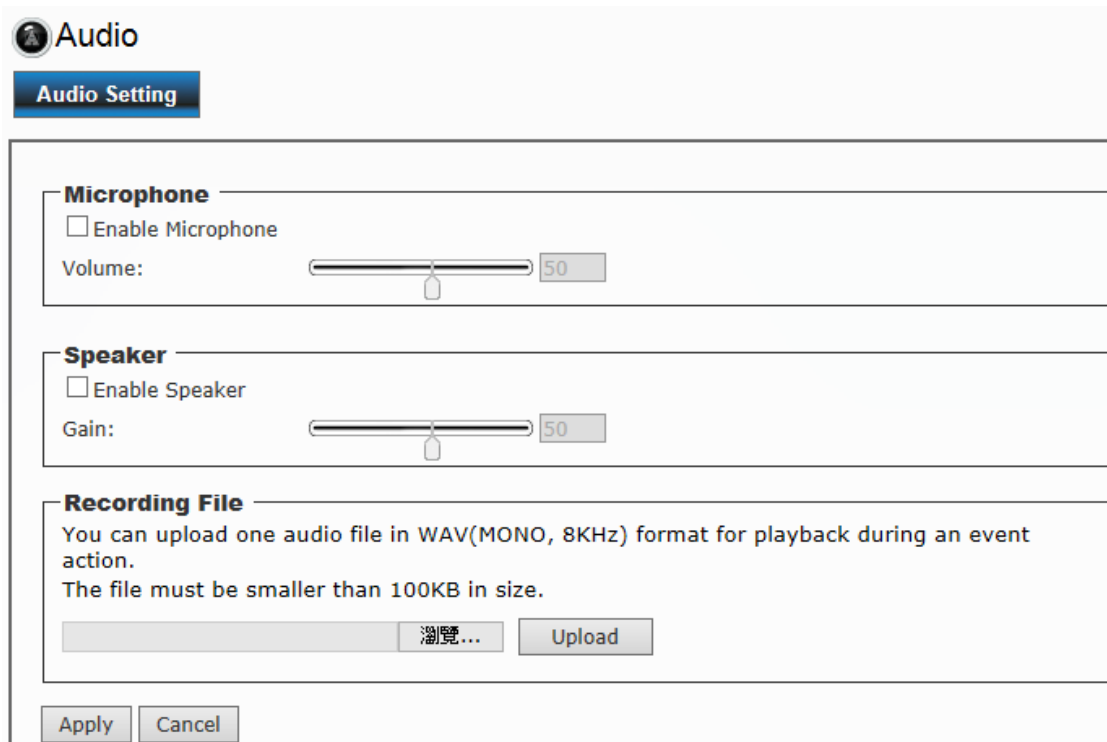

- **Enable Time Stamp:** Select this option to display the date & time information on the live view image.

- **Enable Text Display:** Select this option and enter your heading text in the box to display the text information on the live view image.

- **Enable Image Overlay:** Select **Default Logo** or **User Define Image** to display the image overlay on the live view image.

  You can set the displayed image in transparent mode by selecting the **Transparent** option and select the background color as white or black.

  When you select **User Define Image**, you can click **Browse** to select the image file from your computer and then click **Update** to apply the setting.

  Note: JPG/JPEG file with maximum 65536 bytes.

6.3 Audio

1. **Microphone:**
   - ● Enable Microphone: Select the option to enable the camera's audio in function, so that you can receive the on-site sound and voice from the camera.
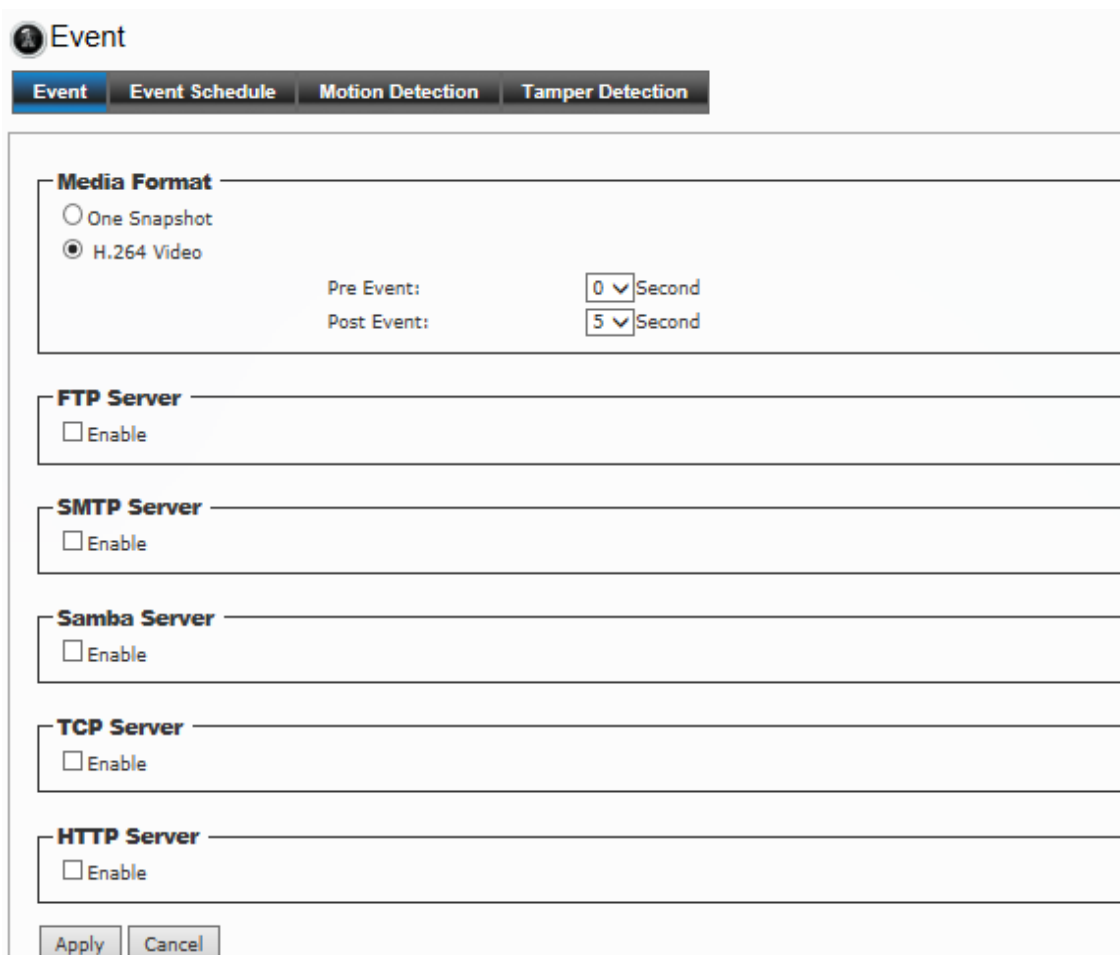
2. **Speaker**
   - ● Enable Speaker: Select the option to enable the camera's audio out function, so that the connected speaker can play the sound and voice through the camera.

3. **Recording File:** During an event action, you can upload one audio file in WAV (mono, 8KHZ, <100KB in size) for playback.

6.4 Event

1. Event

- ● **Media Format:** Select **One Snapshot** to send the alarm message with one still image captured by the camera, or select **H264 Video** to send the alarm message with one video clip recorded by the camera.

    You can set the attachment that is captured in **Pre Event** or **Post Event** time when the event has been triggered.

- ● **FTP Server:** Select "Enable" to enable the FTP server function.

    - **FTP Server:** Enter the IP address of the target FTP server.

    - **User Name:** Enter the user name to login into the FTP server.

    - **Password:** Enter the password to login into the FTP server

    - **File Path Name:** Enter the port number used for the FTP server.

- **Test FTP:** You can test the FTP server function first here.

   Note: Due to the network environment, the camera may not upload number of images that you set.

● **SMTP Server:** Select **"Enable"** to enable the SMTP server function.

   - **SMTP Mail Server:** Enter the mail server address. For example, mymail.com.

   - **Port:** Assign the SMTP port in the text box. The default SMTP port is **25**.

   - **Sender Email Address:** Enter the email address of the user who will send the email. For example, airlive@mymail.com.

   - **Receiver #1/#2 Email Address:** Enter the first/second email address of the user who will receive the email.

   - **Subject:** Enter the subject of the message for the event.

   - **Authentication:** Select the option according to the mail server configuration.

   - **User Name:** Enter the user name to login the mail server.

   - **Password:** Enter the password to login the mail server.

   - **Test SMTP:** When done, click the button to test the SMTP server function.

   - **Requires SSL Encryption:** If the mail server requires an encrypted connection, you should select the SSL option.

   - **STARTTLS:** Select it if the server needs the STARTTLS encryption.

   Note: Due to the network environment, the camera may not upload number of images that you set.

● **Samba Event Server:** Select **"Enable"** to enable the Network Storage server for the camera.

   - **Samba Server Address:** Enter the IP address of the Network Storage server.

   - **Path:** Assign the path for uploading the files on the Network Storage server.

   - **User Name:** Enter the user name to login into the Network Storage server.

   - **Password:** Enter the password to login into the Network Storage server.

   - **Test SMB:** When done, click the button to test the network storage server function.
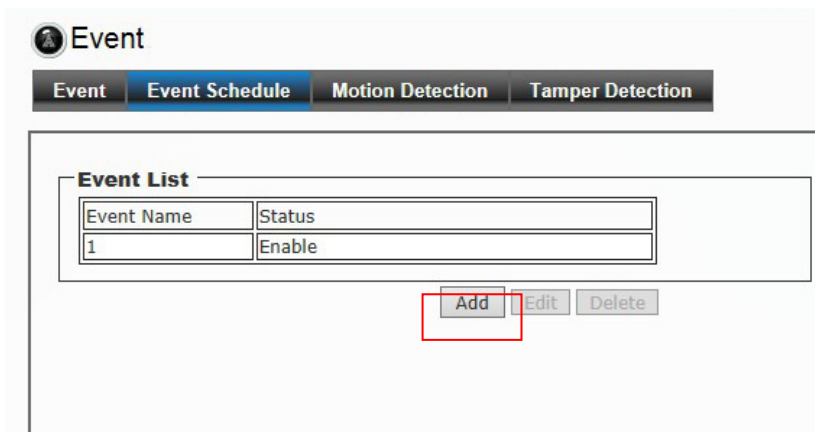
   Note: The recorded video files in Network Storage are enclosed by MP4/AVI format without audio.

● **TCP Server:** Select **"Enable"** to enable the TCP Server function.

   - **TCP Server Address:** Enter the TCP server address.

   - **TCP Port:** 80. Revise it only needed.

   - **Message:** Enter the message here.

   - **Test TCP:** Click to test the TCP server function.

- **HTTP Server:** Select **"Enable"** to enable the TCP Server function.
  - **URL:** Enter the URL path of the HTTP server.
  - **HTTP Port:** 80. Revise it only needed.
  - **Login Name:** Enter the login name of the HTTP server.
  - **Login Password:** Enter the login password of the HTTP server.
  - **Message:** Enter the message here.
  - **Test HTTP:** Click to test the HTTP server function.

2. Event Schedule

Click "Add" for more detail settings.

● Follow the steps below to set up the Event Schedule for the camera:

1. Select **"Enable"** and enter the **Event Name**.

2. **Schedule Time:** Select **"Enable"** to trigger the event on specific time period and date.

3. Select the **Trigger** by: **Motion Detection / Digital Input 1 / Digital Input 2 / Tamper Detection / Video Analytics / Periodically time.**

   *(Video Analytics: Please go to **Video Analytics → Set Event Action** for individual setting)*

4. **Action:** Select the trigger method.

   - **Enable FTP:** The camera will upload the attachment to FTP when triggered.

   - **Enable EMAIL:** The camera will send the attachment to the assigned receiver when triggered.

   - **Enable Samba:** The camera will transfer the attachment to the network storage when triggered.

- **Enable TCP:** The camera will send instant message when triggered.
- **Enable SD CARD:** Image will be saved into local SD Card when triggered.
- **Enable HTTP:** Camera will send the attachment to HTTP server.
- **Trigger digital output:** The camera will trigger the connected device on the camera's output for 1~60 seconds.
- **Audio File Playback**: Playback a recorded audio file when triggered.
- **Modify/Delete:** To change/remove the event profile, select the file on the list and click **Modify/Delete**.

Note: To enable the FTP/Email/Samba/TCP/HTTP services, the required settings of must be completed in the Advance >> Event section.

3. Motion Detection

The Motion Detection option contains the commands and settings that allow you to enable and set up the motion detection feature of the camera. The camera provides three detecting areas.

● Follow the steps below to set up the Motion Detection function for the camera:

1. Select **Enable Motion Detection**.

2. **Window 1/2/3**: When the detecting area is enabled, you can use the mouse to move the detecting area and change the coverage.

3. Set the **Percentage** and **Sensitivity** (1~99) for detecting motion to record video.

4. When done, click **Apply** to save the settings and activate the motion detection function.

4. **Tamper Detection**

Camera Tamper Detection (CTD) detects tampering events in surveillance cameras that may compromise the integrity of the video content. Examples of camera tampering include obstructing the lens with paint or a foreign object, adjusting the lens' focus or aperture settings, pointing the camera in a different direction, and turning off the lights (if indoors with no major change in ambient illumination expected). CTD can tolerate the effects of automatic camera gain, camera shaking that causes mild image jitter (less than +/- 4 pixels in any direction), and dimly lit scenes.
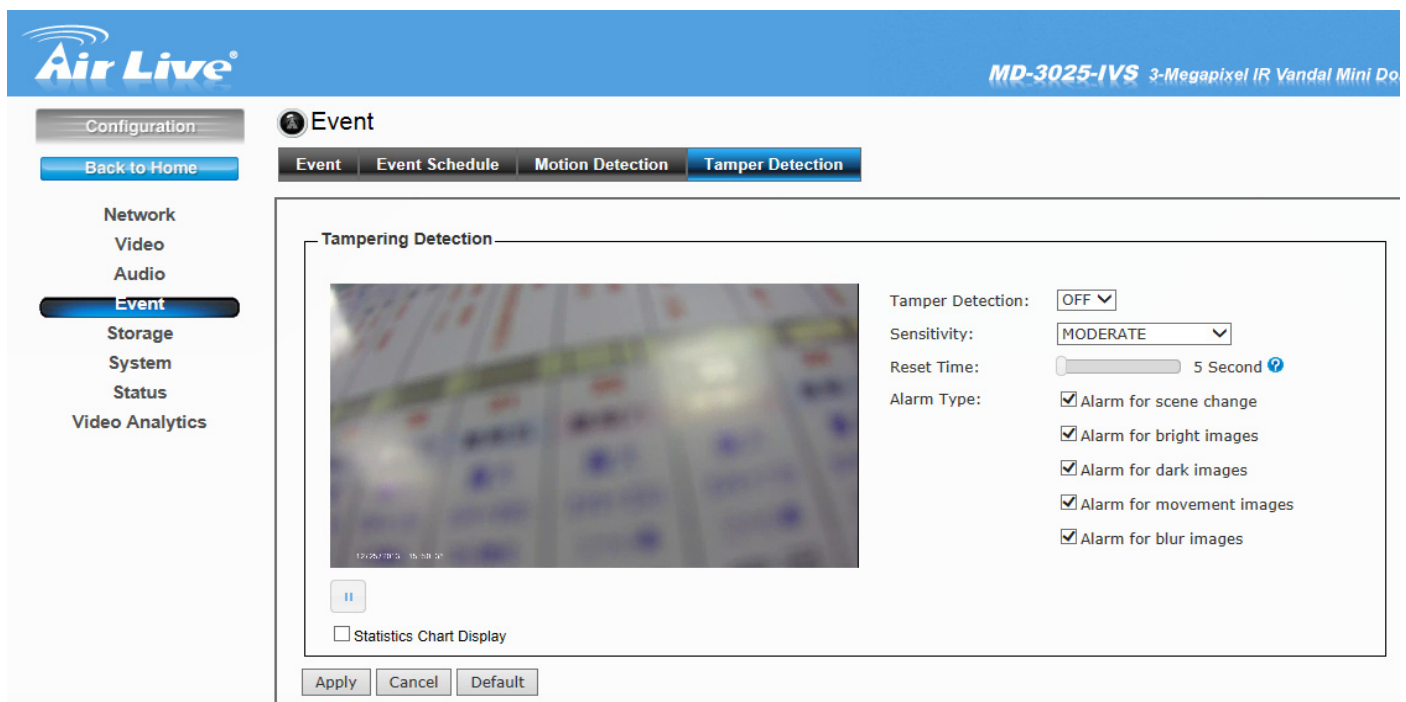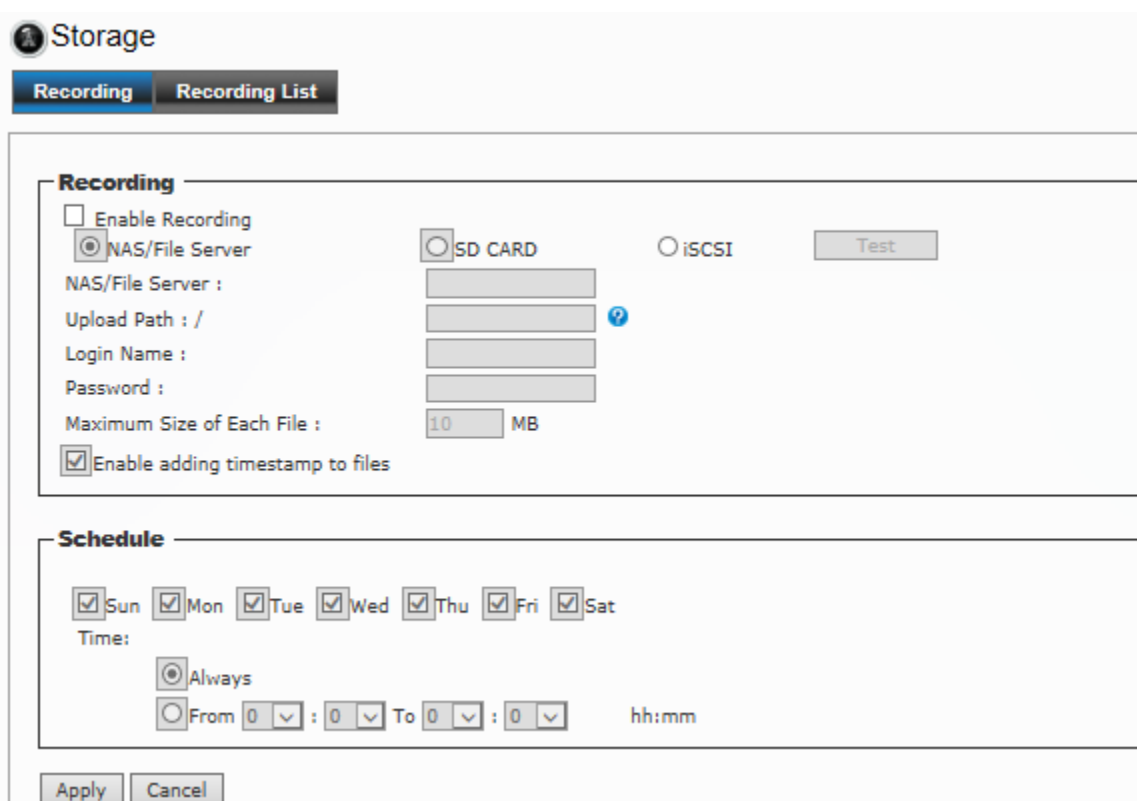
- Select ON/OFF to enable/disable the Tamper Detection.
- Select **Sensitivity** to set the sensitivity level.
  The higher the sensitivity, detects the minutest tampering attempts.
- Select **Reset Time**. Once a tampering is detected, the camera will resume a normal operating after a certain stability time (**Reset Time**) during which no detection will be performed.

● Select **Alarm Type** to specify the activation condition.
● **Statistics Chart Display:** You can see the test result of alarm type here.

6.5 Storage

1. Recording

● **Recording:** Select the option to enable the recording to storage function.
- **NAS/File Server:** Enter the IP address of the Network Storage/CIFS server.
- **Upload Path:** Assign the path for uploading the files on the Network Storage/CIFS server.
- **Login Name:** Enter the user name to login into the Network Storage/CIFS server.
- **Password:** Enter the password to login into the Network Storage/CIFS server.
- **Maximum Size of Each File:** This option allows you to limit the file size to be uploaded to the server.
- **Timestamp:** Select this option to add the date & time information on the attachment.

● **Schedule:**

- **NAS/File Server:** Enter the IP address of the Network Storage/CIFS server.

● **Schedule:** Select **"Always"** to enable recording continuously or select specific time period and date to record. When done, click **Apply** to save the settings.

2. Recording List

This page shows the files list information. User may play or delete the selected file.

Note: Please remember to insert a SD card before you start to use this function.

6.6 System

The System menu contains sub-menus as below. When completed, click **Apply** to save the settings.

1. Device Settings

- **DIPS:**

  - **DIPS (Dynamic IP Service):** To enable or disable the DIPS® (Dynamic IP Service) function.
  - **Device ID (for DIPS):** It's a unique number of each device for identification.

- **Information:** This item allows you to assign the camera name and location information**.**

  - **Camera Name:** Enter a descriptive name for the camera, which is helpful to identify the camera easily while multiple cameras are connected within the network.
  - **Location:** Enter a descriptive name for the location where is monitored by the camera.

- **Indication LED:** This item allows you to set the LED illumination as desired. The available options include: **ON** and **OFF**.

- **Date and Time:** Enter the correct date and time for the system.

  - **Camera Date & Time:** It shows the current date and time.
  - **TimeZone:** Select the proper time zone for the region from the pull-down menu.
  - **DayLight Saving:** Select this option if the Daylight Saving Time is used in your location.

    Daylight Saving means a period from late spring to early fall, and during the period many countries will set their clocks ahead of normal local time by one hour to give more daytime light in the evening.

  - **Don't Modify:** Select this option to set the date and time as system's default settings.
  - **Synchronize with NTP Server:** Select this option and the time will be synchronized with the NTP Server. You need to enter the **NTP Server Address** of the server and set the **Update Interval**.
  - **Manual:** Select this option to set the date and time manually.
  - **Synchronize with PC:** Select this option and the date & time settings of the camera will be synchronized with the connected computer.

2. Account

- ● **Viewer Login:** Anonymous means user can login without user name and password. Or select **"Only users in database"** to limit the authentication.

- ● **Admin:** To prevent unauthorized access to the camera's Web Configuration, you are strongly recommend to change the default administrator password. Type the administrator password twice and then click **Modify** to set and confirm the password.

- ● **Users**

  - **User Name/Password/Confirm Password:** Enter the user's name you want to add to use the camera. Then, enter the password twice for the new user. When done, click Add to add the new user for the camera.
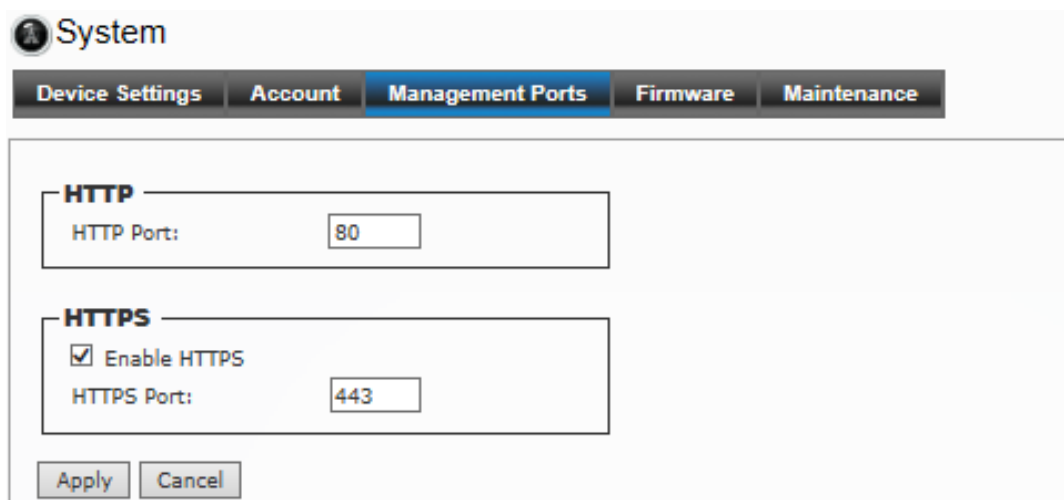
- **User List:** Display the existing users of the camera. To delete a user, select the one you want to delete and click **Delete**.

● **Guest**

- **User Name/Password/Confirm Password:** Enter the user's name you want to add to use the camera. Then, enter the password twice for the new user. When done, click Add to add the new user for the camera.

- **Guest List:** Display the existing guests of the camera. To delete a guest, select the one you want to delete and click **Delete**.

Note: The "Users" can access the camera and control the Function buttons of the camera's Web Configuration; the "Guest' can only view the live view image from the Main screen of the Web Configuration while accessing the camera. Only the "Admin" is allowed to configure the camera through the Web Configuration.

3. **Management Ports**

● **HTTPS:** Select the **Enable HTTPS** option to enable HTTPS which is a secure protocol to provide authenticated and encrypted communication within your network.

- **HTTPS Port:** Assign a HTTPS port in the text box. The default HTTPS port is **443**.

4. Firmware
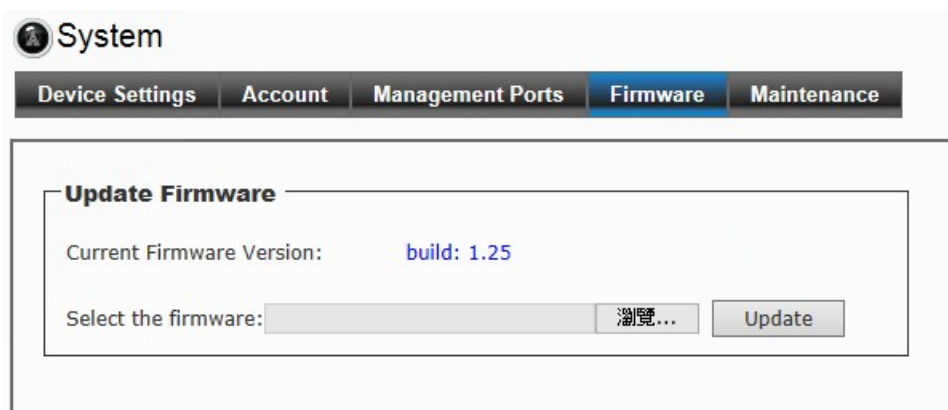
● **Update Firmware:** You can upgrade the firmware for your camera once you obtained a latest version of firmware.

- **Current Firmware Version:** It displays the current firmware version.
- **Update:** Click **Browse** to locate the firmware file and then click **Update**.

Warning!!!

The download firmware procedure cannot be interrupted. If the power and/or network connection are broken during the download procedure, it might possibly cause serious damage to the device. Strongly suggest that DO NOT upgrade firmware via Wireless LAN due to high error rate possibly and don't allow any other clients to access this unit during updating procedure. Be aware that you should not turn off the power during updating the firmware and wait for finish message. Furthermore, the firmware upgrade procedure always is risk and do not try to upgrade new firmware if it's not necessary.

5. Maintenance

- **Factory Reset:** Click **Reset** to restore all factory default settings for the camera.

- **System rebooted:** Click **Reboot** to restart the camera just like turning the device off and on. The camera configuration will be retained after rebooting.

- **Configuration Backup:** You can save your camera configuration as a backup file on your computer. Whenever you want to resume the original settings, you can restore them by retrieving the backup file.
  - **Backup:** Click the button to save the current configuration of the camera.
  - **Backup to SD CARD Device:** Click to save the configuration file to SD card.

- **Configuration Restore:** lick **Browse** to locate the backup file on your PC and then click **Restore**.

- **Restore From SD CARD Device:** Restore the backup file from SD card.
- **Format:** Click to format the SD card.

6.7 Status

The Status menu shows the current status of the camera, including the basic information, audio/video settings, networking configuration, and system logs.
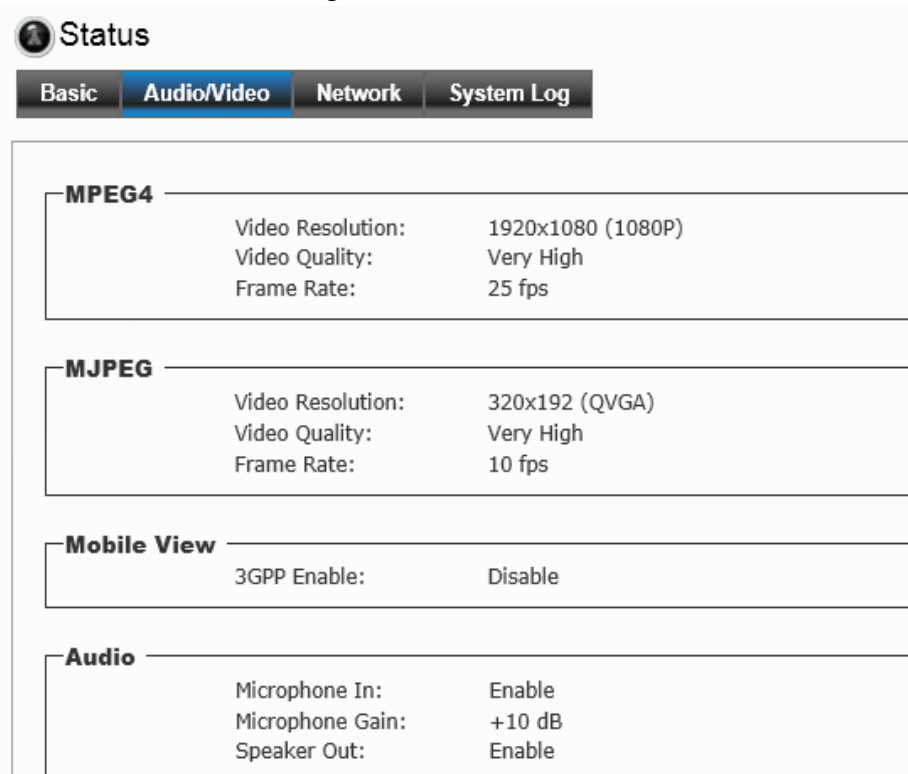
1. **Basic**
   It provides the basic information as above.
2. **Audio/Video**
   It provides the information including H.264/MJPEG/Mobile View/Audio as below.

3. **Network:** It provides the information including IP/LAN as below.

4. **System Log:** It provides the log information as below.

● **Enable remote log:** Enter the IP address to enable the remote log function.

7 Appendix
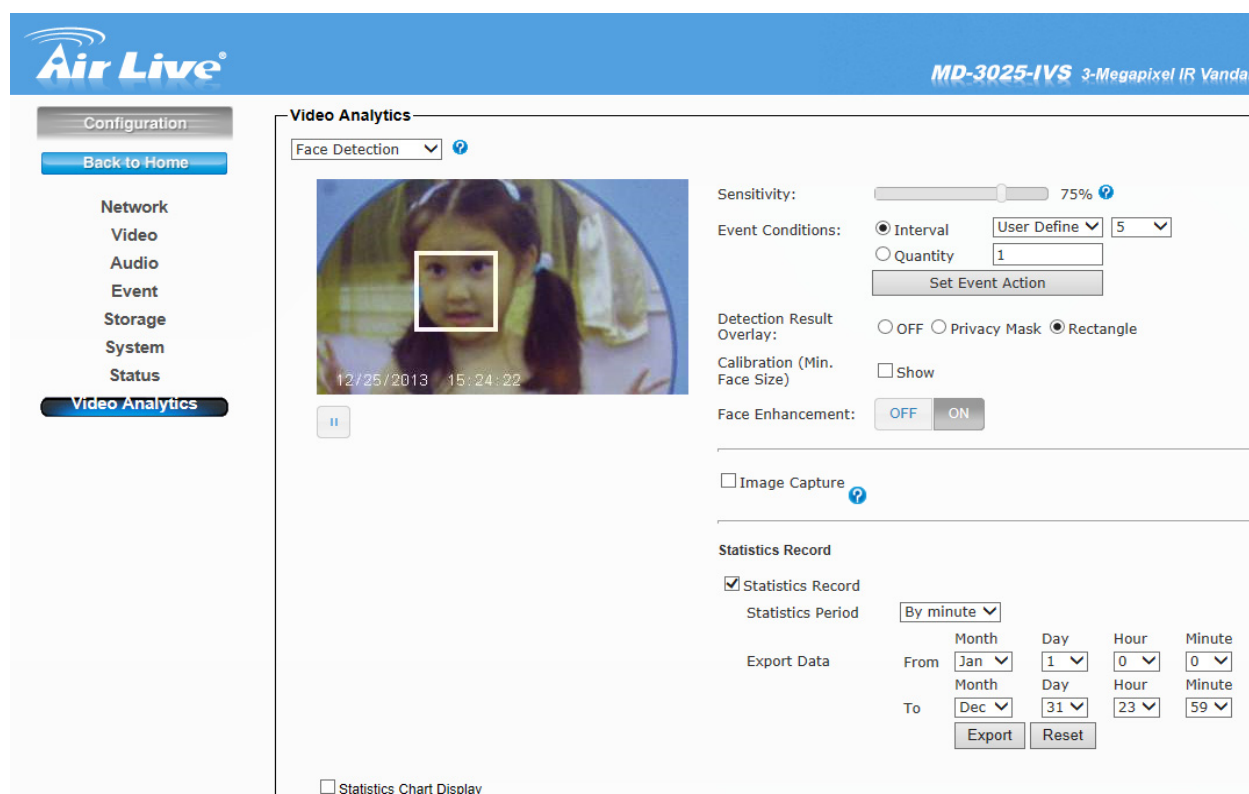
A. Video Analytics (Only for MD-3025-IVS)

MD-3025-IVS provides multiple intelligent video analytics that helps you to save your human resources and reach the goal of automatic surveillance.
Please go to **Configuration → Video Analytics** to experience the entire IVS function.

Note: Only one Video Analytics function can be excuted at same time.

A.1 Face Detection:

Face detection is a precise feature which needs highly accurate rate of recognition on human faces only. The software is able to count how many faces in the image and also highlights those faces simultaneously so the administrator will be easier to look in details on each face at specific environment.


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- **Sensitivity:** Adjust sensitivity 0~100%, the higher sensitivity means more precisely and detailed face detection.
- **Event Conditions:** Choose either **Interval** or **Quantity** with **NONE**, **Daily**, **Hourly** or **User Define** to set time point for alarm. For example, if you set Interval with NONE, the alarm will be on when IP Camera detect the face.
- **Set Event Action:** Go to the Event Schedule to Add or Edit the event.
- **Detection Result Overlay:** Select OFF, Privacy Mask or Rectangle to be shown on the face when any face has been detected.
- **Calibration (Min. Face Size):** Face detection requires the min. face size is 20x20 pixels, so you can use this for reference.
- **Face Enhancement:** Enable this function for more accuracy.
- **Image Capture:** Enable this function to save the image to Samba server or SD card.
- **Statistics Record:** This function can record how many faces have been detected. You can configure your camera in different ways to generate the statistics you required and statistic data can be exported in csv format file.
    - Select **Statistics Period** to specify the period you want the data for.
    - Select the range to export the data or press "Reset" to delete it.
- **Statistics Chart Display:** Enable this to see the detection result by chart.

A.2 Face Recognition:

The key feature of Face Recognition is to recognize faces for access control or any suspicious persons in camera which match the database. You can save up to 10 face images to the AirLive MD-3025-IVS for recognition, so when the camera catch the face which match the database, the camera will trigger related output devices by necessary reaction.
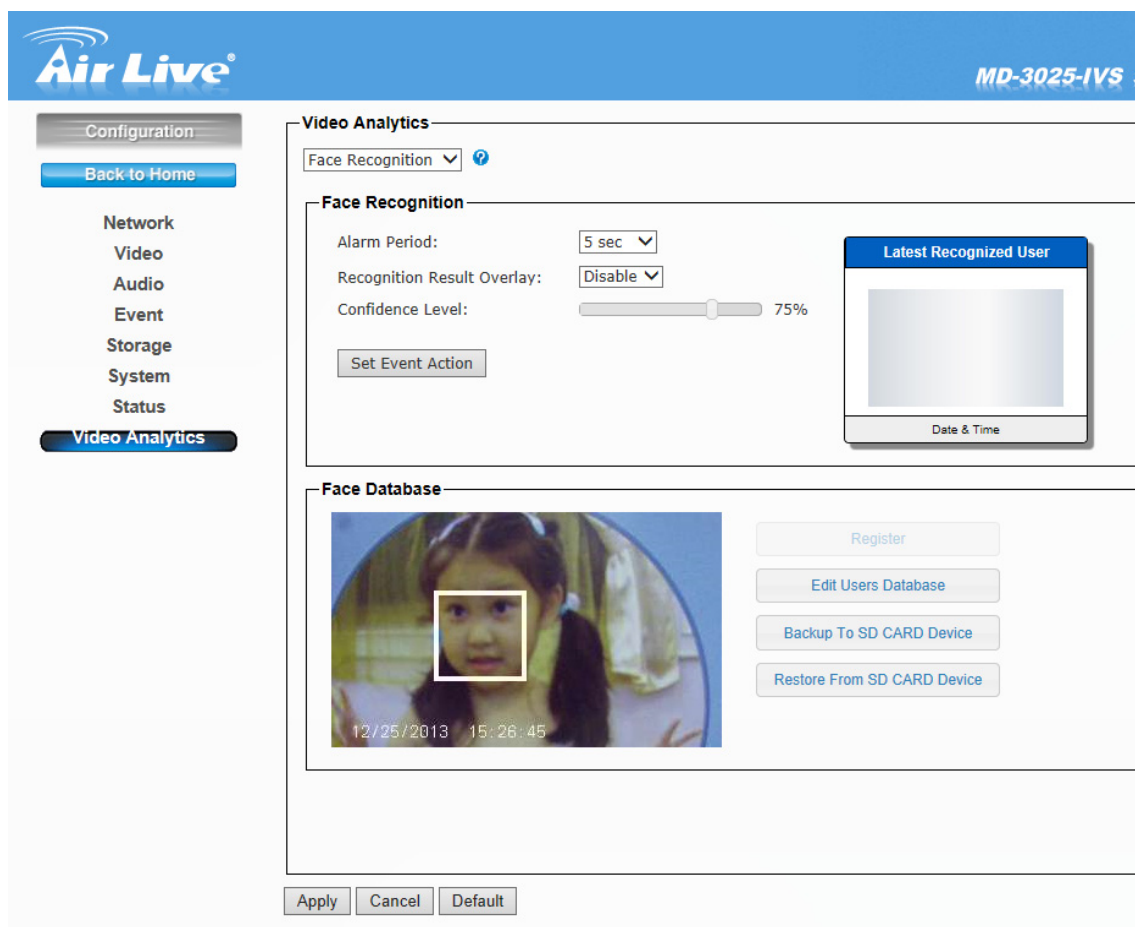
- Select proper alarm time in **Alarm Period**.
- Select to Enable/Disable the overlay in **Recognition Result Overlay**. All the detected face will be shown on the live view screen.
- Select **Confidence Level** to set the confidence threshold when compared to the faces in the database.
- Edit the alarm action in the **Set Event Action**.
- **Register** function supports memorizing up to **10** results of face recognition into the database. Also you can select to edit the database, backup to or restore from the SD card device.
- **Edit Users Database:** You can edit the registered database here. (See below)
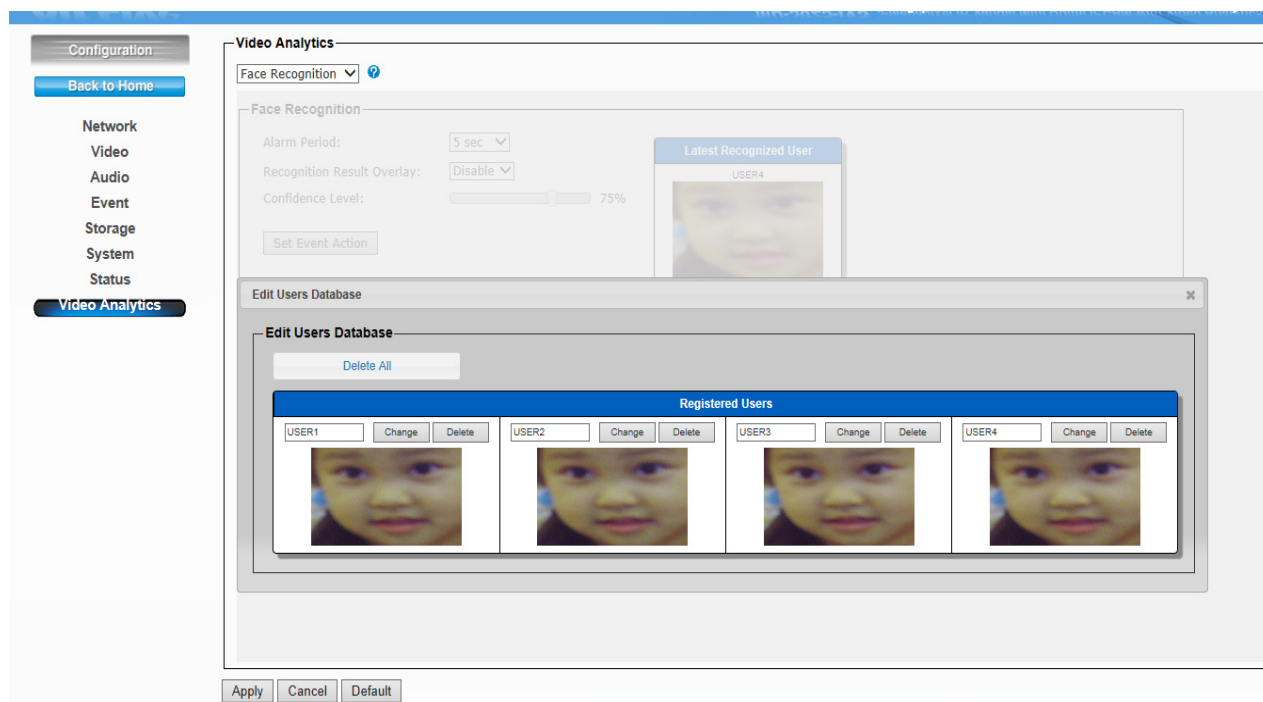
A.3 iMotion Detection (Intelligent Motion Detection)

Intelligent Motion Detection is able to increase the accuracy of motion detection and also provides more flexible setting with polygon for the zones. Any moving object in the zone will trigger this alarm. Objects must move and stay within the boundary for at least 100 ms.
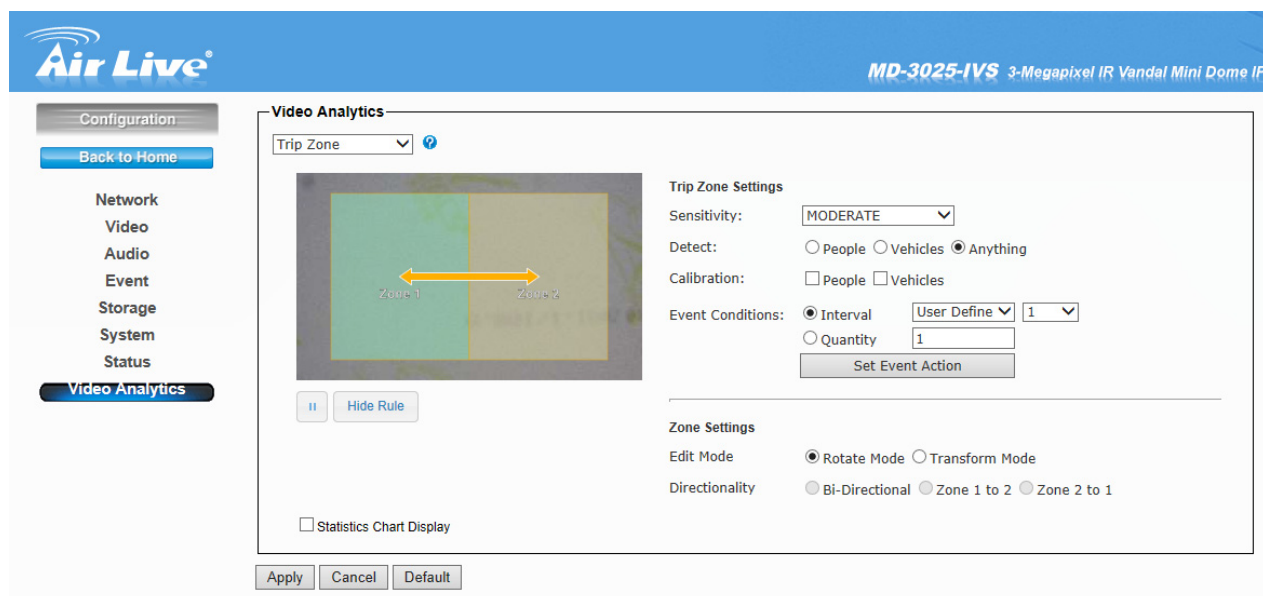

● Select **Sensitivity** to set the detection sensitivity level. Higher sensitivity will make it easier to detect and less objects missing, but more misjudgments.
● Select **People / Vehicles / Anything** as the detected objects.

- Select **Calibration (People** or **Vehicle Object Sizes)**. The minimum and maximum boundary of objects can be specified to improve the detection accuracy. The width and length values must be at least 6 pixels. If any false detection caused by smaller objects, you can try to increase the minimum size.
  - **Min. Size of Calibration:** The width and length values must be 6 pixels at least. If any false detection caused by smaller objects, you can try to increase the minimum size.
  - **Max. Size of Calibration:** It has to be larger than the minimum size and half the frame size is the most.
  - Edit the alarm action in the **Set Event Action.**
  - Up to **4** zones can be specified when click the **Add Zone** function. Left click to add the point and **15** points at most can be used in each zone.
  - Select **Delete Zone/All** to delete the zones
  - Select **Enable/Disable** to allow the trigger or not.

A.4 Trip Zone

The Trip Zone is an area protection based on two virtual areas with a line in center. Any object moves across the line within 0.5 second at least will trigger the alarm and send out an alert. It can be set to detect one direction or both directions. It is very useful to some surveillance environments like walls, railroad platform, parking lot entrance or any intersection where needs to monitor the "Against Traffic".

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- Select **Sensitivity** to set the detection sensitivity level. Higher sensitivity will make it easier to detect and less objects missing, but more misjudgments.
- Select **People / Vehicles / Anything** as the detected objects.
- Select **Calibration (People** or **Vehicle Object Sizes)**. The minimum and maximum boundary of objects can be specified to improve the detection accuracy. If any false detection caused by smaller objects, you can try to increase the minimum size.
- In **Event Conditions**, you can specify the minimum time interval or quantity (500 at most) for each alarm. And edit the alarm action in the **Set Event Action**.
- Select **Rotate Mode** or **Transform Mode** in **Edit Mode**.
  - **Rotate Mode:** User can rotate the zone at will.
  - **Transform Mode:** User can drag the point of the zone to any shape.
- **Directionality:** User can select the detected moving direction from one to another or both the directions
- **Statistics Chart Display:** Here will show the result of Trip Zone.

A.5 Object Counting

The Object Counting makes store owners easier to calculate the number of people in and out of the store. You may choose one way or two way directions for counting. The numbers can be displayed on screen and saved to the database. It is also useful to calculate the amount of traffic flow on the highway.

- Select **Sensitivity** to set the detection sensitivity level. Higher sensitivity will make it easier to detect and less objects missing, but more misjudgments.
- Select Basic or Advance **Mode**.
- Select **Advance** mode for more detail settings.
  – Select **Calibration (People** or **Vehicle Object Sizes)**. The minimum and maximum boundary of objects can be specified to improve the detection accuracy. The width and length values must be at least 6 pixels. If any false detection caused by smaller objects, you can try to increase the minimum size.
  – **Min. Size** of Calibration: The width and length values must be 6 pixels at least. If any false detection caused by smaller objects, you can try to increase the minimum size.
  – **Max. Size** of Calibration: It has to be larger than the minimum size and half the frame size is the most.
- **Object Size**: Specify the width and length of an object. The width and length values must be greater than 16 pixels and smaller than 64 pixels.
- In **Event Conditions**, you can specify the minimum time interval or quantity for each alarm. And edit the alarm action in the **Set Event Action**.
- Enable / Disable the **Counting Result Overlay**.
- **Reset Counter**: Select the minimum time interval to reset the counter result.
- **Counter Orientation:** Select **Left-Right** to detect objects moving in a horizontal way and **Top-Bottom** in a vertical way.
- **Directionality:** User can select the detected moving direction from one to another or both the directions.
- **Statistics Record:** You can configure your camera in different ways to generate the statistics you required and statistic data can be exported in csv format file.
  - Select and choose the **Statistics Period** that you want and also you can export or reset the result.

A.6 e-Fence

The e-Fence is an electronic fence protection system which is able to detect and send output alert if any object is entering or leaving the boundaries you set in the camera. This function can be used in many applications, either as a standalone protection system or other protection systems such as airports, power plants, radio towers or even military camps.

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- Select **Sensitivity** to set the detection sensitivity level. Higher sensitivity will make it easier to detect and less objects missing, but more misjudgments.
- Select **People / Vehicles / Anything** as the detected objects.
- Select **Calibration (People** or **Vehicle Object Sizes)**. The minimum and maximum boundary of objects can be specified to improve the detection accuracy. The width and length values must be at least 6 pixels. If any false detection caused by smaller objects, you can try to increase the minimum size.
- **Min. Size** of Calibration: The width and length values must be 6 pixels at least. If any false detection caused by smaller objects, you can try to increase the minimum size.
- **Max. Size** of Calibration: It has to be larger than the minimum size and half the frame size is the most.
- Up to 4 zones can be specified when click the **Add Zone** function. Left click to add the point and **15** points at most can be used in each zone.
- Select **Delete Zone/All** to delete the zones.
- Select **Enable/Disable** to allow the trigger or not.
- **Statistics Chart Display:** Here will show the result of e-Fence.