AirLive®

Powered by OvisLink Corp.

MD-3025-IVS

Face Detection Guide

Version 1.0

MD-3025-IVS
Face Detection Guide

1. Overview

The MD-3025-IVS has built-in video analytic function for Face Detection function. It is a standalone function built into the camera's firmware without the need for external software or device. The Face Detection function can be used to detect and count any person walks by or stays in the detected area. This guide will focus on using MD-3025-IVS's "Face Detection" function to detect human face in places like office, lobby, ticket stand, shopping mall, airport, cashier, signage system and amusement park.

The Face Detection works on the live view video image. When people walk into the video image area, the camera will detect people's faces. The maximum quantity of face can be detected in the video at the same time is 35 faces.

The important factors for successful face detection installations are:
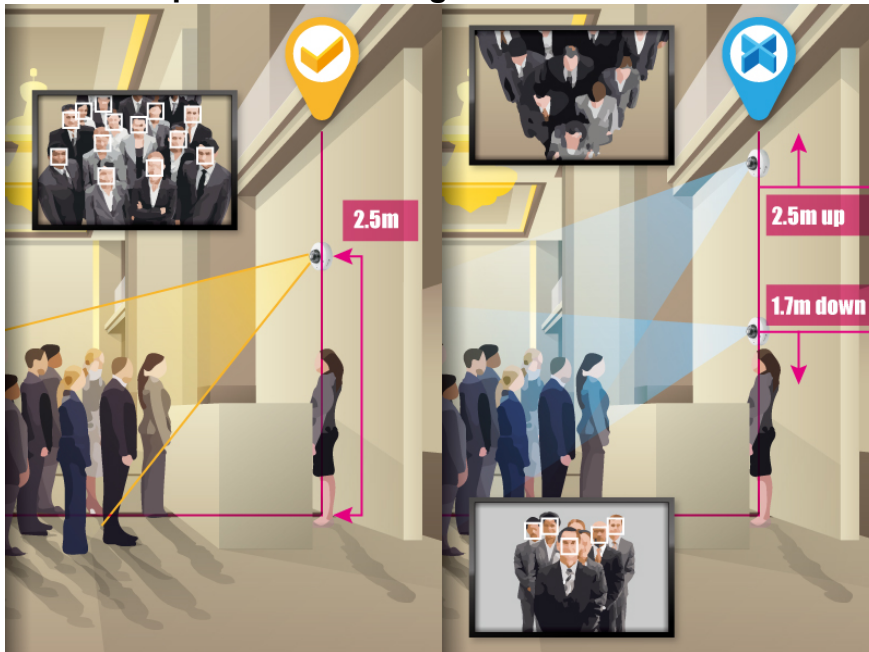
■ Choose the appropriate installation location and height.
■ Choose the appropriate resolution and frame rate.
■ Make sure the people's face is bigger than minimum face size.
■ *Please remember to click on "Apply" button to save settings.*

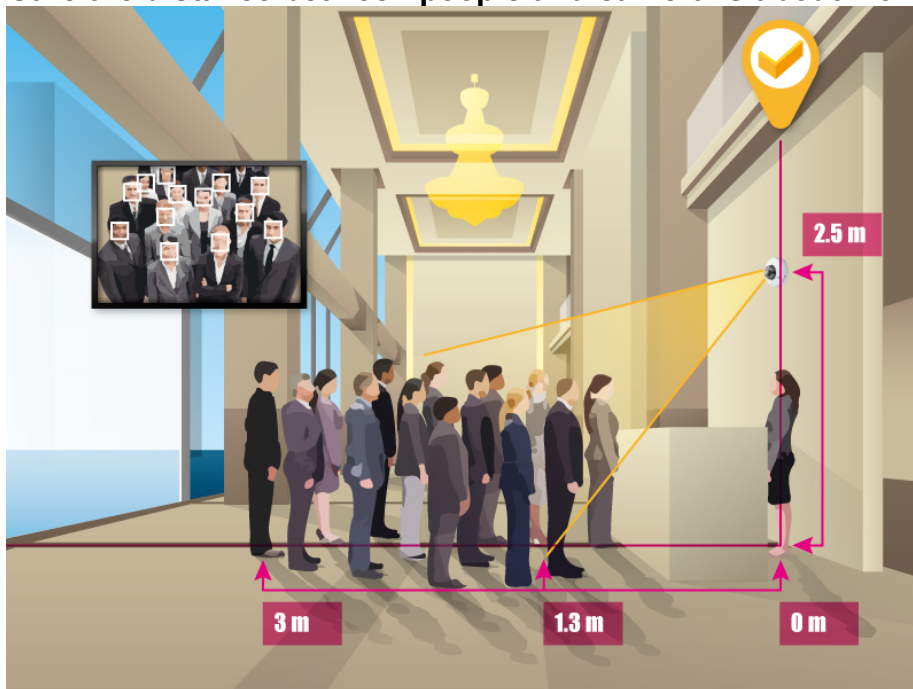We will guide you through the procedure in the following articles.

2. Hardware Installation Guidelines

- It is recommended to have at least 2.5 meter of vertical clearance (from surface to camera) for best performance.
- The followings are basic installation guidelines for best face detection results. However, the face detection function can still work in less than ideal conditions.

1. Avoid the camera position is too high or too low.

2. Make sure the distance between people and camera is about 1.3m~3m

3. Avoid the light of surrounding is too dark or too bright.

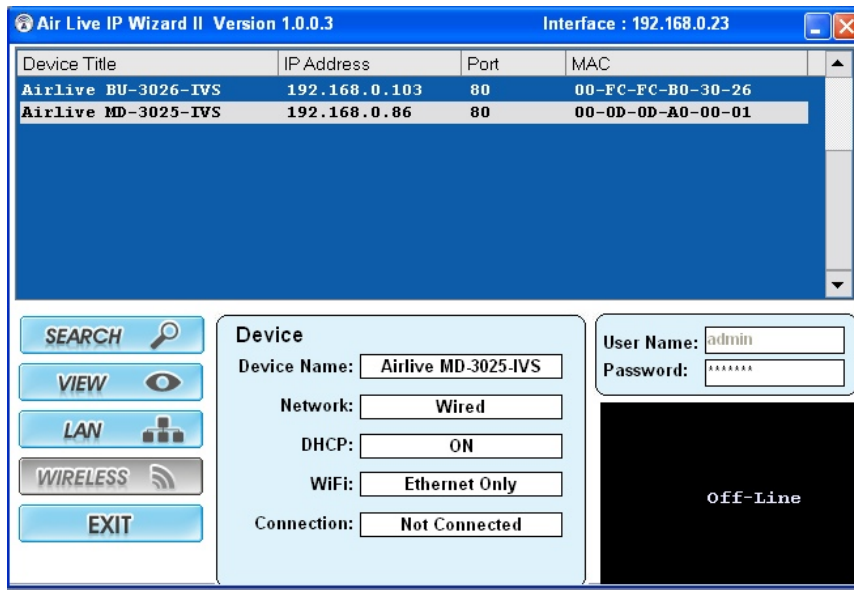**4. Make sure the position of the camera is right in front of the people.**

3. Camera Configuration

3.1 Finding camera using AirLive IP Wizard

The IPCAM's default IP address is 192.168.1.100，but this address can change when there is DHCP server(router) in your network.   Therefore, please install AirLive IP wizard to find your camera.

1. Install the "AirLive IP Wizard" from the installation CD or download it from this link.

2. Run the "setup.exe" and open the AirLive IP Wizard.

3. The IP Wizard will auto search and list out the camera found.   Double click on the camera that you want to configure.
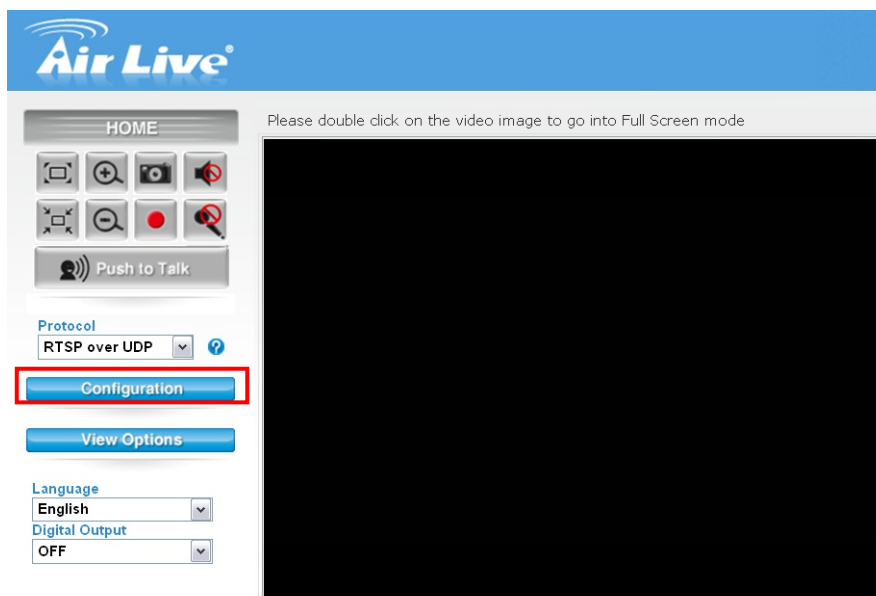
4. The IPCAM's web configuration will open automatically after double click.　Please enter the "admin" for username and "airlive" for password.

5. After entering the correct username and password.　You will enter the camera's web configuration page.　When prompted to install "Media Control" from "OvisLink Corp", please select "Yes" to install.

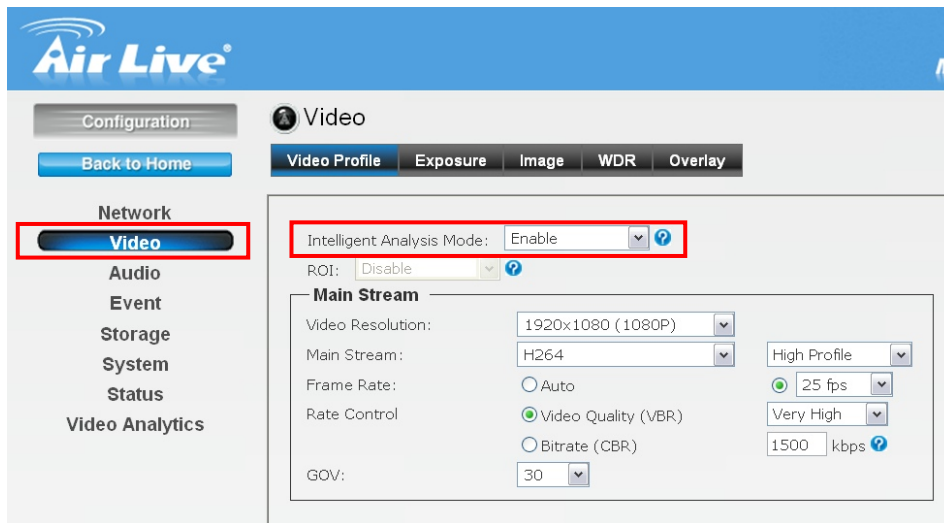## 3.2 Enable Camera's Video Analytic function

Please use Internet Explorer as the default browser.　If you are using IE 11, please go to "Setup->Compatibility View Settings" and add the camera's IP address to the list.

Please follow the step below to enable camera's video analytics function.

1. Click on "Configurations" on left menu bar

2. Click on "Video" on the left menu bar and select "enable" Intelligent Video Analytics.
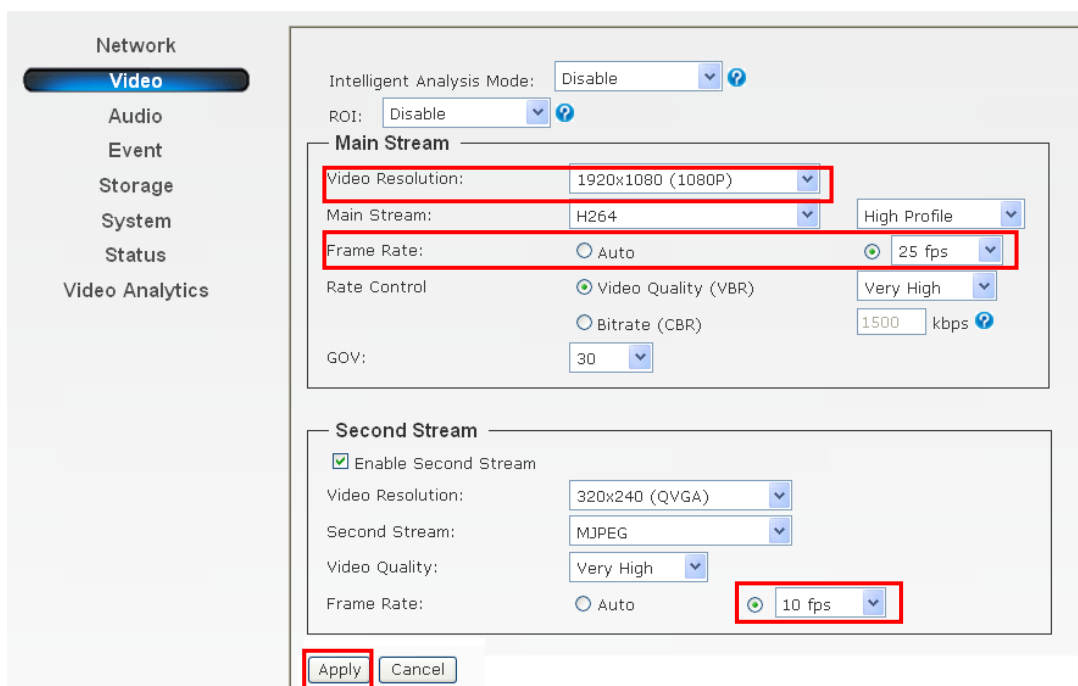

3.3 Setting Resolution and Frame Rate

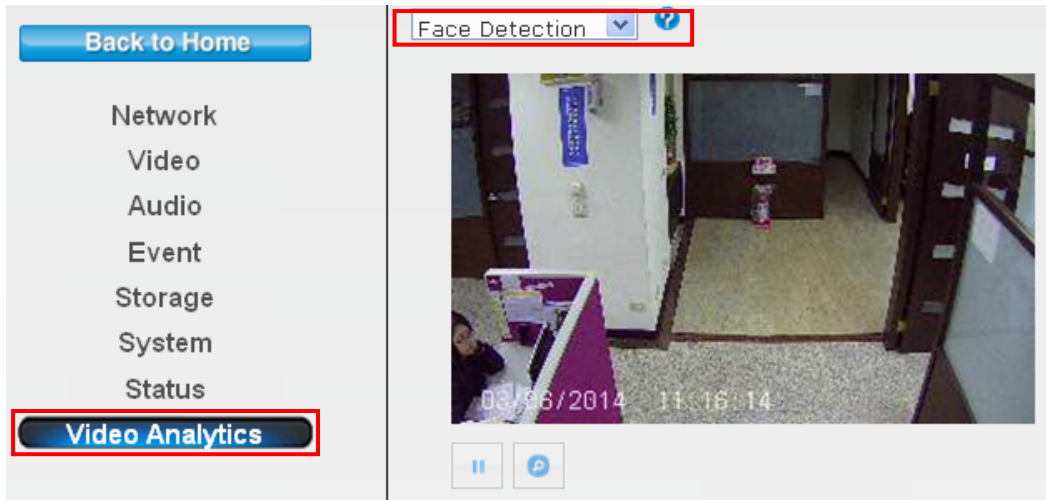On the video page, it is important to set the resolution and frame rate correctly.

⚠ Please remember to click on "Apply" button after finish settings.

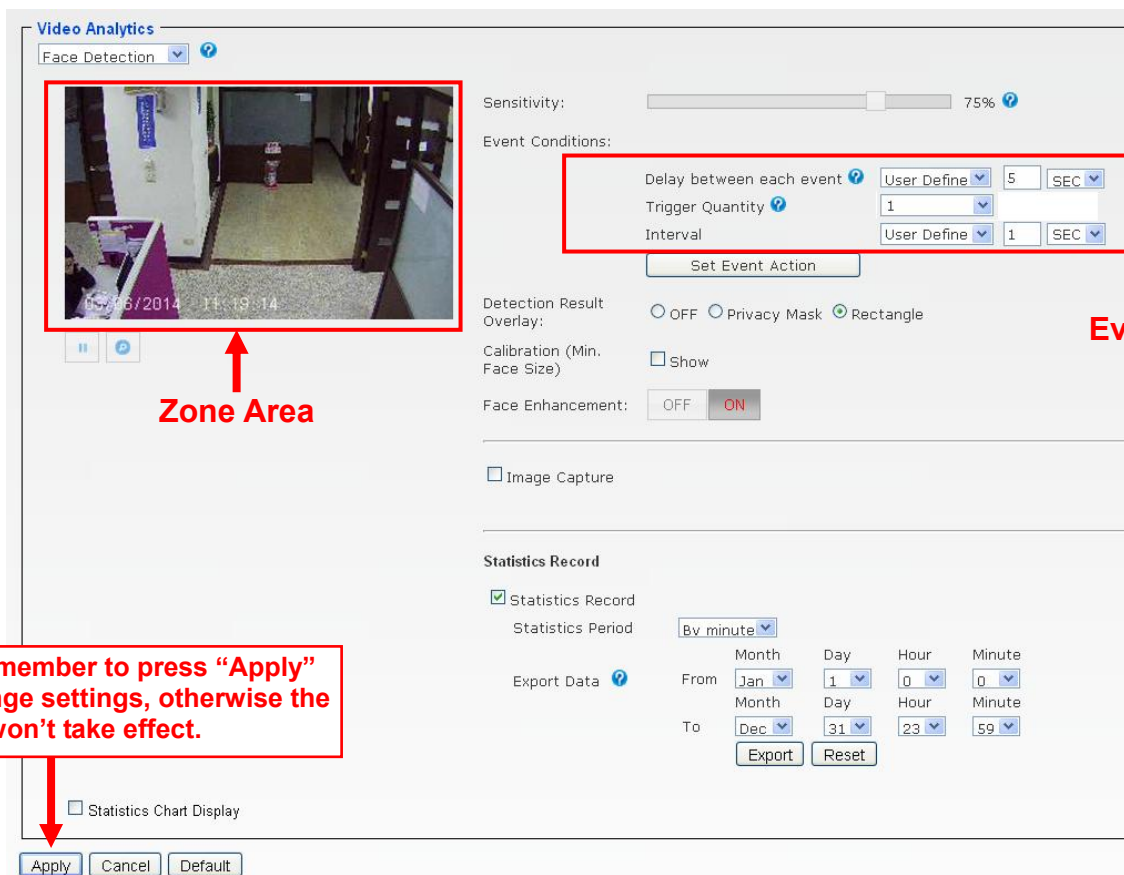| Installation Site	Main Stream Resolution	Main Stream Frame Rate	Second Stream Frame Rate
Office	1920x1080	25FPS	10FPS

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3.4 Configure Face Detection Function

Please go to "Video Analytics" menu and select "Face Detection"

Below is the main page for face detection.

Event Settings

Zone Area

Please remember to press "Apply" after change settings, otherwise the settings won't take effect.
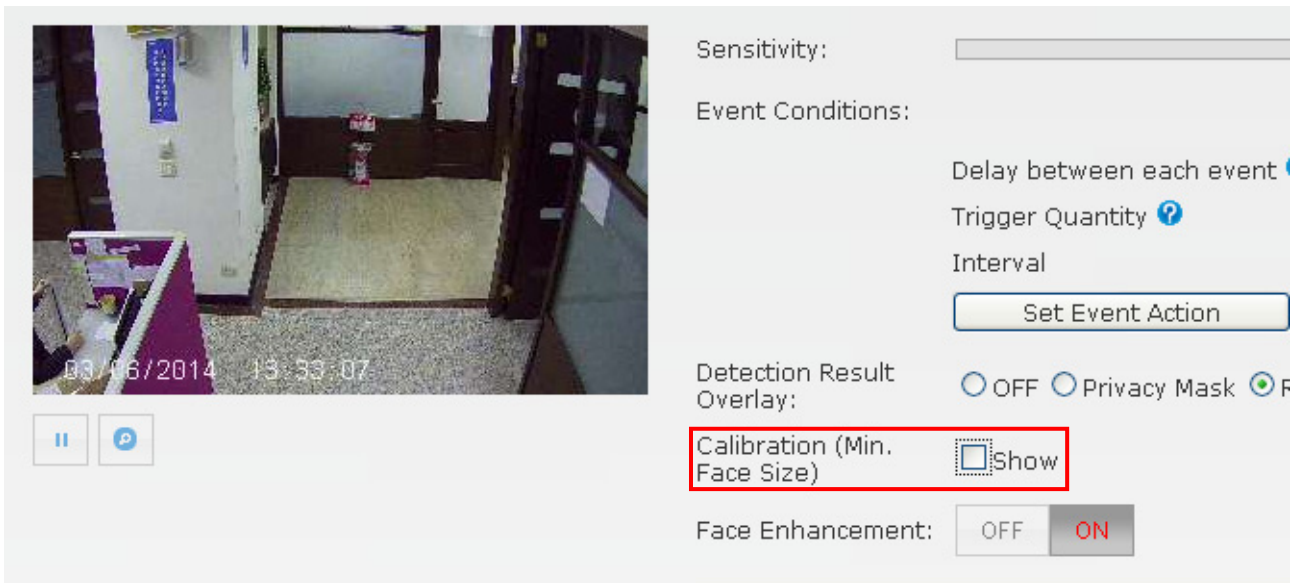
The first step is to calibrate the minimum face size.   People's faces are must bigger than the minimum face size; otherwise, the faces will not be detected.

Calibration

Your installation height and viewing angle can change the size of a person's face as perceived by the camera. It is important to calibrate the minimum face size after installation.

You can perform calibration by checking the "Show" in the calibration field.

On the Zone Area, one window will appear.

Compare to the person's face. When the face is bigger than the window, the face will be marked by a rectangle mark.
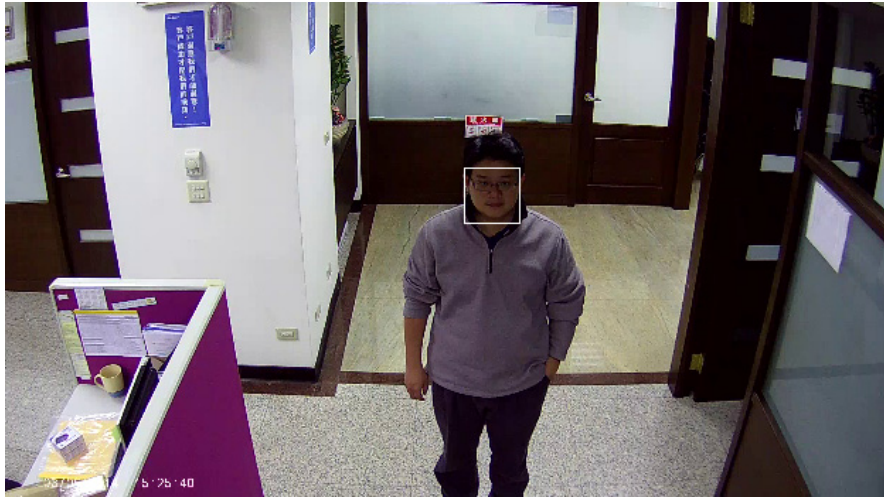
If the face is smaller than the window, the rectangle mark will not appear on the person's face.

Other Important Settings

■   Sensitivity: Adjust sensitivity 0~100%, the higher sensitivity means more precisely and detailed face detection.

■   Delay between each event: To avoid the events are triggered continuously, the setting can delay the each event follow the setting of time.

■   Trigger Quantity: When the detected faces are equal or more than the setting of the trigger quantity. Camera will trigger the event.

■   Interval: In the defined time, camera will reset the counting.

■   Detection Result Overlay: Please select "Rectangle". The rectangle mark will display on the detected faces.

■ Face Enhancement: Enable this function for more accuracy.

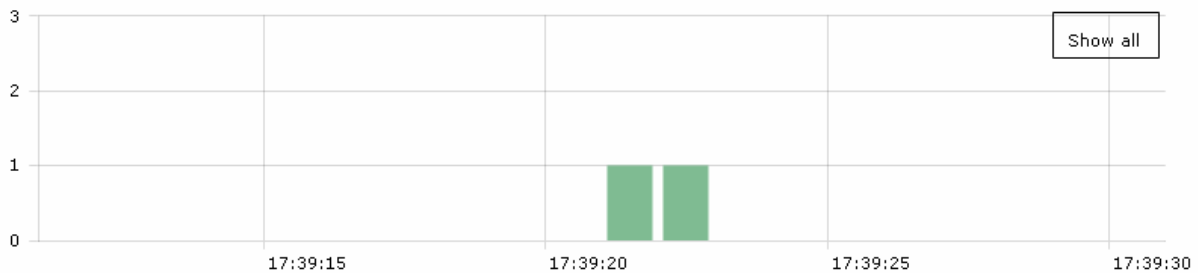■ Image Capture: When camera detects faces, camera can send image or video to Samba server or SD Card.

■ Statistic Records: Please enable this item. We recommend choose "hourly" which can report the number of counting in each hour for up to 30 days. When you choose minutely, the camera will hold the per minute data for 48 hours. Choosing daily will hold daily count for 30 days.

■ Statistic Chart Display: When enabled, it will show the counting result in a statistic graph. It is not recommended to turn on this function as it might use a lot of CPU resource which can influence counting performance. If you use this function, please remember to **turn it off** after finish using it.

Statistics Chart Display

■ Stop Update

Show all

Event Action

The camera's Face Detection function not only can detect the human faces, but also can perform certain action when event conditions are met. For example, it can be set if the number of face detected exceeds the maximum 10 or the total amount 15 in the last 30 seconds, it will send an email to the operator or trigger the digital output.
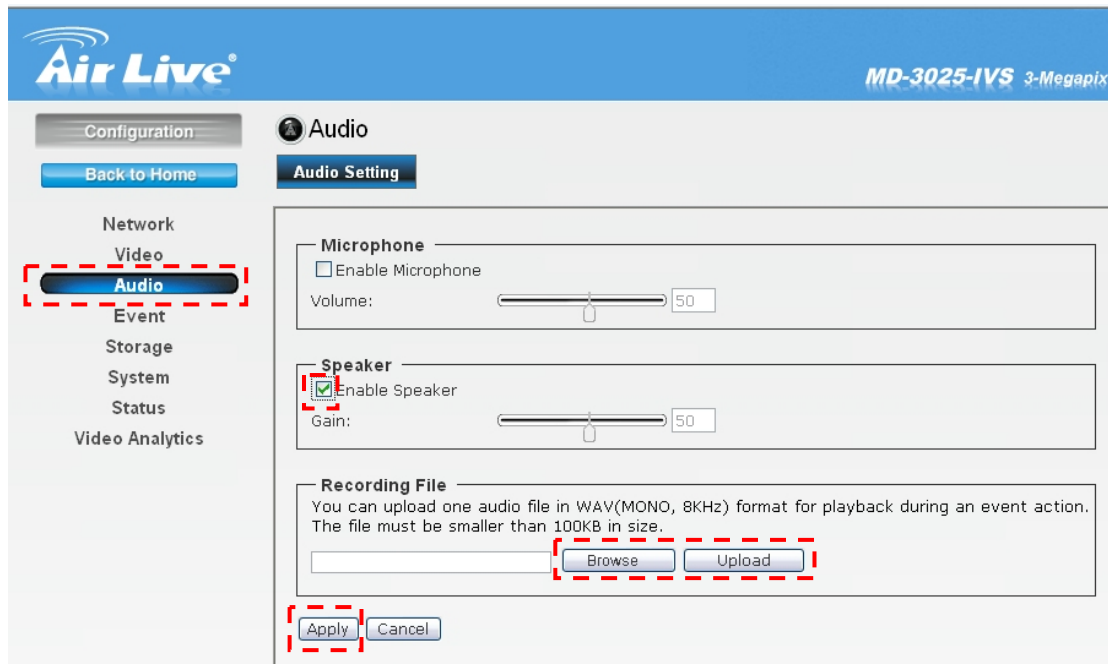
This can be used for crowd management or restricted area where people are prohibited to enter in.
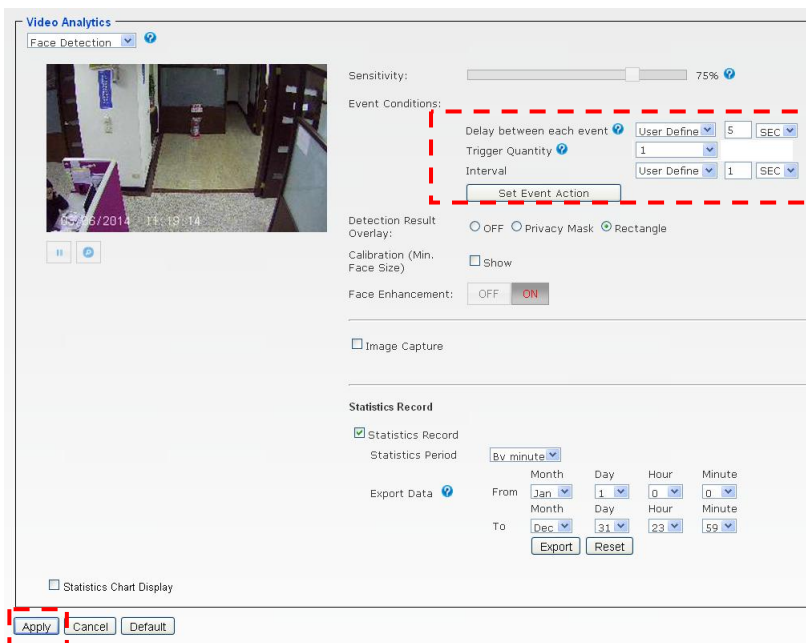
Example:

Setting if the number of faces detected exceeds 20 in 30 seconds in front of the ticket stand or information desk, the camera will sound a voice message "Number of people exceeded. Please send more personnel to serve the customers".

In some restricted area, set the number of face exceeds 1 in 1 second, the camera will trigger the alarm immediately and record the video. The buzzer sound will be shut down once the security guard disarmed the alarm.

1. Please make sure MD-3025 is connected to external speaker.

2. Please record a voice message on your PC using Windows Sound Recorder, then save the voice file.   The format should be 8Khz mono .wav file.   The file size should be less than 100KB.

3. Go to the camera's UI, then select "Configuration->Audio".   Check "Enable Speaker". Click on "Browse" to select the audio file you want to record.   Then select "Upload". After upload finished, please press the "Apply" button to save settings.

4. Go to "Video Analytics" and "Face Detection".   Change Interval to 10 minutes and quantity to "100".   Then press "Apply" button to save settings.

5. Now, please click on "Set Event Action". Click on "Add".   Then the following screen will appear.   Please enter the data as shown below.   Please remember to click on "Save" after finish settings.

(!) *Note: The Event Name does not allow spaces in between words.   Please enter the event name as one single word.*
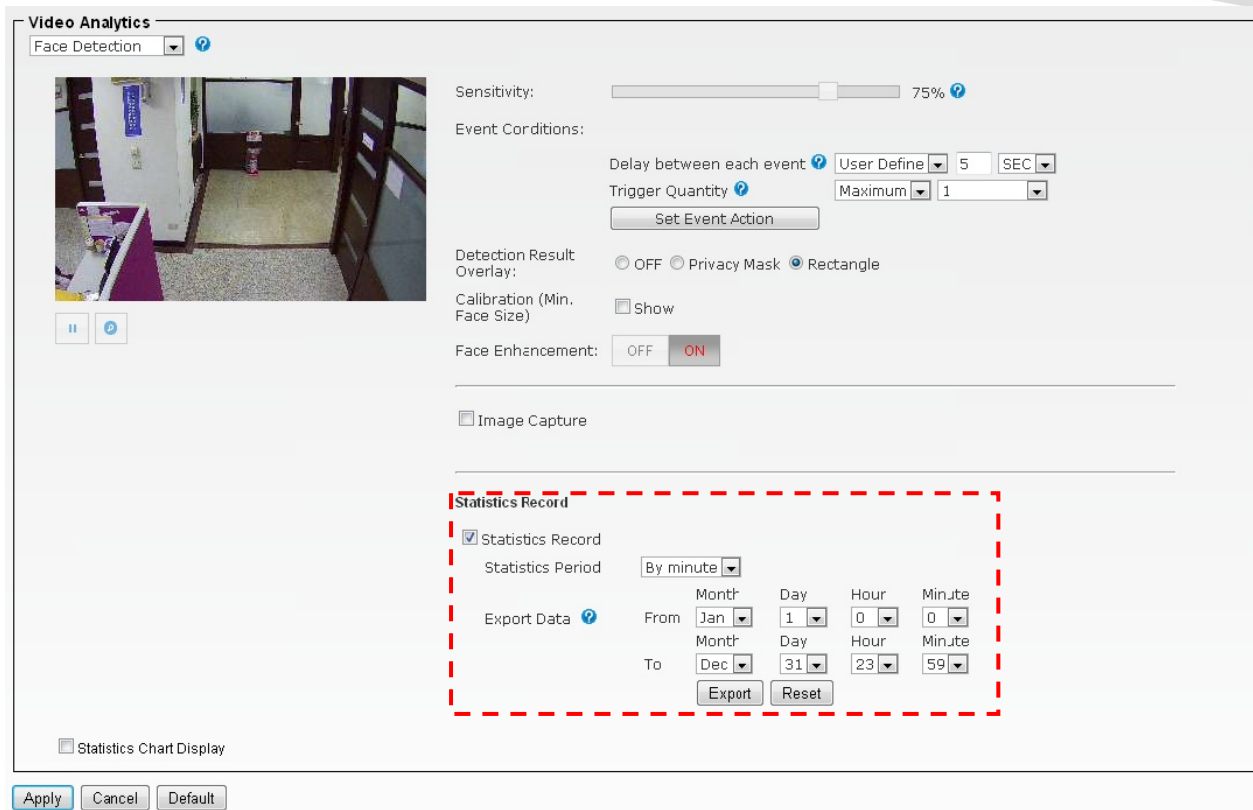
4. Retrieve Counting Data

You can retrieve the counting results using one of the method below:

- Export data from camera's web interface manually.
- Let camera send the daily or hourly report to remote FTP or Samba Server. This function is under development, please write to tech@airlive.com to inquire about this function.
- Retrieve Data using CGI Commands. If you are a developer or system integration, you can use this method to get data for your CMS or management system.
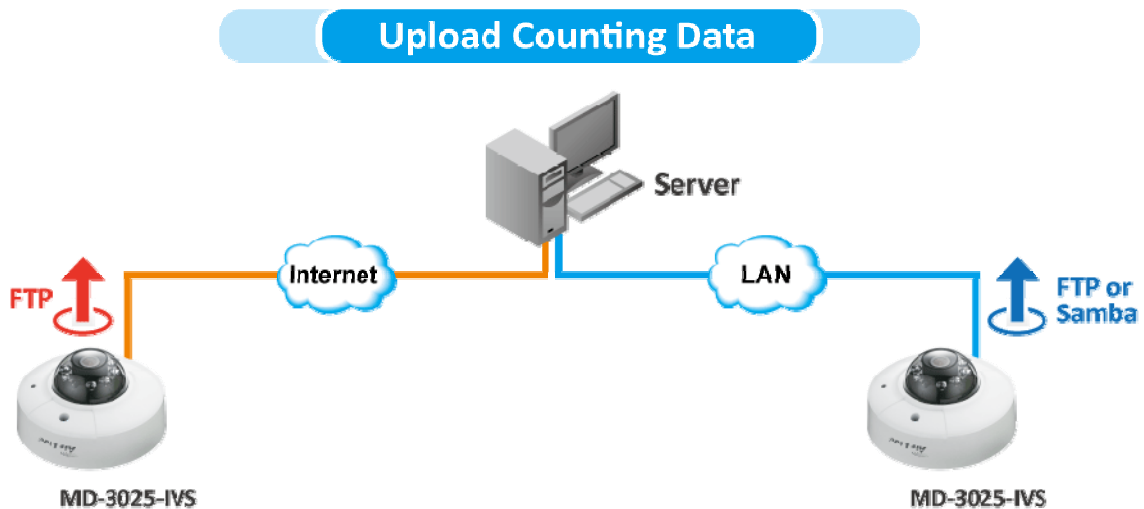
Export Data from Camera's Web UI

Please go to the Face Detection page (Configuration->Video Analytics->Face Detection). You can select the date, time, and format you want to export.

Camera Send Daily or Hourly Report

The camera will send daily or hourly report to remote FTP or File Server.   This function provides great advantage for large installations because data can be uploaded via internet to a centralized server.   In addition, there is no need to configure the server when there is a new camera installation.   This function is under development and will be available soon.

CGI Command to Export Statistic Records

Note: This requires administrator access (administrator authorization).

Method: Get

Syntax: http://<servername>/cgi/admin/va_trigger.cgi?action=<value> [&<parameter>=<value>...]

with the following parameters and value

<parameter>=<value>	Value	Description
action=<string>	export	
mode	fd oc	Which records of IVS function will be exported. fd = FaceDetection oc = Object Counting
period	0 ~ 2	Which records of period will be selected. 0 = Minutely 1 = Hourly 2 = Daily
begin	month-day%20hour:minute	search time begins, %20 is the html character code of space, ex: 10-21%2012:31
end	month-day%20hour:minute	search time ends, %20 is the html character code of space, ex: 10-21%2012:31

Example:

Export daily face detection statistics records from Jan. 1 to Dec. 31

http://myserver/cgi/admin/va_trigger.cgi?action=export&mode=fd&period=2&begin

=1-1%200:0&end=12-31%2023:59

return:

Succeed	HTTP/1.1 200 OK Content-Type: text/csv Content-Length: 40 Connection: keep-alive Content-Disposition: attachment; filename=fd_event_log.csv Set-Cookie: fileDownload=true; path=/ 2014-02-12 13:58,3 2014-02-12 13:59,3