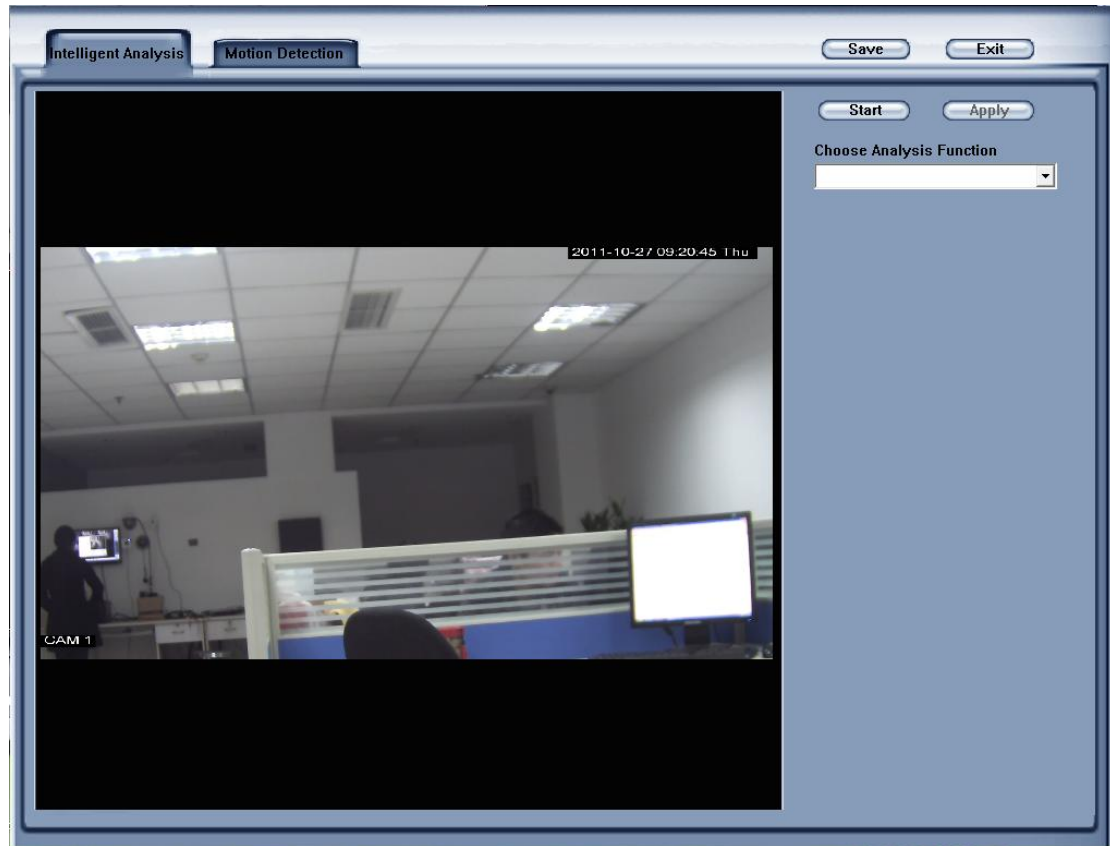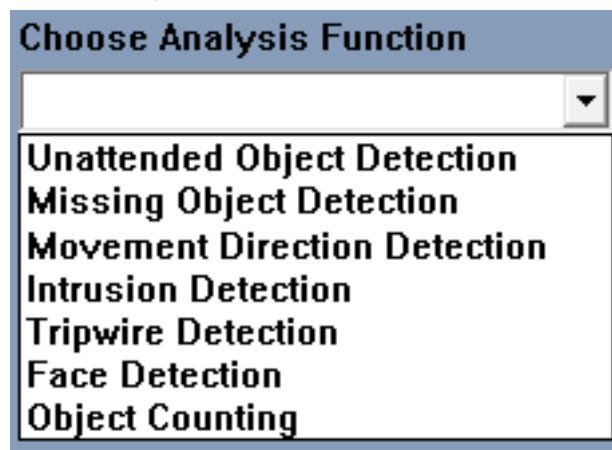# Intelligent Video Analysis

Notes: You can use the Intelligent Video Analysis Function only when you have capture cards /DG series IP Devices or USB Dongle bought from us.
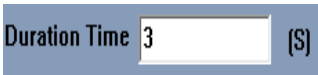

There are 7 intelligent video analysis functions:

Notes: You can only select Intelligent Video Analysis Function from the drop-down list.

Parameters Introduction:

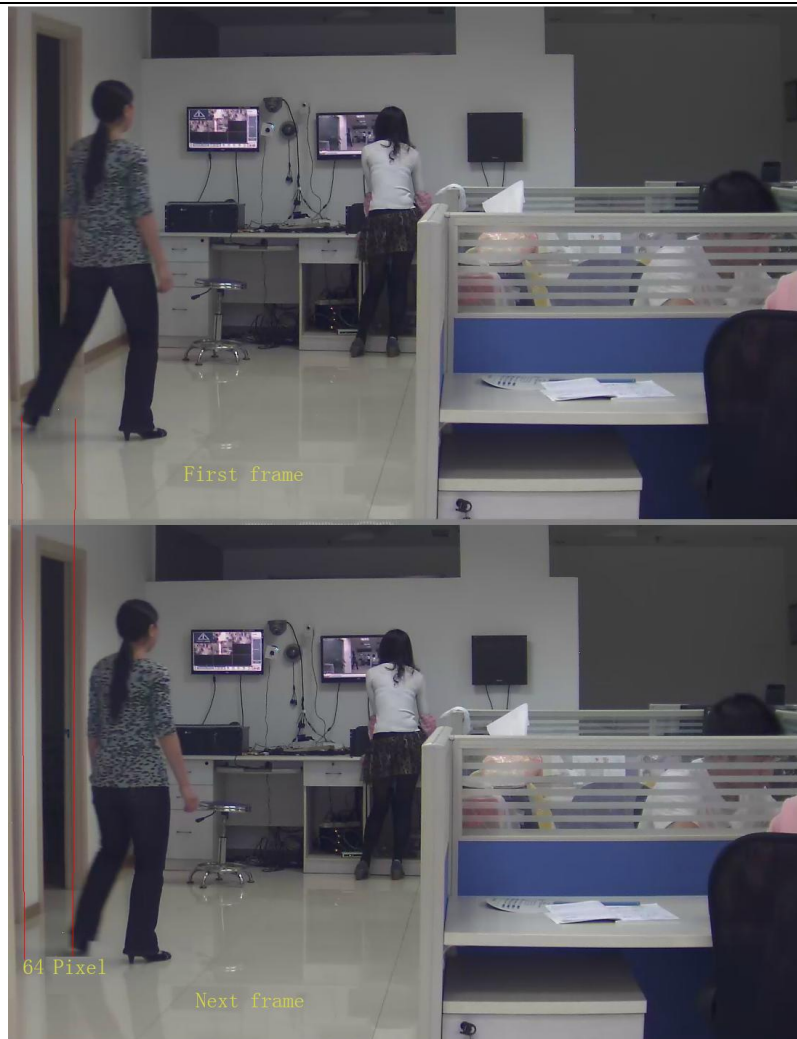|		
1	Image Scale ———————————— 1	The image scale bar is used to adjust the resolution of the image for video analysis. The lower the value, the more close to the original image resolution. For example: the resolution of the source video is 1024*768，you set the image scale as 2, then the length and width will be shrunk to 1/2 of original resolution, about 512*384 for detection. It is 1 by default.
2	Sensitivity ———————————— 10	The sensitivity bar is used to adjust the sensitivity of the area you selected. The lower the value, the more sensitive the system. It is 10 by default.
3	Volume Ratio ———————————— 10%	The volume ratio bar is used to set the minimum acreage of detection zone to trigger alarm. Its unit is percent, if the acreage of missing or unattended area exceeds the setting value of the areas you selected, system will trigger alarm. The default value is 10%
4	Duration Time 3 (S)	This option allows you to specify the duration time of an object missing or unattended to invoke the detection
5	Minimum Size 100 (…)	The minimum area can be detected. Click the (…) button, then use the mouse to outline the minimum detection region on the screen. Click the (…) button again to get the minimum detection region.
6	Maximum Size 300000 (…)	The maximum area can be detected. The opposite settings as minimum size setting.
7	Angle 8 (…)	The direction you have set. Click the (…) button, then use the mouse to outline the arrow on the screen, the arrow indicates direction. Click the (…) button again to get the direction value. Notes: Only the last draw direction is available.
8	Pixel Offset 3 (3-30)	The Pixel offset value, Its unit is piexl, allow a certain of object movement offset. For example you set the value 3, if one object moves in a range of 3 pixels, it will be seen as didn't move, on the opposite it will be seen as moved.

9	Mode OutDoor ▾	If the view of camera is outside door, please set the mode as OutDoor, on the opposite please set the mode as InDoor.
10	Fast Movement Speed Slow	The Movement Speed value bar is used to adjust the objects' movement speed. If the detected objects move fast, please set the value faster. On the opposite please set the value slower.
11	☐ Enabled Check Schedule ⬚	Enable the software to start Intelligent Video Analysis function. Click the ⬚ button to set the time schedule for intelligent video analysis function.
12	☐ Trigger Output ⬚	Enable the software to trigger an alarm output. Click the ⬚ button to assign output device.
13	☐ Invoke Alarm ⬚	Enable the software to play a .wav audio file when alarm occurred. Click the ⬚ button to set a .wav sound file.
14	☐ Display the detection zone in live image	You can display the detection zone in live image by checking "V" in ☑

■ Unattended Object Detection

To detect any unattended objects within the camera view, following the steps below:

1. Click **Choose Analysis Function** and select Unattended Object Detection from the drop-down list

2. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the **Delete Detection Zone** button.

4. Setup the suitable Image Scale, Sensitivity, Volume Ratio, Duration Time, it is suggested to keep the default value.(Reference: Parameters Introduction)

5. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

6. Click the **Start** button to start the function.

7. If you have modified the parameters, please click the **Apply** button to save them.

8. While you click the Start or Apply button, the system will automatically capture the image for reference, you can see the image by clicking the **Show Reference Image** button.

When any unattended object appears and remains stationary for the duration time, a warning message will appear and its location will be highlighted with red box in live video, the selected alarm audio and output will be activated, and the event will be recorded as unattended object in system Log for later retrieval

Application: Applied in airport, oil filed and other high-risk fields.
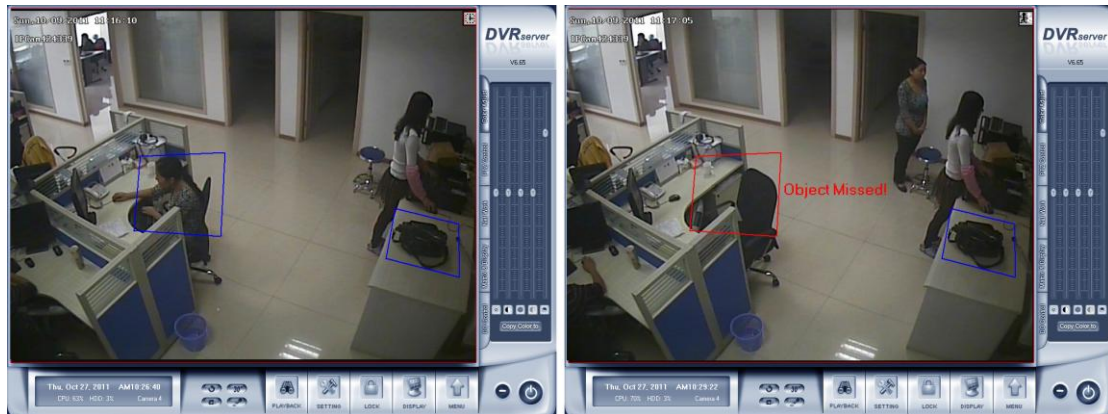
■ Missing Object Detection

To detect any missing objects within the camera view, follow the steps below:

1. Click **Choose Analysis Function** and select Missing Object Detection from the drop-down list

2. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the **Delete Detection Zone** button.

4. Setup the suitable Image Scale, Sensitivity, Volume Ratio, Duration Time, it is suggested to keep the default value.(Reference: Parameters Introduction)

5. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

6. Click the **Start** button to start the function.

7. If you have modified the parameters, please click the **Apply** button to save them.

8. While you click the Start or Apply button, the system will automatically capture the image for reference, you can see the image by clicking the **Show Reference Image** button. When any object, which you have outlined the regions for, disappears from the camera view for 3 seconds, a warning message will appear and its location will be highlighted with red box in the live video, the selected alarm and output will be activated, and the event will be recorded as missing object in system Log for later retrieval

Application: Applied in the museum, the exhibition and other places which have the valuable things.

■ Movement Direction Detection

To detect movement direction within the camera view, follow the steps below:

1. Click `Choose Analysis Function` and select Movement Direction Detection from the drop-down list

2. Click the `Start Draw Detection Zone` button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the `Delete Detection Zone` button.

4.Setup the suitable Image Scale, Sensitivity, Volume Ratio, Duration Time, it is suggested to keep the default value.(Reference: Parameters Introduction)

5. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

6. Click the `Start` button to start the function.

7. If you have modified the parameters, please click the `Apply` button to save them.

when any object appear in the detection zone, move reverse direction of the arrow you have draw, its location will be highlighted with red box in the live video, the selected alarm audio and output will be activated, and the event will be recorded as movement direction alarm in system Log for later retrieval

Notes: In live image, the Red box meaning there are alarm objects in detection zone, green box meaning there are objects in detection zone.

Application: Applied in road and other places which allow one-way movement.

■ Intrusion Detection

To detect instrusion within the camera view, follow the steps below:

1. Click **Choose Analysis Function** and select Intrusion Detection from the drop-down list

2. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the **Delete Detection Zone** button.

4.Setup the suitable Image Scale, Sensitivity, Volume Ratio, Duration Time, it is suggested to keep the default value.(Reference: Parameters Introduction)

5. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

6. Click the **Start** button to start the function.

7. If you have modified the parameters, please click the **Apply** button to save them.

When any object intrude the detection zone you have draw, its location will be highlighted with red box in the live video, the selected alarm audio and output will be activated, and the event will be recorded as Intrusion detection alarm in system Log for later retrieval

Application: Applied in the heavily guarded military centers or bank, the museum and other places which need prevention appear suspicious characters.

◼ Tripwire Detection

To detect tripwire within the camera view, follow the steps below:

1. Click **Choose Analysis Function** and select Intrusion Detection from the drop-down list

2. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the **Delete Detection Zone** button.

4. Click the **Draw Tripwire** button draw tripwire, only the last draw tripwire is available.

5. Click the **Angle 8** ... button, then use the mouse to outline the arrow on the screen, the arrow indicates direction. Click the ... button again to get the direction value. Only the last draw direction is available.

6. Setup the suitable image scale, sensitivity, minimum size, maximum size, angle, minimum offset. It is suggested to keep the default value.(Reference: Parameters Introduction)

7. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

8. Click the **Start** button to start the function.

9. If you have modified the parameters, please click the **Apply** button to save them.

When any object step on the tripwire and move reverse direction of the arrow you have draw, its location will be highlighted with red box in the live video, the selected alarm audio and output will be activated, and the event will be recorded as tripwire detection alarm in

system Log for later retrieval

Application: Applied in prevention through border, fence, through the subway route and other places

■ Face Detection

To detect face within the camera view, follow the steps below:

1. Click **Choose Analysis Function** and select Face Detection from the drop-down list

2. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the **Delete Detection Zone** button.

4.Setup the suitable Image Scale, Sensitivity, Volume Ratio, Duration Time, it is suggested to keep the default value.(Reference: Parameters Introduction)

5. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

6. Click the **Start** button to start the function.

7. If you have modified the parameters, please click the **Apply** button to save them.

When people appear in the detection zone, the face detection works and detects and records human faces. Then the thumbnail images will appear on the live image.

Note:

1. Face contour must be clearly seen, especially the eyes.

2. If you wearing sunglasses or black box glasses, it may influnce face detection accuracy.

3. If you look at the camera like this: , then the software can recognizes the

face. But if you look at an angle, like 45 degrees   then the software can not recognizes the face.

Application: Applied in the entrance guard system, bank and other places which need record the people's faces.

■ Object Counting

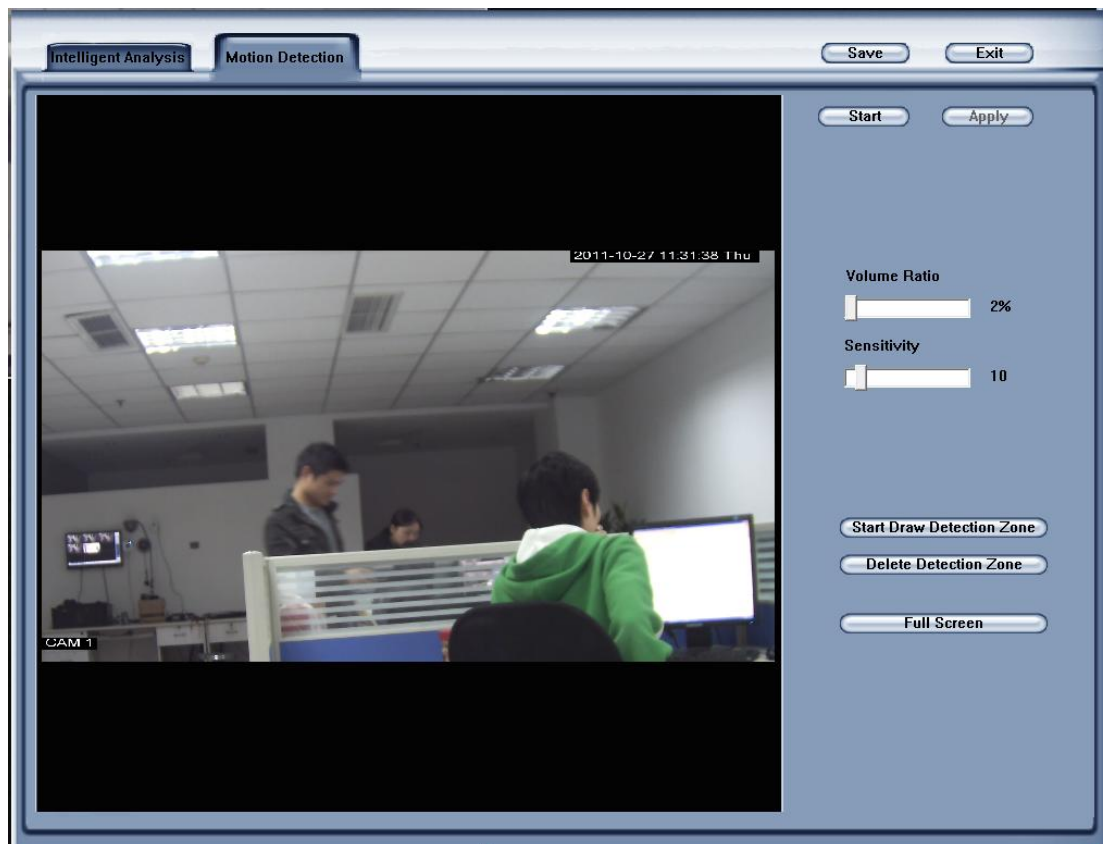To count object within the camera view, follow the steps below:

1. Click **Choose Analysis Function** and select Object Counting from the drop-down list

2. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

3. You can delete the detection zone by clicking the **Delete Detection Zone** button.

4. Click the **Draw Tripwire** button draw tripwire, only the last draw tripwire is available.

5. Click the **Angle 8** button, then use the mouse to outline the arrow on the screen, the arrow indicates direction. Click the button again to get the direction value. Only the last draw direction is available.

6. Setup the suitable image scale, sensitivity, minimum size, maximum size, angle, minimum offset. It is suggested to keep the default value. (Reference: Parameters Introduction)

7. Choose Trigger Output, Invoke Alarm for the application. (Reference: Parameters Introduction)

8. Click the **Start** button to start the function.

9. If you have modified the parameters, please click the **Apply** button to save them.

The object counting provides bi-directional counting of objects under the surveillance area. The arrow indicates direction, when an object appears in the detection zone, step on the tripwire and moves along the direction of the arrow, it will be counted as 1 out, when an
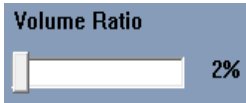
object appears in the detection zone, step on the tripwire and moves reverse direction of the arrow, it will be counted as 1 in.

Application: Applied in the market, the highway and other places which need monitoring flows.

■ Motion Detection

Parameters Introduction:

1	**Volume Ratio** 2%	The volume ratio bar is used to set the minimum acreage of detection zone to trigger alarm. Its unit is percent, if the acreage of motion area exceeds the setting value of the areas you selected, system will trigger alarm. The default value is 2%.
2	**Sensitivity** 10	The sensitivity value bar is used to adjust the sensitivity of the area you selected. The lower the value the more sensitive the system. The default value is 10

To detect any motion detection within the camera view, please follow the steps below:

1. Click the **Start Draw Detection Zone** button then single-left-click on the video to start drawing the detection area, you should left-click mouse at each corner, and single-right-click to stop drawing, you can draw any irregular zone as you like and you can draw several detection zones.

2. You can delete the detection zone by clicking the **Delete Detection Zone** button.

3. You can click the **Full Screen** button to choose the full screen as the detection zone.

4. Setup the suitable sensitivity, volume ratio, it is suggested to keep the default value. (Reference: Parameters Introduction)
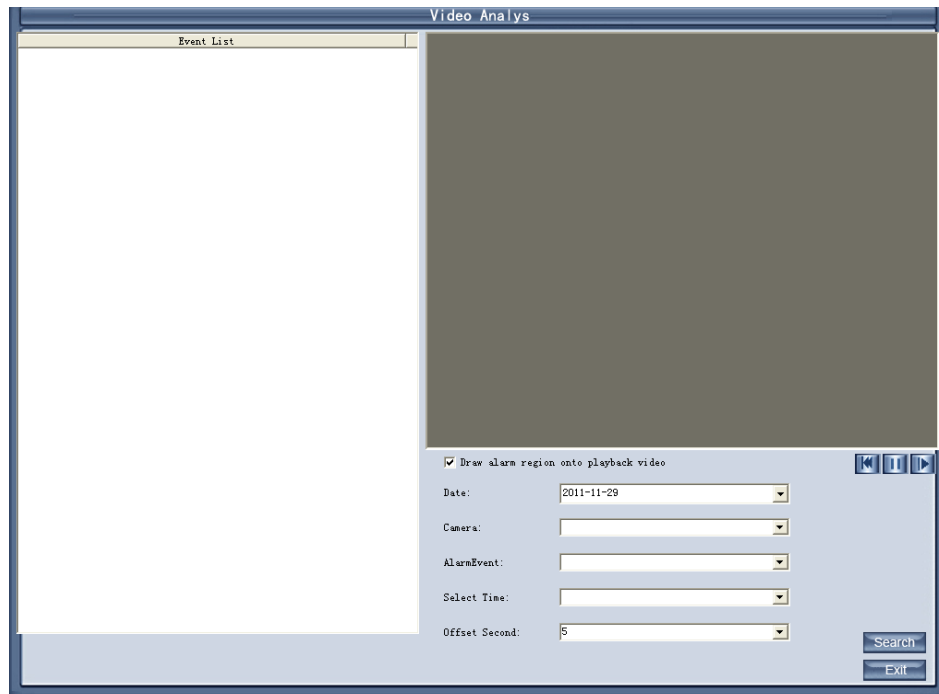
5. Click the **Start** button to start monitoring for the application.

6. If you have modified the parameters, you shall click the **Apply** button to save them.
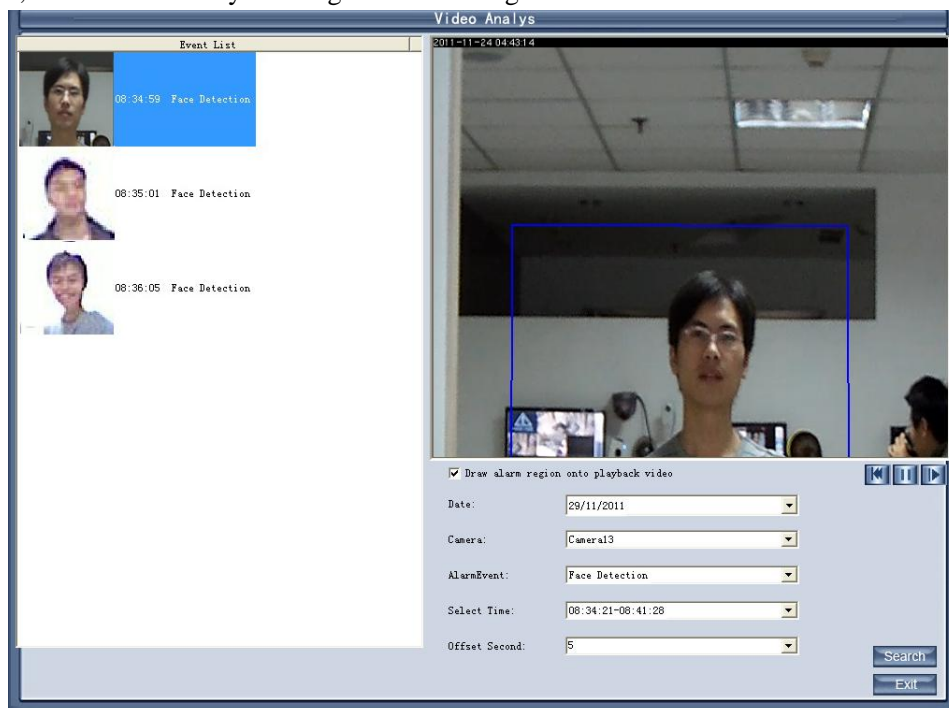
Notes: Only IP Camera can use Motion Detection.

Intelligent Video Analysis Playback

Right click mouse and select Video Analysis Playback, you will go into Video Analysis Playback interface:
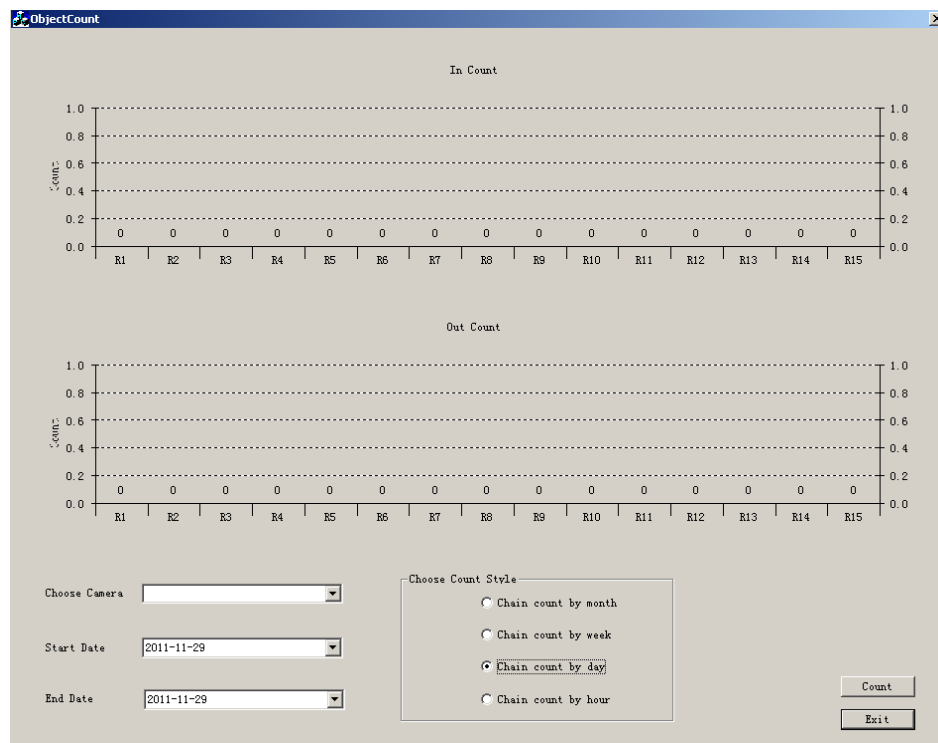

Select the camera you want to search, then select alarm event (not include object counting), and the date, then click search you will get the following interface:

The alarm information will be listed on the left, when you double click on one message, the corresponding record will be played on the right.

Object Counting Analysis

Right click mouse and select Object Counting Analysis, you will go into Object Counting Analysis interface:

Select the camera you want to count, select the start date, end date and choose count style, then click count you will get the following interface:

The data of in and out will be list clearly by hour, by day, by week or by month.