Honeywell

Video Analytics

Version 4

Getting Started Guide

Document 800-00923 – Rev E – 09/10

Revisions

Issue	Date	Revisions
A	10/07	New document
B	11/07	Document p/n changed to 800-00923.
C	09/08	Added content for HVA V4.6 software release.
D	09/09	Added content for HVA V4.7 software release.
E	09/10	Replaced inside/outside zones by counting line for people counting.

Contents

About This Document

Honeywell Video Analytics is an intelligent software system that can be added to your existing CCTV system to automate the daily surveillance tasks and collect relevant information from a large amount of video data. Honeywell Video Analytics:

- Detects and tracks moving objects in the video
- Detects user-defined events
- Triggers real-time alarms
- Provides indexing and retrieval capabilities for specific events or objects detected and stored in the database
- Provides statistics reporting on any event over camera groups selected
- Provides central alarm storage and alarm management mechanism

This document is intended for system integrators or engineers and covers installing the software package and getting the system up and running.

Software License

To use this release of Honeywell Video Analytics software, you must agree to the Honeywell End User License Agreement. The full license agreement is on your installation CD.

Operating Conditions

Honeywell Video Analytics software is intended for use in typical indoor or outdoor environments where stationary security cameras are placed. To ensure the correct hardware configuration — specifically, camera placement and setup — and optimal performance of the software, please refer to the *Video Analytics V4 Reference Guide* on your installation CD.

Installation

Please ensure that you install all hardware components before installing the Video Analytics software.

Caution If your system includes 3rd party hardware, install these components and their drivers before installing the Video Analytics software.

Installing the System Hardware

Figure 1 shows a typical Video Analytics system. *Table 1* describes the components.

Figure 1 System Components

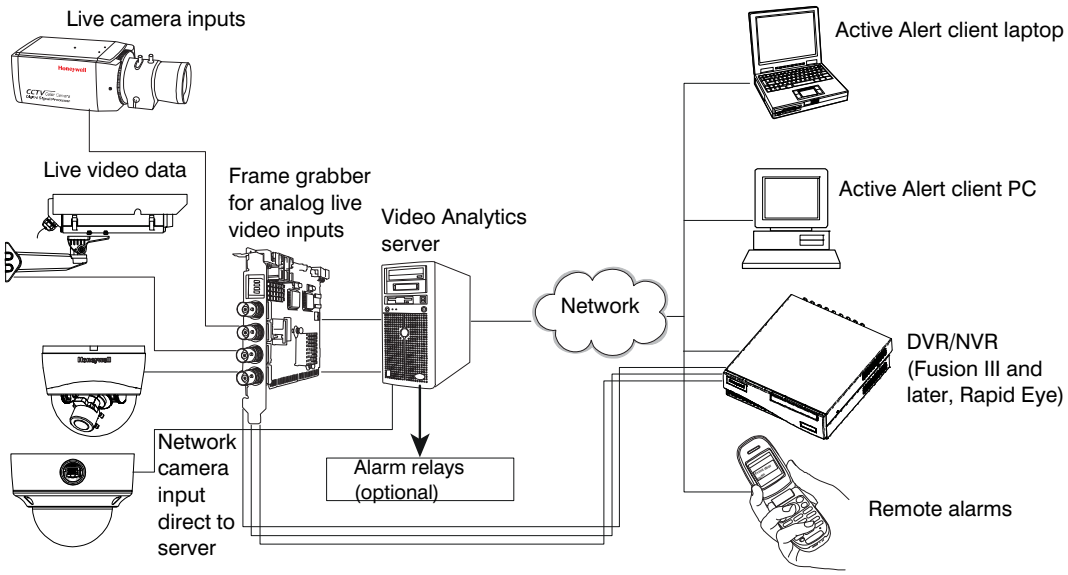


Table 1 System Component Description

Hardware	Description
Camera inputs	Video Analytics software takes video inputs from various types of live camera inputs, including: • Analog video (NTSC, PAL) through a frame grabber device • IP network video from network cameras feeds directly to the server. Network cameras must be set to stream MJPEG video at a minimum of 15 fps per stream. **Caution** To ensure optimal performance of your Video Analytics software, please follow the camera placement and setup sections in the *Video Analytics V4 Reference Guide*.
Frame grabber (optional)	A frame grabber is required only for use with analog (NTSC, PAL) live video inputs. Insert the frame grabber cards to the appropriate PCI slots on the server, then install the MultiCam driver. See *Installing a Euresys MultiCam 6.4.2.634 Driver*, *page 8*.
Video Analytics server	The Video Analytics server — 8, 16, and 24 Channel models— receives the video in real time, extracts relevant information, and stores that metadata. All server models require Windows® XP Pro with Service Pack 2 or Windows Server 2003 Standard. The other system requirements differ, depending on the model. For a complete server system requirements list, please refer to the to the *Video Analytics V4 Installation Guide*.
Alarm Management Server (optional)	The Alarm Management server is a dedicated server that receives alarms from Video Analytics servers to provide centralized alarm storage and management capability. For complete system requirements, please refer to the *Video Analytics V4 Installation Guide*.
Laptop, PC	The Video Analytics client applications (see *Installing the Video Analytics Software Suite*, page *10*) reside on a Windows-based laptop or personal computer (PC). These applications connect to the Analytics servers (or DVR/NVRs) to perform specific monitoring management and monitoring tasks. The PC must have the following **minimum** system requirements (for an 8-channel analytics server): • Windows® XP Pro with Service Pack 2 or Windows Server 2003 R2 Standard • Dual Core Intel® Pentium® 935 processor (3.2 GHz or higher) or comparable • 1 GB RAM • Video card with 16 MB memory • 100/1000 Ethernet network connection • Audio with speakers
DVR/NVR	For DVR/NVR based systems, video from the live camera inputs is stored on the DVR/NVR running Video Analytics software and is then output to a laptop or PC for viewing, search and retrieval. Refer to the guide that came with your DVR/NVR for system requirements and detailed installation information.
Alarm relay (optional)	An alarm relay board (optional) connected to your system allows the software to trigger the alarm relay output whenever an alarmed event is detected in the corresponding camera view. See *Installing an Add-On Relay Module and Driver (Optional)*, *page 9*. **Note** Only one relay module can be connected to each analytics server.
Note For currently supported hardware information, please refer to the *Video Analytics V4 Installation Guide*.	

Selecting and Placing Cameras

To ensure optimal performance of your system, the camera field of view (FOV) is one of the first key decisions during setup and installation. For your system to properly monitor the activities of each individual person or object to determine if an event has occurred, you must carefully consider the type of camera, the lens, where the camera is placed, and where the lens is pointing.

In addition, the camera FOV must match the operating conditions expected by the Video Analytics software.

Proper lighting conditions are also critical. For optimal performance, take into account the lighting conditions of both inside and outside environments when selecting the proper camera. For example, an auto-gain camera with a wide dynamic range may improve the overall image for a camera aimed at a window that experiences periods of direct sunlight.

Operating Conditions

A conventional video security system depends on knowledge of several operating conditions. To ensure that your system performs its intended automatic surveillance tasks, it is important that the operating conditions described in *Table 2* are met.

Table 2 Operating Conditions

Condition	Explanation
Occlusion level	No object is completely hidden from view by another object in the scene. In more specific terms: total occlusion of an object occurs (in a typical situation) less than 10% of the time, for less than 5 seconds duration. Also, the average occlusion amount of a single object should not exceed 60% of its size.
Traffic amount	The scene involves low to medium traffic (that is, less than 30% of the field of view coverage).
Object size	Within the camera FOV, moving objects (normally people or vehicles) appear to have medium size in the image. The minimum object size requirement is 18 pixels for the software to detect and track the object. The horizontal or vertical object dimension range should be 5% ~ 80% of the image width or height, to ensure a continuous track of the object's movement as it moves around in the scene. For best performance, object height range should be 20% ~ 40% of the FOV height.
Object speed or duration	To be detected, an object must appear for at least 10 consecutive frames of the video input. Also, the object must stay in the camera view for at least 2 seconds. If an object appears to move too fast in the image for too short a time, try placing your camera further away, or use a wider-angle lens to widen the FOV. In people counting (overhead camera views), the required duration is 1 second.
Lighting condition or contrast	When a camera is installed outdoors or in a room lit by a large amount of outdoor lighting (for example, a loading dock or a green house), lighting conditions can vary considerably throughout the day. Use a camera with auto-gain capability to ensure sufficient image contrast. Be aware that even with an auto-gain camera, the image may still not have sufficient contrast for the software to detect objects within the FOV. For low light conditions, a minimum of 2 lux of illumination is required.

Table 2 Operating Conditions

Condition	Explanation
System load	Typical load — The server processing power is designed to meet different levels of activity in each camera at different times of day. For example, 10 ~ 20 objects per minute for a maximum of 16 hours in a 24 hour period and 1~3 objects per minute for the remaining 8 hours. Peak load — The server processing power is designed to handle extremely busy scenes where the object traffic may be 90~120 objects per minute for 4 or 5 hours in a 24 hour period. The rest of the time should be average or limited traffic through the FOV. If your system experiences peak needs most of the time, you may need to increase the server disk space to provide additional storage. Please check with Honeywell Sales Support (HVSsupport@honeywell.com). Additional contact information is available on the back cover of this document.

Installing a Euresys MultiCam 6.4.2.634 Driver

This section assumes you are using the Honeywell recommended and supported Picolo Tetra or Picolo Alert frame grabbers. To install a Euresys™ MultiCam driver 6.4.2.634 for Windows:

1. Uninstall any previous version of MultiCam drivers (**Start ➤ Control Panel ➤ Add or Remove Programs**).
2. On the Video Analytics software installation CD, click **Euresys MultiCam 6.4.2.634 Driver**.
3. When the installation is complete, remove the CD, then click **Yes** to restart your computer. After it reboots, click **Finish**.
4. If you see **Found New Hardware** dialogs pop up, select **Yes, this time only** to have Windows search for the software and install it automatically. You may need to repeat this step multiple times as there may be multiple frame grabbers with multiple inputs on the system.
5. Verify that the frame grabbers are working properly:
   a. Launch the MultiCam Studio application (**Start ➤ All Programs ➤ Euresys MultiCam ➤ MultiCam Studio**).
   b. Click **Create a new source** on the toolbar.
   c. Select: **Standard camera operated with Picolo series**
      NTSC or **PAL**
      RGB16 Color Format
      A frame grabber from the list
      Mosaic
   d. Click **Finish**.
6. A series of windows open. Click **Set all sources active**.
7. Verify that all video output channels (VID1-8) connected to cameras show video.

VID1-8 assumes you are using an 8-channel server and the first 8 inputs are connected to live cameras. Channels VID9-16 and any channels with no camera input display the message `NO SIGNAL`.

Installing an Add-On Relay Module and Driver (Optional)

To provide relay output (Form C) when an alarm occurs, install an MCC InstaCal driver first, then physically plug the relay board into the Analytics server.

1. Uninstall any InstaCal driver prior to V5.82 (**Start ➤ Control Panel ➤ Add or Remove Programs**).
2. If required, search your system to ensure that any previous versions of *cbw32.dll* are removed.
3. On the Video Analytics software installation CD, click **MCC InstCal 5.82 Driver**.
4. When the installation is complete, remove the CD, then click **Yes** to restart your computer. After it reboots, click **Finish**.

After installing the driver:

1. Plug the MCC board into the appropriate slot on the computer, then reboot to allow Windows to find the new hardware and link to its driver.
2. Run InstaCal (**Start ➤ All Programs ➤ MCC)** once to generate the *CB.CFG* ***configuration file on the system.***
3. Launch InstaCal and verify that the relay board is working properly:
   a. Verify that the relay board appears in the PC Board List.
   b. Select **Test ➤ Digital**.
   c. On the Relay Noise Test tab, click **Test** for the selected relay. You should hear a clicking sound.
   d. Repeat for each relay on the board, then click **OK**.

Installing the NTP Service (Recommended)

For optimal performance and ease of operation, Honeywell recommends that you synchronize the clocks on all Video Analytics servers, the alarm management server, and client PCs within your system. This ensures that:

- All the analytics events and alarms are based on the same clock, and that they arrive at the alarm management server.
- The client PC clocks are not out of sync with the server that they are connecting to.
- The HTTP connection does not get rejected by the server.

For details on how to install the NTP software included on your installation CD, please refer to *Honeywell Video Analytics V4 Installation Guide* (*Appendix D*).

Installing the Video Analytics Software Suite

Only after you finish installing all the hardware, install the Video Analytics software. *Table 3* describes the five client applications included in the software suite.

Table 3 Client Applications in Video Analytics Software Suite

Application	Allows you to …
Configuration Tool	Configure specific types of events or alarms for the system to detect in each camera view.
Live Monitoring Station	View the live processing results of moving objects in the camera view that are identified and tracked and real-time events that are reported from the connected servers. See and hear suspicious events and alarms as they occur.
Forensics Tool	Retrieve relevant metadata from the Analytics server of detected objects and events based on user-defined query or the alarm video from DVR/NVR database. **Note** Retrieval of full alarm video is only available on DVR/NVR integrated systems (for example, Video Analytics on Fusion III DVR).
Reporting Tool	Generate statistics reports for any event detected in the system, including counting data as well as surveillance event types. You can configure the reporting template and set up scheduled e-mail reporting.
Alarm Management	The Alarm Management system allows a security operator to monitor real-time alarms at a central station from multiple Video Analytics servers.
Alarm Watch	The Alarm Watch module provides additional alarm delivery mechanisms, including e-mail alarms, relay outputs, and alarm key frame monitoring using Alarm Watch Station GUI client from a large number of Analytics servers.

These client applications can be launched either from an Analytics server or from a PC or laptop that can access the server (or DVR/NVR) through a TCP connection.

License Keys

HVA software V4.6 supports software license key strings only. It allows mix and match of different product packages on a single server. For example, a 16-channel analytics server can be licensed to run 8 channels of Active Alert Premium and 8 channels of Smart Impressions. See *Acquiring a License Key*, page *14*.

If you are upgrading from an earlier version of HVA software that included a license key dongle (USB device), during the V4.6 installation, your dongle license will automatically be transferred to a license key string. After the license transfer, your dongle will be disabled and can no longer be used. See *Upgrading a Dongle License to a License Key String*, page *12*.

Preparing for the Installation

If this is a new installation, please proceed to *Starting the Installation Program*, page *12*.

Upgrading from a Previous Version

If you are performing a software upgrade, you may need to first uninstall the previous version. *Table 4* lists the various upgrade scenarios.

Table 4 Software Upgrade Scenarios

Upgrade		
From a Previous HVA Package	**To a V4.6/V4.7 Package**	**Requires First Uninstalling Previous Version**
Honeywell Video Analytics — Client	Full Package	✓ Yes, see *Uninstalling Video Analytics Suite*, page *12*.
Honeywell Video Analytics — Client	Client Only	✘ No. Proceed to *Starting the Installation Program*, page *12*.
Honeywell Video Analytics — Server	Full Package	✘ No. Proceed to *Starting the Installation Program*, page *12*. If the previous version was a license key dongle installation, the dongle license will be transferred to a license key string (see *Upgrading a Dongle License to a License Key String*, page *12*). Keep the dongle handy (or ensure it is plugged in on the server) so that you can complete the upgrade.
Honeywell Video Analytics — Server	Client Only	✓ Yes, see *Uninstalling Video Analytics Suite*, page *12*.

Table 4 Software Upgrade Scenarios

Upgrade		
From a Previous HVA Package	**To a V4.6/V4.7 Package**	**Requires First Uninstalling Previous Version**
Honeywell Video Analytics — Server / — Client are both installed on the same machine	Full Package	✓ Yes, uninstall the Honeywell Video Analytics—Client version. See *Uninstalling Video Analytics Suite*, page *12*.
Honeywell Video Analytics — Server/ — Client are both installed on the same machine	Client Only	✓ Yes, uninstall the Honeywell Video Analytics—Server version. See *Uninstalling Video Analytics Suite*, page *12*.
Note When upgrading from HVA V4.6 to V4.7 (Client to Client or Full Package to Full Package), you do not need to uninstall the previous version.		

Uninstalling Video Analytics Suite

There are two methods to uninstall Honeywell Video Analytics Suite from your system:

Uninstall Shortcuts	Windows Add or Remove Programs
a. **Start ➤ All Programs ➤ Video Analytics ➤ Uninstall Honeywell Video Analytics** b. Click **Yes** to start the removal process. c. You must restart your system for the configuration changes to take effect.	a. **Start ➤ Control Panel ➤ Add or Remove Programs** b. Select **Honeywell Video Analytics - Server** (or Honeywell Video Analytics - Client), then click **Remove**. c. Click **Yes**.

Upgrading a Dongle License to a License Key String

1. If you are upgrading from a previous Video Analytics—Server software version that included a license key dongle (USB device), insert your dongle key into a USB port to verify your previous license information.
2. Click **Next>**. Your dongle license automatically transfers to a license key string. After the installation is complete, the dongle device can no longer be used.

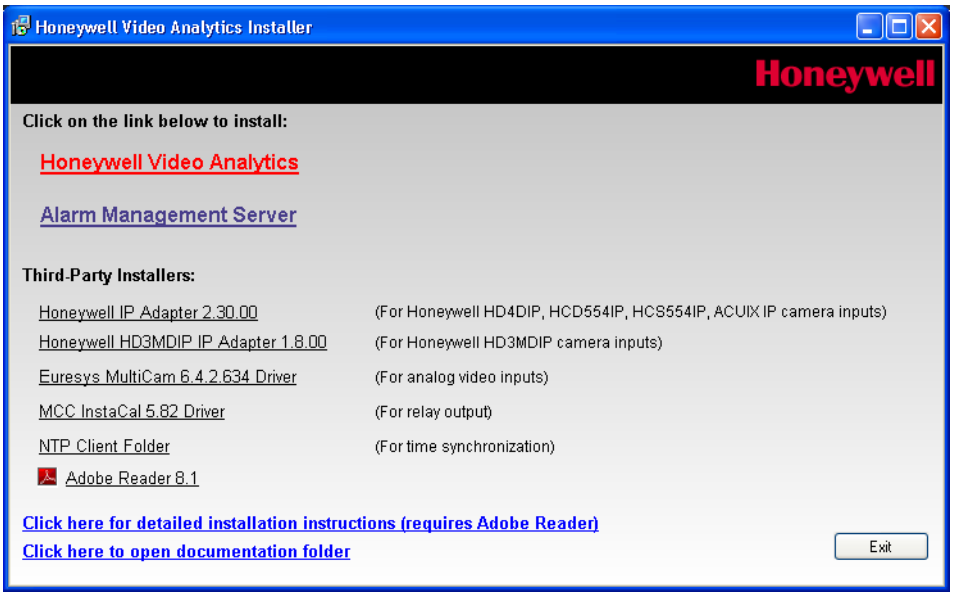
Starting the Installation Program

Note Where the instructions differ between the Video Analytics — Full Package and the Video Analytics — Client Only, the differences are noted where relevant.

1. Insert the installation CD into the CD-ROM drive. The following screen displays.

Figure 2 Video Analytics Installer

Honeywell recommends that you install the software in the order shown.



2. Select the installation option that matches the license you have purchased.

	Full Package	Client Only
3.	Click **Honeywell Video Analytics — Full Package**. This installs the server and client on the same machine.	Click **Honeywell Video Analytics — Client Only**.

4. After accepting the license agreement, follow the InstallShield Wizard prompts.

	Full Package	Client Only
5.	When a Select Destination screen displays, select the number of licensed channels that will be installed on the system, based on the number of licenses purchased. Click **Reset** to accept the default directory or **Change…** to select a different directory. Click **OK**.	When a Destination Folder screen displays, click either **Next>** to accept the default directory or **Change…** to select a different directory.
6.	On the System Settings screen, you may: • Select a new Analytics server Port if the default TCP port number 18081 conflicts with another port used by a different system application. • Select the desired video format, **NTSC** or **PAL**.	Go to *step 7*.

7. On the Summary screen, review your settings, then click:
   - **Install** to continue the installation, or
   - **<Back** to correct any settings before continuing.

	Full Package	Client Only
	You are prompted to set a password for the Administrator to access the Analytics server.	Go to *step 8*.

8. InstallShield Wizard Completed screen displays. Click **Finish**.

	Full Package	Client Only
9.	You must restart your system for the configuration changes to take effect.	Does not require a reboot.

Acquiring a License Key

If you need to obtain a license key to activate the software:

1. Connect to the Analytics server using the Configuration Tool.
2. On the **System Setup tab**, click **Enter License Key**.
3. Copy the Server ID text string and e-mail to HVSsupport@honeywell.com. Honeywell will send you a license key.
4. When you have the license key:
   a. Connect to the Analytics server using the Configuration Tool.

b. Select **Connect to remote server…** from the **File** menu.

c. On the **System Setup tab**, click **Enter License Key**.

d. Type the license key string in the **Please enter License Key:** field.

e. Click **OK**.

f. Click **Send to server** to activate the software.

Installing Alarm Management Server

An Alarm Management Server (AMS) has to be installed on a separate, dedicated server from the Video Analytics server. Please refer to the *Honeywell Video Analytics V4 Installation Guide* for detailed steps on installing an Alarm Management Server.

Setting Up User Accounts

All client applications require a valid user account to log on to the server and perform various tasks. The Live User Configuration is only available on the Video Analytics server. To set up user accounts and permissions:

1. Go to **Start ➤ Honeywell Video Analytics ➤ ActivEye User Configuration**.
2. When prompted, log on as shown:

localhost = server

On first log on, **admin** is the only account present in the system. Type the password you used during the software installation.

3. On the ActivEye User Configuration dialog, click Add to set up new users and permissions.

Installing a Printer

The Reporting Tool client application requires at least one printer on your system:

- Install at least one printer on the server machine to use the Reporting Tool to generate scheduled e-mail reports sent from the server.
- Install at least one printer on the client PC to generate individual reports from the PC.

Note This can be a virtual printer if you only want to generate reports in text, PDF, or HTML.

To install a printer, use the Windows Add Printer Wizard (**Start ➤ Settings ➤ Printers and Faxes ➤ Add a Printer**.

Installing the Honeywell IP Utility

The Honeywell IP Utility allows you to use Honeywell IP cameras with Honeywell Video Analytics software.

1. From the Honeywell Video Analytics Installer, click **Honeywell IP Utility XXX** (see the top option on *Figure 2*).
2. Click **Setup**.
3. At the Welcome screen, click **Next** to start the installation.
4. After **Accept**ing the license agreement terms, follow the Install Wizard prompts to complete the installation.
5. As part of the installation the Install Wizard prompts you for Bonjour installation. Bonjour enables automatic discovery of computers, devices, and services on IP networks, including the Honeywell IP cameras. If Bonjour is not already installed on your system, click **Yes** at the prompt to install the application.
6. After the installation is complete, a shortcut for the Honeywell IP Utility.exe application appears on your PC desktop.

Video Source and Channel Configuration

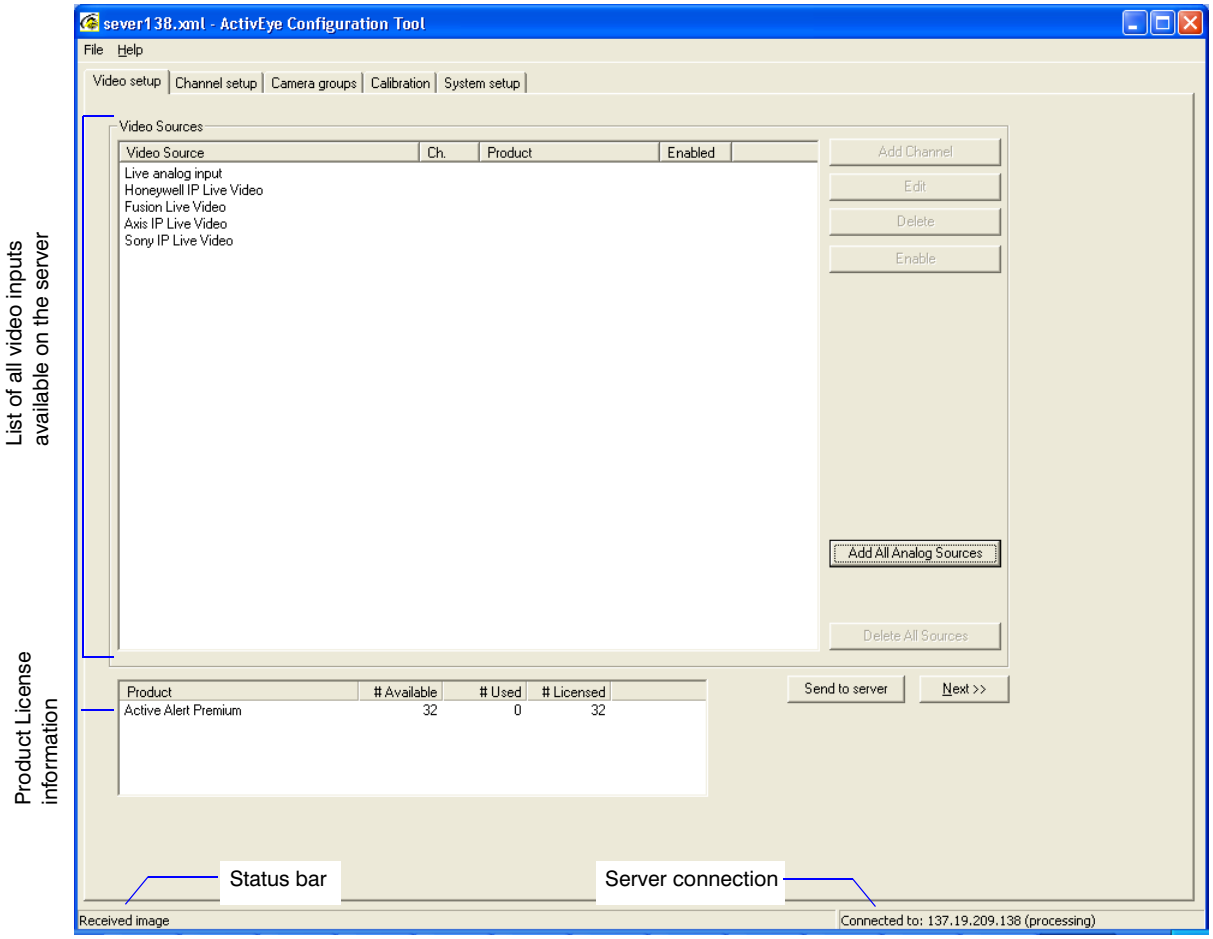
After the system software is installed and user accounts have been established on the server(s), use the Configuration Tool to set up the video sources in your network system.

Note For detailed information, please refer to the *Video Analytics V4 Reference Guide*.

Launching the Configuration Tool

1. Launch the Configuration Tool (**Start ➤ All Programs ➤ Honeywell Video Analytics ➤ ActivEye Configuration Tool**).
2. If prompted to log on (on first logon), type the hostname or IP address of the server, the user name, and the password you used when installing the software. The main Configuration Tool screen appears. All the video inputs discovered by the software are listed.

Figure 3 Configuration Tool - Video Setup



Setting Up the Video Source

On the Video setup tab:

1. Click Add All Analog Sources to add all available analog video sources. You can specify the image size (CIF or QCIF) to apply to every camera input, OR

   Click Add Channel to add an individual video source.

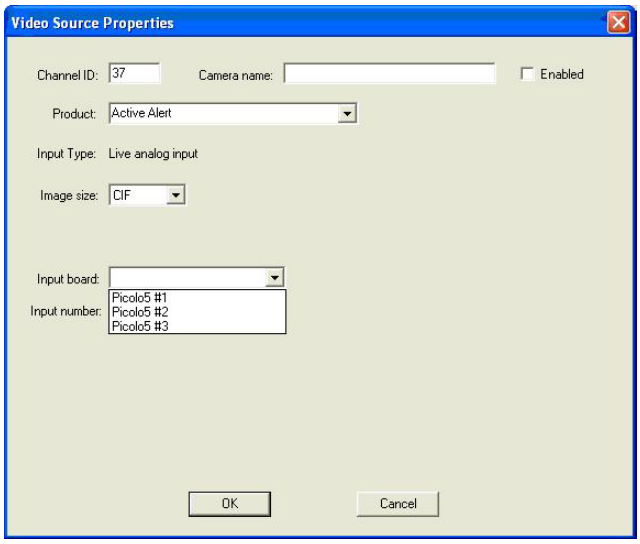
   Select the video source type (live analog input or an IP network camera or video server) and the desired image size.

2. Depending on the video source, other fields on this dialog become available:

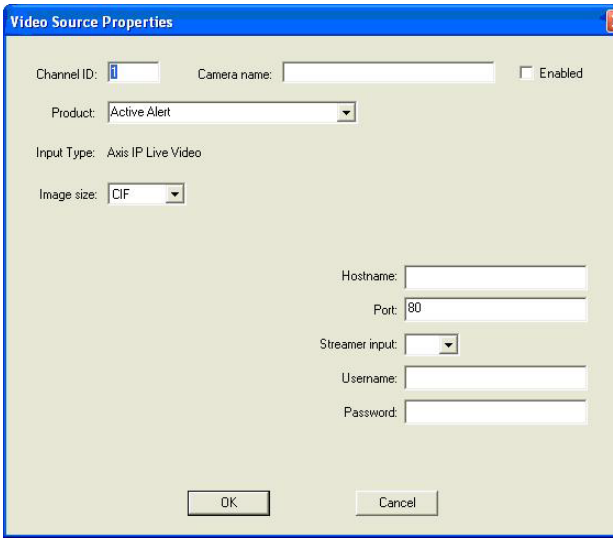
Live analog input	Specify the board number and input number on the frame grabber
Axis IP camera Sony IP Live Video Honeywell IP Live Video Fusion Live Video	Specify the IP address, port number, streamer input, and user name and password

Figure 4 Video Source Properties

Live analog input fields



IP camera fields



3. Click OK.

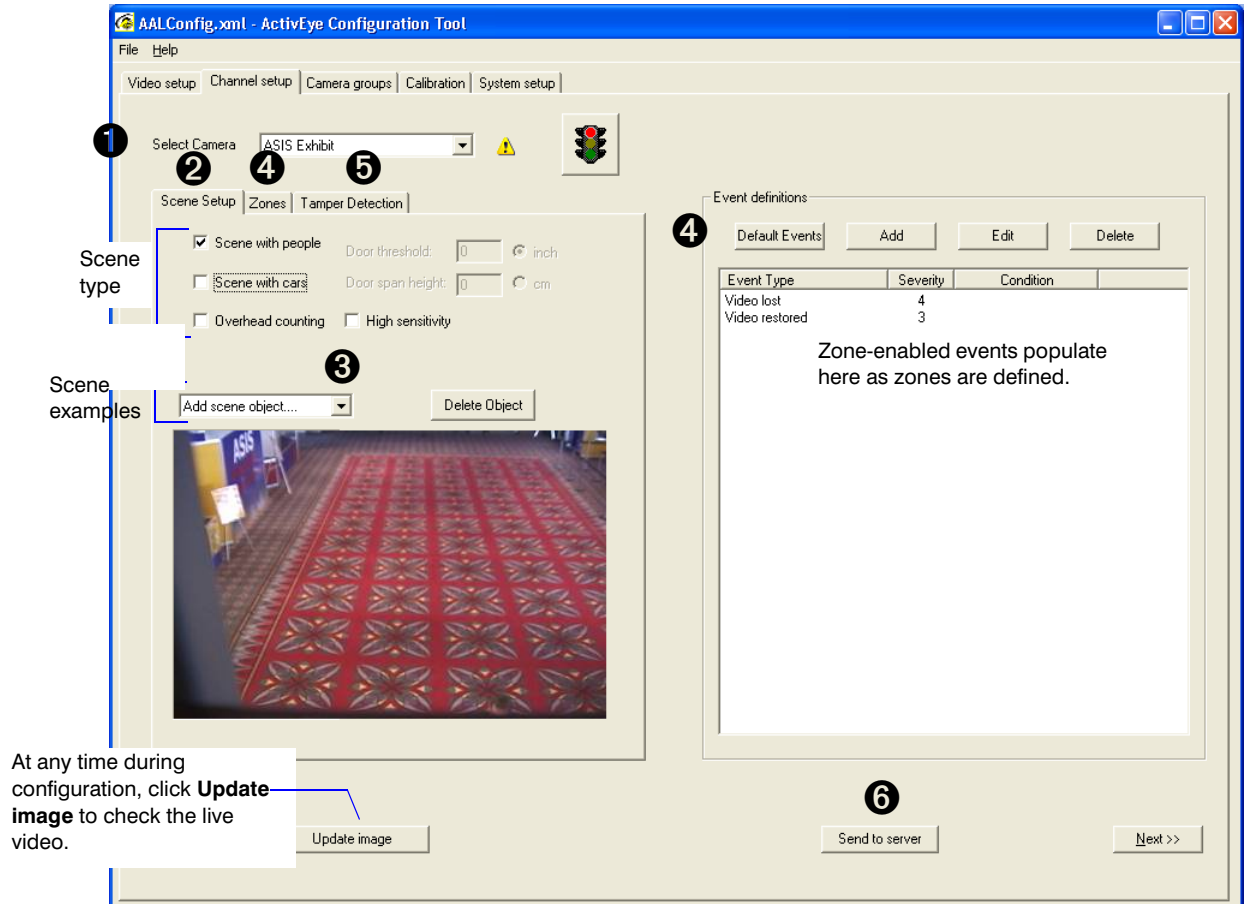
Note For a list of currently supported IP network cameras and video servers, please refer to the *Video Analytics V4 Reference Guide*.

Configuring Each Video Source

For each video source you can set up scenes, zones, and events. The number of camera inputs allowed is controlled by the license you have purchased.

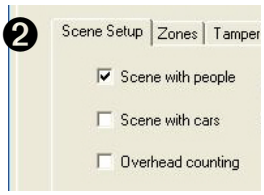
The following instructions cover how to set up the view from one video source. Each camera must be set up individually.

Figure 5 Configuration Tool - Channel Setup



Step 1 Select a Camera to Configure

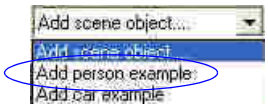
Step 2 Select One or More Scene Type



Select	To do this …
Scene with people	Monitor human activities
Scene with cars	Monitor vehicular activities
Overhead counting	Count people in an overhead camera view. Selecting this type automatically also selects Scene with people and de-selects Scene with cars.

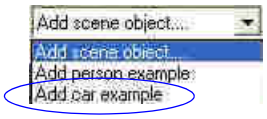
Step 3 Define How the Software Tracks Objects in the Scene

Scene with people — add 2 *average* person examples

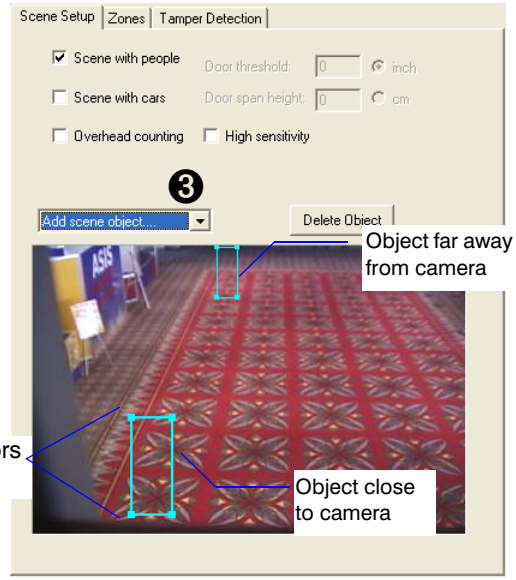


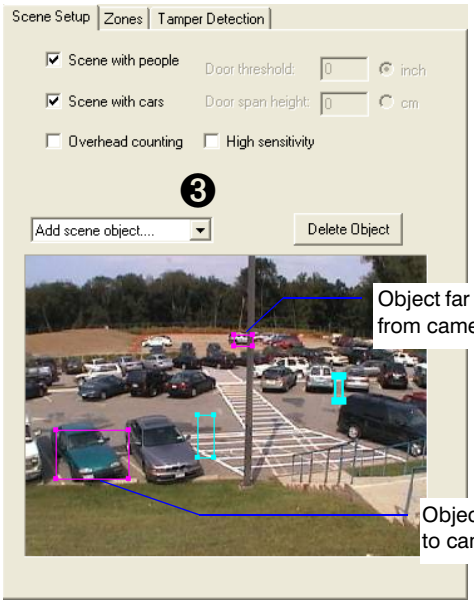
1. With the cursor inside the rectangle, press and hold the left mouse button to move the blue rectangle to the desired location, then release the mouse button.
2. Set the *size* of the person. With the cursor on one anchor, press and hold the left mouse button to move the anchor.
3. Repeat for at least 2 *person examples.*

Scene with cars — add 2 *average* car examples



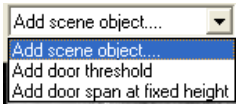
1. With the cursor inside the rectangle, press and hold the left mouse button to move the pink rectangle to the desired location, then release the mouse button.
2. Set the *size* of the vehicle. With the cursor on one anchor, press and hold the left mouse button to move the anchor.
3. Repeat for at least 2 *vehicle examples*. Place the examples far apart vertically.



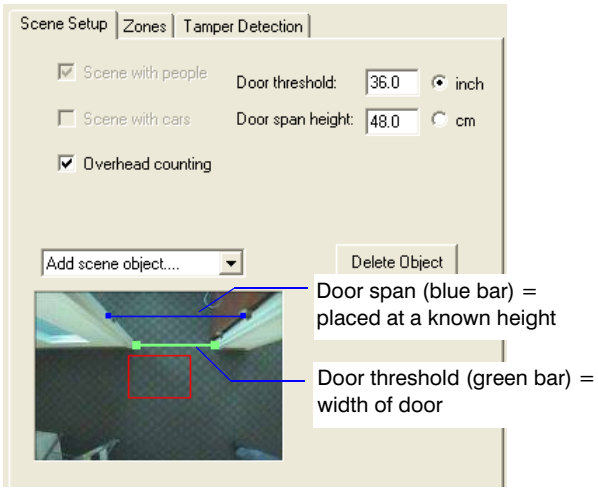


Overhead counting — set up door threshold (width) and door span (height)

1. It is important to position the overhead camera correctly. Refer to the *Overhead Counting* section in the *Video Analytics V4 Reference Guide* for detailed instructions.
2. Place a 2 ft. x 2 ft. sheet of paper on the floor directly under the camera.
3. Select 

. Make sure the paper on the floor is directly under the camera.
4. Verify the camera field of view (FOV) exceeds the door width by 4 ft. so that people passing through the door from all possible directions are tracked.
5. 

6. Configure exactly one door threshold and one door span. With your cursor on a line endpoint, drag the point to the desired position.
7. Type the actual length of the door threshold and the height of the horizontal door span in the fields shown.



Step 4 Set Up Zones and Associate Zones to Events

This enables the system to detect, track, and collect the required information. The available options in the Zone drop-down list depends on your product package.

Note To ensure that your system functions properly, do not overlap inside zones with outside zones, and vice versa.

All other zones can be completely separate, partially overlapping, or fully overlapping.

There are four zone shapes:

Shapes	Zone Type
Quadrilateral	Exclusion, object-block, restricted, fence, inside/outside, car lane, counter, detection, asset, handicapped, shoulder, target
Trespass lines	Trespass — to mark a virtual territory + an arrow to indicate allowed traffic direction Theft — arrow indicates direction + line segment indicates the distance of the arm reach into the shelf
Quadrilateral + 2 directional edges	Direction — to define the allowed traffic direction
2 Quadrilaterals + common edge	U-turn — 2 quadrilaterals define zone + arrows to indicate starting direction

Scene with people / Scene with cars —

1. On the Zones tab, set as many zones as needed to ensure correct tracking of people and/or objects.

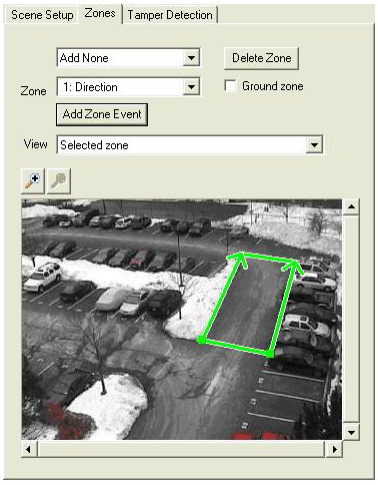
   As you add a zone, zone-enabled events populate in the Events Definition area (see *Figure 5*).
2. If required, add **object-block zone**(s) or **exclusion zone**(s) from the Add zone drop-down list so the system ignores movement in particular areas of the scene. Examples: up-close moving trees, swinging/sliding doors or gates, reflective surfaces.

Overhead counting —

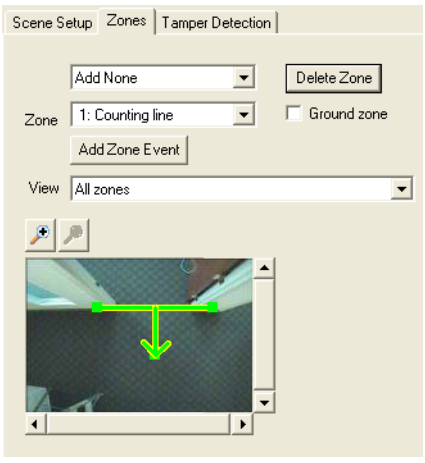
1. Set up counting lines as required. Certain counting events such as **person counted as entering** and **person counted as exiting** require both inside and outside zones.
2. To filter out any extraneous door movement, use the **Add object-block zone** or **Add exclusion zone** options in the Add zone drop-down list.

Note Use the zoom-in and zoom-out tooltips above the image to assist you to define precise zones. Each zoom-in click magnifies 2x. Point and drag the entire image or use the scroll bars to move to the desired area to place the zone.

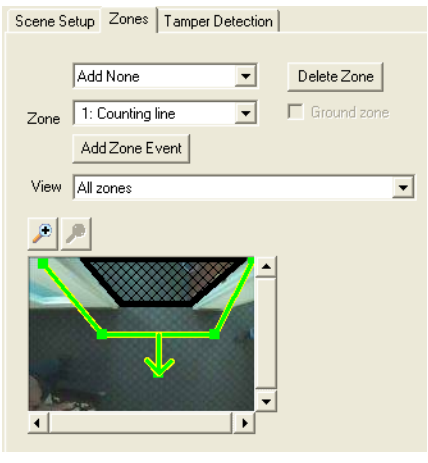
Direction zone example



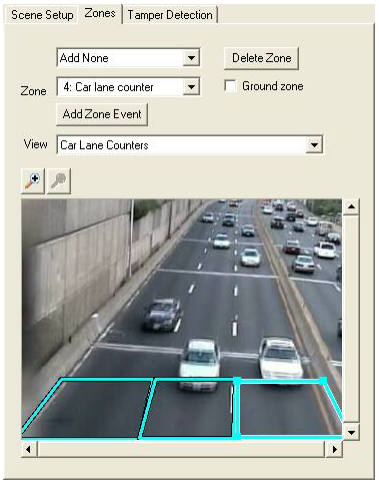
Counting line example



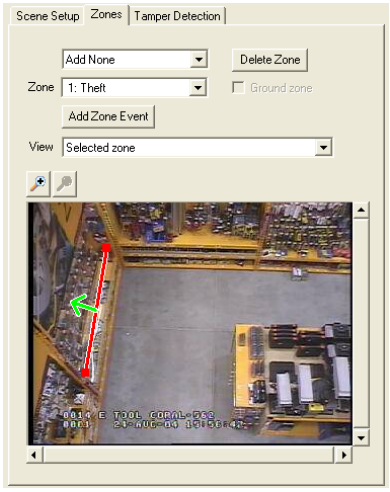
Counting line + exclusion zone example



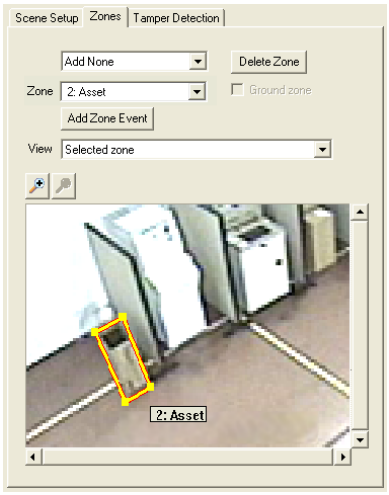
Car lane counter zone example



Theft zone example



ATM asset zone example



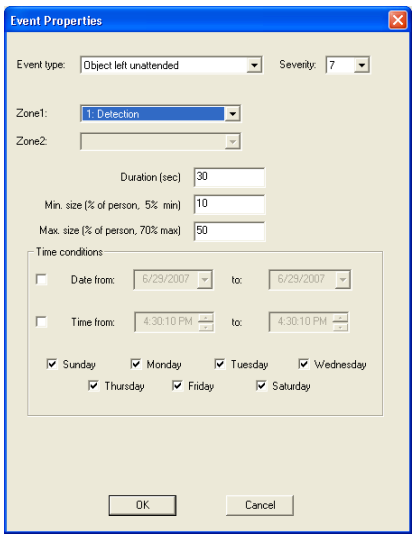
Scene with people / Scene with cars —

3. Set up people or object events. Click Add in the Event definitions area to and events and customize event detection settings, as required. You can set the severity level (1 = lowest to 10 = highest) and set up time conditions.

   Only the events listed are detected in real-time and stored in the database for later search and retrieval.

4. Field test and make adjustments to scene objects and zones to ensure the highest counting accuracy.

5. Finalize the event list. Delete unnecessary events.



Overhead counting —

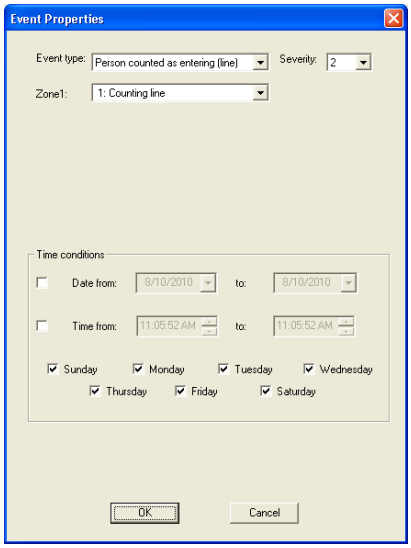
3. Set up people counting events. Click Add in the Event definitions area. Select **Person counted as entering**, then change the severity level and time conditions as desired.

4. Repeat *step 3* to add the **Person counted as exiting** event.

5. If desired, set the counter daily reset schedule (**File ➤ People Counts Reset Time**).

6. Field test and make adjustments to scene objects and zones to ensure the highest counting accuracy.

7. Finalize the event list and delete any unnecessary events.

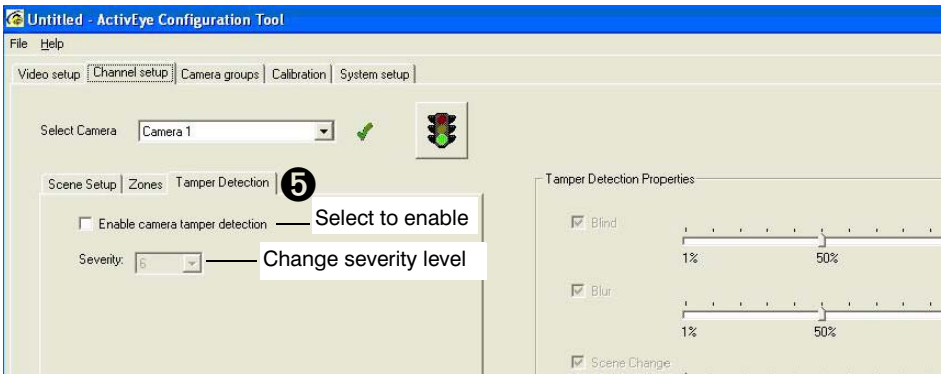


Step 5 Camera Tamper Detection

HVA software V4.6 and later has a tamper detection feature; when enabled, the software automatically alerts the user when a camera in the system has been tampered with. This includes:

- Blinding (camera lens is covered, scene has very low contrast, loss of video from network video streamers that do not provide specific video loss alarms)
- Blurring (lens is out of focus)
- Scene change (field of view has changed)

1. Enable the camera tamper detection feature.
2. If desired, change the severity level for camera tamper alarms and specify the tamper detection properties. Each type of detection can be enabled independently and you can adjust the threshold parameters for each type independently.



Step 6 Upload the Configuration to the Server

1. When you are satisfied with all the camera views in your system, upload the entire configuration settings to the Video Analytics server. Click Send to server. The traffic light icon on the Channel Setup tab indicates whether you are sending:
   - A fully configured channel (green light). The server will detect all analytics events configured for this channel.
   - A partially configured channel (yellow light). There is no complete scene object, zone and event setup. If you only enable camera tamper detection on a specific channel, the channel is processed only by the camera tamper detection module. Click the yellow light to see which configuration steps are missing.
   - A new channel has been added but has not yet been configured (red light).
2. Honeywell recommends that you save the configuration into a local configuration file (**File ➤ Save As**).

Live Monitoring Station

The Live Monitoring Station application allows you to remotely receive live video streams and view real-time events and alarms from multiple Analytics servers.

1. Launch the program (**Start ➤ All Programs ➤ Honeywell Video Analytics ➤ ActivEye Live Monitoring Station**).
2. When prompted to log on, identify up to three servers that you wish to connect to simultaneously. Type the hostname or IP address of the servers. The user name and password is the same for all servers.

   The main Live Monitoring Station screen appears.

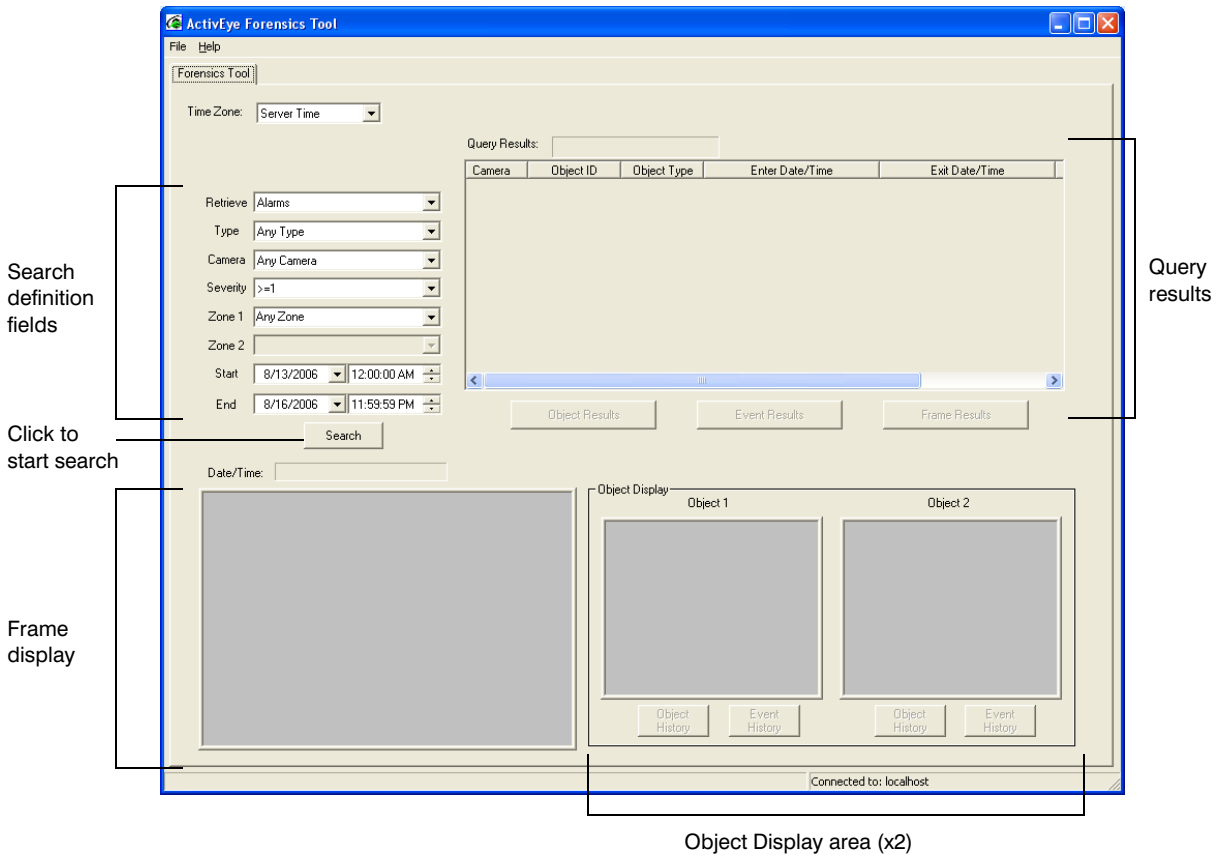
Figure 6 Live Monitoring Station, Showing Areas of Interest

Forensics Tool

The Forensics Tool is a client application used to connect to Analytics servers to conduct search and retrieval of past incidents from the database.

1. Launch the program (**Start ➤ All Programs ➤ Honeywell Video Analytics ➤ ActivEye Forensics Tool**).
2. When prompted to log on, type the server host name, the user name, and password, then click **OK** to open the main Forensics Tool screen.

Figure 7 Forensics Tool



3. Click Search to search the database based on your criteria. Search criteria can include one or all of: Time Zone, Retrieve (for alarms, events, objects, or image frames), Type (event alarm, or object), Camera, Severity, Zone 1, Zone 2, Start (beginning of the search period time), End (end of the search period time).

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