Video Analytics

ACTIVE ALERT®

Honeywell's video analytics suite of products enables enhanced security and surveillance solutions by automatically monitoring video for specific people, vehicles, objects, and their associated behaviour within a camera view. Active Alert can provide real time alarms based on user defined rules to detect abnormal or suspicious behaviour without the need for human supervision. This powerful capability enhances both manned and unmanned operations by working 24/7, reducing the amount of video data operators must review, and enabling a high level of monitoring for any size of video system.

Honeywell Active Alert software is accurate and high performing and is capable of monitoring and analysing the behaviour of up to 20 objects per camera view, both indoors and outdoors. The suite of solutions includes 'Base', 'Standard' and 'Premium' packages as well as 'People Counter' and 'Smart Impressions®' options. Each of these enables a different set of detectable behaviours.

Product packages can be mixed and matched on a single server enabling the user to assign a product package for each camera to enable the features they need for that particular camera. This results in flexibility for the user to select a combination of product packages to run on each analytics server to ensure optimal end-user deployment requirements.

Market Opportunities

The Honeywell video analytics suite of products is an ideal solution to enhance a facility's current level of security or to optimise the use of current personnel resources. Active Alert can be used as a standalone solution or in conjunction with a compatible recording system with local and remote management capabilities. The user interface is intuitive, user friendly and easy to maintain, regardless of the system size. Powerful data search tools enables almost instantaneous access to events and alarms.

Typical applications include exterior perimeter protection, controlling restricted areas and detecting of behaviours that are precursors to potentially dangerous or illicit situations.

Features:

- Supports Honeywell IP Cameras - EQUIP® Series
- An i-LIDS® approved system both as a primary detection system for operational alert use and as an approved event based recording system for sterile zone monitoring applications
- User interfaces available in English, French, Spanish, Italian, Dutch, and German
- Real-time scene analysis and alarms based on user definable rules
- Powerful onsite or remote configuration capabilities
- Rich set of detectable events and behaviours to suit a broad set of system requirements
- Accurate indoor and outdoor applications with patented technology to reduce false alarms
- High performance software that minimises the need for excessive PC hardware
- Powerful search tools for instantaneous retrieval of incidents
- Ability to provide voice, visual, relay closure, e-mail, or cell phone alarm

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Video Analytics

ACTIVE ALERT®

Honeywell Active Alert is offered in three packages including a base, standard and premium package, each of which enables a different set of detectable behaviours. The Active Alert Base package includes basic people and vehicle behaviour detections, in addition to camera tamper detection: blinding, blurring and scene change. Real-time alarms are generated to alert the user of any of these conditions in order to protect the camera view from being altered due to intentional or non-intentional acts. The Active Alert Standard package builds on the base package by adding the ability to discern more advanced behaviors such as person jumping a fence line or loitering, and vehicles parked or pulled off the road. The Active Alert Premium package builds on the Standard package by adding the ability to detect abandoned or removed objects, and possible theft incidents.

	Active Alert Base	Active Alert Standard	Active Alert Premium
PEOPLE EVENTS			
Person entered restricted area	X	X	X
Person exited restricted area	X	X	X
Person loitering in restricted area		X	X
Person started moving in wrong direction	X	X	X
Person stopped moving in wrong direction	X	X	X
Person on fence line		X	X
Person entered sterile zone		X	X
Person started running			X
Person stopped running			X
People converged		X	X
People passed by		X	X
Person trespassing-tripwire	X	X	X
Person running in wrong direction			X
CAR TRAFFIC EVENTS			
Car started moving in wrong direction	X	X	X
Car stopped moving in wrong direction	X	X	X
Car entered restricted area	X	X	X
Car parked in restricted area		X	X
Car entered sterile zone	X	X	X
Car speeding			X
Car made illegal u-turn		X	X
Car parked in disabled parking space		X	X
Car pulled off road		X	X
Car needs assistance		X	X
Car exited restricted area	X	X	X
Car trespassing–tripwire	X	X	X
VIDEO/CAMERA EVENTS			
Video signal lost	X	X	X
Video signal restored	X	X	X
Camera sabotage features	X	X	X
COUNTING EVENTS			
Person counted as entering		X	X
Person counted as exiting		X	X
Car entered car park		X	X
Car exited car park		X	X
Car counted in lane			X
PREMIUM EVENTS			
Object left unattended			X
Object removed			X
Possible theft			X

Video Analytics

SMART IMPRESSIONS®

Honeywell's Smart Impressions® video analytics software provides the data that tracks the movement of people and vehicles to help end users better understand their operations.

It provides real-time counting data of people and vehicles entering or exiting a camera scene. Two innovative analytics algorithms include the ability to track people entering a target zone and how long they dwell in the area. This data can provide businesses with powerful insight into the design, use, and efficiency of operations.

Smart Impressions is high performance software capable of accurately monitoring indoor and outdoor scenes 24/7. Custom reports can be configured to perform statistical analysis of people or vehicle traffic patterns. The software also provides the ability to instantaneously retrieve the images of these people or vehicles. This innovation enables video to move beyond security applications and to provide valuable business data and insight that may otherwise never be fully utilised. It can be used as a standalone solution or in conjunction with a compatible recording system with local and remote management capabilities. The software user interface is intuitive, user friendly and easy to maintain regardless of the system size.

Smart Impressions video analytics software provides the data that enables end users to better understand their operations and potential revenue opportunities.

People Activity:

By counting and reporting the number of people entering and exiting as well as providing information on dwell time and entering target zone data, managers can better understand their closing ratio and opportunities for operational improvements.

Smart Impressions also provides key components to track the effectiveness of merchandising, advertising, promotions, window changes and location changes.

Combining Smart Impressions data with other operational data provides you the methodology to accurately:

- Increase customer service during key selling periods
- Reduce costs during slow selling periods
- Determine effectiveness of advertising expenses and promotional campaigns
- Determine the effectiveness of merchandising, displays, end caps, window changes and location changes
- Drive accountability

Traffic Activity:

Smart Impressions' ability to count vehicles adds a new dimension in analysing roadway and parking operations, including design, safety, revenue opportunities and detection of problems and deficiencies. Traffic counts are critical to understanding traffic conditions, growth, and planning for long-range road improvements and resurfacing of roadways. It drives the data necessary for:

- Roadway geometry analysis
- Planning for roadway improvements and maintenance
- Estimates of revenue
- Location and design of roadway routes
- Signal timing
- Ommissions control
- Design of control and safety systems

Features:

- Ability to count people and vehicles
- Target zone data for people or vehicles entering and remaining in target zone
- Real-time scene analysis and counting data based on user definable rules
- Accurate indoor and outdoor applications with patented technology to reduce false alarms
- Powerful custom reports enable statistical analysis of people or vehicle traffic
- High performance software minimises the need for excessive PC hardware
- Powerful onsite or remote configuration capabilities

Camera 9: Staying in in target zone 2

Video Analytics

PEOPLE COUNTER

People Counter provides the data that enables end users to better understand their operations and maximise potential revenue opportunities. By counting and reporting the number of people entering and exiting a specific area, managers can better understand their closing ratio and identify opportunities for improvement.

People Counter provides the key component to determine your close ratio.Transaction, sales and staffing data can only truly be interpreted by adding traffic information to the equation. Combining traffic data with other operational data provides end users with the methodology to accurately increase customer service during key selling periods, reduce costs during slow selling periods and determine effectiveness of advertising expenses and promotional campaigns.

People Counter is an ideal solution to accurately automate the gathering of data relating to people entering and exiting a site that can be used for a variety of purposes. This innovation enables video to move beyond security applications and to provide valuable business data that may otherwise never be fully utilised. It can be used as a standalone solution or in conjunction with a compatible recording system with local and remote management capabilities. The intuitive user interface is user-friendly and easy to maintain regardless of the system size.

Understanding key selling periods and reallocating staff is the most cost-effective and time-efficient means to increase total sales. People Counter reports on the following events to provide data to organisations to increase revenues and plan more effectively:
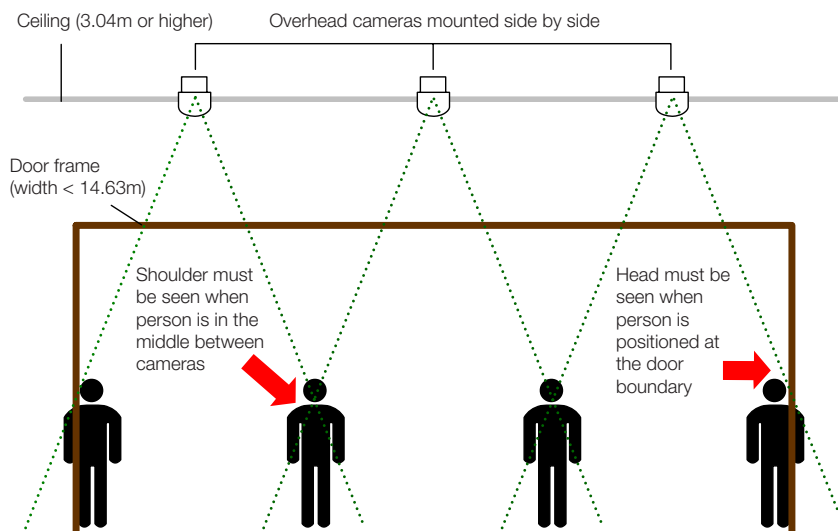
Counting Events:
- Person counted as entering
- Person counted as exiting

Video / Camera Events:
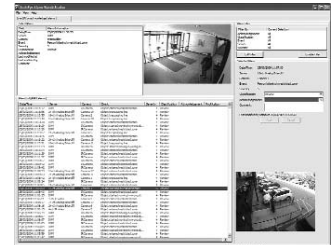- Video signal lost
- Video signal restored

Features:
- Directional counting gives users the ability to count people entering and exiting
- Accurate indoor and outdoor applications with patented technology to reduce false alarms
- Powerful custom reports to enable statistical analysis of people traffic
- High performance software that minimises the need for excessive PC hardware
- Powerful onsite or remote configuration capabilities

Ceiling (3.04m or higher) Overhead cameras mounted side by side

Door frame (width < 14.63m)

Shoulder must be seen when person is in the middle between cameras

Head must be seen when person is positioned at the door boundary

Video Analytics

CENTRALISED ALARM MANAGEMENT SERVER FOR VIDEO ANALYTICS

Honeywell's Alarm Management suite allows security operators to monitor real-time alarms from a large number of video analytics servers. The Alarm Management Server (AMS) is a service that connects to a large number of Honeywell video analytics servers to receive analytics alarms generated by these servers. Multiple security operators on separate workstations can run separate copies of Alarm Watch Station (AWS) client applications to connect to AMS and collaboratively manage real-time alarms coming from all various analytics servers.

The alarm acknowledgement state modified by one operator can be seen on the AWS by all other operators in real-time.

There are three components in the software that enable Alarm Management functionality:

- Alarm Management Server – Running as a Windows service on the AMS PC.
  It serves as a communications interface between all HVA servers and the Alarm Watch Station client applications. AMS connects to HVA servers, stores all the incoming alarms into a local database, and delivers these alarms to all the Alarm Watch Stations that are connected to it.

- Alarm Watch Admin – A client application that allows the user to configure the AMS. The user can add HVA servers for AMS to connect to, customise alarm acknowledgement states that best suit the organisation's own alarm management operation, and create user accounts to be used by AMS. Alarm Watch Admin is one of the client applications included in the Honeywell Video Analytics client package.

- Alarm Watch Station – A redesign from the previous version of Alarm Watch Station, this client application now works with AMS to allow the user to view and manage all the alarms coming from the list of HVA servers that AMS is connected to. The user can view and modify the status of any alarm; the status is shared across workstations and can be viewed by other operators. Alarm Watch Station is one of the client applications included in the Honeywell Video Analytics client package.
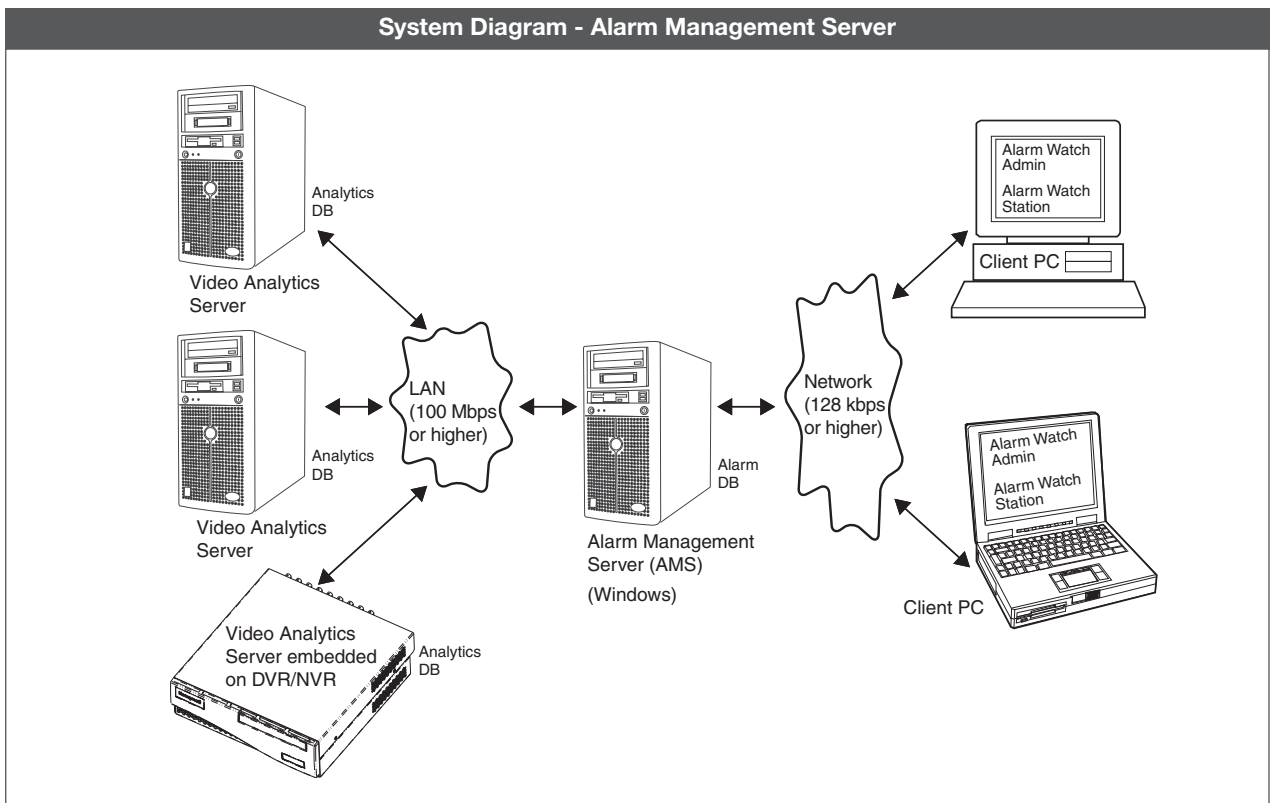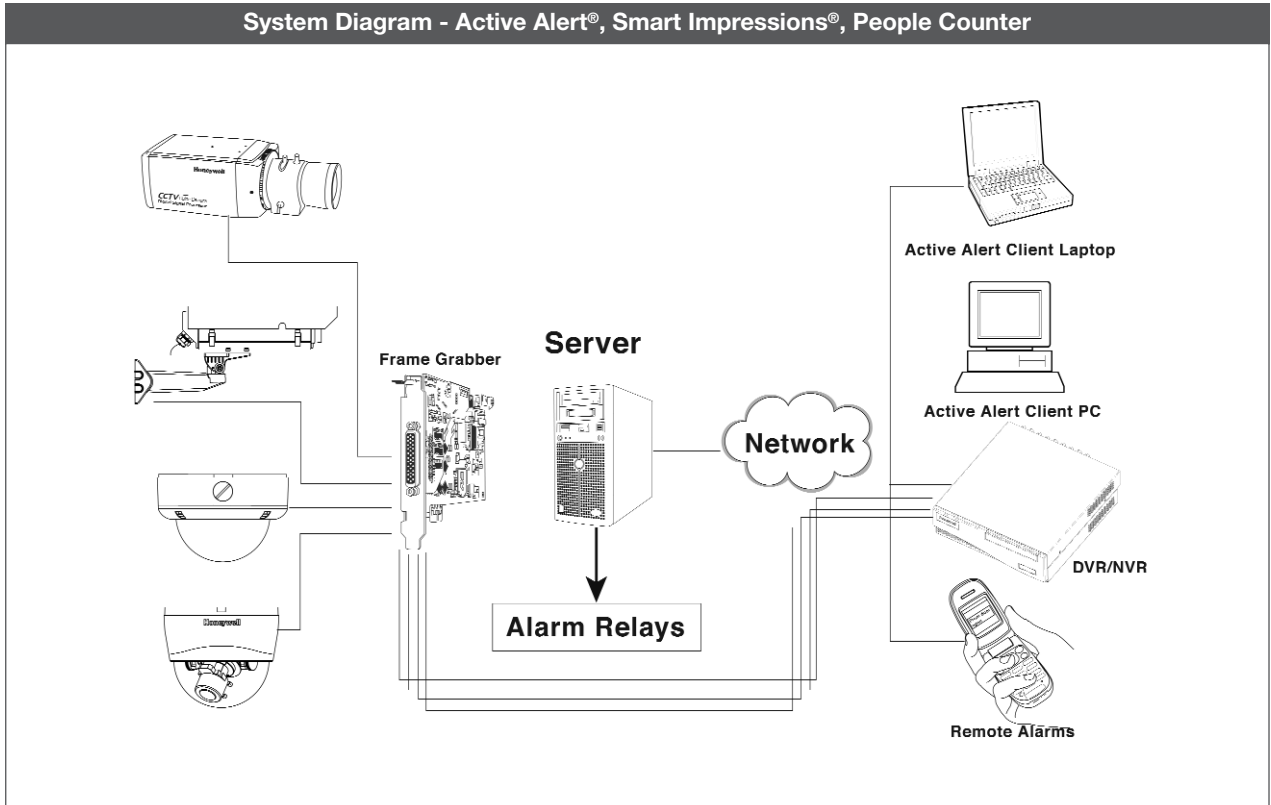
Market Opportunities
The Alarm Management suite is an ideal solution for larger Honeywell Video Analytics systems, in addition to central station monitoring types of applications.

Features
- AMS has its own alarm database to store alarm data, including acknowledgement states of all alarms for real-time alarm management.
- User-defined alarm case management enables the user to filter alarms by date, time, ,alarm severity, event type, alarm classification, alarm acknowledgement and analytics server.
- Customisable alarm acknowledgement states enable a company to synchronise these according to their internal alarm management protocol.

- Multiple security operators on separate workstations can collaboratively manage real-time alarms from various analytics servers; alarm action taken can be viewed by all operators in real-time.
- Separate user account management for AMS results in an added level of system security.
- Four types of user level permissions include Admin, View Live Alarms, Modify Alarm State and Search.

Video Analytics

System Diagram - Active Alert®, Smart Impressions®, People Counter

Frame Grabber

Server

Network

Alarm Relays

Active Alert Client Laptop

Active Alert Client PC

DVR/NVR

Remote Alarms

System Diagram - Alarm Management Server

Analytics DB

Video Analytics Server

Analytics DB

Video Analytics Server

Video Analytics Server embedded on DVR/NVR

Analytics DB

LAN (100 Mbps or higher)

Alarm Management Server (AMS) (Windows)

Alarm DB

Network (128 kbps or higher)

Alarm Watch Admin
Alarm Watch Station

Client PC

Alarm Watch Admin
Alarm Watch Station

Client PC

Honeywell

Video Analytics

SYSTEM SPECIFICATIONS

Suggested Minimum System Requirements for Active Alert and Smart Impressions				
Component	4 Channel PC	8 Channel PC	16 Channel PC	24 Channel PC
Operating System	Windows® XP Professional with Service Pack 2, or Windows Server 2003 Standard	Windows® XP Professional with Service Pack 2, or Windows Server 2003 Standard	Windows® XP Professional with Service Pack 2, or Windows Server 2003 R2 Standard	Windows® XP Professional with Service Pack 2, or Windows Server 2003 R2 Standard
Processor	Intel® Premium® 4 (3.0 GHz or higher) or comparable	Recommended: Intel Core 2 Duo E-7300 (2.66 GHz or higher) or comparable Minimum: Dual Core Intel Pentium 935 (3.2 GHz or higher) or comparable	Recommended: Intel® Xeon® E5504 (2.0 GHz or higher) or comparable Minimum: 2 X Dual-Core Intel® Xeon® 5140 (2.33 GHz or higher)	Recommended: Intel® Xeon® E5530 (2.4 GHz or higher) or comparable Minimum: Quad Core Intel® Xeon® X5450 (3.0 GHz or higher) or comparable
RAM	512 MB or higher	1 GB or higher	2 GB or higher	2 GB or higher
Hard Drive Storage	80 GB (for 60-day storage of metadata)	160 GB (for 60-day storage of metadata)	400 GB (for 60-day storage of metadata)	500 GB (for 60-day storage of metadata)
Video Adapter	Video card with 16 MB memory	Video card with 16 MB memory	Video card with 16 MB memory	Video card with 16 MB memory
Network Connection	100/1000 Ethernet	100/1000 Ethernet	100/1000 Ethernet	100/1000 Ethernet
For Analogue Video Input	One Picolo Alert™ Compact frame grabbers with 1 spider (breakout) cables (recommended)	One Picolo Alert™ Compact frame grabber PCI or PCIe	Two Picolo Alert™ Compact frame grabber PCI or PCIe	Three Picolo Alert™ Compact frame grabber PCI or PCIe

Suggested Minimum System Requirements for People Counter				
Component	10 Channel PC	20 Channel PC	30 Channel PC	40 Channel PC
Operating System	Windows® XP Professional with Service Pack 2, or Windows Server 2003 Standard	Windows® XP Professional with Service Pack 2, or Windows Server 2003 Standard	Windows® XP Professional with Service Pack 2, or Windows Server 2003 Standard	Windows® XP Professional with Service Pack 2, or Windows Server 2003 Standard
Processor	Intel® Premium® 4 (3.0 GHz or higher) or comparable	Dual Core Intel® Pentium 935 (3.2 GHz or higher) or comparable	2 Dual-Core Intel® Xeon® 5120 (1.86 GHz or higher) or comparable	2 x Dual Core Intel® Xeon® 5140 (2.33 GHz or higher)
RAM	512 MB or higher	1 GB or higher	2 GB or higher	2 GB or higher
Hard Drive Storage	80 GB (for 60-day storage of metadata)	160 GB (for 60-day storage of metadata)	300 GB (for 60-day storage of metadata)	400 GB (for 60-day storage of metadata)
Video Adapter	Video card with 16 MB memory	Video card with 16 MB memory	Video card with 16 MB memory	Video card with 16 MB memory
Network Connection	100/1000 Ethernet	100/1000 Ethernet	100/1000 Ethernet	100/1000 Ethernet
For Analogue Video Input	2 Picolo Alert™ Compact frame grabbers PCI or PCIe	2 Picolo Alert™ Compact frame grabbers with 2 spider (breakout) cables (recommended) can only support 16 channels. The rest of the channels must be IP video inputs.	2 Picolo Alert™ Compact frame grabbers with 2 spider (breakout) cables (recommended) can only support 16 channels. The rest of the channels must be IP video inputs.	2 Picolo Alert™ Compact frame grabbers with 2 spider (breakout) cables (recommended) can only support 16 channels. The rest of the channels must be IP video inputs.
Processing Resolution	All channels must be processed at QCIF (160x120) resolution.	All channels must be processed at QCIF (160x120) resolution.	All channels must be processed at QCIF (160x120) resolution.	All channels must be processed at QCIF (160x120) resolution.

NOTES:
1. This assumes all channels are processed at QCIF (160x120) resolution for overhead people counting purposes.
2. The number of analogue video inputs allowed per server depends on the available PCI slots for frame grabber devices.

Video Analytics

ALARM MANAGEMENT SERVER SYSTEM SPECIFICATIONS AND ORDERING

Minimum PC System Requirements for Alarm Management Server	
Component	**Requirement**
Operating System	Windows XP Professional with Service Pack 2, or Windows Server 2003 R2 Standard
Processor	Recommended: Intel Core 2 Duo-E-7300 (2.66 GHz or higher) or comparable Minimum: Dual Core Intel Pentium 935 (3.2 GHz or higher) or comparable
RAM	1 GB or higher
Hard Drive Storage	160 GB, **Note:** On average, the size of an alarm record is 20 KB
Video Adapter	Video card with 16 MB memory
Network Connection	100/1000 Ethernet
Other	One USB 2.0 interface

Ordering	
HASWCD	Software CD
HAAB	Active Alert Base (single channel add on licence)
HAAS	Active Alert Standard (single channel add on licence)
HAAP	Active Alert Premium (single channel add on licence)
HASI	Smart Impressions (single channel add-on licence)
HAAC	People Counter (single channel add-on licence)
HAAMS*	Alarm Management Server Software
HACARDPAC2	Euresys™ Picolo Alert™ Compact frame grabber PCI Express Card for 8 analogue inputs (must use with HACARDCAB8)
HACARDCAB8	Euresys™ 8 port spider cable for Picolo Alert™ Compact Card (HACARDPAC2)
100-00504	USB-based 8 Form C Relays and 8 High Voltage Inputs (can only use 1 per analytics server)
100-00473	USB-based 24 Form C Relays electromechanical 6 AMP outputs (can only use 1 per analytics server)
HA8SRVRT3X	8 Channel Mini Tower, using latest Dell server, will fit 2 HACARDPAC2 (not included), EMEA Power Settings
HA8SRVR3X	8 Channel 1U Rackmount, using latest Dell server, will fit 2 HACARDPAC2 (not included), EMEA Power Settings
HA16SRVRT3X	16 Channel Mini Tower, using latest Dell server, will fit 2 HACARDPAC2 (not included), EMEA Power Settings
HA16SRVR3X	16 Channel 1U Rackmount, using latest Dell server, will fit 2 HACARDPAC2 (not included), EMEA Power Settings
HA24SRVR3X	24 Channel 2U Rackmount, using latest Dell server, will fit 3 HACARDPAC2 (not included), EMEA Power Settings

*Alarm Management Server Software needs to be installed on a separate PC Server (Recommended units are HA8SRVRT3X or HA8SRVR3X)

NOTE: Honeywell reserves the right, without notification, to make changes in product design or specifications.

For additional information,

please visit www.honeywell.com/security/uk

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i LIDS ®

Imagery Library for Intelligent
Detection Systems

Sterile Zone Monitoring
2009/10 Evaluations
Honeywell
Honeywell Video Analytics - Active Alert
Version 4.7.0.8

Honeywell