

HONEYWELL ADVANCE ANALYTICS

SYSTEM OVERVIEW

Honeywell Advance Analytics is uniquely positioned to offer next generation managed security solution to customers utilizing seamless MAXPRO integration providing a end-to-end connected building solution. Honeywell Advance Analytics (HAA) suite is a Video Analytics solution for actionable intelligence, enhanced security and surveillance installation. It automatically monitors video for specific people, vehicles, objects, and their associated behavior within a camera view.

Honeywell Advance Analytics (HAA) can provide real time alarms based on the user defined rules to detect abnormal or suspicious behavior without human supervision. This powerful capability enhances both manned and unmanned operations around the clock. This in-turn reduces the amount of video data that operators must review and enables a high level monitoring for any size of video system.

NEXT GEN SOLUTION

HAA solution deploys AI powered analytics which uses Deep Learning in its Video Analytics features. Deep Learning in Video Analytics involves the use of layered filters which enhance the detection rate of objects and rule violations. Firstly with the use of layers of filters, the accuracy of detecting the right object becomes high and there will be minimal false detections. The second step is to find out the activities being done by the detected objects, as these activities can be rule violations. For example, a person (object) can loiter (activity) around in a restricted zone. The detection of such activities is enhanced through the layered filters of Deep Learning. Similarly, the third step which is tracking the objects activity post rule-violation is also improved.

HAA is capable of monitoring and analyzing the behavior of an object in a camera view, for both indoor and outdoor views. HAA utilizes automated video analysis tools that is designed for immediate detection and extraction of events from surveillance footage. This replaces the traditional time-consuming tasks of monitoring live and recorded videos. By deploying HAA, users can make optimal use of their surveillance systems and allocate their time and attention in a more effective manner. This helps in increasing the return on investment in the surveillance system, while improving overall security, safety, and business operations.



HIGHLIGHTS

- **ENHANCE OPERATOR EFFECTIVENESS** Improvements make the system easier to operate including greater automation and remote access making it easier to manage and respond to alarms and remotely manage video systems from MAXPRO application.
- **ENHANCED ACCURACY** Delivers superior results in complex environments, such as indoor and outdoor scenes including varying weather conditions. Leverages a proven technology for a decade to provide high probability of detection and low false alarm rate.
- **VISUALIZE THE DATA TO SEE RESULTS** The ability to visualize important information about events and alarms makes it easier to manage a building. Honeywell Advance Analytics integration with MAXPRO VMS enables the Intelligent Command feature providing clear, meaningful graphics of real-time building conditions as well as analysis of trends and key performance indicators.
- **CONTROL FROM ANYWHERE** Manage your building from a remote location via a visual interface that lets you view and manage alarms.

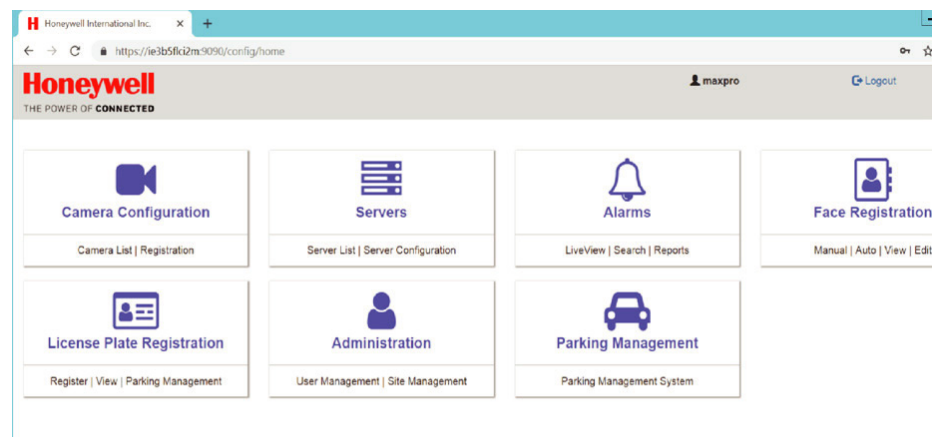
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FEATURES

- Powerful AI based technology to recognize Face, Age & Gender with higher accuracy
- Powerful visualization tools like, Heat Map, Flow Map & Count Map to have quick view of activities happening in certain area or camera. These algorithm are included as basic feature of HAA
- HAA include algorithm which can be also used as Parking Management / Availability software, it sends an alarm when the parking is full.
- Dedicated Thin Client UI for easier live alarm monitoring and flexible reporting. Access Thin Client from any workstation in the network
- Administrator Login
- Scheduler to enable scheduling of Analytics
- ONVIF streaming of analytics overlaid video, video stabilization
- Alarm video creation & Snapshot creation
- False Alarm Minimization with Deep Learning
- Direct Camera Connection
- Supports video analytics configuration on locked preset with PTZ camera
- People/Object/Vehicle counting report generation
- Save, Export and Restore options for Analytics Settings with each Camera
- Real-time scene analysis and alarms based on user definable rules
- Rich set of detectable events and behaviors to suit a broad set of system requirements
- Accurate indoor and outdoor applications with technology to reduce false alarms
- Powerful on-site configuration capabilities
- Powerful search tools for instantaneous retrieval of incidents
- Full integration ensures alarm handling and transmission is consistent with the platform's capabilities
- Up to 8 zones or directional zones per channel
- One-person setup
- Fast and easy commissioning with simple region of interest detection
- Flexible detection within the same scene by criteria per detection zone
- Powerful advanced parameters for improved detection probability and false alarm reduction

INTUITIVE GRAPHICAL USER INTERFACE

Executable setup is available via web based graphical user interface (GUI). The intuitive GUI guides you through the configuration and provides all the necessary tools to set up HAA and to specify detection or counting tasks. Within the configurator, object properties such as sensitive area, size, speed, perspective, etc including movement direction can be set. These properties are visualized exemplarily as overlays for intuitive configuration and feedback. The pick object functionality configuration can be initiated by just clicking on an object of interest in the live scene. All specific information regarding size, speed, direction, aspect ratio, and color are automatically set for task configuration. Up to eight independent tasks can be selected and combined in the scene to build sophisticated detection rules. However, each



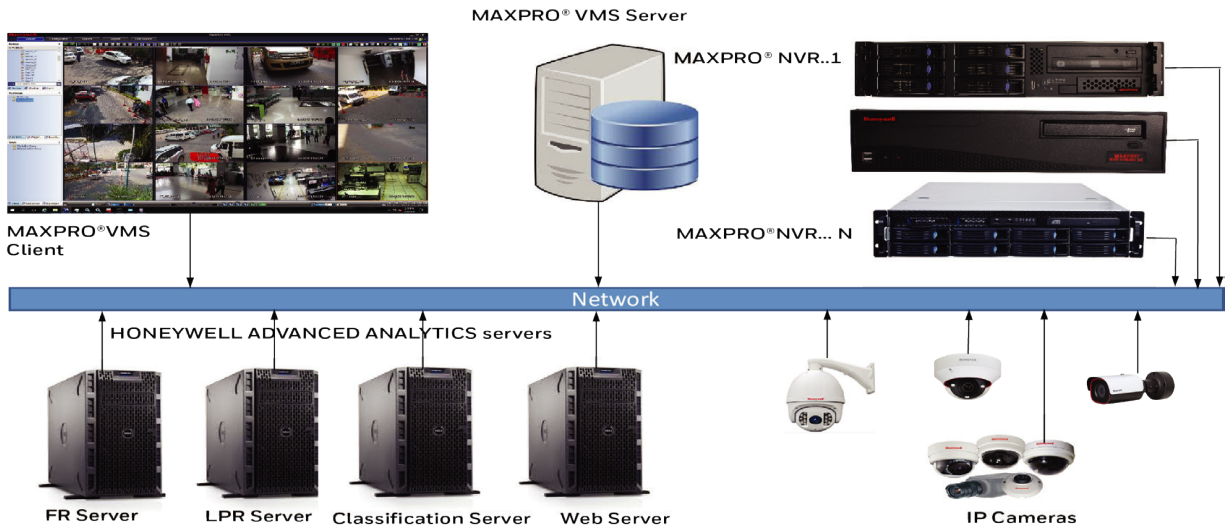
task is individualized with its own parameters. This allows the detection of multiple object states in parallel while generating separate triggers that can be handled independently or in combination. The interface allows a flexible selection of detection areas through polygons with up to 16 corner points. When a movement is detected, the object is outlined in yellow on the display and its motion is displayed as a green trajectory. If an object and its motion matches with the rule conditions defined for one of the detector tasks then an alarm is triggered and the object outlines are turned to red.

Device	Model	IP Address	Main Server	Proxy Server	Site	VMS	Working Analytica	License	Details
126	Video_Cam_Cam01	192.168.0.261	None	None	HTS_English	Mouse	Yes	Yes	
127	FR_Camera	192.168.0.263	None	None	HTS_English	Mouse	Yes	Yes	
128	LPR_Camera	192.168.0.249	None	None	HTS_English	Mouse	Yes	Yes	
129	Class_Classification_Camera	192.168.0.246	None	None	HTS_English	Mouse	Yes	Yes	
130	General_Analytics_Camera	192.168.0.225	None	None	HTS_English	Mouse	Yes	Yes	

COMPREHENSIVE & INTEGRATED ANALYTICS

HAA is based on distributed architecture and robust to weather changes, lighting changes, tree swaying and other background distractions. HAA is seamlessly integrated with Honeywell’s Flagship Video Surveillance platform MAXPRO® VMS. It allows you to access all the alarms processed in HAA through MAXPRO® VMS client for unified alarm management. You can also generate customized and detailed reports from MAXPRO® VMS for all the HAA supported alarms.

SYSTEM ARCHITECTURE DIAGRAM



Technical Specifications	
OPERATING SYSTEM	Workstation: Windows 10 Server: Ubuntu 20.04.6
NETWORK	Ethernet, 2x1 Gbit or higher recommended

NOTE: Contact Honeywell representative for detailed information about system requirement and design

Part Number	Description
HNMHAATWL	HAA Tripwire Detection
HNMHAATPL	HAA Trespass Detection
HNMHAAC TL	HAA Camera Tampering
HNMHAAHOPTZL	HAA PTZ Handoff
HNMHAAPSAPTZL	HAA PTZ Pre-set Position Analytics
HNMHAACAPTZL	HAA Continuous Auto PTZ
HNMHAALODL	HAA Left Baggage Detection
HNMHAAMODL	HAA Missing Object Detection
HNMHAATAILGATEL	HAA Tailgating Detection
HNMHAALOITERL	HAA Loitering Detection
HNMHAAOCL	HAA Smart Subject Search
HNMHAANMDL	HAA No Motion Detection
HNMHAAFSL	HAA Face Search Detection
HNMHAACROWDL	HAA Crowding Detection
HNMHAACFLOWL	HAA Counter Flow Detection
HNMHAASMOKE L	HAA Video Smoke Detection
HNMHAAFLAME L	HAA Video Fire Detection
HNMHAASLIPFALL L	HAA Slip & Fall Detection
HNMHAAHELMETL	HAA PPE Detection (Helmet)
HNMHAAPCOUNTL	HAA People Counting
HNMHAARAL	HAA Reporting & Analysis
HNMHAANFDL	HAA No Flame Detection
HNMHAAHEATMAPL	HAA Heat Map
HNMHAAQMGMTL	HAA Queue Management
HNMHAAFRCAPL	HAA Face Detection / Face Capture
HNMHFRRGL	HAA Face Recognition / Verification
HNMHAAVCOUNTL	HAA Vehicle Counting
HNMHAAVWWAYL	HAA Wrong Way Detection
HNMHAAVIPARKL	HAA Illegal Parking Detection
HNMHAAVSPEEDL	HAA Speeding Detection
HNMHAAACONGL	HAA Congestion Detection
HNMHAAAPARKMGMTL	HAA Parking Slot Occupancy Detection
HNMHALPRL	HAA License Plate Recognition
HNMHAAALPRDFCL	HAA LPR with FR (Driver Face Capture)
HNMHAAARLVDL	HAA Red Light Violation Detection

For more information,

<https://honeywellbuildings.in>

Tel: +91 124 4975000

Email: BuildingAutomation.SecurityIndia@honeywell.com

Honeywell Building Automation

Unitech Trade Center, 5th Floor, Sector-43,

Block C, Sushant Lok Phase - I,

Gurgaon - 122 002, Haryana, India

<https://www.honeywellbuildings.in/>

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