At a glance

Number of Cameras: 1, 4, 8 or 16 options
Analytics: 14 core analytics included
Analytics per camera stream: 4
Form factor: standalone appliance

Wavestore video analytics appliance

Wavestore's standalone **Video Analytics Appliance** provides the option of adding a host of powerful video analytics to Wavestore systems. Utilising virtually any IP camera, it can easily be retrofitted to existing installations or deployed as part of a greenfield project.

Available in 1, 4, 8 and 16 channel input options, the **Video Analytics Appliance** can simultaneously run up to four different types of analytics on each channel. These include object tracking, people and vehicle counting with speed and direction filters, intrusion detection and loitering.

Image stabilisation to improve image quality and tamper detection to alert operators of unauthorised camera obstruction or movement, are included as standard.

Video channels are restreamed to Wavestore Video Management Software (VMS) storage/recording servers together with metadata which can be used to trigger a host of actions using Wavestore's 'Cause and Effect' event rules engine. Streams with bounding box overlays are also available to ensure operators are instantly aware of detected persons or objects of interest within Wavestore's WaveView client software.

To improve detection accuracy across the entire scene, as well as minimise false alarms and speed up deployment, a built-in 3D calibration tool is used on set-up to define the height, angle and perspective of subjects over various distances within the field of view. The Metadata from the **Video Analytics Appliance** can also be collected, via an API, for reporting purposes.

Creating logical rules using single or multiple analytics

The **Video Analytics Appliance** is designed to detect humans and vehicles and alert operators to exceptional events. This is achieved through pre-configured rules that are set up using the on-board rules creation engine, via a simple-to-use web interface. Logical rules can be configured for single or multiple sets of analytics which, when triggered, perform a wide variety of actions via Wavestore's powerful Event Rules capability.

Combining single or multiple analytics with a wide variety of filters such as speed, direction and dwell-time, can enable users to create granular and discriminating rules which exactly match their detection requirements.

Deep learning

As humans and vehicles are the only things of interest, deep learning has been deployed within the **Video Analytics Appliance** to filter out environmental and other unwanted activity from giving false-positive alerts. As such, activity from, for example, moving trees, clouds, car headlight reflections and animals etc., which can all cause false positive readings, are identified through deep learning and ignored by the analytic algorithms.

This ensures the highest possible levels of detection accuracy from the system and greatly reduces the opportunity for false alerts.

Cause and Effect with Wavestore's WaveView Client Software

Events from the **Video Analytics Appliance** can be used as a 'Cause' to trigger a host of 'Effects' within Wavestore's VMS. These are configured and controlled by the Waveview client software. For example, third-party equipment such as lights and speakers can be activated when an event occurs, such as cross the line detection or object abandoned. PTZ cameras can also be programmed to go to a pre-set on a specific event, or the system can be programmed to enable an image of an event to pop-up on a control room screen. It can even notify authorised personnel by e-mail that an event has taken place. The possibilities are endless.

Change Wavestore Video Wall layouts on event

When used in conjunction with Wavestore's Video Wall solution, triggered events can be configured to pop-up on screen for enhanced situational awareness for the user.

Server-based options

Video Analytics are also available to be loaded onto a dedicated server, offering enhanced power for large scale requirements. Please contact your local Wavestore representative for further details.

Analytics include:

- Intrusion detection
- Enter filter
- Exit filter
- Appear filter
- Disappear filter
- Counting lines & zones
- Stopping filter
- Tailgating
- Abandoned object
- Removed object
- Object tracker
- Dwell filter
- Speed filter
- Direction filter

Ordering information:

WA-VCA-1	1 channel appliance
WA-VCA-4	4 channel appliance
WA-VCA-8	8 channel appliance
WA-VCA-16	16 channel appliance

TECHNICAL SPECIFICATION	WA-VCA-1	WA-VCA-4	WA-VCA-8	WA-VCA-16
General				
Supported browsers for set-up	Internet Explorer, Safari, Chrome, Firefox (latest versions)			
Video and data				
Number of channels	1	4	8	16
Resolution of each channel	1080p		720p	D1
Minimum frames per second	15			
Maximum frames per second	30			
Supported video streams format	H.264 & MJPEG			
Video input method	RTSP, ONVIF, Wavestore VMS			
Supported analytics				
Number of separate analytic functions that can run simultaneously per stream	4			
Intrusion detection	An event is triggered when a subject enters a zone set within the scene. Single or multiple zones can be created within the scene			
Entry filter	An event can be triggered immediately a subject enters a zone, or the system can be programmed to wait for one or more analytics to be triggered, e.g. a specified dwell time before entering			
Exit filter	When a subject exits a zone an event can be triggered immediately or wait for one or more analytics to be triggered, such as dwell time after exiting, before triggering an event			
Appear filter	An event is triggered If a subject appears in a scene, such as moving from behind an obstruction			
Disappear filter	If a subject disappears from a scene, such as moving behind an obstruction, an event is triggered			
Object-Counting lines and zones	Provides accurate counting of the number of people or vehicles within zones or crossing lines, even in dense scenes. Single or multiple lines or zones can be drawn and set up to count in a single direction or bidirectional. Direction of travel after crossing the line can also be tracked. Events can be triggered if a predefined maximum is reached			
Stopping filter	If a subject stops in a zone for longer than a predefined length of time, such as at a drop-off point, an event is triggered.			
Tailgating	An event can be created if two subjects cross an area in the scene within quick succession.			
Abandoned object	Suitable for sterile zones. Left objects will trigger an event.			
Removed object	Subjects removed from a zone will trigger an event.			
Object tracker	A human or vehicle, or both, can be tracked through the scene and an event triggered.			
Dwell filter	An event can be triggered if a subject is in a zone for more than the predefined amount of time.			
Speed filter	An event can be triggered if a subject moves too quickly or slowly through the scene from that predefined.			
Direction filter	An event can be triggered if a subject travels in a certain direction after leaving a zone or crossing a line, such as a vehicle turning into a no-entry road or a human exiting a retail premises through the entry way.			
Other features				
Create additional events for	Camera tamper alert & loss of video input			
Image stabilisation	Yes			
Wavestore Video Management Software				
Wavestore VMS level compatibility	Integration included with Premium, Enterprise and Ultimate levels			
Inputs and Outputs				
Digital input / output	4 in, 4 out			
RS485	2			
Physical & Power				
Housing	Anodised black aluminium			
Operating temperature range	-5°C to 50°C (14°F to 122°F)			
Weight	1.8Kg			
Dimensions (D x W x H)mm	200 x 176.6 x 53.6			
Power input	DC12v +/- 10%			
Power consumption	15.4W			
Warranty				
Standard warranty	3-year return to base			