



## Wavestore VMS software overview

Sitting at the heart of a security solution, Wavestore's open platform Video Management Software (VMS) offers so much more than just industry leading video and recording management. As well as bringing together audio, data and video, including images from the very latest ultra-high definition and 360° fish eye cameras, Wavestore provides a platform that makes integration between disparate third-party technologies simple. Our VMS unlocks a host of business intelligence and operational benefits and enables the deployment of technology such as intelligent video analytics, whilst augmenting often 'dumb' systems with video and ease of control to create a much more powerful and effective total security solution.



THE QUEEN'S AWARDS  
FOR ENTERPRISE:  
INNOVATION  
2015



THE QUEEN'S AWARDS  
FOR ENTERPRISE:  
INTERNATIONAL TRADE  
2015

Winner of two Queen's Awards for Enterprise

# Unlock the full potential of your integrated security solution with Wavestore



**CAMERAS**  
Any video, any format

Integrated with thousands of cameras, including high-megapixel, UHD, 4K, HD, MP, HD-over-coax, 360° fisheye, thermal and analogue from all leading vendors

**ONVIF** | The IP-based Security Standard

**ACCESS CONTROL**  
Access, granted

- Instantaneously retrieve recorded images of any access control activity
- Search by text, door location and activity
- Proactively address unauthorised attempts to enter a restricted area
- Full integration with a host of Access Control vendors

**VIDEO ANALYTICS**  
Intelligent video, empowering systems

- Benefit from full integration with best-in-breed analytics providers
- ANPR, Facial Recognition, Heat Mapping, People Counting, Advanced Motion Detection and many more
- On-camera or dedicated server analytic engine compatibility

**PIDS AND SENSORS**  
Detect, decide

- Integration with a wide range of PID technology including fibre optics
- Simple setup of powerful rules-based actions from sensor triggers

**AUDIO**  
Listen, communicate

- Integrates with cost-effective, standard audio equipment
- Associate multiple microphones to video from any camera using external or in-camera microphones
- Enable two-way communication

**EPOS and Text**  
Transact, verify

- Add the power of video to text output
- Search by any relevant text field, such as item or value

**WaveStar**  
Open, for business

- Wavestore's specialist integration service
- Integrate practically anything into your wavestore solution
- Easy to deploy across your entire system via a simple upload
- Ensures future-proof operation. Integrate additional devices and systems as your solution grows over time



**WAVESTORE RECORDING OPTIONS**  
Powerful storage and control

Wavestore offers its own range of high-performance recording and storage servers and appliances from entry level through to enterprise level. Available in pure IP or IP/Analogue Hybrid formats, each server and appliance is optimised for use with any level of Wavestore's VMS (Base, Premium & Enterprise), making it possible to create the perfect solution for virtually any application.

Please visit [Wavestore.com](http://Wavestore.com) to view our full range of servers and appliances

**THIRD PARTY RECORDING DEVICES**  
Flexible storage and control

Wavestore's VMS can be installed on a wide range of third-party professional recording and storage appliances. What's more, Wavestore operates a comprehensive third-party hardware certification programme to ensure full compatibility and deliver peace of mind.



## One screen, total control...

**WAVEVIEW CLIENT**  
Manage your entire system from just one screen

- Powerful search functionality with instant video retrieval
- 3-click evidential export
- Fully customisable layout allowing simultaneous viewing of live and recorded video
- Minimal training required
- WaveView client compatible with Windows and Linux

**WAVEVIEW MOBILE CLIENT**  
View live & recorded video via iOS and Android devices

- View, control & monitor multiple security feeds 'on the move'
- View live and recorded video with full playback control
- Instant 'Time Jump' video recall feature
- Customisable multi-screen layouts
- Gesture Pan/Tilt/Zoom control
- Available on Android and iOS



Visit [wavestore.com](http://wavestore.com) for a full list of third party integrations

# Choose your Wavestore VMS level

Version 6	Base	Premium	Enterprise
<b>User Management</b>			
Max cameras per server	24	128	254
Max concurrent client application connections per server	2	5	Unlimited
Max simultaneous server connections per client application (Server Groups)	1	5	255
<b>Video Management Software (VMS)</b>			
Simple and secure DVD or USB install of complete Wavestore VMS embedded onto Linux OS	✓	✓	✓
Ability to run server and client application on a single appliance*	✓	✓	✓
Advanced certified image authentication (watermarking)	-	Optional	Optional
Image encryption	✓	✓	✓
Multiple languages supported	✓	✓	✓
Unified multiple server health monitoring (within server group)	-	✓	✓
LDAP / Active Directory support	-	-	✓
<b>Camera Integration</b>			
IP, HD, 4K, Megapixel, HD-SDI, Thermal and Analogue camera integration	✓	✓	✓
ONVIF conformant	✓	✓	✓
Automatic ONVIF camera discovery	✓	✓	✓
Open architecture for third party camera integration	✓	✓	✓
H.264, MJPEG, MPEG-4, MPEG-2, MxPEG (Mobotix), JPEG2000 video formats support	✓	✓	✓
360° fisheye camera integration (including Oncam and ImmerVision)	✓	✓	✓
Very high Megapixel camera support (above 19MP)	-	Optional	Optional
<b>Metadata Engine</b>			
Enables other third-party integrations and metadata search, including third-party event and EPoS transaction text search	-	✓	✓
<b>Other Third Party Integrations</b>			
<b>Video Analytics (server and on-camera)</b>			
People Counting	-	Optional	Optional
Crowd Monitoring	-	Optional	Optional
Heat Maps	-	Optional	Optional
Facial Recognition	-	Optional	Optional
Advanced motion detection	-	Optional	Optional
i-LIDS approved detection analytics	-	Optional	Optional
<b>Text based analytics</b>			
Electronic Point of Sale (EPoS)	-	Optional	Optional
Automatic Number Plate Recognition (ANPR/LPR)	-	Optional	Optional
<b>Access Control</b>			
Access Control systems	-	Optional	Optional
<b>Perimeter Intrusion Detection Systems (PIDS)</b>			
Optical fibre based systems	-	Optional	Optional
<b>Physical Security Information Management (PSIM)</b>			
Full command & control systems	-	Optional	Optional
<b>Audio</b>			
Built-in camera, analogue capture, on-board server and other PC audio sub-systems	✓	✓	✓

\*subject to meeting minimum hardware specification

## Three unique levels of V6 to meet your needs

With a simple 'buy-once' licence model, Wavestore's VMS is provided as a single software package that gives you the flexibility to choose from Base, Premium or Enterprise levels in order to match your project's requirements. Additionally, as your system grows, you can simply add more channel licenses or upgrade to the next level of Wavestore's VMS via a simple licence key upgrade, without the need to reinstall the software.



Version 6	Base	Premium	Enterprise
<b>Remote Monitoring</b>			
Remote monitoring and RVRCS	-	Optional	Optional
<b>Asset Protection</b>			
Asset tracking systems	-	Optional	Optional
<b>Specialist Integration</b>			
WaveStar bespoke device integration service	-	Optional	Optional
<b>WaveView Client</b>			
Licence-free WaveView client application compatible with Linux and Windows	✓	✓	✓
Fully customisable Graphical User Interface (GUI)	✓	✓	✓
Simultaneously display live and playback images on the same workspace	✓	✓	✓
Configurable size, aspect ratio and position of camera layouts	✓	✓	✓
User defined custom camera layouts	✓	✓	✓
Simple synchronisation of multiple recorded views	✓	✓	✓
3-Axis mouse or joystick support	✓	✓	✓
Time stamped synchronised replay of all camera images	✓	✓	✓
Client de-warping of any 360° fisheye cameras in live, playback and export	✓	✓	✓
Unlimited configurable views from any single 360° fisheye stream	✓	✓	✓
Version 6 WaveView client compatible with Wavestore Version 5 VMS	✓	✓	✓
Interactive Maps	-	✓	✓
<b>Exporting video from the WaveView Client</b>			
3-click evidential export of any recorded video	✓	✓	✓
Export complete 360° video for full post-event analysis	✓	✓	✓
Multiple simultaneous camera video export	✓	✓	✓
Export to a host of video and audio formats (incl. wsb, dvd, mpeg, avi, mp4, wmv etc.)	✓	✓	✓
<b>WaveView Mobile Client</b>			
Licence-free mobile client application for Android and iOS devices	✓	✓	✓
<b>Recording Management</b>			
Configurable recording schedules	✓	✓	✓
Native quality image recording	✓	✓	✓
Configurable multi-track recording per camera	✓	✓	✓
Time-lapse recording function (recording i-frames only)	-	✓	✓
Lip-sync audio recording	✓	✓	✓
Native 360° fisheye camera recording	✓	✓	✓
iSCSI support	✓	✓	✓
Event-driven video switching	✓	✓	✓
RAID capability up to RAID6 (N+2 redundancy)	-	✓	✓
Failover	-	-	✓
<b>Search Engine</b>			
Instantaneous retrieval of recorded video via playback slider	✓	✓	✓
Global text search of operator event notes	✓	✓	✓
Event/Alarm search and instant replay	-	✓	✓
Metadata search	-	✓	✓
<b>Alarm and Event Management Engine</b>			
User configurable event and alarm management	✓	✓	✓
Configurable event email notifications	✓	✓	✓
Manual and/or automatic digital output trigger	✓	✓	✓
Flexible cause & action rules engine	✓	✓	✓
Evidential video locking	✓	✓	✓
Real time on screen event list	-	✓	✓
<b>Updates</b>			
Wavestore software upgrades (within current version)	60 Days	90 Days	90 Days
Easy upgrade to next level of software (Base to Premium, Premium to Enterprise for example)	✓	✓	N/A
Service Level Agreement (SLA)	Optional	Optional	Optional

\*subject to meeting minimum hardware specification

# Features of Wavestore's VMS



## One screen, total control

Simultaneously view, control and manage live video, recorded footage and integrated devices, all from one screen, all at the same time, to create a fully scalable and powerful total security solution.

## Any video, any format

Wavestore is compatible with a wide range of video technologies making it possible to have any combination of camera types and images displayed on screen and recorded at the same time, even with a mix of compression formats including H.264, MJPEG, MPEG-2, MPEG-4, MxPEG and JPEG2000.



## Leading 360° dewarping as standard



Wavestore delivers powerful client-side dewarping as standard across all levels of its VMS. Compatible with a multitude of camera brands, now including Immervision and OnCam full SDK integration, you need never miss a thing with full 360° recording providing complete live or recorded image interrogation as part of your overall solution.

## Rapid retrieval, effective decisions

Thanks to Wavestore's unique architecture, users are able to search multiple petabytes of storage by text, alarm/event or via an intuitive play-bar with pin-point accuracy to instantaneously retrieve and play back recorded video.

## Open, for business

Future-proof your system with Wavestore's truly independent open platform VMS and benefit from best-in-breed integrated solutions which unlock real benefits and maximise return on investment regardless of industry.

## Wide Technology Partner eco-system

Wavestore operates an ever expanding Technology Partner programme allowing partners to benefit from seamless integrations across a host of best-in-breed brands encompassing cameras, access control, video analytics and much more. In addition, Wavestore is fully compliant with ONVIF profile S bringing enhanced flexibility to camera choice.



## THE LINUX ADVANTAGE

- Industry leading throughput
- Wavestore VMS embedded into the Linux Operating System
- Save on processor & hardware requirements
- Low energy and maintenance costs
- Lightning quick updates



## Efficient management, unlimited data

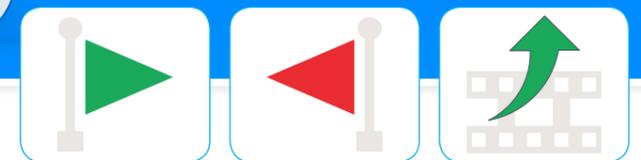
Wavestore utilises an ultra-robust proprietary Large Allocation Storage System (LASS) to deliver industry-leading throughput, high volume recording rates and efficient HDD usage of up to 98% of disk size. It also empowers Wavestore's lightning fast search functionality – which is up to 95% faster than that of other VMS platforms, even across storage of multiple PetaBytes.

## Data integrity, better evidence

Wavestore's VMS is engineered with security and resilience at its very heart utilising a robust anti-corruption file system coupled with 4096bit encryption to provide peace of mind that your data remains safe and secure at all times.

## 3-click evidential export

A fully stitched-together sequence of events from any number of cameras can be exported in just three clicks to a wide range of video formats.



1. Set start point of video

2. Set end point of video

3. Export

## Multiple track recording

Up to three video, one audio and one metadata track can be utilised per camera channel. Each track can be configured to retain data for different lengths of time and in different formats, image rates and resolutions. They can also be set up to record on continuous, motion or alarm modes, and on different hardware for redundancy and to protect data.

## One level of support, always excellent

Wavestore's reputation is built on providing excellent products backed by service to match. With a 3 or 5 year optional Service Level Agreement (SLA), you can take advantage of new software features and functionality as they are introduced to unlock powerful new benefits well into the future.

## WaveStar specialist integration service

Wavestore's unique WaveStar scripting service makes quick and cost-effective integration possible for a wide range of devices. Virtually anything with an output can be integrated, allowing events and metadata to be captured, events to be triggered and associated video interrogated.

## Intelligent video, empowering systems

Wavestore's VMS brings together video, audio and data from disparate devices onto a single future-proof platform, enabling powerful live operation and post-event search functionality across a host of technologies. Operators can manage alarms and events either in real time as they happen or via post-event interrogation, including retrieval of associated video and audio via text searches. Video from time-synchronised events can be easily stitched together using Wavestore's 3-click evidential export function from any number of cameras, to a wide range of video formats.





# The future of VMS has arrived



## The operator's favourite GUI just got better

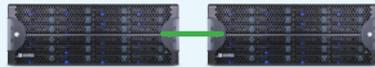
WaveView client has been updated based on customer feedback, to include a fresh new look featuring updated icons and graphics, making it even more intuitive to use. The addition of dockable components and configurability of the live event stream window provide an enhanced user experience, whilst automatic login and automatic opening of an operator's chosen layout, delivers convenience.



### Leading support for larger systems

Now with the ability to handle more than 250 channels per server and support for up to 16 PetaBytes of images per volume, (the equivalent of approximately 7.4 million days at 25 images per second, or over 250 cameras for 80 years at 25 images per second), V6 sets a new industry benchmark for Enterprise level applications.

#### Intelligent Failover



Now available at Enterprise level as standard to deliver resilience and peace of mind in mission-critical applications and to ensure uninterrupted recording should a problem occur.



### Taking security to the next level

Wavestore's VMS is independently security tested as part of its ongoing security programme and V6 includes a new high-security password policy system alongside enhanced encryption and other security updates provide protection against unauthorised access and deliver a hard stop against any hacking attempts.



### Increased channel support

Thanks to enhanced efficiency in the way video is handled within V6, more than 250 channels can now be connected to each server or appliance, saving investment on hardware.

**Base:** up to 24 channels per server/appliance

**Premium:** up to 128 channels per server/appliance

**Enterprise:** up to 254 channels per server/appliance

### But that's not all, other new features include...

-  Simplified installation of Wavestore's VMS onto your server or appliance, now from either a USB memory stick or a DVD. If purchasing a Wavestore server or appliance, the VMS comes pre-loaded
-  Full support for ImmerVision 360° panomorph optics and Oncam 360° cameras now added
-  Additional parameters for 360° camera set-up to take into account wall angle and camera orientation
-  Introduction of camera shortcut keys using keyboard number pad



LDAP and Active Directory has been made even easier to set up via on-screen prompts, available as standard at Enterprise level



Improvements to I/O device set-up and the ability to configure outputs via Axis VAPIX



Numerous improvements to network set-up, including support for port bonding and jumbo frames



Improved hardware driver support for third-party servers and appliances



Support for up to 32 Network Interface Cards (NIC) within a server or appliance, delivering industry leading throughput



Improved support for audio devices



A host of additional third-party integrations

Visit [Wavestore.com/demo](http://Wavestore.com/demo) and discover for yourself the power and simplicity of V6



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