WISENET

WISENET WAVE

Hanwha Techwin

Video Management System

Intuitive and Easy to Use

- An intuitive 'drag & drop' tool makes it extremely easy for operators to set up a display of live and recorded images on a single screen or video wall, with customizable layouts and sizes.
- Zoom windows which, with just simple clicks of a mouse, enables operators to zoom in to see close up detail of any suspicious activity.
- Motion detection and video analytics support can be configured to generate alerts when user defined incidents occur.
- A wide range of smart, keyword, calendar and preview search options facilitate rapid retrieval of recorded video.

Wisenet WAVE targets the needs of projects in the mid-market with an emphasis on simplified user experience.

SUNAPI 2.0 INTEGRATION

Wisenet WAVE is integrated with the latest SUNAPI 2.0 for seamless interaction with Wisenet cameras and recorders.

Full SUNAPI 2.0 driver has been rigorously tested with Wisenet P, X, and Q series and supports:

- Video/audio streaming
- PTZ
- Event - advanced analytics, MD, alarm
- Device configurations

Hanwha Techwin specific features

Deep camera integrations and NVR monitoring, search & playback:

- H.265
- WiseStream
- All triggering events including sound classification and loitering
- Simple Focus / Initialize Focus / Lens Control settings
- Multi-directional camera support
- Hallway view
- Camera profile/image configuration
- PTZ preset Sync

Simple. Reliable. Customizable.

Wisenet WAVE VMS features a very unique adaptive scaling technology which dynamically switches between the high resolution and low resolution images depending on the CPU usage of the client PC. It is an endlessly customizable IP Video Management platform that gives users the ability to create tailored networked video solutions for any type of project, for use by anyone, on any device.

An Operating System to Suit Your Needs

Wisenet WAVE has applications for all major operating systems so our users are not limited by what device or operating system they choose to use on their desktops, mobile devices, rack mount servers, or even low-powered embedded devices. (For embedded devices, please contact Hanwha Techwin Support)

WAVE Sync

A cloud-based service that enables simple, centralized remote access and insight into any Wisenet WAVE system.

Desktop

A rich media player designed to view and manage a single Wisenet WAVE system from a desktop or laptop PC.

Mobile

A mobile app designed for viewing Wisenet WAVE system video and archives while on-the-go.

Server

A media server responsible for discovering, connecting to, and managing system devices and data.

Supported Browsers	Desktop OS Support	Mobile OS Support	Server OS Support
Google Chrome	Microsoft Windows	Google Android	Microsoft Windows
Mozilla Firefox	Ubuntu Linux	Apple iOS	Ubuntu Linux
Opera / Opera Neon	Apple macOS		
Micosoft Edge			
Apple Safari			

Wisenet WAVE Sync Simplifies Everything

A cloud-based service which can be remotely accessed by an unlimited number of authorized users from anywhere in the world.

Setup in Seconds

Step 1: Create Wisenet WAVE Sync Account
Step 2: Link your System to Wisenet WAVE Sync
Step 3: Connect, View and Manage from anywhere

Connect. View. Manage. Scale.

Wisenet WAVE Sync is a public cloud application hosted on Amazon AWS that enables simple remote connectivity, streaming and management of one or an unlimited number of Wisenet WAVE Systems.

Supported Operating Systems:

Google Chrome
Mozilla Firefox
Opera/Opera Neon
Microsoft Edge
Apple Safari

View	Manage	Scalability / Integration
Live Video (adaptive)	System Settings	Unlimited # of Systems
Recorded Video (adaptive)	User Permissions	Unlimited # of Users
Camera Details	Cloud Connections	Unlimited # of Devices
Keyword Search	Email Notifications	Cloud API
Calendar Search	Cloud System Merge	
Flex Timeline		

Wisenet WAVE Sync Browser & Devices Interface

Cloud Systems

Cloud Connect	Connect any Wisenet WAVE System for simple remote connectivity from anywhere using NAT Traversal and Cloud Data Proxy technology.
User Management	Add an unlimited number of users to a single Wisenet WAVE Sync System. Share access to your Wisenet WAVE system in seconds using only email addresses. Create Custom Roles to quickly assign access to multiple Wisenet WAVE Sync connected systems.
How it works	Wisenet WAVE applications (Server, Desktop, Mobile) connect via an active internet connection to the Wisenet WAVE Sync (Cloud) and are automatically connected together using a combination of NAT Traversal (direct connection) and data proxy technologies (connected via Wisenet WAVE Sync).

Wisenet WAVE Sync Features	
Connectivity	Nat Traversal: Connect directly to proxied Wisenet WAVE servers
	Cloud Data Proxy: Connect via AWS cloud proxy service
Interface Tabs	Systems: View connected system tiles
	Settings: View users / rename system / merge system / disconnect system
	View: Use Wisenet WAVE sync client to view live or recorded video
Security	
Secure Password Recovery:	Via email
HTTPS:	Open SSL encrypted server/client/cloud connections
Email:	TLS (Transport Layer Security)
Passwords:	Complex multi-level hash
Developer Tools	
Cloud API	Available upon request
Scalability	
# of Connected Systems	Unlimited
# of Users	Unlimited

Desktop

The Ultimate Flexibility

Wisenet WAVE offers a wide range of options to allow users to choose how and where to manage their video surveillance systems with minimal hardware requirements.

Wisenet WAVE is offered as software which can be installed onto a user's desktop running Windows, Linux or Apple devices.

One App, Many Features

Wisenet WAVE Desktop combines performance, ease-of-use, and a robust reliability into a single cross-platform lightweight app capable of running on everything from Atom based tablets to Xeon based servers.

Supported Operating Systems: Microsoft Windows, Ubuntu Linux, Apple MacOS

Usability	Media	Configuration	Search
Drag & Drop Everything	IP Cameras / Encoders / DVRs	Events & Rules Engine	Smart Motion Search
Consolidated Notifications	RTSP/HTTP Streams	User Management	Keyword Search
Flex Timeline	I/O Devices	IP Cameras / Encoders	Calendar Search
Customizable Layouts	Web Pages	Server Management	Time-Slice Search
Digital Maps	Videos	I/O Device Management	Bookmarks
Adaptive Scaling	Images	Storage Management	Audit Trail

Desktop Application

Supported Operating Systems

Windows 8
Windows 8.1
Windows 10
Windows Server 2012
Windows Server 2012 R2
Windows Server 2016 (Long-term Service Channel) 1607
Windows Server 2019

Ubuntu Linux 16.04 LTS
Ubuntu Linux 18.04 LTS
Ubuntu Linux 20.04 LTS

macOS Mojave 10.14
macOS Catalina 10.15
macOS Big Sur 11

Supported Media Playback On Grid	
Live Streams	Codecs: H.265 H.264 MJPEG
Offline Media	Videos: AVI MKV MP4 MOV TS M2TS MPEG MPG FLV WMV 3GP
	Images: JPG PNG GIF BMP TIFF
Connected Devices	I/O Devices: Status and Triggers
	Servers: Server Health Monitoring
Browser	Web Pages: Responsive Websites / Progressive Web Apps
Viewing Modes	
Media Player	View, edit, and export offline videos and images
Connected	View, configure, and manage any Wisenet WAVE system
Videowall	Put Desktop into VideoWall mode to control remotely
Showreel	Fully customizable timed viewing tour of any GRID media
Maximum # Of Grid Items	
64 Bit OS	64 Items (e.g. 64 live streams)
Hardware Requirements	
Minimum Supported Specs	Hard Drive: HDD/SSD/mSATA RAM: 2GB CPU: Quad Core Intel Celeron CPU or higher Graphics: Intel HD Graphics 3000 w/ OpenGL2.1 support Networking: 1GB NIC
Performance Specs	Hard Drive: Performance SSD RAM: 16 GB RAM CPU: Intel Core i5 Graphics: NVIDIA GeForce GTX 1050 (OpenGL2.1 support is required) Networking: 10 GB NIC

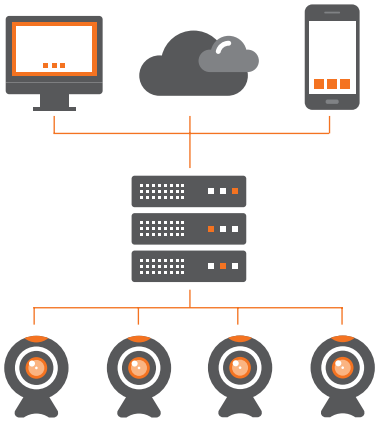
Server

Lightweight. Powerful. Server Hive.

The Wisenet WAVE server application is the foundation of the entire platform - with the ability to operate alone or as one part of a hive.

Wisenet WAVE is available as a downloadable software application from the Hanwha Techwin website which enables the installers to easily and effortlessly install and configure.

The supporting web-based application enables each Wisenet WAVE platform to be managed as a stand alone system or as part of a larger, scalable video management solution. The application also provides an audit trail, real-time health monitoring and camera failover support, as well as reports on server health and storage status.



Server Hive

Connect to any Server w/ any Client

- Instant synchronization
- No single point of failure
- Automatic failover
- One-click upgrades

Discover. Manage. View. Integrate.

The Wisenet WAVE server application is a lightweight, powerful media server responsible for discovering, connecting to and managing Wisenet WAVE system devices and data.

Supported Operating Systems: Microsoft Windows Ubuntu Linux

Discover	Manage	View	Integrate
IP Cameras (ONVIF, Custom)	IP Cameras / NVRs / DVRs	Live Video (adaptive)	HTTP Generic Events
RTSP/HTTP Streams	Advanced Routing	Recorded Video (adaptive)	HTTP Request-as-an-Action
I/O Devices	Storage (HDD/NAS/DAS)	Server Health	Server API
Servers / Systems	Events & Rules Engine	Log Files	Storage SDK
SAMBA NAS	Failover	Audit Trail	Video Source SDK
	Transcoding	Storage Status	Any Device or System
	HTTPS & Encrypted video traffic		Metadata SDK & Plugins

Server Application

Supported Operating Systems

Windows 8
Windows 8.1
Windows 10
Windows Server 2012
Windows Server 2012 R2
Windows Server 2016 (Long-term Service Channel) 1607
Windows Server 2019

Ubuntu Linux 16.04 LTS
Ubuntu Linux 18.04 LTS
Ubuntu Linux 20.04 LTS

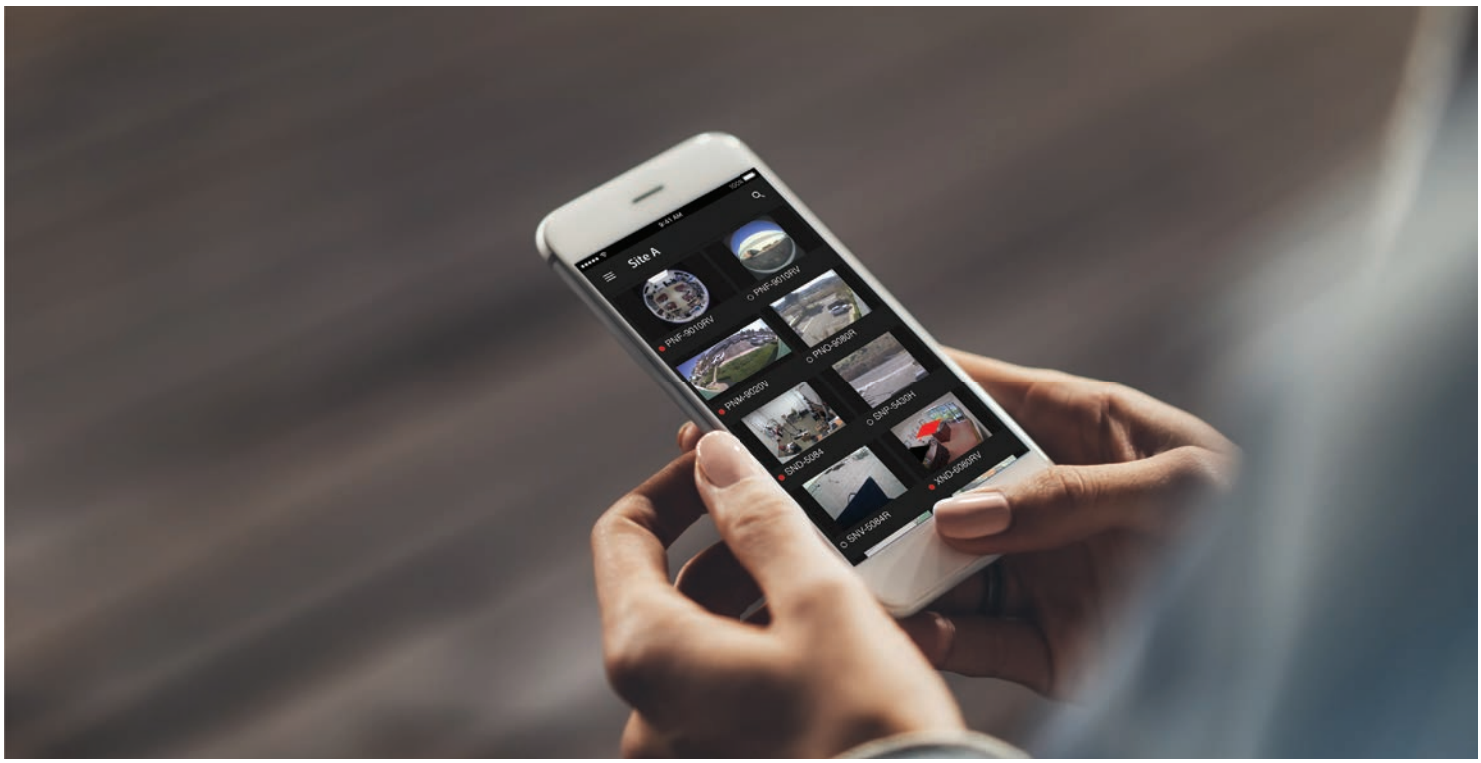
Supported Media Streaming	
Live Streams	Video: H.265 H.264 MJPEG
	Audio: AAC PCM (Mu-Law, A-law) g726 MP3
Live Streams (Available to pull from Server to 3rd Party)	Video: H.265 H.264 MJPEG WebM
	Audio: AAC PCM (Mu-Law, A-law) g726 MP3
	Protocols: RTSP MJPEG WebM HLS
Other	
Automatic Camera Failover	~1 Min. Configurable.
Transcoding	Supported (For Web Client, Mobile, Api)
Database	SQLITE + Proprietary Archive Index
Single Sign On	LDAP / Active Directory
Security	Open SSL Salted MD5 Hash TLS/SSL HTTPS
Dev tools	Server API (HTTP) / Video source SDK / Storage SDK / Metadata SDK
NAS	SAMBA (Authenticated, Unauthenticated)
Scalability	
# Of Resources Per System:	10,000
# Of Clients Per System:	Unlimited
# Of Streams Per Server:	128
# Of Servers In a Server Hive	100 (100 is a recommended maximum. Contact technical support for more info).
# Of Users In a System	1,000
Hardware Recommendations	
Recommended based on # of streams	

Streams	RAM	NIC	CPU*
Up to 16	2 GB	1 GB	Dual Core Atom
Up to 32	4 GB	1 GB	Dual Core Atom
Up to 64	8 GB	1 GB	Core i3
Up to 128	16 GB	1 GB	Core i3
*CPUs data correct at time of print.			

Mobile

Smart Phone. Smart Video.

A mobile app provides the opportunity to remotely access the key functions of Wisenet WAVE from a smart device to enable 'on-the-road' users to view and respond to any incidents captured by Wisenet cameras.



Connect. View. Search. Control.

Wisenet WAVE Mobile, with a custom developed media player,is a low-latency, user-friendly mobile application for iOS and Android devices that allows users to connect to, view, search and control IP cameras over Wi-Fi or data networks.

Supported Operating Systems: Google Android Apple iOS

Connect	View	Search	Control
Wifi	Live Video (adaptive)	Keyword	Advanced PTZ / Standard PTZ
Data 4G/LTE	Recorded Video (adaptive)	Calendar	Fisheye Dewarping
	Layouts	Flex Timeline	2 Way Audio
	Available Systems	Smart Motion Search	

Mobile

Supported Operating Systems

Oreo	8.0 - 8.1
Pie	9.0
Android 10	10.0
Android 11	11.0
iOS 11	11.0
iOS 12	12.0
iOS 13	13.0
iOS 14	14.0

GET IT ON Google Play

Download on the App Store

Supported Media Playback	
Streams	Codecs: H.265 H.264 HLS
Features	
Remote Connect	Login using local or Wisenet WAVE Sync credentials
Live Thumbnails	Thumbnails refresh in real time
Keyword Search	Search for cameras or layouts by name
Calendar Search	Search by date and time
Smart Motion Search	Search motion events within the entire video or specific region
Advanced PTZ	Point pan, zoom, tilt controls, PTZ presets
Fisheye Dewarping	Dewarp fisheye images
Adaptive Scaling	Hi / low resolution switching transcoding
Layouts	View thumbnails of System Layouts
Quick System Switch	Quickly switch between multiple Wisenet WAVE systems

WISENET

Hanwha Techwin
Heriot House, Heriot Road, Chertsey, Surrey, KT16
9DT, United Kingdom
Tel : +44.1932.57.8100
Fax : +44.1932.57.8101
www.hanwha-security.eu

Hanwha Techwin

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REVISED 11-2021