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WISeNET
SAMSUNG

SURVEILLANCE SOFTWARE

SSM - Smart Security Manager

Surveillance Software

SSM Features

SSM is a one-stop management software platform that maximises the efficiency of Wisenet network products.

- **Centralised Management**

An administrator can manage the configuration of the servers, cameras and recorders from a single location.

- **Distributed Intelligence**

SSM's modular architecture allows the software to effectively manage any system, from low-end solutions to enterprise level installations.

- **Guaranteed Reliability** (Available in Enterprise version)

Failover redundancy controls and automatic network-fail recovery ensure that your SSM system will operate reliably at all times.

- **Flexible System Architecture** (Available in Enterprise version)

The transaction Server functionality provides easy integration with third party systems.

- **Efficient Monitoring**

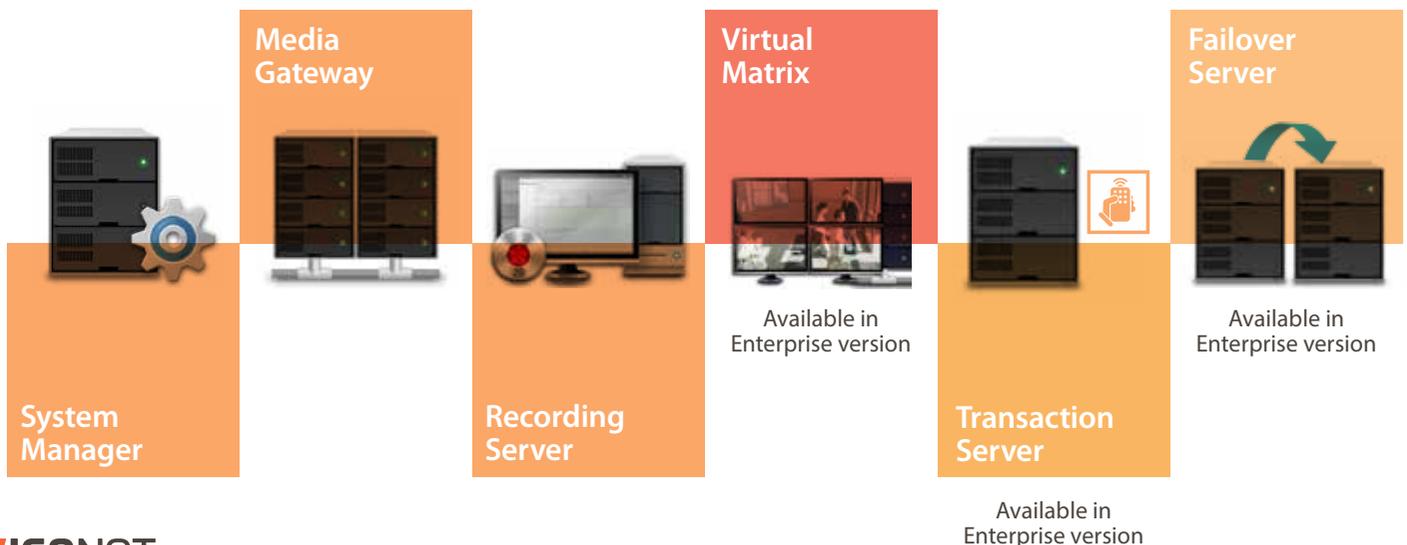
Fully configurable event rules and configurations make it easy for system operators to identify important incidents.

- **Powerful Search Engine**

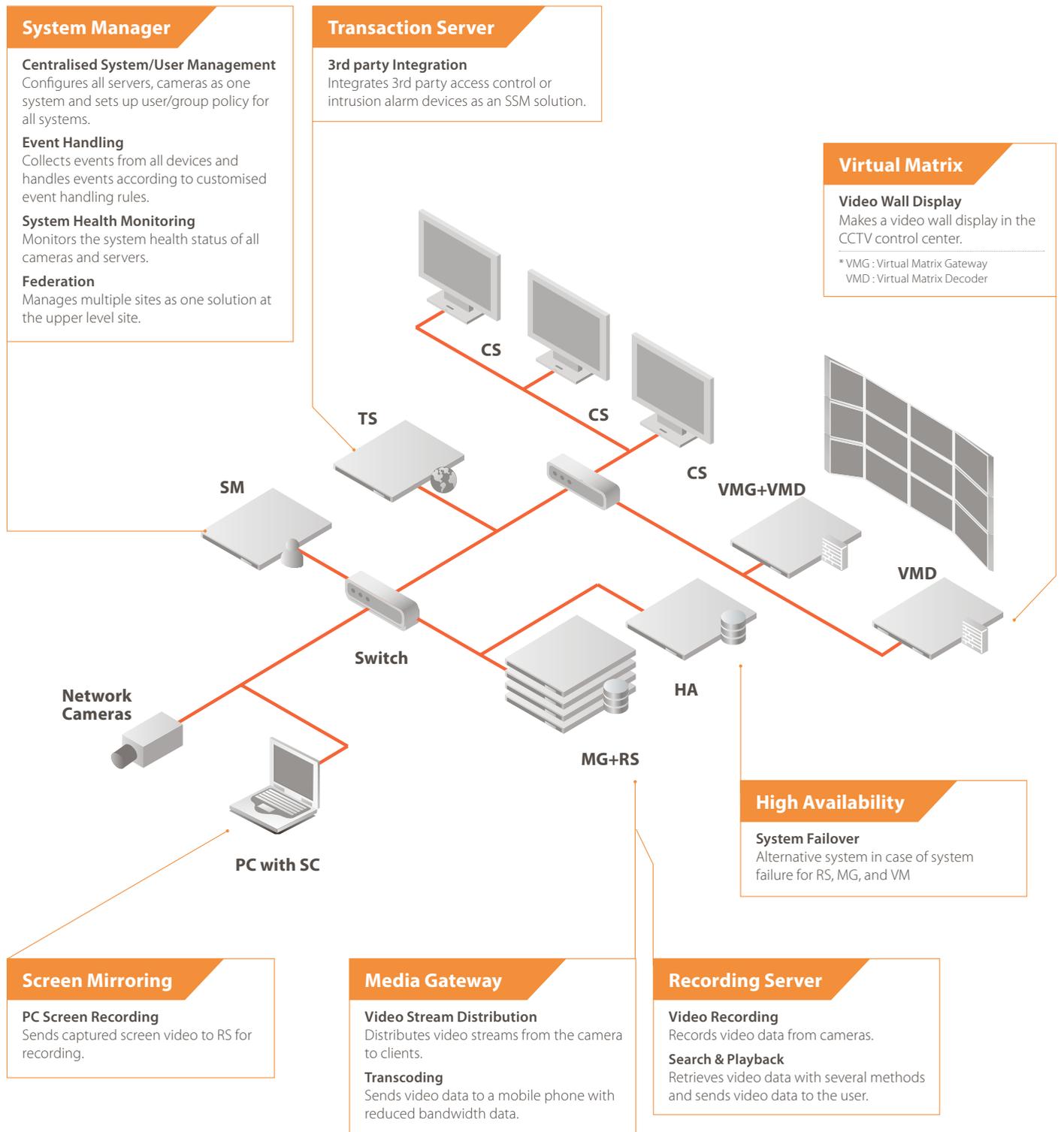
A wide range of search options assist users in the swift retrieval of evidential data

- **Extended Scalability** (Available in Enterprise version)

SSM is suitable for both small installation and larger installations, with numerous features for enterprise systems including Federation, Failover, Transaction Server and LDAP Integration.



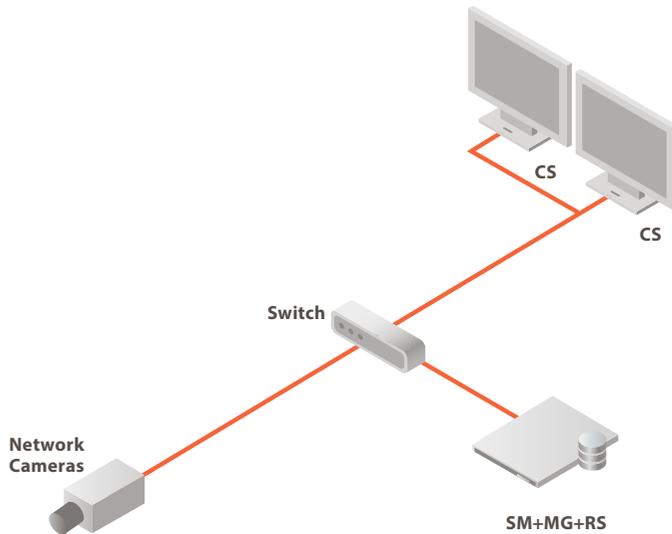
SSM System Overview



Surveillance Software

Small System

Up to 100 cameras, suitable for applications such as Commercial Building, Education, Government Offices (City Hall, Museum, Library and more)

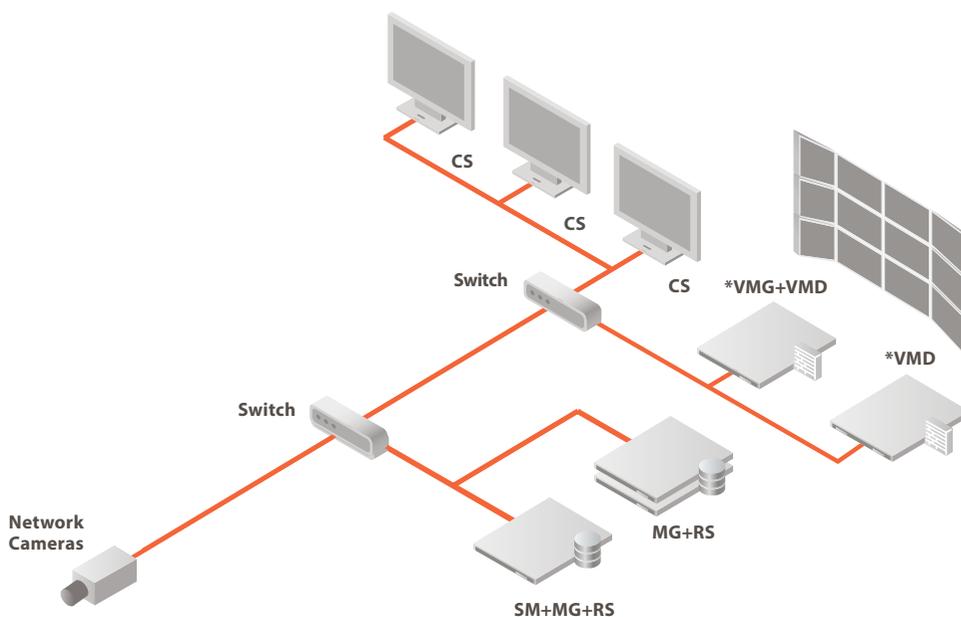


Network Camera + Server Recording System

- Only one SM needs to be installed for a surveillance solution.
- If a server is used RS, SM and MG is preferred to be installed to that server.
- Even though it depends on performance of the server, one server can handle a solution under 100 cameras.

Mid System

Up to 300 cameras, suitable for applications such as Industrial Factory, Public Utilities, Commercial Building, Healthcare, Sports Complex, Prison



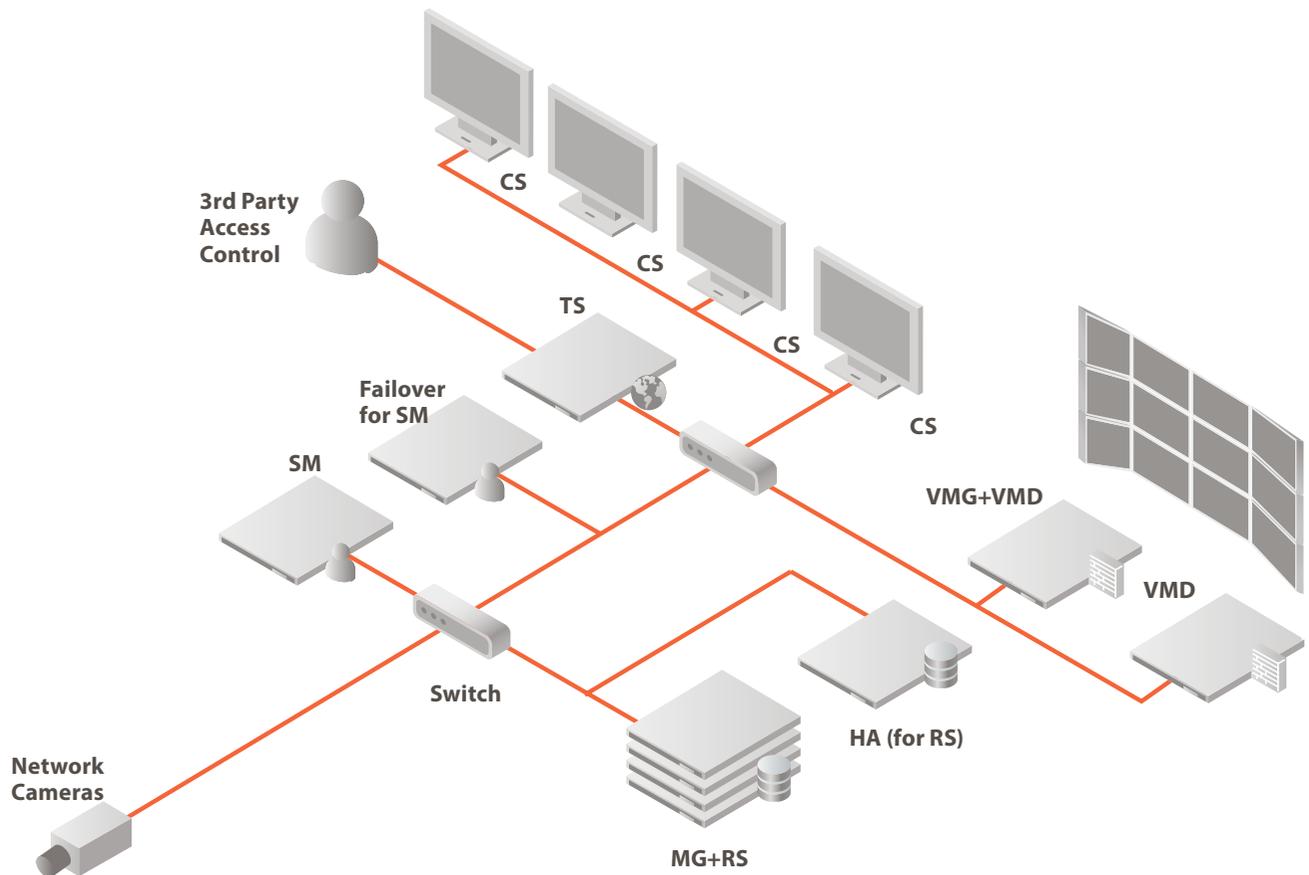
Network Camera + Server Recording + Video Wall System

- Only one SM needs to be installed on site.
- SM is not needed to be installed to a separated server but can be installed with a recording server.
- MG and RS can be installed to a server.
- * Only one VMG needs to be installed on site and it can be installed with VMD.
- For video wall system, a display server with 4 or more monitor output is commonly used instead of the expensive server that has RAID storage system.

*Available in Enterprise version

Enterprise System

More than 300 cameras, suitable for applications such as Airport, Convention Center, Railway, Port, Casino



Network Camera + Server Recording + Video Wall + Failover + Access Control System

- SM is recommended to be installed at a separated server because it might need more performance for handling a mid to high site which may cause unstable recording.
- Failover system for SM and RS is recommended for stable system operation and redundancy for video data.
- TS is needed for integration with a 3rd party access control or intruder alarm system

Server Features

Multi-site / Multi-client monitoring

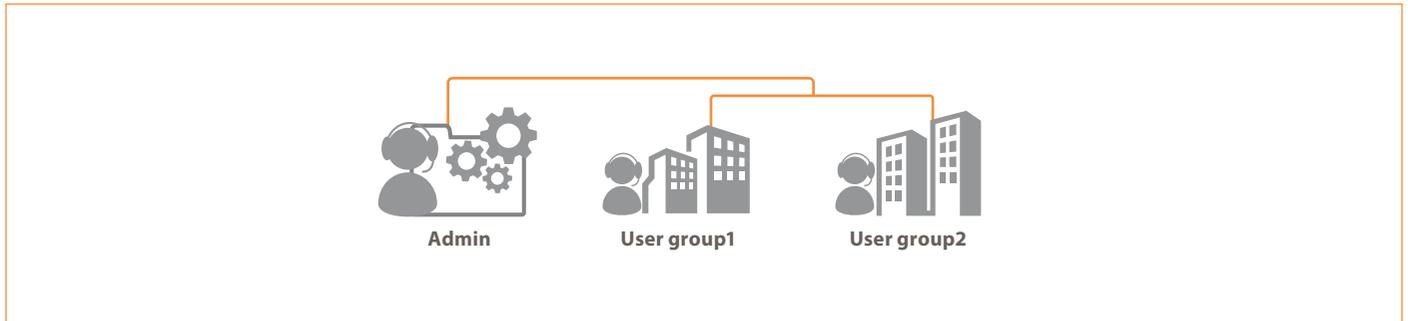
Conventional monitoring solutions have an on-site administrator to control the local devices; this can limit the scope when expanding the monitoring system. The SSM supports multi-site / multi-client monitoring that removes this limitation making it suitable for mid to large sized monitoring applications.

Expandability

Wisenet network connected products are registered and managed by SSM server. The server can search the connected equipment, support health checks and upgrade each device to ensure that they are maintained in the best condition.

Reliability and Security

Individual sites, users and user group management is controlled by the system manager. With this level of authorisation access and management, certain sites or devices and management function can be controlled at the user level.



Virtual Matrix (Available in Enterprise version)

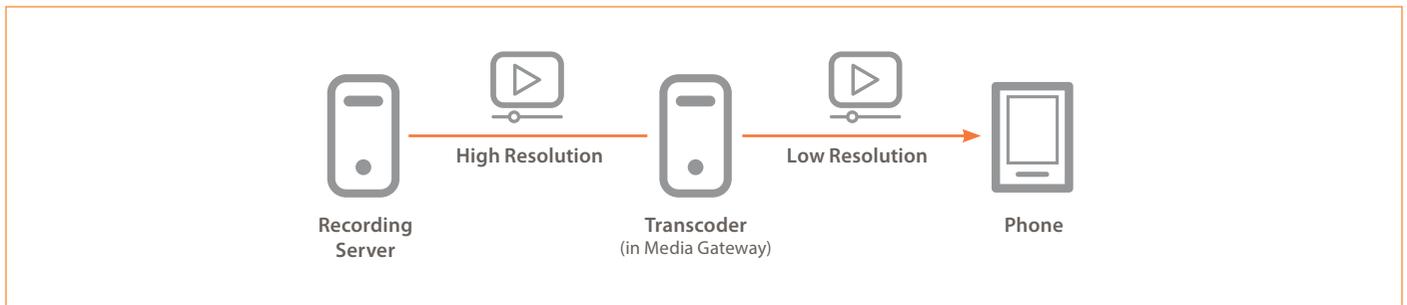
SSM Virtual Matrix is designed to control wall-monitors and ensures that operators maintain a complete control of all monitors, allowing immediate video view control and switching event video to resolve incidents fast.

- Provide sequence, event and map monitoring mode for more efficient monitoring.
- Multi monitors can be merged as one monitor without any additional devices.



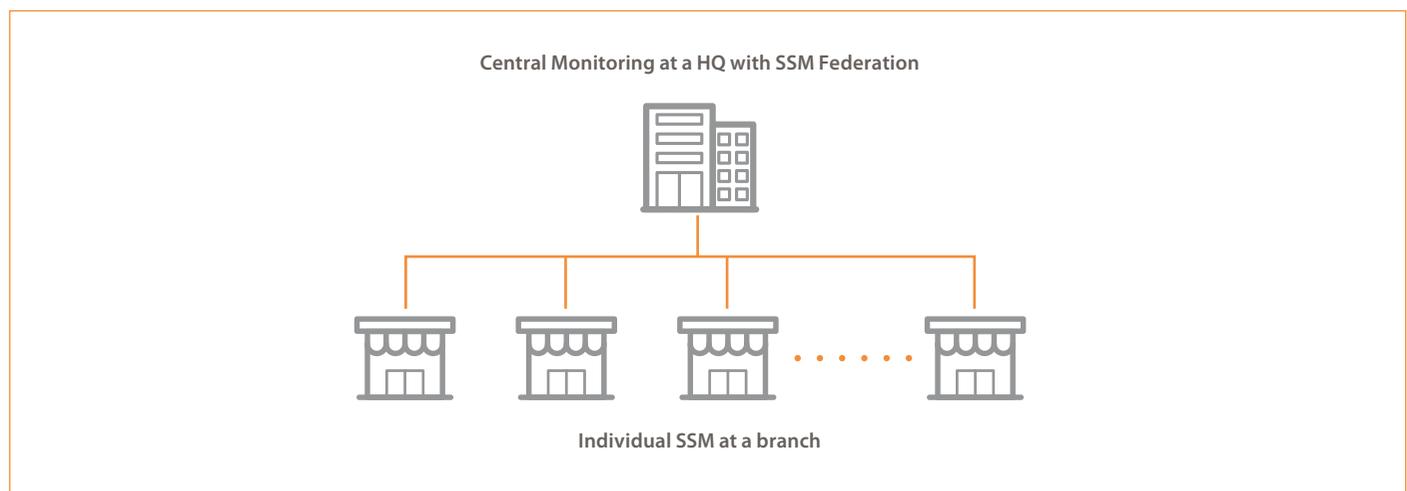
Transcoder (Available in Enterprise version)

In a mobile environment, recorded video with high resolution and framerate cannot be played because of bandwidth limitation. Transcoder transcodes the recorded video to a lower bandwidth stream for more reliable monitoring.



Federation (Available in Enterprise version)

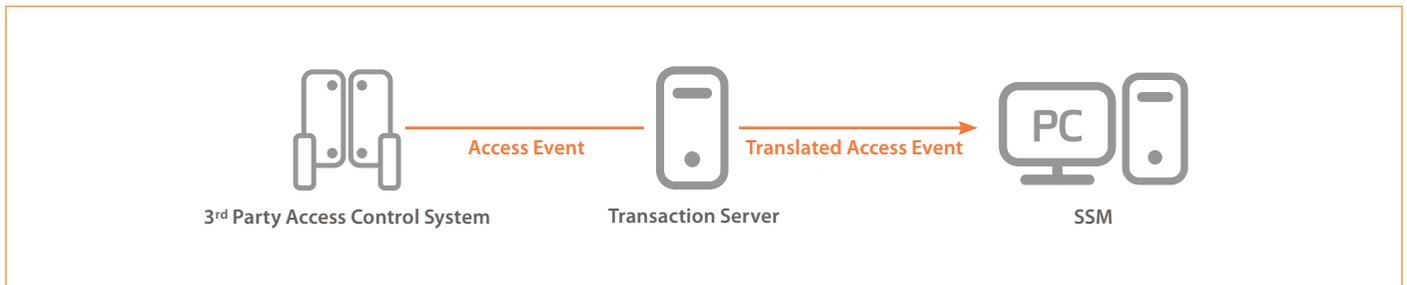
SSM's Federation feature makes it possible to connect geographically distributed, independent SSM systems to mimic a larger system. All systems are managed independently, easing the problem of managing a single, centralised system, yet providing the benefits of centralised systems. Connecting two SSM systems takes less than a minute and users will be able to access the remote system's live and recorded video as if it is a local system.



Server Features

Transaction Server (Available in Enterprise version)

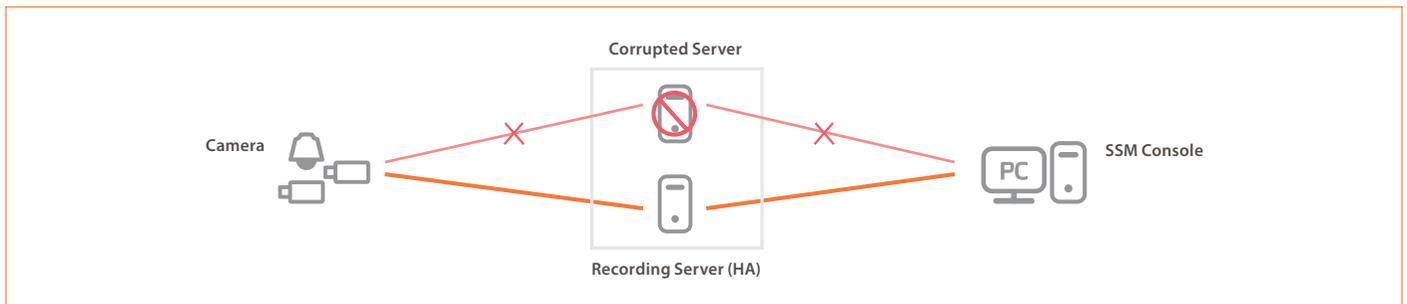
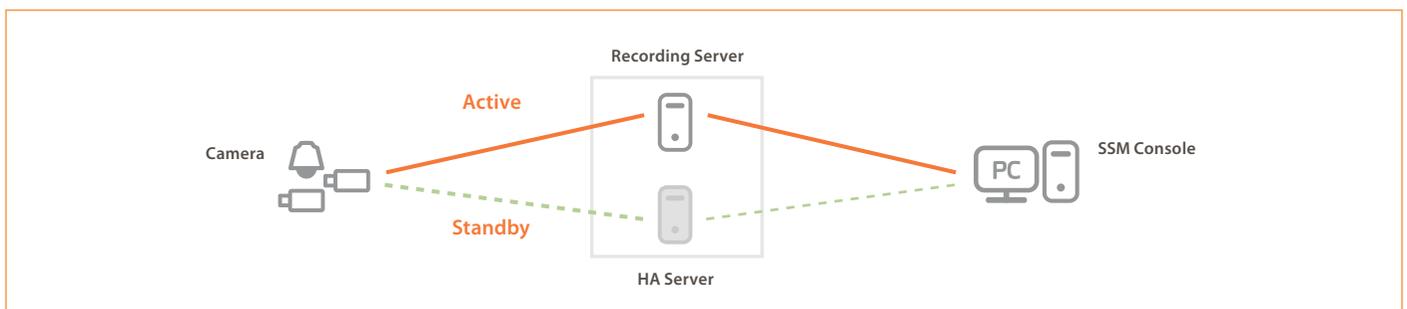
*Transaction Server is an interface between SSM and a third-party system such as access control or intrusion alarm system.



HA(Failover) Server (Available in Enterprise version)

For the sustainable system operation, HA server acts like a watchdog for SSM servers and if a server is corrupted by the network or system itself, HA takes over the role of the system. After recovering the corrupted system, HA will automatically switch back.

- HA is ready for Recording Server, Media Gateway and Virtual Matrix.
- For cost reduction, a single HA can watch multi servers because all servers are seldom corrupted simultaneously.



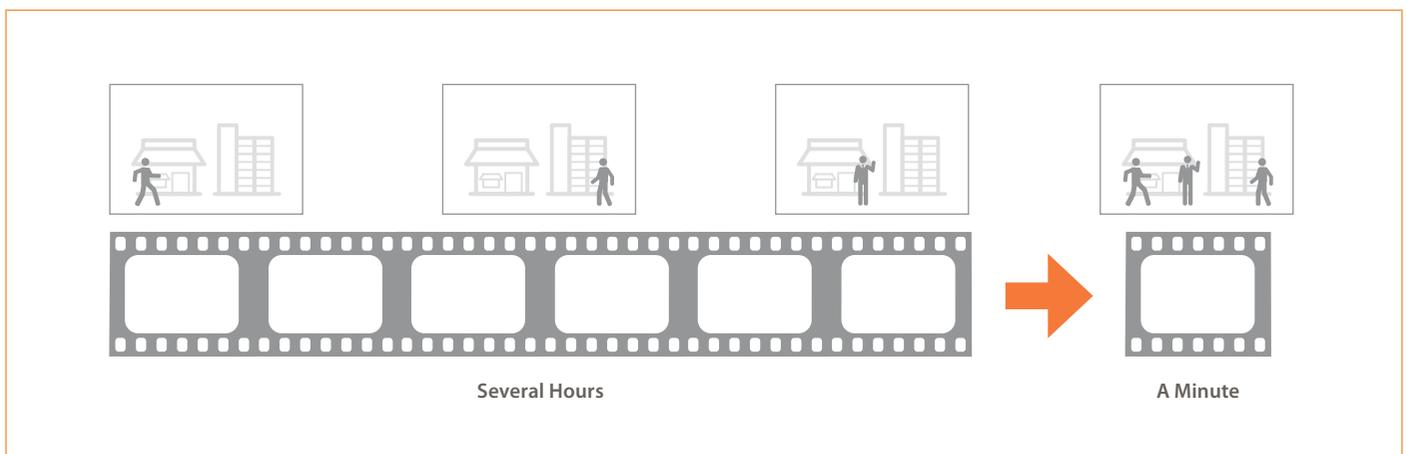
Screen Mirroring

The screen of a PC with Screen Mirroring can be displayed on a console or video wall with Virtual Matrix Server and can be recorded in Recording server. This is used for making video evidence of third party software like building management software, energy system, PoS system and so on.



Video Summary

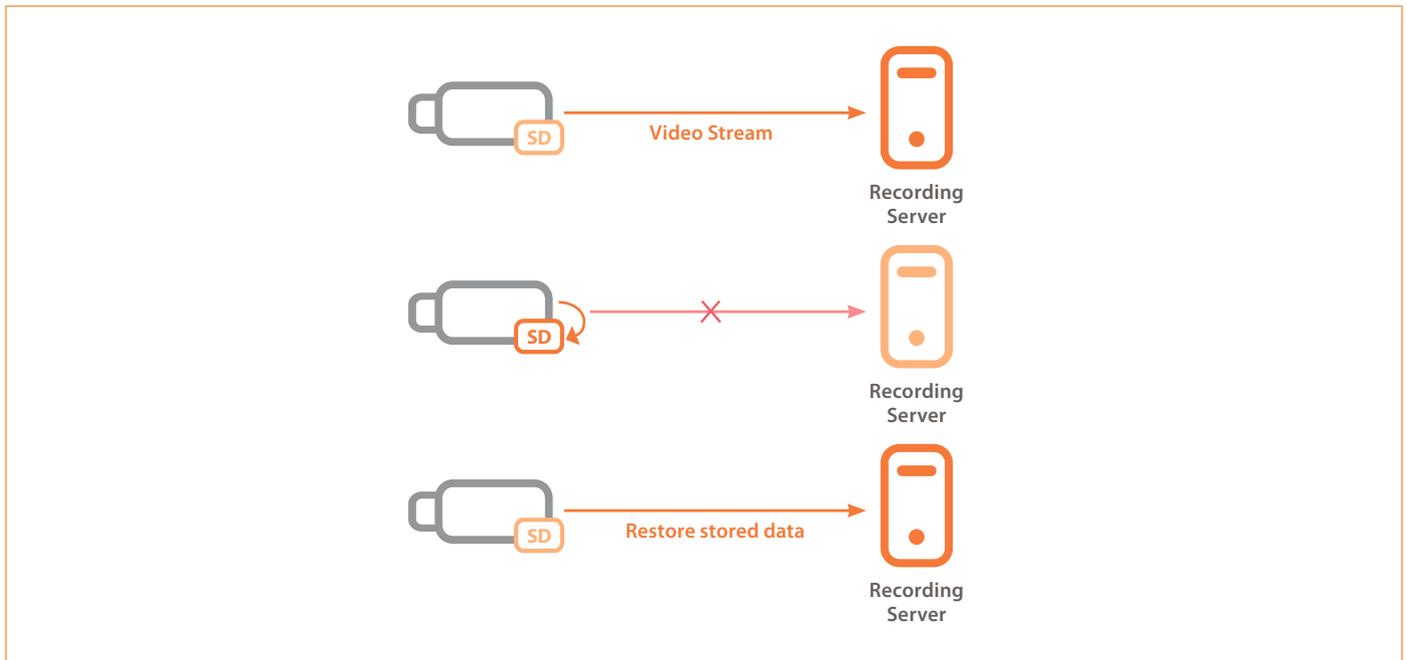
Video Summary condenses hours of recorded video into a series of shortened clips, with events overlaid and time-stamped. Selecting any of these events replays the relevant video clip in its entirety. Searches can be further refined by using criteria such as colour, object size and direction of movement.



Server Features

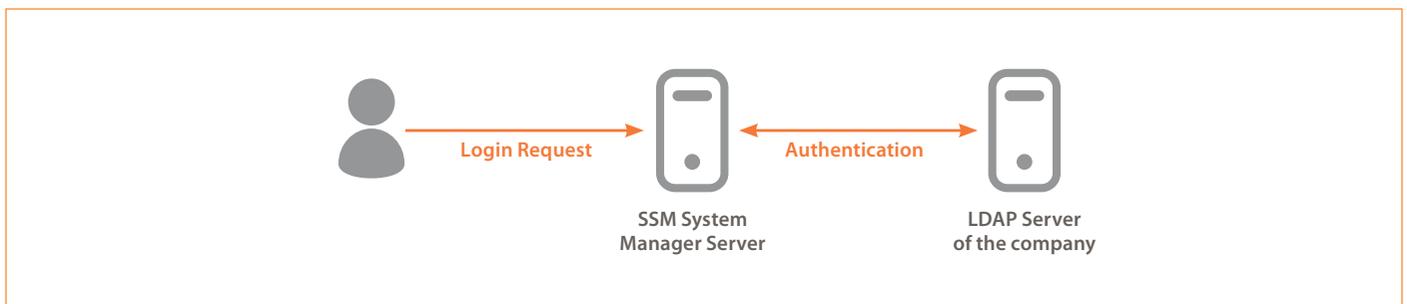
Auto Recovery Backup

In case of network failure, video data from a camera cannot be streamed to the Recording Server, so important evidence may be missed. However the Auto Recovery Backup feature enables video data to be stored onto the camera's SD Card. Once connected to the network, the camera sends the stored data to the Recording Server



LDAP Integration (Available in Enterprise version)

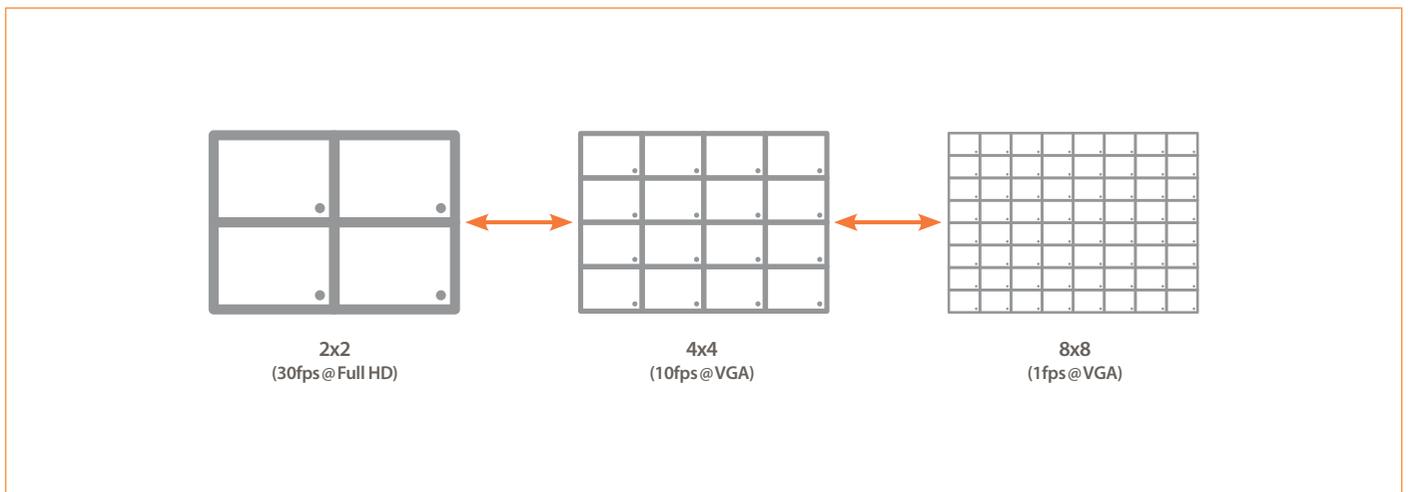
Companies usually use their own user authority policy so additional user setup for SSM can be a time consuming job. SSM supports LDAP so that it can utilise a company's pre-defined user authority system such as MS Active Directory.



Console Features

Bandwidth and performance optimised live monitoring

For effective and reliable monitoring, SSM provides an auto-profile change feature, where the optimum video profile is displayed relative to the screen format. For screen formats such as 6x6 or 8x8, 'I-frame only' is a more comprehensive option because of PC performance limitations.

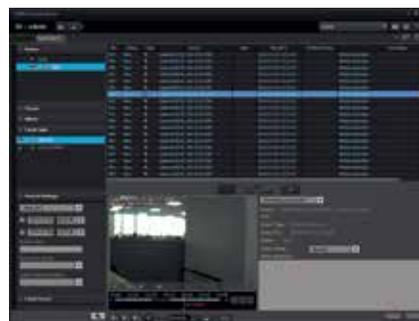


Efficient monitoring through powerful event management

All event-related features such as event priority, event colouring, rule-based event action setup and real-time event thumbnail display enable more efficient monitoring. SSM can also provide a separate event viewer window that provides real-time event logs with a single channel preview. Operators can monitor each event and add notes. Audio broadcasting is also available so that warnings can be issued in a dangerous event situation.



Live viewer event thumbnail



Event viewer

Console Features

GPU video decoding

By utilising the GPU processing power of Nvidia graphic card, a workstation can display almost double the amount of channels without any additional hardware equipment. With CPU, a workstation can display 21 channels in Full HD real-time streams. However when you combine GPU with CPU, 39 channels can be displayed. (Tested with Intel Xeon CPU E3-1270 3.60GHz, NVIDIA Geforce GTX 960, Win10 64bit, 8G RAM).



Map monitoring with Google Map (Available in Enterprise version)

*With SSM, an administrator can set a map-based layout to match with the live videos in real-time. Overlaying camera or sensor icons means resolving issues becomes extremely easy. By utilising map based monitoring together with live monitoring, an event pop-up window will appear on the location where the event has happened helping to resolve an event quickly. As well as 2D map image, Google map can be used for wide area surveillance.



2D Map



Google Map

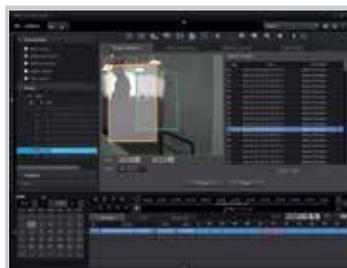
Various searching mode

SSM provides totally 9 types of search modes for quick evidence retrieval.

- Date/time, event, bookmark, and local folder search are the basic search features.
- POS, heat mapping is one of business intelligence features for retail shop owners.
- Motion search and smart search make it possible to retrieve evidence within a very short period of time.
- Video Summary is one of key features of SSM that provides 1 minute video clip for 24 hours.



Motion search



Smart search

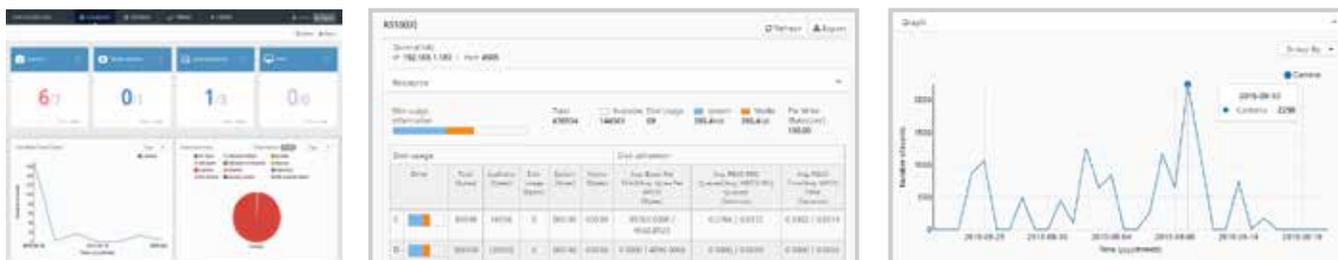


POS search

*For Enterprise systems only

System Dashboard (Available in Enterprise version)

All system devices that include servers, cameras and recorders can be monitored with a single dashboard. It shows detailed system information such as device and component status, CPU performance, memory usage, network bandwidth and HDD consumption. It also provides event statistics for efficient event management. For mobile accessibility such as tablet PC and smartphone, Dashboard provides plug-in free web access feature for any browsers like Google Chrome, Safari, Firefox and IE.



SSM Mobile

Security guards can access the SSM system via SSM mobile. With SSM mobile, it is possible to monitor live video and playback recorded data. If mobile bandwidth is not sufficient, the SSM transcoder creates a stable streaming environment.



Bookmark



Live 4ch



LivePTZ

SSM Specifications

General		Professional	Enterprise
Maximum Number of Cameras		288	Unlimited
Maximum Number of Clients		5	Unlimited
Centralised Management		Yes	Yes
Architecture		Multi-Server	Multi-Server
Clients		SSM Console, Configuration Manager, SSM Mobile	SSM Console, Configuration Manager, SSM Mobile
Supported Devices		Network Camera / Encoder / Decoder, DVR / NVR	Network Camera / Encoder / Decoder, DVR / NVR
Summary			
Basic Component	System Manager	Yes	Yes
	Media Gateway	Yes	Yes
Add-on Component	Recording Server	Yes	Yes
	Screen Mirroring	Yes	Yes
	Virtual Matrix	-	Yes
	Transaction Server	-	Yes
	Transcoder	-	Yes
	Failover Server	-	Yes
Features	Live Monitoring	Yes	Yes
	Search Playback	Yes	Yes
	Event Monitoring	Yes	Yes
	Map Monitoring	Yes	Yes
	POS/ATM Monitoring	Yes	Yes
	Wall Management	-	Yes
	Google Map Monitoring	-	Yes
	Video Analytics Monitoring	-	Yes
	Advanced Health Monitoring	-	Yes
	Access Control Monitoring	-	Yes
	Video Summary Search	-	Yes
	Active Directory Integration	-	Yes
	Site Federation	-	Yes
Component			
Media Gateway	Max. Media Gateway	4	Unlimited
	Max. Bandwidth (In/Out)	400 / 600Mbps	400 / 600Mbps*
	Max. Devices per Server	128 Network Cameras or 288 Cameras of Recorders	128 Network Cameras or 288 Cameras of Recorders*
Recording Server	Max. Cameras	128	128
	Recording Performance	400Mbps	400Mbps*
	Playback Performance	100Mbps	100Mbps
	Mode	Manual, Continuous, Pre / Post Event, Schedule	Manual, Continuous, Pre / Post Event, Schedule
	Auto Recovery Backup	Yes	Yes
	Video Summary	-	Yes
	Event Profile Recording	Yes	Yes
Screen Mirroring	ONVIF Protocol	Profile S (Except SSM-RS00L)	Profile S (Except SSM-RS00L)
	PC Screen Streaming for Recording	Yes	Yes
	Max. Monitors	4	4
Virtual Matrix	Max. Streaming	5	5
	Frame Rate	Up to 30fps	Up to 30fps
	Max. Monitors	-	48
	Modules	-	VM Manager, VM Gateway, VM Decoder
	Sequence Monitoring	-	Yes
	Event Monitoring	-	Yes
	Map Monitoring	-	Yes
Transaction Server	Playback on Wall Monitor	-	Yes
	Screen Merge	-	Yes
	Access Control	-	Samsung, Honeywell, JCI, Gallagher, Siemens
	Intrusion Detection	-	Bosch, Honeywell
Transcoder	Intercom	-	Samsung, Stentofon
	Video Analytics	-	Agent Vi
	Playback Transcoding	-	For Console and Mobile
	Max. Input Resolution	-	5M
Federation	Max. Output Resolution	-	D1
	Max. Transcoding Channels	-	10
	Max. Site Hierarchy Level	-	4*
Failover Server	Max. Sites	-	25*
	Cameras Per Site	-	288*
Configuration & Maintenance	Auto System Failover	-	Yes
	Target Server	-	MG, RS, VM
	Architecture	-	Active / Standby
Configuration & Maintenance			
General	Setup File Backup/Restore	Yes	Yes
	Login Fail Time Limitation	Yes	Yes
	Time Sync	With NTP or a Server Component	With NTP or a Server Component
	Data Security	SSL	SSL
System Management	Device Discovery	Auto / Manual	Auto / Manual
	Device Name Synchronisation	Server, Recorder to SSM	Server, Recorder to SSM
	Edits Multi-Device Names	Yes	Yes
	Server Setup File Import/Export	Yes	Yes
	Device Firmware Update	Yes	Yes

* Recommended specification but not limited.

User Management	Device Access Authority Setup	Yes	Yes
	Feature Level Authority Setup	Yes	Yes
	LDAP Integration	-	Yes
Event Management	Event Priority Setup	From 1 to 10 with Colour	From 1 to 10 with Colour
	External Event Integration	Yes	Yes
	Rule Based Event Action Setup	Yes	Yes
System Dashboard	Real-Time System Monitoring	-	Yes
	System Status Summary	-	Yes
	Detailed System Status	-	Yes
	Event Statistics Graph	-	Yes
Operation		Professional	Enterprise
General	Viewers	Live, Search, Event	Live Search, Event, Google Map, Plug-in
	Multi-Monitor	Up to 4	Up to 4
	Video Decoding via GPU	Nvidia CUDA Processor	Nvidia CUDA Processor
	System Health Monitoring	Yes	Yes
	Screen Lock	Yes	Yes
	Multicast	-	Yes
	Auto Bandwidth Control	Changes Camera Profile, I-frame Mode and Deblocking by Split Format Automatically	Changes Camera Profile, I-frame Mode and Deblocking by Split Format Automatically
System Controller Integration	SPC-2000, SPC-7000	SPC-2000, SPC-7000, Axis T8310	
Live Monitoring	Number of Channels for Live	100CH	100CH
	Sequence Monitoring	Yes	Yes
	Pre-Defined Layout	Yes	Yes
	User Favorite layout	Yes	Yes
	PTZ Control	Yes	Yes
	PTZ Area Zoom	Yes	Yes
	Digital Zoom	Yes	Yes
	Fisheye Camera View	Single, Quad, Panoramic	Single, Quad, Panoramic
	Two-Way Audio	Yes	Yes
	Audio Broadcasting	Yes	Yes
	Manual Recording	Local PC, Recorder	Local PC, Recorder
	Playback on Live	Yes	Yes
	Video Adjustment	Brightness, Contrast	Brightness, Contrast
	Video Enhancing	Deintellace, Flip, Defog	Deintellace, Flip, Defog
	Manual Alarm Out Control	Yes	Yes
Export/Print Image	Yes	Yes	
Video Wall Control	-	Yes	
Event Handling	Live Event List	Yes	Yes
	Event Thumbnail Image on Live	Yes	Yes
	Event Acknowledge	Normal, Abnormal, etc with Note	Normal, Abnormal, etc with Note
	Instant Viewer	Yes	Yes
	Instant Player	Yes	Yes
	Event Search	Yes	Yes
	Event Sequential Playback	Yes	Yes
	Rule Based Event Setup	Yes	Yes
	Event Handling History	Yes	Yes
	Event Report	PDF File with Chart and Graph	PDF File with Chart and Graph
Search & Playback	Number of Channels for Playback	16CH	16CH
	Date/Time Search	Yes	Yes
	Event Search	Yes	Yes
	Local Folder Search	Yes	Yes
	Bookmark Search	Yes	Yes
	Smart Search	Yes	Yes
	Video Summary	-	Yes
	Heat-Map (for NVR)	Yes	Yes
	Motion Search (for DVR)	Yes	Yes
	Multi Channel Time Line	Yes with Colour Variation per Recording Type	Yes with Colour Variation per Recording Type
	Synchronous Playback	Yes	Yes
	Export Video/Image	SEC, AVI	SEC, AVI
	2 Men Rule	Yes (Backup for SSM, Search & Backup for NVR)	Yes (Backup for SSM, Search & Backup for NVR)
Backup	Scheduled Backup, Masking Backup, Onetime Schedule Backup	Scheduled Backup, Masking Backup, Onetime Schedule Backup	
Monitoring with Map	2D/3D Image Map Monitoring	Yes	Yes
	Number of Layout Format for Map	10	10
	Map Link on Map	Yes	Yes
	Set Coordinates for 2D Map	Yes	Yes
	Export Image	Capture, Print	Capture, Print
	Google Map Monitoring	-	Yes
PoS Integration	Measure Distance on Google Map	-	Yes
	PoS Receipt Display on Live	Yes	Yes
	PoS Instant Viewer	Yes	Yes
	PoS Search	Yes	Yes
ETC	Customisable Plug-in	-	Yes
Misc			
Language	English, French, German, Spanish, Italian, Russian, Chinese, Japanese, Korean, Turkish, Polish, Czech, Serbian, Romanian, Portuguese, Dutch, Croatian, Hungarian, Greek, Swedish, Danish, Finnish, Norwegian, Taiwanese	English, French, German, Spanish, Italian, Russian, Chinese, Japanese, Korean, Turkish, Polish, Czech, Serbian, Romanian, Portuguese, Dutch, Croatian, Hungarian, Greek, Swedish, Danish, Finnish, Norwegian, Taiwanese	English, French, German, Spanish, Italian, Russian, Chinese, Japanese, Korean, Turkish, Polish, Czech, Serbian, Romanian, Portuguese, Dutch, Croatian, Hungarian, Greek, Swedish, Danish, Finnish, Norwegian, Taiwanese
Technical Support	-	-	Yes