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# Siveillance™ Video Pro

2020 R3 - Specification Sheet

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# Feature Overview

## Key Features

- **Limitless Multi-Server and Multi-Site Solution:**  
Siveillance Video Pro supports an unlimited number of users, cameras, servers and sites. It allows the expansion of any installation as it is required.
- **Centralized Management**  
A Management Client connected to the management server enables full remote system configuration of all recording servers, failover servers, devices, rules, schedules and user rights.
- **High Availability – Failover Recording Servers**  
A redundancy option for recording servers to ensure maximum system uptime while minimizing video interruption in the event of system problems. Operates in two failover modes: cold stand-by and hot stand-by.
- **Siveillance Video Interconnect**  
A unique system concept that allows all Siveillance Video systems to be interconnected with Siveillance Video Pro to gain central surveillance operation across geographically dispersed sites.
- **Siveillance Video Federated Architecture**  
System concept that enables multiple individual Siveillance Video Pro and Siveillance Video Advanced systems to be connected with a central Siveillance Video Pro system in a hierarchical architecture for infinite scalability and central management.
- **Alarm Manager**  
Single-point alarm function that provides a consolidated and clear overview of security and system-related alarms.
- **Siveillance Video Monitoring Wall**  
Flexible and hardware independent Monitoring wall feature that seamlessly integrates with the Management Client and Siveillance Video Client.
- **ONVIF T and Q Profiles**  
The generic ONVIF driver will now cover features for ONVIF profiles T and Q
- **Metadata Support**  
Supports reception, storage and export of metadata, including etadata from camera- resided video analytics and location data in Video Push from Siveillance Video Mobile.
- **Hardware Accelerated Video Decoding**  
Hardware accelerated video decoding on the Video Client using multiple NVIDIA cards

## Key Features (Contd..)

- **High Efficiency Video Coding**  
H.265 enables better video quality with same bandwidth or same video quality with less bandwidth compared to h.264 video codec.
- **Hardware Accelerated Video Motion Detection**  
Video motion detection (VMD) decoding is moved from the CPU to the GPU part of the Intel CPU to significantly reduce the CPU load and improve performance of the recording servers.
- **Two-Step Verification**  
Prevents non-authorized people from accessing the system and protects against “man in the middle” attacks
- **Centralized Search**  
Easy to use search tool that aggregates different data types registered in the Siveillance Video as entries and allows users to find everything they look for in one place. Search categories that include People, Vehicle & Location Search Filters providing improved geographical awareness.
- **Adaptive Streaming**  
Adaptive streaming technologies enable the optimum streaming video viewing experience for a diverse range monitoring device. Deliver video to the user in the most efficient way possible with less hardware needed. Adaptive Streaming can be enabled in Video client, Web client and Mobile client.

## Automate Device Password Management

- Automate device password changes on periodic basis as per cyber security protocols, with ease and make sure cadence is kept without manual intervention.
- **Intuitive Map Function**  
Multi-layered and interactive maps display the location of every camera and offer control of the entire surveillance system. It also has seamless drag-and-drop integration with Siveillance Video monitoring Wall.
- **Smart Map – offline support**  
The Smart Map feature in Siveillance Video Client includes support for offline OpenStreetMap.
  - Administrators can configure a specific map server to show geographical maps without connecting to the Internet

## Smart Map – Offline Support (Contd..)

- Building support in Smart Map allows to Navigate with ease between cameras on different floors
- **Bookmarking**  
Allows users to mark video sections of interest and add descriptive notes for later analysis or sharing with other users.
- **Multicast Support**  
Optimizes network load in systems with many users by sending one video stream per camera to multiple Siveillance Video Clients.
- **Multiple Language Support**  
Let's most operators use the system in their native language with support for 29 different languages, while the Management Client is available in 12 languages.
- **Fast Evidence Export**  
Deliver authentic evidence to public authorities by exporting video to various formats, including video from multiple cameras in encrypted Siveillance Video format with dedicated player application included.
- **Audit Logs**  
Enables extensive logging of all user system accesses, configuration changes and operator actions.
- **Flexible User and Rights Management:**  
Strict privileges on management of users' access to functions and camera actions. Modular user management with support for basic user accounts to global user management with single sign-on Microsoft® Active Directory accounts.
- **Versatile Rule System**  
Facilitates the automation of different aspects of the system, including camera control, system behavior and external devices, based on events or time schedules.
- **Customizable Management User Interface**  
Adaptable management user interface makes it possible to toggle the availability of functions on and off in the Management Client.
- **Evidence Lock**  
Secures availability of video for investigations by overriding normal video retention and grooming policies.
- **Edge Storage**  
Uses camera-based storage as a complement to the central storage in the recording servers. Its flexible video retrieval can be based on time schedules, events or manual requests.

## Automate Device Password Management(Contd..)

- **Secure Multi-Stage Storage**  
Unique data storage solution that combines superior performance and scalability with video data grooming for cost-efficient, long-term video storage, with the option to encrypt and digitally sign stored video and audio.
- **Tiered Management Rights**  
Makes it possible to assign partial management permissions to system administrators using the Management Client.
- **64-bit Recording Servers**  
Allow more cameras to be run on a single recording server than 32 bits.
- **Smart Maps**  
Quickly navigate to the correct geographical overview to identify and preview relevant cameras in a user interface like Google or Bing maps using smartmaps
  - Building support in Smart Map allows to Navigate with ease between cameras on different floors
  - Alarms on Smart Maps
- **Web Client Alarm List**  
List of alarms in the systems so users can quickly get and overview and act if needed
- **User Access Permission**  
System administrators controlling systems with multiple users can control access permission per client for each of the three Siveillance Video clients, resulting in safer security access
- **Liftable Privacy Masking**  
Privacy well protected both on live and recorded video using permanent and liftable privacy masking
- **Simple Installation**  
Selecting "Single Computer" set up during the initial installation the system automatically performs certain configurations for an easier installation experience
- **Open Network Bridge (earlier ONVIF Bridge)**  
Includes the ability to do forward playback with different speeds and backward playback for an improved investigation experience
- **DLNA Support**  
Connect Siveillance Video to any DLNA supported TV and display video captured from cameras without a computer or a Client.
- **One-Click Installer**  
Configure Siveillance Video faster and easier during installation, with automatic device detection and retention-time configuration.

## Automate Device Password Management Contd..)

- **Siveillance Video Mobile Access Control Support**  
Open/close/grant/deny access and control perimeter via Siveillance Video mobile app.
- **Online License Activation**  
Activate Siveillance Video camera License via internet
- **64-bit Video Client Player**  
Take full advantage of the modern CPU's benefits to process more information at once.
- **Siveillance LPR Integration via MIP SDK**  
External applications can create and manage match lists fully through the MIP-SDK Configuration API.
- **Trusted Root Certificate via CA**  
Use trusted certificates between the Siveillance Management Server and Siveillance Recording Server for heightened security on server communication.
- **More Secured, Stronger data protection and Enhanced Encryption**
- Siveillance Video now includes
  - The latest Microsoft CNG encryption modules
  - Password protected configuration
  - Server Configurator Utility now available for the Mobile Server
- Siveillance Video now Operates in a compliant mode that is approved by U.S. Federal information processing standards (FIPS 140-2)
- **Network Configuration**  
Camera user handling and network settings configuration done directly in the VMS – for your existing ONVIF-compliant devices.  
Simplify the way you work and quickly change network settings – without the need to access each individual device.
- **Alarm Notification for Video Client**  
Even when the Video Client is minimized, or the operator is working on another screen, alarm notifications will appear – to help keep focus on what's important.  
Click on the notification to gain instant access to the Alarm Manager – for related video, bookmarking and further investigation.  
Administrators can choose what alarm levels trigger this notification, and as before, can define what these level mean. Feature is community-enabled for MIP SDK

## Automate Device Password Management Contd..)

- **Centralized Search - LPR**  
Integrating Siveillance LPR results into the Centralized Search agent  
Make use of camera application metadata for license plate recognition. Axis Optimizer plugin now including Centralized Search plugin.

## Integration Options

- The Siveillance Video Integration Platform Software Development Kit (SDK) enables seamless integration of video analytics algorithms and other third-party applications in Siveillance Video Client and Management Client.
  - 1) Compatible with Siveillance Video (ACM) Access Control Module and integrates with alarms, gates, building management systems, using hardware input/output (I/O) and various types of events.
- Generic event integration enables easy and fast integration of third-party applications and systems via a simple message-based socket communication interface.
- System configuration API enables external applications to make changes to the system's configuration.
- Siveillance Video Driver Framework within MIP SDK allows IoT devices manufacturers to develop their own drivers and provide faster device compatibility and deeper integration with other devices connected via Siveillance Video application.

## Recording Server/ Failover Recording Server

### System

- Simultaneous digital multi-channel MJPEG, MPEG4, MPEG-4 ASP, MxPEG, H.264 and H.265 video recording of IP cameras and IP video encoders without any software limitations on number of cameras per server
- Edge Storage with flexible retrieval enables video retrieval from camera storage based on time schedules, events or manual requests. This enables users to effectively retrieve video recordings across low-bandwidth connections

## System (Contd..)

- Two-way audio allows users to transmit and record audio from connected microphones and audio from the operator's microphone to attached speakers
- Generic framework for receiving and storing metadata from compatible devices and clients
- Route traffic between multiple connected cameras and multiple clients requesting live view, playback and export
- Multicast one video stream to all Siveillance Video Clients. The infrastructure must support IGMP to reach remote networks
- Multi-live streaming gives the possibility to define multiple streams for live viewing with different properties. It optimizes Siveillance Video Client viewing performance according to the available bandwidth and view layouts, which is ideal for deployments with remote viewing
- A dedicated recording stream enables optimization stream properties (resolutions, encodings and frame rate) for video storage and forensic usage
- Secure high-speed recording database holding JPEG images or MPEG4, MPEG-4 ASP, MxPEG or H.264 / H.265 streams
- Flexible control of recording characteristics for MPEG4/H.264/H.265 streams, making it possible to toggle between recording key frames only or the full stream
- Record more than 30 frames per second per camera, limited only by hardware
- Recording quality depends entirely on camera and video encoder capabilities with no software limitations
- Possibility to import pre-event images recorded locally in camera or video encoder
- Built-in, real-time, camera-independent motion detection with the ability to generate motion metadata for SmartSearch
- Secure HTTPS camera connection on devices supporting HTTPS
- Digital signing of the recording server's video database can be used to verify that recorded video has not been modified or tampered with while stored in the Siveillance Video system or after export
- Remote Connect Services enable you to securely connect remote cameras across different types of private and public networks

## High Availability

- Siveillance Video Pro offers two levels of redundancy on the recording servers: Cold and hot stand-by failover
- Both mechanisms offer fully automatic and user transparent failover in the event of hardware or system failure, with automatic synchronization at system recovery
- Cold stand-by failover is a cost-efficient redundancy solution where one, or a group of, failover recording servers can act as backup to one or multiple recording servers
- Hot Stand-by failover is a high-security redundancy solution providing minimal interruption in recording and live streams, where a dedicated failover recording server is preconfigured for a recording server

## Pan-Tilt-Zoom (PTZ)

- "Pass-through" control of manual PTZ operation from clients with user priority
- 32,000 PTZ priority levels for control of rights between different operators and automatic patrolling schemes
- Execute rule-based go-to preset position on events and patrolling
- Pause PTZ patrolling on event and resume patrolling after manual session timeout

## I/O and Events

- Support for devices with one or more input and output ports
- Powerful rule processing engine for execution of start and stop actions triggered by events or time profiles.
- The recording server runs as a Windows service under local system account or optional local Windows user or Microsoft Active Directory account with run-as-a-service privileges.
- Port forwarding enables clients to access the recording servers from outside a network address translation (NAT) firewall.
- Support for both IPv4 and IPv6 addressing 64-bit recording servers allow more cameras to be run on a single server unit.

## I/O and Events (Contd..)

- To facilitate post-deployment system performance optimization and seamless system expansion, Siveillance Video has the ability to move a camera between two recording servers in runtime.
- Handle pre-event recordings that significantly reduces the wear and tear of disc systems by keeping the pre-buffered video in memory instead of writing it to a disk using Pre-buffer in Memory.

## Setup and Management

- Download and install the recording server from a web page on the management server. The recording server is completely managed via the Management Client and configuration changes are applied instantly while recording is in operation.
- Local recording server configuration data is available during periods where the management server is inaccessible.
- Recording server manager is available in the local console notification area (icon tray) for status messages, start/stop of the service and change of network settings.

## Client Access

- Facilitate client access.
- Clients are authenticated and authorized at the management server and use a session-limited access token to access the recording server.

## Management Server and Client

### System

- Management server for user authentication logon, system configuration and logging.
- Management Client for central administration of the system such as recording servers, devices, security, rules and logging.
- All configuration and logs from the entire system are stored in a centralized Microsoft SQL database and accessible by the management server only.
- Failover solution for the management server provides a resilient system solution based on Windows Server Clustering, ensuring high system availability.

### System (Contd..)

- Management server manager is available in the local console notification area (icon tray) for status messages and to start/stop the service.
- The management server runs as a Windows service under local system account or optional local Windows user or Microsoft active directory account with run-as-a-service privileges.
- To register and validate your licenses, the system offers easy-to-use online activation via the Internet and alternatively, offline activation via email and web for closed surveillance networks.
- Support for both IPv4 and IPv6 addressing.

### Storage

- Definition of one or more storage containers with individual archiving schemes and retention times. Recording capacity is limited only by disk space.
- Each storage container is defined as live database and one or more optional archives, where the video data is moved from the live database to secondary disk systems or network drives. The archived data is still online and available for clients.
- Archiving schemes define when video is archived to the next archiving stage in the storage container and how long the video data is retained before deletion.
- Optional video data grooming possibility enables reduction of video recording data size by reducing the frame rate of the video data.
- Ability to allocate individual devices to different storage containers.
- Move a device or a group of devices between two storage containers.
- Light and strong video database encryption option, using DES-56 encryption algorithm.
- Digital signing helps ensure video integrity of video stored in the recording servers.
- Storage overview gives instant indication of used vs. available storage in total and for individual cameras
- Manage maximum recording time for manual recordings



## Siveillance Video Interconnect

- System concept that interconnects all Siveillance video management software units to gain central operation and cost-effective management of geographically dispersed surveillance sites.
- Intelligent video storage management makes optimal use of remote/central video storage and available network bandwidth with a choice to store video recordings remotely, centrally or combined with flexible revival of the remotely stored video
- Possibility to define time interval and bandwidth cap for upload of video from an interconnected site
- Enables the proactive detection of errors and cost-efficient management of connected sites by propagation of system status events and embedded remote management of connected system
- Ability to detect system problems and remotely manage interconnected sites reducing operational costs and the need for on-site visits.
- Its intelligent video storage management makes optimal use of available remote and central storage, and network resources.

## Siveillance Video Federated Architecture

- System concept that enables multiple individual Siveillance Video Pro and Siveillance Video Advanced systems to be interconnected with a central Siveillance Video Pro system in a hierarchical architecture for infinite scalability and central management.
- Centralized management access to all federated systems.
- Resilient architecture that allows the individual systems to function as autonomous sites in the event of network problems.
- Seamless management of multisite and federated installations running different software generations. Siveillance Video's Management Client 2016 and higher is backward compatible with 2014 version.

## Devices

- Hardware wizard to add devices; automatically using Universal Plug and Play (UPnP) discovery, via IP network range scanning, or using manual device detection. All methods support automatic or manual model detection.

## Devices (Contd..)

- Search and add devices directly on HTTPS
- Wizard for swift replacement of malfunctioning devices with preserved configuration settings and recordings.
- Enable and disable devices if they are not used or are down for maintenance.
- Adjust settings such as brightness, color level, compression, maximum bit rate, resolution and rotation per camera or camera group.
- Select and configure video format, frames per second (FPS), resolution and quality for the video streams used per camera.
- Select and configure one, or more, video streams per camera to be used for live viewing. Each stream can be in different video format, FPS, resolution and quality.
- Adjustable group of pictures (GOP) length for MPEG4 and H.264/ H.265 encoded video.
- Optional preview window for immediate verification of video settings per camera or for a group of cameras.
- Assign camera shortcut number for easy operation by clients.
- Define multiple PTZ preset positions on the server.
- Import PTZ preset positions from cameras.
- PTZ scanning on supported devices.
- Define multiple PTZ patrolling schemes with adjustable wait time between shifts and customizable transitions with disabling of motion detection to avoid false alarms.
- Run multiple patrolling schedules per camera per day. For example, run different schedules for day/night/weekend.
- Privacy mask consistently hides certain areas in the camera view in live and playback video and in exported material.
- Configure device events like motion detection with pre- and post-buffers, or input signal behavior options.
- Fine-tune motion detection sensitivity per camera manually or automatically.
- Apply one or multiple exclusion zones for where motion detection is to be disabled to avoid unwanted detection.

## Rules, Time Profiles and Notifications

- Powerful Microsoft Outlook®-style rules system supports an unlimited number of rules.
- Rule actions are triggered by event, time interval or a combination of event and time. Rules can be optionally stopped by event or after a certain time.
- Time profiles with reoccurring time selection and expire condition support an unlimited number of time profiles.
- Dynamic day-length time profile follows daylight changes over the year for a given location defined by a GPS position, including daylight savings time.
- Rule-based bookmark creation.

**Trigger events:** The Siveillance Video Pro system and connected devices support a wide set of events that can be used to trigger actions using the rule system.

Events are grouped in the following categories:

- **Hardware:** events that relate to physical hardware devices connected to the system.
- **Devices:** events that relates to certain functions and states of devices available to the Siveillance Video system via the connected hardware devices.
- **External Events:** events that relate to VMS integrations.
- **Recording server:** events that relate to failover, archiving and database functions.
- Siveillance Video Monitoring Wall start and stop actions; Set Siveillance Video Monitoring Wall to preset layout, set Siveillance Video Monitoring Wall monitor layout and camera content.
- Multi-recipient customizable email notification with image and/or AVI attachment of incidents.
- **Analytics:** events from integrated applications and systems - *For further details on available trigger events, please refer to the Siveillance Video Pro Administrator's Manual.*
- **Start actions:** The triggering events may initiate a wide set of actions in the VMS, connected devices or integrated systems. Actions in the VMS system connected devices or integrated systems upon the completion of a rule. - *For a complete list of available stop actions, please refer to the Siveillance Video Pro Administrator's Manual.*

**Stop actions:** The rule engine may also trigger stop actions in the VMS, connected devices or integrated systems upon the completion of a rule. *For a complete*

## Rules, Time Profiles and Notifications (Contd..)

*list of available stop actions, please refer to the Siveillance Video Pro Administrator's Manual.*

## User Rights Management

- Supports inherited user rights and the ability to assign partial management rights
- Common and central management of all user rights across all user and programmatic interfaces.
- Overall system security definition makes it possible to globally allow or deny permission to devices and functions (such as manage, read, edit and delete).
- Device-specific security definition makes it possible to allow or deny permission to individual devices and functions (such as manage, read, edit and delete).
- Tiered management rights enable differentiated administrator rights per administrator role.
- Roles control user and administrator access to:
  - **General:** Management Client and Siveillance Video Client profiles, Evidence Lock profile, dual authorization rights, system log-in time profile.
  - **Cameras:** Visibility, administrate, live view (within time profile), playback (within time profile), search sequences, export, smart search, AUX commands, manual recording, bookmark functions, Evidence Lock functions.
  - **Microphones and speakers:** Visibility, administrate, listen to live audio (within time profile), playback audio (within time profile), search sequences, export, manual recording, bookmark functions, Evidence Lock functions, speak to speakers.
  - **Inputs and outputs:** Visibility, administrate, status, activation.
  - **Remote recordings:** Retrieve remote recordings
  - Siveillance Video Monitoring Wall: visibility, administrate, control
  - **External events:** Visibility, administrate, trigger
  - View groups privileges
  - **Servers:** Siveillance Video Enterprise server access and authentication details, Siveillance Video Federated Architecture site permissions.
  - **Alarms:** Visibility of alarms and ability to manage alarms.

## User Rights Management (Contd..)

- **Application:** Manager, Siveillance Video Client/ Siveillance Video Web Client/ Siveillance Video Mobile, live/ playback/setup, status API and service registration API. Siveillance Video: Plug-in permissions

## Evidence Lock

- Management of retention time options
- Overview of locked video sequences

## Logging

- Logs of system, audit and rule entries are consolidated from all recording servers and clients.
- Each log file has adjustable size and time limitations.

## Siveillance Video Client Profiles

- Centralized management of Siveillance Video Client application options enables optimization of Siveillance Video Client for different user categories and skill levels.
- Ability to enforce or recommend optional
- Siveillance Video Client application options for a user or group of users, using an unlimited number of Siveillance video profiles.
- Define general Siveillance Video Client application options, including (listing not exhaustive): visibility of time, visibility of camera live indicators, default image quality, default frame rate, keyboard and joystick setup, startup mode and de-interlacing filters.
- Access to live mode and the availability of individual control panes and overlay buttons.
- Access to playback mode and the availability of individual control panes, overlay buttons and settings for specific functions, such as default export path
- Access to setup mode and the availability of individual control panes and setup functions.
- Access to Centralized Search, Alarm Manager, System Monitor.
- Access to setup mode and the availability of individual control panes and setup functions.
- Definition of available view layouts.

## System Administration

- Built-in backup and restore support for manual system backup of all configuration data, including (listing not exhaustive): system configuration data, maps, alarm settings and definitions and client views.
- System Monitor function gives actual and historic performance and usage reports of server. performance, storage availability, network usage and camera performance.
- Configuration Reporting enables complete or partial documentation of system configuration. Custom and site-specific free-text information, integrator's notes and logo can be added to the printer-friendly reports.
- Kerberos Authentication ensures faster and mutual authentication using open and more secure standards than the existing NTLM authentication.
- Change single and multiple-device passwords directly within Siveillance Video for an easier and more secure user experience

## License Administration

- Expanded license information for multi-site installations where both the total used licenses for the common SLC is presented and the license use in the specific system.
- License overview that presents the license use of all the individual sites running on the same SLC.

## Authentication

- System log-in uses Microsoft Active Directory, local Windows or basic user account.

## Management Client Profiles

- Centralized management of Management Client application options enables optimization of the Management Client for different user categories and skill levels.
- Ability to tailor the availability of main/sub functions in the Management Client for different user roles.

## Event Server

### Alarm Manager

- Single-point alarm management of all internal system alarms and external security alarms.
- Alarm descriptions and work instructions make alarms actionable for operators.
- An alarm location map can be linked to each alarm providing instant situational awareness to the operator dealing with the alarm.
- Customizable alarm priorities allow operators to focus on the most critical alarms.
- Customizable alarm categories enable logical grouping of alarms dependent on their type and nature. Customizable alarm statuses enable alignment of the alarm handling workflow with existing workflows and security systems.
- Alarm handling result code enables tracking of the outcome of the alarms.
- Automatic allocation to alarm owner with escalation and alarm forwarding possibilities.
- Time profiles for definition of active alarms.
- Possibility to associate one or more cameras to an alarm (maximum 15 cameras can be displayed simultaneously in the alarm preview window)
- A set of alarm handling reports gives valuable information about alarm inflow and alarm handling performance.
- Extensive logging of alarms.
- Microsoft Clustering support for the event server enables secure and redundant alarm handling.

### Siveillance Video Mobile Server

- The Siveillance Video Mobile server runs as a dedicated service, allowing it to be installed either on the same server as other system components or on dedicated hardware in more demanding installations.
- The Siveillance Video Mobile server can transcode video so streams are robust and can adapt to changing connection bandwidth. The server also optimizes the use of available bandwidth to get the best possible stream quality.
- Adjustable transcoding logic enables capping of video resolution and frame rate for video streams provided to Siveillance Video Web Clients and Siveillance Video Mobile clients.

### Siveillance Video Mobile Server (Contd..)

- Option to bypass the transcoding logic and send direct streams to Siveillance Video Mobile and Web Clients. With no transcoding happening in the Mobile Server, live video is streamed directly to Siveillance Video Mobile and Web Client.
- Installing the Siveillance Video Mobile server plugin in the Management Client will give access to Siveillance Video Mobile server management in order to change settings, read out miscellaneous status information, configure codecs used for exports as well as manage ongoing and completed exports.
- Siveillance Video Mobile servers can be installed in parallel, offering redundancy and/or allowing more simultaneous users.
- Siveillance Video Mobile servers can be configured through tray controller to easily adjust/update settings
- Use either a default-generated certificate for HTTPS encrypting the connection to the Siveillance Video Mobile server or provide your own custom certificate.
- Video Push configuration is done from the server, so users can download and use Siveillance Video Mobile without having to do any configuration.
- Siveillance Video Mobile server supports creating server-side export through Siveillance Video Web Client and Siveillance Video Mobile.
- Siveillance Video Web Client, including optional browser plug-ins, is included with the Siveillance Video Mobile server. No additional setup is needed.
- Enables system integrators to verify and validate that the setup is correctly configured before they hand it over to the customer.
- Enables system integrators to verify that they have configured the mobile server correctly without the need for logging in with a smartphone to do the validation.
- Hardware accelerated video decoding in the Mobile Server

## Siveillance Video Client

### General

- Dedicated task-oriented tabs for the Centralized Search, Alarm Manager and System Monitor, in addition to the traditional Live and Playback tabs.
- Application theme support with choice of dark or light themes.

## General (Contd..)

- True multi-window support where secondary windows have full functionality and can be operated in an independent mode or synchronized mode where they follow the control of the main window.
- Shortcuts to select a specific window or specific camera in a window.
- Camera search function promptly finds cameras, types of cameras and views in the system with the ability to create temporary views to display all or a subset of cameras matching the search criteria.
- Display metadata bounding boxes from supported devices in live views and playback.
- Significant reduction in network traffic and central storage costs. with Scalable Video Quality Recording™ (SVQR) technology enabling instant access to low quality recorded video, with the possibility to later retrieve high quality video from the edge when or if needed.
- Export video in three simple steps (Select cameras, Set start time and end time, Click Export) using Simplified export panel.

## Live View

- View live video from 1-100 cameras per computer monitor/view.
- Multiple computer monitor support provides a main window and any number of either floating windows or full screen views.  
Live view digital zoom allows a full view of recordings while the operator can digitally zoom in to see details.
- Supports 41 different view layouts optimized for 4:3 and 16:9 display settings in both landscape and portrait.
- Independent playback capability allows for instant playback of recorded video for one or more cameras, while in live mode.
- Centralized storage of shared and private camera views, enables coherent access to views across the system
- Possibility to instantly re-arrange cameras in views for optimized monitoring of incidents, with single click restore of original view.
- Seamless access to cameras in interconnected and federated systems.
- Instant camera placement in live view allows for instant replacement of cameras in a view, where new cameras

## Live View (Contd..)

- can be placed in a particular view and positioned through a simple drag-and drop operation.
- Update on "motion only" optimizes CPU use by allowing motion detection to control whether the image should be decoded and displayed.
- Global hotspot function allows users to work in detail with any camera selected from any view
- Matrix function shows live video from multiple cameras in any view layout with customizable rotation paths, remotely controlled by computers sending matrix remote commands.
- Import static or active HTML maps for fast navigation to cameras and to provide a good overview of premises.
- Hide HTML page toolbar in HTML page views
- Activate matrix via graphical maps of premises using JavaScript or integrate with centralized access control systems.
- The operator can assign outputs, PTZ presets and views as actions to joystick buttons and as keyboard shortcuts.
- Two-way audio support enables Siveillance Video Client to record and play live audio from camera- connected microphones and outgoing audio from the operator's microphone to one or multiple camera speakers.
- Adaptive de-interlacing option secures high video quality, based on the actual video content received. Siveillance Video Client can optionally apply a filter to areas of the image where jagged edges would otherwise show up.
- Operators may start/stop manual recording on individual cameras, where the recording status is propagated to all Siveillance Video Client users active in the system.
- Support for live video play without recording storage

## PTZ

- Control PTZ cameras by using;
  - PTZ preset positions
  - PTZ point-and-click control
  - Overlay buttons
  - PTZ zoom to a defined rectangle
  - Video overlaid PTZ control
  - Virtual joystick function
- Take manual control of a PTZ camera that is running a patrolling scheme. After a timeout with no activity the camera reverts to its scheduled patrolling scheme.

## PTZ (Contd...)

- Fisheye camera (Grandeye™/IPIX™) support for 1x2 or 2x2 "Quad View" for viewing all 360° at once 360° ImmerVision Enables® Panomorph lens technology
- Ability to define PTZ preset positions and PTZ patrolling schemes as an integral part of the work process in the Video Client.
- System feedback to operators failing to gain access to a PTZ camera when is used by another user or when engaged in an automated patrolling scheme with higher priority
- The advanced PTZ control also allows an operator to reserve the control of a PTZ camera, which prevents other users or automated patrolling schemes (with higher priority) to take over the control.
- Local hotspot function allows users to work in detail with a camera selected from the same view.
- Carousel function allows a specific view item to rotate between pre-defined cameras that are not necessarily present in the view at the same time. Operators can select default or custom display times for each camera, and they are able to manually switch to the next or previous camera in the carousel list.

## Playback

- Playback video from 1-100 cameras per computer monitor/view.
- Advanced video navigation includes fast/slow playback, jump to date/time, single step and video motion search.
- Integrated video timeline with time navigation and playback controls, including an integrated function to select a time interval for export, Evidence Lock or video retrieval from Edge Storage devices and interconnected systems.
- Toggle between simple and advanced timeline mode
- Overview of recorded sequences and bookmarks
- Independent playback capability allows the independent playback of recorded video from one or more cameras.
- Instant camera placement in playback view allows users to instantly replace cameras in a view, where a new camera can be placed in a particular view and position with a simple drag-and drop operation.
- Digital zoom allows the operator to see magnified details in the recorded video.

## I/O and Events

- Overlay buttons provide intuitive control of cameras, camera-integrated devices and other integrated Systems directly from the camera view.
- Manually trigger output port relay operation, for example when controlling gates.
- Manually trigger events by activating a server-defined event from a list.

## Bookmarking

- Manually define quick or detailed bookmarks with the bookmark function.
- Create bookmarks based on rules.
- Bookmarks are shown in timeline with instant preview.
- Listing and previewing of bookmarks in recording search.
- Bookmark reports enable effortless incident documentation. Direct video export of a bookmark reduces the time needed to prepare forensic video material.

## Centralized Search

- In this search tool, users can filter for motion, alarms, events, bookmarks and other types of data – all in one place. This means far more rapid and efficient video investigations.
- This platform smoothly embeds partner integrations with powerful analytic capabilities via dedicated filtering options. Through specific plug-ins and devices, search criteria such as line-crossing and object-in-field will be enabled directly in the Search tab, saving time and increasing efficiency.

## Evidence Lock

- Allows manual extension of video retention time for a selected set of cameras in a given time interval, where the operator selects an extended retention time from a pre-defined set of retention time options.
- Evidence Lock overrides defined retention and grooming policies.
- Headline and details information can be added to locked video sequences in order to enhance the manageability.
- Search, filter and listing functions provide an
- Overview of locked video and allows Siveillance Video Client users to manage locked evidence, including

## Evidence Lock (Contd..)

- editing comments, modifying the extended retention time and removing the Evidence Lock.
- Locked video can be exported through a single step operation.

## Export and Print

- The snapshot function enables operators to produce instant visual documentation of a camera by saving the camera image to a file or sending it directly to a printer.
- The storyboarding function makes it possible to include video sequences from different or overlapping time intervals from different cameras in the one and the same export.
- Export in Siveillance Video format; including the standalone Siveillance Video Client-Player application for instant and easy viewing by authorities.
- Export preview with looped playback Encryption and password protection of exported video material with a choice of following strong encryption algorithms: 56-bit DES 128, 192 and 256-bit AES.
- Secure video evidence handling with a digital signature of exported video material that enables users to verify the video has not been modified or tampered with when viewing the export in the Siveillance Video Client – Player.
- Create evidence material in media player format (AVI files), MKV format, or still image format (JPEG images).
- Disable re-export option to prevent undesirable distribution of sensitive evidence material.
- Bulk camera export in multiple formats to multiple destinations, including direct export to optical media, results in more efficient video exports and more secure handling of evidence material.
- Export comment function enables users to add general and/or camera-specific comments to a video export when exporting to Siveillance Video format.
- In media player format comments can be added as pre/post slides.
- Print incident reports including image, surveillance details and free-text user comments.

## Map function

- Built-in map function in Siveillance Video Client provides intuitive overview of the system and offers integrated access to all system components.
- Map images can be in standard graphic file formats including JPG, GIF, PNG and TIF.
- Any number of layered maps such as city, street, building and room.
- Instant camera preview on “mouse over” and one-click shows all cameras on map.
- One-click function to open floating window with all cameras (maximum 25 cameras) on the map.
- Depiction of camera view zones on map with clickable PTZ zones for instant PTZ control.
- Easy drag-and-drop and point-and-click definition of: cameras, servers, microphones, speakers, I/O devices, hot-zones for map hierarchies, camera view zones and PTZ camera presets position view zones.
- Integrated control of speakers, microphones, and events and output I/O control, including doors, gates, light and access control systems.
- Real-time status monitoring indication from all system components including cameras, I/O devices and system servers.
- Graphical visualization of the system status through color coding.
- Hierarchical propagation of status indications to higher ordered maps.
- Different levels of status indications available (alarm, warning and errors).
- System performance data for cameras and servers including camera resolution, FPS, network use and disk space.
- Ability to suppress status indications (such as error and warning) for a given device.
- Possibility to edit device names in a map and assign map-specific names and references to devices in a map.
- Map editing subject to user rights.

## Camera Navigator

- Provides consistent and comprehensive visual verification, ensuring easier tracking of moving objects in geographically complex environments
- Automatically displays thumbnail views of nearby cameras.
- Add-on to the map application with no special configuration needed.

## Alarm Manager

- Dedicated dockable tab for the Alarm Manager
- Alarm list with extensive filtering capabilities and an alarm preview in both live and playback mode.
- Extensive alarm sort and filtering functions allow operators to focus on most critical alarms.
- Instant preview of primary and related cameras helps reduce the number of false alarms.
- Tight integration with the map function allows operators to indicate and acknowledge active alarms in the map.
- Alarm descriptions and work instructions make alarms actionable for operators.
- Alarm escalation and alarm forwarding possibilities allow operators with appropriate skills to handle different alarms.
- Alarm reports enable incident documentation.
- Alarm location map presents the alarm operator with a map showing the alarm area when an alarm is selected.
- Optional sound notifications for different alarm priorities for notification of new incoming alarm.
- Alarm disabling option enables users to suppress alarms from a given device in a certain time period.
- Instant access to both live and recorded video from the cameras that are related to the alarm.
- Alarm handling reports give valuable information about alarm inflow and alarm handling performance.
- Common alarm list for all interconnected sites.
- Global common alarm list for all sites in a Siveillance Video Federated Architecture.

## System Monitor

- Dedicated dockable tab with system performance and use information.
- System Monitor function gives actual and historic

## System (Contd..)

performance and use reports of storage availability, network use, and server and camera performance.

## Authentication

- System log-in uses Microsoft Active Directory, local Windows or a basic user account.
- Use current Windows logon for authentication
- Auto-log-in and auto-restore views.
- Dual authorization offers an optional additional level of system security, where Siveillance Video Client users are granted access to the system only when a second user or supervisor has confirmed the log-in with a successful authorization of the second user.
- Support for IPv4 and IPv6 addressing 64-bit Windows® operating system support enables better performance when viewing and operating many cameras.
- Support for multicast streams with automatic switch to unicast if the network becomes unreliable

## Setup and Management

- Download and install Siveillance Video Client from a web page on the management server.
- Notification about new updates at log-in.
- Application options allow users to adapt the layout and personalize the application to their preferences.

## Siveillance Video Client - Player

- Play back recorded or archived video and audio evidence, including edited storyboard exports.
- Same user-friendly interface and most functions as Siveillance Video Client.
- Offers a simplified user interface with the possibility option to toggle between "Simple" and "Advanced" modes.
- Instant one-click playback for easy viewing of exported video evidence.
- Advanced second-level investigation tools make it easy to refine exported video and re-export the most essential evidence.
- Metadata bounding boxes included in exports are displayed time synchronized in Siveillance Video Client — Player.
- The project tool allows users to merge video exports or archives from two different locations or Siveillance Video systems together into one new export.



### Siveillance Video Client – Player (Contd..)

- View up to 100 cameras time-synched during playback.
- Camera search function promptly finds cameras, types of cameras and camera views in the system.
- Scrollable activity timeline with magnifying feature.
- Instant search on recordings based on date/time and activity/alarm (video motion detection).
- Evidence can be generated as a printed report, a JPEG image, an AVI or MKV film or in Siveillance Video format.
- Export audio recordings in WAV, MKV or AVI format.
- Exported video can be digitally zoomed to view an area of interest and minimize export footprint size.
- Re-export evidence containing Siveillance Video format and Siveillance Video Client -Player for instant, easy viewing by authorities.
- Verification of digital signatures added in the recording server, or as a part of the export, enables users to verify that the video has not been modified or tampered with.
- Encryption and password protection of exported. video material with a choice of the following strong encryption algorithms: 56-bit DES 128, 192 and 256-bit AES.
- Secure video evidence handling with a digital signature of re-exported video material enables users to verify that the video has not been modified or tampered with when viewing the export in Siveillance Video Client – Player
- View, modify or add general and/or camera- specific comments for a given video export.
- De-interlacing of video from analog cameras. IPIX technology for PTZ in 360° recorded images 360° ImmerVision Enables® panomorph lens technology.

### Siveillance Video Web Client

- Two-way audio in webclient
- Broadcast audio to multiple camera-connected speakers at once through Web Client
- Remote users can listen to, playback and export audio recordings remotely from anywhere through an Internet connection
- Access Siveillance Video views through the browser and avoid advanced setup.
- Shared views can be managed centrally via the server with administrator/user rights and user groups.

### Siveillance Video Web Client (Contd..)

- Camera search function promptly finds cameras, types of cameras and camera views in the system.
- Easy video playback including fast/slow playback, single frame step and jump to date/time with frame preview while adjusting time.
- Option for client-side video decoding via browser plugins (please refer to [www.siemens.com/siveillance-vm](http://www.siemens.com/siveillance-vm) for details on supported browsers).
- Control PTZ cameras remotely, including preset positions.
- Dynamic bandwidth optimization when streaming from server to client gives better use of bandwidth
- Create AVI files or save JPEG images.
- Preview exports on the server without downloading them.
- Export on the server to avoid moving large video files back and forth. Only download needed files or save them for downloading when on a faster connection.
- Trigger outputs and events with live view of related camera.
- System log-in using Siveillance Video username and password.
- System log-in using Microsoft Active Directory user.
- Secure connection through HTTPS.
- No installation needed on client computer.

### Siveillance Video Mobile

- One & Two-way audio in Mobile client
- Audio support on video push enables users to push live video from the device's camera directly into Siveillance Video for stronger documentation of incidents.
- Supports any mobile device running Android® 5.0 or higher, iOS 9.3 or higher.
- Add log-in credentials for multiple servers in Siveillance Video Mobile to easily switch between sites or different connection addresses.
- Views are inherited from the connected Siveillance Videosystem. The client automatically obtains the user's private and shared views from the system to be used as camera lists in Siveillance Video Mobile.
- A view with all cameras is automatically generated, allowing Siveillance Video Mobile to be used when no views are set up. It also provides a quick way of searching through cameras.

## Siveillance Video Mobile (Contd..)

- Camera search function promptly finds cameras, types of cameras and camera views in the system.
- Cameras can be viewed in full screen to take better advantage of the device's screen. It is also possible to search through cameras in a view while in full screen by swiping left or right.
- Digital pinch-to-zoom enables users to zoom in on a part of the image for closer review and conduct detailed investigation of video when using megapixel or high-definition cameras.
- Play back recordings from the database and select a specific time or recorded sequence to start playback, step through recordings and select a playback speed.
- Connect securely to the Siveillance Video Mobile server using HTTPS encryption
- View recordings from the database while keeping an eye on what is currently happening. The client displays a live picture-in-picture frame of the same camera when in playback mode. The picture-in-picture can be moved by dragging and double-tapping will return to live view.
- Control PTZ cameras with Siveillance Video Mobile either manually or by selecting predefined presets for quick navigation.
- Video Push allows users to use their mobile devices' cameras as cameras in the Siveillance Video. Easy to use and requires no setup in the mobile device.
- Option to include location metadata in Video Push Trigger outputs and events:
- Mobile devices can trigger outputs connected to the Siveillance Video, or user-defined events to have greater control while on the go.
- Export on the server to avoid moving large video files back and forth. Only download needed files or save them for downloading when on a faster connection.

## Siveillance Video Monitoring Wall System

- Hardware independent, it runs on standard servers and displays. No special Monitoring wall hardware or network configurations required.
- Flexible and scalable, it supports multiple Siveillance Video Monitoring Walls with an unlimited number and combination of monitors at any location.

## Management

- Management of Siveillance Video Monitoring Wall is fully integrated with the Management Client.
- Intuitive Siveillance Video Monitoring Wall builder enables easy definition of any number of
- Siveillance Video Monitoring Walls, including the size and position of individual monitors.
- Siveillance Video Monitoring Wall presets provide powerful control of the layout (camera grid) and camera content.
- All user actions are subject to the assignment of user rights.

## Control

- Dynamic user control of Siveillance Video Monitoring Wall layout and content through manual drag-and-drop of cameras and views into Siveillance Video Monitoring Wall via Siveillance Video Client.
- Automatic event-driven control of Siveillance Video Monitoring Wall layout and content based on rules, such as motion detection, I/O, integrated third-party applications, time, or video analytics events.
- Layout control enables instant insertion of a camera in a specific monitor and position, changes of Siveillance Video Monitoring Wall monitor layout, setting of all (or some) of the monitors in Siveillance Video Monitoring Wall to a predefined layout and set of camera feeds.
- Intuitive integration with the map function enables users to easily drag-and-drop cameras into Siveillance Video Monitoring Wall from the map.
- Supports seamless manual or rule-based display of any camera in a distributed setup based on Siveillance Video Federated Architecture or Siveillance Video Interconnect.

## View

- Individual Siveillance Video Client users can view Siveillance Video Monitoring Wall views as a part of the available view selection, which enables Siveillance Video Monitoring Wall to be used as an operator collaboration tool.  
Share important information with control room personnel using manual text messages or pre-defined

## View (Contd..)

messages that are displayed on certain events and incidents.

- Black screen monitoring is a new capability that allows operators to focus on critical activities. In Siveillance Video's cameras can automatically be removed from the Monitor Wall when an incident has been cleared. This means that the control room operators only are presented with the relevant video feeds.
- In addition to live video Siveillance Video's Monitor Wall supports playback of video, where any authorized operator seamlessly can control playback of video from his/her Video Client. This enables collaboration in assessment of incidents and investigations.
- To enable flexible and efficient collaboration in control rooms the Siveillance Video's Monitor Wall supports a wide set of different content. This means that operators instantly can share alarms, still images, bookmarks, maps, carousels, etc. with peers, and coordinate effort and responses.
- Siveillance Video's Smart Wall has the ability to render video using hardware accelerated decoding in the Monitor Wall. This gives significant performance improvements both in video rendering performance, reduced RAM usage and up to 75% reduction in the CPU load of the workstation running the Siveillance Video's Monitor wall.

# Licensing Structure

## Server Base License

- A Siveillance Video Pro server base license is mandatory for installing the product
- The base server license permits the following deployments within the legal entity purchasing the base server license:
  - Unlimited number of Management Servers
  - Unlimited number of Recording Servers
  - Unlimited number of Siveillance Video Clients, Siveillance Video Web Clients and Siveillance Video Mobile applications

## Hardware Device License

- To connect cameras, audio devices, video encoders and other devices to Siveillance Video Pro, one license per physical hardware devices required. In total, for all copies of the product installed under this license, the product may only be used with hardware devices as you have purchased hardware device licenses for (For encoders, please refer the Supported Hardware webpage for license requirements)
- An unlimited number of hardware device licenses can be purchased. To extend an installation with additional hardware device licenses, the base server license number (SLC) is required when ordering
- New license enforcement logic enables simplified licensing handling:

Off-line systems require initial activation and re-activation at extensions 15% (min 10/max 100) cameras may be replaces per year without re-activation (e.g. if the customer is licensed with 500 cameras then 15% of 500 which is 75 cameras can be replaced without re-activation and if the cameras are 2000 then maximum of 100 (as 15% of 2000 is 300 which is greater than 100) cameras can be replaced without re-activation.)

## Licensing of Siveillance Video Interconnect

- One Siveillance Video Interconnect device license is required per device (e.g. camera) in an interconnected site that is enabled in the central Siveillance Video Pro system

## Licensing of Siveillance Video Federated Architecture

- The use of Siveillance Video Federated Architecture is free and not subject to licensing. This implies that unlimited sites and cameras can be included in the federated hierarchy, without the need for additional or special licenses

## Siveillance Video Monitoring Wall Application License

- Siveillance Video Monitoring Wall is an add-on product that is included in the base license of Siveillance Video Pro, which permits connection of unlimited numbers of Siveillance Video monitoring Walls (including physical displays) and camera feeds

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