savVi™ Version 5.1

savVi™ is a unified video analytics software solution that offers a wide variety of analytics functionalities through a single, easy to use platform that integrates with existing or new surveillance systems. Featuring real-time event detection, video search and business intelligence applications, savVi provides a complete solution to the diverse video analytics requirements of multiple vertical markets.

The tables below list the major technical features and functionalities of savVi. The data presented can be used to assist in responses to bids, preparation of proposals or as a general source of information for design purposes.

Product Characteristics

Architecture	Distributed analytics, Server analytics
Minimal Hardware Requirements	Intel i5 or comparable CPU, 8GB RAM, 20 GB of free disk space, Graphic card compatible with HD hardware acceleration such as Intel HD Graphics or any of the NVIDIA and ATI Radeon HD cards
Supported Operating Systems	Windows 2012 and 2012 R2 (64-bit), Windows Server 2008 SP2 (64-bit), Windows 7 SP1 (64-bit)
Supported Databases	MS SQL Server Express Edition (bundled with savVi), MS SQL Server 2012 (Standard and Enterprise editions), MS SQL Server 2008 R2 (Standard and Enterprise editions)
Supported Camera Form Factors	Fixed, PTZ
Supported Camera Sensor Types	Color, Thermal
Supported Cameras & Encoders for Optimized Offering	Axis, Cisco, IQinVision, Samsung Techwin, Verint, Vivotek For complete and up-to-date information on supported devices, click here
Supported Video Management Systems (VMSs)	Cisco, Genetec, Milestone, Verint For complete and up-to-date information on supported VMSs, click here

Management & Administration

Enterprise Grade Features	
Centralized Management	All configuration and setup is performed on a single central server
High Availability	Complete high availability and failover support of all server components
Automatic Set-up & Calibration	Automatic calibration and camera configuration via the Automatic Scene Learning tool (ASL)
Bulk Camera Management	Cameras can be configured as a group
Automatic Camera Discovery	Cameras can be automatically added to the server without manually specifying their IP address
Automatic Mapping to VMS Cameras	Cameras with embedded Vi-Agents can be automatically linked to the corresponding cameras within the VMS
Camera Tampering Detection	
Obscuring	Automatic alert when the video feed is obscured
Camera Shifted	Automatic alert when the camera's field of view (angle) is changed
Saturation	Automatic alert when the saturation of the camera increases to a specified grey level for a specified percentage of the field of view for a specified time period
Low Light	Automatic alert when the light decreases to a specified grey level for a specified percentage of the field of view for a specified time period
Camera Disconnection	Automatic alert when communication with the camera is lost or there is no live video stream
Database	
Redundancy / Failover	Deploy redundant servers to eliminate any single point of failure
Backup & Restore	Ability to backup the database and restore the database from a backup when required
Automatic Archiving	Automatically archives the database and frees space when it reaches a predefined size
API	
Web Service Interface	Offers a web service interface that enables third party video viewing and management applications to integrate with savVi
License Information	

SKU	License	Description
VIRDNT	Redundant Server & VAP License	Redundancy package with failover support for analytics server (per server) and/or VAP

Real-Time Detections & Alerts

savVi delivers highly accurate real-time event detections, eliminating the need to rely on the alertness or response discipline of the surveillance system's operator. Users define potential events of interest in advance and receive alerts when such events occur, enabling rapid responses to incidents, as they emerge.

Licensing Options for Real-Time Detections & Alerts

SKU	License	Description
SAVRT1	Real-Time Events License – 1 Rule	Enables 1 rule type for real-time events (per camera) – see list of "Real-Time Detection Rules" below
SAVRT2	Real-Time Events License – 2 Rules	Enables 2 rule types for real-time events (per camera) – see list of "Real-Time Detection Rules" below
SAVENT	Real-Time Events License – Enterprise	Enables all rule types for real-time events (per camera) – see list of "Real-Time Detection Rules" below
SAVSET	Real-Time Events License – PTZ Presets	Enables multiple rule types for real-time events on PTZ presets (per camera) – see "Real-Time Detections on Presets" below
SAVPTZ	Real-Time Events License – PTZ Enterprise	Enables multiple rule types for real-time events on PTZ presets and target tracking (per camera) – see "Real-Time Detections on Presets" & "Autonomous Tracking" below
SAVCOR	Real-Time Events + Video Search License – Corporate	Enables all rule types for real-time events and video search (per camera)

Real-Time Detection Rules

Moving in an Area (Person / Vehicle)	Detects a person / vehicle moving in a predefined area
Crossing a Line (Person / Vehicle)	Detects a person / vehicle crossing a predefined line
Tailgating (Person / Vehicle)	Detects a person / vehicle that crosses a predefined line within a predefined time interval after the person / vehicle that crossed previously
Loitering	Detects a person sojourning inside a predefined area for longer than a predefined time period
Crowding	Detects a crowd if the density of people in a predefined area exceeds a predefined threshold (%) for a predefined time period
Occupancy	Detects a group if the number of people in a predefined area exceeds a predefined threshold (number) for longer than a predefined time period
Stopped Vehicle	Detects a vehicle that stops in a predefined area for longer than a predefined time period
(Vehicle) Speed Analysis	Detects if the average vehicle speed in a predefined area drops below a predefined threshold for longer than a predefined time period
Suspicious Object	Detects a static object that has been left unattended in a predefined area for longer than a predefined time period
Asset Protection	Detects a predefined static object removed or obscured from a camera's field of view for longer than a predefined time period; Up to 20 static objects can be defined in a camera's field of view
Lighting Detection	Detects a light (signal) appearance in a predefined area of the camera's field of view for longer than a predefined time period

Real-Time Detections on PTZ Cameras

Real-Time Detections on Presets	Enables detections on the following rules on preset positions of a PTZ camera's virtual tour: - Person / vehicle moving in an area - Person / vehicle crossing a line - Stopped vehicle - Suspicious object
Autonomous Tracking	Locks a PTZ camera onto a detected moving target (person / vehicle) by controlling the camera's Pan Tilt Zoom, and tracks that target

Performance	
Number of Rules per Camera	Unlimited
Number of Detected Targets	Unlimited
Number of Detection Areas	Unlimited
Number of Rule Schedules	Unlimited
Rule Management	
Rule Scheduling	Activate / deactivate rules according to predefined schedules
Configurable Rule Parameters	Wide range of advanced parameters to suit various scenarios and environments including: Interval between Events, Camera Type (CCD/Thermal), Masking Level and Video Quality Monitoring settings
Rule Testing & Optimization	Improves the detection and performance of a selected analytics rule by analyzing its previous detections, comparing rule settings and selecting the optimized configuration
Rule Chaining	Ability to create a sequence of detection rules by configuring a specific rule to activate / deactivate other rule/s
Event on Non-Detection	Alert when an activated rule does not detect the target after a specific time threshold
Deploy in Any Environment	All analytics rules can be used both indoors and outdoors
Configurable Sensitivity	Determines the sensitivity of detection according to the physical conditions of the scene; Set to a higher value to improve probability of detection if no events are being generated; Set to a lower value if too many false alarms are being generated

Video Search

savVi boasts automatic and effortless retrieval and analysis of recorded video, replacing cumbersome, labor-intensive, manual searches. Users define parameters regarding the event / object of interest and receive matching search results within seconds, enabling rapid access to specific video segments buried in the stored video.

Licenses for Video Search

SKU	License	Description
SAVVSQ	Video Search License	Enables video search queries (per camera) – includes all the capabilities listed below
SAVCOR	Real-Time Events + Video Search License – Corporate	Enables all rule types for real-time events and video search (per camera)

Search Criteria

Camera Selection	Apply search on selected / all cameras
Time Period Specification	Search according to specific time period or recurring time periods
Target Type	Search for specific target type (Person / Vehicle / Static Object)
Target Behavior	Search according to the specific behavior / state of the target

Target Type	Behavior
Person	Moving in an area for a specified duration, Crossing a line, Occupancy, Crowding
Vehicle	Moving in an area for a specified duration, Crossing a line Stopping in a specified area
Static Object	Suspicious object, Asset removed

Target Color	Search according to specific target color
Target Size	Filter according to specific target size
Dwell Time	Search according to interval of dwell time
Similar Targets	Select a vehicle or person and then search for similar looking targets
Search Sensitivity	Controls the tolerance of the search query by selecting the sensitivity level to include / exclude similarities / proximities

Search Results - Viewing Options

Thumbnails	Displays each search query result in a thumbnail image showing the found target (person / vehicle / object). Users can play back the results. Provides automatic zoom in on the detected target based on the available recorded video resolution.
Video Summary	Displays all search query results in a single clip, as segments, allowing quick review of the video footage for all detected events.
Target Path / Location	Displays the motion paths of found moving targets (persons or vehicles). Alternatively, a graphical overlay is displayed indicating the locations of found targets (static objects) that were added to or removed from a field of view or to / from a predefined area within a field of view. Users can play back each motion path / found target.
Site Map	Visualization of motion data gathered from individual cameras deployed at one site onto a complete site map. By using "Site Map" view, a user can see the "Target Path / Location" on a larger map, showing multiple camera displays in one view.

Search Query / Results Management

My Queries	Save a search query definition as a preset for future use
My Search Results	Save selected items from the search results for future use
Video Clip Export	Export selected event footage from the search results as an independent video file

Performance

Number of Cameras for Simultaneous Search	Unlimited
Number of Detected Targets	Unlimited
Number of Detection Areas	Unlimited
Query Time	~5 seconds per camera per 24 hours of recorded video

Business Intelligence

savVi offers automated statistical analysis to present traffic volumes, movement trends and motion patterns, enabling effortless extraction of operational data from surveillance video. Equipped with such information, facility managers, marketing leaders and business owners can make educated decisions regarding various operational and resource allocation aspects at their facility.

License for Business Intelligence

SKU	License	Description
SAVVBI	Business Intelligence License	Enables business intelligence rule types and generation of statistical information (per camera) – includes all the capabilities listed below

Business Intelligence Rules for Statistical Reports

Counting (People / Vehicles)	Counts people / vehicles crossing a predefined line (bidirectional), with such data available for extraction to dynamic reports
Speed Analysis (Vehicles)	The vehicle speed data is continuously gathered and available for extraction to dynamic reports
Occupancy (People)	The occupancy information is continuously gathered and available for extraction to dynamic reports
Crowding (People)	The crowding information is continuously gathered and available for extraction to dynamic reports

Query Results – Viewing Options

Statistics Analysis	Presents graphs showing count results, obtained after performing a search, per camera and / or per timeframe.
Target Path / Location	Displays the motion paths of found moving targets (persons or vehicles). Users can play back each motion path.
Heat Map	Displays visualization of traffic areas ("hot zones") within the camera's field of view. Users can play back each heat map value to show the customer traffic at that location.
Site Map	Projects motion data (pulled from "Target Path / Location" view or "Heat Map" view) from individual cameras at one site onto a complete site map.

The tables above refer to the product version specified at the beginning of this document, and do not contain the full features and functionalities of savVi, or design aspects that may affect or limit some of the features or functionalities. Additional information is available on Agent Vi's website www.agentvi.com, including in the savVi Product Brochure, or in Agent Vi's extended documentation and manuals which are available to Agent Vi's partners. For specific queries, please contact sales@agentvi.com