

## innovi Data Sheet

innovi™ is an innovative AI-powered video analytics platform that employs highly accurate and sophisticated algorithms developed and tailored specifically to surveillance scenarios. These advanced algorithms, based on deep learning, allow innovi to execute automatic classification of objects with precision, and without any need for special configuration or tweaking, thereby instantly transforming any ONVIF/RTSP fixed IP camera into a smart IoT device.

Available as a cloud-based SaaS or on- premise software, innovi boasts a comprehensive set of video analytics capabilities. Furthermore, innovi's federated software architecture can be easily enabled across large surveillance installations, as well as at dispersed and remote sites.

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The tables below list the major technical features and functionalities of innovi.

Product Characteristics	
Algorithm Technology	<p>Cutting-edge Artificial Intelligence (AI) algorithms which result in high Probability of Detection (POD) &amp; low False Alarm Rate (FAR), with no complex set up.</p> <p>All video streams are continuously analyzed in real-time</p>
Architecture	Distributed analytics: innovi Edge component at the remote site network, and innovi Coreserver (either Agent Vi Hosted or Customer Hosted)
innovi Edge	<p>A compact appliance or virtual appliance, running Agent Vi's video analytics pipeline.</p> <p>Connects to any ONVIF/RTSP-supporting IP camera, multiple cameras can be connected to each innovi Edge.</p> <p>innovi Edge processes the video locally and communicates with innovi Core</p>
innovi Core	<p>innovi Core performs all central management and higher-level processing of extracted metadata for advanced video analysis.</p> <p>Available either in the Cloud (Agent Vi Hosted) or on-prem (Customer Hosted) High availability and failover support of all innovi Core components</p>
Deployment Options	<p>Agent Vi Hosted</p> <p>Customer Hosted</p>
Scalability	Unlimited number of analytics-driven cameras per account
Supported Cameras	All ONVIF / RTSP fixed IP cameras (visual / thermal) for outdoor and indoor environments, are supported by <a href="#">innovi Edge™</a>
Supported Video Management Systems	<p>Immix CS/CC by SureView</p> <p>Systems Security Center by Genetec</p> <p>Sentinel by Monitor Computer</p> <p>Systems Signal Tower by Online</p> <p>Intelligence XProtect by Milestone Systems</p> <p>For complete and up-to-date information on supported vendors, click <a href="#">here</a></p> <p>Note: Webhooks API is available for third party integrations</p>
Management, Administration & Operation	
Main Features	
Centralized Management	All configuration and setup are performed centrally
Automatic Calibration	Seamless, continuous automatic camera calibration
Bulk Camera Management	Cameras can be configured as a group
Accessibility	Available using a standard web browser
Camera Enablement	Cameras are easily added to innovi and configured within minutes

Health Monitoring	
<p>innovi's health monitoring monitors all service aspects that may compromise innovi's ability to undertake its video analytics functionalities and communicate with third-party systems</p>	
Video & Connectivity Quality	<p>Receive notification of:</p> <ul style="list-style-type: none"> <li>innovi Edge connection to innovi</li> <li>Video source connection to innovi Edge</li> <li>Video source quality (low resolution / low frame rate / low processing rate)</li> <li>Video status (scene blocked / too dark / saturated)</li> </ul>
innovi Edge Health	Notification of no communication / innovi Edge overload / high latency
Real-Time Event Delivery Notification to Alarm Automation Software / VMS	Notification of event delivery delay / failure
Geospatial Map-Based Display	
<p>innovi includes a Geographic Information System (GIS)-based map interface that allows multiple functionalities, including defining real-time detection rules, undertaking search queries, and more, via the map. Each camera can be anchored to the map and then interacted with via the map interface. Events generated by anchored cameras will be displayed in their correct location on the map, and various data insights (for example, operational insights) can also be visualized through the map interface.</p>	

Unique Features of Agent Vi Hosted innovi	
No Network Configuration	Connection is established by the innovi Edge: outbound traffic only (no need for port forwarding)
Software Upgrades	Seamless and immediate availability of upgrades, all managed by Agent Vi
No On- Premise Servers	No need to purchase and maintain on- premise servers, as cloud servers are managed by Agent Vi
Fault Tolerance	Fault-tolerant architecture, managed and maintained by Agent Vi
Data Back-up & Restore	User's data is backed up by Agent Vi and restored by Agent Vi in case of failure
Cost Efficiency	Total cost of ownership per camera remains the same, regardless of camera count

innovi Capabilities – Summary	innovi Remote Guarding	innovi Investigation	innovi Enterprise	innovi Corporate
Real-Time Detections & Alerts- IntrusionDetection package	✓		✓	✓
Real-Time Detections & Alerts -Comprehensive Package			✓	✓
Real-Time Anomaly Detection			✓	✓
Video Search		✓	✓	✓
Business Intelligence			✓	✓
Custom Object Detection				✓
Facial Recognition				✓
License Plate Recognition				✓
Geospatial Map-based Display (GISintegration)		✓	✓	✓
Health Monitoring	✓	✓	✓	✓

### Real-Time Detections & Alerts – Remote Guarding Package

innovi’s Intrusion Detection Package meets the monitoring and detection needs of organizations and security service providers, enabling them with a video analytics service that delivers accurate, automatic real-time detections of security breaches at remote sites with immediate video verification. By reinforcing guard services with AI-powered video analytics, the capabilities enable more sites to be monitored with an increased level of security – without an increase in security staff.

#### Real-Time Detection Rules

Moving in an Area (Person / Car / Bus / Van / Truck/ Pickup Truck/ Motorcycle /Bicycle)	Detects a person / car / bus / van / truck / pickup truck / motorcycle / bicycle moving in a predefined area
Crossing a Line (Person / Car / Bus / Van /Truck/ Pickup Truck/ Motorcycle/ Bicycle)	Detects a person / car / bus / van / truck / pickup truck / motorcycle / bicycle crossing a predefined line

#### Video Verification

Event Clip for Video Verification	innovi generates an alarm video clip that includes several seconds before and after the breach.  The video clip is available to the operator via the alarm automation software / VMS, following integration with innovi
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#### Rule Considerations & Management

Number of Rules per Camera	Unlimited
Number of Detected Targets	Unlimited
Number of Detection Areas	Unlimited
Number of Rule Schedules	Unlimited

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/CMOS/Thermal)

## Real-Time Detections & Alerts – Enterprise Package

innovi 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.

### Real-Time Detection Rules

Moving in an Area/ Loitering (Person /Car / Bus / Van / Truck/ Pickup Truck/ Motorcycle/ Bicycle)	Detects a person / car / bus / van / truck / pickup truck / motorcycle / bicycle moving in a predefined area
Crossing a Line (Person / Car / Bus / Van /Truck/ Pickup Truck/ Motorcycle/ Bicycle)	Detects a person / car / bus / van / truck / pickup truck / motorcycle / bicycle crossing a predefined line
Stopped Vehicle (Car / Bus /Van / Truck /Pickup Truck)	Detects a car / bus / van / truck / pickup truck stopped in a predefined area for longer than a predefined time period
Occupancy	Detects a configurable number of people in a predefined area for longer than a predefined time period
Grouping	Detects a configurable number of people closely grouping in a predefined area for longer than a predefined time period
Unattended Object	Detects an unattended object; Suitcases, bags, backpacks, boxes in a predefined area for longer than a predefined time period

### Video Verification

Event Clip for Video Verification	innovi generates an alarm video clip that includes several seconds before and after the breach.  The video clip is available to the operator via the alarm automation software / VMS, following integration with innovi
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### Rule Considerations & Management

Number of Rules per Camera	Unlimited
Number of Detected Targets	Unlimited
Number of Detection Areas	Unlimited
Number of Rule Schedules	Unlimited
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/CMOS/Thermal), Masking Level

## Real-Time Anomaly Detection

innovi delivers highly accurate real-time event detections for anomalous events and patterns, bringing an operator's attention to unexpected behaviors and trends that would otherwise go unnoticed. The Anomaly Detection capability identifies events / objects without manual rule configuration or pre-definition and alerts the operator to such events in real-time.

innovi's Anomaly Detection algorithm continually learns the distinct characteristics of each scene for particular times of day / days of the week etc. Once the initial learning period is complete, innovi alerts for different behaviors / incidents / trends that do not match the typical behavior / traffic for that time / day.

Recognizing that not all anomalous events will be of interest to the user, the user provides feedback to innovi that defines what is of interest (and what is not), thereby fine-tuning future Anomaly Detection results.

Types of objects that will generate events/ can be user-defined for alerts	Person, Vehicle, Two-wheel vehicle, Unknown
Detection Sensitivity	User can define a daily / weekly event rate per camera

## Video Investigation

innovi offers 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.

Contrary to competing solutions which rely on batch processing of recorded video in order to provide search functionality, innovi creates metadata in real-time, as the video is stored, which is then available for Video Search. Effectively, there is no waiting time to process and search through the video, and multiple (even all) cameras can be searched simultaneously, regardless of the number of cameras in an installation.

innovi Video Search can work with any VMS as it relies on recording video in the innovi Edge devices.

### Search Criteria

Camera Selection	Apply search on selected / all cameras. Cameras can be selected by marking a zone on a map-based interface and including all cameras in such zone	
Time Period Specification	Search according to specific time period or recurring time periods	
Target Type	Search for specific target type (person / car / bus / van / truck / pickup truck / motorcycle / bicycle)	
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
		Grouping
	Vehicle (Car / Bus / Van / Truck / Pickup Truck / Motorcycle / Bicycle)	Moving in an area for a specified duration
Crossing a line		
Stopping in a specified area		
Object	Unattended Object	

Target Color	Search according to specific target color; can search for upper body color and lower bodycolor for a Person
Dwell Time	Search according to interval of dwell time
<b>Search Results - Viewing Options</b>	
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 videoresolution.
Geo-spatial Map Display	Displays each search query result on the street map, enabling geographical context of theevent.
<b>Search Query / Results Management</b>	
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
<b>Performance</b>	
Number of Cameras for SimultaneousSearch	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

innovi 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.

### Business Intelligence – Rules

Counting (People / Vehicles)	Counts people / vehicles crossing a predefined line/s (bidirectional)
Speed Analysis (Vehicles)	Vehicle speed data is continuously gathered and collated
<b>Query Results – Viewing Option</b>	
Statistics Analysis	Presents graphs showing count results, obtained after performing a search, per camera and/ or per time period.

The tables above do not contain the full features and functionalities of innoVi, or design aspects that may affect or limit some of the features or functionalities. Additional information is available on Agent Vi's website, including in the innoVi Product Brochure, or in Agent Vi's extended documentation and manuals which are available to Agent Vi's partners. For specific queries, please contact AgentVi.

Agent Vi reserves the right to change the product specification at its sole discretion at any time.

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