Hitachi Smart Spaces and Video Intelligence
Smart Spaces and Video Intelligence

Enhance safety and efficiency with IoT Insight to help your organization or city thrive

Families want to live in safe communities. Businesses aspire to create innovative solutions and economic opportunity. Residents and visitors like to get around town easily. Smart spaces are urban, commercial and industrial areas that use video, internet of things (IoT), analytics and artificial intelligence (AI) technologies to deliver insights to people, buildings and machines, to make organizations more effective and improve our quality of life. Hitachi enables a variety of public and private organizations throughout the city to drive operational excellence and become safer and smarter with an end-to-end, intelligent and adaptable smart city IoT solution.

With Smart Spaces and Video Intelligence, organizations and cities can utilize data-driven solutions to:

- Keep traffic flowing and transit safe, with integrated video, data, and alerts.
- Protect students on campus while achieving operational excellence.
- Provide downtown area insights on foot traffic, parking, traffic mix, and more.
- Drive more retail success with business intelligence and insights for a thriving economy.

Hitachi Smart Spaces and Video Intelligence

Smart Spaces and Video Intelligence for retail, campuses, transportation and public areas, are the building blocks for smart cities: They help all areas and organizations become safer and more effective so they can thrive.
The Problem and Solution

Your single pane of glass for making your spaces smart

Over the past few years, the majority of public and private organizations have implemented a diverse set of systems to protect their assets, premises and people. To effectively manage large amounts of critical assets and incidents, your systems must be integrated so that they can provide meaningful information.

The primary goal of Hitachi Visualization Suite (HVS) is to provide a platform for representing just about any real-world object, such as a building, car, camera, train, boat, you name it. By integrating critical video and event sources together with fixed and moving assets, such as those listed above, HVS provides visual and geospatial correlation in a simple interface that takes command and control to a new level.

Integrating disparate data and video sources and using existing public safety assets, both private and public, HVS applies analytics and the best visualization interface on the market. HVS is quickly becoming the most adaptable and intelligent solution for smart spaces: the foundation for the safe and smart business, facility campus or city.
Full Situational Awareness

Integration of disparate systems and sensors provides connected intelligence

Tailor your view to include all the information you need to make informed decisions quickly.
Actionable Intelligence

Visual correlation between seemingly different data paints a clear picture

HVS combines public information sources, such as traffic, and social media with private sources of information, including license plate recognition (LPR), computer-aided dispatch (CAD)/911 calls and gunshot events. Just about any sensor data can be integrated with HVS.

- Multiple map layers.
- NOAA weather alerts.
- Imported ESRI shape files.
- Navigation charts.
- Geocoding services.
- Dozens of third-party video systems.
- CAD/911 systems.
- License plate recognition systems.
- Traffic systems.
- Drone detection.
- Video analytics.
- Body worn cameras.
- Social media.
- Smart sensors.
- Building schematics.
- And much more...
Plate TST4584
966 Monte Linda Loop, Milpitas, CA 95035

1/17/17
11:12:01
ID: 2965
Alarm Type: 3
Camera Name: Camera_02

Notes
Stolen license Plate 234398888MA345893388347 MA201071
Investigations

Simple search and timeline views make investigations intuitive

HVS provides a single pane of glass view for the user. By showing real-time events correlated with fixed and moving assets, true information can be derived from data locked in standalone public safety systems.

HVS provides public safety organizations with:

- Visual insight.
- Improved collaboration.
- Integration of disparate systems.
- Intelligence from the raw data.
- Event and alarm tracking.

Go back in time and view all of the events for a particular day, or perform a simple search across the logged events or by place and time.
Automated Workflow

Manage by exception

Even the best-trained video operator cannot see everything at once. HVS allows you to manage by exception, instantly and automatically presenting the most critical information when something out of the ordinary occurs.

- License plate read event identifies a stolen vehicle.
- A gunshot event occurs nearby.
- Several people call 911, identifying a man with a gun
- The operator pulls up nearby video and gets a description of the suspect.
- Armed with a license plate number, description of the suspect and visual evidence of the car, they dispatch the closest officers to arrest the suspect.

Actionable intelligence through automated workflow and visualization of distinct events.
Intelligent Video Management

Minimize costs while maximizing camera and server status information

Hitachi Video Management System (HVMS) provides a powerful platform for operators to access unlimited locations, cameras and users. This advanced management system can be distributed among a variety of servers and IoT devices, and it offers a global view and intelligent search.

HVMS provides a single, highly accessible web interface to view live and recorded video. This approach allows users to utilize the solution as enterprise software that integrates with HVS or as a standalone, onboard software on the Hitachi Smart Camera platform.

Key Features include:

- Scalability: unlimited servers and users.
- Browser-based graphical user interface (GUI) that is consistent across all platforms and devices.
- No changes required to existing IT and network with minimal configuration and encryption.
- Firewall friendly.
- Cloud ready.
- Supports the most modern security protocol including Secure Real-time Transport Protocol (SRTP).

Instantly filter as many as thousands of available cameras and locations using a keyword feature that intelligently searches across server names, camera names and metadata for the streams.
Video Analytics Enables Smart Public Safety and Operational Intelligence

Transform surveillance cameras into smart city sensors

Hitachi Video Analytics (HVA) transforms video data into intelligent information that can be used for security and safety of people, assets and buildings, as well as enterprise operations and revenue-generating applications. It addresses privacy concerns while delivering continuous visibility of data via a suite of analytics.

**Public Safety**
- Face Collector.
- Intrusion Detector.
- Object Detector.
- Video Enhancer.

**Business Intelligence**
- Activity Visualizer.
- People Counter.
- Queue Detector.

**Operational Intelligence**
- Direction Controller.
- License Plate Recognizer.
- Parking Space Analyzer.
- Traffic Analyzer.
- Vehicle Counter.

Hitachi Video Analytics provide accurate alerts and insights for smarter public safety and first responders while ensuring privacy protection with the Privacy Protector filter.
Social Intelligence Analysis

Maximize situational awareness through targeted social and open source data

Social data integration is a key component to HVS; Social Hitachi Social Intelligence Analyzer (SIA) helps public safety and corporate organizations to understand online conversations, to improve the safety of their communities and security of their assets. SIA is a cloud-based intelligence platform that uses filters and keywords, allowing organizations to gather and analyze real-time open source data.

Features include:
- Automated alerts.
- Geo and inferred location.
- Link analysis.
- Social reenactment.
- Intelligent data mining.
- Deep web search.

Weather and traffic indicators are additional components that are integrated directly into the queries, allowing enhanced situational analysis and deeper intelligence, for smarter public safety and emergency response.
Hitachi Smart Camera

Smart Camera

The smart choice for outside-remote camera applications

Hitachi Smart Camera 200 is a standalone surveillance tool. This outdoor camera includes infrared night mode which automatically enables lighting for nighttime vision, built-in storage, onboard analytics and more:

- Video Management Software (VMS) onboard the camera.
- Email notification alerts of snapshots and images based on onboard analytics.
- Wi-Fi and multisensing cellular carrier cellular connectivity.
- Pre-integrated into Hitachi Visualization Suite for easy and accessible situational awareness.

Onboard analytics include line crossing, intrusion detection, scene change, and face detection. Scene change can detect an object that is added or removed from a scene. It is commonly used for asset protection or for suspicious object detection.
From Discovery to Courtroom

Upload and manage digital evidence: media, audio, pictures and documents

HVS includes built-in Hitachi Digital Evidence Management (DEM), which that can be easily uploaded from multiple systems, tagged and associated with a case on single platform. Workflow can be applied to the media for notifications or queuing for review by a case manager.

Digital evidence can be collected in several ways:

- Seamless upload of evidence from body worn camera or any other device with automated chain of custody.
- Export a video clip from a source video system.
- Live stream, recording and playback from multiple video sources in HVS.
- From a workflow engine based on any external event, HVS can leverage geotagged media and display geospatially on the map, overlaying event data, such as social media, CAD or 911 calls.
DEM is an open platform solution for auto-data uploads or manual uploads. All media is digitally signed when uploaded to track and ensure proper chain of custody.
Hitachi Video Management Platform

Perfect the Management and Storage of Video

Solve high-availability, redundancy, scalability and cost issues once and for all

Hitachi Video Management Platform (VMP) caters to the high-performance and throughput demands of today’s video surveillance. This converged hardware and software solution addresses issues of scalability, availability and redundancy while optimizing data center space and is perfectly designed for mid-to enterprise-level management of video surveillance infrastructure.

Virtualization provides additional benefits of cost-saving:

- VMP can scale out on demand through the addition of both virtual and physical resources.
- Power, cooling and space costs are significantly reduced as a result of using virtual servers where, previously, hardware would have been dedicated to individual video management tasks.
- Rapid deployment will cut the time of configuration expenses as well as reduce lag time for facilities to be up and running in a short amount of time.

Hitachi VMP supports all major video management software suppliers such as Milestone, OnSSI, Qognify and Verint to name a few.
VMP Provides Turnkey Video Management Platform

Hitachi Video Management Platform (VMP) is a converged hardware platform composed of storage and compute that is built specifically for today’s video management systems.
For Moments When Time and Accuracy Are Critical

Improve the effectiveness of video surveillance

Live facial recognition provides real-time facial image matching for video surveillance systems deployed in public and commercial buildings, hospitals, banks, railways, cruise lines, airports and many other areas where continuous proactive threat detection is essential.

- High matching accuracy.
- High speed matching.
- High robustness.
- Auto alert.
- Integrates with HVS data ingest.

Our facial recognition technology can prevent criminals from entering important areas or facilities, and more importantly, prevent them from causing harm to people or property through proactive alerts.
Crime Prediction Analytics

Put big data analytics to work to help reduce crime and terrorism

By integrating with existing crime data, such as records management system (RMS), and combining it with social media and other spatial data sources, Hitachi Visualization Predictive Crime Analytics can visualize crime by location and predict (with a high level of accuracy) where and when specific types of crime will occur.

Predictive Crime Analytics can predict, down to the city-block level, crime types and times where the highest probability exists for a specific crime type. This information becomes useful to optimally manage patrols and get officers in the right place at the right time to prevent crimes from occurring.

Predictive Crime Analytics can predict, with a high level of accuracy, where and when specific types of crime are likely to occur, so officers can prevent it or be nearby when it happens, to neutralize threats quickly.
How Does It Work?

The hybrid cloud design makes Hitachi Visualization Suite the most robust and flexible tool on the market. HVS represents a state-of-the-art design optimally suited for crisis and emergency management. The underlying cloud architecture allows the solution to scale up quickly during high-demand situations, such as when there is an active shooter. Literally hundreds of users can view camera feeds, get alerts and share information as never before.

The hybrid cloud architecture allows HVS to easily integrate with third-party camera systems. Hitachi Visualization Platform (HVP) makes deployment simple. It handles all video and data ingest along with workflow on premises. This keeps the sensitive data where it lives currently without having to replicate across data centers or into the cloud.

By combining the highly available cloud architecture with an on-premises appliance for integration, HVS can scale up or down quickly, depending upon the criticality of the situation.
HVS: How Does It Work?
Hitachi Edge Gateway for Video brings intelligence to the edge for your legacy cameras: It’s an integrated set of secure and intelligent cloud devices for edge capture and recording.

- Secure internet service bus avoids limitations of VPN connectivity.
- Reliable Microsoft Windows Azure cloud environment provides world-class stability.
- Video transcoding to normalize disparate video feeds.
- Dynamic streaming to provide the best video quality based on available edge CPU and bandwidth.

The mobile gateway is portable for buses, trains, squad cars, ferries, and so forth, for live viewing.

- Cellular connectivity.
- Mobile hot spot.
- Geotracking.
- Stream live video from moving vehicle.

The small form-factor and ruggedized Edge Gateway is ideal for integrating private camera systems into HVS.
Public and Private Partnerships

Deter crime and promote public safety

Deputizing private-entity cameras expands the area of surveillance without added cost. The process creates partnerships between law enforcement and private entities.

- Access to locations and angles otherwise unavailable to law enforcement.
- Improved patronage and better emergency response.
- Increase data coverage for Hitachi Video Analytics.
DEPUTIZE YOUR CAMERAS
Deter crime and promote public safety by making it easier for the community to collaborate with law enforcement. Businesses, malls, schools and others can help us protect our neighborhoods by sharing their security camera views during an emergency.

GET INVOLVED!
Help the police protect your business and solve crimes. No individual or agency working alone can prevent crime; it takes police and citizens working in partnership. Start being proactive today and fill out the registration form. Tell your police department if you own security cameras and if you are willing to share their video feeds.

SIGNS AND STICKERS
Cameras can be very helpful in preventing crimes when people know they are there. We will provide you with signage indicating that a system is in operation and that you will share recordings of suspicious activity with the police.

DEPUTIZE YOUR CAMERAS
When a crime or other emergency takes place, video is an incredibly helpful resource for first responders. By sharing your security system’s video with us in real time, our response and investigation will be faster and your neighborhood will be safer.

Get Started
You can help support criminal investigation by notifying the police department about your system. Knowing in advance if cameras are located in and around your business will improve and accelerate the investigation of a crime.
Hitachi Vantara

Your data is the key to new revenue, better customer experiences and lower costs. With technology and expertise, Hitachi Vantara drives data to meaningful outcomes.