



Cloud Video Surveillance Platform for Safe City Projects

Citywide, Large-Scale, Complex Video Surveillance
Deployments Made Simple and Cost Effective...



SafeCiti™ reduces crime and promotes social and economic well-being among residents while creating an interconnected environment in which it is safe to live, work, and play.



Taipei City, Taiwan

SafeCiti™ is Iveda Solutions' ultimate cloud video surveillance validator. SafeCiti is a complete cloud-based video surveillance solution for citywide deployments. Only Iveda Solutions has the know-how, experience, partnerships, and global resources to deploy a true safe city project that is reliable, centrally managed, scalable, and cost effective. Serving our customers and responding to their requirements over the past eight years have allowed us to test and validate the best of the best in video surveillance technologies and methodologies, including surveillance cameras, wireless systems, and other components necessary to deploy an efficient and effective video surveillance system. We centrally manage all of the components from our cloud, allowing customers easy, secure access to the system without the overhead of managing and maintaining infrastructure. If clients prefer to manage their own private cloud, we can design, build, and deliver turnkey highly secure systems for them. SafeCiti is the culmination of years of experience providing cloud-based video surveillance products and services to businesses and communities.

SafeCiti is Cloud Based

The typical Safe City deployment scenarios below are what we see in many citywide video surveillance installations. We recognize the need to integrate existing infrastructure as cities

worldwide experience dwindling resources while also facing the need for enhanced public safety and security. Iveda Solutions' centralization of traditional isolated and detached video systems in the cloud has enhanced video utilization and improved video surveillance capabilities.

Iveda Solutions' Cloud-Based SafeCiti	Typical Safe City Deployments
Open-source IP-based system	Proprietary closed architecture
Centralized video management and access through one login	Requires login to individual DVRs
Remote video recording and storage	Local DVRs or other recording devices
Multiple, simultaneous access with no degradation of video quality	Video quality deteriorates with more than 1 user
Integration of existing CCTV and IP Cameras	Typically utilizes proprietary systems
Data redundancy and faster retrieval from central cloud	Separate and independent storage devices
Integrated GUI – user dashboard	Individual tools for each different system function
Automatic device recognition and network routing	Requires device configuration and software upgrades in the field.
Customizable system architecture	Vendor and brand defined functions only

Simple, Interoperable & Highly Reliable

The SafeCiti Video Surveillance Platform is an open-source infrastructure, built on the foundation of interoperability in order to utilize existing third party video surveillance systems. This facilitates rapid deployment, while keeping costs low. SafeCiti is designed to seamlessly integrate with public and private IT networks.

The SafeCiti solution enables public/private entities from diverse industries and applications to combine and share resources to enhance safety, security and improve efficiencies.

SafeCiti beneficiaries, such as government agencies, first responders, community leaders, businesses and citizens use SafeCiti cloud-based video surveillance solutions to create a highly reliable, omnipresent, integrated network that operates as a citywide "crime watch" while also enabling faster and better coordinated responses to disaster or calamity.

In-Vehicle Mobile Video



Force Multiplier



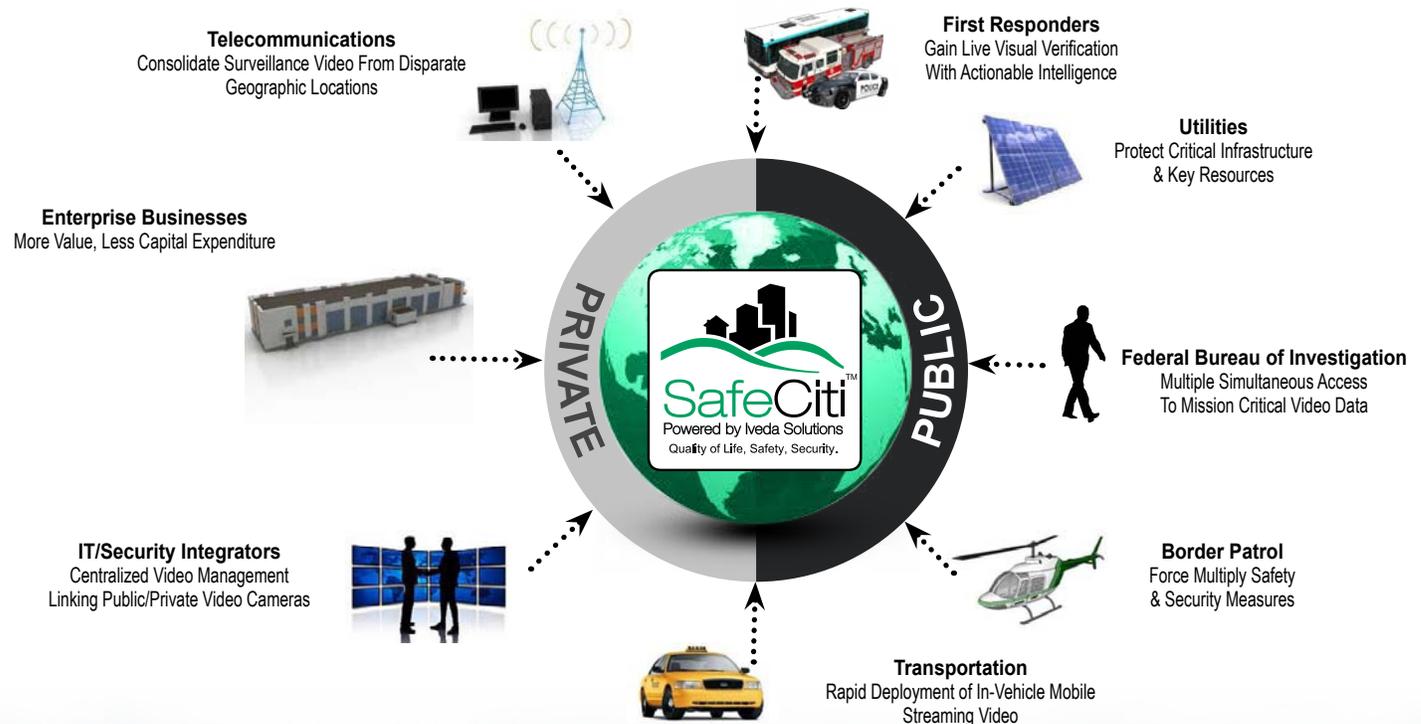
Real-Time Remote Video Surveillance



Cell Phone Viewing Capability



Multiple Simultaneous Camera Access



Our Cloud-Based SafeCiti Solution

- Project design, management, and implementation
- Consolidation and centralization of existing cameras
- Conversion of existing analog cameras to digital
- Design and integration of wall display systems
- Design and implementation of monitoring centers
- Utilization of our secure cloud or your private cloud
- Public/private partnership enabler
- Green cloud video cube and container for mobile data centers in rural areas
- Fast and cost effective data center implementations
- Rapid deployment of in-vehicle mobile streaming video
- Fast and cost effective wireless network implementation

Sample SafeCiti Projects:

New Taipei City Police Department

First Phase Completed in August 2011
Second Phase January – June 2012
With future expansion plans

The New Taipei City Police Department has been a customer of MEGAsys, our subsidiary in Taiwan, since 2009. In 2011, we completed the monitoring and video surveillance systems integration for the police department and in January 2012, we were awarded approximately U.S. \$2.2 Million for the second phase of the SafeCiti deployment. The project includes integration of new cameras, existing citywide cameras, and fiber networks. MEGAsys is providing, network engineering and design, field construction, and integration of existing NVR systems.

When the project is complete, the police department will have an Intelligence Integrated Center (IIC). The IIC has the following main functions:

Quick Position Location: Our system utilizes an industry standard XML feed to easily integrate existing GPS, GIS and 110 ALI/ANI Reporting Systems. Once a crime is reported, police can immediately determine its location. The surrounding monitors can display any nearby police presence and the picture of the scene and its location can be forwarded in short order.

e-Patrol Function: On-duty police station personnel with system access rights are able to instantly browse system hot zones from all surrounding command center monitors through a web interface. The Precinct Director can direct police officers based on real time video intelligence.

30-degree Fan-type Range for Wide-area Searching: The system is capable of searching surrounding areas or probable escape routes in real time within a 30-degree range based on the subject's last known escape velocity, time, and distance from the original location of the crime.

Quick Video Index Search: Through system motion and non-motion analytics, police are able to browse many hours of stored video within a few minutes to quickly identify and collect video evidence. This capability significantly enhances the efficiency of direct video access and search.

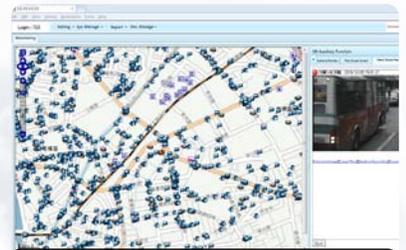
System Maintenance Alert System: Combined with GIS and a recording system, the application proactively monitors its own performance and status. In the event of equipment malfunction, capacity threshold or vandalism, the system is able to immediately send a maintenance alert to the appropriate police jurisdiction. Online maintenance can be performed in most cases and the system can also monitor maintenance status online, improving the department's efficiency.

Strengthen Criminal Evidence Collection: The system is fully integrated into the National Police Administration Crime database to help investigators easily cross-analyze and compare evidence of past and current criminal activity to help solve cases.

Authentication and Full Control: The system is fully capable of combining existing end-user domains with city police systems for consolidated security authentication. Any police personnel that have not been pre-authorized will not have access. The system records all police access to the system to prevent misuse, infringement, and violations of privacy laws.



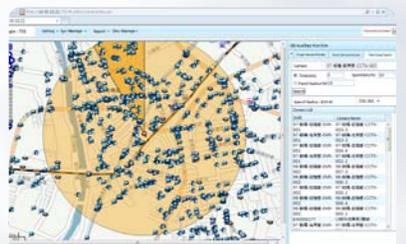
Video Wall



Automatically patrol a selected bus route or any street path.



Command Center

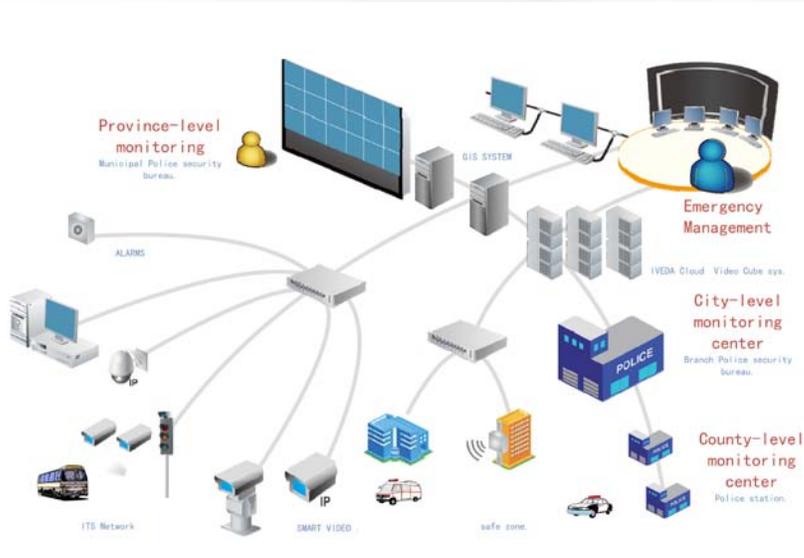


Create a search area anywhere within the city for faster analysis.

According to city police records, crime detection efficiency increased significantly after SafeCiti implementation. The number of solved criminal cases reached 8,896 in November of 2011.

For the first time, New Taipei City participated in the Global Intelligent Community Forum and was nominated one of the Smart21 Communities of 2012, from 400 participating cities in the world. There is no doubt that the successful SafeCiti deployment was a major contributor in having the highly coveted honor bestowed upon New Taipei City.

Remote Digital Video Surveillance Recording System Engineering Architecture Diagram



Project Facts

- Video surveillance encompassing 10 counties, 4 towns, 15 rural areas
- Centralized system for remote live surveillance and recording encompassing 16 branches and 157 sub-station
- Integration of 13,000 cameras and 3,353 digital video recorders (DVR)
- System scalability designed for additional 10,000 cameras.

Our SafeCiti Deployments Include:

- Central monitoring center construction (display wall system installation and integration)
- Implementation of conference and broadcasting systems
- Integration of existing software and hardware for centralized video
- Management and access anytime/ anywhere

Single System *1-16 cameras	Single Location, Multi-System *16+ cameras	Multi-Location, Multi-System *128+ cameras	Integrated Safety Management	Data Center	Centralized Management	SafeCiti
<ul style="list-style-type: none"> • Camera • NVR • DVR 	<ul style="list-style-type: none"> • Camera • DVR • NVR • Video Encoder 	<ul style="list-style-type: none"> • Camera • DVR • NVR • Video Encoder • Network Router • Camera Management System (CMS) 	<ul style="list-style-type: none"> • Camera • DVR • NVR • CMS • Fire and Burglary Alarms • Access Control • Analytics 	<ul style="list-style-type: none"> • Hosted Video Platform • Offsite and redundant storage • GIS server • GPS server • System Health Monitoring • Global Access and Distribution Management 	<ul style="list-style-type: none"> • Automatic video archiving • Tiered authentication • Intelligent Operations Center • Network Security • Mobile Access 	<ul style="list-style-type: none"> • Total system interoperability • Public Safety Coordination • Interdepartmental Collaboration • Enable Public Private Cooperation • Smart City

Large-scale Video Surveillance Deployment

Centralized Management
System integration
Multi Equipment Brand integration



Box Systems	Multi-Box Integration	Systems Integration	Large Scale Video Hosting Management System
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Glendale, California

City of Glendale, California

Started in 2008
Ongoing project

The City of Glendale is the third largest city in Los Angeles County, California. Our SafeCiti project with the City of Glendale started in 2008.

The original project involved the main police station and the city jail. The project included converting 64 analog cameras from various manufacturers to enable digital operation. We then built a secure private cloud infrastructure to centrally manage all of their cameras.

Over the years, Glendale has been adding cameras to the same backend we built for them in 2008. The infrastructure was designed to be scalable for future integration of existing and new cameras.

The most recent completed project involved installing new IP cameras along the primary shopping district and in downtown Glendale using the city's fiber network, setting up a mesh wireless network, and integrating an existing camera

system. Glendale plans to solicit ordinary citizens as volunteers to assist with the surveillance of the shopping district. This will strengthen police relationships with the community and will help ease public "big brother" concerns.

The deployment of the SafeCiti project will provide the city with enhanced situational awareness, act as a force multiplier for dwindling public safety resources, and provide various departments within the city bureaucracy centralized management and simultaneous access to live and recorded video.

Project Facts

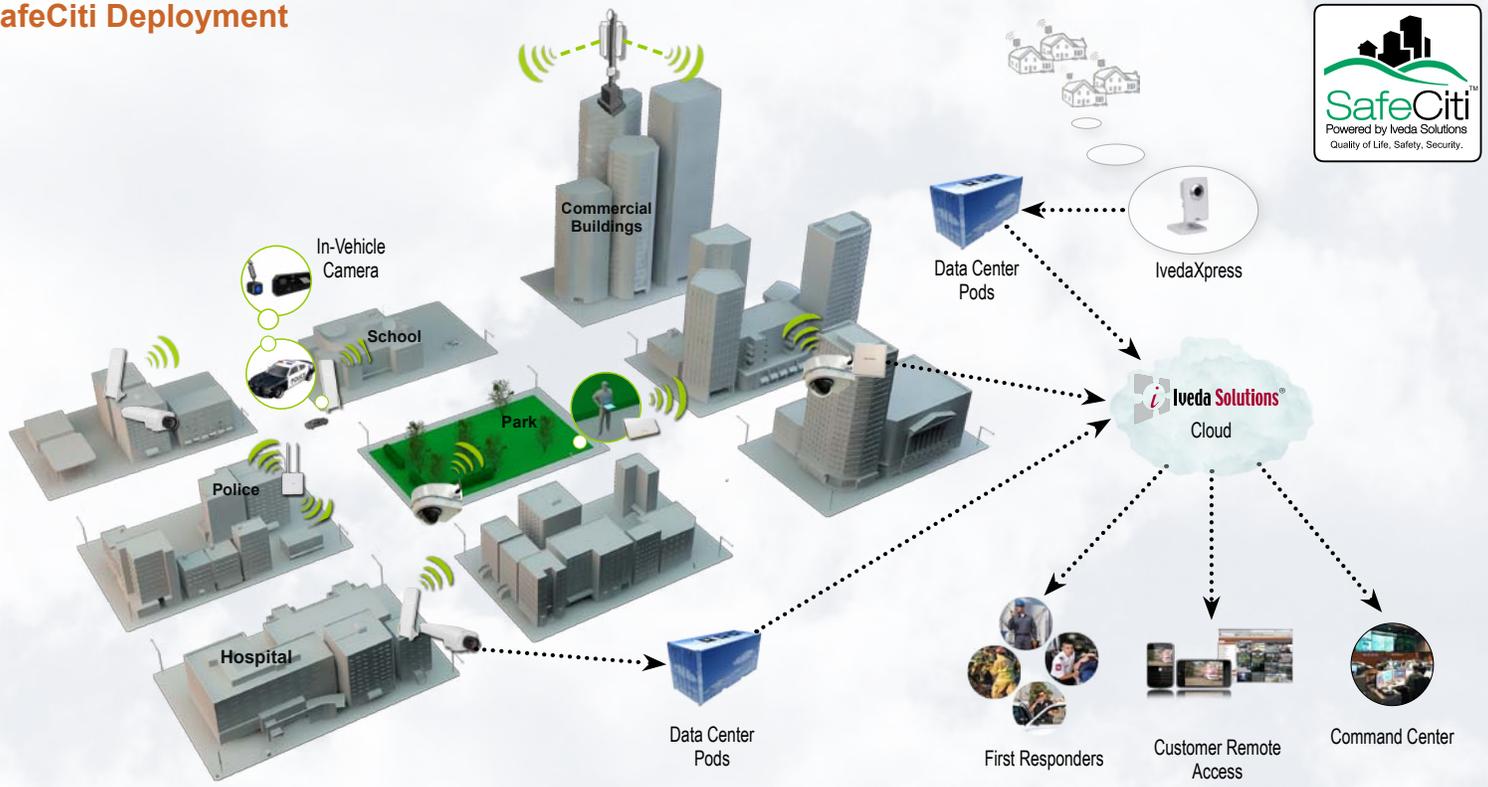
- New camera and mesh wireless equipment integration with existing camera system
- Private cloud implementation provides enhanced situational awareness and acts as force multiplier for dwindling public safety resources
- This project covers Glendale main police station, jail, downtown, and primary shopping district.
- Future plans to expand throughout the city and transportation hubs



The City of Glendale and Iveda Solutions had the Safe City vision, but like in any other city, resources are scarce for such a large project. Together, we will continue to scale as the City secures more funds through additional budgets and grants. The city's overarching goal is to expand a private cloud throughout Glendale to cover utilities, critical infrastructure, transit areas, parks, and other high traffic areas. This will create a more secure and safe environment, improving the lives of citizens and providing more growth opportunities for businesses.

The New Taipei City and the City of Glendale projects are examples of how our cloud video surveillance solutions are effectively integrating all kinds of video systems into one managed video platform. We engineered solutions, manage how video data is first obtained, processed, transported, secured, stored, distributed, and remotely viewed. The solution provides functional tools for the New Taipei City Police Department and Glendale Police Department to gain on demand real-time access to live and archived video throughout the cities. These successful projects affirm our ability to execute large and complex citywide video surveillance projects.

SafeCiti Deployment



SafeCiti Applications

Monitor Public Areas – Capability to better monitor common public areas for vandalism and other illegal activities.

Remote Surveillance of Traffic – Enables real-time traffic surveillance for immediate deployment of first responders in cases of accidents. Real-time notification after an accident enables expedited response which leads to saved lives and enables faster restoration of normal traffic flows.

Virtual Courtesy Patrol – High risk corridors, communities, and right-of-ways currently being physically patrolled by police officers, can now be patrolled remotely using cameras. This force multiplier enables reallocation of police officers to more mission-critical tasks.

Checkpoints/ Toll Gates/ Border Crossing – Monitoring these areas with cameras provides better safety for the people working there. Illegal crossings will be caught live and dealt with accordingly.

Natural Disaster Recovery – In case of natural disasters, shared video data amongst first responders, whether federal, state, or local, allows them to assess the situation and coordinate instantaneous and synchronized responses.

Public Alert Integration – SafeCiti-enabled locales can cooperate more effectively with neighboring cities whenever a public alert is issued. This increases the chances of catching perpetrators quickly after a crime is committed.

Mobile Solutions – The Iveda Solutions in-vehicle video surveillance system, utilizing the cellular networks, completes the SafeCiti solution. It enables vehicles with the capability of real-time access to in-vehicle cameras that can be used for stakeouts, public right-of-way security, and enhanced safety throughout the city. Monitored cameras in squad cars also increase the safety of police officers and protect the rights of citizens during routine traffic stops.



SAFETY Act Designated



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