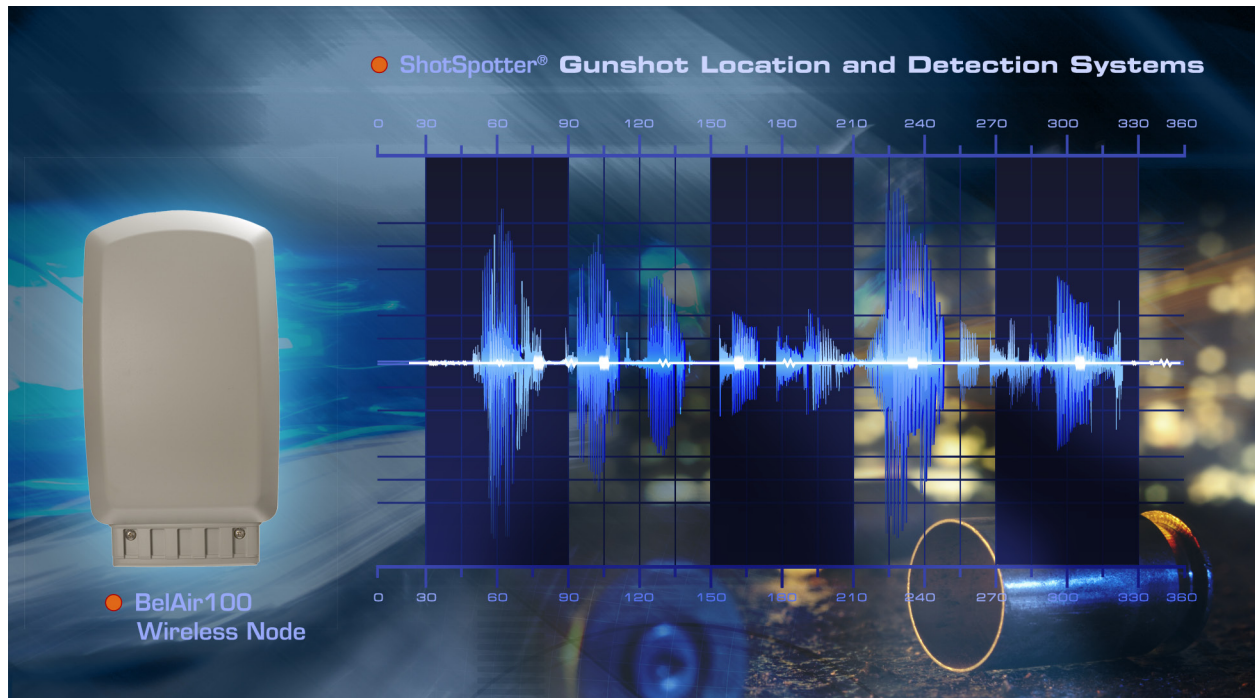


Crime Prevention and Response Systems (CPRS)

Combining Video and Acoustic Surveillance, and Wireless Data Communications makes Safer Cities



Key Benefits

Crime Prevention and Response Systems (CPRS) employing gunshot location and video help diminish criminal presence for safer communities.

- *Projection of presence inhibits crime*
- *Creates record of activity, aiding investigation and case resolution*
- *Reduces or eliminates leased line costs and provides bandwidth for alternative uses*
- *More effective and timely response*

Acoustic Sensors, Detection and Processing

Violent crime is a serious problem in many communities as it affects quality of life and commerce. Cities today are under increased pressure to improve safety and security. Using advanced technology, cities can reduce gun related crime and speed up response times as first responders can approach a situation with greater actionable intelligence, including real-time incident detection, accurate location, and number of rounds fired. Within one second of the gun firing, cameras capture images of persons and activity at the incident location.

Network Communication Environment

Where local networks are not in place, General Dynamic provides a deployed BelAir Networks mesh radio network to carry the image and gunshot signals back to the operations center. The mesh network allows multiple streams of camera and acoustic signals to be multiplexed and fed to points for backhauling to the Operations Center. Networks such as these have built in redundancy, providing multiple prioritized paths back to the Operations Center. This redundancy ensures that if a communications link is lost, an alternative path is available for continuous connectivity for correlation processing. This approach leads to communication

State-of-the-Art Partnering

General Dynamics integrates video cameras from Verint with acoustic gunshot detection and location technology from ShotSpotter, linked together using IP protocol over a BelAir Networks wireless mesh network. Information from the various devices is then correlated within the VidSys physical security information management software, providing one common operating picture to verify, analyze, resolve and track the unfolding situation.

Deployed cameras types from Verint, including Pan Tilt Zoom (PTZ), GPS/acoustic-directed high resolution and thermal, can be deployed individually or as a coupled optical sensor system where each contribute images with different characteristics depending on the field location requirement (e.g., foliage, fog or scene complexity).

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About General Dynamics Information Technology

As a trusted systems integrator for more than 50 years, General Dynamics Information Technology provides information technology (IT), systems engineering and professional services to customers in the defense, intelligence, homeland security, federal civilian government and commercial sectors. With approximately 16,000 professionals worldwide, the company manages large-scale, mission-critical IT programs delivering IT services and enterprise solutions.

channel consolidation to reuse channels in the network and minimize interference. This consolidation reduces spectrum utilization, providing bandwidth for use by other first responders and reducing spectrum requirements.

Integrated Capabilities

At the Operations Center, the software of the various systems is consolidated onto a redundant, configured server. Here the sensor information is recorded and saved for further analysis and potential replay or recall. Images are sequenced through a series of windows on dual monitor display. This allows the spectrum of situations to be displayed and oriented to management procedures of the attendant or the Operation Center. In an incident, procedural policies can be invoked and displayed to assist the operator in managing the situation. Images, signatures and data records can all be directed to responding parties, so that a common operating picture is distributed to various forces. Similarly, selected image streams can be directed to one set of responders while a different set of images can be forwarded to responders with a different mission objective.

System-in-a-box Solution

General Dynamics offers a baseline one square mile solution set comprised of cameras, acoustic sensors, pole mounting cases incorporating back-up power, local storage and video and acoustical analytics and mesh radios linking back to a dual-display for presentation and record storage. This solution set is for ready deployment into a city or township urban area site. The solution set can be augmented with more equipment to expand the area being monitored, or to increase the level of monitoring within the area. This augmentation can be arranged before or after deployment, as determined by the customer.

The CPRS system has capabilities beyond cameras and acoustic sensors. Various software packages are available to:

- enhance the Operating Center procedures and activities.
- automatically read license plates.
- check database software modules.
- coordinate, integrate, share and analyze information from the various physical security devices.

Incident logging software is available in a variety of capabilities, such as “Chain of Custody” management and Computer Aided Dispatch, which are available to be placed on the server system to enhance the operational procedures. Improvised explosive device (IED) / left object notification software is available to enhance the recorded image analytic checks and associated alarming. The mesh radios can also provide secure wireless access to remote public safety personnel.

General Dynamics is committed as a system integrator to bringing the best of deployed technologies to communities to secure a stronger homeland.