

## From spaceships to the stars: LAPD safeguards city events with Axis.

Los Angeles Police Department uses Axis cameras as a smart, flexible tool to protect public events and gather intelligence in covert operations.



**Organization:**

Los Angeles Police Department

**Location:**

Los Angeles, California, USA

**Industry segment:**

City surveillance

**Application:**

Situational awareness, crime investigation, event security

**Mission**

The Counter Terrorism and Special Operations Bureau of the Los Angeles Police Department (LAPD) needed surveillance cameras that could be easily installed for temporary covert investigations and public events. The bureau wanted to give incident commanders real-time situational awareness from a command post, as well as push video out to officers' iPads and smartphones in the field.

**Solution**

The Technical Support Unit in Major Crimes Division, which is responsible for ad hoc surveillance camera operations, began acquiring an inventory of fixed and pan/tilt/zoom (PTZ) Axis network cameras in 2007. The cameras record directly to on-board SD cards, and the department uses AXIS Camera Companion software to manage the system. The video is also transmitted back to police headquarters for live monitoring. It is sent over a secure wireless mesh network to avoid interruptions from cellular traffic.

**Result**

Axis cameras have helped the LAPD manage crowd safety at events like the retirement voyage of the spaceship Endeavor through the streets of LA and the annual red carpet celebration at the Academy Awards. When Occupy L.A. established a protest encampment in front of City Hall and the surrounding Civic Center, the surveillance cameras helped officers spot and detain a truck approaching the fringes of the camp. This stopped the truck before it could unload its cargo of long clubs that could have been used as weapons on officers trying to maintain a peaceful evacuation.



## Surveillance at the ready

Los Angeles, CA, the United States' second most populous city, is a sprawling metropolis home to nearly four million people. While the Los Angeles Police Department maintains an extensive, permanent network of analog cameras, its Counter Terrorism and Special Operations Bureau needed a more responsive and flexible option for special investigations and one-off events.

Deputy Chief Michael Downing directed his Technical Support Unit to investigate network surveillance cameras that would allow officers to remotely control the cameras over the department's secure network and monitor video at headquarters wherever the cameras were placed. Axis cameras came out on top.

"The cameras work seamlessly over the network," said Richard Cowgill of the Technical Support Unit. "You don't have to do any special configuring. You just assign an IP address to the camera, and it's basically plug and play." He also noted that it's easy to make last minute adjustments based on the fluidity of the situation.

When real-time situational awareness is needed for special operations, Cowgill's highly-trained Technical Support Unit surveys the intended site and strategically mounts the network cameras. The installations are temporary in nature and rarely last more than a month or two before the cameras are redeployed to a new location.

### Long distance stakeouts

To ensure the video can reliably stream anywhere the cameras are deployed, Cowgill's unit relies on a mesh network that bounces the signal off antennas on the tallest buildings in the city. The video stream has been tested as far as 20 miles away from the command post with no frame drops. When the location has no direct line of sight, Cowgill's team bridges the gap with "hops" of mesh nodes until a direct line of sight can be established. The video is stored at the edge with SD cards and managed at police headquarters with AXIS Camera Companion software. The department also records to a 1TB network-attached storage device for redundancy.

As the department reuses cameras for a variety of missions, they needed a flexible array of options to meet any scenario. Their arsenal includes 1080p HDTV-quality AXIS Q6035-E PTZ Network Cameras, smaller AXIS P5534-E PTZ Network Cameras and AXIS Q1755 Fixed Network Cameras for more covert scenarios. For undercover operations, the department utilizes custom built enclosures that disguise the cameras' appearance.

In cases where the unit has to use an analog camera in a sting operation, such as in a warehouse or an office that the LAPD is controlling, Cowgill can connect the analog cameras to an Axis video encoder to digitize the footage and stream it back to the command post.

The cameras have become a dependable partner in their investigations. Cowgill recalled one case that required an officer to keep eyes on a house down a dead-end street: "There were too many people coming and going for an officer to sit in an unmarked car unnoticed, so he asked for a camera," he said. Cowgill's crew discreetly mounted the cameras to give the officer eyes on the target without having to physically be at the scene.

"We do these types of intelligence-gathering investigations probably five or six times a month," said Deputy Chief Downing. "It's become a force multiplier for us because we can use cameras in places where an officer would be too conspicuous."





### Princes, kings and outer space explorers

As one of the country's leading cultural centers, the City of Los Angeles plays host to a number of major events on the national stage that require a tough, yet nimble pop-up video surveillance system.

The cameras have been used to monitor high exposure events such as a visit from the British royal family, victory parades for pro sports teams like the LA Lakers and LA Kings and the break-up of the 2011 Occupy LA encampment.

In 2012, the retired NASA Endeavor space shuttle embarked on a 12-mile, 2 day road trip and parade through the city streets to its final home at the California Science Center. Traveling at just 1 to 2 miles an hour, the shuttle's final journey allowed spectators to have an up close and personal experience, but the slow speed also increased the security risks from vandalism, theft, accidents and more.

AXIS Q6035-E PTZ Network Cameras were deployed along the route to help keep the crowds, the shuttle and the city's historic landmarks safe. In order to accommodate the shuttle's size, the city temporarily removed hundreds of street signs, lights and trees –the traditional fixtures for outdoor cameras. Thanks to the cameras' ease of installation, they were able to overcome this unique challenge by mounting the cameras on stands and buildings to oversee the events with detailed precision.

### Axis for best picture

The LAPD also use Axis cameras and a mesh network to protect the iconic red carpet area at the annual Academy Awards ceremony outside the Dolby Theater. The event presents a number of surveillance challenges, including large crowds, variable outdoor lighting conditions and cameras flashes. The red carpet itself even poses a challenge since red is one of the hardest colors for video to render.

To address those challenges, the LAPD chose AXIS Q6035-E PTZ Network Cameras and AXIS P5534-E PTZ Network Cameras due to their high color fidelity, HDTV-quality resolution and precision zoom capabilities. Camera placement was critical, and the LAPD combined cameras providing comprehensive, wide angle overhead views with dedicated cameras at high risk zones throughout the area. Using this set up, officers on the ground could relay any suspicious activity back to police headquarters seven miles away. There, commanders could zoom in and provide instant support.

Commanders at headquarters managed the cameras through AXIS Camera Companion software. The edge-based software running inside the camera network let them select, control and view all cameras wirelessly on 70-inch display monitors at City Hall, as well as access the recorded video.

The flexibility and ease of use of the software lets the LAPD work seamlessly to protect these events and others throughout the city to the best of their ability.

**“We’ve been using Axis network cameras since 2007 because of their reliability and easy redeployment. As Axis continues to improve its optics and provide higher definition images, surveillance just gets better and better.”**

**Michael Downing, Deputy Chief and Commanding Officer for Counter Terrorism and Special Operations Bureau, Los Angeles Police Department.**



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**Richard Cowgill, Technical Support Unit, Los Angeles Police Department.**



# About Axis Communications

Axis offers intelligent security solutions that enable a smarter, safer world. As the global market leader in network video, Axis is driving the industry by continually launching innovative network products based on an open platform – delivering high value to its customers and carried through a global partner network. Axis has long-term relationships with partners and provides them with knowledge and ground-breaking network products in existing and new markets.

Axis has more than 1,600 dedicated employees in more than 40 countries around the world, supported by a network of over 65,000 partners across 179 countries. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ OMX Stockholm under the ticker AXIS.

For more information about Axis, please visit our website [www.axis.com](http://www.axis.com).