



## WIRELESS MESH NETWORKS CASE STUDY

### San Diego Police Department

## San Diego Police Department turns to Aruba for video surveillance

The San Diego Police Department needed an eye in the sky. Due to increased crime in several areas along a mass transportation route, the department wanted to step up security for local residents. Specifically, these areas were along the popular San Diego Trolley route. But the department had limited direct access to the area and needed a flexible, scalable way of setting up a wireless video surveillance solution. The integrator on the project, ProShop Group, had worked with several wireless vendors in the past, and each had presented challenges that made configuration or installation difficult.

### The Solution

ProShop Group recommended a wireless mesh routing solution from Aruba Networks that allows for quick, simple deployment. In addition to Aruba wireless mesh routers, the solution included rugged enclosures from Dotworkz Systems that protect high-quality pan/tilt/zoom (PTZ) cameras.

From their patrol cars, police officers can control the camera over a secure 2.4-GHz Wi-Fi network to gain a better view of different areas. The video stream is also sent over the wireless mesh network to police headquarters several miles away, where it is monitored and recorded. T routers provide high-quality backhaul with speeds of up to 30 frames per second.



### Challenges

- The San Diego Police Department needed a fast, cost-effective way to monitor high-traffic areas along the San Diego Trolley route operated by the Metropolitan Transit System (MTS)
- The police department had limited access to the area and needed a wireless network solution that would provide high-quality video from a distance
- The department also wanted to expand the wireless network in the future quickly and without requiring a major investment



San Diego Police Department officers are able to control the zoom and viewing angle of the cameras remotely from their patrol cars. The video stream is sent over the wireless mesh network back to police headquarters, where it is monitored and recorded.

## Why Wireless?

Public safety agencies have been utilizing wireless radio frequency (RF) communications for over a half-century, originally for voice communications and later for narrowband data applications.

Advances in technology now make wireless ideal for many more broadband multimedia applications, and the Federal Communications Commission in the U.S. has recently licensed the 4.9-GHz spectrum for exclusive use in public safety applications, with support for both narrowband and broadband communications.

Wireless broadband communications makes it possible for public safety agencies to protect the public in ways that were unimaginable a decade ago.

Live video feeds give first responders better situational awareness while en route to an incident. Command and control personnel can utilize multi-agency collaboration and white boarding tools to coordinate response plans. And mobile command centers can bring these and other capabilities to the scene.

## Aruba's Wireless Mesh Network Technology offers Reliable, Broadcast Quality Video and Lower Cost of Deployment

The Aruba wireless mesh solution can save over 90 percent on installation costs compared to traditional wired networks. In urban areas, it can be very expensive to trench fiber and obtain the necessary permits to install the network.

Aruba's solution also is simple and quick to configure. The wireless mesh routing protocol allows different subnets for security purposes, which provides greater isolation and more control. Since wireless traffic does not require a common gateway, setting up the network is greatly simplified.

"The Layer 3 routing technology from Aruba made configuration of the wireless mesh network fast and easy," said Quan Trinh, chief technology officer at integrator ProShop Group. "We had the system set up and running in just a few hours."

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***"We needed an economical way to install video surveillance cameras and capture the video in a quick and easy-to-deploy manner allowing us to better serve the community."***

**Sgt. Matt Dobbs**  
*San Diego Police Department*



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