

Case Study - AeroGuard™ MIMO All Wireless Solutions Benefit Law Enforcement

Vehicle Surveillance Video and Data Streaming Upload/Download Application

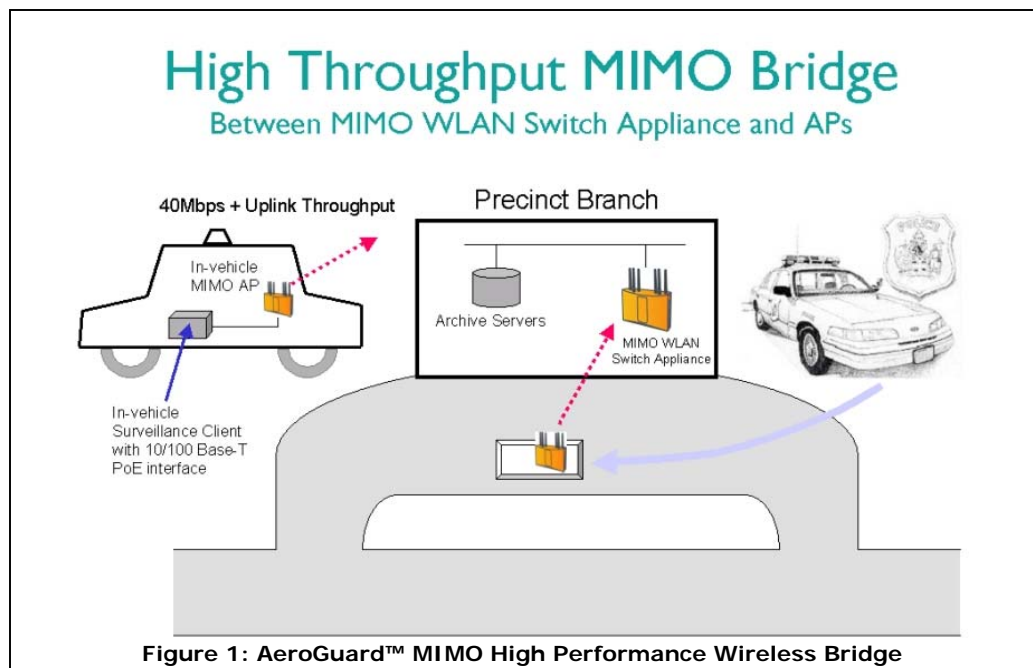
Application Scenario:

The need to rapidly archive large data files is becoming a critical communications requirement in law enforcement. Upon arrival of a police vehicle in the precinct facility parking lot, field video and data content are uploaded for storage on the department servers. Simultaneously, important updates from the dispatch are downloaded to the in-vehicle computers.

Desired Outcome:

The current data transfer rate using conventional WLAN technology is approximately 22Mbps maximum for the link between in-vehicle computers and department servers. AeroGuard™ MIMO technology needed to improve significantly on this performance to be considered for the application. Further, the link needed to automatically establish itself when the vehicle was within reception of the building AP. No on duty personnel involvement was a requirement, and reliability and security were essential.

The desired outcome, therefore, is to minimize upload/download time, be highly secure, have no downtime, and require no personnel involvement to configure the link for every visit.



Solution:

The AeroGuard™ MIMO All Wireless Solution achieved the outcome flawlessly. As shown in Figure 1, several AeroGuard™ MIMO dual radio access points were installed in the facility to provide adequate coverage for peak loads when police vehicles come on and off shift. Each police vehicle was retrofit with an AeroGuard™ MIMO dual radio bridge and linked to the surveillance server in the vehicle with a Power over Ethernet connection, as shown in Figure 2.

AeroGuard™ includes features that improve performance while supporting the latest security. AeroGuard™ provides two radios in each access point, so it is possible to double the link speed, assuring adequate system capacity to accommodate conceivable future growth. And each link is secured with WPA2 style AES encryption; the toughest available protection for wireless LAN.

Each link between AP and vehicle is capable of providing 108 Mbps burst bit rate, allowing the AeroGuard™ system to achieve better than 43Mbps effective throughput, twice the desired throughput as the conventional WLAN solution. The equipment set up during installation was simple and, once installed, no additional configuration was necessary during normal use. The link between the vehicle and precinct server was able to establish automatically upon the arrival of a vehicle to the assigned area of the facility, with excellent system reliability.

The improved data rate significantly reduces the upload time of video archive files from the surveillance camera's server installed in the law enforcement vehicle without compromising reliability and security.

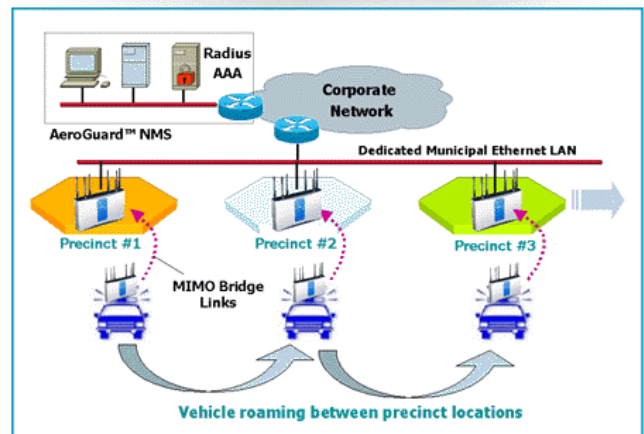


Figure 2: AeroGuard™ MIMO for Wireless Surveillance