



## Why Should I Care About Mobile and Wireless Solutions for Public Safety and Transportation?

Transportation agencies increasingly are looking to improve public safety, customer service, and service efficiency. By improving customer service, the transportation agencies are hoping to enhance the experience of citizens and tourists using a city's public transportation system and thus increase ridership. Mobile and wireless solutions allow transportation agencies to monitor activity inside a bus or train and, in the case of an emergency situation, to collaborate in real time with law enforcement in the area.

Traffic management systems deployed throughout a city can increase the overall flow of traffic and enable a bus fleet to stay on schedule and move more easily along its route. Wirelessly networked buses and trains allow the implementation of innovative new revenue-generating services.

## Wireless and Mobile Solutions for Transportation Agencies and First Responders

### Networked Video Security

When security cameras are connected to a wireless network, they can be used in buses, at train stations, at major stops, and in park-and-ride lots to monitor these areas for suspicious activities and other public safety concerns. The Cisco® Mobile Network provides a secure, wireless network in vehicles, trains, and buses. With video cameras installed in public safety vehicles, bus drivers or train conductors can notify public safety officials in real time in the case of an emergency. In a vehicle with a Cisco 3200 Series Rugged Integrated Services Router installed, police personnel can view video feeds directly from laptops installed in their police cruisers. The video footage from these public transportation vehicles can be received on a laptop in

real time by the responding vehicles that come within range. The ability to monitor the situation using video can give public safety officers insights and situational awareness ahead of time. Equipped with this information, first responders can make rapid and appropriate decisions and take effective action more easily.

### Real-Time Route Management

Wireless, real-time route management enables transportation agencies to efficiently track their fleet of buses, trains, and other vehicles from an agency's headquarters. Buses that are equipped with the Cisco 3200 Series Rugged Integrated Services Routers can transmit estimated arrival times and location information that then can be centrally managed. Gathering this data and analyzing existing routes allow a transportation agency to improve customer service and fleet efficiency. Additionally, wireless connectivity to incident command buses, supervisory vehicles, and a rail system enables efficient information sharing among transportation agency employees using voice, data, and video.

### Digital Signage

Digital signage allows a transportation agency to improve revenue streams through marketing and advertising digital content to passengers. The Cisco Mobile Network enables a bus or train to stay connected while moving through a city or wide area. It enables the display of specific local information to passengers, such as connection options and local tourist information and news.

### Traffic Management

By connecting intersections with wireless connectivity and traffic management systems, transportation authorities can monitor the traffic and optimize transit services, adapting to dynamically changing traffic patterns.

### Public Access

With wireless connectivity available in vehicles such as buses and trains, passengers can have access to the Internet using Wi-Fi personal digital assistants (PDAs) or laptops. This capability can be provided with the Cisco 3200 Rugged Integrated Services Router on the vehicle connecting to the Cisco wireless mesh network infrastructure.

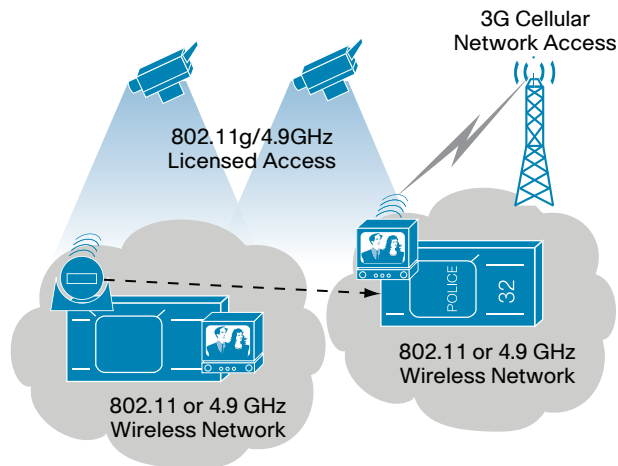
### Benefits

Implementing the Cisco Mobile Network in public safety and transportation vehicles provides important benefits to customers:

- Reduction in incidents as a result of the improvement in real-time collaboration between transportation agencies and law enforcement
- Reduction in injury claims when security cameras are monitoring the bus
- Reduction of vandalism, including graffiti, broken windows, and damaged seats, through security camera monitoring
- Improved public safety for the entire public transportation system through security cameras that can be directly monitored from public safety vehicles in the area
- Improved route scheduling and passenger load management for improved customer service
- Improved punctuality of public transportation through traffic management, which makes it possible to adapt to changing traffic patterns in a city
- New revenue source and additional customer benefits through digital signage and public Internet access and advertisements

Figure 1 illustrates how the Cisco Mobile Network enables law enforcement vehicles to receive video streams from public busses outfitted with cameras and the Cisco 3200 Series Wireless and Mobile Router.

Figure 1. The Cisco Mobile Network



## Cisco Outdoor Wireless Solutions

The Cisco Mobile Network, a part of Cisco's Outdoor Wireless Network Solutions, is a comprehensive mobility solution for vehicles. This solution can turn a vehicle into a full branch office, enabling mobile workers to stay connected continuously, and securely access the same applications and information that are available in their office. The Cisco 3200 Wireless and Mobile Router provides a secure, wireless network in vehicles, trains, and buses, leveraging wireless broadband as back haul. The Cisco 3200 Mobile Router creates a mobile network, allowing a vehicle to maintain seamless connectivity while stationary or in motion. First-responder vehicles are transformed into mobile, IP-based command centers, offering secure data, voice, and video communications from a mobile network to a central command center. The Cisco 3200 Series enables a vehicle to roam

seamlessly between different types of wireless networks, (such as 802.11, 4.9-GHz, and 3G cellular or satellite) extending wireless coverage over a wider region. The ability to access different wireless networks transparently can also be used to provide backup coverage, in case one of the networks goes down. For example, a satellite network can provide connectivity if the wireless 802.11 networks becomes unavailable.

The Cisco Aironet 1520 Series wireless broadband platform provides a wireless backhaul infrastructure for the Cisco Mobile Network. The Cisco Aironet 1520 Series is a cost-effective wireless mesh platform for municipalities and service providers to build high-performance, citywide wireless networks that are easy to deploy, manage, secure, and scale. With multiple radios supporting 2.4-GHz, 4.9-GHz and 5-GHz frequencies, the Cisco Aironet 1520 Series is designed to provide secure, high-bandwidth, and scalable solutions to enable access to fixed and mobile applications across metropolitan areas.

## Why Cisco?

Cisco is the innovator in providing outdoor wireless network solutions to government and municipal agencies and organizations. The Cisco Network is based on proven enterprise technology and security that government customers are looking for.

By working with the established networking leader, municipalities and businesses can also benefit from:

- More than two decades of experience building large-scale routing and RF networks
- Proven performance, reliability, and security
- A broad range of technical experts and engineers who understand the unique requirements of government agencies and enterprise customers

- Award-winning customer support services that help companies get the most out of their investments and extend the life of their network assets
- Ongoing investments in R&D initiatives benefiting municipalities and businesses
- Sustained value with upgradable, standards-based solutions
- A phased approach to support the integration of new technologies or respond to new government mandates or regulations
- Best practices based on showcase network deployments

## For More Information

### Cisco Mobile Network

[http://www.cisco.com/marketing/mobility/solutions/outdoor\\_mn.shtml](http://www.cisco.com/marketing/mobility/solutions/outdoor_mn.shtml)

### Cisco Networked Video Security—At-A-Glance

[http://www.cisco.com/en/US/products/hw/routers/ps272/prod\\_brochure0900aecd804a8cad.html](http://www.cisco.com/en/US/products/hw/routers/ps272/prod_brochure0900aecd804a8cad.html)

### Cisco Outdoor Wireless Solution

[http://www.cisco.com/en/US/netsol/ns621/networking\\_solutions\\_package.html](http://www.cisco.com/en/US/netsol/ns621/networking_solutions_package.html)

### Cisco 3200 Series Mobile and Wireless Router

<http://www.cisco.com/go/3200>