

What Are Cisco Mobile Networks?

As part of the Cisco® Outdoor Wireless Networking solution, Cisco Mobile Networks provide a secure, wireless network that extends mission-critical network applications to mobile staff in local government, public safety, and transportation. The Cisco 3200 Series Rugged Integrated Services Router is a rugged wireless router that is deployed in police, fire, ambulance, and first-responder vehicles and that provides secure data, voice, and video communications from an incident to a network operations center (NOC). With its compact form factor and rugged design, the Cisco 3200 Series Rugged Integrated Services Router is optimized for vehicle deployments. Cisco Mobile Networks provide public safety personnel with the following communication advantages:

- Real-time access to NOC resources from first-responder vehicles over broadband IP networks
- Increased situational awareness with real-time voice, video, and data communications
- Secure network connectivity, helping ensure data integrity between vehicle network and headquarters
- Scalable hardware platform, providing expansion for future wireless technologies and applications
- Network redundancy with multiple wireless network connections while stationary or in motion

The Cisco 3200 Series Rugged Integrated Services Router extends the IP network to an agency's most important resource: police officers and first responders in the field. Officers now have a secure, reliable network in the vehicle for transferring mission-critical information from the scene to headquarters. The mobile network can stay connected while in motion using standards-based mobile IP, offered as part of Cisco IOS® Software.

What Problems Need to Be Solved?

With heightened security concerns around the globe, many public safety agencies are facing the challenge of enhancing their communications infrastructure for increased efficiency and security of their staff. While reducing overall cost, they need to build a communications infrastructure that provides increased safety for its workforce and the general public. The network must also enhance accessibility to mission-critical applications in real time. The main challenges that public safety agencies face are:

- Lack of voice interoperability within and across agencies
- Limited communication based on proprietary narrowband networks
- Limited access to criminal or medical records while on the scene
- Reliance on office resources to report field results
- Minimal situational awareness at an incident
- Need for secure, standards-based networks to facilitate interoperability

Cisco Mobile Networks

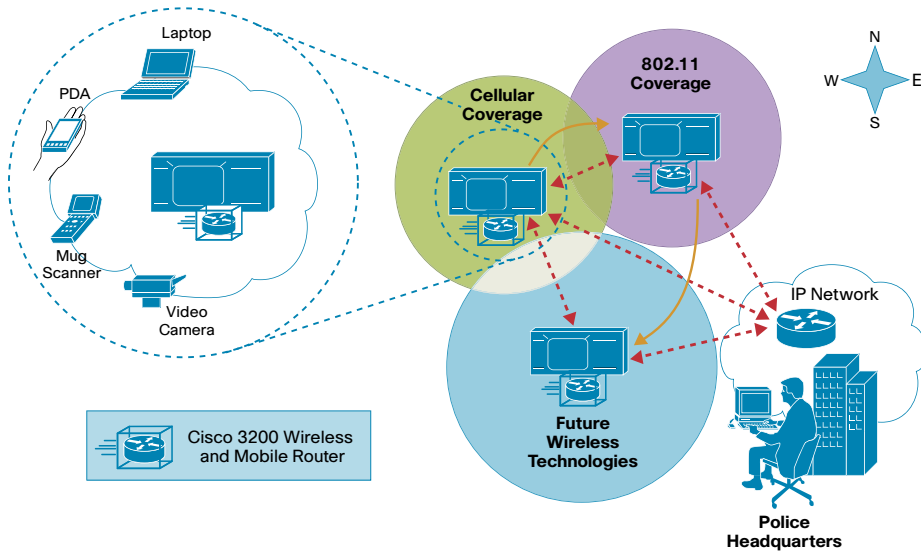
The Cisco 3200 Series Rugged Integrated Services Router offers a wireless, ruggedized, high-performance router designed to extend the IP network from wired premises out to vehicles. Cisco 3200 Series Rugged Integrated Services Routers create a mobile network in and around a vehicle to allow users to roam while still maintaining a secure broadband connection. Remote users can exchange voice, video, and data communications with a central site and securely access corporate resources in real time. Figure 1 shows the Cisco 3200 Series Router.

Figure 1 Cisco 3200 Series Rugged Integrated Services Router



Cisco 3200 Series Rugged Integrated Services Routers use standards-based mobile IP features in Cisco IOS Software to allow the mobile node to stay connected as it moves from one wireless network to another. Transition to different wireless networks is transparent to the users and devices (such as laptops, personal digital assistants [PDAs], and surveillance cameras) connected to the vehicle network. These devices and applications maintain continuous connectivity over multiple wireless networks without user intervention. In essence, the Cisco 3200 Series allows an entire mobile network or subnet to stay connected while in motion. Figure 2 shows how a vehicle network roams between different wireless networks while maintaining a transparent connection to network resources.

Figure 2 Cisco 3200 Series Router Roams Across Multiple Wireless Networks and Stays Connected



What Are the Benefits of the Cisco Mobile Network?

The Cisco 3200 Series offers public safety customers with the following key solution benefits:

- A rugged router with a modular compact form factor, designed for mobile networks
- Standards-based connectivity for a wide range of LAN and WAN wired or wireless links, including 4.9-GHz and 802.11b/g wireless capabilities, with upgradeability to future wireless technologies
- Always-on wireless access for vehicle networks with easy mobility through mobile IP regardless of location or movement
- Advanced IP services through standards-based Cisco IOS Software, offering robust network security, reliability, quality of service (QoS), and remote management functions
- Integrated network security features including authorization and authentication, stateful firewall, intrusion detection, and Triple Digital Encryption Standard (3DES) or Advanced Encryption Standard (AES) encryption for VPNs
- Ability to integrate third-party networking components into the Cisco 3200 Series router's rugged enclosure to optimize space consumption in the vehicle

Why Cisco?

Cisco is a leader in outdoor wireless networking solutions for public safety entities. Cisco offers local, state, and federal municipality customers with metropolitan wireless mesh solutions. These outdoor wireless mesh network solutions provide a source of broadband network connectivity for mobile networks deployed in police, fire, and other first-responder vehicles. The network infrastructure integrates fixed outdoor applications, such as video surveillance, traffic signal control or chemical or biological sensors, to extend the value of the outdoor wireless network for public safety purposes. A standards-based architecture based on IP makes it possible for other agencies to take advantage of this network as a common, interoperable communications system.