
City of Charlotte

City of Charlotte Deploys a FirstNet Ready, FIPS-Compliant Interoperable Mobile Network - A Sierra Wireless® InMotion Solution

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A Sierra Wireless® InMotion Solution

CUSTOMER CRITICAL CHALLENGE

- First responders were hampered by slow speeds on the 3G network and dual login to the VPN and laptop computer
- These challenges resulted in dropped calls, poor in-field application

functionality, and an average downtimes of 5-10 minutes per incident

SOLUTION

- Deployment of Sierra Wireless's complete InMotion Solution as the key communications platform for the City of Charlotte's law enforcement officers and firefighters

BENEFITS

- Enhanced capabilities for real time, situational awareness improved first responder access to information and enabled more effective in-field response

Business Challenge

The business of public safety happens on the streets in real time every day, and being able to provide the most accurate and reliable information to first responders enables them to perform lifesaving duties. However, the public safety landscape is changing because the vast amount of in-field information that is needed requires more sophisticated data communications and end-user technologies. Real-time communications permits the effective and efficient deployment of public safety resources, in order to prevent or halt disruptive behavior.

Until 2015, police and firefighters performed much of their field duties using in-vehicle laptops equipped with 3G modems and a standard VPN client, but first responders were being hampered by:

- a) slow speeds on the 3G network,
- b) the need to login twice--to the VPN and the computer--and
- c) unreliable connectivity.

These issues were causing calls to drop and first responders would be forced to pull over and reboot their systems, resulting in an average downtime of 5-10 minutes per incident. The City of Charlotte's Innovation and Technology (I&T) department estimated that this was occurring frequently. Asking our first

responders to belt experts didn't make sense, but they also couldn't get access to a number of applications they absolutely needed in the field like electronic monitoring. All of these factors led the City to seek alternative communications platforms.

A Sierra Wireless Mobile Workforce Solution

The City of Charlotte was one of several Broadband Technology Opportunity Program (BTOP) grant recipients, and had access to federal funds to improve public safety. However, the grant required that new vehicle communications solutions must be capable of supporting the FirstNet Band 14 Network. It also stipulated that all solutions meet the Federal Information Processing Standards (FIPS).

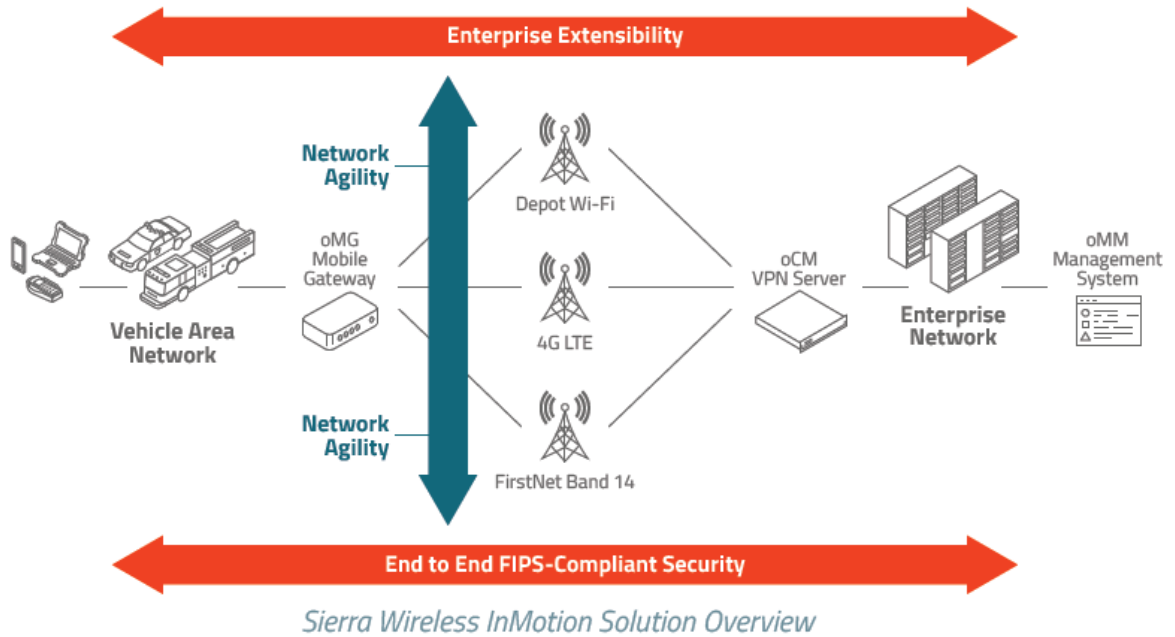
Working with first responders to uncover their needs, the IT team compiled a list of priority requirements for the new system.

In addition to FirstNet Band 14 and FIPS compliance, the solution had to provide the following functionality:

- Wi-Fi capability
- automatic switching between cellular and Wi-Fi networks
- modular encryption to enable easy carrier switching
- multiple Ethernet ports
- scalable technology
- broadband
- ruggedized

The City evaluated six bids, and only Sierra Wireless's InMotion Solutions met all its criteria. Deployment involved a large project team including employees and contractors, and it was completed over a nine month period.

Each of the City's 950 public safety vehicles are now equipped with Sierra Wireless oMG mobile gateways, which are being used in conjunction with Panasonic rugged laptops/tablets to provide the City's police officers with faster, real-time data access to critical policing applications, and an essential network infrastructure for applications such as electronic monitoring (EM) used to identify potential suspects near a scene of a crime.



The new system allows the City's firefighters to better accomplish dynamic dispatching, sending the closest companies to the incidents by transmitting critical information, such as pertinent incident details, driving directions and locations of the nearest hydrants. Each oMG gateway is currently operating on a commercial LTE network, but the multi-network platform will be able to operate on FirstNet Band 14 as required.

Result

Since deploying the new communications infrastructure, the City has realized immediate benefits. Its police officers now have truly mobile offices, enabling them to remain on the street, where the business of public safety happens. The City's firefighters now have the ability to communicate vital information in life-threatening emergencies to paramedics before they arrive.

The major benefits that the City has seen since deploying the solutions are:

- a) Officers are now able to spend more time doing police work, and less time trying to solve IT problems
- b) System is much faster so it reduces the time officers spend waiting for responses
- c) Enables the City to consider new applications like video streaming, electronic citation systems
- d) Integration with electronic monitoring & officers on the street can

now know where monitored offenders are located

The City's first responders are now equipped with the communications technology that will enable them to leverage new applications, such as body-worn cameras and multimedia communications, and a future national public safety broadband network.

Now that the City has deployed the new platform across their public safety fleet, other departments are interested in similar solutions. The IT department will look at expanding the platform to other mission critical city and county departments in the years to come; a deployment to the Charlotte-Mecklenburg school district police department is already in the works.