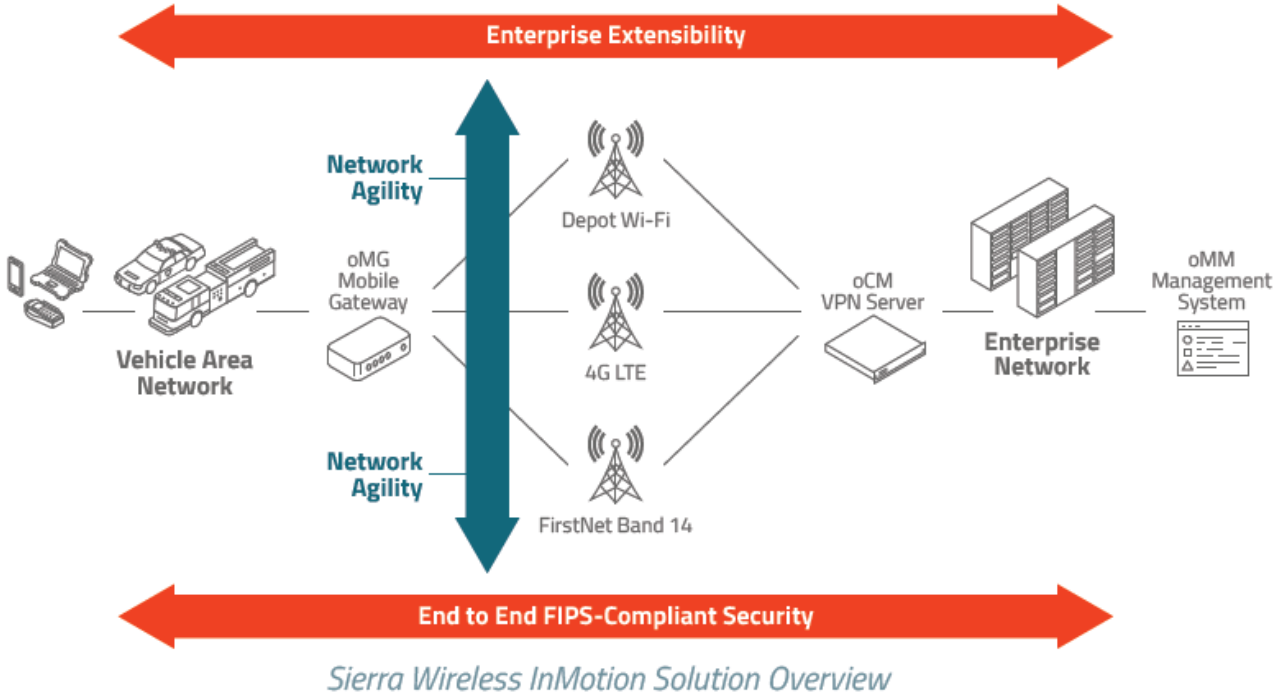
City of Charlotte

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



Sierra Wireless InMotion Solution Overview

City of Charlotte Deploys a FirstNet Ready, FIPS-Compliant Interoperable Mobile Network

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, andbeing able to provide the most accurate and reliable information to first respondersenables them to perform lifesaving duties. However, the public safety landscape ischanging because the vast amount of in-field information that is needed requiresmore sophisticated data communications and end-user technologies. Real-timecommunications permits the effective and efficient deployment of public safetyresources, in order to prevent or halt disruptive behavior.

Until 2015, police and firefighters performed much of their field duties using in-vehiclelaptops equipped with 3G modems and a standard VPN client, but first responderswere 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

pullover and reboot their systems, resulting in an average downtime of 5-10 minutesper incident. The City of Charlotte’s Innovation and Technology (I&T) departmentestimated that this was occurring frequently. “Asking our first responders to beIT experts didn’t make sense, but they also couldn’t get access to a number ofapplications 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, thegrant required that new vehicle communications solutions must be capable of supporting theFirstNet Band 14 Network. It also stipulated that all solutions meet the Federal InformationProcessing Standards (FIPS).

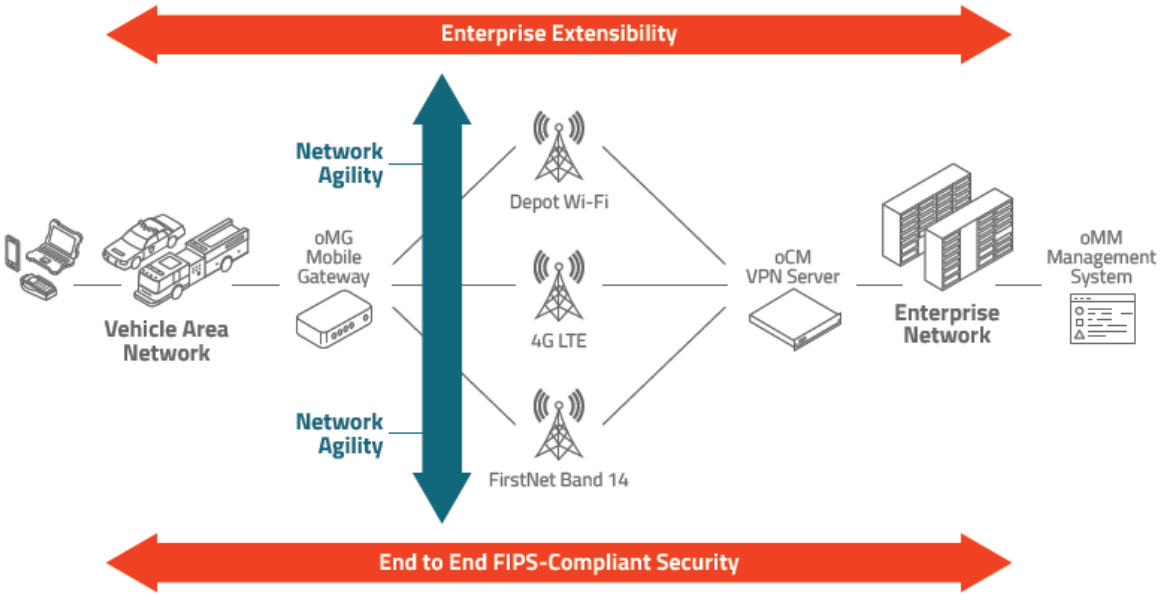
Working with first responders to uncover their needs, the IT team compiled a list of priorityrequirements for the new system.

In addition to FirstNet Band 14 and FIPS compliance, the solution had to provide thefollowing 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’ InMotion Solutions met all its criteria.Deployment involved a large project team including employees and contractors, and it wascompleted over a nine month period.

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



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The new system allows the City’s firefighters to better accomplish dynamicdispatching, sending the closest companies to the incidents by transmitting criticalinformation, such as pertinent incident details, driving directions and locations of thenearest hydrants.Each oMG gateway is currently operating on a commercial LTE network, but the multinetworkplatform will be able to operate on FirstNet Band 14 as required.

Result

Since deploying the new communications infrastructure, the City has realizedimmediate benefits. Its police officers now have truly mobile offices, enabling themto remain on the street, where the business of public safety happens. The City’sfirefighters now have the ability to communicate vital information in life threateningemergencies 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 thatwill enable them to leverage new applications, such as body-worn cameras and multimediacommunications, 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 lookat expanding the platform to other mission critical city and county departments inthe years to come; a deployment to the Charlotte-Mecklenburg school district policedepartment is already in the works.