



Enhancing Connectivity for San Diego Fire Department

Overview

San Diego Fire-Rescue Department (SDFD) required a reliable, high-speed connectivity solution to support critical operations. The department's command vehicles previously relied on single-SIM mobile modems, which limited connectivity to one carrier's network. This resulted in frequent coverage gaps, network congestion, and degraded signal quality due to geographical and infrastructure interference.

To address these issues, SDFD partnered with IP Access International to implement a SuperGIG™ Communications-On-The-Move (COTM) solution that ensures robust and seamless connectivity through blended cellular and satellite technology.

AT A GLANCE

Industry

Public Safety

Challenge

Limited Connectivity, Network Congestion, and Signal Interference.

Solution

SuperGIG™ Communications-On-The-Move (COTM) Bundle with Multi-SIM and LEO Satellite Technology

Challenge: Unreliable Connectivity in Critical Situations

SDFD's reliance on a single-carrier mobile modem posed multiple operational challenges:



Limited Coverage & Reliability

In areas where the carrier had weak or no coverage, SDFD command vehicles faced communication blackouts, impacting situational awareness and operational coordination.



Network Congestion

During emergency incidents, local cellular networks became overloaded, significantly reducing data transmission speeds and delaying critical information sharing.



Signal Interference

Geographical obstructions and urban infrastructure interfered with signal strength, leading to inconsistent connectivity and unreliable performance in key areas.

Solution: SuperGIG™ with Multi-SIM and LEO Satellite Technology

IP Access International deployed an advanced SuperGIG™ Communications-On-The-Move (COTM) solution that combined cellular and satellite connectivity to maximize uptime and reliability. The deployment included:

- 11 Battalion Chief Vehicles outfitted with Dejero GateWay 211 and Intellian OW10HV antennas.
- One 40-ft Command Truck equipped with a Kymeta flat panel antenna and Dejero GateWay M6E6.
- Multi-SIM Technology, leveraging FirstNet, Verizon, and T-Mobile networks to provide automatic network blending and failover.
- OneWeb's Low Earth Orbit (LEO) Satellite Connectivity, ensuring backup communications in areas with no cellular coverage.
- Annual Rollover Data Plans, optimizing budget efficiency and long-term sustainability.





Enhancing Connectivity for San Diego Fire Department

How It Works: Blended Connectivity for Continuous Operations

The Dejero Smart Blending Technology dynamically monitors the strength and performance of each available network and intelligently blends them into a single, resilient connection. This ensures:

- **Automatic Network Switching** – Seamlessly transitions between cellular providers (FirstNet, Verizon, T-Mobile) to maintain a stable connection.
- **Failover to Satellite** – If no cellular service is available, the OneWeb LEO satellite connection automatically engages, providing low-latency, high-speed internet access.
- **Optimized Bandwidth** – Combines multiple networks to increase data throughput, reducing downtime and ensuring reliable communication.

Operational Benefits

With SuperGIG™, SDFD now experiences significant improvements in their field operations, including:

- **Uninterrupted Connectivity** – Reliable communications in urban, rural, and remote areas, ensuring first responders stay connected at all times.
- **Seamless Transitions Between Networks** – Automatic failover between cellular and satellite keeps operations running without manual intervention.
- **Enhanced Situational Awareness** – Real-time data transmission and command coordination, even in areas prone to network congestion or interference.
- **Improved Command & Control** – Faster response times, improved coordination with Emergency Command Dispatch Centers (ECDC), and better decision-making during incidents.

A Mission-Critical Enhancement for SDFD

The integration of SuperGIG™ COTM technology into SDFD's command vehicles has significantly strengthened their operational capabilities. By addressing previous connectivity challenges, the department now has a resilient, high-speed communication system that ensures personnel can remain connected even in the most challenging environments.

Through this deployment, SDFD is better equipped to enhance public safety, improve incident response times, and maintain mission-critical communications—ultimately ensuring faster, more effective emergency response operations.

