

## Mobile public safety



### Benefits

- Reduces emergency response time, increasing community safety
- Increased efficiencies enabling officers to spend more time in the community
- Faster access to information improves scheduling, communication, and safety
- Two-way video enhances safety of personnel

### Tropos technology differentiators

- Performance – Multi-megabit capacity, low latency
- Security – Layered, military-grade security; VPN support
- Mobility – Seamless roaming across entire coverage area
- Reliability – Mesh architecture creates redundant paths; patented routing algorithms increase resiliency
- Scalability – Can be used across 10s, 100s, and 1000s of square miles
- Management – Most comprehensive configuration, analysis, and reporting

“The network is currently handling more than 4 terabytes of traffic each month, and has easily scaled with the increasing demand. Some of our critical public safety applications require redundant wireless connectivity, but the cellular data cards have remained virtually unused and handle less than 1 percent of our traffic which has resulted in significant cost savings for the City.”

Mark Meier  
Chief Technology Officer  
Oklahoma City, Oklahoma

**An increase in community safety is directly related to lower crime rates and faster emergency response times. A wireless broadband network enables access to critical information and communication to dispatch centers and other mobile public safety workers from the field, improving efficiencies and safety.**

### High speed mobile access for public safety

An IP broadband network delivers reliable high speed data and video access keeping public safety workers connected. For example, downloading building blueprints and HAZMAT information while en route, can enable firefighters to be better prepared when they arrive at a fire. Command and control officers can communicate with multiple first responder units, directing them to where they are needed most, and coordinate their efforts.

When using low speed data connections it typically takes about 20 to 30 seconds for a police officer to receive a text-only description of a registered vehicle owner. By using a Tropos network with multi-megabit capacity, they can get a full color photo of the registered owner's driver license in less than 10 seconds. This not only improves officer efficiency but can help them to quickly identify a potentially dangerous suspect even before leaving the safety of their vehicle.

In-vehicle video can be used to transmit real-time video of an incident to headquarters increasing officer safety and serving as evidence in legal matters. Live video feeds can be transmitted to

multiple vehicles providing first responders with real-time visibility into a situation in progress enabling them to be better prepared when they arrive on scene.

“Seventy-five percent of city staff perform duties outside an office, so this network is an important productivity tool and the enhanced communications mean improved safety and service for our residents, and reduced costs for the city.”

Homer Nicholson  
Mayor of Ponca City, Oklahoma

### Key benefits of mobile public safety systems

- Field-based access to information improves public safety worker efficiencies and community safety; includes access to criminal records; wants and warrants tracking systems; HAZMAT data; Geographic Information Systems (GIS)
- Mobile radio and GPS capabilities enable faster dispatch by identifying closest first response vehicle to an incident site
- Tactical networks around crime or accident scenes helps first responders communicate among themselves and with local resources such as hospitals
- Temporary extensions of the network can be quickly deployed during community events, fairs and other non-permanent venues for use by public safety and for video surveillance
- Enables filing of reports from the field so that first responders spend more time in the community

### Multi-use network

Tropos' unique wireless IP broadband network delivers scalable bandwidth and operational flexibility to securely support multiple applications on the same infrastructure. In addition to the primary mobile public safety application, a single network can be designed to also support a range of other municipal services such as:

- Automated utility meter reading — Centralized monitoring of water, electrical and gas meters for fast alert to problems as well as accurate meter reading in real-time
- Mobile workforce — Fast, easy access to records and filing of reports from anywhere around town, improving efficiencies
- Intelligent transportation systems — Replaces costly leased

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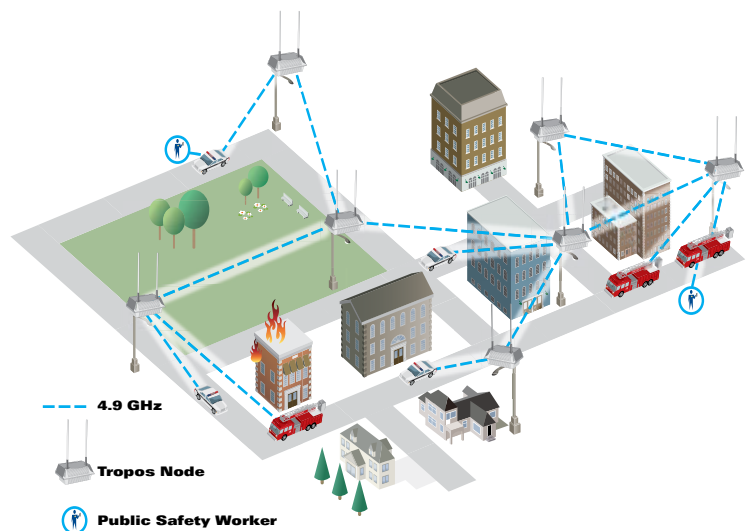
lines to traffic signals; offers the bandwidth to support signal management, video, red light runner monitoring, etc.

### Mobile public safety network building blocks

Tropos wireless mesh routers are installed outdoors on street fixtures such as light poles. High powered Tropos mobile routers in public safety vehicles connect to the fixed nodes extending network coverage and capacity. If the network is not available or is out of range, the mobile routers form a standalone network supporting Wi-Fi communications between officers with Wi-Fi enabled handhelds, laptops, and the fixed wireless network which connects to the Internet.

Built with reliability and security in mind, Tropos networks can operate in both the 4.9 GHz Public Safety band, the 5.8 GHz UNNI band and 2.4 GHz Wi-Fi band. Industry leading routing algorithms allow for simultaneous dual paths in the network which provides network reliability, path redundancy and fault tolerance.

Customers using Tropos mesh networks today for mobile public safety communicators include: Oklahoma City, OK; Corpus Christi, TX; Rock Hill, SC



Tropos Metro-Scale Mobile Public Safety Network