

Advancing mobile resilience for first responders

T-Priority network slice and Ericsson Cradlepoint routers

Executive summary

In today's high-demand public safety environment, continuous and secure mobile connectivity is mission-critical. First responders depend on real-time communication and data access to improve decision-making, coordinate responses, and protect both personnel and the public. To meet these evolving demands, T-Mobile and Ericsson Enterprise Wireless Solutions have partnered to deliver an integrated solution that brings together robust 5G mobile router technology and the nation's first dedicated 5G network slice for first responders.

At the core of this solution is T-Priority, the nation's first 5G standalone (5G SA) network slice for public safety agencies and critical infrastructure organizations. T-Priority provides a higher level of assurance that first responders can consistently access the speed, capacity, and low latency of the network, especially during high-traffic situations. When extreme network congestion occurs, T-Priority's dynamic resource allocation helps preserve performance for mission-critical applications, ensuring connectivity is maintained when it matters most.

Ericsson 5G SA-compatible mobile routers further strengthen this platform, transforming emergency vehicles into reliable mobile command centers. With cloud-based management and ruggedized hardware designed for field use, these routers offer a secure and scalable foundation for agencies deploying advanced technologies such as telemedicine, live-stream video, and real-time analytics.



Five key takeaways

- 1. Integrated 5G connectivity is now mission-critical**
Public safety and critical infrastructure agencies increasingly rely on mobile broadband for real-time operations. Reliable, secure, and uninterrupted connectivity is no longer optional—it is operationally essential.
- 2. T-Priority offers consistent access, even under network stress**
T-Priority operates on the most widely deployed nationwide 5G standalone network, using a network slice to provide agencies with more consistent, prioritized access during major incidents or public congestion, helping ensure mission-critical applications remain operational.
- 3. Ericsson Cradlepoint routers deliver field-ready performance**
Ericsson Cradlepoint R980 routers are purpose-built for mobile environments, offering rugged hardware, dual-modem resilience, and centralized cloud-based management to help ensure stable, secure field connectivity.
- 4. Integration enables continuity across jurisdictions and events**
The combined T-Mobile and Ericsson solution supports continuous, in-motion communications with centralized oversight, enabling agencies to coordinate complex operations without loss of situational awareness.
- 5. Forward-thinking technology decisions prevent obsolescence**
Agencies making long-term technology investments must plan for next-generation capabilities like network slicing. Locking into outdated platforms can compromise operational effectiveness, underscoring the need to partner with providers that offer future-ready solutions.



Introduction

Public safety agencies are navigating a fundamental shift in operations. What was once a voice-dominated environment anchored by land mobile radios is now rapidly embracing mobile broadband, real-time video, and data-rich applications. This transformation is accelerated by 5G, which enables powerful tools like thermal imaging, drone overwatch, and telemedicine. As a result, operational effectiveness, first responder safety, and overall situational awareness have significantly improved.

These new tools depend on fast, reliable, and secure connectivity, not just in command centers, but in vehicles and remote field environments where demands are unpredictable and timing is critical. Yet despite progress in wireless infrastructure, agencies still face serious connectivity challenges. Network congestion, coverage limitations, and data security requirements can prevent agencies from fully realizing the benefits of mobile technology.

The sections that follow examine these challenges and introduce a solution from Ericsson and T-Mobile, designed to support the operational needs of law enforcement, fire, EMS, and critical infrastructure personnel.

Challenges in first responder connectivity

As public safety operations grow more dependent on mobile broadband, the limitations of conventional connectivity have become more pronounced. The promise of real-time data can only be fulfilled if the underlying network can support the demands of modern response environments.



Maintaining connectivity in motion

First responders operate in constant motion. Maintaining a strong, stable connection while moving across jurisdictions is essential, yet signal handoffs, terrain variability, and interference can degrade performance when continuity is needed most.



Disruptions from network congestion

Major incidents, such as natural disasters or large-scale public gatherings, can overwhelm local networks. When thousands of devices compete for limited bandwidth, the technologies first responder agencies rely on are undermined. This makes effective prioritization vitally important.



Ensuring data security and compliance

Modern public safety connectivity requires a foundation of encrypted communications and a zero-trust architecture. Sensitive information constantly flows in the field: license plate reads, patient data, and live surveillance video. Without secure data transmission, agencies face significant operational risks and challenges in meeting CJIS and HIPAA policy requirements.



Prioritizing access over raw speed

Of course, public safety agencies need a fast connection. The true challenge is ensuring mission-critical applications continue to function reliably when the network is under load, whether during daily operations or large-scale emergencies.

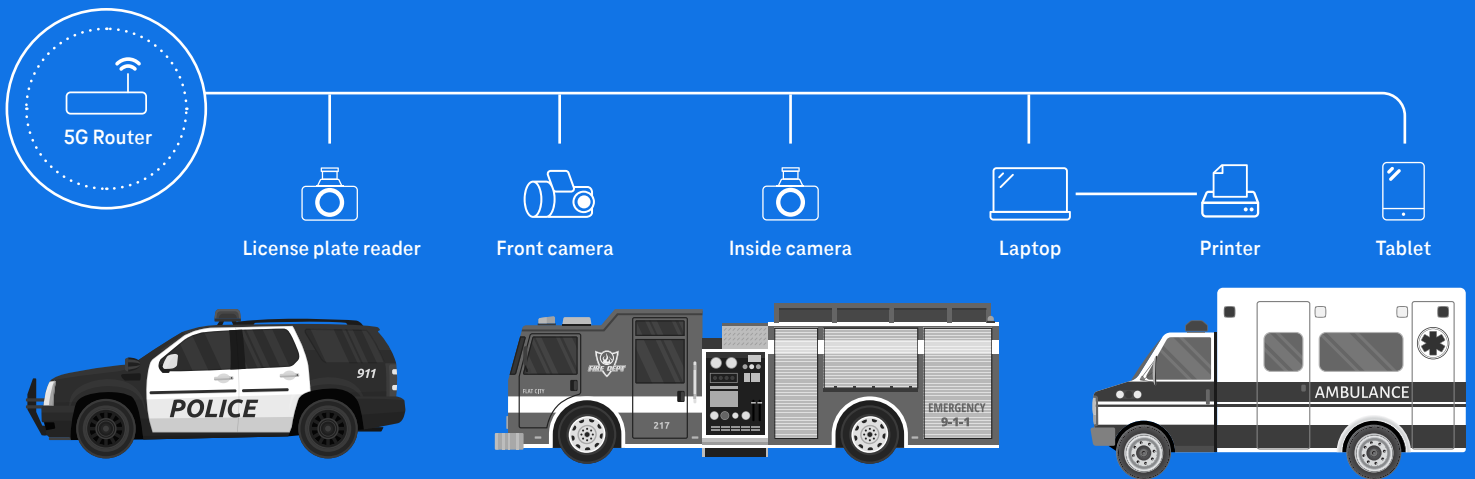


Solution overview

To overcome these operational challenges, two critical technologies must work in tandem: a rugged, secure mobile router platform and a reliable network that prioritizes mobile data traffic. The combined solution from Ericsson and T-Mobile delivers on both fronts, offering agencies a field-proven, future-ready foundation for mobile connectivity.

Ericsson Cradlepoint 5G SA-compatible routers

Ericsson's line of Cradlepoint 5G SA-compatible routers offer the security and resilience required for mobile deployments. These enterprise-grade devices are built for field environments, with rugged hardware certified for shock and vibration. Dual-modem options help ensure continuous connectivity, even during network transitions, while external antennae optimize signals in marginal coverage areas. Each router functions as a secure in-vehicle hub supporting multiple devices, including mobile computers, tablets, cameras, and telematics systems, with a zero-trust security foundation to protect sensitive data and comply with CJIS and HIPAA standards.



T-Priority network slice

T-Priority is the nation's first dedicated 5G SA network slice built for public safety. It operates on the T-Mobile nationwide 5G standalone network, the most extensive 5G SA network currently available. Rather than relying on traditional preemption protocols, T-Priority provides a logically separate, dedicated segment within the 5G network. Under normal conditions, this slice delivers high performance. During periods of elevated network demand, it dynamically expands the resources available to first responders, ensuring mission-critical applications remain operational. This approach delivers greater consistency and operational assurance, even during major incidents.

Importantly, T-Priority is not tied to a single frequency band or coverage zone. It operates across the full T-Mobile 5G SA footprint, providing a unified experience nationwide. The combination of T-Priority and Ericsson's 5G SA-compatible routers provides a powerful, end-to-end solution that is both secure and scalable.

Integration strategy

The value of a mobile connectivity solution lies in how well its components work together. The partnership between Ericsson and T-Mobile is a sophisticated, integrated platform that delivers dependable performance, secure communications, and centralized control.

Because public safety operations are defined by constant movement, the combination of Ericsson mobile routers and the T-Mobile nationwide 5G standalone network supports transitions while minimizing disruptions.

This allows first responder vehicles to stay connected as they move, supporting situational awareness tools, voice communications, and data applications.

The integrated solution adapts when network conditions change. The router's ability to leverage multiple connections pairs effectively with the network's ability to prioritize traffic when demand surges. This coordinated response between hardware and network infrastructure helps agencies maintain operational effectiveness during high traffic events.

Furthermore, centralized management through the Ericsson NetCloud platform brings critical efficiency to IT operations. An entire fleet can be overseen from a single interface to deploy updates, enforce security policies, and monitor performance without pulling vehicles from service. This integration extends the value of each component: the routers are field-tough and remotely manageable, and the network is fast and strategically aligned with agency priorities.

Ericsson delivers a unified approach

Ericsson combines its leadership in wireless WAN with Ericsson Cradlepoint solutions and its global expertise in 5G infrastructure.

Use cases

The effectiveness of first responder technology is defined by its performance in the field. The following real-world examples highlight how the T-Priority and Ericsson solution supports operational confidence under complex conditions.



Law enforcement: A patrol unit detects a stolen vehicle. During a cross-jurisdictional pursuit, the system uploads location data and video footage to dispatch, maintaining steady connectivity for continuous information sharing.

Fire incident coordination: At a structure fire, crews access building schematics and occupancy data on rugged tablets. As the incident escalates, responding units receive updated data in real time, helping synchronize operational efforts.

EMS and pre-hospital care: EMS crews transmit patient vitals and real-time video from the field to the receiving hospital. Mobile connectivity enables physicians to provide consultative input, allowing for treatment adjustments and ensuring the hospital is prepared for arrival.

Multi-agency incident response: A fire battalion chief deploys a drone during a highway collision, coordinating with EMS and law enforcement via live video. Vehicle-mounted systems maintain connectivity to facilitate a multi-jurisdictional mutual aid response.

Mobile command centers: At a major event, a mobile command post monitors crowds and directs resources. Personnel view multiple video streams, with prioritized access ensuring connectivity despite high network use by the public.

Utility response: After a major storm, repair crews stream live updates, access grid data, and coordinate with control centers in real time. Stable communications enable faster damage assessment, improved crew safety, and efficient restoration.



Conclusion: Built for operational continuity

Today's first responder teams operate in fast-moving, high-stakes environments where continuity of communication is essential. The partnership between Ericsson and T-Mobile delivers that trust. By combining rugged, field-ready router technology with a dedicated 5G network slice, this integrated solution provides a secure, scalable platform that supports frontline operations without compromise.

This is not a promise of performance under ideal conditions. It is a solution engineered for the realities of emergency response.

If your agency is planning to upgrade its mobile infrastructure or reevaluating how to better support field teams, now is the time to explore what's possible. Connect with a T-Mobile public safety solutions expert to learn how the combined power of T-Priority and Ericsson mobile router technology can support your mission, your people, and your community.

Plan for what's next, not just what's now.

“When agencies buy a router or network solution, they're often locked into a 3-to-5-year lifecycle. That means the choices you make today will either open the door to next-gen capabilities—or leave you stuck with outdated tools. Network slicing is a perfect example of what's coming fast. Make sure your decisions align with the future, not just the past.”

— Joel Bach, Ericsson Senior Product Marketing Manager

Learn more at [T-Priority.com](https://www.t-mobile.com/priority) and [cradlepoint.com/public-safety](https://www.cradlepoint.com/public-safety)