

VerizonFrontline

The facts about public safety communications

Verizon Frontline is the advanced network for first responders on the front lines.



On the front lines of an emergency, first responders need to know the mission-critical technology they carry in their hands, on their belts and in their vehicles is reliable – lives depend on it. The technology your agency uses can affect your ability to respond to a crisis. We built Verizon Frontline to help first responders on the front lines stay connected in routine and extreme conditions.

There are a lot of misconceptions about the Verizon Frontline and FirstNet (built with AT&T) public safety networks. As often happens, there's a mix of facts, opinions and confusing claims. We want to address some of the most common questions and provide answers you can count on.

Is there really a dedicated wireless network for public safety?

Not really. Band 14 is a 20 MHz slice of radio spectrum in the 700 MHz band. Congress allocated Band 14 to public safety and authorized FirstNet to use it to support its deployment of a nationwide public-safety broadband network. FirstNet has leased Band 14 to AT&T, enabling AT&T to use it to serve all of its commercial customers, though priority must be given to public safety customers.¹

Verizon Frontline has priority services that enable us to give access to public safety first and preemption capabilities for the moments that matter most.² Verizon's 4G LTE network uses Band 13. Bands 13 and 14 are adjacent in the 700 MHz band and have the same favorable technical characteristics that support wireless broadband communications.

In practice, Band 14 is not used exclusively for public safety.³ Verizon also does not use Band 13 for first responders alone. That means user experiences will vary depending on the carrier and the network that carrier has built. For instance, to enhance the capacity and experience provided by Band 13, Verizon has built out its 4G LTE network with advanced technologies that allow the same band of spectrum to carry large amounts of traffic efficiently.

Bottom line: When evaluating support for public safety communications, it's important to focus on the network as a whole – and whether that network prioritizes first responders.

If FirstNet was allocated as a network for first responders by Congress, what is Verizon Frontline's mission?

We provide first responders with reliable solutions to help keep them connected in extreme and routine situations. We deliver choice, innovation, and a reliable, highly secure option for first responder organizations, and that has made us the #1 network choice in public safety.⁴

Do all public safety agencies need to operate on the same band of the wireless spectrum?

No. With network interoperability, public safety data will be able to travel across any band in any wireless spectrum. Verizon supports network, system, application and device interoperability across FirstNet and all commercial carriers.

Interoperability is crucial to the safety of first responders and the organizations that support them, no matter what network, apps or devices they use. We are continually enhancing our network output and capabilities to meet the mission of enabling voice and data interoperability across agencies, jurisdictions, devices and networks.

Verizon does more than support intercarrier and interagency interoperability; our network is built to be interoperable and adhere to 3rd Generation Partnership Project standards. Verizon's vision of interoperability would enable first responders to communicate and share data with whomever they need, when they need it, regardless of platform or device. Achieving this vision of interoperability will require that all wireless carriers, device manufacturers, platforms and solution providers commit to enabling interoperability.

Does it create a bigger security risk to allow public safety traffic to interoperate with other wireless networks?

Not necessarily. Network security is a top concern for network providers, and it's up to each provider to build in security measures that help protect your voice and data communications. For example, private network service lets you bypass the conditions of the public network with a direct network connection for greater security and performance.

The right professional services teams, when backed by years of security experience, help our customers identify and resolve security risks within their network infrastructure.

AT&T claims that its FirstNet service is the only carrier to offer end-to-end encryption to secure data transmission. Is this accurate?

Well ... sometimes. Data traveling on the AT&T FirstNet network is encrypted "tower to core." But true end-to-end encryption must also include application layer encryption, not the network layer alone, because as soon as that data is sent to another network (e.g., a server on the internet), it is no longer encrypted. Therefore, FirstNet only offers genuine end-to-end encryption in those limited scenarios in which all data transmission is on the FirstNet/AT&T network.

True end-to-end data security is critical. As a recognized leader in network and security services, Verizon offers a comprehensive security assessment that evaluates all aspects of an organization's security controls.

Verizon conducts research to understand the threats against specific industries and specific technologies. Our expertise and insight give first responders a head start on optimizing their security programs. The following two recent research reports from Verizon can help your customers better understand why we're a leader in security—and how we can help them improve their programs.

- **Data Breach Investigations Report:** [verizon.com/dbir](https://www.verizon.com/dbir)
- **Mobile Security Index:** [verizon.com/mobilesecurityindex](https://www.verizon.com/mobilesecurityindex)

How does preemption work?

Preemption helps keep your people connected in emergency situations. In those rare times when the network is fully utilized, preemption automatically activates to provide these personnel with uninterrupted access to the network. It helps ensure that our public safety customers can continue to communicate with each other and do their jobs, even in times of high network use.

How is Verizon working to improve the way public safety agencies operate in the future?

Verizon Frontline is built on an adaptive, intelligent platform that prioritizes first responders. It helps ensure that those on the front lines get the information they need when it matters most, automatically preempting non-mission-critical actions.

Verizon is at the forefront of emergency response technology with the Verizon Frontline Innovation Program. A catalyst for innovative public safety solutions, this program works alongside first responders to understand their needs and sources leading technology solutions from the global entrepreneurial community.

Additionally, through our Smart Communities and Safe Cities solutions and programs, we're working with local governments to help improve the services they provide to citizens. We're also developing wireless network solutions, including THOR—our Tactical Humanitarian Operations Response 5G emergency mobile command center. This is just one of the innovations we're exploring to leverage the full power of our 5G network. These advances help expand coverage and provide network continuity following a disaster. And we'll continue to provide leading services as open and nonproprietary, which means your first responders can communicate with any other responders, and your agency can collaborate with other agencies.

Does Verizon provide additional support during emergencies and other situations?

Yes. The Verizon Frontline Crisis Response Team includes hundreds of people located nationwide to help provide coordinated action and support during trainings as well as natural disasters and emergencies—to Verizon and non-Verizon customers. We've strategically placed assets, including our mobile command centers, THOR and THOR's Hammer (a standalone, network-capable, deployable trailer), that are ready to deploy during planned special events as well as during natural disasters and other emergencies.

Why is Verizon using network virtualization?

Network virtualization enables Verizon to make updates and upgrades quickly, without slowing down your frontline workers. We believe that with network virtualization, Verizon Frontline can make upgrades quickly so hardware upgrades don't slow down frontline workers. We believe that investing in advanced technologies, such as priority, preemption and exceptional quality of service (QoS), will provide the greatest long-term benefits to our customers.

What impact will 5G have on public safety?

5G public safety networks are more adaptive, which is important in mission-critical responses. For example, in the future, network slicing should enable public safety applications to be separately configured, providing QoS parameters to handle push-to-talk and push-to-video mission-critical communications. This should reduce the possibility that other applications or virtual network users can affect the performance of the public safety network slice or compromise its security.

On the front lines, every detail is critical and every second counts. That's why Verizon Frontline is built for 5G. The transformative speeds of 5G can help public safety agencies improve decision making and deliver better information to the front lines faster.

Why should I choose Verizon Frontline for public safety communications?

When lives are at stake, first responders need a network they can rely on, one that truly prioritizes them. The network matters, especially when it comes to public safety to help first responders stay connected in extreme conditions, not just the day to day. We designed it for 5G so you can take advantage of the next wave of public safety innovations. In making your choice, you should consider these facts:

- Verizon is the #1 network choice in public safety.⁴
- Verizon has the nation's most reliable 5G network as ranked by RootMetrics.⁵
- We have deep roots with the first-responder community and more than three decades of experience working with public safety agencies, with the network first responders rely on, dedicated local support teams and 24/7 service.
- Our 5G Ultra Wideband network delivers high speeds, low latency and massive capacity, so first responders can work more safely and effectively using the latest innovations and never-before-possible lifesaving applications for public safety.



1. "The Network," FirstNet, accessed May 25, 2023. <https://2014-2018.firstnet.gov/network>

2. Mobile Broadband Priority allows customers to connect to the network with priority by leveraging a pool of radio resources dedicated to enable their connection. Mobile Broadband Priority identifies the user with an Access Priority setting, giving them higher priority for network access than lower Access Class users. Preemption automatically activates to provide approved personnel uninterrupted access to the network in those uncommon times when the network is fully utilized. 911 calls are never preempted.

3. "Public-Safety Broadband Network: Network Deployment Is Progressing, but FirstNet Could Strengthen Its Oversight," U.S. Government Accountability Office, January 2020. <https://www.gao.gov/assets/gao-20-346.pdf>

4. Based on quarterly third-party wireless voice market share data, Q1 2023.

5. **Most reliable 5G network based on more first place rankings in RootMetrics® 5G data reliability assessments of 125 metro markets conducted in 2H 2022. Tested with best commercially available smartphones on three national mobile networks across all available network types. Your experiences may vary. RootMetrics rankings are not an endorsement of Verizon.**