

The facts about public safety communications

Verizon Frontline is the advanced network and technology for first responders.



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.

There are a lot of misconceptions about the Verizon Frontline and AT&T FirstNet® 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 “fifth wireless network” dedicated to 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 award-winning nationwide 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.

But it’s important to note that, in practice, neither Band 13 nor Band 14 is used exclusively for public safety.^{3,4} That means user experiences will vary depending on the carrier and the network that carrier has built. For instance, to enhance the capacity & 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 that network needs to prioritize first responders.

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

Verizon is America’s #1 network in public safety.⁵ Our mission is to provide frontline workers with reliable solutions to help keep them connected, in any situation. We provide choice, innovation (which is driven by competition) and a reliable, secure option for first responder organizations. In times of crisis, more networks offer greater opportunity for unbroken communication. As in any mission, redundancy over a single response option is key.

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, regardless of their network. 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 Partner Project (3GPP) 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, our Private Network service lets you bypass the conditions of the public network with a direct network connection for greater security and performance.

And our professional services teams, 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?

It's an accurate description of how FirstNet works, but it's not the entire story. Data traveling on the AT&T FirstNet network is encrypted "tower to core." But true "end-to-end encryption" must include application layer encryption, not the network layer alone. As soon as that data is sent to another network (e.g., a server on the internet) it is no longer encrypted. Therefore, it is not true end-to-end encryption except in those limited scenarios in which all data transmission is on the FirstNet/AT&T network.

Verizon understands the criticality of true end-to-end data security and can help organizations achieve that objective. As a recognized leader in both network and security services, Verizon offers a comprehensive security assessment that evaluates all aspects of an organization's security controls.

A key differentiator for Verizon is the research it conducts to understand the threats against specific industries and specific technologies. Verizon's expertise and insight gives its customers a head start on optimizing their security programs against the most likely threats. 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 2021 Public Safety Spotlight: [verizon.com/business/resources/reports/2021/2021-msi-public-safety.pdf](https://www.verizon.com/business/resources/reports/2021/2021-msi-public-safety.pdf)

How does preemption work?

Verizon leverages preemption during temporary periods of peak demand and emergency situations to automatically reallocate network resources to designated users so they can stay connected during emergencies. 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 is at the forefront of emergency response technology with 5G First Responder Labs, located in key cities around the country. As catalysts for innovative public safety solutions, the labs work alongside first responders to understand their needs and to source leading technology solutions from the global entrepreneurial community.

And with Verizon Frontline, we are bringing advanced network and technologies to address the challenges that public safety agencies and first responders face every day. Verizon Frontline is built on an intelligent platform. It recognizes first responders, preempting non-mission-critical actions to minimize data or network restrictions.

Additionally, through our Smart Communities and Safe Cities solutions and programs, we're partnering with local governments to help improve the services they provide to citizens. We're also developing wireless network innovations—such as drone-deployed services—to 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 Response Team includes hundreds of people located nationwide to help provide coordinated action and support during natural disasters and emergencies—to both Verizon and non-Verizon customers. We've strategically placed assets, including our Mobile Command Centers, Cells on Wheels (COWs), Cells on Light Trucks (COLTs) and more, that are ready to deploy during planned special events, as well as during natural disasters and other emergencies. You can reach our Verizon Response Team at 800.981.9558.

Why is Verizon using network virtualization?

Our products and services are built right to meet the unique requirements of the work you do every day in your communities. With Verizon Frontline, first responders can access the benefits of service enhancements and upgrades quickly without requiring lengthy hardware upgrades. We believe that investing in advanced technologies like priority, preemption and 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 quality-of-service (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.^{3,6,7}

On the front lines, every detail is critical and every second counts. That's why Verizon Frontline, the advanced network and technology for first responders, 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. Verizon currently offers 5G services.⁸

Does AT&T offer 5G on FirstNet?

FirstNet was designed to be a 4G LTE network and does not currently support 5G services. AT&T will not be able to deliver the 5G experience for their users by staying within the confines of FirstNet Band 14.^{3,6}

Why should I choose Verizon Frontline for public safety communications?

When lives are at stake, those on the frontlines need a network they can rely on. That's why we built Verizon Frontline, the advanced network and technology built right for first responders. The network matters, especially when it comes to public safety. In making your choice, you should consider these facts:

- Verizon has the nation's most reliable network and has been ranked #1 by RootMetrics in overall network performance 16 times in a row.⁹
- We have deep roots with the first-responder community and decades of experience working with public safety agencies, with the best nationwide wireless network,⁹ dedicated local support teams and 24/7 service.
- We're a global leader in the development and deployment of 5G technology. Our 5G Ultra Wideband network¹⁰ is designed for high speeds, low latency and massive capacity, which will help enable first responders to work more safely and effectively using the latest innovations and creating opportunities for never-before-possible lifesaving applications for public safety.

Learn more:

To learn more about how Verizon Frontline can support your agency's mission-critical wireless communication needs, visit [verizon.com/frontline](https://www.verizon.com/frontline) or contact your Verizon Government Account Manager.

1 <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 https://firstnet.gov/system/tdf/FirstNet_Authority_Financial_Report_Fiscal_Year_2019_with_Independent_Auditors_Report.pdf?file=1&type=node&id=1352&force=0

4 <https://www.gao.gov/assets/710/704058.pdf>

5 Based on quarterly third-party market share data, Q3 2021.

6 <https://www.rrmediagroup.com/Features/FeaturesDetails/FID/1028#:~:text=The%20arrival%20of%205G%20has,of%20new%20public%20safety%20applications>

7 Network slicing with enhanced quality of service is not currently available, coming soon.

8 **5G Nationwide available in 2,700+ cities on most Verizon 5G devices. 5G Ultra Wideband available in select areas. 5G Ultra Wideband access requires a 5G-capable device with select voice/data and 5G Ultra Wideband plans.**

9 **America's most reliable based on rankings from RootMetrics® US National RootScore® Reports: 2H 2013 - 1H 2021. Tested with best commercially available smartphones on 3 national mobile networks across all available network types. Your experiences may vary. The RootMetrics award is not an endorsement of Verizon.**

10 **5G Ultra Wideband available in select areas.**

Network details & coverage maps at [vzw.com](https://www.vzw.com). © 2022 Verizon. VZFAQ6570122