FirstNet Core Infrastructure / EPC

Building the network that helps protect America

FirstNet features a dedicated network Core just for first responders and those who support them. FirstNet SIMs provide FirstNet users access to the Core. FirstNet users are able to access the network with minimal latency and stay connected to this highly available network across the FirstNet Core dedicated to public safety.

All FirstNet traffic is carried on a high availability, highly secure, high capacity Internet Protocol/ Multiprotocol Label Switching Common Backbone transport network and is assigned appropriate markings to assure high priority and Quality of Service (QoS) throughout the network.

AT&T is combining FirstNet dedicated hardware and software with commercial infrastructure, integrating Band 14 (as it is deployed) and commercial bands across the FirstNet Evolved Packet Core (EPC). LTE wireless access for FirstNet users is based on: (1) Dedicated Core functions for the FirstNet Public Land Mobile Network (PLMN); (2) Enabling broadcast of the FirstNet PLMN-ID across Band 14 and other AT&T commercial LTE bands; (3) Provision of QoS, priority and preemption across all bands.

FirstNet Core redundancy

Redundancy and failure restoration are cornerstones of the FirstNet Core with hardware, software, process, and geo-redundancy implemented across critical FirstNet Core functions. The FirstNet Core is built on the AT&T Integrated Cloud architecture, ensuring multiple levels of physical, logical, and geo-redundancy.

FirstNet 99.99% availability

The FirstNet Core provides carrier-grade availability and accessibility. Redundancy and overlapping coverage is designed throughout the Core in order to meet 99.99% availability.

FirstNet is architected with security at all levels

The FirstNet Core is designed with a defense in-depth approach that provides security at every level. Building on one of the largest IP networks in the world, the FirstNet Core is a network dedicated to public safety, with the security of first responders foremost. Dedicated security engineering and operations teams help to ensure FirstNet is there when first responders need it most.

FIRSTNET
Built with AT&T

Public safety users must have the capability for instantaneous communication that is secure and reliable. The FirstNet cybersecurity approach prioritizes security effectiveness while supporting the mission of public safety – protecting our people and our communities.

Security from the ground up

- A highly secure, purpose-built network core
- Geographical redundancy for high reliability
- 24x7 monitoring by a dedicated U.S.-based security operations center
- Dedicated engineering and architecture teams implement security that is modern and highly effective

First Priority™ - QoS, priority and preemption

First Priority™ will provide primary users with an evolving set of QoS, priority and preemption capabilities.

How First Priority™ works

- "Priority" allows first responders to receive access to network resources first, ahead of other users
- "Preemption" means that first responders are able to utilize all available resources within the network, even if services to low priority users are offloaded or denied
- "Quality of Service" establishes minimum/maximum service quality parameters and appropriate access to critical communication resources at all times
- FirstNet primary users will be configured as "able to preempt" and "not preemptible"
- Together, QoS and preemption allow primary users to communicate when they require timely, critical communications

FirstNet's Core infrastructure / EPC benefits

- A highly secure, reliable nationwide network
- Experienced security professionals
- Trusted, highly secure applications
- Encryption and management solutions to fit the needs of public safety
- Public safety can choose levels of priority to fit their organization's needs
- Preemption automatically initiated for primary users
- FirstPriority™ users are eligible for incident management to uplift to highest priority on the network

For more information go to:

FirstNet.com

FIRSTNET™

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