FirstNet Push-to-Talk: LMR Interoperability Option

FIRSTNET
Built with AT&T

Increase Capacity and Enhance Coverage with FirstNet

FirstNet Push-to-Talk Land Mobile Radio (LMR) Interoperability allows team members using two-way radios and the FirstNet Push-to-Talk (PTT) service to talk to one another, simply and reliably. FirstNet PTT LMR Interoperability supports more effective communications to help achieve your agency's mission.

FirstNet PTT LMR Interoperability offers many benefits:

- **Extend Push-to-Talk service beyond the LMR network.** Extend PTT capabilities beyond the boundaries of your local LMR system with nationwide broadband coverage.
- **Increase available LMR capacity by off-loading non-critical communications.** You can move non-emergency users from LMR to FirstNet Push-to-Talk to free capacity and reduce congestion – without losing group communications.
- **Provide a low-cost alternative.** Deploy the service on your agency's smartphones, reducing the need for expensive radios.
- **Offer broadband PTT overlay and network redundancy.** Be confident knowing you can use FirstNet PTT as an overlay broadband data network for redundancy in the event of an LMR network outage.

What is LMR Interop for FirstNet PTT?

FirstNet PTT offers a Radio over Internet Protocol (RoIP) interoperability solution, built to the open RoIP standard, allowing LTE-based FirstNet PTT groups and LMR channels to communicate with each other.

Plus, the RoIP gateway allows agencies with LMR users to take advantage of the FirstNet PTT service, which provides nationwide LTE coverage, high performance prioritized PTT calling, a choice of cost-effective FirstNet PTT certified devices, and low monthly recurring costs.

Customers that own their LMR systems and have straightforward interoperability needs can get the biggest benefit. Large statewide systems with diverse user groups and dispatch-centric systems may look to other interoperability solutions, such as sub-system gateways or console interfaces (on the FirstNet PTT product roadmap.)

Solution Components

The FirstNet PTT RoIP Interop solution consists of:

1. Customer premise equipment (CPE)
2. Connectivity with the LMR network, and
3. Connectivity with the FirstNet network and FirstNet PTT servers.

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CPE and Connectivity with the LMR Network

Typically located at the customer's premises along with other radio equipment, the FirstNet Ready® Cubic Vocality RoIP gateway provides the key networking function by converting LMR analog signals to IP digital signals for delivery to the FirstNet PTT LTE-based service. The Cubic RoIP gateway is connected to the LMR network by a cable to a donor radio that is tuned to the desired channel. Customers may purchase the gateway, the donor radio and the cable from a FirstNet authorized dealer or through their preferred source.
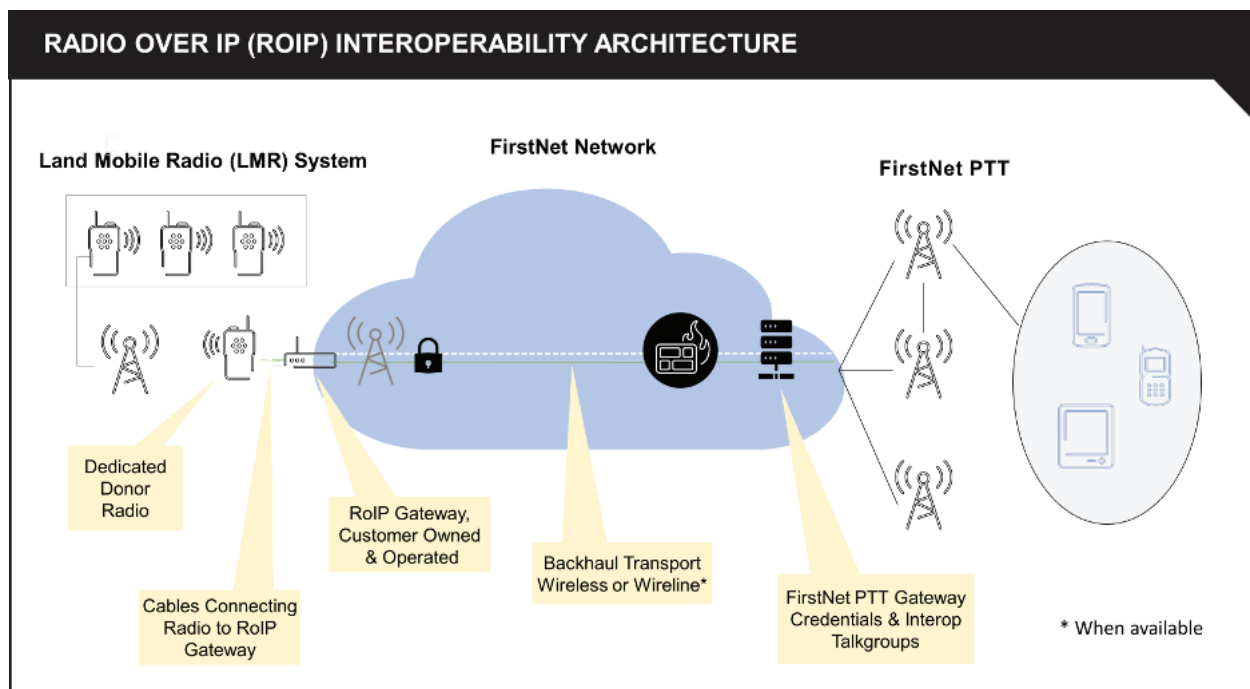
Connectivity with FirstNet PTT

The Cubic RoIP gateway is connected to the FirstNet PTT service using one of two options:

1. A FirstNet Mobile Unlimited Plan (wireless data plan.) A FirstNet Mobile Data Plan for Data Only Devices with First Priority® ensures that traffic sent from the RoIP Gateway receives high priority access and preemption to remain connected to the FirstNet network during times of congestion. Once traffic reaches the FirstNet PTT servers, it is delivered to PTT users with the highest level of prioritization available on the FirstNet network* in accordance with the Mission Critical PTT standard. (*Other than mandated emergency calling.)

2. A wireline Internet connection. When available, wireline backhaul from the RoIP Gateway will use a built-in VPN to deliver highly secure traffic to the FirstNet PTT servers. This option will best serve customers that have marginal wireless performance in their location.

For implementations that require very high availability, redundancy can be achieved with both wireline backhaul* and wireless failover (*when available).

Once your Interoperability networking is established, you can manage your combined talkgroups via FirstNet Central [firstnetcentral.firstnet.com] and the FirstNet PTT admin tool.

Tip: You must have the permission of the FCC licensee to connect the RoIP Gateway to a shared LMR radio network.

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Purchase and Set-Up Options

Your FirstNet representative can place an order on your behalf for the RoIP gateway, donor radio(s) and cable(s) with our authorized dealer, who will ship your gateway ready for installation with LTE/wireless connectivity. You may also order equipment from select authorized FirstNet dealers or your preferred provider.

For your initial FirstNet PTT LMR Interop implementation, the FirstNet Onboarding team will help you ensure that your FirstNet PTT gateway credentials are available for the configuration of your RoIP gateway and that your FirstNet PTT licenses have been ordered. Our Onboarding service engineers will then gather your requirements before establishing your LMR/FirstNet PTT talkgroups.

With CPE, backhaul, licenses and talkgroups on hand, customers can complete the implementation of their FirstNet PTT LMR Interop solution. Purchase of implementation services for the RoIP gateway from Cubic or from select FirstNet dealers is highly recommended, although you may use your own internal resources. Once complete, users in LMR channels will be able to communicate with FirstNet PTT talkgroups.

Support

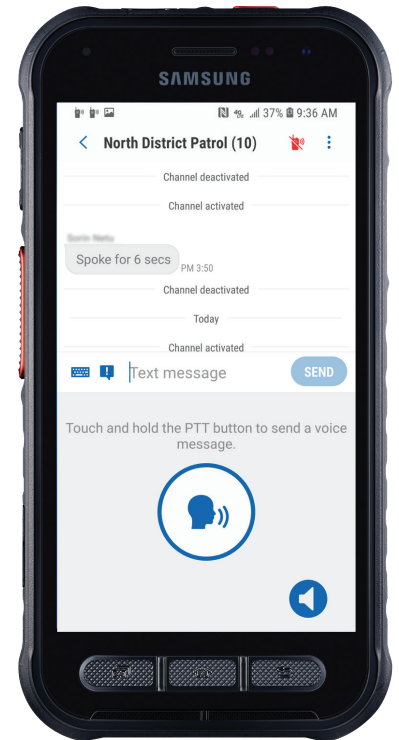Technical Support for FirstNet PTT is available from FirstNet Customer Service 24/7.

FirstNet PTT Conversation View

Pricing

Component	$
FirstNet PTT Subscription	$10/subscriber/month
FirstNet PTT LMR Interop Bolt-On Subscription	$5/subscriber/month
FirstNet PTT LMR Interop Site License Fee (per RoIP Gateway)	$2500 (one time)
FirstNet Mobile Unlimited Plan (for wireless backhaul from RoIP Gateway)	$40/line/month
First Priority® for FirstNet Mobile Unlimited Plan · Primary Customers · Extended Primary	· No incremental charge · $7.50/line/month

Notes:
1. *FirstNet PTT subscription requires purchase of an existing qualified FirstNet wireless rate plan (or purchase of FirstNet PTT Only Rate for feature phones.)*
2. *Each FirstNet PTT LMR Interop Bolt-On subscription requires a subscription to FirstNet PTT.*
3. *Customer is responsible for purchase and implementation of Cubic Vocality RoIP gateway and other required equipment or network.*
4. *Customer must hold FCC license or obtain permission from the LMR licensee to connect the RoIP gateway to the LMR network.*
5. *FirstNet PTT LMR Interop Site License Fee applies to each RoIP Gateway.*
6. *Wireless backhaul requires FirstNet Mobile Unlimited Plan with a Black SIM.*

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