



# CBRS – New Mobile Technology for Mission Needs

In January 2020, CommScope was among the first companies to become fully FCC certified to operate in the Citizens Broadband Radio Spectrum (CBRS). CBRS is a monumental change in spectrum allocation that came after the Department of Defense agreed to share 150 MHz of wireless spectrum in the 3.5 GHz cellular band that had been used primarily for Navy radar and sonar. Through that agreement, the FCC set aside the spectrum for public and private entities to share as they see fit.

CBRS enables agencies to use existing infrastructure to quickly establish a private network by using this shared spectrum. Given the shift towards mobility, wireless access has become so important it is often referred to as “the fourth utility.” CBRS offers improved security, quality of service and performance over existing Wi-Fi. Federal agencies are now able to build their own private networks with commercially available products rather than expensive, proprietary equipment. They can use CBRS to address their most challenging mission-critical use cases without having to rely on a mobile operator.

One major opportunity for CBRS is to enable military “smart bases,” adding flexibility and performance while also preparing bases for an expected surge in IoT devices. Medical facilities run by the VA or DHA can use CBRS to protect critical wireless communications indoors and provide secure, temporary network access outdoors during a disaster. With CBRS, the Pentagon can run its own private, wireless mobile network to improve phone coverage and security in its massive headquarters, and the

Intelligence Community can connect multiple devices as part of a private LTE network.

From wide-area surveillance to remote data transfer to critical communications, private networks support the most challenging use cases in government. And with IoT management issues emerging as a major challenge for federal agencies, CBRS could be the perfect communications backbone for high throughput, low latency IoT uses.

## CommScope Technology

CommScope is a leader in the CBRS Alliance, supporting the development, commercialization and adoption of the applications and services needed to leverage CBRS.

With the help of the RUCKUS CBRS™ portfolio, agencies can deploy and manage a private LTE network as easily as they deploy Wi-Fi today. With that LTE network, they can finally support applications and services that only a dedicated, secure, and ultra-high-performance mobile network can enable.

The RUCKUS CBRS LTE portfolio includes:

- **RUCKUS Q410** – a 3.5 GHz indoor LTE AP, 1/2W EIRP, plug-in to Wi-Fi AP to add the CBRS capability to existing network
- **RUCKUS Q710** – a 3.5 GHz indoor LTE AP, 1W EIRP, 200Mbps
- **RUCKUS Q910** – a 3.5 GHz outdoor LTE AP, 1W EIRP, 200Mbps

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**FEDERAL SOLUTION BRIEF**

- **RUCKUS cEMS** – cloud-based element management system (cEMS) delivered as a subscription service that brings Wi-Fi like simplicity and zero-touch provisioning to LTE AP management. cEMS enables cloud management of CBRS APs
- **RUCKUS cEPC** – cloud-based evolved packet core (cEPC) delivered as subscription service that provides required LTE network core functionality and subscriber management also has an option to host 3rd party EPC on-premise
- **RUCKUS cSAS** – cloud-based spectrum allocation server (cSAS) delivered as a subscription service that ensures spectrum availability per CBRS spectrum requirements.

RUCKUS Q710 and Q910 CBRS APs are the technology that unlock the potential of CBRS. These devices can aggregate up to four separate CBRS channels, delivering over 200 Mbps combined throughput to end users in high-density areas such as a headquarters or agency campus.

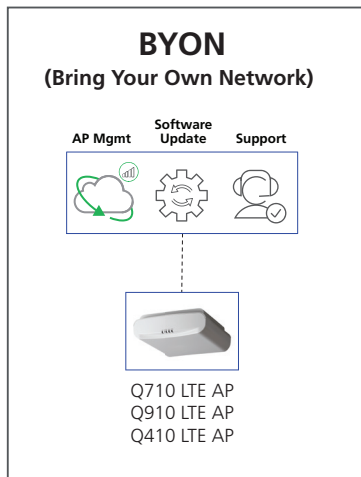
These APs are as powerful as they are easy to deploy, packed with advanced technology such as LTE-Advanced Carrier

Aggregation, Self-Organizing Networks (SON), Self-Organizing Timing and Zero Touch Provisioning™. They are also lightweight and energy efficient—the Q710 looks and feels just like a Wi-Fi AP, and the Q910 can be discreetly attached to light poles or cable strands.

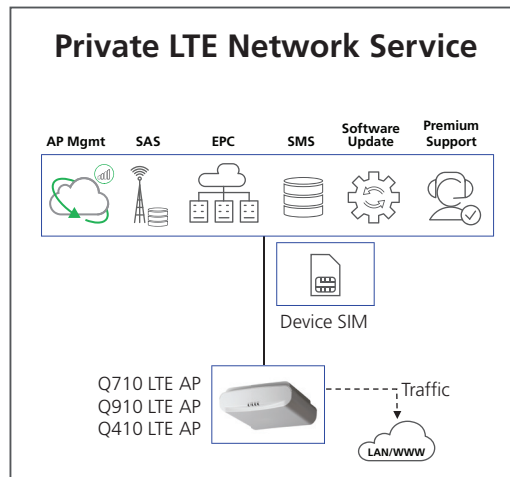
CBRS is a game-changer. A large amount of high-quality spectrum made available for all, with the power to support high-performing networks. Customers are looking to take advantage of this opportunity to drive experiences in in-building cellular, security, safety, automation and analytics.

CommScope's RUCKUS CBRS LTE portfolio enables agencies and service providers to deploy private LTE networks to ensure a high quality-of-service for mission-critical applications and use cases. CommScope is the only company to offer a complete licensed and unlicensed suite of wired and wireless solutions that meet government connectivity requirements. With a 30-year history of advancing federal IT network modernization, CommScope understands how to update agency networks in a scalable and secure manner.

## RUCKUS CBRS LTE Network Options



**Customer brings EPC, SAS and other services**



**Simple, hosted LTE Network Core Network and SAS from RUCKUS for Private LTE Applications**

The CommScope RUCKUS solution allows customers options to best meet their needs. Either use the complete solution offering or your established EPC and SAS vendors and add the RUCKUS CBSDs.

Now meets next

At CommScope Federal, we push the boundaries of communications technology to create the world's most advanced networks. Across the globe, our partners and their solutions are redefining connectivity, solving today's challenges and driving the innovation that will meet the needs of what's next.

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