

# CBRS FAQ

## 1. What is CBRS?

CBRS is the Federal Communications Commission's (FCC) acronym for Citizens Broadband Radio Service. It is a 150 MHz block of frequency in the 3.5 GHz (3550–3700) band. The band, previously only available to the U.S. Department of Defense, especially for use along the coastline by the U.S. Navy, was underutilized. The FCC chose to make this spectrum available for commercial LTE use. It will also enable enterprises to build private LTE networks.

## 2. What is the purpose of CBRS?

Essentially, it is to improve wireless service by eliminating the spectrum crunch. There are a finite number of wireless frequencies in the radio spectrum. CBRS opens up more frequencies for wireless traffic. If you have too many LTE cellular devices in close proximity to each other, you get a big traffic jam or as it is commonly called, a spectrum crunch. Because CBRS operates in the 3.5 GHz band, it's opening up new spectrum to ease wireless congestion and improve "traffic" flow for all devices.

## 3. What about indoor signals?

Enterprise deployment of CBRS networks will greatly improve indoor phone reception and call quality in skyscrapers, hotels, manufacturing plants, office buildings, hospitals, etc. where 80% of wireless traffic is generated. Currently to improve service and increase capacity, small cells from each major carrier would have to be installed throughout the building – an expensive proposition. Because CBRS enables neutral hosts, it can support all service providers.

## 4. What applications will CBRS be used for?

CBRS provides secure, cost-effective LTE coverage for indoor wireless traffic and for IoT applications. It can be used in every market vertical including education, military, hospitality, offices, healthcare, even multi-family residences. It can replace existing Wi-Fi systems or complement them. It can also be effectively used for public spaces (e.g. stadiums, arenas, airports, convention centers) and smart cities.

## 5. Can anyone set up a private LTE CBRS network?

To use the CBRS spectrum, you must request and be approved for a channel through the Spectrum Access

System (SAS) that manages and allocates the spectrum. When use of the spectrum is no longer needed, the channel is freed up for other users.

## 6. How does spectrum sharing work?

CBRS works by enabling spectrum sharing for both legacy and new users. The CBRS spectrum is divided into three tiers.

**Tier 1**, Incumbents, such as the DoD, will get priority usage.

**Tier 2** includes Priority Access Licenses (PAL). The FCC will auction 10-year renewable PALs on a county-by-county basis through competitive bidding. Up to seven PALs may be licensed in any given county with a four PAL cap for any licensee. Each PAL consists of a 10-MHz channel within the 3550–3620 band.

**Tier 3** is for General Authorized Access (GAA) use. It will be shared among everyone and no one receives priority access. GAA users can share higher tiers when they are not in use but must not cause interference to upper tiers. 80 MHz of spectrum will always be available for GAA use.

## 7. What are some applications for CBRS?

**IoT.** CBRS provides the high reliability and low latency needed for IoT operations.

**Small cell networks.** You can increase capacity by adding CBRS small cells.

**5G.** For fast, cost-effective wireless, you can choose Private LTE CBRS networks and then move to 5G when available.

**Neutrality.** CBRS provides in-building LTE services that are not tied to a single network provider.

**mMIMO hotspots.** These cover the needs of high-density, high-usage areas that have low mobility.

**Wider coverage.** CBRS can be laid over existing wireless grids for reliability and capacity.

## 8. What's OnGo certification?

OnGo™ is a brand of the CBRS Alliance. OnGo Certified indicates that CBRS products have met a high set of industry standards for interoperability and security.

