# CBRS

## EXPANDING WIRELESS POSSIBILITIES

Until recently, enterprises wanting to expand wireless coverage and increase data usage throughout and around their facilities were restricted to using either 4G public LTE or wi-fi. As enterprises continue to rely on data, the demand for more security, faster access, mobile support, data capabilities and more surged exponentially.

To meet the rising demands of enterprises across the country, the Federal Communications Commission (FCC) has authorized general access to Band 48, more commonly known as CBRS or Citizens Broadband Radio Service.
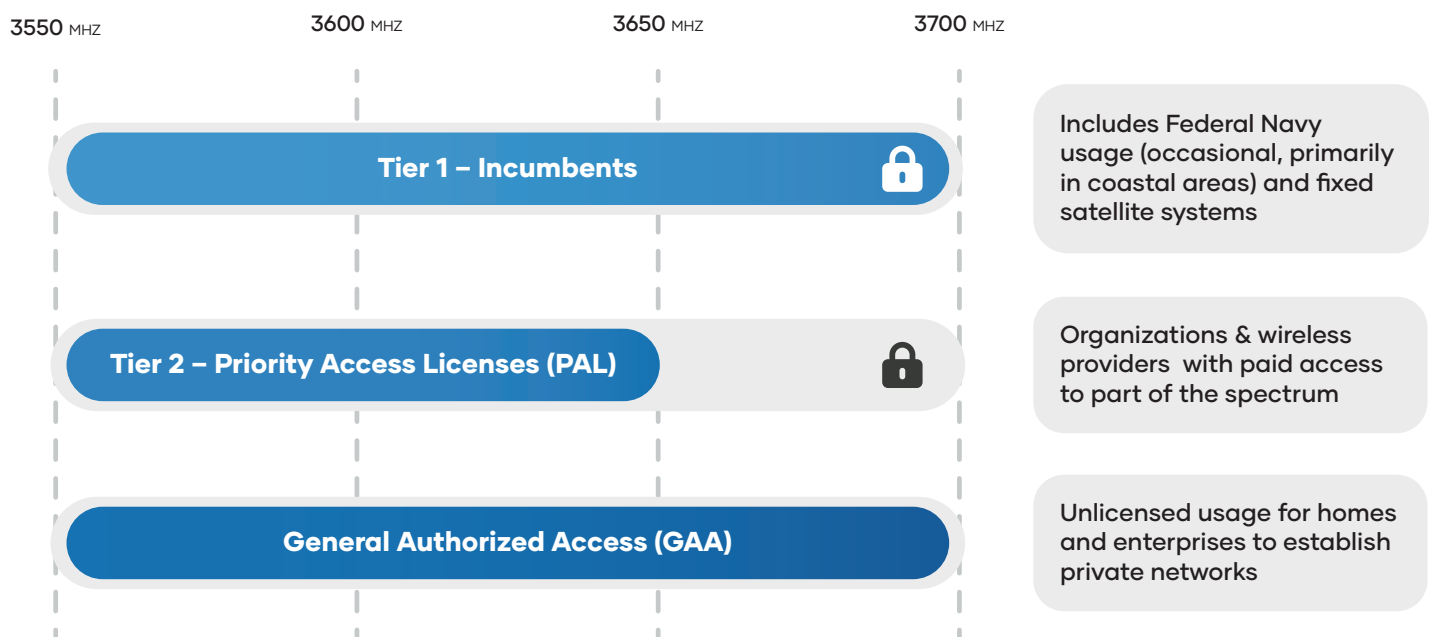
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# What is CBRS?

CBRS, short for the Citizens Broadband Radio Service, is 150 MHz of spectrum ranging from 3.55 to 3.7 GHz. It's a custom wireless network solution in the 3.5 GHz band, also known as Band 48.

Historically, Band 48 was used exclusively by the United States government, primarily for radar systems, fixed satellite receivers and wireless internet. With general access now available, this U.S. – only spectrum has been adapted for private mobile networks, offering a completely custom, secure option for enterprises.

## Are 5G and CBRS the Same?

Not exactly. While it's a common misconception, 5G is the fifth generation of wireless technology. For more bandwidth, 5G offers faster speeds and better network flexibility than its predecessors. Since 5G requires more bandwidth, or spectrum, CBRS supports the rising need for broadband and the constant pursuit of cellular technology.

3550 MHZ        3600 MHZ        3650 MHZ        3700 MHZ

**Tier 1 – Incumbents** 🔒

Includes Federal Navy usage (occasional, primarily in coastal areas) and fixed satellite systems

**Tier 2 – Priority Access Licenses (PAL)** 🔒

Organizations & wireless providers with paid access to part of the spectrum

**General Authorized Access (GAA)**

Unlicensed usage for homes and enterprises to establish private networks

🔒 **PROTECTED** from interference from lower tiers

# CBRS Across the Board
## How Industries Use CBRS

CBRS is the flexible network solution for private wireless connectivity. With providers naming it the "innovation band," various industries have their eyes set on leveraging its possibilities for their benefit.

## Petrochemical

Due to their large size and interoperability with other facilities and offices, petrochemical facilities often patch their communication network together with wi-fi bridges and various access points. CBRS picks up where other systems falls flat, covering a wide range and multiple buildings to provide reliable connectivity without interference from other nearby networks. Private LTE, powered by CBRS, gives frontline workers accommodations necessary to seamlessly communicate and collaborate across a facility and the enterprise as a whole.

## Manufacturing

5G signals can encompass an individual warehouse and manufacturing facility or blanket an entire center consisting of many facilities. Operating on the same network provides a seamless communication ecosystem to maximize efficiency and lower costs. CBRS unifies your network to create a single access point for all wireless devices across your facility, allowing your industrial smart radios to unify your workforce. Gain reliable, secure coverage that every worker can use with private LTE powered by CBRS.

## Mining

CBRS allows for a single access area for all mobile devices throughout your site, no matter what environment the facility lies in. With its unique, and sometime dangerous, work environment, mining operations benefit from a private LTE network powered by CBRS to remotely access all types of devices. From sensors to remote-controlled vehicles and communication devices, CBRS creates a seamless network to help these sites get the job done safely and within their timeline.

## Transportation

Whether it's on the tarmac of an airport, on the deck of a cargo ship or from within their respective logistics offices, CBRS creates a consistently reliable network for all communications and connectivity. With containers and valuable assets in constant motion, other network options are ill-suited for the demands of shipping and transportation hubs, and thus enterprises have relied more on CBRS and private wireless recently for their connectivity needs.

# The Transformative Effect of CBRS

## How CBRS Changes Industrial Communication

### Better Performance

CBRS is making private networks more alluring to businesses, and it's partially due to its performance compared to wi-fi, 4G and other enterprise-grade network options. Unlike other network offerings, CBRS is better suited for expansive areas or sites needing large amounts of data without going through a service provider or the process of purchasing spectrum at auction.

With increased bandwidth and more reliable coverage than wi-fi, CBRS is a proven network solution in the industrial realm. CBRS offers more administrative control and flexibility than others, so your private network meets your needs. As enterprises continue to push for more efficiency, the CBRS spectrum continues to act as a tactical and strategic asset for connectivity.

### Increased Security

Modern businesses rely on data; it's the lifeblood that guides some of the biggest, most prominent business decisions being made today. As enterprises everywhere continue to rely so much on data - it's accuracy, volume and interpretation - data security remains a top priority for industry and business leaders across the globe. Network solutions, such as CBRS, provide greater data security than its predecessors.

CBRS takes a multidimensional approach to data security. With data encryption and user authentication regarded as its standard processing, along with other security measures, CBRS builds a totally secure environment for all communications and data collection. Even with a standard-based connection between nodes or between devices, CBRS provides excellent performance with a considerably secure interface between all wireless devices and systems in your facility.

### Advanced Devices

Enterprises looking to deploy the highly reliable private LTE networks, powered by the CBRS spectrum, are giving themselves a competitive advantage with the ability to support more advanced devices on premise. These smart devices require the constant, reliable connection of CBRS to provide for and improve worker efficiency, safety and performance.

As enterprises continue implementing new, innovative solutions to increase profitability and productivity in their workplaces, CBRS supports these endeavors. As more devices are introduced to the market, these devices become more vital to the overall operation of the facility. Before they can innovate and improve the facility, however, they need a network powerful enough to support them and reliable enough to ensure constant access. And that's where CBRS comes in.

### Improved Accessibility

Before CBRS, private broadband coverage wasn't available for private use. Instead, enterprises were often left with only three options: public LTE, wi-fi networks or leasing through a carrier, which often required a multi-million dollar system. Each offering provided workers with an exceptional means to doing their job, however issues with network congestion, varying signal strength and security remained.

CBRS significantly reduces the barrier to entry with its public availability. Whether enterprises need it for temporary or permanent coverage, or a growth in data capacity, the infrastructure is a fundamental addition to facilities looking to pursue digital transformation. These essentially cut out the need to invest in carriers or purchasing part of the spectrum for organizational use. With CBRS' competitive pricing options and complete customizations, enterprises of all sizes and revenue can craft their network to fit their facilities and unique business needs.

# The Ideal Network for the Internet of Workers™

As the IoW platform, weavix™ is the next generation of frontline radio communications and workforce management. Our complimentary managed service, weCare™, ensures your radios, infrastructure and private LTE network, powered by the CBRS spectrum, are fully operable across the entirety of your enterprise. With a 98% service level agreement, weavix™ is your partner in connecting your workforce and enabling interoperability across plants.

**For more information about implementing CBRS, schedule a demo at *weavix.com***