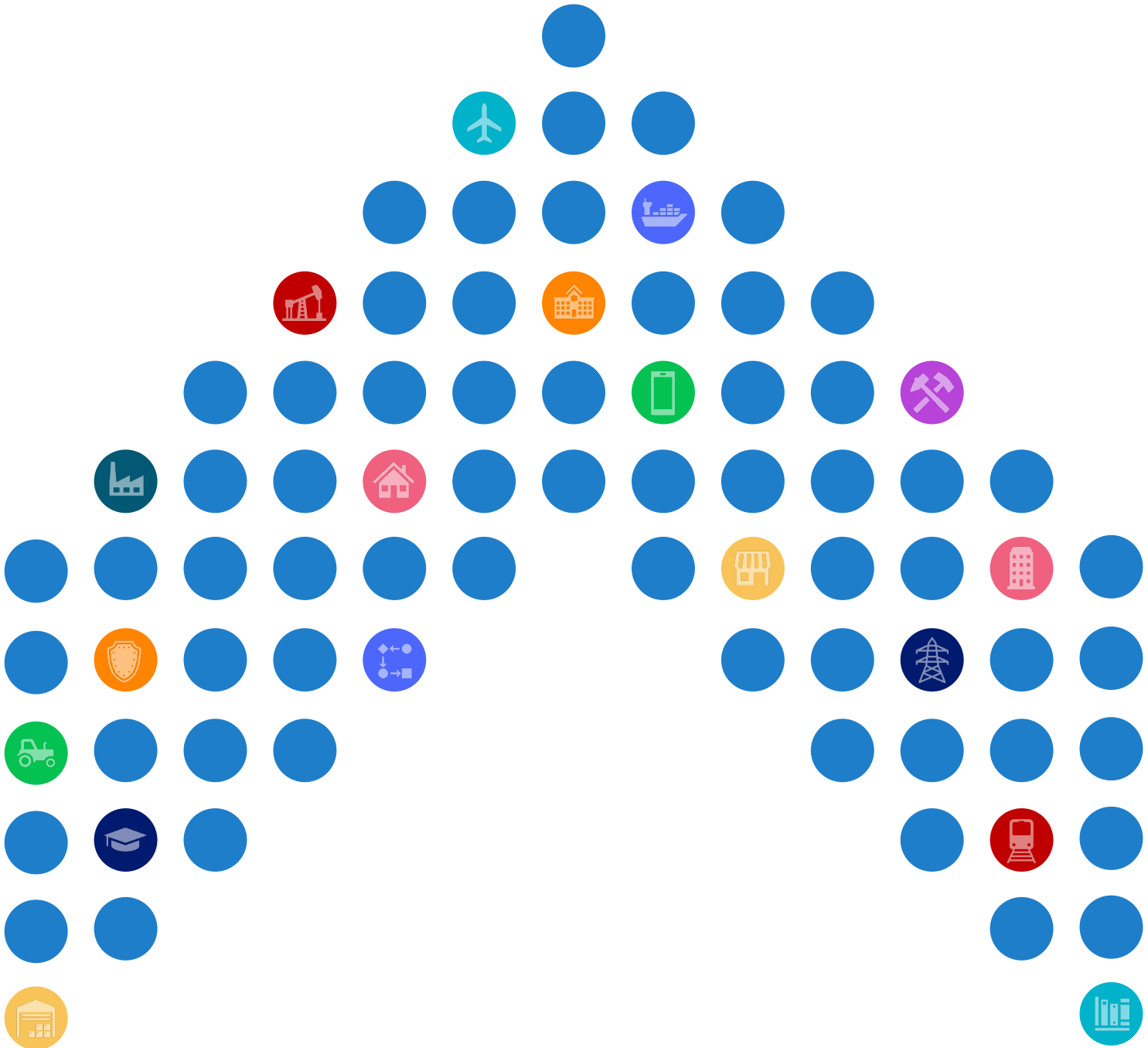


CBRS

America's Most Widely Utilized
Mid-Band Spectrum Asset

JUNE 2026



CBRS:

America's Most Widely Utilized Mid-Band Spectrum Asset

In the space of only a few years, the Citizens Broadband Radio Service (CBRS) spectrum band has moved from innovative theoretical concept to large-scale commercial reality – supporting private 5G, expanding rural broadband, enabling mobile competition, and strengthening American industrial leadership across the globe.

For years, the U.S. wireless market has been defined by a simple reality: access to licensed mid-band spectrum has largely been concentrated in the hands of the nation's three largest mobile carriers. Nearly 90% of the mid-band spectrum auctioned by the FCC between 2017 and 2022 was the high-power exclusive licensed spectrum accessible only to massive conglomerates like AT&T, Verizon, and T-Mobile.¹ Over the same period, just 150 MHz of shared licensed spectrum – CBRS – was made available.²

America doesn't have a high-power spectrum shortage – It has a competition shortage.








The CBRS band delivers unique value because it allows businesses, rural internet providers, hospitals, neutral hosts, schools, utilities, manufacturers, *and* new mobile entrants to access and deploy private 5G wireless networks and applications *without* forced dependence on the big three mobile carriers that dominate traditional high-power licensed spectrum.

CBRS creates economic value that traditional high-powered cellular networks can't.

CBRS is increasingly delivering many of the most important innovations, competitive pressures, and consumer benefits in the wireless marketplace. By enabling new entrants to deploy localized wireless infrastructure and offload traffic onto privately managed spectrum, CBRS is creating new forms of competition that were previously impossible without billions of dollars in auction spending.

To support the wireless data needs of U.S. manufacturers and other leading industries, it is imperative that policymakers understand that CBRS is the mid-band spectrum truly powering private 5G deployments and American innovation, productivity, and global wireless leadership.

This report reviews some of the many successes and wide-ranging impacts provided uniquely by CBRS, including:

-  **Delivering Results Across America Today**
| Page 2
-  **Powering the U.S. Manufacturing Revolution**
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-  **Connecting Rural America**
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-  **Underpinning American Industrial Infrastructure**
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-  **Closing the Homework Gap & Enabling AI-Powered Education**
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CBRS:

Delivering Results from Coast to Coast

Spectrum policy conversations are often focused on prospective possibilities, but CBRS is already supporting factories, ports, utilities, national defense, logistics, and energy infrastructure and delivering measurable economic and consumer value at scale.

CBRS has quickly become one of the most important and successful spectrum innovations in the United States, and this crucial band's contributions to real-world investment and innovation only continue to grow.

American companies have invested billions in CBRS networks and infrastructure, moving it from concept to large-scale commercial reality—supporting private 5G, expanding rural broadband, enabling mobile competition, and strengthening American industrial leadership.

CBRS powers hundreds of private networks, neutral host deployments, and mobile capacity solutions across the country.



Education



Offices



Libraries



Airports



Hospitals



Defense



Factories



Utilities



Homes



Warehouses



Ports



Mobile Data



Farms



Logistics Hubs



Mines



Oil & Gas



Railways

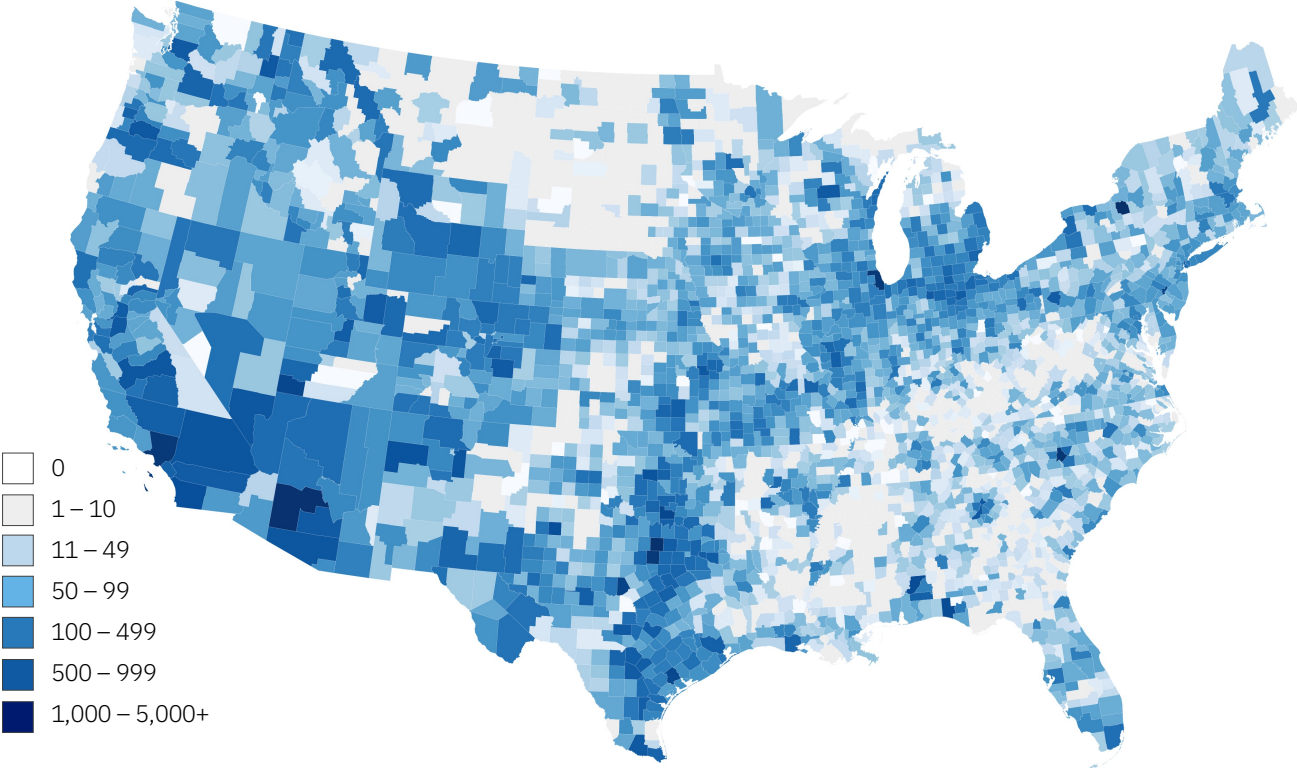


Retail

CBRS by the Numbers

| | | |
|---|--|--|
| <p>MORE THAN</p> <p>442,000</p> <p>CBRS Base Station Devices Deployed³</p> | <p>MORE THAN</p> <p>10 Million</p> <p>U.S. Locations Have Access to CBRS-Powered Broadband⁴</p> | <p>MORE THAN</p> <p>1,000</p> <p>Unique Entities Operating in CBRS⁵</p> |
| <p>APPROXIMATELY</p> <p>82%</p> <p>of U.S. Counties Have Active CBRS Deployments³</p> | <p>AN ESTIMATED</p> <p>200 Million</p> <p>U.S. Consumer Handsets Support CBRS⁶</p> | <p>NEARLY</p> <p>70%</p> <p>of CBRS Deployments are in Rural Census Blocks⁷</p> |
| <p>75%</p> <p>of All U.S. Private 5G Networks Run on CBRS⁸</p> | <p>NEARLY</p> <p>↑300%</p> <p>Increase in CBRS-Powered Private 5G Networks in the U.S. <i>Projected 2026-2032⁶</i></p> | <p>↓35%</p> <p>Price Decrease for Mobile Service Plans <i>2021-2025, Adjusted for Inflation⁹</i></p> |

ACTIVE CBRS BASE STATION DEVICES BY COUNTY¹



CBRS:

The Wireless Operating System Powering the American Manufacturing Revolution

American manufacturing is undergoing its most significant technological transformation in generations. Across factories, warehouses, industrial campuses, and supply chains, manufacturers are deploying AI-driven analytics, robotics, machine vision, autonomous vehicles, predictive maintenance systems, digital twins, and real-time automation platforms designed to increase productivity, improve resilience, reduce downtime, and strengthen America's competitive position in the global economy.

But these technologies depend on something many traditional wireless systems struggle to provide: secure, low-latency, highly reliable connectivity capable of supporting massive numbers of connected devices and mission-critical industrial operations in real time.

CBRS-based private wireless networks are increasingly becoming the wireless operating system powering this new era of AI-enabled manufacturing, because unlike traditional consumer-focused macro-cellular networks, CBRS enables manufacturers to deploy secure, business-controlled private 5G infrastructure that is optimized for specific industrial operations.

CBRS networks provide the mobility, reliability, coverage, security, and performance needed to support smart factories, autonomous systems, connected machinery, industrial IoT, and AI-enabled automation at scale.

Why Manufacturers Choose CBRS

- ✓ **Control:**
On-site, business-owned networks (not dependent on cellular carriers)
- ✓ **Cost Efficiency:**
Multi-billion-dollar spectrum not required
- ✓ **Performance:**
Low latency, high reliability for robotics, AI, and automation
- ✓ **Flexibility:**
Deploy, scale, and customize networks facility-by-facility



Manufacturing data that has that digital thread or the digital twin of our products has been able to expand greatly because **we are now able to capture new data streams that we've not previously been able to do.**

John Deere
Senior Principal Architect¹⁰



As manufacturers race to modernize operations, reshore supply chains, and compete globally, CBRS is emerging as foundational infrastructure for next-gen American industrial leadership.

America's Private 5G Economy Runs on CBRS

Private 5G is transforming manufacturing and CBRS is making it possible, using shared, locally-licensed spectrum to enable AI, automation, and smart factories.

Today, 75% of U.S. private 5G networks rely on CBRS, supporting deployments in manufacturing, ports, airports, utilities, defense, logistics, mining, oil and gas, healthcare, and education.⁸

Private 5G deployments in CBRS are expected to increase nearly 300% by the end of 2032. Growth in CBRS deployments is expected to continue to significantly outpace traditional high-power deployments, driving an expanded 86% share of U.S. private 5G deployments for CBRS over the same timeframe.⁸

“American manufacturing is undergoing a once-in-a-generation transformation, and CBRS is a critical tool for bringing manufacturing jobs and supply chains back to the U.S.”

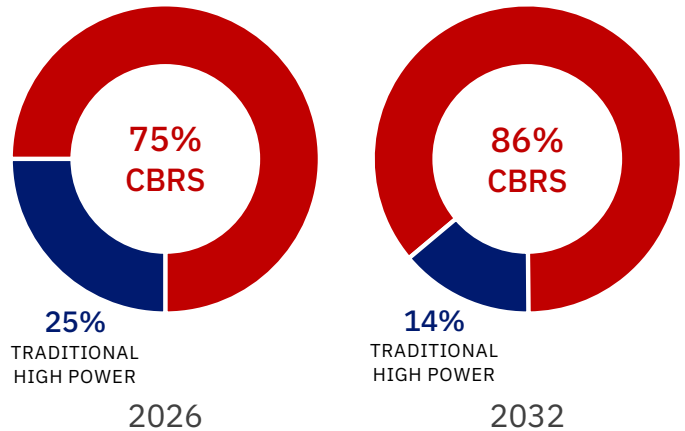


– John Puskar
CEO, American Made 5G¹¹

86%

Proportion of Private 5G Networks: CBRS vs. Traditional Macro-Cellular in the U.S. in 2032

AMERICAN 5G PRIVATE NETWORK DEPLOYMENTS: Spectrum Mix Over Time⁸

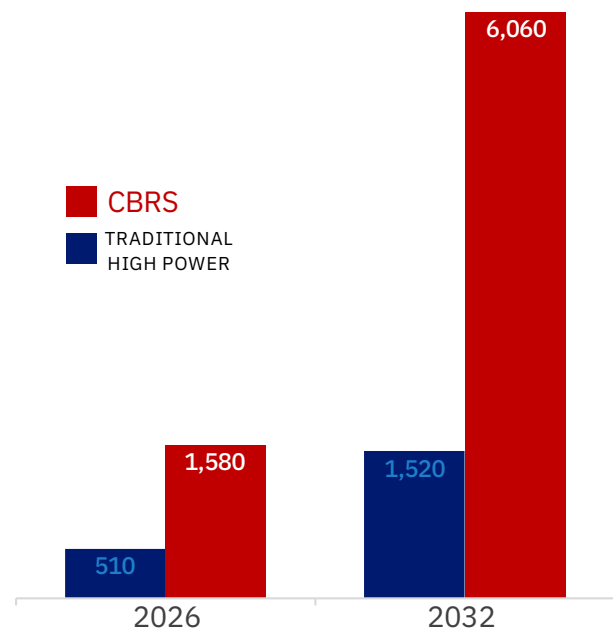


NEARLY

300%

Projected Increase in CBRS-Powered Private 5G Networks in the U.S. 2026-2032

AMERICAN 5G PRIVATE NETWORK DEPLOYMENTS: Deployments by Spectrum Band Over Time⁸

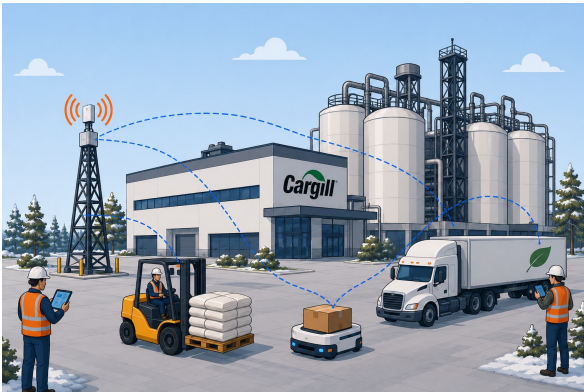


The U.S. Manufacturing Revolution: Powered by CBRS Private 5G Networks

CBRS has allowed manufacturers of critical goods – from steel to semiconductors – to improve safety, enhance onsite communications, boost productivity, and utilize new technologies like autonomous vehicles at large facilities where other technologies cannot deliver the same reliability, coverage, or control.

Shared licensed spectrum, like CBRS, enables on-site, business-controlled 5G without the costs or constraints of nationwide licenses. So, it is no surprise that CBRS is the dominant platform for private 5G. In fact, CBRS was the most widely used band for private 5G deployments across the globe per the April 2026 State of the Market Report released by the Global mobile Suppliers Association (GSA).¹²

CBRS in Action: Cargill's Private 5G Deployment

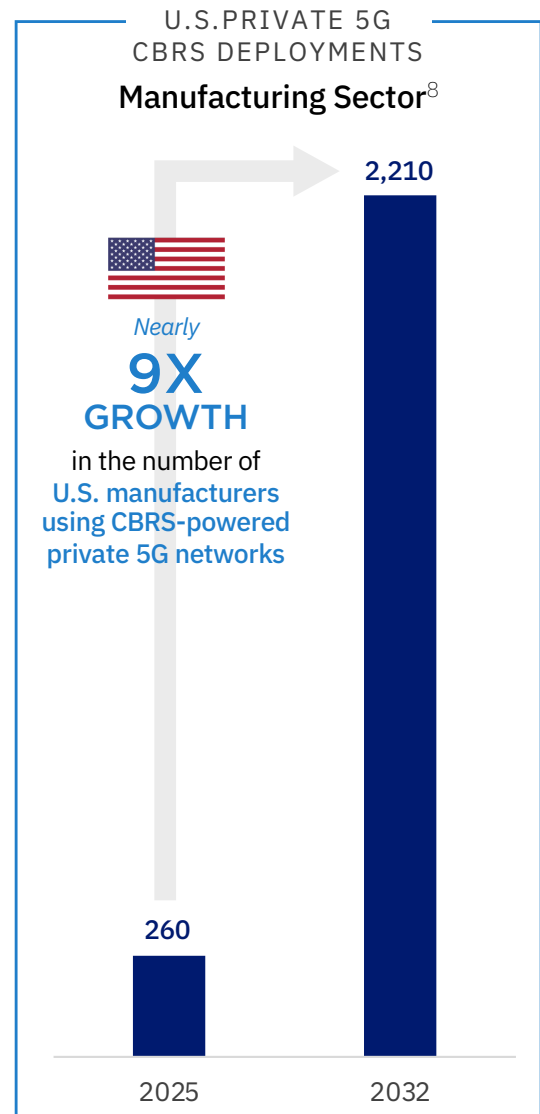


Cargill's CBRS network was built to address the cost, coverage, and mobility limitations of traditional consumer-focused macro-cellular deployments in industrial environments.

Since it was installed, CBRS has delivered consistent, predictable performance for mobile and mission-critical use cases such as forklifts, AGVs, tablets, and outdoor operations. Cargill has already expanded CBRS to 50 additional facilities, with plans to expand to 100 more.¹³

CBRS is supporting America's innovative spirit and advancing homegrown manufacturing.

- At least **260 U.S. manufacturers** are using CBRS-powered private 5G networks⁸
- In 2032, that number is expected to reach **2,200+ U.S. manufacturers**⁸
- Nearly **9X growth in CBRS-powered private 5G networks** powering U.S. manufacturing⁸



Reshoring Critical Supply Chains & Rebuilding America's Industrial Base

CBRS private networks support advanced automation, robotics, and secure on-premises connectivity, helping American companies like U.S. Steel, John Deere, Logan Aluminum, Dow Chemical, and Tesla compete globally to beat China.¹⁴

CBRS powers the companies investing in, hiring for, and building next-generation, American-made technology.

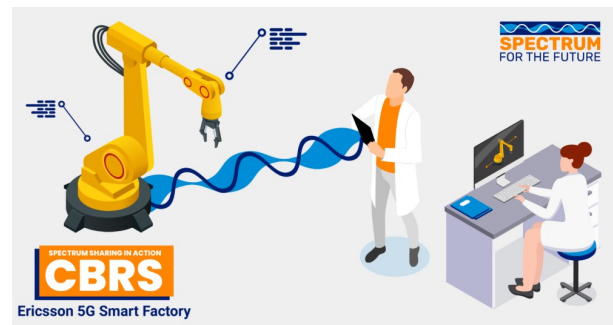
CBRS is also powering the companies investing and hiring to build next-generation, American-made technology, like Ericsson¹⁵, with its 5G Smart Factory, or electronics manufacturer Foxconn.¹⁶ Tarana, a next-generation fixed wireless access technology provider, uses two California-headquartered companies to perform its manufacturing, with most of the company's 400 employees, including 26 PhDs, also based in California.⁴⁵



CBRS has spurred the rise of U.S.-based telecommunications equipment manufacturing. Companies designing and building CBRS radios, core networks, and software are headquartered in America—creating American jobs, revitalizing industrial capacity, and securing the supply chain against geopolitical risk.¹⁰

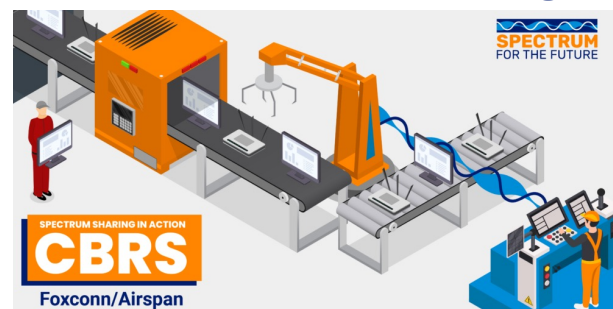
THE AMERICAN MADE 5G COALITION

CBRS in Action: Ericsson's 5G Smart Factory



At Ericsson's 300,000-square-foot 5G Smart Factory in Lewisville, Texas, CBRS is enabling cutting-edge manufacturing of 5G and Advanced Antenna System radios, creating 500+ new jobs that are literally fueling 5G infrastructure deployment in the United States. The CBRS-powered network supports energy management, environmental monitoring, augmented reality for remote support, and mobile alerting to reduce production loss at the Smart Factory.¹⁵

Foxconn Smart Manufacturing



At its 100,000 square-foot smart manufacturing park in Mount Pleasant, Wisconsin, Foxconn uses dynamic spectrum sharing in the CBRS band to automate its smart factories. Right now, these solutions are enabling operation of automatic guided vehicles and robotics, while connecting a data center, lab space, factory stations and more.¹⁶

What is the Value of Private 5G for U.S. Manufacturers?

Private 5G is driving measurable productivity and cost gains. Manufacturers report reduced downtime, improved operational efficiency, and significant cost savings.

For example, Fortune Global 500 companies lose a combined \$1.4 trillion per year to unplanned equipment downtime.¹⁷ But CBRS-enabled private networks are reducing manufacturing downtime by as much as 30%, while also enabling automation, predictive maintenance, and real-time analytics.⁸

Unplanned Downtime:
↓30%

After installing a CBRS private 5G network, one U.S. automotive manufacturer reduced its unplanned downtime by 30%.⁶

Estimated Cost Savings:
↑38%

As a direct impact of connecting their machines and equipment wirelessly with 5G, manufacturers anticipate estimated costs savings of roughly 38% on average.¹⁴

“5G is vital to the Manufacturing 4.0 movement that’s propelling America to be the global hub for smart, modern manufacturing. Manufacturers are harnessing 5G to make workplaces safer, boost efficiency and strengthen resilience across our operations.”¹⁸



– Jay Timmons | President and CEO,
National Association of Manufacturers

CBRS in Action: BMW Manufacturing



With a production rate exceeding 1,500 cars daily, the South Carolina facility is BMW’s largest manufacturing hub in the world— and it’s powered by CBRS. BMW’s private 5G wireless network is streamlining storage and manufacturing activities and ensuring a seamless operational flow.¹⁶

John Deere Factories



John Deere deployed CBRS-powered private networks in factories across Illinois and Iowa to connect digital devices to manufacturing operations, use video analytics to improve quality, and operate autonomous vehicles and robots.¹⁶

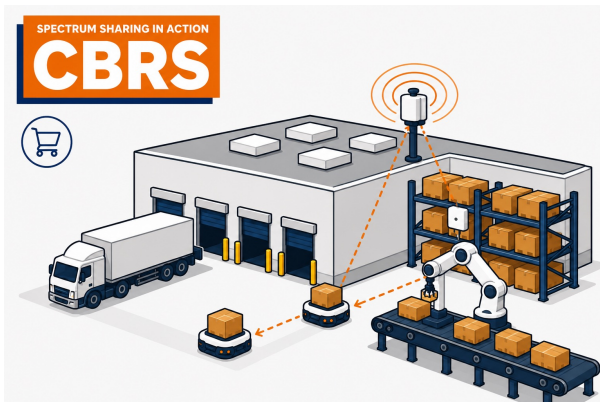
CBRS in Action:

Dow Production Plants



With 40 different production plants covering 20 square miles, each with *thousands* of mechanical components, Dow's Freeport site is the largest integrated chemical manufacturing complex in the Western Hemisphere. An industrial site like Dow's doesn't have the benefit of commercial connectivity, and tons of steel and concrete make connectivity difficult, but CBRS was up to the challenge. In the first four months following the CBRS launch, the plant completed 28,000+ digital procedures, reducing the time it takes workers to complete operations and maintenance activities and increasing worker safety.¹⁹

Large Global Retailer



A large global retailer is testing the use of a wireless networking tool operating in the CBRS band – it can handle four times the amount of traffic of traditional 5G and is designed to control robotic systems to improve warehouse efficiencies. The retailer plans to test this innovative tool at distribution centers in Brooksville, Florida and Lebanon, Pennsylvania.¹⁶

To support the wireless needs of U.S. manufacturers and leading industries, policymakers *must* understand that

CBRS is the mid-band spectrum truly powering private 5G deployments and American innovation, productivity, & global wireless leadership.



Private 5G Manufacturing Impact Study²⁰

Over a 5-year period, a U.S.-based electronics manufacturer that adopts private cellular-enabled Industry 4.0 technologies will realize:

7.6%

Increase in Gross Profit

1.19M

Additional Units Produced

\$1.05 Billion

Operational Cost Savings

A Tier One U.S. electronics manufacturer that introduced Industry 4.0 practices would **save an accumulated \$1 billion** from 2021 to 2025 alone, which could **boost the gross profit margin to 19.6%**

CBRS AT WORK:

Cybersecurity

A recent survey conducted by the Digital Manufacturing & Cybersecurity Institute and ABI Research found that improved security was the number one reason why U.S. manufacturers invested in private 5G.⁸

Why? Real-time network monitoring capabilities coupled with low latency means private 5G networks provide a layer of security not found with other networking solutions.

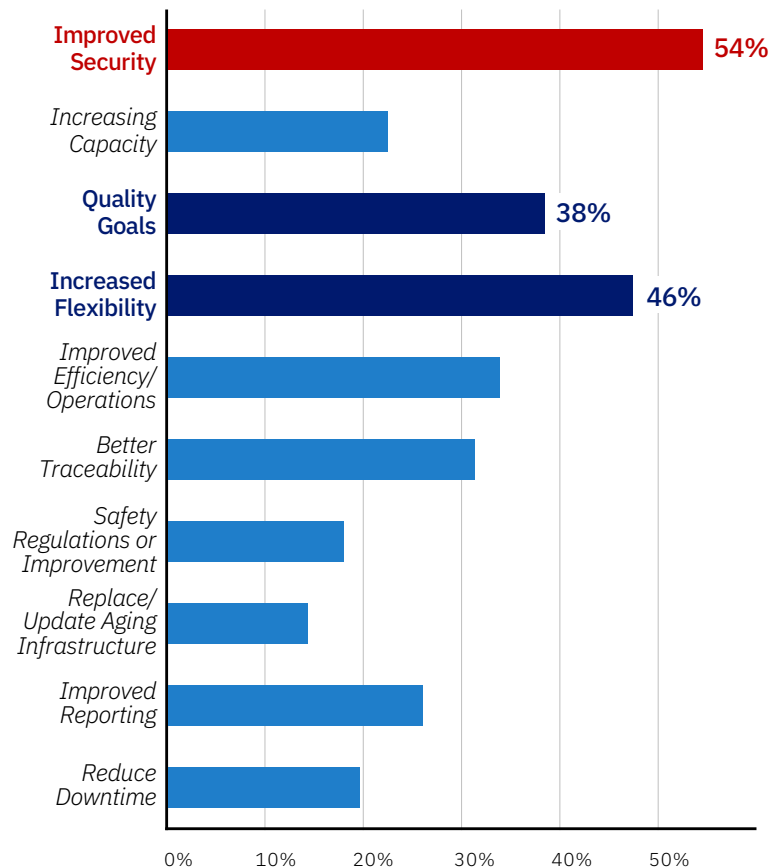
In addition to restricting access to only those users with a Subscriber Identity Module (SIM) card, private 5G networks allow manufacturers to install the connectivity infrastructure on-site, ensuring sensitive data isn't falling into the wrong hands – two strong protective measures to help prevent unauthorized network access or data theft.

Private 5G Networks Drive Productivity, Resilience, & Security

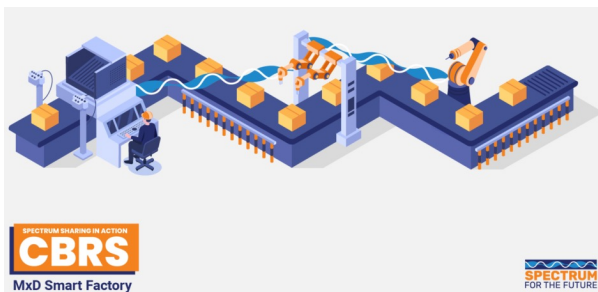
Improved Security:
The #1 reason U.S. manufacturers set up a private 5G network.



PRIVATE 5G INVESTMENT DRIVERS FOR MANUFACTURERS⁸



CBRS in Action: Chicago's MxD



Chicago's MxD, the Digital Manufacturing and Cybersecurity Institute, is allowing manufacturers to test factory automations through a CBRS-powered private network that provides a platform for testing innovative CBRS use cases with lowered costs.¹⁶

Private 5G Networks Deliver for U.S. Manufacturers

According to a study released by the Manufacturing Institute, “5G is poised to help manufacturers in almost every part of their businesses.”²²

The report also quoted National Association of Manufacturers’ Chief Economist Chad Moutray, who said, “Manufacturers’ competitiveness depends on their ability to continuously improve the efficiency and effectiveness of their operations, and disruptive technologies are changing the way that firms innovate and produce.”

Additional findings from the study include:

86%
Will Create New Businesses

86% of manufacturers expect the utilization of 5G will lead to the creation of new businesses.

91%
Important to Business’ Future

91% of manufacturers believe 5G connectivity will be important to the overall future of their business. **61%** say it will be “*extremely important.*”

93%
Expect Some Cost Savings

93% of manufacturers expect to see some level of cost savings as a direct impact of connecting their machines and equipment wirelessly with 5G.

CBRS in Action: Toyota Material Handling



Toyota Material Handling’s Columbus, Indiana warehouse is enjoying increased productivity, faster deliveries to customers, and boosted employee morale since launching its CBRS 5G private network to power business-critical operations at the almost 200,000 square foot facility. Toyota’s advanced, modernized network has reported no disruptions or connectivity losses since its operational launch in November of 2023.²⁴



Private 5G Manufacturing Impact Study²³

ABI Research held discussions with several manufacturers about their private 5G experience. They report the following benefits:

- Up to **20% energy savings** from high-efficiency operations
- Up to **30% maintenance cost reductions**, spurred by predictive and preventative maintenance
- Up to **30% productivity improvements** by minimizing downtime and optimizing operations
- **40%+ decrease in workplace accidents** because 5G supports robust safety measures like real-time equipment monitoring



“Ericsson was able to accomplish in two-to-three months what would have taken us nine-to-twelve months working directly with telecom providers. Their private [CBRS] 5G solutions helped us stay focused on our top priority— our customers.”



Daniel Schumacher
VP, IT Technology, Toyota
Material Handling North America²⁴

CBRS:

Delivering for Rural America

Expanding Connectivity Where Traditional Models Failed

For millions of Americans living in rural communities, broadband access is not an abstract policy debate – it determines whether families can participate in modern economic life. Reliable internet connectivity increasingly shapes access to education, healthcare, precision agriculture, remote work, emergency services, and small-business growth. Yet for decades, many rural communities were left behind because traditional broadband deployment models often could not justify the economics of serving sparsely populated areas with difficult terrain and high infrastructure costs.

CBRS is helping change that equation.

Unlike traditional models that concentrate macro-cellular spectrum access in the hands of a few nationwide carriers, CBRS gives rural broadband providers, wireless internet service providers (WISPs), electric cooperatives, and local operators access to affordable mid-band spectrum capable of delivering robust, high-speed connectivity across underserved areas. The result is one of the most significant grassroots broadband expansions in modern American history, driven by local providers deploying innovative wireless networks tailored to the communities they serve – not by massive nationwide infrastructure monopolies.

CBRS demonstrates that smart spectrum policy can expand competition, lower deployment barriers, and unlock private investment in communities that traditional broadband economics often overlook.

Presently we use CBRS to serve around 1000 customers on our network with that number growing by the day.²⁵

Matthew Fridenstine
North Coast Wireless Communications
Rural OH



While 171 locations may appear modest in scale, each represents a home or community that could cost our cooperative tens to hundreds of thousands of dollars to connect with fiber infrastructure.²⁶

Ricky Martinez
Taylor Telecom
West TX



We currently provide broadband service to over 100,000 customers using Citizens Broadband Radio Service.²⁷

Robert Al Brown
SmartWAVE Technologies
Alpharetta, GA

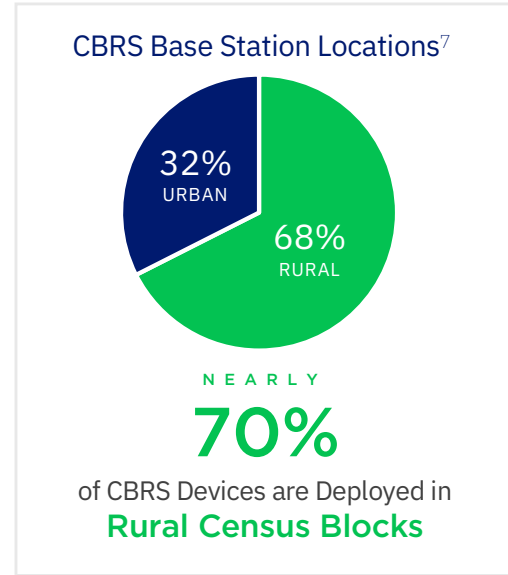


Delivering Connectivity Across Rural America

For rural providers and smaller operators, CBRS offers something traditional licensed spectrum often does not: an affordable, deployable mid-band solution that can deliver robust broadband without billion-dollar auction costs... and it's working.

FCC data shows 10 million+ locations have access to internet service using CBRS-based connectivity.⁴

According to data from NTIA, nearly 70% of the more than 400,000 CBRS base station devices deployed in the U.S. are located in rural census blocks.⁷ In many underserved communities, CBRS is not supplemental, it's essential.



We have installed 20 towers and invested \$2 million in our network to deliver reliable high-speed internet, supporting homes, farms, and businesses where fiber deployment is not feasible. This will affect **600 farms, and 4000 subscribers. We rely on CBRS spectrum to provide these essential services**, enabling us to offer competitive speeds and connectivity in underserved regions.²⁹



Will MacHugh
Eltopia Communications, Inc.
Rural WA



For small wireless internet service providers like us, **CBRS is a critical lifeline both for the rural customers we support and our business.**²⁸



Joel Brick
Interlakes Wireless
South Dakota



Chad Benson
Interlakes Wireless
South Dakota



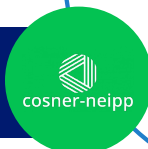
I am the owner of a small fixed wireless ISP with over **400 subscribers in rural Missouri.** We are deeply committed to serving the small towns of Hartville and Mansfield and their surrounding rural areas. In 2024 we made a significant investment—approximately equal to our normal yearly capex spend—in CBRS equipment in order to better serve our communities.³⁰



Andrew Kaiser
Ridgetop Networks, Inc.
Rural MO



The availability of **Citizens Broadband Radio Service (CBRS) spectrum has been crucial for my company to provide sufficiently high speeds to handle the needs for many of our clients.**³¹



Timothy Neipp
Cosner-Neipp Corp.
Rural CA



Barger Creek Wireless, a family operated business, provides fixed terrestrial wireless internet service to **650 customers in rural northern Michigan**. Our service population faces the challenges of poverty and long driving distances to any population center. The region is heavily wooded, largely state forest land, and houses are spread out, making any sort of cable or fiber connection to these homes very expensive for both provider and customer. ... **Our network serves 85% of our customers with CBRS GAA licensing.**³²

Carl Cadwallader
Barger Creek Wireless
Atlanta, MI



We currently provide broadband service to approximately 635 customers, including **323 customers served using Citizens Broadband Radio Service (CBRS)**. For many of these customers, our network represents the only reliable broadband option available.³³

Zach Eggers
The Greater Eastern OR Network
Baker City, OR



Wired or Wireless Inc. provides fixed wireless internet to suburban and rural customers in an area that covers 11 counties in Northeast Washington and Northern Idaho. ... **We use the CBRS GAA Tier to deliver service to over 350 individual customer sites.**³⁴

William Geibel, Jr.
Wired or Wireless, Inc.
NE Washington & Northern ID



Acrospire Networks is a small, locally owned internet service provider based in Northeast Wisconsin, serving approximately **500 homes and businesses with high-speed broadband service**. Our company was started out of necessity to bring reliable internet access to rural areas where larger providers determined service was not economically viable. We focus on connecting underserved communities with dependable, locally supported broadband. CBRS spectrum currently provides broadband service to more than one quarter of our customer base.³⁵

John Lyons
Acrospire Networks
NE Wisconsin



[Intermax] delivers fiber and fixed wireless broadband and phone services in North Idaho and Northwestern Washington, **connecting homes, businesses, and critical facilities and services – including hospitals, schools, and libraries**. Our network relies on the CBRS spectrum, which is essential for serving rural communities.³⁶

Mike Kennedy
Intermax
Coeur d'Alene, ID



“

We have made a continuous investment for the past five years to reach customers that other providers simply don't care about. We serve homes and small businesses, and many of the small businesses are family farms. CBRS is a critical tool in overcoming the dense foliage and challenging terrain that defines our beautiful region. ... **CBRS has been a game changer for us, allowing us to reach customers that otherwise would simply never get service.**³⁷



Alex Kelly
ICON Technologies, Inc.
Carbondale, PA

“

We serve approximately 3,000 rural customers throughout **40 rural communities**. ... To date, approximately 1/2 of our broadband subscribers receive service through fixed wireless. **1,200 of those are served using CBRS Spectrum.**³⁸



Donnie McCorkle
ATC Communications
Arapahoe, NE

“

We currently provide broadband service to approximately **1239 total customers, including 445 customers, served using Citizens Broadband Radio Service (CBRS).**⁴⁰



Bill Blackford
Farmers Telecommunications Inc.
Rural CO

“

Across more than **20 California counties**, we currently have [CBRS] GAA availability at approximately **560,000 locations** and PAL-based availability at approximately **127,000 locations.**³⁹



Craig Stein
Cal.net, Inc.
Rural CA

“

Our company provides high-speed internet to our customers, with a particular **focus on delivering reliable broadband to rural/remote areas where traditional internet infrastructure has been limited or not available.** In order to deliver our fixed wireless services, we use the Citizens Broadband Radio Service (CBRS) spectrum in the 3550-3700 MHz band.⁴¹



Robert Pensworth
CresCommWiFi
Port Angeles, WA

“

Softcom serves “primarily rural communities across Sacramento and San Joaquin Counties of California. We currently provide **broadband service to approximately 3000 total customers, including 1500 customers served using Citizens Broadband Radio Service.**⁴²



Kevin Triplett
Softcom Internet Communications, Inc.
Rural CA

CBRS:

American Industrial Infrastructure

Enabling A Once-In-A-Generation Digital Transformation

America's industrial economy is undergoing a once-in-a-generation digital transformation. From airports to warehouses, energy facilities, maritime ports, and logistics hubs, critical infrastructure operators are increasingly relying on real-time data, automation, AI-enabled analytics, robotics, autonomous systems, and connected sensors to improve efficiency, safety, resilience, and competitiveness.

But these environments require something traditional consumer-focused macro-cellular networks were never designed to provide: secure, dedicated, highly reliable wireless connectivity that is optimized for operational and mission-critical use cases.

That is why industrial operators across the U.S. are increasingly turning to CBRS-based private wireless networks.

Unlike traditional consumer-focused macro-cellular service, CBRS enables industrial operators to deploy and manage their own localized wireless infrastructure tailored specifically to their operational needs.

CBRS in Action:

Railroad Operator Norfolk Southern Corporation

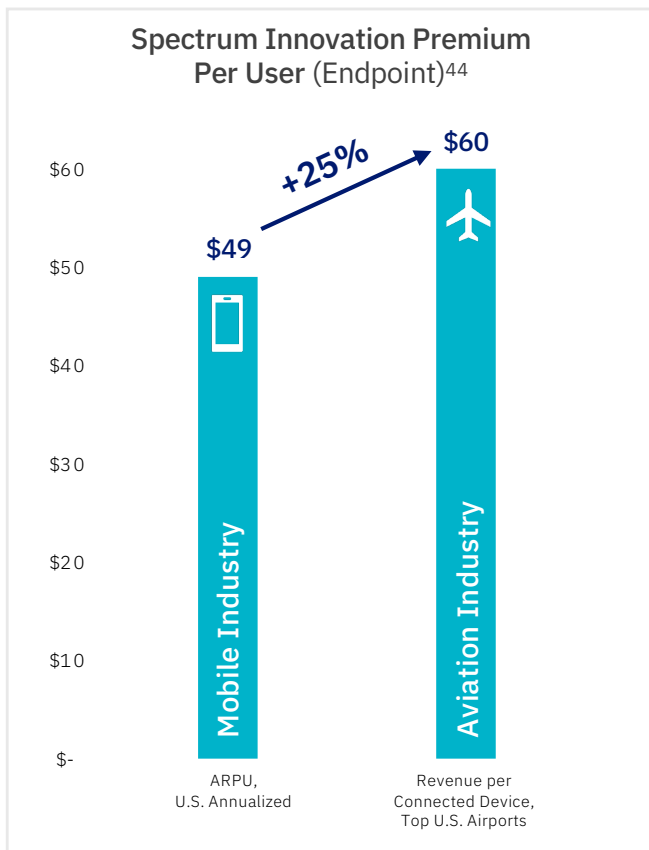


Freight railroad operator Norfolk Southern Corporation has deployed a private LTE network using CBRS spectrum to enhance wireless connectivity for rail yard workers at its outdoor rail switching facilities, enhancing rail safety and efficiency with AI inspections and resilient networking solutions. Norfolk Southern is using CBRS to accelerate operations across 22 states and creating a smarter and safer rail industry.⁴³

In environments where downtime, congestion, or connectivity failures can carry enormous operational and economic consequences, CBRS private networks provide the low latency, mobility, security, coverage, and reliability required to support next-generation industrial applications.

CBRS Generates More Economic Value

The economics of CBRS are compelling. For example, analysis of one large U.S. airport using CBRS-enabled digital transformation technologies found that the airport generated value per connected endpoint of approximately \$60 annually, roughly 25% greater than the approximately \$49 annualized average revenue per user (ARPU) generated by traditional mobile network operators using comparable spectrum resources.⁴⁴



The implication is significant: When spectrum is placed directly in the hands of enterprises modernizing critical infrastructure, it can generate greater economic value than when used solely to expand conventional consumer mobile services.

Airports represent only a small portion of the U.S. economy, but they provide a powerful demonstration of the broader “innovation premium” created when enterprises have direct access to mid-band spectrum through frameworks like CBRS.



Allocating spectrum directly to the businesses that use it **creates more value** than allocating it directly to cellular providers like AT&T, Verizon, and T-Mobile.

CBRS in Action: Dallas-Ft. Worth Airport



At DFW, CBRS-based private wireless networks are helping transform operations across a 27-square-mile campus roughly the size of Manhattan, where extending traditional fiber connectivity to remote locations could cost well into the six figures for only a handful of endpoints. By deploying private CBRS infrastructure, DFW achieved dramatically lower latency and transaction speeds reportedly 50–70% faster than traditional consumer-focused macro-cellular networks, all while supporting more than 40 security cameras, digital signage, construction operations, and other mission-critical applications across the airfield and terminal environment.

Airport officials say the dedicated spectrum, broad outdoor coverage, and lower infrastructure costs enabled by CBRS are turning private wireless into “critical infrastructure” for modern airport operations, improving operational efficiency, security, passenger experience, and long-term scalability.⁴⁶

CBRS AT WORK:

Airports

America's airports are rapidly becoming highly connected digital infrastructure hubs, managing enormous flows of passengers, cargo, vehicles, security operations, and critical logistics in real time. That transformation requires something traditional consumer-focused macro-cellular networks were not designed to provide: secure, dedicated, highly reliable wireless connectivity tailored to mission-critical operations.

For airport operators, wireless connectivity is no longer viewed as a consumer convenience. It is core infrastructure that is more like a utility than a commercial mobile service. And increasingly, airports are turning to CBRS-based private wireless networks to fill that role.

CBRS Use Cases: Aviation Industry

- ✓ **Safety & Security, Including Perimeter Security**
- ✓ **Enhanced Passenger Processing & Screening**
- ✓ **Autonomous**
Autobus, Luggage Carts, Jetways
- ✓ **Computer Vision**
Resource Management, Below-Wing Safety
- ✓ **Turn Around Times**

Airports require purpose-built networks capable of supporting safety systems, autonomous operations, computer vision analytics, perimeter security, connected infrastructure, and operational technologies that cannot tolerate congestion or dependence on public-network priorities.

CBRS enables airports to deploy and control these networks directly, ensuring that communications supporting airfield operations, surveillance systems, building controls, and critical logistics remain reliable, secure, and optimized for airport-specific needs.

Airports with Operating CBRS Networks Include:⁴⁴



DALLAS
FORT WORTH
INTERNATIONAL
AIRPORT



Oakland San Francisco Bay Airport



LOS ANGELES WORLD AIRPORTS



Reno-Tahoe
Airport Authority



Seattle-Tacoma
International
Airport

CBRS in Action: Minneapolis-St. Paul Airport



At MSP, CBRS-based private wireless networks support more than 25 airside operations, field maintenance, and trades vehicles responsible for FAA-mandated safety inspections across the airport's sprawling airfield. These operations require real-time GIS mapping, precise location services, and the transmission of high-resolution imagery that traditional consumer-focused macro-cellular networks often cannot reliably support due to coverage and capacity limitations. By deploying a private CBRS network, MSP achieved higher-bandwidth connectivity, expanded coverage across the airfield, and access to high-definition premium mapping tools that improve operational awareness, efficiency, and airfield safety.⁴⁴

CBRS AT WORK:

The Energy Sector

America's energy sector is rapidly modernizing as utilities, operators, pipelines, and refineries deploy AI-driven monitoring systems, industrial IoT sensors, predictive maintenance platforms, autonomous inspection technologies, and real-time operational analytics to improve reliability, efficiency, resilience, and safety. U.S. energy operators are turning to CBRS-based private wireless networks to provide the dedicated connectivity backbone they need to modernize and secure critical energy systems.

These CBRS networks support real-time monitoring of substations, pipelines, drilling operations, power generation facilities, smart grid systems, remote field equipment, and environmental sensors while enabling predictive maintenance systems that can identify equipment failures before they occur. AI-enabled predictive maintenance systems powered by CBRS connectivity can reduce costly operational disruptions while improving infrastructure resilience and extending equipment life cycles. In refineries, chemical plants, and industrial energy facilities, CBRS-powered private networks connect workers, autonomous inspection systems, robotics, drones, and analytics platforms operating in dense industrial environments where reliable connectivity is essential for both operational continuity and worker safety.

For utilities and energy providers facing increasing demands for grid modernization and infrastructure hardening, CBRS provides a scalable, cost-effective platform capable of supporting the next generation of digitally connected energy infrastructure.⁴⁷

CBRS Use Cases: The Energy Sector

- ✓ **Safety & Security**
Video Surveillance,
Wearable Safety
- ✓ **Automation**
Autonomous
Vehicles, Drones
- ✓ **Operational Efficiency
& Logistics**
Wellhead Sensors,
Drilling Equipment,
Field Worker Tablets,
Ruggedized Handsets

CBRS in Action: Chevron Phillips Chemical



CBRS private cellular networks allow companies like Chevron, which acquired 26 licenses in 21 counties in the CBRS PAL auction, to become their own telecom operators in remote areas. With 50-60% of Chevron's coverage area lacking access to traditional consumer-facing macro-cellular networks, CBRS has proven itself indispensable.⁴⁸

Chevron has integrated a private network powered by CBRS to keep workers connected to mission-critical business applications and help monitor and manage industrial equipment on the plant floor.¹⁶

Chevron and its affiliate, CPChem, are also deploying private cellular infrastructure to enhance connectivity for critical operations at their remote exploration and production operations.⁴⁹

Cameron LNG, EOG Resources, Pioneer Natural Resources and Oxy are also engaged in efforts to integrate CBRS network equipment into their private communications systems.

ExxonMobil

PIONEER
NATURAL RESOURCES



Occidental Petroleum Corporation



CBRS AT WORK:

Ports

America's ports are rapidly evolving from traditional cargo transfer facilities into highly automated, AI-enabled logistics platforms that depend on secure, high-capacity wireless connectivity.

As ports become increasingly automated, wireless infrastructure itself is becoming critical industrial infrastructure.

Modern ports increasingly rely on Automated Guided Vehicles (AGVs), autonomous cargo systems, machine vision, predictive analytics, and centralized AI coordination platforms to move containers, optimize scheduling, monitor equipment, and reduce congestion across terminals operating around the clock.

CBRS-based private wireless networks provide ports with the secure, localized, and high-performance connectivity needed to support these systems across sprawling industrial environments where traditional public macro-cellular networks fail to deliver the reliability and control required for mission-critical operations.

The transformation of the Port of Long Beach demonstrates the broader future of industrial infrastructure in the U.S.: AI-enabled, data-driven, autonomous systems operating on dedicated wireless platforms optimized for operational reliability, efficiency, security, and resilience.

CBRS Use Cases: Ports & Maritime Facilities

- ✓ **Safety & Security**
- ✓ **Automation/Autonomous Machinery**
AGVs, Autonomous Sea Drones
- ✓ **Operational Efficiency & Logistics**
Real-Time Asset Tracking, Yard Analytics
- ✓ **Communications & Infrastructure**
Digital Twins, Mission-Critical Connectivity



Ports are becoming AI-driven logistics platforms.

CBRS in Action: The Port of Long Beach



The Port of Long Beach – one of the largest seaports in the world – uses CBRS to support automated guided vehicles moving cargo without human drivers, monitor inventory in real time using CBRS-enabled wireless sensors, and track and route equipment, vehicles, and cargo to improve speeds and workplace safety.¹⁶

At Long Beach, electric AGVs carrying containers weighing up to 70 tons navigate using high-precision digital mapping, advanced sensors, and centralized coordination software that continuously manages traffic flows and operational movements across the yard. AI systems analyze real-time and historical operational data to forecast congestion, optimize resource allocation, improve vessel scheduling, and reduce costly delays. These technologies not only improve throughput and reduce operating costs but also support broader environmental goals by reducing idle time, lowering emissions, improving energy efficiency, and minimizing truck congestion at terminals.⁵⁰

The Port of Long Beach is redefining how cargo is moved, tracked, and managed. What's happening there is setting the benchmark for port modernization across the U.S. and globally.

CBRS AT WORK:

Warehousing & Logistics

As consumer expectations for rapid delivery continue to rise and supply chains become increasingly digitized, modern warehouses are evolving into highly automated, data-driven logistics hubs dependent on continuous, real-time wireless connectivity to support robotics, AI systems, automated inventory management, and machine vision applications.

CBRS-based private wireless networks are increasingly becoming the connectivity foundation for these next-generation logistics operations because of their unique ability to deliver secure, reliable, low-latency connections capable of supporting constant mobility and dense device connectivity in facilities often filled with steel infrastructure, concrete barriers, and moving equipment.

Rather than relying on congested traditional macro-cellular systems originally designed for consumer mobility, **CBRS enables operators to deploy secure, high-performance, localized networks optimized specifically for logistics operations that improve throughput, reduce delays, and lower operating costs.**

The result is faster, more resilient and more efficient modernized supply chains with the ability to support next generation AI-enabled commerce and industrial automation.⁵¹

CBRS in Action:

USMC Logistics Base Albany



At Marine Corps Logistics Base Albany, the U.S. Marine Corps deployed large-scale CBRS-powered private 5G logistics networks to modernize military warehouse operations and strengthen mission readiness.

Covering more than one million square feet and delivering roughly 40 Gbps of wireless capacity, the network supports autonomous forklifts, robotics, advanced inventory tracking, machine vision, augmented reality applications, and AI-enabled logistics coordination in a highly secure industrial environment. The operational results have been dramatic:

- **98%** inventory reordering accuracy
- **65%** faster movement of goods
- **55%** reduction in labor costs

The experience at Marine Corps Logistics Base Albany offers a clear demonstration of how CBRS-based private wireless networks can transform logistics efficiency, operational resilience, and real-time decision-making in mission-critical industrial and defense environments.⁵²

CBRS Use Cases: Warehousing & Logistics

- ✓ Automated Guided Vehicles (AGVs) & Autonomous Drones
- ✓ Robotics Systems and Machine Vision
- ✓ Inventory Scanning & Surveillance
- ✓ Augmented Reality Systems
- ✓ AI-Enabled Inventory Systems
- ✓ Smart Forklifts
- ✓ Predictive and Real-Time Analytics

CBRS: The Model for America's Connected Infrastructure Future

CBRS provides the range, mobility, and interference protection necessary to make private wireless networks across large industrial properties possible at scale. The already substantial use cases for CBRS are rapidly expanding, with CBRS being deployed to support:

- AI-enabled analytics
- Autonomous ground-service vehicles and drones
- Autonomous and computer vision systems
- Connected sensors, lighting, and other IoT applications
- Utility and building management systems
- Real-time data and operational coordination
- Robotics

The extensive use of CBRS highlights why shared and business-accessible spectrum policies matter.

CBRS allows operators – the ones that best understand their operational and communications needs – to deploy targeted, localized wireless infrastructure optimized for safety, efficiency, and resilience. That model is fundamentally different from traditional nationwide macro-network deployment, and it delivers fundamentally different economic benefits.

- ✓ **CBRS provides the bandwidth, range, and security needed for the next wave of digital communications**
- ✓ **Enables airport operators – those that know their own communications and technology needs – to manage their networks**

Ongoing access to CBRS and other shared licensed spectrum bands for business and private-network use is not simply a spectrum-management decision; it is a decision about whether the U.S. will continue enabling digital transformation across critical sectors of the economy.⁴⁴

CBRS in Action:

Miami International Airport



At Miami International Airport, CBRS-based private wireless networks are powering the airport's "Smart Airport 2.0" transformation by enabling secure, high-performance connectivity across passenger services, airport operations, tenants, and IoT infrastructure.

The airport is using CBRS to support digital applications including maintenance sensors, congestion monitoring, automation, operational analytics, and enhanced wireless services throughout one of the nation's busiest international aviation hubs. Airport officials say the private network provides the flexibility, security, and scalability needed to improve passenger experience, reduce operating costs, enable new revenue opportunities, and support the next generation of connected airport operations.

As Miami International Airport's innovation director put it, private networks are "like a Swiss Army knife" – versatile, efficient, and essential for modern operations.¹⁶

CBRS:

Closing the Homework Gap & Enabling AI-Powered Education

CBRS is boosting connectivity in schools, closing the school-to-home digital divide – especially in rural and hard-to-serve areas – and delivering the connectivity students need to learn and grow.

Meaningful access to CBRS spectrum has enabled the deployment of innovative, cost-effective wireless networks that support essential operational, instructional, and clinical workflows across K-12 schools and higher education institutions and drive student achievement, digital equity, and workforce development.

CBRS-based networks support digital learning platforms, online assessments, virtual laboratories, and real-time collaboration tools that are now integral to modern instruction at all levels of education.⁵³



Landon Garner
Phoenix, AZ

CBRS in Action: Syracuse University⁵⁴

Syracuse University, the “Nation’s Most Connected Campus,” has made significant investments in a private CBRS network to address complex connectivity needs that traditional consumer-focused macro-cellular networks cannot fully meet.

The Syracuse CBRS deployment powers:



Building Occupancy Assessment

Syracuse University leveraged its private 5G network, AI, thermal sensors, cameras, and more than 5,400 Wi-Fi access points to improve occupancy accuracy from 80% to 95%, which delivers real-time insight into how classrooms, labs, and campus facilities are actually being used and helping administrators better understand, manage, and optimize campus space.

In-Building Connectivity

With one of the largest private 5G networks in the U.S., Syracuse can deliver reliable, seamless connectivity indoors and out throughout classrooms, labs, and campus facilities and laid the foundation for real-time data collection, operational intelligence, and next-gen smart campus applications.

Improved Student Experience

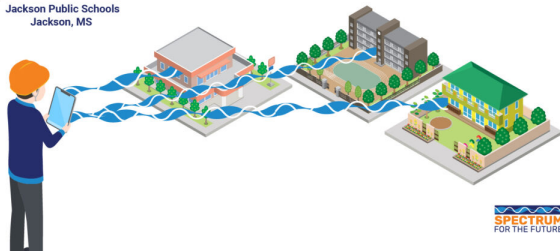
Syracuse combined AI, Microsoft Fabric, and campus-wide connectivity to transform disparate data into actionable insights, enabling students, faculty, and administrators to access information more quickly and helping the university improve transportation, campus services, and the overall student experience.

Tukwila School District



Tukwila School District in Washington State is using CBRS to eliminate educational gaps by delivering reliable internet access directly to students' homes. The district created a private network that ensures as many as **1,200 students have the broadband connectivity needed for remote learning, addressing a long-standing digital divide.**¹⁶

Jackson, MS Public Schools



In Mississippi, Jackson Public Schools is using CBRS to serve nearly **17,000 students across 36 schools spanning 104 square miles.** The district uses CBRS-based private networks to ensure consistent connectivity while enabling remote connectivity, campus safety, wireless coverage on school buses, and at-home internet access for students.¹⁶

The Ohio State University



The Ohio State University is utilizing CBRS networks to accelerate agricultural technology research and development. Through partnerships, **OSU's 200+ academic centers use CBRS-powered private networks for scalable agricultural research** that improves productivity and sustainability from local farms to global food systems.¹⁶

Fresno Unified School District



Fresno Unified School District in California is using CBRS-based private networks to close the school-to-home digital gap across its district. With the installation of CBRS-powered base station towers on schools, the district has **expanded connectivity to its students across 24 school neighborhoods with plans for further expansion underway.**¹⁶

Cal Poly's Smart Campus



California Polytechnic State University is using CBRS to create a fully digital campus environment. Partnering with Federated Wireless and AWS, Cal Poly deployed private 5G networks that **support smart buildings and precision agriculture research and enable innovative applications across its six college locations and academic programs.**¹⁶

University of Wisconsin



The University of Wisconsin-Milwaukee's Connected Systems Institute private 5G CBRS network allows students, faculty, and industry partners to collaborate on critical smart manufacturing applications, from IIoT sensor integration to autonomous robotics control – showing how **CBRS enables next-gen manufacturing research and workforce development.**¹⁶

Ft. Worth School District



Fort Worth Independent School District in Texas is **leveraging CBRS technology to provide at-home connectivity in less densely populated areas**. Using CBRS-powered base stations, private networks, and connected equipment, Fort Worth ISD has ensured students have the connectivity they need to thrive in today's digital world.¹⁶

Boulder Valley Schools



Boulder Valley School District (BVSD) in Colorado is deploying **CBRS networks across 44 schools** in partnership with local internet service providers to connect student households in mountainous areas. Using district-owned fiber for backhaul, BVSD mounted **CBRS radios on school rooftops, providing free connectivity to ~1,000 student households**.¹⁶

Castleberry Independent School District



In Texas, Castleberry schools are using CBRS to ensure all elementary students have in-home connectivity while keeping costs to the district affordable. Three strategically placed **cell towers powered by CBRS spectrum, deliver complete coverage for student households at three elementary schools**, ensuring reliable connections for homework.¹⁶

Fontana Unified School District



Fontana Unified School District is deploying CBRS to reach students living in remote areas. **After testing service to ~4,000 students, FUSD is expanding the network to deliver cost-effective and reliable connectivity**. Students receive school-issued devices that connect to CBRS equipment, routing connections to the district's secure network.¹⁶

Harris County Libraries



The Harris County, Texas Public Library System deployed **31 CBRS base stations** on county buildings and monopolies, plus two mobile units for emergency response, with **each supporting ~300 simultaneous users**, bringing free connectivity to students, parks, and community centers. The initiative also distributes connected devices through libraries.¹⁶

Val Verde Unified School District



Val Verde schools are using a hybrid approach, combining **CBRS and Wi-Fi technologies to connect 1,400 student households**. The district uses CBRS for flat terrain and Wi-Fi for hilly areas, ensuring optimal coverage regardless of geography. Students receive external antennas and indoor routers that automatically authenticate school-issued laptops.¹⁶

CBRS:

Expanding Consumer Choice & Challenging Market Concentration

For years, the U.S. wireless market has been defined by a simple reality: access to licensed mid-band spectrum has largely been concentrated in the hands of the nation's three largest mobile carriers.

Nearly 90% of the more than 500 MHz of mid-band spectrum auctioned by the FCC between 2017 and 2022 was the exclusive licensed macro-cellular spectrum accessible only to massive conglomerates like AT&T, Verizon, and T-Mobile.¹ Over that same period, only 70 MHz of shared licensed spectrum was auctioned (CBRS PALs) with an additional 80 MHz licensed by rule (CBRS GAA), yet shared spectrum is increasingly delivering many of the most important innovations, competitive pressures, and consumer benefits in the wireless marketplace.²

CBRS is helping change the economics of wireless competition and delivering value traditional macro-cellular networks cannot.

By enabling new entrants to deploy localized wireless infrastructure and offload traffic onto privately managed spectrum, CBRS is creating new forms of competition that were previously impossible without billions of dollars in auction spending.

Cable operators like Spectrum Mobile are increasingly using CBRS-based infrastructure to reduce dependence on traditional wholesale arrangements, adding targeted capacity where consumers actually use the most mobile data and improving network economics. That increased competition is benefiting consumers directly through lower prices, improved service offerings, and expanded wireless choice.⁵⁵

Importantly, CBRS demonstrates that wireless competition is no longer driven solely by nationwide macro-cellular coverage. Increasingly, wireless performance depends on targeted densification, localized capacity deployment, and intelligent traffic management in high-demand areas such as apartment buildings, campuses, stadiums, airports, logistics hubs, and urban corridors. Shared spectrum enables precisely that kind of efficient deployment.

**The broader lesson is clear:
Spectrum policy shapes market structure.**

Exclusive licensed spectrum alone tends to reinforce concentration among incumbent nationwide carriers. Shared spectrum frameworks like CBRS expand participation, lower barriers to entry, and create opportunities for new forms of wireless competition that benefit consumers, businesses, and the broader economy alike.

CBRS Is Driving a New Era of Consumer Choice & Mobile Competition

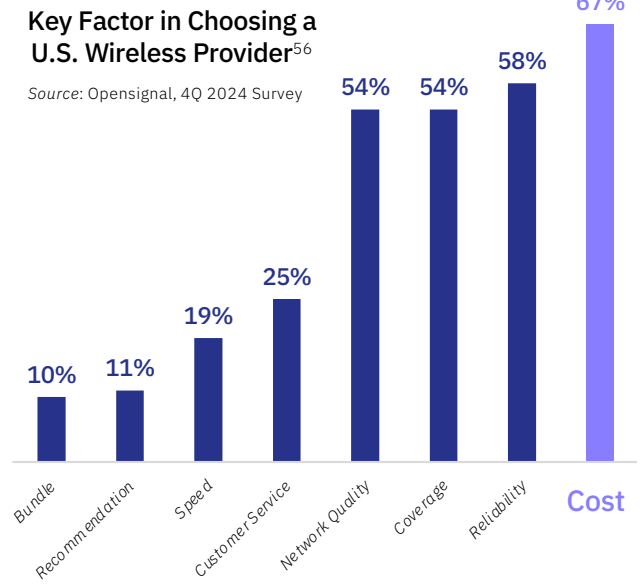
CBRS is one of the few spectrum bands that expands ownership opportunity beyond the three legacy consumer-focused macro-cellular carriers.

And that matters to consumers.

Why? Because CBRS is making it possible for new mobile competitors, including Spectrum Mobile and Xfinity Mobile, to reduce their dependency on the more expensive spectrum they can buy only from the “Big 3” traditional cellular providers.

And the results are increasingly visible across the marketplace. As cable and new entrants expand their wireless offerings, consumers are benefiting from greater pricing pressure and improved service competition because new mobile competitors are passing the savings on to American families.

When Americans choose a wireless carrier, **cost is their #1 consideration.**



New mobile entrants are passing the savings on to American families.

In fact, the Consumer Price Index (CPI) shows real prices for unlimited mobile service plans declined substantially in recent years – by over 10 percent in 2025 and 35 percent over the last five years – even as mobile data consumption continues to grow dramatically.⁹

Mobile Service Prices in 2025:

↓10%

The Consumer Price Index (CPI) shows real prices for unlimited mobile service plans declined by over 10 percent in 2025.⁹

Mobile Service Prices 2020-2025:

↓35%

The Consumer Price Index (CPI) shows real prices for unlimited mobile service plans declined by 35 percent over the last five years.⁹

And because more than 200 million consumer devices already support CBRS, the ecosystem for shared-spectrum-powered competition is already deeply embedded in the American wireless market.⁶

America doesn't have a spectrum shortage... It has a competition shortage.

Operators like Spectrum Mobile and Xfinity Mobile are using CBRS-based infrastructure to add targeted capacity in the places where consumers use the most mobile data, like apartment buildings, campuses, and airports. That means more efficient deployment, which delivers improved network economics and increased competition – and consumers win with lower prices, improved service offerings, and more choice.

The big three cellular providers are continually telling Congress they need more exclusive spectrum (while repeatedly and consistently admitting to investors they don't), but the truth is:

**America doesn't have a shortage of high-power exclusive licensed spectrum...
It has a shortage of spectrum like CBRS.**

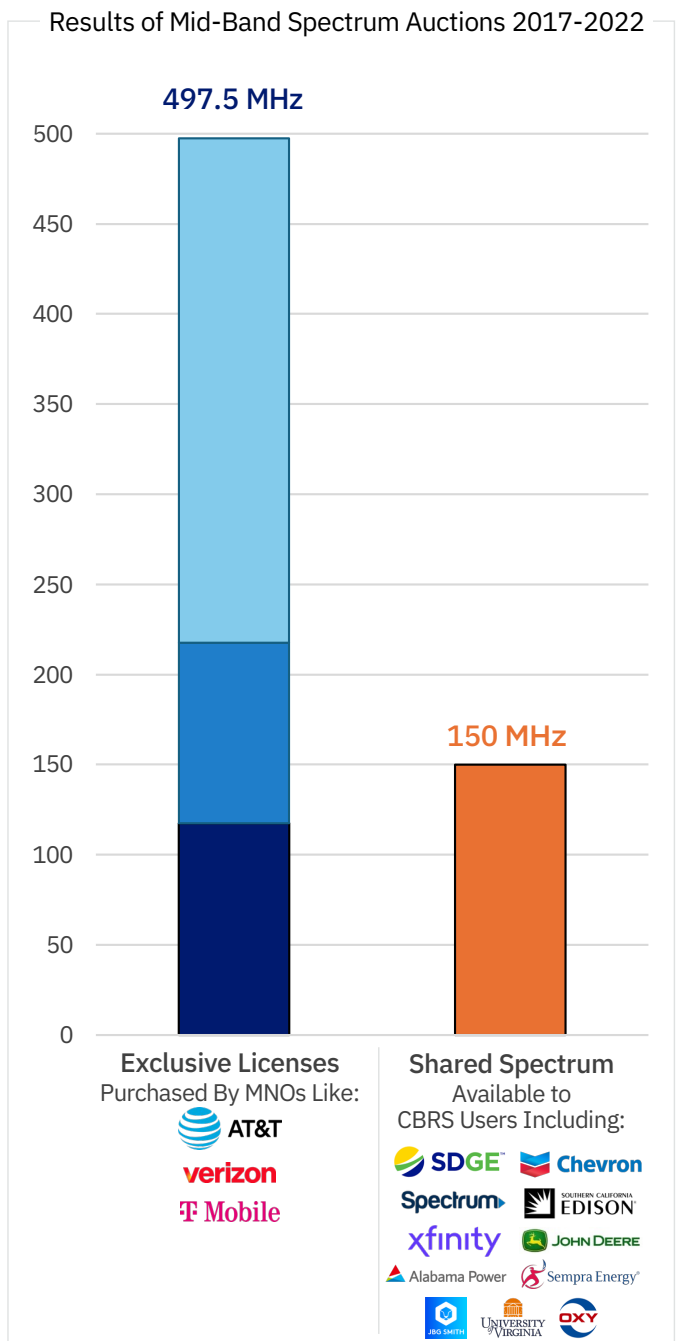
Shared licensed spectrum connectivity drives innovation and competition because it is accessible to the businesses, factories, schools, hospitals, ports, and rural providers modernizing the American economy.

From 2017-2022 alone, the FCC auctioned 497.5 MHz of mid-band exclusive licensed spectrum for use by companies like AT&T, Verizon, and T-Mobile.¹ Over that same period, only 70 MHz of shared licensed spectrum was auctioned (CBRS PALs) with an additional 80 MHz licensed by rule (CBRS GAA)²:

| Exclusive Licensed Macro-Cellular Spectrum | |
|--|------------------|
| 2.5 GHz | 117.5MHz |
| 3.45-3.55 GHz | 100.0 MHz |
| C-Band | 280.0 MHz |
| Total: | 497.5 MHz |

| Shared Licensed Spectrum | |
|--------------------------|----------------|
| CBRS PALs + GAA | 150 MHz |
| Total: | 150 MHz |

Traditional High-Power Exclusive Licensed Cellular Providers Have **MORE THAN 3X MORE MID-BAND SPECTRUM** vs. CBRS-Style Shared Licensed Spectrum

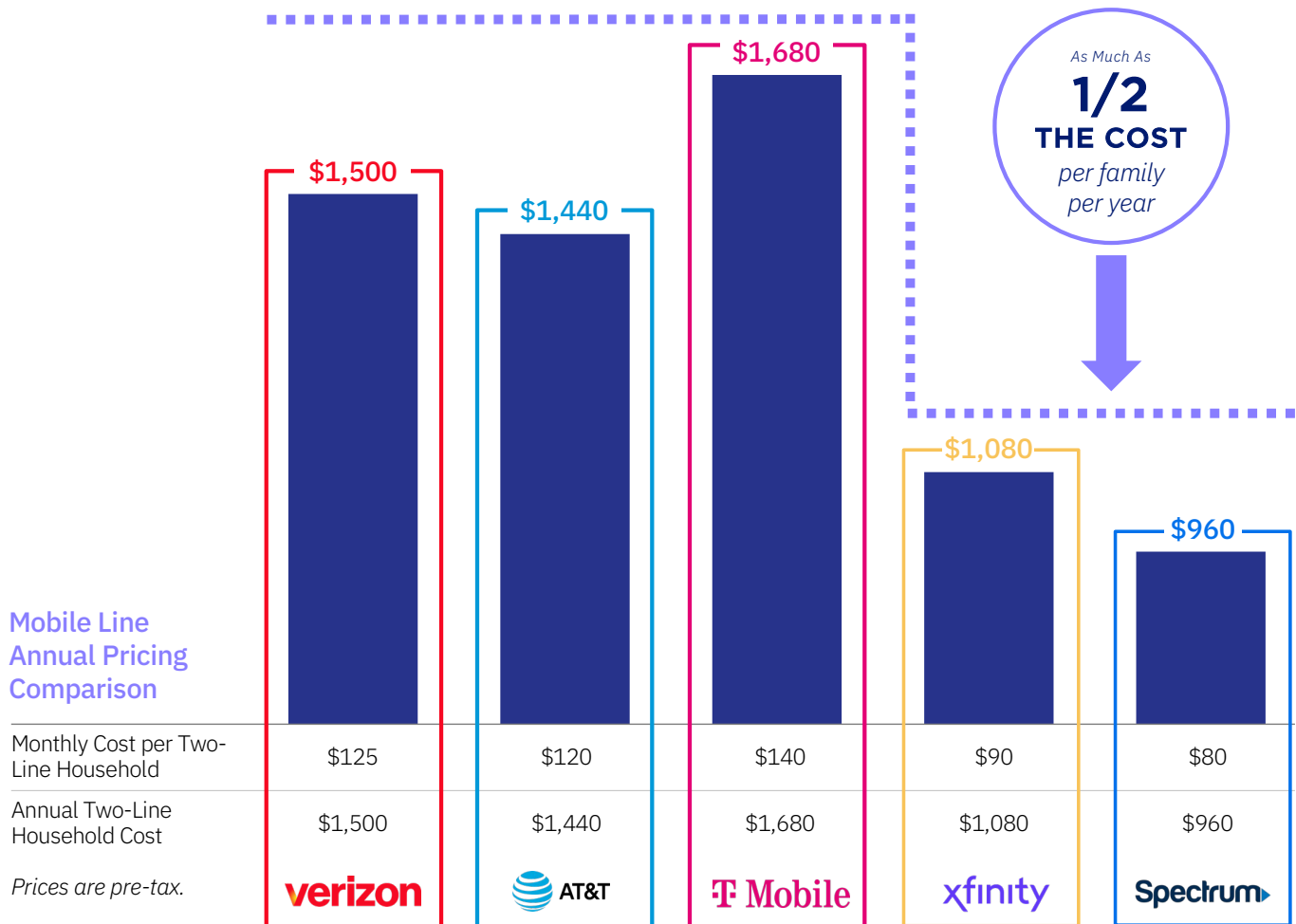


More Accessible Spectrum = More Benefits for Consumers

CBRS made it possible for new mobile operators beyond the three legacy consumer-focused macro-cellular carriers to own spectrum.

The downstream results are increasingly visible across the marketplace. As cable and new entrants expand their wireless offerings, consumers are benefiting from greater pricing pressure and improved service competition.

It's no wonder the **Big 3 Cellular companies are aggressively lobbying Congress for spectrum arrangements that would rig the system against their new competition** – companies that are lowering annual mobile costs for American families and delivering hundreds of dollars in savings every year.



Plan comparisons selected based on comparable mobile plans (Spectrum Mobile Unlimited Plus, Xfinity Mobile Plus, AT&T Unlimited Extra 2.0, Verizon Unlimited Plus, T-Mobile Experience More). Auto-pay discounts are included. Prices from company websites as of 04/17/26. Note: AT&T's OneConnect Duo plan was not selected for comparison as the mobile plan included in OneConnect is not comparable to Spectrum's Unlimited Plus plan (OneConnect is only available in select fiber-eligible locations and does not offer equipment installment plans, device discounts, premium data, hotspot data, an international plan, or contract buyouts).

The American Model for the World to Follow

CBRS is a uniquely American innovation that has become a global proof point showing localized mid-band spectrum access works for businesses and that spectrum policy can be innovative, efficient, and pro-competition.

After the United States established CBRS, numerous other countries adopted localized or enterprise-focused mid-band licensing approaches, including Australia, Canada, France, Germany, Japan, South Korea, and the United Kingdom.¹²

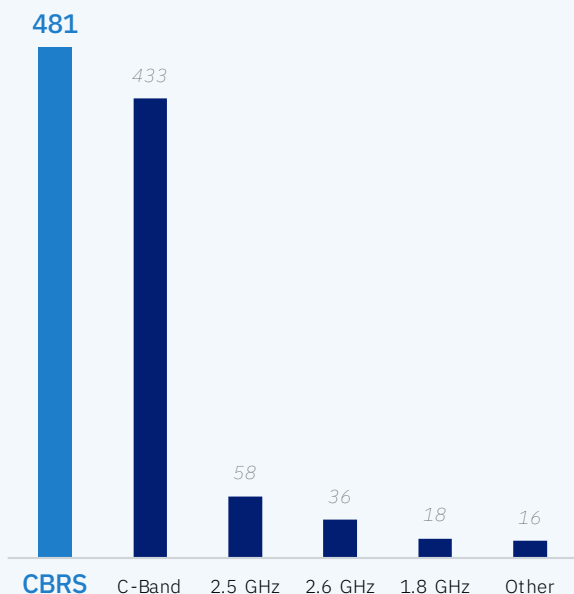


CBRS has driven U.S. leadership in private 5G.

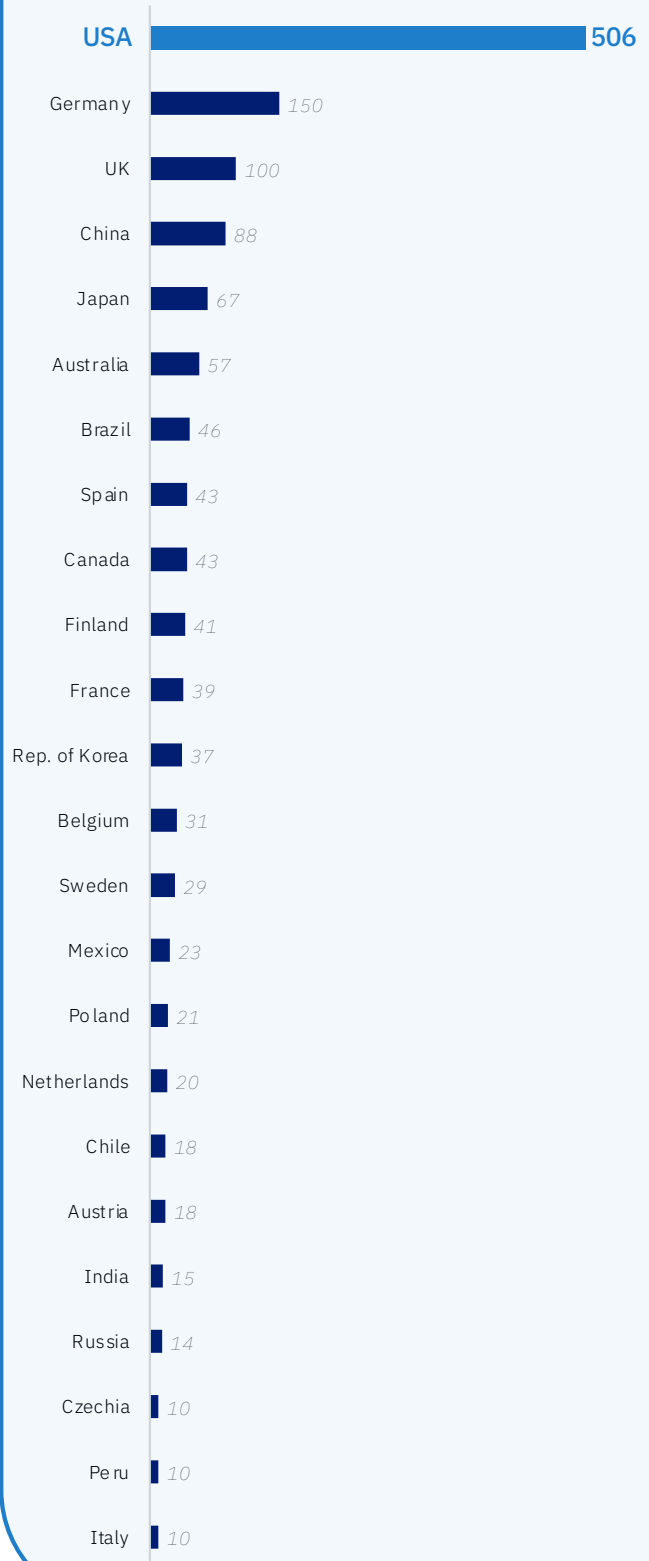
In fact, CBRS is the most widely used band for private 5G networks across the globe and the U.S. significantly outpaces all peer countries in terms of its number of private wireless network customers.

Globally, CBRS is the most widely used band for private 5G networks.

BANDS USED FOR PRIVATE MOBILE NETWORKS¹²



PRIVATE MOBILE NETWORKS BY COUNTRY¹²



CBRS:

America's Most Widely Utilized Mid-Band Spectrum Asset

One of the most successful and economically productive mid-band spectrum platforms in the world, CBRS has delivered results across American manufacturing, logistics, agriculture, energy, education, healthcare, airports, ports, rural broadband, and mobile competition. CBRS is proof that shared mid-band spectrum drives investment, innovation, and industrial transformation at massive scale while expanding opportunity far beyond the handful of nationwide carriers that have dominated traditional high-power licensed spectrum.

The success of CBRS has fundamentally changed the spectrum policy debate. For decades, many policymakers assumed the highest and best use of mid-band spectrum was exclusive nationwide licensing controlled by a small number of incumbent operators. CBRS has demonstrated something different: Some of the greatest economic value is created when businesses, schools, manufacturers, hospitals, utilities, ports, airports, logistics hubs, and rural providers can directly access and deploy wireless infrastructure tailored to their own operational needs. Shared spectrum is not a compromise. It is an innovation platform.

That distinction matters enormously for America's economic future. Because of CBRS, U.S. factories are deploying AI-enabled automation, strengthening supply-chain resilience, reducing industrial downtime, modernizing critical infrastructure, enabling autonomous logistics systems, supporting precision agriculture, improving energy operations, and reconnecting underserved communities to the digital economy. CBRS is the wireless foundation for the next generation of American industrial competitiveness.

And critically, CBRS is succeeding because its current framework is succeeding. The balanced combination of licensed PAL access and flexible GAA sharing has enabled billions of dollars in private investment, deployment across more than 80% of U.S. counties, and participation by more than 1,000 operators ranging from Fortune 500 manufacturers to small rural broadband providers. The evidence is clear: shared mid-band spectrum can support both large-scale investment and broad-based innovation without sacrificing reliability, performance, or efficiency.

The choice before policymakers is therefore straightforward. The U.S. can continue building on one of the most successful spectrum innovations of the modern wireless era—preserving the shared-access framework that has made CBRS a global model for industrial wireless connectivity and private 5G leadership, or it can undermine this progress in favor of policies that further concentrate access to this critical spectrum into the hands of a few incumbent carriers, like AT&T, T-Mobile, and Verizon.

CBRS has already shown what the future of wireless connectivity looks like: more competitive, more localized, more resilient, more innovative, and more directly connected to the productive sectors of the American economy.

Preserving, strengthening, and expanding CBRS and spectrum sharing is not simply good spectrum policy— **it's an investment in American manufacturing, American innovation, American competitiveness, & America's long-term global wireless and technological leadership.**

Appendix & Resources

- 1 Auction of Flexible-Use Service Licenses in the 3.45–3.55 GHz Band Closes; Winning Bidders Announced for Auction 110, AU Docket No. 21-62, Public Notice, DA 22-39, 37 FCC Rcd 308 (rel. Jan. 14, 2022); Auction of Flexible-Use Licenses in the 2.5 GHz Band Closes; Winning Bidders Announced for Auction 108, Public Notice, 37 FCC Rcd 10117 (rel. Sep. 1, 2022).; Auction of Flexible-Use Service Licenses in the 3.7-3.98 GHz Band Closes; Winning Bidders Announced for Auction 107, Public Notice, 36 FCC Rcd 4318 (rel. Feb. 24, 2021).

- 2 Auction of Priority Access Licenses in the 3550-3650 MHz Band Closes; Winning Bidders Announced for Auction 105, Public Notice, 35 FCC Rcd 9287 (12) (rel. Sep. 2, 2020).

- 3 *CBRS - Market Metrics - U.S. Distribution*. Keybridge. (Accessed May 26, 2026).

- 4 Federal Communications Commission. National Broadband Map. (Accessed May 13, 2026).

- 5 *CBRS Coalition Sees Growth – and Need for More Spectrum*, Fierce Network (Dec. 8, 2025).

- 6 “As of 2024, 91 percent of the 340 million total Americans owned a smartphone.” Consumer Affairs: Cell Phone Statistics 2026. | “The Average Lifespan of a Smartphone in the U.S. Is Approximately 2.5 Years.” NSYS Group. The Average Lifespan of a Smartphone in the U.S. 2024. | Charter analysis of new mobile device model support for band n48 (CBRS) for Apple, Samsung, and Google models available from the three nationwide mobile network operators. Apple: 100 percent n48 support since iPhone 11 (and partial support beginning with iPhone XR); Samsung: 95 percent n48 support standard on Galaxy S and Z models beginning with Galaxy S21 in 2021; Google: 100 percent n48 support since Pixel 6 (and support beginning with Pixel 3a). Combined average n48 support across the three manufacturers: 98.3 percent.

- 7 Boulware, Douglas M., and Anthony W. Romaniello. *NTIA Report 25-575: An Analysis of Aggregate CBRS SAS Data from April 2021 to July 2024*. National Telecommunications and Information Administration (Nov. 2024).

- 8 Kasujee, Ibraheem, and Tom Rebbeck. *The Role of Private 5G and CBRS in the US Manufacturing Sector*. Analysys Mason (Mar. 2026).

- 9 *More for Less: The Wireless Affordability Tracker*. CTIA (Apr. 29, 2026).

- 10 *How John Deere Conquered 5G for Manufacturing*. Industry Week (Apr. 16, 2025).

- 11 *New Study: CBRS-Powered Private 5G Driving U.S. Manufacturing Growth, Innovation, and Reshoring*. American Made 5G (Mar. 23, 2026).

- 12 *State of the Market Report*. GSA (Apr. 2026).

- 13 *Cargill Scales Private 5G with NTT Data*. TeckNexus (Feb. 25, 2026); *Cargill Deploys Private 5G to Aid Factory AI and Automation Efforts*. CIO (Apr. 10, 2026).

- 14 *American Manufacturers & Wireless Innovators Launch “American-Made 5G” Coalition to Support America’s Wireless Manufacturing Comeback*. American-Made 5G (Nov. 17, 2025).

- 15 *How CBRS-Based Smart Wireless Connectivity is Empowering Industry 4.0*. Ericsson (Aug. 2021).

- 16 *Dynamic Spectrum Sharing in Action*. Spectrum for the Future. (Accessed May 13, 2026).

- 17 *True Cost of Downtime*. Siemens (2024).

- 18 *How 5G Is Modernizing Manufacturing*. National Association of Manufacturers and CTIA (Sep. 16, 2025).

- 19 Dressen, Clark, and Jason Jackson. *Driving Digital into the Heart of Plant Maintenance for Safety, Agility, and Reliability*. Dow and Kyndryl (Oct. 14, 2022).

- 20 Saunders, Jake; Dimitris Mavrakis; Michael Larner; Ryan Martin; and Kangrui Ling. *Unlocking the Value of Industry 4.0*. ABI Research (Oct. 25, 2019).

- 21 Larner, Michael. *12 Examples of Manufacturing Technologies*. ABI Research (June 22, 2022).

- 22 *Connecting Manufacturers with the Future: How 5G Is Transforming the Manufacturing Landscape* and accompanying press release *Manufacturers Accelerating 5G Deployment*. The Manufacturing Institute (Mar. 31, 2021); *How 5G Is Transforming Manufacturing*. National Association of Manufacturers (Mar. 31, 2021).

- 23 Gergs, Leo, *5G for Smart Manufacturing: 4 Critical Questions Answered*. ABI Research (June 7, 2024).

Appendix & Resources

- 24 *Toyota Material Handling Transforms Production Operations with Ericsson Private 5G*. Ericsson (Feb. 27, 2024).

- 25 Letter from Matthew Fridenstine, President & CEO, North Coast Wireless Communications, to Marlene H. Dortch, Sec’y, Fed. Commc’ns Comm’n, Promoting Investment in the 3550–3700 MHz Band, WT Docket No. 17-258 (filed Dec. 10, 2025).

- 26 Letter from Ricky Martinez, General Manager and CEO, Taylor Telecom, to Marlene H. Dortch, Sec’y, Fed. Commc’ns Comm’n, Promoting Investment in the 3550–3700 MHz Band, WT Docket No. 17-258 (filed Feb. 13, 2025).

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- 32 Letter from Carl and Kathleen Cadwallader, Owners, Barger Creek Wireless, to Marlene H. Dortch, Sec’y, Fed. Commc’ns Comm’n, Promoting Investment in the 3550–3700 MHz Band, WT Docket No. 17-258 (filed Dec. 12, 2025).

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Appendix & Resources

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