

**3.5 GHz CBRS:  
*Disrupting the  
Disruptive  
Spectrum***

Market Study  
Fourth Quarter 2017





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# **3.5 GHz CBRS: *Disrupting the Disruptive Spectrum***

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## Market Study

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*iGR*  
12400 W. Hwy 71  
Suite 350 PMB 341  
Austin TX 78738

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## Abstract

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In April 2015 the U.S. Federal Communications Commission (FCC) established the Citizens Broadband Radio Service (CBRS) for shared wireless broadband use of the 3550-3700 MHz band (commonly called the 3.5 GHz Band).

In late October 2017, and in response to months of petitions and comments on the April 2015 rules, the FCC announced a Notice of Proposed Rulemaking (NPRM) asking for public comment on multiple aspects of the proposed rules.

Most in the industry expected the FCC to issue a final rulemaking on CBRS rather than what it did — basically delay the final rules for several months. This has injected a great deal of uncertainty around what the final CBRS will actually be.

There are several major areas on which the FCC is asking for comment:

- Geographic size of the Priority Access License (PAL) leases
- Term length of the PALs
- Renewability of the PALs.

Whatever the FCC decides on these above issues will not only affect the potential auction price of the PALs, but may also impact (to a greater or lesser extent) what types of entities (carriers, private businesses, school districts, etc.) are able to enter the auction and have a hope of winning licenses (relative to what the original rulemaking might have enabled).

In *iGR's* opinion, the 150 MHz of CBRS has the potential to disrupt the mobile operator's grip on cellular voice and data services by enabling new players — enterprises, schools and universities, hotels and hospitals — to build and operate their own private LTE networks. In addition, it should also enable existing 3.5 GHz license holders — wireless ISPs — to expand their products and services. And, finally, CBRS could enable wired broadband providers to disrupt mobile operators' market share via the residential market.

This market study, which is an update to the market study published in the second quarter of 2017, provides an explanation of how the CBRS licensing scheme works, how the technology elements of the new band work, and the implications of both on the potential adoption of CBRS as another tool in the toolkit to address demand for bandwidth. It also provides a forecast from 2017 to 2022 of the total number of CBRS nodes expected to be deployed in the U.S. The forecasted number of nodes is categorized by Outdoor WISP, Outdoor nonWISP, Inside Commercial, and Inside Residential.

Key questions addressed in this study:



- What is CBRS?
- What are the different license types of CBRS?
- How does the licensing scheme work? What is the potential impact?
- Who are the likely adopters of CBRS?
- What is the current state of the CBRS market?
- How many CBRS nodes of the following categories – outdoor WISP, outdoor nonWISP, inside commercial, and inside residential – are expected to be deployed in the U.S. between 2017 and 2022?

This market study is recommended for:

- Mobile operators, particularly those servicing the U.S. market
- Mobile backhaul providers, including telcos and cable MSOs
- Wired and wireless backhaul vendors and solution providers
- Mobile OEMs, particularly those servicing the U.S. market
- Wired and wireless infrastructure vendors, particularly those servicing the U.S. market
- Financial and investment analysts.