

# Rapidly Accelerating U.S. 5G

## with 500 Megahertz of Mid-Band Spectrum at 12.2-12.7 GHz

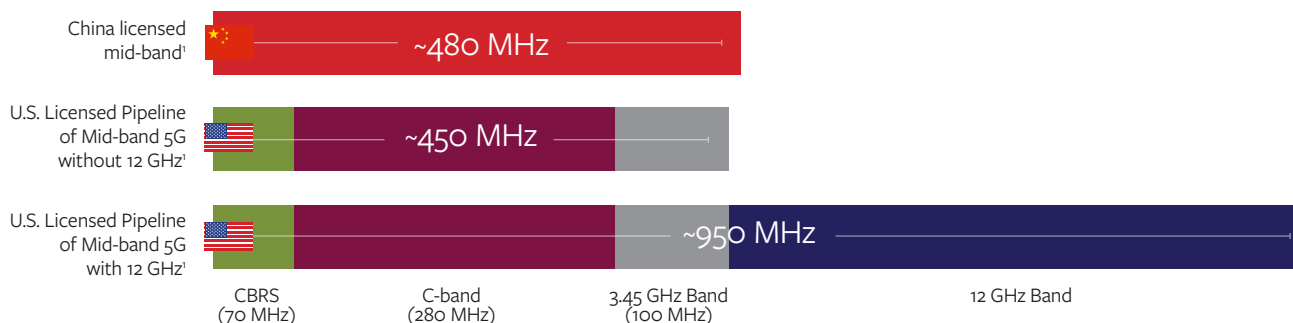
### Unleash 12 GHz mid-band spectrum to supercharge 5G deployment in the United States

The 12 GHz Band (12.2-12.7 GHz) offers 500 megahertz of licensed terrestrial mid-band spectrum ideal for 5G mobile broadband. Terrestrial licenses in the 12GHz band (known as “MVDDS”) were purchased at an FCC auction in 2004 through competitive bidding. The long-outmoded rules currently governing the 12 GHz Band were written in 2002, well before the smartphone era. MVDDS licensees began petitioning for authority to provide mobile broadband services more than four years ago. An open FCC rulemaking to consider reform of the band is long overdue and promises to promote investment in advanced wireless broadband throughout the United States.

#### The only remaining 5G spectrum between 6 and 24 GHz; No Federal Encumbrances

Favorable propagation characteristics make mid-band frequencies well-suited for next-generation wireless services: an operator would need to deploy nine times as many costly transmitter sites at 24 GHz to achieve the same coverage that the 12 GHz Band can offer.

Updating the 12 GHz Band to allow 5G deployments would nearly double the nationwide mid-band spectrum available for next-generation broadband. No Federal encumbrances exist in the 12 GHz Band: Unlike other recent spectrum reallocations, opening the band to 5G deployment will not conflict with Federal or state agencies or the Department of Defense.



<sup>1</sup> Source: 5G Mid-band Spectrum Global Update: Analysys Mason, accessed at: <https://apictia.org/wp-content/uploads/2020/03/5G-mid-band-spectrum-global-update-march-2020.pdf>

## The U.S. needs more licensed mid-band spectrum to compete

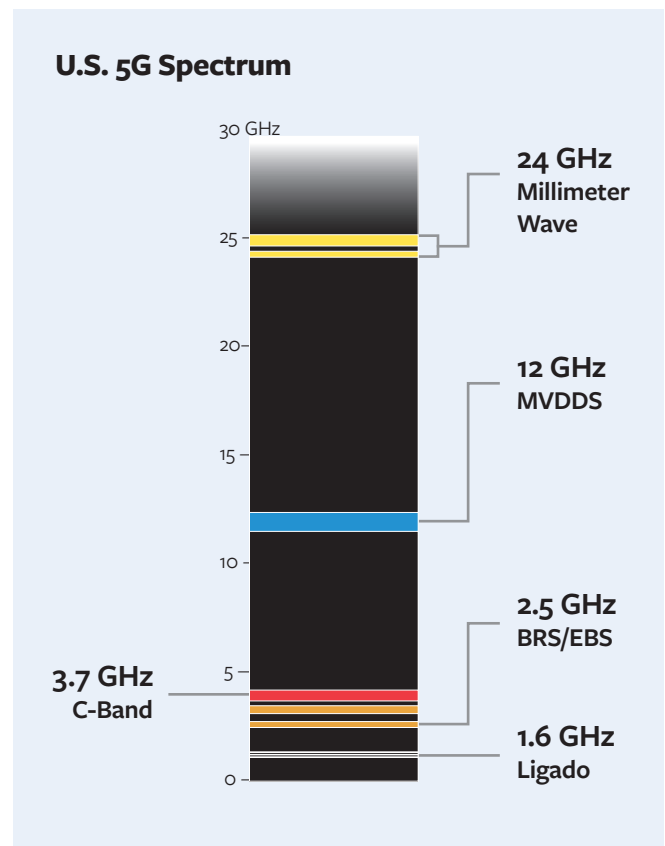
According to a recent study completed for CTIA<sup>2</sup> the US currently ranks last among 13 major wireless markets in 5G mid-band spectrum capacity. Even after pending CBRS PAL and C-band auctions, the US will still remain behind other countries, including China (480 MHz). And while the 3.45-3.55 GHz holds promise, adding this 100-MHz band will still not close the mid-band gap with other leading economies, such as Japan (1000 MHz). Swiftly modifying the 500 MHz of existing terrestrial licenses in the 12 GHz Band would propel the US into a leadership position in availability of mid-band spectrum licensed for terrestrial mobile use.

## Highly restrictive 12 GHz rules date from 2002, before the smartphone era. They urgently need review.

The FCC's antiquated 12 GHz rules prohibit broadband deployment by barring two-way communications and imposing exceptionally low power limits of less than 1/10th of the power found in a cell phone. To accelerate 5G investment and deployment, the 12 GHz Band operating rules must be revisited immediately. Flexible-use licenses for two-way, mobile broadband would transform U.S. telecom competitiveness and economic growth.

## The U.S. can explore 5G broadband in the 12 GHz Band while preserving satellite stakeholders' interests.

In addition to the MVDDS licensees, the 12 GHz band is currently used by satellite TV broadcasters DISH Network and AT&T (DIRECTV). DISH has long advocated for 5G in the band. AT&T recently acknowledged the band's 5G potential, outlining its own views on how it might be implemented. SpaceX is promoting a future satellite-based broadband service and has received authorization from the FCC (at no cost) to operate in a total of 15,500 MHz of spectrum. Whether or not such a service is ever commercially or technically feasible, SpaceX has been on notice from the FCC that it should not rely on 12GHz (a mere 3% of its total spectrum)<sup>3</sup>. No existing or future satellite subscriber will experience interference from an FCC public rulemaking process that simply assesses the practicality of 5G in the band.



## A win-win decision for the United States.

Initiating a transparent notice-and-comment rulemaking into whether or not to permit 5G broadband deployment in the 12 GHz Band will allow the FCC—and the public—to assess the costs and benefits of modernizing severe legacy restrictions in the band. This process is an essential first step to vastly accelerating 5G deployment throughout the United States.

## The Time is NOW.

The rollout of 4G yielded enormous benefits for U.S. employment, GDP growth and consumer welfare. 5G promises to do even more if policymakers act with urgency. Delay in launching a 12 GHz review will postpone or prevent the U.S. from realizing the economic, technological, and competitive benefits of using the 12 GHz Band for 5G. A rulemaking that solicits public comment on the costs and benefits of permitting 5G deployment and innovation in the 12 GHz Band should start immediately.

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<sup>2</sup> 5G Mid-band Spectrum Global Update: Analysys Mason, accessed at: <https://api.ctia.org/wp-content/uploads/2020/03/5G-mid-band-spectrum-global-update-march-2020.pdf>

<sup>3</sup> Yet SpaceX is now seeking a wholesale modification of its FCC license to operate more than 4,400 satellites. If granted, the denser network of satellites SpaceX has sought could forever preclude 5G deployment in the 12 GHz Band. The FCC should not grant SpaceX an unwarranted and prohibitive modification without first undertaking a public rulemaking that fully explores 5G options for 12 GHz.