

ALERT

FCC Seeks to Refresh the Record on C-Band Spectrum for Drones

August 23, 2021

The Federal Communications Commission (FCC or Commission) released a Public Notice last week to refresh the record on the use of certain spectrum in the 5 GHz band for unmanned aircraft systems (UAS). A petition for rulemaking filed by the Aerospace Industries Association (AIA) asking the Commission to adopt licensing and service rules to enable drone use in the 5030-5091 MHz band (the C-band), has been pending since 2018.

The purpose of the Public Notice is "to update the record to reflect operational, technical, and regulatory developments that have occurred over the last three years in the rapidly growing and evolving area of UAS operations and that are relevant to this proceeding." In addition, the FCC asks specific questions related to AIA's proposal and seeks comment on whether the Commission should consider licensing in the 5 GHz band not just for radio line of sight (LOS) links, but also for beyond LOS (BLOS) links. Comments will be due 30 days after publication in the Federal Register, and replies will be due 45 days after publication.

The proceeding is important because, with limited exception, drones do not have access to licensed spectrum in the United States. Although the C-band allocation is globally harmonized and has been on the books for a long time, the Commission has not adopted licensing and service rules to enable the use of the band. In the meantime, UAS operators typically must rely on unlicensed and unprotected spectrum to conduct operations. In 2020, pursuant to a mandate in the 2018 Federal Aviation Administration Reauthorization Act, the FCC's Wireless Telecommunications Bureau and Office of Engineering and Technology released a report recommending that the Commission undertake a proceeding to enable the use of the C-

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Practice Areas

Telecom, Media & Technology
Uncrewed Aircraft Systems (UAS)

band for UAS.

In particular, the Public Notice seeks comment on the following:

- Whether the FCC should require that applicants certify they have, or will use pilots with, a remote pilot certification.
- The feasibility and practicality of implementing and operating AIA's dynamic frequency assignment proposal, including "any current or planned technologies or systems that could perform the necessary functions and are scalable to meet the real-time coordination needs of a large and growing number of operations, and what new or modified technologies, devices, connections, or standards would be needed to implement this approach."
- Pending or future standards work relevant to the dynamic frequency assignment approach.
- With respect to dynamic frequency assignment, (1) the process for authorizing the frequency assignment manager; and (2) minimum eligibility requirements or restrictions for applicants.
- How to enforce the requirement that UAS operators "release" the spectrum after their flight, and whether there are potential safety concerns if authorization is revoked mid-flight.
- The appropriate technical requirements and parameters. For example, whether to establish an altitude limit for UAS use of the band, whether any changes to Section 87.139 of the rules are necessary to accommodate UAS operations, especially those considered in RTCA DO-362, and any additional technical limitations needed to protect the adjacent Aeronautical Mobile Airport Communication System (AeroMACS) bands.
- Whether command non-payload control communications (CNPC) are consistent with the AM(R)S allocation for the band, and whether the Commission should also allow payload communications with a prioritization mechanism.
- Whether and how to authorize BLOS operations in the band. In particular, the Public Notice asks about the infrastructure needed for that use, whether exclusive geographic area-based licenses would promote such deployment, and what license terms would be appropriate in that context.
- Whether the Commission could adopt a licensed-by-rule approach, "with station equipment held to technical requirements (such as RTCA DO-362 requirements) in the Commission's equipment authorization process."
- Whether to partition the band into two segments, one in which it adopts something like the AIA proposal, the other in which it issues exclusive geographic area licenses for network-based services and if so, how.

For more information about the FCC's Public Notice or assistance with filing comments, please contact the authors listed on this alert.