

December 7, 2020

The Honorable Ajit Pai, Chairman  
The Honorable Michael O’Rielly, Commissioner  
The Honorable Brendan Carr, Commissioner  
The Honorable Jessica Rosenworcel, Commissioner  
The Honorable Geoffrey Starks, Commissioner  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Dear FCC Commissioners:

We write you today to express our concern over certain aspects of the Commission’s recent action to reallocate a portion of the 3.7-4.2 GHz frequency band, making the frequency spectrum from 3.7-3.98 GHz available for flexible use by the telecommunications industry. Since 2017, the aviation industry has consistently noted during the Federal Communications Commission (FCC) rulemaking process that deployment of 5G networks in this frequency band may introduce harmful radio frequency (RF) interference to radar altimeters currently operating in the globally-allocated 4.2–4.4 GHz aeronautical band. Radar altimeters are deployed on tens of thousands of civil aircraft in the United States and worldwide to support several critical safety-of-life aircraft functions throughout multiple phases of flight. Radar altimeters are the only sensor onboard a civil aircraft which provides a direct measurement of the clearance height of the aircraft over the terrain or other obstacles.

In response to the latest FCC *Report and Order*<sup>1</sup>, in April 2020 RTCA Special Committee 239 (SC-239) formed a 5G Task Force to lead a study effort as a multi-stakeholder group that included open participation from the interested public. Using technical information supplied by the mobile wireless industry and radar altimeter manufacturers, a quantitative evaluation of radar altimeter performance regarding RF interference from future 5G networks in the 3.7-3.98 GHz band was conducted, as well as a detailed assessment of the risk of such interference occurring and impacting safety.

RTCA submitted their full report in a filing to the Commission on October 8, 2020<sup>2</sup>. The results of this comprehensive study revealed a major risk that 5G telecommunications systems in the 3.7–3.98 GHz band will cause harmful interference to radar altimeters on all types of civil aircraft—including large commercial transport airplanes; business, regional, and general aviation airplanes; and both transport and general aviation helicopters. The results of the study performed clearly indicate that this risk is widespread and has the potential for broad impacts to aviation operations in the United States, including the possibility of catastrophic failures leading to multiple fatalities, in the absence of appropriate mitigations.

A further filing by the aviation industry to the Commission on December 7, 2020, provides recommendations on potential mitigations that could be implemented to ensure that radar altimeters can continue to operate effectively at performance levels demanded of aviation safety-of-life systems. Mitigations implemented by flexible use licensees, at the outset, are critical if current radar altimeters – and aviation safety – are to be protected as new 5G systems are introduced into the 3.7-3.98 GHz band.

To enable the protection of the frequency bands used by radar altimeters that are installed in tens of thousands of airplanes and rotorcraft throughout the nation, we respectfully request that the Commission suspend Auction 107, which is scheduled to begin December 8, 2020. The RTCA Report is the most comprehensive analysis and assessment to date on this subject, based on the best assumptions, parameters, and data. It has been peer

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<sup>1</sup> Expanding Flexible Use of the 3.7 to 4.2 GHz Band, GN Docket No. 18-122, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343 (2020) (“Report and Order”).

<sup>2</sup> See Assessment of C-Band Mobile Telecommunications Interference on Low Range Radar Altimeter Operations, attachment to Letter of Terry McVenes, President and CEO, RTCA, Inc., to Marlene Dortch, FCC, GN Docket No. 18-122 (Oct 8, 2020) (“RTCA Report”).

reviewed for accuracy and validity and should not be dismissed by the Commission. Moving forward with the auction without fully addressing the potential for harmful interference to radar altimeters, and thus the threat to aviation safety, would be a disservice to the safety of the traveling public and put our nation's airlines, business and general aviation, and helicopter operations at risk. We ask that the Commission grant the pending Petition for Reconsideration of the *Report and Order* filed by many of the undersigned and other aviation and aerospace associations and companies<sup>3</sup> by adopting the recommended mitigations before proceeding with the auction.

We look forward to continuing our dialogue with you on this important topic and resolving these critical issues. Thank you for your consideration.

Sincerely,

Aerospace Industries Association  
Airborne Public Safety Association  
Air Line Pilots Association, International  
Aircraft Electronics Association  
Aircraft Owners and Pilots Association  
Airlines for America  
Cargo Airline Association  
Experimental Aircraft Association  
General Aviation Manufacturers Association  
Helicopter Association International  
National Air Carrier Association  
National Air Transportation Association  
National Business Aviation Association  
RTCA  
Regional Airline Association

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<sup>3</sup> See Petition for Partial Reconsideration of the 3.7-4.2 GHz Band Report and Order filed by the Aerospace Industries Association, the Aerospace Vehicle Systems Institute, Air Line Pilots Association International, Airbus, Aviation Spectrum Resources, Inc., Garmin International, Inc., the General Aviation Manufacturers Association, the Helicopter Association International, Honeywell International Inc., the International Air Transport Association, and the National Air Transportation Association, GN Docket No. 18-122 (May 26, 2020)