



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

800 Independence Ave., S. W.  
Washington, D. C. 20591

March 21, 2022

Federal Communications Commission  
7435 Oakland Mills Road  
Columbia, MD 21046

Dear Mr. Corey Cahill:

The Federal Aviation Administration (FAA), Spectrum Engineering Services Group was notified by Fortem Technologies of their filing of an application for equipment certification for a Detect and Avoid (DAA) radar with the Federal Communications Commission (FCC). Specifically, the application refers to the Fortem Technologies TrueView Model R30 radar, a small, lightweight electronically scanning radar that provides detect and avoid capabilities for small unmanned aircraft that operates in the frequency range 15.4-15.7 GHz band and requests certification for use under FCC ID #2APIM-FTR30V002.

The Spectrum Planning and International Team of the FAA Spectrum Engineering Services Group has reviewed the information provided to us by Fortem Technologies and conditionally supports the FCC granting certification of this equipment. We note that an FCC grant of equipment certification only signifies compliance with the FCC's specific rules and we ask that the grant of FCC equipment certification for this system include the following condition:

FCC authorization does not signify Federal Aviation Administration (FAA) approval for use of this radar for Detect-and-Avoid (DAA) functions. Users should check with the FAA Aircraft Certification Service for guidance and authorization as necessary prior to use of the radar for DAA purposes.

The FAA also notes that the current FCC rules only allows for use as a ground based system (see the 15400-15700 MHz line of the frequency band table in Section 87.173 of the FCC rules). The FAA further notes that we support the proposal in Section VII of the "Petition to Adopt Service Rules for Unmanned Aircraft Systems ("UAS") Command and Control in the 5030-5091 MHz Band (RM-11798)" that adds the MA class of station symbol to the 15400-15700 MHz line of the frequency table in Section 87.173 of the FCC Rules. This addition will allow the Fortem Technologies TrueView Model R30 radar to also be installed on aircraft for DAA purposes if adopted by the FCC.

In light of ongoing standards developments that could potentially impact current and future use of the Fortem Technologies TrueView Model R30 radar, the certification that directs users to the FAA for guidance will ensure continued compliance with FAA and FCC rules. By way of background:

1. Aviation has recently developed a standard for ground based unmanned aircraft DAA systems and the FAA is currently reviewing that standard and considering it for adoption.
2. Aviation has developed standards for unmanned aircraft DAA systems and the FAA has adopted standards for airborne DAA systems intended for installation on large unmanned aircraft (see FAA Technical Standard Order C212).
3. The proposed Fortem Technologies TrueView Model R30 radar is not capable of meeting the current requirements for airborne DAA system intended for installation on large unmanned aircraft.
4. Work is underway within RTCA Special Committee 228 to develop standards for DAA systems intended for installation on small unmanned aircraft and these standards should be completed within the next two years.
5. It is anticipated that the FAA will adopt the RTCA developed standards for DAA systems intended for installation on small unmanned aircraft once they are published.
6. It is anticipated that the Fortem Technologies TrueView Model R30 radar will be capable of meeting the standards for DAA systems intended for installation on small unmanned aircraft that are being developed in RTCA.

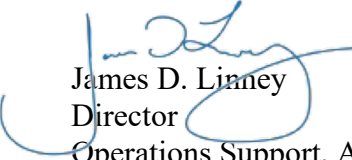
Our office reviewed the update request to the EIRP changes below and concurs with the update.

The table below lists the old and new EIRP levels, along with the stated EIRP in the old and new FAA request letters.

| Original FCC EIRP testing results | Stated EIRP in original FAA request letter                                               | Latest FCC EIRP testing results | Stated EIRP in this latest FAA request letter |
|-----------------------------------|------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|
| 45.87 dBm                         | $10 \times \log(8,000\text{mW}) + \text{TX ant gain } 16 \text{ dBi} = 55.0 \text{ dBm}$ | 54.52 dBm                       | 55.0 dBm                                      |

If you require any additional information, please contact Mr. Michael Weiler, Group Manager, Spectrum Engineering Services Group, at (202) 267-7531 or Mr. Jae Shin, Electronics Engineer, Spectrum Planning and International Team, at (202) 267-7365 or via e-mail [jae.w.shin@faa.gov](mailto:jae.w.shin@faa.gov).

Sincerely,

  
James D. Linney  
Director  
Operations Support, AJW-1