



**Federal Communications Commission
Office of Engineering and Technology
Laboratory Division**

July 19, 2022

UN5GHZ PRE-APPROVAL GUIDANCE CHECKLIST

UN5GHZ

U-NII devices authorized in U-NII-4 band 5.850-5.895 GHz and channels that span U-NII-3 and U-NII-4 Bands under Part 15 Subpart E.

Checklist for PAG Review

1. Antennas

- 1.1 Information for all the antennas, i.e., type, gain and relative positions within host, must be included in the filing
- 1.2 Show how the (aggregate, if applicable) antenna gain was computed/measured (as in TCB Workshop Presentation Aggregate Antenna Gain Review, April 2021). Provide equation(s) used to calculate Directional Gain and provide example calculation showing how the DG was calculated with the antenna gain of individual antennas. Provide details (references or attached documents) on how the individual antenna gains were derived, i.e., declared by the host manufacturer, based on data sheet, or measured. Since the CBP needs to detect a small signal, the worst case scenario to consider is when the receiver has the lowest antenna gain.
- 1.3 Indoor devices shall have an integrated antenna.

2. Labelling

- 2.1 Label showing “Indoor Use Only” for Subordinate and APs.
- 2.2 E-labelling may be acceptable if proper justification is provided.

3. Band Edge Measurements

- 3.1 Band Edge measurements made below 5725 MHz are to be made with a Peak detector.
- 3.2 Band Edge measurements above 5895 MHz are to be made with an RMS detector.
- 3.3 Band Edge measurements above 5895 MHz should also include Peak plots to show compliance with 15.35(b) where the peak emissions must be limited to no more than 20 dB above the average limit.

4. Declaration Requirements

The application should contain a declaration letter which satisfies the declaration requirements from Section 3. of KDB 291074 D02.

5. Indoor Device Limitations

5.1 Indoor Access Points and Subordinate Devices cannot use weatherized enclosure.

5.2 May not be battery powered. Power must be provided from a wired permanent indoor local power connection.

Automatic battery back operation is permitted during power loss.

6. Modular Certifications (when applicable)

6.1 Modular approval letter to be uploaded with the application

6.2 No subordinate devices can be modules

6.3 Show notification for the host manufacturer about referencing KDB Publication 996369 D04 Module Integration Guide

7. Security

Provide specific exhibit with device security description is required (complying with 47 CFR § 15.407(i).

8. Spurious Emissions

Show that measurements are made at the prescribed antenna heights, per KDB Publication 291074 D02, including measurements along all three axes, as per ANSI C63.10.

9. Hearing Aid Compatibility (when applicable)

4.1 Confirm that VoLTE cannot be transported over 5G NR sub 6 GHz. If so, must state that in the OTT declaration of pre-install of OTT voice service and test report.

4.2 Manufacture must provide an attestation (cover letter) confirming that the results using ABM1 values obtained from VoLTE connections over LTE bands and ABM2 values for 5G NR sub 6 GHz connections over the same bands provide a reasonable representation of the HAC rating over the 5G NR sub 6 GHz connections.