

UN6GHZ PRE-APPROVAL Item for FCC ID: RAS -MT7927	Check list
<b>1. Antennas</b>	
1.1 Information for all the antennas, i.e., type, gain and relative positions within host, must be included in the filing	The antenna specs are uploaded. 6XD report, page 8. The antenna information is described.
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.	Directional gain is evaluated. Please see the note of 6XD report on page 638 -657 for EIRP and on page 696 – 717 for EIRP PSD.
1.3 For conducted test in MIMO cases, show that the testing was done for that path that has the lowest antenna gain.	For MIMO power, please see page 648-657.
<b>2. Contention Based Protocol (CBP)</b>	
2.1 CBP testing shall be performed on one channel in each sub-band of operation for both narrowest and widest bandwidths	From Page 722-769 of 6XD report, sub-band: UNII-5, UNII-6, UNII-7 and UNII-8 are tested. The narrowest BW:20MHz and Widest BW:160 MHz/320MHz are tested.
2.2 Use three separate 10 MHz AWGN signals when testing a 160 MHz channel. The simulated incumbent signal must be a 10 MHz wide AWGN signal	Page 722-769 of 6XD report, three 10MHz separate AWGN signals when testing a 160MHz or 320MHz channel.
2.3 Report lowest AWGN signal detectable by EUT	Please see the item: Adjusted Power (minimal) in the table: <u>Contention Based Protocol Measurement</u> on the Page 722-767 of 6XD report.
2.4 Verify that the testing was performed with the AWGN signal set to lowest level (for example, -100 dBm) and increased until the EUT detects and stops transmitting. For instance a table like the following (or similar) shall be reported:	Please see the <u>table: Contention Based Protocol Measurement</u> on the Page 722-767 of 6XD report.
2.5 If conducted measurements are used, the detection threshold needs to be corrected to refer to a 0 dBi gain antenna and include all the applicable losses (cables, etc.). For instance, the report should show (at least): <i>Detection Level = Injected AWGN Power (dBm) – Antenna Gain (dBi) + Path Loss (dB)</i>	Please see the note on the Page 722-769 of 6XD report.

2.6 Include plots showing EUT has stopped transmitting after detection of AWGN signal.	Please see the <u>table: Plots of EUT cases transmission in the time domain</u> on the Page 724-769 of 6XD report.
2.7 Describe whether channel puncturing and/or bandwidth reduction mechanisms supported. The report needs to include a plot as an example for at least one of the AWGN signals used.	Model: MT7927 not support channel puncturing, OP has the description.
2.8 If radiated testing is used, show that spot-checks were done to identify which side of the EUT has the lowest sensitivity to the incumbent signal detection, and that side was indeed chosen for the test.	CBP is tested by conducted method.
<b>3. Client Device Limitations</b>	
3.1 Client device (per definition in 47 CFR § 15.202) is limited to indoor locations, does not connect directly to the internet nor to other clients	Please see 6XD device Declaration letter, Item a).
3.2 Requires attestation (as a Form 731 exhibit) stating that the device can only operate under the control of a low-power indoor access point and subordinate.	Please see 6XD device Declaration letter. Item a).
3.3 No vehicular use, except large aircrafts above 10000 ft	This is indoor client 6XD device, not applied. Please see 6XD device Declaration letter. Item e).
3.4 Transmit Power Control (TPC) required for client devices connected to Standard Power Access Points, excluding Fixed Client devices	Please see 6XD device Declaration letter. Item b)& c).
3.5 Show/justify enclosure is not weatherized for Subordinate and APs.	This is indoor client, not Subordinate and APs.
<b>4. Emission Mask</b>	
4.1 Power spectral density suppression complies with 47 CFR § 15.407(b)(6).	From page 25, limited of unwanted emission out of the restricted bands, the limit= -27 dBm /MHz. For the testing, please see the measurement from page 34 to page 591.
4.2 If EUT supports OFDMA discuss testing of partial Resource Unit (RU) configurations. In any case the shape of the mask shall be based on full RU.	FULL RU is tested.
4.3 OOBE limits only apply outside of the 5.925-7.125 GHz band. All in-band emissions need to meet the channel mask. In case a higher RBW for the in-Band Emissions Mask is used (i.e., a more conservative case) that should be noted.	Please see page 594-630 of 6XD report.
<b>5. Filing</b>	

99% of the occupied bandwidth must be contained within all the U-NII sub bands authorized for that equipment class	Please see page 659-661 of 6XD report.
<b>6. Hearing Aid Compatibility (HAC)</b>	
6.1 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	No HAC issue.
6.2 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.	No HAC issue.
<b>7. Labelling</b>	
7.1 Label showing indoor only for Subordinate and APs.	This is indoor client, not Subordinate and APs.
7.2 E-labelling may be acceptable if proper justification is provided	No use of E-labeling.
<b>8. Modular Certifications (when applicable)</b>	
8.1 Modular approval letter to be uploaded with the application	The device is not modular.
8.2 No subordinate devices can be modules	The device is not modular.
8.3 Show notification for the host manufacturer about referencing KDB Publication 996369 D04 Module Integration Guide	The device is not modular.
<b>9. RF Exposure</b>	
9.1 Demonstrate applicable classification (portable/mobile/fixed) in reference to worst-case scenario use cases	Both MPE and SAR are evaluated.
9.2 Address f > 6 GHz RF exposure via most recent applicable KDB or TCB Workshop procedures	SAR and power density are evaluated. Please see SAR report.
9.3 Address all applicable simultaneous transmission conditions using the compliance condition $TER \leq 1$ , where TER (total exposure ratio) in this context is defined as: $TER = \sum_{k=1}^{N_s} \left( \frac{SAR_k}{SAR_{lim}} \right) + \sum_{k=1}^{N_f} \left( \frac{MPE_{field,k}}{MPE_{field,lim}} \right)^2 + \sum_{k=1}^{N_{PD}} \left( \frac{MPE_{PD,k}}{MPE_{PD,lim}} \right)$ with $N_s$ , $N_f$ , and $N_{PD}$ referring to sources requiring SAR, field-MPE, or PD-MPE, respectively, k referring to measured or estimated values for the source k, and "lim" to the corresponding applicable compliance limit	Please see Page 68 of RF Exposure Info (SAR) Annex A-K, Annex H TER Evaluation.

Simultaneous transmit evaluations and test exemption analyses may use SPLSR per KDB Publication 447498.	
<b>10. Security</b>	
Provide specific exhibit with device security description is required (complying with 47 CFR § 15.407(i))	Please see software operation description, it is uploaded.
<b>11. Spurious Emissions</b>	
Show that measurements are made at the prescribed antenna heights, per KDB Publication 987594 D01, including measurements along all three axes, as per ANSI C63.10	In page 14 of 6XD report, The EUT antenna had been pre-test on the positioned of each 3 axis.