



EMC UPDATES

Laboratory Division

Office of Engineering and Technology

Dusmantha Tennakoon

Note: The views expressed in this presentation are those of the authors and may not necessarily represent the views of the Federal Communications Commission.



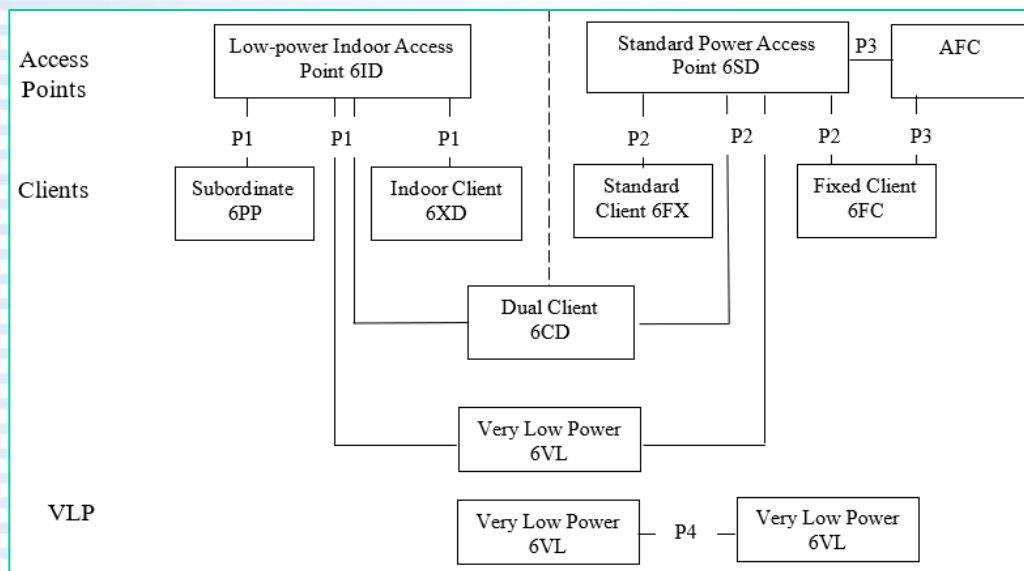
U-NII-6-8

- Updated draft KDB publication 987594 published to address VLP device certification (submit comments)

Published on April 05, 2024

VLP devices now open for certification

6VL – Very Low Power devices





U-NII-6-8 (VLP)

- VLP devices do not need to connect to APs
- No outdoor fixed infrastructure
- Operation prohibited on oil platforms and aircraft, except that operation of this device in 5.925-6.425 GHz is permitted in large aircraft while flying above 10,000 feet
- Limited to 14 dBm EIRP
- Limited to -5 dBm EIRP PSD
- Transmit Power Control (TPC) Required (attestation + data required)
- Contention Based Protocol Required
- Need to prioritize channels above 6.105 GHz (attestation + details required)
- 6VL maybe added to existing grants by filing a new application under same FCC ID.



U-NII-6-8

- FCC will require test data to be submitted to show client devices operate 6 dB below the power authorized by AFC for a Standard Power AP. Requirement goes into affect June 15th, 2024 (60 days from today). Attestations no longer acceptable after this date.



6 GHz Standard Power Devices

- Several Geolocation methods under PIA has been accepted so far.
- Once accepted the inquirer submitting the PIA will receive 4 documents:
 - 1. Acceptance Letter
 - 2. Copy of PIA (pdf of inquiry)
 - 3. Final accepted version of the Geolocation General Description
 - 4. Final accepted version of the Geolocation Justification Report
- TCBs will need to carefully review the documents (most importantly the Acceptance Letter) to validate that the device being certified complies with the Geolocation method that was accepted.



Part 15.231

- 15.231(a)(3) *Periodic transmissions at regular predetermined intervals are not permitted.*
- A device that doesn't meet this requirement cannot be certified using emissions limits in 15.231(b).
- A device that can be programmed directly or through an APP to turn on/off during regular hours of the day fall into this category.
- TCB must validate the information in the user manual and other documents (including discussions with grantee) that the device cannot be programmed to operate at regular predetermined intervals.



Part 15.37(h)

- Effective June 2, 2015 devices using digital modulation techniques in the 5725-5850 MHz bands will no longer be certified under the provisions of § 15.247. The technical requirements for obtaining certification after this date for digitally modulated devices and the digitally modulated portion of hybrid devices are found in subpart E of this part.



C-V2X under a waiver

● KDB 511808 re-published on February 09, 2024

Updated to correct error in OOB Mask. Landing page has also been updated to reflect additional entities that are approved under a waiver.

- Devices that operate in the 5895-5925 MHz band
- Limited to a single 20 MHz channel (5905-5925 MHz)
- Device certification restricted to companies granted a waiver
 - ITO equipment class - OBU
 - ITR equipment class – RSU
- Measure Occupied Bandwidth, Transmit Power and OOB Mask
- Applications subject to PAG (WAIVER) since it is under waiver

● A new FCC ID is required.



Part 25 – Supplemental Coverage from Space (SCS)

- R&O FCC 24-28 allows consumer handsets to directly connect to satellites for communication purposes
- Bands available for provision of SCS:
 - 600 MHz: 614-652 MHz and 663-698 MHz;
 - 700 MHz: 698-769 MHz, 775 MHz-799 MHz, and 805-806 MHz;
 - 800 MHz: 824-849 MHz and 869-894 MHz;
 - Broadband PCS: 1850-1915 MHz and 1930-1995 MHz; and
 - AWS-H Block: 1915-1920 MHz and 1995-2000 MHz



SCS

- New devices will require Part 25 testing in addition to testing all other terrestrial bands supported, i.e., 22/24/27 etc.
- Existing authorized devices will require a C2PC to add Part 25. Certain sections of our rules have been waived in the order. Waiver is limited in time and intended to cover existing devices and applications likely already in process.
- Therefore, only below items are needed for permissive change:
 - Cover letter stating intent to add Part 25 for SCS operation and no hardware changes or RF emissions have changed
 - SCS capability added via software update
 - Covered equipment attestations
- Most rules are effective 30 days after publication in Federal Register. Wait for further guidance before approving devices.



Part 96 - CBRS

- Devices should be certified with highest power level – some planning is required by grantee. That is, list highest EIRP on grant with list of antennas that can be used.
- This avoids issues later. For example, if EIRP needs to be increased a new ID will be required.
- CBEs and CBDs require separate FCC IDs



Part 15/74 – Wireless Microphones

- R&O FCC 24-22 allows Wireless Multichannel Audio Systems (WMAS) to operate in the broadcast (TV) bands and other Part 74 LPAS bands on a licensed basis.
- Additionally, allows operation of WMAS in Part 15 TV bands and 600 MHz duplex gap.
- Use ETSI EN 300 422-1 v2.2.1 for emission mask and spurious emission limits for all wireless microphones.
- Max 6 MHz bandwidth for WMAS in VHF-TV & UHF-TV bands under Part 74. Cannot span two adjacent channels.
- Max 20 MHz bandwidth allowed outside of TV bands and 600 MHz duplex gap for Part 74.
- WMAS shall have an operational mode capable of providing at least 3 audio channels per megahertz. But this mode need not be operational at all times (Part 15 & 74).



Part 15/74 – Wireless Microphones

- Max 6 MHz bandwidth for WMAS in Part 15. Cannot span two adjacent channels.
- Remove database access requirements in 15.236(c)(6) for wireless microphones operating in the 600 MHz guard bands, including the duplex gap.
- No power increases for Part 74 WMAS devices.
- For Part 15 WMAS:
 - 50 mW EIRP for operation in TV bands with bandwidths ≤ 1 MHz
 - 100 mW EIRP for operation in TV bands with bandwidths between 1-2 MHz
 - 100 mW EIRP for operating in TV bands with bandwidths greater than 2 MHz and up to 6 MHz
- Will update KDB pub. 206256 to include new requirements. Do not approve WMAS devices until further notice from FCC.



Questions?

THANK YOU