UNII-4 Devices
KDB Publication 291074 & Misc.

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KDB publication 291074 addresses requirements for UNII-4 (draft version since September 2021). Currently open for comment.

A CIIPC can be performed to add UNII-4.

NII equipment class

Restricted to indoor use
Things to keep in mind

- Under PAG
  - If you have a device with multiple UNII bands (including UNII-4) it is limited to indoor use even if other bands allow outdoor use. For example, a triband AP supporting UNII-4 is restricted to indoor use even though other bands allow outdoor use. If the manufacturer wants to use 2.4 GHz & 5 GHz outdoors they need to provide details of how the AP knows it is outdoors and prohibits 5.9 GHz operation. You cannot leave it to the end-user.
  - Surveillance cameras fixed outdoors are prohibited from using 5.9 GHz.
  - Requires integrated antennas. Supersedes 15.203
  - If CIIPC is being performed to add UNII-4 the device must have integrated antenna and provide evidence that the device has an existing label stating it is for indoor use only.
Technical Requirements

1. Frequency range: 5850-5895 MHz
2. Power & PSD:

<table>
<thead>
<tr>
<th></th>
<th>Power</th>
<th>PSD</th>
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</thead>
<tbody>
<tr>
<td>Indoor AP</td>
<td>36 dBm EIRP</td>
<td>20 dBm EIRP</td>
</tr>
<tr>
<td>Indoor Client</td>
<td>30 dBm EIRP</td>
<td>14 dBm EIRP</td>
</tr>
<tr>
<td>Subordinate</td>
<td>36 dBm EIRP</td>
<td>20 dBm EIRP</td>
</tr>
</tbody>
</table>

**Note 1**: no conducted limit.

**Note 2**: a channel that spans UNII-3 & 4 needs to meet the UNII-4 rules for power and PSD.

3. Measurement detector: RMS Average

Exception: To meet -27 dBm EIRP below 5725 MHz a Peak detector can be used.

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OOBE

U-NII-4 Unwanted Emission Levels

-30 -27 -24 -21 -18 -15 -12 -9 -6 -3 0 3 6 9 12 15 18 21 24 27 30

PSD (dBm/MHz)

Frequency (GHz)

Client/Indoor AP/Subordinate/Indoor AP Client U-NII-3 (Lower Edge) U-NII-3 (Upper Edge) U-NII-4 (Lower Edge) U-NII-4 (Upper Edge)
§15.521(a) UWB on aircraft and ships not allowed—application for certification needs to detail how this is implemented.