

Antenna Report

Rev.04

Radiation Characteristics of antenna located into a Host Platform

| Antenna Peak Gain and VSWR w/ cable loss (dBi) <sup>1</sup> |              |      |                              |                    |                 |                      |              |            |                  |                         |             |                          |                        | 2400-2483.5 MHz 5150-5250 MHz 5250-5350 MHz 5470-5725 MHz 5725-5850 MHz 5850-5895 MHz 5925-6425 MHz 6425-6525 MHz 6525-6875 MHz 6875-7125 MHz |         |         |         |         |         |         |         |         |         | Unique ID Generator |                  |            |               |
|-------------------------------------------------------------|--------------|------|------------------------------|--------------------|-----------------|----------------------|--------------|------------|------------------|-------------------------|-------------|--------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------------|------------------|------------|---------------|
| Antenna Cycle                                               | OEM          | ODM  | Host Platform Name           | Host Platform Type | Intel Platform  | Antenna-Manufacturer | Antenna-Type | Antenna-PN | Antenna Main/Aux | SAR min separation (mm) | WiFi-Module | Applicable Certification | SAR FCC/ISED C/PC Assy | Antenna Metrics <sup>2</sup>                                                                                                                  | 2.4 GHz | 5.2 GHz | 5.3 GHz | 5.8 GHz | 5.9 GHz | 6.2 GHz | 6.5 GHz | 6.7 GHz | 7.0 GHz | Applicant e-mail    | Application Date | UniqueID   |               |
| 202601                                                      | Lenovo China | LCFC | TP001728, ThinkPad T14s Gen7 | Regular NB         | AMD Penryn Lake | SPEEDWIRE            | PIFA         | DC33002B00 | Main/Ant.2       | 10.80                   | MT7925B14L  | CE,UKCA,FCC,ISED,NCC,MET | YES                    | Gain                                                                                                                                          | 1.89    | 2.58    | 2.33    | 3.83    | 3.74    | 2.00    | 3.22    | 2.15    | 1.77    | 1.22                | phs@china.com    | 2025-12-17 | 202601-095041 |
| 202601                                                      | Lenovo China | LCFC | TP001728, ThinkPad T14s Gen7 | Regular NB         | AMD Penryn Lake | SPEEDWIRE            | PIFA         | DC33002B00 | Aux/Ant.1        | 10.80                   | MT7925B14L  | CE,UKCA,FCC,ISED,NCC,MET | YES                    | Gain                                                                                                                                          | 1.85    | 2.61    | 2.52    | 3.41    | 3.32    | 3.26    | 3.21    | 3.72    | 2.85    | 3.97                | Phs@china.com    | 2025-12-17 | 202601-095041 |
| 202601                                                      | Lenovo China | LCFC | TP001728, ThinkPad T14s Gen7 | Regular NB         | AMD Penryn Lake | SPEEDWIRE            | PIFA         | DC33002B00 | Main/Ant.2       | 10.80                   | MT7925B14L  | CE,UKCA,FCC,ISED,NCC,MET | YES                    | VSWR                                                                                                                                          | 1.41    | 1.33    | 1.44    | 1.38    | 1.50    | 1.34    | 1.28    | 1.24    | 1.43    | 1.35                | Phs@china.com    | 2025-12-17 | 202601-095041 |
| 202601                                                      | Lenovo China | LCFC | TP001728, ThinkPad T14s Gen7 | Regular NB         | AMD Penryn Lake | SPEEDWIRE            | PIFA         | DC33002B00 | Aux/Ant.1        | 10.80                   | MT7925B14L  | CE,UKCA,FCC,ISED,NCC,MET | YES                    | VSWR                                                                                                                                          | 1.43    | 1.58    | 1.67    | 1.21    | 1.67    | 1.59    | 1.46    | 1.64    | 1.39    | 1.62                | Phs@china.com    | 2025-12-17 | 202601-095041 |

1: 3D Antenna Peak Gain required being test in system basis

2: OEM/ODM and platform antenna vendors should try to adapt the antenna with a VSWR of 2 (S11<-10dB) for a good antenna matching, and if not possible, try to achieve a VSWR of 3 (S11<-6dB) for a medium antenna matching.

| Intel Reference Antenna Gain and Type |                     |         |         |         |         |         |         |         |         |         |
|---------------------------------------|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Antenna Type                          | 2.4 GHz             | 5.2 GHz | 5.3 GHz | 5.6 GHz | 5.8 GHz | 5.9 GHz | 6.2 GHz | 6.5 GHz | 6.7 GHz | 7.0 GHz |
| PFA                                   | Design Reference    | 3.00    | 5.00    | 5.00    | 5.00    | 5.00    | 5.00    | 5.00    | 5.00    | 5.00    |
| PFA                                   | For WiFi 6E and eee | 3.24    | 3.64    | 3.73    | 4.77    | 4.97    | 4.83    | 4.30    | 5.37    | 5.59    |
| PFA                                   | From WiFi 7 module  | 2.95    | 5.11    | 4.95    | 5.15    | 5.13    | 4.45    | 5.02    | 4.96    | 4.96    |
| Dipole                                | For WiFi 6E and eee | 2.89    | 2.92    | 3.19    | 4.41    | 4.22    | 4.83    | 4.30    | 4.49    | 5.34    |
| Dipole                                | From WiFi 7         | 2.95    | 4.03    | 4.11    | 5.15    | 5.13    | 4.45    | 5.02    | 4.71    | 4.49    |
| Monopole                              | From WiFi 7         | 2.83    | 4.57    | 4.44    | 4.95    | 4.43    | 4.67    | 4.91    | 4.91    | 4.79    |

3D Peak Antenna gain should be equal or greater than -2 dBi. If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

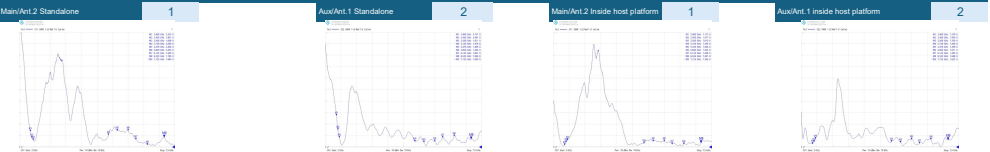
Max Antenna 3D Radiation Pattern - Main Antenna / Ant.2



Max Antenna 3D Radiation Pattern - Aux Antenna / Ant.1



Antenna VSWR data plot inside and outside a host Platform (standalone)



Maximum VSWR of 2 (S11<-10dB) is a good antenna matching. If not possible, try to achieve a VSWR of 3 (S11<-6dB) for a medium antenna matching.

| non Combo Cable Loss (dBi) |                 |              |              |              |              |              |              |              |              |
|----------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                            | 2.4GHz          | 5.2GHz       | 5.3GHz       | 5.6GHz       | 5.8GHz       | 5.9GHz       | 6.2GHz       | 6.5GHz       | 6.7GHz       |
|                            | 2400-2483.5 MHz | 5150-5250MHz | 5250-5350MHz | 5470-5725MHz | 5725-5850MHz | 5850-5895MHz | 5925-6425MHz | 6425-6525MHz | 6525-6875MHz |
| Main                       | 0.38            | 0.58         | 0.58         | 0.60         | 0.60         | 0.61         | 0.62         | 0.63         | 0.64         |
| Aux                        | 0.63            | 0.96         | 0.97         | 1.00         | 1.01         | 1.02         | 1.04         | 1.06         | 1.07         |