

# ANTENNA INFORMATION

|                                                           |                                     |
|-----------------------------------------------------------|-------------------------------------|
| OEM                                                       | Lenovo                              |
| ODM                                                       | LCFC                                |
| Platform model name                                       | TP00146A<br>ThinkPad X13 Yoga Gen 4 |
| Intel platform (ex: Yes, No or NA)                        | Yes                                 |
| Platform type (ex: regular NB, convertible PC, AIO...etc) | Convertible PC                      |
| SAR minimum separation (mm)                               | 5.7mm                               |

|                                       |                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------|
| Antenna manufacturer                  | Luxshare-ICT                                                                              |
| Address                               | No. 568, Sec. 1, Minsheng N. Rd., Guishan Dist.,<br>Taoyuan City 333016 , Taiwan (R.O.C.) |
| Antenna Part number                   | Main: DC33001YV00                      Aux: DC33001YV00                                   |
| Antenna type (ex: PIFA, Dipole...etc) | PIFA                                                                                      |

| Antenna Peak gain w/ cable loss (dBi)* |                                  |                               |                               |                               |                               |                               |                               |                               |                               |                                |
|----------------------------------------|----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|
|                                        | <b>2.4GHz</b><br>2400-2483.5 MHz | <b>5.2GHz</b><br>5150-5250MHz | <b>5.3GHz</b><br>5250-5350MHz | <b>5.6GHz</b><br>5470-5725MHz | <b>5.8GHz</b><br>5725-5850MHz | <b>5.9GHz</b><br>5850-5895MHz | <b>6.2GHz</b><br>5925-6425MHz | <b>6.5GHz</b><br>6425-6525MHz | <b>6.7GHz</b><br>6525-6875MHz | <b>7.0 GHz</b><br>6875-7125MHz |
| Main                                   | 1.82                             | 2.97                          | 2.20                          | 2.86                          | 0.94                          | -0.28                         | 2.72                          | 2.92                          | 2.92                          | 2.92                           |
| Aux                                    | 1.82                             | 2.88                          | 2.11                          | -0.63                         | -1.54                         | -1.54                         | 0.76                          | 1.20                          | 1.20                          | 0.04                           |

| Cable Assembly Part Number and Information |                 |                         |                           |                       |                       |
|--------------------------------------------|-----------------|-------------------------|---------------------------|-----------------------|-----------------------|
|                                            | <b>Cable PN</b> | <b>Cable length(cm)</b> | <b>Cable diameter(mm)</b> | <b>Impedance(ohm)</b> | <b>Connector type</b> |
| Main                                       | 081L            | 9.3                     | 0.81                      | 50                    | MHF4                  |
| Aux                                        | 081L            | 9.8                     | 0.81                      | 50                    | MHF4                  |

\* 3D Antenna Peak Gain required being test in system basis.

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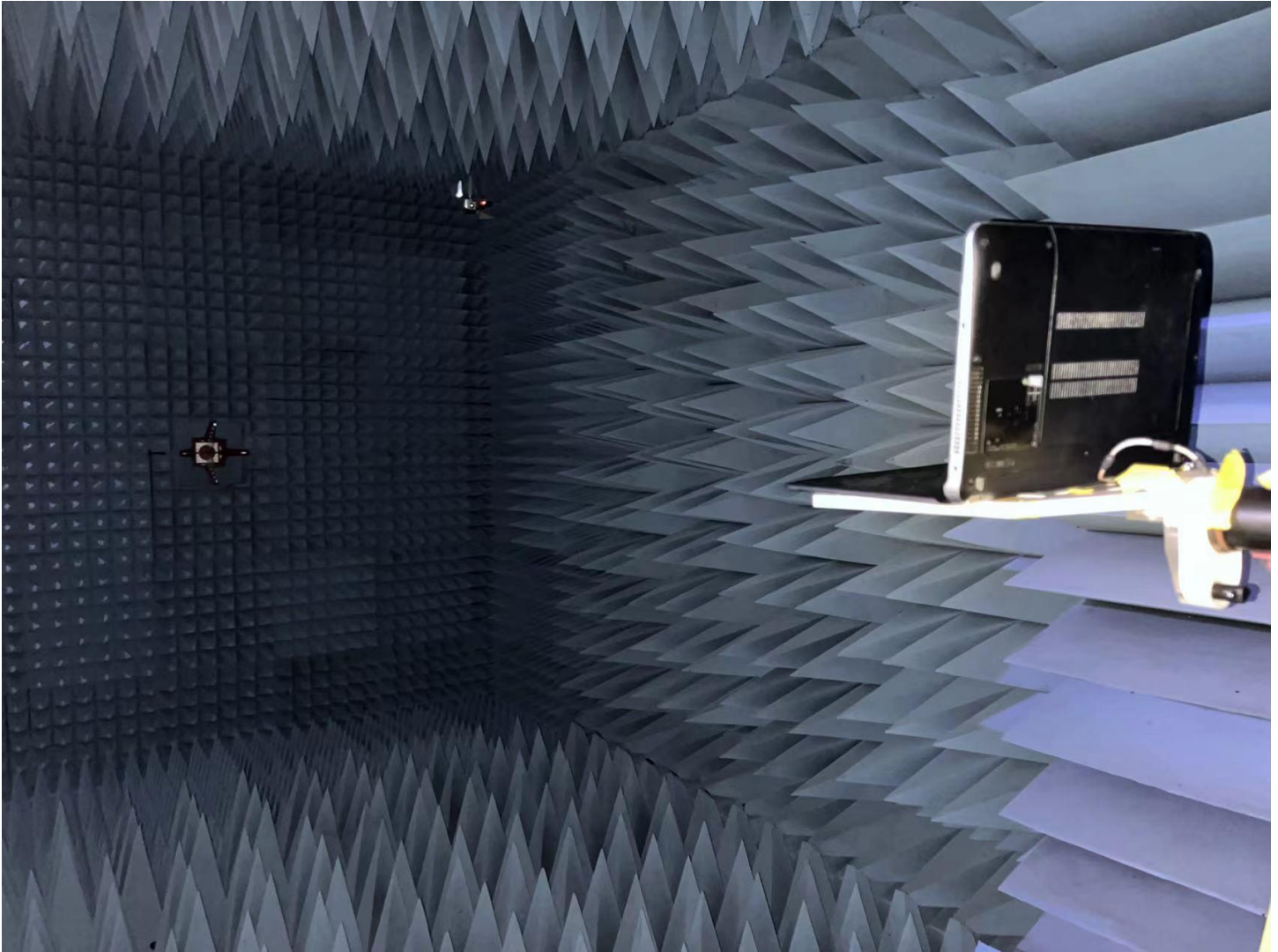
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# Annex A. Photographs

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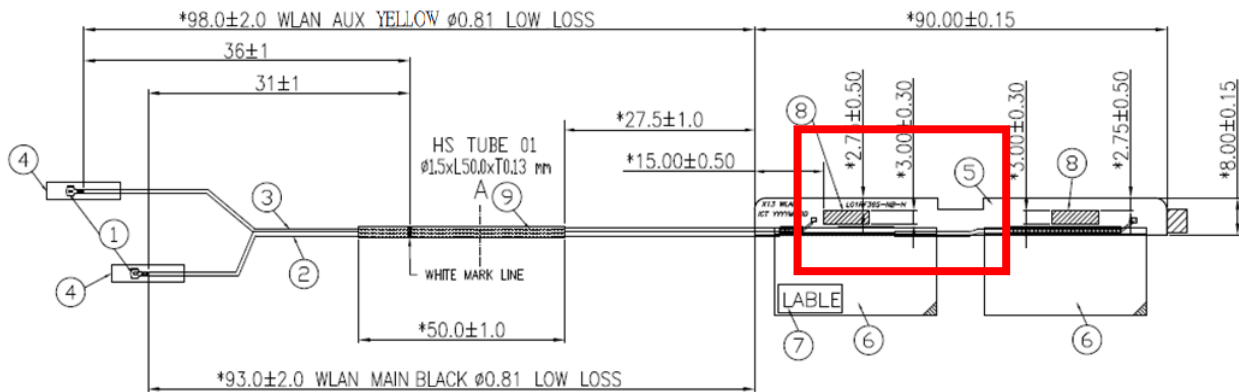
## A.1 Setup Photo



## A.2 Test sample

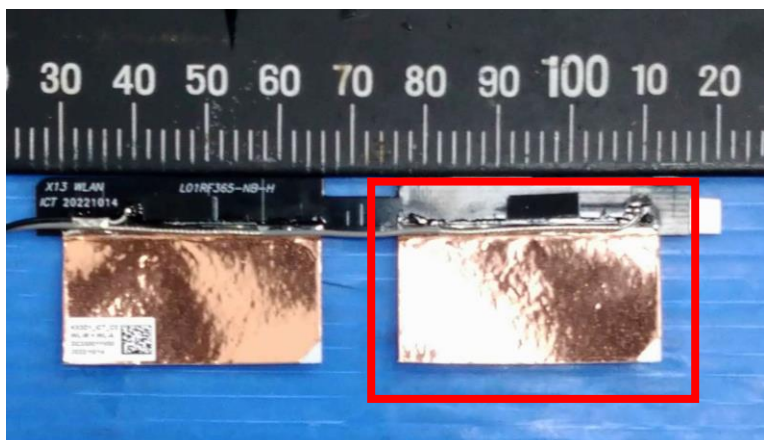
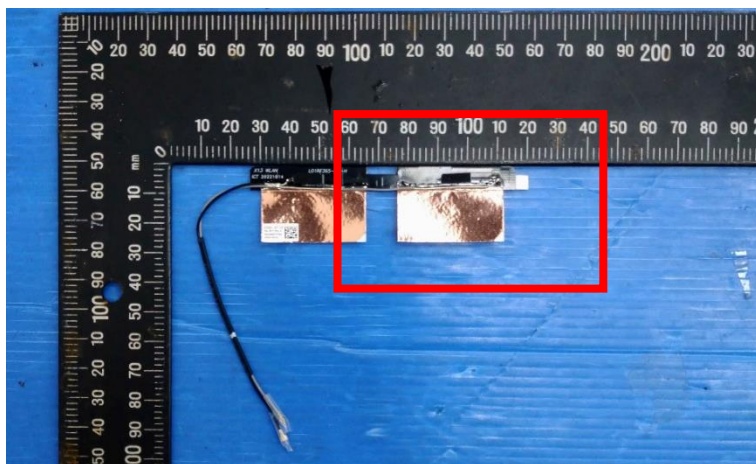
## Main Antenna

## Antenna Drawing

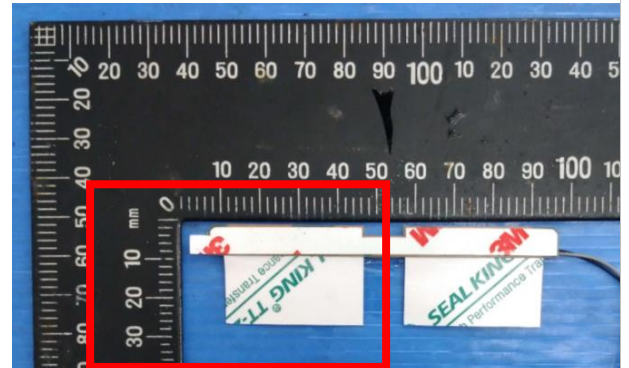
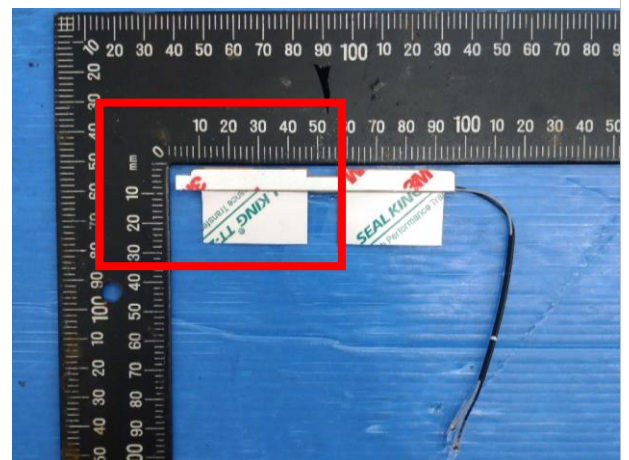


## Antenna Photo

## Front



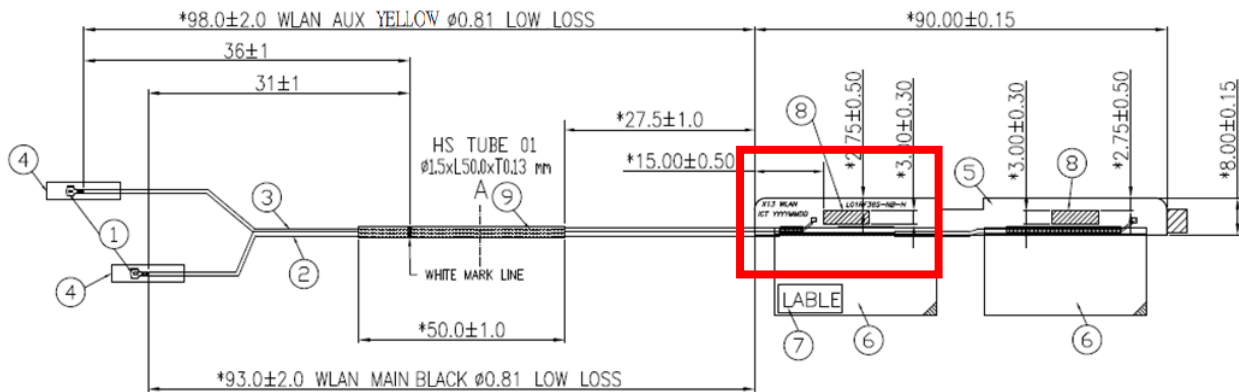
Back



**Note: antenna photo should include L type ruler**

## Aux Antenna

### Antenna Drawing

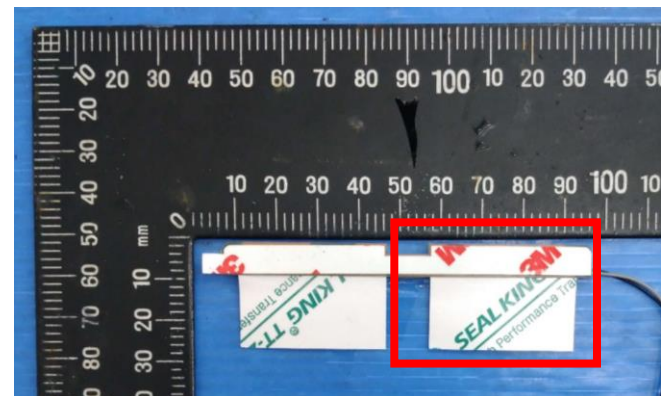
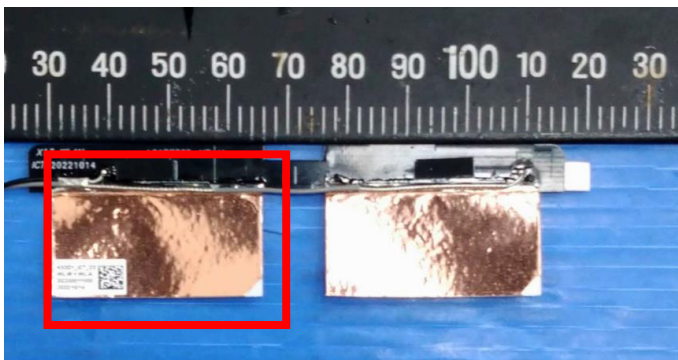
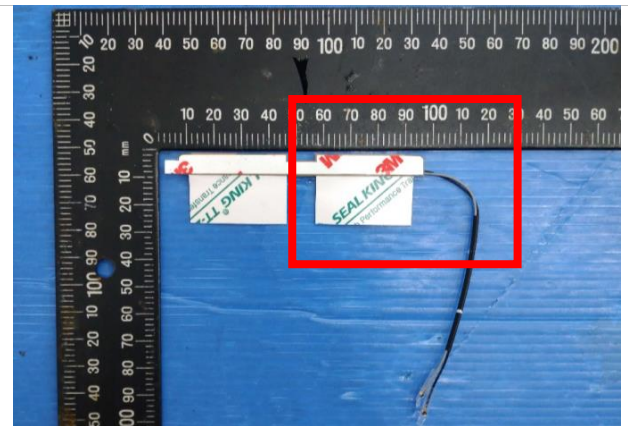


### Antenna Photo

#### Front



#### Back



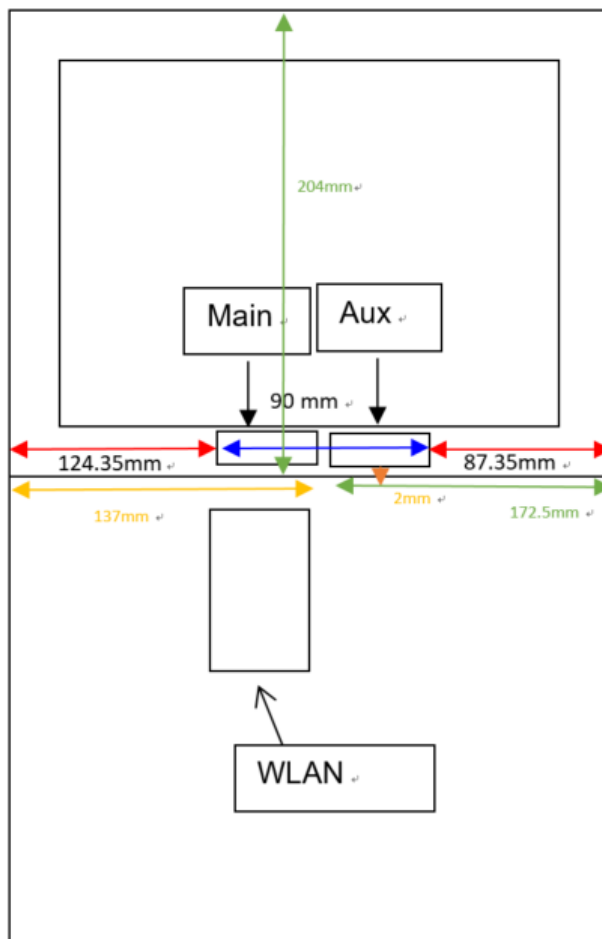
Note: antenna photo should include L type ruler

# Annex B. Antenna Location

## B.1 Antenna Host Platform Location Information

Include a dimensioned photo(s) or dimensioned drawing(s) of Main and Aux antenna placements (measurements are not required for receive-only antenna).

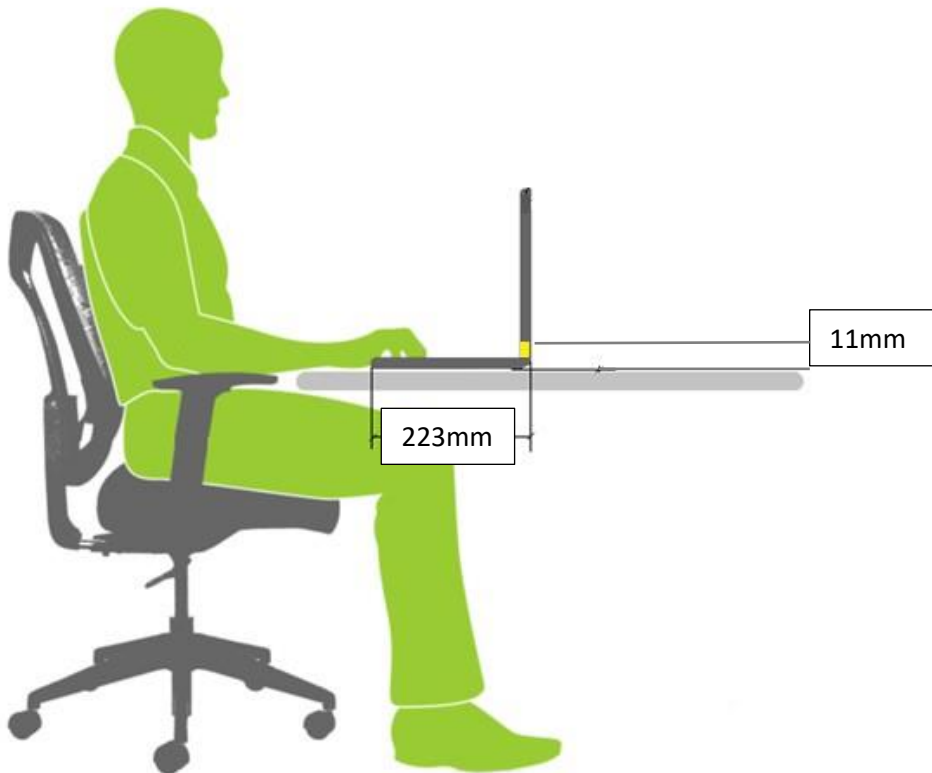
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.



## B.2 Antenna dimensional information for SAR evaluation

Include a dimensioned photo(s) or dimensioned drawing(s) showing the distance (mm) between the transmit antennas and the user. For notebook/laptop hosts show lapheld position (example below). For tablet hosts show all orientations including lapheld, primary & secondary portrait, primary & secondary landscape positions. Include a description of any proximity sensors or power throttling implementations that limit or exclude use of any host orientation.

### NB Mode



TB Mode

