



Spot Check Evaluation

APPLICANT : Lenovo(Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT : Portable Tablet Computer
BRAND NAME : Lenovo
MODEL NAME : TB310XU
FCC ID : O57TB310XU
STANDARD : 47 CFR Part 15 Subpart C §15.247
47 CFR Part 15 Subpart E §15.407

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



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REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|--------------|---------|-------------------------|---------------|
| FR291508-01C | Rev. 01 | Initial issue of report | Nov. 02, 2022 |
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1 General Description

1.1 Applicant

Lenovo(Shanghai) Electronics Technology Co., Ltd.
Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone

1.2 Manufacturer

Lenovo PC HK Limited
23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong, China

1.3 Product Feature of Equipment Under Test

| Product Feature | |
|-----------------|--------------------------|
| Equipment | Portable Tablet Computer |
| Brand Name | Lenovo |
| Model Name | TB310XU |
| FCC ID | O57TB310XU |
| HW Version | Lenovo Tablet TB310XU |
| SW Version | TB310XU_RF01_220920 |
| EUT Stage | Identical Prototype |

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Modification of EUT

No modifications are made to the EUT during all test items.



2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: TB310XU, FCC ID: O57TB310XU) is electrically identical to the reference device (Model: TB310FU, FCC ID: O57TB310FU) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 15C (equipment class: DTS, DSS) and FCC Part 15E (equipment class: NII) reuse the original model’s result and do spot-check, following the FCC KDB 484596 D01 v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: O57TB310XU.

2.2 Model Difference Information

The main difference between FCC ID: O57TB310FU and FCC ID: O57TB310XU is as below:

- The model TB310FU only support BT/WLAN function, and the Modle TB310XU support BT/WLAN + WWAN(2G/3G/4G) function, the BT/WLAN RF part are the same.

Other differences and all the details of similarity and difference can be found in the confidential documents (TB310XU_Operational Description of Product Equality Declaration).

2.3 Reference detail Section:

| Rule Part | Equipment Class | Frequency Band (MHz) | Reference FCC ID(Parent) | Type Grant/ Permissive Change | Reference Title | FCC ID Filling (Variant) | Report Title/Section |
|-----------|-----------------|----------------------|--------------------------|-------------------------------|----------------------|--------------------------|-------------------------|
| 15C | DSS (BR/EDR) | 2400~2483.5 | O57TB310FU | Original Grant | FR291508A | O57TB310XU | All sections applicable |
| | DTS (BLE) | 2400~2483.5 | O57TB310FU | Original Grant | FR291508B | O57TB310XU | All sections applicable |
| | DTS (WLAN) | 2400~2483.5 | O57TB310FU | Original Grant | FR291508C | O57TB310XU | All sections applicable |
| 15E | NII | 5150~5250 | O57TB310FU | Original Grant | FR291508D | O57TB310XU | All sections applicable |
| | NII | 5250~5350 | O57TB310FU | Original Grant | FR291508D / FZ291508 | O57TB310XU | All sections applicable |
| | NII | 5470~5725 | O57TB310FU | Original Grant | FR291508D / FZ291508 | O57TB310XU | All sections applicable |
| | NII | 5725~5850 | O57TB310FU | Original Grant | FR291508D | O57TB310XU | All sections applicable |



2.4 Spot Check Verification Data Section

Conducted power test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model

Summary for power spot check for each rule entry and technology is listed as below:

| Test Item | Mode | O57TB310FU Parent Worst Result | O57TB310XU Variant Check Result | Difference (dB) |
|-----------------------|--------------------|--------------------------------|---------------------------------|-----------------|
| Conducted Power (dBm) | BT2.0 | 10.79 | 10.72 | 0.07 |
| | BLE 1M | -0.90 | -1.09 | 0.19 |
| | BLE 2M | -0.80 | -1.10 | 0.30 |
| | 11b, 2.4GHz | 20.82 | 20.80 | 0.02 |
| | 11g, 2.4GHz | 25.63 | 25.09 | 0.54 |
| | 11n HT20, 2.4GHz | 25.10 | 25.04 | 0.06 |
| | 11a, 5.2GHz | 17.31 | 17.05 | 0.26 |
| | 11a, 5.3GHz | 17.46 | 17.24 | 0.22 |
| | 11a, 5.5GHz | 17.49 | 17.06 | 0.43 |
| | 11a, 5.8GHz | 17.41 | 17.15 | 0.26 |
| | 11n HT20, 5.2GHz | 15.55 | 15.24 | 0.31 |
| | 11n HT20, 5.3GHz | 15.52 | 15.30 | 0.22 |
| | 11n HT20, 5.5GHz | 15.47 | 15.33 | 0.14 |
| | 11n HT20, 5.8GHz | 15.51 | 15.24 | 0.27 |
| | 11n HT40, 5.2GHz | 15.53 | 15.34 | 0.19 |
| | 11n HT40, 5.3GHz | 15.57 | 15.25 | 0.32 |
| | 11n HT40, 5.5GHz | 15.55 | 15.30 | 0.25 |
| | 11n HT40, 5.8GHz | 15.52 | 15.29 | 0.23 |
| | 11ac VHT20, 5.2GHz | 15.50 | 15.16 | 0.34 |
| | 11ac VHT20, 5.3GHz | 15.48 | 15.25 | 0.23 |
| | 11ac VHT20, 5.5GHz | 15.43 | 15.30 | 0.13 |
| | 11ac VHT20, 5.8GHz | 15.44 | 15.11 | 0.33 |
| | 11ac VHT40, 5.2GHz | 14.93 | 14.67 | 0.26 |
| | 11ac VHT40, 5.3GHz | 15.03 | 14.80 | 0.23 |
| | 11ac VHT40, 5.5GHz | 15.06 | 14.83 | 0.23 |
| | 11ac VHT40, 5.8GHz | 14.99 | 14.68 | 0.31 |
| | 11ac VHT80, 5.2GHz | 11.20 | 11.01 | 0.19 |
| | 11ac VHT80, 5.3GHz | 10.84 | 10.67 | 0.17 |
| 11ac VHT80, 5.5GHz | 14.01 | 13.71 | 0.30 | |
| 11ac VHT80, 5.8GHz | 13.90 | 13.55 | 0.35 | |

Conclusion:

Conducted power test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result, the test data from the original model is representative for the variant model. The power level spot check are shown within expected level compliant to limit line.

We are using power measurements from the original parent model reports to list on the grant.

The same DFS detection mechanism/software is used in the variant. Hence, there is no spot check data for DFS hand-shaking mechanism.

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.



3 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|--------------------|--------------|------------|------------|-----------------|------------------|---------------|---------------|---------------------|
| Spectrum Analyzer | R&S | FSV40 | 101040 | 10Hz~40GHz | Oct. 12, 2022 | Oct. 27, 2022 | Oct. 11, 2023 | Conducted (TH01-KS) |
| Power divider | STI | STI08-0055 | - | 0.5~40GHz | Aug. 25, 2022 | Oct. 27, 2022 | Aug. 24, 2023 | Conducted (TH01-KS) |
| Power Meter | Anritsu | ML2495A | 1005002 | 50MHz Bandwidth | Jan. 05, 2022 | Oct. 27, 2022 | Jan. 04, 2023 | Conducted (TH01-KS) |
| Pulse Power Sensor | Anritsu | MA2411B | 0917070 | 300MHz~40GHz | Jan. 05, 2022 | Oct. 27, 2022 | Jan. 04, 2023 | Conducted (TH01-KS) |

NCR: No Calibration Required.

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