



December 30, 2021

Federal Communications
Commission Authorization and
Evaluation Division 7435 Oakland
Mills Road, Columbia, MD 21046

**FCC Class II Permissive Change for FCC ID : A3LAX211D950QED
(Original Grant date : 12/22/2021)**

Dear Examiner,

This application is preparing for Class II Permissive Change that adding a certified module (FCC ID : A3LAX211D950QED) into a new Laptop Computer (Model Name: NP950QED, Brand : Samsung)

The Grip Sensors and Accelerometer have been used to power reduced for SAR compliance. The details of power level see the operational description and test report.

The major change filed under this application is :

Change #1 : As described in the Operational Description, Changes to the application of power table depending on the LCD angle, accelerometer sensor and grip sensor of the laptop.

Change #2 : Check the output power level is lower than original grant.

Change #3 : Adds new antennas that meet FCC Part 15 equivalent-type. The antenna information is listed as below.

Antenna	Type	Manufacturer	Frequency	Peak gain
Main Antenna	PIFA	Galtronics	2400-2500	0,47
			5150-5250	2,52
			5250-5350	3,08
			5470-5725	3,94
			5725-5850	3,35
			5925-6425	4,81
			6425-6525	3,79
			6525-6875	4,98
			6875-7125	4,99
Aux Antenna	PIFA	Galtronics	2400-2500	-3,01
			5150-5250	-0,23
			5250-5350	0,57
			5470-5725	0,77
			5725-5850	-0,15
			5925-6425	1,52
			6425-6525	-1,24
			6525-6875	-1,23
			6875-7125	-0,99

SAMSUNG

SAR testing and RF spot check was performed to demonstrate RF compliance
For Bluetooth, spot check was performed and emission level does not have any degradation.

About Sensor:

Grip sensing antenna measure capacitance value and this value is converted by the ADC. Grip sensor IC (SX9360) check grip state if measured capacitance value is over threshold value or not. If this value is over threshold value, Tx power of WLAN is reduced. This operation is worked only in clamshell mode.

The Accelerometer sensor is Intel custom sensor used for determining the angle between the lid (screen) and the base (keyboard). This angle, referred as hinge angle, can be further used to detect the platform state.

The Hinge calculation based only on accelerometers will not work if the device is placed in a vertical (portrait) position. In such case, when device is on vertical (portrait) position, the Hinge sensor may continue reporting data, but the angle values should be ignored. In such case as vertical position (Book mode), DSI Level selected 1 (DSI=1). Vertical position has a higher priority than Hinge angle and operates as DSI=1 for both Hinge angle($200^\circ \leq [\text{current}] \leq 360^\circ$) and Vertical position(Angle to the ground : $\pm 70^\circ \leq [\text{current}] \leq \pm 110^\circ$)

Sincerely Yours,



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