

RF Exposure Evaluation in co-locating with other transmitters

1. Configuration

The host PC device (DL-Note) has the following two types of configurations for the wireless communication features. The Figure-1 is designed for US and Canada, and the Figure-2 is for US only.

The applying modular transmitter device (FCC ID: PPD-AR5BXB72-L) was previously certified by the Commission on October/31/2006 with the same configuration in this application.

The difference from the previous grant condition is:

to enable the simultaneous transmission with the WWAN modular transmitters listed below.

The co-location with the Bluetooth module remains the same.

Figure-1: Dual transmitters model of DL-Note (Canada and US)

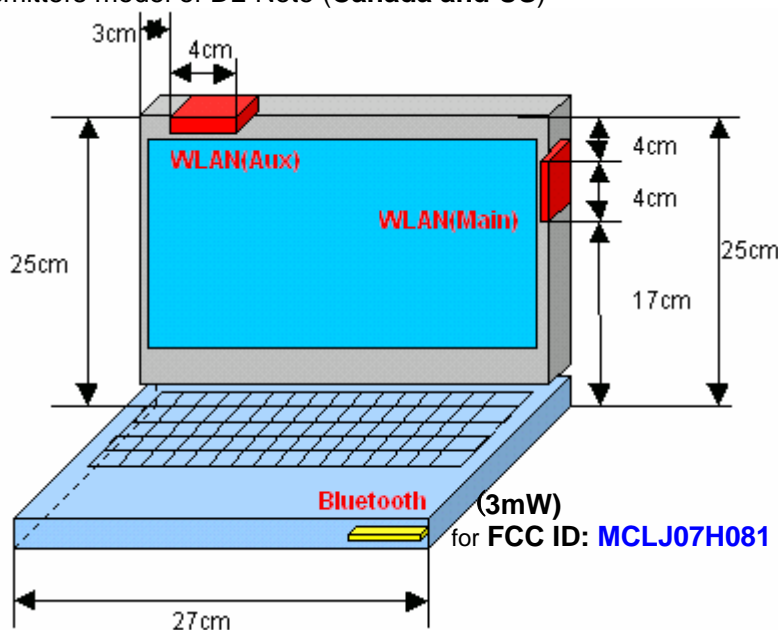
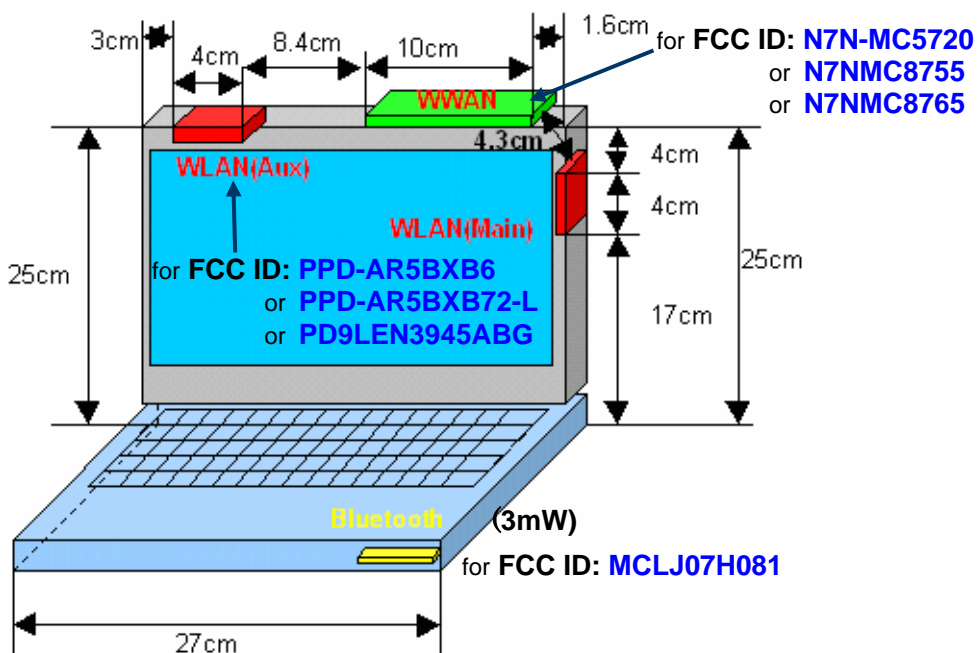


Figure-2: Triple transmitters model of DL-Note (US only)



2. Justification for SAR testing

The subjected host device is a tablet type PC and the transmission antennas are very close to the human body. Therefore the applying LMA transmitter and the antenna system is categorized as a Potable device pursuant to FCC CFR 47 Section 2.1093.

The separate SAR test report (Number: 06U10667-1B) was measured for the applying modular transmitter (FCC ID: PPD-AR5BXB72-L) in co-locating with Bluetooth device (FCC ID: MCLJ07H081) and each WWAN modular transmitter in active. Also each WWAN module was examined the SAR independently (Document Number: 06U10664-1B, 06U10665-1B and 06U10666-1B).

Hereafter, the calculation of grid-summed SAR result for WLAN and each WWAN SAR testing is used for the RF exposure evaluation.

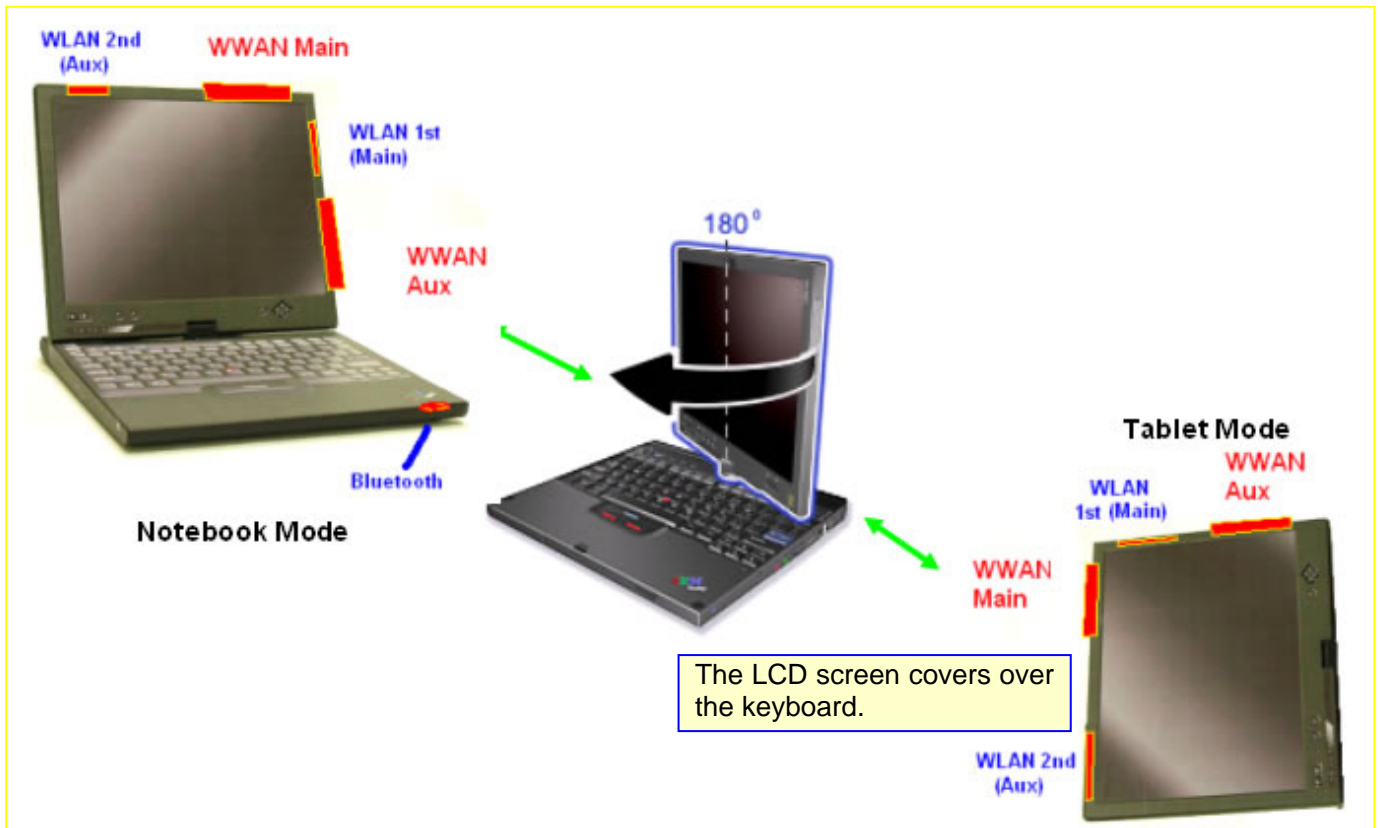
3. Conclusion

The maximum grid-summed SAR results for the WLAN and WWAN modules are as follows, then the applying device (FCC ID: PPD-AR5BXB72-L) has found to comply with the limits for the SAR compliance according to FCC CFR 47 section 2.1093, Portable devices.

WLAN 2.4GHz DTS band with Bluetooth and WWAN	0.673 mW/g
WLAN 5.2GHz U-NII band with Bluetooth and WWAN	0.861 mW/g
WLAN 5.8GHz DTS band with Bluetooth and WWAN	0.659 mW/g

4. Summary of grid-summed SAR result

The SAR test was performed with the following configuration, and the same terms of each configuration are referred in the SAR test report.



Laptop mode

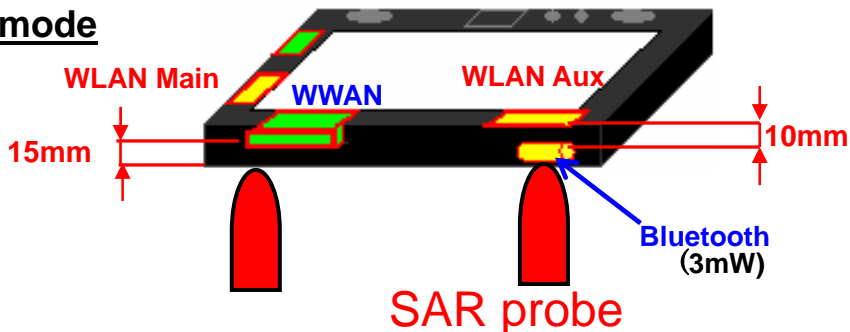


Table-1 Grid-summed SAR result of Laptop mode

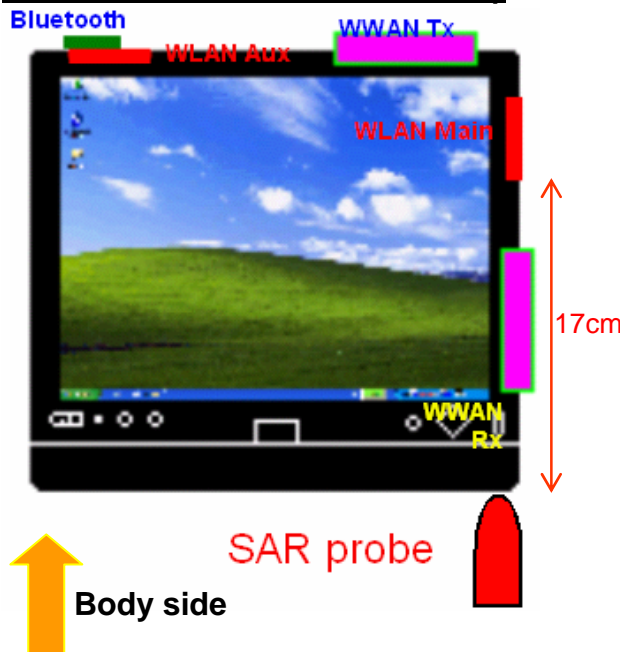
[Unit of results: mW/g]

WLAN		PPD-AR5BXB72-L + MCLJ07H081		WWAN	N7N-MC5720	N7NMC8755	N7NMC8765	Sum of WLAN + WWAN *1
		Main	Aux					
SAR Test Report No.		06U10667-1B			06U10665-1B	06U10666-1B	06U10664-1B	
Laptop (Lap-Held)	2.4G (DTS)	0.115	0.122	EVDO-22H	0.081	N/A	N/A	0.673
				EVDO-24E	0.436			
	5.2G (U-NII)	0.264	0.072	GRPS-22H	N/A	0.142	0.122	0.772
				EGRPS-22H		0.041	0.035	
				GRPS-24E		0.194	0.277	
	5.8G (DTS)	0.173	0.050	EGRPS-24E	0.068	0.137	0.659	
			WCDMA-22H	N/A	N/A	0.055		
			WCDMA-24E			0.358		

*1: MIMO LAN (Main + Aux) + the highest SAR result of WWAN



Tablet PL (Primary Landscape)



Tablet PP (Primary Portrait)

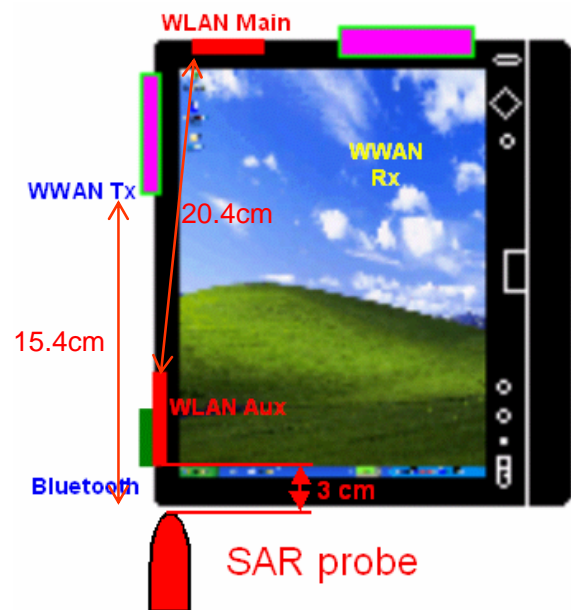


Table-2 Grid-summed SAR result of Tablet Primary mode

[Unit of results: mW/g]

WLAN		PPD-AR5BXB72-L + MCLJ07H081		WWAN	N7N-MC5720	N7NMC8755	N7NMC8765	Sum of WLAN + WWAN *2	
		Main	Aux						
SAR Test Report No.		06U10667-1B			06U10665-1B	06U10666-1B	06U10664-1B		
Primary Portrait	2.4G (DTS)	(mobile)	0.361	EVDO-22H	0.066	N/A	N/A	0.544	
				EVDO-24E	0.046				
	5.2G (U-NII)	(mobile)	0.678	GRPS-22H	N/A	0.082	0.183	0.861	
				EGRPS-22H		0.022			0.058
				GRPS-24E		0.056			0.025
	EGRPS-24E	0.027	0.015						
5.8G (DTS)	(mobile)	0.233	WCDMA-22H	N/A	N/A	0.074	0.416		
			WCDMA-24E			0.032			

*2: MIMO LAN (Aux) + the highest SAR result of WWAN

Tablet SL (Secondary Landscape)

Tablet SP (Secondary Portrait)

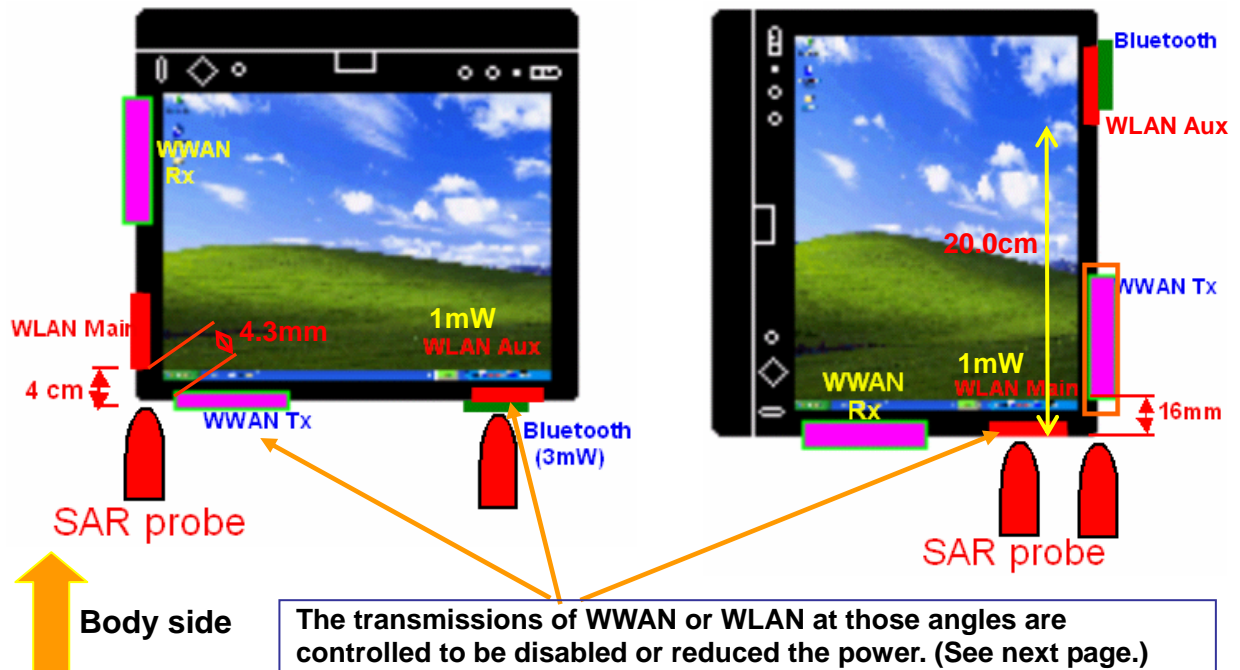


Table-3 Grid-summed SAR result of Tablet Secondary mode

[Unit of results: mW/g]

WLAN		PPD-AR5BxB72-L + MCLJ07H081		WWAN	N7N-MC5720	N7NMC8755	N7NMC8765	Sum of WLAN + WWAN
		Main	Aux					
SAR Test Report No.		06U10667-1			06U10665-1	06U10666-1	06U10664-1	
Secondary Landscape	2.4G (DTS)	0.024	*3 (0.024)	EVDO-22H EVDO-24E	(disabled)	N/A	N/A	0.048
	5.2G (U-NII)	0.042	*3 (0.042)	GRPS-22H EGRPS-22H GRPS-24E EGRPS-24E	N/A	(disabled)	(disabled)	0.084
	5.8G (DTS)	0.070	*3 (0.070)	WCDMA-22H WCDMA-24E	N/A	N/A	(disabled)	0.140
Secondary Portrait	2.4G (DTS)	*3 (0.024)	*4 (0.024)	EVDO-22H	0.183	N/A	N/A	0.333 *5
				EVDO-24E	0.097			
	5.2G (U-NII)	*3 (0.042)	*4 (0.042)	GRPS-22H	N/A	0.194	0.285	0.396 *5
				EGRPS-22H		0.069		
				GRPS-24E		0.064		
	EGRPS-24E	0.032	0.069					
5.8G (DTS)	*3 (0.070)	*4 (0.070)	WCDMA-22H	N/A	N/A	0.096	0.425 *5	
			WCDMA-24E			0.129		

*3: SAR is exempted pursuant to the footnote 14 of the Section 3 in Supplement C to OET Bulletin 65. Instead, the main WLAN antenna's values in Secondary Landscape mode are used as a worse case.

*4: SAR was not measured for WLAN due to the distance of mobile antenna. Instead, the main WLAN antenna's values in Secondary Landscape mode are used as a worse case.

*5: (*3 + *4) + the highest SAR result of WWAN

[Transmission control in “Tablet” operation mode]

- The system recognizes mechanically that it is transformed from “**Notebook mode**” to “**Tablet mode**”.



- The screen angle of **Tablet mode** is determined by operators with the screen rotation switch shown below, then the system recognizes which screen mode in **PL**, **PP**, **SL** or **SP** is selected.
- When the **SL** screen mode was selected, the system controls the transmission power of the Aux antenna for WLAN module (FCC ID: **PPD-AR5 BXB72-L**) to restrain to **1mW**, or the transmission of WLAN module (FCC ID: PPD-AR5 BXB6 or PD9LEN3945ABG) is forced to switch to the main antenna.
If WWAN module was active, the system does not function with **SL** mode for any WWAN module, and the screen returns to **PL** mode automatically so that operator won't use the **SL** mode.
- When the **SP** screen mode was selected, the system controls the transmission power of the Main antenna for WLAN module (FCC ID: **PPD-AR5 BXB72-L**) to restrain to **1mW**, or the transmission of WLAN module (FCC ID: PPD-AR5 BXB6 or PD9LEN3945ABG) is forced to switch to the Aux antenna.

