

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: **N7NMC8765**) 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 WLAN 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)

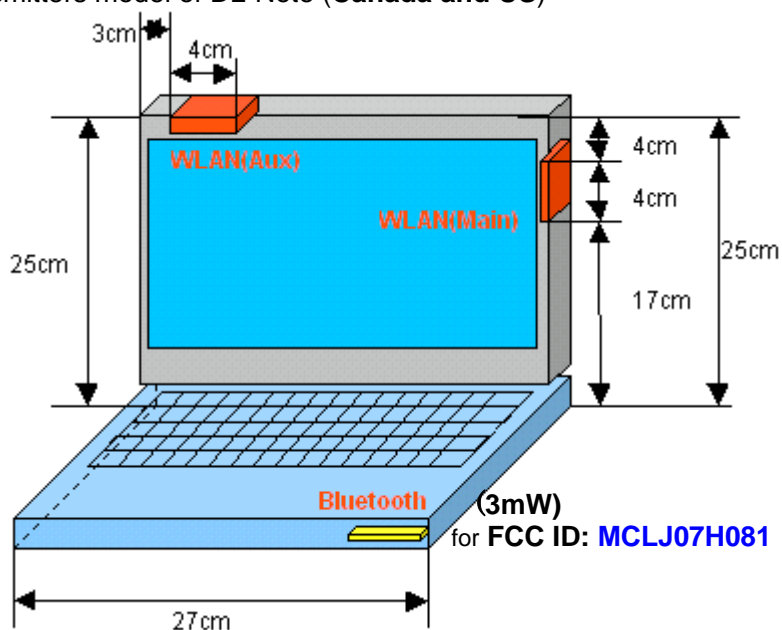
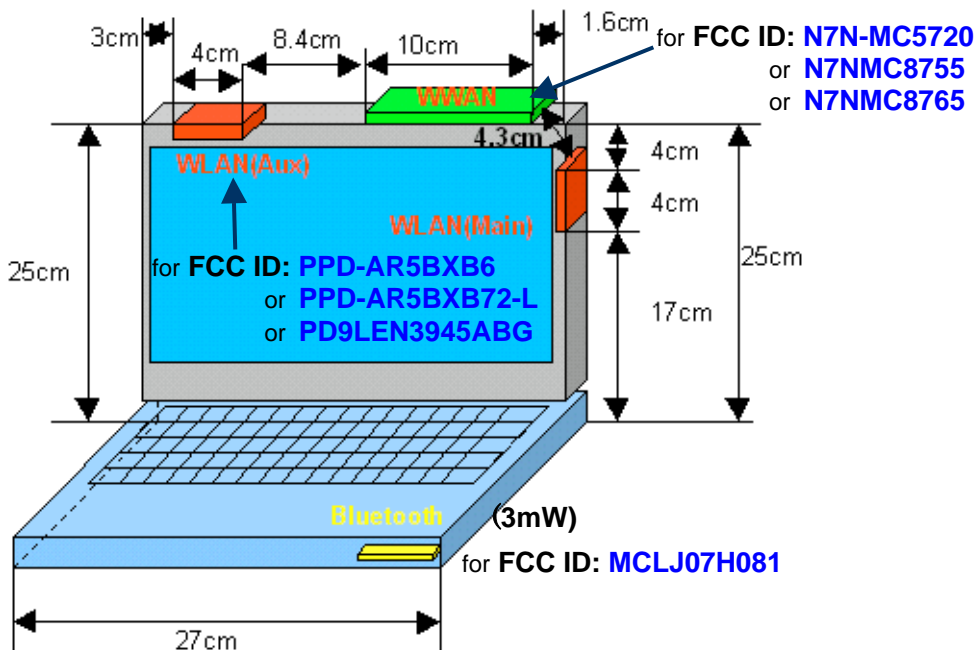


Figure-2: Triple transmitters model of DL-Note (US only)



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 are categorized as a Potable device pursuant to FCC CFR 47 Section 2.1093.

The separate SAR test report (Number: 06U10664-1B) was measured for the applying modular transmitter (FCC ID: N7NMC8765) with the co-located WLAN (FCC ID: PPD-AR5BXB72-L) and Bluetooth (FCC ID: MCLJ07H081) in active. PPD-AR5BXB72-L was selected representatively as the worst case among the three co-located WLAN transmitter devices.

Also the co-located WLAN modules (FCC ID: PD9LEN3945ABG, PPD-AR5BXB72-L and PPD-AR5BXB6) were examined the SAR independently with the co-located Bluetooth (FCC ID: MCLJ07H081) in active, and granted on October/18/2006, October/31/2006 and November/07/2006. The document Numbers of SAR test reports for these transmitters referred in this exhibit are 06LR023SAR-F, 06U10634-4B and 06LR024SAR-F.

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

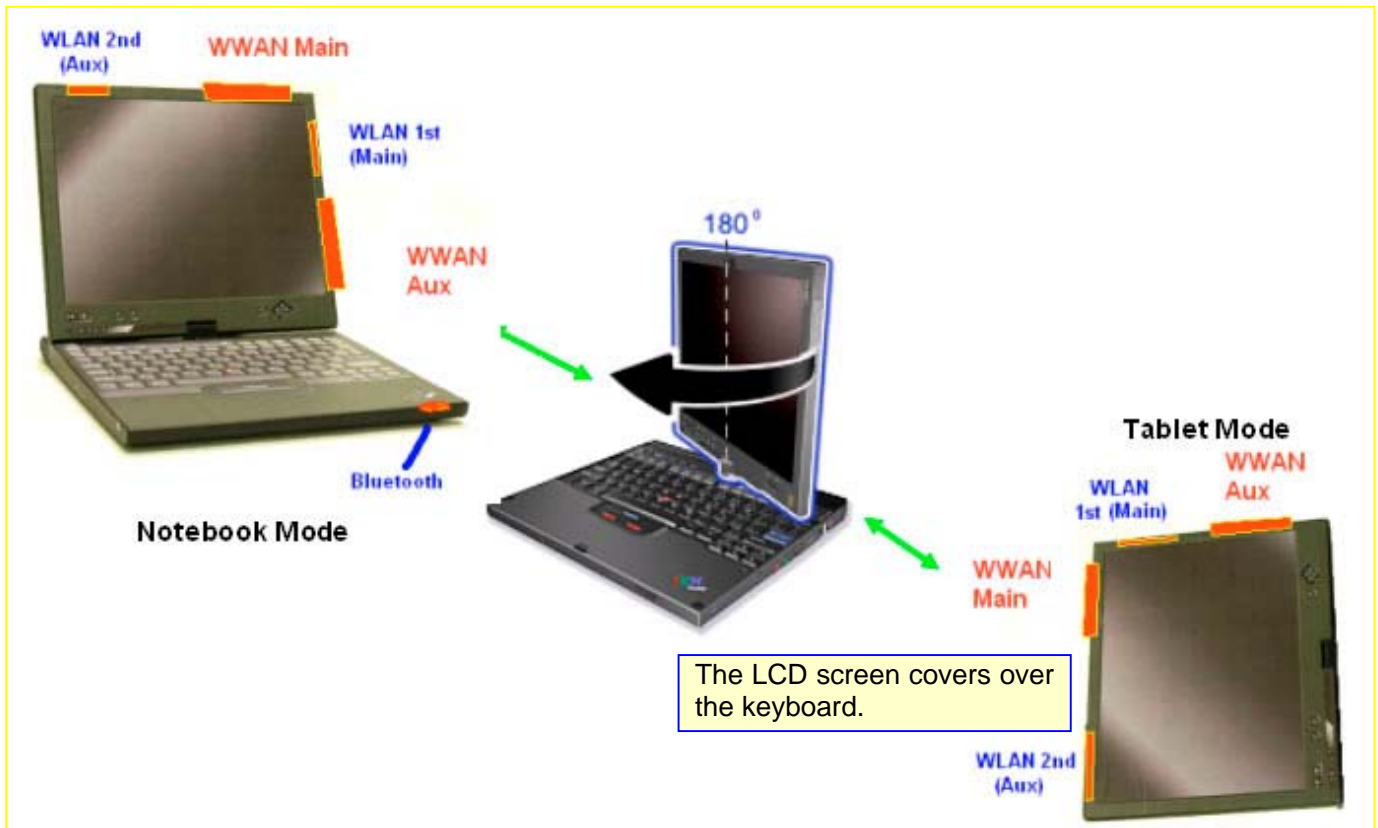
3. Conclusion

The maximum grid-summed SAR results of the WWAN and WLAN modules are as follows, then the applying device (FCC ID: N7NMC8765) has found to comply with the limits for the SAR compliance according to FCC CFR 47 section 2.1093, Portable devices.

Part 22E	GPRS with WLAN and Bluetooth	0.861 mW/g
	EGPRS with WLAN and Bluetooth	0.736 mW/g
	WCDMA with WLAN and Bluetooth	0.752 mW/g
Part 24H	GPRS with WLAN and Bluetooth	0.703 mW/g
	EGPRS with WLAN and Bluetooth	0.693 mW/g
	WCDMA with WLAN and Bluetooth	0.710 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

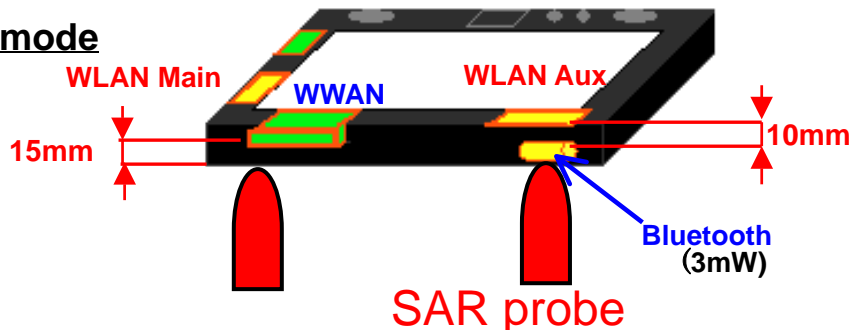


Table-1 Grid-summed SAR result of Laptop mode

[Unit of results: mW/g]

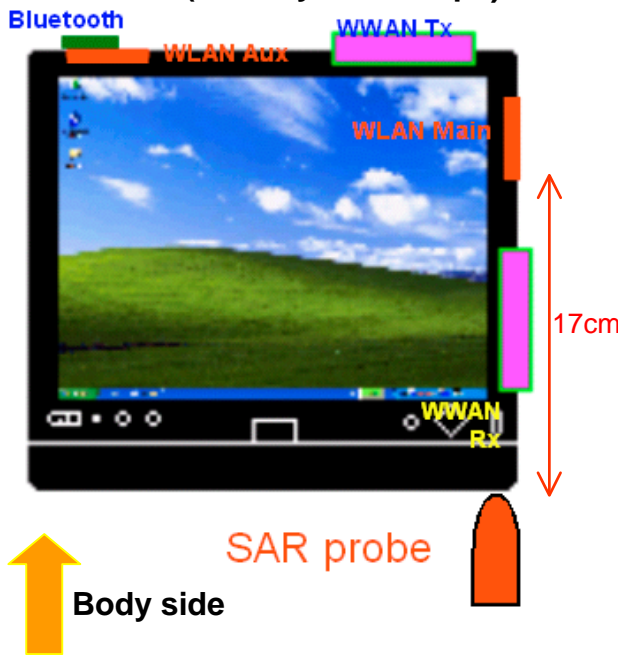
WWAN		N7NMC8765	WLAN		PPD-AR5BxB72-L + MCLJ07H081	PPD-AR5BxB6 + MCLJ07H081	PD9LEN3945ABG + MCLJ07H081	Sum of WLAN + WWAN
SAR Test Report No.		06U10664-1B	Main	Aux	06U10634-4B	06LR024SAR-F	06LR023SAR-F	
Laptop (Lap-Held)	GPRS-22H	0.118 (0.122) *1	2.4G (DTS)	0.115	0.122	0.067	0.051	0.454 *2
	EGPRS-22H	(0.035) *1						0.371 *2
	WCDMA-22H	(0.055) *1	5.2G (U-NII)	0.264	0.072	0.166	0.095	0.391 *2
	GPRS-24E	(0.277) *1						0.613 *2
	EGPRS-24E	(0.137) *1	5.8G (DTS)	0.173	0.050	0.185	0.103	0.473 *2
	WCDMA-24E	(0.358) *1						0.654 *2
		0.318						

*1: Reference only (from the previous measurement results of CCS SAR Report 06U10631-3B)

*2: MC8765 SAR result + the highest SAR result of WLAN (i.e. MIMO Main+Aux in 5.2GHz band)



Tablet PL (Primary Landscape)



Tablet PP (Primary Portrait)

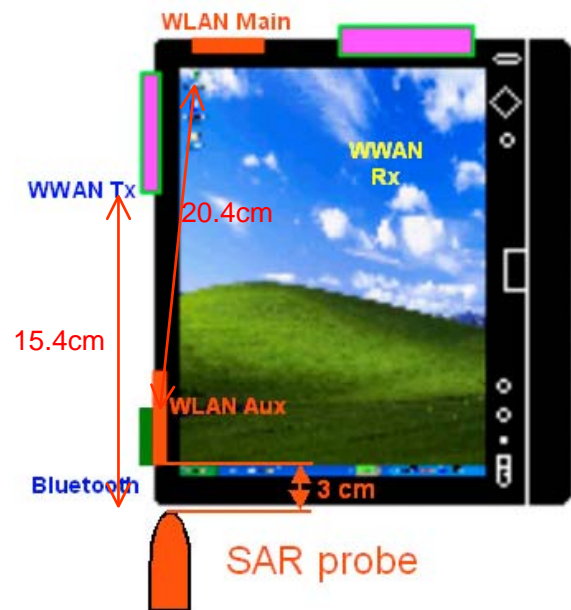


Table-2 Grid-summed SAR result of Tablet Primary mode

[Unit of results: mW/g]

WWAN		N7NMC8765	WLAN		PPD-AR5BXB72-L + MCLJ07H081	PPD-AR5BXB6 + MCLJ07H081	PD9LEN3945ABG + MCLJ07H081	Sum of WLAN + WWAN
			Main	Aux				
SAR Test Report No.		06U10664-1B	06U10634-4B		06LR024SAR-F	06LR023SAR-F		
Primary Portrait	GPRS-22H	0.183 (0.183) *1	2.4G (DTS)	(mobile)	0.361	0.203	0.142	0.861 *3
	EGPRS-22H	(0.058) *1						
	WCDMA-22H	(0.074) *1	5.2G (U-NII)	(mobile)	0.678	0.107	0.097	0.752 *3
	GPRS-24E	(0.025) *1						
	EGPRS-24E	(0.015) *1	5.8G (DTS)	(mobile)	0.233	0.175	0.122	0.693 *3
	WCDMA-24E	(0.032) *1						
		0.032						0.710 *3

*1: Reference only (from the previous measurement results of CCS SAR Report 06U10631-3B)

*3: MC8765 SAR result + the highest SAR result of WLAN

Tablet SL (Secondary Landscape)

Tablet SP (Secondary Portrait)

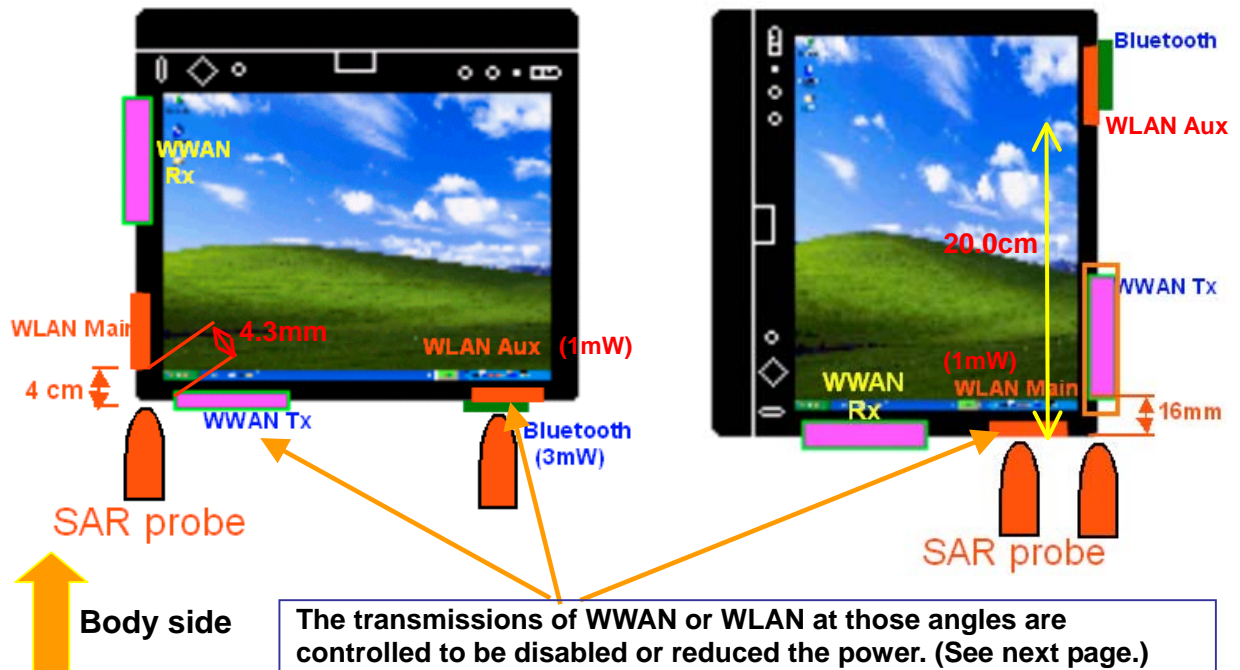


Table-3 Grid-summed SAR result of Tablet Secondary mode

[Unit of results: mW/g]

WWAN		N7NMC8765	WLAN	PPD-AR5BXB72-L + MCLJ07H081		PPD-AR5BXB6 + MCLJ07H081	PD9LEN3945ABG + MCLJ07H081	Sum of WLAN + WWAN					
				Main	Aux								
SAR Test Report No.		06U10664-1B		06U10634-4B		06LR024SAR-F	06LR023SAR-F						
Secondary Landscape	GPRS-22H	(disabled)	2.4G (DTS)	0.024	*4 (0.024)	0.053	0.040	0.140 *6					
	EGPRS-22H	(disabled)							0.140 *6				
	WCDMA-22H	(disabled)	5.2G (U-NII)	0.042	*4 (0.042)	0.097	0.062	0.140 *5					
	GPRS-24E	(disabled)									0.140 *6		
	EGPRS-24E	(disabled)						5.8G (DTS)	0.070	*4 (0.070)	0.135	0.068	0.140 *6
	WCDMA-24E	(disabled)											
Secondary Portrait	GPRS-22H	0.243 (0.285) *1	2.4G (DTS)	*4 (0.024)	*5 (0.024)	0.058	0.033	0.383 *6					
	EGPRS-22H	(0.067) *1								0.207 *6			
	WCDMA-22H	(0.096) *1	5.2G (U-NII)	*4 (0.042)	*5 (0.042)	0.079	0.125	0.236 *6					
	GPRS-24E	(0.127) *1									0.267 *6		
	EGPRS-24E	(0.069) *1						5.8G (DTS)	*4 (0.070)	*5 (0.070)	0.053	0.120	0.209 *6
	WCDMA-24E	(0.129) *1 0.155											

*1: Reference only (from the previous measurement results of CCS SAR Report 06U10631-3B)

*4: 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.

*5: 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.

*6: MC8765 SAR result + the highest SAR result of WLAN

[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.

