



EVALUATION REPORT

EUT Description	GSM, WCDMA and LTE Cellular adapter card
Brand Name	Intel
Model Name	7262M2WW
FCC/IC ID	FCC ID: PD97262WW / IC ID: 1000M-7262WW
Antenna type	Dipole, Pulse, Part Number SPDA24700/2700
Hardware/Software Version	HW PR2.1, SW 1449
Features	2G: GSM/GPRS/EDGE 850 / 1900 3G: WCDMA/HSPA/DC-HSDPA FDD II / IV / V 4G: LTE-FDD 2, 4, 5, 7, 12, 13, 17, 26 LTE-TDD 41 (see section 3)

Applicant	Intel Mobile Communication
Address	“Le Navigator” BatB 505 route des Lucioles 06560 Valbonne – Sophia Antipolis France
Contact Person	Wilfrid D’Angelo
Telephone/Fax/ Email	wilfrid.dangelo@intel.com

Reference Standards	FCC CFR Title 47 Part 1.1310 FCC CFR Title 47 Part 2.1091 (see section 1)
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Test Report number	14112501.TR08
Revision Control	Rev. 00

The test results relate only to the samples tested.
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Issued by Reviewed by Approved by

Jose M. FORTES
(Technical Manager)

Jose M. FORTES
(Technical Manager)

Nawfal ASRIH
(Laboratory Manager)

**Intel Mobile Communications France S.A.S – WRF Lab
425 rue de Goa – Le Cargo B6 – Z.I. des 3 Moulins – 06600, Antibes, France
Tel. +33493001400 / Fax +33493001401**

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1. Standards, reference documents and applicable test methods

1. FCC CFR Title 47 Part 1.1310 – Radiofrequency radiation exposure limits.
2. FCC CFR Title 47 Part 2.1091 – Radiofrequency radiation exposure evaluation: mobile devices.

2. General conditions, competences and guarantees

- ✓ Intel Mobile Communications Wireless RF Lab (Intel WRF Lab) is a laboratory competent to perform this evaluation.
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
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3. EUT features

These are the detailed bands and modes supported by the Equipment Under Test:

GSM / GPRS / EDGE	GSM 850 (824.0 – 849.0 MHz) PCS 1900 (1850.0 – 1910.0 MHz)
WCDMA / HSPA+	FDD II (1850.0 – 1910.0 MHz) FDD IV (1710.0 – 1755.0 MHz) FDD V (824.0 – 849.0 MHz)
LTE FDD	Band 2 (1850.0 – 1910.0 MHz) Band 4 (1710.0 – 1755.0 MHz) Band 5 (824.0 – 849.0 MHz) Band 7 (2500.0 – 2570.0 MHz) Band 12 (699.0 – 716.0 MHz) Band 13 (777.0 – 787.0 MHz) Band 17 (704.0 – 716.0 MHz) Band 26 (814.0 – 849.0 MHz)
LTE TDD	Band 41 (2496.0 – 2690.0 MHz)

4. Remarks and comments

1. The conducted output power values presented in this report are the corresponding maximum per band and they are taken from reports 14112501.TR06.
2. This report only covers the additional LTE bands added in the HW version PR2.1. The RF Exposure Evaluation for all the remaining bands was already done in the report 14112501.TR03.

5. Evaluation Verdicts summary

Mode	Band	Highest Power Density @ 20cm (mW/cm ²)	Limit (mW/cm ²)	Verdict
LTE FDD	Band 7	0.074	1.000	P
	Band 12	0.065	0.467	P
	Band 13	0.072	0.521	P
	Band 26	0.063	0.543	P
LTE TDD	Band 41	0.058	1.000	P

P: Pass
 F: Fail
 NM: Not Measured
 NA: Not Applicable

6. Document Revision History

Revision #	Date	Modified by	Details
Rev. 00	2015-03-16	J.M. Fortes	First Issue

Annex A. Evaluation Description

A.1 RF Exposure Limit

The EUT has been evaluated against the requirement of human Maximum Permissible Exposure (MPE) according to the standards and documents detailed in 1. *Standards, reference documents and applicable test methods.*

As per FCC CFR Title 47 Part 2.1091, a mobile device (i.e. transmitting device designed to be used in such way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons) operating in the services covered by Parts 22, 24, 27 and 90 are subject to RF Exposure evaluation according to the limits defined in FCC CFR Title 47 Part 1.1310, Table 1:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

For the purpose of this evaluation, a minimum distance of 20cm was used to calculate the equivalent plan wave power density, to be compared with the power density limit, according to Friis transmission formula:

$$S_{eq} = \frac{P_{avg} \cdot G}{4 \cdot \pi \cdot R^2}$$

Where:

S_{eq} = Equivalent Plane Wave Power Density

P_{avg} = Source-Based Average Power at antenna terminals

G = Gain of the Transmitting Antenna

R = Distance from the Transmitting Antenna

Annex B. Results of RF Exposure Evaluation

B.1 LTE-FDD

B.1.1 Band 7

Antenna Peak Gain = 2dBi

Mod.	CH #	Freq [MHz]	Avg Power [dBm]	ERP/EIRP Avg [dBm]	ERP/EIRP Avg [mW]	Power density @ 20cm [mW/cm ²]	Limit [mW/cm ²]
QPSK	20800	2505	23.69	25.69	370.68	0.074	1.000
	21100	2535	23.63	25.63	365.59	0.073	1.000
	21400	2565	23.45	25.45	350.75	0.070	1.000
16QAM	20775	2502.5	22.84	24.84	304.79	0.061	1.000
	21100	2535	22.88	24.88	307.61	0.061	1.000
	21400	2565	22.79	24.79	301.30	0.060	1.000

B.1.2 Band 12

Antenna Peak Gain = 2dBi

Mod.	CH #	Freq [MHz]	Avg Power [dBm]	ERP/EIRP Avg [dBm]	ERP/EIRP Avg [mW]	Power density @ 20cm [mW/cm ²]	Limit [mW/cm ²]
QPSK	23025	700.5	23.11	25.11	324.34	0.065	0.467
	23095	707.5	23.11	25.11	324.34	0.065	0.472
	23165	714.5	23.00	25.00	316.23	0.063	0.476
16QAM	23017	699.7	22.18	24.18	261.82	0.052	0.466
	23095	707.5	22.21	24.21	263.63	0.052	0.472
	23165	714.5	22.21	24.21	263.63	0.052	0.476

B.1.3 Band 13

Antenna Peak Gain = 2dBi

Mod.	CH #	Freq [MHz]	Avg Power [dBm]	ERP/EIRP Avg [dBm]	ERP/EIRP Avg [mW]	Power density @ 20cm [mW/cm ²]	Limit [mW/cm ²]
QPSK	23205	779.5	23.17	25.17	328.85	0.065	0.520
	23230	782	23.61	25.61	363.92	0.072	0.521
	23255	784.5	23.04	25.04	319.15	0.063	0.523
16QAM	23205	779.5	22.39	24.39	274.79	0.055	0.520
	23230	782	22.82	24.82	303.39	0.060	0.521
	23255	784.5	22.10	24.10	257.04	0.051	0.523

B.1.4 Band 26

Antenna Peak Gain = 2dBi

Mod.	CH #	Freq [MHz]	Avg Power [dBm]	ERP/EIRP Avg [dBm]	ERP/EIRP Avg [mW]	Power density @ 20cm [mW/cm ²]	Limit [mW/cm ²]
QPSK	26697	814.7	23.02	25.02	317.69	0.063	0.543
	26865	831.5	23.00	25.00	316.23	0.063	0.554
	26990	844	22.65	24.65	291.74	0.058	0.563
16QAM	26697	814.7	22.03	24.03	252.93	0.050	0.543
	26865	831.5	22.02	24.02	252.35	0.050	0.554
	27025	847.5	21.82	23.82	240.99	0.048	0.565

B.2 LTE-FDD

B.2.1 Band 41

Antenna Peak Gain = 2dBi

Mod.	CH #	Freq [MHz]	Avg Power [dBm]	ERP/EIRP Avg [dBm]	ERP/EIRP Avg [mW]	Power density @ 20cm [mW/cm ²]	Limit [mW/cm ²]
QPSK	39700	2501	22.43	24.43	277.33	0.055	1.000
	40620	2593	22.52	24.52	283.14	0.056	1.000
	41540	2685	22.66	24.66	292.42	0.058	1.000
16QAM	39700	2501	21.35	23.35	216.27	0.043	1.000
	40620	2593	21.65	23.65	231.74	0.046	1.000
	41540	2685	21.65	23.65	231.74	0.046	1.000