

MPE CALCULATION

Note: for these measurements, the ZWM module (CFS8DLZWM / 573F-ZWM) and the other modules are tested in the new target host device, LYNXPLUS3 (CFS8DLYNXPLUS3 / 573F-LYNXPLUS3).

Note regarding the WIFI module in the calculation table (CFS8DLWIFI / 573F-WIFI): Conducted output power readings for the WIFI module were re-measured on 06/05/2014. Results are in the center table immediately below. All deviations from the original measurements appear to be within measurement tolerances.

Power Reported in Module Original Report					Power Reading Taken 06/05/2014					Delta (New - Orig)			
Channel No.	Frequency (MHz)	P(dbm) @11mbps	P(dbm) @54mbps	P(dbm) @65mbps	Channel No.	Frequency (MHz)	P(dbm) @11mbps	P(dbm) @54mbps	P(dbm) @65mbps	Channel No.	P(dbm) @11mbps	P(dbm) @54mbps	P(dbm) @65mbps
1	2412	16.45	16.46	16.58	1	2412	16.19	16.09	16.99	1	-0.26	-0.37	0.41
6	2437	15.20	15.34	15.61	6	2437	15.08	14.98	15.22	6	-0.12	-0.36	-0.39
11	2462	14.78	14.83	14.92	11	2462	14.43	14.79	14.43	11	-0.35	-0.04	-0.49

Note: FCC IDs / IC numbers corresponding to band measurements in the MPE calculations table are as follows:

BAND	FCC ID	IC NUMBER
SRR	CFS8DLYNXPLUS3	573F-LYNXPLUS3
WIFI	CFS8DLWIFI	573F-WIFI
Z-WAVE	CFS8DLZWM	573F-ZWM
EGPRS	QIPPHS8-US	7830A-PHS8US
UMTS	QIPPHS8-US	7830A-PHS8US

CALCULATIONS:

BAND:	CHANNEL:	FREQ:	uV/M @ 3M:	MAXIMUM EIRP (dbm):	ANTENNA GAIN(db):	DUTY CYCLE:	MAXIMUM EIRP (mW):	FRISS mW/CM ² :	EXP LIMIT mW/CM ² :	% OF LIMIT:	
SRR	N/A	344.94	66,393	-18.79	INTEGRAL	10%	0.013	0.0000026	0.23	0.0011	
WIFI	1, 54mbps	2412.0		16.99	1.3	100%	67.453	0.0134193	1.000000	1.3419	
Z-WAVE	N/A	908.42	30,400	-5.57	INTEGRAL	100%	0.277	0.0000552	0.6056	0.0091	
BAND:	CH No:	FREQ(Mhz)	TRP dbm	MAX COND. PWR (dBm)	ANTENNA GAIN(db):	DUTY FACTOR (dB)	MAX AVG EIRP (mW)	FRISS mW/CM ² :	EXP LIMIT mW/CM ² :	% OF LIMIT:	CO-MPE %:
850MHz	N/A	824.2	N/A	33.50	-1.56	3.01	781.628	0.1555000	0.5577	27.8824	29.2346
1900MHz	N/A	1880	N/A	30.30	2.67	3.01	990.832	0.1971199	1	19.7120	21.0642
MAXIMUM MME OF JUST THE 344.94 MHz RADIO AS % OF LIMIT IS:										0.0011	
MAXIMUM CO-MPE OF THE 344.94 MHz RADIO & WIFI MODULE AS % OF LIMIT IS:										1.3431	
MAXIMUM CO-MPE OF THE 344.94 MHz RADIO & CELLULAR MODULE AS % OF LIMIT IS:										27.8835	
MAXIMUM CO-MPE OF THE 344.94 MHz RADIO, WIFI & CELLULAR MODULE AS % OF LIMIT IS:										29.2255	
MAXIMUM CO-MPE OF THE 344.94 MHz RADIO, Z-WAVE, WIFI & CELLULAR MODULE AS % OF LIMIT IS:										29.2346	

4.0 RESULTS:

TEST RESULT: PASS

In the configuration tested the EUT complied with the standards specified above.

FCC RULES CONCERNING MAXIMUM PERMISSIBLE RF EXPOSURE:**§ CFR 47 1.1310 Radiofrequency radiation exposure limits.**

The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter. Further information on evaluating compliance with these limits can be found in the FCC's OST/OET Bulletin Number 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."

NOTE TO INTRODUCTORY PARAGRAPH: These limits are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3. Copyright NCRP, 1986, Bethesda, Maryland 20814.

In the frequency range from 100 MHz to 1500 MHz, exposure limits for field strength and power density are also generally based on guidelines recommended by the American National Standards Institute (ANSI) in Section 4.1 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,"

ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers." § CFR 47 1.1310 Radiofrequency radiation exposure limits. The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter. Further information on evaluating compliance with these limits can be found in the FCC's OST/OET Bulletin Number 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." NOTE TO INTRODUCTORY PARAGRAPH: These limits are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3. Copyright NCRP, 1986, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, exposure limits for field strength and power density are also generally based on guidelines recommended by the American National Standards Institute (ANSI) in Section 4.1 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,"

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