



RF EXPOSURE REPORT

REPORT NO.: SA130313E02G

MODEL NO.: RT5390

FCC ID: VQF-RT5390

RECEIVED: May 27, 2014

TESTED: June 18, 2014

ISSUED: Aug. 11, 2014

APPLICANT: MediaTek Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130313E02G	Original release	Aug. 11, 2014



1. CERTIFICATION

PRODUCT: 802.11b/g/n 1T1R WLAN Mini Card
BRAND NAME: MediaTek
MODEL NO.: RT5390
TEST SAMPLE: MASS-PRODUCTION
APPLICANT: MediaTek Inc.
TESTED DATE: June 18, 2014
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: RT5390) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Midoli Peng , **DATE:** Aug. 11, 2014
(Midoli Peng, Specialist)

APPROVED BY : May Chen , **DATE:** Aug. 11, 2014
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Set 1						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	JOYMAX	IWX-145XRSXX-999	3.7	200 mm	Dipole	I-PEX
Chain (1)	JOYMAX	IWX-145XRSXX-999	3.7	200 mm	Dipole	I-PEX
Set 2						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APP6P-700119	3.5	225 mm	PIFA	I-PEX
Chain (1)	ACON	APP6P-700119	3.5	225 mm	PIFA	I-PEX
Set 3						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WHA YU	C923-520020-A	0.82	205 mm	PIFA	I-PEX
Chain (1)	WHA YU	C923-520021-A	0.12	310 mm	PIFA	I-PEX
Set 4						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Ji-Haw	1415-017J0H2	2.11	130 mm	PIFA	I-PEX
Chain (1)	Ji-Haw	1415-017J0H2	2.11	130 mm	PIFA	I-PEX
Set 5						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	81XCAE15.G28	0.82	330 mm	PIFA	I-PEX
Chain (1)	WNC	81XCAE15.G28	0.82	330 mm	PIFA	I-PEX



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Set 6						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	6036B0054202 (81.EDG15.G74)	0.13	420 mm	PIFA	I-PEX
Chain (1)	WNC	6036B0054102 (81.EDG15.G75)	-0.54	545 mm	PIFA	I-PEX
Set 7						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	DC33000L400	-2.12	344 mm	PIFA	I-PEX
Chain (1)	WNC	DC33000L400	-3.40	591 mm	PIFA	I-PEX
Set 8						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WHA YU GROUP	DQ652018600 (C680-520186-A)	2.83	415 mm	PIFA	I-PEX
Chain (1)	WHA YU GROUP	DQ652018600 (C680-520186-A)	1.35	475 mm	PIFA	I-PEX
Set 9						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	81.EEW15.018	1.65	700 mm	PIFA	I-PEX
Chain (1)	WNC	81.EEW15.018	1.57	700 mm	PIFA	I-PEX
Set 10						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	81XCAE15.G17	1.65	700 mm	PIFA	I-PEX
Chain (1)	WNC	81XCAE15.G17	1.65	700 mm	PIFA	I-PEX



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Set 11						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	81XCAF15.G01	1.59	1050 mm	Dipole	I-PEX
Chain (1)	WNC	81XCAF15.G01	1.59	1050 mm	Dipole	I-PEX
Set 12						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WHA YU GROUP	DQ652024900	0.24	170 mm	PIFA	I-PEX
Chain (1)	WHA YU GROUP	DQ652024900	-1.35	170 mm	PIFA	I-PEX
Set 13						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Tyco	M5	2.27	350 mm	PIFA	I-PEX
Chain (1)	Tyco	M5	2.31	300 mm	PIFA	I-PEX
Set 14						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Acon	APP6P-700233	1.36	300 mm	PIFA	I-PEX
Chain (1)	Acon	APP6P-700233	1.43	350 mm	PIFA	I-PEX



Set 15						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WONDERFUL	1415-01DC0H2	2.9	235 mm	PIFA	I-PEX
Chain (1)	WONDERFUL	1415-01DC0H2	2.9	235 mm	PIFA	I-PEX
Set 16						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WHA YU GROUP	DQ652021600	-0.13	510 mm	PIFA	I-PEX
Chain (1)	WHA YU GROUP	DQ652021600	0.30	510 mm	PIFA	I-PEX
Set 17						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APP8P-700182	2.62	600mm	PIFA	I-PEX
Chain (1)	ACON	APP8P-700181	2.80	540mm	PIFA	I-PEX
Set 18						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	HPMH-B3035050G000 11	0.20	600mm	PIFA	I-PEX
Chain (1)	WNC	HPMH-B3035050G000 11	1.97	540 mm	PIFA	I-PEX
Set 19						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APP8P-700180	-0.96	519 mm	PIFA	I-PEX
Chain (1)	ACON	APP8P-700180	0.22	690 mm	PIFA	I-PEX
Set 20						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Amphenol	FL5202-11-001-C	-1.41	521 mm	PIFA	U.FL
Chain (1)	Amphenol	FL5202-11-001-C	-0.77	710 mm	PIFA	U.FL

Set 21						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Amphenol	IV5218-11-002-C	0.55	500 mm	PIFA	U.FL
Chain (1)	Amphenol	IV5218-11-001-C	0.31	821 mm	PIFA	U.FL
Set 22						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Yageo	6036B0088901	1.46	487 mm	PIFA	I-PEX
Chain (1)	Yageo	6036B0089001	0.95	811 mm	PIFA	I-PEX
Set 23						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	6036B0086802 (81.EHC15.G63)	-1.30	415 mm	PIFA	U.FL
Chain (1)	WNC	6036B0087102 (81.EHC15.G64)	-0.49	710 mm	PIFA	U.FL
Set 24						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Yageo	6036B0086801	-2.69	415 mm	PIFA	U.FL
Chain (1)	Yageo	6036B0087101	-1.09	710 mm	PIFA	U.FL
Set 25						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	6036B0087702 (81.EHC15.G73)	-0.58	688 mm	PIFA	U.FL
Chain (1)	WNC	6036B0087602 (81.EHC15.G74)	0.09	1018 mm	PIFA	U.FL
Set 26						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APM8P-700037	0.82	688 mm	PIFA	I-PEX
Chain (1)	ACON	APM8P-700038	0.75	1018 mm	PIFA	I-PEX

Set 27						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APM8P-700035	1.81	760mm	PIFA	I-PEX
Chain (1)	ACON	APM8P-700036	1.16	960mm	PIFA	I-PEX
Set 28						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	6036B0088203	1.21	760mm	PIFA	U.FL
Chain (1)	WNC	6036B0088303	-0.07	960mm	PIFA	U.FL
Set 29						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APP8P-700146	0.76	480 mm	PIFA	IPX
Chain (1)	ACON	APP8P-700147	-0.55	728 mm	PIFA	IPX
Set 30						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	HPMH-B2985050G000 20	-1.73	480 mm	PIFA	I-PEX
Chain (1)	WNC	HPMH-B2985050G000 21	-3.61	728 mm	PIFA	I-PEX
Set 31						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Foxconn	WDAN-HMRAN001-DH /79010T900-600-G	0.45	595mm	PIFA	I-PEX
Chain (1)	Foxconn	WDAN-HMRAN002-DH /79010T800-600-G	1.85	402mm	PIFA	I-PEX
Set 32						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	APP8P-700225	1.7	595mm	PIFA	U.FL
Chain (1)	ACON	APP8P-700226	1.22	402 mm	PIFA	U.FL

Set 33						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Yageo	CAN43130WIFO04921/ 79010SQ00-011-G	0.23	425mm	PIFA	U.FL
Chain (1)	Yageo	CAN43130WIFO04922/ 79010SR00-011-G	1.53	740mm	PIFA	U.FL
Set 34						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Foxconn	WDAN-HMCH1401-DH/ 79010T000-600-G	-0.99	425mm	PIFA	I-PEX
Chain (1)	Foxconn	WDAN-HMCH1402-DH/ 79010SY00-600-G	-0.09	740mm	PIFA	I-PEX
Set 35						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WHAYU	C107-520757-A/79010 T100-12S-G	-0.18	495 mm	PIFA	I-PEX
Chain (1)	WHAYU	C107-520756-A/79010 SS00-12S-G	2.58	825 mm	PIFA	I-PEX
Set 36						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Foxconn	WDAN-HMCH1501-DH/ 79010SW00-600-G	-0.35	495mm	PIFA	I-PEX
Chain (1)	Foxconn	WDAN-HMCH1502-DH/ 79010SV00-600-G	0.38	825mm	PIFA	I-PEX
Set 37						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	SkyCross	cead00009	2.98	320mm	PIFA	I-PEX
Chain (1)	SkyCross	cead00010	2.98	320mm	PIFA	I-PEX
Set 38						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Mgear	C6214-520005PA	3.4	335 mm	PIFA	I-PEX
Chain (1)	Mgear	C6214-520005PA	3.4	335 mm	PIFA	I-PEX

Set 39						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	650677-001	2.76	530mm	PIFA	I-PEX
Chain (1)	N/A	N/A	N/A	N/A	N/A	N/A
Set 40						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Amphenol	IV5233-15-003-C	0.54	520 mm	PIFA	I-PEX
Chain (1)	Amphenol	IV5233-15-002-C	-0.53	790 mm	PIFA	I-PEX
Set 41						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	6036B0091201	-1.11	520 mm	PIFA	U.FL
Chain (1)	WNC	6036B0091401	-0.95	790 mm	PIFA	U.FL
Set 42						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Yageo	6036B0091202	0.8	520 mm	PIFA	U.FL
Chain (1)	Yageo	6036B0091402	0.25	790 mm	PIFA	U.FL
Set 43						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	JI-HAW	14-NL-7-1	3	113mm	PIFA	I-PEX
Chain (1)	JI-HAW	14-NL-7-1	3	113mm	PIFA	I-PEX
Set 44						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	JI-HAW	14-NK-7-1	3	113mm	PIFA	I-PEX
Chain (1)	JI-HAW	14-NK-7-1	3	113mm	PIFA	I-PEX

Set 45						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	JI-HAW	14-NE-7-1	3	113mm	PIFA	I-PEX
Chain (1)	JI-HAW	14-NE-7-1	3	113mm	PIFA	I-PEX
Set 46						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	25.90A85.001 (APP8P-700180)	-0.96	519mm	PIFA	I-PEX
Chain (1)	ACON	25.90A85.001 (APP8P-700180)	0.22	690mm	PIFA	I-PEX
Set 47						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	Amphenol	25.90A86.001 (FL5202-11-001-C)	-1.41	519mm	PIFA	I-PEX
Chain (1)	Amphenol	25.90A86.001 (FL5202-11-001-C)	-0.77	690mm	PIFA	I-PEX
Set 48						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	ACON	25.90A87.001 (APP8P-700182)	2.62	600mm	PIFA	I-PEX
Chain (1)	ACON	25.90A87.001 (APP8P-700181)	2.80	540mm	PIFA	I-PEX
Set 49						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	WNC	25.90A8K.001 (81.EHC15.G87)	0.20	600mm	PIFA	I-PEX
Chain (1)	WNC	25.90A8K.001 (81.EHC15.G87)	1.97	540mm	PIFA	I-PEX
Set 50						
Chain	Manufacture	Model name	Antenna Gain (dBi)	Antenna Cable Length	Antenna Type	Connector
Chain (0)	YAGEO	CAN43130WIAS04911	1.34	615.0 mm	PIFA	I-PEX
Chain (1)	YAGEO	CAN43130WIAS04912	0.88	960.0 mm	PIFA	I-PEX

Set 51					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Wanshih	1415-020Y000	2.72	PIFA	I-PEX
Chain (1)	Wanshih	1415-020Y000	2.80	PIFA	I-PEX
Set 52					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WHA YU GROUP	C1335-520129-A	2.93	PIFA	I-PEX
Chain (1)	WHA YU GROUP	C1335-520130-A	2.89	PIFA	I-PEX
Set 53					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	APP8P-700362 (25.90ABC.001)	0.59	PIFA	I-PEX
Chain (1)	ACON	APP8P-700363 (25.90ABA.001)	1.44	PIFA	I-PEX
Set 54					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EL815.G44 (25.90A8S.001)	-0.29	PIFA	I-PEX
Chain (1)	WNC	81.EL815.G45 (25.90A8R.001)	-0.31	PIFA	I-PEX
Set 55					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	1415-023C000 (81.EL815.G50)	-1.57	PIFA	I-PEX
Chain (1)	WNC	1415-023C000 (81.EL815.G50)	-2.83	PIFA	I-PEX
Set 56					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	CAN4313HP0661LLB 1 (1415-023G000)	0.02	PIFA	I-PEX
Chain (1)	Yageo	CAN4313HP0661LLB 1 (1415-023G000)	0.88	PIFA	I-PEX

Set 57					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	APP8P-700360	0.01	PIFA	I-PEX
Chain (1)	ACON	APP8P-700361	1.94	PIFA	I-PEX
Set 58					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EL815.G42 (25.90AAD.001)	-2.34	PIFA	I-PEX
Chain (1)	WNC	81.EL815.G43 (25.90AAC.001)	-3.79	PIFA	I-PEX
Set 59					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Quanta	R12_AN-090-A/B	1.6	PIFA	I-PEX
Chain (1)	Quanta	R12_AN-090-A/B	0.3	PIFA	I-PEX
Set 60					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Quanta	R15_AN-090-A/B	0.8	PIFA	I-PEX
Chain (1)	Quanta	R15_AN-090-A/B	0.4	PIFA	I-PEX
Set 61					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Quanta	R18_AN-090-A/B	1.5	PIFA	I-PEX
Chain (1)	Quanta	R18_AN-090-A/B	0.5	PIFA	I-PEX
Set 62					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	6036B0088901/CAN4 3130LIIN03841	0.68	PIFA	HRS
Chain (1)	Yageo	6036B0089001/CAN4 3130LIIN03842	-0.62	PIFA	HRS

Set 63					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EKT15.G09	-0.28	PIFA	U.FL
Chain (1)	WNC	81.EKT15.G10	-0.26	PIFA	U.FL
Set 64					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Foxconn	790116700-600-G	0.58	PIFA	I-PEX
Chain (1)	Foxconn	790116800-600-G	0.29	PIFA	I-PEX
Set 65					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EKT15.G07	0.09	PIFA	U.FL
Chain (1)	WNC	81.EKT15.G08	-1.43	PIFA	U.FL
Set 66					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EL815.G54	-2.04	PIFAPIFA	U.FL
Chain (1)	WNC	81.EL815.G53	-2.58	PIFAPIFA	U.FL
Set 67					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WHAYU	C435-520153-A	-0.6	PIFA	U.FL
Chain (1)	WHAYU	C435-520152-A	1.41	PIFA	U.FL
Set 68					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	6036B0088901/CAN4 3130LIIN03841	-2.2	PIFA	HRS
Chain (1)	Yageo	6036B0089001/CAN4 3130LIIN03842	-2.16	PIFA	HRS

Set 69					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EKT15.G11	-1.35	PIFA	U.FL
Chain (1)	WNC	81.EKT15.G12	-2.09	PIFA	U.FL
Set 70					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	iem	IA-110196	0.22	PIFA	U.FL
Chain (1)	iem	IA-110197	0.53	PIFA	U.FL
Set 71					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Smart Approach	SE-ECC50-002	-1.17	PIFA	U.FL
Chain (1)	Smart Approach	SE- ECC50-001	0.45	PIFA	U.FL
Set 72					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	DQ643130W13	0.19	PIFA	U.FL
Chain (1)	Yageo	DQ643130W13	-1.98	PIFA	U.FL
Set 73					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Foxconn	DQ6HQR36000 / WDAN-HQR36001-DH	-1.00	PIFA	U.FL
Chain (1)	Foxconn	DQ6HQR36000 / WDAN-HQR36001-DH	-0.60	PIFA	U.FL
Set 74					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	DQ6Y15GCB00 (81.EZY15.GCB)	-0.21	PIFA	U.FL
Chain (1)	WNC	DQ6Y15GCB00 (81.EZY15.GCB)	-1.75	PIFA	U.FL

Set 75					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	DQ64313HQ01 / CAN4313HQ0671LLB1	-1.75	PIFA	U.FL
Chain (1)	Yageo	DQ64313HQ01 / CAN4313HQ0671LLB1	0.89	PIFA	U.FL
Set 76					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Foxconn	DQ6HQR33000 / WDAN-HQR33001-DH	-1.10	PIFA	U.FL
Chain (1)	Foxconn	DQ6HQR33000 / WDAN-HQR33001-DH	1.77	PIFA	U.FL
Set 77					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	DQ6Y15GCA00 (81.EZY15.GCA)	0.17	PIFA	U.FL
Chain (1)	WNC	DQ6Y15GCA00 (81.EZY15.GCA)	-0.88	PIFA	U.FL
Set 78					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	DQ64313HQ00 / CAN4313HQ0670LLB1	-0.34	PIFA	U.FL
Chain (1)	Yageo	DQ64313HQ00 / CAN4313HQ0670LLB1	0.08	PIFA	U.FL
Set 79					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Foxconn	DQ6HQR39000 / WDAN-HQR39001-DH	-0.74	PIFA	U.FL
Chain (1)	Foxconn	DQ6HQR39000 / WDAN-HQR39001-DH	-1.53	PIFA	U.FL
Set 80					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	DQ6Y15GCN00 (81.EZY15.GCN)	-0.28	PIFA	U.FL
Chain (1)	WNC	DQ6Y15GCN00 (81.EZY15.GCN)	-1.34	PIFA	U.FL

Set 81					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	DQ64313HQ02 / CAN4313HQ0672LLB1	-0.36	PIFA	U.FL
Chain (1)	Yageo	DQ64313HQ02 / CAN4313HQ0672LLB1	0.46	PIFA	U.FL
Set 82					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	57.EEW15.0AP	2.64	PIFA	U.FL
Chain (1)	WNC	57XCAE15.030	0.93	PIFA	U.FL
Set 83					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	57XCAE15.028	0.67	PIFA	U.FL
Chain (1)	WNC	57XCAE15.030	1.80	PIFA	U.FL
Set 84					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Foxconn	DQ6U3300100 / WDAN-HQU33001-DH	-1.28	PIFA	U.FL
Chain (1)	Foxconn	DQ6U3300100 / WDAN-HQU33001-DH	-2.03	PIFA	U.FL
Set 85					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Hong-Lin	DQ602333400	-2.50	PIFA	U.FL
Chain (1)	Hong-Lin	DQ602333400	-0.68	PIFA	U.FL
Set 86					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	JESS-LINK	PANT12A00007-1/ DQ612A00001	0.29	PIFA	U.FL
Chain (1)	JESS-LINK	PANT12A00007-1/ DQ612A00001	1.78	PIFA	U.FL

Set 87					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	DQ6815G7400 (81.EL815.G74)	-0.53	PIFA	U.FL
Chain (1)	WNC	DQ6815G7400 (81.EL815.G74)	-0.63	PIFA	U.FL
Set 88					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WANSHIH	UC1WFI0095	1.99	PIFA	U.FL
Chain (1)	WANSHIH	UC1WFI0095	2.95	PIFA	U.FL
Set 89					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WHA YU	C1335-520176-A	1.49	PIFA	U.FL
Chain (1)	WHA YU	C1335-520176-A	1.91	PIFA	U.FL
Set 90					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	JOINSOON	IA-120138 Arroyo3	2.15	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA
Set 91					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	JOINSOON	IA-120138 Lawrence2	2.15	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA
Set 92					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	6036B0105001/CAN4 313HV0636WLA1	1.35	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA

Set 93					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	6036B0105002/ 81.EKT15.G09	-0.28	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA
Set 94					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	6036B0088903/ 81.EKT15.G11	-0.73	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA
Set 95					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	6036B0088901/CAN4 3130LIIN03841	-1.09	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA
Set 96					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.EZY15.GAN/ 25.91458.001	-0.59	PIFA	U.FL
Chain (1)	WNC	81.EZY15.GAP/ 25.91459.001	-2.74	PIFA	U.FL
Set 97					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	25.90AEF.001 (81.EL815.G70)	-0.21	PIFA	U.FL
Chain (1)	WNC	25.90AEE.001 (81.EL815.G71)	-0.73	PIFA	U.FL
Set 98					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	25.90AEH.001 (APP8P-700411)	0.70	PIFA	U.FL
Chain (1)	ACON	25.90AEG.001 (APP8P-700412)	1.51	PIFA	U.FL

Set 99					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	APE8P-700001	-1.68	PIFA	U.FL
Chain (1)	ACON	APE8P-700001	2.04	PIFA	U.FL
Set 100					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	1415-02D1000 / CAN4313HP0691LLB 1	0.95	PIFA	U.FL
Chain (1)	Yageo	1415-02D1000 / CAN4313HP0691LLB 1	-0.64	PIFA	U.FL
Set 101					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Foxconn	DQ6U3600100 / WDAN-HQU36001-DH	0.28	PIFA	U.FL
Chain (1)	Foxconn	DQ6U3600100 / WDAN-HQU36001-DH	-1.42	PIFA	U.FL
Set 102					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Hong-Lin	DQ602333900	-1.50	PIFA	U.FL
Chain (1)	Hong-Lin	DQ602333900	-0.42	PIFA	U.FL
Set 103					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	JESS-LINK	DQ612A00002	-1.10	PIFA	U.FL
Chain (1)	JESS-LINK	DQ612A00002	-0.59	PIFA	U.FL
Set 104					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	DQ6815G7500(81.EL8 15.G75)	-0.41	PIFA	U.FL
Chain (1)	WNC	DQ6815G7500(81.EL8 15.G75)	-0.71	PIFA	U.FL

Set 105					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	6036B0088901/CAN43 130LIIN03841	-0.41	PIFA	U.FL
Chain (1)	NA	NA	NA	NA	NA
Set 106					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	25.90A8X.011(81.EL8 15.G14)	-0.53	PIFA	U.FL
Chain (1)	WNC	25.90A8Y.001(81.EL8 15.G15)	-2.66	PIFA	U.FL
Set 107					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	25.90A8Z.001 (APP8P-700333)	-2.11	PIFA	U.FL
Chain (1)	ACON	25.90A90.001 (APP8P-700334)	-2.24	PIFA	U.FL
Set 108					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	25.90A9K.001(81.EL8 15.G18)	-1.63	PIFA	U.FL
Chain (1)	WNC	25.90A9L.001(81.EL8 15.G19)	-3.62	PIFA	U.FL
Set 109					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	25.90A9K.021(APP8P- 700337)	-0.83	PIFA	U.FL
Chain (1)	ACON	25.90A9L.021(APP8P- 700338)	-0.87	PIFA	U.FL
Set 110					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	25.90A92.001 (81.EL815.022)	2.12	PIFA	U.FL
Chain (1)	WNC	25.90A9J.001 (81.EL815.023)	2.80	PIFA	U.FL

Set 111					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	25.90A92.011(CAN43 131WLWT05951)	-0.65	PIFA	U.FL
Chain (1)	Yageo	25.90A92.011(CAN43 131WLWT05951)	2.30	PIFA	U.FL
Set 112					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Yageo	25.90A96.011 / CAN43131WLWT0592 3	-2.47	PIFA	U.FL
Chain (1)	Yageo	25.90A95.011 / CAN43131WLWT0592 4	-2.28	PIFA	U.FL
Set 113					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ACON	25.90A8X.011(APP8P- 700329)	-0.06	PIFA	U.FL
Chain (1)	ACON	25.90A8Y.001(APP8P- 700330)	-4.85	PIFA	U.FL
Set 114					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	81.XCI15.G07	1.68	Dipole	SMA
Chain (1)	WNC	81.XCI15.G07	0.02	Dipole	SMA
Set 115					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ADVANCED-C ONNECTEK INC.	C-APP6P-700744	-0.44	PIFA	U.FL
Chain (1)	ADVANCED-C ONNECTEK INC.	C-APP6P-700745	-1.53	PIFA	U.FL
Set 116					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Smart Approach	SE-EIPNA-001	-2.29	PIFA	I-PEX
Chain (1)	Smart Approach	SE-EIPNA-002	0.13	PIFA	I-PEX



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Set 117					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ADVANCED-CONNECTEK INC.	C-APP6P-700744	-0.46	PIFA	U.FL
Chain (1)	ADVANCED-CONNECTEK INC.	C-APP6P-700745	-2.41	PIFA	U.FL
Set 118					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Hong-Lin	DQ602351300	-1.41	PIFA	LC
Chain (1)	Hong-Lin	DQ602351300	-2.40	PIFA	LC
Set 119					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	JESS-LINK PRODUCTS CO., LTD	DQ612A00013	1.78	PIFA	MHF
Chain (1)	JESS-LINK PRODUCTS CO., LTD	DQ612A00013	0.29	PIFA	MHF
Set 120					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Wistron Neweb Corporation	57XCAE15.028	0.67	PIFA	U.FL
Chain (1)	Wistron Neweb Corporation	57XCAE15.030	1.80	PIFA	U.FL
Set 121					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Wistron Neweb Corporation	57.EEW15.0AP	2.64	PIFA	U.FL
Chain (1)	Wistron Neweb Corporation	57XCAE15.030	0.93	PIFA	U.FL
Set 122					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Wistron Neweb Corp.	6036B0105002 (81.EKT15.G09)	-0.28	PIFA	U.FL
Chain (1)	Wistron Neweb Corp.	6036B0105102 (81.EKT15.G10)	-0.26	PIFA	U.FL

Set 123					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	ICT-LANTO	DQ61RF14200 / LA81RF142-1H	1.81	PIFA	I-PEX
Chain (1)	ICT-LANTO	DQ61RF14200 / LA81RF142-1H	-0.60	PIFA	I-PEX
Set 124					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Wistron Neweb Corp.	DQ6K15G7000 (81EAAK15.G70)	-0.81	PIFA	I-PEX
Chain (1)	Wistron Neweb Corp.	DQ6K15G7000 (81EAAK15.G70)	2.02	PIFA	I-PEX
Set 125					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	WNC	DC330014C10 (81.EL815.G54)	-2.04	PIFA	I-PEX
Chain (1)	WNC	DC330014C00 (81.EL815.G53)	-2.58	PIFA	I-PEX
Set 126					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	SA	SE-ECC50-002	-1.17	PIFA	I-PEX
Chain (1)	SA	SE- ECC50-001	0.45	PIFA	I-PEX
Set 127					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	Whayu	C435-520153-A	-0.6	PIFA	TNOV
Chain (1)	Whayu	C435-520152-A	1.41	PIFA	TNOV



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Set 128					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	MAG. LAYERS SCIENTIFIC- TECHNICS CO., LTD	PCA-9007-25GC4-A1	-4.84	PIFA	I-PEX
Chain (1)	MAG. LAYERS SCIENTIFIC- TECHNICS CO., LTD	PCA-9007-25GC4-A1	-3.07	PIFA	I-PEX
Set 129					
Chain	Manufacture	Model name	Antenna Gain (Included Cable loss) (dBi)	Antenna Type	Connector
Chain (0)	INPAQ TECHNOLO GY CO., LTD	WA-P-LBLB-04-004	0.74	PIFA	I-PEX
Chain (1)	INPAQ TECHNOLO GY CO., LTD	WA-P-LBLB-04-004	1.91	PIFA	I-PEX

From the above antennas, the antenna set 1 was selected as representative antennas and their data were recorded in this report.

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

802.11b

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412 - 2462	106.17	3.7	20	0.04951	1.00

802.11g

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412 - 2462	231.739	3.7	20	0.10808	1.00

802.11n (HT20)

FREQUENCY BAND (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412 - 2462	206.538	3.7	20	0.09632	1.00

802.11n (HT40)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2422 - 2452	169.434	3.7	20	0.07902	1.00

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