



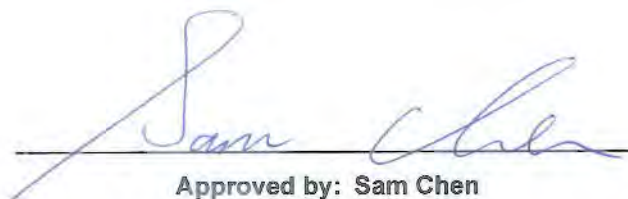
FCC RADIO EXPOSURE TEST REPORT

FCC ID : HEDML16035
Equipment : MetroLin Outdoor 60GHz PTP + 5GHz + 2.4GHz
Brand Name : Ignitenet
Model Name : ML1-60-35/ML1-60-19
Applicant : Accton Technology Corp
No. 1, Creation Rd. III, Science-based Industrial
Park Hsin Chu 30077, Taiwan
Manufacturer (1) : Joy Technology (Shen Zhen) Co. Ltd
HengKeng Ind., Shangpai, Shangwu, Aiqun Rd.,
Shiyan Town, Shenzhen 518108 China
Manufacturer (2) : Accton Technology Corp
No. 1, Creation Rd. III, Science-based Industrial
Park Hsin Chu 30077, Taiwan
Standard : 47 CFR Part 2.1091

The product was received on Apr. 12, 2018, and testing was started from May 02, 2018 and completed on Jun. 22, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Reviewed by: Sam Chen

Report Producer: Wendy Pan



1 General Description

1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
5GHz WLAN	5150-5250 5725-5850	5180-5240 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)

Note 1: This device contains transmitter 60GHz module FCC ID: HED-ML60MDSB

Note 2: WLAN and 60G work at the same time.

1.1.1 Table for Multiple Listing

The EUT has two model names which are identical to each other in all aspects except for the following table:

Brand Name	Model Name	EUT No.	WLAN 2.4GHz Ant. Model Name	WLAN 5GHz Ant. Model Name	60GHz Ant. Model Name
Ignitenet	ML1-60-35	EUT 1	OS-242509-NM	120G00000174X	123400001485A
	ML1-60-19	EUT 2	OS-242509-NM	120G00000175X	123400001486A

From the above models, model: ML1-60-35 was selected as representative model for the test and its data was recorded in this report.

1.2 Testing Location

Testing Location		
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-327-0973
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.



2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

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

2.2 MPE Calculation Method

The MPE was calculated at 54 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)
2.4G;D1D	7.82	26.87	34.69	0.50	35.19	3.30370	65	0.06222	1.00000
5.2G;D1D	20.00	13.53	33.53	0.50	34.03	2.52930	65	0.07550	1.00000
5.8G;D1D	20.00	16.89	36.89	0.50	37.39	5.48277	65	0.10327	1.00000

Simultaneous Transmission Analysis EUT 1 Mode: WLAN 2.4GHz+WLAN 5GHz+60GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
2.4G;G1D	7.82	26.87	34.69	0.50	35.19	3.30370	65	0.06222	1	0.06222
5.8G;D1D	20.00	16.89	36.89	0.50	37.39	5.48277	65	0.10327	1	0.10327
60G	42.00	3.81	45.81	0.50	46.31	42.75629	65	0.80529	1	0.80529
									Sum Ratio	0.97078
									Ratio Limit	1

————THE END————