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Project No: CB10504269

Maximum Permissible Exposure Report

Applicant's company	Accton Technology Corporation
Applicant Address	No. 1, Creation Rd. III, Science-based Industrial Park Hsin Chu 30077, Taiwan R.O.C.
FCC ID	HED-ML6035G3
Manufacturer's company (1)	Joy Technology (Shen Zhen) Co. Ltd
Manufacturer Address	HengKeng Ind., Shangpai, Shangwu, Aiqun Rd., Shiyan Town, Shenzhen 518108 China
Manufacturer's company (2)	Accton Technology Corporation
Manufacturer Address	No. 1, Creation Rd. III, Science-based Industrial Park Hsin Chu 30077, Taiwan R.O.C.

Product Name	Metrolinq Outdoor 60GHz PTP + 5 GHz
Brand Name	IgniteNet
Model No.	ML-60-35, ML-60-35-1, ML-60-19, ML-60-19-1
Ref. Standard(s)	47 CFR FCC Part 2 Subpart J, section 2.1091
Received Date	Mar. 10, 2016
Final Test Date	Apr. 25, 2016
Submission Type	Original Equipment

TAF
Testing Laboratory
1190

Sam Chen
SPORTON INTERNATIONAL INC.

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA5M2614-03	Rev. 01	Initial issue of report	May 04, 2016
FA5N2614-03	Rev. 02	Adding model name: ML-60-19, ML-60-19-1	May 05, 2016

1. GENERAL DESCRIPTION

1.1. EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
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 do not work at the same time.

1.2. Table for Multiple Listing

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

Model Name	5GHz	60GHz	Remark
ML-60-35 / ML-60-19	Internal / Dish Ant.	Internal / Dish Ant.	Outdoor use
ML-60-35-1 / ML-60-19-1	External / Dish Ant.	Internal / Dish Ant.	

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

1.3. 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	

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/ cm²)	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/ cm²)	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 56 cm to show compliance with the power density limit.
The following formula was used to calculate the Power Density:

E (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Peak 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

Antenna Type : Dish Ant.

Conducted Power for IEEE 802.11a: 11.79dBm

Distance (cm)	Test Freq. (MHz)	Antenna gain (dBi)	Antenna Gain (numeric)	Average Output Power		Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
				(dBm)	(mW)			
56	5825	18.10	64.5654	11.7946	15.1167	0.024779	1	Complies