

: NB & Tablet Equipment

Brand Name : Getac Model No. : V110

FCC ID : QYLV110

Standard : 47 CFR FCC Part 15.209

Operating Band : 83 kHz (channel frequency 83kHz)

FCC Classification: DCD (for Part 15 Low Power Transmitter Below 1705 kHz)

Applicant : Getac Technology Corporation.

5F., Building A, No. 209, Sec.1, Nangang Rd., Nangang

Dist., Taipei City 11568, Taiwan, R.O.C.

Manufacturer : Getac Technology(Kunshan)Co., LTD.

No. 269, No. 2 Avenue, Kunshan Comprehensive Free

Trade Zone, Jiangsu Province, P.R.C

The product sample received on Sep. 25, 2013 and completely tested on Nov. 07, 2013. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

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

Reviewed by:

1190

Report No.: FR391853-01

SPORTON INTERNATIONAL INC. Page No. : 1 of 26 TEL: 886-3-327-3456 Report Version : Rev. 01



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information	5
1.2	Accessories and Support Equipment	6
1.3	Testing Applied Standards	6
1.4	Testing Location Information	6
1.5	Measurement Uncertainty	7
2	TEST CONFIGURATION OF EUT	8
2.1	The Worst Case Modulation Configuration	8
2.2	Test Channel Frequencies Configuration	8
2.3	The Worst Case Measurement Configuration	8
2.4	Test Setup Diagram	9
3	TRANSMITTER TEST RESULT	11
3.1	AC Power-line Conducted Emissions	11
3.2	Transmitter Radiated Emissions	15
4	TEST EQUIPMENT AND CALIBRATION DATA	26
APP	ENDIX A. TEST PHOTOS	

APPENDIX B. PHOTOGRAPHS OF EUT

Report No.: FR391853-01



Summary of Test Result

Report No.: FR391853-01

Conformance Test Specifications							
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result		
1.1.2	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied		
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]:0.1941150MHz 35.19 (Margin 18.67dB) - AV 50.61 (Margin 13.25dB) - QP	FCC 15.207	Complied		
3.2	15.209	Transmitter Radiated Emissions	[dBuV/m at 3m]:0.5829MHz 60.80 (Margin 11.50dB) - PK	FCC 15.209	Complied		

SPORTON INTERNATIONAL INC. Page No. : 3 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



Revision History

Report No.: FR391853-01

Rev. 01	Initial issue of report	Nov. 20, 2013

SPORTON INTERNATIONAL INC. Page No. : 4 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information						
Frequency Range Modulation Ch. Frequency (kHz) Channel Number Field Strength (dBuV/m)						
83 kHz	OOK	83	1	86.11		
Note 1: Field strength p	erformed peak level	at 3m.				

Report No.: FR391853-01

1.1.	.1.2 Antenna Information						
		Antenna Category					
	Equipment placed on the market without antennas						
\boxtimes	Integral antenna (antenn	a permanently attached)					
	External antenna (dedica	ated antennas)					
1.1.	1.1.3 Type of EUT						
		Identify EUT					
EU	Γ Serial Number	N/A					
Pre	sentation of Equipment						
		Type of EUT					
\boxtimes	Stand-alone						
	Combined (EUT where the radio part is fully integrated within another device)						
	Combined Equipment - E	rand Name / Model No.:					
	Plug-in radio (EUT intend	led for a variety of host systems)					
	Host System - Brand Na	me / Model No.:					
	Other:						
1.1.	4 Test Signal Duty	Cycle					
		Operated Mode for Worst Duty Cycle					
	Operated normally mode	for worst duty cycle					
\boxtimes	Operated test mode for v	vorst duty cycle					
		Test Signal Duty Cycle (x)					
\boxtimes	100%						
1.1.	.1.5 EUT Operational Condition						

Supply Voltage		mains	\boxtimes	DC		
Type of DC Source	☐ Inte	ernal DC supply	\boxtimes	External DC adapter	\boxtimes	Battery

SPORTON INTERNATIONAL INC. Page No. : 5 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



1.2 Accessories and Support Equipment

Accessories Information						
AC Adapter 1	Brand Name	Delta		Model Na	ime /	ADP-65WH BB
AC Adapter 1	Power Rating	I/P: 100~240Vac, 1.5A; O/P: 19 Vdc, 3.42A				
AC Adapter 2	Brand Name	Getac		Model Na	ime <i>P</i>	ADM-9019M
AC Adapter 2	Power Rating	I/P: 100~240Vac, 1.5A; O/P: 19 Vdc, 4.74A				
Li-ion Battery	Brand Name	Getac Tecl	nnology Cor	rp Model	Name	BP3S1P2100-S
Li-ion battery	Power Rating	11.1Vdc,	2100mAh			
Digitizer	Brand Name	KYE	Model Nan	ne	T116 E	MR Digitizer

Report No.: FR391853-01

1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2009

1.4 Testing Location Information

	Testing Location						
\boxtimes	HWA YA	ADD	DD : No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.				
		TEL	:	886-3-327-3456	FAX : 886-3-318-0055		
Test Condition		n		Test Site No.	Test Engineer	Test Environment	
AC Conduction		AC Conduction CO01-HY		David	20°C / 49%		
Radiated Emission			03CH03-HY	Hsiao	23.1°C / 62%		

SPORTON INTERNATIONAL INC. Page No. : 6 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



1.5 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Report No.: FR391853-01

Measurement Uncertainty					
Test Item		Uncertainty			
AC power-line conducted emissions		±2.26 dB			
Emission bandwidth		±1.42 %			
Unwanted emissions, conducted	9 – 150 kHz	±0.38 dB			
	0.15 – 30 MHz	±0.42 dB			
	30 – 1000 MHz	±0.51 dB			
All emissions, radiated	9 – 150 kHz	±2.49 dB			
	0.15 – 30 MHz	±2.28 dB			
	30 – 1000 MHz	±2.56 dB			
Temperature		±0.8 °C			
Humidity		±3 %			
DC and low frequency voltages		±3 %			
Time		±1.42 %			
Duty Cycle		±1.42 %			

SPORTON INTERNATIONAL INC. Page No. : 7 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



2 Test Configuration of EUT

2.1 The Worst Case Modulation Configuration

Mode	Field Strength (dBuV/m at 3m)	
Touch-Panel	86.11	

Report No.: FR391853-01

2.2 Test Channel Frequencies Configuration

Mode	Test Channel Frequencies (kHz)	
Touch-Panel	83-(F1)	

2.3 The Worst Case Measurement Configuration

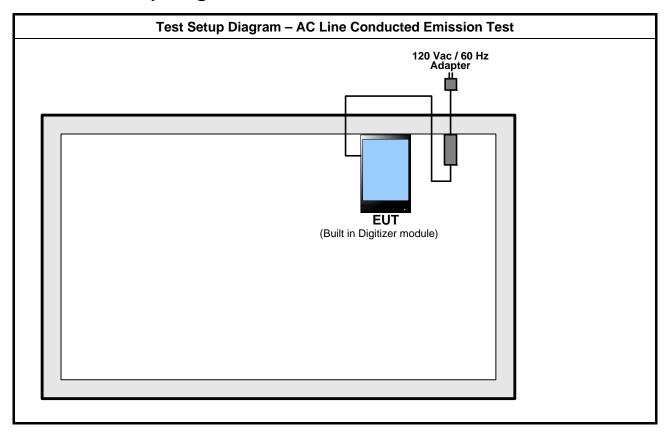
The Worst Case Mode for Following Conformance Tests					
Tests Item AC power-line conducted emissions					
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz				
Operating Mode	Operating Mode Description				
1	AC Power & Touch-Panel				

Th	The Worst Case Mode for Following Conformance Tests									
Tests Item		Emission Bandwidth, Field Strength of Fundamental Emissions Transmitter Radiated Unwanted Emissions								
Test Condition	Radiated measurement	Radiated measurement								
	☐ EUT will be placed in	fixed position.								
User Position		EUT will be placed in mobile position and operating multiple positions. EUT shall be performed two orthogonal planes. The worst planes is Y.								
	EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two or three orthogonal planes.									
Operating Mode < 1GHz		ch-Panel								
Mode	Touch-Panel									
	X Plane	Y Plane	Z Plane							
Orthogonal Planes of EUT										

SPORTON INTERNATIONAL INC. Page No. : 8 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



2.4 Test Setup Diagram



Report No.: FR391853-01

SPORTON INTERNATIONAL INC. Page No. : 9 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

Test Setup Diagram - Radiated below 30MHz Test 120 Vac / 60 Hz Adapter (Built in Digitizer module) Test Setup Diagram - Radiated above 30MHz Test 120 Vac / 60 Hz Adapter EUT (Built in Digitizer module)

Report No.: FR391853-01

SPORTON INTERNATIONAL INC. Page No. : 10 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit							
Frequency Emission (MHz)	Quasi-Peak	Average					
0.15-0.5	66 - 56 *	56 - 46 *					
0.5-5	56	46					
5-30	60	50					

Report No.: FR391853-01

3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

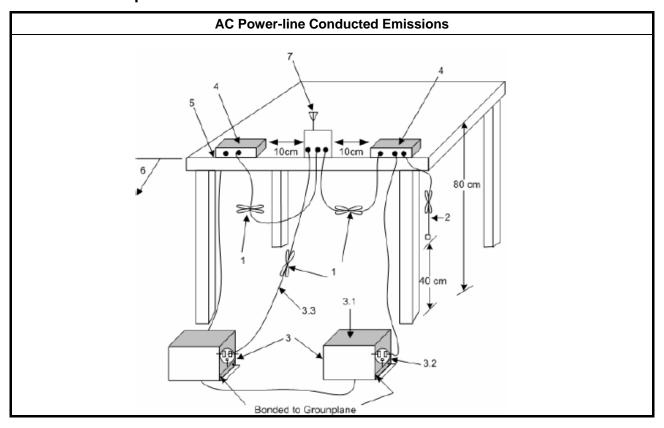
3.1.3 Test Procedures

	Test Method										
\boxtimes	Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions.										
\boxtimes	If A	C conducted emissions fall in operating band, then following below test method confirm final result.									
		Accept measurements done with a suitable dummy load replacing the antenna under the following conditions: (1) Perform the AC line conducted tests with the antenna connected to determine compliance with FCC 15.207 limits outside the transmitter's fundamental emission band; (2) Retest with a dummy load to determine compliance with FCC 15.207 limits within the transmitter's fundamental emission band.									
		For a device with a permanent antenna operating at or below 30 MHz, accept measurements done with a suitable dummy load, in lieu of the permanent antenna under the following conditions: (1) Perform the AC line conducted tests with the permanent antenna to determine compliance with the FCC 15.207 limits outside the transmitter's fundamental emission band; (2) Retest with a dummy load in lieu of the permanent antenna to determine compliance with the FCC 15.207 limits within the transmitter's fundamental emission band.									

SPORTON INTERNATIONAL INC. Page No. : 11 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



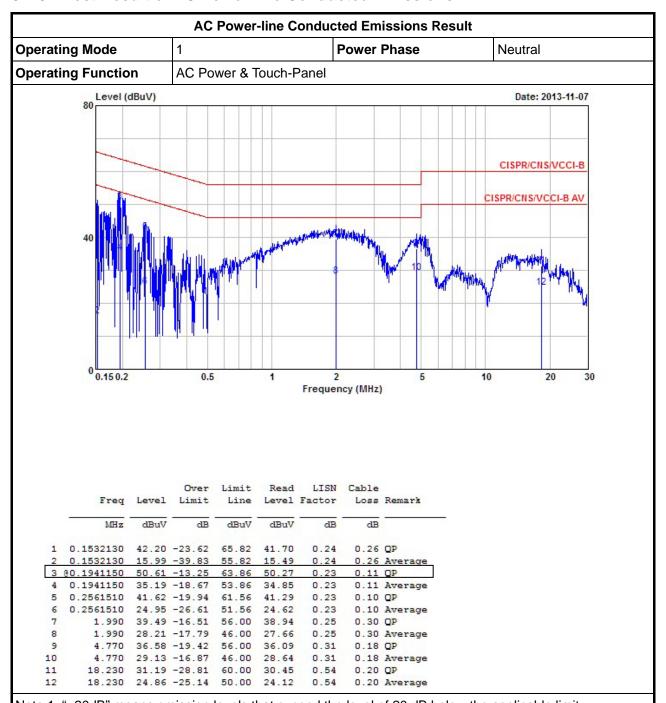
3.1.4 Test Setup



Report No.: FR391853-01

SPORTON INTERNATIONAL INC. Page No. : 12 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

5 Test Result of AC Power-line Conducted Emissions



Report No.: FR391853-01

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

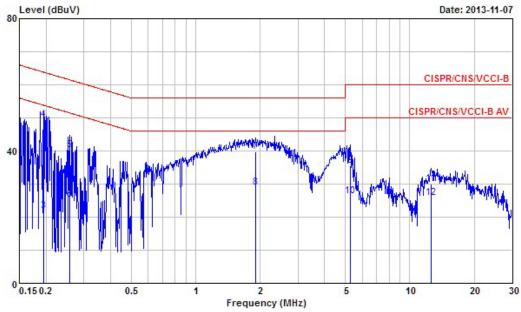
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

Note 3: When emissions are in operating band over limits, retest with a dummy load for final in-band results.

SPORTON INTERNATIONAL INC. Page No. : 13 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

AC Power-line Conducted Emissions Result

Operating Mode 1 Power Phase Line Operating Function AC Power & Touch-Panel



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1500000	14.96	-41.04	56.00	14.59	0.11	0.26	Average
2	0.1500000	41.25	-24.75	66.00	40.88	0.11	0.26	QP
3	0.1944650	21.79	-32.05	53.84	21.57	0.11	0.11	Average
4	0.1944650	49.57	-14.27	63.84	49.35	0.11	0.11	QP
5	0.2588790	40.39	-21.08	61.47	40.18	0.11	0.10	QP
6	0.2588790	25.20	-26.27	51.47	24.99	0.11	0.10	Average
7	1.909	39.72	-16.28	56.00	39.30	0.13	0.29	QP
8	1.909	28.97	-17.03	46.00	28.55	0.13	0.29	Average
9	5.280	35.53	-24.47	60.00	35.18	0.18	0.17	QP
10	5.280	26.33	-23.67	50.00	25.98	0.18	0.17	Average
11	12.580	30.08	-29.92	60.00	29.66	0.26	0.16	QP
12	12.580	25.92	-24.08	50.00	25.50	0.26	0.16	Average

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

Note 3: When emissions are in operating band over limits, retest with a dummy load for final in-band results.

SPORTON INTERNATIONAL INC. Page No. : 14 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

3.2 Transmitter Radiated Emissions

3.2.1 Transmitter Radiated Emissions Limit

Transmitter Radiated Emissions Limit									
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)						
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300						
0.490~1.705	24000/F(kHz)	33.8 - 23	30						
1.705~30.0	30	29	30						
30~88	100	40	3						
88~216	150	43.5	3						
216~960	200	46	3						
Above 960	500	54	3						

Report No.: FR391853-01

- Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
- Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.
- Note 3: the frequency bands 9-90 kHz, 110-490 kHz measurements employing an average detector and other below 1GHz measurements employing a CISPR guasi-peak detector.

3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

SPORTON INTERNATIONAL INC. Page No. : 15 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



FCC Test Report No.: FR391853-01

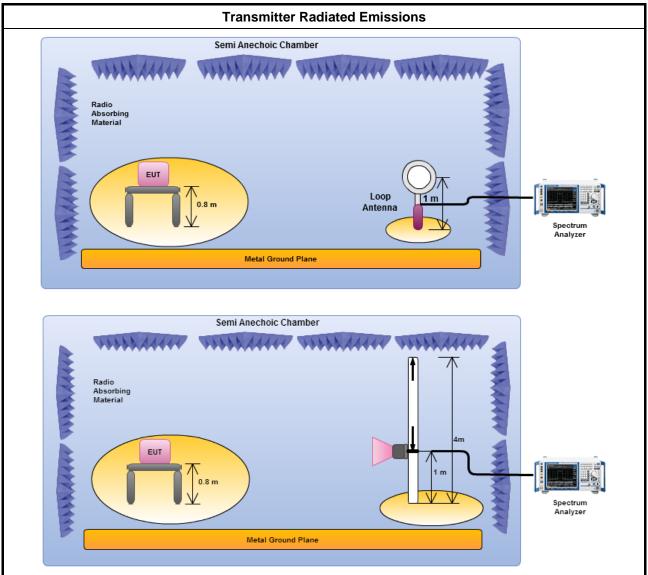
3.2.3 Test Procedures

	Test Method
\boxtimes	Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1 GHz and test distance is 3m.
\boxtimes	Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz. The frequency bands 9-90 kHz, 110-490 kHz measurements employing an average detector and other below 30MHz measurements employing a CISPR quasi-peak detector. Test distance is 3m.
	At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the requirements; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be following below methods.
	The results shall be extrapolated to the specified distance by making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor.
	The results shall be by using the square of an inverse linear distance extrapolation factor (40 dB/decade).
\boxtimes	For radiated measurement. Loop antenna was rotated about the horizontal and vertical axis and the equipment to be measured and the test antenna shall be oriented to obtain the maximum emitted field strength level.
\boxtimes	The any unwanted emissions level shall not exceed the fundamental emission level.
\boxtimes	All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

SPORTON INTERNATIONAL INC. Page No. : 16 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



3.2.4 Test Setup



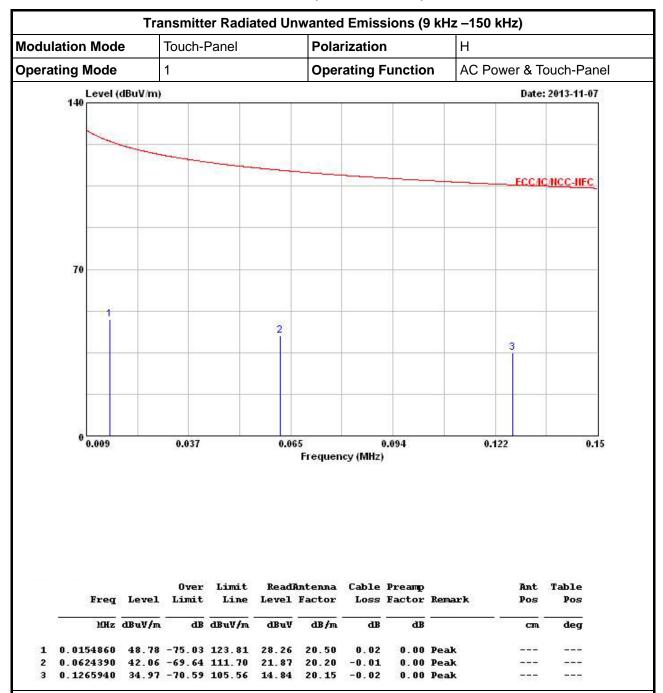
Report No.: FR391853-01

Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. The center of the loop shall be 1 m above the ground. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna. the antenna height shall be varied from 1 m to 4 m.

SPORTON INTERNATIONAL INC. Page No. : 17 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR391853-01

3.2.5 Transmitter Radiated Emissions (Below 30MHz)



Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 18 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

Modulation Mode	Touch-Panel	Polar	ization	Н		
Operating Mode	1	Oper	ating Function	AC Power	& Touch-Pane	
Level (dBu	ıV/m)			Date: 2013-11-07		
70	2			FCC	ОЛСЛІСС-НЕС	
	3					
0 0.15	0.52	0.89	1.26	1.63	2	
0.15	0.32	Frequen		1.03	2	

Report No.: FR391853-01

			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dВ	M	cm.	deg
1	0.2499000	74.12	-25.54	99.66	54.06	20.10	-0.04	0.00	Peak		2224
2	0.4145500	68.02	-27.24	95.26	48.00	20.10	-0.08	0.00	Peak		
3	@0.5829000	60.80	-11.50	72.30	40.83	20.06	-0.09	0.00	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit. Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

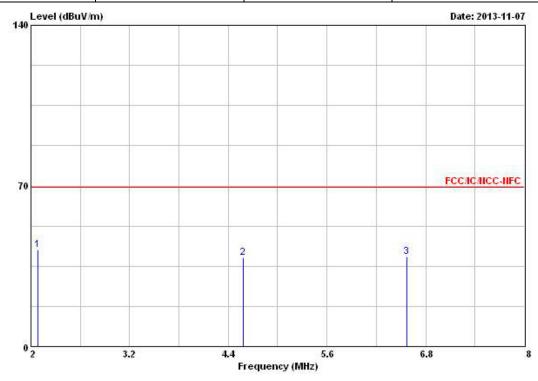
Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 19 of 26 Report Version TEL: 886-3-327-3456 : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (2 MHz – 8 MHz)										
Modulation Mode	Touch-Panel	Polarization	Н								
Operating Mode	1	Operating Function	AC Power & Touch-Panel								

Report No.: FR391853-01



	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Remark	Ant Pos	Table Pos
i.		MHz dBuV/m	dBuV/m dB	dBuV/m dBuV	dB/m	dB dB	2.0	cm	deg		
1	2.080	42.15	-27.39	69.54	22.33	20.00	-0.18	0.00	Peak		1222
2	4.580	38.66	-30.88	69.54	18.96	20.00	-0.30	0.00	Peak		
3	6.570	39.04	-30.50	69.54	19.31	20.08	-0.35	0.00	Peak	570350	10000

Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

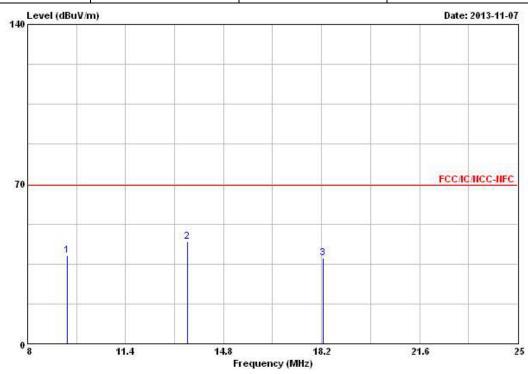
Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 20 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (8 MHz – 25 MHz)										
Modulation Mode	Touch-Panel	Polarization	Н								
Operating Mode	1	Operating Function	AC Power & Touch-Panel								

Report No.: FR391853-01



	Freq	Level	Over Limit			Antenna Factor			Remark	Ant Pos	Table Pos
9	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1	9.390	38.82	-30.72	69.54	19.14	20.10	-0.42	0.00	Peak		2224
2	13.560	44.76	-24.78	69.54	25.19	20.10	-0.53	0.00	Peak		
3	18.250	37.39	-32.15	69.54	17.85	20.16	-0.62	0.00	Peak	500000	100000

Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit.

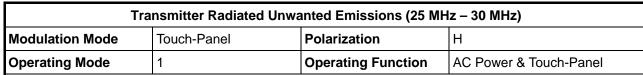
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

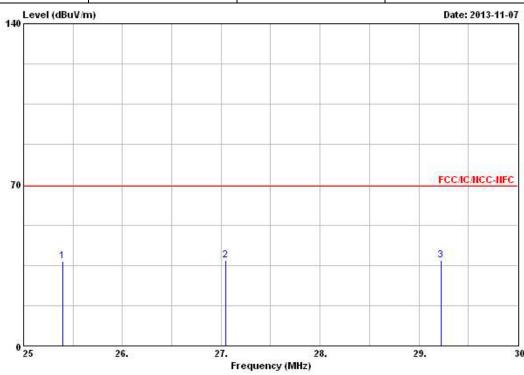
Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 21 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR391853-01





	Freq	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	Remark	Ant Pos	Table Pos
15	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		- Cm	deg	
1	25.400	36.65	-32.89	69.54	17.34	20.10	-0.79	0.00	Peak		2224	
2	27.050	37.02	-32.52	69.54	17.72	20.10	-0.80	0.00	Peak			
3	29.220	37.03	-32.51	69.54	17.76	20.10	-0.83	0.00	Peak	77.77	1000	

Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit.

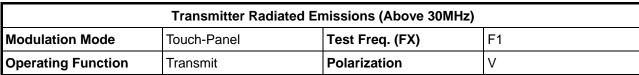
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

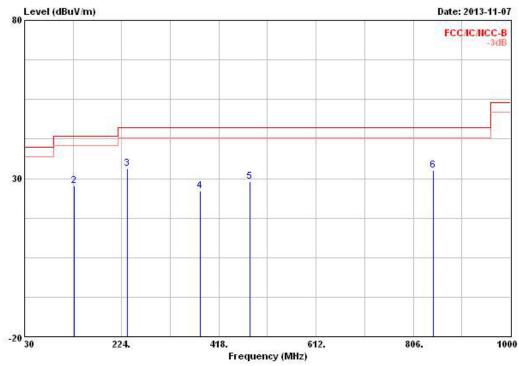
Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 22 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Emissions (Above 30MHz)



Report No.: FR391853-01



	10 0 0000000000000000000000000000000000	********	0ver	Limit		Antenna		Preamp		Ant	Table
	Freq	Level	Limit	Line	reaet	Factor	ross	Factor	Kemark	Pos	Pos
9	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	4	cm	deg
1	30.000	25.65	-14.35	40.00	33.64	18.85	0.77	27.61	Peak		222
2	128.940	27.66	-15.84	43.50	41.32	11.93	1.68	27.27	Peak		
3 @	234 670	33.14	-12.86	46.00	46.68	11.10	2.24	26.88	Peak		
4	381.140	26.09	-19.91	46.00	35.49	14.91	2.90	27.21	Peak	200	
5	479.110	29.07	-16.93	46.00	36.50	17.06	3.27	27.76	Peak		222
6	846.740	32.45	-13.55	46.00	35.43	20.26	4.44	27.68	Peak	75.50	

Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit.

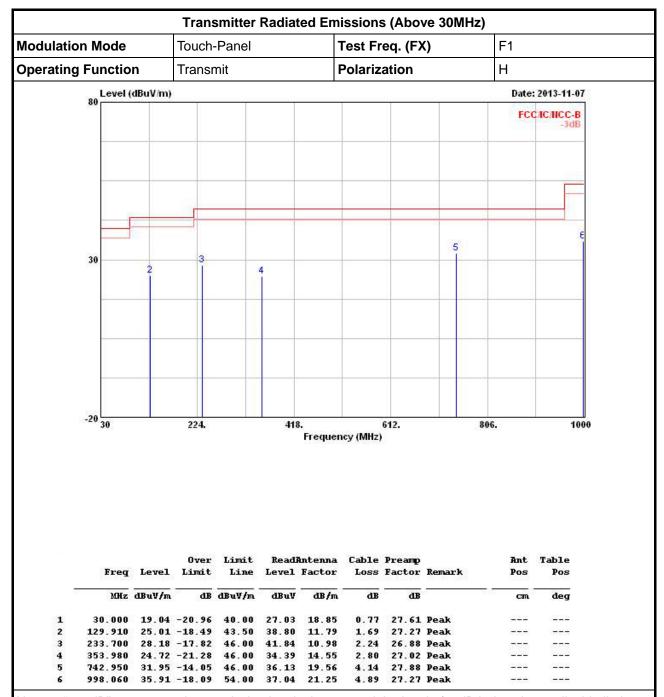
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 23 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR391853-01



Note 1: ">20dB" means spurious emission levels that exceed the level of 6 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement worst emissions of receive antenna polarization: V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 24 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01



3.2.7 Test Result of Field Strength of Fundamental Emissions

Field Strength of Fundamental Emissions Result									
Modulation Mode	Frequency (MHz)	Fundamental (dBuV/m)@3m	Polarization	Margin (dB)	Limit (dBuV/m)@3m				
Touch-Panel	F1	86.11	Н	23.11	109.22				
Result Complied									
Note 1: Measurement worst emissions of receive antenna polarization: V (Vertical)									

Report No.: FR391853-01

Note 1: Measurement worst emissions of receive antenna polarization: V (Vertical).

SPORTON INTERNATIONAL INC. Page No. : 25 of 26 TEL: 886-3-327-3456 Report Version : Rev. 01

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Mar. 26, 2013	Conduction (CO04-HY)
LISN	SCHWARZBECK MESS-ELEKTRO NIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 21, 2013	Conduction (CO04-HY)
RF Cable-CON	HUBER+SUHNE R	RG213/U	7.61183201e+01 2	9kHz ~ 30MHz	Nov. 09, 2012	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)

Report No.: FR391853-01

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Dec. 01, 2012	Radiation (03CH03-HY)
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May. 03, 2013	Radiation (03CH03-HY)
Spectrum	R&S	FSP30	100023	9kHz ~ 30GHz	Jul. 20, 2013	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 21, 2013	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Jan. 17, 2013	Radiation (03CH03-HY)
Turn Table	EM Electronics	EM Electronics	060615	0 ~ 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	MF	MF-7802	MF780208179	1 ~ 4 m	N/A	Radiation (03CH03-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	Dec. 02, 2012	Radiation (03CH03-HY)

Note: Calibration Interval of instruments listed above is two year.

SPORTON INTERNATIONAL INC. Page No. : 26 of 26
TEL: 886-3-327-3456 Report Version : Rev. 01