



STC Test Report

Date : 2015-09-30
No. : HM170019

Page 1 of 23

Applicant Heng Yu Electronic Manufacturing Company Limited.
Room 3-5, 15/F., Nan Fung Commercial Centre, 19 Lam Lok
Street, Kowloon Bay, Hong Kong.

Manufacturer: Zhuhai Heng Yu New Technology Company Limited.
Heng Ke Campus, Jin Hai Avenue, San Zao, Zhuhai, Guang Dong,
P.R.C.: 8109040

Description of Sample(s):

Product:	Keyboard
Brand Name:	Wincor Nixdorf
Model No.:	TA99A-SU-0007
FCC ID:	XENTA99

Date Sample(s) Received: 2015-04-02

Date Tested: 2015-04-17 to 2015-09-04

Investigation Requested: Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2014 and ANSI C63.10: 2013 for FCC Certification.

Conclusion(s): The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on Section 2.2 in this Test Report.

Remark(s): This report is a supplement to Test Report, number HM169764 issued on 2015-09-11. The original page(s) of the same test report is hereby superseded.





CHEUNG Chi, Kenneth
Authorized Signatory
ElectroMagnetic Compatibility Department
For and on behalf of
The Hong Kong Standards and Testing Centre Ltd.



STC Test Report

Date : 2015-09-30
No. : HM170019

Page 2 of 23

CONTENT:

Cover	Page 1 of 23
Content	Page 2 of 23
1.0 General Details	
1.1 Test Laboratory	Page 3 of 23
1.2 Equipment Under Test [EUT] Description of EUT operation	Page 3 of 23
1.3 Date of Order	Page 3 of 23
1.4 Submitted Sample	Page 3 of 23
1.5 Test Duration	Page 3 of 23
1.6 Country of Origin	Page 3 of 23
1.7 RF Module Details	Page 4 of 23
1.8 Antenna Details	Page 4 of 23
2.0 Technical Details	
2.1 Investigations Requested	Page 5 of 23
2.2 Test Standards and Results Summary	Page 5 of 23
2.3 Table for Test Modes	Page 6 of 23
3.0 Test Results	
3.1 Emission	Page 7 - 14 of 23
Appendix A	
List of Measurement Equipment	Page 15 of 23
Appendix B	
Ancillary Equipment	Page 16 of 23
Appendix C	
Photographs	Page 17 - 23 of 23



Date : 2015-09-30

Page 3 of 23

No. : HM170019

1.0 General Details

1.1 Test Laboratory

The Hong Kong Standards and Testing Centre Ltd.
EMC Laboratory
10 Dai Wang Street, Taipo Industrial Estate
New Territories, Hong Kong

1.2 Equipment Under Test [EUT]

Description of Sample(s)

Product:	Keyboard
Manufacturer:	Zhuhai Heng Yu New Technology Company Limited.
	Heng Ke Campus, Jin Hai Avenue, San Zao, Zhuhai, Guang Dong,
	P.R.C.: 8109040
Brand Name:	Wincor Nixdorf
Model Number:	TA99A-SU-0007
Input Voltage:	5.0Vd.c. (powered by USB) 120Va.c. (for PC)

1.2.1 Description of EUT Operation

The Equipment Under Test (EUT) is USB keyboard of Heng Yu Electronic Manufacturing Company Limited. The keyboard consists with a 125kHz contactless card interface.

1.3 Date of Order

2015-04-02

1.4 Submitted Sample(s):

1 Sample

1.5 Test Duration

2015-04-17 to 2015-07-21

1.6 Country of Origin

China

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 4 of 23

1.7 RF Module Details

Module Model Number:	N/A
Module FCC ID:	N/A
Frequency range:	119 – 135kHz
Operating Frequency:	125kHz
Channel Spacing:	Wideband
Carrier Power:	4.7 dB μ A/m at 10 m
ITU Designation:	10K0A1D

Module Specification (specification provided by manufacturer)

1.8 Antenna Details

Antenna Type:	Loop antenna – Integrated
Antenna Length:	around 3500mm
Antenna Gain:	-2.5dBi

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

Page 5 of 23

No. : HM170019

2.0 Technical Details

2.1 Investigations Requested

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2014 Regulations and ANSI C63.10: 2013 for FCC Certification.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary				
Test Condition	Test Requirement	Test Method	Class / Severity	
			Pass	Fail
Radiated Emissions	FCC 47CFR 15.209	ANSI C63.10:2013	N/A	<input checked="" type="checkbox"/> <input type="checkbox"/>
AC Mains Conducted Emissions	FCC 47CFR 15.207	ANSI C63.10:2013	N/A	<input checked="" type="checkbox"/> <input type="checkbox"/>

Note: N/A - Not Applicable

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

Date : 2015-09-30

No. : HM170019

Page 6 of 23

3.0 Test Results

3.1 Emission

3.1.1 Radiated Emissions

Test Requirement:	FCC 47CFR 15.225
Test Method:	ANSI C63.10:2013
Test Date:	2015-04-17 to 2015-09-04
Mode of Operation:	Tx on mode

Test Method:

The sample was placed 0.8m above the ground plane on a standard radiated emission test site. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. In the frequency range of 9kHz to 30MHz, The center of the loop antenna shall be 1 meter above the ground and rotated loop axis for maximum reading. The emissions worst-case are shown in Test Results of the following pages.

Remark: 3 orthogonal axis apply to hand-held device only.

*: Semi-anechoic chamber located on the G/F of The Hong Kong Standards and Testing Centre Ltd. with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 607756.

STC Test Report

Date : 2015-09-30

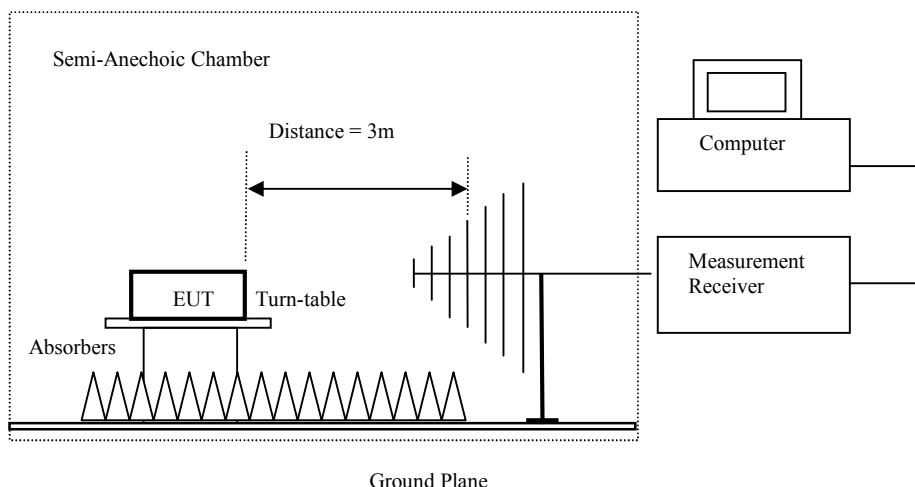
No. : HM170019

Page 7 of 23

Spectrum Analyzer Setting:

9KHz – 30MHz (Pk & Av)	RBW: 10kHz VBW: 30kHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold
30MHz – 1GHz (QP)	RBW: 120kHz VBW: 120kHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold
Above 1GHz (Pk & Av)	RBW: 3MHz VBW: 3MHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold

Test Setup:



Absorbers placed on top of the ground plane are for measurements above 1000MHz only.

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 8 of 23

Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz) @ 300m
0.490-1.705	24000/F (kHz) @ 30m
1.705-30	30 @ 30m
30-88	100 @ 3m
88-216	150 @ 3m
216-960	200 @ 3m
Above960	500 @ 3m

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of On mode connected to PC (including passive tag) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions Peak Value						
Frequency kHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength @3m dB μ V/m	Distance Factor dB	Limit @3m dB μ V/m	E-Field Polarity
125.80	39.8	11.5	51.3	80.0	125.6	Horizontal
251.70	13.6	11.5	25.1	80.0	119.6	Horizontal

Field Strength of Spurious Emissions Average Value						
Frequency kHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength @3m dB μ V/m	Distance Factor dB	Limit @3m dB μ V/m	E-Field Polarity
125.80	39.4	11.5	50.9	80.0	105.6	Horizontal
251.70	13.2	11.5	24.7	80.0	99.6	Horizontal

Remarks:

*: Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000 MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Distance factor for 300m to 3m = $40\log(300m/ 3m) = 80$ dB

Calculated measurement uncertainty	:	9kHz to 30MHz	1.8dB
		30MHz to 1GHz	5.2dB
		1GHz to 18GHz	5.1dB

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 9 of 23

Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz) @ 300m
0.490-1.705	24000/F (kHz) @ 30m
1.705-30	30 @ 30m
30-88	100 @ 3m
88-216	150 @ 3m
216-960	200 @ 3m
Above960	500 @ 3m

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of On mode connected to PC (including passive tag) (30MHz – 1GHz): Pass

Frequency MHz	Field Strength of Spurious Emissions Quasi-Peak Value				
	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength @3m dB μ V/m	Limit @3m dB μ V/m	E-Field Polarity
180.00	21.7	12.4	34.1	43.5	Horizontal
228.00	24.8	14.8	39.6	46.0	Horizontal
240.00	30.4	15.4	45.8	46.0	Horizontal
300.00	27.5	17.4	44.9	46.0	Horizontal
480.00	10.6	22.6	33.2	46.0	Horizontal
960.00	5.2	31.2	36.4	46.0	Horizontal
681.20	7.1	26.0	33.1	46.0	Vertical

Remarks:

*: Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000 MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Calculated measurement uncertainty : 9kHz to 30MHz 1.8dB
30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

Date : 2015-09-30

No. : HM170019

Page 10 of 23

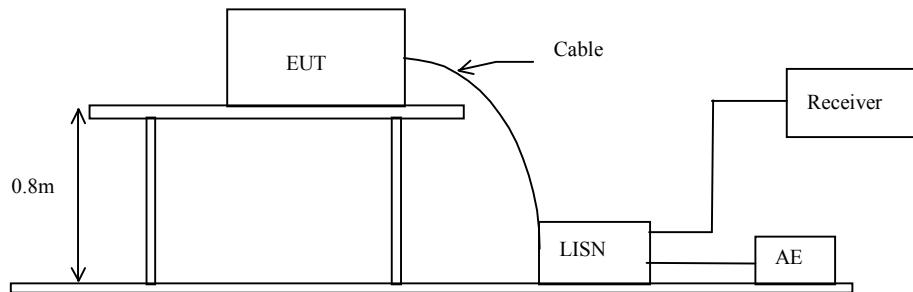
3.1.2 Conducted Emissions (0.15MHz to 30MHz)

Test Requirement: FCC 47CFR 15.207
Test Method: ANSI C63.10:2013
Test Date: 2015-04-17
Mode of Operation: RFID on mode (Connected to PC)
Test Voltage: 120V a.c., 60Hz

Test Method:

The test was performed in accordance with ANSI C63.10: 2013, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Test Setup:



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 11 of 23

Limit for Conducted Emissions (FCC 47 CFR 15.207):

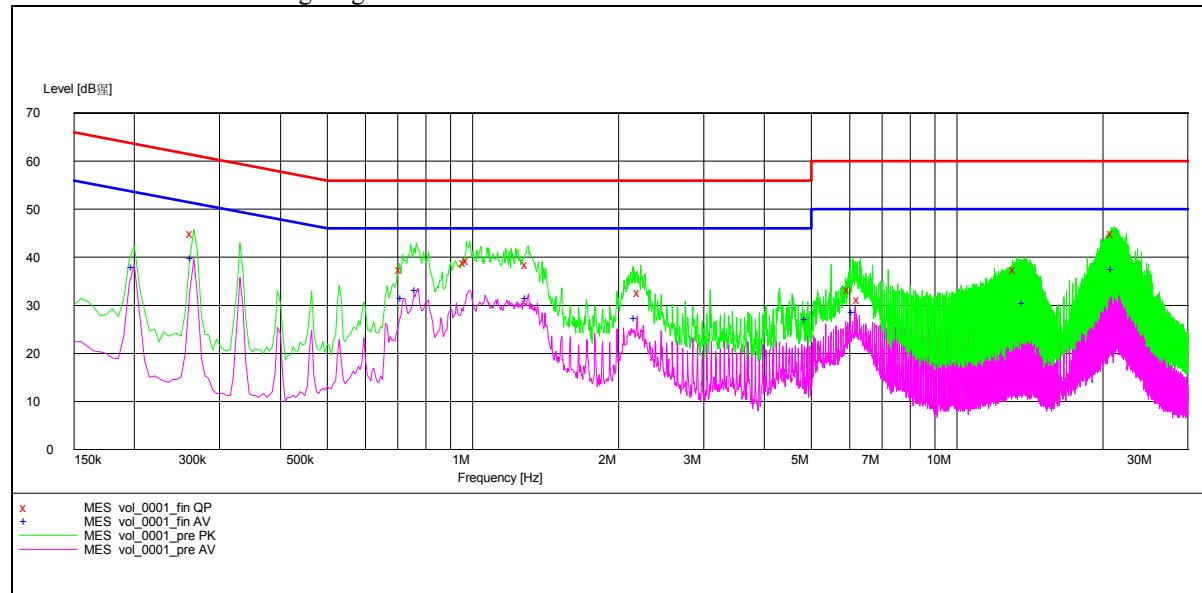
Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of RFID on mode (Connected to PC) - Live: PASS

Please refer to the following diagram for individual results.



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 12 of 23

Results of RFID on mode (Connected to PC) - Live: PASS

Conductor	Frequency	Quasi-peak		Average	
		Level	Limit	Level	Limit
Live or Neutral	MHz	dB μ V	dB μ V	dB μ V	dB μ V
Live	0.200	42.2	64.0	39.4	54.0
Live	0.265	44.5	61.0	40.9	51.0
Live	0.720	-*-	-*-	30.4	46.0
Live	0.725	37.9	56.0	-*-	-*-
Live	0.765	-*-	-*-	33.0	46.0
Live	1.095	37.0	56.0	-*-	-*-
Live	1.275	37.0	56.0	-*-	-*-
Live	1.320	-*-	-*-	30.2	46.0
Live	2.150	32.5	56.0	-*-	-*-
Live	5.830	28.4	60.0	-*-	-*-
Live	6.280	31.2	60.0	-*-	-*-
Live	13.825	38.8	60.0	-*-	-*-
Live	21.365	38.5	60.0	-*-	-*-
Live	22.370	-*-	-*-	35.4	50.0
Live	24.885	-*-	-*-	34.1	50.0
Live	25.135	-*-	-*-	34.1	50.0
Live	25.260	-*-	-*-	31.9	50.0
Live	25.385	-*-	-*-	31.9	50.0

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

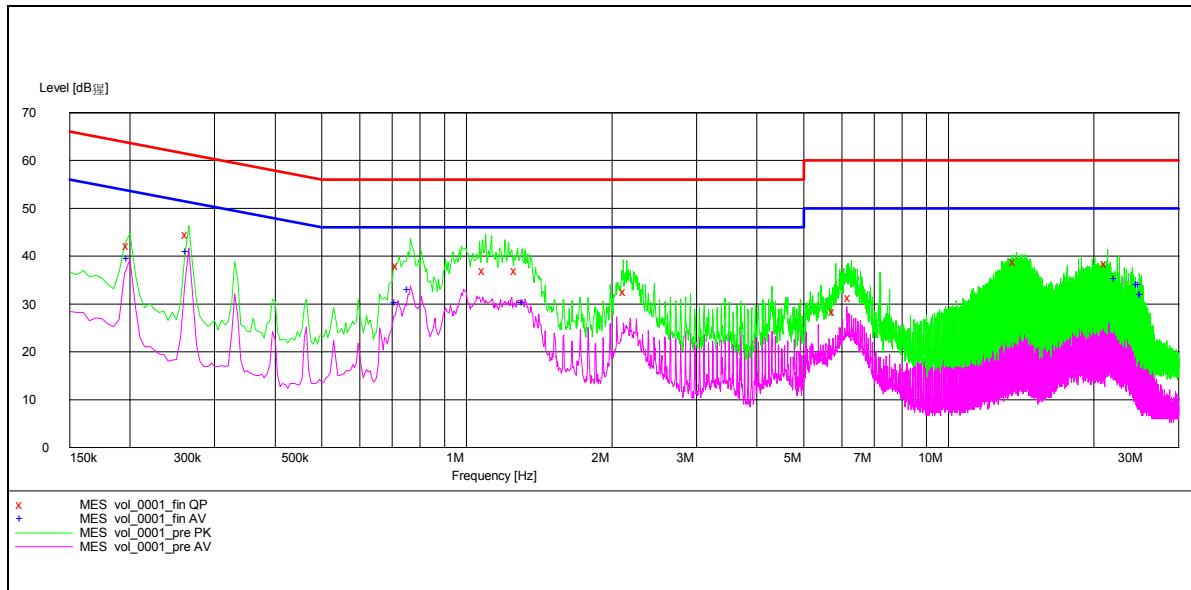
Date : 2015-09-30

No. : HM170019

Page 13 of 23

Results of RFID on mode (Connected to PC) - Neutral: PASS

Please refer to the following diagram for individual results.



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 14 of 23

Results of RFID on mode (Connected to PC) - Neutral: PASS

Conductor	Frequency	Quasi-peak		Average	
		Level	Limit	Level	Limit
Live or Neutral	MHz	dB μ V	dB μ V	dB μ V	dB μ V
Neutral	0.200	-*-	-*-	37.9	54.0
Neutral	0.265	45.0	61.0	39.6	51.0
Neutral	0.715	37.4	56.0	-*-	-*-
Neutral	0.720	-*-	-*-	31.3	46.0
Neutral	0.770	-*-	-*-	33.0	46.0
Neutral	0.970	38.9	56.0	-*-	-*-
Neutral	0.985	39.2	56.0	-*-	-*-
Neutral	1.300	38.5	56.0	31.5	46.0
Neutral	2.185	-*-	-*-	27.2	46.0
Neutral	2.225	32.7	56.0	-*-	-*-
Neutral	4.920	-*-	-*-	27.1	46.0
Neutral	6.020	33.3	60.0	-*-	-*-
Neutral	6.155	-*-	-*-	28.5	50.0
Neutral	6.315	31.2	60.0	-*-	-*-
Neutral	13.305	37.4	60.0	-*-	-*-
Neutral	13.830	-*-	-*-	30.3	50.0
Neutral	21.110	45.0	60.0	37.5	50.0

Remarks:

Calculated measurement uncertainty (0.15MHz – 30MHz): 3.25dB

-*- Emission(s) that is far below the corresponding limit line.

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 15 of 23

Appendix A

List of Measurement Equipment

LIST OF MEASUREMENT EQUIPMENT

Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM299	DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA	ETS-LINDGREN	3115	00114120	2014/01/15	2016/01/15
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM216	MINI MAST SYSTEM	EMCO	2075	00026842	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-LINDGREN	FACT-3	--	2014/09/29	2015/09/29
EM320	BICONILOG ANTENNA	ETS-LINDGREN	3142D	00094856	2014/08/06	2016/08/06
EM229	EMI TEST RECEIVER	R&S	ESIB40	100248	2015/06/01	2016/06/01
EM022	LOOP ANTENNA	EMCO	6502	1189-2424	2014/01/15	2016/01/15

Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM119	LISN	R & S	ESH3-Z5	0831.5518.52	2014/05/26	2015/05/26
EM181	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB7	100072	2015/06/01	2016/06/01
EM179	IMPULSE LIMITER	ROHDE & SCHWARZ	ESH3-Z2	357-8810.52/54	2015/01/14	2016/01/14
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057-99A	2012/02/03	2017/02/03

Remarks:-

CM Corrective Maintenance

N/A Not Applicable or Not Available

TBD To Be Determined

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



STC Test Report

Date : 2015-09-30

No. : HM170019

Page 16 of 23

Appendix B

Ancillary Equipment

ITEM NO.	DESCRIPTION	MODEL NO.	FCC ID	REMARK
1	LENOVO COMPUTER	M2B	N/A	N/A
2	DELL MOUSE	N/A	N/A	2.4M UNSHIELDED CABLE CONNECTED TO THE COMPUTER
3	DELL MONITOR	E153FPc	N/A	RESOLUTION:1024 x 768 (DURING TESTING) 1.4M UNSHIELDED POWER CORD CONNECTED TO THE COMPUTER 1.8M SHIELDED CABLE CONNECTED TO THE COMPUTER

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

Date : 2015-09-30
No. : HM170019

Page 17 of 23

Appendix C

Photographs of EUT

Front View of the product



Back View of the product



Rear View of the product (Left)



Rear View of the product (Right)



Top View of the product

Bottom View of the product

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

Date : 2015-09-30

No. : HM170019

Page 18 of 23



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

Date : 2015-09-30

No. : HM170019

Page 19 of 23

Photographs of EUT

Inner Circuit Top View – All PCBs



Inner Circuit Bottom View -- All PCBs

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

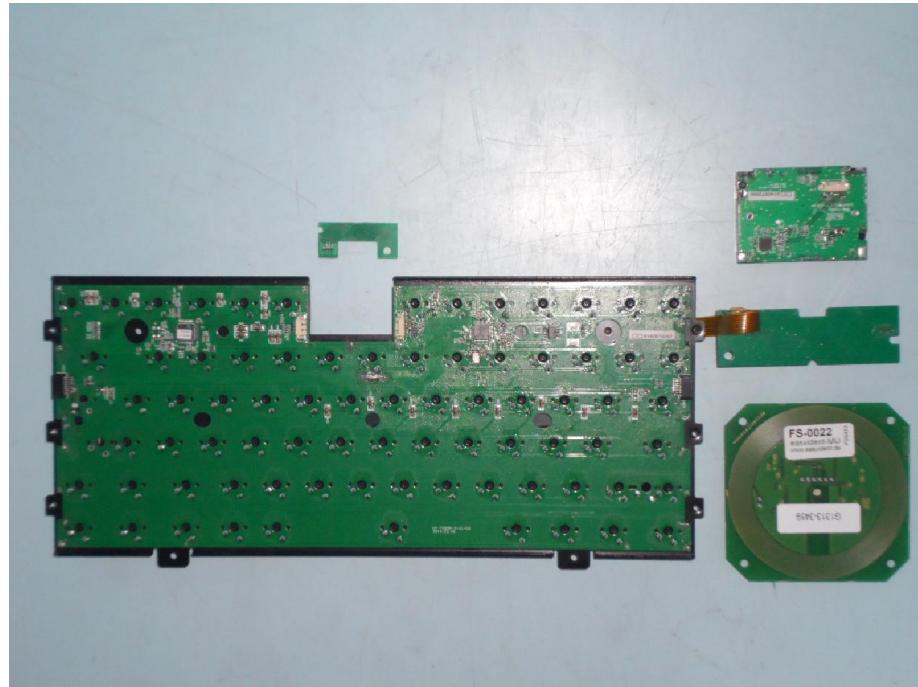


STC Test Report

Date : 2015-09-30

No. : HM170019

Page 20 of 23



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

Date : 2015-09-30
No. : HM170019

Page 21 of 23

Photographs of EUT

Measurement of Radiated Emission Test Set Up (30MHz – 1GHz)



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

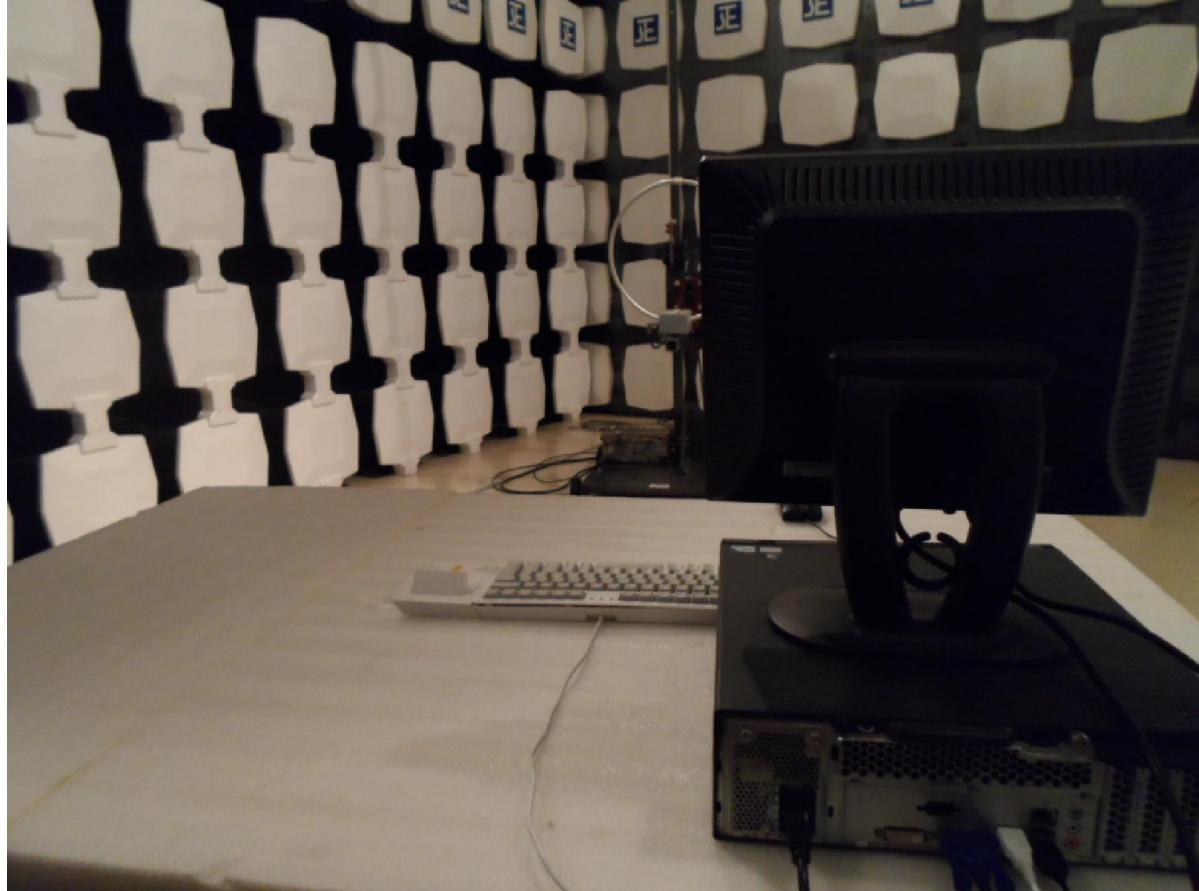
Date : 2015-09-30

No. : HM170019

Page 22 of 23

Photographs of EUT

Measurement of Radiated Emission Test Set Up (9kHz – 30MHz)



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@hkstc.org Website: www.stc-group.org

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

STC Test Report

Date : 2015-09-30
No. : HM170019

Page 23 of 23

Photographs of EUT

Measurement of Conducted Emission Test Set Up



******* End of Test Report *******



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by The Hong Kong Standards & Testing Centre Limited (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
2. Any report issued by the Company as a result of this application for testing service (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to his customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. The Report refers only to the sample tested and does not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
5. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
6. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
7. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
9. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
10. Issuance records of the Report are available on the internet at www.stc-group.org. Further enquiry of validity or verification of the Reports should be addressed to the Company.