

CENTRE OF TESTING SERVICE INTERNATIONAL

OPERATE ACCORDING TO ISO/IEC 17025

FCC ID/IC TEST REPORT

TEST REPORT NUMBER: CGZ3140220-00105-EFI



CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China





TEST REPORT For FCC ID/IC				
47 CFR PART 15 OCT, 2013				
Report Reference No	CGZ3140220-00105-EFI			
Date of issue	24 April 2014			
Testing Laboratory Name	CENTRE OF TESTING SERVICE CO., LTD.			
Address	A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China			
Testing location/ procedure	Full application of Harmonised standards ■			
	Partial application of Harmonised standards \square			
	Other standard testing method \square			
Applicant's name	TECHSIGNO S.R.L.			
Address	Via Selvuzzis, 53 Udine 33100 Italy			
Test specification				
Standard	47 CFR PART 15 OCT, 2013			
	RSS-210 Issue 8, RSS-Gen Issue 3			
	ANSI C63.4-2009			
Test Report Form No	CTSEMC-1.0			
TRF Originator	CENTRE OF TESTING SERVICE CO., LTD.			
Master TRF	Dated 2009-01			
CENTRE OF TESTING SERVICE C	O., LTD. All rights reserved.			
This publication may be reproduced in whole or in part for non-commercial purposes as long as the CENTRE OF TESTING SERVICE CO., LTD. is acknowledged as copyright owner and source of the material. CENTRE OF TESTING SERVICE CO., LTD takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.				
Test item description	Double Technology Scanner			
Trade Mark	TECHSIGNO			
Manufacturer	TECHSIGNO S.R.L.			
Model/Type reference	PT2SCAN WIRED HF USB 1D			
Ratings	DC 5V, 0.3AW			
Operating Frequency	13.56MHz			
Result	Positive			

Compiled by:

Supervised by:

Approved by:

Kate zhang / Fileadministrators

Duke yang / Technique principal

Vincent yao / Manager

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines)

Complaint line: +86-20-85533471

E-mail: cts@cts-lab.com.cn





FCCID-TEST REPORT

 Test Report No. :
 CGZ3140220-00105-EFI
 24 April 2014 Date of issue

Type / Model	PT2SCAN WIRED HF USB 1D
EUT	Double Technology Scanner
Applicant	TECHSIGNO S.R.L.
Address	Via Selvuzzis, 53 Udine 33100 Italy
Telephone	+39-0432603604
Fax	+39-0432602905
Contact	Dr. Roberto Chiandussi
Manufacturer	TECHSIGNO S.R.L.
Address	Via Selvuzzis, 53 Udine 33100 Italy
Telephone	+39-0432603604
Fax	+39-0432602905
Contact	Dr. Roberto Chiandussi
Factory	TECHSIGNO S.R.L.
Address	Via Selvuzzis, 53 Udine 33100 Italy
Telephone	+39-0432603604
Fax	+39-0432602905
Contact	Dr. Roberto Chiandussi

Test Result according to the standards on page 1: PASSED

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.





TABLE OF CONTENTS

Description	<u>Page</u>
1.0 TEST STANDARDS	4
2.0 SUMMARY	4
3.0 EQUIPMENT UNDER TEST	4
4.0 TEST ENVIRONMENT	6
5.0 SUMMARY OF STANDARDS ANS RESULTS	7
6.0 POWER LINE CONDUCTED EMISSION TEST	8
7.0 RADIATED EMISSION	11
8.0 FREQUENCY STABILITY MEASUREMENT	19
9.0 99% BANDWIDTH	22
10.0 DEVIATION TO TEST SPECIFICATIONS	24

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.





1.0 TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15 OCT, 2013
- RSS-210 Issue 8, RSS-Gen Issue 3
- ANSI C63.4-2009

2.0 SUMMARY

2.1 GENERAL REMARKS

Date of receipt of test sample	20 February 2014	
Testing commenced on	20 February~24 April 2014	
Testing concluded on	24 April 2014	

2.2 FINAL ASSESSMENT

The FCC requirements pertaining to the technical standards and tested operation modes are

□ - **not** fulfilled.

The equipment under test

fulfils the FCC requirements cited on page 1.

- does not fulfil the FCC requirements cited on page 1.

3.0 EQUIPMENT UNDER TEST

3.1 Power supply system utilised

Power supply voltage :

DC 5V by PC

3.2 Short description of the Equipment under Test (EUT)

Number of tested samples: 1

Serial number: Prototype

3.3 EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

☐ - Standby

☐ TX- Y position

☐ TX- Zposition

■ TX- X position

Transmitter Frequency: 13.56MHz

Note:Operation mode TX -X position of EUT is the radiated test worst case. So only these test results be recorded in the test report.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

cts@cts-lab.com.cn See Reverse For Terms And Conditions of Service





3.4 EUT configuration

3.4.1. Description of configuration (EUT)

Description	•	Double Technology Scanner	
Model Number	:	PT2SCAN WIRED HF USB 1D	
Operation frequency	:	13.56MHz	
Antenna	:	PCB antenna, met requirement of FCC 15.203	

3.4.2. Tested Supporting System Details

3.4.2.1. Notebook

M/N	:	F83VF
S/N	:	AEN0AS64740305D
Manufacturer	:	ASUS
Power Cord	:	Unshielded, Detachabled, 1.5m, 3Pin
FCC	:	By DoC

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China
Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406
Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn





4.0 TEST ENVIRONMENT

4.1 Address of the test laboratory

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

4.2 Test facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L3394

CENTRE OF TESTING SERVICE CO., LTD has been assessed and proved to be in compliance with CNAS-CL01: 2006 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

IC-Registration No.: 8374A

The 3m Alternate Test Site of CENTRE OF TESTING SERVICE CO., LTD has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 8374A on June 6, 2011.

FCC-Registration No.: 971995

CENTRE OF TESTING SERVICE CO., LTD, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration No.791995, July 13,2012.

4.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35 ° C
Humidity:	25~75 %
Atmospheric pressure:	86~106 kPa

4.4 Definitions of symbols used in this test report

- - The black square indicates that the listed condition, standard or equipment is applicable for this report.
- ☐ The empty square indicates that the listed condition, standard or equipment is **not** applicable for this report.

4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the CTS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3140220-00105-EFI Page 6 of 24





4.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±1.22dB	(1)
Power disturbance	30MHz~300MHz	±1.38dB	(1)
	30MHz~300MHz	±3.14dB	(1)
Radiation emission (3m)	300MHz~1000MHz	±3.18dB	(1)
	1GHz~26.5GHz	±3.54dB	(1)

^{(1).} This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5.0 SUMMARY OF STANDARDS ANS RESULTS

5.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Results	
Conducted Emission Test	FCC Part 15 : 15.207 RSS-Gen:7.2.4 ANSI C63.4-2009	PASSED	
Radiated emission	FCC Part 15.205/15.209/15.225 RSS-210 Issue 8:A2.6 ANSI C63.4-2009	PASSED	
Frequency Stability	FCC Part 15.225(e) RSS-210 Issue 8:A2.6 ANSI C63.4-2009	PASSED	
99% Bandwidth	RSS-Gen 4.6.1	PASSED	
N/A is an abbreviation for Not Applicable.			

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.



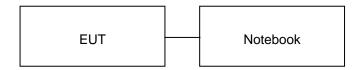


6.0 POWER LINE CONDUCTED EMISSION TEST

6.1.Test Equipment

Conduc	Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2013/11	
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2013/11	
3	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/026	2013/11	
4	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2013/11	
5	EMI Test Software	EZ-EMC	Farad	N/A	N/A	

6.2. Block Diagram of Test Setup



(EUT: Double Technology Scanner)

6.3. Power Line Conducted Emission Test Limits Standard: FCC Part 15: 15.207, ANSI C63.4-2009

Ī			Maximum RF Line Voltage		
	Frequency		Quasi-Peak Level	Average Level	
			dB(μV)	dB(μV)	
ſ	150kHz	~ 500kHz	66 ~ 56*	56 ~ 46*	
	500kHz	~ 5MHz	56	46	
	5MHz	~ 30MHz	60	50	

Notes: 1. * Decreasing linearly with logarithm of frequency.

6.4.Test Procedure

The XBOX Power connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#1). Power on the PC and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC Part 15C on Conducted Emission Test.

6.5. Power Line Conducted Emission Test Results PASSED.

The frequency range from 150KHz~30MHz is investigated. Please see the following pages.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3140220-00105-EFI Page 8 of 24

^{2.} The lower limit shall apply at the transition frequencies.

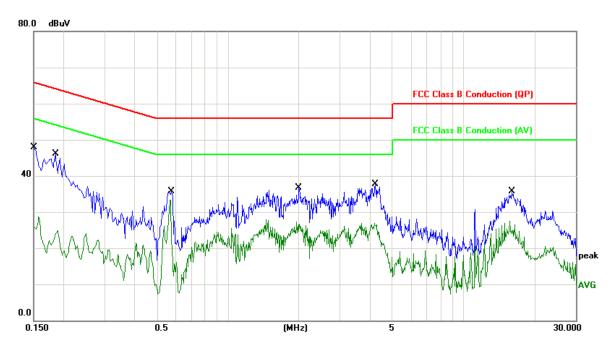
FCC ID:2ABSK-SCAN-WHUSB1D IC:11779A-SCANWHUSB1D CENTRE OF TESTING SERVICE







EUT	Double Technology Scanner
Operating Condition	TX
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	20 February~24 April 2014
Operator	Duke
MODEL NO	PT2SCAN WIRED HF USB 1D



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	0.1500	9.78	30.69	40.47	66.00	-25.53	QP
2	0.1500	9.78	15.99	25.77	56.00	-30.23	AVG
3	0.1860	9.78	29.44	39.22	64.21	-24.99	QP
4	0.1860	9.78	14.68	24.46	54.21	-29.75	AVG
5	0.5780	9.84	23.68	33.52	56.00	-22.48	QP
6	0.5780	9.84	11.48	21.32	46.00	-24.68	AVG
7	2.0100	9.86	19.88	29.74	56.00	-26.26	QP
8	2.0100	9.86	14.16	24.02	46.00	-21.98	AVG
9	4.2420	9.91	21.62	31.53	56.00	-24.47	QP
10	4.2420	9.91	14.32	24.23	46.00	-21.77	AVG
11	16.1300	9.96	19.66	29.62	60.00	-30.38	QP
12	16.1300	9.96	14.20	24.16	50.00	-25.84	AVG
Remark:	Other frequen	icy mini ma	rgin all >6 dB	of Limit			•

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines)

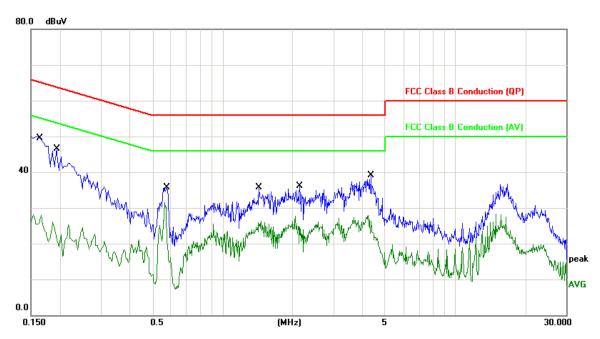
Complaint line: +86-20-85533471

E-mail: cts@cts-lab.com.cn





Test point: N Result: ■ - passed □ - not passed



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	0.1660	9.78	30.00	39.78	65.16	-25.38	QP
2	0.1660	9.78	11.14	20.92	55.16	-34.24	AVG
3	0.1940	9.78	23.96	33.74	63.86	-30.12	QP
4	0.1940	9.78	10.73	20.51	53.86	-33.35	AVG
5	0.5780	9.84	23.62	33.46	56.00	-22.54	QP
6	0.5780	9.84	11.55	21.39	46.00	-24.61	AVG
7	1.4340	9.84	19.33	29.17	56.00	-26.83	QP
8	1.4340	9.84	14.08	23.92	46.00	-22.08	AVG
9	2.1540	9.87	18.46	28.33	56.00	-27.67	QP
10	2.1540	9.87	14.35	24.22	46.00	-21.78	AVG
11	4.3380	9.91	20.97	30.88	56.00	-25.12	QP
12	4.3380	9.91	14.09	24.00	46.00	-22.00	AVG
Remark	: Other frequen	ncy mini ma	rgin all >6 dB	of Limit			

Note:Level=Reading+Factor. Margin= Level-Limit

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn





7.0 RADIATED EMISSION

7.1 Limit

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

FCC Part 15.209								
Frequency	Field Strength L	imitation	Field Strength Lim Measurement D					
(MHz)	(uV/m)	Distance	(dBuV/m)	(dBuV/m)				
0.009-0.490	2400/F(KHz)	300m	20log 2400/F(KHz)+80					
0.490-1.705	24000/F(KHz)	30m	20log 24000/F(KHz)+40					
1.705-30.00	30	30m	20log 30+40	69.5				
30.00-88.00	100	3m	20log 100	40.0				
88.00-216.00	150	3m	20log 150	43.5				
216.00-960.00	200	3m	20log 200	46.0				
Above 960.00	500	3m	20log 500	54.0				
	FC	C Part 15.2	25(a)/(b)/(c)					
Frequency	Field Strength L	imitation	Field Strength Limitation at 3m Measurement Distance					
(MHz)	(uV/m)	Distance	(dBuV/m)	(dBuV/m)				
13.553-13.567	15848	30m	20log 15848+40	124.0				
13.567-13.710	334	30m	20log 334+40	90.5				
13.110-13.410 13.710-14.010	106	30m	20log 106+40	80.5				

Note:

- (1) The tighter limit shall apply at the boundary between two frequency range.
- (2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).
- (3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$.

Example:

F.S Limit at 30m distance is 30uV/m , then F.S Limitation at 3m distance is adjusted as $L_{d1}=L_1=30uV/m\ ^*(10)^2=100\ ^*$ 30 uV/m

7.2 Test Equipment

Radia	Radiated disturbance (electric field)									
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.					
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2013/11					
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2014/03					
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2014/03					
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2014/03					
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2014/03					
6	Loop Antenna	A.R.A	PLA-1030/B	1030	2013/11					
7	EMI Test Software	EZ-EMC	Farad	N/A	N/A					

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

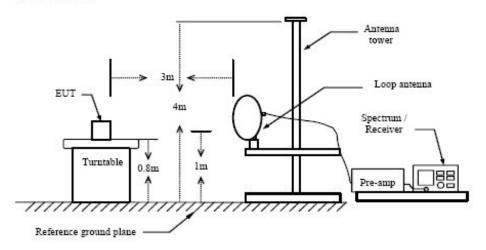
Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn



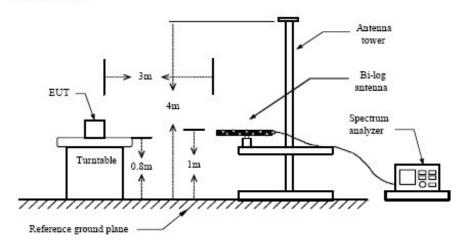


7.3 Test Configuration

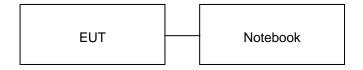
Below 30MHz



Below 1 GHz



7.4. Block Diagram of Test Setup



(EUT: Double Technology Scanner)

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines)

Complaint line: +86-20-85533471

E-mail: cts@cts-lab.com.cn





7.5 Test Procedure

- 1. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- 2. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- 3. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4. The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- 5. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- 6. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE: (FCC PART 15.209)

- 1. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- 2. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

NOTE: (FCC PART 15.225)

- 1. Spectrum Setting:
 - 9 KHz 150 KHz, RBW= 200Hz, VBW=200Hz, Sweep time = 200 ms. 150 K Hz – 30 MHz, RBW= 10 KHz, VBW=10 KHz, Sweep time = 200 ms. 30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
- 2. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- 3. The Log-Bicon Antenna will use to test frequency range from 30MHz to 1000MHz and the Loop Antenna will use to test frequency below 30MHz.

7.6 Test Results

The frequency range from 9KHz~30MHz,30MHz to 230MHz, 230MHz to 1000MHz is investigated. Please see the following pages.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Page 13 of 24

Report No.: CGZ3140220-00105-EFI



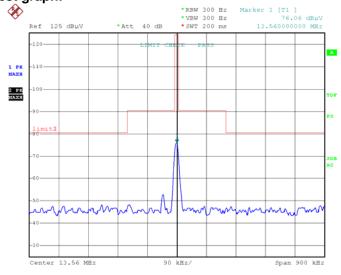


EUT	Double Technology Scanner
Operating Condition	DC 5V
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test distance	3 Meter
Test Date:	20 February~24 April 2014
Operator	Duke
MODEL NO	PT2SCAN WIRED HF USB 1D

Test Mode:	TX –X Position Mode	Result:	■ - passed
Frequency range:	9KHz~30MHz		\square - not passed

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	13.56000	14.24	61.82	76.06	124.00	-47.94	QP
2	27.17620	14.79	33.68	48.47	69.50	-21.03	QP
Rem	ark: Others the	result ma	argin all > 10dE	3 of the limit.			

FCC Part 15.225 test graph:



Date: 23.APR.2014 15:19:19

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

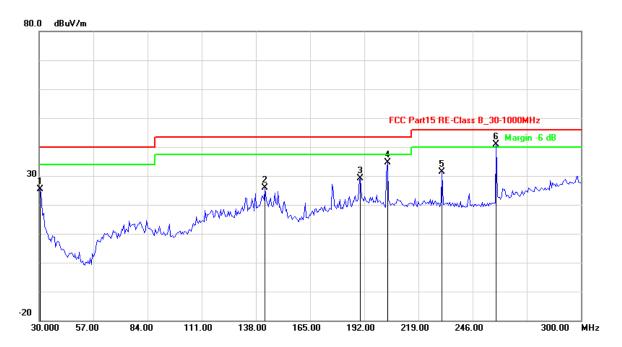
Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

FCC ID:2ABSK-SCAN-WHUSB1D IC:11779A-SCANWHUSB1D CENTRE OF TESTING SERVICE









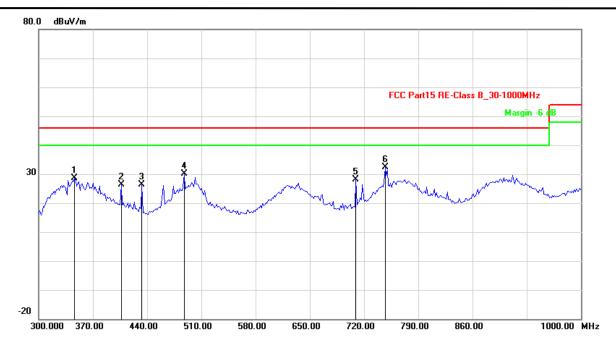
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	30.5410	-18.94	44.27	25.33	40.00	-14.67	QP
2	142.5450	-16.62	42.50	25.88	43.50	-17.62	QP
3	190.1603	-12.02	41.11	29.09	43.50	-14.41	QP
4	203.6873	-12.44	47.09	34.65	43.50	-8.85	QP
5	230.7414	-12.40	43.90	31.50	46.00	-14.50	QP
6	257.7955	-12.65	53.41	40.76	46.00	-5.24	QP

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.







No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	346.2926	-13.36	41.92	28.56	46.00	-17.44	QP
2	406.6132	-14.94	41.32	26.38	46.00	-19.62	QP
3	433.2665	-15.64	42.04	26.40	46.00	-19.60	QP
4	487.9760	-9.88	39.90	30.02	46.00	-15.98	QP
5	709.6192	-12.46	40.54	28.08	46.00	-17.92	QP
6	747.4950	-6.54	38.86	32.32	46.00	-13.68	QP

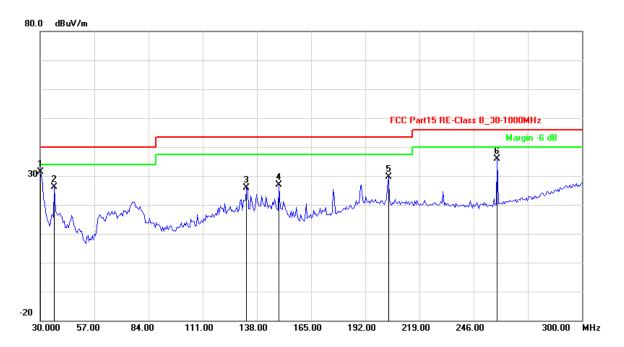
Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

FCC ID:2ABSK-SCAN-WHUSB1D IC:11779A-SCANWHUSB1D CENTRE OF TESTING SERVICE









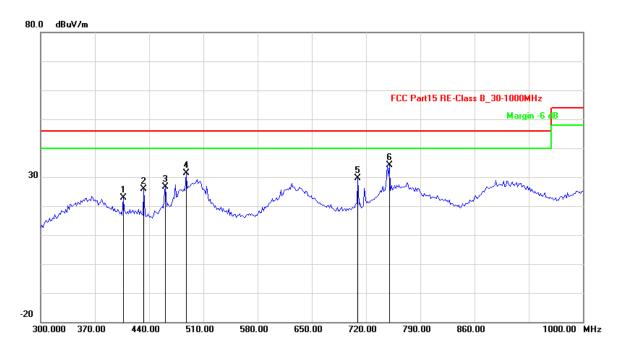
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	30.0000	-18.45	49.80	31.35	40.00	-8.65	QP
2	37.0341	-24.22	50.25	26.03	40.00	-13.97	QP
3	132.8056	-16.87	42.77	25.90	43.50	-17.60	QP
4	149.0381	-17.25	44.24	26.99	43.50	-16.51	QP
5	203.6874	-12.44	41.95	29.51	43.50	-13.99	QP
6	257.7956	-12.65	48.41	35.76	46.00	-10.24	QP

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.







No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	406.6132	-14.94	37.94	23.00	46.00	-23.00	QP
2	433.2665	-15.64	41.46	25.82	46.00	-20.18	QP
3	461.3226	-13.09	39.64	26.55	46.00	-19.45	QP
4	487.9760	-9.88	41.15	31.27	46.00	-14.73	QP
5	709.6192	-12.46	42.09	29.63	46.00	-16.37	QP
6	750.3006	-6.30	40.35	34.05	46.00	-11.95	QP

Remark: Other frequency mini margin all >10 dB of Limit

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.





8.0 FREQUENCY STABILITY MEASUREMENT

8.1 Limit

FCC Part 15.225(e)

The frequency tolerance of the carrier signal shall be maintained within +/-0.01% of the operating frequency over a temperature variation of - 20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

For battery operated equipment, the equipment tests shall be performed using a new battery.

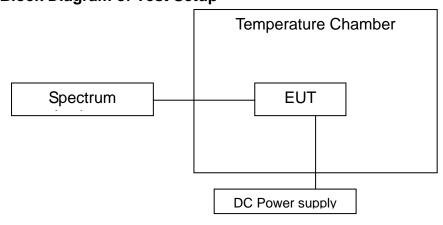
8.2 Test Equipment

Radiated disturbance (electric field)						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2013/11	
2	Temperature Chamber	GW	GDS-150	1016	2013/11	
3	DC Source	MCP	M10-SP-305E	/	2014/3	

8.3 Test Procedure

- The equipment under test was connected to an external DC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber.
 - After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the counter.
- 2. At room temperature (25±5°C), an external variable DC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage.

8.4. Block Diagram of Test Setup



(EUT: Double Technology Scanner)

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn





8.5. Test Results

Please see the following pages.

Test Temp.	Test Voltage (V dc)	Frequency (MHz)	Error (KHz)	Limit (KHz)
	4.25	13.559423	-0.577	
-20 ℃	5.00	13.559412	-0.588	
	5.75	13.559397	-0.603	±1.356
	4.25	13.559345	-0.655	
25 ℃	5.00	13.559365	-0.635	
	5.75	13.559345	-0.655	
50℃	3.45	13.559324	-0.676	7
	3.00	13.559367	-0.633	
	2.55	13.559370	-0.630	

Test Temp.	Test Voltage (V dc)	Frequency (MHz)	Error (KHz)	Limit (KHz)
	4.25	13.559417	-0.583	
-20 ℃	5.00	13.559410	-0.590	
	5.75	13.559393	-0.607	±1.356
	4.25	13.559345	-0.655	
25 ℃	5.00	13.559363	-0.637	
	5.75	13.559347	-0.653	
	3.45	13.559330	-0.670	
50 ℃	3.00	13.559361	-0.639	
	2.55	13.559368	-0.632	

Test Temp.	Test Voltage (V dc)	Frequency (MHz)	Error (KHz)	Limit (KHz)
	4.25	13.559418	-0.582	
-20 ℃	5.00	13.559411	-0.589	
	5.75	13.559395	-0.605	
	4.25	13.559342	-0.658	
25 ℃	5.00	13.559362	-0.637	±1.356
	5.75	13.559341	-0.659	
	3.45	13.559332	-0.668	
50 ℃	3.00	13.559365	-0.635	1
	2.55	13.559366	-0.634	

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn





	Test Voltage	Frequency	Error	Limit
Test Temp.	(V dc)	(MHz)	(KHz)	(KHz)
	4.25	13.559420	-0.580	
-20 ℃	5.00	13.559423	-0.577	
	5.75	13.559397	-0.603	
	4.25	13.559349	-0.651	
25 ℃	5.00	13.559361	-0.639	±1.356
	5.75	13.559350	-0.650	
	3.45	13.559333	-0.667	
50 ℃	3.00	13.559362	-0.638	
	2.55	13.559370	-0.630	

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn





9.0 99% **BANDWIDTH**

9.1 Test procedure

According to RSS-210 RSS-Gen 4.6.1 The Receiver output is connected to the spectrum analyzer. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual. The sweep time is coupled.

9.2. Test Equipment

Band Edge Compliance test						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	
1	Loop Antenna	A.R.A	PLA-1030/B	1030	2013/11	
2	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2013/11	

9.3. Test Results PASSED.

Channel	Frequency (MHz)	Bandwidth (KHz)
	13.56	168.00

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

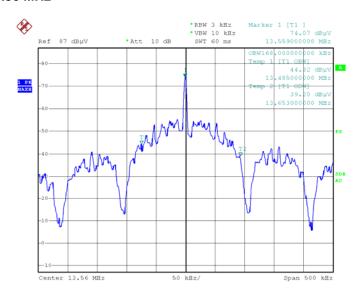
See Reverse For Terms And Conditions of Service

Report No.: CGZ3140220-00105-EFI





99% Bandwidth 13.56 MHz



Date: 24.APR.2014 08:49:12

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.





10.0 DEVIATION TO TEST SPECIFICATIONS

The following identical model(s):

N/A

Belong to the tested device:

Product description: **Double Technology Scanner**Model name: **PT2SCAN WIRED HF USB 1D**

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3140220-00105-EFI