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Report No.: FCC12-RTE072502

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TEST REPORT

Applicant: Archos SA

Address of Applicant: 12 Rue Ampere 91430 Igny, France

Equipment Under Test (EUT)

Product Name: GBook

Model No.: ANGB

Trade mark: ARNOVA

FCC ID: SOVANGB

Applicable standards: FCC CFR Title 47 Part 15 Subpart B:2010

Date of sample receipt: Jun. 18, 2012

Date of Test: Jul. 24-25, 2012

Date of report issued: Jul. 25, 2012

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Kavin Yu Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the EBO product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	Jul. 25, 2012	Original

Prepared by:	Project Engineer	Date:	Jul. 25, 2012	
Reviewed by:	Hams. Hu	Date:	Jul. 25, 2012	
	Reviewer	_		



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4 Test Summary

Test Item	Section in CFR 47	Result	
Conducted Emission	Part15.107	PASS	
Radiated Emissions	Part15.109	PASS	

PASS: The EUT complies with the essential requirements in the standard.



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5 General Information

5.1 Client Information

Applicant:	Archos SA
Address of Applicant:	12 Rue Ampere 91430 Igny, France
Manufacturer:	Archos SA
Address of Manufacturer/	12 Rue Ampere 91430 Igny, France

5.2 General Description of E.U.T.

Product Name:	GBook
Model No.:	ANGB
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20))
. , ,	2422MHz~2452MHz (802.11n(H40))
Power supply:	Model No.: ASSA1a-050150
	Input: AC 100-240V, 50/60Hz, 0.45A
	Output: DC 5.0V, 1500mA
	DC 3.7V Li-ion Battery

5.3 Test mode and voltage

Test mode:	
Data Transfer	Data Transfer with PC
Test voltage:	AC 120V/60Hz

5.4 Test Facility

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

● FCC —Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 600491, July 20, 2010.

Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.



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5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen,

China

Tel: 0755-27798480 Fax: 0755-27798960

5.6 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
HP	Printer	CB495A	05257893	DoC
Lenovo	PC	OPTIPLEX745	GTS312	DoC
Lenovo	MONITOR	E178FPC	N/A	DoC
Lenovo	KEYBOARD	SK-8115	N/A	DoC
Lenovo	MOUSE	MOC5UO	N/A	DoC

5.7 Deviation from Standards

Biconical, log.per. antenna and horn antenna were used instead of dipole antenna. Semi-anechoic Chamber was used as alternation of open air test sites, and all test suites were performed with radiated method in it.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.



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6 Test Instruments list

Radi	Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2013	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 03 2012	Jul. 02 2013	
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 26 2012	Feb. 25 2013	
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	Mar. 10 2012	Mar. 09 2013	
6	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 03 2012	Jul. 02 2013	
7	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 03 2012	Jul. 02 2013	
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
9	Coaxial cable	GTS	N/A	GTS210	Jul. 03 2012	Jul. 02 2013	
10	Coaxial Cable	GTS	N/A	GTS211	Jul. 03 2012	Jul. 02 2013	
11	Thermo meter	KTJ	TA328	GTS256	Jul. 06 2012	Jul. 05 2013	

Cond	Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS252	Sep. 08 2011	Sep. 07 2013	
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 03 2012	Jul. 02 2013	
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Jul. 03 2012	Jul. 02 2013	
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	Jul. 03 2012	Jul. 02 2013	
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Jul. 03 2012	Jul. 02 2013	
6	Coaxial Cable	GTS	N/A	GTS227	Jul. 03 2012	Jul. 02 2013	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
8	Thermo meter	KTJ	TA328	GTS233	Jul. 05 2012	Jul. 04 2012	

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	Barometer	ChangChun	DYM3	GTS257	July 10 2012	July 09 2013



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7 Test Results and Measurement Data

7.1 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	150kHz to 30MHz				
Class / Severity:	Class B				
Receiver setup:	RBW=9kHz, VBW=30kHz				
Limit:	- 441)	Limit (c	dBuV)		
	Frequency range (MHz)	Quasi-peak	Average		
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	0.5-30	60	50		
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.				
Test setup:	Reference Plane LISN 40cm 80cm Filter AC power Equipment Test table/Insulation plane Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m				
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar				
Measurement Record:	Uncertainty: ± 3.45dB				
T (1 (Refer to section 6 for details				
Test Instruments:	Trefer to section of for details				
Test Instruments: Test mode:	Data Transfer with PC				

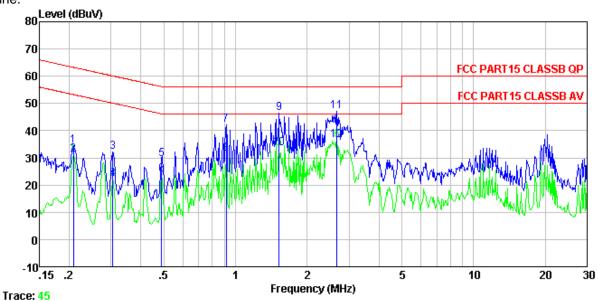
Measurement Data



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Condition : FCC PART15 CLASSB QP LISN(2011) LINE

Job No. : 649RF

Test Mode : Data Transfer

Test Engineer: HuXiaohe

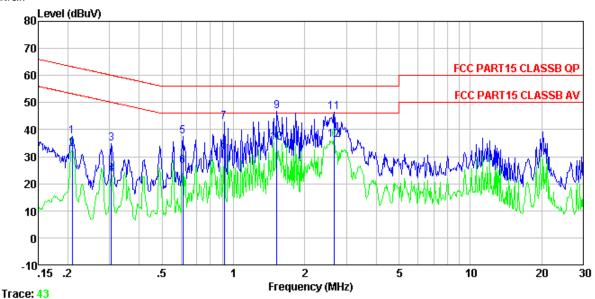
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu₹	dB	d₿	dBuV	dBuV	——dB	
1 2 3	0.208 0.208 0.305	33.88 30.36 31.56	0.65 0.65 0.61	0.10 0.10 0.10	34.63 31.11 32.27	53.27	-28.64 -22.16 -27.83	Average
4 5	0.305 0.489	21. 45 28. 94	0.61 0.56	0.10 0.10	22.16 29.60	50.10 56.19	-27.94 -26.59	Average QP
6 7 8	0. 489 0. 914 0. 914	23.13 41.66 30.86	0.56 0.49 0.49	0.10 0.10 0.10	23. 79 42. 25 31. 45	56.00 46.00	-13.75 -14.55	Average
9 10 11 12	1.527 1.527 2.664 2.664	45. 90 33. 09 46. 49 35. 93	0. 43 0. 43 0. 37 0. 37	0.10 0.10 0.10 0.10	46. 43 33. 62 46. 96 36. 40	56.00 46.00 56.00 46.00	-9.04	Average



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Neutral:



Condition : FCC PART15 CLASSB QP LISN(2011) NEUTRAL

Job No. : 649RF

Test Mode : Data Transfer

Test Engineer: HuXiaohe

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBu₹	dBuV	dB	
1	0.208	36.80	0.65	0.10	37.55		-25.72	
2 3	0.208 0.305	31.98 34.24	0.65 0.61	0.10 0.10	32.73 34.95		-20.54 -25.15	Average QP
4 5	0.305 0.611	22. 91 36. 79	0.61 0.53	0.10 0.10	23.62 37.42		-26.48 -18.58	Average OP
6	0.611	25.85	0.53	0.10	26.48	46.00	-19.52	Average
7 8	0.914 0.914	42.14 31.48	0. 49 0. 49	0.10 0.10	42.73 32.07		-13. 27 -13. 93	QP Average
9	1.527	46.17	0.43	0.10	46.70	56.00	-9.30	
10 11	1.527 2.664	34. 47 46. 01	0.43 0.37	0.10 0.10	35.00 46.48	46.00 56.00	-11.00 -9.52	Average QP
12	2.664	35.72	0.37	0.10	36.19	46.00		Average

Notes:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.



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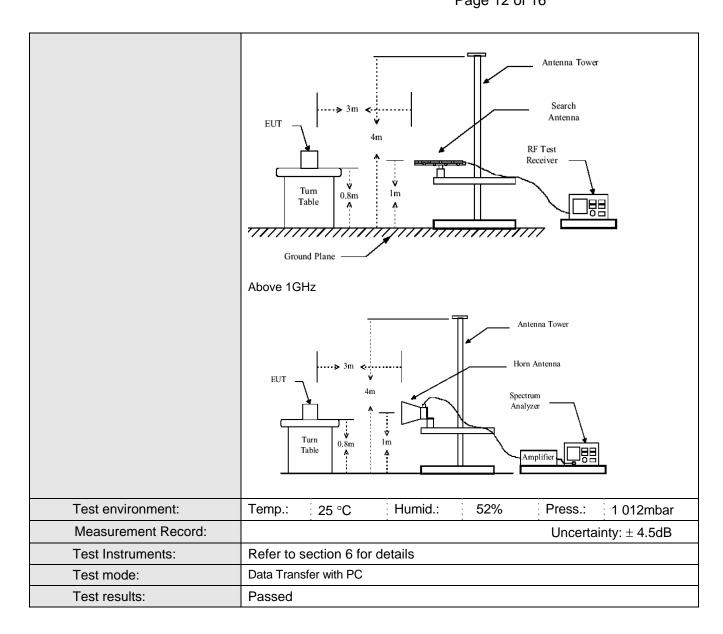
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7.2 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109								
Test Method:	ANSI C63.4:2003								
Test Frequency Range:	30MHz to 5GHz								
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)								
Receiver setup:	Frequency	Detector	RBW	VBW	Remark				
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value				
	Above 1GHz	Peak	1MHz	3MHz	Peak Value				
Limit:			•						
	Freque	ency	Limit (dBuV/	m @3m)	Remark				
	30MHz-8	8MHz	40.0)	Quasi-peak Value				
	88MHz-21	16MHz	43.5	5	Quasi-peak Value				
	216MHz-9	60MHz	46.0)	Quasi-peak Value				
	960MHz-	1GHz	54.0		Quasi-peak Value				
	Above 1	GHz	54.0		Average Value				
	7,0000	OTIZ	74.0)	Peak Value				
Test Procedure:	 The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 								
	determine the	-	e of the field sti	ength. Both	ers above the ground to horizontal and vertical ement.				
	4. For each suspected emission, the EUT was arranged to its worst case and the the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.								
	5. The test-receive Bandwidth with	ver system was n Maximum Ho		etect Functio	n and Specified				
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT work be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.								
Test setup:	Below 1GHz								



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Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor



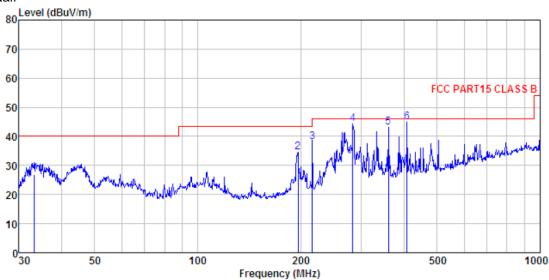
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Measurement Data

Below 1GHz

Horizontal:



Site : 3m chamber

Condition : FCC PART15 CLASS B 3m VULB9163 -2012-05 HORIZONTAL

Job No. : 649RF

Test Mode : Data Transfer

Test Engineer: Sam

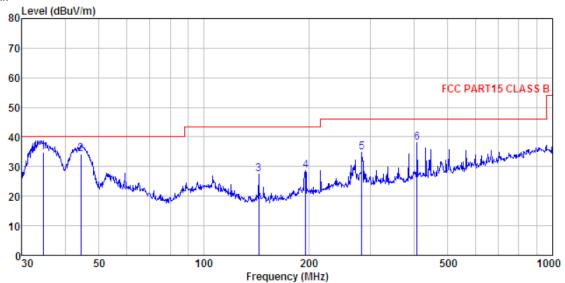
	Freq		Intenna Factor						Remark
	MHz	dBu∀	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 2 3 4 5 6	33. 328 196. 510 216. 024 283. 979 360. 448 408. 946	51.25 54.06 58.43 56.05	13.57 14.12 15.78 16.43	1.82 1.93 2.29 2.67	32.13 32.15 32.17 32.00	34.51 37.96 44.33 43.15	43.50 46.00 46.00 46.00	-8.99 -8.04 -1.67 -2.85	QP QP QP QP



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Vertical:



Site : 3m chamber

Condition : FCC PART15 CLASS B 3m VULB9163 -2012-05 VERTICAL

Job No. : 649RF

Test Mode : Data Transfer

Test Engineer: Sam

	Freq		intenna Factor					Over Limit	
	MHz	dBu∀	dB/m	dB	<u>dB</u>	dBuV/m	dBuV/m	₫B	
1 2 3 4 5 6	44.431 143.830	48.98 46.55 45.47 49.07	11. 23 13. 57 15. 78	0.71 1.53 1.82 2.29	32.01 31.96 32.13	34.25 27.35 28.73 34.97	40.00 43.50 43.50 46.00	-5.75 -16.15 -14.77 -11.03	QP QP QP QP

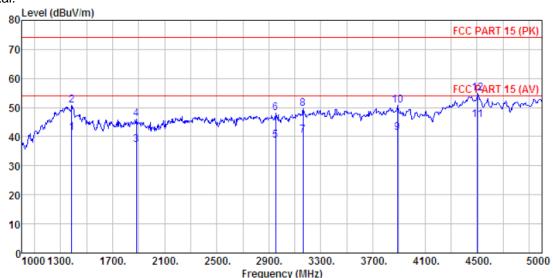


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Above 1GHz

Horizontal:



Site : 3m chamber

Condition : FCC PART 15 (PK) 3m BBHA9120D ANT(>1GHZ) HORIZONTAL

Job No. : 649RF

Test Mode : Data Transfer

Test Engineer: Sam

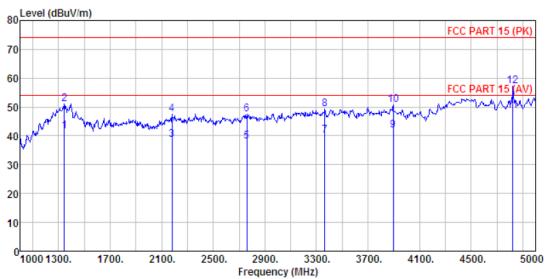
0.00	Freq	ReadA	intenna Factor		Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBu₹	dB/π	₫B	<u>dB</u>	dBuV/m	dBuV/m	₫B	
1 2 3 4 5 6 7 8 9 10 11	1384.000 1384.000 1884.000 1884.000 2952.000 3164.000 3164.000 3888.000 4508.000	32. 44 41. 94 36. 28 45. 14 34. 46 43. 72 34. 57 43. 64 31. 28 40. 75 30. 54 39. 75	25. 63 25. 67 25. 67 28. 43 28. 43 28. 82 28. 82 29. 49 29. 49 31. 34 31. 34	4.60 4.90 4.90 5.89 6.29 7.68 7.68 8.34 8.34	21. 35 21. 35 29. 63 29. 63 30. 01 30. 01 29. 25 27. 00 27. 00 24. 60 24. 60	41. 32 50. 82 37. 22 46. 08 38. 77 48. 03 40. 43 49. 50 41. 45 50. 92 45. 62 54. 83	74.00 54.00 74.00 54.00 74.00 54.00 74.00 54.00 74.00 54.00	-23. 18 -16. 78 -27. 92 -15. 23 -25. 97 -13. 57 -24. 50 -12. 55 -23. 08	Average Peak Average Peak Average Peak Average Peak Average



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Vertical:



Site : 3m chamber

Condition : FCC PART 15 (PK) 3m BBHA9120D ANT (>1GHZ) VERTICAL

Job No. : 649RF

Test Mode : Data Transfer

Test Engineer: Sam

	2110111001		Intenna	Cable	Preamp		Limit	Over	
	Freq		Factor		Factor	Level	Line		Remark
	MHz	dBu∀	<u>dB</u> /m	dB	<u>d</u> B	dBuV/m	dBuV/m	<u>d</u> B	
1	1344.000	32.17	25.70	4.57	20.79	41.65	54.00	-12.35	Average
2	1344.000	41.64	25.70	4.57	20.79	51.12	74.00	-22.88	Peak
3	2180.000	36.47	27.80	5.17	30.72	38.72	54.00	-15.28	Average
4	2180.000	45.16	27.80	5.17	30.72	47.41	74.00	-26.59	Peak
5	2760.000	34.26	28.28	5.72	30.30	37.96	54.00	-16.04	Average
6	2760.000	43.78	28.28	5.72	30.30	47.48	74.00	-26.52	Peak
7	3364.000	33.42	28.51	6.70	28.50	40.13	54.00	-13.87	Average
8	3364.000	42.54	28.51	6.70	28.50	49.25	74.00	-24.75	Peak
9	3896.000	31.69	29.50	7.69	26.94	41.94	54.00	-12.06	Average
10	3896.000	40.41	29.50	7.69	26.94	50.66	74.00	-23.34	Peak
11	4824.000	32.37	31.79	8.61	24.17	48.60	54.00	-5.40	Average
12	4824.000	41.17	31.79	8.61	24.17	57.40	74.00	-16.60	Peak

