



**TEST REPORT CONCERNING THE COMPLIANCE OF A  
PART 15 CLASS B COMPUTER DEVICE PHERIPHERAL,  
BRAND MYLAPS  
MODEL Flex Cradle  
WITH 47 CFR PART 15 (10-1-09).**

**11112102.fcc02  
December 22, 2011**

FCC listed : 90828  
Industry Canada : 2932G-1  
VCCI Registered : R-1518, C-1598  
R&TTE, LVD, EMC Notified Body : 1856

**TÜV Rheinland EPS B.V.  
P.O. Box 15  
9822 ZG Niekerk (NL)  
Smidshornerweg 18  
9822 TL Niekerk (NL)**

Telephone: +31 594 505005  
Telefax: +31 594 504804

E-mail: [info@tuv-eps.com](mailto:info@tuv-eps.com)  
Web: [www.tuv-eps.com](http://www.tuv-eps.com)

## MEASUREMENT/TECHNICAL REPORT

**AMB-it BV**  
**Model : Flex Cradle**

**FCC ID: NXYCRADLE1**

This report concerns: Original grant/certification ~~Class 2 change~~ ~~Verification~~

Equipment type: JBP Part 15 Class B Computer Device Pheripheral

Report prepared by:	Name	: Richard van der Meer
	Company name	: TÜV Rheinland EPS B.V.
	Address	: Smidshornerweg 18
	Postal code/city	: 9822 TL Niekerk
	Mailing address	: P.O. Box 15
	Postal code/city	: 9822 ZG Niekerk
	Country	: The Netherlands
	Telephone number	: + 31 594 505 005
	Telefax number	: + 31 594 504 804
	E-mail	: info@tuv-eps.com

The data taken for this test and report herein was done in accordance with 47 CFR Part 15 (10-1-09 edition) and the measurement procedures of ANSI C63.4-2009. TÜV Rheinland EPS B.V. at Niekerk, The Netherlands, certifies that the data is accurate and contains a true representation of the emission profile of the Equipment Under Test (EUT) on the date of the test as noted in the test report. I have reviewed the test report and find it to be an accurate description of the test(s) performed and the EUT so tested.

Date: December 22, 2011

Signature:



O. Hoekstra  
Senior Engineer Telecom TÜV Rheinland EPS B.V.



### Summary

The device under test does:

- fulfill the general approval requirements as identified in this test report
- not fulfill the general approval requirements as identified in this test report

### Description of test item

Test item	:	Part 15 Class B Computer Device Pheripheral
Manufacturer	:	AMB-it B.V.
Brand	:	MYLAPS
Model	:	Flex Cradle
Serial number	:	--
Revision	:	Not applicable

### Applicant information

Applicant's representative	:	Mr. B. van Rens & Mr. J. Willemse
Company	:	AMB-it B.V.
Address	:	Zuiderhoutlaan 4
Postal code	:	2012PJ
City	:	Haarlem
Country	:	The Netherlands
Telephone number	:	+31 23 5291893
Telefax number	:	+31 23 5290156
Email	:	Jeroen.Willemse@mylaps.com <a href="mailto:info@collis.nl">mailto:info@collis.nl</a>
Internet	:	www.mylaps.com

### Test(s) performed

Location	:	Niekerk
Test(s) started	:	December 01,2011
Test(s) completed	:	December 16,2011
Purpose of test(s)	:	Equipment Authorization (Original grant/certification)
Test specification(s)	:	47 CFR Part 15 (10-1-09 Edition)

Test engineer(s)	:	R. van der Meer
------------------	---	-----------------

Report written by	:	R. van der Meer
-------------------	---	-----------------

Report date	:	December 22, 2011
-------------	---	-------------------

This report shall not be reproduced, except in full, without the written permission of TÜV Rheinland EPS B.V.  
The test results relate only to the item(s) tested.

## **Table of contents**

1	General information.....	5
1.1	Product description.....	5
1.1.1	Introduction.....	5
1.2	Related submittal(s) and/or Grant(s).....	5
1.2.1	General.....	5
1.3	Test Summary.....	5
2	Tested system details.....	6
2.1.1	Description of input and output ports.....	7
2.2	Test methodology.....	8
2.3	Test facility.....	8
2.4	Test conditions.....	8
3	System test configuration.....	9
3.1	Justification.....	9
3.2	EUT mode of operation.....	9
3.3	Special accessories.....	9
3.4	Equipment modifications.....	9
3.5	Product Labelling.....	9
3.6	Block diagram of the EUT.....	9
3.7	Schematics of the EUT.....	9
3.8	Part list of the EUT.....	9
4	Radiated emission data.....	10
4.1	Radiated field strength measurements (30 MHz – 1 GHz, E-field).....	10
5	Conducted emission data.....	11
5.1	Conducted emission data of the EUT.....	11
5.2	Plots of the conducted emissions.....	12
6	List of utilized test equipment.....	14

## 1 General information.

### 1.1 Product description.

#### 1.1.1 Introduction.

The product tested is part of an inductive laptiming system.

The content of this report and measurement results have not been changed other than the way of presenting the data.

### 1.2 Related submittal(s) and/or Grant(s).

#### 1.2.1 General.

This test report supports the original grant/certification in equipment authorization files under **FCC ID: NXYCRADLE1**.

### 1.3 Test Summary

The EUT was tested in accordance with the specifications given in the table below.

Test Standard		Description		Pass / Fail
47 CFR Part 15 (10-1-09 Edition)			Page	
15.107(a)		Conducted emissions	14 - 16	Pass
15.109(a)		Radiated emissions	10 - 13	Pass

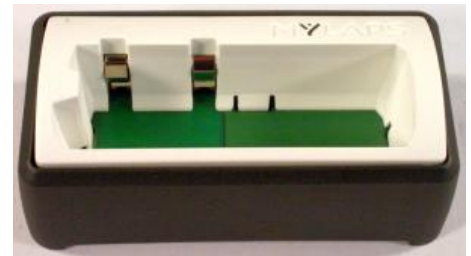
Table 1: testspecifications

Testmethods: ANSI C63:2009.

## 2 Tested system details.

Details and an overview of the system and all of its components, as it has been tested, may be found below.

EUT	:	Part 15 Class B Computer Device Pheripheral
Manufacturer	:	AMB-it B.V.
Brand	:	MYLAPS
Model	:	Flex Cradle
Serial number	:	--
Voltage input rating	:	+5 Vdc
Voltage output rating	:	n.a.
Current input rating	:	--
Remarks	:	N.a.
Interface cable(s)	:	USB



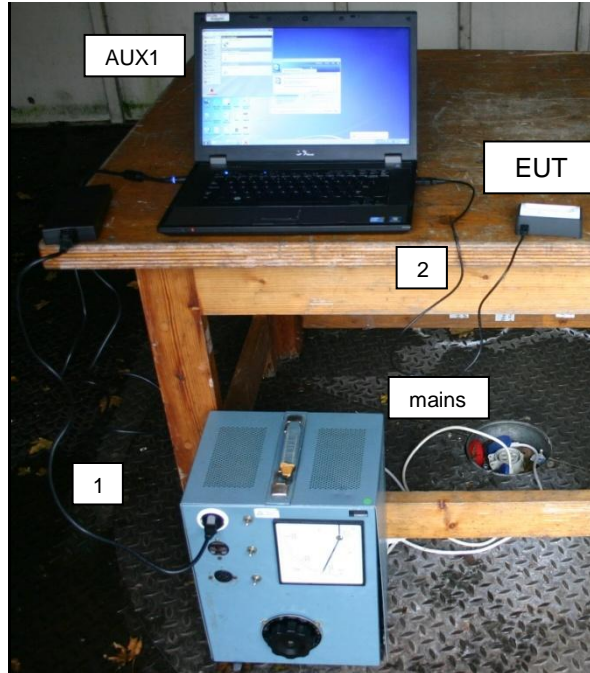
AUX1	:	Notebook computer
Manufacturer	:	Dell
Brand	:	Dell
Model	:	Latitude E5510
Serial number	:	N.a.
Voltage input rating	:	100-240Vac 50-60Hz
Remark	:	Property MYLAPS



AUX2	:	Rechargeable Power Transponder
Manufacturer	:	AMB-it B.V.
Brand	:	MYLAPS
Model	:	Flex
Serial number	:	5616163
FCC ID:	:	NXYTRANX
Remark	:	--



N.a. means Not applicable



System, EUT connected to a PC for power supply and communications

Photograph of the system

#### 2.1.1 Description of input and output ports.

Number	Terminal	From	To	Remarks
1	Power supply	Mains	AUX1EUT	--
2	Interconnect	AUX1	EUT	Usb connection

## 2.2 Test methodology.

The test methodology used is based on the requirements of 47 CFR Part 15 (10-1-09 Edition), sections 15.31, 15.107 and 15.109.

The test methods, which have been used, are based on ANSI C63.4: 2009.

Radiated emission tests above 30 MHz were performed at a measurement distance of 3 meters.

Radiated emission tests below 30 MHz were performed at a measurement distance of 3 meters. To calculate the field strength level from these results to the appropriate distance at which the limit is specified, the appropriate extrapolation factor is used.

The receivers are switching automatically to the right bandwidth in accordance with CISPR 16. This is implemented in the receiver. The antenna factors are programmed in the test receiver. The receiver automatically calculates the appropriate correction factor for the utilized antenna and also the appropriate antenna factor for the cable loss. The total correction is automatically added to the measured value.

## 2.3 Test facility.

The Federal Communications Commission and Industry Canada has reviewed the technical characteristics of the test facilities at TÜV Rheinland EPS B.V., located in Niekerk, 9822 TL Smidshornerweg 18, The Netherlands, and has found these test facilities to be in compliance with the requirements of 47 CFR Part 15, section 2.948 (10-1-06 edition).

The description of the test facilities has been filed at the Office of the Federal Communications Commission under registration number 90828. The facility has been added to the list of laboratories performing these test services for the public on a fee basis.

The description of the test facilities has been filed to Industry Canada under registration number 2932G-1. The facility has been added to the list of laboratories performing these test services for the public on a fee basis.

## 2.4 Test conditions.

Normal test conditions:

Temperature (*)	: +15°C to +35°C
Relative humidity(*)	: 20 % to 75 %
Supply voltage	: 120VAC/60Hz to the AC/DC Power Supply (of AUX1)
Air pressure	: 950 – 1050 hPa

\*When is was impracticable to carry out the tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests are stated separately.



### **3 System test configuration.**

#### **3.1 Justification.**

The system was configured for testing in a typical fashion (as a customer would normally use it).

The justification and manipulation of cables and equipment in order to simulate a worst-case behavior of the test setup has been carried out as prescribed in ANSI C63.4: 2009.

#### **3.2 EUT mode of operation.**

The EUT has been tested while continuously transmitting. The intentional radiator tests have been performed with a complete functioning EUT.

#### **3.3 Special accessories.**

No special accessories are used and/or needed to achieve compliance.

#### **3.4 Equipment modifications.**

No modifications have been made to the equipment in order to achieve compliance.

#### **3.5 Product Labelling**

The product labeling information is available in the technical documentation package.

#### **3.6 Block diagram of the EUT.**

The block diagram is available in the technical documentation package.

#### **3.7 Schematics of the EUT.**

The schematics are available in the technical documentation package.

#### **3.8 Part list of the EUT.**

The part list is available in the technical documentation package.

## 4 Radiated emission data.

### 4.1 Radiated field strength measurements (30 MHz – 1 GHz, E-field)

Frequency (MHz)	Measurement results @3m Vertical (dBuV/m)	Measurement results @3m Horizontal (dBuV/m)	Correction factor (dB)	Measurement results @3m Vertical After correction (dBuV/m)	Measurement results @3m Horizontal After correction (dBuV/m)	Limits @3m (dBuV/m)	Pass/Fail
67.86	11.4	9.6	7.3	18.7	16.9	40.0	Pass
71.00	8.8	6.6	7.7	16.5	14.3	40.0	Pass
75.00	10.3	6.5	8.4	18.7	14.9	40.0	Pass
88.84	9.7	6.6	10.7	20.4	17.3	43.5	Pass
94.86	8.2	6.2	11.6	19.8	17.8	43.5	Pass
98.86	8.2	6.2	12	20.2	18.2	43.5	Pass
102.86	8.4	6.2	12.5	20.9	18.7	43.5	Pass

Table 2 Radiated emissions of the EUT.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15 section 15.109 are depicted in Table 2.

#### Notes:

- Field strength values of radiated emissions at frequencies not listed in the table above are more than 20 dB below the applicable limit.
- Measurement uncertainty is  $\pm 5.0$  dB
- The reported field strength values are the worst case values at the indicated frequency. The EUT was varied in three positions, the antenna was varied in horizontal and vertical orientations and also in height (between 1m and 4m).
- A Quasi-peak detector was used with a resolution bandwidth of 120 kHz, except for frequencies above 960 MHz where an average detector was used.
- Tested with and without AUX2, maximum values noted.

Test equipment used (for reference see test equipment listing section 6).

99069	99070	99071	99107	99608	99609	99547	99699
15633							

#### Test engineer

Signature : 

Name : Richard van der Meer

Date : December 01, 2011

## 5 Conducted emission data.

### 5.1 Conducted emission data of the EUT

Frequency (MHz)	Measurement results dBµV Neutral (L2)		Measurement results dBµV Line 1 (L1)		Limits dBµV		Result
	QP	AV	QP	AV	QP	AV	
0.166	48.1	*note3	49.4	*note3	65.5	55.5	PASS
0.178	45.3	--	47.4	--	64.5	54.5	PASS
0.206	43.6	--	45.3	--	63.2	53.2	PASS
0.274	42.6	--	43.6	--	61.1	51.1	PASS
0.402	39.2	--	40.7	--	57.9	47.9	PASS
0.566	36.4	--	36.7	--	56.0	46.0	PASS
0.702	38.4	--	38.8	--	56.0	46.0	PASS
0.878	36.8	--	38.1	--	56.0	46.0	PASS
1.078	36.1	--	37.2	--	56.0	46.0	PASS
1.750	34.2	--	35.1	--	56.0	46.0	PASS
17.910	36.5	--	36.1	--	60.0	50.0	PASS
19.122	37.1	--	39.9	--	60.0	50.0	PASS
20.206	38.8	--	47.8	--	60.0	50.0	PASS

Table 3 Conducted emission measurements

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15 section 15.107 at the 120 Volts AC mains connection terminals of the AC/DC power supply which was connected to AUX1, which in turn feeds the EUT by USB power, are depicted in Table 3.

#### Notes:

1. Measurement uncertainty is  $\pm 3.5$ dB
2. The resolution bandwidth used was 9 kHz.
3. Tested with both (AUX1 and AUX2). Values noted are of the combination with AUX1, which are the emissions of the connected Notebook computer. Plots of these emissions are provided in section 5.2.
4. Qp values already within Av limits, therefor Av not measured.
5. Tested with and without AUX2, maximum values noted.

Test equipment used (for reference see test equipment listing section 6).

99548	99161	12512	15667	13313		

#### Test engineer

Signature :



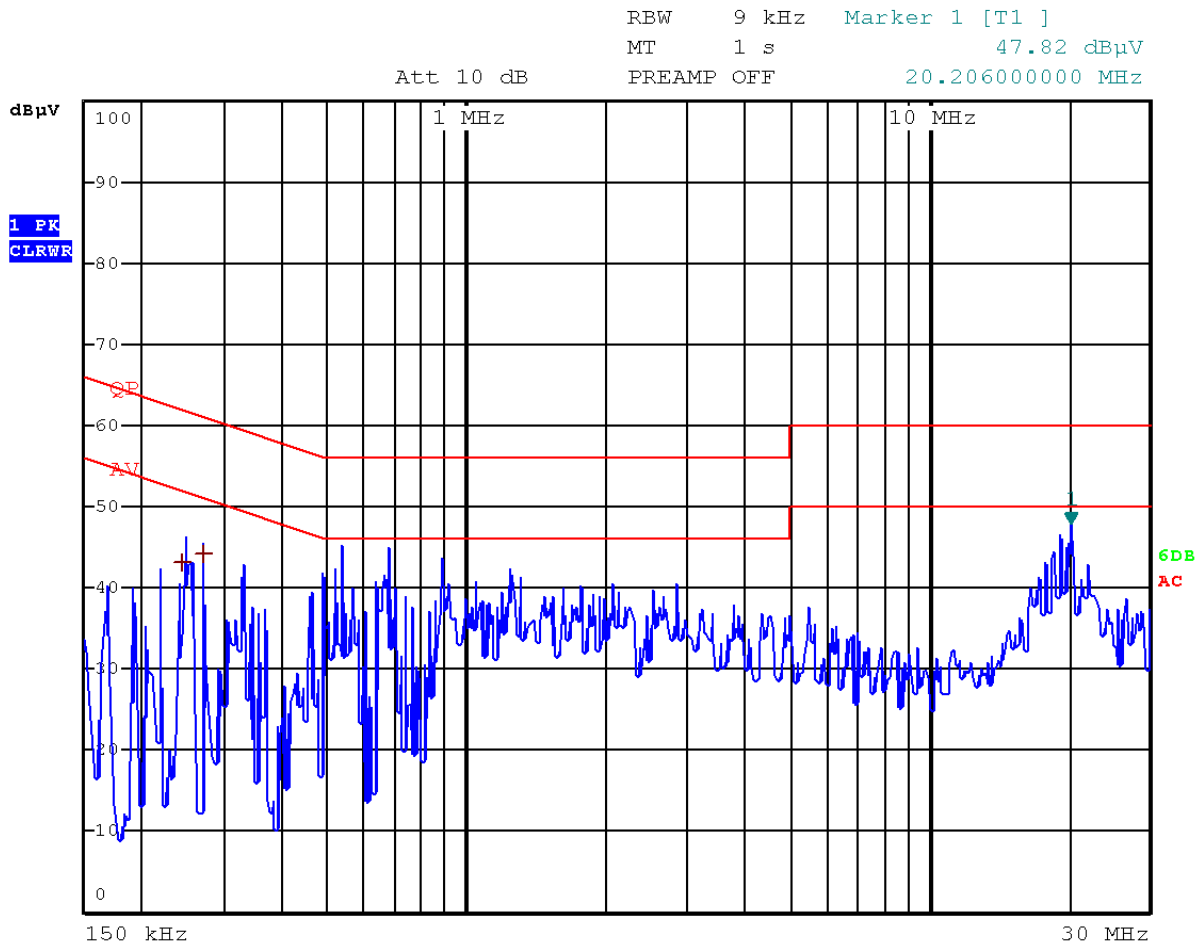
Name :

R. van der Meer

Date :

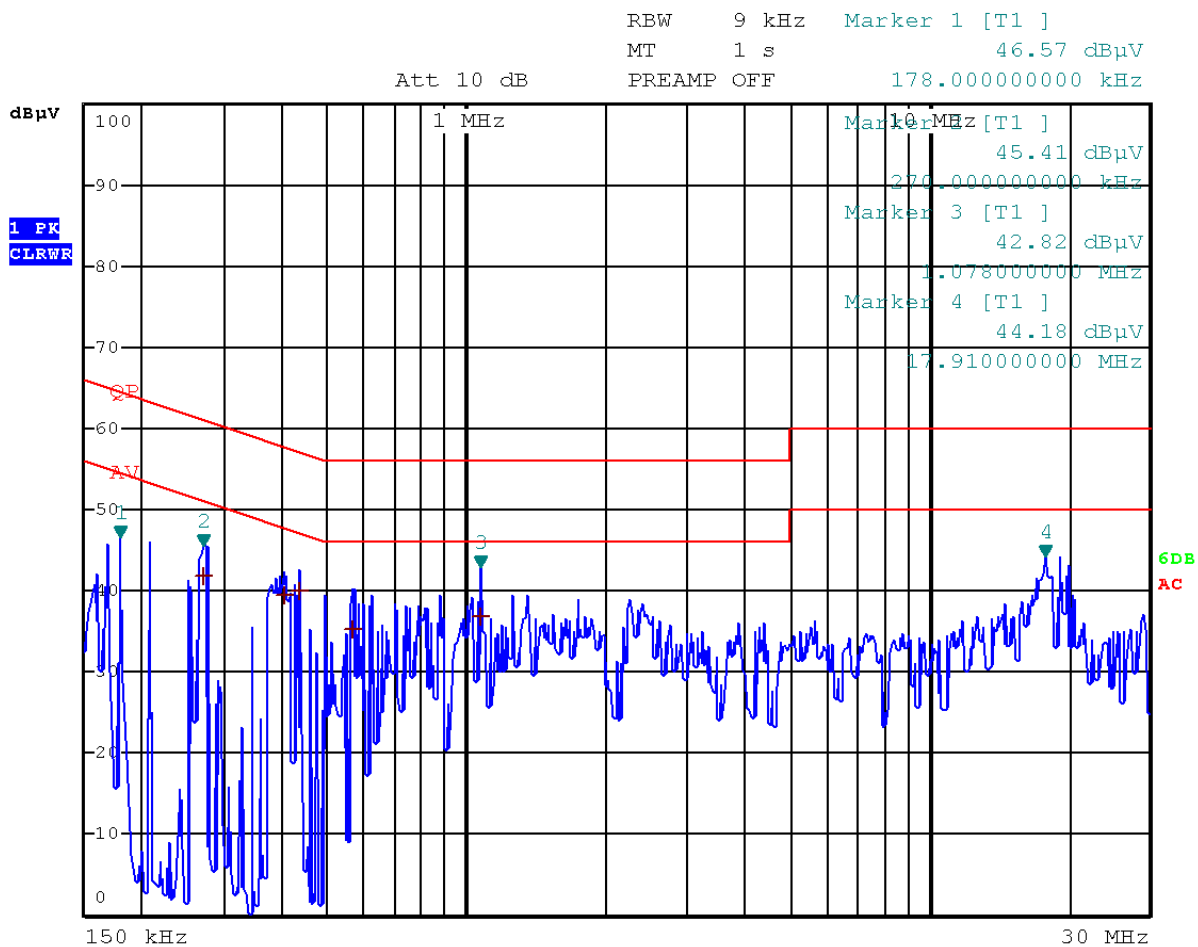
December 01, 2011

## 5.2 Plots of the conducted emissions



Date: 1.DEC.2011 11:09:48

Plot 2: conducted emissions of the EUT on L1



Date: 1.DEC.2011 10:45:53

Plot 3: conducted emissions of the EUT on L2

## 6 List of utilized test equipment.

Inventory number	Description	Brand	Model	Last cal.	Next cal.
12476	Antenna mast	EMCO	TR3	NA	NA
12477	Antenna mast 1-4 mtr	Poelstra	NA	NA	NA
12512	LISN	EMCO	3625/2	01/2010	01/2012
13313	Pulse Limiter	R&S	ESH3-Z2	02/2011	02/2012
15453	Active loopant. 60 cm	Chase	HLA6120	05/2011	05/2012
15633	Biconilog Testantenna	Chase	CBL 6111B	02/2011	02/2012
15667	Measuring receiver	R&S	ESCS30	06/2011	06/2012
99069	Coax 5m RG213 OATS	NMi Certin B.V.	KABEL 5M OATS	10/2011	10/2012
99070	Coax 15m RG213 OATS	NMi Certin B.V.	KABEL 15M OATS	10/2011	10/2012
99071	Coax OATS ground	NMi Certin B.V.	KABEL GROND OATS	10/2011	10/2012
99107	Controller OATS	Heinrich Deisel	4630-100	NA	NA
99161	Variac 250V 6A	RFT	LTS006	NA	NA
99547	Temperature-Humiditymeter	Europe supplies	WS-7082	10/2011	10/2012
99580	OATS	Comtest	FCC listed: 90828	08/2011	08/2013
99608	Controller (OATS)	EMCS	DOC202	NA	NA
99609	Antenna mast	EMCS	AP-4702C	NA	NA
99613	Temperature-Humiditymeter	Europe supplies	WS-7082	10/2011	10/2012
99651	Variac	NA	Vast Activa: 08-9510	NA	NA
99683	Loop antenna 6cm	--	7405-901	09/2011	09/2012
99699	Measuring receiver	R&S	ESCI	02/2011	02/2012

NA= Not Applicable