Report No: CCISE191111002

FCC REPORT

Applicant: XTIM SARL

Address of Applicant: 77, rue de Lyon - 13015 Marseille - France

Equipment Under Test (EUT)

Product Name: Metafly controller

Model No.: META1

FCC ID: 2ADQDMETA1

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: 18 Nov., 2019

Date of Test: 18 Nov., to 21 Nov., 2019

Date of report issued: 22 Nov., 2019

Test Result: PASS *

Authorized Signature:



Bruce Zhang 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 CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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





2 Version

Version No.	Date	Description
00	22 Nov., 2019	Original

Tested by: Owen (hen Date: 22 Nov., 2019

Reviewed by: 22 Nov., 2019

Project Engineer

Telephone: +86 (0) 755 2311 8282 Fax: +86 (0) 755 2311 6366



3 Contents

			Page
1	C	OVER PAGE	1
2	V	ERSION	2
3	C	ONTENTS	3
4	TI	EST SUMMARY	4
5		ENERAL INFORMATION	
	5.1	CLIENT INFORMATION	5
	5.2	GENERAL DESCRIPTION OF E.U.T.	
	5.3	TEST MODE	
	5.4	Measurement Uncertainty	
	5.5	DESCRIPTION OF SUPPORT UNITS	
	5.6	RELATED SUBMITTAL(S) / GRANT (S)	
	5.7	DESCRIPTION OF CABLE USED	
	5.8	ADDITIONS TO, DEVIATIONS, OR EXCLUSIONS FROM THE METHOD	
	5.9	LABORATORY FACILITY	6
	5.10	=	6
	5.11	TEST INSTRUMENTS LIST	7
6	TI	EST RESULTS AND MEASUREMENT DATA	8
	6.1	RADIATED EMISSION	8
7	TI	EST SETUP PHOTO	14
Ω	E	LIT CONSTRUCTIONAL DETAILS	15





4 Test Summary

Test Item	Section in CFR 47	Result	
Conducted Emission	Part 15.107	N/A	
Radiated Emission	Part 15.109	Pass	

Remark:

- 1. Pass: The EUT complies with the essential requirements in the standard.
- 2. N/A: The EUT not applicable of the test item.

Test Method: ANSI C63.4:2014



5 General Information

5.1 Client Information

Applicant:	XTIM SARL
Address:	77, rue de Lyon - 13015 Marseille - France
Manufacturer:	XTIM SARL
Address:	77, rue de Lyon - 13015 Marseille - France
Factory:	Rokotech (ShenZhen) limited
Address:	4F, No.16 Xingye West Road, Heyi, Shajing Baoan District, ShenZhen

5.2 General Description of E.U.T.

Product Name:	Metafly controller
Model No.: META1	
Power supply:	DC 6V (4 × " AA" Battery)
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.3 Test Mode

Operating mode	Detail description		
Charging mode	Keep the EUT in Charging(to Metafly flyer) mode(Worst case)		
On mode	Keep the EUT in Control mode		

The sample was placed 0.8m above the ground plane of 3m chamber. 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 the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. New battery is used.

5.4 Measurement Uncertainty

Parameters	Expanded Uncertainty		
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)		
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)		
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)		
Radiated Emission (1GHz ~ 18GHz)	±5.38 dB (k=2)		
Radiated Emission (18GHz ~ 40GHz)	±3.36 dB (k=2)		



Report No: CCISE191111002

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745	N/A	DoC
XTIM SARL	Metafly Flyer	METAB	N/A	2ADQDMETAB

5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.7 Description of Cable Used

Cable Type	Cable Type Description		From	То	
/	/	/	/	/	

5.8 Additions to, deviations, or exclusions from the method

No

5.9 Laboratory Facility

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

• FCC - Designation No.: CN1211

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● ISED - CAB identifier.: CN0021

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.10 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 2311 8282 Fax: +86 (0) 755 2311 6366





5.11 Test Instruments list

Radiated Emission:							
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)		
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020		
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-18-2019	03-17-2020		
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-18-2019	03-17-2020		
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-18-2019	03-17-2020		
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020		
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019		
Horn Antenna				11-21-2019	11-20-2020		
EMI Test Software	AUDIX	E3	\	/ersion: 6.110919	b		
Pre-amplifier	HP	8447D	2944A09358	03-18-2019	03-17-2020		
Pre-amplifier	CD	PAP-1G18	11804	03-18-2019	03-17-2020		
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-18-2019	03-17-2020		
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019		
Spectrum analyzer	Ronde & Schwarz			11-21-2019	11-20-2020		
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-18-2019	03-17-2020		
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-18-2019	03-17-2020		
Cable	MICRO-COAX	MFR64639	K10742-5	03-18-2019	03-17-2020		
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-18-2019	03-17-2020		

Conducted Emission:							
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)		
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-18-2019	03-17-2020		
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-18-2019	03-17-2020		
LISN	CHASE	MN2050D	1447	03-18-2019	03-17-2020		
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2019	07-20-2020		
Cable	HP	10503A	N/A	03-18-2019	03-17-2020		
EMI Test Software	AUDIX	E3	Version: 6.110919b				



6 Test results and Measurement Data

6.1 Radiated Emission

0.1	Radiated Ellission	<u> </u>					
	Test Requirement:	FCC Part 15 B Section 15.109					
	Test Frequency Range:	30MHz to 25000MHz					
	Test site:	Measurement Dis	stance: 3m	(Sen	ni-Anechoic	Chamber)	
	Receiver setup:	Frequency	Detecto	r	RBW	VBW	Remark
		30MHz-1GHz	Quasi-pe	ak	120kHz	300kHz	
		Above 1GHz	Peak		1MHz	3MHz	Peak Value
			RMS		1MHz	3MHz	Average Value
	Limit:	Frequenc		Lim	nit (dBuV/m	@3m)	Remark
						Quasi-peak Value Quasi-peak Value	
		216MHz-960			46.0		Quasi-peak Value
		960MHz-10			54.0		Quasi-peak Value
					54.0		Average Value
		Above 1G	Hz		74.0		Peak Value
	Test setup:	Below 1GHz Antenna Tower Search Antenna RF Test					
		Tum Table 0.8m A A Ground Plane Above 1GHz					
		AE - SOCM (Turn		Ground Reference Plane Test Receiver Controller Controller			
	Test Procedure:	The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic 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.					
			-				meters above the strength. Both
	ground to determine the maximum value of the field strength. Both						





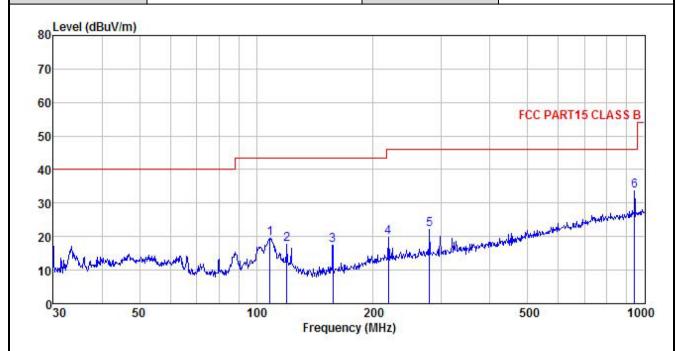
	 horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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 would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average
Test Instruments:	method as specified and then reported in a data sheet. Refer to section 5.11 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All of the observed value above 6GHz ware the niose floor , which were no recorded



Measurement Data:

Below 1GHz:

Product Name:	Metafly controller	Product Model:	META1
Test By:	Carey	Test mode:	Charging mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	DC 6V	Environment:	Temp: 24℃ Huni: 57%



	Freq		Intenna Factor				Limit Line		Remark
	MHz	dBu₹	<u>dB</u> /m		<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>ab</u>	
1	108.267	34.81	12.20	2.03	29.47	19.57	43.50	-23.93	QP
2 3 4 5 6	119.856	34.56	10.23	2.17	29.39	17.57		-25.93	
3	157.559	35.14	8.98	2.57	29.15	17.54	43.50	-25.96	QP
4	219.075	33.29	12.23	2.85	28.71	19.66	46.00	-26.34	QP
5	279.044	34.22	13.48	2.88	28.49	22.09	46.00	-23.91	QP
6	942.131	34.93	22.38					-12.31	

Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



roduct Name:	Metafly controller	Product Mode	el:	META1					
est By:	Carey		Test mode:		Charging mode Horizontal		Charging mode		
est Frequency:	30 MHz ~ 1 GHz		Polarization:				Horizontal		
est Voltage:	DC 6V		Environment:		Temp: 24℃	Huni: 57			
Lovel (dDul//m)									
80 Level (dBuV/m)									
70									
60					FCC PART15	CLASSB			
50									
40									
						_ 6			
30					4	man from the			
			100000000000000000000000000000000000000		habital thinks	WESS			
20 1		2	3	adad white the sales	n hapland				
10 Marthau Martin	Market Market and Market	2 manufacture manufacture and me	at franchistration	A CONTRACTOR OF THE PARTY OF TH	open to the second				
10 Martin Maria	and have the same of the same	2 Mary Mary Mary Mary Mary Mary Mary Mary	in property of the state of	ARTHUR STORY	4 A Share to the state of the s				
0 30 50		word who we have the second on	200	particular distance	500	1000			
10 Marthur Mark		when the second	200	adapt-philipsols-alpak					
0 30 50	1	100 Frequency	200 (MHz)						
0 30 50	1 eadAntenna Cabl	100 Frequency	200 (MHz)						
0 30 50	1 eadAntenna Cabl vel Factor Los	100 Frequency	200 (MHz) Limit Over Line Limit	Remark					
10 0 50 So	eadAntenna Cabl vel Factor Los BuV dB/m d	Frequency Le Preamp ss Factor Level B dB dBuV/m 27 29.84 16.65	200 (MHz) Limit Over Line Limit dBuV/m dB 40.00 -23.35	Remark					
10 0 50 So	eadAntenna Cabl vel Factor Los BuV dB/m d .36 13.86 1.2 .71 12.16 2.0 .66 13.31 2.8	Tequency Le Preamp ss Factor Level B dB dBuV/m 27 29.84 16.65 12 29.47 15.42 13 28.54 16.24	Z00 (MHz) Limit Over Line Limit dBuV/m dB 40.00 -23.35 43.50 -28.08 46.00 -29.76	Remark QP QP QP					
10 MHz di 1 46.995 31. 2 107.510 30. 3 251.180 28. 4 508.258 30. 5 815.968 30.	eadAntenna Cabl vel Factor Los BuV dB/m d .36 13.86 1.2 .71 12.16 2.0 .66 13.31 2.8 .53 17.59 3.6	Trequency Le Preamp ss Factor Level Le Preamp 100 100 100 100 100 100 100 10	200 (MHz) Limit Over Line Limit dBuV/m dB 40.00 -23.35 43.50 -28.08	Remark QP QP QP QP QP					

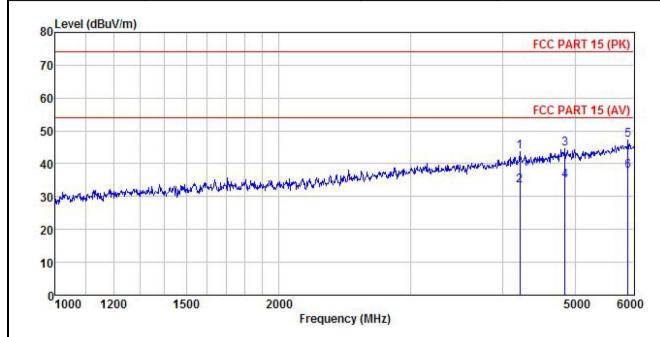
Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Above 1GHz:

Product Name:	Metafly controller	Product Model:	META1
Test By:	Carey	Test mode:	Charging mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Vertical
Test Voltage:	DC 6V	Environment:	Temp: 24℃ Huni: 57%



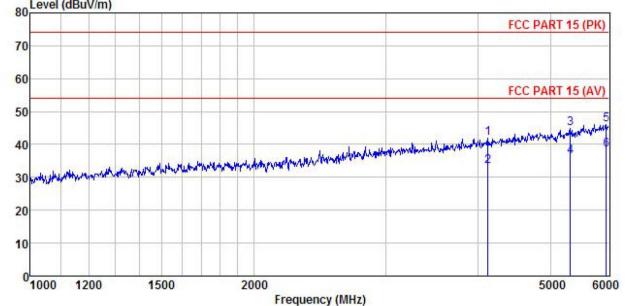
	KeadAnt Freq Level Fa		ntenna Factor				Limit Line	Over Limit	Remark
	MHz	dBu₹			<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1	4215.562	46.38	30.34	6.43	41.82	43.60	74.00	-30.40	Peak
2	4215.562	36.06	30.34	6.43	41.82	33.28	54.00	-20.72	Average
3	4847.873	46.02	31.10	6.83	41.83	44.58	74.00	-29.42	Peak
4	4847.873	36.36	31.10	6.83	41.83	34.92	54.00	-19.08	Average
4 5	5893.452	45.94	32.68		42.03			-26.73	
6	5893.452	36.38	32.68	7.91	42.03	37.71	54.00	-16.29	Average

Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Metafly controller	Product Model:	META1	
Test By:	Carey Test mode: C		Charging mode	
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Horizontal	
Test Voltage:	DC 6V	Environment:	Temp: 24°C Huni: 57%	
80 Level (dBuV/m)			FCC PART 15 (PK)	



	Freq		Antenna Factor				Limit Line		Remark
	MHz	dBu∇	<u>dB</u> /m		<u>ab</u>	$\overline{dBuV/m}$	dBuV/m	<u>d</u> B	
1	4118.504	44.86	30.32	6.29	41.81	41.90	74.00	-32.10	Peak
2	4118.504	36.28	30.32	6.29	41.81	33.32	54.00	-20.68	Average
3	5321.268	44.94	32.18	7.10	41.90	44.92	74.00	-29.08	Peak
4	5321.268	36.37	32.18	7.10	41.90	36.35	54.00	-17.65	Average
5	5946.487	44.77	32.69	7.92	42.04	46.13	74.00	-27.87	Peak
6	5946.487	36.96	32.69	7.92	42.04	38.32	54.00	-15.68	Average

Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.