SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

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RF Exposure Evaluation Report

Application No. :	SZEM1607006252CR
Applicant:	Mota Group, Inc
Manufacturer:	Mota Group, Inc
Factory:	Mota Group, Inc
Product Name:	JetJat Ultra
Model No.:	JJ-ULTRA, JJ-ULTRA-W, JETJAT ULTRA, MOTA JET JAT NANO-C, JETJAT LIVE-W, Mota PROLIVE-5000, JJ-ULTRA-K
FCC ID:	2AI6CGC032410233
Standards:	47 CFR Part 1.1307 (2015)
	47 CFR Part 1.1310 (2015)
Date of Receipt:	2016-07-04(for original report SZEM160600518403)
Date of Test:	2016-07-06 to 2016-07-07(for original report SZEM160600518403)
Date of Issue:	2016-07-11(for original report SZEM160600518403)
	2016-08-25(for new report SZEM160700625202)
Test Result :	**PASS***

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

Authorized Signature:

Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.
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. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

2 Version

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
00		2016-07-11		Original
01		2016-08-25		New

Authorized for issue by:				
Tested By		Bill Chen **(Bill Chen) /Project Engineer**		2016-07-07 **Date**
Checked By		Eric Fu **(Eric Fu) /Reviewer**		2016-08-25 **Date**

3 Contents

4 General Information

4.1 Client Information

Applicant:	Mota Group, Inc
Address of Applicant:	PO Box 1116, Campbell, CA 95009
Manufacturer:	Mota Group, Inc
Address of Manufacturer:	PO Box 1116, Campbell, CA 95009
Factory:	Mota Group, Inc
Address of Factory:	PO Box 1116, Campbell, CA 95009

4.2 General Description of EUT

Product Name:	JetJat Ultra
Model No.:	JJ-ULTRA
Operation Frequency:	IEEE 802.11g: 2412MHz to 2462MHz
Channel Numbers:	IEEE 802.11g: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK)
Sample Type:	Mobile production
Antenna Type:	Integral
Antenna Gain:	0dBi
Battery	DC 3.7V by lithium battery(DC 3.7V, 150mAh)

Remark for the report SZEM160600518403:

Model No.: CX-10WD, CX-10W, CX-10DS, CX-30W, CX-37, CX-38, CX-39, CX-10WD-TX, CX-10W-TX, CX-10, CX-10A, CX-10C, CX-10D, CX-31, CX-30W-TX, CX-37W, CX-38W, CX-39W, JETJAT ULTRA

Only the model CX-10WD was tested, since the circuitry design, PCB layout, electrical components used, internal wiring and functions were identical for all above models. Only the mode No. and appearance of the color are different.

Remark for the report SZEM160700625202:

Model No.: JJ-ULTRA, JJ-ULTRA-W, JETJAT ULTRA, MOTA JET JAT NANO-C, JETJAT LIVE-W, Mota PROLIVE-5000, JJ-ULTRA-K

This report was an additional report copied from the report SZEM160600518403, just changed the name & address of applicant, manufacturer, factory; product name and model numbers.

According to the declaration of the applicant, the electrical circuit design, layout, components used and internal wiring for the models in the report SZEM160600518403 was exactly the same as the models in SZEM160700625202, only different on model No..

4.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.4 Test Facility

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

• **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• **VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

• **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical 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 our files. Registration No.: 556682.

• **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f^2)	6
30–300	61.4	0.163	1.0	6
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30
30–300	27.5	0.073	0.2	30
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: Pd = (Pout*G)/(4* Pi * R 2)

Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

Antenna Gain: 0dBi
Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1 in linear scale.
Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm^2)	Limit	Result
Lowest	2412	23.12	205.12	0.041	1.0	PASS

Note: Refer to report No. SZEM160600518402 for EUT test Max Conducted Peak Output Power value.
The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.