SGS-CSTC Standards Technical Services Co., Ltd.

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SAR Evaluation Report

Application No.:	SZEM1210005746RF
Applicant:	Liquid Image Co., LLC
Manufacturer:	Foxda Technology Industrial(Shenzhen) co., Ltd.
Factory	Foxda Technology Industrial(Shenzhen) co., Ltd.
Product Name:	Torque+ Series Offroad Goggle 369
Model No.(EUT):	369
Standard:	47 CFR Part 1.1307(2011) 47 CFR Part 2.1093 (2011) KDB447498D01 General RF Exposure Guidance v05
FCC ID:	WGI-XSC-369
Date of Receipt:	2012-10-22(For original report: SZEM121000572902)
Date of Test:	2012-10-28 to 2012-10-31(For original report: SZEM121000572902)
Date of Issue:	2012-12-14(For original report: SZEM121000572902) 2013-01-14(For new report: SZEM121000574602)
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 Contents

3 General Information

3.1 Client Information

Applicant:	Liquid Image Co., LLC
Address of Applicant:	7909 Walerga Road, Suite112-206 Antelope, California, 95843, United States
Manufacturer:	Foxda Technology Industrial(Shenzhen) co., Ltd.
Address of Manufacturer:	1F-3F of 2nd Building, Foxda Industrial Zone, Pingshan New District, Shenzhen China
Factory:	Foxda Technology Industrial(Shenzhen) co., Ltd.
Address of Factory:	1F-3F of 2nd Building, Foxda Industrial Zone, Pingshan New District, Shenzhen China

3.2 General Description of EUT

Name:	Torque+ Series Offroad Goggle 369
Model No.	369
Trade Mark:	Xtreme Sport Cams
Operation Frequency:	IEEE 802.11b/g: 2412MHz to 2462MHz
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK)
Sample Type:	Portable production
Test Power Grade:	Set wifi_pwr value 2 (manufacturer declare)
Test Software of EUT:	Provided by manufacturer
Antenna Type:	Integral
Antenna Gain:	0.34dBi
Power Supply:	Model 55 Li-ion Battery 3.7V 1150mAh 4.3Wh
USB Cable:	45 cm with one ferrite core
HDMI Cable:	55 cm with two ferrite core
Test Voltage:	DC 3.7 Li-ion Battery

Original model No. in report SZEM121000572902: 339

New model No. in report SZEM121000574602: 369

Only the model 339 was tested in report SZEM121000572902.

This report was an additional report copied from the report SZEM121000572902, just changing the product name and model No..Since the electrical circuit design, layout, components used and internal wiring for the model “339” in the report SZEM121000572902 was exactly the same as the model “369” in this report, only the product name and color are difference.

3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

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No tests were sub-contracted.

3.4 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.
- **VCCI**
  The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, 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)**
  The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

15.247(b)(4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6dBi. Except as shown in paragraph (c) of this section. if transmitting antennas of directional gain greater than 6dBi are used. the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1). (b)(2). and (b)(3) of this section. as appropriate. by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.1.2 Limits

According to KDB447498D01 General RF Exposure Guidance v05

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test Exclusion Threshold (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

MHz	30	35	40	45	50	mm
150	232	271	310	349	387	SAR Test Exclusion Threshold (mW)
300	164	192	219	246	274	
450	134	157	179	201	224	
835	98	115	131	148	164	
900	95	111	126	142	158	
1500	73	86	98	110	122	
1900	65	76	87	98	109	
2450	57	67	77	86	96	
3600	47	55	63	71	79	
5200	39	46	53	59	66	
5400	39	45	52	58	65	
5800	37	44	50	56	62	

Note: 10-g Extremity SAR Test Exclusion Power Thresholds are 2.5 times higher than the 1-g SAR Test Exclusion Thresholds indicated above. These thresholds do not apply, by extrapolation or other means, to occupational exposure limits.

4.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is 11.61dBm(14.4877mW) in lowest channel;

The best case gain of the antenna is 0.34dBi.

0.34dBi logarithmic terms convert to numeric result is nearly 1.0814.

According to the formula. calculate the EIRP test result:

EIRP= P x G = 14.4877 mW x 1.0814 = 15.6670mW ①

SAR requirement:

Limit = 19mW @ 10 mm ②

① < ②.

So the SAR report is not required.