



No. I19Z61022-SEM02

for

Surf Communication Solutions Ltd.

4G dashcam

FCC ID: 2APWTAI-12

Hardware Version: PVT2.0

Software Version: V 1.0.1

Model Name: AI-12

Issued Date: 2019-8-21



Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I19Z61022-SEM02	Rev.0	2019-8-15	Initial creation of test report
I19Z61022-SEM02	Rev.1	2019-8-21	Update the maximum antenna gain

CONTENTS

1. TEST LABORATORY	4
1.1. TESTING LOCATION	4
1.2. TESTING ENVIRONMENT	4
1.3. PROJECT DATA	4
1.4. SIGNATURE	4
2. CLIENT INFORMATION	5
2.1. APPLICANT INFORMATION	5
2.2. MANUFACTURER INFORMATION	5
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	6
3.1. ABOUT EUT	6
3.2. INTERNAL IDENTIFICATION OF EUT	6
3.3. INTERNAL IDENTIFICATION OF AE	6
4. REFERENCE DOCUMENTS.....	7
4.1. REFERENCE DOCUMENTS FOR TESTING	7
5. RF EXPOSURE LIMIT	7
6. CLASSIFICATION	8
7. TEST RESULTS.....	8
7.1. THE MAXIMUM ANTENNA GAIN.....	8
7.2. THE MAXIMUM RATED POWER LIMITS	8
7.3. OUTPUT POWER INTO ANTENNA & RF EXPOSURE VALUE AT DISTANCE 20CM	8

1. Test Laboratory

1.1. Testing Location

Company Name: CTTL(Shouxiang)
Address: No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District,
Beijing, P. R. China100191
Postal Code: 100191
Telephone: 00861062304633
Fax: 00861062304793

1.2. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 20-75%

1.3. Project data

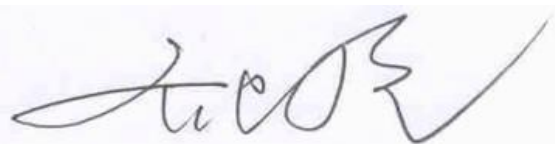
Project Leader: Lin Hao
Testing Start Date: 2019-08-15
Testing End Date: 2019-08-15

1.4. Signature



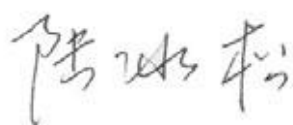
Lin Hao

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	Surf Communication Solutions Ltd.
Address /Post:	7 Hamada Street ,Yokneam Ilit Israel
Contact:	Mr Adi Toister
Email:	adi@surfsolutions.com
Telephone:	+972544858102
Fax:	\

2.2. Manufacturer Information

Company Name:	Surf Communication Solutions Ltd.
Address /Post:	7 Hamada Street ,Yokneam Ilit Israel
Contact:	Mr Adi Toister
Email:	adi@surfsolutions.com
Telephone:	+972544858102
Fax:	\

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	4G dashcam
Model name	AI-12
Operation mode	LTE Band2/4/12

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	PVT2.0	V 1.0.1

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	902030	/	HUIZHOU NEW JINKE ENERGY DEVELOPMENT CO. LTD
AE2	Battery	902030	/	Dongguan Golden CEL Battery Co., Ltd

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

447498 D01 General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

Canadian RSS-102 standard for uncontrolled environment requires the RF-exposure value in W/m² unit, therefore the MPE limit value determined in mW/cm² unit, should be multiplied by 10 to have the required unit. The MPE limits are the same like on FCC § 1.1301 at table 1.

5. RF Exposure Limit

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f²)*	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 *Plane-wave equivalent power density

$$\text{Friis transmission formula: } P_d = \frac{P_{out} * G}{4 * \pi * r^2}$$

where

P_d = power density (mW/cm²)

P_{out} = output power to antenna (mW)

G = gain of antenna (linear scale)

r = distance between antenna and observation point (cm)

6. Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

7. Test Results

7.1. The maximum antenna gain

The maximum antenna gain for each frequency band is:

LTE Band2: 2.54 dBi

LTE Band4: 2.74 dBi

LTE Band12: -0.26 dBi

7.2. The maximum rated power limits

Range of operating power:

LTE Band2: 25 dBm

LTE Band4: 25 dBm

LTE Band12: 25 dBm

7.3. Output Power Into Antenna & RF Exposure value at distance 20cm

The worst cases conducted output power for every frequency band is:

Frequency band	Maximum Rated Power (dBm)	Maximum Rated Power (mW)	Antenna gain	d (cm)	Calculation (mW/cm ²)	Limit (mW/cm ²)	Calculation
LTE B2	25	316.228	1.8	20	0.11	1.0	PASS
LTE B4	25	316.228	1.9	20	0.12	1.0	PASS
LTE B12	25	316.228	0.9	20	0.06	0.47	PASS

According above test result, and the device complies with the exposure requirements.

*****END OF REPORT*****