



FCC RF EXPOSURE REPORT

For

Connector-Less Autonomous Data Recorder

MODEL NUMBER: GCL

FCC ID: WAOGCL

IC: 7733A-GCL

REPORT NUMBER: 4788200421.1-8

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Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
--	05/03/2018	Initial Issue	



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Geospace Technologies Corporation
Address: 7007 Pinemont Houston, TX 77040.USA

Manufacturer Information

Company Name: Geospace Technologies Corporation
Address: 7007 Pinemont Houston, TX 77040.USA

EUT Description

EUT Name: Connector-Less Autonomous Data Recorder
Model: GCL
Brand Name: Geospace Technologies
Sample Status: Normal
Sample ID: 1230384
Sample Received Date: October 26, 2017
Date of Tested: November 15, 2017 ~ May 02, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	Complies

Tested By:

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Stephen Guo
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. IAS (Lab Code: TL-702) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has demonstrated compliance with ISO/IEC Standard 17025:2005, General requirements for the competence of testing and calibration laboratories FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules IC(Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320. VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011
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4. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-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/f ²)*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

CALCULATION METHOD

$$S = PG / 4\pi R^2$$

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna



CALCULATED RESULTS

ZigBee Mode					
Frequency	Output Power	Output Power	Power Density	Limit	Test Result
MHz	dBm	mW	mW/cm ²	mW/cm ²	--
2405~2475	4	2	0.001	1.0	Complies

Note: 1. Antenna Gain=3.3.0dBi (Numeric 2.14), $\pi=3.141$.
2. The Power comes from turn up power which declared by customer.
3. The minimum separation distance of the device is greater than 20 cm.
4. Calculate by WORST-CASE mode.

END OF REPORT