RF Exposure Evaluation Declaration

Product Name	:	Drivewell Tag SVR
Model No.	:	XS-S1 VER4.0
FCC ID	:	2AFGD-0003

Applicant	:	Cambridge Mobile Telematics
Address	:	101 Main Street, 14th Floor, Cambridge, MA 02142, USA

Date of Receipt	:	Apr. 11th, 2017
Test Date	:	Apr. 11th, 2017~ May. 03rd, 2017
Issued Date	:	May. 10th, 2017
Report No.	:	1742033R-RF- US- P20V01
Report Version	:	V1.0

Test Report Certification

Issued Date : May. 10th, 2017
Report No. : 1742033R-RF-US-P20V01

Product Name	:	Drivewell Tag SVR
Applicant	:	Cambridge Mobile Telematics
Address	:	101 Main Street, 14th Floor, Cambridge, MA 02142, USA
Manufacturer	:	Cambridge Mobile Telematics
Address	:	101 Main Street, 14th Floor, Cambridge, MA 02142, USA
Model No.	:	XS-S1 VER4.0
FCC ID	:	2AFGD-0003
EUT Voltage	:	DC 3.3V
Test Voltage	:	AC 120V/60Hz
Applicable Standard	:	KDB 447498D01V06 FCC Part1.1310
Test Result	:	Complied
Performed Location	:	DEKRA Testing & Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392

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Reviewed By : Frank He

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Approved By : Harry Zhao

(Engineering Manager: Harry Zhao)

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: 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 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: Pd = (Pout*G)/(4*pi*r2)

Where

Pd = power density in mW/ cm^2

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 is the limit of MPE, 1 mW/cm^2 . 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.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
The temperature and related humidity: 18℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Drivewell Tag SVR
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

- **Antenna Information**

Model No.	N/A					
Antenna manufacturer	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Sectorized		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
			☐	Sectorized		
	☒	Internal	☐	PIFA		
			☐	PCB		
			☒	Ceramic Chip Antenna		
			☐	Metal plate type F antenna		

Antenna Technology	Ant Gain (dBi)
☒ SISO	2.2

- **Power Density**

Standlone modes:

Test Mode	Frequency Band (MHz)	EIRP (dBm)	Power Density at R = 20 cm (mW/cm^2)	Limit of Power Density S(mW/cm^2)
BLE	2405 ~ 2480	8.540	0.00142	1

Note: The standlone transmission power density is 0.00142 mW/cm^2 for Drivewell Tag SVR without any other radio equipment.

The End