Report No.: GTS201807000022E05

# RF Exposure

| | |
|---|---|
| **Applicant:** | Pointer Telocation Inc. |
| **Address of Applicant:** | Pointer Telocation 7751 NW 48th street suite 395 Doral Florida 33166 Doral USA |
| **Manufacturer/Factory:** | Pointer Telocation Inc. |
| **Address of Manufacturer/Factory:** | Pointer Telocation 7751 NW 48th street suite 395 Doral Florida 33166 Doral USA |

**Equipment Under Test (EUT)**

| | |
|---|---|
| Product Name: | Cello Family |
| Model No.: | Cello-CANiQ 3G EU K-Line - CT7800153-000,<br>Cello-CANiQ 3G EU - CT7800151-000,<br>Cello CANiQ 3G EU (DTCO) - CT7800154-000 |
| Trade Mark: | Pointer |
| **Applicable standards:** | EN 62311:2008 |
| **Date of sample receipt:** | December 03, 2018 |
| **Date of Test:** | December 04-12, 2018 |
| **Date of report issue:** | December 13, 2018 |
| **Test Result :** | PASS * |

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

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2014/53/EU are considered.

**Robinson Lo**
**Laboratory Manager**

## 2 Version

| Version No. | Date | Description |
|---|---|---|
| *00* | *December 13, 2018* | *Original* |
| | | |
| | | |
| | | |
| | | |

***Prepared By:*** *Date:* *December 13, 2018*

***Project Engineer***

***Check By:*** *Date:* *December 13, 2018*

***Reviewer***

# 3 Contents

Page

# 4 General Information

## 4.1 General Description of EUT

| | |
|---|---|
| Product Name: | Cello Family |
| Model No.: | Cello-CANiQ 3G EU K-Line - CT7800153-000,<br>Cello-CANiQ 3G EU - CT7800151-000,<br>Cello CANiQ 3G EU (DTCO) - CT7800154-000 |
| Test Model No: | Cello-CANiQ 3G EU K-Line - CT7800153-000 |
| The electrical circuit design, layout, components used and internal wiring were identical for all models, with only dfference being the model name | |
| Hardware Version: | PB1031 REV-E |
| Software Version: | 38 |
| Power Supply: | DC 9-32V or<br>DC 3.7V, 3.7Wh, 1000mAh by Lithium Ion Polymer Battery |
| **GPS** | |
| Operation Frequency: | L1: 1559MHz to 1610MHz |
| **GSM** | |
| Support Networks: | GSM, GPRS, EGPRS |
| TX Frequency: | E-GSM900: 880---915MHz<br>DCS1800: 1710---1785MHz |
| Modulation Type: | GSM/GPRS: GMSK<br>EGPRS: GMSK/8PSK |
| Antenna Type: | Integral Antenna |
| Antenna Gain: | 2.00dBi |
| **WCDMA** | |
| Operation Frequency: | Band I:1920MHz~1980MHz<br>Band VIII:880MHz~915MHz |
| Modulation Type: | WCDMA:QPSK<br>HSDPA:QPSK, 16QAM<br>HSUPA:QPSK, 16QAM |
| Antenna Type: | Integral Antenna |
| Antenna Gain: | 2.00dBi |

## 4.2 Test Facility

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

● **FCC —Registration No.: 381383**

Global United Technology 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 files. Registration 381383, January 08, 2018.

● **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, August 15, 2016.

## 4.3 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
Address: No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102
Tel: 0755-27798480
Fax: 0755-27798960

## 4.4 Description of Support Units

The EUT has been tested as an independent unit.

## 4.5 Deviation from Standards

None.

## 4.6 Abnormalities from Standard Conditions

None.

## 4.7 Other Information Requested by the Customer

None.

# 5 Technical Requirements Specification in EN 62311

| | |
|---|---|
| Test Requirement: | EN 62311 |
| Test Method: | EN 62311 |
| General Description of Applied Standards | EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current. |
| Limit: | According to EN 62311, the criteria listed in the below table shall be used to evalouate the environmental inpact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.<br><br>**Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)**<br><br>Frequency range / E-field strength (V/m) / H-field strength (A/m) / B-field (μT) / Equivalent plane wave power density $S_{eq}$ (W/m²)<br>0-1 Hz — / $3,2 \times 10^4$ / $4 \times 10^4$ / —<br>1-8 Hz 10 000 / $3,2 \times 10^4/f^2$ / $4 \times 10^4/f^2$ / —<br>8-25 Hz 10 000 / 4 000/f / 5 000/f / —<br>0,025-0,8 kHz 250/f / 4/f / 5/f / —<br>0,8-3 kHz 250/f / 5 / 6,25 / —<br>3-150 kHz 87 / 5 / 6,25 / —<br>0,15-1 MHz 87 / 0,73/f / 0,92/f / —<br>1-10 MHz $87/f^{1/2}$ / 0,73/f / 0,92/f / —<br>10-400 MHz 28 / 0,073 / 0,092 / 2<br>400-2 000 MHz $1,375\ f^{1/2}$ / $0,0037\ f^{1/2}$ / $0,0046\ f^{1/2}$ / f/200<br>2-300 GHz 61 / 0,16 / 0,20 / 10<br><br>Notes:<br>1. *f* as indicated in the frequency range column. |
| Test method: | According to the Far field calculation formula:<br>**Far Field Calculation Formula**<br>$E = \frac{\sqrt{30PG(\theta,\phi)}}{r}$<br>G = antenna gain relative to an isotropic antenna<br>$\theta, \phi$ = elevation and azimuth angles to point of investigation<br>r = distance from observation point to the antenna<br><br>The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement ot the user for keeing 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body. |
| Result: | Pass |

**Measurement Data**:

| Maximum output power for GSM transmitting | | | | | |
|---|---|---|---|---|---|
| Frequency (MHz) | Output Power (dBm) | Output Power (mW) | E Field Strength (V/m) | Limit (V/m) | Result |
| 824.20-848.80 | 32.86 | 1931.968 | 9.747 | 61.00 | Pass |
| **Maximum output power for WCDMA transmitting** | | | | | |
| Frequency (MHz) | Output Power (dBm) | Output Power (mW) | E Field Strength (V/m) | Limit (V/m) | Result |
| 880~915 | 22.16 | 164.437 | 0.830 | 61.00 | Pass |

------End------