

## RF Exposure Report

**Report No.:** SA191119C05

**FCC ID:** LHJ-STRLNK2P

**Test Model:** StrLnk2P

**Received Date:** Nov. 19, 2019

**Date of Evaluation:** Dec. 09, 2019

**Issued Date:** Dec. 26, 2019

**Applicant:** Continental Automotive Systems, Inc.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
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**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA191119C05	Original Release	Dec. 26, 2019

## 1 Certificate of Conformity

**Product:** TCU (Telematics Control Unit)

**Brand:** Continental

**Test Model:** StrLnk2P

**Sample Status:** Identical Prototype

**Applicant:** Continental Automotive Systems, Inc.

**Date of Evaluation:** Dec. 09, 2019

**Standards:** FCC Part 2 (Section 2.1091)

**References Test Guidance :** KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.3 -2002

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

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**Prepared by :** \_\_\_\_\_ , **Date:** \_\_\_\_\_  
Lena Wang / Specialist

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**Approved by :** \_\_\_\_\_ , **Date:** \_\_\_\_\_  
Dylan Chiou / Project Engineer

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	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

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

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

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 25cm away from the body of the user. So, this device is classified as **Mobile Device**.

## 2.4 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Output Power ERP / EIRP (dBm)	Output Power ERP / EIRP (mW)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
GSM850	824-849	27.78	599.791	25	0.076	0.55
PCS1900	1850-1910	31.51	1415.794	25	0.180	1.00
WCDMA II	1850-1910	24.05	254.097	25	0.032	1.00
WCDMA IV	1710-1755	24.34	271.644	25	0.035	1.00
WCDMA V	824-849	22.48	177.011	25	0.023	0.55
LTE 2	1850-1910	25.41	347.536	25	0.024	1.00
LTE 4	1710-1755	25.40	346.737	25	0.044	1.00
LTE 5	824-849	23.41	219.280	25	0.028	0.55
LTE 7	2500-2570	25.45	350.752	25	0.045	1.00
LTE 12	699-716	23.71	234.963	25	0.030	0.47
WLAN	2412-2462	26.56	452.898	25	0.058	1.00
	5180-5240	17.15	51.88	25	0.007	1.00
	5745-5825	18.39	69.024	25	0.009	1.00

### Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### Conclusion:

The formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$$WWAN + WLAN 2.4GHz = 0.180 / 1 + 0.58/1 = 0.76$$

$$WWAN + WLAN 5GHz = 0.180 / 1 + 0.009/1 = 0.189$$

**Therefore the maximum calculations of above situations are less than the “1” limit.**

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