MPE TEST REPORT

Applicant	Flextronics (Shanghai) Co., Ltd
FCC ID	2AP3PAPOC2
Product	In-cab telematics tracker
Model	FT502-L130-GL
Report No.	R2006A0368-M1
Issue Date	July 9, 2020

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 1.1310**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Yu Wang

Performed by: Yu Wang

Guangchang Fan

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.**The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

1.3 Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C

Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment under Test

Client Information

Applicant	Flextronics (Shanghai) Co., Ltd
Applicant address	4F, Bldg. 10, No. 3000 Longdong Ave., Pudong New District, Shanghai 201203, China
Manufacturer	Flex Industrial, Ltd.
Manufacturer address	Level 3, Alexander House, 35 Cybercity, Ebene, Mauritius

General Technologies

Model	FT502-L130-GL
IMEI	866258041991487
Hardware Version	P2
Software Version	2.3.23
Date of Testing:	June 8, 2020~ June 29, 2020
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. 2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.	

3 Maximum conducted output power (measured) and antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by
Numeric gain (G)=10^(antenna gain/10)

Band	Maximum Conducted Output Power (dBm)		Antenna Gain (dBi)	Numeric gain
	(dBm)	(mW)		
WCDMA Band II	24.000	251.189	1.000	1.259
WCDMA Band IV	24.000	251.189	1.000	1.259
WCDMA Band V	24.000	251.189	0.000	1.000
LTE Band 2	24.500	281.838	1.000	1.259
LTE Band 4	24.500	281.838	1.000	1.259
LTE Band 5	24.500	281.838	0.000	1.000
LTE Band 12	24.500	281.838	-1.000	0.794
LTE Band 13	24.500	281.838	-1.000	0.794
BLE	7.590	5.741	1.000	1.259

4 Test Result

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following

TABLE 1 – LIMITS FOR MAXIMUN PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 300~1500 MHz is f/1500, for 1500~100,000MHz is 1.0.So

Band	The maximum permissible exposure
WCDMA II	1.0mW/cm^2
WCDMA IV	1.0mW/cm^2
WCDMA V	0.55mW/cm^2
LTE Band 2	1.0mW/cm^2
LTE Band 4	1.0mW/cm^2
LTE Band 5	0.55mW/cm^2
LTE Band 12	0.47mW/cm^2
LTE Band 13	0.52mW/cm^2
Bluetooth (Low Energy)	1.0mW/cm^2

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided. This calculation is based on the conducted power, considering maximum power and antenna gain. The formula shown in KDB 447498 D01 is used in the calculation.

Equation from KDB 447498 D01 General RF Exposure Guidance v06 (10/23/2015) is:

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

Where: S = power density (in appropriate units, e.g. mW/cm^2)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	PG (mW)	Test Result (mW/cm^2)	Limit Value (mW/cm^2)	The MPE ratio	Conclusion
WCDMA II	316.228	0.063	1.000	0.063	Pass
WCDMA IV	316.228	0.063	1.000	0.063	Pass
WCDMA V	251.189	0.050	0.550	0.091	Pass
LTE Band 2	354.813	0.071	1.000	0.071	Pass
LTE Band 4	354.813	0.071	1.000	0.071	Pass
LTE Band 5	281.838	0.056	0.550	0.102	Pass
LTE Band 12	223.872	0.045	0.470	0.095	Pass
LTE Band 13	223.872	0.045	0.520	0.086	Pass
Bluetooth (Low Energy)	7.228	0.001	1.000	0.001	Pass
Note: **R** = 20cm ∏= 3.1416 The MPE ratio = Mac Test Result÷Limit Value					

So the simultaneous transmitting antenna pairs as below:

∑of MPE ratios= LTE + BLE =0.102+0.001=0.103 <1

Note: For transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

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