MPE TEST REPORT

Applicant	Kizy Tracking SA
FCC ID	2AGPEWT2
Product	Tracker
Model	K-2
Report No.	RXA1712-0426MPER1
Issue Date	January 9, 2018

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.

Jiangpeng Lan

Performed by: Jiangpeng Lan

Kai Xu

Approved by: Kai Xu

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1 Test Laboratory

1.1 Notes of the Test Report

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1.2 Test facility

CNAS (accreditation number:L2264)

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

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.

IC (recognition number is 8510A)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

VCCI (recognition number is C-4595, T-2154, R-4113, G-10766)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Japan to perform electromagnetic emission measurement.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

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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.	

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2 Description of Equipment under Test

Client Information

Applicant	Kizy Tracking SA
Applicant address	Maladiere 71c Neuchatel Switzerland 2002
Manufacturer	Xavi (Suzhou) Technologies CO., LTD.
Manufacturer address	No. 108# Huahong Rd., Wujiang , Suzhou , JiangSu Province, China

General Technologies

Model	K-2
IMEI	352803060008050
Hardware Version	WT2-N V0.2B
Software Version	WT2_linux_350
Date of Testing:	December 13, 2017~ December 15, 2017

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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 (dB)
	(dBm)	(mW)		
GSM 850	33.0	1995.262	-8	0.158
GSM 1900	28.0	630.957	-4	0.398
WCDMA Band II	22.0	158.489	-4	0.398
WCDMA Band V	23.0	199.526	-8	0.158

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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.

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

Band	The maximum permissible exposure
GSM850	0.57mW/cm^2
GSM1900	1.0mW/cm^2
WCDMA II	1.0mW/cm^2
WCDMA V	0.57mW/cm^2

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

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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)
GSM850	316.228	0.063	0.57
GSM1900	251.189	0.050	1.00
WCDMA II	63.096	0.013	1.00
WCDMA V	31.623	0.006	0.57
Note: **R** = 20cm ∏= 3.1416			

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

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