

RF Exposure Report

Report No.: FCC_RF_SL19040201-SEV-801R1_MPE_Rev1.0

FCC ID: 2ATJP-T410

Test Model: T410

Received Date: 06/01/2019

Test Date: 06/05/2019

Issued Date: 07/02/2019

Applicant: Vendwatch Telematics LLC

Address: 111 W. Anderson Lane, Suite E300, Austin, Texas 78753, USA

Manufacturer: East West Manufacturing Enterprises

Address: 11100 Metric Blvd, Suite 200C, Austin, Texas 78758, USA

Issued By: Bureau Veritas Consumer Products Services, Inc.

Lab Address: 775 Montague Expressway, Milpitas, CA 95035

Test Location (1): 775 Montague Expressway, Milpitas, CA 95035

**FCC Registration /
Designation Number:** 540430



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Release Control Record

Issue No.	Description	Date Issued
FCC_RF_SL19040201-SEV-801R1_MPE	Original Release	06/24/2019
FCC_RF_SL19040201-SEV-801R1_MPE_Rev1.0	Addressed TCB Questions	07/02/2019

1 Certificate of Conformity

Product: Vending Machine Modem

Brand: Vendwatch Telematics LLC

Test Model: T410

Sample Status: Engineering sample

Applicant: Vendwatch Telematics LLC

Test Date: 06/05/2019

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services, Inc., Milpitas 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 EMC characteristics under the conditions specified in this report.

Prepared by : Shuo, **Date:** 07/02/2019
Shuo Zhang / Test Engineer

Approved by : Chen, **Date:** 07/02/2019
Chen Ge / Engineer Reviewer

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 ²)	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 ²)*	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/cm²

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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

SMT Antenna, 0.5dBi Gain

2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	1.83	0.5	20	0.00034	1

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 +etc. < 1

CPD = Calculation power density

LPD = Limit of power density

BLE = 0.00034

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

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