



中国认可
国际互认
检测
TESTING
CNAS L2264

EMF TEST REPORT

Applicant ID TECH
Product ViVOPay Kiosk III; ViVOPay Kiosk III SRED
Brand ID TECH
Model ViVOPay Kiosk III; ViVOPay Kiosk III SRED
Report No. RXA1703-0053EMF01R1
Issue Date May 8, 2017

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **EN62311:2008 / 1999/519/EC**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Approved by: Kai Xu

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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. This report must not be used by the client to claim product certification, approval, or endorsement by any government agencies.

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 (recognition number is 428261)

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-766)

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.

1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
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City: Shanghai
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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	ID TECH
Applicant address	10721 Walker Street Cypress, CA 90630 United States
Manufacturer	ID TECH
Manufacturer address	10721 Walker Street Cypress, CA 90630 United States

General Technologies

Product Name	ViVOpay Kiosk III; ViVOpay Kiosk III SRED
Model	ViVOpay Kiosk III; ViVOpay Kiosk III SRED
SN	controller A: 532T998513 controller D: 532T998593 antenna B: 615T553602 antenna C: 453T556805
Hardware Version	80136110
Software Version	80136120
Date of Testing:	March 13, 2017~ March 17, 2017

Model	Grop
ViVOpay Kiosk III	IDVK-300001(controller A) & IDVK-310100(normal antenna B)
	IDVK-300001(controller A) & IDVK-330100(35 degree antenna C)
ViVOpay Kiosk III SRED	IDVK-308021(controller D) & IDVK-310100(normal antenna B)
	IDVK-308021(controller D) & IDVK-330100(35 degree antenna C)

Note: There is more than one controller (controller A and controller D) and Antenna (Antenna B and Antenna C), each grop (AB/AC/DB/DC) should be applied throughout the compliance test respectively, however, only the worst case (controller D & Antenna C) will be recorded in this report.

3 Maximum conducted output power (measured) and antenna Gain

Band	Rated power (mW)
NFC	1000

According to EN62311:2008 and 2014/53/EU, limits for maximum permissible exposure (EMF) are as following:

Frequency range	E-field strength (V m ⁻¹)	H-field strength (A m ⁻¹)	B-field (μT)	Equivalent plane wave power density S _{eq} (W m ⁻²)
up to 1 Hz	—	3.2 × 10 ⁴	4 × 10 ⁴	—
1–8 Hz	10,000	3.2 × 10 ⁴ /f ²	4 × 10 ⁴ /f ²	—
8–25 Hz	10,000	4,000/f	5,000/f	—
0.025–0.8 kHz	250/f	4/f	5/f	—
0.8–3 kHz	250/f	5	6.25	—
3–150 kHz	87	5	6.25	—
0.15–1 MHz	87	0.73/f	0.92/f	—
1–10 MHz	87/f ^{1/2}	0.73/f	0.92/f	—
10–400 MHz	28	0.073	0.092	2
400–2,000 MHz	1.375/f ^{1/2}	0.0037/f ^{1/2}	0.0046/f ^{1/2}	f/200
2–300 GHz	61	0.16	0.20	10

The maximum permissible exposure for 10-400MHz is 2, so

Band	The maximum permissible exposure
NFC	2 W/ m ²

The Transmitter is using external antennas that operate at 20 cm or more from nearby persons. The maximum permitted level is calculated using the general equation:

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

- where: S = power density (in appropriate units, e.g. W/m²)
- P = power input to the antenna (in appropriate units, e.g., W)
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = distance to the center of radiation of the antenna (appropriate units, e.g., m)

GSM 900: **PG** = 1000mW=1W
R = 0.2 m
 π = 3.1416

Solving for S, the power density at 20 cm is

Band	Test Result (W/m ²)	Limit Value (W/m ²)
NFC	1.989	2

So the limit is kept.

Note: For mobile or fixed location transmitters, minimum separation distance is 20cm, even if calculations indicate EMF distance is less.