RF MPE REPORT

Report No.:	20240217G02609X-W4
Main Product:	TVS Pro4 Animal Pathogen Analyzers
Main Model No.:	EQ-PS400
Series Model No.:	EQ-MS400, EQ-FS400, YQ-MS400, YQ-PS400, YQ-FS400
FCC ID:	2BF4PS400
Applicant:	Changzhou Trendi Medical Technology Co., Ltd
Address:	No.403, Legend Holdings Lianhong New Material Innovation R&D Building, Changzhou Science and Education City, Jiangsu Province, China
Dates of Testing:	02/23/2024 - 03/26/2024
Issued by:	CCIC Southern Testing Co., Ltd.
Lab Location:	Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China. **Tel：** 86 755 26627338 **Fax：** 86 755 26627238

This test report consists of 8 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CCIC-SET. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to CCIC-SET within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.

Test Report

Product.....:	TVS Pro4 Animal Pathogen Analyzers
Trade Name .....:	Trending-VetAX
Applicant.....:	Changzhou Trendi Medical Technology Co., Ltd
Applicant Address.....:	No.403, Legend Holdings Lianhong New Material Innovation R&D Building, Changzhou Science and Education City, Jiangsu Province, China
Manufacturer.....:	Changzhou Trendi Medical Technology Co., Ltd
Manufacturer Address.....:	No.403, Legend Holdings Lianhong New Material Innovation R&D Building, Changzhou Science and Education City, Jiangsu Province, China
Test Standards.....:	47 CFR Part 2.1091
Test Result.....:	Pass
Tested by .....:	Chuiwang Zhang 2024.03.26 Chuiwang Zhang, Test Engineer
Reviewed by.....:	Chris You 2024.03.26 Chris You, Senior Engineer
Approved by.....:	Yang Fan 2024.03.26 Yang Fan, Manager

Table of Contents

1. GENERAL INFORMATION 5
1.1. EUT Description 5
1.2. EUT Description 6
1.3. Laboratory Facilities 6
1.4. Laboratory Location 6
2. TECHNICAL REQUIREMENTS SPECIFICATION IN CFR TITLE 47 PART 2.1091 ... 7
2.1. Exposure Limits 7
2.2. Predication of MPE limit at a given distance 7
2.3. Evaluation Results 8
2.4. Conclusion 8

Change History		
Issue	Date	Reason for change
1.0	2024.03.26	First edition

1. GENERAL INFORMATION

1.1. EUT Description

EUT supports Radios application	2.4G WIFI/BLE
Frequency Range(Tx)	BLE: 2.402GHz ~ 2.480GHz
	2.4G WIFI: 2.412GHz ~ 2.462GHz
Bandwidth	BLE: 1/2Mbps
	802.11b/g/n-HT200: 20MHz 802.11n-HT40: 40MHz
Modulation Type	BLE: GFSK
	2.4G WIFI: DSSS (802.11b), OFDM (802.11g/n)
Antenna gain	BLE: 3.26Bi
	2.4G WIFI: 3.26Bi
Antenna Type	PCBl Antenna

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

Note 2: Model No.: EQ-PS400 (Main Model), EQ-MS400, EQ-FS400, YQ-MS400, YQ-PS400, YQ-FS400 has no difference in structure, size, appearance, circuit, etc., and it does not affect the electromagnetic compatibility characteristics and radio frequency characteristics of the product. The difference is reflected in the different regions and industries targeted.

Note 3: Correspondence between product name, model and brand:

Product Name	Model No.	Trade Name
TVS Pro4 Animal Pathogen Analyzers	EQ-PS400	Trending-VetAX
TFS Pro4 Foodborne Pathogen Analyzers	EQ-FS400	Trending-FoodAX
TMS Pro4 POCT Molecular Diagnosis Analyzers	EQ-MS400	Trending-MedAX
Veterinary Diagnostic System Pro4S	YQ-PS400	TRENDI
Microbial Diagnostic System Pro4S	YQ-FS400	TRENDI
Clinical Molecular Diagnostic System Pro4S	YQ-MS400	TRENDI

1.2. EUT Description

EUT has been tested according to the following standards.

No.	Identity	Document Title
1	47 CFR Part 1	Practice and Procedure
2	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
3	KDB 447498 D01 General RF Exposure Guidance v06	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
4	OET Bulletin 65 Edition 97-01	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

1.3. Laboratory Facilities

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

CAB number: CN0064

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

1.4. Laboratory Location

Company Name:	CCIC Southern Testing Co., Ltd.
Address:	Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China

2. Technical Requirements Specification in CFR Title 47 Part 2.1091

2.1. Exposure Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	< 6
3.0-30	1824/f	4.89/f	*(900/f^2)	< 6
30-300	61.4	0.163	1.0	< 6
300-1500	/	/	f/300	< 6
1500-100,000	/	/	5	< 6
(ii) 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
Note: f = frequency in MHz. * = Plane-wave equivalent power density.				

2.2. Predication of MPE limit at a given distance

Refer to formulas on page 19 of OET Bulletin 65, Edition 97-01.

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the centre of radiation of the antenna (appropriate units, e.g., cm)

2.3. Evaluation Results

Worst-Case mode Conducted Output Power Results for BLE

Band	Mode	Frequency (MHz)	Maximum Output Power (dBm)	Max Tune up power (dBm)	Max Tune up power (mW)
BLE	GFSK	2480	8.52	8±1	7.94

Worst-Case mode Conducted Output Power Results for 2.4G WLAN

Band	Mode	Frequency (MHz)	Maximum Output Power (dBm)	Max Tune up power (dBm)	Max Tune up power (mW)
2.4G WIFI	802.11b	2462	17.56	17±1	63.10

Calculation results: Worst-Case mode

Band	Max Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Result (mW/cm2)	Power Density (mW/cm2)	Ratio
BLE	9	3.26	20	0.027	1.00	0.027
2.4G WIFI	18	3.26	20	0.003	1.00	0.003

Max Simultaneous Transmission Calculation (Worst-case mode)

No.	Worst Mode	MPE Ratio	Limit	Results
1	BLE + 2.4G WIFI	0.03	≤ 1.0	Pass

2.4. Conclusion

According to the KDB 447498 D01 General RF Exposure Guidance v06 section 7.2 determine the device is exclusion from SAR test.

** END OF REPORT **