



FCC TEST REPORT

FCC ID: 2AVZVW10

Product	:	POS SYSTEM
Model Name	:	W10
Additional model	:	W10-1,W10-2,W10-3,W10-4,W10-5
Brand	:	CITAQ
Report No.	:	PTC19082202504E-FC04
Prepared for		
CITAQ CO., LTD.		
9F&13F.,Chuangye Bldg.,Keji Middle Road.,Hi-Tech Zone,Shantou.,Guangdong		
Prepared by		
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TEST RESULT CERTIFICATION

Applicant's name : CITAQ CO., LTD.
Address : 9F&13F.,Chuangye Bldg.,Keji Middle Road.,Hi-Tech
Zone,Shantou.,Guangdong
Manufacture's name : CITAQ CO., LTD.
Address : 9F&13F.,Chuangye Bldg.,Keji Middle Road.,Hi-Tech
Zone,Shantou.,Guangdong
Product name : POS System
Model name : W10
Additional model : W10-1,W10-2,W10-3,W10-4,W10-5
Test procedure : KDB 447498 D01 General RF Exposure Guidance v05
Test Date : Dec. 18, 2019 to Jan.13, 2020
Date of Issue : Jan.13, 2020
Test Result : Pass

This device described above has been tested by PTS, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

A handwritten signature in black ink that reads "Leo Yang" with a long horizontal stroke extending to the right.

Leo Yang / Engineer

Technical Manager:

A handwritten signature in black ink that appears to read "Chris Du" in a stylized, cursive font.

Chris Du / Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	POS System
Model Name	:	W10
Additional model	:	W10-1,W10-2,W10-3,W10-4,W10-5
Model Description	:	Only the model names are different.
Bluetooth Version	:	V4.2(With Br+Edr+BLE)
Operating frequency	:	WiFi: 802.11b/g/n HT20: 2412-2462MHz 802.11n HT40: 2422-2452MHz Bluetooth:2402-2480MHz
Max. RF output power	:	WiFi: 18.85dBm Bluetooth: -2.52dBm
Type of Modulation	:	WiFi: CCK, OFDM Bluetooth: GFSK, Pi/4 DQPSK,8DPSK
Antenna installation:	:	WIFI/Bluetooth: internal permanent antenna
Power supply	:	DC 24V 2.5A Power by AC adapter ;Adapter model:PA1060-240T1A250
Adapter	:	Input:100-240V ~50/60Hz 1.8A max Output: DC 24V 2.5A



4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	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



4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$P_d = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
BT	1.58	-3.28	0.47	0.0001	1	Pass
WIFI	1.58	18.85	76.74	0.0241	1	Pass
BLE	1.58	-2.52	0.56	0.0002	1	Pass

*****THE END REPORT*****