




TEST REPORT

FCC ID. :	2BBVL-AION7XX01	
Test Report No..... :	TCT240523E023	
Date of issue..... :	Jul. 22, 2024	
Testing laboratory	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	TES Touch Embedded Solutions Inc. Taiwan Branch	
Address..... :	7F., No.141, Sec. 3, Ren ai Rd., Da an Dist., Taipei City 106, Taiwan, 222106 China	
Manufacturer's name ... :	TES Touch Embedded Solutions Inc. Taiwan Branch	
Address..... :	7F., No.141, Sec. 3, Ren ai Rd., Da an Dist., Taipei City 106, Taiwan, 222106 China	
Standard(s)	47 CFR FCC Part 15.407 RSS-247 Issue 2 KDB905462 D02 UNII DFS Compliance Procedures New Rules v02 KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02	
Product Name..... :	AIO Core Board module	
Trade Mark	TES/MicroTouch 	
Model/Type reference..... :	AION7XX01	
Rating(s)..... :	DC 4.2V	
Date of receipt of test item	May 23, 2024	
Date (s) of performance of test..... :	May 23, 2024 ~ Jul. 22, 2024	
Tested by (+signature) ... :	Aaron MO	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	

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1. General Product Information

1.1. EUT description

Product Name.....:	AIO Core Board module
Model/Type reference.....:	AION7XX01
Sample Number.....:	TCT240523E013-0101
EUT type.....:	Client only device, no radar detection Capability
Operation Frequency	Band 2A: 5260 MHz~5320 MHz Band 2C: 5500 MHz~5700 MHz
Channel Separation	802.11a: 20MHz 802.11n: 20MHz, 40MHz 802.11ac: 20MHz, 40MHz, 80MHz 802.11ax: 20MHz, 40MHz, 80MHz
Modulation Technology	Orthogonal Frequency Division Multiplexing(OFDM)
Antenna Type.....:	External Antenna
Antenna Gain.....:	Support two antenna: Antenna a: Band 2A: Antenna 0: -5.36dBi, Antenna 1: -6.01dBi Band 2C: Antenna 0: -5.78dBi, Antenna 1: -5.74dBi Antenna b: Band 2A: Antenna 0: 3.27dBi, Antenna 1: -5.36dBi Band 2C: Antenna 0: 3.45dBi, Antenna 1: -5.78dBi
TPC Function.....:	Unsupported
Rating(s).....:	DC 4.2V
Remark.....:	This device selects the operating frequency with randomly in the DFS operation frequency.

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None.

2. Test Result Summary

Conformance Test Specifications					
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result
UNII Detection Bandwidth	7.8.1	DFS: UNII Detection Bandwidth Measurement	N/A	100% of the 99% BW	N/A
Channel Availability Check	7.8.2.1	DFS: Initial Channel Availability Check Time	N/A	CAC \geq 60 sec	N/A
Channel Availability Check	7.8.2.2	DFS: Radar Burst at the Beginning of the Channel Availability Check Time	N/A	Detection Threshold: -62dBm	N/A
Channel Availability Check	7.8.2.3	DFS: Radar Burst at the End of the Channel Availability Check Time	N/A	Detection Threshold: -62dBm	N/A
In-service Monitoring	7.8.3	DFS: In-Service Monitoring for Channel Move Time (CMT)	CMT \leq 10sec	CMT \leq 10sec	Complied
In-service Monitoring	7.8.3	DFS: In-Service Monitoring for Channel Closing Transmission Time (CCTT)	CCTT \leq 60 ms starting at CMT 200ms	CCTT \leq 60 ms starting at CMT 200ms	Complied
In-service Monitoring	7.8.3	DFS: In-Service Monitoring for Non-Occupancy Period (NOP)	NOP $>$ 30 min	NOP \geq 30 min	Complied
Statistical Performance Check	7.8.4	DFS: Statistical Performance Check	Complied	Table 5 - 7 (KDB 905462)	N/A

Note: This test report was based on FCC ID: 2BBVL-AION7XX01; Change antenna.

3. General Information

3.1. RF General information

IEEE Std. 802.11	Channel Bandwidth (MHz)
a/n(HT20)/ ac(VHT20)/ax (HE20)	20
n(HT40)/ac(VHT40)/ax (HE40)	40
ac(VHT80)/ax(HE80)	80
Remark: All test are performed with conducted method	

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	IC ID	Trade Name
AP	R6300v2	3GM24478A 0282	PY313200227	4054A-13200227	NTEGEAR
PC	Inspiron3668	CNOYUJCX	/		DELL
BOX PC	TBX-100N70 20011002	/	/	/	MicroTouch
Media Player	IDX-300	/	/	/	MicroTouch

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3.3. Test Instruments List

DFS				
Name	Model No.	Manufacturer	Date of Cal.	Due Date
vector Signal Generator	N5182A	Agilent	Jun. 27, 2024	Jun. 26, 2025
Spectrum Analyzer	N9020A	Agilent	Jun. 27, 2024	Jun. 26, 2025
Combiner Box	AT890-RFB	Ascentest	/	/

4. Facilities and Accreditations

4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

*******END OF REPORT*******