



Wi-Fi Interoperability TEST REPORT

No. 24T04Z101045-025

for

TCL Communication Ltd.

Product Name: 9491G

Model Number: 9491G

CID: WFA131214

Wi-Fi Component Firmware 2023-10-26-192901

Issued Date: 2024-06-17

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.chinattl.com

REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04Z101045-025	Rev.0	1st edition	2024-06-17

Note: the latest revision of the test report supersedes all previous version.

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1. Test Laboratory

1.1. Testing Location

Location 1: CTTL(CuiHu)

Address: CuiHu Cloud Center, No. 1 Gaolizhang Road, Wenquan
Town, Haidian District, Beijing, China

1.2. Testing Environment

Normal Temperature: 20-22℃

Relative Humidity: 40-60%

1.3. Project data

Testing Start Date: 2024-05-21

Testing End Date: 2024-06-17

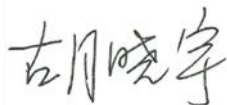
1.4. Signature



Wang Zhentao
(Prepared this test report)



Xie Fangfang
(Reviewed this test report)



Hu Xiaoyu
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.
Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Seoul
Postal Code: /
Country: /
Contact Annie Jiang
Email nianxiang.jiang@tcl.com
Telephone: +86 755 3661 1621
Fax: +86 755 3661 2000-81722

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Seoul
Postal Code: /
Country: /
Contact Annie Jiang
Email nianxiang.jiang@tcl.com
Telephone: +86 755 3661 1621
Fax: +86 755 3661 2000-81722

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Series Number	e88f6f7ee439
CID	WFA131214
Product Name	9491G
Model Number	9491G
Wi-Fi Component Firmware Version	2023-10-26-192901
Wireless Chipset	MT6631N/B
Operating System	Android
OS Version	Android

Note: Photographs of EUT are shown in ANNEX A of this test report.

3.2. Product Designators

Device Type	Enterprise
Product Type	STA
Primary Product Category	Tablet (Wi-Fi and other)
Additional Category of Product	N / A
Does this product want be designate as a Source	Yes
Is this product an Application Specific Device	No
Does this product support Wi-Fi Test Suite	Yes
Is 802.11a Device:	Yes
Is 802.11b Device:	Yes
Is 802.11g Device:	Yes
Is 802.11n Device:	Yes
Is 802.11ac Device:	Yes
Is 802.11ax Device:	No
Spatial Streams	

Band	Transmit	Receive
2.4GHz	1	1
5GHz	1	1

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Product Capabilities

No	Item	Description	Value
1		Concurrent Operation in 2.4 GHz and 5 GHz	No
2	11ac	WPA3™ - Personal	Yes
		WPA3™ - Enterprise	Yes
		WPA2™ - Personal	Yes
		WPA2™ - Enterprise	Yes
		WPA/WPA2 - Personal	Yes
		WPA/WPA2 - Enterprise	Yes
		WEP	Yes
		Rx MCS 8 (256-QAM)	No
		Rx MCS 8-9 (256-QAM)	Yes
		Rx Short Guard Interval	Yes
		Rx STBC 2x1	Yes
		Rx A-MPDU of A-MSDU	Yes
		Tx SU beamformee	Yes
		Tx LDPC	No
		Rx LDPC	No
		Rx DL MU-MIMO	No
		Extended 5 GHz Channel Support	No
		RTS with BW Signaling	No
		Rx 160 MHz operations	No
3	802.11h (11ac)		No

Note: The test samples listed above were selected and prepared by the applicant.

4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Wi-Fi_CERTIFIED_ac_Interoperability_Test_Plan v2.10

5. Test Results

5.1. Summary of Measurement Results

No	Test Cases	Standard Sub-clause	Verdict
1	General Configurability Tests	Clause 5.1.1	P
2	STA Initial 5 GHz Operation	Clause 5.2.1.1	P
3	AP and STA Association and Throughput using WPA2-Personal	Clause 5.2.9.1	P
4	AP and STA Association and Throughput using WPA2-Enterprise	Clause 5.2.10.1	P
5	802.11h Testing – Channel Switch Test	Clause 5.2.23.1	NA
6	Roaming Test for Single and Dual Band STAs with WPA-Personal	Clause 5.2.26.1	P
7	Traffic Differentiation in Single BSS with Wi-Fi CERTIFIED ac STA	Clause 5.2.27.1	P
8	Traffic Differentiation in Single BSS with Two Wi-Fi CERTIFIED ac STAs	Clause 5.2.28.1	P
9	Test the AC Parameter Modification	Clause 5.2.32.1	P
10	TXOP Limit Test	Clause 5.2.33.1	P
11	Basic Association in the Wi-Fi CERTIFIED ac Environment	Clause 5.2.35.1	P
12	Ability to Receive 1 and 2 Spatial Streams [Rx 1-2 tested Spatial Streams]	Clause 5.2.36.1	P
13	A-MPDU Aggregation when the STA is the Receiver with and without WPA2-Personal	Clause 5.2.37.1	P
14	A-MSDU Aggregation when the STA is the Receiver	Clause 5.2.38.1	P
15	Overlapping BSS – 5 GHz	Clause 5.2.40.1	P
16	Receive Short GI for 80 MHz Operation [Rx Short Guard Interval]	Clause 5.2.42.1	P
17	STBC Receive Test [Rx STBC 2x1]	Clause 5.2.46.1	P
18	A-MPDU Aggregation when the STA is the Transmitter	Clause 5.2.47.1	P
19	Ability to Receive 3 Spatial Streams [Rx 1-3 tested Spatial Streams]	Clause 5.2.49.1	NA

No	Test Cases	Standard Sub-clause	Verdict
20	STA Transmitting to AP using Supported Number of Spatial Streams [Tx 1-3 tested Spatial Streams]	Clause 5.2.50.1	P
21	STA Receiving 256-QAM MCSs [Rx MCS 8 (256-QAM)] or [Rx MCS 8-9 (256-QAM)]	Clause 5.2.54	P
22	STAUT Transmitting and Receiving VHT A-MPDU Delimiter for Single MPDU	Clause 5.2.55	P
23	Ability to Receive A-MPDU with A-MSDU	Clause 5.2.56	P
24	CTS with BW signaling in response to RTS with BW signaling	Clause 5.2.57	P
25	Single User (SU) Transmit Beamforming when STA is the Beamformee [Tx SU beamformee]	Clause 5.2.58	P
26	LDPC Test where STA is the Transmitter [Tx LDPC]	Clause 5.2.59	NA
27	LDPC Test where STA is the Receiver [Rx LDPC]	Clause 5.2.60	NA
28	Clear Channel Assessment on Secondary Channel	Clause 5.2.61	P
29	Operating Mode Notification Testing	Clause 5.2.62	P
30	STAUT acting as MU Beamformee	Clause 5.2.63A	NA
31		Clause 5.2.63B	NA
32		Clause 5.2.63C	NA
33	Ability to Receive 4 Spatial Streams at STAUT	Clause 5.2.64	NA
34	Ability to Receive 160 MHz at STAUT	Clause 5.2.65	NA
35	RTS with Static Bandwidth Signaling	Clause 5.2.67A	NA
36	RTS with Dynamic Bandwidth Signaling	Clause 5.2.67B	NA
37	This test verifies that the STAUT associate to AP that advertises WMM parameter IE	CT_WMM_Core _STA_WMMIE_ 10328_1	P

Please refer to **ANNEX B2** for details.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

5.2. Statements

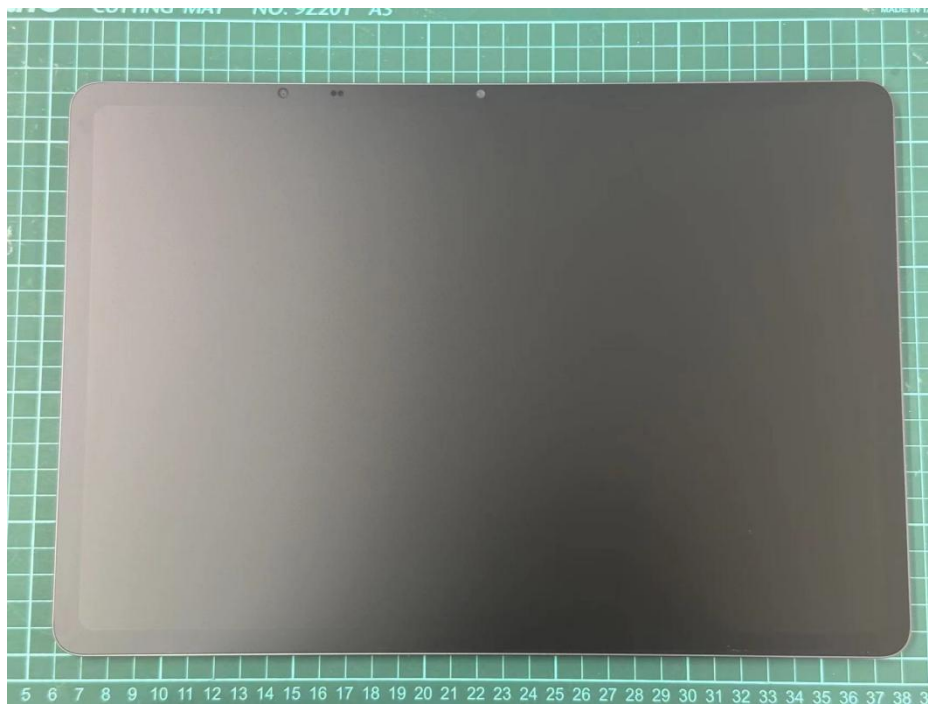
The test cases as listed in section 5.1 of this report for the EUT specified in section 3 was performed by CTTL according to the standards or reference documents listed in section 4.2

The EUT met all requirements of the standards or reference documents, and only the WLAN function was tested.

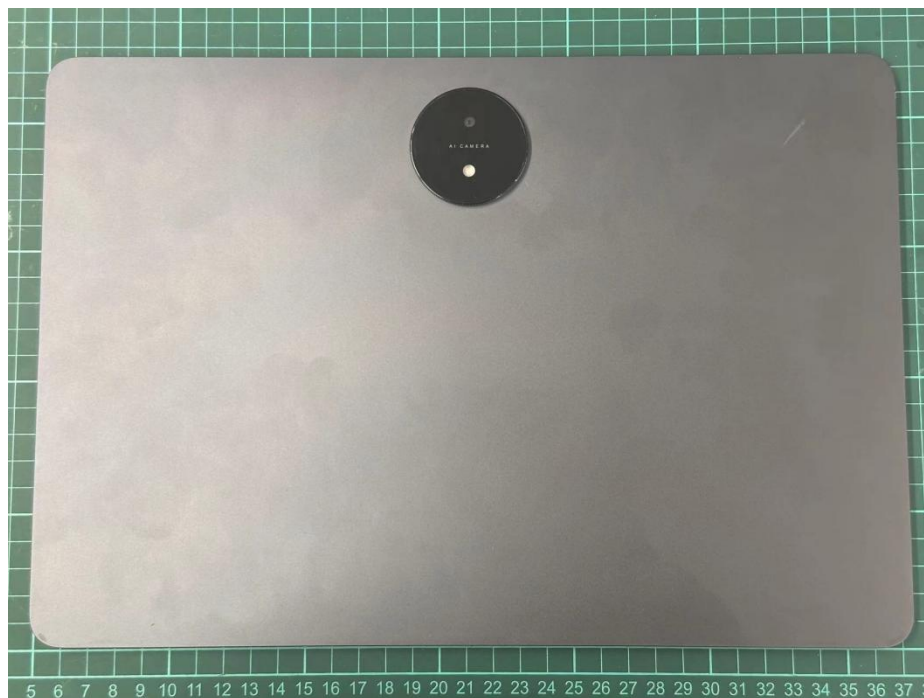
6. Test Facilities Utilized

No.	Product	Version	Vendor
Test bed Stations			
1	BCM94709R4366AC	SigmaVHT5G-1.3.20.tar.bz2	Broadcom
2	RD-88W-8897-WIFI-S0	Mrvl-WFASigma_ver_M2.0_R0.09(10:12:16 Oct 20 2016)	NXP
3	MT663XR2TB	1.0	MediaTek
4	CA-65-Y9345	3.0.4_r00041.2	Qualcomm
Test bed Access Points			
5	BCM94709R4366AC	SigmaVHT5G-1.3.20.tar.bz2	Broadcom
6	RD-88W-AP-8964-WIFI-R0	RD-88W-AP-8964-DR2-v9.0.6.0.p21_fw_9.1.7.111-wfa	NXP
7	MT7615 R2TBV2	1.3.5.10	MediaTek
8	CA-65-Y9345	3.0.4_r00041.2	Qualcomm
Servers			
9	HostAPD	2.4	Qualcomm
Supplicants			
10	S81	/	ETS-Lindgren
11	QuickTrack tool	/	/

ANNEX A: EUT photograph



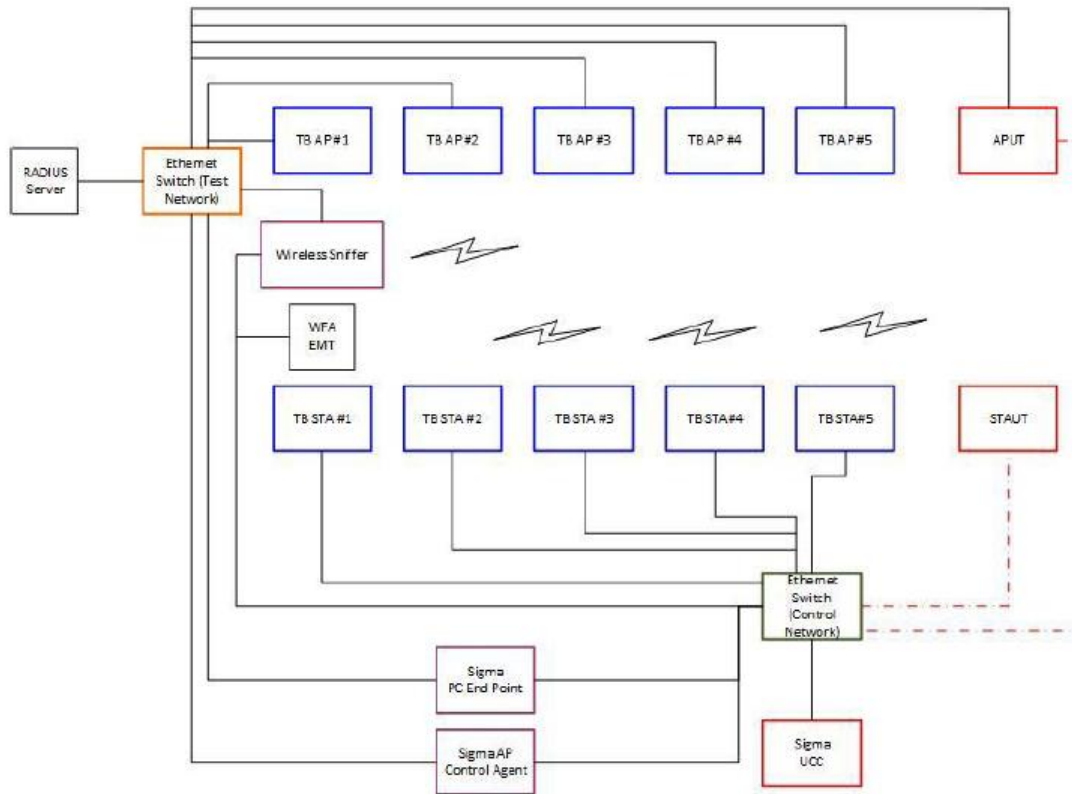
EUT Photo (Front view)



EUT Photo (Back view)

ANNEX B: EUT parameters

B.1. Measurement Method



. The WFA Sigma Automation Suite will be used as much as possible. This tool suite provides configuration, test control, traffic generation, and results analysis services. The test plan, in its entirety, can be executed in a fully automated manner through the WFA distributed Sigma Command Scripts and the Sigma Unified CAPI Console

B.2 Measurement Result

No	Test Item	Test Cases	Test Result	Conclusion
1	Clause 5.1.1	General Configurability Tests	Pass	P
2	Clause 5.2.1.1	STA Initial 5 GHz Operation	Pass	P
3	Clause 5.2.9.1	AP and STA Association and Throughput using WPA2-Personal	Pass	P
4	Clause 5.2.10.1	AP and STA Association and Throughput using WPA2-Enterprise	Pass	P
5	Clause 5.2.23.1	802.11h Testing – Channel Switch Test	Not Tested	NA
6	Clause 5.2.26.1	Roaming Test for Single and Dual Band STAs with WPA-Personal	Pass	P
7	Clause 5.2.27.1	Traffic Differentiation in Single BSS with Wi-Fi CERTIFIED ac STA	Pass	P
8	Clause 5.2.28.1	Traffic Differentiation in Single BSS with Two Wi-Fi CERTIFIED ac STAs	Pass	P
9	Clause 5.2.32.1	Test the AC Parameter Modification	Pass	P
10	Clause 5.2.33.1	TXOP Limit Test	Pass	P
11	Clause 5.2.35.1	Basic Association in the Wi-Fi CERTIFIED ac Environment	Pass	P
12	Clause 5.2.36.1	Ability to Receive 1 and 2 Spatial Streams [Rx 1-2 tested Spatial Streams]	Pass	P
13	Clause 5.2.37.1	A-MPDU Aggregation when the STA is the Receiver with and without WPA2-Personal	Pass	P
14	Clause 5.2.38.1	A-MSDU Aggregation when the STA is the Receiver	Pass	P
15	Clause 5.2.40.1	Overlapping BSS – 5 GHz	Pass	P
16	Clause 5.2.42.1	Receive Short GI for 80 MHz Operation [Rx Short Guard Interval]	Pass	P
17	Clause 5.2.46.1	STBC Receive Test [Rx STBC 2x1]	Pass	P
18	Clause 5.2.47.1	A-MPDU Aggregation when the STA is the Transmitter	Pass	P
19	Clause 5.2.49.1	Ability to Receive 3 Spatial Streams [Rx 1-3 tested Spatial Streams]	Not Tested	NA
20	Clause 5.2.50.1	STA Transmitting to AP using Supported Number of Spatial Streams [Tx 1-3 tested Spatial Streams]	Pass	P
21	Clause 5.2.54	STA Receiving 256-QAM MCSs [Rx MCS 8 (256-QAM)] or [Rx MCS 8-9 (256-QAM)]	Pass	P

No	Test Item	Test Cases	Test Result	Conclusion
22	Clause 5.2.55	STAUT Transmitting and Receiving VHT A-MPDU Delimiter for Single MPDU	Pass	P
23	Clause 5.2.56	Ability to Receive A-MPDU with A-MSDU	Pass	P
24	Clause 5.2.57	CTS with BW signaling in response to RTS with BW signaling	Pass	P
25	Clause 5.2.58	Single User (SU) Transmit Beamforming when STA is the Beamformee [Tx SU beamformee]	Pass	P
26	Clause 5.2.59	LDPC Test where STA is the Transmitter [Tx LDPC]	Not Tested	NA
27	Clause 5.2.60	LDPC Test where STA is the Receiver [Rx LDPC]	Not Tested	NA
28	Clause 5.2.61	Clear Channel Assessment on Secondary Channel	Pass	P
29	Clause 5.2.62	Operating Mode Notification Testing	Pass	P
30	Clause 5.2.63A	STAUT acting as MU Beamformee	Not Tested	NA
31	Clause 5.2.63B		Not Tested	NA
32	Clause 5.2.63C		Not Tested	NA
33	Clause 5.2.64	Ability to Receive 4 Spatial Streams at STAUT	Not Tested	NA
34	Clause 5.2.65	Ability to Receive 160 MHz at STAUT	Not Tested	NA
35	Clause 5.2.67A	RTS with Static Bandwidth Signaling	Not Tested	NA
36	Clause 5.2.67B	RTS with Dynamic Bandwidth Signaling	Not Tested	NA
37	CT_WMM_Core_STA_WMM-IE_10328_1	This test verifies that the STAUT associate to AP that advertises WMM parameter IE	Pass	P

ANNEX C: TEST LAYOUT



Wi-Fi Certification Test Laboratory

ANNEX D: Accreditation Certificate



The image shows a template for a laboratory accreditation certificate. It features the ILAC-MRA and CNAS logos at the top. The text is in both English and Chinese. The English text reads: "China National Accreditation Service for Conformity Assessment LABORATORY ACCREDITATION CERTIFICATE (Registration No. CNAS L0570) Telecommunication Technology Labs, CAICT (Legal Entity: China Academy of Information and Communications Technology) No.52, Huayuan North Road, Haidian District, Beijing, China is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate. The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate. Effective Date: 2023-06-20 Expiry Date: 2029-06-19 Signed on behalf of China National Accreditation Service for Conformity Assessment [Signature] China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Accreditation Cooperation Mutual Recognition Arrangement (APAC MRA). The validity of the certificate can be checked on CNAS website at http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml."

ILAC-MRA

CNAS

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L0570)

Telecommunication Technology Labs, CAICT

(Legal Entity: China Academy of Information and Communications Technology)

No.52, Huayuan North Road, Haidian District, Beijing, China

is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

Effective Date: 2023-06-20

Expiry Date: 2029-06-19

Signed on behalf of China National Accreditation Service for Conformity Assessment

张朝华

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Accreditation Cooperation Mutual Recognition Arrangement (APAC MRA). The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml>.

END OF REPORT