

TEST REPORT

Product Name : 4K AndroidTV Set Top Box
Brand Mark : Claro
Model No. : DV8935
FCC ID : 2AW68-C8935
Report Number : BLA-EMC-202209-A5507
Date of Sample Receipt : 2022/9/23
Date of Test : 2022/10/16 to 2022/11/14
Date of Issue : 2022/11/30
Test Standard : 47 CFR Part 1.1307, Part 1.1310
Test Result : Pass

Prepared for:

Shenzhen SDMC Technology Co.,Ltd.

Room 1022, Floor 10, Building A, Customs Building, No. 2, Xin'an 3rd Road, Dalang Community, Xin'an Street, Bao'an District, Shenzhen,

Prepared by:

BlueAsia Technical Services(Shenzhen) Co.,Ltd.

No.41, South of Beihuan Road, Shangwu Community, Shiyan Subdistrict, Bao'an District, Shenzhen,Guangdong ,China

TEL: +86-755-23059481

Compiled by:

Charlie

Review by:

Sueels

Approved by:

Blue Zheng

Date:

2022/11/30



REPORT REVISE RECORD

| Version No. | Date | Description |
|--------------------|-------------|--------------------|
| 00 | 2022/11/30 | Original |

BlueAsia

TABLE OF CONTENTS

| | | |
|-----|--|----|
| 1 | TEST SUMMARY | 4 |
| 2 | GENERAL INFORMATION | 5 |
| 3 | GENERAL DESCRIPTION OF E.U.T..... | 5 |
| 4 | BLOCK DIAGRAM OF EUT CONNECTION | 7 |
| 5 | LABORATORY LOCATION..... | 8 |
| 6 | RF EXPOSURE COMPLIANCE REQUIREMENT | 9 |
| 6.1 | LIMITS..... | 9 |
| 6.2 | TEST PROCEDURE | 9 |
| 6.3 | EUT RF EXPOSURE EVALUATION | 10 |

1 TEST summary

| Test item | Test Requirement | Test Method | Class/Severity | Result |
|-------------|--|--------------------|--------------------|--------|
| RF Exposure | 47 CFR Part 1.1307 47 CFR Part 1.1310 | CFR 47 Part 1.1310 | CFR 47 Part 1.1310 | PASS |

BlueAsia

2 General information

| | |
|-----------------------|--|
| Applicant | Shenzhen SDMC Technology Co.,Ltd. |
| Address | Room 1022, Floor 10, Building A, Customs Building, No. 2, Xin'an 3rd Road, Dalang Community, Xin'an Street, Bao'an District, Shenzhen, |
| Manufacturer | Shenzhen SDMC Technology Co.,Ltd. |
| Address | Room 1022, Floor 10, Building A, Customs Building, No. 2, Xin'an 3rd Road, Dalang Community, Xin'an Street, Bao'an District, Shenzhen, |
| Product Name | 4K AndroidTV Set Top Box |
| Test Model No. | DV8935 |

3 General description of EUT

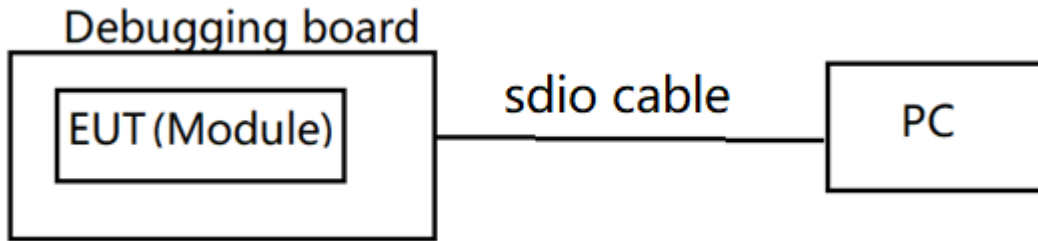
| | |
|-----------------------------|--|
| Hardware Version | V1 |
| Software Version | Android 10 |
| Operation Frequency: | 2402MHz-2480MHz |
| Modulation Type: | GFSK, $\pi/4$ DQPSK, 8DPSK |
| Channel Spacing: | 1MHz |
| Number of Channels: | 79 |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | 1.7dBi (Provided by antenna specification) |

| | |
|-----------------------------|--|
| Operation Frequency: | 2402MHz-2480MHz |
| Modulation Type: | GFSK |
| Channel Spacing: | 2MHz |
| Number of Channels: | 40 |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | 1.7dBi (Provided by antenna specification) |

| | |
|-----------------------------|---|
| Operation Frequency: | 802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz |
| Modulation Type: | 802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| Channel Spacing: | 5MHz |
| Number of Channels: | 802.11b/g/n(HT20):11 802.11n(HT40):7 |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | Antenna 1: 3.19dBi Antenna 2: 3.09dBi (Provided by antenna specification) |

| | |
|---|--|
| Operation Frequency: | Band 1 : 5180MHz-5240MHz; Band 2:5260MHz~5320MHz Band 3: 5500MHz~5700MHz; Band 4 : 5745MHz-5825MHz |
| Channel numbers: | Band 1: 802.11a/802.11n(HT20)/802.11ac(HT20): 4, 802.11n(HT40)/802.11ac(HT40):2, 802.11ac(HT80): 1 Band 2: 802.11a/802.11n(HT20)/802.11ac(HT20): 4, 802.11n(HT40)/802.11ac(HT40):2, 802.11ac(HT80): 1 Band 3: 802.11a/802.11n(HT20)/802.11ac(HT20): 11, 802.11n(HT40)/802.11ac(HT40):5, 802.11ac(HT80): 3 Band 4: 802.11a/802.11(HT20)/802.11ac(HT20): 5, 802.11n(HT40)/802.11ac(HT40): 2, 802.11ac(HT80): 1 |
| Channel separation: | 802.11a/n/ac(HT20): 20MHz, 802.11n/ac(HT40): 40MHz, 802.11ac(HT80): 80MHz |
| Modulation technology: (IEEE 802.11a/n/ac) | BPSK, QPSK, 16-QAM, 64-QAM, 256QAM |
| Data speed(IEEE 802.11a) | 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps |
| Data speed (IEEE 802.11n/ac): | Up to 866.7Mbps |
| Antenna Type: | PCB antenna |
| Antenna gain: | Antenna 1: 3.24dBi; Antenna 2: 3.50dBi (Provided by antenna specification) |
| Note: | Antenna number: 2 SISO mode: 802.11a/802.11n(HT20)/ 802.11n(HT40)/ 802.11ac(HT20)/ 802.11ac(HT40)/ 802.11ac(HT80) MIMO mode: 802.11n(HT20)/ 802.11n(HT40)/ 802.11ac(HT20)/ 802.11ac(HT40)/ 802.11ac(HT80) Directional gain = $10 \log[(10^{\text{ANT1}} / 20 + 10^{\text{ANT2}} / 20)^2 / N_{\text{ANT}}]$ dBi = $10 \log[(10^{3.19} / 20 + 10^{3.09} / 20)^2 / 2]$ = 6.38dBi |

4 BLOCK diagram OF EUT connection



BlueAsia

5 Laboratory Location

All tests were performed at:

BlueAsia Technical Services(Shenzhen) Co.,Ltd.

No.41, South of Beihuan Road, Shangwu Community, Shiyan Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673

No tests were sub-contracted.

BlueAsia

6 RF Exposure Compliance Requirement

6.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures | | | | |
| 0.3–3.0 | 614 | 1.63 | *(100) | 6 |
| 3.0–30 | 1842/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 |
| (B) 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 |

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

$\pi = 3.1416$

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

6.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

6.3 EUT RF Exposure Evaluation

Antenna Gain: 3.5dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 3.5 dBi in linear scale.

Output Power into Antenna & RF Exposure Evaluation Distance:

BLE 1M:

| Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
|-----------------|---------------------------------------|------------------------------|--|-------|--------|
| 2480 | 5.18 | 3.296 | 0.00147 | 1.0 | PASS |

BLE 2M:

| Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
|-----------------|---------------------------------------|------------------------------|--|-------|--------|
| 2480 | 4.787 | 3.011 | 0.00134 | 1.0 | PASS |

BT(GFSK):

| Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
|-----------------|---------------------------------------|------------------------------|--|-------|--------|
| 2480 | 5.323 | 3.406 | 0.00152 | 1.0 | PASS |

2.4G WIFI 802.11n20:

| Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
|-----------------|---------------------------------------|------------------------------|--|-------|--------|
| 2412 | 19.852 | 96.650 | 0.04305 | 1.0 | PASS |

5G WIFI 802.11ac80:

| Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
|-----------------|---------------------------------------|------------------------------|--|-------|--------|
| 5320 | 19.176 | 82.718 | 0.03684 | 1.0 | PASS |

Note: Refer to report No. BLA-EMC-202209-A5502/03/04/05 for EUT test Max Conducted Peak Output Power value.

The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation Requirement

----END OF REPORT----

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of BlueAsia, this report can't be reproduced except in full.