

Hardware Unit Test Report

Power consumption Test of Android TV version

Hardware version	FW version	Sample No.	eMMC Flash P/N
V015	1. k000a-r52101c_EMC_ND_fac-20200928 2. BFX-UA300-userdebug 10 QT 19.522.3-20201104 release key version	S/N: YUHOY13-2154002298-01S1N	DDR: 1. K4A8G165WC-BCTD 2. K4A4G165WF-BCTD eMMC: KLM8G1GETF-B041

1. Test Setup

Equipment:

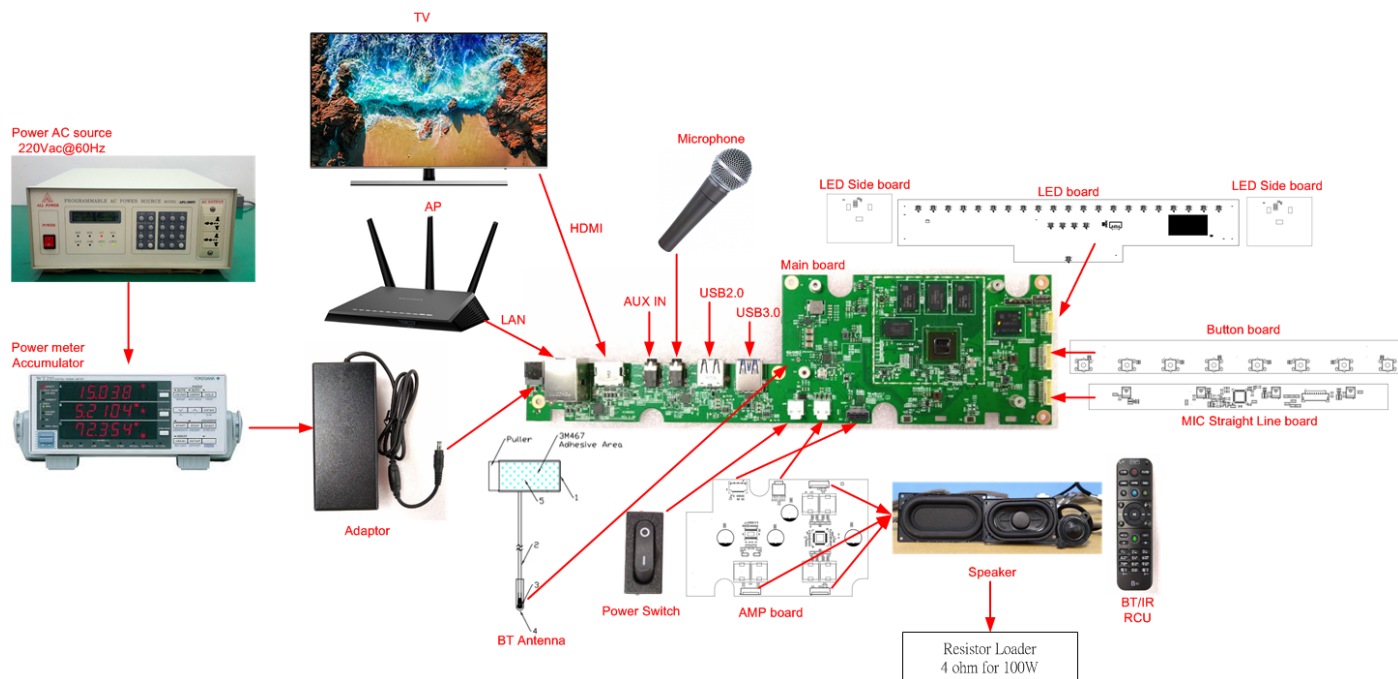
1. BFX-UA300 EVT board V015.
2. AC POWER: APG-1005N: 220Vac @60Hz
3. AC Adapter: ANY2405D-NIM 24V/5A
4. 4K TV: ENVISION P2271WHL
5. Power meter with accumulator: Yokogawa WT210
6. Current probe: TCPA300
7. NETGEAR R7000 1Gbps

Test Environment:

1. Test place: FXN CNSBG Building 1F office
2. Test DUT name: BFX-UA300 EVT V015 board
3. Test environment condition: temperature: 25 deg-C, humidity: 65
4. Test date: 2020/10/14
5. Test result: See section 3 for test results.
6. Test setup picture (block diagram and real test environment picture)

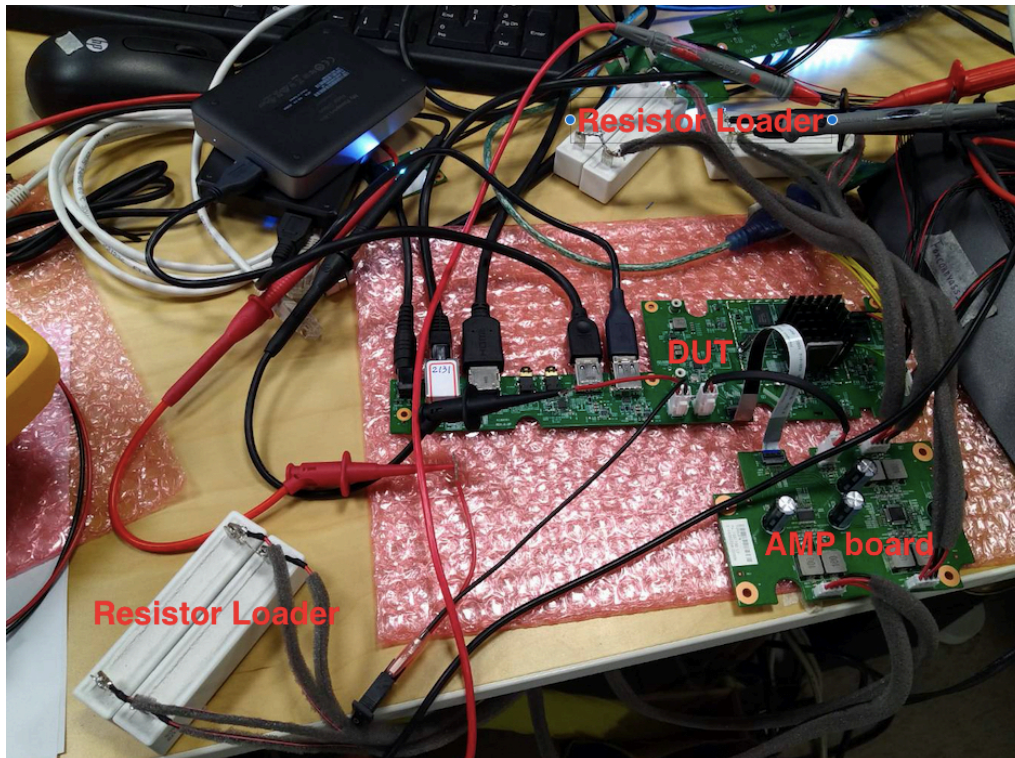
BFX-UA300 V015 Hardware unit test report

Block Diagram:



Test setup picture:





2. Test Items and Condition

1. Operation mode

1. DUT power on
2. Play local 4kp60 video and record AUX-in, MIC in and Far field MIC in and USB R/W test and lperf to 1000Mbps. The audio value is 100%.
3. Accumulating for 1 hour and record the power consumption result.

2. Active standby mode

1. DUT power on
2. Using command to make DUT to enter active standby mode.
3. Command:
`su`
`setprop persist.berlin.suspend.mode active_standby`
`echo mem > /sys/power/state`
4. Accumulating for 1 hour and record the power consumption result.

3. Active standby mode

1. DUT power on
2. Using command to make DUT to enter active standby mode.
3. Command:
`su`
`svc power shutdown`
4. Accumulating for 1 hour and record the power consumption result.

3. Test Result

EVT build power consumption:

3.1 Operation mode [Adaptor: ANY2405D-NIM 24V/5A]

Test Results of power consumption: F/W version: k000a-r52101c_EMC_ND_fac-20200928 version(LAN: 1000M bps)			
Item No.	AC port BFX-UA300 EVT Board V015	DC port BFX-UA300 EVT Board V015	Remark
#1 Operation mode*	220Vac/0.1860A@60Hz, 18.260W	23.71Vdc/0.64A, 15.1744W	

Note:

*: This FW version is only for factory google TV version, almost no more background in the system which cannot run under full load conditions.

3.2 Active standby mode [Adaptor: ANY2405D-NIM 24V/5A]

Test Results of power consumption: F/W version: k000a-r52101c_EMC_ND_fac-20200928 version(LAN: 1000M bps)			
Item No.	AC port BFX-UA300 EVT Board V015	DC port BFX-UA300 EVT Board V015	Remark
#1 Active standby mode*	220Vac/0.0440A@60Hz, 2.03W	24.0Vdc/0.05A, 1.20W	

Note:

*: Active standby mode includes power down function of AMP board. The test is after 10 minutes when DUT enters active standby mode.

3.3 Active standby mode [Adaptor: Unknow model name: 24V/5A]

Test Results of power consumption: F/W version: k000a-r52101c_EMC_ND_fac-20200928 version(LAN: 1000M bps)			
Item No.	AC port BFX-UA300 EVT Board V015	DC port BFX-UA300 EVT Board V015	Remark
#1 Active standby mode*	220Vac/0.0493A@60Hz, 1.7264W	23.8Vdc/0.04A, 0.952W	

Note:

*: Active standby mode includes power down function of AMP board. The test is after 10 minutes when DUT enters active standby mode.

3.4 Active standby mode [Adaptor: Unknow model name: 24V/5A]

Test Results of power consumption: F/W version: BFX-UA300-userdebug 10 QT 19.522.3-20201104 release key version(LAN: 1000M bps)			
Item No.	AC port BFX-UA300 EVT Board V015	DC port BFX-UA300 EVT Board V015	Remark
#1 Active standby mode*	220Vac/0.0445A@60Hz, 1.1968W	23.8Vdc/0.035A, 0.833W	

Note:

*: Active standby mode includes

- 1.) power down to sleeping mode function of AMP board, MIC straight board and BT function.
- 2.) 24V-To-5V DC-DC power IC(U1308) has optimize its performance at PFM mode.
- 3.) Plugged-out 24V power cable of AMP board.

The test is after 10 minutes when DUT enters active standby mode.

3.5 Low Power mode [Adaptor: Unknow model name: 24V/5A]

Test Results of power consumption: F/W version: BFX-UA300-userdebug 10 QT 19.522.3-20201104 release key version(LAN: 1000M bps)			
Item No.	AC port BFX-UA300 EVT Board V015	DC port BFX-UA300 EVT Board V015	Remark
#1 Low Power mode	220Vac/0.0421A@60Hz, 0.8730W* 220Vac/0.0450A@60Hz, 1.0873W**	23.8Vdc/0.02689A, 0.6400W 23.8Vdc/0.03081A, 0.7333W	Note1

Note:

*: Low Power mode includes

Low power mode is plugged-out the Giga LAN cable due to the ethernet is not power down.

The test is after 10 minutes when DUT enters low power mode.

** : Low Power mode includes

Low power mode is plugged-in the Giga LAN cable.

The test is after 10 minutes when DUT enters low power mode.

Note1: The time test is from pressing button until to see the Home launcher of Google TV.

Boot-up time: 18.74s (press power button)

Wake-up time: 20.08s (press RCU power button)