

Hardware Unit Test Report

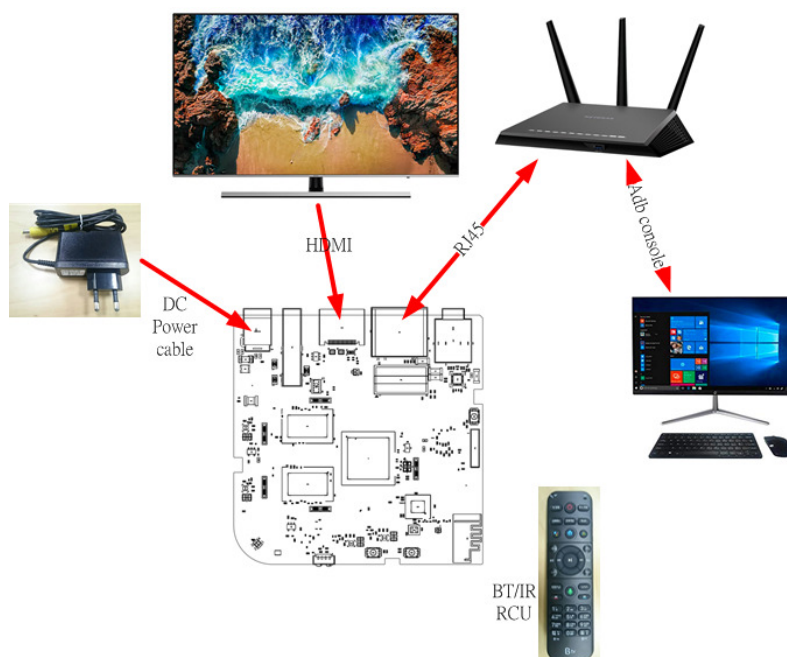
eMMC Stress Test

Data read, write, erase test

Hardware version	FW version	Sample No.	eMMC Flash P/N
V005	4.9.113 #1 Mon Feb 26 16:03:31 CST 2019 Build BFX_AT100-eng 9 PI 20190226 release-keys	S/N:	KLM8G1GETF-B041

1. eMMC Stress Test Setup

Data read, write, erase test



2. Test Command

```
adb connect xxx.xxx.xxx.xx
adb push emmc_test_write_verify.sh /data/
adb shell
cd /data
chmod 777 emmc_test_write_verify.sh
./emmc_test_write_verify.sh
```

3. Test Condition

Purpose: The script has read/write and erase function. The read/write data is 0x5A and 0xA5 and writing into 1Gb file in eMMC. After filling 1Gb file, the script will verify 1Gb file. The read/write cycle is 1Gb then check if any error. For example, write 0x5A to 1Gb, then read this 1Gb file and verify check. If verify is ok, remove the 0x5A file. Then write 0xA5 to 1Gb file and repeat the same work.

Content setup: Play 4Kp60 video repeat. The video is placed at local eMMC and use MoviePlayer.app to play video.

Adb Console: For test command and run “emmc_test_write_verify.sh” provided by FXN SW team for testing.

Environment: 25 degree-C room temperature.

4. Result and Picture

The test result after 8TBW accumulatively is pass.

eMMC R/W test			
Date	Record(TBW)	Error	Pass/Fail
2019/4/23~2019/4/30	8.375	No	Pass

```

1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 60.651 secs (16487774 bytes/sec)
1m01.06s real 0m02.00s user 0m33.36s system
1333 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 56.023 secs (17849811 bytes/sec)
0m56.35s real 0m01.68s user 0m32.54s system
1334 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 61.163 secs (16349753 bytes/sec)
1m01.70s real 0m01.80s user 0m33.64s system
1335 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 56.184 secs (17798661 bytes/sec)
0m56.56s real 0m01.78s user 0m32.65s system
1336 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 61.254 secs (16325464 bytes/sec)
1m01.37s real 0m01.86s user 0m33.10s system
1337 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 55.473 secs (18026787 bytes/sec)
0m55.73s real 0m01.81s user 0m32.46s system
1338 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 63.455 secs (15759199 bytes/sec)
1m03.63s real 0m02.05s user 0m33.72s system
1339 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 55.640 secs (17972681 bytes/sec)
0m56.16s real 0m01.73s user 0m32.28s system
1340 : Write a5, verify ok

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```

5014 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 68.357 secs (14629079 bytes/sec)
1m08.51s real 0m02.01s user 0m34.68s system
5015 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 65.419 secs (15286078 bytes/sec)
1m05.59s real 0m01.98s user 0m34.36s system
5016 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 66.575 secs (15020653 bytes/sec)
1m06.89s real 0m02.00s user 0m34.83s system
5017 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 67.341 secs (14849794 bytes/sec)
1m07.52s real 0m01.91s user 0m35.06s system
5018 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 66.061 secs (15137524 bytes/sec)
1m06.19s real 0m01.95s user 0m34.26s system
5019 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 64.710 secs (15453562 bytes/sec)
1m04.90s real 0m02.04s user 0m34.18s system
5020 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 69.538 secs (14380626 bytes/sec)
1m09.74s real 0m01.72s user 0m34.96s system
5021 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 67.456 secs (14824478 bytes/sec)
1m07.58s real 0m01.76s user 0m34.46s system
5022 : Write a5, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 69.000 secs (14492753 bytes/sec)
1m09.16s real 0m02.11s user 0m34.86s system
5023 : Write 5a, verify ok
1953125+0 records in
1953125+0 records out
1000000000 bytes transferred in 65.887 secs (15177500 bytes/sec)
1m06.07s real 0m01.96s user 0m34.39s system
5024 : Write a5, verify ok

```

Figure 1. Partial log as reference.

Slice log:

1953125+0 records in

T99X171T00 V005 Power Consumption Test

1953125+0 records out

1000000000 bytes transferred in 67.341 secs (14849794 bytes/sec)

1m07.52s real 0m01.91s user 0m35.06s system

5018 : Write a5, verify ok

1953125+0 records in

1953125+0 records out

1000000000 bytes transferred in 66.061 secs (15137524 bytes/sec)

1m06.19s real 0m01.95s user 0m34.26s system

5019 : Write 5a, verify ok

1953125+0 records in

1953125+0 records out

1000000000 bytes transferred in 64.710 secs (15453562 bytes/sec)

1m04.90s real 0m02.04s user 0m34.18s system

5020 : Write a5, verify ok

1953125+0 records in

1953125+0 records out

1000000000 bytes transferred in 69.538 secs (14380626 bytes/sec)

1m09.74s real 0m01.72s user 0m34.96s system

5021 : Write 5a, verify ok

1953125+0 records in

1953125+0 records out

1000000000 bytes transferred in 67.456 secs (14824478 bytes/sec)

1m07.58s real 0m01.76s user 0m34.46s system

5022 : Write a5, verify ok

1953125+0 records in

1953125+0 records out

1000000000 bytes transferred in 69.000 secs (14492753 bytes/sec)

1m09.16s real 0m02.11s user 0m34.86s system

5023 : Write 5a, verify ok

1953125+0 records in

1953125+0 records out

1000000000 bytes transferred in 65.887 secs (15177500 bytes/sec)

1m06.07s real 0m01.96s user 0m34.39s system

5024 : Write a5, verify ok