
高通多媒体技术期刊 20151230



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Revision History

Revision	Date	Description
A	Dec. 2015	Initial release

Note: There is no Rev. I, O, Q, S, X, or Z per Mil. standards.

内容

- Camera
 - Solution of camera log drop issue on L and M release.
- Audio
 - Important docs update
 - QC FM patches on 8909 M release
 - Enable SEC M2S slave mode
 - Tasha codec reset control and set drive strength 16 mA
 - Audio common issues



Camera

Why log drops issue happened?

Google has added a new logd daemon based log mechanism since L, and could use `TARGET_USES_LOGD` to control which way to use. the API in liblog will use different way depend on this macro.

On Android M, google removed the code for legacy way from kernel and liblog, the new mechanism use userspace memory heap and list to maintain log buffer, for some module if it needs high peak throughput for log output, the new mechanism will drop log and cost more CPU/power.

Camera log drop issue on L release

- How to resolve the issue?
 - In file /[device/qcom/msm8994/BoardConfig.mk](#) Add following line
 - TARGET_USES_LOGD := true
 - You need to change the folder [msm8994](#) based on your target.

With this flag, android log tool will fall back to legacy log tool and logd will be disabled, then it should have the same status as KK.

Camera log drop issue on M release

- Legacy log tool is removed from android M, so the solution on L can not work anymore.
- Following the step to add the legacy log tool back.
 - 1. in external\sepolicy, adding following two lines of code into domain.te give selinux right for for /dev/log/*
 - allow domain log_device:dir search;
 - allow domain log_device:chr_file rw_file_perms;
 - 2. in device/qcom/msmXXX/BoardConfig.mk, adding:
TARGET_USES_LOGD := false
 - 3. restore node of /dev/log/* in kernel:
 - a. git revert 89a57067c00fe2085e10ca97ace7cefa64acb59c, it will restore logger.c, logger.h, etc
<https://www.codeaurora.org/cgit/quic/la/kernel/msm-3.10/commit/?id=89a57067c00fe2085e10ca97ace7cefa64acb59c>
 - b. arch/arm64/configs/msm_defconfig, add CONFIG_ANDROID_LOGGER=y
 - c. in drivers/char/misc.c, change DYNAMIC_MINORS from 64 to 96
 - d. in drivers/staging/android/Makefile, add obj-
\$(CONFIG_ANDROID_LOGGER) += logger.o

Camera log drop issue on M release

4. in system/core/liblog

a. for logd_write_kern.c

```
+#ifdef __BIONIC__
#include <android/set_abort_message.h>
+#endif
+#if __BIONIC__
    if (prio == ANDROID_LOG_FATAL) {
        android_set_abort_message(msg);
    }
+#endif
```

b. for log_read_kern.c

remove:

```
typedef char bool;
#define false (const bool)0
#define true (const bool)1
```

add:

```
#include <cutils/sockets.h>
```

copy code of log_read.c from line 37(*/* branchless on many architecture. */*) to line 197(*/* End of ../libcutils/socket_local_client.c */*) into log_read_kern.c

Camera log drop issue on M release

Above solution is verified on 8996, you can also get the solution(00031251) on Qualcomm support website



Audio

Important docs update

- Solutions

- [00031061](#) - Userspace, Kernel Space, PCM Log Collection Procedure for Audio Issue Debugging
- [00031062](#) - How to Debug Issues Related to Audio Playback
- [00031063](#) - How to Debug Issues Related to Audio Recording
- [00031065](#) - MSM8996 Audio Software Solutions Tree
- [00031066](#) - WCD9335+WSA881x How To Read/Write Registers
- [00031105](#) - How to Debug issue's Related to Voice/VoLTE Call
- [00031111](#) - MSM8952 Audio Software Solutions Tree
- [00031116](#) - Supported Audio Formats on Android
- [00031247](#) - MSM8937.LA.1.0 - Release schedule
- [00031259](#) - Info - APE audio decoder profile with details

QC FM patches on 8909 M release

- Version below has all the patches mainlined.
 - <https://www.codeaurora.org/cgit/quic/la/platform/manifest/tag/?h=LA.BR.1.2.6-00610-8x09.0>
- If you want to know the exact code changes/patches, please file a case.

Enable SEC M2S slave mode

- MSM8916 Bear family chipsets
 - SPK Mux (0x07702004) => 0x10020A
 - Read MI2S GPIO registers' value when playing to debug the issue
 - /system/bin/r <address>

Tasha codec reset control and set drive strength 16 mA

- MSM8996+WCD9335 , MSM8956/76 + WCD9326
- Please apply file case to apply it, which is used to resolve issue as “with low possibility Tasha sound card can’t be registered due to Slimbus error”

Audio common issues (1)

- 描述 : android.security.cts.AudioFlingerBinderTest failed
- 复现步骤和现象 :
 - CTS test case
- 基线 : MSM8952.LA.1.0
- CR : 922172
- 代码修改 :
 - <https://www.codeaurora.org/cgit/quic/la/platform/frameworks/av/commit/?id=c012bc839986db7926b78aeaa48b1c2f522188c4>
 - <https://www.codeaurora.org/cgit/quic/la/platform/frameworks/av/commit/?id=2bf6318bf4737686886beb36ec662fab21d770ca>

Audio common issues (2)

- 描述：FNS is not able to enable
- 复现步骤和现象：
 - 1. First call made with default fnsMode.
 - 2. Changed fnsMode = 0xF3 in RTC(set to DSP), Batch copy to ACDB.
 - a. Changed value is reflected in online mode(both static and dynamic cal tables)
 - b. Saved this acdb file.
 - 3. Push acdb and reboot the device
 - 4. Make new call
 - Result: Two scenarios observed here:
 - Scenario 1:
 - a. Check RTC calibration(fnsMode) ->0XF3 is present
 - b. Get from DSP ->No issue observed
 - c. Try to “Get from DSP” after few seconds ->fnsMode getting changed to default(0xFF) and fnsTargetNoiseFloor to 0x01
 - Scenario 2:
 - a. For subsequent calls, fnsMode is remaining at 0xFF and unable to change.
- 基线：MSM8976.LA.1.0
- CR：944948
- 代码修改：
 - ADSP subsystem
 - 如果发现该问题，提交case要求fix

Audio common issues (3)

- 描述 : Device mute
- 复现步骤和现象 :
 - Monkey test, device mute
 - From kernel log, we can see time out error, for example
 - afe_close: AFE close failed -110
- 基线 : MSM8952.LA.1.0
- CR : 952945
- 代码修改 :
 - ADSP subsystem
 - `adsp_proc\core\buses\slimbus\src\common\SlimBusMaster.c`

Audio common issues (4)

- 描述 : modem_reset observed with FV5_SMECNS
- 复现步骤和现象 :
 - Crash when Call is dialed [only when Speaker in on]. If speaker is off no crash observed.
- 基线 : MSM8939.LA.2.0
- CR : NA
- 代码修改 :
 - Following parameter values are changes in HANDSFREE device.
 - VOICE_PARAM_FPECNS.aec_pf_num_spectral_bands_L16 0x20 --> Changes to 0x14
 - VOICE_PARAM_FPECNS.aec_pf_mela_L16Q8 0x1400 --> changed to 0xA00

Audio common issues (5)

- 描述 : direct_pcm output works abnormally
- 复现步骤和现象 :
 - 1. Settings->Sound & notification
 - 2. Adjust "Media volume" in sound item
 - Result: No sound can be heard
- 基线 : MSM8996.LA.1.0
- CR : 944878, 946670, 933740
- 代码修改 :
 - 如有发现该问题创建case , 申请修改

Questions?

<https://support.cdmatech.com>

