



Migrate eMMC to phone (MT6575)



WCP2OSS3/SS6

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Reference modification (1/2)

■ Modification reference

– eMMC MCP

- EMI list update
- eMMC region layout update

Blue: 每次更换eMMC MCP都要update一次

– Project config

- Enable MTK_EMMC_SUPPORT
- Update EMMC_CHIP

– BoardConfig

- EXT4 img

– Kernel config

- Enable EXT4
- Disable CONFIG_MTK_MTD_NAND

Black: 第一次改nand为eMMC时做，之后再更换eMMC就不用做了

– Disable custom PMT

- Preloader & uboot

– Add MBR/EBR1/EBR2 partition

- Preloader/uboot

Reference modification (2/2)

- Modification reference
 - Uboot config header
 - MSDC host custom config
 - Remove MSDC_CD_PIN_EN & MSDC_REMOVABLE
 - Preloader/uboot/kernel
 - Init.rc
 - Mount ext4 fs
 - Normal & meta & factory mode
 - Vold
 - Indicate FAT partition num
 - eMMC factory entry
 - GFH_INFO_EMMC.txt (if security feature enabled)

Note

- 所有改动都可以参考
 - Project: mt6575_evb_emmc 对应的file
- 截图
 - 左侧为改前file
 - 右侧为改后file

eMMC feature option

- Mediatek/config/xxx/ProjectConfig.mk
 - Make sure
 - MTK_EMMC_SUPPORT = yes
 - Add EMMC_CHIP in
AUTO_ADD_GLOBAL_DEFINE_BY_NAME_VALUE
 - EMMC_CHIP = 4 (举例，如何填后面会介绍)

eMMC MCP

- eMMC region layout update
 - Mediatek/build/tools/ptgen/emmc_region.xls
 - Add new eMMC partiton layout
 - How to get the new eMMC partiton layout?

	A	B	C	D	E
1	Index	Region	SanDisk-SDIN5C1-4G	SanDisk-SDIN5C1-8G	Hynix-H9DP32A4 MCGR-4G
2	1	Boot1	1024	1024	2048
3	2	Boot2	1024	1024	2048
4	3	RPMB	128	128	2048
5	4	GP1			
6	5	GP2			
7	6	GP3			
8	7	GP4			
9	8	User	3563520	7757824	3784704

Project config

- Mediatek/config/xxx/ProjectConfig.mk
 - MTK_EMMC_SUPPORT = y
 - EMMC_CHIP = 4
 - '4' is the collum index in
mediatek/build/tools/ptgen/emmc_region.xls

	0	1	2	3	4
	A	B	C	D	E
1	Index	Region	SanDisk-SDIN5C1-4G	SanDisk-SDIN5C1-8G	Hynix-H9DP32A4 MCGR-4G
2	1	Boot1	1024	1024	2048
3	2	Boot2	1024	1024	2048
4	3	RPMB	128	128	2048
5	4	GP1			
6	5	GP2			
7	6	GP3			
8	7	GP4			
9	8	User	3563520	7757824	3784704

Boardconfig

- EXT4 img size
 - Mediatek/config/xxx/BoardConfig.mk

```
41
42 USE_CAMERA_STUB := true
43
44 TARGET_NO_FACTORYIMAGE := true
45
46 HAVE_HTC_AUDIO_DRIVER := true
47
48 #BOARD_USES_GENERIC_AUDIO := true
49 BOARD_USES_VXCH_AUDIO := true
```

```
41
42 # eMMC support
43 ifeq ($(MTK_EMMC_SUPPORT), yes)
44 TARGET_USERIMAGES_USE_EXT4 := true
45 endif
46
47 TARGET_USERIMAGES_SPARSE_EXT_DISABLED := true
48
49 USE_CAMERA_STUB := true
```


Kernel config

- Mediatek/config/xxx/autoconfig/kconfig/project
 - Enable EXT4

```

24 CONFIG_FS_POSIX_ACL=y
25 CONFIG_GPS=y
26 CONFIG_MTK_GPS=y
27 # CONFIG_MTK_NFC is not set
28 #
29 # Network testing
30 #
31 CONFIG_WIRELESS=y
32 CONFIG_WIRELESS_EXT=y
33 CONFIG_WEXT_CORE=y
34 CONFIG_WEXT_PROC=y
35 CONFIG_WEXT_PRIV=y

```

```

25 CONFIG_FS_POSIX_ACL=y
26
27 CONFIG_EXT4_FS=y
28 CONFIG_EXT4_USE_FOR_EXT23=y
29 CONFIG_EXT4_FS_XATTR=y
30 # CONFIG_EXT4_FS_POSIX_ACL is not set
31 # CONFIG_EXT4_FS_SECURITY is not set
32 CONFIG_EXT4_DEBUG=y
33 CONFIG_JBD2=y
34 # CONFIG_JBD2_DEBUG is not set
35
36 CONFIG_GPS=y

```

- Disable CONFIG_MTK_MTD_NAND

```

1689 CONFIG_MTK_MTD_NAND=y
1689 # CONFIG_MTK_MTD_NAND is not set

```

Enable msdc0 in kernel

- Mediatek/custom/xxx/kernel/core/src/board-custom.h

```
43 //=====
44 // #define CFG_DEV MSDC0
45 #define CFG_DEV MSDC1
```

```
43 //=====
44 #define CFG_DEV MSDC0
45 #define CFG_DEV MSDC1
```

```
56 */
57 #define CONFIG_MTK_COMBO_SDIO_SLOT (0) /* MSDC0 for temp use */
58 #else
59 #undef CONFIG_MTK_COMBO_SDIO_SLOT
```

```
56 */
57 #define CONFIG_MTK_COMBO_SDIO_SLOT (2)
58 #else
59 #undef CONFIG_MTK_COMBO_SDIO_SLOT
```

Make sure the SDIO slot is **NOT** index 0

Init.rc

- Android normal mode
 - Mediatek/config/xxx/init.rc

Need

95	mount yaffs2 mtd@system /system nandboot	95	mount ext4 /dev/block/mmcblk0p6 /system wait
96	mkdir /system/secro 0600 system system	96	mkdir /system/secro 0600 system system
97	# RIL need to do this before the folder /system changed to read only	97	# RIL need to do this before the folder /system changed to read only
98	chown radio system /system/etc/ril	98	chown radio system /system/etc/ril
99	chmod 0770 /system/etc/ril	99	chmod 0770 /system/etc/ril
100	chmod 0444 /system/etc/ril/oper.lis	100	chmod 0444 /system/etc/ril/oper.lis
101	mount yaffs2 mtd@system /system ro remount nandboot	101	mount ext4 /dev/block/mmcblk0p6 /system ro remount wait
102	mount yaffs2 mtd@userdata /data nosuid nodev nandboot	102	mount ext4 /dev/block/mmcblk0p3 /data nosuid nodev wait
103	mount yaffs2 mtd@cache /cache nosuid nodev nandboot	103	mount ext4 /dev/block/mmcblk0p2 /cache nosuid nodev wait
104	write /proc/bootprof "INIT:NAND:Mount_END"	104	write /proc/bootprof "INIT:NAND:Mount_END"
105		105	
106	on post-fs	106	on post-fs
107	# once everything is setup, no need to modify /	107	# once everything is setup, no need to modify /
108	mount rootfs rootfs / ro remount	108	mount rootfs rootfs / ro remount
109		109	
110	# We chown/chmod /data again so because mount is run as root + data	110	# We chown/chmod /data again so because mount is run as root + data
111	chown system system /data	111	chown system system /data
112	chmod 0771 /data	112	chmod 0771 /data
113		113	
114	# Same reason as /data above	114	# Same reason as /data above
115	chown system cache /cache	115	chown system cache /cache
116	chmod 0770 /cache	116	chmod 0770 /cache
117		117	
118	mkdir /cache/recovery 0770 system system	118	mkdir /cache/recovery 0770 system system
119		119	
120	# mount yaffs2 mtd@nvram /nvram nandboot	120	# mount yaffs2 mtd@nvram /nvram nandboot
121	mount yaffs2 mtd@secstatic /system/secro nandboot	121	mount ext4 /dev/block/mmcblk0p5 /system/secro wait
122	mount yaffs2 mtd@secstatic /system/secro ro remount nandboot	122	mount ext4 /dev/block/mmcblk0p5 /system/secro ro remount wait
123		123	

Init.rc

- Meta mode
 - Mediatek/config/xxx/advanced_meta_init.rc

Need

96	mount yaffs2 mtd@system /system nandboot	96	mount ext4 /dev/block/mmcblkOp6 /system wait
97		97	
98	mkdir /system/secro 0600 system system	98	mkdir /system/secro 0600 system system
99		99	
100	# RIL need to do this before the folder /system changed to read	100	# RIL need to do this before the folder /system changed to read
101	chown radio system /system/etc/ril	101	chown radio system /system/etc/ril
102	chmod 0770 /system/etc/ril	102	chmod 0770 /system/etc/ril
103	chmod 0444 /system/etc/ril/oper.lis	103	chmod 0444 /system/etc/ril/oper.lis
104	mount yaffs2 mtd@system /system ro remount nandboot	104	mount ext4 /dev/block/mmcblkOp6 /system ro remount wait
105	mount yaffs2 mtd@userdata /data nosuid nodev nandboot	105	mount ext4 /dev/block/mmcblkOp3 /data nosuid nodev wait
106	mount yaffs2 mtd@cache /cache nosuid nodev nandboot	106	mount ext4 /dev/block/mmcblkOp2 /cache nosuid nodev wait
107	write /proc/bootprof "INIT:NAND:Mount_END"	107	write /proc/bootprof "INIT:NAND:Mount_END"
108		108	
109	on post-fs	109	on post-fs
110	# once everything is setup, no need to modify /	110	# once everything is setup, no need to modify /
111	mount rootfs rootfs / ro remount	111	mount rootfs rootfs / ro remount
112	# We chown/chmod /data again so because mount is run as root + d	112	# We chown/chmod /data again so because mount is run as root +
113	chown system system /data	113	chown system system /data
114	chmod 0771 /data	114	chmod 0771 /data
115		115	
116	# Same reason as /data above	116	# Same reason as /data above
117	chown system cache /cache	117	chown system cache /cache
118	chmod 0770 /cache	118	chmod 0770 /cache
119		119	
120	mkdir /cache/recovery 0770 system system	120	mkdir /cache/recovery 0770 system system
121		121	
122	# mount yaffs2 mtd@nvram /nvram nandboot	122	# mount yaffs2 mtd@nvram /nvram nandboot
123	mount yaffs2 mtd@secstatic /system/secro nandboot	123	mount ext4 /dev/block/mmcblkOp5 /system/secro wait
124	mount yaffs2 mtd@secstatic /system/secro ro remount nandboot	124	mount ext4 /dev/block/mmcblkOp5 /system/secro ro remount wait

Init.rc

- Meta mode
 - Mediatek/config/xxx/meta_init.rc

Need

28	mount yaffs2 mtd@system /system nandboot	28	mount ext4 /dev/block/mmcblk0p6 /system
29		29	
30	# RIL need to do this before the folder /system changed to r	30	# RIL need to do this before the folder /system chang
31	chown radio system /system/etc/ril	31	chown radio system /system/etc/ril
32	chmod 0770 /system/etc/ril	32	chmod 0770 /system/etc/ril
33	chmod 0444 /system/etc/ril/oper.lis	33	chmod 0444 /system/etc/ril/oper.lis
34		34	
35	mount yaffs2 mtd@system /system ro remount nandboot	35	mount ext4 /dev/block/mmcblk0p6 /system ro remount
36		36	
37	# We chown/chmod /data again so because mount is run as root	37	# We chown/chmod /data again so because mount is run
38	mount yaffs2 mtd@userdata /data nosuid nodev nandboot	38	mount ext4 /dev/block/mmcblk0p3 /data nosuid nodev

Init.rc

- Factory mode
 - Mediatek/custom/xxx/factory/init.rc

Need

56	mount yaffs2 mtd@system /system nandboot	56	mount ext4 /dev/block/mmcblk0p6 /system wait
57	mkdir /system/secro 0600 system system	57	mkdir /system/secro 0600 system system
58	# RIL need to do this before the folder /system changed to read	58	# RIL need to do this before the folder /system changed to read
59	chown radio system /system/etc/ril	59	chown radio system /system/etc/ril
60	chmod 0770 /system/etc/ril	60	chmod 0770 /system/etc/ril
61	chmod 0444 /system/etc/ril/oper.lis	61	chmod 0444 /system/etc/ril/oper.lis
62	mount yaffs2 mtd@system /system ro remount nandboot	62	mount ext4 /dev/block/mmcblk0p6 /system ro remount wait
63	mount yaffs2 mtd@userdata /data nosuid nodev nandboot	63	mount ext4 /dev/block/mmcblk0p3 /data nosuid nodev wait
64	mount yaffs2 mtd@cache /cache nosuid nodev nandboot	64	mount ext4 /dev/block/mmcblk0p2 /cache nosuid nodev wait
65		65	
66	on post-fs	66	on post-fs
67	# once everything is setup, no need to modify /	67	# once everything is setup, no need to modify /
68	mount rootfs rootfs / ro remount	68	mount rootfs rootfs / ro remount
69		69	
70	# We chown/chmod /data again so because mount is run as root +	70	# We chown/chmod /data again so because mount is run as root +
71	chown system system /data	71	chown system system /data
72	chmod 0771 /data	72	chmod 0771 /data
73		73	
74	# Same reason as /data above	74	# Same reason as /data above
75	chown system cache /cache	75	chown system cache /cache
76	chmod 0770 /cache	76	chmod 0770 /cache
77		77	
78	mkdir /cache/recovery 0770 system system	78	mkdir /cache/recovery 0770 system system
79		79	
80	# mount yaffs2 mtd@nvram /nvram nandboot	80	# mount yaffs2 mtd@nvram /nvram nandboot
81	mount yaffs2 mtd@secstatic /system/secro nandboot	81	mount ext4 /dev/block/mmcblk0p5 /system/secro wait
82	mount yaffs2 mtd@secstatic /system/secro ro remount nandboot	82	mount ext4 /dev/block/mmcblk0p5 /system/secro ro remount wait
--		--	

Vold

- Indicate FAT partition num
 - Mediatek/config/xxx/vold.fstab

Need

16	# Mounts the first ext2 partition of the specified device	16	# Mounts the first ext2 partition
17	dev mount sdcard /mnt/sdcard auto /devices/platform/goldfish mmc.0 /	17	dev mount sdcard /mnt/sdcard 4 /devi
18		18	

eMMC factory entry

- Need change 3 files:
 - mediatek/custom/[project]/factory/inc/cust_mcard.h
 - mediatek/custom/[project]/factory/inc/cust.h
 - mediatek/custom/[project]/factory/factory.ini
- You can find source files in
 - ALPS.GB.TDFD.MP/mediatek/custom/xxx/factory/

eMMC factory entry

- mediatek/custom/[project]/factory/factory.ini

//ALPS_SW/MP/ALPS.GB.TDFD_MP/alps/mediatek/custom/lenovo73_gb/factory/factory.ini#1

// test item and test flow configuration

MenuItem=Keys;

MenuItem=Jogball;

MenuItem=OFN;

MenuItem=Touch Panel;

MenuItem=Backlight Level;

MenuItem=Nand Flash;

MenuItem=Memory Card;

MenuItem=SIM Detect;

MenuItem=Signaling Test;

MenuItem=Vibrator;

MenuItem=LED;

MenuItem=RTC;

MenuItem=Loopback;

MenuItem=Ringtone;

MenuItem=Receiver;

//ALPS_SW/MP/ALPS.GB.TDFD_MP/alps/mediatek/custom/lenovo73_gb/factory/factory.ini#2

1 // test item and test flow configuration

2 MenuItem=Keys;

3 MenuItem=Jogball;

4 MenuItem=OFN;

5 MenuItem=Touch Panel;

6 MenuItem=Backlight Level;

7 MenuItem=Nand Flash;

8 MenuItem=eMMC;

9 MenuItem=Memory Card;

10 MenuItem=SIM Detect;

11 MenuItem=Signaling Test;

12 MenuItem=Vibrator;

13 MenuItem=LED;

14 MenuItem=RTC;

15 MenuItem=Loopback;

16 MenuItem=Ringtone;

Ext4 naming mount

- Init.rc
- Mediatek/custom/xxx/kernel/core/src/board.c

Need

recovery.fstab

- Recovery mode
 - [alps/mediatek/config/project/recovery.fstab](#)

NEED

#	mount point	fstype	device	[device2]
/boot	mtd	boot		
/cache	yaffs2	cache		
/data	yaffs2	userdata		
/misc	mtd	misc		
/recovery	mtd	recovery		
/sdcard	vfat	/dev/block/mmcblk0p1	/dev/block/mmcblk0	
/system	yaffs2	system		

#	mount point	fstype	device	[device2]
/boot	emmc	boot		
/cache	ext4	/dev/block/mmcblk0p2		
/data	ext4	/dev/block/mmcblk0p3		
/misc	emmc	misc		
/recovery	emmc	recovery		
/sdcard	vfat	/dev/block/mmcblk0p4		
/system	ext4	/dev/block/mmcblk0p6		



Q & A



Notes

- Make sure
 - EMI setting right
 - GPIO setting right

Q&A 1

■ Q: Build error

```
2011/11/08 16:57:24 ptgening ...
LOG: out/target/product/lenovo75_ptgen.log
==> [FAIL] 2011/11/08 16:57:24

[mtksws022:alps]$ cat out/target/product/lenovo75_ptgen.log
Can't call method "get_cell" on an undefined value at mediatek/build/tools/ptgen/ptgen.pl
line 840.
Os = linux

argument:
MT6575 no mediatek/build/tools/ptgen/partition_table.xls mediatek/custom/lenovo75/common
mediatek/source/misc/ 4K yes 4 mediatek/config/lenovo75/configs/EMMC_partition_size.mk
PLATFORM=MT6575
LCA_PRJ=no
PART_TABLE_FILENAME=mediatek/build/tools/ptgen/partition_table.xls
SCAT_NAME=mediatek/source/misc/
PARTITION_DEFINE_H_NAME=mediatek/custom/lenovo75/common
EMMC_SUPPORT=yes
EMMC_CHIP= 4
EMMC_PART_SIZE_LOCATION=mediatek/config/lenovo75/configs/EMMC_partition_size.mk
SCAT_NAME=mediatek/source/misc/MT6575_Android_scatter.txt
PARTITION_DEFINE_H_NAME=mediatek/custom/lenovo75/common/partition_define.h
SHEET_NAME=MT6575 no 4K emmc
EMMC_REGION_FILENAME=mediatek/build/tools/ptgen/emmc_region.xls
mbr start is 2176
get_sheet failed? MT6575 no 4K emmc
```

- A: Mediatek/build/tools/ptgen/partition_table.xls
 - Rename sheet 'MT6575 no emmc sheet '
 - → MT6575 no **4K** emmc sheet?

Q&A 2

- Q: How to adjust Multi-binary image alignment (e.g. 512KB)
 - Align column 'size(KB)' in partition_table.xls

	A	B	C	D	E	F	G	H	I	J
1	Index	Partition	Type	Start	End	Size	Size (KB)	Size2	Size(HEX)	DL
2	1	PRELOADER	Raw data	#NAME?	#NAME?	256 KB	256	262144	#NAME?	1
3	2	DSP_BL	Raw data	#NAME?	#NAME?	768KB	768	786432	#NAME?	1
4	3	MBR	Raw data	#NAME?	#NAME?	16KB	512	524288	#NAME?	1
5	4	EBR1	Raw data	#NAME?	#NAME?	368KB	512	524288	#NAME?	1
6	5	NVRAM	YAFFS2	#NAME?	#NAME?	3 MB	3072	3145728	#NAME?	0
7	6	SECCFG	Raw data	#NAME?	#NAME?	128 KB	512	524288	#NAME?	0
8	7	UBOOT	Raw data	#NAME?	#NAME?	384 KB	512	524288	#NAME?	1
9	8	BOOTIMG	Raw data	#NAME?	#NAME?	6 MB	6144	6291456	#NAME?	1
10	9	RECOVERY	Raw data	#NAME?	#NAME?	6 MB	6144	6291456	#NAME?	1
11	10	SEC_RO	EXT4	#NAME?	#NAME?	6 MB	6144	6291456	#NAME?	1
12	11	MISC	Raw data	#NAME?	#NAME?	384KB	512	524288	#NAME?	0
13	12	LOGO	Raw data	#NAME?	#NAME?	3 MB	3072	3145728	#NAME?	1
14	13	EXPDB	Raw data	#NAME?	#NAME?	640 KB	1024	1048576	#NAME?	0
15	14	EBR2	Raw data	#NAME?	#NAME?	16 KB	512	524288	#NAME?	1
16	15	ANDROID	EXT4	#NAME?	#NAME?	200MB	256000	262144000	#NAME?	1
17	16	CACHE	EXT4	#NAME?	#NAME?	60 MB	61440	62914560	#NAME?	1
18	17	USRDATA	EXT4	#NAME?	END	128 MB	131072	134217728	#NAME?	1
19	18	BMTPOOL	Raw data	FFFF0050	0	50	50	50	0	0
20	19	END	Raw data	0	#####	#####	0	339	0	0
21						User data Rem	-83	MB (256MB)		
22							173	MB (512MB)		

Q&A 2

- Adjust MBR/EBR align to 512KB
 - Mediatek/build/tools/ptgen/ptgen.pl
 - Previous : offset 1 cylinder = 0x20 blocks
 - Now: offset 512KB = 32 cylinder = 0x400 blocks

Line	Code (Previous)	Code (Now)
524	#MBR	#MBR
525	print "MBR start is \$mbr_start\n";	print "MBR start is \$mbr_start\n";
526	\$BR[0][1][0][1] = \$p1_start_block = 0x20;	\$BR[0][1][0][1] = \$p1_start_block = 0x400;
527	\$BR[0][1][1][1] = \$p2_start_block;	\$BR[0][1][1][1] = \$p2_start_block;
528	\$BR[0][1][2][1] = \$p3_start_block;	\$BR[0][1][2][1] = \$p3_start_block;
529	\$BR[0][1][3][1] = \$p4_start_block = \$p3_start_block	\$BR[0][1][3][1] = \$p4_start_block = \$p3_start_block
530	print "P1 start is \$p1_start_block\n";	print "P1 start is \$p1_start_block\n";
531	print "P2 start is \$p2_start_block\n";	print "P2 start is \$p2_start_block\n";
532	print "P3 start is \$p3_start_block\n";	print "P3 start is \$p3_start_block\n";
533	print "P4 start is \$p4_start_block\n";	print "P4 start is \$p4_start_block\n";
534	\$BR[0][1][0][2] = \$p1_size_block = \$p2_start_block -	\$BR[0][1][0][2] = \$p1_size_block = \$p2_start_block -
535	\$BR[0][1][1][2] = \$p2_size_block;	\$BR[0][1][1][2] = \$p2_size_block;
536	\$BR[0][1][2][2] = \$p3_size_block;	\$BR[0][1][2][2] = \$p3_size_block;
537	\$BR[0][1][3][2] = \$p4_size_block = \$eMMC_size_block	\$BR[0][1][3][2] = \$p4_size_block = \$eMMC_size_block
538	print "P1 size is \$p1_size_block\n";	print "P1 size is \$p1_size_block\n";
539	print "P2 size is \$p2_size_block\n";	print "P2 size is \$p2_size_block\n";
540	print "P3 size is \$p3_size_block\n";	print "P3 size is \$p3_size_block\n";
541	print "P4 size is \$p4_size_block\n";	print "P4 size is \$p4_size_block\n";
542	print "eMMC size is \$eMMC_size_block\n";	print "eMMC size is \$eMMC_size_block\n";
543		
544	print "P5 start is \$p5_start_block\n";	print "P5 start is \$p5_start_block\n";
545	print "P5 size is \$p5_size_block\n";	print "P5 size is \$p5_size_block\n";
546	print "P6 start is \$p6_start_block\n";	print "P6 start is \$p6_start_block\n";
547	print "P6 size is \$p6_size_block\n";	print "P6 size is \$p6_size_block\n";
548	#EBR1	#EBR1
549	\$BR[1][1][0][1] = \$p5_start_block - \$p1_start_block;	\$BR[1][1][0][1] = \$p5_start_block - \$p1_start_block;
550	\$BR[1][1][0][2] = \$p5_size_block;	\$BR[1][1][0][2] = \$p5_size_block;
551	\$BR[1][1][1][1] = \$p6_start_block - 0x20 - 0x20;	\$BR[1][1][1][1] = \$p6_start_block - 0x400 - 0x400;
552	\$BR[1][1][1][2] = \$p6_size_block + 0x20;	\$BR[1][1][1][2] = \$p6_size_block + 0x400;
553		
554	#EBR2	#EBR2
555	\$BR[2][1][0][1] = 0x20;	\$BR[2][1][0][1] = 0x400;
556	\$BR[2][1][0][2] = \$p6_size_block;	\$BR[2][1][0][2] = \$p6_size_block;
557		



Appendix



eMMC partition layout

- Use 'Memory test' to get eMMC partition
 - Unit : KB

	A	B	C	D	E
1	Index	Region	SanDisk-SDIN5C1-4G	SanDisk-SDIN5C1-8G	Hynix-H9DP32A4JJMCGR-4G
2	1	Boot1	1024	1024	2048
3	2	Boot2	1024	1024	2048
4	3	RPMB	128	128	2048
5	4	GP1			
6	5	GP2			
7	6	GP3			
8	7	GP4			
9	8	User	3563520	7757824	3778560

A
 B
 C
 D-(A+B+C)

Size = 0x04000000 (64MB/512Mb)
 NAND Flash:
 ERROR: NAND Flash was not detected!
 EMMC :
 EMMC_PART_BOOT1 Size = 0x00200000 (2MB)
 EMMC_PART_BOOT2 Size = 0x00200000 (2MB)
 EMMC_PART_RPMB Size = 0x00200000 (2MB)
 EMMC_PART_GP1 Size = 0x00000000 (0MB)
 EMMC_PART_GP2 Size = 0x00000000 (0MB)
 EMMC_PART_GP3 Size = 0x00000000 (0MB)
 EMMC_PART_GP4 Size = 0x00000000 (0MB)
 EMMC_PART_USER Size = 0xE7000000 (0MB)

A
 B
 C
 D

RAM Test

100%

100472 Bytes / 8.92 KBps EMMC USB 921600 bps 0:19 sec
 DA Download All With Battery (High Speed)