Mango220 Android How to compile and Transfer image to Target

http://www.mangoboard.com/ http://cafe.naver.com/embeddedcrazyboys Crazy Embedded Laboratory

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Document History

Revision	Date	Change note

1.	Release Note 2012 03 14오류!			책갈피가	정의되어	있지	않습니다.
	1.1.	Base 코드	오류!	책갈피가	정의되어	있지	않습니다.
	1.2.	수정사항	오류!	책갈피가	정의되어	있지	않습니다.

1. 컴파일 and How to transfer on targat

Mango220 build and boot # Environment http://cafe.naver.com/embeddedcrazyboys/22475

#Compile [u-boot compile]

./build_uboot clean ./build_uboot config ./build_uboot

[kernel compile] -----SD/MMC Kernel Config ------#sdmmc boot and 7inch cap touch 1024x600 , 5M CAM ./build_kernel clean [CAM_A] ./build_kernel defconfig mango220_android_sdmmc_7inch_1024_600_mt9p111_5M_CAM_A_defconfig [CAM_B] ./build_kernel defconfig mango220_android_sdmmc_7inch_1024_600_mt9p111_5M_CAM_B_defconfig ./build_kernel

#sdmmc boot and 7inch cap touch 1024x600 , TVP5150 ./build_kernel clean

[CAM_A]

./build_kernel defconfig mango220_android_sdmmc_7inch_1024_600_tvp5150_CAM_A_defconfig [CAM_B] ./build_kernel defconfig mango220_android_sdmmc_7inch_1024_600_tvp5150_CAM_B_defconfig

./build_kernel

 $\# sdmmc \ boot \ and \ 7 inch \ cap \ touch \ 1024x600$, SR130PC10 1.3M ./build_kernel clean

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[CAM_A] ./build_kernel mango220_android_sdmmc_7inch_1024_600_sr130pc10_1_3M_CAM_A_defconfig	defconfig				
[CAM_B] ./build_kernel mango220_android_sdmmc_7inch_1024_600_sr130pc10_1_3M_CAM_B_defconfig	defconfig				
./build_kernel					
eMMC Kernel Config					
<pre>#eMMC boot and 7inch cap touch 1024x600 , 5M CAM ./build_kernel clean [CAM_A] ./build_kernel defconfig mango220_android_emmc_7inch_1024_600_mt9p111_5M_CAM_A_defconfig [CAM_B] ./build_kernel defconfig mango220_android_emmc_7inch_1024_600_mt9p111_5M_CAM_B_defconfig ./build_kernel</pre>					
#eMMC boot and 7inch cap touch 1024x600 , TVP5150 ./build_kernel clean					
[CAM_A] ./build_kernel defconfig mango220_android_emmc_7inch_1024_600_tvp5150_CAM_A_defconf [CAM_B] ./build_kernel defconfig mango220_android_emmc_7inch_1024_600_tvp5150_CAM_B_defconf	ig				
./build_kernel					

#eMMC boot and 7inch cap touch 1024x600 , SR130PC10 1.3M ./build_kernel clean

[CAM_A] ./build_kernel

defconfig

mango220_android_emmc_7inch_1024_600_SR130PC10_1_3M_CAM_A_defconfig [CAM_B] ./build_kernel mango220_android_emmc_7inch_1024_600_SR130PC10_1_3M_CAM_B_defconfig

defconfig

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./build_kernel

[android compile] tar xf android-jb411-xxx.tgz tar xf android-jb411-xxx-prebuilts.tgz

[SDMMC boot]
\$ cd android-jb411
\$ vi device/crazyboys/mango220/BoardConfig.mk
BOARD_USES_EMMC := false
#BOARD_USES_EMMC := true

수정 후 컴파일

[EMMC boot]
\$ cd android-jb411
\$ vi device/crazyboys/mango220/BoardConfig.mk
#BOARD_USES_EMMC := false
BOARD_USES_EMMC := true

수정 후 컴파일

How to compile

./build_android.sh

#SD Boot 최초 한번 SD card를 linux pc에 삽입 #df 명령으로 디바이스 확인 # cd image #How To Fusing \$ dmesg | tail [12403.632015] usb 2-5: new high-speed USB device number 25 using ehci_hcd [12403.856263] hub 2-0:1.0: unable to enumerate USB device on port 5 [12483.752014] usb 2-5: new high-speed USB device number 26 using ehci_hcd [12483.976252] hub 2-0:1.0: unable to enumerate USB device on port 5 [12513.801490] sd 9:0:0:0: [sdd] 15644672 512-byte logical blocks: (8.01 GB/7.45 GiB) [12513.802983] sd 9:0:0:0: [sdd] No Caching mode page present [12513.807109] sd 9:0:0:0: [sdd] No Caching mode page present [12513.807109] sd 9:0:0:0: [sdd] No Caching mode page present [12513.807113] sd 9:0:0:0: [sdd] Assuming drive cache: write through [12513.807113] sd 9:0:0:0: [sdd] Assuming drive cache: write through [12513.808249] sdd: sdd1 sdd2 sdd3 sdd4

#image

sudo ./sdwriter sdd 220 bin

#Boot mode
SD CH2 : Off[1], ON, Off, Off, Off, Off[6]
eMMC CH4: Off[1], Off, On, Off, On, Off[6]

[Linux host pc ubuntu 12.0.4] [icanjji@icanjji-pc image]\$ lsusb Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub Bus 001 Device 002: ID 8087:0024 Intel Corp. Integrated Rate Matching Hub Bus 002 Device 002: ID 8087:0024 Intel Corp. Integrated Rate Matching Hub Bus 001 Device 003: ID 05e3:0716 Genesys Logic, Inc. USB 2.0 Multislot Card Reader/Writer Bus 002 Device 005: ID 18d1:0002 Google Inc.

Mango220 <-> usb otg <-> Linux PC 연결 후

"lsusb" 명령으로 드라이버 인식을 확인 합니다.

[SD/MMC and eMMC fusing command] ## 8GB fdisk -c 0 500 1000 300 fatformat mmc 0:1 fastboot

Host PC sudo ./fastboot flash fwbl1 E4412_S.bl1.SMDK.MR3.bin sudo ./fastboot flash bl2 E4412_S.bl2.SMDK.MR3.bin.signed sudo ./fastboot flash bootloader u-boot.bin sudo ./fastboot flash tzsw E4412_S.tzsw.SMDK.MR3.bin.signed

sudo ./fastboot flash kernel zImage sudo ./fastboot flash ramdisk ramdisk-uboot.img sudo ./fastboot -w sudo ./fastboot flash system system.img

sudo ./fastboot flash kernel zImage;sudo ./fastboot flash ramdisk ramdisk-uboot.img;sudo ./fastboot - w;sudo ./fastboot flash system system.img

[env]

setenv bootcmd "movi read kernel 0 40008000;movi read rootfs 0 41000000 100000;bootm 40008000 41000000"

Window PC only

드라이버 설치 image 디렉토리)

adb_usb_driver 디렉토리 mango220-how-to-adb-driver.pdf

[eMMC only start] Boot switch : 3, 5 ON SD/MMC card insert ## u-boot

emmc partition 0 1 0 mmc erase boot 0 0 0; mmc erase user 0 0 0 [eMMC only end]

[SD/MMC and eMMC fusing command] ## 8GB fdisk -c 0 500 1000 300 fatformat mmc 0:1 fastboot

image 디렉토리에서 dos command 실행

Host PC fastboot flash fwbl1 E4412_S.bl1.SMDK.MR3.bin fastboot flash bl2 E4412_S.bl2.SMDK.MR3.bin.signed fastboot flash bootloader u-boot.bin fastboot flash tzsw E4412_S.tzsw.SMDK.MR3.bin.signed

fastboot flash kernel zImage fastboot flash ramdisk ramdisk-uboot.img fastboot -w fastboot flash system system.img

u-boot ethernet

eth1addr 변수를 꼭 지정하고 해야합니다. ex) setenv eth1addr 00:40:5c:26:0a:5c

인터페이스는 다음과 같이 선택합니다. 0번 포트 선택: setenv ethact smc911x-0 ## fusing via tftp

[u-boot ip]

setenv ipaddr 192.168.3.20; setenv serverip 192.168.3.9; setenv gatewayip 192.168.3.1; setenv netmask 255.255.255.0

[bootloader fusing]

==> set boot mode to eMMC CH0

tftp 41000000 E4412_S.bl1.SMDK.MR3.bin; emmc open 0; movi write zero fwbl1 0 41000000; emmc close 0

tftp 41000000 E4412_S.bl2.SMDK.MR3.bin.signed; emmc open 0; movi write zero bl2 0 41000000; emmc close 0

tftp 41000000 u-boot.bin; emmc open 0; movi write zero u-boot 0 41000000; emmc close 0 tftp 42000000 E4412_S.tzsw.SMDK.MR3.bin.signed; emmc open 0; movi write zero tzsw 0 42000000; emmc close 0

[Kernel fusing] tftp 41000000 zImage; movi write kernel 0 41000000

[tftp boot]

setenv bootcmd "tftp 40008000 zImage ;movi read rootfs 0 41000000 100000;bootm 40008000 41000000"

[SD Env]

setenv bootcmd "movi read kernel 0 40008000;movi read rootfs 0 41000000 100000;bootm 40008000 41000000"