(S5PV210) Mango210 Qt4 Filesystem 포팅 가이드

베이스 소스

buildroot-2012.05 ,

kernel : 3.0.8

8GB MMC Card 준비 (테스트 Transcend 8GB 6 Class)

PC Linux PC 에 삽입

[root@HP-note-jji sdwriter]# **df**

Filesystem 1K-blocks Used Available Use% Mounted on

/dev/sda5 115345960 12046528 97440104 12% /

udev 886452 12 886440 1% /dev

tmpfs 358104 900 357204 1% /run

none 5120 0 5120 0% /run/lock

none 895260 76 895184 1% /run/shm

**/dev/sdb2 231808 147592 84216 64% /media/57f8f4bc-abf4-655f-bf67-946fc0f9f25b**

**/dev/sdb1 7019508 37488 6982020 1% /media/0000-3333**

**/dev/sdb4 103328 4152 93844 5% /media/af681c35-4e43-ba0f-26dc-92a8ff743183**

**/dev/sdb3 354284 75728 260268 23% /media/64f2d0be-02cd-6e99-a1a7-0d747940ac4e**

192.168.0.113:/home/icanjji/work/ 1746752512 629174272 1030156288 38% /media/113

“df” 명령으로 파티션 확인

[root@HP-note-jji sdwriter]# **sudo ./sdwriter sdb 210**

Mango SD Writer V1.0

Unmount all : success

Partition Create : success

Write Mango210 BL1 : success

Write Mango210 Uboot : success

Write Mango210 Kernel : success

Android Filesystem Create : success

Gnome Filesystem Create : success

Unmount all : success

Success

## How to Compile

$ cd uboot/

$ ./ build\_uboot

커널

$ ./build\_kernel defconfig mango210\_10\_1inch\_mrvl8787\_defconfig

$ ./build\_kernel

## build root 컴파일

[icanjji@crz-server113 buildroot-2012.05]$ cp mango210\_defconfig .config

[icanjji@crz-server113 buildroot-2012.05]$ ./build\_rootfs.sh

부팅 모드는 SD Boot 모드로 합니다.

2,3번 On

Linux tool 복사

image\bl1\_image\

에

# cp smdk-usbdl /bin/

## u-boot Write 방법

u-boot 실행 후

MANGO210 # dnw 21000000 ; movi write u-boot 21000000

Host PC에서 (Linux)

[root@HP-note-jji sdwriter]# smdk-usbdl -f u-boot.bin -a 21000000

## kernel Write 방법

u-boot 터미널 창에서

MANGO210 # dnw 21000000 ; movi write kernel 21000000

Host PC (Linux)

[root@HP-note-jji sdwriter]# smdk-usbdl -f zImage -a 21000000

u-boot에서 환경 설정

setenv bootcmd 'movi read kernel 20008000;bootm 20008000'

setenv bootargs "root=/dev/mmcblk0p2 rootfstype=ext3 console=ttySAC1,115200 rootwait"

부팅 합니다.

Qt4 example 테스트 방법

터치 테스트 방법

부팅 후

# cat /proc/bus/input/devices

I: Bus=0019 Vendor=0001 Product=0001 Version=0100

N: Name="gpio-keys"

P: Phys=gpio-keys/input0

S: Sysfs=/devices/platform/gpio-keys.0/input/input0

U: Uniq=

H: Handlers=kbd event0

B: PROP=0

B: EV=3

B: KEY=10000 40000000

**I: Bus=0018 Vendor=0000 Product=0000 Version=0000**

**N: Name="s3c\_ts"**

**P: Phys=**

**S: Sysfs=/devices/virtual/input/input1**

**U: Uniq=**

**H: Handlers=kbd mouse0 event1**

**B: PROP=0**

**B: EV=b**

**B: KEY=400 0 4 0 2000000 0 40000800 c0040 0 0 0**

**B: ABS=2650000 1000003**

**export QWS\_MOUSE\_PROTO="tslib:/dev/input/event1”**

**export TSLIB\_TSEVENTTYPE=INPUT
export TSLIB\_TSDEVICE=/dev/input/event1
export TSLIB\_CALIBFILE=/etc/pointercal
export TSLIB\_CONFFILE=/etc/ts.conf**

**export TSLIB\_PLUGINDIR=/usr/lib/ts**

**export LD\_LIBRARY\_PATH=/usr/lib:/lib**

**export QWS\_SIZE=1280\*800**

**export QWS\_DISPLAY=Transformed:Rot270:VNC:LinuxFb**

**보정 방법**

**# ts\_calibrate**

**# cat /etc/pointercal**

**66319 480 -1649264 -227 66371 -291440 65536 1280 80080 800**

**# /usr/share/qt/examples/touch/pinchzoom/pinchzoom –qws**

**수행하면 됩니다.**

**디스플레이 관련 (Rotation)**

**export QWS\_DISPLAY=Transformed:Rot270:VNC:LinuxFb**

**화면 로테이션 관련**

**Buildroot에서**

**qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq Graphics drivers qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqk**

 **x Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are x**

 **x hotkeys. Pressing <Y> selectes a feature, while <N> will exclude a feature. Press x**

 **x <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] feature is selected [ ] x**

 **x feature is excluded x**

 **x lqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqk x**

 **x x [\*] Linux Framebuffer x x**

 **x x [\*] Transformed x x**

 **x x [\*] Qt Virtual Framebuffer x x**

 **x x [\*] VNC x x**

 **x x [\*] multiscreen x x**

**x x \*\*\* directfb Qt driver not available (need directfb) \*\*\***

**을 configuration합니다.**

I recompiled qt-embedded with the option

-qt-gfx-transformed

and when I launch the application I use the command

./myapp -qws -display transformed:Rot90

|  |
| --- |
| **디버깅** |

**커널에**

**include/linux/input.h:#define EV\_VERSION 0x010000**

**에 정의가 되어 있다.**

**하지만, buildroot는 EV\_VERSION이 0x010001**

**이다.**

**커널을 3.0.8 로 업그레이드 했다.**

**커널에서 10.1” 드라이버를 수정을 했다.**

**“drivers/input/touchscreen/mango\_ft5x06\_ts.c”**

**static void ft5x0x\_report\_value(void) 함수에서 추가**

**…..**

**if (event->touch\_point) {**

 **input\_report\_abs(data->input\_dev, ABS\_X, event->au16\_x[0]);**

 **input\_report\_abs(data->input\_dev, ABS\_Y, event->au16\_y[0]);**

 **}**

 input\_sync(data->input\_dev);

 if (event->touch\_point == 0) {

 ft5x0x\_ts\_release();

 return ;

 }

}

####

static int

ft5x0x\_ts\_probe(struct i2c\_client \*client, const struct i2c\_device\_id \*id)

{

…

set\_bit(KEY\_VOLUMEDOWN, ft5x0x\_ts->input\_dev->keybit);

 **/\* For single touch \*/// CRZ**

 **input\_set\_abs\_params(input\_dev, ABS\_X, 0, SCREEN\_MAX\_X, 0, 0);**

 **input\_set\_abs\_params(input\_dev, ABS\_Y, 0, SCREEN\_MAX\_Y, 0, 0);**

**#####**

**부팅 시 자동으로 환경 설정 위해서 파일 시스템에**

**/etc/profile.d**

**에 만들자**

**Qt\_config.sh 이름으로 다시 만들자**

**# mkdir /etc/profile.d**

**# vi /etc/profile.d/Qt\_config.sh**

|  |
| --- |
| **#!/bin/sh****echo "Qt4 TSlib Environment Start"****echo "-----------------------------"****export QWS\_MOUSE\_PROTO="tslib:/dev/input/event1"****export TSLIB\_TSEVENTTYPE=INPUT****export TSLIB\_TSDEVICE=/dev/input/event1****export TSLIB\_CALIBFILE=/etc/pointercal****export TSLIB\_CONFFILE=/etc/ts.conf****export TSLIB\_PLUGINDIR=/usr/lib/ts****export LD\_LIBRARY\_PATH=/usr/lib:/lib****export QWS\_SIZE=1280\*800****export QWS\_DISPLAY=Transformed:Rot270:VNC:LinuxFb** |

**# chmod 755 /etc/profile.d/Qt\_config.sh**

**리부팅 후 이상없이 동작한다.**

**mango210 login: root**

**Qt4 TSlib Environment Start**

**-----------------------------**

**# env**

**HISTFILESIZE=1000**

**INPUTRC=/etc/inputrc**

**TSLIB\_TSDEVICE=/dev/input/event1**

**USER=root**

**HOSTNAME=mango210**

**LD\_LIBRARY\_PATH=/usr/lib:/lib**

**TSLIB\_TSEVENTTYPE=INPUT**

**HOME=/root**

**QWS\_SIZE=1280\*800**

**PAGER=/bin/more**

**PS1=#**

**TSLIB\_PLUGINDIR=/usr/lib/ts**

**LOGNAME=root**

**TERM=vt100**

**PATH=/bin:/sbin:/usr/bin:/usr/sbin:/usr/bin/X11:/usr/local/bin**

**TSLIB\_CONFFILE=/etc/ts.conf**

**DMALLOC\_OPTIONS=debug=0x34f47d83,inter=100,log=logfile**

**HISTSIZE=1000**

**SHELL=/bin/sh**

**QWS\_DISPLAY=Transformed:Rot270:VNC:LinuxFb**

**PWD=/root**

**TSLIB\_CALIBFILE=/etc/pointercal**

**QWS\_MOUSE\_PROTO=tslib:/dev/input/event1**

**EDITOR=/bin/vi**