

3. usb keyboard를 끼운다.

현재 고도리가 장착한 usb keyboard는 ps/2 keyboard와 ps/2 mouse를 장착할 수 있는 usb 젠더이다.

즉, input device가 두개 잡힌다.

해서 총 4개가 잡히게 되고

```
/dev/event0 : usb keyboard  
/dev/event1 : usb mouse  
/dev/event2 : s3c2440 button  
/dev/event3 : s3c2440 touch screen
```

4. 다음과 같은 로그가 나온다.

Starting kernel ...

```
Linux version 2.6.13-h1940-aesop2440 (root@localhost.localdomain) (gcc version 3.3.4) #34 Wed  
Feb 15 15:32:28 KST 2006  
CPU: ARM920Tid(wb) [41129200] revision 0 (ARMv4T)  
Machine: aESOP-2440  
Memory policy: ECC disabled, Data cache writeback  
CPU S3C2440A (id 0x32440001)  
S3C2440: core 399.651 MHz, memory 133.217 MHz, peripheral 66.608 MHz  
S3C2410 Clocks, (c) 2004 Simtec Electronics  
CPU0: D VIVT write-back cache  
CPU0: I cache: 16384 bytes, associativity 64, 32 byte lines, 8 sets  
CPU0: D cache: 16384 bytes, associativity 64, 32 byte lines, 8 sets  
Built 1 zonelists  
Kernel command line: root=/dev/nfs rw  
nfsroot=172.16.1.200:/scratchbox/users/aesop/targets/AESOP mem=63M  
ip=172.16.1.101:172.16.1.200:172.16.1.1:255.255.255.0::eth0:off console=ttySAC0,115200n81  
irq: clearing subpending status 00000002  
PID hash table entries: 256 (order: 8, 4096 bytes)  
timer tcon=00500000, tcnt d8d2, tcfg 00000200,00000000, usec 0000170f  
Console: colour dummy device 80x30  
Dentry cache hash table entries: 8192 (order: 3, 32768 bytes)  
Inode-cache hash table entries: 4096 (order: 2, 16384 bytes)  
Memory: 63MB = 63MB total  
Memory: 60800KB available (2330K code, 584K data, 116K init)  
Mount-cache hash table entries: 512  
CPU: Testing write buffer coherency: ok  
NET: Registered protocol family 16  
S3C2440: Initialising architecture  
S3C2440: IRQ Support  
S3C2440: Clock Support, UPLL 47.980 MHz  
SCSI subsystem initialized  
usbcore: registered new driver hub  
S3C2410 DMA Driver, (c) 2003-2004 Simtec Electronics  
DMA channel 0 at c4000000, irq 33  
DMA channel 1 at c4000040, irq 34  
DMA channel 2 at c4000080, irq 35  
DMA channel 3 at c40000c0, irq 36  
NetWinder Floating Point Emulator V0.97 (double precision)  
yaffs Feb 15 2006 12:37:26 Installing.  
Initializing Cryptographic API  
s3c2410 Backlight Driver Initialized.  
Console: switching to colour frame buffer device 96x34  
S3C24X0 fb0: s3c2410fb frame buffer device initialize done  
S3C24X0 fb1: s3c2410fb1 frame buffer device initialize done  
S3C2410/2440 Framebuffer Change driver, (c) 2005 aESOP-embedded  
GPIO L3 bus interface for S3C2440, installed  
S3C2410 RTC, (c) 2004 Simtec Electronics  
s3c2410-rtc s3c2410-rtc: rtc disabled, re-enabling  
s3c2410_serial0 at MMIO 0x50000000 (irq = 70) is a S3C2440  
s3c2410_serial1 at MMIO 0x50004000 (irq = 73) is a S3C2440  
s3c2410_serial2 at MMIO 0x50008000 (irq = 76) is a S3C2440  
io scheduler noop registered  
io scheduler anticipatory registered  
io scheduler deadline registered  
io scheduler cfq registered  
RAMDISK driver initialized: 16 RAM disks of 4096K size 1024 blocksize
```

```
loop: loaded (max 8 devices)
nbd: registered device at major 43
bcon3 = 0000 0000 0000 0000 0001 1111 0100 1100
cs89x0:cs89x0_probe(0x0)
PP_addr=0x3000
cs89x0.c: v2.4.3-pre1 Russell Nelson <nelson@crynwr.com>, Andrew Morton <andrewm@uow.edu.au>
eth0: cs8900 rev J found at 0xf8000300
cs89x0: Extended EEPROM checksum bad and no Cirrus EEPROM, relying on command line
cs89x0 media RJ-45, IRQ 53, programmed I/O, MAC 00:00:c0:ff:ee:08
cs89x0_probel() successful
bcon3 = 0000 0000 0000 0000 0001 1111 0100 1100
cs89x0:cs89x0_probe(0x0)
cs89x0: request_region(0xf8000300, 0x10) failed
cs89x0: no cs8900 or cs8920 detected. Be sure to disable PnP with SETUP
S3C24XX NAND Driver, (c) 2004 Simtec Electronics
s3c2410-nand: mapped registers at c4300000
s3c2410-nand: timing: Tacls 13ns, Twrph0 66ns, Twrph1 39ns
NAND device: Manufacturer ID: 0xec, Chip ID: 0x76 (Samsung NAND 64MiB 3,3V 8-bit)
Scanning device for bad blocks
Bad eraseblock 659 at 0x00a4c000
Creating 1 MTD partitions on "NAND 64MiB 3,3V 8-bit":
0x00000000-0x04000000 : "Total nand"
usbmon: debugfs is not available
s3c2410-ohci s3c2410-ohci: S3C24XX OHCI
s3c2410-ohci s3c2410-ohci: new USB bus registered, assigned bus number 1
s3c2410-ohci s3c2410-ohci: irq 42, io mem 0x49000000
hub 1-0:1.0: USB hub found
hub 1-0:1.0: 2 ports detected
Initializing USB Mass Storage driver...
usbcore: registered new driver usb-storage
USB Mass Storage support registered.
usb 1-1: new low speed USB device using s3c2410-ohci and address 2
input: USB HID v1.10 Keyboard [CHESEN PS2 to USB Converter] on usb-s3c24xx-1
input: USB HID v1.10 Mouse [CHESEN PS2 to USB Converter] on usb-s3c24xx-1
usbcore: registered new driver usbhid
drivers/usb/input/hid-core.c: v2.01:USB HID core driver
s3c2410_udc: version 28 Aug 2005
mice: PS/2 mouse device common for all mice
s3c2410-buttons successfully loaded
s3c2410-gd successfully loaded
s3c2410 TouchScreen successfully loaded
i2c /dev entries driver
s3c2440-i2c s3c2440-i2c: slave address 0x10
s3c2440-i2c s3c2440-i2c: bus frequency set to 378 KHz
s3c2440-i2c s3c2440-i2c: i2c-0: S3C I2C adapter
mmci-s3c2410: probe: mapped sdi_base=c4900000 irq=37 irq_cd=62 dma=0.
mmci-s3c2410: initialisation done.
godori: AESOP2440 SOUND driver register
godori: AESOP2440 SOUND driver.....probe
AESOP2440 UDA1341 audio driver initialized
NET: Registered protocol family 2
IP route cache hash table entries: 512 (order: -1, 2048 bytes)
TCP established hash table entries: 2048 (order: 2, 16384 bytes)
TCP bind hash table entries: 2048 (order: 1, 8192 bytes)
TCP: Hash tables configured (established 2048 bind 2048)
TCP reno registered
TCP bic registered
NET: Registered protocol family 1
NET: Registered protocol family 17
eth0: using half-duplex 10Base-T (RJ-45)
MMC: sd_app_op_cond timed out. Probably no SD-Card here.
IP-Config: Complete:
    device=eth0, addr=172.16.1.101, mask=255.255.255.0, gw=172.16.1.1,
    host=172.16.1.101, domain=, nis-domain=(none),
    bootserver=172.16.1.200, rootserver=172.16.1.200, rootpath=
Looking up port of RPC 100003/2 on 172.16.1.200
Looking up port of RPC 100005/1 on 172.16.1.200
VFS: Mounted root (nfs filesystem).
Freeing init memory: 116K
INIT: version 2.86 booting
Initializing udev dynamic device directory.
mount: Mounting /dev/root on / failed: No such file or directory
INIT: Entering runlevel: 3
[: 0: unknown operand
```

AESOP Linux

```
/) /)
(='.') <- godori
```

```
login[314]: root login on `tts/0`
```

```
root@godori:~#
root@godori:~# cat /proc/bus/input
root@godori:~# cat /proc/bus/input/devices
I: Bus=0003 Vendor=0a81 Product=0205 Version=0010
N: Name="CHESSEN PS2 to USB Converter"
P: Phys=usb-s3c24xx-1/input0
H: Handlers=kbd event0
B: EV=120003
B: KEY=10000 7 ff800000 7ff febefdf ffeffff ffffffff fffffffe
B: LED=7
```

```
I: Bus=0003 Vendor=0a81 Product=0205 Version=0010
N: Name="CHESSEN PS2 to USB Converter"
P: Phys=usb-s3c24xx-1/input1
H: Handlers=kbd mouse0 event1
B: EV=7
B: KEY=1f03ff 0 20000 3878 d801d101 1e0000 0 0 0
B: REL=103
```

```
I: Bus=0019 Vendor=dead Product=beef Version=0001
N: Name="s3c2410-buttons"
P: Phys=input/s3c2440_buttons0
H: Handlers=kbd event2
B: EV=3
B: KEY=1680 0 2000000 1000087c
```

```
I: Bus=0013 Vendor=dead Product=beef Version=0101
N: Name="s3c2410 TouchScreen"
P: Phys=ts0
H: Handlers=mouse1 event3
B: EV=b
B: KEY=400 0 0 0 0 0 0 0 0 0 0
B: ABS=1000003
```

```
root@godori:~# cat /proc/bus/input/handlers
N: Number=0 Name=kbd
N: Number=1 Name=mousedev Minor=32
N: Number=2 Name=evdev Minor=64
root@godori:~#
root@godori:~#
root@godori:~#
root@godori:~#
root@godori:~# more /etc/profile
# /etc/profile: This file contains system-wide defaults used by
# all Bourne (and related) shells.
#TSLIB_TSDEVICE=/dev/input/event1
TSLIB_TSDEVICE=/dev/input/event3
TSLIB_CONFFILE=/etc/tslib/ts.conf-input
export TSLIB_TSDEVICE TSLIB_CONFFILE
# Set the values for some environment variables:
export HOSTNAME=`cat /etc/HOSTNAME`

# Set the default system $PATH:
PATH="/bin:/sbin:/usr/bin:/usr/sbin:/usr/X11R6/bin"

# Set a default shell prompt:
PS1='\u@\h:\w\$ '
#PS1='aesop# '
PS2='> '

export PATH PS1

# Default umask. A umask of 022 prevents new files from being created group
# and world writable.
umask 022
```

5. 키보드 확인

/etc/profile을 위의 로그처럼 고친 후
startx를 친다.

firefox를 띄운 후(왜냐하면 입력창이 있는 녀석이 이 녀석밖에 없어서...^^)

검색창에 www.empal.com 등으로 쳐보면 잘 입력된다.

※ 한가지 재미있는 점은 키버튼도 먹고, 동시에 usb keyboard도 먹는다는 사실....^^