

USB host reboot 명령으로 리셋 시 에러 발생

<http://www.mangoboard.com/>

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Document History

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1. USB HOST reboot 명령 error 발생

```
root@android:/ # reboot
```

```
1.310342] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
1.316928] s5p-ehci s5p-ehci: S5P EHCI Host Controller
1.322043] s5p-ehci s5p-ehci: new USB bus registered, assigned bus number 1
1.329121] s5p-ehci s5p-ehci: irq 87, io mem 0xec200000
1.341198] s5p-ehci s5p-ehci: USB 0.0 started, EHCI 0.00
1.341981] hub 1-0:1.0: USB hub found
1.344691] hub 1-0:1.0: 0 ports detected
1.349129] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
1.354964] s5p-ohci s5p-ohci: EXYNOS OHCI Host Controller
1.360321] s5p-ohci s5p-ohci: new USB bus registered, assigned bus number 2
1.367334] s5p-ohci s5p-ohci: irq 87, io mem 0xec300000
1.426189] s5p-ohci s5p-ohci: init_err (00000000 0000)
1.426239] ohci_hcd: can't start s5p-ohci
1.429850] s5p-ohci s5p-ohci: startup error -75
1.434447] s5p-ohci s5p-ohci: USB bus 2 deregistered
1.439480] s5p-ohci s5p-ohci: Failed to add USB HCD
1.444456] s5p-ohci: probe of s5p-ohci failed with error -75
1.450259] Initializing USB Mass Storage driver...
```

2. 원인은

int s5p_usb_phy_init(struct platform_device *pdev, int type) 함수에서

아래 코드에서 S5P_USB_PHY_CONTROL 레지스터 값이 3 이라서 PHY 를 다시 리셋하지 않아서 발생함.

```
    if (type == S5P_USB_PHY_HOST) {
        MANGO_DBG("readl(S5P_USB_PHY_CONTROL)=0x%x\n",readl(S5P_US
B_PHY_CONTROL));
        if (readl(S5P_USB_PHY_CONTROL) & (0x1<<1))
            return -1;
```

수정 조치

m210_ics404_mrvl8787_140108_Rel/kernel\$ vi arch/arm/mach-s5pv210/setup-usb-phy.c

int s5p_usb_phy_init(struct platform_device *pdev, int type)

함수 아래 코드 적용

```
#if 1//crazyboys 2014140315 reboot usb host error patch
    if (type == S5P_USB_PHY_HOST) {
        __raw_writel(__raw_readl(S3C_USBOTG_PHYPWR) | (0x1<<7)|(0x1<<6),
```

```

        S3C_USBOTG_PHYPWR);
        __raw_writel(__raw_readl(S5P_USB_PHY_CONTROL) & ~(1<<1),
        S5P_USB_PHY_CONTROL);
    }
#endif
    if (type == S5P_USB_PHY_HOST) {
        MANGO_DBG("readl(S5P_USB_PHY_CONTROL)=0x%x\n",readl(S5P_US
B_PHY_CONTROL));
        if (readl(S5P_USB_PHY_CONTROL) & (0x1<<1))
            return -1;
    }
}

```

kernel/arch/arm/mach-s5pv210\$ vi mach-smdkv210.c에 추가

```
#include <plat/regs-usb-hsotg-phy.h>
```

defconfig 파일 수정

```
CONFIG_USB_EHCI_ROOT_HUB_TT=y
```

```
CONFIG_USB_GADGET_VBUS_DRAW=500
```

3. 변경사항

Name	Size	Modified
kernel	250,798	2014-03-18 11:23:06
└─ arch	144,466	2014-03-18 11:23:05
└─┬─ arm	144,466	2014-03-18 11:23:05
└─┬─┬─ configs	63,173	2014-03-18 11:23:05
└─┬─┬─┬─ mango210_genix_7inch_Jan9500_defconfig	63,173	2014-03-15 11:43:28
└─┬─┬─┬─ mach-s5pv210	81,293	2014-03-18 11:23:05
└─┬─┬─┬─┬─ mach-mango210.c	75,909	2014-03-15 11:35:08
└─┬─┬─┬─┬─┬─ setup-usb-phy.c	5,384	2014-03-15 11:14:26
└─┬─ drivers	43,159	2014-03-18 11:23:06
└─┬─┬─ gpio	43,159	2014-03-18 11:23:06
└─┬─┬─┬─ gpiolib.c	43,159	2014-03-15 11:43:08
└─┬─┬─┬─┬─ mango210_genix_7inch_Jan9500_defconfig	63,173	2014-03-15 11:43:24

4. 확인

```
1.376922] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
1.383604] s5p-ehci s5p-ehci: S5P EHCI Host Controller
1.388618] s5p-ehci s5p-ehci: new USB bus registered, assigned bus number 1
1.395705] s5p-ehci s5p-ehci: irq 87, io mem 0xec200000
1.407776] s5p-ehci s5p-ehci: USB 0.0 started, EHCI 1.00
1.408560] hub 1-0:1.0: USB hub found
1.411261] hub 1-0:1.0: 1 port detected
1.415623] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
1.421448] s5p-ohci s5p-ohci: EXYNOS OHCI Host Controller
1.426802] s5p-ohci s5p-ohci: new USB bus registered, assigned bus number 2
1.433820] s5p-ohci s5p-ohci: irq 87, io mem 0xec300000
1.497416] hub 2-0:1.0: USB hub found
```

reboot 입력 후에도 이상 없습니다.