S3C2450 Mango24R2 Ethernet and WiFi Test

Document History

Revision	Date	Change note

1. Ethernet and WiFi Test

1.1. Ethernet Test

ifconfig -a

eth0   Link encap:Ethernet   HWaddr 00:80:00:23:45:67
         BROADCAST MULTICAST MTU:1500 Metric:1
         RX packets:0 errors:0 dropped:0 overruns:0 frame:0
         TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
         collisions:0 txqueuelen:1000
         RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)
         Interrupt:57

DHCP IP 할당

udhcpc -ieth0
udhcpc (v1.19.4) started
[6500.970000] net eth0: SMSC911x/921x identified at 0xc4880000, IRQ: 57
Sending discover...
Sending select for 192.168.3.175...
Lease of 192.168.3.175 obtained, lease time 86400
deleting routers
route: SIOCDELRT: No such process
adding dns 192.168.3.1
[6501.700000] eth0: IPv6 duplicate address fe80::280:ff:fe23:4567 detected!

1.2. WiFi Test

After booting and Debug Terminal

#tar xvf wlan.tar

1.2.1. WiFi init

$ insmod mlan.ko
$ insmod sd8xxx.ko
$ iwconfig

실행 결과

root@Mango:~# insmod mlan.ko mlan: module license 'Marvell Proprietary' taints kernel.

```
root@Mango:~# insmod sd8xxx.ko
wlan_sdio mmc0:0001:1: firmware: using built-in firmware mrvl/sd8787_uapsta.bin
WLAN FW is active
root@Mango:~# iwconfig
lo          no wireless extensions.


eth0        no wireless extensions.


mlan0       IEEE 802.11-DS   ESSID:""   Nickname:""
            Mode:Managed   Access Point: Not-Associated      Bit Rate:1 Mb/s
            Tx-Power=8 dBm
            Retry limit:9    RTS thr=2347 B    Fragment thr=2346 B
            Encryption key:off
            Power Management:on
            Link Quality=0/5   Signal level=0 dBm   Noise level=0 dBm
            Rx invalid nwid:0   Rx invalid crypt:0   Rx invalid frag:10
            Tx excessive retries:0   Invalid misc:0      Missed beacon:0


uap0        IEEE 802.11-DS   ESSID:""
            Mode:Master   Frequency:2.437 GHz   Access Point: Not-Associated
            Encryption key:off
            Link Quality:0   Signal level:0   Noise level:0
            Rx invalid nwid:0   Rx invalid crypt:0   Rx invalid frag:0
            Tx excessive retries:0   Invalid misc:0      Missed beacon:0
```

1.2.1. 보안 모드 None 접속 방법

```
$ ifconfig mlan0 up
$ iwlist mlan0 scanning
$ iwconfig mlan0 essid any
$ udhcpc –imlan0
```

실행 결과

```
root@Mango:~# ifconfig mlan0 up
root@Mango:~# iwlist mlan0 scanning
InterpretIE: Error in processing IE, bytes left < IE length
SCAN_RESP: wlan_interpret_bss_desc_with_ie returned error
mlan0       Scan completed :
          Cell 01 - Address: 00:08:9F:94:42:E2
                    ESSID:"Samsol"
                    Mode:Master
                    Frequency:2.412 GHz (Channel 1)
                    Quality:0/5   Signal level:-91 dBm   Noise level:-106 dBm
                    Encryption key:on
                    Bit Rates:1 Mb/s; 2 Mb/s; 5.5 Mb/s; 11 Mb/s; 18 Mb/s
                              24 Mb/s; 36 Mb/s; 54 Mb/s; 6 Mb/s; 9 Mb/s
                              12 Mb/s; 48 Mb/s
                    Extra:Beacon interval=100
                    IE: Unknown: DD090010180200F0000000
                    IE: Unknown: DD180050F2020101800003A4000027A4000042435E0062322F00
                    Extra:band=bg
          Cell 02 - Address: 06:13:4E:0A:4C:F0
                    ESSID:"KT_WLAN" [2]
                    Mode:Master
                    Frequency:2.412 GHz (Channel 1)
                    Quality:1/5   Signal level:-85 dBm   Noise level:-106 dBm
                    Encryption key:on
                    Bit Rates:1 Mb/s; 2 Mb/s; 5.5 Mb/s; 6 Mb/s; 9 Mb/s
                               11 Mb/s; 12 Mb/s; 18 Mb/s; 24 Mb/s; 36 Mb/s
                               48 Mb/s; 54 Mb/s
                    Extra:Beacon interval=100
                    IE: Unknown: DD0900037F010100200000
                    Extra:band=bg
```

```
root@Mango:~# iwconfig mlan0 essid any
InterpretIE: Error in processing IE, bytes left < IE length
SCAN_RESP: wlan_interpret_bss_desc_with_ie returned error
root@Mango:~# iwconfig
lo          no wireless extensions.

eth0        no wireless extensions.

mlan0       IEEE 802.11-DS   ESSID:"crztech-test" [15]   Nickname:""
            Mode:Managed   Frequency:2.442 GHz   Access Point: 00:26:66:1A:55:AC
            Bit Rate:72 Mb/s     Tx-Power=8 dBm
            Retry limit:9    RTS thr=2347 B     Fragment thr=2346 B
            Encryption key:off
            Power Management:on
            Link Quality=3/5   Signal level=-69 dBm   Noise level=-106 dBm
            Rx invalid nwid:0   Rx invalid crypt:0   Rx invalid frag:58
            Tx excessive retries:2   Invalid misc:7     Missed beacon:0

uap0        IEEE 802.11-DS   ESSID:""
            Mode:Master   Frequency:2.437 GHz   Access Point: Not-Associated
            Encryption key:off
            Link Quality:0   Signal level:0   Noise level:0
            Rx invalid nwid:0   Rx invalid crypt:0   Rx invalid frag:0
            Tx excessive retries:0   Invalid misc:0     Missed beacon:0
```

1.2.2. 보안 모드 접속방법

```
WPA-Personal        ▼
```

```
# insmod mlan.ko
# insmod sd8xxx.ko -> 모듈 드라이버 로딩 완료
# iwpriv mlan0 passphrase "1;passphrase=1234567890" -> AP 에서 설정한 wpa2 key
"1234567890" 입력
# iwconfig mlan0 essid "CRZ_AP" -> AP 이름
# udhcpc -I mlan0 -> 고정 IP 설정 또는 DHCP 클라이언트 구동
```

```
WEP                    ▼
```

iwconfig mlan0 key 123456789a
iwconfig mlan0 key [1]
iwconfig mlan0 essid "CRZ_AP"

이렇게 하시면 WEP Key보안만 되어 있는 AP에 접속 가능합니다.

1.3. Bluetooth Test

```
# insmod mlan.ko

[    26.765000] mlan: module license 'Marvell Proprietary' taints kernel.

[    26.765000] Disabling lock debugging due to kernel taint

# insmod mbtchar.ko

# insmod bt8xxx.ko
```

```
#   hciconfig
hci0:    Type: BR/EDR   Bus: SDIO
         BD Address: 00:00:00:00:00:00   ACL MTU: 0:0   SCO MTU: 0:0
         DOWN
         RX bytes:47 acl:0 sco:0 events:0 errors:0
         TX bytes:11 acl:0 sco:0 commands:0 errors:0
# hciconfig hci0 up
# hcitool -i hci0 scan
Scanning ...
         00:21:D2:EE:49:B4         SPH-W5000(18**)
```