IMX6 Platform Evaluation Application Note

Amp'ed RF Technology, Inc.

1. Linux Driver

Various Linux drivers for the ACC1340 WiFi chip are posted on the Amp'ed RF download web site here: http://www.ampedrftech.com/dnload.php.

These are pre-built for many CPU chipsets. For chips that are not posted, please contact your sales representative with your requests/inquiries: http://www.ampedrftech.com/sales_res.php

Alternatively, the ACC1340 may share drivers from different WiFi chips with source code available in many Linux kernels, for evaluation purposes. While not full featured, these alternative drivers may be more commonly ported to various CPUs.

2. Prepare SDIO evaluation board

- Reset WiFi module before inserting to SDIO.
- Insert the SD adapter (along with the WiFi module, shown in Fig-1) into the SDIO slot of IMX6 EVB as shown in Fig-2 - powering the WiFi module with USB external.
- Make sure PC is connected to IMX6 EVB via serial port.

Fig-1 SDIO Adaptor

Fig-2 IMX6 board && WB60

3. Install kernel modules.

insmod compat.ko

insmod cfg80211.ko

insmod mac80211.ko

insmod cw1200_core.ko

insmod cw1200_wlan.ko

- Enable the wireless interface "wlan0" with this command:

    ifconfig wlan0 up

- Connect to the router with "wpa_supplicant" tool.

    First, use the default configuration file to connect to the router. Modify the items of "ssid" and "psk" with the correct ones of the router with '*vi'* or '*vim'* command.

- Execute the following to connect to the router:

    wpa_supplicant -B -iwlan0 -c ./wpa_supplicant_default.conf

- Execute the following command to confirm whether the device is connected to the router.

    iwconfig wlan0

    With success, the AP mac address should be obtained instead of *"Not-Associated".*

- If it fails, get the wireless encryption type of the router, and edit the corresponding file.

    Example:

    If router uses WPA-TKIP encryption, the file "wpa_supplicant_wpa_tkip.conf" should be used.

    Then on IMX6 EVB, we edit the configuration file and then execute the below command:

    wpa_supplicant -B -iwlan0 -c ./wpa_supplicant_wpa_tkip.conf

- Get an IP address with "udhcpc" tool:

    udhcpc -iwlan0