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Using the nrc7394 in hostmode

Tested in combination with the IMX8 precoessor

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NRC7394 hostmode

To use the NRC7394 in hostmode Newracom provided all the import information on their GitHub page: https://github.com/newracom/nrc7394_sw_pkg/
In this document you will a quick overview of all the steps and some additional information that we did not find in the Newracom documentation.

1. Preparing the host platform

The first step is to prepare the host platform for this you can follow the guide Newracom provides on there github page: https://github.com/newracom/nrc7394_sw_pkg/blob/master/package/doc/UG-7394-018-Raspberry_Pi_setup.pdf
Make sure to use the correct kernel version is used (at the time of writing 5.10.x but check the documents).

- An important step that is not mentioned in guide is that MAC80211 MESH needs to be enabled in the kernel configuration menu (menuconfig)

Kernel Configuration에서 MAC80211 MESH Enable이 되어 있지 않은 경우에 다음과 같은 WARINING이 발생할 수 있습니다.

```
------------[ cut here ]------------
WARNING: CPU: 0 PID: 185 at net/wireless/core.c:629 wiphy_register+0x7d4/0xd18
Modules linked in: nrc(O+)
```

Kernel Configuration Menu (menuconfig)에서 다음 option이 disable 되어 있다면 enable 되어야 합니다.

Networking support -> Wireless

```
config MAC80211_MESH
        bool "Enable mac80211 mesh networking support"
        depends on MAC80211
        ---help---
          Select this option to enable 802.11 mesh operation in mac80211
          drivers that support it.  802.11 mesh connects multiple stations
          over (possibly multi-hop) wireless links to form a single logical
          LAN.
```

2. Compiling the driver

The next import step is to cross compile the newracom driver for this you can reference the following document: https://github.com/newracom/nrc7394_sw_pkg/blob/master/package/doc/UG-7394-002-Host%20driver%20porting.pdf

3. Starting the driver

The last step is to copy the compiled driver and nrc_pkg folder to your development board.
After this is done you can use the nrc_pkg/script/start.py script to load the drivers and initialize the modules.
If the mac80211 kernel module is not loaded by default on your system you might need to configure this first or use the “modprobe mac80211” command to load this module.

Important: the start.py script will change your network configuration in the nrc_pkg/script/conf/etc/ you can change the way the networking is set-up.
In the nrc_pkg/script/conf/ folder are also the config files located for the wifi HaLow network. If you want to change the ssid, password, frequency, … for you HaLow this can be achieved by making changes to the correct file.

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