AIW-154 Porting

AIW-154 Module is NXP (Marvell) PCIE-WLAN-UART-BT-8997 chip.

Support Yocto3.0 (Advantech RISC RSB-3710)

Get kernel source 5.4.70\_2.3.0

#git clone [https://github.com/ADVANTECH-Corp/linux-imx.git –b adv\_5.4.70\_2.3](https://github.com/ADVANTECH-Corp/linux-imx.git%20–b%20adv_5.4.70_2.3).0

Modify the kernel config ([arch/arm64/configs/imx\_v8\_adv\_defconfig](https://github.com/ADVANTECH-Corp/linux-imx/commit/9ddadd71b1deeabf41dc1464808c12bc66a06887#diff-6b85872426678d533ff3fcec26679a269d947b7462f4762485461f7e1a29a9e5))

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Add CONFIG\_MWIFI\_PCIE\_8997=m

Remove #CONFIG\_MWIFI\_PCIE\_8997 is not set

Remove CONFIG\_MWIFI\_SDIO\_8997=m

Remove CONFIG\_MBT\_SDIO\_8997=m

Add # CONFIG\_MWIFI\_SDIO\_8997 is not set

Add # CONFIG\_MBT\_SDIO\_8997 is not set

Make kernel and dts

#cd linux-imx/

#source /opt/poky/3.0/environment-setup-aarch64-poky-linux

#make imx\_v8\_adv\_defconfig

#make –j4 Image

#make -j4 freescale/imx8mp-rsb3720-a1.dtb

Make module and create module.tar.gz

#make -j4 modules

#mkdir ~/roofs

#make modules\_install INSTALL\_MOD\_PATH=~/rootfs/

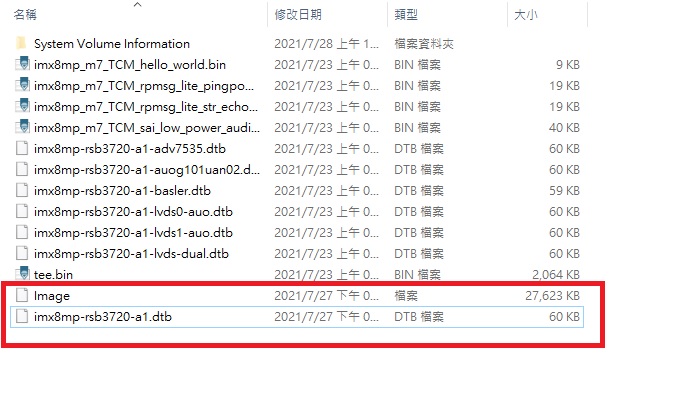
# cd ~/rootfs/lib/modules/

# tar zcvf 5.4.70-00015-g9ddadd71b1de-dirty.tar.gz 5.4.70-00015-g9ddadd71b1de-dirty/

Copy Image and dtb to SD

\linux-imx\arch\arm64\boot\Image

\linux-imx\arch\arm64\boot\dts\freescale\imx8mp-rsb3720-a1.dtb



Copy rootfs.tar.gz to usb disk. Then copy to devices.

#mkdir /temp

#mount /dev/sda1 /temp

#cp -a /temp/0727/5.4.70-00015-g9ddadd71b1de-dirty.tar.gz /lib/modules/

#cd /lib/modules/

#tar zxvf 5.4.70-00015-g9ddadd71b1de-dirty.tar.gz

Modify the /etc/modprobe.d/advantech.conf

options pcie8xxx cfg80211\_wext=0xf wfd\_name=p2p cal\_data\_cfg=none drv\_mode=7 fw\_name=nxp/pcieuart8997\_combo\_v4.bin



Then System Reboot.

(1)Command line to Connect

# ifconfig mlan0 up

# wpa\_passphrase "XX" xx>/tmp/wpa.conf 🡪 XX is WIFI ESSID , xx is password

# ifconfig eth0 down

# wpa\_supplicant -d -B -i mlan0 -c /tmp/wpa.conf -Dnl80211

# udhcpc -i mlan0

(2)Shell script to Connect

#cd /

#/tools/wifi8997.sh XXXX xxxx 🡪 XXXX is WIFI ESSID , xxxx is password