# support 524wifi6 DR9074 Triband card on rockchip-5b

# First step, download development for rockchip-5b:

you can get source code by

git clone https://github.com/Joshua-Riek/ubuntu-rockchip

Use -ko compilation option can only build the kernel to deb, -uo can only build uboot and -ro can only build rootfs.

Then, you can move to development create you img by

./build.sh --board=rock-5b --suite=oracular --flavor=desktop

# In order to support tri band cards, modifications need to be made to the kernel module.

**Firstly**, the ath11k\_pci module needs to be added to support QCOM PCI cards. Move config.common.ubuntu to

build/linux-rockchip/debian.rockchip/config/config.common.ubuntu

in the compiled environment. This directory may not be available in the newly downloaded environment. You can compile the kernel to obtain this directory.

Move mac.c to

build/linux-rockchip/drivers/net/wireless/ath/ath11k/mac.c

Move reg.c to

build/linux-rockchip/drivers/net/wireless/ath/ath11k/reg.c

Compile the kernel so you can get a new kernel deb with ath11k\_pci.

**Secondly**, the correct firmware of the WiFi card is also required to activate it, you can move our firmware (amss.bin, board-2.bin) to:

/lib/firmware/ath11k/QCN9074/hw1.0

and delete the amss.bin.zst and board-2.bin.zst from the directory.

# Setup wireless on ubuntu

# Download hostapd

 you can download hostapd by use command:

sudo apt-get install hostapd

# Use hostapd to create a wireless access point

First, you should turn off ubuntu’s wifi tool by this command:

sudo nmcli radio wifi off

it will block you wifi function unblock wifi by use this command:

sudo rfkill unblock wifi

You can setup an access point by using command:

sudo hostapd hostapd.conf

hostapd.config is a configuration which has set the type of wi-fi you want to enable and the following figure shows its typical structure:



I have marked the most important part with a red box, where ssid represents the name of the wifi and interface represents the device selected to enable wifi. By the way if you don’t know your interface name, you can use command: ip addr which can show you the information about the interface, the wireless interface always seem like wlan\* or wlp\*.

If you see following output after you use hostapd command:



this means you have successfully started the AP.

And when you see this:



it means a device connected to you access point.

This also means connect if you not set password:



# Use wpa\_supplicant to connect a access point

First, you should turn off ubuntu’s wifi tool by this command:

sudo nmcli radio wifi off

it will block you wifi function unblock wifi by use this command:

sudo rfkill unblock wifi

You can connect an access point by using command:

sudo wpa\_supplicant -Dnl80211 -iwlp1s0 -c wpa.conf

-i can set the interface you want to use to connect. wpa.config is a configuration which has set the type of wi-fi you want to connect and the following figure shows its typical structure:



you can change the ssid to which access point you want.

If you see following output after you use hostapd command:



this means connect successful.

If you want to connect a access point which has a password you should change the wpa\_supplicant configuration like this:



the psk is the password proto and key\_mgmt is the encryption options.

# FAQ



when you see this output you can use: sudo rfkill unblock wifi



when you see this output that means you may run another wpa\_supplicant, you should close it then you can run another wpa\_supplicant if you don’t know where is it, you can use command: sudo killall wpa\_supplicant to kill all wpa\_supplicant.