**How to enable WiFi/Bluetooth with AIW-162**

**Prerequisite**

* ROM-5880 (SOM-DB2510) with Debian 10.13 (Linux kernel v4.19.232) on it
* Stop system background daemons by following commands with console utility.

#systemctl stop NetworkManager

#killall wpa\_supplicant

* Extract “AIW-162\_FW.zip” and copy files to one USB stick and plugged into any one USB port of SOM-DB251 platform and follows WiFi/ Bluetooth test steps next.
* AIW-162\_FW.zip is including

1. WiFi driver and firmware files:

bcmdhd.ko,

fw\_bcm43752a2\_pcie\_ag.bin,

nvram\_ap6275p\_mp.txt,

clm\_bcm43752a2\_pcie\_ag.blob

2) Bluetooth firmware: BCM4362A2\_001.003.006.1059.1089.hcd

.

**Test WiFi**

1. **Bring up WiFi driver** :

* Bring up WiFi driver with bcmdhd.ko if mount USB stick underlying /run/media/sda1

# cp /run/media/sda1/bcmdhd.ko /system/lib/modules/

# cp /run/media/sda1/fw\_bcm43752a2\_pcie\_ag.bin

/vendor/etc/firmware/

# cp /run/media/sda1/nvram\_ap6275p\_mp.txt

/vendor/etc/firmware/nvram.txt

# cp /run/media/sda1/clm\_bcm43752a2\_pcie\_ag.blob

/vendor/etc/firmware/

# insmod /system/lib/modules/ bcmdhd.ko

*Note: you will see the interface wlan0 by “ifconfig –a” command*

# ifconfig wlan0 up

1. **Test with WiFi AP**

* Using editor (such as Vim) to create WiFi client configuration in /etc/wpa\_supplicant.conf

(Following is one example as one AP named as “TEST” with pre-shared key

“123456789” for your reference)

# cat /etc/wpa\_supplicant.conf

ctrl\_interface=/var/run/wpa\_supplicant

ctrl\_interface\_group=0

update\_config=1

network={

ssid="TEST"

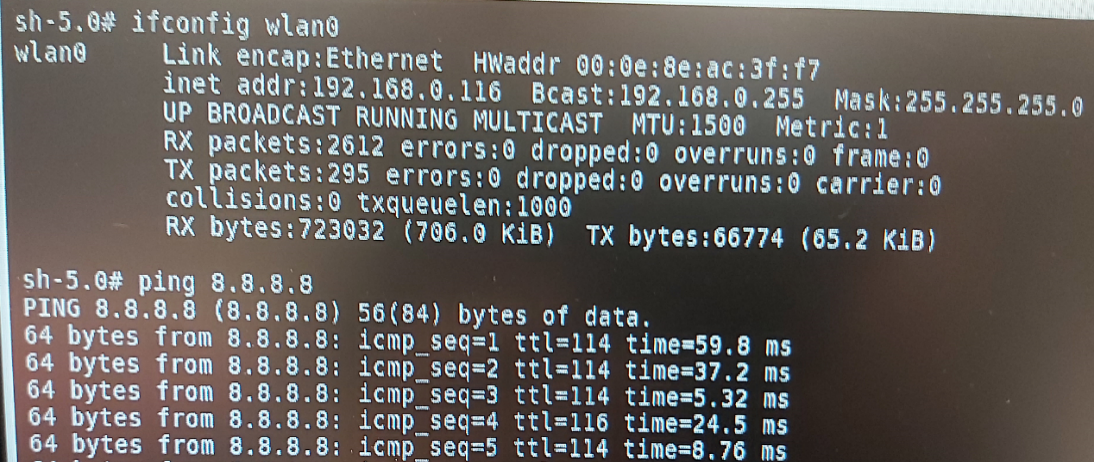
psk="123456789"

}

# wpa\_supplicant -i wlan0 -c /etc/wpa\_supplicant.conf -B

# dhclient wlan0

* If AP is configured with internet connection, user can use ping to check the internet availability as follows.
  + Check network connection after obtained IP address

# ping 8.8.8.8****

**Test Bluetooth**

1. **Bring up Bluetooth Interface**

* Bring up Bluetooth driver with follows if have mount USB stick underlying /run/media/sda1

# cp /run/media/sda1/BCM4362A2\_001.003.006.1059.1089.hcd

/vendor/etc/firmware/BCM4362A2.hcd

# brcm\_patchram\_plus1 -d --enable\_hci --no2bytes --tosleep 200000 –

baudrate 1500000 --patchram /vendor/etc/firmware/BCM4362A2.hcd

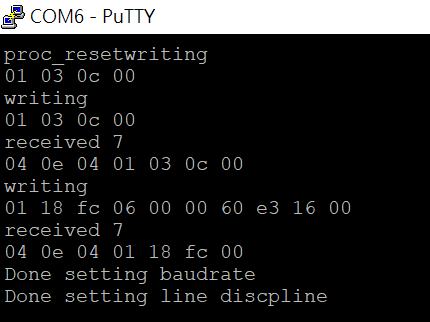
/dev/ttyS4 &

***[ Notes ]***

* *Please wait seconds for “brcm\_patchram\_plus1” commane to finish*
* *If you see following console snapshot which means the patch is done*

*successfully , and then the interface “hci0” is ready by*

*checking with “hciconfig –a” command.*



1. **Test Bluetooth Interface**

* Using Bluetooth with following commands

# hciconfig hci0 up

# bluetoothctl

[bluetooth]# scan on

[bluetooth]# scan off

If there are any Bluetooth devices nearby you will see some devices listed by “devices” command as follows.

[bluetooth]# devices