TCCxxxx Android ALL V1.3E Wi-Fi Guide

TCCxxxx-Android-ALL-V1.3E-Wi-Fi Guide

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Telechips

Preliminary

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Revision History

Date	Version	Description
2013-02-12	1.00	Initial Release
2013-03-08	1.1	Update for Broadcom wifi
2013-07-11	1.1	Add bcm4335
2013-08-30	1.2	Update known issue
2014-02-11	1.3	Update for Kitkat

TABLE OF CONTENTS

Contents

Revision History 5
TABLE OF CONTENTS 6
Contents 6
1 Introduction 7
2 Supported Wi-Fi modules 7
3 Setting Wi-Fi 8
4 Wi-Fi 9
5. Wi-Fi portable hotspot 10
6. Wi-Fi Direct 11
7. Power/Reset control 12

1 Introduction

This document describes how to use Wi-Fi on TCC Android 4.4

2 Supported Wi-Fi modules

Telechips Android 4.4 is supporting only below modules.
We don't support the other Wi-Fi modules. If you want to use other Wi-Fi modules. Please contact to vendor of Wi-Fi module.

	Realtek			Broadcom	
	rt8188cu	**rt8189es**	**rt8188eus**	**BCM4334 (Murata/Ampak/USI)**	**BCM4335 (Murata)**
Spec	USB / 11n	SDIO / 11n	USB / 11n	SDIO / 11n / dual	SDIO / 11ac / dual
Support	TCC89x demo board	Android dongle / Linux dongle	m805_89x	Android dongle(USI) / Linux dongle(Ampak)	TCC893x demo board

For Wi-Fi Display, Please refer to a document of Wi-Fi Display guide.

3 Setting Wi-Fi

Default Wi-Fi module is Realtek RT8188CU(USB interface). If you want to use another module, please execute '**choosewifi**' command after lunch and kernel defconfig.

my android# choosewifi
Usage: choosewifi < realtek | broadcom>

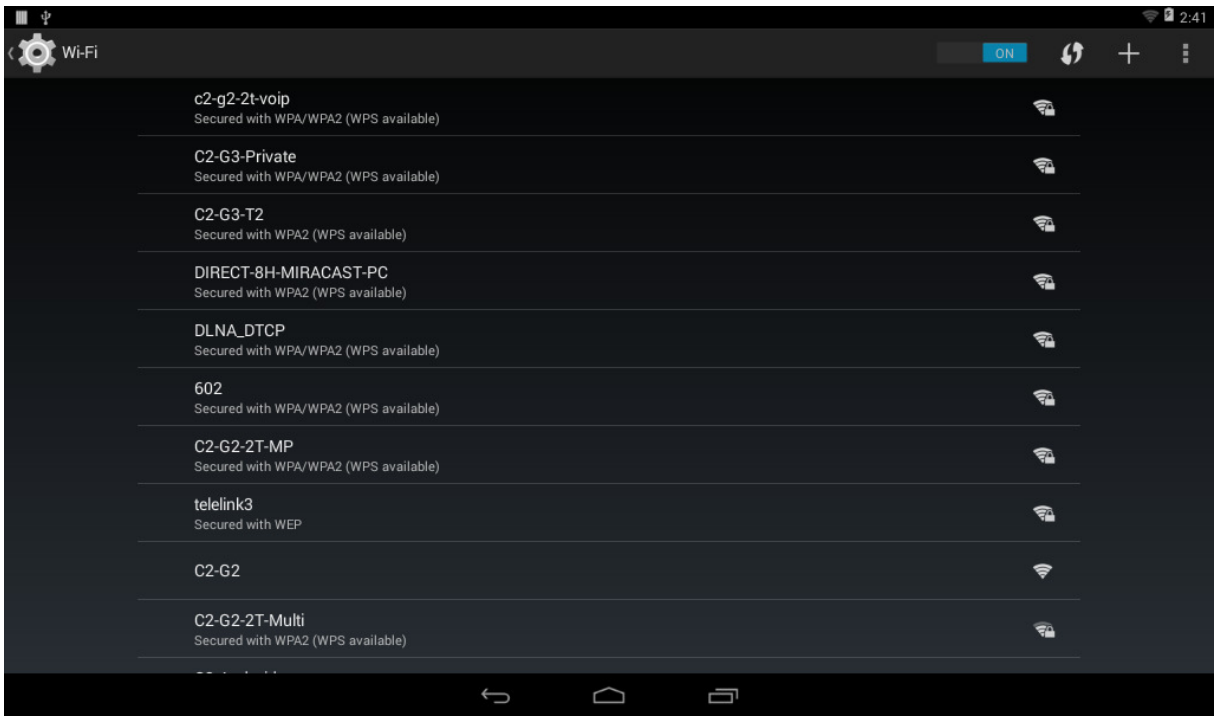
Ex) realtek rt8188cu
my android # choosewifi realtek rt8188cu

Ex) Broadcom bcm4334
my android # choosewifi broadcom bcm4334

This command builds kernel/android.
And if you download changed rom, ***please remove userdata area.***

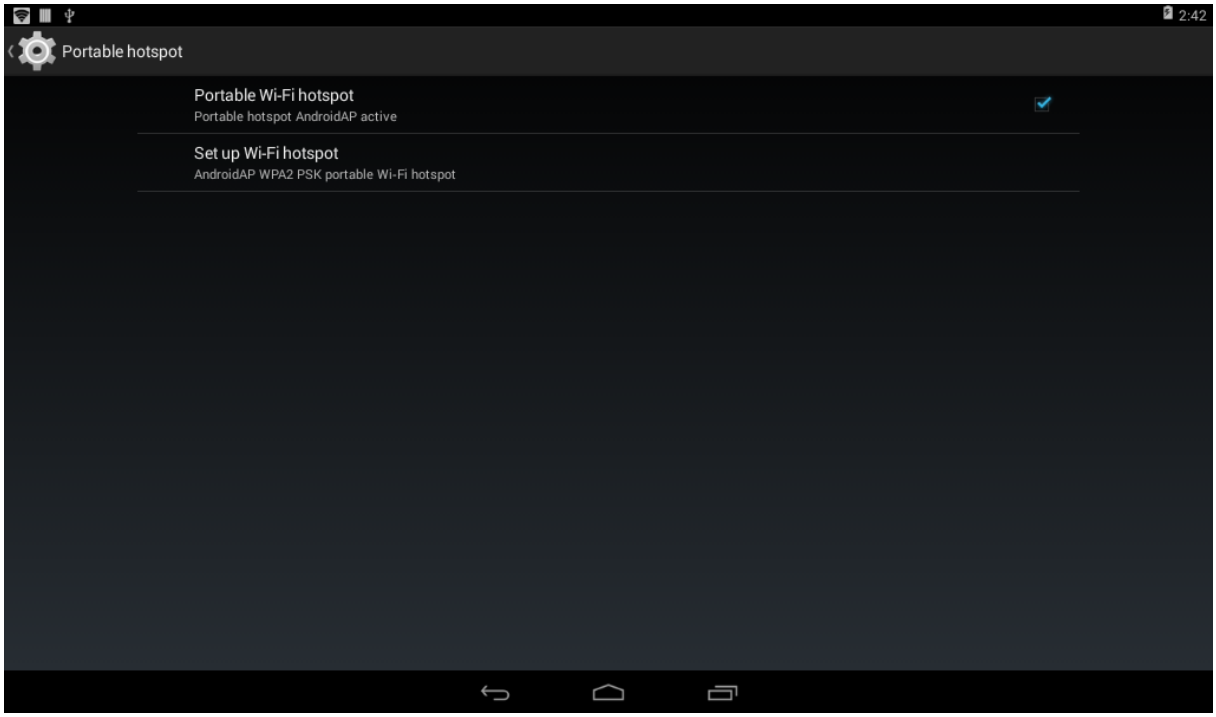
4 Wi-Fi

You can connect Wireless access point.



5. Wi-Fi portable hotspot

You can also use Wi-Fi portable hotspot. But this is useful for you if you have another communication method, for example, Ethernet or mobile.



Default password of portable Wi-Fi hotspot is 123456789. We fix password like below.

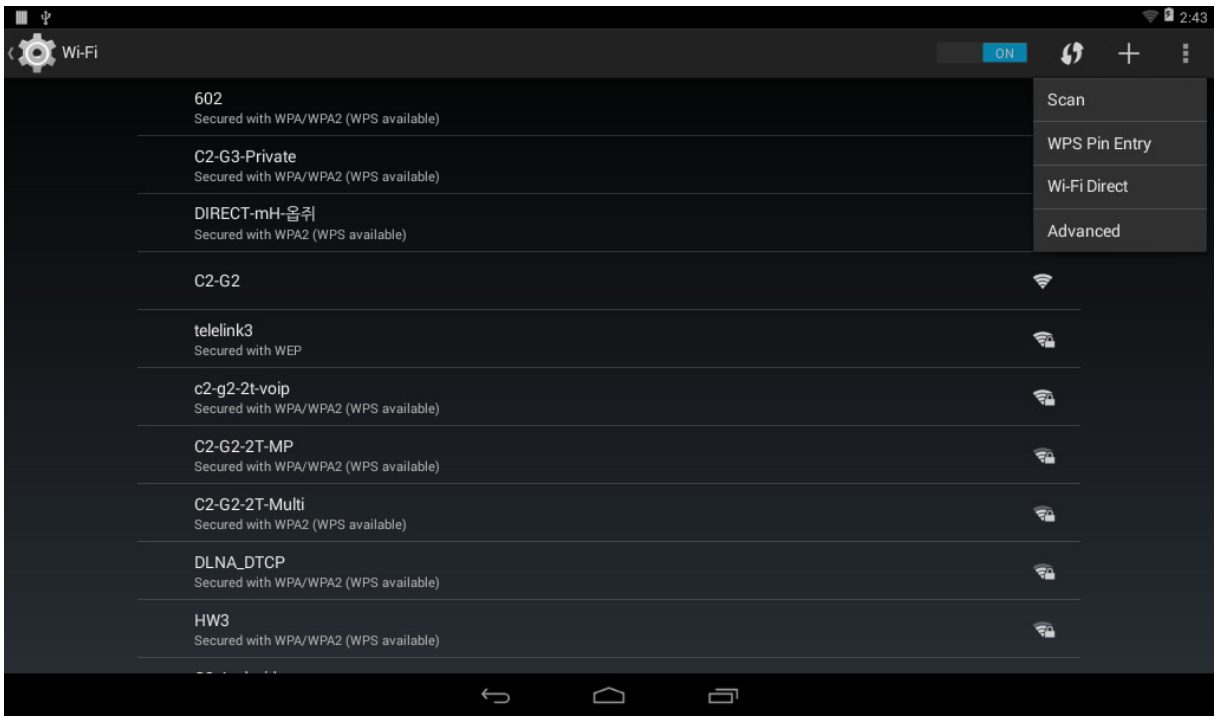
```
diff --git a/wifi/java/android/net/wifi/WifiApConfigStore.java
b/wifi/java/android/net/wifi/WifiApConfigStore.java
index 0531ca3..bbd9e3c 100644
--- a/wifi/java/android/net/wifi/WifiApConfigStore.java
+++ b/wifi/java/android/net/wifi/WifiApConfigStore.java
@@ -206,7 +206,7 @@ class WifiApConfigStore extends StateMachine {
                config.allowedKeyManagement.set(KeyMgmt.WPA2_PSK);
                String randomUUID = UUID.randomUUID().toString();
                //first 12 chars from xxxxxxxx-xxxx-4xxx-yxxx-xxxxxxxxxxxx
-               config.preSharedKey = randomUUID.substring(0, 8) + randomUUID.substring(9,13);
+               config.preSharedKey = "1234567890";//randomUUID.substring(0, 8) +
randomUUID.substring(9,13);
                sendMessage(WifiStateMachine.CMD_SET_AP_CONFIG, config);
        }
 }
```

6. Wi-Fi Direct

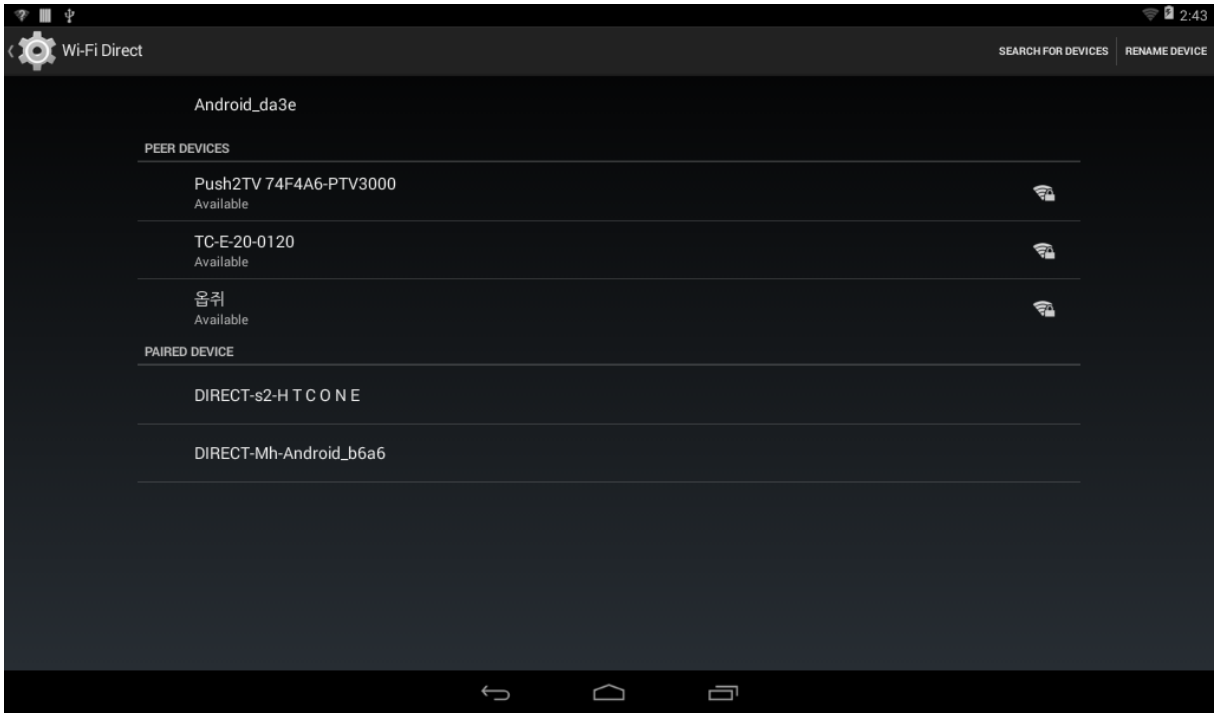
You can find mode detailed information for Wi-Fi Direct.

http://developer.android.com/guide/topics/connectivity/wifip2p.html

If you use Wi-Fi module that support concurrent, you can use Wi-Fi Direct as below.



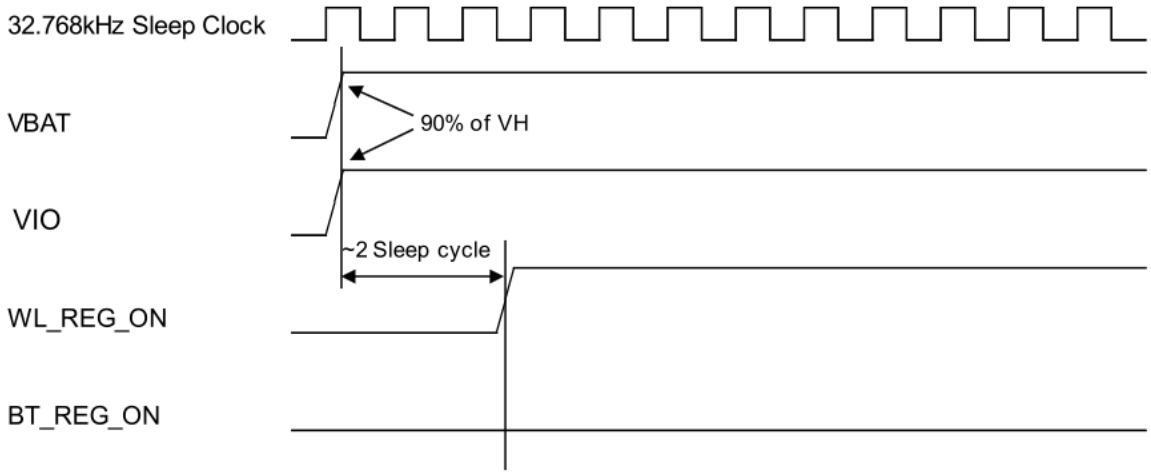
If you use Wi-Fi module that doesn't support concurrent, you can see Wi-Fi Direct menu as below



7. Power control for Broadcom module

When you are going to use Wi-Fi+BT combo module, you have to control reset pin in case of below picture, WL_REG_ON, not power pin. It is depend on module specification, so please go over the datasheet of module. Generally combo module has each reset pins.
For example Broadcom BCM4334/4335 is a combo module. Please refer to below picture.

9.2. Power On Sequence for WLAN ON and BT Off



If you want to use Wi-Fi+BT exclusively, you must change this GPIO to reset pin.

The location of power or reset control(Broadcom modules) is kernel/driver/mmc/host/tcc_sdhc.c

```
60 #if defined(CONFIG_BROADCOM_WIFI)
61 #if defined(CONFIG_MACH_TCC893X) && !defined(CONFIG_SUPPORT_BCM4335)
62 #define GPIO_WIFI_EN            TCC_GPEXT1(3)
63 #elif defined(CONFIG_MACH_TCC8920)
64 #define GPIO_WIFI_EN            TCC_GPEXT1(3)
65 #elif defined(CONFIG_STB_BOARD_DONGLE_TCC893X) ||
defined(CONFIG_STB_BOARD_DONGLE)
66 #define GPIO_WIFI_EN            TCC_GPB(24)
67 #elif defined(CONFIG_MACH_TCC893X) && defined(CONFIG_SUPPORT_BCM4335)
68 #define GPIO_WIFI_EN            TCC_GPEXT2(5)
69 #elif defined(CONFIG_STB_BOARD_YJ8930T)
70 #define GPIO_WIFI_EN            TCC_GPF(8)
71 #else
72 #error unknown defined
```

```
73 #endif
74 #endif
```

You have to modify this code(GPIO_WIFI_EN) to fit your hardware