LGE KCC FCC CE Manual - 2012







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Install KCC/FCC/CE Tool

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≝☐ × □ Bluetool_setup_1.5.0. € CP210x_VCP_Win_XP CP210x_VCP_VIN_XP CP210x_VCP_VIN_XP <t< td=""><td>9 2_S2K3_Vista_7 4SWin32-x86</td><td>⊒7 12,757KB 14,138KB 8,302KB</td><td>종류 Windows Installe 압축(ZIP) 파일 응용 프로그램</td><td>수정함 2009-1 2011-1 2011-1</td></t<>	9 2_S2K3_Vista_7 4SWin32-x86	⊒7 12,757KB 14,138KB 8,302KB	종류 Windows Installe 압축(ZIP) 파일 응용 프로그램	수정함 2009-1 2011-1 2011-1
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Broadcom Blue Tool Elle Edit View Iransport Window Help Log Window	HCI Control: com44	2 115200nfc 7,3: Host Controll <u>Reset</u> AP	er & Baseband Command M reset device with DTR	
	Read_Page_Scan_Activity Write_Page_Scan_Activity Read_Innuiry_Scan_Activity			
			Fig	2

1. Check

"ActivePerl-5.8.4.810-MSWin32-x86.msi", "Bluetool_setup_1.5.0.9.exe",

"CP210x_VCP_Win_XP_S2K3_Vista_7.exe" as Fig.1

- 2. Excute "ActivePerl-5.8.4.810-MSWin32-x86.msi" will install Active perl.
- 3. Excute "CP210x_VCP_Win2K_XP_S2K3.exe" will install USB Driver.
- 4. Excute "Bluetool_setup_1.5.0.9.exe" will install Blue Tool
- 5. Execute "BlueTool.exe" will run Blue Tool as Fig.2





KCC/FCC/CE PC Config Setup



- 1. Connect USB Jig and PC USB Port using USB Cable
- 2. Select "시작→설정→제어판→ 시스템" in PC [Fig.1] and Device Manager[Fig.2] to see if the driver is successfully installed by activating its port.
- 3. Check the number of com port in Device manager (com4)
- 4. Check the number of Baudrate in Device manager (115200)



KCC/FCC/CE PC Setup

BLUETOOL SETUP

START BLUETOOL

BlueTool Version 1.5.0.9 was used for these procedures.

- 1. Start BlueTool (Programs > Broadcom BlueTool > BlueTool).
- 2. Enable the BlueTool log window (View > Log Window). The log window

HCI Con	trol		Ctrl+1	-
Dia			00111	
500	ect HCI	Control W	indow Transp	ort
Thr •	USB	usb0	-	OK
Blu C	NET		· ·	Cancel
OV SDI	SDIO	sdio0	~	
	UART	com1	-	
Do		115200	•	
US		CTS flow	control	
_		SLIP/Th	ree-wire	
Fe	atures:			
	Blu C OV SD C Do US	G USB Blu C NET Ov SDIO O SDIO O UART Do US Features:	USB usb0 USB usb0 Blu NET Ov SDI0 Sdio0 Ov C SDI0 Sdio0 Ov CTS flow Features: CTS flow	USB usb0 Blu ONET SDI0 sdio0 SDI0 sdio0 O UART com1 UART com1 Integration of the second s



- 1. From the BlueTool Transport menu, select HCI Control.
- 2. In the Select HCI Control Window Transport window: UART setup—Enable the UART option, select the appropriate com port, set the baud rate to 115200

3. Click OK

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KCC/FCC/CE PC Setup

RESET THE DEVICE UNDER TEST

The device under test (DUT) should be reset before each procedure. In the HCI Control... window:

- 1. Clear (uncheck) and then reselect the HCI protocol active option.
- 2. From the shortcut menu, select 7.3: Host Controller & Baseband Commands (3 key).
- 3. In the main body of the window, double-click **Reset** to reset the DUT.

HCI Control: usb0		×
HCI protocol active	7.3: Host Controller & Baseband Commands (3 key)	
Set_Event_Mask		^
Set_Event_Filter		~



RECEIVE TEST

This is a non-hopping, write receive only test. To put the DUT in receive mode:

1. In the HCI Control window, from the shortcut menu, select 0: Vendor Specific Command (0 key).

2. In the main body of the window, double-click Write_Receive_Only.

3. In the HCI Command: Write_Recieve_Only window, enter the desired frequency (Low: 2402 MHz, Mid: 2441 MHz, High: 2480 MHz).

The last line of the BlueTool log window will read Status = 0x0 (0, "Success").

HCI Control: usb	0	-
HCI protocol active	0: Vendor-specific Commands (0 key)	
Delay_Peripheral_SCO_S	tartup	<u>^</u>
Write_Rate_Control		v



Transmit Mode(Single Freq-Non Hopping)

To set the transmit carrier frequency arm:

- 1. Reset the device (page 6).
- 2. In the HCI Control window, from the shortcut menu, select 0: Vendor Specific Command (0 key)
- 3. In the main body of the window, double-click Set Tx Carrier Frequency Arm
- 4. In the HCI Command... window:
- a. From the Carrier_Enable shortcut menu, select Carrier on.
- b. In the Carrier_Frequency... field, enter the desired output frequency. (Low: 2402, Mid: 2441, High: 2480)
- c. From the Mode shortcut menu, select PRBS9.
- d. From the **Modulation Type** shortcut menu, select **GFSK**, **8PSK**, or **QPSK**. **Note:** Only one modulation type can be selected for a specific test instance, but all three types must be tested for FCC compliance.
- e. From the Transmit_Power shortcut menu, select Specify Power Table index. f. In the Transmit_Power_Table_Index Transmit_Power field, enter 0.

Camer_Enable:	Carrier on		OK
Carrier_Frequency (2402-2490; MHz):	2402	0x962	Cance
Mode:	PRBS9	•	
Modulation Type:	GFSK 💌		
Transmit_Power:	Specify Power T	able index 💌	
Transmit Dawar dBas (120 to 127; dBas)	0	Cix()	
Transinit_Fower_ubiii (*120 to 127, ubiii);			



5. Click OK.

ACL Basic

1. Reset the device (page 6).

2. In the HCI Control window, from the shortcut menu, select 7.4: Informational Parameters (4 key).

3. In the main body of the window, double-click **Read BD ADDR**.

The last line of the BlueTool log window will contain the Bluetooth device address of the DUT.

HCI Control: usb0		
HCI protocol active	7.4: Informational Parameters (4 key)	•
Read_Local_Extended_F Read_Buffer_Size Read_Country_Code Read_BD_ADDR	eatures	

4. In the HCI Control window, from the shortcut menu, select 0: Vendor-specific Commands (0 key).

5. In the main body of the window, double-click **Tx_Test**.

HCI Control: usb	0	_ 🗆 🔀	
HCI protocol active	0: Vendor-specific Commands (0 key)	2	Ŧ
Set_Link_Quality_Thresh	old		~
Rx_Test			-



- 6. In the HCI Command... window
- a. From the Local_Device_BD_ADDR shortcut menu, select the Bluetooth device address of the DUT.
- b. From the Hopping_Mode shortcut menu, select 79 channel.
- c. From the Modulation_Type shortcut menu, select PRBS9 Pattern.
- d. From the Logical_Channel shortcut menu, select ACL Basic.
- e. From the BB_Packet_Type shortcut menu, select DH5/3-DH5, DH3/3-DH3, or DH1/2-DH1.

Note: Only one packet type can be selected for a specific test instance, but all three types must be tested for FCC compliance.

- f. In the BB_Packet_Length field, enter 65535
- g. From the Tx_Power_Level shortcut menu, select **Specify Power Table index**.
- h. In the Transmit_Power_Table_Index field, enter 0.

Local_Device_BD_ADDR:	203500B30001 -	ОК
Hopping_Mode:	79 channel	Cancel
Frequency	2402 MHz 👻	
Modulation_Type:	PRBS9 Pattern	
Logical_Channel:	ACL Basic	
BB_Packet_Type:	DH5 / 3-DH5	
BB_Packet_Length (0-65535; Firmware will limit len to max for BB_Packet_Type):	0 0x0	
Tx_Power_Level:	Specify Power Table index	
Transmit_Power_dBm (-128 to 127; dBm):	0 Oc0	
Transmit_Power_Table_Index (0-7):	0 0x0	

7. Click OK.

ACL EDR

1. Reset the device (page 6).

2. In the HCI Control window, from the shortcut menu, select 7.4: Informational Parameters (4 key).

3. In the main body of the window, double-click Read BD ADDR.

The last line of the BlueTool log window will contain the Bluetooth device address of the DUT.

HCI Control: usb0		
HCI protocol active	7.4: Informational Parameters (4 key)	•
Read_Local_Extended_F Read_Buffer_Size Read_Country_Code Read_BD_ADDR	eatures	

- 4. In the HCI Control window, from the shortcut menu, select 0: Vendor-specific Commands (0 key).
- 5. In the main body of the window, double-click **Tx_Test**.

- 6. In the HCI Command ... window
- a. From the Local_Device_BD_ADDR shortcut menu, select the Bluetooth device address of the DUT.
- b. From the Hopping_Mode shortcut menu, select 79 channel.
- c. From the Modulation_Type shortcut menu, select PRBS9 Pattern.
- d. From the Logical_Channel shortcut menu, select ACL EDR.
- e. From the **BB_Packet_Type** shortcut menu, select **DH5/3-DH5**, **DH3/3-DH3**, or **DH1/2-DH1**.

Note: Only one packet type can be selected for a specific test instance, but all three types must be tested for FCC compliance.

- f. In the **BB_Packet_Length** field, enter **65535**.
- g. From the Tx_Power_Level shortcut menu, select **Specify Power Table index**.
- h. In the Transmit_Power_Table_Index field, enter 0.

HCI Command: Tx_Test (usb0)			
Local_Device_BD_ADDR:	203500B30001	•	ОК
Hopping_Mode:	79 channel	*	Cancel
Frequency	2402 MHz 👻]	
Modulation_Type:	PRBS9 Pattern	•	
Logical_Channel:	ACL Basic	-	
BB_Packet_Type:	DH5 / 3-DH5	•	
BB_Packet_Length (0-65535; Firmware will limit len to max for BB_Packet_Type):	0	Ox0	
Tx_Power_Level:	Specify Power	Table index 💌	
Transmit_Power_dBm (-128 to 127; dBm):	0	0x0	
Transmit_Power_Table_Index (0-7):	0	0x0	

7. Click OK.

Unmodulated mode(CW)

To set the transmit carrier frequency arm:

- **1.** Reset the device (page 6).
- 2. In the HCI Control window, from the shortcut menu, select 0: Vendor Specific Command (0 key)
- 3. In the main body of the window, double-click Set Tx Carrier Frequency Arm
- 4. In the HCI Command... window:
- a. From the Carrier_Enable shortcut menu, select Carrier on.
- b. In the Carrier_Frequency... field, enter the desired output frequency. (Low: 2402, Mid: 2441, High: 2480)
- c. From the Mode shortcut menu, select PRBS9.
- d. From the Modulation Type shortcut menu, select Unmodulated.
- e. From the Transmit_Power shortcut menu, select Specify Power Table index. f. In the Transmit_Power_Table_Index Transmit_Power field, enter 0.

HCI Command: Set_Tx_Carrier_F	Frequency_ARM (com4@1152 🔳 🗖 🔀
Carrier_Enable:	Carrier on 💌 OK
Carrier_Frequency (2402-2490; MHz):	2402 0x962 Cancel
Mode:	Unmodulated 🗾
Modulation Type:	GFSK 🔽
Transmit_Power:	Specify Power Table index 💌
Transmit_Power_dBm (-128 to 127; dBm);	0 0x0
Transmit_Power_Table_Index (0-7):	0 0x0

FCC Dwell Time Testing Mode

ACL Basic

- 1. Reset the device (page 6).
- 2. In the HCI Control window, from the shortcut menu, select 7.4: Informational Parameters (4 key).
- 3. In the main body of the window, double-click **Read BD ADDR**.
- The last line of the BlueTool log window will contain the Bluetooth device address of the DUT.

HCI Control: usb0		
HCI protocol active	7.4: Informational Parameters (4 key)	•
Read_Local_Extended_F Read_Buffer_Size Read_Country_Code Read_BD_ADDR	eatures	

- 4. In the HCI Control window, from the shortcut menu, select 0: Vendor-specific Commands (0 key).
- 5. In the main body of the window, double-click **Tx_Test**.

HCI Control: usb	0	_ D ×
HCI protocol active	0: Vendor-specific Commands (0 key)	
Set_Link_Quality_Threshold		<u>^</u>
Rx_Test		~

FCC Dwell Time Testing Mode

- 6. In the HCI Command... window
- a. From the Local_Device_BD_ADDR shortcut menu, select the Bluetooth device address of the DUT.
- b. From the **Hopping_Mode** shortcut menu, select **Single Frequency**.
- c. From the Modulation_Type shortcut menu, select PRBS9 Pattern.
- d. From the Logical_Channel shortcut menu, select ACL Basic or ACL EDR.
 "ACL Basic" to test hopping channel in GFSK modulation mode or, "ACL EDR" to test hopping channel in 8PSK mode
- e. From the **BB_Packet_Type** shortcut menu, select **DH5/3-DH5**. **Note:** These are worst case packet duty cycles.
- f. From the Tx_Power_Level shortcut menu, select **Specify Power Table index**.
- g. In the Transmit_Power_Table_Index field, enter 0.

🗱 HCl Command: Tx_Test (com4@115200nfc)	
Local_Device_BD_ADDR:	0A5CAB008541 • OK
Hopping_Mode:	Single frequency Cancel
Frequency:	2402 MHz 💌
Modulation_Type:	PRBS9 Pattern
Logical_Channel:	ACL Basic 💌
BB_Packet_Type:	DH5 / 3-DH5
BB_Packet_Length (0-65535; Firmware will limit len to max for BB_Packet_Type):	0 0×0
Tx_Power_Level:	Specify Power Table index 💌
Transmit_Power_dBm (-128 to 127; dBm):	0 0×0
Transmit_Power_Table_Index (0-7):	0

7. Click OK.

KCC/FCC/CE Certification Setup

USB JIG pin map

Federal Communications Commission(FCC) Statement

You are cautioned that changes or modifications not expressly approved by the part responsible

for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1) this device may not cause harmful interference, and

2) this device must accept any interference received, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

(5) Industry Canada(IC) Statement

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

- 1) this device may not cause interference and
- 2) this device must accept any interference. Including interference that may cause undesired operation of device.

This class B digital apparatus complies with Canadian ICES-003

Avis d'Industrie Canada

Cet appareil est conforme à norme CNR-210 des règlements d'Industrie Canada. Son fonctionnement est sujet aux deux conditions suivantes:

- 1) Cet appareil ne doit pas provoquer d'interférences et
- 2) Cet appareil doit accepter toute les interférences. y compris celles pouvant entraîner son dys-fonctionnement.
 Cet appareil numérique de classe B est conforme à la norme NMB-003 du Canada.

IC Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

NOTE: THE MANUFACTURERE IS NO T RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Avis d'Industrie Canada sur I'exposition aux rayonnements

Cet appareil est conforme aux limites d'exposition aux rayonnements d'Industrie Canaca pour unenvironnement non contrôlé.

II doit être installé de façon à garder une distance minimale de 20

centimètres entre la source de rayonnements et votre corps.

REMARQUE: LE FABRICANT N'EST PAS RESPONSIBLE DES INTERFÉRENCES RADIOÉLECTRIQUES CAUSÉES PAR DES MODIFICATIONS NON AUTORISÉES APPORTÉES APPORTÉES À CET APPAREIL. DE TELLES MODIFICATIONS POURRAIT ANNULER L'AUTORISATION ACCORDÉE À L'UTILISATEUR DE FAIRE FONCTIONNER L'APPAREIL.