

AW-BT715C

Bluetooth Module

Demo Board User Guide

Version 0.1

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Document release	Date	Modification	Initials	Approved
Version 0.1	2014/06/26	Initial Version	N.C. Chen	Chihhao Liao

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Contents

1. Install driver and tool

install active perl version: 5.8.4.810 before install Broadcom tool

install Broadcom tool BLUETOOL version:1.7.3.3

install CP210X(USB to UART) driver CP210X_VCP_Win2K_XP_S2K3

2. Connect the EVB to a PC

Use the cable to connect EVB with PC



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Check the com port that will be used.



A.CONNECT TO A BLUETOOTH TESTER

Run BlueTool, and then:



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1. From the BlueTool **View** menu, select **Log Window.** A record of issued commands will be maintained in the log window.



2. From the Transport menu, select HCI Control.

a. In the Select HCI Control Window Transport window (screenshot below), select UART, the COM port that will be used, 115200, and CTS flow control.

b. Click OK.

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ile <u>E</u> dit <u>V</u> iew	<u>Transport</u> <u>W</u> indow <u>H</u> elp					
	HCI Control	Ctrl+1				
🔲 Log Windd	Diagnostics	Ctrl+2				
	Throughput Tests	Ctrl+3				
	SCO Test	Ctrl+4				
	Set Speech Bandwidth to 16KHz					
	Set Speech Bandwidth to 8KHz	N 1.				
	Transport Sleep	N)				
	Bluetooth HID	Ctrl+5	-			
	Over-the-air Firmware Undate	Ctrl+6				
	SDP	Ctrl+7				
	HCI Download	Ctrl+8				
	Download Firmware/Config	Ctrl+9				
< 1 m	USB HID		-			
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Broadcom Bl le Edit View	ae Iool Iransport Window Help	elect HCI C USB C NET C SDIO C UART	Control Windo usb0 sdio0 com4 115200 CTS flow co SLIP/Three-	vy Transp V V V V Ntrol wire	OOT OK Cancel	
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B. Reset

- 1.In the HCI Control window
- a. Select 7.3 Host Controller & Baseband Commands (3 key) for HCI protocol active
- b.Double-click Reset.
- 2. Confirm that this step is done successfully by viewing the log window



C. Download the Configuration File

1. In the HCI Control window

a. Select **0: Vendor-specific Commands (0 key)** for HCI protocol active b.Double-click **Download Minidriver.**

2. Confirm that this step is done successfully by viewing the log window

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🗱 Broadcom BlueTool	
<u>File Edit View Iransport Window H</u> elp	
📁 Log Window 📃 🗖 🗙	🗱 HCI Control: com4@115200
<pre>[0E 04]: 01 03 0C 00 event = 0xE (14, "Command Complete") Num_HCI_Command_Packets = 0x1 (1) Command_Opcode = 0xC03 (3075, "Reset") Status = 0x0 (0, "Success") 43:52.078 com4 c> Download_Minidriver HCI Command com40115200 [2E FC 00] 3. opcode = 0xFC2E (64558, "Download_Minidriver" 48:52.079 com4 <c download_minidriver<br="">HCI Command Complete Event com40115200 [0E 04]: 01 2E FC 00 event = 0xE (14, "Command Complete") Num_HCI_Command_Packets = 0x1 (1) Command_Opcode = 0xFC2E (64558, "Download_Min Status = 0x0 (0, "Success") 43:52.080 com4 Transport closed com40115200</c></pre>	 HCI protocol active: D: Vendor-specific Commands (0 key) Hold UPRX & CTS low Reset ARM reset device with DTR strobe Download Miniditwer Creade DIM Set Power Amp Bias Set Ham Behavior Set AFH Behavior Read BTW Security Key Enable Radio Read Diagnostic Info Get HID Device Inable USB HID Emulation Write TR Eprogramming Table Automatic Paring Requested Read USB HID Emulation Write To Extension Read Collaboration Mode Write Collaboration Mode Write To Collaboration Mode Write Collaboration Mode Write To Collaboration Mode Write To Collaboration Mode Write To Collaboration Mode Write To Collaboration Mode Write The Attennation Table Read UART Clock Setting Set Sleep Clock Accuracy And Settling Time Configure Sleep Mode Read RAM Launch RAM Install Patches Set Link Quality Threshold Tx Test Connectionless Tester Loopback Test Connectionless Tester Loopback Test

- 3. From the BlueTool Transport menu, select Download Firmware/Config....
- 4. In the Select Download Firmware/Config Transport window
 - a. select UART, the COM port that will be used, 115200,and CTS flow control.
 - b. Click OK.

e <u>E</u> dit <u>Vil</u> w	<u>Transport</u> <u>W</u> indow <u>H</u> elp						
D Log Windc	HCI Control Diagnostics	Ctrl+1 Ctrl+2		elect Dow	nload Firmw	are/Config	; Transport
[OE 04] event = Num_HCI Command Status 31:35.921 [O3 18 opcode	Throughput Tests C SCO Test C Set Speech Bandwidth to 16KHz Set Speech Bandwidth to 8KHz Proprietary Mode (click to turn ON) Transport Sleep		C USB usb0 Cul+3 Cul+4 Inab. 3. SDI0 sdio0 C UART com4				
	Bluetooth HID Over-the-air Firmware Update SDP HCI Download	C trl+5 C trl+6 Ctrl+7 Ctrl+8	_nod	Features:	CTS flow	control ee-wire	

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- 5. In the Download: com @115200 window,
 - a. select 20702 A0/A1/B0 Runtime RAM for Device configuration
 - b. mark From burn image
 - c. key in 0x00090000 on SS location
 - d. click Locate
 - e. select the configuration
 - f. click open
 - g. click Execute
 - h. close the window

🎇 Download: com4@115200				
🗖 Download protocol active	Save	Remove	Status: Idle	
Device configuration: 20702 A0/A1/B0 Runtime RAM	Import	Export	ARM HCI	5. Execute
Setup			Write	Manual read/write
☐ Initially reset device with DTR strobe Post reset delay: 100 m	15		Max write size: 251	
🔽 Autobaud 🔽 Repeat until launch announcement Delay: 🛛 🛛 🛛	15		Written sectors only 💌	
🔽 Wait for launch announcement 🛛 Reprogram IF_PLL			🦵 Manual mode (minidriver ex	æc)
- 🗖 Download minidriver			🖵 USB bulk pipe 🔄	
E-Program Files/Broadcom/Elue Tool/Minidrivers/2045/wart_legacy_ramcfg_o	nly hex			Locate
- 🔽 Download firmware				
Standard 🗾				Locate
🔽 Download configuration record				4
E:\1292 setup\BCM20710A1_001.002.014.0062.0067.hcd				Locate
RAM runtime 💌 SS location: 0x00090000	DS location	c 0x000000	84	FN offset: 0x0000
□ 🔽 Include static section _2. 🔽 From burn image	nit RF_PLL	(65 nm radio)	Include charger config -	
Crystal frequency (MHz): 26 MHz preset 🗾 Error (PPM):	0	VS location:	0x00000000
Ontroit nowar adjited 10	onno motrih	tuning 21	WC lenoth.	โกษกกกก

D. Verify the DUT condition by reading the BD address

- 1. In the HCI Control window
 - a. mark HCI protocol active ,select 7.4 Informational Parameters(4 keys)from it
 - b. Double-click Read BD ADDR.
- 2. The Log Window will show the BD address.

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E. Set Event Filter

- 1. In the HCI Control window
 - a. select 7.3 Host Controller & Baseband Commands (3 key) for HCI protocol active
 - b. Double-click Set Event Filter.
- 2.In the HCI Command window
 - a. select connection setup for filter type
 - b. select Allow Connecttion from all devices for Connection_Setup_ Filter _Condition_type
 - c. select Do Auto accept the connection with role switch disabled for Auto_Accept_Flag
 - d. Click OK.
- 3. Confirm that this step is done successfully by viewing the log window .

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F. Write Scan Enable

- 1. In the HCI Control window
 - a. select 7.3 Host Controller & Baseband Commands (3 key) for HCI protocol active
 - b. Double-click. Write Scan Enable
- 2. In the HCI Command window
 - a. select Inquiry and Page Scan enabled for scan_Enable
 - b. Click OK.
- 3. Confirm that this step is done successfully by viewing the log window .

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G. Enable Device Under Test Mode

- 1. In the HCI Control window
 - a. select 7.6 Testing Commands (6 key) for HCI protocol active
 - b. Double-click Enable Device Under Test Mode
- 2. Confirm that this step is done successfully by viewing the log window .





🚯 Broadcom Blue Tool	
<u>File Edit View Iransport Window H</u> elp	
<pre>pie Edit yew jransport window Help Cog Window Com4@115200 (0E 04]: 01 1A 0C 00 event = 0xE (14, "Command Complete") Num_HCI_Command_Packets = 0x1 (1) Command_Opcode = 0xClA (3098, "Write_Scan_Enab. Status = 0x0 (0, "Success") 31:35.921 com4 c> Enable_Device_Under_Test_Mod HCI Command com4@115200 (03 18 00] opcode = 0x1803 (6147, "Enable_Device_Under_Te: 31:35.923 com4 <c "command="" "enable_device_1="" "success")="" (0,="" (1)="" (14,="" (6147,="" 00="" 01="" 03="" 04]:="" 18="" <="" [05="" com4@115200="" command="" command_opcode="0x1803" complete="" complete")="" enable_device_under_test_mod="" event="0xE" hci="" num_hci_command_packets="0x1" pre="" status="0x0"></c></pre>	Control: com4@115200 probool activel 7.6: Testing Commands (6 key) a UPRX & CTS low compace_Mode compace_Mode

H.TX Testing

- 1. In the HCI Control window
 - a. select 0: Vendor-specific Commands (0 key) for HCI protocol active
 - b. Double-click TX Test
- 2. 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 frequency shortcut menu, select which frequency you want to test.
 - d. From the Modulation_Type shortcut menu, select PRBS9 Pattern.
 - e. From the Logical_Channel shortcut menu, select ACL Basic.
 - f. From the BB_Packet_Type shortcut menu, DH5/3-DH5, DH3/3-DH3, or DH1/2-DH1.
 - g. From the BB_Packet_length(....) shortcut menu, key 65535
 - h. From the Tx Power Level shortcut menu, select Specify Power in dBm
 - i. From the Transmit Power dBm shortcut menu, key in which power you want to transmit.
 - j. Click **OK**.
- 3. Confirm that this step is done successfully by viewing the log window.

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LCI Control: com4@115200		
F HCI protocol active 0: Vendor-specific Commands	(0 key) 👱	
📕 Hold UPRX & CTS low 🛛 Reset 🔲 🗖 ARM reset dev	rice with DTR strobe	
Configure_Sleep_Mode Read_Raw_RSSI Write_Channel_Class_Config IOP_Test_Tx IOP_Test_Rx Write_RAM Read_RAM Launch_RAM 3. Install_Patches		
set_Link_Quality_Intesnoia Tx_Test		
Ry_Test Connectionless_Tester_Loopback_Test Connectionless_DUT_Loopback_Test	=	
HCI Command: Tx_Test (com4@115200)		
Local_Device_BD_ADDR:	0DA21B5B6CA9 💌	ок
Hopping_Mode:	Single frequency Ca	ancel
Frequency:	2442 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):	65535 OxFFFF	
Tx_Power_Level:	Specify Power in dBm 📃	
Transmit_Power_dBm (-128 to 127; dBm):	9 0x9	
Transmit_Power_Table_Index (0-7):	0 0x0	

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I. RX Testing

1. In the HCI Control window

a. select 0: Vendor-specific Commands (0 key) for HCI protocol active b. Double-click RX Test

- 2. 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 report period shortcut menu, select which period you want to used
 - c. From the frequency shortcut menu, select which frequency you want to test.
 - d. From the Modulation_Type shortcut menu, select PRBS9 Pattern.
 - e. From the Logical_Channel shortcut menu, select ACL Basic.
 - f. From the BB_Packet_Type shortcut menu, DH5/3-DH5, DH3/3-DH3, or DH1/2-DH1.
 - g. From the BB_Packet_length(....) shortcut menu, key in 65535
 - h. Click OK.
- 3. Confirm that this step is done successfully by viewing the log window .

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LCI Control: com4@115200	
HCI protocol active 0: Vendor-specific Commands (0 key)	•
Hold UPRX & CTS low Reset ARM reset device with DT	IR strobe
Configure_Sleep_Mode Read_Raw_RSSI Write_Channel_Class_Config IOP_Test_Tx IOP_Test_Rx Write_RAM Read_RAM Launch_RAM Install_Patches Set_Link_Quality_Threshold Tx_Test Rx_Test Rx_Test Connectionless_Tester_Loopback_Test Connectionless_DUT_Loopback_Test Get_Running_Sync_Ok_Count Write_Rate_Control_Extended Write_High_Priority_Connection Send_LMPDU	
HCI Command: Rx_Test (com4@115200)	
Remote_Device_BD_ADDR:	DDA21B5B6CA9 OK
Report_Period (250-2000; milliseconds):	1000 Ox3E8 Cancel
Frequency:	2442 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):	65535 OxFFFF

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	10¥	
1:54.218	com4 c> Rx_Test	1
	HCI Command	
	com4@115200	
[52 FC	OE]: A9 6C 5B 1B A2 0D E8 03 28	04 01 0:
opcode	= 0xFC52 (64594, "Rx_Test")	
Remote	_Device_BD_ADDR = "ODA21B5B6CA9"	
Report	_Period = 0x3E8 (1000, milliseco	nds)
Freque	ncy = 0x28 (40, "2442 MHz")	
Modula	tion_Type = 0x4 (4, "PRBS9 patte:	rn")
Logica	<pre>1_Channel = 0x1 (1, "ACL Basic")</pre>	
BB_Pac	ket_Type = 0xF (15, "DH5 / 3-DH5"	")
BB_Pack	ket_Length = 0xFFFF (65535, Firm	ware wil.
- 54 050		_
.:54.250	com4 <c rx_test<="" td=""><td></td></c>	
.:54.250	com4 <c rx_test<br="">HCI Command Complete Even</c>	t I
.:54.250	com4 <c rx_test<br="">HCI Command Complete Even com40115200</c>	t
.:54.250 [OE 04	com4 <c rx_test<br="">HCI Command Complete Even com40115200]: 01 52 FC 00</c>	t
.:54.250 [OE 04 event	com4 <c rx_test<br="">HCI Command Complete Even com40115200]: 01 52 FC 00 = 0xE (14, "Command Complete")</c>	t
.:54.250 [OE 04 event Num_HC	com4 <c rx_test<br="">HCI Command Complete Even com4@115200]: 01 52 FC 00 = 0xE (14, "Command Complete") I_Command_Packets = 0x1 (1)</c>	t
.:54.250 [OE 04 event Num_HC Comman	<pre>com4 <c rx_test<br="">HCI Command Complete Even com4@115200]: 01 52 FC 00 = 0xE (14, "Command Complete") I_Command_Packets = 0x1 (1) d_Opcode = 0xFC52 (64594, "Rx_Te:</c></pre>	t st")
.:54.250 [OE 04 event Num_HC Comman Status	com4 <c rx_test<br="">HCI Command Complete Even com4@115200]: 01 52 FC 00 = 0xE (14, "Command Complete") I_Command_Packets = 0x1 (1) d_Opcode = 0xFC52 (64594, "Rx_Te: = 0x0 (0, "Success")</c>	t st")
.:54.250 [OE 04 event Num_HC Comman Status	<pre>com4 <c rx_test<br="">HCI Command Complete Even com4@115200]: 01 52 FC 00 = 0xE (14, "Command Complete") I_Command_Packets = 0x1 (1) d_0pcode = 0xFC52 (64594, "Rx_Te: = 0x0 (0, "Success")</c></pre>	t st")

Measure performance with instrument for auto testing (ex. Agilent N4010) Step : A to G

Measure performance with instrument for manual testing (ex. Spectrum Analyzer)

Step : A to D , H(testing TX) or I(testing RX)

The device under test (DUT) should be reset before each procedure. Re-test or replace the DUT need to switch **Bluetool** and plug DUT.

If the Log Window didn't show successful message in any step (Step B~I), please reset it.



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2. AW-BT715C EVB



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EVB PCB Stackup

品名	供應商	供應商料號	材質	厚度(mil)	厚度(um)
solder mask		HG-65	S/M	0.8	20.00
電鍍銅(磷銅球)			Plating	0.8	20.00
銅箔			CU	1.3	33.00
P.P.膠片	南亞	NPG-B	玻纖布 EPOXY	7.1	180.00
			CU	1.3	33.00
內層板-L2/L3基板	南亞	NPG-R	FR-4 0.9T	32.86	834.00
			CU	1.3	33.00
PP驟片	南亞	(Helogen free)	玻纖布	71	180.00
1.		Inclogentiee	EPOXY	7.1	100.00
銅箔			CU	1.3	33.00
電鍍銅(磷銅球)			Plating	0.8	20.00
solder mask		HG-65	S/M	0.8	20.00
			Total :	55.46	1406.00
			SPEC 'T'	55.12	1.40

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Federal Communication Commission Interference Statement

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.

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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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 20cm between the radiator & your body.

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further <u>transmitter</u> test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions <u>can not be met</u> (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID <u>can</u> <u>not</u> be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID: TLZ- BT715C". The grantee's FCC ID can be used only when all FCC compliance requirements are met.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

Industry Canada 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 harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

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 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

This device is intended only for OEM integrators under the following conditions: (For module device use)

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and

2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes: (Pour utilisation de dispositif module)

1) L'antenne doit être installée de telle sorte qu'une distance de 20 cm est respectée entre l'antenne et les utilisateurs, et

2) Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

Tant que les 2 conditions ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

IMPORTANT NOTE:

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

NOTE IMPORTANTE:

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains IC: 6100A-BT715C".

Plaque signalétique du produit final

Ce module émetteur est autorisé uniquement pour une utilisation dans un dispositif où l'antenne peut être installée de telle sorte qu'une distance de 20cm peut être maintenue entre l'antenne et les utilisateurs. Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 6100A-BT715C".

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

Manuel d'information à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.

Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

低功率電波輻射性電機管理辨法

第十二條 經型式認證合格之低功率射頻電機,非經許可,公司、商 號或使用者均不得擅自變更頻率、加大功率或變更原設計之 特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通

信;經發現有干擾現象時,應立即停用,並改善至無干擾時 方得繼續使用。

前項合法通信,指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

模組認證:

1. 本模組於取得認證後將依規定於模組本體標示審驗合格標籤。

2. 系統廠商應於平台上標示「本產品內含射頻模組:

《WXXXyyyLPDzzzz-x」字樣。