

AW-CU479

IEEE802.15.4 Wireless Microcontroller Zigbee 3.0 Stamp LGA Module (M06)

RF Tool Guide

Rev. A

(For Standard)



Revision History

Version	Revision Date	Description	Initials	Approved
A	2020/8/18	Initial Version	Jeff Kuo	N.C. Chen



1. System Setup

(1) Hardware Requirements

- AW-CU479 Module on test board
- Host system need running the Window10 x64 operating system
- Vector Signal Analyzer analyzer for transmit measurements.
- Signal generator for receiver measurements.
- RF isolation chamber for receive measurements.
- RF attenuators
- RF cable



• PL-2303 GPIO Test (tool)

Ρ	L2303HXD_GPIO > PL2303HXD 4 GPIO_bin			
•	名稱 ^	修改日期	類型	大小
	PL-2303 4 GPIOTest.exe	2020/8/11 上午 1	應用程式	300 KB
L				

• Tera Term (tool)

Note: Tera Term is our suggestion, you can try any terminal tool.

名稱 ^	\sim	修改日期	類型	大小
🚏 teraterm-4.63.exe		2009/9/8 下午 04	應用程式	7,045 KB

• Production flash programmer folder (please contact FAE)

Note: You must be have below files

2477 > ProductionFlashProgrammer

•	名稱 ^ ~	修改日期	類型	大小
	AN1172_CustomerModuleEvalTool_JN5169.bin	2016/8/19 上午 1	BIN 檔案	27 KB
i.	🔊 ftd2xx.dll	2015/1/26 下午 0	應用程式擴充	215 KB
	▶ JN51xxProgrammer.exe	2017/6/16 下午 0	應用程式	543 KB
	libgcc_s_dw2-1.dll	2015/1/26 下午 0	應用程式擴充	110 KB
	pdcurses.dll	2015/1/26 下午 0	應用程式擴充	116 KB
	programmer.dll	2017/6/16 下午 0	應用程式擴充	205 KB
	🎯 uninstall.exe	2020/2/13 下午 0	應用程式	322 KB



2. AW-CU479 EVB





3. How to download the image

1. you must check the COM number (J9 and J11) (can check the value by the following picture) Note: J9 for DUT COM port

J11 for PL2303 control Test/Normal mode.



2. Find the folder of production flash programmer. And type cmd to get into the Dos window.

室田 井田 給援					
🗠 🛧 📙 cmd				✓ → 提尋 ProductionFlashP	ro
CMD mel ve 按큟 "cmd"					
		,, <u>-</u>			
	ftd2xx.dll	2015/1/26 下午 09:16 應用程式擴充	215 KB		
3D 1017	JN51xxProgrammer.exe	2017/6/16 下午 06:55 應用程式	543 KB		
下戦	libgcc_s_dw2-1.dll	2015/1/26 下午 09:16 應用程式擴充	110 KB		
文件	pdcurses.dll	2015/1/26 下午 09:16 應用程式擴充	116 KB		
音樂	programmer.dll	2017/6/16 下午 06:55 應用程式擴充	205 KB		
桌面	🮯 uninstall.exe	2020/2/13 下午 01:55 應用程式	322 KB		
園片					
影片					
本機磁碟 (C:)					
2422					
cygwin64					
Intel					
LitePoint					
020					
REMicro					
Performance Development					
Perilogs					
Peri					
Program Files					
Program Files (x86)					
Python27					
Symantec					
Windows					
使用者					
本機磁碟 (D:)					
	*				1



3. key in JN51xxProgrammer.exe –s com7 –f AN1172_CustomerModuleEvaTOOL_JN169.bin To open the tool and download the image file (com7 is your DUT J9 Com port)



4. Finish

■ 条統管理員: C:\Windows\System32\cmd.exe - JN51xxProgrammer.exe -s com7 -f AN1172_CustomerModuleEvalTool_JN5169.bin	-	(\times
NXP JN51xx Device Programmer (Build 1614) COM7 Detected JN5169 with MAC address 00:15:8D:00:04:BA:2D:86				
Flash programmed successfully]	100%
Operations Complete Press any key				



4. How to into the test mode (Default is Download mode)

- 1. Open the PL-2303 GPIO Test
- 2. Setting Com port (J11 com port)
- 3. Baud rate is 115200
- 4. Setting the GP1

Keying 1 and Select set button.(open test mode)

5. Setting the GP3

First Keying 0 and Select set button Then Keying 1 and Select set button again. (Reset)

PL-2303 4 GPIOTest Ver 1.0.0.1	×
COM6 Open Close OP Size 8 Rate 115200 SE S.Bit 1 Set Port Status SE Par None Get Port Status SE GP0 GP1 GP1 SE Output Enable Get Set 1 Get Set GP3 GP3 GP3 Output Enable Get Set 1 GP2 GP3 GP4 Get Set Get Set Get Set 1	PEN COM6 port Successfully! T port status Successfully! T GP1 value Successfully! P1 value: 1 T GP3 value Successfully! P3 value: 1 T GP3 value Successfully! P3 value: 0 T GP3 value Successfully! P3 value: 1



5. Test mode

- 1. Open the Tera Term
 - Setting COM port (J9 com port)
 - Baud rate is 38400

Tera Term: Serial port set	up		×
Port:	COM6	\sim	ОК
Baud rate:	38400	\sim	
Data:	8 bit	\sim	Cancel
Parity:	none	\sim	
Stop:	1 bit	\sim	Help
Flow control:	none	\sim	
Transmit delay	'char O	ms	ec/line

- a. standard module (AW-CU477&CU478)
- b. M06 High Power Module (AW-CU479)

(Choose what kind of DUT you used)

<u>M</u>	COM7	7:38400b	aud - Tera	Term VT			—	×
File	Edit	Setup	Control	Window	Resize	Help		
******* * (* (* (******** ******** ********	woodeneed Customer Jersion Compiled Producti Chip ID Homeneed Customer Sadio Pa Sadio Pa Sadio Pa Sadio Pa Sadio Pa Sadio Pa Sadio Pa Sadio Pa	www.www.www. Hodule Ev 4.05 Aug 19 20 Dr Test AF Dx01006066 www.www.www. rans Dx00 www.www.www. rans Dx00 www.www.www. rans Dx00 an option	Aluation To 16 11:11:08 1 Version D Construction To Construction To Construction To Construction To Construction To Construction Constructio	*********** ol * * *********************				

AzureWave Technologies, Inc.

Tx power Adjustment.

Select a

*	Тх Ронет	• Adjustement	1	*
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a) Dofa	ilt Ty Pouer			
 b) Defau 	ilt Tx Power	+0.8dB		
c) Defau	It Tx Power	+1,2dB		
d) Defau	ult Tx Power	+1,6dB		

• Tx 2.5dB Attenuator.

Select a

exected accesses and a constrained accesses access accesses acce accesses a

Please choose an option > A 2.5dB Attenuator Off Selected

• RX Maximum Input Level.

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• Customer Module Evaluation Tool (main menu)

Activity of the second structure of the secon

Please choose an option >



6. Select "g" trigger packet test (Rx test)

"I" transmit packet test (Tx test)

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a) TX Power Test (CH) b) TX Power Test (Hodulated) c) Receive Test d) Oscillator Frequency Test e) Current Measurement Test f) RF Power Measurement g) Trigger Packet Test h) Receive Packets Test h) Receive Packets Test j) Conmectionless Packet Error Rate Test k) CCA Test 1) LQI Test
Please choose an option >

- 7. RX test (Select g)
 - $S \rightarrow$ start test (start to receive the package)
 - +/- \rightarrow Increment or decrement channel
 - $X \rightarrow Return to main menu$

🜉 COM7:38400baud - Tera T	Ferm VT			-	\times
File Edit Setup Control	Window	Resize	Hel	р	
Please choose an option >G Enter Trigger DIO in Hexadecinal (O ************************************	F] (by do ⇔⇔ ∗	efault cho	ose 8)	2	^
	ołołok				
* Key Function	*				
*	*				
* + Increment Channel	*				
 Decrement Unannel Transvert Peretitions 	*				
* [Decrement Repetitions	*				
* > Increase Trigger Delau	*				
* < Decrease Trigger Delay	*				
* s Start Test	*				
* х Return to наin неnu	*				
*	*				
* Note:	*				
* Connect pin DIU2 to the trigger	*				
* !!!!! Irig on KHISING edge !!!!!	*				
* Input on the signal generator #000000000000000000000000000000000000	*				
Channel 11 (2.405 GHz) Repetitions 100 Trigger delay 1 nS					
	ołołok				
* Running Trigger Packet Test	*				
Perforning 100 repetitions					*



- 8. TX test (Select i)
 - +/- \rightarrow can control the channel
 - $F \rightarrow$ fast transmit rate (fast transmit can help modulation to catch signal)
 - $X \rightarrow Return to main menu$

