AW-CU282

Wireless LAN Module IC

MFG Tool Command User Guide

Version 0.1

Document release	Date	Modification	Initials	Approved
Ver. 0.1	2013/3/17	Initial version	Renton Tao	Ivan Chen

Step1: Initial Command

As the information showed on your screen, please enter these commands below to start your test.

Command: 1 Wi-Fi testing mode

Step2: Generate 802.11 b/g/n Packet

(1)Command: 22 1 12 1

22: Initial transmit power in the antenna

1: Set the wanted channel (1~14 for B/G/N mode)

12: Set the wanted power, typically G mode: 12 dBm/ B mode: 15 dBm

1: Set the mode, 1→G mode & N mode , 0→ B mode

(2)Command: 112 0 (only for N mode)

112: N mode HT20/40.

0: for HT20/40. 0→HT20, 1→HT40

(3)Command: 25 1 13

25: Set duty cycle, packet mode.

1: Data rate enable

13: Data rate set up

A mode &B mode & G mode

1Mbps	5.5Mbps	11Mbps	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps
1	3	4	6	7	8	9	10

36Mbps	48Mbps	54Mbps
11	12	13

N mode

MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
15	16	17	18	19	20	21	22	23

After you type above command, you can measure the 802.11b/g/n packet by your RF test instrument (exp: Agilent 4010, IQview…).

(4) Command: 25 0

Stop transmitting packet signal.

Step3: Generate 802.11b/g/n continuous symbol

(1)Please re-type the Step5 (1)~(4) commands.

(2)Command 17 1 13

    17: Set continuous mode.

     1: Enable data rate

    13: 54 Mbps, other data rate, please refer the above table.

After you type above command, you can measure the 802.11b/g continuous symbol in your RF test instrument.

(3)Command 17 0

    Stop transmitting continuous signal

Step4: Test RX sensitivity

Before test RX, the Marvell standard waveform is needed. Please contact Azurewave FAE for this issue.

(**1**) **Command 12 1**

    12: Choose RX text channel

     1: Channel number, (1~14 for B/G/N mode)

(2) Command: 112 0 (only for N mode)

    112: N mode HT20/40.

      0: for HT20/40. 0→HT20, 1→HT40

(3) 32: Check the received packets.

(4) 31: Clear all the received packets.

Step5: Others Commands

(1) Command 45→ Check the MAC

(2) Command 99→ Quit the test mode/ Quit the MFG tool

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 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-CU282". 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.