

Tune Up Info for FCC

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1. Purpose

This document introduce general information of the Moto production test H/W and S/W. Including Test Flow, Test Items List, Required Equipment List and some related information.

2. Responsibility

Foxconn Wimax Team has responsibility to update and release this document.

3. Equipment list

- 1. Spectrum Analyzer R&S FSG
- 2. Signal Generator R&S SMJ100A
- **3.** Circulator * 1
- 4. RF Splitter * 1
- 5. RF cables * 5
- 6. Attenuator 30dB * 1

3.1 Test setup



4. Channels and Frequency of Operation

WiMax	Up Link	Down Link	
Frequency	2505 to 2685 MHz	2505 to 2685 MHz	
Channel	720	720	

Channel for Calibration:

Index	0	1	2	3	4	5	6	7	8	9
UL	2500MHz	2520MHz	2540MHz	2560MHz	2580MHz	2600MHz	2625MHz	2645MHz	2665MHz	2685MHz
DL	2500MHz	2520MHz	2540MHz	2560MHz	2580MHz	2600MHz	2625MHz	2645MHz	2665MHz	2685MHz

Litepoint IQ fact calibrates the CPEs for ten channels as above.

4.1 Control Panel calibration Max Power Target:

Wimax_PowerTarget = 25.5 dBm

4.1.1 Setting up the Data Socket

Use the PuTTY application, or equivalent terminal emulation program to set up a data socket with the CPE device. If using PuTTY, an example of a session setup is shown below.

4.1.2 TFTP Server

In order to code load the Radio, the CPE must be able to download the Radio binary and configuration files via TFTP. Typically the Test Host PC is used for this, but any TFTP server that the CPE can access can be used.

The IP address of the TFTP server must be known, and the binary and config files to be loaded into the Radio must be in the TFTP server's default location.

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1. Execute Putty and enter Host name and save session	ons then load
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🔀 PuTTY Configuration	×
Category:	
 Session Logging Terminal Keyboard Bell Features Window Appearance Behaviour Translation Selection Colours Connection Data Proxy Telnet Rlogin SSH Serial 	Basic options for your PuTTY session Specify the destination you want to connect to Host Name (or IP address) Port 192.168.15.1 22 Connection type: Baw O Baw I elnet Rogin Sth Save or delete a stored session Saved Sessions CPE Default Settings CMU B83 CPE Default Settings Delete Chose window on exit: Always Never
About	<u>Open</u> <u>C</u> ancel

- 2. Login: Admin
- 3. Password: Tools
- 4. The screen will show dbgcli>

5. Enter commands: factory testfactory vsg 192.168.15.2 (Before enter these commands, pls execute tftp application program first and direct the path into bin and cfg files.

🖨 192.16	8.15.1 - PuTTY				
login as	: Admin				
******	*****	* * * * * * * * * * * * * * * * *			
**		* *			
* *	Banner	* 7			
**		***********			
0000000000 00					
AGUULUGIS	2.100.13.1 S passw	oru:			
CPE CLI	is ready				
cpe_cli>	start ebetherd				
cpe_cli>	** CAI API MESSAG	E: Constructin	ug object		
******	**********	ersion 1.0.0.4	-CalipI*******	****	
** Cal A	PI MESSAGE: Openin	g local interf	ace		
DeviceIO	Send: dwIoctl=800	46BO2 - InputH	uffer=7FFF7D8C	00000004 04000000	len=00000
00C - i	32Ret=-1				
Kannon P	ort ID 15 U				
COMMIND	EVECUTION SOCKET W	ATTING.			
for data	on nort TCP 4500	sfd = 21			
	on pore for 1000				
COMMAND	EXECUTION SOCKET W	AITING			
for data	on port TCP 2800	sfd = 23			

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4.1.2 Getting Start Control panel

1.Run "BCS200 Control Panel 1.1.exe" (Control panel might be higher version due to Beceem API differentce)

BCS200 Control Panel	
	BCS200 Control Panel Version 1.1.0
Connection TX & Timing RX Statu	IS EEPROM MAC ID
Interface Parameters	Device Mode Mode: 0 Normal Modulation: 0 4 QAM Get Mode Set Mode
Connection Actions Connect Device Disconnect Device	Band Config Image: Config Frequency (GHz) 0.0000 Bandwidth (MHz) 0.00 Get Config Set Config
	Exit

2.Select Interface Parameters MII interface should be selected

- 3.Press "Connect Device" to verify communication with the device. IP is 192.168.15.1 for Ethernet interface
- 4.Device status will appear under "Connection Actions".
- 5.For device mode, select normal mode, than press set mode.
- 6.For Band Config, enter frequency and bandwidth the same as signal generator setup.



BCS200 Control Panel **BCS200 Control Panel** BECEEM Connection TX & Timing RX Status EEPROM MAC ID General Status Version Info ////// General Stats PHY Version × 00000000 Offset 0.00 PPM Sync No S MAC Version 00 00 00 0.0000 GHz Sync Frequency Cal API Version 4 00 4 00 4 00 **RSSI Stats** Force ReSync Is Sync BB Chip ID × 00000000 RF Chip ID × 00000000 Get CINR CINR 0 Driver Version Stats Get Temp Temp 0.00 Get Version Info C Error Exit

7. Change menu page using buttons across top of screen. Select status button.

8 .Press IS Sync button to confirm if CPE synch with signal generator.

COMMUNICATIONS	Version 1.1.0
Connection TX & Timing RX	tatus EEPROM MAC ID
Sync Frequency Offset	0.00 PPM 0000 GHz Cal API Version 000 Cal API Version 00 BB Chip ID 0000 0 Oriver Version Cal API Version 0 0 0 Octoo 0 Octoo

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5. Select Tx & Timing button, set output power by setting "TX Output Power" to get desired power.

BCS200 Control Panel	
BECEEM BCS2	00 Control Panel Version 1.1.0
Connection TX & Timing RX Status EEPR	OM MAC ID
TX Gains and Power	Timing Options
Backoff 4 0 dB Ext Attn or TX PGA 0 4 OdB Attn	Execution Mode Console Log v0.8.3 Timing System Log Enable Timing Controls File Log
TX PA 0 🕴 OdB Attn	Post Cmd Wait 🕴 0 ms
Get TX1 Attn Set TX1 Attn TX Output Power 0.0 dBm	Poll Interval 0 ms Max Polls 1000000 EEPROM Read Delay 4 ms EEPROM Verify Delay 4 ms
Get TX1 Power Set TX1 Power	Get Options Set Options
	Exit

6. Set output power up to 25.5dBm to do the test, which is the maximum output power of this CPE

	200 Control Panel
Concentration TXA. Timing B2 Colles	TELEVISION INVESTIGATION CONTRACTO
Letters and tever and the	f transmitters Andrew
Backoff © de Est Attn M TX PGA 0 0dB Attn TX PGA 0 0dB Attn TX PA 0 0dB Attn Get TX1 Attn Set TX1 Attn TX Output Power © 25.5 dBm Got TX1 Power	Option ID
	1 × il

