

手動PG efue簡介

MPTool

MP WPG Others

	1	0	3	2	5	4	7	6	9	8	B	A	D	C	F	E
00	81	29	7C	00	00	01	00	01	00	4C	00	04	00	10	00	00
01	2D	2D	2D	2D	2D	2D	2D	2D	2D	04	2D	FF	FF	FF	FF	
02	FF	FF	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A	
03	FF	02	FF	FF	FF	FF	FF	00	FF	FF	FF	FF	FF	FF	FF	
04	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
05	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
06	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
07	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
08	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
09	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
0A	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
0B	FF	FF	FF	FF	FF	FF	FF	FF	20	7F	00	1A	00	01	08	FF
0C	00	FF	FF	00	00	00	55	00	FF	00	FF	FF	FF	FF	FF	
0D	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
0E	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
0F	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	

MASKED CHANGED UPDATED PROGRAMMED

2. 必填

ID: 8129

Product ID: 0811

Vendor ID: 0BDA

Customer ID: 00

MAC Address: 00E04C882101

ThermalMeter: 1A

LED Function: 00

XtalCapacity: 20

Channel Plan: 2G:FCC 5G:FCC_DFS

ExternalLNA: 2.4G ☒ 5G ☒

ExternalPA: 2.4G ☒ 5G ☒

3. 產測相關

802.11ac WLAN Adapter

Realtek

4. 產測相關

Tx Power Index

1. Load default map file

5. 執行

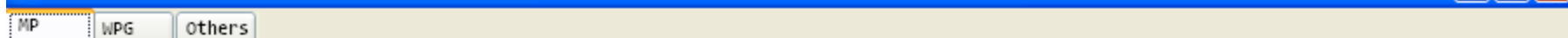
6. 執行後，退卡再次上卡時生效。

READ UPDATE PROGRAM

156/512

Autoload: Successfully

綠底部分：
• 請特別注意是否正確。
• 其中0x1B, 0x30, 0x36為power difference的地方，此值約略是如此，但實際要以實測為準。



Start Time: 1:45 PM 5/15/2025

Start Testing MAP E-FUSE 1*1_PG Quit Reset Help

	Tx Packet Setting		
--	--------------------------	--	--

Testing Item	Packet Pattern	Get EFUSE OK	RF	RfPath A
--------------	----------------	--------------	----	----------

None	Random	Tx Packets	0	Offset	
------	--------	------------	---	--------	--

Tx Pwr(A)	Tx Pwr(B)	Packet Length	Rx OK	0	Offset	
-----------	-----------	---------------	-------	---	--------	--

48	0	1000	Rx CRC32 Error	0	Value	
----	---	------	----------------	---	-------	--

Channel	Packet Counts	Rx PHY OK <input type="checkbox"/>	Reg Read	Reg Write
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42 Rx PHY Error ☐ RF Read RF Write

[illegible]

Data Rate		Mac Address		Thermal Val		+ Monitor	
Nuc1 MCS0							

Preamble
00E04C882101
Write
Read
Update
Crystal Clibration

Long GI	Tx Dest Set	EFUSE	Offset	Value	Xin/Xout
					0x20

Signal Location	Signal Value	Signal Name
8129 7C00 0001 0001 004C 0004 0010 0000		

80M 2D2D 2D2D 2D2D 2D2D 2D2D 042D FFFF FFFF LDPC

Tx Path	Rx Path	LED1 ON	IQK	FF02 FFEE FFEF FF00 FFEF FFEF FFEF FFEF FFEE FFEF FFEF FFEF FFEF FFEF FFEF FFEF
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[illegible]

5G

可用以看整張map的值

```
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF
```

```
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF
```

Rx Physical Match only	FFFF FFFF FFFF FFFF 207E 001A 0001 08FF 00FF FF00 0000 5500 FF00 FFFF FFFF FFFF
------------------------	--

FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF

```
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF
```

```
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF
```

Close Used 150 Bytes

產測

5G Power Index的獲得：

1. 以5G, 40M, MCS7作為基準，由測試得到TX index後，直接把值寫入efuse。
2. 5G, 20M/80M的MCS7也會由實際量測而得到TX index，但寫入efuse時是紀錄其與40M, MCS7的“差值”。
3. 此差值位於0x30與0x36，原則上應該是要為一定值，但實際會有些許差異，因此這些值是會變化的。(除非能接受其變異才能寫入固定值。)

2G Power Index的獲得：

1. 以2G, 40M, MCS7作為基準，由測試得到TX index後，直接把值寫入efuse。
2. 2G, 20M的MCS7也會由實際量測而得到TX index，但寫入efuse時是紀錄其與40M, MCS7的“差值”。
3. 此差值位於0x1B，原則上應該是要為一定值，但實際會有些許差異，因此這些值是會變化的。(除非能接受其變異才能寫入固定值。)
4. CCK同40M, MCS7的作法，也採絕對值的方式做efuse的寫入。

Thermal Meter：

1. 紀錄量測power當時後的thermal meter value。
2. 需要能貼近量power當時的溫度，所以測power的時間需要愈短愈好，或是達到熱平衡之後才做紀錄。(後者較差)

XTAL Trim：

1. 可以把XTAL頻偏的部份儘量CAL.到中心。

2.4GHz CCK Power index must be calibration

(MP tools 是十進位, WPG tools 是十六進位,請千萬小心!!!)

The screenshot displays the MPTool software interface. The main window has tabs for 'MP', 'WPG', and 'Others'. The 'WPG' tab is active, showing a table of power index values for various channels. The 'Tx Power Index' dialog box is open, showing settings for 2.4G, Path A, and CCK-1T. The dialog box is highlighted with a red border. The main window also shows a 'Channel Plan' dropdown set to '2G:FCC 5G:FCC_DFS' and a 'Tx Power Index' button.

MP	WPG	Others
00	81	29 7C 00 00 01 00 01 01
01	2D	2D 2D 2D 2D 2D 2D 2D 2D
02	FF	FF 2A 2A 2A 2A 2A 2A 2A
03	FF	04 FF FF FF FF FF FF 66
04	FF	FF FF FF FF FF FF FF FF
05	FF	FF FF FF FF FF FF FF FF
06	FF	FF FF FF FF FF FF FF FF
07	FF	FF FF FF FF FF FF FF FF
08	FF	FF FF FF FF FF FF FF FF
09	FF	FF FF FF FF FF FF FF FF
0A	FF	FF FF FF FF FF FF FF FF
0B	FF	FF FF FF FF FF FF FF FF
0C	00	FF FF 00 00 00 55 00 FF
0D	FF	FF FF FF FF FF FF FF FF
0E	FF	FF FF FF FF FF FF FF FF
0F	FF	FF FF FF FF FF FF FF FF

MPTool

MP WPG Others

Channel Plan: 2G:FCC 5G:FCC_DFS

ExternalLNA: ☐ 2.4G ☐ 5G

ExternalIPA: ☐ 2.4G ☐ 5G

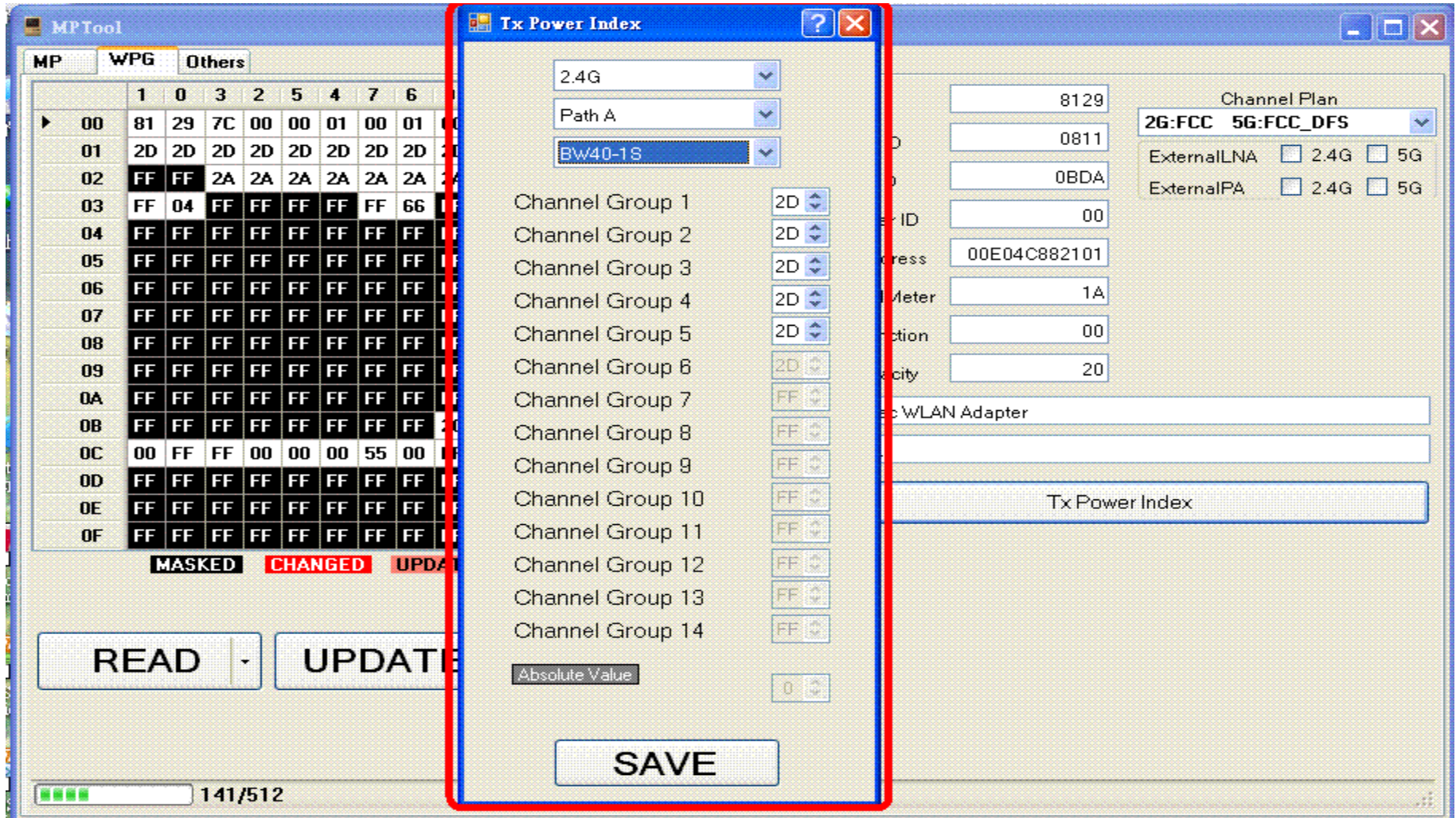
WLAN Adapter

Tx Power Index

SAVE

2.4GHz HT40MCS7 Power index must be calibration

(MP tools 是十進位, WPG tools 是十六進位,請千萬小心!!!)



2.4GHz OFDM Power index must be calibration

(填4代表比HT40MCS7大2 dB)

The screenshot displays the MPTool software interface. The main window shows a table of power index values for various channels. A red box highlights the 'Tx Power Index' dialog box, which is used for calibrating the power index for 2.4GHz OFDM. The dialog box includes a dropdown menu for '2.4G', a dropdown for 'Path A', and a dropdown for 'OFDM-1T'. It also lists 14 channel groups with their corresponding power index values. A 'Power Difference between BW40-1S and OFDM-1T' is set to 4. The 'SAVE' button is visible at the bottom of the dialog box.

	1	0	3	2	5	4	7	6	9
00	81	29	7C	00	00	01	00	01	00
01	2D	2D	2D	2D	2D	2D	2D	2D	2D
02	FF	FF	2A	2A	2A	2A	2A	2A	2A
03	FF	04	FF	FF	FF	FF	FF	66	FF
04	FF	FF	FF	FF	FF	FF	FF	FF	FF
05	FF	FF	FF	FF	FF	FF	FF	FF	FF
06	FF	FF	FF	FF	FF	FF	FF	FF	FF
07	FF	FF	FF	FF	FF	FF	FF	FF	FF
08	FF	FF	FF	FF	FF	FF	FF	FF	FF
09	FF	FF	FF	FF	FF	FF	FF	FF	FF
0A	FF	FF	FF	FF	FF	FF	FF	FF	FF
0B	FF	FF	FF	FF	FF	FF	FF	FF	20
0C	00	FF	FF	00	00	00	55	00	FF
0D	FF	FF	FF	FF	FF	FF	FF	FF	FF
0E	FF	FF	FF	FF	FF	FF	FF	FF	FF
0F	FF	FF	FF	FF	FF	FF	FF	FF	FF

MPTool
MP WPG Others

READ **UPDATE**

141/512

Tx Power Index

2.4G
Path A
OFDM-1T

Channel Group 1 31
Channel Group 2 31
Channel Group 3 31
Channel Group 4 31
Channel Group 5 31
Channel Group 6 2D
Channel Group 7 FF
Channel Group 8 FF
Channel Group 9 FF
Channel Group 10 FF
Channel Group 11 FF
Channel Group 12 FF
Channel Group 13 FF
Channel Group 14 FF

Power Difference between BW40-1S and OFDM-1T 4

SAVE

8129
0811
0BDA
00
00E04C882101
1A
00
20

Channel Plan
2G:FCC 5G:FCC_DFS

ExternalLNA ☐ 2.4G ☐ 5G
ExternalIPA ☐ 2.4G ☐ 5G

WLAN Adapter

Tx Power Index

5GHz HT40MCS7 Power index must be calibration

(MP tools 是十進位, WPG tools 是十六進位, 請千萬小心!!!)

The image shows two overlapping software windows. The background window is 'MPTool' with a 'WPG' tab selected, displaying a hex grid of power index values. The foreground window is 'Tx Power Index', which is highlighted with a red border. It contains settings for 5G, Path A, and BW40-1S, with 14 channel groups each set to 2A. A 'SAVE' button is at the bottom. To the right, another window shows 'Channel Plan' settings for 2G:FCC and 5G:FCC_DFS.

MPTool WPG Tab Data:

	1	0	3	2	5	4	7	6	5
00	81	29	7C	00	00	01	00	01	00
01	2D	2D	2D	2D	2D	2D	2D	2D	2D
02	FF	FF	2A	2A	2A	2A	2A	2A	2A
03	FF	04	FF	FF	FF	FF	FF	66	FF
04	FF	FF	FF	FF	FF	FF	FF	FF	FF
05	FF	FF	FF	FF	FF	FF	FF	FF	FF
06	FF	FF	FF	FF	FF	FF	FF	FF	FF
07	FF	FF	FF	FF	FF	FF	FF	FF	FF
08	FF	FF	FF	FF	FF	FF	FF	FF	FF
09	FF	FF	FF	FF	FF	FF	FF	FF	FF
0A	FF	FF	FF	FF	FF	FF	FF	FF	FF
0B	FF	FF	FF	FF	FF	FF	FF	FF	2A
0C	00	FF	FF	00	00	00	55	00	FF
0D	FF	FF	FF	FF	FF	FF	FF	FF	FF
0E	FF	FF	FF	FF	FF	FF	FF	FF	FF
0F	FF	FF	FF	FF	FF	FF	FF	FF	FF

Tx Power Index Settings:

- Frequency: 5G
- Path: Path A
- Bandwidth: BW40-1S
- Channel Groups 1-14: 2A
- Absolute Value: 0
- Buttons: READ, UPDATE, SAVE

Channel Plan Settings:

- Channel Plan: 2G:FCC 5G:FCC_DFS
- ExternalLNA: ☐ 2.4G ☐ 5G
- ExternalIPA: ☐ 2.4G ☐ 5G
- Other fields: 8129, 0811, 0BDA, 00, 00E04C882101, 1A, 00, 20

5GHz 80MHz Power index must be calibration

(填 - 4代表比HT40MCS7小2 dB)

The image shows two overlapping software windows. The background window is 'MPTool' with a table of hex values. The foreground window is 'Tx Power Index' with various configuration fields.

MPTool Window:

MP	WPG	Others
00	81	29 7C 00 00 01 00 01 00 40
01	2D	2D 2D 2D 2D 2D 2D 2D 2D 2D
02	FF	FF 2A 2A 2A 2A 2A 2A 2A 2A
03	FF	04 FF FF FF FF FF C6 FF FF
04	FF	FF FF FF FF FF FF FF FF FF
05	FF	FF FF FF FF FF FF FF FF FF
06	FF	FF FF FF FF FF FF FF FF FF
07	FF	FF FF FF FF FF FF FF FF FF
08	FF	FF FF FF FF FF FF FF FF FF
09	FF	FF FF FF FF FF FF FF FF FF
0A	FF	FF FF FF FF FF FF FF FF FF
0B	FF	FF FF FF FF FF FF FF 20 7F
0C	00	FF FF 00 00 00 55 00 FF 00
0D	FF	FF FF FF FF FF FF FF FF FF
0E	FF	FF FF FF FF FF FF FF FF FF
0F	FF	FF FF FF FF FF FF FF FF FF

Legend: MASKED (black), CHANGED (red), UPDATED (green)

Buttons: READ, UPDATE

Status: 141/512

Tx Power Index Window:

5G
Path A
BW80-1S

Channel Group 1 to 14 (each with a value of 26)

Power Difference between BW40-1S and BW80-1S: -4

SAVE

Channel Plan: 2G:FCC 5G:FCC_DFS

ExternalLNA: ☐ 2.4G ☐ 5G

ExternalPA: ☐ 2.4G ☐ 5G

Buttons: Tx Power Index