



# Ameba Series Efuse Application Note





# EFuse Map

注意：Ameba1和AmebaZ的EFuseMap在mptool上的读取格式不一样。

- For Ameba1 (8711AF/8711AM/8195AM)

UI\_mptool\_1V14

Main PSD Efuse Reg

	1	0	3	2	5	4	7	6	9	8	B	A	D	C	F	E
00	81	95	16	C2	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	02	00	FF	FF	FF	FF
02	23	23	23	23	23	21	26	26	26	26	03	26	FF	FF	FF	FF
03	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
04	FF	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	FF
06	FF	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	FF
08	FF	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	FF
0A	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0B	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0C	FF	FF	FF	FF	FF	FF	FF	FF	20	22	18	19	00	00	FF	00

Read >>> Update >>> Program

Read mapfile Save mapfile

ID 8195

MAC Address F0EC4E0EAA74

ThermalMeter (Hex) 19

Channel plan (Hex) 22

XtalCapacity (Hex) 20

TX Power Index (Dec)

	CCK	BW40
Ch 1.2	35	38
Ch 3.4.5	35	38
Ch 6.7.8	35	38
Ch 9.10.11	35	38
Ch 12.13	33	38
Ch 14	35	

Difference BW20 and BW40 0

Difference OFDM and BW40 3





# EFuse Map

- For AmebaZ (8710BN/8711BN/8711BG/8710BF)

UI\_mptool\_1V14

Main PSD Efuse Reg

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	95	81	C2	16	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	00	02	FF	FF	FF	FF
02	23	23	23	23	21	23	26	26	26	26	26	03	FF	FF	FF	FF
03	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
04	FF	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	FF
06	FF	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	FF
08	FF	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	FF
0A	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0B	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0C	FF	FF	FF	FF	FF	FF	FF	FF	22	20	19	18	00	00	00	FF

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ThermalMeter (Hex) 19

Channel plan (Hex) 22

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	CCK	BW40
Ch 1.2	35	38
Ch 3.4.5	35	38
Ch 6.7.8	35	38
Ch 9.10.11	35	38
Ch 12.13	33	38
Ch 14	35	

Difference BW20 and BW40 0

Difference OFDM and BW40 3



For Ameba1





# Ameba1 EFuse Map

20~25	CCK Index
26~2A	BW40 Index
2B	Difference BW20-1S and BW40-1S
C8	Channel plan
C9	Crystal Calibration
CA	Thermal meter
11A~11F	MAC

量产校准写efuse、仅需用到  
上述位置

	1	0	3	2	5	4	7	6	9	8	B	A	D	C	F	E
000	81	95	16	C2	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
010	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	02	00	FF	FF	FF	FF
020	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	02	2D	FF	FF	FF	FF
030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
040	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0C0	FF	FF	FF	FF	FF	FF	FF	FF	20	20	05	1A	00	00	FF	00
0D0	00	3E	02	01	00	23	FC	00	04	20	02	4C	87	11	02	21
0E0	00	0C	04	22	08	00	32	00	21	FF	0C	02	22	00	01	2A
0F0	00	01	00	00	00	00	00	00	00	00	00	00	00	02	FF	FF
100	00	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00
110	EB	00	6E	00	00	01	00	00	FF	00	FF	FF	FF	FF	FF	FF
120	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
130	01	FF	10	00	FF	00	FF	00	00	00	FF	FF	FF	FF	FF	FF
140	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
150	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
160	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
170	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
180	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
190	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

Command : lwpriv config\_get realmap

High Performance · Low Power





# Ameba1 E-Fuse Setting

## Power Index & MAC

	1	0	3	2	5	4	7	6	9	8	B	A	D	C	F	E
020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
110	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

20~25	CCK Index	Path A CCK Power Index for Ch 1,2, Range 0~63.
		Path A CCK Power Index for Ch 3, 4, 5, Range 0~63.
		Path A CCK Power Index for Ch 6, 7, 8, Range 0~63.
		Path A CCK Power Index for Ch 9, 10, 11, Range 0~63.
		Path A CCK Power Index for Ch 12, 13, Range 0~63.
		Path A CCK Power Index for Ch 14, Range 0~63.
26~2A	BW40 Index	Path A 2G BW40-1S Power Index for Ch 1, 2, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 3, 4, 5, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 6, 7, 8, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 9, 10, 11, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 12, 13, 14 Range 0~63.
2B	Difference BW20-1S and BW40-1S.	Pwower Index Difference between BW20-1S and BW40-1S.
		Bit[7:4]: Path A 2G Offset, Range -8~7.
		Pwower Index Difference between OFDM-1Tx and BW40-1S.
		Bit[3:0]: Path A 2G Offset, Range -8~7.
11A~11F	MAC	MAC Address : [47:0]





# Ameba1 E-Fuse Setting

Offset	Name	Bits	Initial
Byte C9	Crystal Calibration	8	00 h
	1 0 3 2 5 4 7 6 9 8 B A D C F E		
0C0	FF FF FF FF FF FF FF FF 20 20 05 1A 00 00 FF 00		

XTAL\_K Value :  
Bit[7:0], Xo/Xi Range 0~3F h.

Offset	Name	Bits	Initial
Byte C8	Channel Plan	8	7F h
	1 0 3 2 5 4 7 6 9 8 B A D C F E		
0C0	FF FF FF FF FF FF FF FF 20 20 05 1A 00 00 FF 00		

Bit[6:0]: Channel Plan





# Ameba1 E-Fuse Setting

Offset	Name	Bits	Initial
Byte CA	Thermal Meter	8	12 h

	1	0	3	2	5	4	7	6	9	8	B	A	D	C	F	E
0C0	FF	FF	FF	FF	FF	FF	FF	FF	20	20	05	1A	00	00	FF	00

Thermal Meter Default Value

System maker will calibrate a value and save it in EEPROM.

Bit[7:0]: Thermal Meter Value







# For AmebaZ



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# AmebaZ EFuse Map

20~25	CCK Index
26~2A	BW40 Index
2B	Difference BW20-1S and BW40-1S
C8	Channel plan
C9	Crystal Calibration
CA	Thermal meter
11A~11F	MAC

量产校准写efuse、仅需用到  
上述位置

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	FF
000	95	81	C2	16	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
010	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
040	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0C0	FF	FF	FF	FF	FF	FF	FF	FF	7F	FF	FF	11	00	00	00	FF
0D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
0F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
100	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
110	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
120	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
130	FF	01	00	10	00	FF	00	FF	00	00	FF	FF	FF	FF	FF	FF
140	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
150	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
160	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
170	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
180	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
190	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

Command : lwpriv config\_get realmap

High Performance · Low Power



REALTEK



# AmebaZ E-Fuse Setting

## Power Index & MAC

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	FF
020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
110	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

20~25	CCK Index	Path A CCK Power Index for Ch 1,2, Range 0~63.
		Path A CCK Power Index for Ch 3, 4, 5, Range 0~63.
		Path A CCK Power Index for Ch 6, 7, 8, Range 0~63.
		Path A CCK Power Index for Ch 9, 10, 11, Range 0~63.
		Path A CCK Power Index for Ch 12, 13, Range 0~63.
		Path A CCK Power Index for Ch 14, Range 0~63.
26~2A	BW40 Index	Path A 2G BW40-1S Power Index for Ch 1, 2, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 3, 4, 5, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 6, 7, 8, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 9, 10, 11, Range 0~63.
		Path A 2G BW40-1S Power Index for Ch 12, 13, 14 Range 0~63.
2B	Difference BW20-1S and BW40-1S.	Ppower Index Difference between BW20-1S and BW40-1S.
		Bit[7:4]: Path A 2G Offset, Range -8~7.
		Ppower Index Difference between OFDM-1Tx and BW40-1S.
		Bit[3:0]: Path A 2G Offset, Range -8~7.
11A~11F	MAC	MAC Address : [47:0]



# AmebaZ E-Fuse Setting

Offset	Name	Bits	Initial
Byte C9	Crystal Calibration	8	00 h

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	FF
0C0	FF	FF	FF	FF	FF	FF	FF	FF	7F	FF	FF	11	00	00	00	FF

XTAL\_K Value :  
Bit[7:0], Xo/Xi Range 0~3F h.

Offset	Name	Bits	Initial
Byte C8	Channel Plan	8	7F h

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	FF
0C0	FF	FF	FF	FF	FF	FF	FF	FF	7F	FF	FF	11	00	00	00	FF

Bit[6:0]: Channel Plan



# AmebaZ E-Fuse Setting

Offset	Name	Bits	Initial
Byte CA	Thermal Meter	8	12 h

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	FF
0C0	FF	FF	FF	FF	FF	FF	FF	FF	7F	FF	FF	11	00	00	00	FF

Thermal Meter Default Value

System maker will calibrate a value and save it in EEPROM.

Bit[7:0]: Thermal Meter Value

