Instruction description

The transmission of

ASCII protocol command commands and return information is in ASCII format. All commands start with command characters and parameters (if any, in hexadecimal units) and after stopping there will be <CR> (0x0D hex), and return The information will include <LF>(0x0A hex) at the beginning, the first character of the command and <CR><LF> at the end. If the command does not meet the corresponding settings, the return message will be LF>X <CR><LF>.

For example:

PC or Host: <LF>S<CR>

Reader return message: <LF>S01234567<CR><LF> Command* Return message**

Description V Display the reader software version Vxxyy,<message> xx: Main version number		
yy: Second version number <message>: Other information .		
S	S01234567 01234567 is the reader ID number	Show reader ID
Q	Q<None or EPC> <None or EPC> None: There is no Tag tag in the RF reading range EPC: PC+EPC+CRC16 R<None	Display tag EPC ID max 256bits
R<bank>,<address>,<length><bank> Memory block 0: reserved 1: EPC 2: TIME 3: The address starting from USER <address> 0 ~ 3FFF <length> Read word length 1 ~ 20	or read data> or <Error code> <None or read data > None: There is no Tag tag in the RF reading range <error code> 0: Other errors 3: Exceeding memory space 4: Memory is locked B: Insufficient reading power F: Non-specific error	Read Tag volume memory data
W<bank>,<address>,<length>,<data> <bank>Memory block 0: reserved 1: EPC 2: TIME 3: USER	W<None or <OK>> or <error code> <None or <OK>> None: There is no Tag tag in the RF reading range <OK>: Writing successful <error code>	Write data to Tag volume memory

The address starting with <address> 0 ~ 3FFF <length>Write the length of words 1 ~ 20	0: Other errors 3: Memory space exceeded 4: Memory is locked B: Insufficient reading power F: Unspecific error Z00~Z1F: If an error occurs during writing, reply how many words have been written. 3Z00~3Z1F: If the Tag reply error is during writing, the error code plus the number of words written	
K<password>,<recom> <password>Delete password 00000000~FFFFFFFF <recom> 0: default	K<None or <OK>> or <Error code> <None or <OK>> None: There is no Tag in the RF reading range <OK>: Deletion successful <Error code> 0: Other errors 3: Memory space exceeded 4: Memory is locked B: Insufficient reading power F: Unspecific error	Delete Tag tag
L<mask>,<action> <mask>Lock mask 000~3FF <action>Lock action 000~3FF	L<None or <OK>> or <Error code> <None or <OK>> None: There is no Tag in the RF reading range <OK>: Locking completed <error code> 0: Other errors 3: Memory space exceeded 4: Memory is locked B: Insufficient reading power F: Unspecific error	lock memory
P<password> <password>Access password 00000000~FFFFFFFF	P	Set the access password and use it to read multiple tags each time you
IN	U<None or EPC> <None or EPC> None: There is no Tag tag in the RF reading range EPC: PC+EPC+CRC16	perform read, write and lock. EPCID number
G1 G0	G1 G0	Start executing the load command Stop the load command

G2	G2	Execute load command The G command is used to select the matching label
T<bank>,<bit address>,<bit length>,<bit data> <bank>Memory block 0: reserved 1: EPC 2: TIME 3: USER <bit address>Start bit address 0~3FFF <bit length>Select bit length 1~60 <bit data>Select bit mask data	T	on the external button function. When there are multiple labels, use this command to select the matching label operation each time.
N0,00 N1, <value> <value>00~1B	N<value> <NULL>	Read the Reader power level and set the Reader power -2~25dBm.
N4,00 N5, <value> <value> 01~05 01: US 902~928 02: Taiwan TW 922~928 03: CN 920~925 04: CN2 840~845 05: European CE 865 ~868	N<value> <NULL>	Read the regulatory range and set the regulatory range.
UR: U<slot Q>, R<band>,<address>, <length> Slot Q: 0~10 <bank> memory bank 0: reserved 1: EPC 2: TIME 3: USER <address> start word address 0 ~ 3FFF <length> read word length 1~1E	U<EPC>,R<DATA> or <error code> EPC= PC+EPC+CRC16 DATA= read data <error code> 0: Other errors 3: Memory space exceeded 4: Memory is locked B: Insufficient reading power F: Unspecific error	Multi-Band data read with EPC for multi-Tag read
QR:	Q<EPC>,R<DATA> or	Multi-Band data read

Q , R<band>,<address>,<leng th> <bank> memory bank 0: reserved 1: EPC 2: TIME 3: USER <address> start word address 0 ~ 3FFF <length> read word length 1~1E	<error code> EPC= PC+EPC+CRC16 DATA= read data <error code> 0: Other errors 3: Memory space exceeded 4: Memory is locked B: Insufficient reading power F: Unspecific error	with EPC for single-Tag read

Remark:

1. Instruction start character <LF>, stop character <CR>

2. Return information starting character <LF>, stop character <CR><LF>

3. V, S, and N instructions are Reader information and parameter instructions. When the Reader is powered on, the user can Executed at any time.

ÿ In a single Tag operating environment, users can use P, Q, R, W, K, L commands.

ÿ In a multi-tag operating environment, only the U command and the UR command can read the EPC of multiple tags. ID number.

ÿ In addition, users can use combined instructions such as T, P, U, R, W, K, L to perform a single Operate on specific tags.

Instruction example description

V: Display Reader software version

After sending the V command, Reader returns software information and hardware information.

Host: <LF>V<CR>

Reader: <LF>VC1C6,9B9F5244,B0,2<CR><LF> Description:

C1C6 software version

9B9F5244 Reader ID number

B0 hardware version

2RF band number

S: Display Reader ID number

After sending the S command, the Reader returns the Reader ID number.

Host: <LF>S<CR>

Reader: <LF>S9B9F5244<CR><LF> Description:

9B9F5244 Reader ID number

Q: Display the EPC ID number of the Tag

Within the RF readable range, the Q command reads the EPC ID number and only supports single Tag operation.

Host: <LF>Q<CR> Reader:

<LF>Q<CR><LF> If a single Tag is

within the RF readable range, after issuing the Q command, the Reader returns the EPC ID number. This EPC ID number contains PC word, EPC and CRC16.

Host: <LF>Q<CR> Reader:

<LF>Q3400666677778888999AAAABBBB71FE<CR><LF> Note:

3400 PC word

6666777788889999AAAABBBB EPC

71FE CRC16

R: Read Tag volume memory data

The R command reads Tag memory data and only supports a single tag operation within the effective RF reading range. The R command can read the memory data of the Tag volume, including the Reserved block, EPC block, TID block and User block. The R instruction can read addresses starting from 0 to 16383 (3FFF) and can read 32 words of data in a single instruction. Within the effective RF reading range, when there is no Tag or multiple tags, the Reader only returns R data.

Host: <LF> R0,0,4<CR> Reader:

<LF>R<CR><LF> Read the delete kill

and access password of the Reserved block. If the deletion and access password is not locked, it cannot be read or written.

Host: <LF>R0,0,4<CR> Reader:

<LF>R1111111122222222<CR><LF> Description: 11111111 Delete

password 22222222 Access

password Read EPC block

starting word position is 2 and read 6 word length .

Host: <LF>R1,2,6<CR>

Reader: <LF>R6666777788889999AAAABBBB<CR><LF>

The starting word position of reading the TID block is 0 and the length of reading is 4 words.

Host: <LF>R2,0,4<CR>

Reader: <LF>RE20034120136F800<CR><LF> Read USER

block starting word position is 0 and read 32 word length

Host: <LF>R3,0,20<CR>

Reader: <LF>R000011112222333344445555666677778889999AAAAB BBB

CCCDDDDEEEEFFFF000011112222333344445555666677

77788889999AAAABBBBCCCCDDDDEEEEFFFF<CR><LF>

If the read command does not correspond to the Tag volume, the Reader will return a data error message. In this case, the deletion and access passwords are locked. After sending the R command, the Reader returns an error code indicating that the memory is locked.

Host: <LF> R0,0,4<CR> Reader:

<LF>4<CR><LF> Description: The error

code is based on the information returned by the Tag volume.

0 Other errors **3**

Memory space exceeded

4 Memory is locked

B reading power is insufficient

F non-specific error

W: Write data to the Tag memory. The W

command is to write data to the Tag memory. It only supports single tag operations within the effective RF reading range. The W command can write data to Tag memory including Reserved, EPC and User blocks. The W command can write addresses starting from 0 to 16383 (3FFF) and supports writing 32 words of data in a single command.

Example: Write the User block, the address starts at 0, and the length of the write is 8 words.

Host: <LF>W3,0,8,00001111222233334444555566667777<CR> Reader:

<LF>W<OK><CR><LF> In this example, an

error occurs when writing the Tag volume and an error message is returned. First, the User **block data of the Tag volume is read as 00001111222233334444555566667777h. Then, a data string of 0 is written to overwrite** it, but the Reader returns Z04 information, which means that some data writing failed. Z04 means that the word number is written. From 00 to 04, the writing is successful. We

read the User block again. The data is **00000000000000000000555566667777h. In this case, moving the Tag** closer to the UHF antenna and writing again can solve this problem.

Host: <LF>R3,0,8<CR>

Reader: <LF>R000011112222333344445555666677777<CR><LF> Host:

<LF>W3,0,8,00000000000000000000000000000000<CR> Reader:

<LF>Z04<CR><LF> Host:

<LF>R3,0,8<CR> Reader:

R00000000000000000000555566667777<CR><LF>

U: Read the EPC of multiple tags

The U command supports reading EPC of multiple Tag tags within the effective RF reading range. The following example is to read the EPC numbers of 5 tags within the effective RF reading range. The EPC length of 3 tags is 6 words and the EPC length of 2 tags is 31 words.

Host: <LF>U<CR>

Reader:

<LF>U30003005FB63AC1F3841EC880467F29E<CR><LF>

<LF>U340027BC7A2CE826ADB871EA00AE6F36<CR><LF>

<LF>UFC000101AAAAAAAA000000000000000000000000000000

000000000000000000000000000000000000000000000000000000000000000000000000000000

0

000000000000067E3<CR><LF>

<LF>U3000300833B2DDD901400000000039BB<CR><LF>

<LF>UF8000001000200030004000500060007000800090000A000B000C000D000E

000F00

100011001200130014001500160017001800190001A001B001C001D001E001FFA1F

<

CR><LF>

<LF>U<CR><LF>

G: Load command action

The G command is a special command that can load commands to set in the Reader's ROM memory. The start command of the G command is G1, the end command is G0, and G2 executes the command settings in the ROM. Clear the command settings in ROM. The first command is G1 and the next is

G0 command. This example is to set up a command to display EPC and read TID memory.

Host: <LF>G1<CR><LF> starts loading

Host: <LF>Q<CR>Display EPC Reader:

<LF>QF8<CR><LF>There are 248 charter left. You can use Host:

<LF>R2,0,4<CR> to read TID memory Reader:

<LF >RF1<CR><LF>There are 241 charters left and you can use Host:

<LF>G0<CR> After sending the G2

command to end the loading, the Reader will execute the command in memory and

return the following information to Host: <LF>G2< CR>

Reader:

<LF>G2<CR><LF>

<LF>Q300066667777888899999AAAABBBB8C5B<CR><LF>

<LF>RE20034120136F800<CR><LF>

T: Select the matching tag

In multiple Tag applications, the T command can select a specific Tag to do Q, R, W, K, L, P,

U's instructions. After executing the Q, R, W, K, L, and U instructions, the T and P instructions will be cleared, which is a one-time

command to use. If you want to select the same or other Tag tags, you must do the T command again. The 2 Tag tags are within the effective RF reading range and read EPC data.

Host: <LF>U<CR>

Reader:

<LF>U3000666677778888999AAAABBBB8C5B<CR><LF>

<LF>U30009908040B00000000000052D02021<CR><LF>

<LF>U<CR><LF>

Select the EPC data of the Tag label starting at the 32 (20h) bit address (please refer to Table 1 on the last page), the bit length is 64 (40h), the data taken out is 6666777788889999h, and the starting address of the Tag EPC block is read 6word , word length is 2

Host: <LF>T1,20,40,6666777788889999<CR>

Reader: <LF>T<CR><LF>

Host: R1,6,2<CR>

Reader: <LF>RAAAABBBB<CR><LF> If the EPC data

of the Tag volume is 30009908040B00000000000052D02021h and the Kill deletion password is read/write locked, we have to read it Kill delete password. The operation steps are to select the Tag label, set the ACCESS access password (ABCDABCDh), and read the Kill deletion password (ABABABABh).

Host: <LF>T1,20,60, 9908040B00000000000052D0<CR> Reader:

<LF>T<CR><LF>

Host: <LF>PCDEFCDEF<CR>

Reader: <LF>P<CR><LF>

Host: R0,0,2<CR>

Reader: <LF>RABABABAB<CR><LF>

N0/N1: Read/set the RF output power level of Reader

The N command can set the RF output power of the Reader. application environment, users can reduce the output power for close-range applications.

Host: <LF>N0,00<CR>Read RF power level Reader:

<LF>N14<CR><LF>RF power is 18dBm (refer to Table 1 on the next page)

Host: <LF>N1,02<CR> Set the RF power level to 0dBm Note: When

setting

the RF power, the Reader will not reply to the message and will restart.

UR: Read the EPC of multiple tags and read the data in the TAG tag memory location

The UR command supports reading the EPC of multiple tags within the RF reading range and reading other sections of the tag such as TID data. After sending the UR command, the Reader will reply to the EPC ID and the data in other sections of the label, similar to the function of the R

command. The command U<slot Q> means that within the RF reading range, you can set the number of multiple tags that can be read in one return pass. <slot Q> refers to the nth power quantity of two. The instruction U<slot Q> can be used alone. For example U3 or U4. <slot Q>The more numbers there are, the longer it

will take for Reader to return. The following example is an EPC that reads 5 tags within the RF range. The EPC length of three tags is 6word and

The EPC length of the two tags is 31 words and the TID memory block in the tag is read starting from position 0 and the length of 2 words is read.

Host: <LF>U3, R2,0,2<CR> Reader:

<LF>U30003005FB63AC1F3841EC880467F29E, RE2003412<CR><LF>
<LF>U340027BC7A2CE826ADB871EA00AE6F36, RE2103415<CR><LF>
<LF>UFC000101AAAAAAAA000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000
0
000000000000067E3, RE2014412<CR><LF>
<LF>U3000300833B2DDD901400000000039BB, RE3003422<CR><LF>
<LF>UF8000001000200030004000500060007000800090000A000B000C000D000E
000F00
10001100120013001400150016001700180019001A001B001C001D001E001FFA1F

,RE2143412<CR><LF>
<LF>U<CR><LF>

QR: Read the EPC of the tag and read the data of the TAG tag memory location

The QR command reads the EPC of the tag and also reads the data of other sections of the TAG tag such as TID. Only supports operation on a single tag within the RF reading range. If there is no tag or there are multiple tags within the RF reading range, Reader only returns Q's data.

Host: <LF>Q,R2,0,2<CR> Reader:

<LF>Q<CR><LF> If there is only one tag

within the RF reading range and the QR command is sent, the Reader returns the EPC and tag information. The data of the TID section.

For example: there is only one tag in the RF reading range and the position of the TID block of the tag is read starting from 0 and the length of the 2 words is read.

Host: <LF>Q,R2,0,2<CR> Reader:

<LF>Q340066667777888899999AAAABBBB71FE, RE2163417<CR><LF>

K: Delete Tag If the Tag

deletion password is not 0, the K command can delete the Tag. If the Tag is deleted, the Tag will not respond to any command operations.

Host: <LF>K12341234,0<CR> Reader:

<LF>K<OK><CR><LF>

L: lock memory

Locked memory is used in:

Lock individual passwords (delete passwords and access passwords) – prevent or allow future reading or writing of these passwords

Lock individual memory blocks (EPC, TID, USER) – prevent or allow future writes to these memory blocks

Permanently locked – produces a permanently locked state, which can be a password or a memory block

Shield area bits

		Kill delete password		Access access password		EPC memory		TID memory		User memory	
11	10	9	8	7	6	5	4	3	2	1	0
0	0	jump over/ write	jump over/ write	jump over/ write	jump over/ write	jump over/ write	jump over/ write	jump over/ write	jump over/ write	jump over/ write	jump over/ write

bit = 0: Ignore related action areas and retain existing lock settings

bit = 1: Execute the relevant action area and overwrite the existing lock setting

Action area bits

		Kill delete password		Access access password		EPC memory		TID memory		User memory	
11	10	9	8	7	6	5	4	3	2	1	0
0	0	password live read/ write	permanent lock	password live read/write enter	permanent lock	password lock write	permanent lock	password lock write	permanent lock	password lock write	permanent lock

bit = 0: Unlock the relevant memory block

bit = 1: For the relevant memory block, perform locking or permanent locking

Action area function (EPC, TID, User memory)

Password lock write permanent lock instructions		
0 0		The relevant memory block can be written to
0	1	The associated memory block is permanently writable and is never locked
1	0	If the ACCESS access password is correct, the relevant memory block can to be written to
1	1	The relevant memory block cannot be written to

Action area function (Kill deletion password, Access access password)

Password Lock Read/Write Permanent Lock Instructions		
0	0	The associated password location is readable and writable
0	1	The associated password location is readable and writable, and can never be lock
1	0	If the ACCESS access password is correct, the associated password location is available to be read and written to
1	1	The relevant password location cannot be read or written

During the memory lock action, the ACCESS access password is required to protect writing or reading/writing. We need the P command to set the ACCESS access action. Please refer to the P command. The following example protects the Kill delete password from being read and written. If the Tag volume Kill deletion password and ACCESS access password are 0, first, we write the Kill deletion password 01230123h and the ACCESS access password CDEFCDEFh, and then perform a locking action to protect it. 1. Write to the Reserved block, Kill deletion password: 01230123h, ACCESS access password: CDEFCDEFh

Host: <LF>W0,0,4,01230123CDEFCDEF<CR> Reader: <LF>W<OK><CR><LF> 2. The next command is to perform ACCESS access, so use the P command to issue ACCESS access. password

Host: <LF>PCDEFCDEF<CR>

Reader: <LF>P<CR><LF> 3. Use the L command to set the read/write protection of the Kill delete password. Host: <LF>L200,200<CR>

Reader: <LF>L<OK> <CR><LF> 4. Read the Reserved block. Since Kill deletes the password, memory reading and writing are locked, and Reader returns the locked error code.

Host: <LF>R0,0,2<CR> Reader: <LF>4<CR><LF> 5. The next command is to perform ACCESS access action, so use the P command to issue the ACCESS access password: CDEFCDEFh

Host: <LF>PCDEFCDEF<CR>

Reader: <LF>P<CR><LF> 6. Read the Reserved block, ACCESS access password is correct, Kill delete password memory is read Host: <LF>R0,0,2<CR> Reader: <LF >R01230123<CR><LF>

P: Set the ACCESS access password when performing the ACCESS access operation.

The P command supports R, W, and L commands. Use the P command before each R, W, L command is issued. The P command can also follow the T command to perform the selected action. When multiple tags are used, the user can use the T command to select one of the Tag tags, and then use the P command to issue the ACCESS access password and execute R, Actions of W and L commands. After completing the R, W, and L commands, the T and P commands will be cleared and are one-time use commands. Please refer to the operation description of the T command. If the User memory block is locked for writing, we know that the ACCESS access password is CDEFCDEFh, and use the P command and the W command to write data.

Host: <LF>PCDEFCDEF<CR>

Reader: <LF>P<CR><LF>

Host: <LF>W3,0,8,00001111222233334444555566667777<CR>

Reader: <LF>W<OK><CR><LF>

N4/N5: Read/set Reader RF regulations

The N command can set the Reader RF regulatory range

Host: <LF>N4,00<CR>Read regulatory range

Reader: <LF>N02<CR><LF>The regulatory scope is is 02: Taiwan regulation 922~928MHz

Host: <LF>N5,03<CR>Set the regulatory range to land regulation: 920~925MHz

illustrate:

Set regulatory scope, Reader will not respond to messages and will restart.

Output power setting	
Parameter value (hex)	Power level (reference)
1B	25
1A	24
19	23
18	22
17	21
16	20
15	19
14	18
13	17
12	16
11	15
10	14
0F	13
0E	12
0D	11
0C	10
0B	9
0A	8
09	7
07	5
06	4
05	3
04	2
03	1
02	0
01	-1
00	-2

ASCII & HEX instruction set

Command Name HEX		ASCII
FW Version	0A 56 0D	<LF>V<CR>
Reader ID	0A 53 0D	<LF>S<CR>
Query EPC	0A 51 0D	<LF>Q<CR>
Multi EPC	0A 55 0D	<LF>U<CR>
Read Power	0A 4E 30 2C 30 30 0D	<LF>N0 ,0 0<CR>
Write Power	0A 4E 31 2C 31 34 0D	<LF>N1 ,1 4<CR>
Read TID bank address=0 word=6	0A 52 32 2C 30 2C 36 0D	<LF>R2 ,0,6<CR>
Read EPC bank PC word	0A 52 31 2C 31 2C 31 0D	<LF>R1 ,1,1<CR>
Read EPC bank address=0 word=8	0A 52 31 2C 31 2C 38 0D	<LF>R1 ,0,8<CR>
Read USER bank address=0 word=32	0A 52 33 2C 30 2C 32 30 0D	<LF>R3,0,20<CR>
Read Reserved bank kill and access pwd	0A 52 30 2C 30 2C 32 0D	<LF>R0 ,0,2<CR>
Write EPC bank PC word	0A 57 31 2C 31 2C 31 2C 33 30 30 30 0D	<LF>W1 ,1,1,3000<CR>
Write EPC bank address=2 word=6	0A 57 31 2C 32 2C 36 2C 30 30 30 30 31 31 31 31 32 32 32 32 33 33 33 33 34 34 34 34 35 35 35 35 0D	<LF>W1 ,2,6,0000111122223333 44445555<CR>
Write USER bank address=0 word=1	0A 57 33 2C 30 2C 31 2C 30 30 30 30 0D	<LF>W3 ,0,1,0000<CR>
Write USER bank address=0 word=8	0A 57 33 2C 30 2C 38 2C 30 30 30 30 31 31 31 31 32 32 32 32 33 33 33 33 34 34 34 34 35 35 35 35 36 36 36 36 37 37 37 37 0D	<LF>W3 ,0,8,0000111122223333 4444555566667777<CR>
Write Reserved bank kill 0A	57 30 2C 30 2C 32 2C 30 31 30 32 30 33 30 34 0D	<LF>W0 ,0,2,01020304<CR>
Write access pwd	0A 57 30 2C 32 2C 32 2C 31 32 33 34 35 36 37 38 0D	<LF>W0 ,2,2,12345678<CR>
Write Reserved bank kill 0A	57 30 2C 30 2C 34 2C	<LF>W0 ,0,4,01020304A1A2A3A

and access pwd	30 31 30 32 30 33 30 34 41 31 41 32 41 33 41 34 0D	4<CR>
Access password	0A 50 41 31 41 32 41 33 41 34 0D	<LF>P A1A2A3A4<CR>
Kill	0A 4B 30 31 30 32 30 33 30 34 2C 30 0D	<LF>K01020304 ,0<CR>
Lock mask=020 action020(EPC write lock)	0A 4C 30 32 30 2C 30 32 30 0D	<LF>L020,020<CR>
Lock mask=020 action000(EPC write unlock)	0A 4C 30 32 30 2C 30 30 30 0D	<LF>L020,000<CR>
US mode	0A 4E 35 2C 30 31 0D <LF>N5,01<CR>	
TW mode	0A 4E 35 2C 30 32 0D <LF>N5,02<CR>	
CN1 fashion	0A 4E 35 2C 30 33 0D <LF>N5,03<CR>	
CN2 mode	0A 4E 35 2C 30 34 0D <LF>N5,04<CR>	
THIS mode	0A 4E 35 2C 30 35 0D <LF>N5.05<CR>	

Impinj 、Alien 芯片存储区划分

Model	User Memory	EPC Memory	Serialized TID	True3D™ Technology	QT™ Technology
Monza 3	0	96	0	×	×
Monza 4D	32	128	48	√	×
Monza 4E	128	496	48	√	×
Monza 4U	512	128	48	√	×
Monza 4QT	512	128	48	√	√
Monza 5	0	128	48	×	×
H3	512	96	64	×	×
H4	128	128	64	×	×

Alien H3 Tag IC

Memory Map

Bank	Address	Description	Memory	Bits
User	00h – 1FFh	User	NVM	512
TID	70h – BFh	Device Configuration	ROM-NVM	80
	60h – 6Fh	Mask Unique Identifier	ROM	16
	20h – 5Fh	Unique Tag ID Unalterable	NVM	64
	00h – 1Fh	TID EPC/TMD/TMDID/TMN	ROM	32
EPC	20h – 7Fh	EPC #	NVM	96
	10h – 1Fh	EPC-PC	NVM	16
	00h – 0Fh	EPC-CRC	RAM	16
Reserved	20h – 3Fh	RES-Access Pwd, EPC optional	NVM	32
	00h – 1Fh	RES-Kill Pwd	NVM	32