## SID\_UF2861Demo Software User's Guidev1.5

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## 1. Parameter interface operation

## 1.1 Open COM Port

Before open com port, please make controller properly connected with the host using the communication cable provided and then turn on the power.

(1) Auto Open Comport:

Value 255(0xFF) is broadcasting address. All controllers will respond the order with a broadcasting address.

Other value ( $0x00 \sim 0xFE$ ) is controller address. Only will the controller conforming to the address respond the operation.

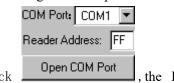


, If reader connect the computer's COM1 ~ COM9, we can see the Baud:

port display in the place. the demonstration software to **57600** by connecting the port and written communication, the connection to the port to have a beginning, such as :

	Informati	on X
Opened COM Port	<b>i</b>	Serial Communication Error
Close COM Port el se		( 确定 )

(2) Open Designated Comport:



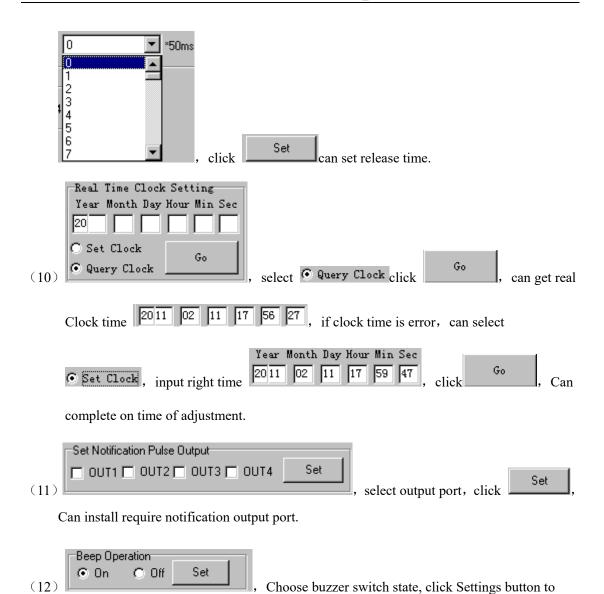
Click Upen LUM Port, the Baud will Auto Select From 115200bps, 57600bps, 38400bps,19200bps, 9600bps, if success



#### **1.2 Parameter Setting:**

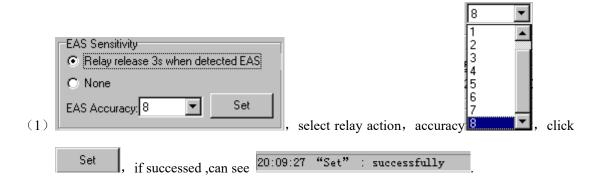
Set Reader Pa	arameter		,	FregBaud
Address(HEX)	00	Baud:	57600bps	User band
Power:	30 💌	Max InventoryScanTime::	10°100ms	C Chinese band2 C US band C Korean band
Dminxfre:	902.6 MHz 💌	🔲 Single Freq		C EU band
Dmaxfre:	927.4 MHz 💌		Set Parameter	Default Parameter

(1)	Address(HEX):	00	the new reader a	ddress to set. This	address can't be	e 0xFF.
	If set 0xFF, r	eader will return er	or information.			
(2)	Power:	30 💌	set and save powe	er configuration.		
(3)	FreqBaud C User bai C Chinese C US ban C Korean C EU ban different.	nd : band2 d band d		oand, different ba	nd, the freque	ncy is
(4)	Dminxfre:	902.6 MHz	Dminxfre:	002.6 MHz 💌	Set reader w	orking
	different. Use range of the	ncy and Max Frequers can follow the card. In single free lue. In frequency h	ocal situation and uency point operation	choose to read mo tion, only need to	equires the rule re sensitive free set two frequen	e to be quency cies to
(5)	Baud:	57600t	ps 🔽 d	emo software star	t run, default u	ise the
	After change	600 to open COM the baud rate, rea the baud rate no cha no software.	port, reader powe der use the new ba	r on, reader baud aud rate until pow	rate default is er off. Close po	57600. ort and
(6)	Max Inventory	ScanTime:: 10*10	)ms 🔽	set the inventory sc	an max respons	se time
	response and GPIO Operat	tion		-	-	
	GPIO Operation	n Pin2 🔲 Pin3 🔲 Pin4	🗖 Pin5 🔲 Pin6 📔	Pin7 🥅 Pin8	Set	Get
		pins, click	Set , Can	control the outpu	t state pins,	Click
	Get	, can get output st	ate pins.			
( 8	ANT1	onfiguration ANT2 ANT3	ANT4	Set , Select	antenna 4,	click
	Set ,	At this time, ante	enna 4 in working	status, can also se	elect multiple a	ntenna
	working toge			_		
(9)	Relay control ReleaseTime		*50ms Set	], select release	time	



complete the operation, buzzer open open, when reading or writing to label operation is successful have prompt.

## 2. Active mode opration ( COM IS OPEN )



Mask Setting     O EPC O TID O User
Mask Start bit address(Hex):0000 Mask Bit Length(Hex)00
(2) Mask Data(Hex): 00 Set , choose mask area, for example
choose EPC, mask start bit address: 0020, mask bit length 30, mask data
123456 , if successed, can see 20:09:27 "Set" : successfully
(3)
Query Tag Type       Protocl       © Query G2 Tag       © Detect EAS before query G2 tag       © Detect EAS         © EPCC1-G2       © 18000-6B       © Query G2 Tag's TID       © Detect EAS before query G2 tag's TID       Set
, choose query tag type EPCC1-G2 or 18000-6B, only choose EPCC1-G2, you can
choose query action, Ouery G2 Tag or Otetect EAS before query G2 tag or Otetect EAS or
○ Query G2 Tag's TID or ○ Detect EAS before query G2 tag's TID, if successed, can see
20:09:27 "Set" : successfully
(4) Pulse interval: Pulse Time: 10ms Set , choose pulse time 10ms ,
click Set , if successed, can see 20:09:27 "Set" : successfully
Response conditions     Setting       Timer notify     Timer notify       RepPauseTime:     0       Set     Timer notify       Delete notify
(5) , only choose Change notify , reponse pause
time effective, if successed, can see 20:09:27 "Set" : successfully . (only choose
RepCondition: Command notify, can get Reader storage blocks Tag information.
( 6 )

	0 1 2 3 4 5 6 7 V,click Set, if success, can see
	20:09:38 "Set" : successfully
(7)	TID Parameter Setting         Start Address:       02         Data-word-num:       04         Set
	start address and read word number. click Set ,if success,can see
(8)	Work Mode Mode Select: Answer Mode Set, (only choose answer mode, can
	operate other page ) click Set if successed,can see
	20:09:27 "Set" : successfully
(9)	Get System Parameter, click button, if successed, can see above six

parameter.

 $(10)\;$  Only set command notify can do following operation

	First read tag time	Last read tag time	ANT	Time
		-		
	Ge	et Tag Buffer Info	Clear Tag Bu	fer
	First read tag time	Last read tag time	ANT	T
	2011-02-12 10:40:21	2011-02-12 10:40:	27 1000	1
000	2011-02-12 10:40:22	2011-02-12 10:40:	27 1000	1
lear Tag Buffer	ill clear reader storg	e blocks tag info	ormation.	
lear Tag	Buffer , then w	Buffer , then will clear reader storge	Buffer , then will clear reader storge blocks tag info	Buffer , then will clear reader storge blocks tag information.

show:

15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 38 08 04 DA 7D E0 00 E	1 E1 15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 39 08 04 DA 7D E0 00 34 7E 15 00 EE
00 2C 96 E1 45 2C 96 E1 4A 00 3A 08 04 DA 7D E0 00 5A D6 15 (	00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 3B 08 04 DA 7D E0 00 8F 49
15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 3C 08 04 DA 7D E0 00 9	97 8E 15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 3D 08 04 DA 7D E0 00 42 11 15 00 EE
00 2C 96 E1 45 2C 96 E1 4A 00 3E 08 04 DA 7D E0 00 2C B9 15 0	00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 3F
08 04 DA 7D E0 00 F9 26 15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 0	)0 40 08 04 DA 7D E0 00 41 2E 15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 41 08 04 DA
7D E0 00 94 B1 15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 42 08 0	4 DA 7D E0 00 FA 19
	F 86 15 00 EE 00 2C 96 E1 45 2C 96 E1 4A 00 43 08 04 DA 7D E0 00 2F 86 15 00 EE
00 2C 96 E1 45 2C 96 E1 4B 00 44 08 04 DA 7D E0 00 CA 0C 15 0	00 EE 00 2C 96 E1 45 2C 96 E1 4B 00 45 08 04 DA 7D E0 00 1F 93
15 00 EE 00 2C 96 E1 45 2C 96 E1 4B 00 46 08 04 DA 7D E0 00 7	'1 3B 15 00 EE 00 2C 96 E1 45 2C 96 E1 4B 00 47 08 04 DA 7D E0 00 A4 A4 15 00 EE
00 2C 96 E1 45 2C 96 E1 4B 00 48 08 04 DA 7D E0 00 50 BD	
,	

, click Stop will stop data getting.

## 3. The Necessary Knowledge

#### 3.1 EPCC1G2 tag memory

Tag memory divided into four storage areas, each storage area can be made up of one or more memory words. The four storage areas:

EPC areas (EPC): Store the area of EPC number, this module stipulates it can store 15 word EPC number. Can read and can write.

TID areas (TID): Store ID number established by the tag production firm. There are 4 words and 8 words two kinds of ID numbers at present. Can read and not can write.

User areas (User): This area of different manufacturers is different. There is no user area in G2 tag of Inpinj Company. There are 28 words in Philips Company. Can read and can write.

Password areas (Password): The first two words is kill password, the last two words is access password. Can read and can write.

Can write protect in four storage areas. It means this area is never writeable or not writeable under the non-safe state; only password area can set unreadable.

#### 3.2 18000-6B tag

6B tag has a memory space, the minimum 8 bytes (byte 0- 7) is UID of the tag, and can't be rewritten. Following byte all can be rewritten, can be locked too, but once locking, can't rewrite again, can't unblock either.

#### 3.3 Data display (tag ID, passwords, memory data is display in 16 hexadecimal)

Write Data (Hex): 1122334455667788

Display in Hex, then 11 is first byte, 22 is second byte, and 1122 is first word.

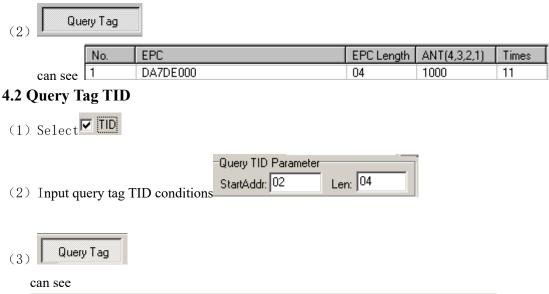
1122334455667788

Total 8 bytes, in other words, total 4 words.

## 4. EPCC1-G2 Test opration ( COM IS OPEN )

# **4.1** Query Tag EPC(The operation needing to choose the tag all need to query tag first)

(1) Read Interval: 50ms Every 50ms issued a command checks.



No.	EPC	EPC Length	ANT(4,3,2,1)	Times
1	013EF1000DA4BFF5	08	0001	6

## 4.3 Read Data, Write Data, Block Erase

Read Data / Write Data / Block Erase	
DA7DE000	Compute and add PC: 1000
C Password   EPC  C TID  C User	DA7DE00083010073 DA7DE00083010073
Address of Tag Data(Word/Hex): 02	DA7DE00083010073 DA7DE00083010073
Length of Data(Read/Block Erase: 4	DA7DE00083010073 DA7DE00083010073
Password(Read/Block Erase) 00000000 (0-120/Word/D):	DA7DE00083010073 DA7DE00083010073
Write Data (Hex): DA7DE000	DA7DE00083010073
Read Write Block Write Block Erase Clear	

#### (1) Read data operation

<1> Choo	DA7DE000	•
<2> Choo	O Password O EPC O TID O User	
	Address of Tag Data(Word/Hex): 00	
	Length of Data(Read/Block Erase: 4	
<3> Write	Password(Read/Block Erase) e (0-120/Word/D):	

Start address: 0x00 stand in start to read data from first word in the designated storage area, 0x01 stand in start to read data from second word in the designated storage area, and so on.

Read the length: Number of the word to be read. It read 120 words at most. Can not set 0 or 120, otherwise, return the parameter error information.

Access password: From left to right it is the former high-word, low word in the

	<4> Click Read can see	12:01:49 "F	lead" :	successfull	y
			)0000 )0000 )0000 )0000		
(2)	Write data operation				
	<1> Choose tag	0			
	<2> Choose memory	issword 🔿 EPC	0 1	ID 💿 Us	
	Address of Tag Data	a(Word/Hex):	0		
	Length of Data(Rea		4		
	Password(Read/Blo <3> Write (0-120/Word/D):	CK Erasej	000000	00 (E	PC memory Address of tag
	is 2)				
	Write Data (Hex):	0000			
			f data (f	rom left) is	written in address 0x00 of the
	designated storage area	, and so on.			
	<4> Click Write can see				
	17:35:06"Write"Command	d Response=Ox	00 (compl	etely write	Data successfully)
	Note: write data	can be u	used t	o chang	e the EPC number
	(the method is a	as follows	5)		
	<1> Choose tag	0			
	<2> Choose memory	ssword 💿 EP	0 0	TID OUs	,and
	select Compute and ad	ld PC			
	Address of Tag Data	a(Word/Hex):	02		]
	Length of Data(Rea				
	Password(Read/Blo <3> Write(0-120/Word/D):		00000		(EPC memory Address of

access password. If operation don't need access password, it can be the arbitrary value, but can't lack.

	tag is 2)
	Write Data (Hex): DA7DE001
	<4> Click write can see
	20:41:49 "Write"Command Response=OxOO (completely write Data successfully)
	No.     EPC     EPC Length     ANT(4,3,2,1)     Times
	No.         EPC         EPC Length         ANT(4,3,2,1)         Times           1         DA7DE001         04         0001         8
(3)	Block Erase Operation (write 0 to the designated data )
	<1> Choose tag
	<2> Choose memory
	Address of Tag Data(Word/Hex): 00
	Length of Data(Read/Block Erase: 4
	Password(Read/Block Erase)
	<3> Write (0-120/Word/D):
	Start address: $0x00$ stand in start to erase data from first word in the designated
	storage area, 0x01 stand in start to erase data from second word in the designated storage area, and so on.
	The difference from write operation: Needn't fill in the data.
	<4> Click Block Erase can see
	14:51:32 "Block Erase"Command Response=0x00(Block Erase successfully)
(4)	Write block operation
	<1> Choose tag
	<2> Choose memory Password C EPC C TID C Use
	Address of Tag Data(Word/Hex): 00
	Length of Data(Read/Block Erase: 4
	<pre>     Password(Read/Block Erase)     CO0000000     (EPC memory Address of tag     (EPC memory Address of tag     ) } </pre>

0000 Write Data (Hex):

Start address: 0x00, the first word of data (from left) is written in address 0x00 of the designated storage area, and so on.

<4> Click Block Write can see

11:54:06 "WriteBlock" Command Response=OxOO (completely write Block successfully)

## 4.4Revise the password

	Read Data / Write Data / Block Erase
	DA7DE000
	Password O EPC O TID O User
	Address of Tag Data(Word/Hex): 00
	Length of Data(Read/Block Erase: 4
	Password(Read/Block Erase) 00000000 000000000000000000000000000
	Write Data (Hex): 0000
	Read Write Block Write Block Erase Clear
(1)	Choose tag
	Choose memory
(3)	Password(Read/Block Erase) 000000000 Write access password (0-120/Word/D):
	Access password: From left to right it is the former high-word, low word in the
	access password. If operation don't need access password, it can be the arbitrary value,
(4)	but can't lack.
(4)	Revise the access password 12345678: Write
	Address of Tag Data(Word/Hex): 02
	Write Data (Hex): 12345678 Click Write
(5)	Revise the kill password 12345678: Write
	Address of Tag Data(Word/Hex): 00
	Write Data (Hex): 12345678 Click Write
(6)	If succeed, we can see
	14:50:44"Write"Command Response=OxOO(completely write Data successfully)
4.5 V	Vrite EPC (Needn't query tag)
	Write EPC(Random write one tag in the antenna)
	Write EPC: AE534012580A04E0 (1-15Word)
	Access Password 00000000 Write EPC
(1)	

- (1) Write access password (If EPC area of the tag has not set password protection, we can write 8 data arbitrarily)
- (2) Write EPC.
- (3) Click Write EPC. (Random write one tag in the effective range of antenna)

When there are many or EPC pieces of tag in the effective range of antenna, and the access

password of one tag is the same as you entered, or EPC area of tag set no password protection,

click Write EPC at a time, random write EPC number of one tag in the effective range of antenna.

## 4.6 Set the state of read and write protection

DA7DE000	C Password      EPC      TID      Use		
C Kill Password C Access Password	Lock of EPC TID and User Bank     Writeable from any state     Writeable from the secure     G. Brenzen the milesel		
<ul> <li>Readable and writeable from any state</li> <li>Readable and writeable from the secured s</li> </ul>	C Permanently writeab C Never writeable		
Permanently readable and writeable     Never readable and writeable	Access Password (8 Hex): 00000000 Lock		
Choose tag			
Choose tag			

#### (4) Write access password:

Access Password (8 H

Any storage area in no password protection status still must write the correct access password.(password can not be zero).

## **4.7 Read Protection**

Read Protection	
DA7DE000	<b>•</b>
Access Password (8 Hex):	00000000
:	Set Privacy By EPC
Sel	t Privacy Without EPC
	Reset Privacy
	Check Privacy

(1) Set Single Tag Read Protection

<1> Choose tag	DA7DE000	•

<2> Write t	Access Password 11111111 ag access password 8 Hex):	
<3> Click	Set Privacy By EPC	

According to EPC number of the tag, setting read protection, make tag unable to be read and written by any order, even if query the tag, it is unable to get EPC number of the tag. Only NXP UCODE EPC G2X tags valid.

(2) Set Single Tag Read Protection without EPC

<1> Write	e tag access password	Access Password '8 Hex):	11111111			
<2> Click	Set Priv	acy Without EPC		can set tag read	l protect	tion in the
effec	tive range of antenna					
The	difference from	Set F	rivacy By EP(	:	: When	there are

several tag in the effective range of antenna, reader don't know the tag which the order operate.

If operate several tags, then the access password of the tag had better be the same. Only NXP UCODE EPC G2X tags valid.

(3) Reset Single Tag Read Protection without EPC

<1> Write access	Access Password password 8 Hex):	11111111	
<2> Click	Reset Privacy		

Use for reset the tag read protection.

Only put a tag in the effective range of antenna. Only NXP UCODE EPC G2X tags valid.

Comments: If tag does not support the read protection setting, it must be unprotected.

- (4) Detect Single Tag Read Protection without EPC
  - <1> Click Check Privacy

Can't detect tag whether it support read protection order, can only detect single tag whether it is protected. If tag does not support the read protection setting, it must be unprotected.

Make sure that there is single tag in the effective range of antenna. Only NXP UCODE EPC G2X tags valid.

## 4.8 EAS Alarm

EAS Alarm		
DA7DE000		•
Access Password (8 Hex):	00000000	
<ul> <li>Alarm</li> <li>No Alarm</li> </ul>	EAS Configure	EAS Alarm

(1) Alarm setting

<1> Choose tag	DA7DE000		•
<2> Write access	Access Password password (8 Hex):	11111111	
<3> Choose alarm	C Alarm ⊙ No Alarm		

Set or reset the EAS status bit of tag. Only NXP UCODE EPC G2X tags valid.

(2) Check alarm without EPC and access password

	Access Passwor (8 Hex):	d 11111111	
<1> Click check alarm	<ul> <li>Alarm</li> <li>No Alarm</li> </ul>	EAS Configure	EAS Alarm

Check the EAS alarm of tag. Only NXP UCODE EPC G2X tags valid.

<2> EAS alarm:

					detected)
Check.	Alarm				
No EAS a	alarm	:			
			 FB (No Tag	 _	

4.9 Lock Block for User (Permanently Lock) (After the data locked, it can not be changed again)

		Lock Block for User (Permanently Lock)	
		DA7DE000	]
		Address of Tag Data 0and1	
		Access Password 00000000 Block Lock	
(1)	Choose tag	34012580A04E0	
(1)	e	Data O and 1	

Access password can not be the whole 0. Otherwise, the tag can not be locked, and the tag return response with parameter error.

(3) Choose address of tag data (word). The user's area amounts to 14 word. (0-13)

Lock permanently in 2 words. Therefore, the address of tag data is divided into 0 and 1, 2 and 3, 4 and 5, 6 and 7, 8 and 9, 10 and 11, 12 and 13. You can lock the data if you wish:

Address of Tag Data (Word):	0 and 1	-
TWOIUI.		_

After the data get locked, it can be read only, can't be rewritten, and can't be erased too. Only NXP UCODE EPC G2X tags valid.

#### 4.10 Kill Tag (Permanently Kill)

		Kill Tag	
		AE534012580A04E0	•
		Kill Password (8 Hex):	Kill Tag
(1)	Choose tag	534012580A04E0	•
(2)	Kill Passwor (8 Hex):	<sup>d</sup> [1111111]	

Kill password can not be the whole 0. Otherwise, the tag can not be killed, and the tag return response with parameter error.

## 4.11 Mask conditions

Mask conditions	
Mask Start Bit Address(Hex):	Mask Bit Length(Hex): 00 🗖 Enable
C EPC C TID C User	Mask Data(Hex): 00
(1) check enable	
Mask Start Bit Address(Hex):	Mask Bit Length(Hex): 00
• EPC O TID O User	Mask Data(Hex): 00
Only check enable can do mask ope	ration.
For example, EPC mask:	
Choose EPC area: © EPC	
Mask Start Bit Address(Hex): 0020	
Mask Bit Length(Hex): 08	
Mask Data(Hex): DA	

Only the first byte of tag's EPC is DA could response. For example, TID mask:

Query Tag         Read Interval: 50ms         Query TID Parameter         StartAddr: 02         Len: 04         Can see TID	Query			
No. EPC	EPC Length	ANT(4,3,2,1)	Times	
1 013EF1000DA4BFF5	08	0001	60	
<mask condition=""></mask>				
Mask conditions		20	✓ Enable	
	it Length(Hex):			
● EPC ● TID ● User Mask D	ata(Hex): 013	BEF1000DA4BFF	5	
For example change EPC :				
42> select				
O Password      EPC O TID O User	an	d 🔽 Compute	and add PC	2 1000
Address of Tag Data(Word/Hex): 02		-		
Length of Data(Read/Block Erase: 4		-		
Password(Read/Block Erase)		-		
<3> Write (0-120/Word/D):		EPC men	nory Addr	ess of tag
Is 2)				
Write Data (Hex): DA7DE001				
<4> Click Write can see				
20:41:49 "Write"Command Response=OxOO(completely write Data successfully)				
Then query tag EPC, can see				
No. EPC	EPC Length	ANT(4,3,2,1)	Times	
1 DA7DE001	04	0001	8	

## 5. 18000-6B Test Interface Operation (After Open COM Port)

5.1 (	Query Tag					
(1)	Read Interval: 50ms	T	send a	inventory	command	every
	50ms.					
	<ul> <li>Query by one</li> </ul>	L				
(2)	C Query by Condition	Query by one				

Only query the single tag. If many tags are in the effective range of antenna at the same

time, it may be unable to query the tag.

	-	
No.	ID	Times
1	E0040000AEE77302	233

Query by Condition

(3)

<1> Unequal Condition:

Query Tags by Condition	
C Equal Condition	<ul> <li>Unequal Condition</li> </ul>
C Less than Condition	C Greater than
Address of Tag Data(0-223):	0
Condition(<=8 Hex Number):	00

Note:

The 8 bytes of 6B tag number write in the  $0\sim7$  which in the address of tag data (0-233)

Figure, query condition begin to compare from the tag data address 0. The comparative content is 22.

Click

Query by one	
	Query by Condition
Query by Condition	

See

No.	ID	Times
1	E0040000AEE77302	186
2	E0040000D4E77302	27

Figure, from the tag number we can see the addresses 0 of tag data: 00, 00, 11, 11.

Unequal condition 22, therefore, the four tags are read.

<2> Equal Condition:

Query Tags by Condition	
<ul> <li>Equal Condition</li> </ul>	C Unequal Condition
C Less than Condition	O Greater than
Address of Tag Data(0-223):	0
Condition(<=8 Hex Number):	00

Note:

The 8 bytes of 6B tag number write in the  $0 \sim 7$  which in the address of tag data (0-233)

Figure, query condition begin to compare from the tag data address 0. The comparative content is 00.

Click

Query by one	
	Query by Condition
Query by Condition	

See

Г	List ID of Tags				
l	No.	ID	Times		
L	1	0022334455667788	69		
L	2	0022334455667789	69		

Figure, from the tag number we can see the addresses 0 of tag data: 00, 00. Equal condition 00, therefore, the two tags are read.

#### <3> Greater than

Query Tags by Condition	
C Equal Condition	O Unequal Condition
C Less than Condition	<ul> <li>Greater than</li> </ul>
Address of Tag Data(0-223):	0
Condition(<=8 Hex Number):	00

Note:

The 8 bytes of 6B tag number write in the 0~7 which in the address of tag data (0-233)

Figure, query condition begin to compare from the tag data address 0. The comparative content is 00.

Click

Query by one	
	Query by Condition
Query by Condition	

See

List ID of Tags				
	No.	ID	Times	
	1	1122334455667788	8	
	2	1122334455667789	8	

Figure, from the tag number we can see the addresses 0 of tag data: 11, 11.

Great than 00, therefore, the two tags are read.

## 5.2 Read and Write Data Block / Permanently Write Protect Block of Byte

	lock / Permanently W	Vrite Protect Block of byte	
E0040000D4E77302			~
Start/Protect Address (00-E3)(Hex):	00	Length of Data: (1-32/Byte/D)	
Write Data (1-32 Byte/	Hex): 0000		
Read Write	Lock	Check Lock	Clear
E 0040000D 4E 77302E E 0040000D 4E 77302E E 0040000D 4E 77302E E 0040000D 4E 77302E	E000000 E000000		<u></u>
			Y

(2) Read data:

(1)

Start/Protect Address	Length of Data:
(00-E9)(Hex):	(1-32/Byte/D)

Start address: 0x00 stand in start to read data from first word in the designated storage area, 0x01 stand in start to read data from second word in the designated storage area, and so on. Range is 8~223. Beyond this range, reader will return parameter error.

Read length: pointed to the number of bytes to read. Range is  $1\sim32$ . If Start address + Read length greater than 224, or Read length greater than 32 or is zero, reader will return parameter error information. The high bytes of Read length write in the low address in tag.

(3) Write data:

Start/Protect Address (00-E9)(Hex):		Length of Data: (1-32/Byte/D)	12
Write Data (1-32 Byte/Hex):	0000		

Write data: Range is  $1 \sim 32$ . If Start address + Write length greater than 224, or Write length greater than 32 or is zero, reader will return parameter error information. The high bytes of Read length write in the low address in tag.

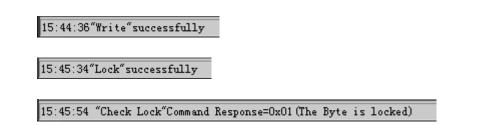
(4) Permanently Write Protect: lock the designated byte.

Start/Protect Address (00-E9)(Hey):	
Stat/Flutect Address	00
(00-E9)(Hex):	100
()()/-	· · · · · · · · · · · · · · · · · · ·

(5) Check Protect: check whether the designated byte is locked.

Start/Protect Address (00-E9)(Hex):	
Statt/Flotect Addless	00
(00-E9)(Hex):	00
()(),	

(6) If succeed, we can see: 15:45:14"Read"successfully

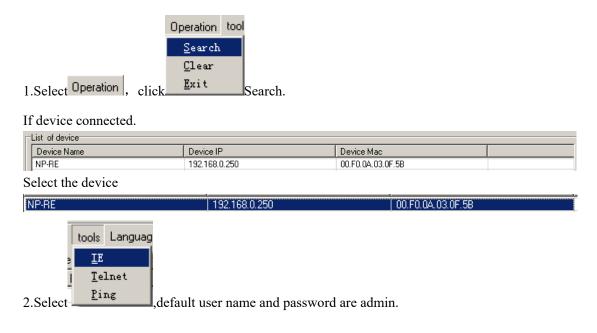


## 6. Frequency Analysis Operation (After Open COM Port)

Frequency	Times	Percentage
Click Start, can see		
902.60MHz(0) 903.00MHz(1) 903.40MHz(2) 903.80MHz(3) 904.20MHz(4) 904.60MHz(5) 905.00MHz(6) 905.40MHz(7)	30/30 30/30 30/30 28/30 30/30 30/30 30/30 30/30 30/30	100.00% 100.00% 100.00% 93.33% 100.00% 100.00% 100.00% 100.00%

The larger of the percentage ,the better of the results.

## 7. Config TCPIP



连接到 192.168.0	. 250	? ×	
	G		
M2M CXT3216			
用户名 (1):	🕵 admin	•	
密码(E):	****		
	☑ 记住我的密码 (B)		
	确定	取消	
			Login.
(1) Select Serial 1	Settings, default:		
Channel O Enable S	erial Port 💌		
-Port Settings		ou Controlu	Warra
Protocol: RS232			NONE
Stop bits: 1	🔽 Data Bits: 🏽 🔽 Pa	анцу.	NONE
Finished click	OK .		
(2) Select Connec	tion1 ,set TCP.		
Channel 0			
	otocol: TCP 💌		
Connect Mode-		<b>.</b>	e Connection:
	oming: Yes 🕶 Active		
		Character:	
-Endpoint Conf			
Local Port: 270		lemote Port	
Remote Host:0.		NS Query Po	eriod:1800 ( Secs )
Disconnect Mo			
Inactivity Tim	neout:4 : 15 (min	is:secs/	
Finished click	ОК .		
(3) Select Netwo	set device IP.		

L Ib Configuration
O Obtain IP address automatically
O Use the following IP config:
IP Address: 192.168.0.250
Subnet: 255.255.2
Default Gateway: 192.168.0.1
Preferred DNS server: 192.168.0.1
Alternate DNS server: 192.168.0.1
Ethernet Configuration
🗹 Auto Negotiate
Speed: O 100Mbps 🖸 10Mbps
Duplex: O Full 💿 Half
MAC Address: 00.F0.0A.03.0F.5B
HTTP Server
HTTP Server Port: 80
Finished click OK .
(4) The end select Apply/Restart .Click Submit , Restart your device.