

Software User's Manual 800&500 Series Reader Demo (.NET)

Version:V1.7

Invengo Information Technology Co., Ltd.

Preface

This demo is applicable to the Invengo product models including, but not limited to:

XC-RF807 Reader

This manual provides the information on the software installation, operation and other features.

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Safety Instructions

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Invengo equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the cautions.



Warning

A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons operating on the equipment.



Notice

A Note either provides: extra information about a topic or alerts to an operating procedure, practice, condition, or statement or corruption or loss of data, or contains special instructions for handling a particular condition or set of circumstances.

1 Overview

1.1 About Demo Software

The Demo software is used to set system parameters and perform write/read operation on Invengo XCRF-800 series and XCRF-500 series reader and ISO compliant transponders

1.2 System Requirements

Supported Operating Systems

Windows 2000 Service Pack 3; Windows Server 2003; Windows XP Service Pack 2; Windows Vista; Windows 7

These systems are 32-bit operating system. The USB driver does not support 64bit OS for the time being..

• Required Software

Windows Installer 3.0 is required. Windows Installer 3.1 or later is recommended. IE 5.01 or later is required: for installing the .NET Framework.

• Recommended hardware requirements

CPU: Pentium 4 at 1.7 GHz or above

Memory: min. 512MB

1.3 Technical Terms

TID: Tag identifierEPC: Electronic product codeRSSI: Received signal strength indicatorLBT: Listen before TalkDRM: Dense reader modeQ: Slot count parametersEAS: Electronic Article SurveillanceQT: innovative privacy features of Impinj Monza 4 tag chip

Software User's Manual 800 & 500 Series Reader Demo (.NET)

2 Installing demo software

Click'setup.exe'



Choose English and click OK button.

Choose	Setup Language 🛛 🗙				
Select the language for this installation from the choice:					
	English (United States)				
	OK Cancel				

Installation window will pop up if .NET Framework 2.0 is not installed.

InstallS	nield 🛛 🕅
2	XCRF-800(500) Demo optionally uses the Microsoft (R) .NET 2.0 Framework. Would you like to install it now?
	<u>Y</u> es <u>N</u> o

Click 'Yes'.



Click 'Next'. Please refer to the following picture:

1Ē	Microsoft .NET Framework 2.0 Setup				
I	End-User License Agreement				
	End-User License Agreement				
	MICROSOFT SOFTWARE SUPPLEMENTAL LICENSE TERMS MICROSOFT .NET FRAMEWORK 2.0				
	Microsoft Corporation (or based on where you live, one of its affiliates) licenses this supplement to you. If you are licensed to use Microsoft Windows operating system software (the "software"), you may use this supplement. You may not use it if you do not have a license for the software. You may use a copy of this supplement with each validly licensed copy of the software.				
	Print By clicking "I accept the terms of the License Agreement" and proceeding to use the product, I indicate that I have read, understood, and agreed to the terms of the End-User License Agreement.				
	✓ I accept the terms of the License Agreement				
	< <u>B</u> ack Install > Cancel				

Accept and click 'Install' to continue setup.



Program will display the following screen directly if .NET Framework 2.0 has been installed.

🕼 Microsoft .NET Framework 2.0 Setup	
Setup Complete	
Microsoft .NET Framework 2.0 has been successfully installed.	
It is highly recommended that you download and install the latest service packs and security updates for this product.	
For more information, visit the following Web site:	
Product Support Center	
	Einish

Click 'Finish'.



Click 'Next'.

🙀 XCRF-800 (500) Demo - Ins	tallShield	Vizard	
Customer Information			
Please enter your information.			
<u>U</u> ser Name:			
InvengoUser			
Organization:			
Invengo			
InstaliShield			
	< <u>B</u> ack	<u>N</u> ext >	Cancel

Please enter your information and click 'Next'.

🛃 XCRF-8	00(500) Demo - InstallShield Wizard 🛛 🛛 🔀						
Destination Folder Click Next to install to this folder, or click Change to install to a different folder.							
	Install XCRF-800(500) Demo to: C:\Program Files\Invengo\XCRF-800(500) Demo\						
InstallShield –	< <u>B</u> ack <u>N</u> ext > Cancel						

Select installation directory, click 'Next'

🕲 XCRF-800(500) Demo - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	
Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
InstallShield	

Click 'Install'

🔂 XCRF-8	00(500) Demo - InstallShield Vizard 📃 🗌 🔀
Installing The prog	XCRF-800(500) Demo ram features you selected are being installed.
17	Please wait while the InstallShield Wizard installs XCRF-800(500) Demo. This may take several minutes.
	Status:
	(**************************************
InstallShield –	
an no spannad i Marina	< Back Next > Cancel

🛃 XCRF-800(500) Demo - I	nstallShield Wizard	×		
	InstallShield Wizard Completed			
	The InstallShield Wizard has successfully installed XCRF-800(500) Demo. Click Finish to exit the wizard.			
	< Back Finish Cancel			

Click 'Finish' to close installation.

After successful installation, the desktop shortcut "will appear

The appropriate Start menu shortcuts will appear, as shown:



3 XCRF-800 Series Reader Demo User Manual

3.1 Running the read demo

Click [Start]—[Programs], select Invengo Demo v1.7 program group, and click 'XCRF-800(500) Demo v1.7' to run the XCRF-800(500) Series reader Demo. Or double click 'XCRF-800(500) Demo v1.7' on the desktop run the XCRF-800(500) Series reader Demo.

Click 'Start 800 Series Reader Demo':



The screen appears:

🙆 XCRF-800 Se	ries Reader	Demo								
Config User	Help								Theme	language
Comm Port	×		ERC	O	Θ	EPC User Data	User Dation			
	Type of tag		Read Type		Antenna 20		Z Read Tag	Nun 3		ASCII
4	EPC		TID		UserBata		Time	Read Tines	AHT1	ANT2
Connect										
DisConnect										
Conn										
•										
Tag										
•										
Exit	Tage Read	Sm	and as		Total Count:	Total Tim		Awa Snood:		>
	rafte vegg:	sp	eeu. ns		iotar count:	Iotal III	le.	we speed:	ns	_

3.2 Connecting/disconnecting XCRF-800 Series reader

1. Selecting communication mode

Three communication modes, including TCP/IP, COM (RS232) and USB, are available. Click 'Comm. Port' to select the desired communication mode.



Notice: USB option will be available when USB device and the driver are installed: Install the USB driver as follows:

Connect the reader with a USB cable, and apply power to the reader, the screen of 'new hardware found' appears.



Click 'Next'

bund New Hardware Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device [recommended]
Duplay a list of the known drivers for this device so that I can choose a specific driver
< <u>R</u> ack. <u>N</u> ext> Cancel

Click 'Next'

Found New Hardware Wizard
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
Windows found a driver for this device. To install the driver Windows found, click Next.
e \projects\epc-900\drivers\winep\usbharve.inf
(Back Cancel





Click 'Finish'.

The message of 'New hardware is installed and ready for use' displays. When the installation of driver is completed, the computer can communicate with the XCRF-800(500) Series reader via USB port. 2. Click 'Connect' button after the desired communication mode is selected.

3. Configuring COM port parameters

The communication mode COM should be selected. Select the desired COM port and baud rate as the screen appears below, and click 'OK' to connect the XCRF-800(500) Series reader.

🙆 Set Reader Po	rt 🔀
Select Port:	Select Baudrate: R9600 R19200 R115200
	K Cancel

4. Configuring IP address

The communication mode TCP should be selected as the screen appears below. Input the reader's IP address, and configure the PC network area which should be identical with that of the reader (defaulted as 192.168.0.210). The default port number is 7086. And click 'OK' to connect the XCRF-500 Series reader. When

the IP addresses of the PC and the reader are not in different segment, enter mapped IP address and port number or the reader and click "OK Connect" button to connect.

🙆 Reader IP	×
Reader IP: 192.168.0.210: 7086	\$
OK Cancel	

5. Successful connection

After the successful connection, the Conn icon on the following screen turns green, and the software status bar indicates that 'successful connection'. The screen appears.



6. Connection failed

'Connect failed' message will appear on the software status bar.



7. Disconnecting the XCRF-800 Series reader

Click 'Disconnect' button, and the Conn icon turns gray. 'Disconnected' message will appear on the software status bar.

3.3 Read and write operation

1. Configuration before read and write operation

The screen appears:

Read Type Loop	💉 Antenna 🛛	NO 🔽 1 🗌 2	🗆 3 🗹 🍕 🗲	Read Tag Num	1 🗘	🔲 RSSI 📃 VTC	🗌 ASCII
Figure: for 2	XCRF-807	Reader					

Type of tag 6C	🗠 Read Type Loop 💌	Antenna NO	1#	두 Read T	ng Num 4	\$	ASCII
Tag ID		Time	2#	ANT1	ANT2	ANT3	ANT4
			3# 4#				
			1-2#				
			1-3#				

Figure: for other readers

Read mode: 'Loop read' and 'Single read'

a) "single" mode: read only once, acquired tags will appear in the tag list.

b) "loop" mode to read: continuously read tag operation will be performed until the stop read button is pressed. The acquired tags will show in the tag list.

The estimated numbers of tags to read: fill the estimated number of tags to write or read.

Antenna number: select the number of antenna that is connected.

(The XCRF-807 reader can use non-adjacent antennas. For example, as shown in the figure below, optional antenna No. 1 and 4 can be select to operate simultaneously, while the No. 2 and 3 antennas are not in operation. Other readers are able to use one antenna or multiple adjacent antennas.)

* Configuring antenna power. The screen appears.



Set the power antenna/s, and click "OK".

RSSI: the antenna signal strength will display when selected. (Readers of specific models support this function.)

UTC: UTC time will display when selected. (Readers of specific models support this function.)

ASCII: ASCII format will be used to write tag data when selected; TID which is of 16 hex will be unaltered. 16 hex format will be used to write tag data when de-selected.

2. Read TID



3. Read EPC number





TID len: specifies the length of the TID to read, usually set to 4 words (8 byte).

Userdata ptr: specifies the offset of the user data to read. Userdata ptr must be within the memory bank.

Userdata len: specifies the length of the user data to read. The sum of the offset and data length must be within the size of the memory bank.

Click "OK" to set.

5. Stop read

Click'

(Stop read tag (stop read tag operation of 2,3 and 4)

6. Read tag data result

Show the data. The screen appears .:

		Tag NO.	Time	Read Times	ANT1	ANT2	ANT3	ANT4	RSSI
Þ	1	e2006001011d6a1c	15:12:58	7	7	0	0	0	
	2	e2006001011d6a06	15:12:59	8	8	0	0	0	
	3	e2006001011d6a1d	15:12:59	3	3	0	0	0	
	4	e2006001011d6a05	15:12:59	8	8	0	0	0	

7. Write EPC data

Select a data in the data list. Click ' ** ' button and the screen appears:

elect Tag(TID):	Length of Data 12	
ata to Write:		

Select tag (TID): click a data in the data list, and the TID number will be automatically added into the text box. (EPC number will be displayed in event of read EPC number.)

Write data byte: The length of data byte to write which is even number will be automatically calculated according the input characters.

Write EPC data: input the hexadecimal digit (A byte consists of two characters) or ASCII string in the text box. 0 will be automatically added if the number of input characters is odd.

Tag access password: input tag the access password, defaulted as '00000000'.

OK: confirm to write EPC data.

Close: close the write EPC data screen.

8. Read user data

Select a tag in the data list, click ' 🕂 'button and the screen appears:

Read User Data Select Tag(TID): e2006001017076fd	Start Addr:0	🗘 Data Length	.: 6 🛟
oser bitt.			OK Close

Select tag (TID): click the data in the data list and the TID number will automatically added to the text box.

Start address: in byte, start address is the start location for reading user data. (even number).

Data length: the data length is calculated from the start address, the byte number of the data to read (even number)

Tag user area data: read data results.

OK: confirm to read user area data.

Close: close the read user data area screen.

Tip: EPC code defaults to 12 bytes. The length of EPC data area of tags from different vendors or of different models may vary, of which the maximum is 30 bytes.

Tip: "Start address" + "data length" should not exceed the maximum number of bytes of user data.

9. Write user data

Select the data is the list, click ' **** ' button, and the screen appears:

elect T (TID):	e2006001011d8 a1 c	Start Address 0 🗘 De	ata Length: 0 0
ata to Write:			
	Access PWD:	Orignal FWD:00000000 00	Close

Select tag (TID): Select the data is the list, and the TID number will automatically be added to the text box. (If the operation is to read EPC, it will be the EPC number.)

Start address: in byte, the start address is the start point (even number) of the user data area to write.

Data length: the length will be calculated according to the input characters. The byte number of the data to write should be even.

Write data: input the hexadecimal digit (A byte consists of two characters) or ASCII string in the text box. The number of characters input should not be odd, and should correspond with the byte number configured.

Write: Confirm to write the user area data.

Close: close the write user data area screen.

Tip: "Start address" + "data length" should not exceed the maximum size of bytes of user data.

10. General writes tag

Select the data is the list, click '	'bı	utton, and the	e screen aj	ppears:
General write tag Select tag: #280110520002ac58c8b Trite data:		Bank:	EPC	PWD: 00000000
Current position: the Oth byte(O based)	Start p	tr: 0 🗘 Data :	Length: 🗍 🤤	Write Close

Select tag: Select the data is the list, and the TID number will automatically be added to the text box. (If the operation is to read EPC, it will be the EPC number.)

Bank: select the operation bank.

PWD: access password.

Start address in byte, the start address is the start point (even number) of the user data area to write.

Data length: the length will be calculated according to the input characters. The byte number of data to write should be even.

Write data: input the hexadecimal digit (A byte consists of two characters) or ASCII string in the text box. The number of characters input should not be odd, and should correspond with the byte number configured.

Write: Confirm to write the user area data.

Close: close the write user data area screen.

11. Exporting data

Click' i button, and the screen appears:						
Export config						
Export Path:						
File Group Book						
Max worksheets each workbook:	20 🛟 (1-255)					
Max records each worksheet:	50000 🛟 (1-65535)					
Exporting Solution: 💿 Common	🔘 sn +Tag NO.					
Export	Close					

Export Path: the directory to save the imported file. Click the '...' button to explore the folders.

File Group: input the file names, and the files exported will be automatically named by adding a sequent number.

Export Solution: 'Common' enables the export of data listed in the box, and 'sn + Tag NO.' enables the export of sequence number + tag number.

Export: exporting data.

Close: close Export Config box.

3.4 Configuration menu

. . .

1. Frequency hopping management
🗠 Frequency Hopping Tanagement 🛛 🔀
Frequency Hopping Set: Please select a set of frequencies from the table of reference frequency, which located left.
902. 750 ● 903. 250 ● 904. 250 ● 905. 250 ● 905. 750 ● 906. 250 ● 906. 250 ● 906. 250 ● 907. 750 ●
Default A Default B Freq Number: 0 Import Save Query Clear

a) Frequency range:

select 'CN', 'US' or 'EU' to switch the frequency range. If the frequency range is selected, the frequency of the reader will switch to the standard frequency of the selected region. (Not supported by all the XCRF-800 Series readers) ("CN": Chinese standard band; "US": North American Standard Band; "EU": EU standard band)

Selecting frequency hopping: select the desired frequency point in the frequency range box.

b) Configuring frequency hopping option:

The left list box includes the frequency point data of the frequency range, and the right box includes the frequency point list, showing the selected frequency point or frequency point query results.

>: add a frequency point to the frequency point list.

>>: add the frequency point in the list box to the frequency point list, or add the maximum frequency points that the XCRF-800 Series reader supports.

Default option A: showing the frequency point of default option A listed in the frequency point list.

Default option B: showing the frequency point of default option B listed in the frequency point list.

Frequency point number: listing the frequency point number in the frequency point list.

Import option: import the external frequency point options saved by demo software.

Storing option: store the frequency point of the frequency point list in the external option file.

Querying frequency point: query the current operating frequency point of the XCRF-800 Series reader; show the current operating frequency point of the XCRF-800 Series reader in the frequency point list.

Clear: clearing the data of frequency point list will not change the configuration of frequency point.

Configuring: configure the data of frequency point list or the selected frequency point in frequency hopping selection list to the XCRF-800 Series reader.

Close: close the screen.

@ Reader Parameter Conf	fig 🔀
IP Config: IP Address: 192.168 . 1 SubNet Mask: 255.255 .255 GateWay: 192.168 . 1	Antenna Power: Session config: 1#: 20.0 v (dBm Session: v 2#: 30.0 v (dBm Flag: v 3#: 30.0 v (dBm Q: 4#: 30.0 v (dBm Default Q: 3 \$
Interval Time: Set Send Code Mode Cancel Send Code Mode Time: 260 🜩 ms	I/O Control: Port1 Low Port3 Low Low
LBT: DEM: DEM:DEM: DEM: DEM:DEM:DEM:DEM: DEM:DEM: DEM:DEM: DEM:DEM: DEM:DEM: DEM:DEM: DEM:	Baseband config.
Config Message:	Config Close

2. Frequency hopping management

The current configuration of the XCRF-800 Series reader display in the screen appears above. If one of the configurations is not available, it is probably caused

by failed query, possibly indicating the feature to operate is not supported. Close screen is recommended.

Configuring IP: modify the IP if needed

Adjusting antenna power: adjust if needed. Or select the desired value (20-30).

I/O control: configuring the ports.

Session config: configuring the session.

Q value: the XCRF-800 Series reader's default Q value.

Configuring Session: Inventory session and flag configuration

Code sending interval: the time interval the multiple readers require to send code which is supported by XCRF-804 only.

LBT: listen before talk.

DRM: dense reader mode switch.

Baseband data rate: baseband data rate setting

Configuration status: Click the button to configure the operation, and execution result will be displayed.

Configuration: add the configuration data to the XCRF-800 Series reader.

Close: closing the screen.

3. Configuring tag parameters

🙆 Tag Param	eter Config	
Select (TI Access P	D): 00000000	
Config Acco New Access P	WD: Config Kill PWD Kill PWD:	
EAS Flag Co	onfig EAS Flag: Set 💟	
🔲 QT order	Type:	Query 💟
persistent:	Save config	~
Orignal	Tag does not reduce range	~
QT_MEM:	Tag uses Private Memory Map	~
-Config Messag	e: Config	Close

Select a data is the data list. And the TID will automatically be added to the 'select tag (TID)' text box.

Select TID: The system will automatically add the number of selected tags to the "Select Tag (TID)" text box. Input the desired number of tags to operate.

Tag access password: input tag access password, the default is: '00000000'.

Configuring access password: select and input new password.

Configuring kill password: select and input new password.

Configuring EAS: select to configure or cancel EAS bit position configuration.

QT command: QT command can be queried and configured when selected. (Specific models of reader support this command.)

Configuring message: Click the Configure button to configure the operation, results will be shown

Configuring: configure the desired options.

Close: closing the screen.

I/0 trigger the reader configura	tion	X
Read Config: ✓ EFC ✓ TID TID LG(double bytes): ✓ UserData User data Addr: VD LG(double bytes): 0 ♀	Trigger Port: Trigger Type: Antenna: 3# 4	▼ ▼ # #
-Stop Trigger:	Q: O	\$
O Level Falling edge Image: Sead Time 0	◆ *10ms	
Config	Close	

4. Setting Read tag by I/O input trigger (applies to XCRF-807 reader)

TID LG (doule bytes): Enter TID length of the tag to operate.

User data Addr (double bytes): in byte, starting address for the user data area to read (even number).

UD LG (double bytes): enter the length of user memory (even number).

Trigger port: select the trigger port.

Trigger type: Never, falling edge, rising edge.

Antenna: select the number of antenna to operate.

Q: set the Q value when a read operation is performed.

The conditions to terminate read operation:

Level: the level of the input ports used to determine whether to stop a read operation.

Read time: read operation trigger, by a certain time interval delay, stop a read operation.

Config: save the configuration changes to the reader.

Close: close the window.

5.	EPC	matching	configuration	l

6	🖾 Config EPC Match											
	✓ Config EPC Match Cancel EPC Match											
ſ	Binary:											
		1	2	3	4	5	6					
	EPC	00010001	00100011	11001100	10111011	10101010	10011001					
	Mask	11111111	00000000	00000000	00000000	00000000	00000000					
		7	8	9	10	11	12					
	EPC	10001000	01110111	01100110	01010101	01000100	10000101					
	Mask	00000000	00000000	00000000	00000000	00000000	00000000					
	Marrie											
	-nex:-	1 2	34	56	78	9 10	11 12					
	EPC	11 23	cc bb	aa 99	88 77	66 55	44 85					
	Mask	ff 00	00 00	00 00	00 00	00 00	00 00					
ļ					01	к (Close					

Binary Code and hexadecimal digit are supported.

EPC: EPC number data.

Mask code: data to match, 0 indicates un-matched masked code.

Configuring EPC matching: select the text box and edit.

Canceling EPC matching: select and cancel the matching.

OK: confirm or cancel the configuration according to the text box.

Close: closing the screen.

6. Filtering repeatedly acquired tag configuration.



Repeatedly acquired tags filtering by time interval can be configured or canceled.

Configuring repeated tag filtering: select and configure.

Cancel repeated tag filtering: select and configure.

Interval time: input or select the desired interval time.

OK: Configure or cancel configuration.

Close: closing the screen.

7. Setting reader clock



Reader clock can be set in the above screen.

Query: query the reader's current time.

Set: configure the reader's current time. Enter the current time directly in the input box or click the drop-down button to select the time in the input box.

Current time: the current time of PC is displayed if "now" is clicked.

8. VSWR protection (only applies to XCRF-807 reader)

STR Protect		
SWR alarm threshold	.(0. 01V) :	Query Set
SWR value:	176	Onorr
Backward voltage	176 🗢	guery
SWR	0 🗘	

Query (VSWR warning threshold): Query the current standing wave ratio warning threshold

Set: Setting SWR warning threshold

Query (standing wave ratio): forward volatage, backward voltage, and standing wave ratio.



9. Over-temperature protection (only applies to XCRF-807 reader)

Set: The over-temperature warning threshold saved to the reader.

Query (over-temperature warning threshold): Query over-temperature warning threshold.

Query (Motherboard temperature): The current board temperature.

10. Close

Close the screen.

3.5 Function Menu

1. Select and read tags

Select Tag	
-Set Match Data-	
Memory Section:	EPC Memory 💉
Start Bit:	00 🗘 (Hex Number)
Match Length:	00 🗘 (Hex Number)
Data:	
	OK Close

Memory Section: select 'TID Memory', 'EPC Memory' and 'user Memory'

Start Bit: the start position of the memory, in byte.

Match Length: matching per bit.

Memory Section: the section to match.

OK: confirm the configuration.

Close: close the screen.

2. Lock tag data area

Cock/Unlock 1	lag Data 🛛 🔀
Select Tag(TID):	e20060010170772b
Data Section:	All Memory 🗸
Lock Flag:	Lock
Access PWD:	
	OK Close

Select the data is the list. The TID will automatically be added to the 'select tag

(TID)' text box. TIDs can be set by user.

Select tag (TID): input the tag TID.

Data Section: select 'All Memory', 'TID", 'EPC', 'user', 'access password, or 'kill password'.

Lock Flag: select 'lock' or 'unlock'.

Access FWD: input tag access password. The default is: '00000000'.

OK: confirm configuration.

Close: close the screen.

3. Block Permanent Lock

🖾 Block perma lock 🛛 🔀														
Tag ID: e280110520002391														
Lock Area: EPC 💽 Lock type: Block perma lock										~				
Block p	tr:	0	*	Blo	ck r	ange:	[1	*	PWD	:		0000	0000
-Mask:														
	1 2	3	4	5	6	7	8	9	10	11	12	13	14	15
				_										
16 1	7 18	19	20	21	22	23	24	25	26	27	28	29		31
									_			_	<i>(</i>]	
										Lock			CIOS	e

Lock Area: select the block to lock.

Address of start block (BlockPtr) : 16 blocks comprise of a unit. 0x00 indicates that operation starts from block 0, and 0x01 indicates block 16.

Block permanent lock range (BlockRange): range of block permanent locks, from the starting block address (BlockPtr) to (16 * BlockRange-1), the minimum is 1.

Mask (Mask): each one corresponds to a block for permanent lock operation. 1 performing a permanent lock, 0 maintaining the original lock state. BlockPtr Mask corresponds to the highest position, (16 * BlockRange- 1) corresponds to the lowest level.

Lock: to complete lock operation.

Close: close the screen.

4. Activate EAS Alarm

EAS alarm will be activated when specific tags in preset location are identified.

EAS enabled: Start EAS alarm success!

Configuring EAS: See Section 3.4

Alarm setting: 1. Visual alarm; 2. Audio alarm.

Disabling EAS: click"

5. Kill tag

[©] Kill Iag	
EPC Code: 8003168008	307036004c32ea
Tag Kill PWD:	
	OK Close

Select the data in the list. The EPC will automatically be added to the 'EPC number 'text box.

EPC Code: input the tag EPC.

Tag Kill PWD: input the tag access password. The default is: '00000000'.

OK: Confirm the configuration.

Close: close the screen.

6. Querying the XCRF-800 Series reader parameters.



Save: save the information in the external file.

OK: Close the screen

6	I/O Ctrl						
	-I/O Operation:						
	GPI1:		GPI4:				
	GPI2:		GPI3:				
	GP01 :	×					
	GP02:	*					
	GP03 :	*					
	GP04:	~					
					C	Query	Set
	-GPI Signal:						
	I						
							~
	Trigger:	Never			~	Set	Clear

7. IO control (GPI signal monitoring applies to XCRF-807 reader)

Query: query info of I/O port.

Set: set the level of output port: high level or low level.

Set (GPI signal change monitoring): Monitoring GPI signal changes.

Trigger (GPI signal change monitoring):

Select the condition to trigger GPI signal change monitoring:

by level change

by falling edge

by rising edge

not to be triggered by level change

Clear (GPI signal change monitoring): Clear GPI signal change monitoring information.

8. Beep

A warning tone gives off during operation when it is enabled. For example: a beep tone gives off when read tag is performed.

4 Troubleshooting

1 Serial Port Connection Failure

Check whether the COM port of the reader is connected with the corresponding port. The serial link baud rate of computer and reader must be identical with that of reader. Whether the serial port cable is correctly connected. Disconnection or loose connection may disable the instructions from the computer to the Reader;

2 Network Port Connection Failure

The default IP address is 192.168.0.210. The connection between the Reader and PC can be established if the PC's IP address and Reader's IP address are in the same network, segment (e.g. 192.168.0.XXX), or of connected networks, The Reader IP can be set by using Demo software in a computer with RS-232 serial port if the IP address is missing.

3 USB Port Connection Failure

Check whether the PC has identified such USB Device. If identification is failed, please install USB driver by referring to Section 3.2.

Check whether the USB cable is correctly connected, as disconnection or loose connection may disable the instructions from the computer to the Reader.

4 Unable to Read Tags

Check the serial port cable, USB cable or network cable is correctly connected. Disconnection or loose connection may disable the instructions from the computer to the Reader.

Check whether the antenna's SMA connector is tight, and whether the tag is damaged.

Whether the Antenna number on the main interface is correctly selected and whether it is identical with port number of external antenna.

Whether the 'Number of Tags to be Read' is correctly set. (It shall be approximate to the number of the tags within the antenna's coverage)

5 How to operate readers remotely?

Reader is equivalent to a network terminal. Demo software can be connected with IP address port (For connecting XCRF-800 Series reader see IP connection of 3.2; for IP address settings, see 3.4 in reader parameter settings; for connecting XCRF-500 Series reader, see IP Settings of 4.2; IP address settings, see 4.4 IP settings; reader port number is fixed at 7086); the reader can be operated when connection is established .

6 Must IP address range be reserved for reader?

Every reader needs an IP. IP address of reader can be set, ensuring that there is not |IP address conflict between reader and other network devices. Reader does not automatically check the IP conflict.

7 How to cancel configuration parameters operation, such as: access password, kill password, and EAS?

For setting access password and kill password, see 4.3.9 and 4.3.10. Access password and kill password will be valid when Locking tag (4.3.11) is completed. For EAS configuration settings see 4.3.13, 4.3.14 and 6.1.14. Only one tag will set off alarm when EAS function. In other words, EAS is designed to set off on the alarm of the EAS tag with EAS.

8 How to set the EPC matching?

For additional information, contact your Invengo representative.

Appendix

The CD-ROM contains setup installer, USB driver, API (including Invengo. ConfigFileClass.dll, Invengo.Order.dll, Invengo.XCRFAPI.dll, Invengo. XCRFReader.dll, log4net.dll, FreqType.xml, language folder) and so on.

API interface function is the interface platform for the reader and background software which provides help for system integrators and end users. For additional information on API interface function, please refer to .NET API Technical Reference Manual.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different

from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.



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