After entering PIN code, click Next.

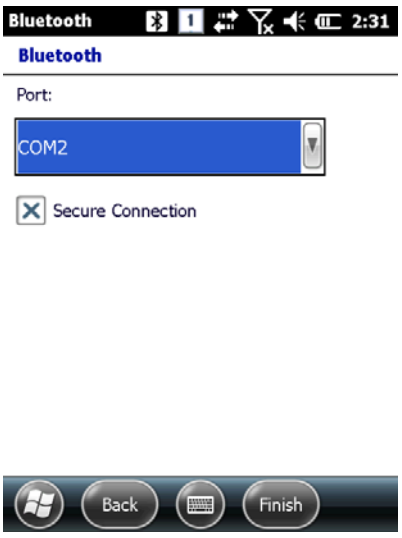
*[illegible]rinter i

Select Serial Port

Select SPP-R200.

Select SPP-R200 from the list.

Select New Outgoing Port from COM Ports tab.



Select COM 2 and click Finish.
After the pairing, Data transfer/reception is possible via COM2

*** If the device information is not displayed correctly, please try Add New Devices again.**

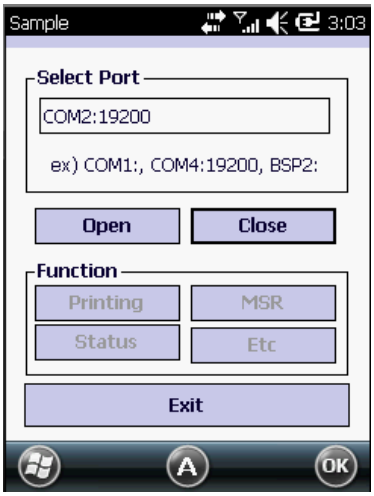
*** PIN code used in pairing can be mutually set on devices.**

*** After the normal pairing, S/W, SDK etc. provided from Bluetooth manufacturer can be used for further Bluetooth services.**

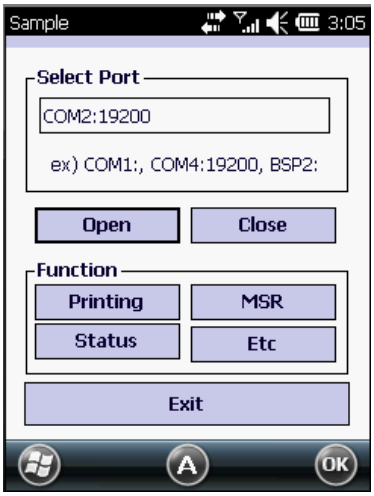
3.3 Bixolon SPP-R200 Printer Demo

SPP-R2000 of Bixolon's leading mobile printer is used for Bluetooth Print demonstration. Application listed on the homepage was used for the test.
****The SDK and programs from 2011/08/05 was used for the demonstration test and it may be different from the ones that are presently listed on Bixolon homage.**

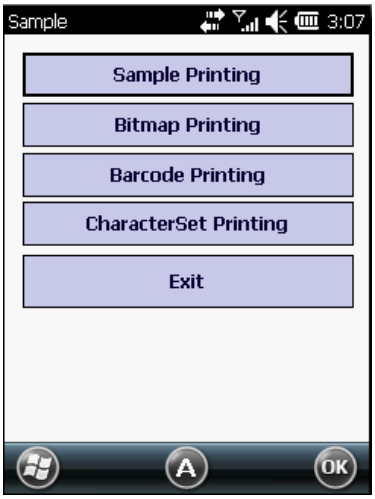
1. **Go to Bixolon website (www.bixolon.com) for "SPP-R200 Windows SDK", and unzip the file onto the hard drive.**
2. **Turn on Bluetooth Power.**
3. **Run "Bluetooth Device Properties" from Control Panel.**
4. **Turn on SPP-R200.**
5. **Set SPP-R200 printer into Bluetooth mode (Refer to SPP-R200 User Guide for the details.)**
6. **Click Scan Device to search for the devices nearby that can be paired.**
7. **Try pairing with SPP-R200 when searched on the list. PIN code is "0000" if the setting is in default.**
8. **If the pairing is successful, message that device is connected via COM2 port is shown on the screen (If the pairing has been performed previously, the message may not be shown.)**
9. **In the downloaded SDK from Bixolon website, copy DLL files and execute files from bin\wm6\ folder to Flash Disk folder of AT870N.**
10. **Run Sample.exe from Flash Disk folder of AT870N.**
11. **Since SPR-R200 is allocated in COM2, change COM8 to COM2 and click Open.**
12. **Click on the Printing button and Sample Printing to check if the printing is performed.**



COM8 -> COM2



Select Open and then select Printing

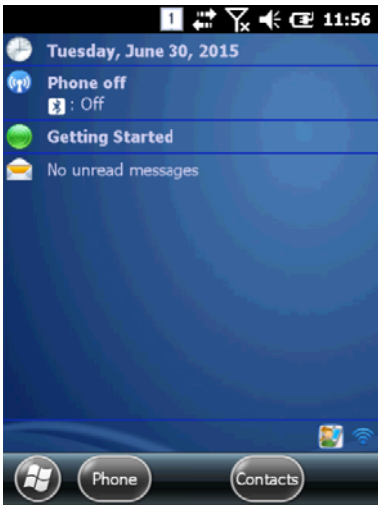


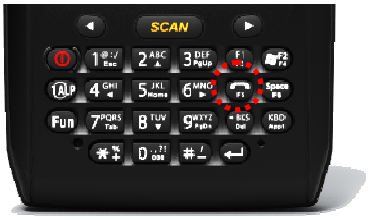
Select Sample Printing

4. Phone

4.1 Turn on the phone

1. [Home] -> [Phone]
2. [Start]->[Phone]
3. Press from the keypad.





4.2Making a phone call

Icon	Description
←	Delete the numbers.
단축 다이얼	Speed dial can be used to call the pre-stored number by pressing on according number. (Speed dial can save up to 98 numbers.)
통화 기록	Call History.
통화	Talk enables the calling.

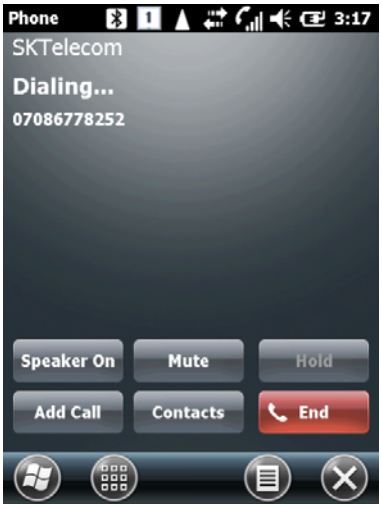
- The speed dial number is pressed for a few seconds for the speed dial calls.

4.3 Receiving calls

Icon	Description
	Receives the incoming calls.
	Rejects the incoming calls.

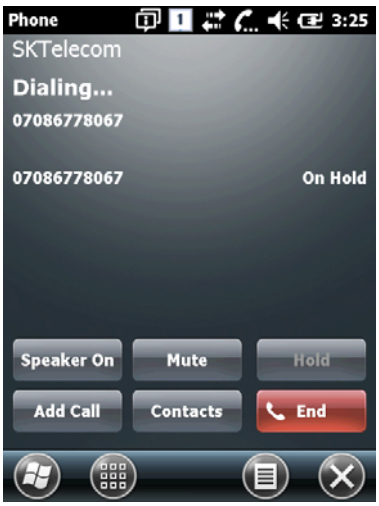
- **Receiving call messages may be displayed differently.**

4.4Hanging up calls



Icon	Description
	Use Speaker phone.
	Use Mute.
	Put the current phone call on hold state.
	After putting the call on hold, add another call.
	Contact can be used for search/add/delete of contacts.
	End calls.

4.5Switching calls

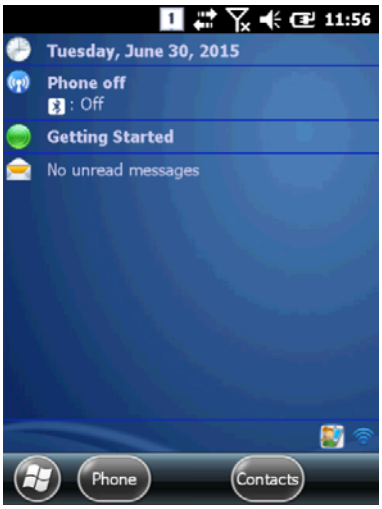


Icon	Description
전환	Put the current call on hold and the call that was on hold back to call state.

5. Contacts

5.1Contacts

1. [Home] -> [Contacts]
2. [Start]->[Contacts]

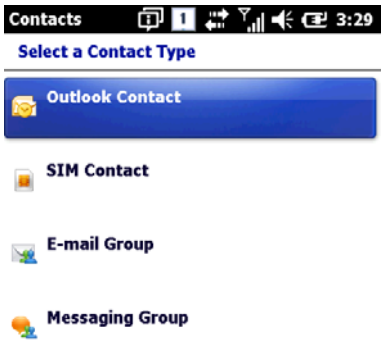


5.2 Search for Contacts

Enter a name for searching.

5.3 Adding New Contacts

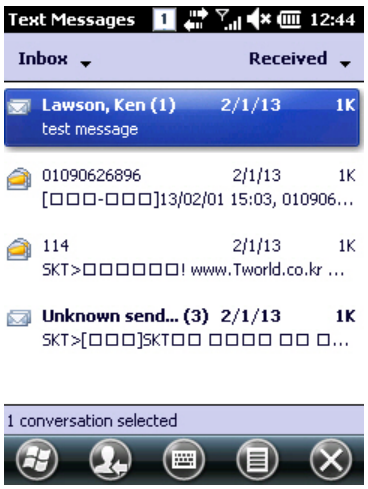
Click on the button to add new contacts.



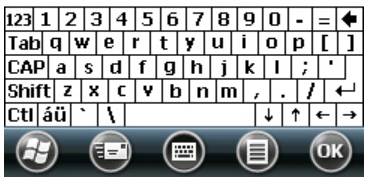
Select a contact type.

6. Text Message

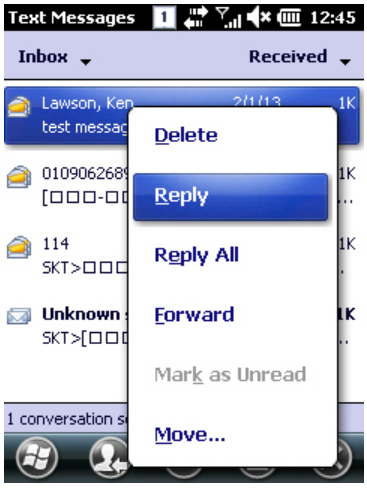
6.4 Replying to the Text Message



Click on the message from the Inbox



Enter the messages and click on the button to send.



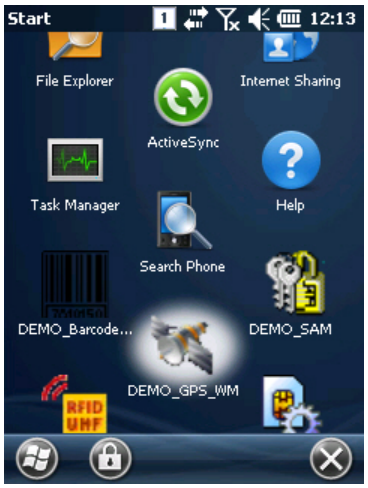
Click on the Reply.

7. GPS Module

GPS Module can be selected as an option in AT870N, and GPS Module is built-in at the top of the handheld.

GPS program port: GPD1
GPS hardware port: COM6, 9600

7.1GPS Demo Program



Run application
- [Start Button] -> [DEMO_GPS_WM]

Main Window
- Start: Start receiving GPS Data
- Stop: Stop receiving GPS Data

Checking on GPS Data Reception:

1. **The reception has to be checked in an open area.**
2. **The reception time for GPS Data can be different depending on the environments. (About 3~10 minutes)**
   After the receiving the GPS data at first, it may take less time for reconnection/reception of GPS data next time.

8. Camera

The handheld can be equipped with 3.0-megapixel camera with functions of adjusting brightness and resolution, capture, video etc.

8.1 Camera

Run application
- [Start Button] -> [Pictures & Videos] -> [Camera]

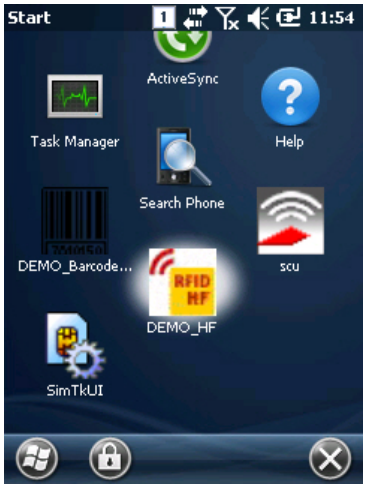
Main Window
- Thumb…: Close the main window and go to Pictures & Videos screen.
- Menu: Menu popup
- To save screen, press “Enter” from the keypad.

9. HF13.56MHz

The handheld can be equipped with HF13.56Mhz module internally. According to ISO standards, it can read tags from 3~8.5cm distance (For Mifare, the distance is 1~3.5cm).

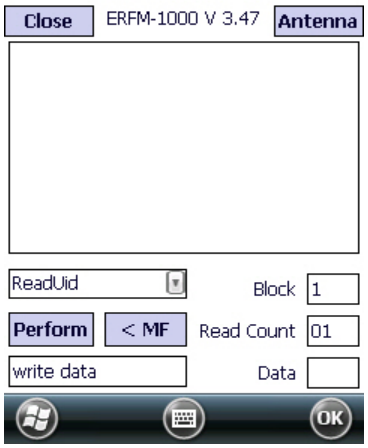
9.1RF13.56 Demo Program

Run application
- [Start Button] -> [DEMO_HF]



Mifare Window

- Open: Open HF device
- Antenna: Stops the antenna signal.
- Perform: Run the selected command from combo box.
- ISO>: Change to ISO-15693 command screen.
- Block: Number of Block be accessed.
- Key Type: Key type of Block to be accessed.
- Key Set: Key set of Block to be accessed.



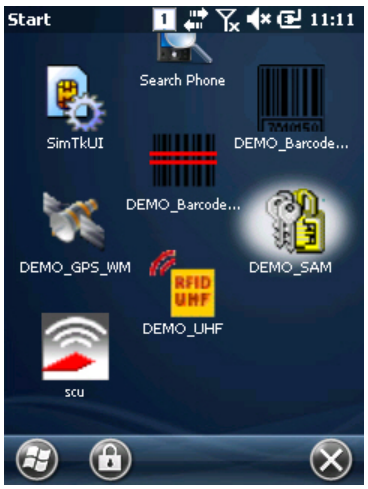
ISO-15693 Window

- <MF: Change to Mifare command screen
- Block: Start number of Block to be accessed.
- Read Count: Number of Block to be accessed

10. Smart Card Device

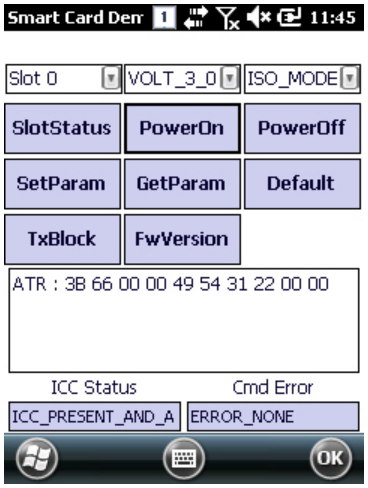
The handheld can communicate with IC Card via ISO-7816.

10.1Smartcard Program



Run application

- [Start Button] -> [DEMO_SAM]



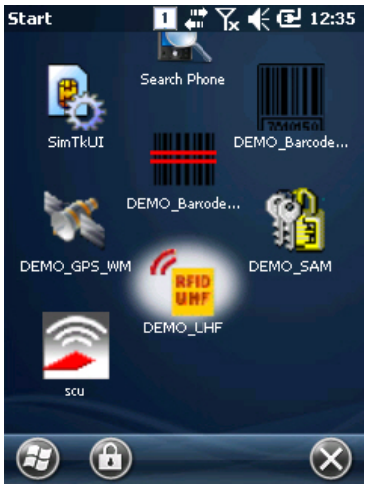
Main Window

- Slot Status: Check the status of the slot.
- PowerOn: Authorize the power of smart card device.
- PowerOff:Unauthorize the power of smart card device.
- SetParam: Set protocol type, clock rate, bit rate etc. of the card device.
- GetParam: Read protocol type, clock rate, bit rate etc. of the card device.
- Default: Set to default settings.
- TxBlock: Transfer APDU Command to the card device.
- FwVersion: Read the firmware version of the card device.

11. UHF 900Mhz

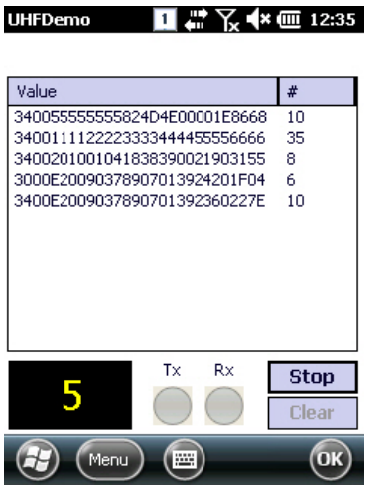
The handheld can be equipped with UHF 900Mhz. It can read or write EPC GEN2 protocol RFID tags. The frequency range is 850 ~ 960Mhz which can be adjusted according to the countries.

11.1 UHF 900Mhz Program



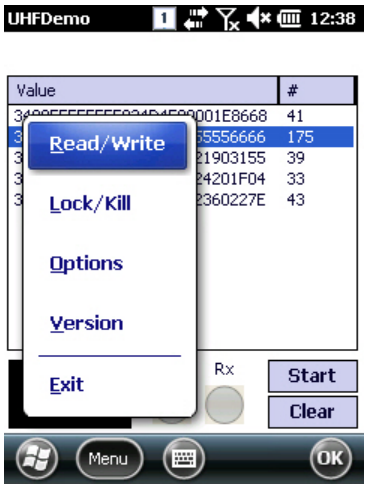
Run application

- [Start Button] -> [DEMO_UHF]



Main Window

- Start: Start the Inventory.
- Clear: Clear all the tag information shown on the screen.
- Menu: Main menu



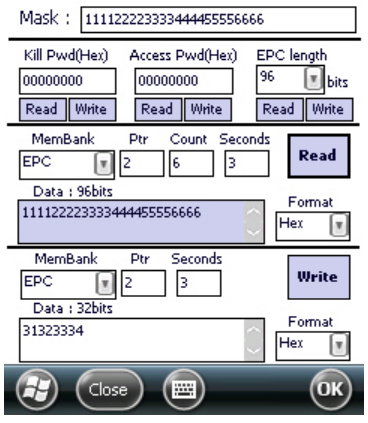
Application option menu

- Read/Write: Perform Read/Write.
- Lock/Kill: Perform Lock/Kill.
- Option: Application option
- Version: Version information

Read/Write Window

- Mask: Selected value from main window is displayed here. It is used as masking pattern when performing Read/Write. Even if there are many tags nearby, only tags that are set as masking pattern can be read or written.
- Kill Pwd, Access Pwd: Read/Write tag's Kill password, access password.
- EPC length: Read/Write tag's EPC length. Even if 128 bit sized tags are used, if the EPC length is set to 96 bit, then the Inventory is only performed on 96 bit. Please refer to EPC Class1 Gen2 specification details.
- Read/Write: Read/Write on selected Memory Bank.
- MemBank: Target memory bank of Read/Write.
- Ptr: Start of Memory bank's offset
- Seconds: Time taken in seconds for Read/Write.

- Format: format the data to be Read/Write.



Lock/Kill Window

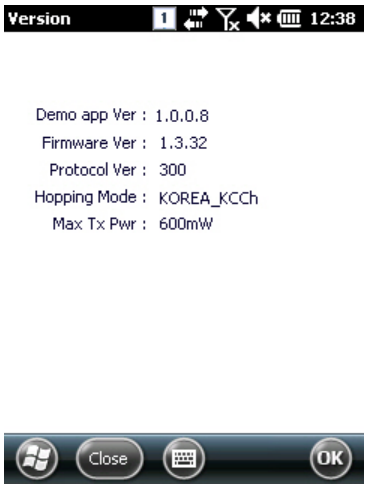
- Mask: Selected value from main window is displayed here. It is used as masking pattern when performing Lock/Kill. Even if there are many tags nearby, only tags that are set as masking pattern can be lock/kill.
- Kill Pwd, Access Pwd: Read/Write tag's Kill password, access password.
- EPC length: Read/Write tag's EPC length.

Even if 128 bit sized tags are used, if the EPC length is set to 96 bit, then the Inventory is only performed on 96 bit.
Please refer to EPC Class1 Gen2 specification details.

- Do Lock: Perform on Lock as it is set in the checkboxes.
- Kill: Kill tags. Once the Kill tag is performed it cannot be restored to its original state.

Options Window

- Session: Change Session that is used in Tag operation
- Target: Change Target that is used in Tag operation
- Q: Change Q that is used in Tag operation
- LBT Ch State/Time: Change LBT option that is used in Europe, Japan frequencies (Not available)
- Power: Change Tx Power level of the reader.



Version Window

- Demo app Ver: Demo application version
- Firmware Ver: UHF module firmware version
- Protocol Ver: UHF module library version
- Hopping Mode: UHF module's country version
- Max TxPwr: UHF module's max output

Chapter 5. Appendix

Product Specifications

Physical Characteristics	
Dimension(L*W*H)	76 X 148 X 24.8(30.5) mm
Weight	320g (PDA only, without Battery)
Operating Temp.	-20℃ ~ 60℃
Storage Temp.	-30℃ ~ 70℃
Humidity	95% Non-condensing
Drop	1.5m Drop to concrete
Performance Characteristics	
Processor	Marvell PXA320 806MHz
Operating System	Windows CE 5.0
Memory	512MB RAM / 512MB ROM
Display	3.5" QVGA with Backlight TFT LCD, 240*320 Pixel, 262,144color
	Stylus Touch Screen Interface
Audio	Phone Receiver, Speaker, Ear Jack, Microphone
Standard I/O Port	USB 1.1 Client / USB Host & Serial (RS-232) via gender cable or cradle
Expansion Slot	1 Micro SD slot (SDHC support) 1 SIM slot
Keypad	29 key
Notification	Vibrator and LED, Speaker
Power System	
Battery	Lithium ion 3.7V Above 2,960mAH(Rechargeable) Up to 4,400mAH(Optional)
Back-up Battery	Lithium Polymer 3.7V, 80mAH(Rechargeable)
Power Adapter	Input AC110~240V / Output DC 5V 3A
Network characteristic	
Radio	MODEM 3G (GSM / GPRS / HSDPA / HSPA+)
WLAN	IEEE 802.11 b/g/a compliant
Antenna	Internal LAN & WAN
Data Capture Device	
Scanner	1D Laser, 2D Imager Barcode Scanner
Camera	3.0 Megapixel Auto Focus with Flash
UHF 900MHz tag reader	
Frequency	860MHz- 960Mhz(Adjustable)
Reading Range	0m ~ 7m (differs from each tag)

Writing Range	0m ~ 3m (According to Tag & Environment)
Antenna Gain	2 dbi (Standard)
Speed	62.5 kbps
RF Output	1W EIRP
Protocol	EPC Gen2 ISO 18000 6C ISO 18000 6B(Optional)
Special Function	Anti-collision

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