ZEBEX INDUSTRIES INC.

Handheld Computer

Z-2070 series

(Version 3.0)

User's Manual

ZEBEX INDUSTRIES INC.

www.zebex.com

Editorial Record

Version	Date of edited	Page	Content
Ver2.00	2008/3/2	25~46	Add Using the Zebex Power Pack
Ver2.00	2008/3/2	47~51	Add How to order
Ver3.00	2010/1/25	26~49	Updated Zebex Power Pack Function and Picture.
Ver3.00	2010/1/26	26~28	Add in Section of Using RFID Scanner

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Preface

About This Manual

Thank you for your purchase of the ZEBEX Z-2070 handheld computer. ZEBEX Z-2070 product is at the forefront of handheld computer technology, and this manual will provide the necessary information on the many and varied options available to you.

The Z-2070 product is a compact, ergonomic, modular and durable handheld computer. It is designed for easy upgrade with an integrated WiFi wireless communication, 1D barcode scanner and RFID HF solution. The design is complies with IP54 regulations and ideal for the mobile worker as it simple and easy to use anywhere along a supply chain.

Symbols used in this manual

	A triangular shape indicates you should exercise caution.
	A circle shape indicates something you should not to do.
	A black circle indicates something you must to do.
	A note symbol indicates the information is important and you should observe.

Copyright

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Safety Information

Your safety is of the utmost importance so please observe and follow the following guidelines that allow you to use the scanner in a safe and responsible way.

Laser Safety

The Z-2070 series handheld computer complies with safety standard IEC825-1(1993) for a Class 2 laser product. It also complies with U.S.21CFR1040 as applicable to a Class II laser product. Avoid staring at direct laser light as the laser beam may hurt your eyes.

LASER BEAM

Never look directly into the laser beam. Doing so can cause eye damage.

Safety Operation

WARNING

Disassembly and Modification

Never try to disassemble or modify the device in any way. All servicing should be carried out be qualified Zebex personnel or Zebex- approved engineers.

Interior Parts and Components

Never touch interior high voltage parts or components. Doing so creates the danger of electrical shock.

Drop and Knock the Device

Be careful when using the device; do not drop or knock the device as irreversible damage to the unit may occur.

Extreme temperature

Do not operate the device under extreme temperature.

Battery and Charger

The use of third-party battery or charger may either damage the device or shorten the life of the device.

CAUTION

Dropping and Damage

Should the drop the device and damage it, immediately turn off the power and contact your original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.

Abnormal Conditions

Should the device become hot or start to emit smoke or an original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.

Foreign Objects

Should any foreign matter ever get into the device, immediately turn off the power and contact your original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.

Moisture

Keep the device away from vases, planters, cups, glasses and other containers of liquid. Also keep it away from metal. Water and metal getting into the device creates the danger of fire and electrical shock.

Federal Communication Commission (FCC) Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a FCC Class B digital device, pursuant to part 15B 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 the 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.

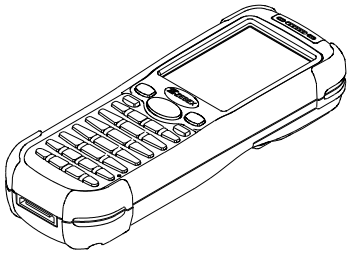
Operation is subject to the following two conditions: This device may not cause interference;
This device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

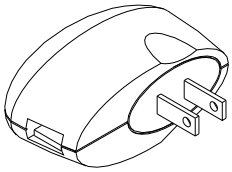
Unpacking

Package Contents



Z-2070 series

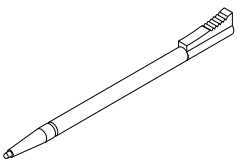
Mobile Data Terminal



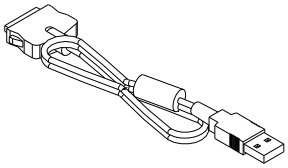
u

Travel charger

selection Type: North America/Japan/ Taiwan/Europe

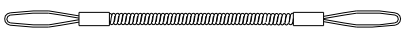


Stylus Pen

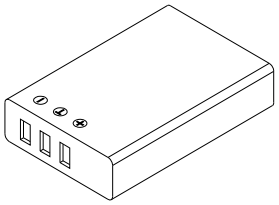


USB cable

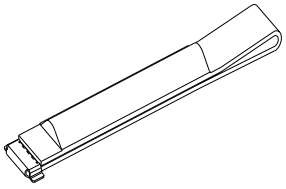
(Terminal connect to PC USB port)



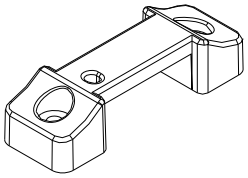
Sling (for stylus Pen)



Battery Pack



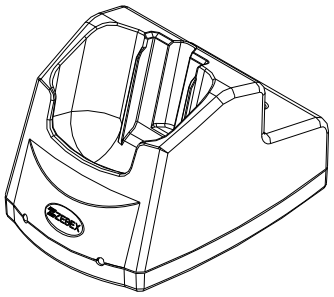
Hand Strip



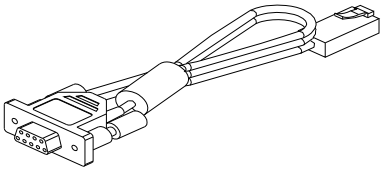
Hand strip Holder

Optional Parts

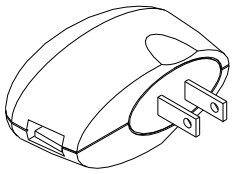
Cradle package



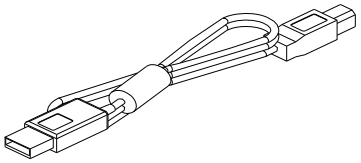
Docking Cradle



RS232 Cable
(Connect from cradle tp PC)

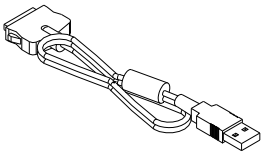


Travel charger

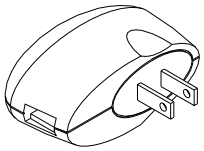


USB cable
(From Cradle to PC USB port)

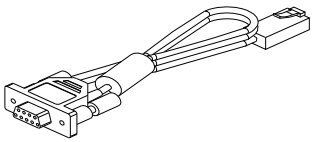
Purchaseable accessories



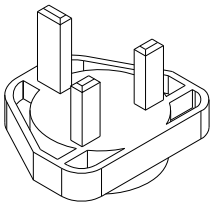
USB Cable
(Terminal connect to PC USB port)



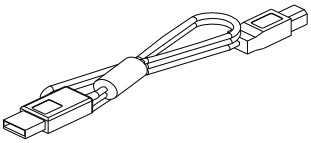
Travel charger



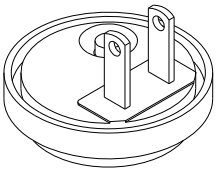
RS232 Cable



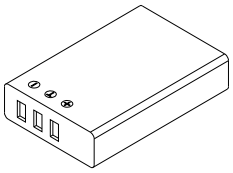
Britain Plug head



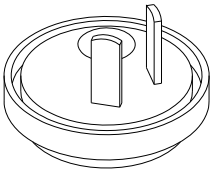
USB cable
(From Cradle to PC USB port)



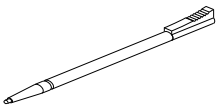
U.S. Plug head



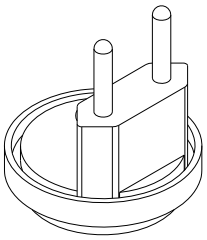
Main Battery



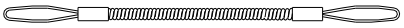
Australia Plug head



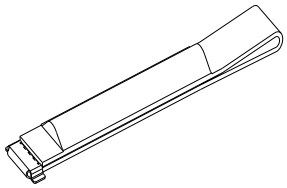
Stylus Pen



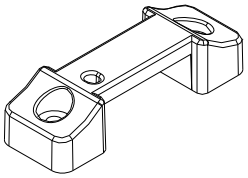
Europe Plug head



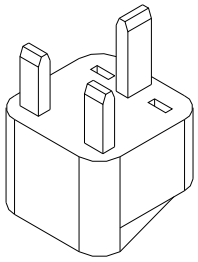
Sling (for stylus Pen)



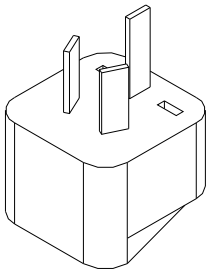
Hand Strip



Hand strip Holder

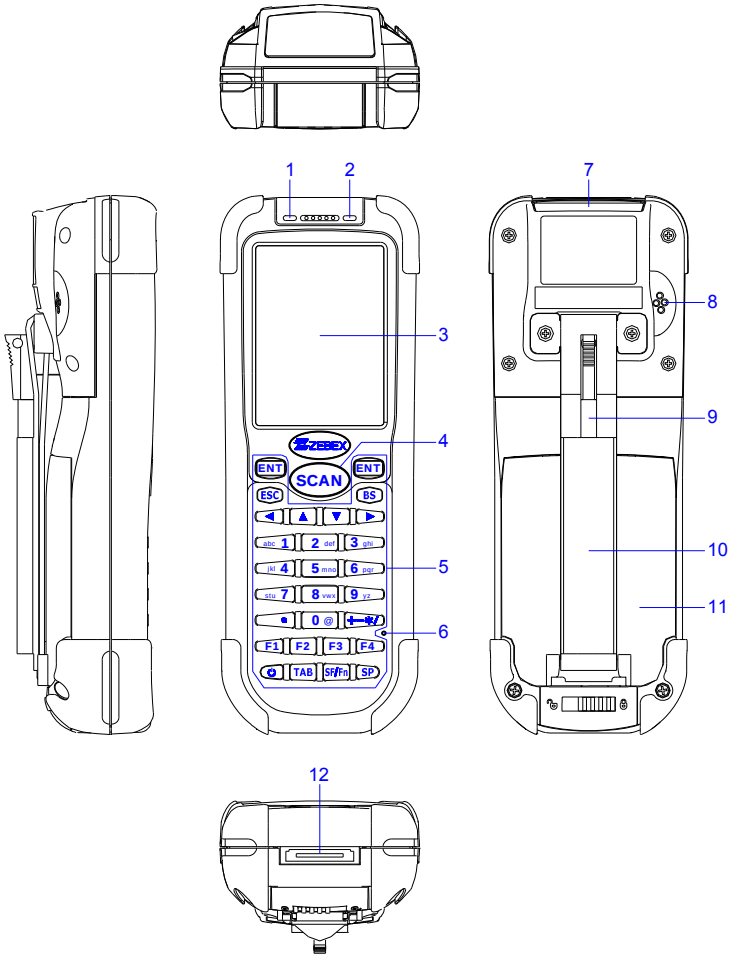


Britain Adapter Head

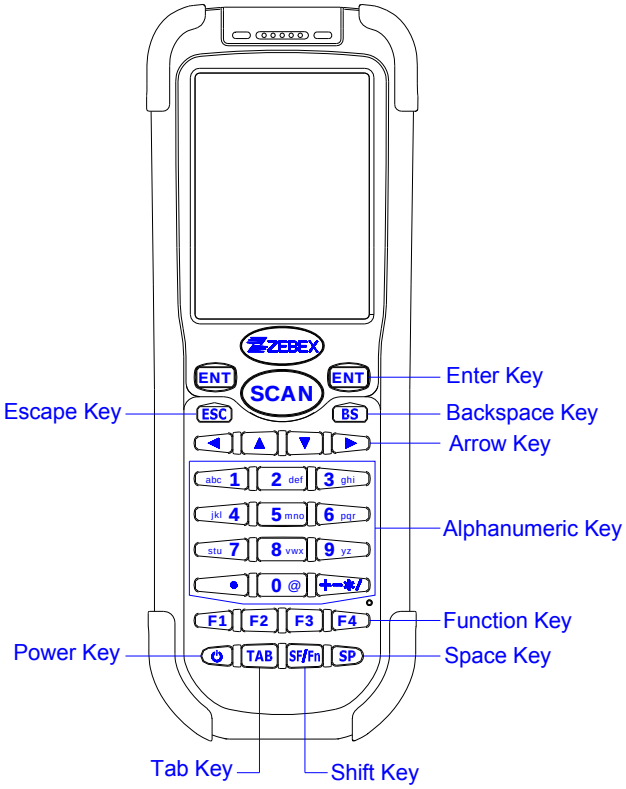


Australia Adapter Head

General Guide



1	LED indicator (Left)	Indicates the status of read bar code : Green for successful read.
2	LED indicator (Right)	Indicates the status of battery charge : Red for battery just on charging and Green for full.
3	LCD screen	Display various data when a program is being run.
4	Scan button	The trigger of Barcode reading.
5	Keypad	A total of 29 keys are provided to the power and other function keys.
6	Reset switch (inside the hole)	Use reset needle (take off the other side of stylus pen cover) to press the RESET switch located inside the hole.
7	Scan windows	Emits a laser for bar code reading.
8	Buzzer	Outputs operation confirmation tones.
9	Stylus pen	For touch screen operation and needle for press RESET switch.
10	Hand strip	Protects the Handheld Terminal to drop.
11	Battery	Main battery
12	Communication port	Communication with PC or charge by USB port



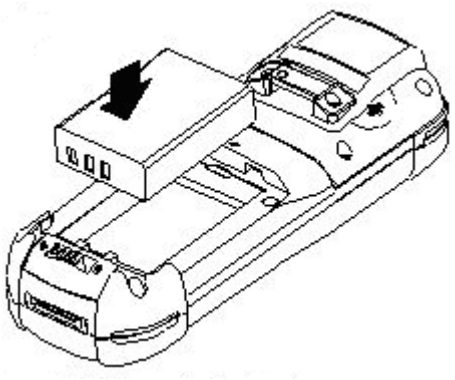
Using the Keypad

ENT	Enter key	Press to confirm entries or commands.
BS	Backspace key	Press to move cursor and deletes the previous character each time.
Arrow	Arrow keys	Press these to move around the screen.
0-9	Alphanumeric keypad	Press to enter numerical or alphabetical data.
F1-F4	Function keys	Press to access function keys 1-4.
SP	Space key	Press to add a space character.
SF/Fn	Shift key	The key is used in combination with other keys to type special characters or perform other function keys. 1. Press after SF/Fn key and press Up key to turn the input method into upper alphabetical. 2. Press after SF/Fn key and press Down key to turn the input method into lower alphabetical. 3. Press after SF/Fn key and press Left or Right key to turn the input method into numerical. 4. Press after SF/Fn key and press F1-F4 key to perform F5 - F8 key.
TAB	Tab key	Press to add a tab indention.
	Power	1. Press to turn the power on. 2. Press more then 3 seconds for turn the terminal power off and go into the suspend mode.
ESC	Escape key	Press to perform a cancel action.

Getting Started

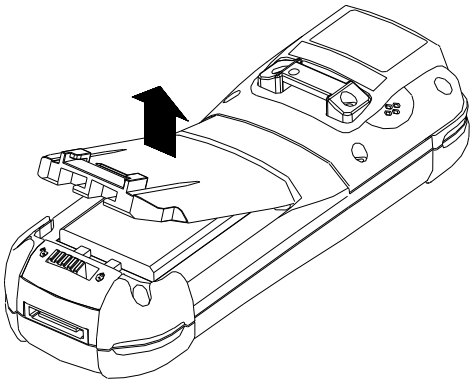
Inserting the Battery

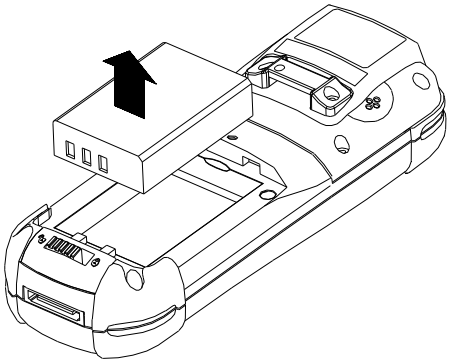
Insert the battery pack as shown and watch the battery direction..



Remove the Battery

Push the side lock to pick up the battery pack.



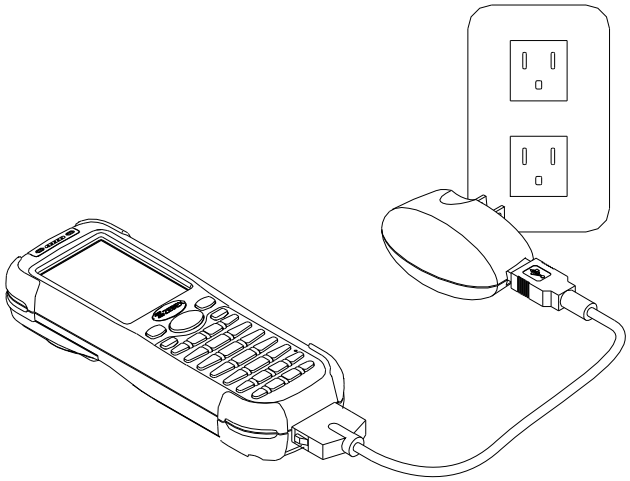


Charging the Battery

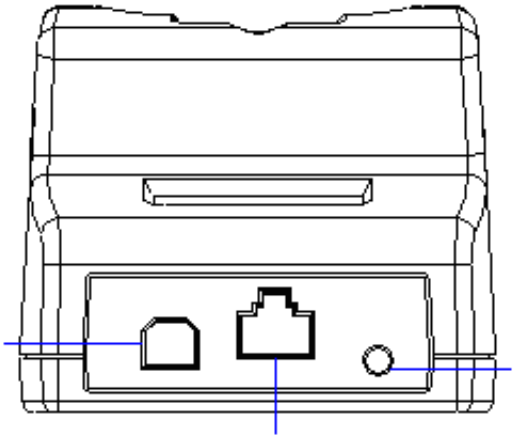
The Li-ion rechargeable battery can be charged while inserted in the device itself or independently via the recharging slot at the back of the cradle.

Charging by cable

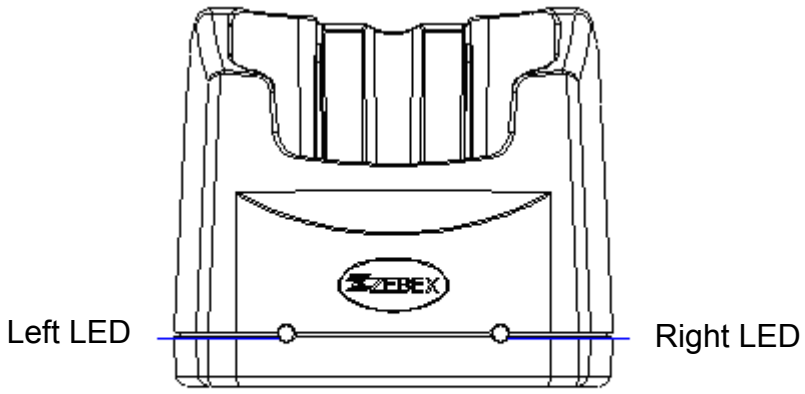
Connect the charging cable and USB AC adaptor as shown.



Charging by cradle



Cradle - rear view

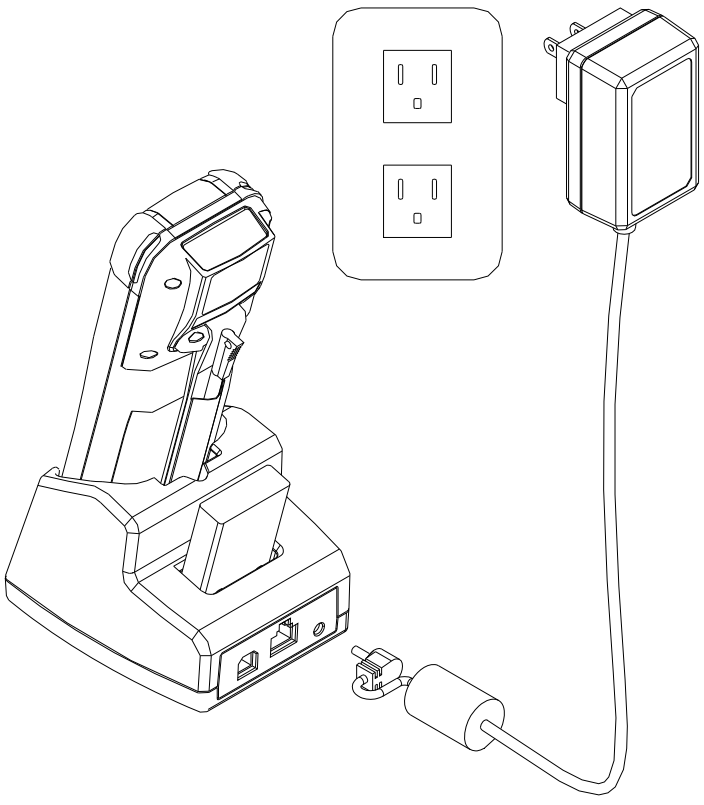


Cradle-front view

Cradle LEDs

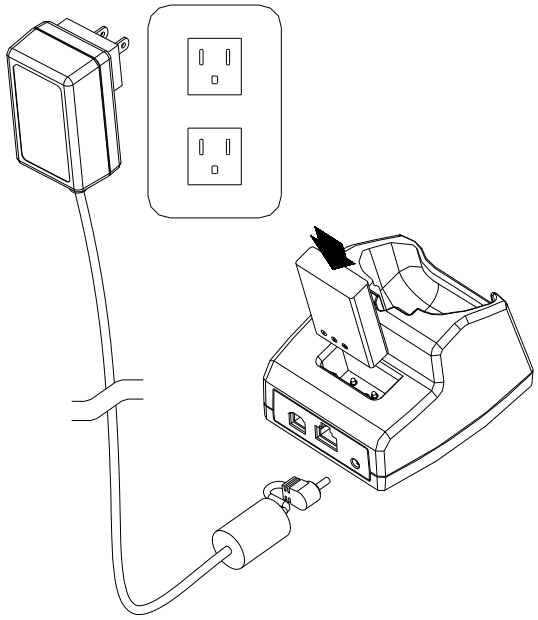
Left LED - The LED lit when a battery is inserted into the rear battery slot of the cradle for recharge. It remains lit until the charge is complete.

Right LED - The LED lit when the cradle is connected to AC power.



Charging the battery separately in the cradle

Insert the battery into the compartment at the rear of the cradle.



Connect the power jack to the cradle and plug AC adapter into the socket.

NOTES

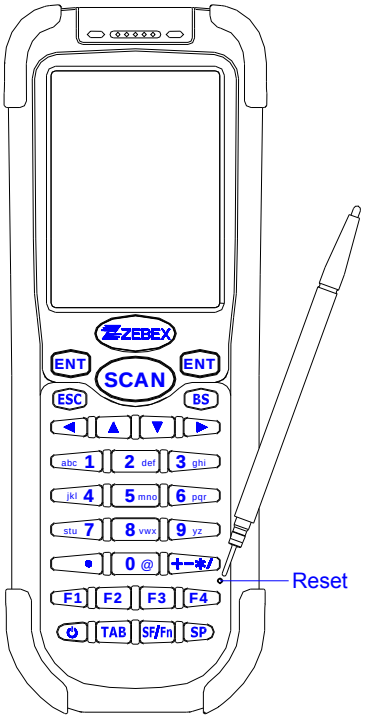
When charging the battery for the first time, charge for at least 12 hours prior to use.

System Reset

Using the Warm reset function

Warm reset function allows you to return the device to the default settings, wile not wiping all data from the memory.

Insert the needle into the reset hole as shown and press down gently, to reset the device.



Using the Cold reset function

Cool reset function allows you to return the device to the factory settings, wile wiping all data from the memory.

Press down and hold the power key and Insert the needle into the reset hole to cool reset the device.

WARNING

Cold reset will erase ALL pre-configured data on the scanner. Check carefully to make sure you have uploaded all important files to your PC before proceeding with the reset.

PC System Requirements

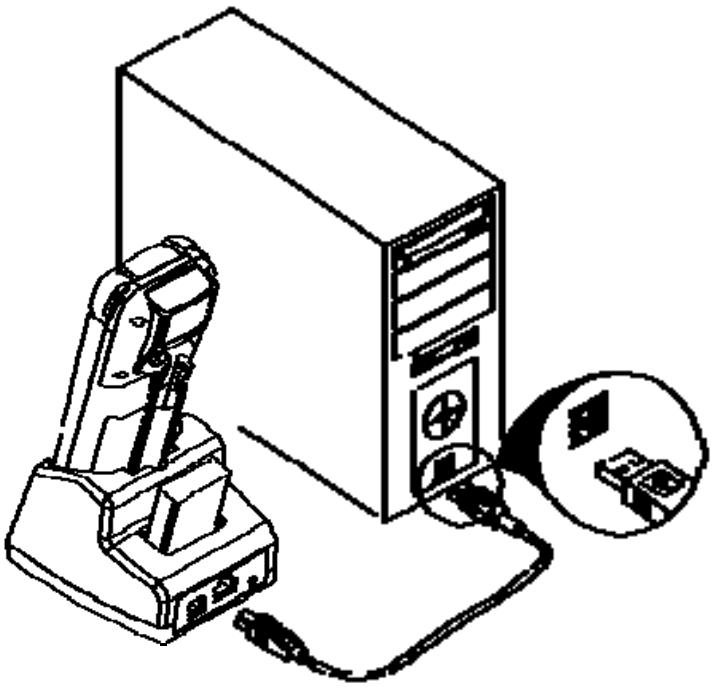
Windows XP Operating System
64 MB RAM
50 MB free HDD space
USB ports communication Interface
WLAN transmitter (optional)
Bluetooth transmitter/receiver (optional)

Connecting To PC

In order to use the software supplied with the Terminal, the mobile data terminal must be connected to a PC.

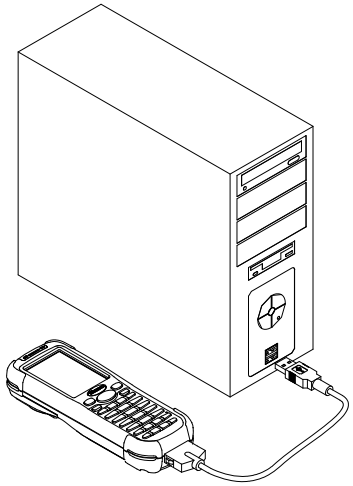
Connecting via USB Cradle

The cradle must also be connected via one of your PC's USB ports. Attach one end of the cable to the USB interface on the cradle and the other to your PC.



Connecting the Z-2070 directly via USB cable

You can connect the Z-2070 directly to your PC, without the need for the cradle, using the Mini USB cable, attaching it to the port on the left hand side of the device.



About The Product

The Z-2070 is a compact, ergonomic and durable portable data terminal. It is designed with an integrated wireless communication and 1D laser barcode scanner, touch screen and 29-keys keypad. The design is ideal for the mobile worker as it simple and easy to use anywhere along a supply chain. It complies with IP54 regulations.

The Z-2070 features a Intel PXA-270 processor (520MHz) with Windows CE.NET version 5.0 operation system. This combination delivers high performance, low power consumption and the diversity of a wireless networking platform. Compared with other systems currently available on the market, Z-2070 is the most cost-effective to offering optimum performance.

Features

Pocket size design
Microsoft Windows CE.NET 5.0 operating system
2.4” TFT color display with touch pane
Jacket module design, easy to change module of 1D/2D scanner or RFID / GPRS at desire
Mini SD I/O Slot for extra storage or Wireless solution with IEEE802.11b/g
Easy system control tools – PowerPack, saving time and cost for software development

Prerequisites

Skills Required

The following skills are required by developers aiming to develop application software for the ZEBEX Z-2070 series.

- Windows programming
- Good knowledge of one or more of the following:
  * Visual C++
  * Visual Basic .NET
  * Visual studio .NET
  * Visual C#
  * Active Server Pages and web programming

The following skills or experiences are also desirable.

- Windows CE devices
- ActiveSync
- Some thing networking experience.

Specifications

Model	Z-2070
System	
CPU	Inter PXA 270 processor (Max. 520MHz)
RAM	64 Mbytes
F-ROM	64 Mbytes
LCD Display	2.4", QVGA 240 X 320 TFT color panel with touch screen
Audio	One mono speaker
Operating System	Microsoft Windows CE.NET 5.0
Power Management	
Main Battery	3.7V 2,200mAH Li-ion rechargeable battery
Backup Battery	One rechargeable backup battery
Battery Life	8 hours (without wireless communication activated)
Scanning Performance	
Scan Engine	Symbol SE-955 1D laser engine
Light Source	650 nm visible Laser Diode
Scan Rate	100 scans per second
Print Contrast	30% @ UPC/EAN 100%
Decoding Capability	
Barcode Symbologies	UPC/ EAN/ JAN, Code 128/EAN 128, Code 39, Code 93, Interleaved 2 of 5, Discrete 2 of 5, Codabar, MSI/Plessey
Card Slots	1 x Mini SD I/O card
Communications / Interfaces	
USB	1.1 Client
RS-232	Programmable up to 115,200 bps
WLAN	802.11b/g (optional)
Bluetooth	Build in Jacket
Jacket Selections	1D Laser scanner , 1D Laser scanner + Bluetooth, GPRS with1D scanner, RFID HF reader
Dimensions	(L) 162 mm x (W) 60.0 mmx (H) 37.3 mm
Weight	Approx. 240 g (battery included)
Environmental	
Operating Temp.	0°C ~ 50°C
Storage Temp	-20°C ~ 60°C
Operating Humidity	10% ~ 70% (non-condensing)
Storage Humidity	5% ~ 70% (non-condensing)
Drop Durability	Withstand 1.5M drop to concrete
Environmental Sealing	IP54 rated sealing
Regulatory Approvals	CE & FCC Part 15B
Cradle	Single slot USB / RS-232 charging cradle with spare battery slot
Software &Development	Microsoft VC 6.0 development environment Supports GUI, database and networking over 1,000 API Emulation software tool for program development and debug

Using Barcode Scanner

Scanning Barcodes

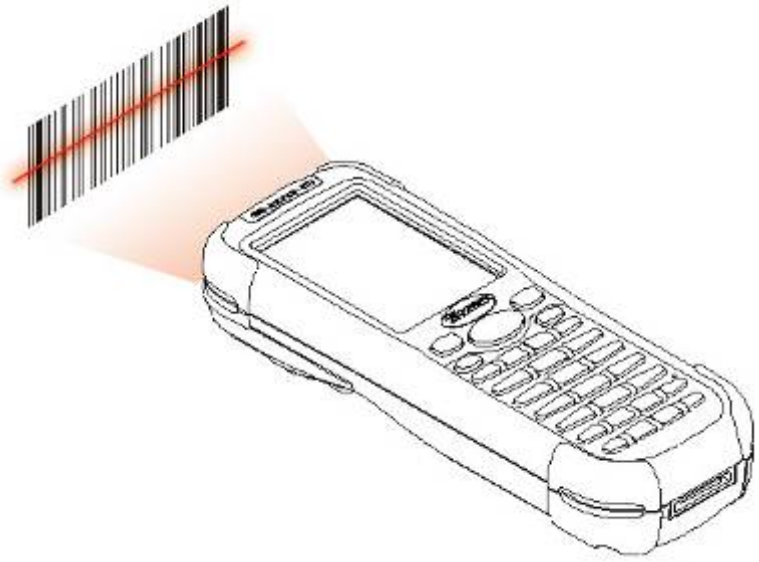
The Z-2070 is a highly versatile tool that can scan a wide range of barcodes but it is imperative that it is used in the correct manner.

To scan a barcode:

1. Hold the Z-2070 horizontally and point it directly at the barcode you wish to scan.

2. Once in the correct position, press the **SCAN** button.

An audible alarm is heard and the barcode digits will appear on the LCD screen if the scan is successful.



Barcode Scanning Position

This device can read from 30 to 180mm distance.

1. Position the laser scanner close to the barcode when scanning small barcodes. And position it is a distance from the barcode when scanning large barcodes
2. The reader can be detected by a red beam.

Band Scanning Position

Make sure that the bars enter the laser beam when scanning large barcodes.

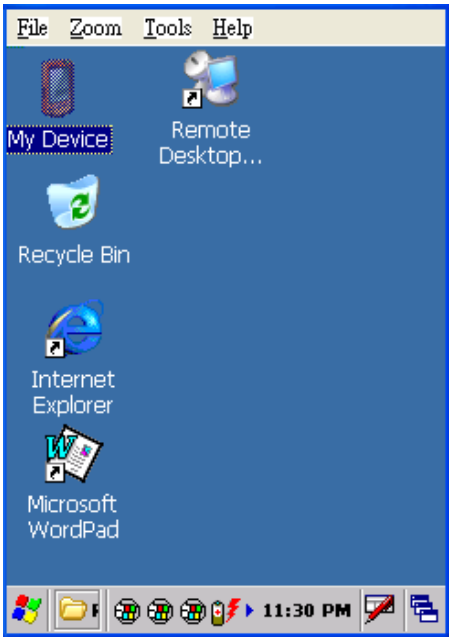
Scanning operations may fail if the laser beam position as below.

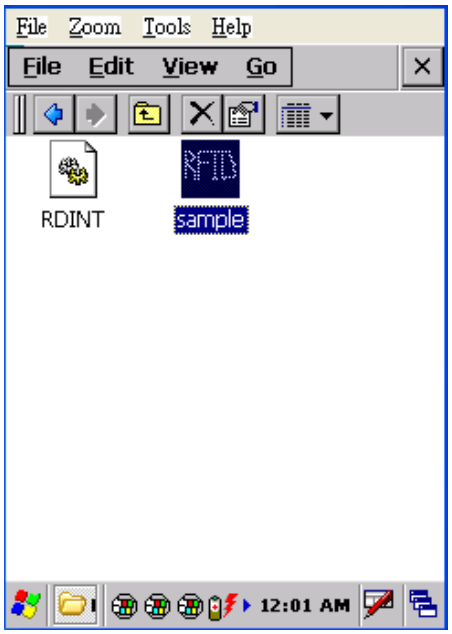
Note: this product scans using laser light. Never look directly into the laser light or shine the laser light into the eyes.

Using RFID Scanner

Scanning RFID

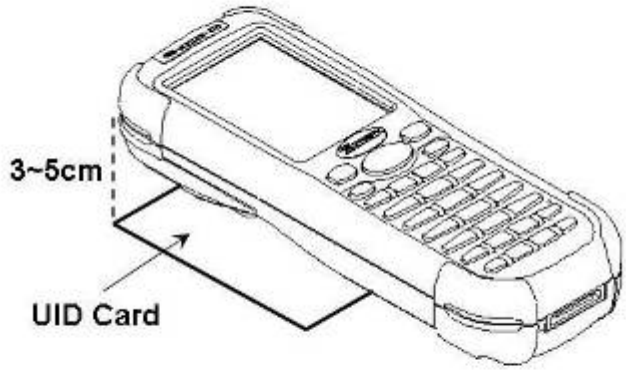
To open Zebex RFID demo program, you can find program located on following path: "My Device\Flash Disk\RFID\RFID_ADJ\".





RFID Scanning Position

RFID scan module was installed in the back of terminals. The devices can read from 30 to 50mm distance from the back-side of terminals.

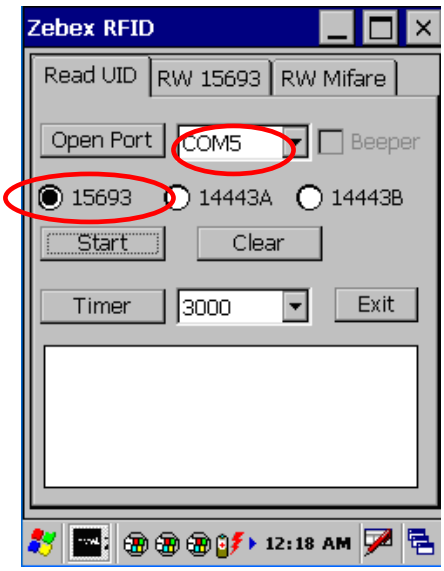


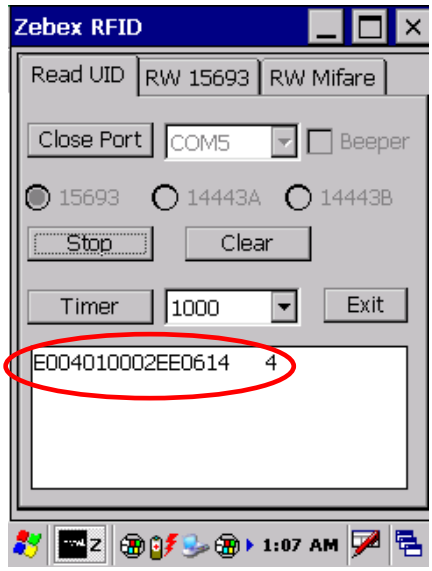
To scan a RFID

After opening Zebex RFID demo program, you will see main menu displayed as below. There are three main functionalities such as “Read UID”, “RW 15693”, and “RW Mifare”. Please follow below steps to read UID.

Reading UID

1) Select COM port to reading UID, default setting was COM5. Then confirm by pressing “ Open Port ” button.
2) Select UID type, then confirm by pressing “ Start ” button. Demo program provide three UID types such as 15693, 14443A, and 14443B.
3) User can also adjust scanning rate by selecting how many msec for scanning once. Then confirm by clicking “ Timer ” button.
4) After scanning UID, it will be shown on column at the bottom of display. Data in column can be clear by pressing “ Clear ” button.
5) COM port can be stop by pressing “ Close Port ” button.
6) If user need to switch to another UID type, UID type by can be cancel by pressing “ Stop ” button. Then user can select another UID type as demand.





RW 15693

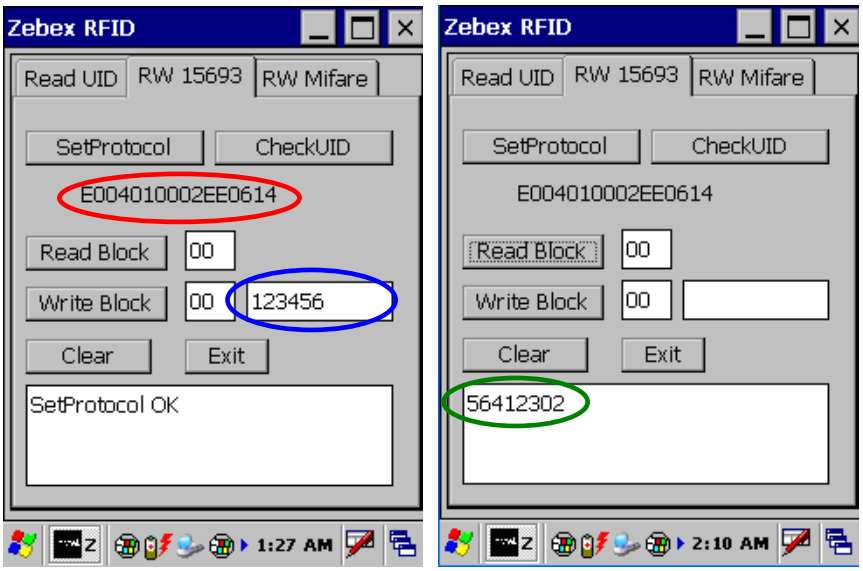
On RW 15693 function window, user can read and write information from RW 15693 UID card:

1) Set up protocol by pressing “ SetProtocol “ button, place UID card within valid range and press “ CheckUID ”button. The UID will display in the red circle of below diagram.
2) To read data from certain Block, first input the location in column next to Read Block. Then confirm by pressing “ Read Block ” button. Read Data will appear in column

showed in green circle of below diagram.

3) To write UID from certain Block, first input the location in column next to ” Write Block ” button, then write the data into the longer column in blue circle. Confirm written data by pressing “ Write Block ” button.

4) Information appear at bottom can be clear by pressing “ Clear ” button.

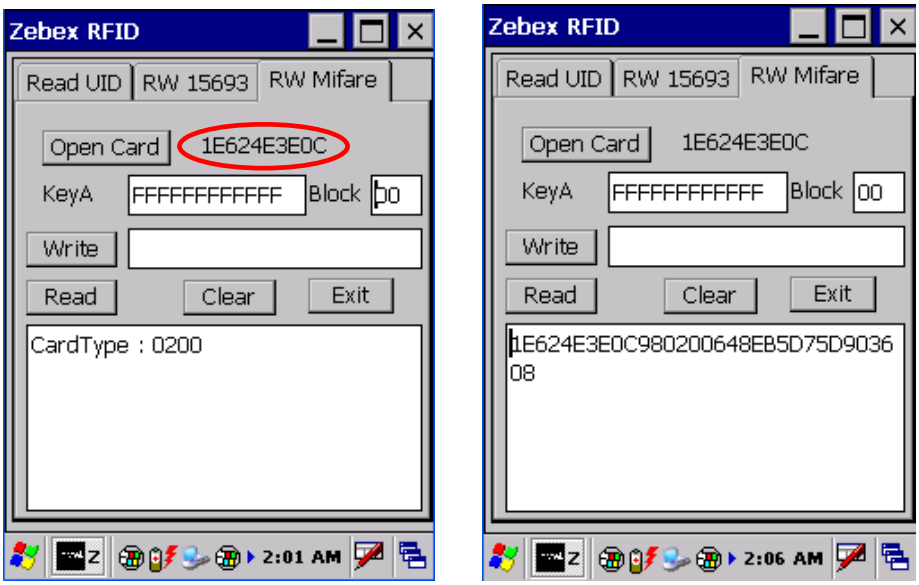


RW Mifare

On RW 15693 function window, user can read and write information from Mifare UID card:

1) Place UID card within valid range, check UID by pressing “ Open Card ” button. UID will display in red circle shown in below diagram.

2) To perform read and write commands, please refer to “**RW 15693”** sections.



Using the Zebex PowerPack

To save your time and effort in developing applications on Z-2070, ZEBEX provides it's owndesign system management tool to called "PowerPack" to let you control it directly.

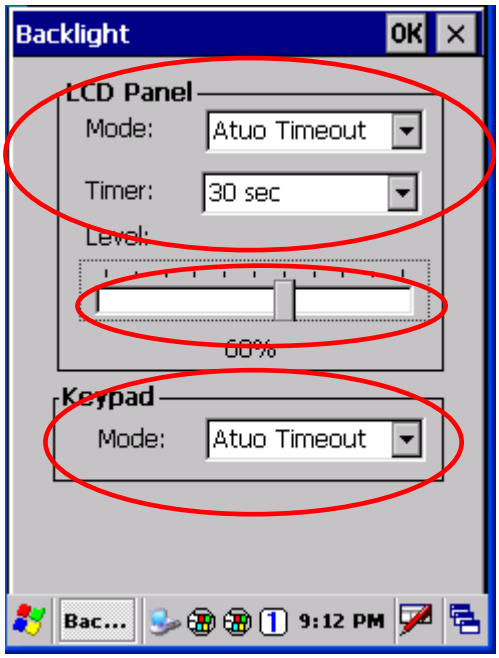
The PowerPack management tools which installs in each of our WinCE product. It is free charge for you. We offer several function for let you control your device without any programming.

Backlight

This application is set up the Backlight of LCD Panel and Key pad. It allows operators to set backlight duration, and also backlight can be set up as On & Off.

The Backlight Setting screen including 3 parts:

1. LCD
2. Keypad
3. Brightness Control Bar

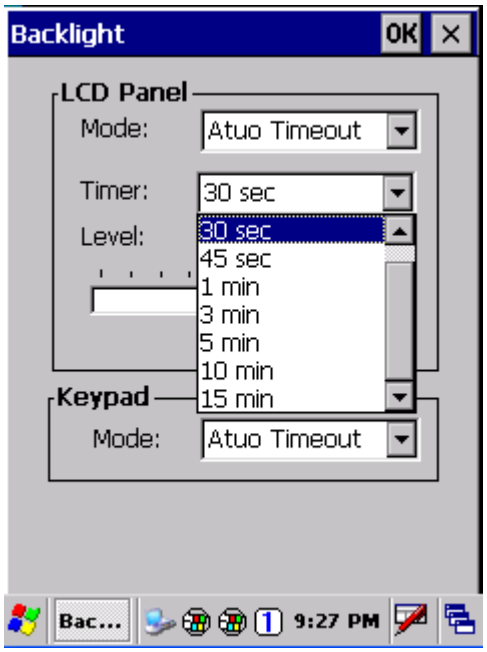


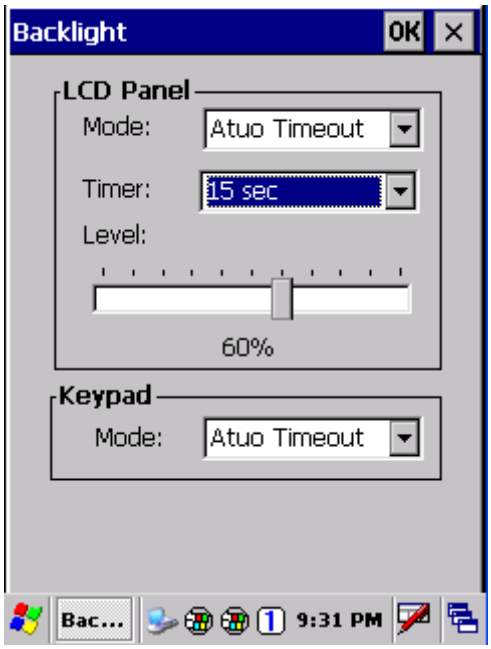
1. **LCD**
   The LCD backlight setting.

   Auto Mode: This function can be set up the LCD backlight to be auto off as Device hasn't been activated for certain interval.
   You can set up the Auto off time from 15 sec to 15 min.

   Always ON: This function can set up the backlight to be always on Until the system into suspend mode.

   Always OFF: This function can set up the backlight to be always off.





2. **Keypad**
   The Keypad Backlight setting.

   Auto Mode: This function can be set up the keypad backlight to be auto off as device hasn't been activated for certain interval.
   The interval of the time for auto off was fixed on 5 seconds.

   Always ON: This function can set up the keypad backlight to be always on until the system into suspend mode.

   Always OFF: This function can set up the backlight to be always off.

3. **Brightness Control Bar**
   The brightness of the backlight can be changed via control bar. Put up to light and put down to dark.

Calculator

This calculator function allows operators to add, subtract, multiply, and divide that simply provide basic logistic function in our daily basis.

The upper zone of the display area displays the memory content, and the lower zone is key pad.

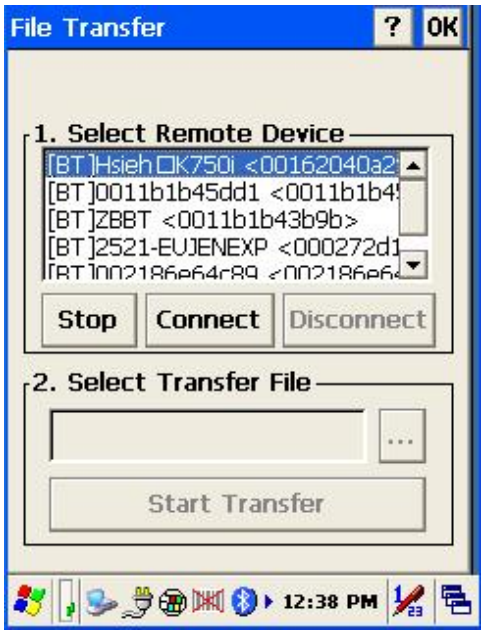
Button description:

MC : Clear buffer of memory.
MR : Got the value of buffer.
MS : Storage the value to buffer.
M+ : Append the value to the buffer.
CE : Clear the display area to “0”, but keep the value in buffer.
C : Clear the display and the buffer of memory.
+/- : Change the value sign form Plus to Minus or Minus to Plus.
0~9 : Numeric key.
/ : Division function.
∗ : Multiplication function.
− : Subtraction function.
+ : Addition function.
. : A decimal point of dot.
= :To be equal to, The amount.

File Transfer

File Transfer is a simple file transferring function tool, the tool can transfer file to another devices via blue tooth. Communication agreement of file transferring was adopted with OBEX agreement which shared with cell phone or Notebook PC. So you can simply use this function to transfer file to cell phone or Notebook PC, or doing file transferring between two terminals.

File Transfer is capable to auto-search devices with Bluetooth communication, so all devices within valid range will be listed in window of **"1. Select Remote Device."**



Function Instructions:

1. Select Remote Device

All devices with Bluetooth Communication functions are listed on the display.

Query	**:**	**For searching usable devices.**
Stop	**:**	**Stop searching.**
Connect	**:**	**For connecting with one device.**
Disconnect	**:**	**For disconnecting with current devices.**

2. Select Transfer File

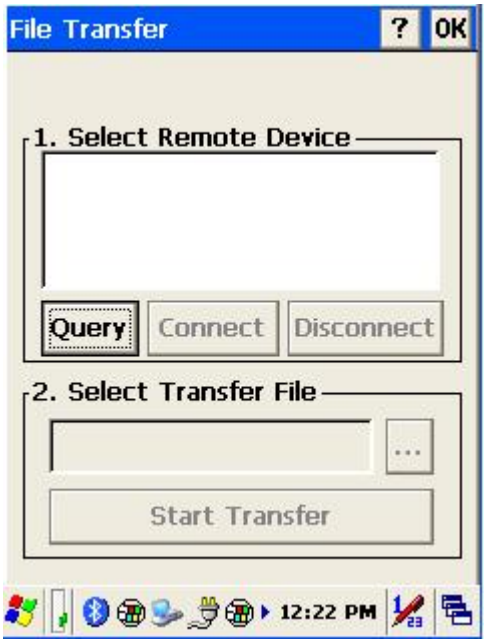
Select file need to be transferred, press ... bottom for selecting file.

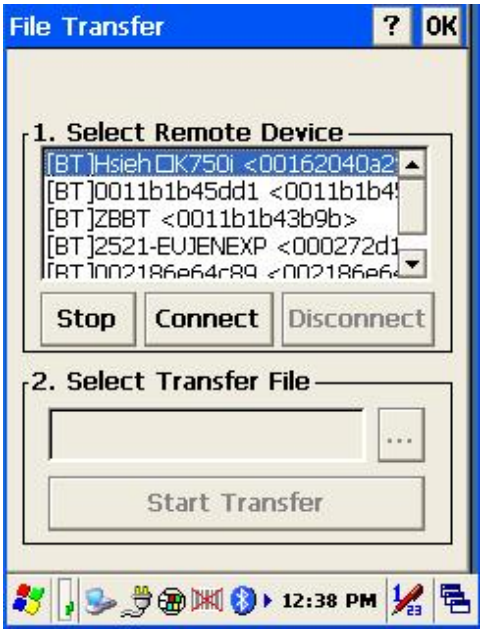
Start Transfer	**:**	**Start transferring file to targeted devices.**

File Transfer Operation

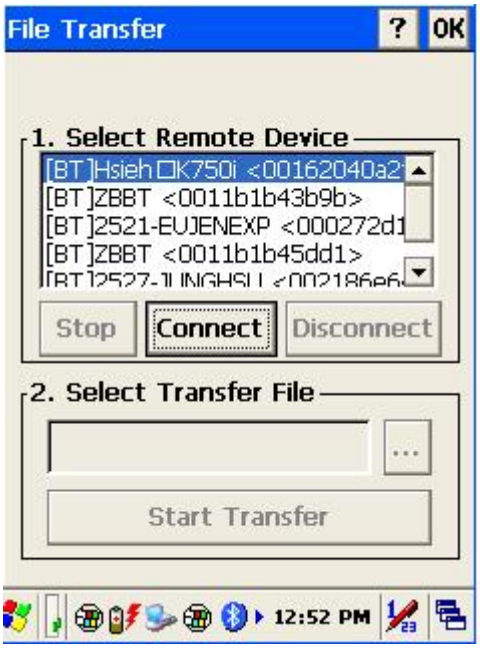
1. **File Transferring by using Bluetooth:**
   Make sure Bluetooth devices was activated, Bluetooth Communication devices can be activated under Switch Function within PowerPack software utilities**.**

   1.1 Select "**Query** " for searching Bluetooth devices, below window will pop up on display.

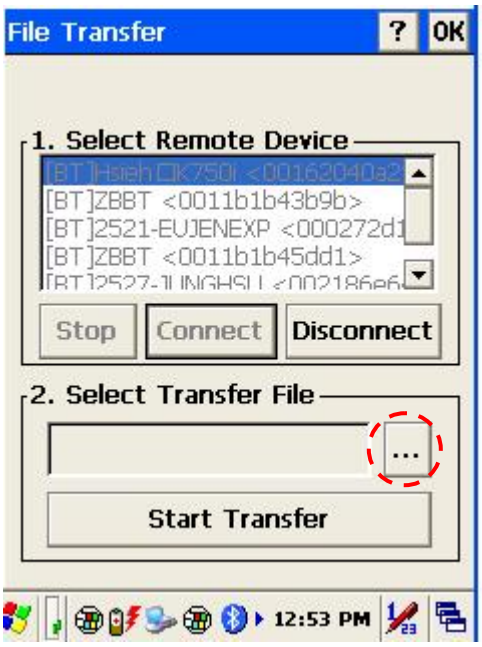




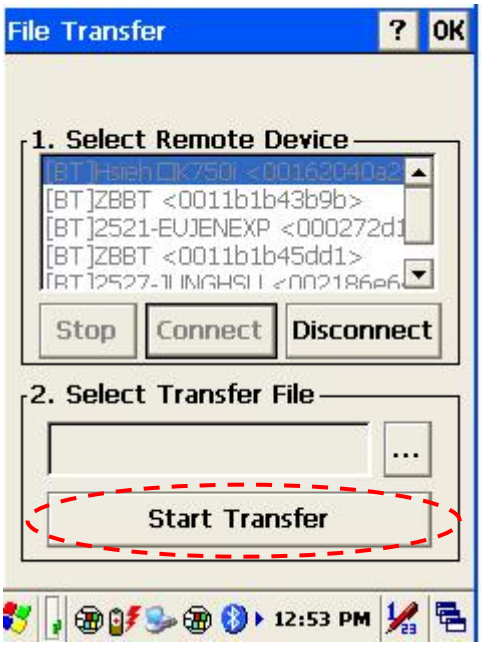
   1.2 Select Bluetooth devices for receiving file, select " **Connect** " for connecting with devices, or select " **Disconnect** " to disconnect with current devices.



1.3 Click " **…** " bottom to select the file need to be transferred, then click " **OK** " bottom to confirm.

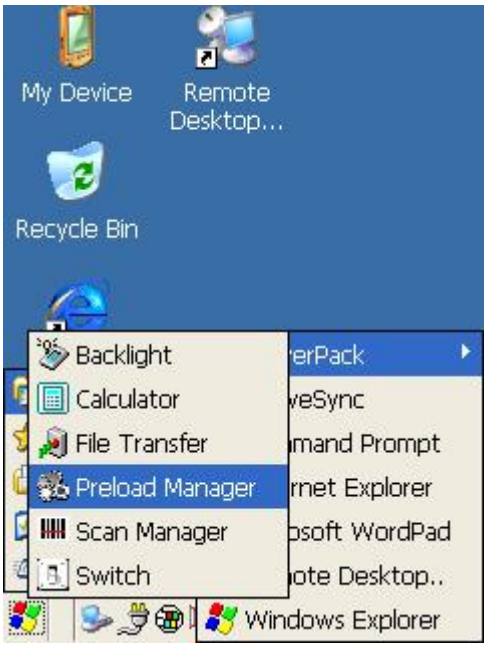


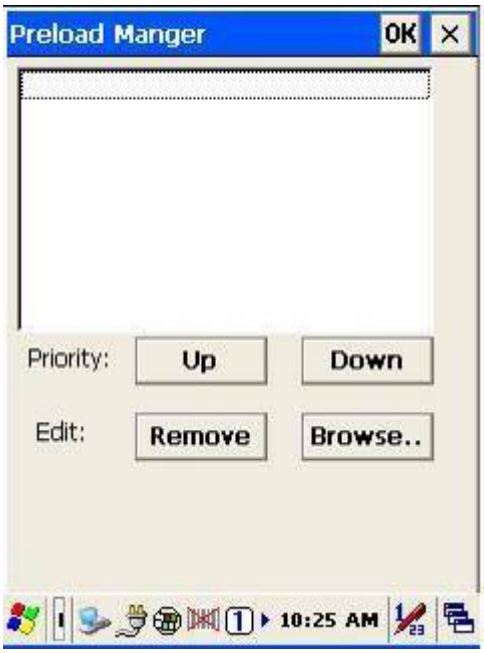
1.4 Select " **Start Transfer** " bottom to start file transferring.



Preload Manager

The Preload Manager is an auto execution program for ZEBEX's WinCE device. You may set programs into the Preload list box and running the program by automatically or manually.





1. Modify Window located on top of display, providing functionalities of Priority, Remove and Browse.
2. Priority : Providing "**UP** "and "**DOWN** " two bottoms for adjusting priority on the lists.
3. Edit : Providing "**Remove** " 與 "**Browse..**" two functionalities，below are instructions:
   Remove：Deleting selected functionalities.
   Browse.：Selecting program for preloading, files can be selected from window by clicking Browse bottoms.

Preload Operation

1. Selected Program:

1.1 By clicking "**Browse..**", Below menu will appear, select preload program by using folder. Programs can be selected more than once.

Confirming file by clicking "**OK**" will get back to Preload Manager main page. Then complete its process.

2. Reset preload priority：

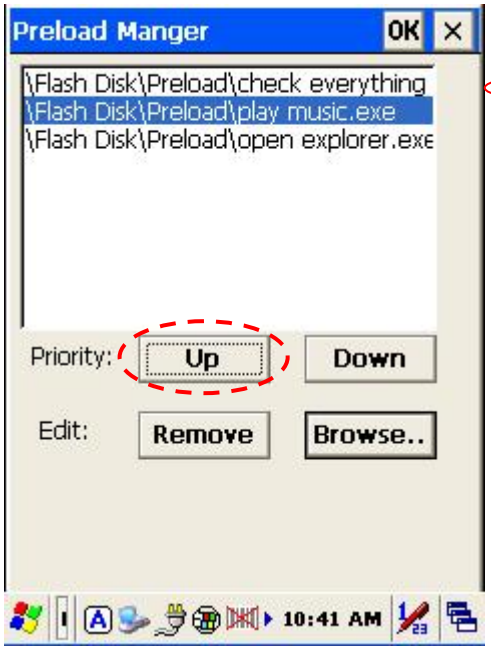
If the preload priority need to be set up as below：

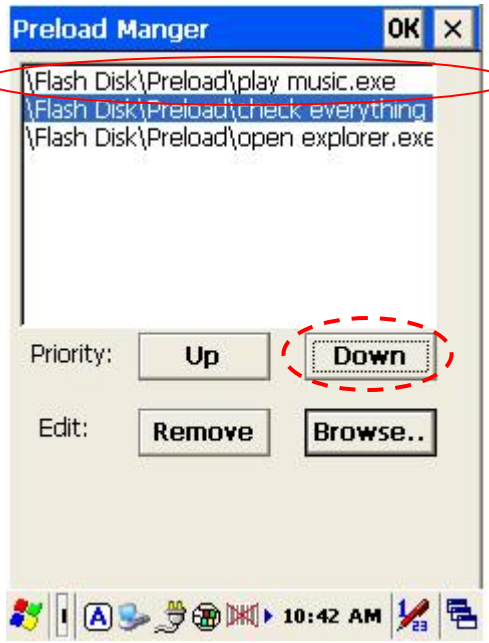
(1)play music -> (2)open explorer -> (3)check everything

Follow steps listed below :

2.1 Select by clicking play music.exe program and click" **Up** " bottom, Therefore, play music.exe will be shifted up.

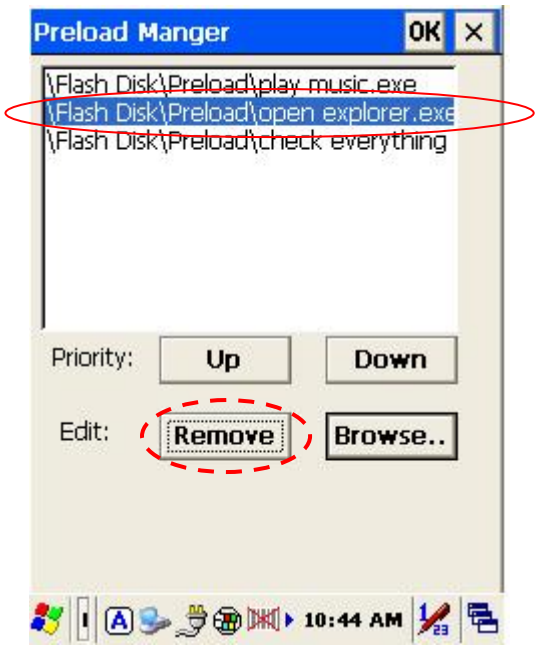
2.2 Then select by clicking check everything program and click "**Down**" bottom. Therefore, check everything program will be shifted down.





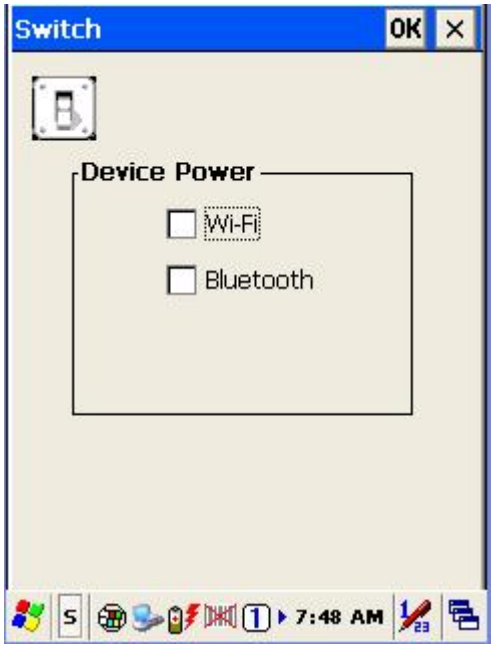
3. Remove a program:

In order to remove “open explorer” program, select by clicking program, then select “Remove” by clicking on bottom to finish command.



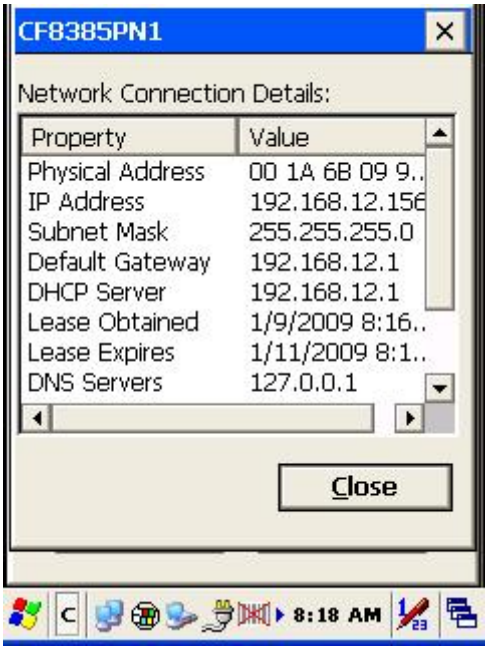
Switch

The WiFi & Bluetooth switch utility. This application provides as a switch function to let you easy turn on or off the function and power for WiFi and Bluetooth interface.



The available wireless network access point will be searching automatically when you check the selection for enable WiFi function. You can select an access point and press “ Connect ” button to connect with that network.

Double-click the “ Add New... ” on the list box will add a new wireless network, or double-click an existed access point on the list box for open the wireless properties for setting. You also can use " ◄ " or " ► " button for display more information for network setting.



TrayScan

The TrayScan program is a barcode reader set up program, it offer you an easy way to enable or disable the barcode scanner, and also offer you to set up each barcode symbolic properties.

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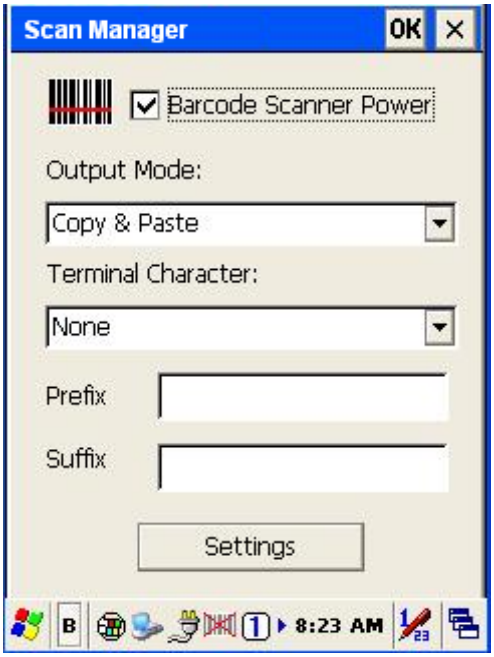
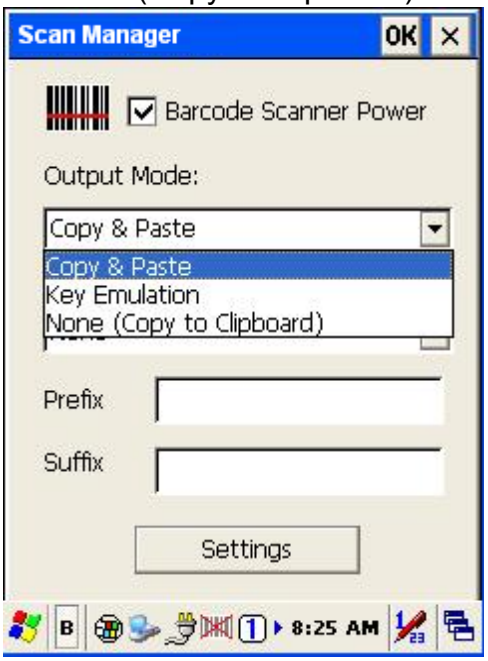


Below are instructions of functions on main page:

1. Output Mode
   Providing three output methods such as Copy & Paste / Key Emulation / None (Copy to Clipboard).



1.1 Copy & Paste

Copy and paste the barcode information into application that need to execute data as input. (ex. WordPad），

1.2 Key Emulation

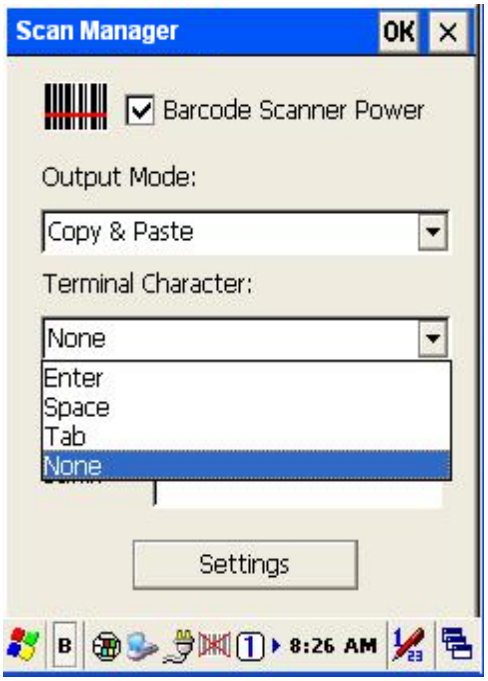
Transfer barcode information via Key Emulation to executed software's edit window. Key Emulation function can also be used for barcode scanning under conditions of Terminal Emulation, Command Promp and some other program without touch panel. Read data will be transferred to application program.

1.3 None(copy to clipboard)

Function provide required barcode information to application program, after this function was activated, scanner will read barcode information and save data into clipboard.

2. Terminal Character

Set the terminator control code with barcode data. We offer "Enter", "Space", "Tab", and "None" for selections. Terminator control code will be sent every time when barcode was read.



3. Suffix

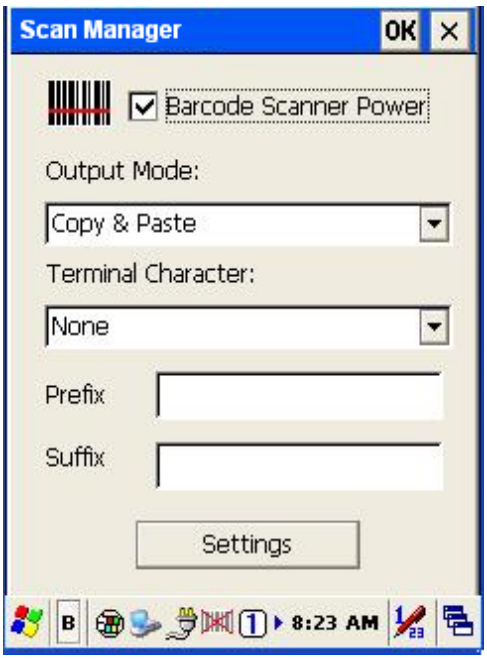
Set the suffix character with barcode data.

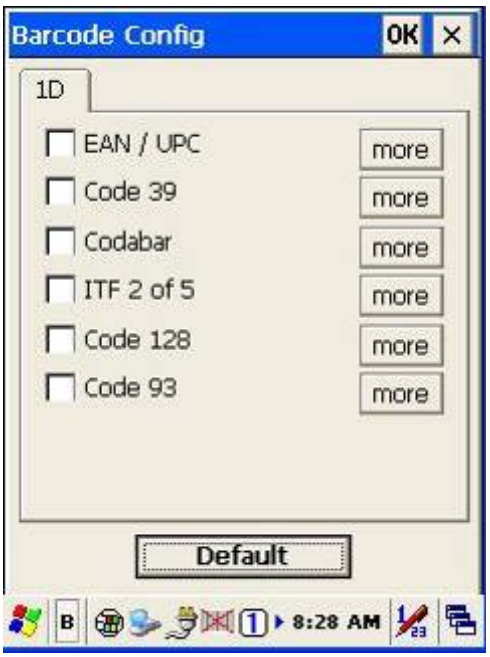
4. Prefix

Set the preamble character with barcode data.

5. Setting

To set the barcode parameter value of each kind of barcode for barcode scanner. Press the" Setting " button in TrayScan application to start the barcode setting.

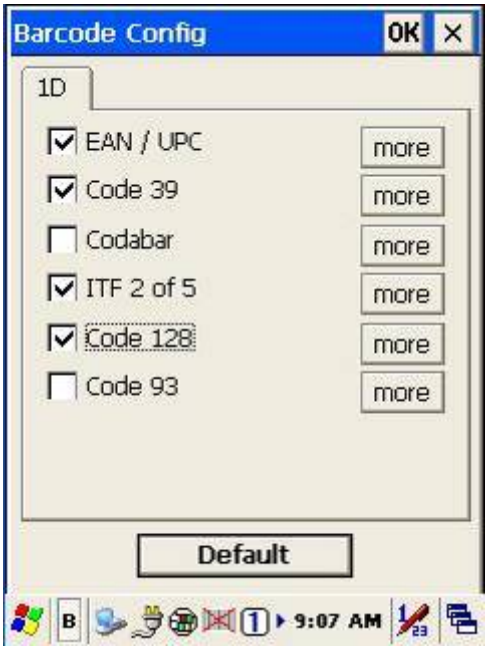




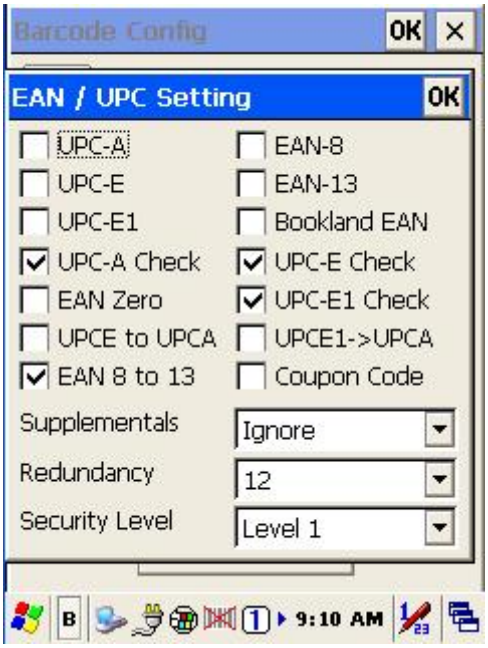
To check the barcode type selection for enable the type of barcode for read.

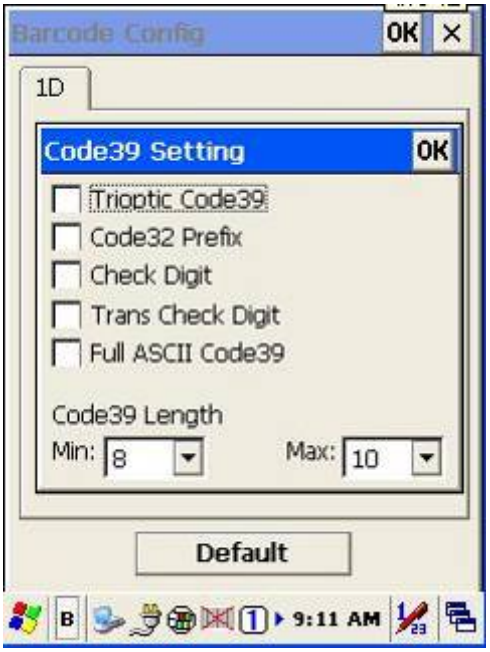
Press "more" button to setting the barcode parameter value of each kind of barcode.

Press "Default "button to use system default value to set up the barcode parameter. The default value was show in below pictures.

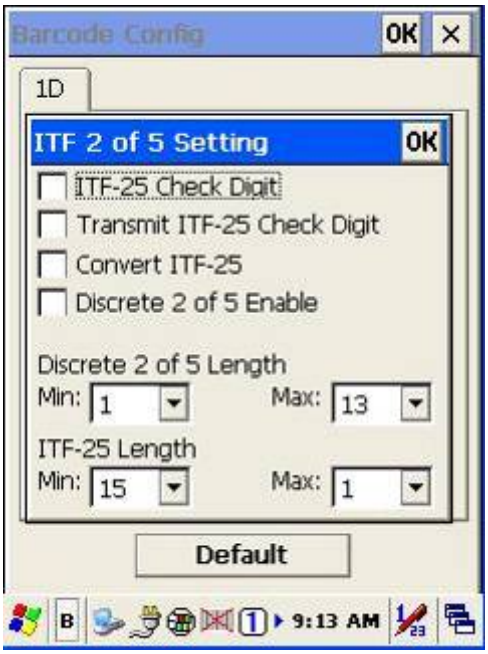


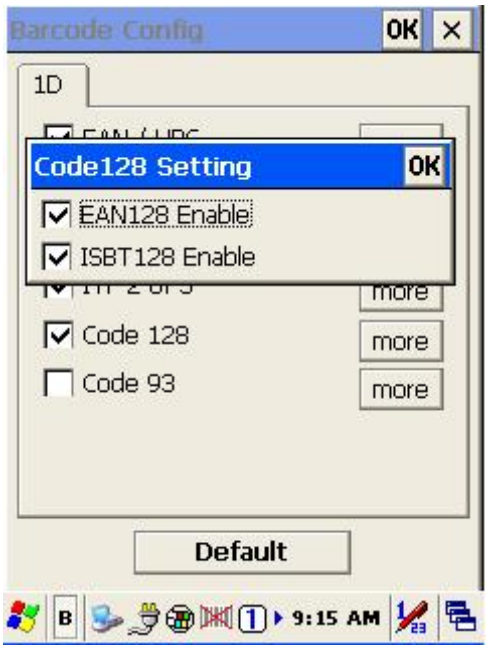
The default values of EAN/UPC code and Code39.





The default values of ITF 2 of 5 code and Code128.



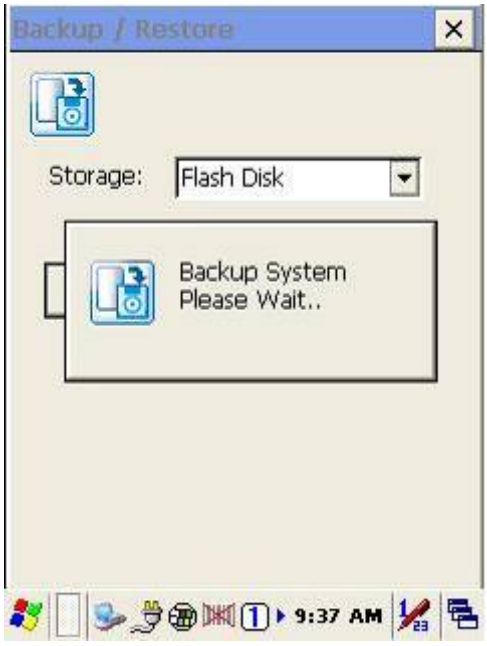


Backup/Restore

You can find this application is located on path “\settings\control Panel\”.

This application provides you an easy way to backup or restore the device setting information into Flash Disk and storage card. Application also provides selection of Flash Disk when there is no storage card. When Mini SD Card was installed into devices, program will auto-search and provides selection of SD Card from menu.

Backup : Select backup data as saved devices, press ” **Backup** ” bottom to proceed backup. Display will restore when backup was finished.

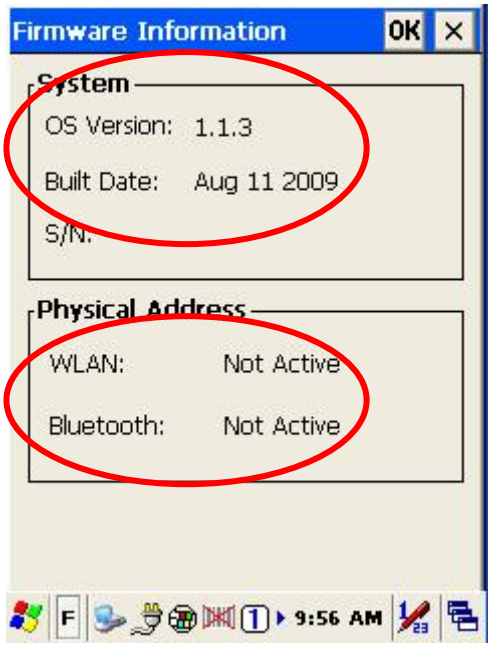


Firmware Information

This application will check and display the version information of the device's operation system and PowerPack utility.

You can find this application is located on path " \settings\control Panel\".

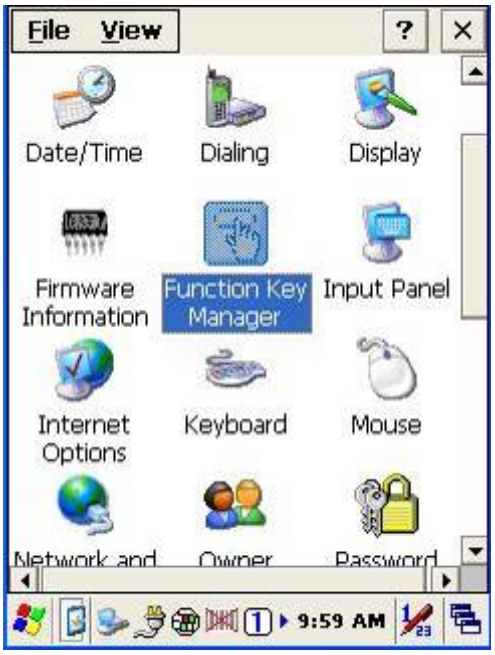
This information is good for identify device firmware version for future update or maintenance.



Function Key Manager

This application utility is provides you an easier way to set up function key for your device. Through using this function key set up utility you will easily and quickly to start the application program like, Window Media Player, Calculator… etc, or your own designed application program, and even the windows system function, like increasing or decreasing the volume or doing the adjustment of brightness on LCD panel.

You can find this application is located on path "\settings\control Panel\".



Program provides eight different function key (F1~F8) for set up, default setting was shown as below:

F1: SIP ON/OFF。

F2: Backlight Manager。

F3: Power Switch。

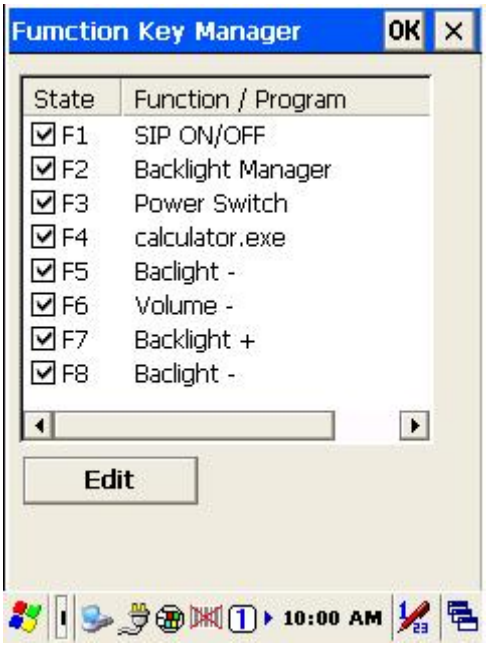
F4: Calculator.exe。

F5: Volume + 。

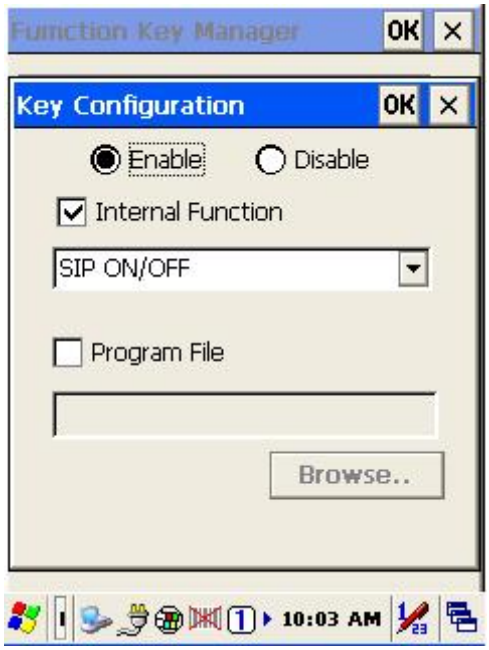
F6: Volume -。

F7: Backlight +。

F8: Backlight -。



Function Key Manager Set Up Instruction:



Enable/ Disable : Enable or Disable Function Key

Provide two set up methods of Internal Function and Program File

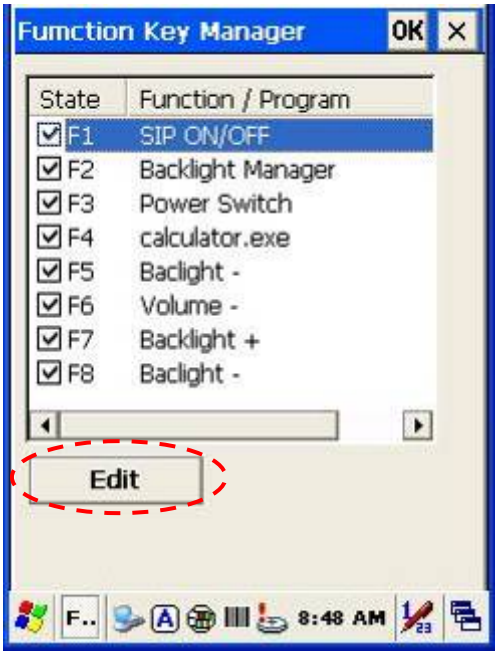
Internal Function : Provide following options,

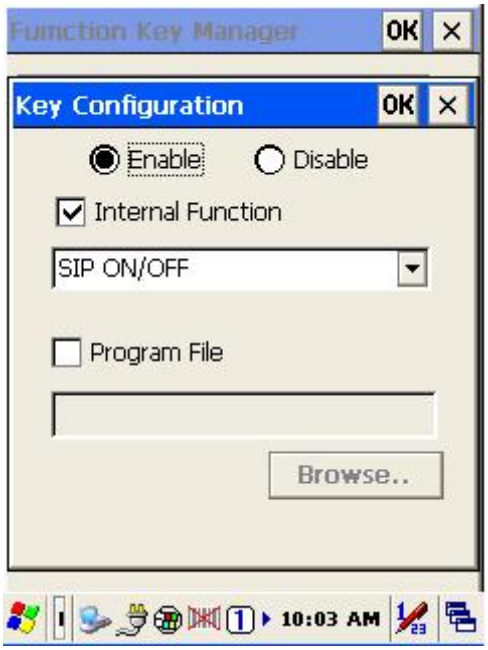
SIP ON/OFF
Backlight Manager
Power Switch
Stylus Calibration
Wi-Fi ON/OFF
Bluetooth ON/OFF
Volume +
Volume –
Backlight +
Backlight –
Cut
Copy
Paste

Program File : Install application program according to demand, this function can be used for setting up auto-execution.

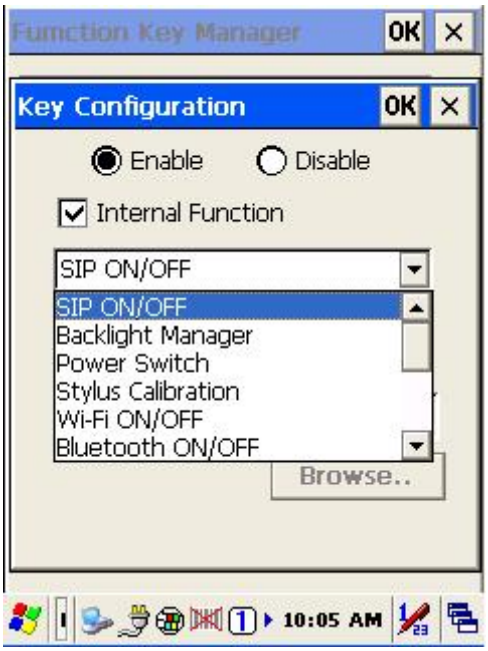
1. Edit Internal Function items：

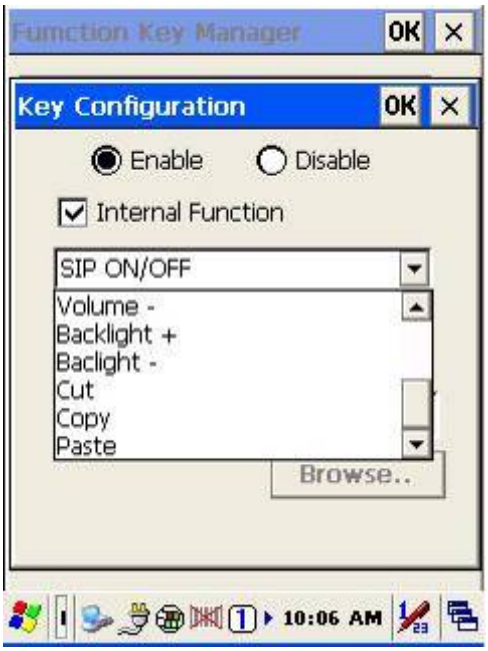
1.1 Select items need to be modified, select by clicking ” **Edit** ” bottom to enter set up window as below:





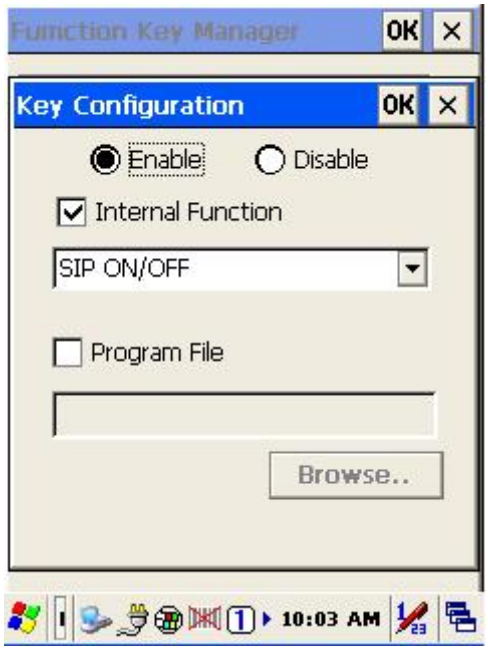
1.2 Select new functional item and complete editing.

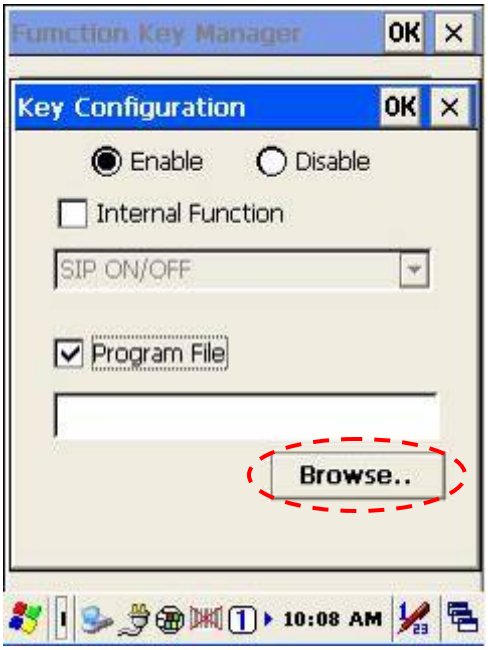




2. Edit application software for auto-execution：

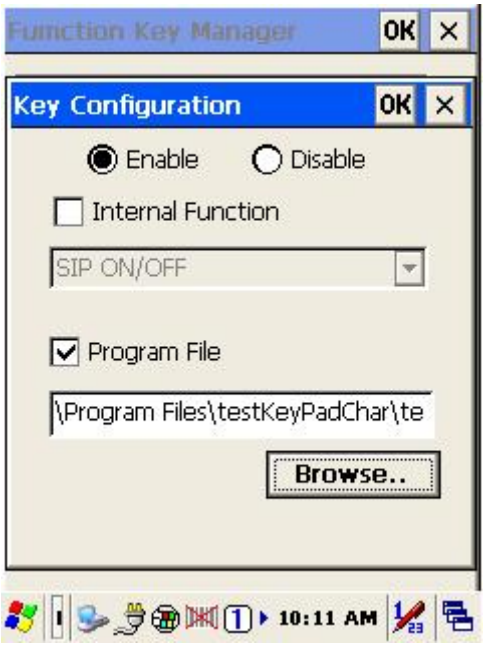
2.1 Select Program File item，then click ” **Browse** ” bottom to enter File Opening Window.

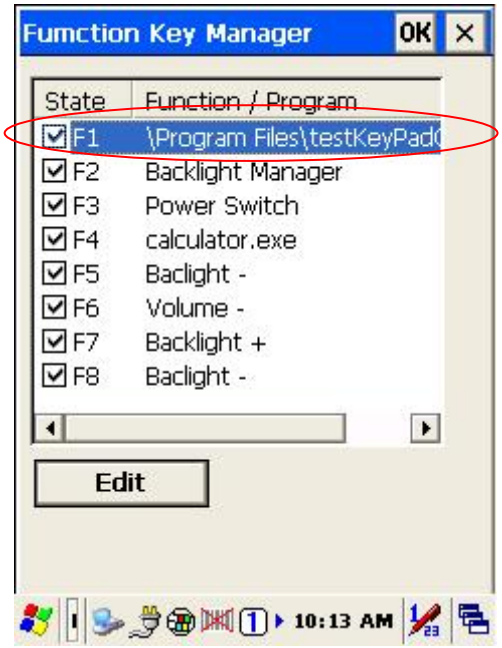




2.2 Select software required auto-execution, then select ” **OK** ” bottom to complete selecting process.

2.3 Confirmed Function / Program had been updated within column. Select by clicking ” **OK** “ bottom to complete editing process. When Function Key Manager Main Page reappear on the display, F1 on function key item lists had been updated to testkeypadChar.





How to order

Please offer Part Number or Model Name for next purchase.

1. Z-2070 Series Windows CE.NET Handheld Computer Set.

Part Number	Model Name	Description
882-7000UB-000	Z-2070BA	Windows CE.NET Handheld Computer, TFT 2.4"QVGA color display, 64MB SDRAM64MB F-ROM
882-70WLUB-000	Z-2070WL	WindowsCE.NET Handheld Computer, TFT 2.4"QVGA color display, 64MB SDRAM/ 64MB F-ROM, With WLAN
Standard Accessories		
170-70U300-180	USB Cable	USB type A, 180cm for Z-2070 connect to PC USB port.
11S-500501-U10	Travel Charger	100~240V DC5V/1000Ma; for USB cable(Type: North America/Japan)
or		
11S-500501-U10	Travel Charger	100~240V DC5V/1000Ma; for USB cable(Type: Europe)
862-206002-400	Battery Pack	Lithium-Ion rechargeable battery pack, 3.7V 2,200 mAh
560-820500-741	Stylus Pen	Length: 95.7cm, including reset thimble
623-220500-061	Sling	Sling for stylus pen
623-220500-031	Hand Strip	Z-2070 hand strip and stylus pen holder
560-020600-891	Hand Strip Holder	Z-2070 hand strip holder

2. CRD-70 Communication and Battery charging Cradle Set.

Part Number	Model Name	Description
882-70CR00-000	CRD-70	Z-2070 communication and battery charging cradle
Standard Accessories		
170-07R420-150	RS-232 Cable	RS232 cable connect from CRD-70 to PC RS-232 Dsub port.

PIN-OUT configuration	
DB-9(F)	
1	CD (Carrier detect)
2	TxD (Transmit data)
3	RxD (Receive data)
4	DSR (Data set ready)
5	GND (Signal ground)
6	DTR(Data terminal ready)
7	CTS (Clear to send)
8	RTS (Request to send)
9	RI (Ring indicator)

PIN-OUT configuration	
1	NC
2	TxD (Transmit data)
3	RxD (Receive data)
4	NC
5	GND (Signal ground)
6	NC
7	CTS (Clear to send)
8	RTS (Request to send)
9	NC
10	GND(Signal ground)

173-0U3000-150 — USB Cable — RJ45 USB type B cable connect from CRD-70 to PC USB port.

3. Z-2070 Series Optional Accessories

	Part Number	Model Name	Description
	170-70U300-180	USB cable	USB type A, 180cm for Z-2070connect to PC USB port.
			DC Jack: For battery charge INNER OF DC JACK:+9V 2A OUTER OF DC JACK:GND
	173-0U3000-150	USB Cable	RJ45 USB type B cable connect from CRD-70 to PC USB port.
	170-07R420-150	RS-232 Cable	RS-232 cable connect from CRD-70 to PC RS-232 Dsub port.
	191-B22004-185	Battery Pack	Lithium-ion rechargeable battery pack, 3.7V, 2,200mAh
	560-820500-741	Stylus Pen	95.7mm, including reset thimble

PIN-OUT configuration	
DB-9 (Female)	
1	CD (Carrier detect)
2	TxD (Transmit data)
3	RxD (Receive data)
4	DSR (Data set ready)
5	GND (Signal ground)
6	DTR (Data terminal ready)
7	CTS (Clear to send)
8	RTS (Request to send)
9	RI (Ring indicator)

	Part Number	Model Name	Description
	623-220500-061	Sling	Sling for stylus pen
	623-220500-031	Hand Strip	Z-2070 hand strip and stylus pen holder
	560-020600-891	Hand Strip Holder	Z-2070 hand strip holder
	862-206002-400	AC Adapter	AC 100~240V 50/60HZ 0.6A, DC 9V/2A
	11S-000000-008	Adapter Head	Britain type head ,interchangeable plug, for 11S-900180-008 AC adapter
	11S-000001-008	Adapter Head	U.S. type head ,interchangeable plug, for 11S-900180-008 AC adapter
	11S-000002-008	Adapter Head	Australia type head ,interchangeable plug, for 11S-900180-008 AC adapter
	11S-000003-008	Adapter Head	Europe type head ,interchangeable plug, for 11S-900180-008 AC adapter

	Part Number	Model Name	Description
	11S-500501-U10	Travel Charger	AC 100~240V,DC 5V/1A;for USB cable (Type: North America/Japan)
	11S-500503-U10	Travel Charger	AC 100~240V,DC 5V/1A ; for USB cable(Type: Europe)
	11S-900000-007	Adapter Head	WA-7 switch head for travel charger, Britain type head
	11S-900002-007	Adapter Head	WA-17 switch head for travel charger, Australia type head

<< MEMO >>