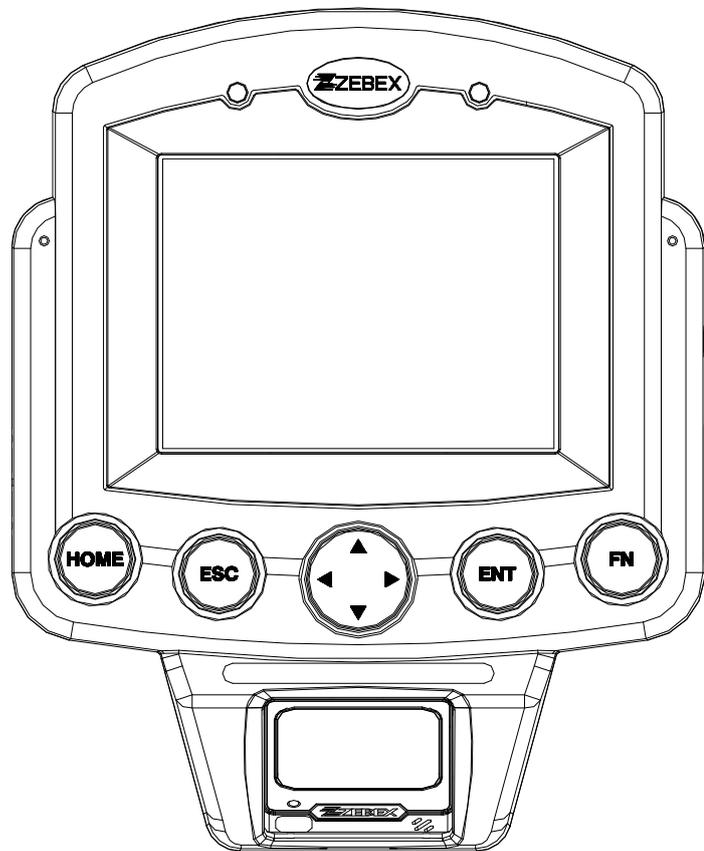


Fixed Computer

Z-7010 series

User's Manual



ZEBEX INDUSTRIES INC.
www.zebex.com

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Preface

About This Manual

Thank you for your purchase of the ZEBEX Z-7010 series fixed computer. ZEBEX Z-7010 series product is at the forefront of fixed technology, and this manual will provide the necessary information on the many and varied options available to you.

The Z-7010 series product is designed base on WindowsCE.NET version 5.0 with an integrated Ethernet module with power over Ethernet function, USB communication interface, ZEBEX A-50M Omnidirectional 1D laser barcode scan module, 5.7 inches touch screen and 8-keys keypad. The design is ideal for the wall mount solution as it simple and easy to use for supermarket price check, security control or shop floor control ... etc.

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 you the information that is important and you should be observed.

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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-7010 series Fixed 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 serious eye damage.

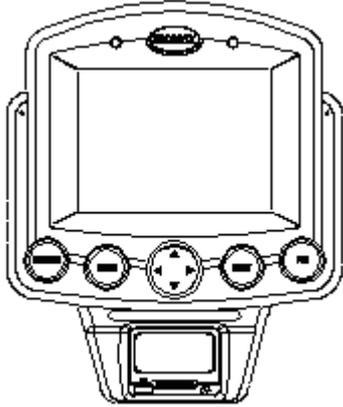
Safety Operation

WARNING	
	<p>Disassembly and Modification</p> <p>Never try to disassemble or modify the device in any way. All servicing should be carried out by qualified Zebex personnel or Zebex- approved engineers.</p>
	<p>Interior Parts and Components</p> <p>Never touch interior high voltage parts or components. Doing so creates the danger of electrical shock.</p>
	<p>Drop and Knock the Device</p> <p>Be careful when using the device; do not drop or knock the device as irreversible damage to the unit may occur.</p>
	<p>Extreme temperature</p> <p>Do not operate the device under extreme temperature.</p>
	<p>Battery and Charger</p> <p>The use of third-party battery or charger may either damage the device or shorten the life of the device.</p>

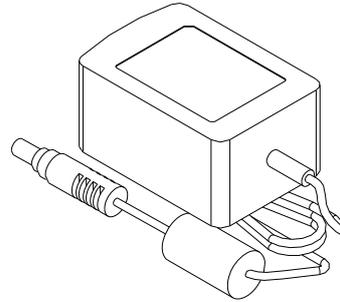
CAUTION	
	<p>Dropping and Damage</p> <p>Should the drop the device and damage it, immediately turn off the power and contact your original dealer or an authorized ZEBEX service provider. Continued use creates the danger of fire and electrical shock.</p>
	<p>Abnormal Conditions</p> <p>Should the device 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.</p>
	<p>Foreign Objects</p> <p>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.</p>
	<p>Moisture</p> <p>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.</p>

Unpacking

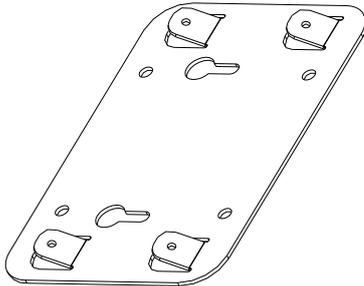
Package Contents



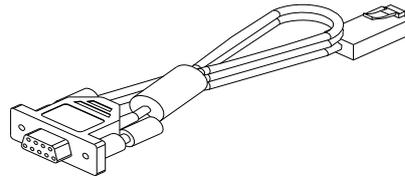
Z-7010 series
Fixed Computer



AC Adapter



Wall Mount Kit



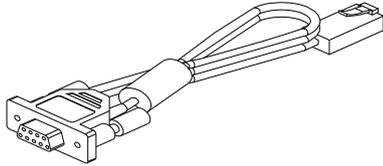
RS-232 /RJ45 Cable



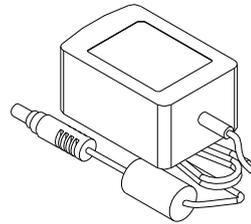
Storage (2G) SD Card

Optional Parts

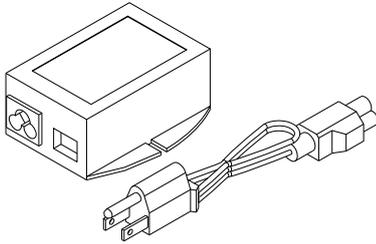
Purchaseable accessories



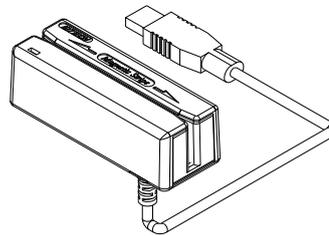
RS232 Cable



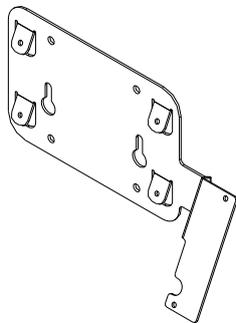
AC Adapter



PoE(Power over Ethernet) Adaptor

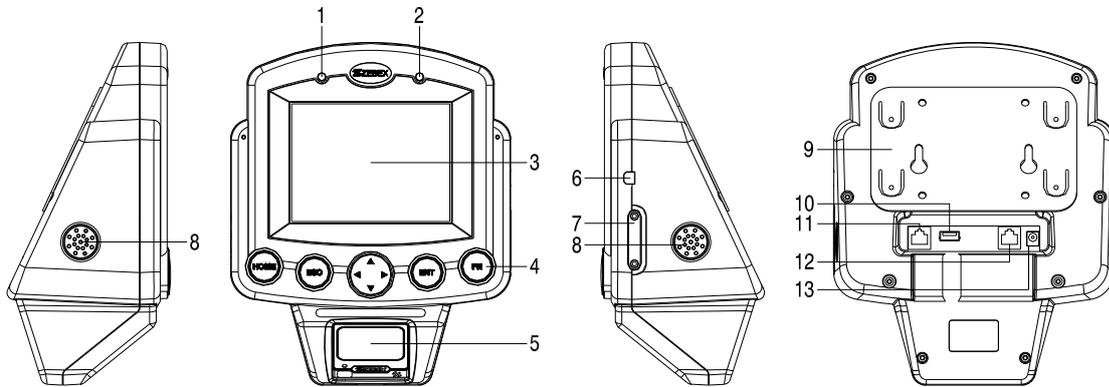


Magnetic Swipe Reader (MSR)

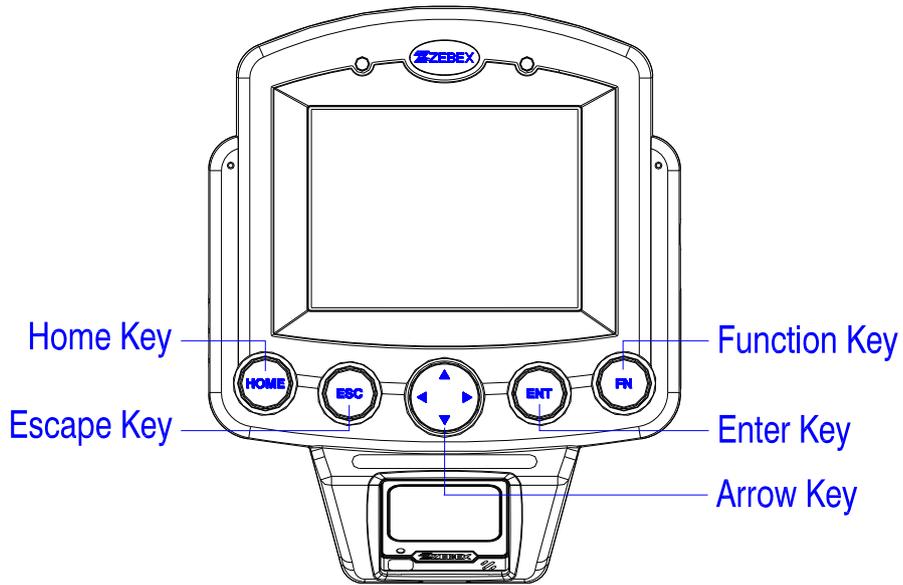


Wall Mount Kit for MSR

General Guide



1	LED indicator	Indicates the status of Power.
2	LED indicator	Indicates the status of Ethernet connection.
3	LCD screen	Display various data when a program is being run.
4	Stroke keys	A total of 8 keys are provided to operations.
5	Barcode scanner	Emits an omnidirectional 1D laser bar code reading.
6	Mini USB port	For USB communication.
7	Mini SD I/O card slot	For Install the Mini SD I/O card
8	Speaker	Voice output.
9	Wall Mount Kit	For wall mount Installation.
10	USB port	For USB communication.
11	Ethernet port	For Ethernet communication.
12	RS-232 port	For RS-232 communication.
13	Power port	For power connection.

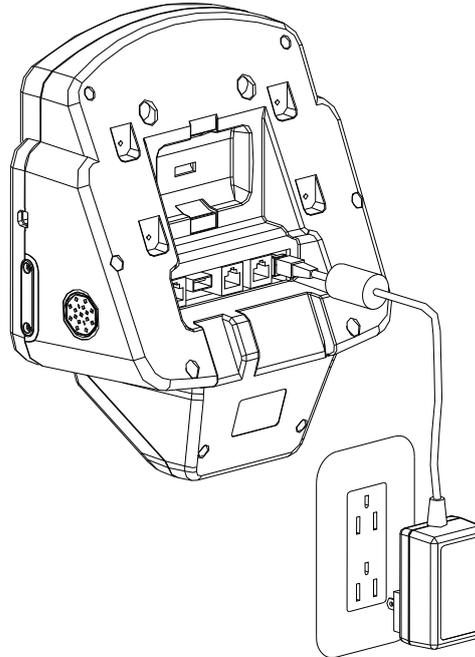


FN	Function keys	Press to perform an ALT key.
ENT	Enter key	Press to confirm entries or commands.
Arrow	Arrow keys	Press 4-way to move around the cursor.
ESC	Escape key	Press to perform a cancel action.
HOME	Home key	Press to perform the windows start menu.

Getting Started

Connect to the power outlet

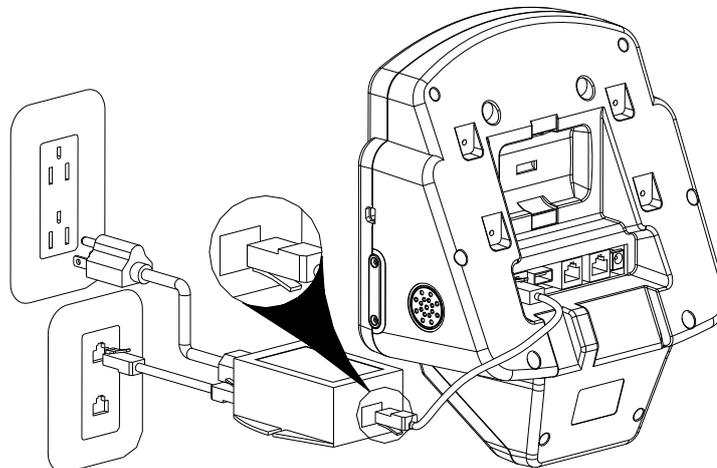
Connect the power jack of AC adapter into the Z-7010 device's power port and joining up the power source.



Connect to the Power over Ether Adapter

Step 1: Inserts PoE (Power over Ethernet) adapter the power line and the Ethernet cable, in the joining-up the power source and the network connection.

Step 2: Connect the PoE (power over Ethernet) adapter with Z-7010 device by Ethernet cable.



Install MSR to Z-7010 with Wall Mount Kit

Install MSR to right hand side of Wall Mount Kit as Fig 1 (follow the red arrow) with 2 screw label in Red Circles in Fig 1.

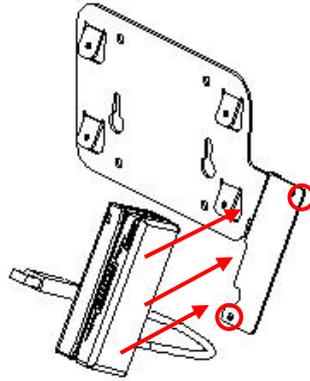


Fig 1

Attach the Wall Mount Kit for MRS to the back of Z-7010 as Fig 2 (follow the Red Arrow) with 4 screws labeled in Red Circle in Fig 3.

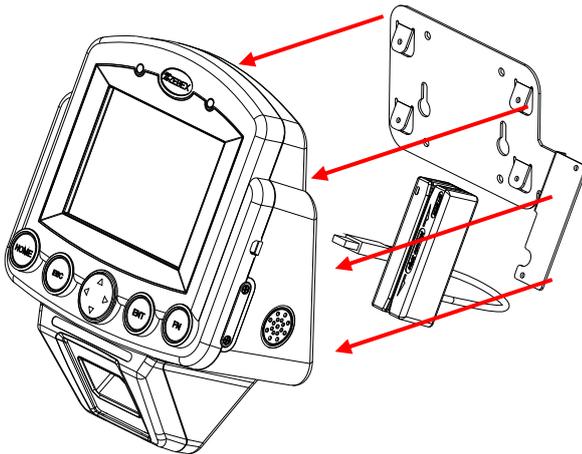


Fig 2 : Install Wall Mount Kit to Z-7010

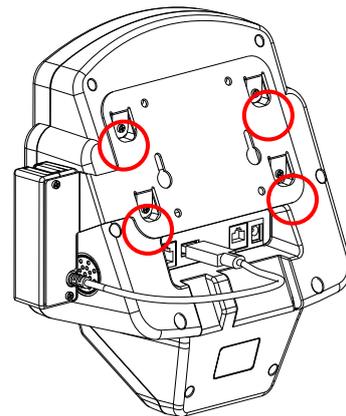


Fig 3 : Back of Z-7010

Attach MSR USB cable to USB port in the back of Z-7010 as Fig 4.

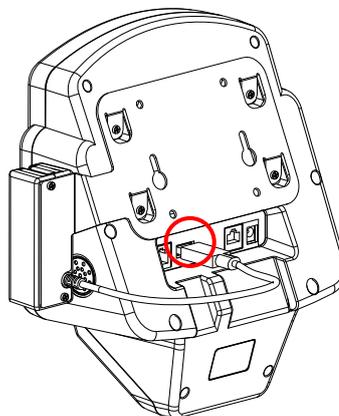


Fig 4 : Connect to Z-7010

PC System Requirements

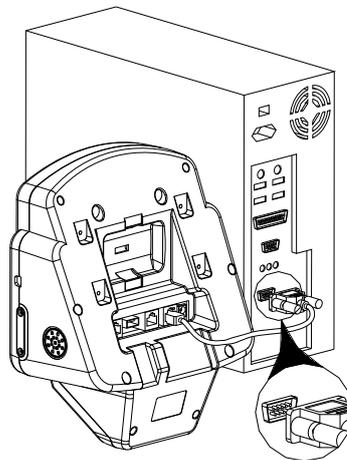
Windows XP Operating System
64 MB RAM
64 MB free HDD space
Interface: Ethernet / USB / RS-232 ports

Cable Connection

In order to use the software supplied with the Z-7010 or , the Z-7010 fixed computer must be connected to a PC or Network.

Connecting via RS232 cable to PC

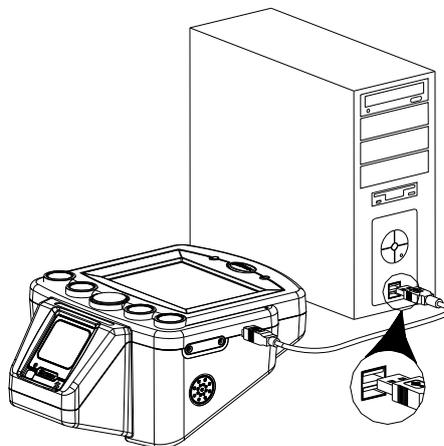
Attach one end of the RS-232 cable to the Z-7010 COM port interface and the other to the COM port on your PC.



Cable connect with PC COM port

Connecting via USB Cable to PC

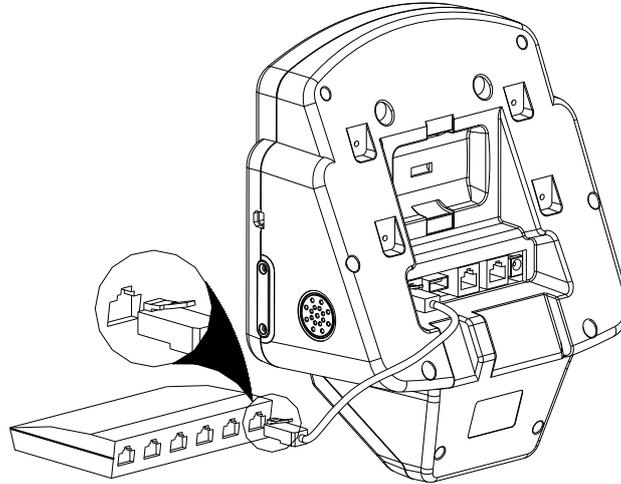
Attach one end of the USB cable to the Z-7010 mini USB port interface and the other to your PC USB port.



Cable connect with PC USB port

Connecting via Ethernet Cable to Network

Attach one end of the Ethernet cable to the Z-7010 device's Ethernet port and the other to network Hub device.



Cable connect with Network Hub device

About The Product

The Z-7010 series product is a compact, ergonomic and durable fixed computer. It is designed base on Windows CE.NET version 5.0 with an integrated Ethernet module with power over Ethernet function, USB communication interface, ZEBEX A-50M Omnidirectional 1D laser barcode scan module, 5.7 inches touch screen and 8-keys keypad. The design is ideal for the wall mount solution as it simple and easy to use for supermarket price check, security control or shop floor control ... application.

The Z-7010 device features an Intel PXA-270 processor (520MHz) and using WindowsCE.NET version 5.0 operation system. This combination delivers high performance, low power consumption and the Ethernet networking solution. Compared with other systems currently available on the market, Z-7010 is the most cost-effective Windows CE fixed computer to offering optimum performance.

FEATURE

- Intel PXA-270 520MHz superior CPU
- 5.7" VGA Large LCD display with touch panel
- Optionally complex function
- Supports with Power over Ethernet (PoE) technology
- Expandability interfaces
- Fully programmable
- Easy development

Prerequisites

Skills Required

The following skills are required by developers aiming to develop application software for the ZEBEX Z-7010 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
- Ethernet networking experience

Hardware Required

The following models of the ZEBEX Z-7010 series and the dedicated options are available.

Available models and the features:

Model name	Barcode scanner	Communication
Z-7010BA	1D Ominidirectional Laser scanner	Ethernet
Z-7010WL	1D Ominidirectional Laser scanner	Ethernet / WiFi
Z-7012	2D Imager	Ethernet
Z-7012WL	2D Imager	Ethernet / WiFi

Specifications

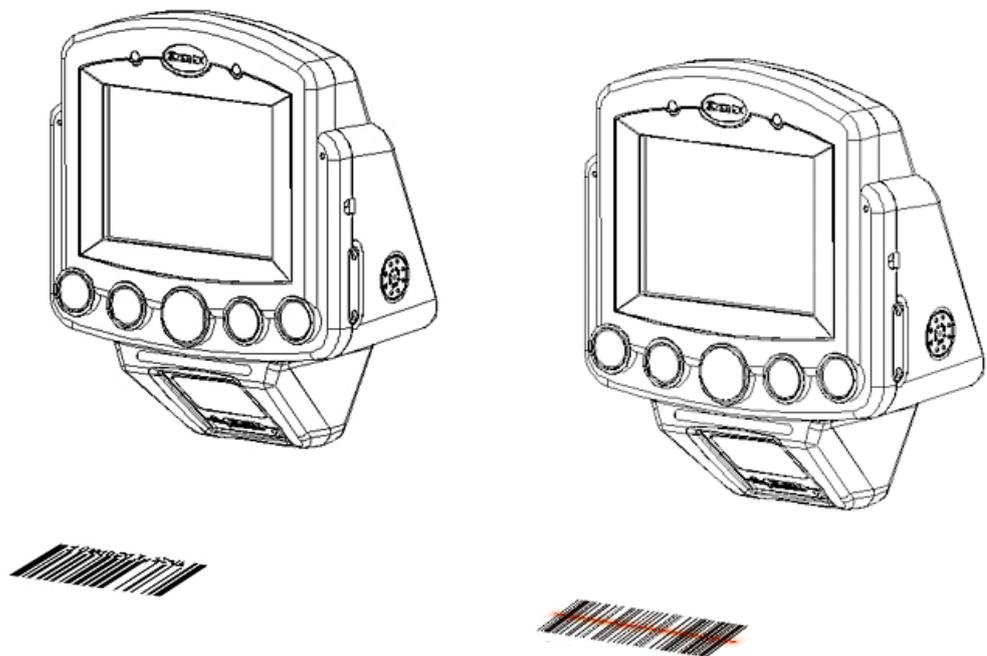
Model	Specification
System	
CPU	Inter PXA 270 processor (Max. 520MHz)
Operating System	Microsoft Windows CE.NET 5.0
RAM	128MB
F-ROM	64 Mbytes
LCD Display	5.7", VGA 640 X 480 TFT color panel with touch screen
Keypads & Buttons	ENT, FN, HOME, ESC, Up/Down/Right /Left 8 keys
Audio	Two speaker output
Interfaces	
Ethernet	10/100 Mbps Ethernet (PoE)
USB	USB 1.1 Host for external device (back); USB 1.1 Client for external device (side)
RS-232	Programmable up to 115,200 bps
Radio Communication	
WLAN	IEEE 802.11 b/g, summit security.
Expansion Slots	
C/F Card Slot	One compact flash Type II card slot
SD I/O Card Slot	One SD/IO card slot, for extended to Bluetooth or IEEE802.11b/g
Power	
AC Adaptor	9V-DC, 2A, 110V/220V input AC auto selecting
Scanning	
1D Scanner	ZEBEX A-50M Omnidirectional Laser Scan Module
2D Scanner (option)	Symbol SE-450 2D image scan module
RFID Reader (option)	HF or UHF RFID reader/writer
Physical	
Dimensions	(L) 245.1 mm x (W) 204.0 mm x (H) 117.6 mm
Weight	Approx 1,400 g
Environmental	
Operating Temp.	0°C ~ 50°C (32°F-122°F)
Storage Temp	-10°C ~ 60°C (14°F-140°F)
Operating Humidity	10% ~ 70% (non-condensing)
Storage Humidity	5% ~ 70% (non-condensing)
Regulatory Approvals	CE & FCC Part 15B

Using Barcode Scanner

Scanning Barcodes

The Z-7010 intergraded with ZEBEX A-50M Omnidirectional 1D laser barcode scan module which is a highly versatile tool that can scan a wide range and omni-direction barcodes, but it is imperative that it is used in the correct manner.

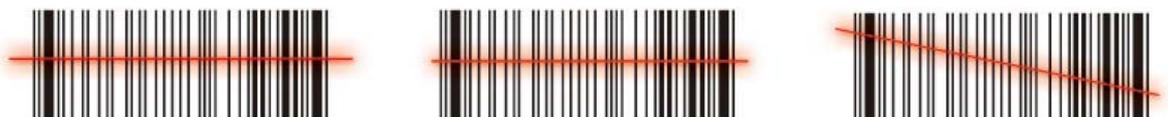
To scan a barcode:



Barcode Scanning Position

This device can read from 0 to 200mm distance.

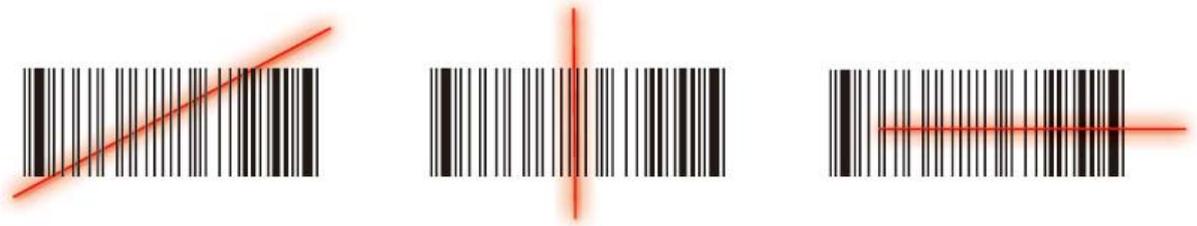
1. Position the laser scanner close to the barcode when scanning small barcodes. And position it is a distance from the barcode when scanning large barcodes
2. The reader can be detected by a red beam.



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 the Application Framework

Zebex provides framework named Application Framework for building an environment that allows users to manage remotely and centrally for the system, barcode system setting, and applications. In application framework, users can remotely control configurations of system, including backlight, sound volume, button locking, tough panel, network, etc..., and launch applications such as browser, media player, or any own-made programs. For details, please refer to documents of Application Framework Instructions.

Using the Zebex PowerPack

To save your time and effort in developing applications on Z-7010, ZEBEX provides its own design system management tool called "PowerPack" to let you control it directly.

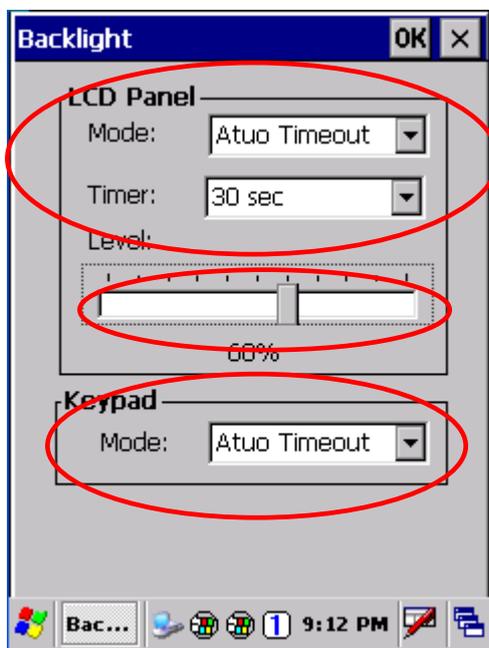
The PowerPack management tools which install in each of our WinCE product. It is free charge for you. We offer several functions for let you control your device without any programming.

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



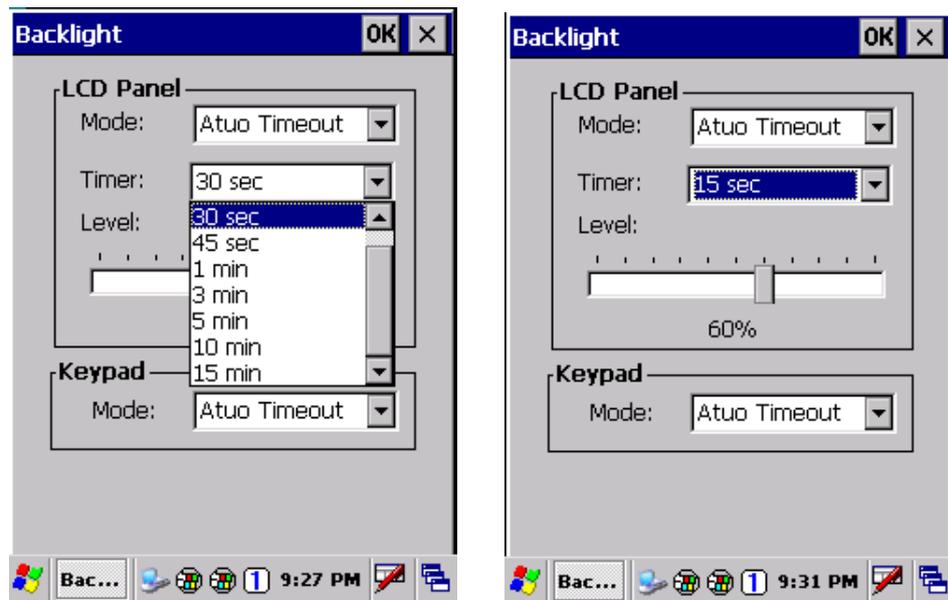
1. LCD

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.

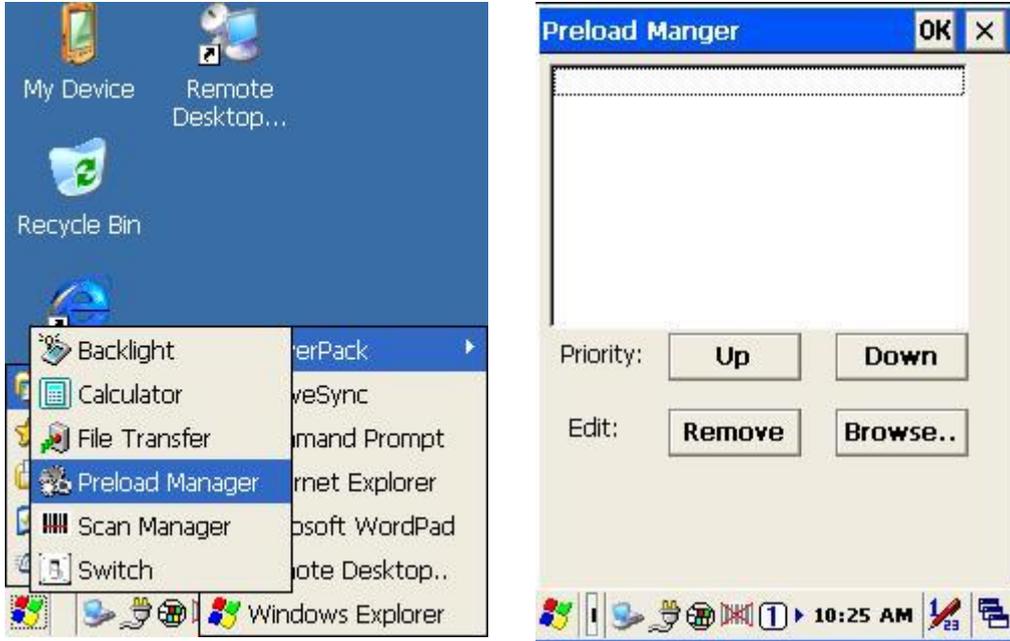


Button description:

- 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.

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 :

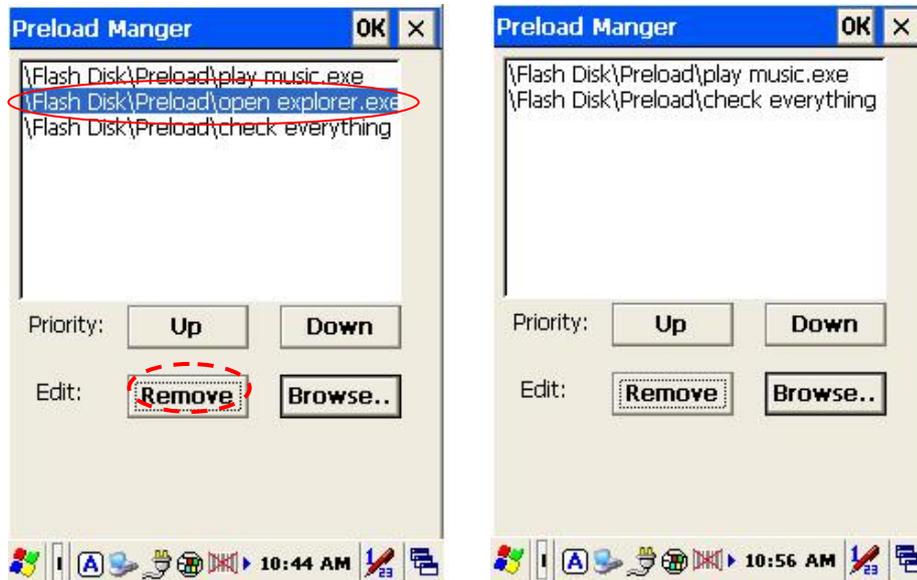
2.1 Select by clicking play music.exe program and click” **Up** ” bottom, Therefore, play music.exe will be shifted up.

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



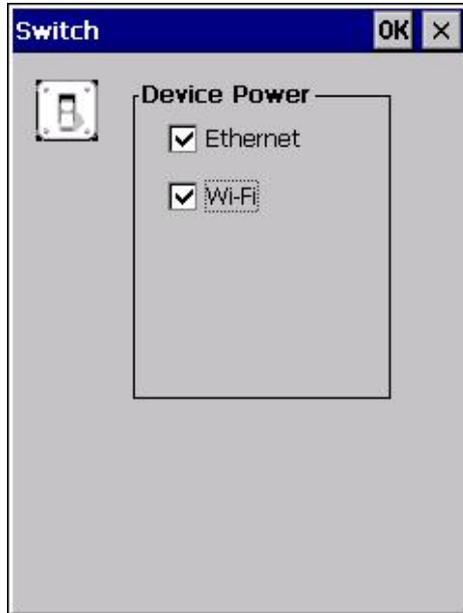
3. Remove a program:

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



Switch

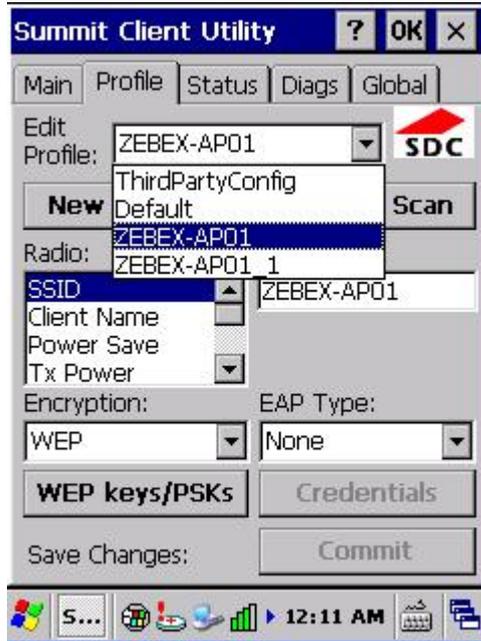
The Ethernet & WiFi switch utility. This application provides as a switch function to let you easy turn on or off the function and power for Ethernet and WiFi interface.



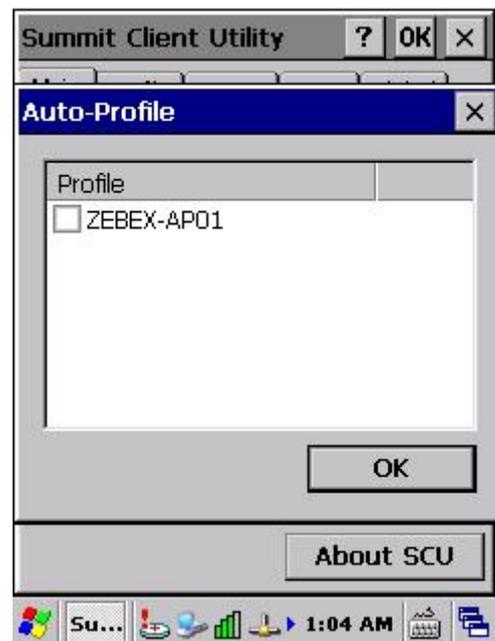
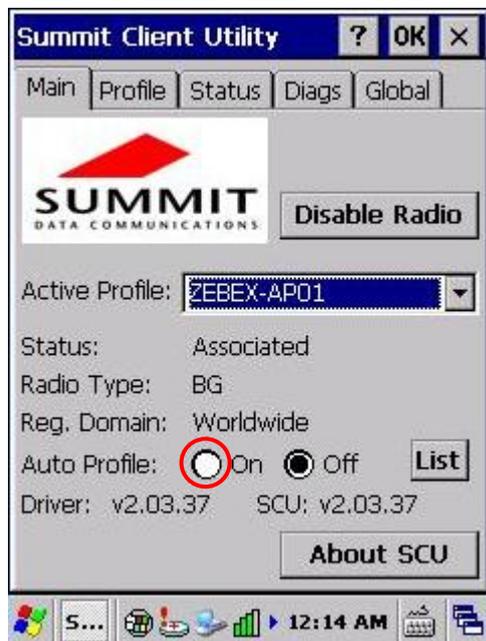
Under the content of “Profile”, the available wireless network access point will be searching by clicking “ Scan ” button. You can select an access point and press “ Configure ” button to connect with that network.



Existing access point can also be selected from Edit Profile shown as below diagram.

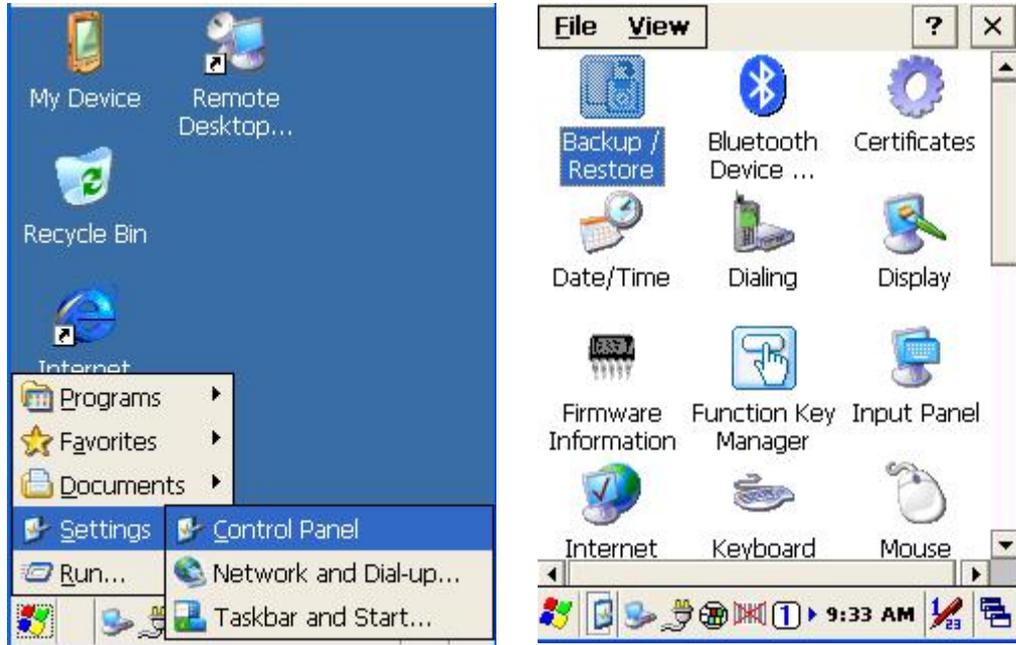


Under content of main menu, existing profile (WiFi) can be set up as Auto Profile. Existing Profile lists can be viewed existing profile by clicking “List” button, check profile and click on “OK” button. Select “On” from Auto Profile menu to complete Auto Profile setting.



Backup/Restore

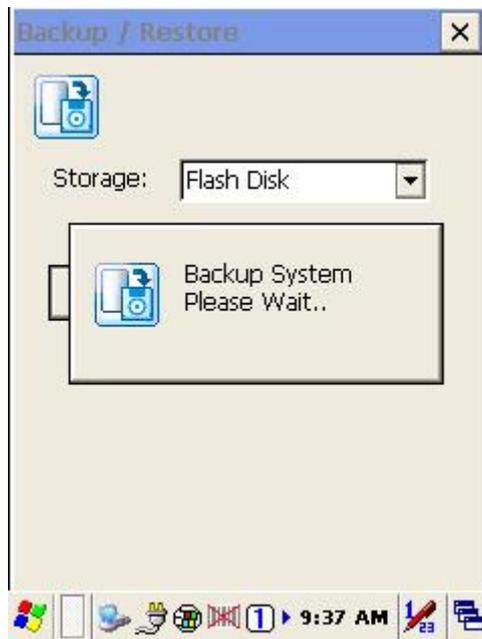
You can find this application is located on path “\settings\control Panel”.



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. PS: For f/w version later than V1.0.9, files backup can only be stored into SD Card instead of Flash Disk.



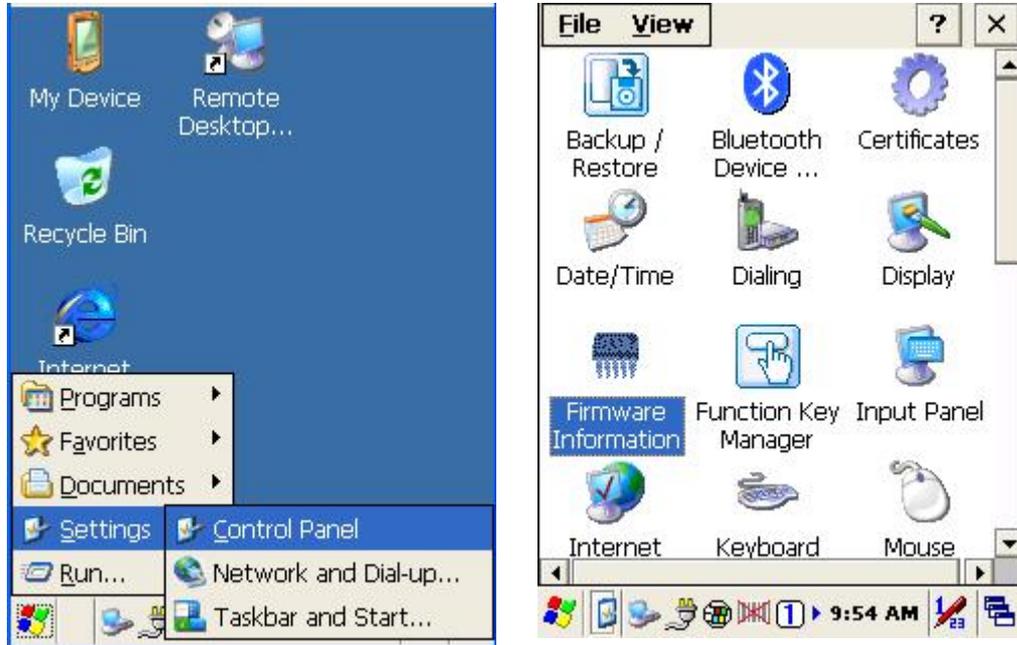
Backup : Select backup data as saved devices, press ” **Backup** ” bottom to proceed backup. Display will restore when backup was finished.



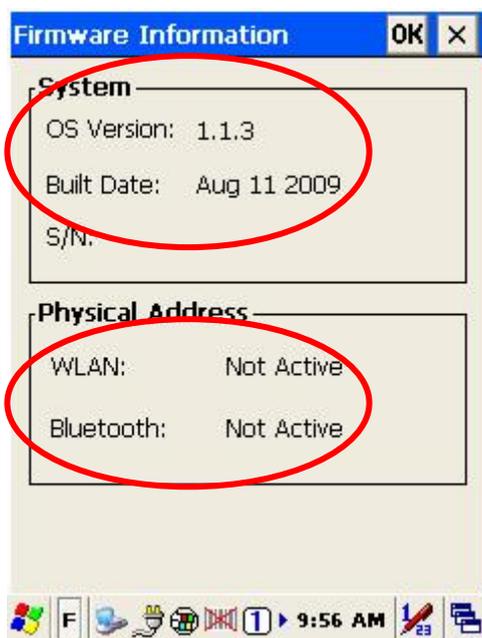
Firmware Information

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".



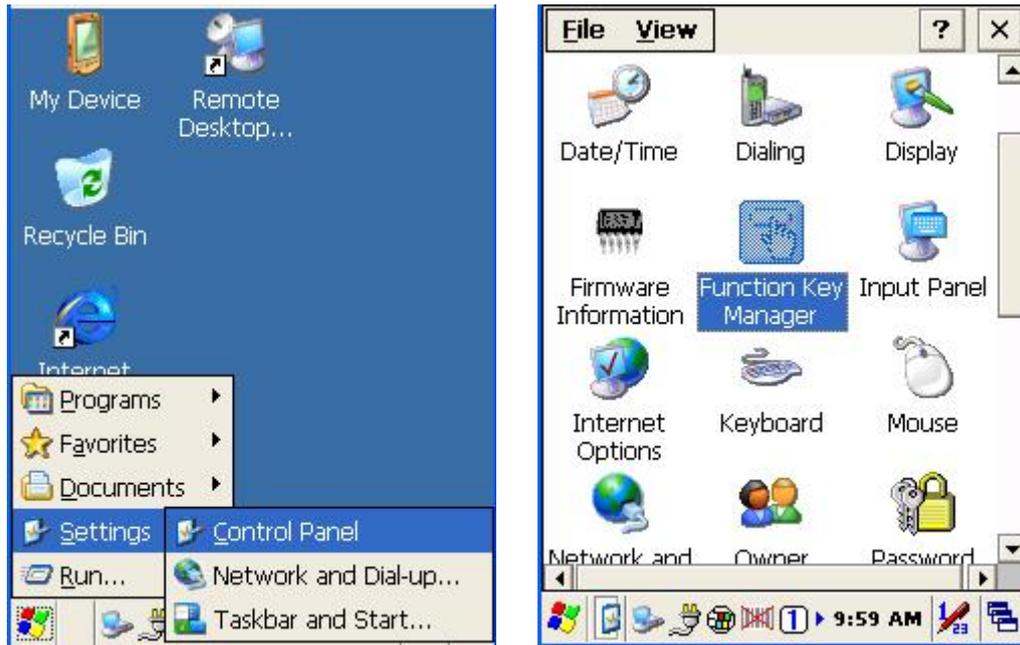
This information is good for identify device firmware version for future update or maintenance.



Function Key Manager

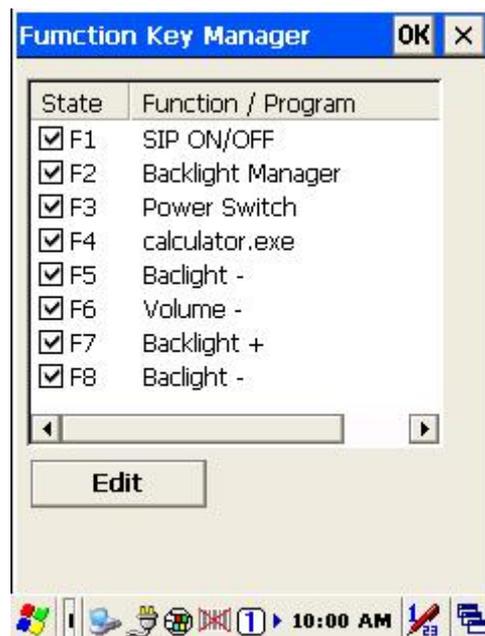
This application utility provides you an easier way to set up function key for your device. Through using this function key set up utility you will easily and quickly to start the application program like, Window Media Player, Calculator... etc, or your own designed application program, and even the 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”.

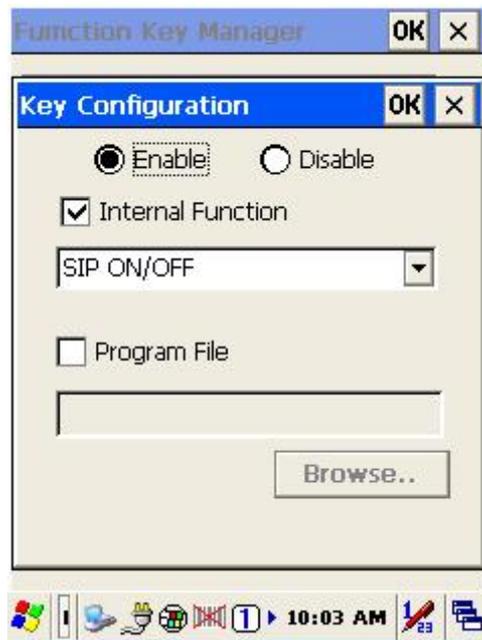


Program provides eight different function key (F1~F8) for set up, default setting was shown as below:

- 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

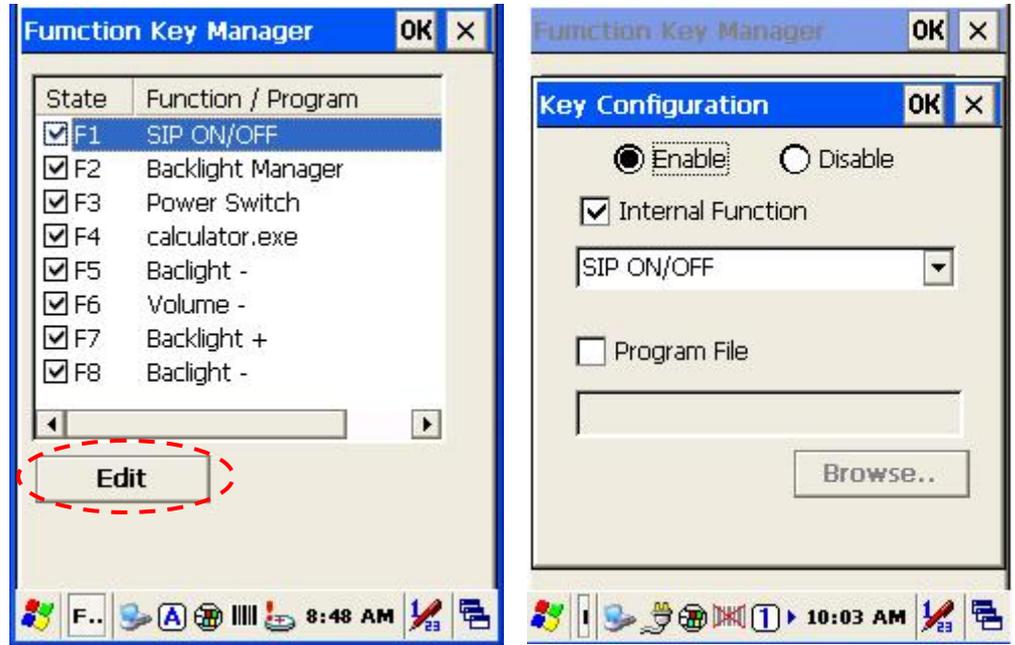
Internal Function : Provide following options,

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

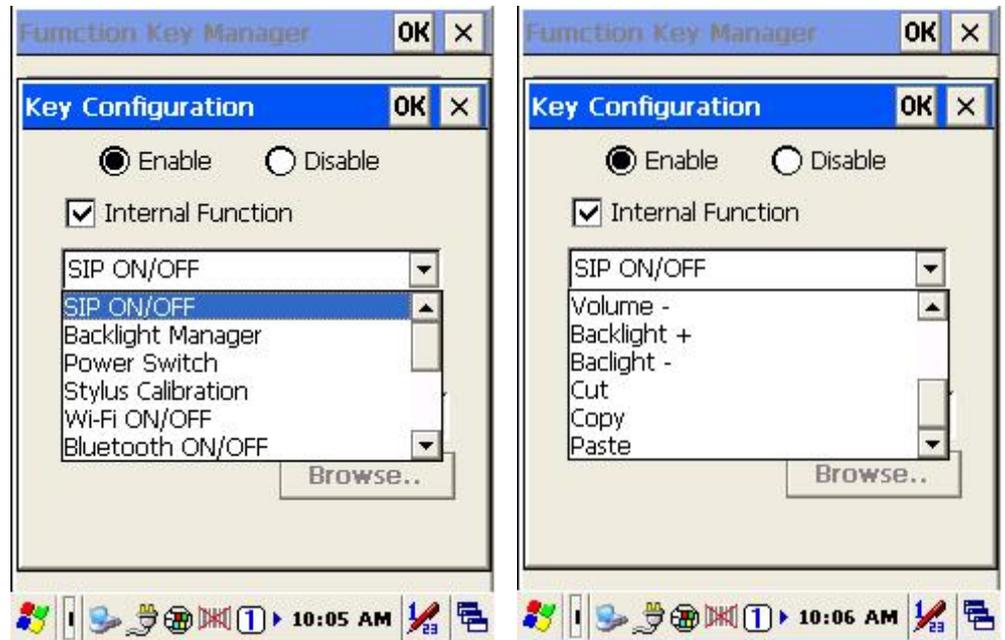
Program File : Install application program according to demand, this function can be used for setting up auto-execution.

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:

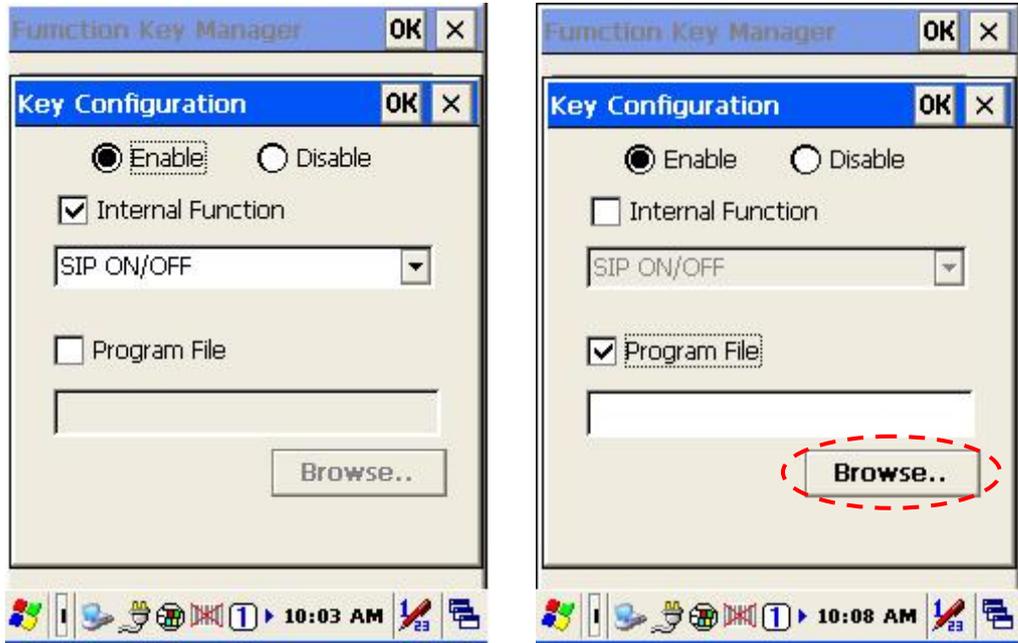


1.2 Select new functional item and complete editing.

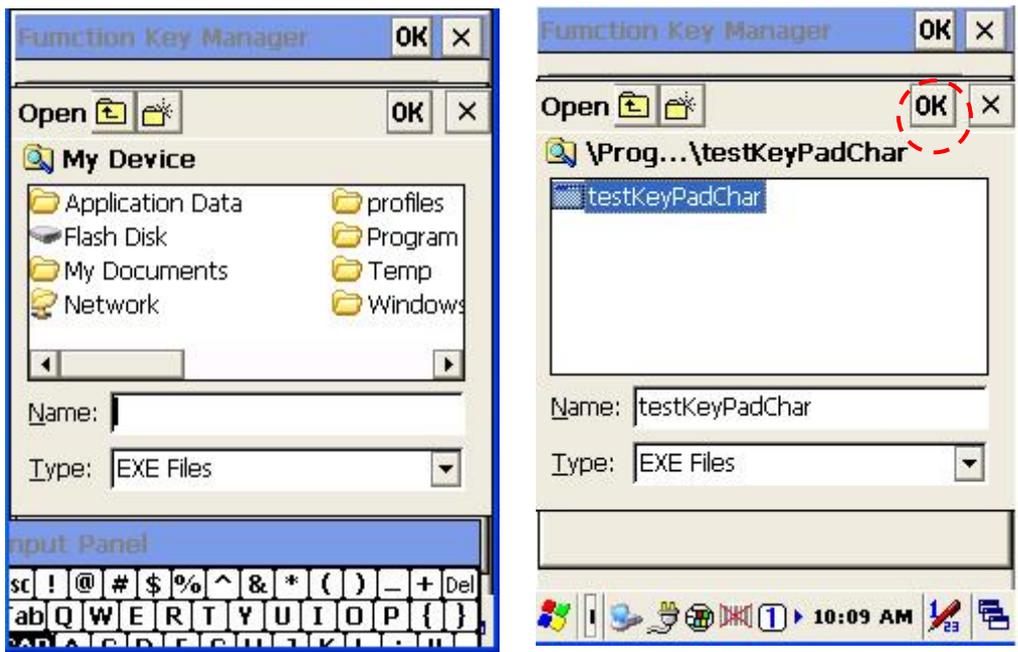


2. Edit application software for auto-execution :

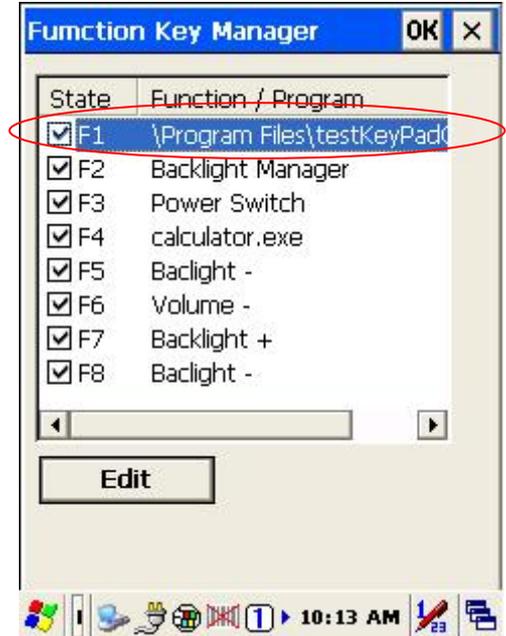
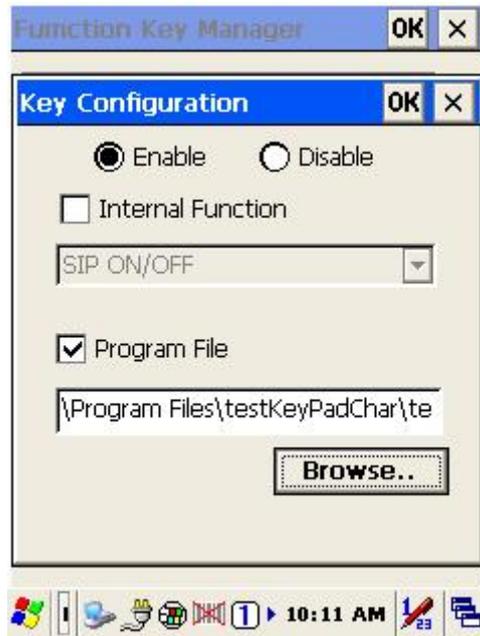
2.1 Select Program File item , then click ” **Browse** ” bottom to enter File Opening Window.



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-7010 EasyCheck Windows CE.NET Fixed Computer Set.

Part Number	Model Name	Description
887-1000R9-101	Z-7010	Windows CE.NET Fixed Computer, TFT5.7" VGA color display, ROM:64MB SDRAM/64MB with Ethernet A-50M scan module ,wall mount kit

Standard Accessories

11S-900181-216	AC Adapter	100~240V DC9V/2A ; flat pins. (Type: North America/ Japan)
11S-900183-216	AC Adapter	100~240V DC9V/2A ; round pins. (Type: Europe)
564-070100-251	SDIO Slot cover	Slot Cover for SD WLAN card used , ABS
570-090000-471	Wall Mount Kit	wall mount kit, with screw#4
174-1RF050-150	RS-232 Cable	RS-232 cable connect 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)

2. Z-7010 Series Optional Accessories

	Part Number	Model Name	Description
	11S-900000-007	Adapter Head	WA-7 switch head, Britain type head
	11S-900002-007	Adapter Head	WA-17 switch head, Australia type head
	564-070100-251	SDIO Slot cover	Slot Cover for SD WLAN card used , ABS
	570-090000-471	Wall Mount Kit	wall mount kit, with screw#4
	11S-900181-216	AC Adapter	100~240V DC9V/2A ; flat pins. (Type: North America/ Japan)
	11S-900183-216	AC Adapter	100~240V DC9V/2A ; flat pins. (Type: Europe)
		POE	Power Over Ethernet adapter

	Part Number	Model Name	Description
	11S-90018N-218	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
	173-0U3000-150	USB Cable	RJ45 USB type B cable connect from CRD-50/60/70 to PC USB port.

<< MEMO >>