

TERMINAL

Model Name: M0010

Version 1.00



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IMPORTANT NOTICES

FCC REGULATIONS

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

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

SAFETY PRECAUTIONS

- ▶ RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE
- ▶ DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS
- ▶ The use of any batteries or charging devices, which are not originally sold or manufactured by CipherLab, will void your warranty and may cause damage to human body or the product itself.
- ▶ The charging and communication cradle uses an AC power adaptor. A socket outlet shall be installed near the equipment and shall be easily accessible. The power adaptor should comply with L.P.S test. Make sure there is stable power supply for the mobile computer or its peripherals to operate properly.
- ▶ DO NOT disassemble, incinerate or short circuit the battery pack.
- ▶ DO NOT expose the mobile computer or the battery pack to any flammable sources.
- ▶ Under no circumstances, internal components are self-serviceable.
- ▶ Per FDA and IEC standards, the scan engines described in this manual are not given a laser classification. However, the following precautions should be observed:

CAUTION

This laser component emits FDA / IEC Class 2 laser light at the exit port. Do not stare into beam.

CARE & MAINTENANCE

- ▶ This mobile computer is intended for industrial use. The mobile computer is rated IP 64, however, it may do damage to the mobile computer when being exposed to extreme temperatures or soaked wet.
- ▶ When the body of the mobile computer gets dirty, use a clean and wet cloth to wipe off the dust. DO NOT use/mix any bleach or cleaner. Always keep the LCD dry.
- ▶ For a liquid crystal display (LCD) or touch screen, use a clean, non-abrasive, lint-free cloth to wipe dust off the screen. DO NOT use any pointed or sharp object to move against the surface.
- ▶ Battery disposal - For green-environment issue, it is important that batteries should be recycled in a proper way.
- ▶ If you want to put away the mobile computer for a period of time, download the collected data to a host computer, and then take out the battery pack. Store the mobile computer and battery pack separately.
- ▶ When the mobile computer resumes its work, the main and backup batteries will take a certain time to become fully charged.
- ▶ If you shall find the mobile computer malfunctioning, write down the specific scenario and consult your local sales representative.

FCC REGULATIONS:

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

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

It only operated in hand-held used. If you only transfer data to Host by WLAN, please keep the minimum distance 20cm between machine & your body.

RELEASE NOTES

VERSION	DATE	NOTES
1.00	Aug. 10, 2007	Initial release

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INTRODUCTION

The terminal Series, running Windows CE 5.0 in palm size, is our first product line of rugged PDA-style Mobile Computer. Light-weight, streamlined and ergonomic, it adds even more powerful and handy tools to delivering the flexibility in customization.

Specifically designed to work as an industrial PDA, the terminal Series provides rich options of data collection, voice and data communications, long-lasting working hours, and so on. Its large color transfective TFT display guarantees ease in reading in all lighting conditions. Integrated with Bluetooth and 802.11b/g technologies.

This manual serves to guide you through how to install, configure, and operate the mobile computer. The Care & Maintenance section is specifically prepared for those who are in charge of taking care of the mobile computer.

We recommend you to keep one copy of the manual at hand for quick reference or maintenance purposes. To avoid any improper disposal or operation, please read the manual thoroughly before use.

Thank you for choosing CipherLab products!

GETTING FAMILIARIZED WITH TERMINAL

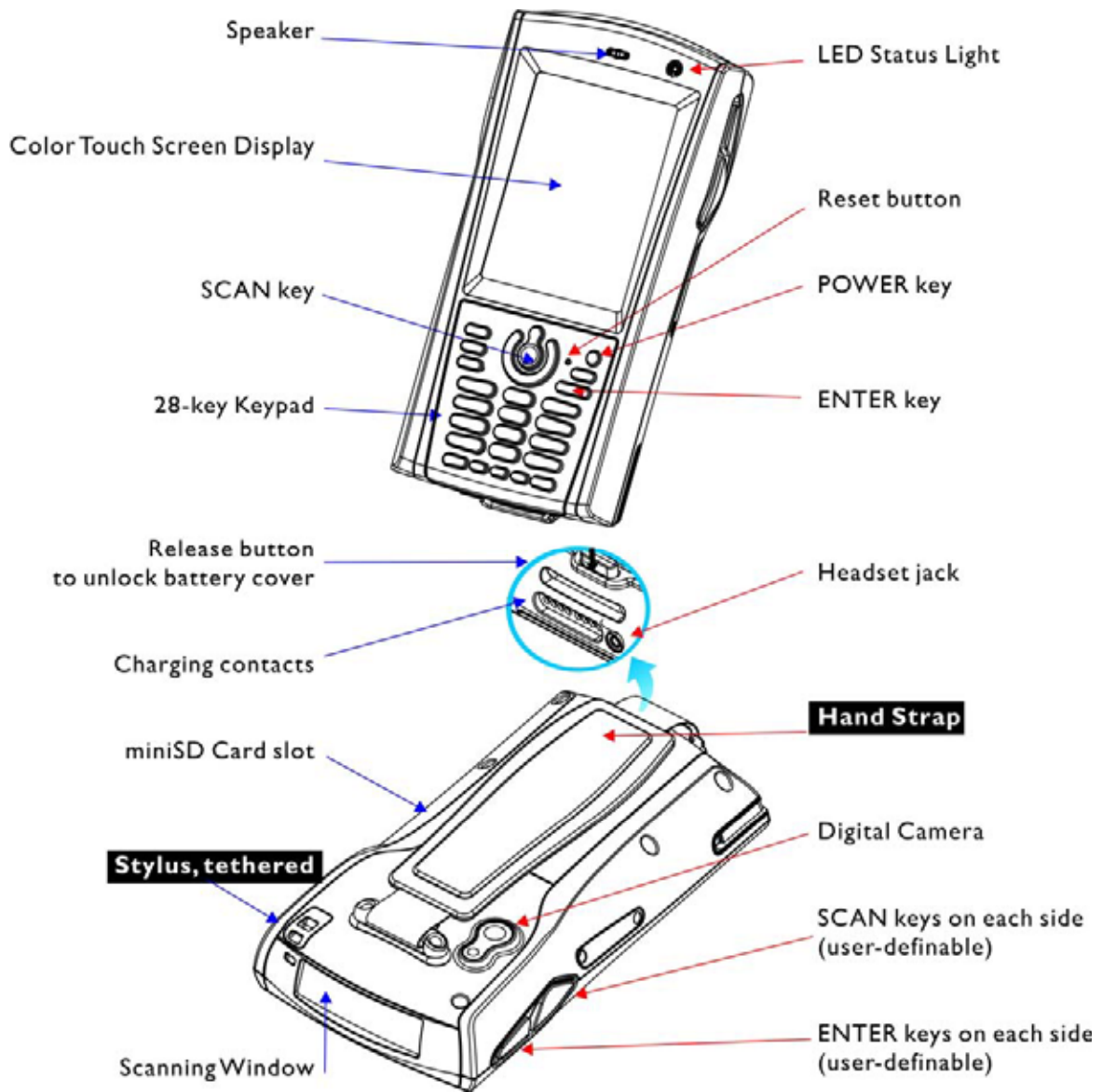


Figure 1: Front / Back View

INSTALLING THE HAND STRAP

The hand strap is ideal for one-handed operation, which requires safe and convenient hold of the mobile computer.

Warning: Always make sure the hand strap is well hooked and screwed to the back of the mobile computer before use.

When the hand strap is desired, install it to the mobile computer by following these steps:

- 1) Place the mobile computer face down on a flat and clean surface.
- 2) Screw one end of the hand strap to the back of the mobile computer.
- 3) Insert and hook the other end of the hand strap to the bottom of the mobile computer.
- 4) Make sure the hand strap is securely attached to the mobile computer.
- 5) Adjust the length of the hand strap to suit your handbreadth.

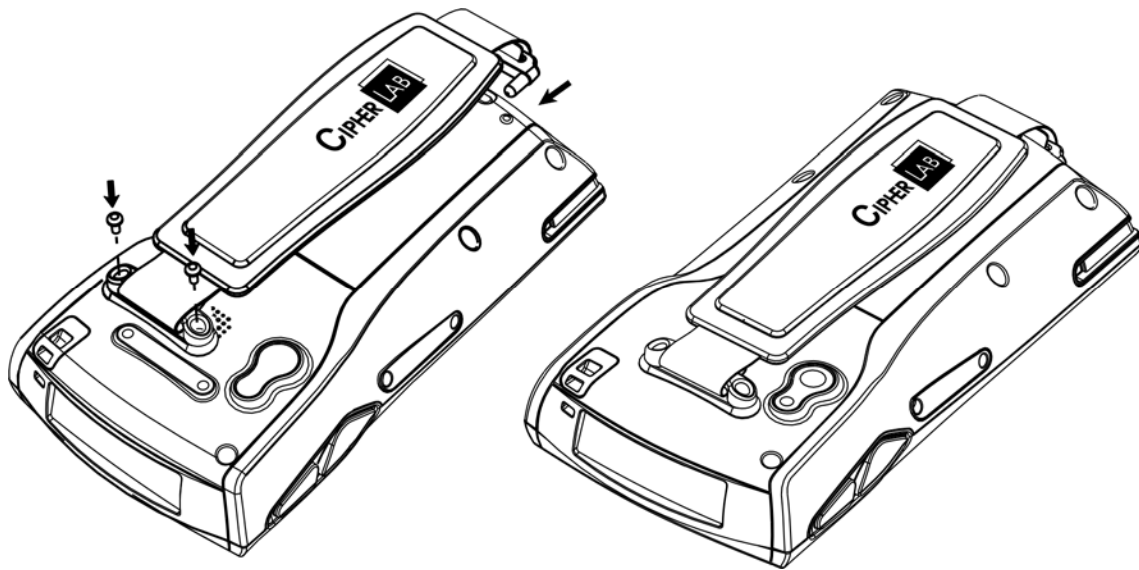



Figure 2: Installing the Hand Strap

INSTALLING THE PISTOL GRIP

This contoured pistol grip enables intuitive trigger-and-scan operation, which is very helpful in scan intensive applications.

When a pistol grip is necessary, install it to the mobile computer by following these steps:

- 1) Press  for the mobile computer to enter suspend mode.
- 2) Place the mobile computer face down on a flat and clean surface.
- 3) Remove the hand strap as well as the side plates as shown below.
- 4) Connect the power connector from the pistol grip to the receptacle on the mobile computer.
- 5) Screw the pistol grip to the back of the mobile computer.
- 6) Make sure all screws are tightened up.
- 7) Turn on the mobile computer to test the trigger.

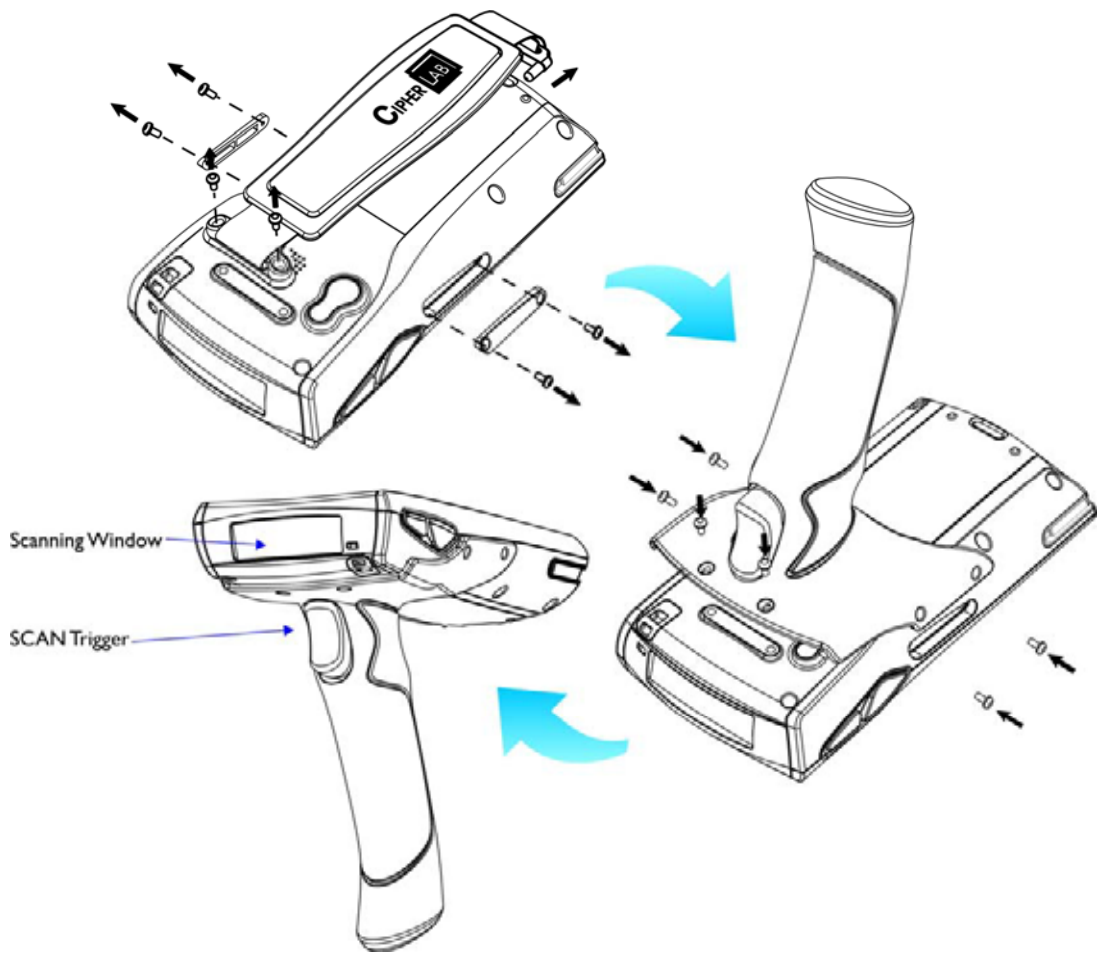


Figure 3: Installing the Pistol Grip

DIMENSIONS

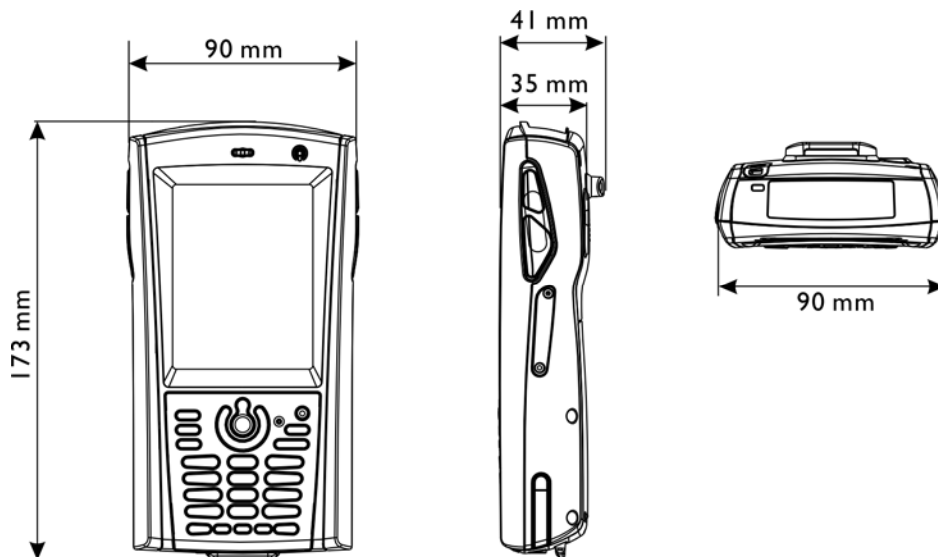


Figure 4: Dimensions

FEATURES

- ▶ Ergonomic design - ruggedized yet streamlined, with hand strap for secure hold.
- ▶ Built tough to survive drop test and sealed against moisture/dust to industrial standard IP 64.
- ▶ Microsoft Windows CE 5.0 operating system, 520 MHz Intel PXA270 processor
- ▶ 128 MB non-volatile NAND flash memory to store OS and software programs (part of the free space is used as a storage card called DiskOnChip)

-
- ▶ 64 MB / 128 MB SDRAM to store and run programs, as well as store program data
 - ▶ One miniSD expansion slot for memory card
 - ▶ Dual mode support - One scan engine (integrated barcode scanner/imager) plus one RFID reader
 - ▶ Total wireless solution - connectivity includes Bluetooth and 802.11b/g .
 - ▶ A 3.5" color transfective TFT display delivers excellent visibility in all lighting conditions.
 - ▶ Programmable feedback includes speaker and vibrator.
 - ▶ Built-in power tools include Reader Configuration Utility, Backup Utility, etc.
 - ▶ Terminal Emulation client for VT100/220 and IBM 5250 enables a quick link to any backend database.
 - ▶ Application Generator (AG*.exe for desktop PC) enables easy customization of data collection applications.

- ▶ Programming support includes Reader DLL and System API.
- ▶ Accessories and peripherals include pistol grip, international AC charging cradle, etc.

INSIDE THE PACKAGE

The following items are included in the package. Save the box and packaging material for future use in case you need to store or ship the mobile computer.

- ▶ Terminalr
- ▶ Rechargeable Li-ion battery pack
- ▶ Stylus
- ▶ Hand Strap
- ▶ Software & Manual CD

Note: For battery charging, you will need to purchase a charging cradle separately.

ACCESSORIES

Rich choices of optional accessories are available for you to enhance the total performance of the mobile computer.

- ▶ Pistol Grip (detachable)
- ▶ Belt Holster
- ▶ Protective Cover
- ▶ mini SD Memory Card
- ▶ Spare rechargeable Li-ion battery, standard or high capacity pack
- ▶ 4-slot Battery Charger
- ▶ Charging & Communication Cradle
- ▶ Vehicle Cradle

USING THE TERMINAL

This chapter explains the features and usage of the terminal.

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1.1 BATTERY

▶ Main Battery

The terminal is powered by a rechargeable 3.7 V/1800 mAh Li-ion battery pack, and it takes approximately 4 hours to fully charge it. However, the charging time may vary by working condition. During normal operation, the mobile computer can work for up to 10 hours.

▶ Backup Battery


The backup battery on the main board takes charge when the main battery is removed or drained out. When fully charged, the 3.7 V/70 mAh rechargeable Lithium button cell helps retain data in SRAM and maintain the system running in suspend mode for at least 20 hours without the main battery. In the meantime, you have to replace the main battery as soon as possible.

1.1.1 INSERTING THE BATTERY

When you first receive the package, the rechargeable functionality of the backup battery is turned off. It is controlled by a DIP switch inside the battery compartment as shown below.

For shipping and storage purposes, save the mobile computer and the main battery in separate packages, and adjust the DIP switch to the OFF position (bottom). This will keep both batteries in good condition for future use.

Note: Any improper handling may reduce the battery life.

- 1) Press  for the mobile computer to enter suspend mode.
- 2) Remove the hand strap.

- 3) Hold the mobile computer still and press the release button to unlock the battery cover.
- 4) Slide off the battery cover.
- 5) Use the stylus (or a sharp-pointed object, such as a pencil) to adjust the DIP switch to the ON position (top). Now the internal backup battery can be charged by the main battery.
- 6) Insert the battery pack into the battery compartment at a proper angle (30°~45°) so that the metal contacts on the battery are met with the charging contacts inside the compartment. Make sure that the battery is snugly fit into the compartment.
- 7) Slide the battery cover back onto the mobile computer until it clicks into place.
- 8) If the battery is charged, the mobile computer turns on.
If the mobile computer does not turn on, charge the battery.

Note: For a new battery, make sure it is fully charged before use. Always prepare a spare battery pack, especially when you are on the road.

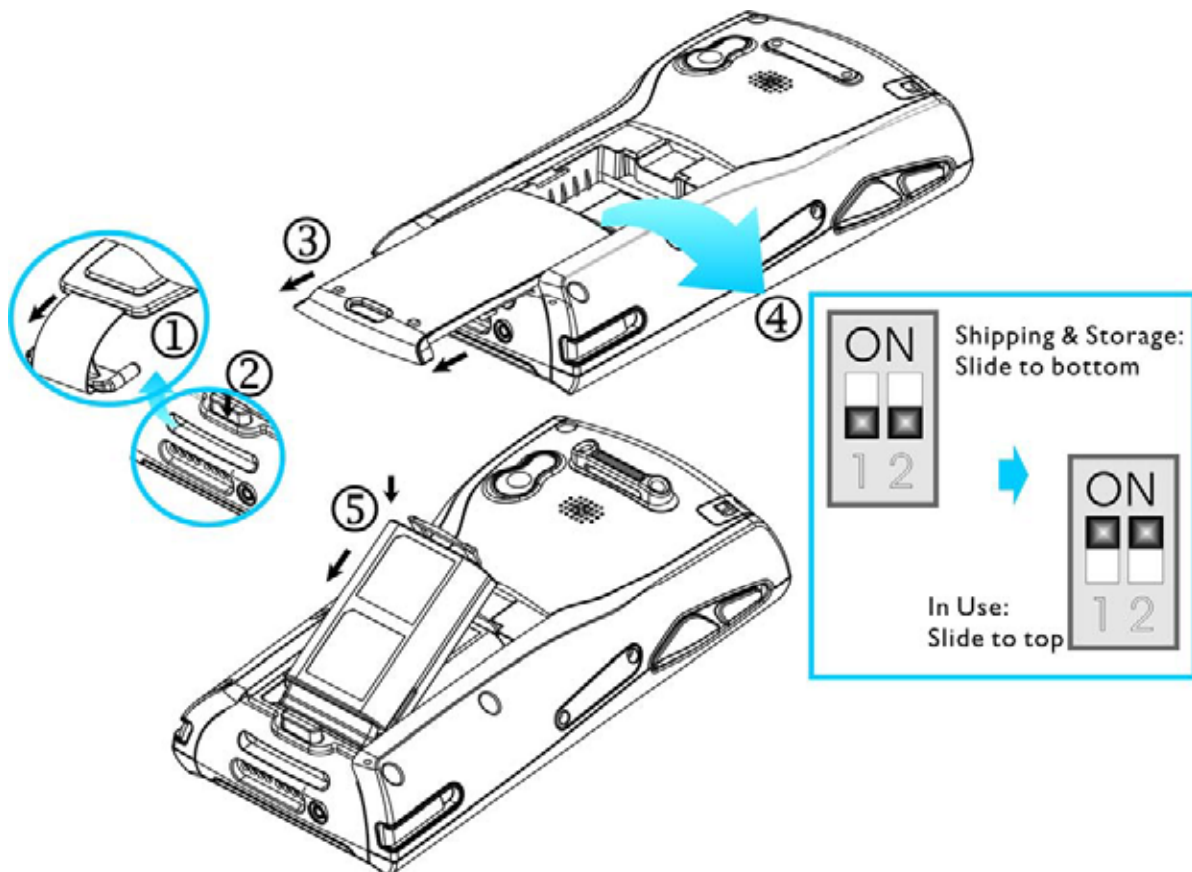


Figure 5: Installing the Main Battery

1.1.2 CHARGING THE BATTERY

The main and backup batteries may not be charged to full for shipment. When you first receive the package, you will need to charge batteries to full before using the mobile computer.




Note: To charge the batteries to full, it requires approximately 8 hours for the first time. After the initial charging, it takes only 4 hours to charge the batteries to full.

Because the internal backup battery is constantly charged from the main battery, the initial charging requires inserting the battery pack to the mobile computer and then seating the mobile computer in the cradle for charging. This will have both the main and backup batteries charged at the same time. To charge the backup battery, make sure that you slide the DIP switch inside the battery compartment to the ON position.

Note: For a new battery, make sure it is fully charged before use. Always prepare a spare battery pack, especially when you are on the road.

1.1.3 UNDERSTANDING THE BATTERY ICONS

The battery pack is the only power source for the mobile computer to work. It also charges the backup battery on the main board so that the data stored in SRAM can be retained properly. Therefore, when the main battery charge goes low (see below for battery status icon), you need to replace the battery pack with a charged one or charge it as soon as possible. Most of all, always save data before it is too late; you should backup important data on a regular basis.

BATTERY STATUS ICONS	DESCRIPTION	
	Main Battery	Main battery charge becomes low.
		Main battery charge becomes very low.
	Charging	Main battery is ready for charging.

Warning: Data loss may occur with SRAM during low battery condition. Always save data before running out of power or keep a fresh battery for replacement.

1.1.4 POWER MANAGEMENT

For any portable device, power management is a critical issue especially when you are on the road. Below are some tips to help you save battery power.

- ▶ To speed up charging the mobile computer, turn off the mobile computer and seat it in the cradle.
- ▶ Bring a second battery pack on the road.

- ▶ Stop wireless connectivity, Bluetooth, or 802.11b that is not in use. Refer to the Wireless Power Manager.
- ▶ To save power, go to **Start > Settings > Control Panel** and select **Display** (for backlight settings) or select **Power** (for power schemes).

Warning: Using backlight, wireless connectivity, and peripherals while on battery power will substantially reduce battery life.

START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE POWER ICON

- 1) In the Battery tab (left below), you can always monitor the charging status.



- 2) Tap the Schemes tab (right above).
- 3) Select the desired power scheme and options for suspending operation when not in use. The system can be set to three different states to conserve power:
 - ▶ User Idle state
 - ▶ System Idle state
 - ▶ Suspend state

The time choices represent the amount of time that must pass before the system will switch to the next power conservation state.

START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE DISPLAY ICON

To conserve more power, you may go to **Start > Settings > Control Panel** and double-tap the **Display** icon to configure the backlight setting. Refer to section 1.4.1 [Adjusting the Backlight](#).

1.2 MEMORY

▶ Read-only Memory (ROM)

128 megabytes flash memory for storing OS (Windows CE 5.0) and custom application programs. Yet a small portion of the memory is referred to as DiskOnChip, which can store data and programs that you wish to retain even after a hardware reset.

▶ Random-access Memory (RAM)

64 or 128 megabytes SDRAM for storing and running programs, as well as storing program data. Its contents will be retained by the backup battery.

▶ Expansion Slot

The mobile computer is equipped with one miniSD card slot, which is user accessible. You may upgrade memory by inserting an optional miniSD memory card.

1.2.1 CAUTION OF DATA LOSS

When the main battery is removed or drained, the backup battery on the main board is to retain the contents of SRAM and maintain the OS in suspend mode for at least 20 hours, on condition that the backup battery has already been fully charged.

If you want to put away the mobile computer for a couple of days, you should be aware that data loss occurs when both the main and backup batteries discharge completely. Therefore, it is necessary to backup data and files before putting away the mobile computer!

1.2.2 CHECKING THE STORAGE SPACE

START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE SYSTEM ICON

- 1) In the Memory tab (left below), it displays the current capacity and usage of the onboard SDRAM, 64 MB / 128 MB.
- 2) You may tap, hold, and drag the slider to re-allocate the memory.

SDRAM	STORAGE MEMORY (LEFT)	PROGRAM MEMORY (RIGHT)
64 MB / 128 MB onboard	It refers to the memory allocated for file and data storage.	It refers to the memory allocated for running programs.

(DESKTOP) MY DEVICE > DISKONCHIP

The DiskOnChip is part of the onboard 128 MB flash memory. Because the flash memory is non-volatile, data or programs stored in DiskOnChip will not be erased after a hardware reset.

Tap and hold the DiskOnChip icon to select Properties from the pop-up menu. In the Properties tab (right below), it displays the current capacity and usage of DiskOnChip.




START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE STORAGE MANAGER ICON

Here provides a tool for administrators to reformat the DiskOnChip folder or storage card (miniSD).

Warning: This tool is for the use of system administrators only. Everything on the storage device will be permanently erased after reformatting.

1.2.3 INSERTING THE MINISD CARD

If you wish to expand memory, follow these steps to insert a memory card into the miniSD card slot:

- 1) Press  for the mobile computer to enter suspend mode.
- 2) Place the mobile computer face down on a flat and clean surface.
- 3) Remove the side plate by unscrewing the two screws (on the right side when you place the mobile computer face down) as shown below.
- 4) Insert the miniSD card properly.
- 5) Replace the side plate and tighten the screws.

Warning: Make sure the mobile computer is set to Suspend mode; otherwise, it may cause damage to the mobile computer.

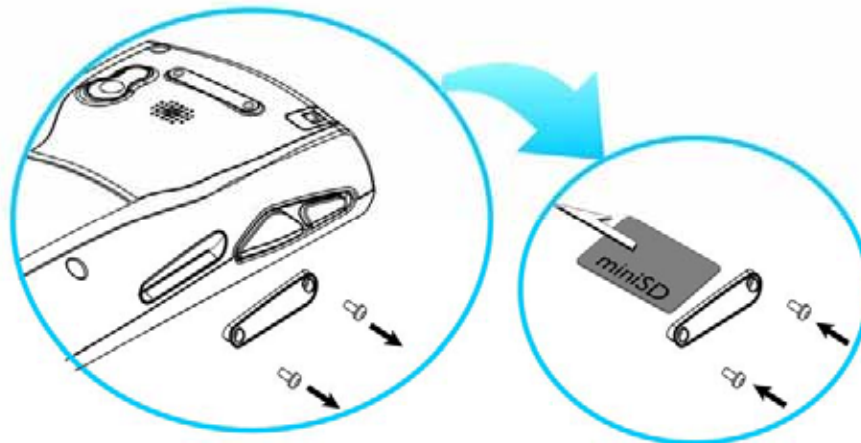


Figure 6: Inserting the miniSD Card

REMOVING THE MINISD CARD

If you wish to remove the miniSD card, simply push the card after removing the side plate. The miniSD card will be rejected automatically.

1.3 KEYPAD

Silicon rubber has been chosen for their durability and prompt feedback. The 28-key keypad includes alphanumeric, navigation, function keys, and so on. This keypad is set to numeric mode by default.

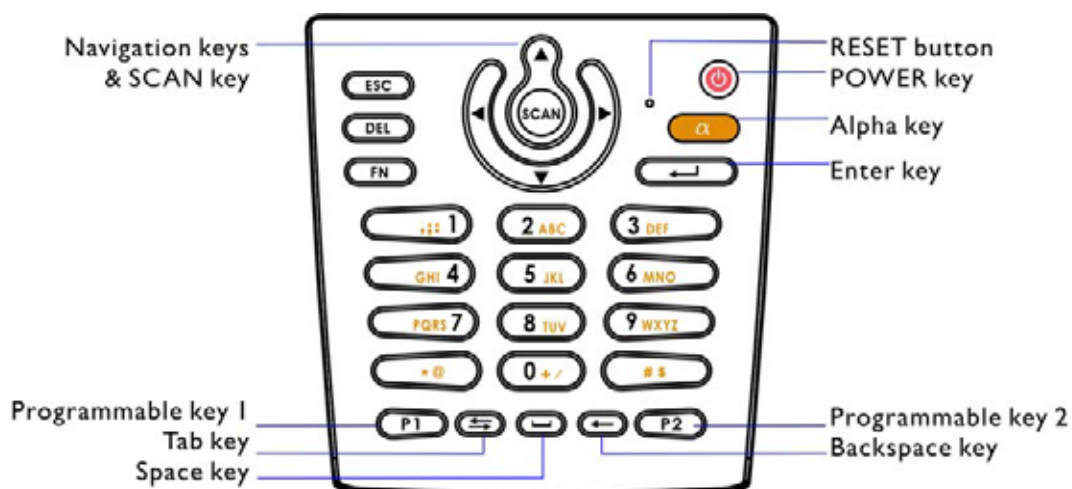


Figure 7: 28-key
Layout

Note: Functionality of keys is application-dependent.

1.3.1 USING THE KEYPAD

PRESS  FIRST, AND THEN 

The LED backlight of keypad is turned off by default. It can be toggled ON/OFF by the key combination: [Func] + [0].

START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE KEYBOARD ICON

The Character Repeat functionality is enabled by default. You may cancel the check box to disable it. When enabled, tap, hold, and drag the slider for a desired Repeat Delay and Repeat Rate.






Warning: It is suggested to turn on the keypad backlight while working in a dark area; however, using backlight while on battery power will substantially reduce battery life.

1.3.2 ALPHA KEY

This alphanumeric keypad is set to numeric mode by default. The Alpha key serves as a toggle among numeric, alpha (lower-case alphabetic), and ALPHA (upper-case alphabetic) input modes.

Note: It is not necessary to hold down the [Alpha] key.

The alpha icon will appear on the status bar in a sequence as shown below.

STATUS ICON	ALPHA KEY	INPUT MODE
	N/A	Numbers
	Press  one time	Small letters
	Press  two times	Capital letters

Note: If you are using the software keypad via SIP, tap CAP (Caps Lock) to toggle between upper case and lower case alphabetic modes.


1.3.3 FUNCTION KEY

The [Func] (function) key serves as a modifier key.

- 1) To enable this modifier key, press  on the keypad.











A circular icon of the letter "F" will appear on the status bar. This modifier key is hold down as long as the icon is displayed.



- 2) Now press another key to get the value of key combination (say, press [1] to get the value of F1). The icon will go off now.
- 3) To get the value of another key combination modified by the [Func] key, repeat the above steps.
- 4) To abort the key modification, press  again, and the icon will go off.

Note: It is not necessary to hold down the [Func] key.

The functionality of each key combination is application-dependent. Below is a list of the factory setting for a variety of key combinations.

KEY COMBINATION	ACTION
 , ▲	PgUp (red-coded): move text up one screenful
 , ▼	PgDn (red-coded): move text down one screenful
 , ◀	Home (red-coded): move to the beginning of screen or document
 , ▶	End (red-coded): move to the end of screen or document
 , 	Toggle ON/OFF the backlight of keypad only
 , 	Turn ON the backlight of LCD and decrease its luminosity
 , 	Turn ON the backlight of LCD and increase its luminosity

Note: Press the [Func] key first, and then press the second key for a specific function.

1.3.4 PROGRAMMABLE KEYS

Two user-definable keys, named P1 and P2, are provided on the keypad. Together with the SCAN key as well as the four side triggers on each side of the touch screen, they can be re-defined as another key or to serve as a shortcut key for launching a specific program.

Refer to the [Button Assignment Utility](#).

Note: By default, the four side triggers are programmed to serve as ENTER keys (upper ones) as well as SCAN keys (lower ones).

1.4 TOUCH SCREEN

The mobile computer comes with a 3.5" TFT graphic LCD, 320 by 240 pixels resolution (QVGA).

The LED backlight of screen, which helps ease reading under dim environments, can be controlled manually and automatically.

Warning: Using backlight while on battery power will substantially reduce battery life. It is suggested to dim the backlight while working in a well-lit area or automatically turn off the mobile computer when not in use.

1.4.1 ADJUSTING THE BACKLIGHT

PRESS  **FIRST, AND THEN** 

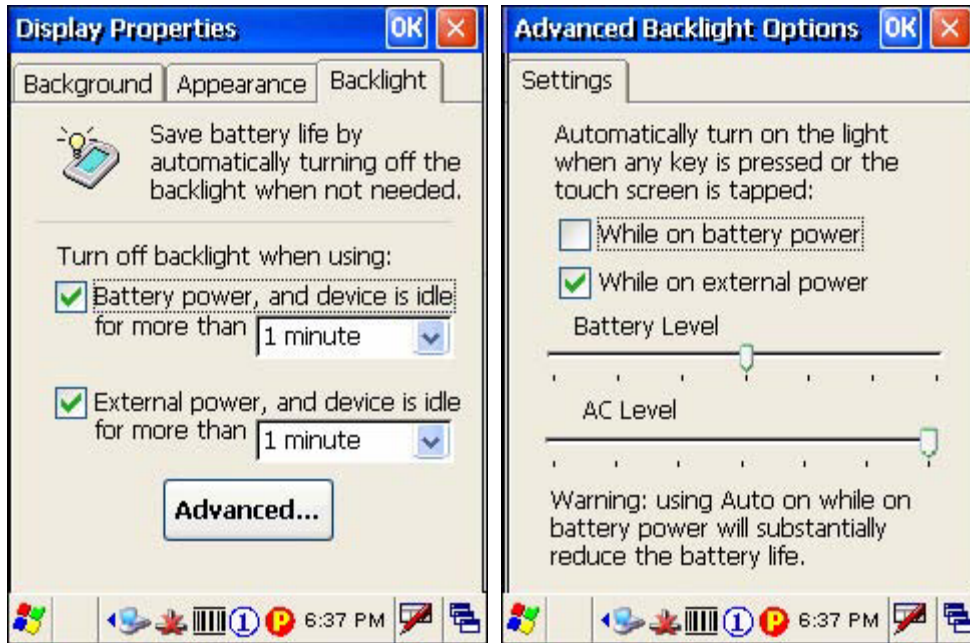
The LED backlight of the screen can be turned on and adjusted decreasingly by the key combination: [Func] + [-]. Keep pressing the key combination ([Func] first, and then [-]) until the luminosity is decreased to a desired level.

PRESS  **FIRST, AND THEN** 

The LED backlight of the screen can be turned on and adjusted increasingly by the key combination: [Func] + [.]. Keep pressing the key combination ([Func] first, and then [.]) until the luminosity is increased to a desired level.

START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE DISPLAY ICON

- 1) Tap the Backlight tab (left below).
- 2) Select one or both of the check boxes to automatically turn off the LCD backlight when using batteries or external power. From the appropriate list, select the amount of time the device should be idle before the backlight is turned off.



- 3) Tap the [Advanced] button (right above).
- 4) In the Settings tab, you can select the luminosity of backlight when it is set to be automatically turned on by pressing any key or tapping the screen. Tap, hold, and drag the slider for AC and battery powered respectively. For more luminosity, move the slider to the right.

1.4.2 RE-CALIBRATING THE SCREEN

This LCD is also a touch screen that can be calibrated through screen alignment.

START > SETTINGS > CONTROL PANEL AND DOUBLE-TAP THE STYLUS ICON

Tap the Calibration tab, and then tap the [Recalibrate] button.



Warning: DO NOT use any pointed or sharp objects to move against the surface of the screen.

1.5 NOTIFICATIONS

1.5.1 STATUS LED

The tri-color LED on top is used to provide information on the charging status or wireless power status.

TASKS	GREEN LED	RED LED	BLUE
Charging 9400	---	On	---

Charging done	On	---	---
Good Read	On	---	---
Bluetooth enabled	---	---	On

Note: The green LED is also used for "Good Read" while collecting data.

1.5.2 AUDIO

▶ Speaker

The mobile computer is integrated with a mono speaker, a low power transducer type, used for playing sounds applied to events in Windows and programs, as well as playing audio files such as .WAV files. In addition, it can be programmed for status feedback.

▶ Headset

A headset jack is provided, which is a 2.5 mm DIA stereo earphone jack with microphone input. Bluetooth headset is also supported.

1.5.3 VIBRATOR

The mobile computer is integrated with a vibrator, which is software programmable for feedback. This can be helpful when working in noisy environments.

1.6 DATA CAPTURE

1.6.1 BARCODE & RFID READER

A wide variety of scan engines is available for delivering flexibility to meet different requirements. Depending on the scan engine integrated (check the "Active Device" setting in ReaderConfig), the mobile computer is capable of scanning barcodes of a number of symbologies that are enabled by default. If you need to scan barcodes that are encoded in a different symbology, use the Reader Configuration Utility to enable the symbology first.

Refer to Appendixes for details on scan engine settings.

- ▶ [Appendix I – Scan Engine Settings](#) lists the symbologies and RFID tags supported.
- ▶ [Appendix II – CCD/Laser Scan Engine](#) provides information on the reader settings as well as symbology settings for the CCD or Laser scan engine.
- ▶ [Appendix III – 2D Scan Engine](#) provides information on the reader settings as well as symbology settings for the 2D scan engine.

Note: The mobile computer allows the co-existence of one integrated scan engine and the RFID reader.

1.6.2 DIGITAL CAMERA

An integrated 2 mega-pixel CMOS camera inside the computer is specifically designed for collecting image data. Refer to the Image Capture Utility.

1.7 COMMUNICATIONS


1.7.1 USING THE CRADLE

The cradle is designed for charging and communications at the same time.

- 1) Place the cradle on a flat and clean surface.
- 2) Connect the line of the power adaptor to the power jack on the back of the cradle.
- 3) Connect the power adaptor to a suitable power outlet.

- 4) The cradle is ready for charging.
- 5) Seat the mobile computer in the cradle.

If data communications are desired at the same time, you can establish a proper connection with a computer or remote host. For example, you may establish a USB connection for ActiveSync.

Make sure that you have Microsoft ActiveSync installed on your computer before you connect the USB cable from the cradle's USB device port () to your computer.

Refer to section 2.3 [Using ActiveSync](#).

UNDERSTANDING THE STATUS INDICATORS

TASKS	GREEN LED	RED LED	BLUE
Power ON	---	---	On
Charging Spare Battery	---	On	---
Charging Done	On	---	---

UNDERSTANDING THE COMMUNICATION PORTS

PORTS	PURPOSE
USB Device Port	This port is provided for connecting to your computer for establishing a connection for ActiveSync.
USB Host Port	This port is provided for connecting a USB device: <ul style="list-style-type: none"> ▶ Keyboard ▶ Mouse ▶ Card reader ▶ Storage device, such as a memory stick

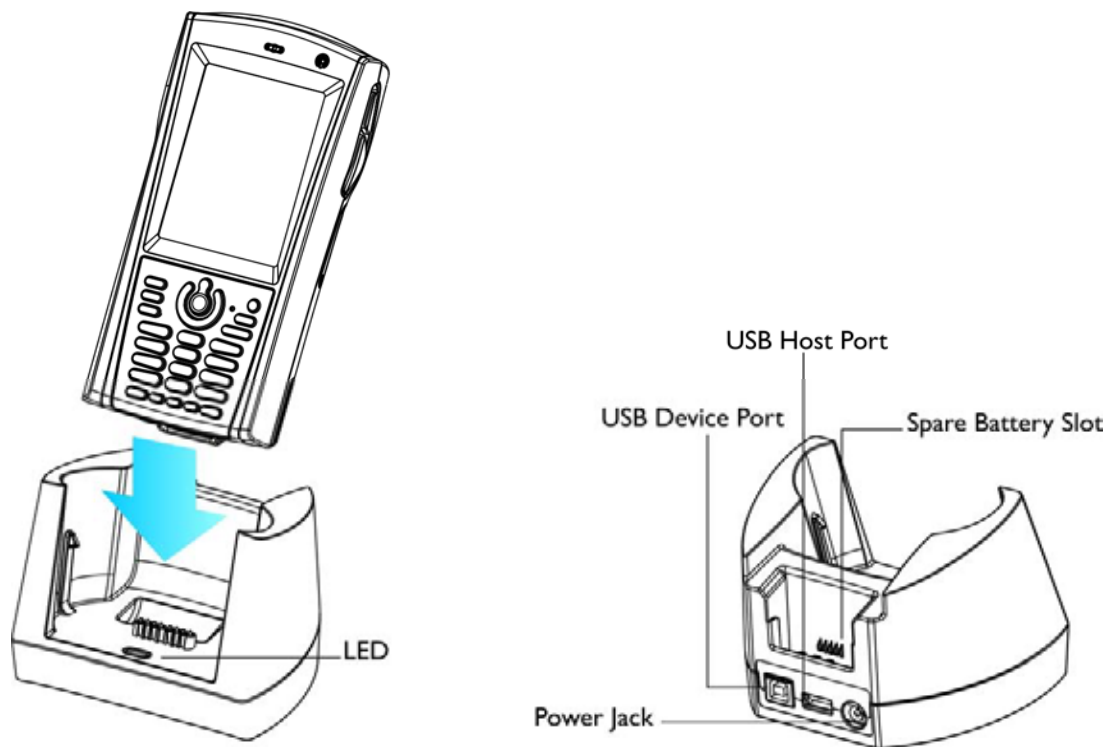



Figure 8:
Understanding the
Cradle

1.7.2 INSERTING THE SIM CARD

- 1) Press  for the mobile computer to enter suspend mode.
- 2) Hold the mobile computer still and remove the hand strap as well as the battery.
- 3) Use your finger to slide the locking plate towards its hinge to unlock the SIM card holder.

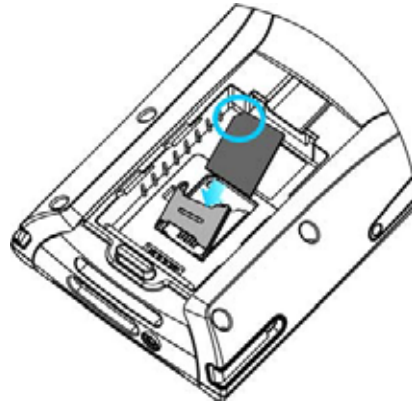


Figure 9: Inserting the SIM Card

4) Flip up the SIM card holder.

- 5) Insert the SIM card to the SIM card holder, using the card orientation shown below.
- 6) Push the SIM card holder down.
- 7) Slide the locking plate away from its hinge to secure the SIM card holder.

1.7.3 TURN OFF THE WIRELESS NETWORKS

The mobile computer supports state-of-the-art wireless technologies, Bluetooth and 802.11b/g, so that it is able to send/receive data in real time in an efficient way.

Refer to the associated utilities.

1.7.4 USING THE HEADSET



Connect the headset to the headset jack (2.5 mm DIA) at the bottom of the mobile computer. You can use the headset for audio playback or communication via Voice over IP (VoIP).

- ▶ Bluetooth headset is supported, bringing you the freedom of cordless mobility.


LEARNING WINDOWS CE BASICS


This chapter mainly describes the basic skills to work with the terminal. The add-on utilities for applications regarding data collection, processing, and transmission, are introduced in the following chapters.

The terminal is specifically designed for real-time data collection in the Windows CE 5.0 environment. It won't take long for any Windows user to get familiarized with it. Keep these basic skills in mind and explore this Windows CE device at ease.

- ▶ Double-tap an item to select it.
- ▶ Tap and hold an item to see a menu that enables tasks, such as cut, copy, rename, delete, etc.
- ▶ Tap and drag to select multiple items.
- ▶ Tap  or  on the toolbar to close an active window, a dialog box, or a running application.

If the button is not displayed, press  on the physical keypad.


- ▶ Tap  on the toolbar to save the current settings and exit the application (or minimize the window in some applications).

If the button is not displayed, press  on the physical keypad.

IN THIS CHAPTER

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2.1 GETTING STARTED

When the terminal is fully charged, you may remove it from the cradle. Then, press  to turn on the mobile computer and wait for the Windows CE desktop to come up. If you are using the mobile computer for the first time, there are a couple of things to do after the desktop comes up.

- ▶ To select your time zone and set the local time: **Start > Settings > Control Panel** and select **Date/Time**.
- ▶ To align the touch screen: **Start > Settings > Control Panel** and select **Stylus**.


SUSPEND MODE

Like your PDA, Pocket PC and most handheld devices, the terminal functions when it is turned on. This is because the Windows CE operating system eliminates the booting process and runs continuously.

- ▶ Turn On (= Resume from Suspend)

To turn on the mobile computer, simply press .

- ▶ Turn Off (= Suspend)

To turn off the mobile computer, press  again, or select Suspend from the Start Menu.

The system is now ready for use but not in use. This is referred to as Suspend mode or Standby mode. It means the system is in power-saving status and waiting for user interference.

Warning: To save battery power, it is suggested that the mobile computer is set to be automatically turned off when not in use. Refer to section 1.1.4 [Power Management](#) for more information about saving power.

2.1.1 DESKTOP

The desktop appears when the mobile computer is turned on (left below). Tap and hold anywhere blank on the screen to manage or configure the desktop (right below).



Alternatively, you may tap  to the right of the taskbar, and then select **Desktop**.



Note: To customize the desktop, tap anywhere blank on the desktop and select **Properties**.

When you turn on the mobile computer and seat it in the cradle for the first time, you will find these icons displayed on the taskbar. Refer to section 2.1.2 [Taskbar](#) for more information on the icons.

ICON	DESCRIPTION	SEE ALSO
	This icon shows that your cradle is directly connected to a computer via USB port. <ul style="list-style-type: none"> Make sure you have Microsoft ActiveSync installed on your computer. 	1.7.1 Using the Cradle 2.3 Using ActiveSync
	This icon shows that BTPAN1 is disabled.	3.1 Changing System Settings
	This icon is a shortcut to the Wireless Power Manager that controls the power to 802.11b/g modules.	4.1 Wireless Power Manager
	This icon shows that the main battery is ready for charging. For information on charging status, refer to the LEDs on the mobile computer as well as on the cradle.	1.1.3 Understanding the Battery Icons
	This icon shows that numeric mode is in use for data input via keypad.	1.3.4 Alpha Key




















2.1.2 TASKBAR





The taskbar is at the bottom of the screen for displaying the **Start** button, status icons for various connections or programs, **SIP** button, **Switch Task** button, etc.



Note: To configure different connections, go to **Start > Settings** and select **Network and Dial-up Connections**.

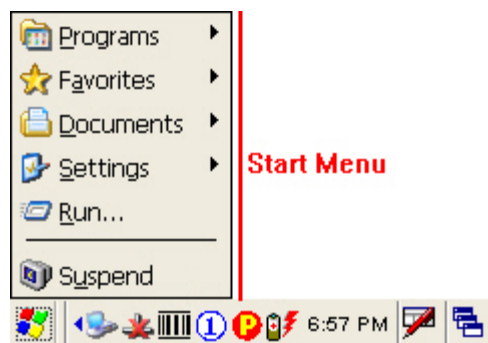
UNDERSTANDING THE ICONS ON THE TASKBAR

ICON	DESCRIPTION	SEE ALSO
	The USB connection for ActiveSync operation is successfully established. <ul style="list-style-type: none"> ▶ Double-tap it to view status. Tap [Disconnect] if necessary. 	3.2.1 USB Connection (via cradle)
	The Bluetooth PAN connection fails. (= disconnected)	3.2.4 BTPAN
	The Bluetooth PAN connection is successfully established through the Bluetooth Manager utility. <ul style="list-style-type: none"> ▶ Double-tap it to view or renew IP Information. 	
	It provides control of the power to the 802.11b/g modules. <ul style="list-style-type: none"> ▶ Double-tap any of these icons to configure the power setting. 	4.1 Wireless Power Manager
	It indicates the Wi-Fi module (802.11b) is enabled. <ul style="list-style-type: none"> ▶ See WLAN1 status icons   below. 	
	The Wi-Fi connection fails. (= disconnected) <ul style="list-style-type: none"> ▶ Double-tap it to access the Wireless Information tab for establishing a new connection. 	
	The Wi-Fi connection is successfully established. <ul style="list-style-type: none"> ▶ Double-tap it to view or renew IP & Wireless Information. 	3.2.3 WLAN
	It provides access to the Bluetooth services. <ul style="list-style-type: none"> ▶ Initially, you need to go to Start > Programs > BTManager to open the Bluetooth Manager so that this icon will appear on the taskbar. 	4.2 Bluetooth Manager
	It provides access to the Reader Configuration Utility. <ul style="list-style-type: none"> ▶ Initially, you need to double -tap the ReaderConfig shortcut on the desktop so that this icon will appear on the taskbar. 	
	Tap it to change the input method.	Software Input Panel (SIP)
	Tap it to switch to desktop or any task, such as a running program or window.	Switch Task
	It indicates the battery status. The other icons are     .	1.1.3 Understanding the Battery icons

	It indicates the current input mode of keypad. The other icons are   .	1.3.4 Alpha Key
	It indicates the modifier key is enabled. (= function mode)	1.3.5 Function Key

2.1.3 START MENU

Tap the **Start** button on the taskbar to open the **Start Menu**.



OPTIONS	DESCRIPTION
Programs	Provides access to available programs in the directory: \Windows\Programs
Favorites	Provides access to your favorites in the directory: \Windows\Favorites
Documents	Provides access to recent opened documents in the directory: \Windows\Recent
Settings	Provides access to <ul style="list-style-type: none"> ▶ Control Panel ▶ Network and Dial-up Connections ▶ Taskbar and Start Menu
Run...	Runs a program or application.
Suspend	Enters the Suspend mode.

Note: To configure the Start menu and taskbar, go to **Start > Settings** and select **Taskbar and Start Menu**.

2.1.4 INPUT METHODS

Data entry can be performed by the following methods:

- ▶ Type with the physical keypad.
- ▶ Scan barcode or RFID tag in applications, e.g. WordPad, CipherLab's Application Generator, etc.
- ▶ Tap or write using SIP (Soft Input Panel)

USING THE SOFT INPUT PANEL (SIP)

Tap the SIP button on the taskbar to select a SIP mode or hide the input panel.



In each mode, the characters appear as typed text on the screen.

OPTIONS	DESCRIPTION
Keyboard	To type using the virtual keyboard.
Transcriber	To write freely on the screen in applications, such as WordPad, Inbox, etc.

2.2 FINDING OUT THE CAPABILITIES OF YOUR MOBILE COMPUTER

- 1) Go to **Start > Settings > Control Panel** and select **System** to obtain essential system information.
- 2) Select the Device Name tab to change the identification for the mobile computer.

DEVICE CONFIGURATION CODE

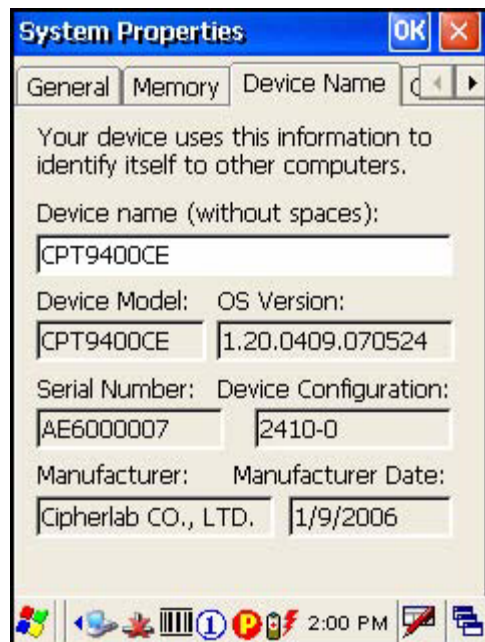
The device configuration of terminal is displayed in 5 digits: xxxx-x

Take the screenshot of System Properties below for example. Its device configuration is "2410-0", which means the 28-key mobile computer has equipped with the following parts:

- ▶ A scan engine that employs Laser scan engine
- ▶ Integrated Bluetooth and Wi-Fi modules module
- ▶ An RFID reader

DEVICE CODE	MODULAR COMPONENT	TYPES
1st digit	Reader module	0= none 1= CCD scan engine 2= Laser scan engine 3= 2D scan engine
2nd digit	Wireless module	4= Bluetooth + 802.11 b/g 5= Bluetooth only

3rd digit	RFID module	0= none 1= RFID reader
4th digit	Reserved	---
5th digit	Keypad module	0= 28-key



2.3 USING ACTIVESYNC


ActiveSync is used to synchronize information between the terminal and your desktop computer, to install programs on the mobile computer, and to backup and restore the mobile computer.

The Microsoft ActiveSync program has to be installed on your desktop computer first.

- ▶ To download the up-to-date version of the program, you may need to go to Microsoft's official web site for Windows Mobile devices as shown below.
<http://www.microsoft.com/windowsmobile/default.mspx>
- ▶ After downloading and installation, run the program. For detailed information on the program, you may click the Help menu, and then select the Microsoft ActiveSync Help.

2.3.1 SYNCHRONIZATION WITH YOUR COMPUTER

- 1) Follow these instructions for initial ActiveSync operation:

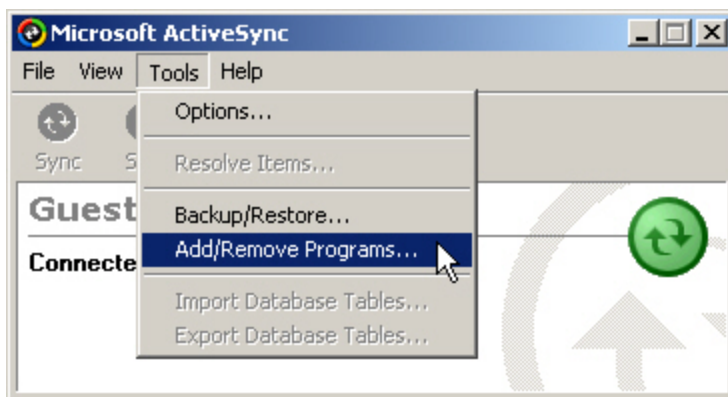
- ▶ Connect the USB cable from the cradle's USB device port () to your computer.
 - ▶ Connect the power cable from the cradle to a nearby power outlet.
 - ▶ Turn on the mobile computer and seat it in the cradle.
- 2) Your computer will automatically detect the USB device. Click [OK] when the connection is established.
 - 3) Select which partnership to set up. If you want to synchronize data between the mobile computer and your personal computer, select Standard Partnership; otherwise, select Guest Partnership.
 - 4) Wait a few seconds for the mobile computer to get connected (and synchronized if a Standard Partnership is selected).

Note: (1) For ActiveSync via Bluetooth, refer to the Bluetooth Manager.
(2) We recommend that you have ActiveSync 3.7.1 installed on your computer because ActiveSync 4.x does not officially support Windows CE 5.0 devices.

2.3.2 ADD/REMOVE PROGRAMS

Click [Add/Remove Programs] from the Tools Menu so that you can proceed to install a program that is designed to be used on a mobile device running Windows CE.

If a user program is no longer desired, you may remove it from the system. Click [Add/Remove Programs] from the Tools Menu so that you can proceed to un-install a program that is designed to be used on a mobile device running Windows CE.



ALTERNATIVE TO INSTALL NEW PROGRAMS (COPY & PASTE)

Alternatively, you may install a new program manually.

- 1) When connected, open the Microsoft ActiveSync window on your desktop computer.
- 2) Click the Explorer button from the toolbar.
- 3) Navigate to the target folder, e.g. the Programs folder, depending on where you wish to access the program.
- 4) Navigate through file folders on your computer to find the new program (.CAB, .EXE, etc.)
- 5) Right-click the program and select [copy] from the pop-up menu.
- 6) Back to the target folder in step 3.
Right-click anywhere blank and select [Paste] from the pop-up menu.
- 7) On the mobile computer, go to **Start > Programs** and the new program will appear.

ALTERNATIVE TO REMOVE PROGRAMS (CONTROL PANEL)

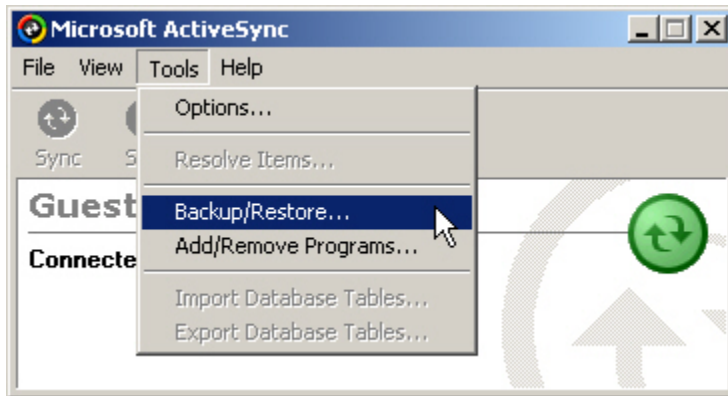
Alternatively, you may un-install a new program manually.

- 1) Go to **Start > Settings > Control Panel** and select **Remove Programs**.
- 2) Tap the name of the program that you want to delete.
- 3) Tap [Remove].
- 4) Tap [Yes] to un-install the program.

Note: If the program does not appear in the list of installed programs, you may use Windows Explorer to locate it. Tap and hold the program to select [Delete] from the pop-up menu.

2.3.3 BACKUP/RESTORE

To best protect your work, you should regularly back up information on your mobile computer. You can perform a backup by during the ActiveSync operation. The backup file is stored on your desktop computer.



2.4 MANAGING PROGRAMS

2.4.1 QUICK LAUNCH A PROGRAM

Tap the **Start** button to view the **Start Menu**. To quick launch a program, tap it from the Programs folder.

Note: Alternatively, you may tap **Start** and select **Run** to run a specific program or open a document.



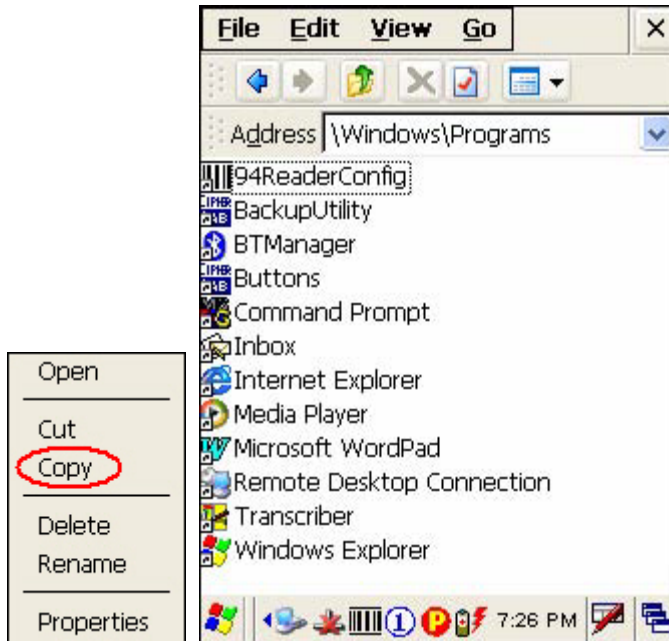
If you wish to quick launch a new program, add it to the Programs folder: **My Device \ Windows \ Programs**. The program will become available in the **Start Menu**. To add a new program or subfolder to the Programs folder, you can either use **Windows Explorer** or **ActiveSync**.

- ▶ Windows Explorer: to move the program by [Copy] and [Paste Shortcut].
- ▶ ActiveSync on the desktop computer: to create a shortcut to the program, and place the shortcut in the Programs folder.

Warning: To avoid making any changes to the program configurations by accident, we recommend you to use [Copy] and [Paste Shortcut] rather than [Cut] and [Paste].

USING WINDOWS EXPLORER TO ADD A PROGRAM TO START MENU

- 1) Go to **Start > Programs** and select **Windows Explorer**.
- 2) Navigate through file folders to find the program you desire.
- 3) Tap and hold the program to select [Copy] from the pop-up menu (left below).



- 4) Navigate to the Programs folder – **My Device\Windows\Programs** (right above).
- 5) Tap and hold anywhere blank on the screen to select [Paste Shortcut] from the pop-up menu. The new program will be added to the Programs folder.

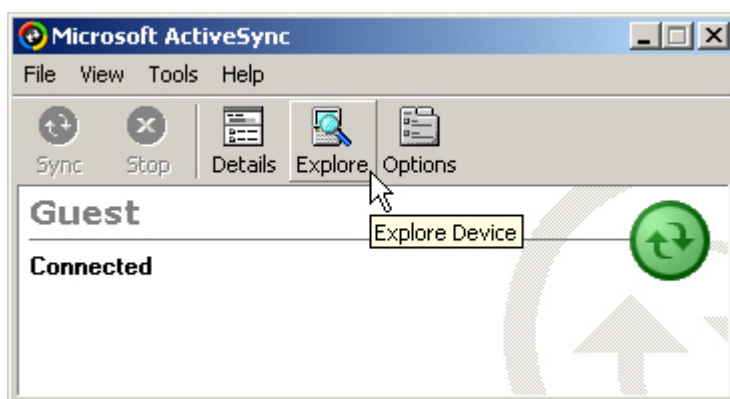


- 6) Go to **Start > Programs** and the new program will appear now.

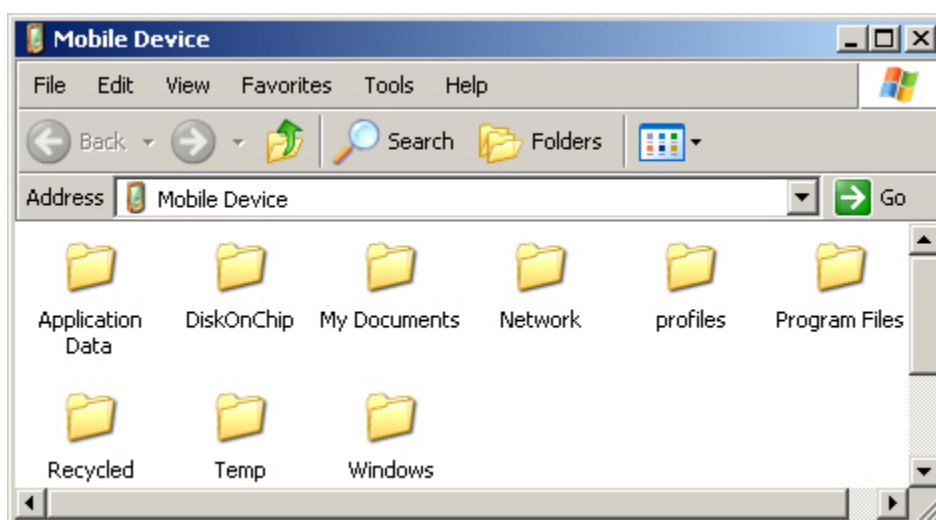
USING ACTIVESYNC TO ADD A PROGRAM TO START MENU

- 1) When connected, open the Microsoft ActiveSync window on your desktop computer.

- 2) Click the Explorer button from the toolbar.



- 3) Navigate through file folders to find the program you desire.



- 4) Right-click the program and select [Create Shortcut] from the pop-up menu.
- 5) Right-click the shortcut and select [Cut] from the pop-up menu.
- 6) Navigate to the Programs folder – **My Device\Windows\Programs**.
- 7) Right-click anywhere blank on the window and select [Paste] from the pop-up menu. The new program will be added to the Programs folder.
- 8) On the mobile computer, go to **Start > Programs** and the new program will appear now.

Note: [Create Shortcut], [Cut], and [Paste]: The same result can be performed by [Copy] and [Paste Shortcut].

2.4.2 CREATE A FOLDER

USING WINDOWS EXPLORER TO ADD A NEW FOLDER

- 1) Go to **Start > Programs** and select **Windows Explorer**.
- 2) Navigate through file folders to find where you wish to create a new folder.
- 3) Right-click anywhere blank on the window and select [New Folder] from the pop-up menu.

A subfolder will be created.

USING ACTIVESYNC TO ADD A NEW FOLDER

- 1) When connected, open the Microsoft ActiveSync window on your desktop computer.
- 2) Click the Explorer button from the toolbar.
- 3) Navigate to the target folder where you wish to create a new folder.
- 4) Right-click anywhere blank on the window and select [New Folder] from the pop-up menu.

A subfolder will be created.

2.4.3 SWITCH AMONG PROGRAMS AND DESKTOP

Tap  to the right of the taskbar and select a running program.

2.4.4 EXIT A PROGRAM

In general, the system manages memory automatically, and there is no need to exit a program in order to open another or to conserve memory. However, random access memory (SDRAM) may be used up when running too many programs. As a result, it will slow down the operation or cause program errors. In that case, you should stop one or more running programs to free memory.

In order to use memory in a more efficient way, you are recommended to exit a program when it is not desired any longer.

Warning: Always remember to save data or settings before you exit a program.
