CipherLab
Reference Manual

TERMINAL

9600

CIPHERLAB CO., LTD.
Website: http://www.cipherlab.com

IMPORTANT NOTICES

FOR USA

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.

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.

FOR CANADA

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Classe B prescrites dans la norme sur le material brouilleur: "Appareils Numeriques," NMB-003 edictee par l'Industrie.

FOR PRODUCT WITH LASER

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 ent emits FDA / IEC Class 2 laser light at the exit port. Do not stare into b

SAFETY PRECAUTIONS

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

- The maximum level of Specific Absorption Rate (SAR) measured is 0.211 W/kg.
- 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.
- DO NOT disassemble, incinerate or short circuit the battery.
- DO NOT expose the scanner or the battery to any flammable sources.
- For green-environment issue, it's important that batteries should be recycled in a proper way.
- Under no circumstances, internal components are self-serviceable.
- The charging and communication cradle uses an AC power adaptor. A socket outlet shall be installed near the equipment and shall be easily accessible. Make sure there is stable power supply for the TERMINAL or its peripherals to operate properly.

CARE & MAINTENANCE

- This TERMINAL is intended for industrial use. The TERMINAL is rated IP 64, however, it may do damage to the TERMINAL when being exposed to extreme temperatures or soaked wet.
- When the body of the TERMINAL 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.
- If you want to put away the TERMINAL for a period of time, download the collected data to a host computer, and then take out the battery pack. Store the TERMINAL and battery pack separately.
- When the TERMINAL resumes its work, the main and backup batteries will take a certain time to become fully charged.
- If you shall find the TERMINAL malfunctioning, write down the specific scenario and consult your local sales representative.

RELEASE NOTES

Version	Date	Notes
1.00b	Sep. 21, 2009	
1.00a	Sep. 14, 2009	Initial release

INTRODUCTION

9600 TERMINAL, running Windows CE 6.0 in palm size, is our new product line of rugged PDA-style TERMINAL. 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, 9600 TERMINAL provides rich options of data collection, voice and data communications, long-lasting working hours, and so on. Its large color transflective TFT display guarantees ease in reading in all lighting conditions. Integrated with Bluetooth and 802.11b/g technologies, you may choose to add the GPRS module to gain greater speeds and optimal mobility. In particular, an integrated GPS receiver is made available for use with third-party location-based applications.
This manual serves to guide you through how to install, configure, and operate the TERMINAL. The Care & Maintenance section is specifically prepared for those who are in charge of taking care of the TERMINAL.
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!

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 6.0 operating system, 520 MHz Intel PXA270 processor
- 1 GB NAND flash memory to store OS and software programs

  (part of the free space is used as a storage card called DiskOnChip)

- 128 MB SDRAM to store and run programs, as well as store program data
- One microSD expansion slot for memory card
- Dual mode support — One scan engine (integrated barcode scanner/imager) plus one RFID reader
- Ambidextrous side triggers
- Total wireless solution — connectivity includes Bluetooth, 802.11b/g and /EDGE GPRS
- A 3.5" color transflective TFT display delivers excellent visibility in all lighting conditions
- Programmable feedback includes buzzer, speaker and vibrator
- Built-in power tools include Reader Configuration Utility, Backup Utility, etc.
- Quick link to any backend database through MIRROR Emulator programs for VT100/220 and IBM 5250 emulation
- Easy customization of data collection applications through FORGE Application Generator (AG) programs (AG*.exe for desktop PC)
- Programming support includes Reader DLL and System APIs
- 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 TERMINAL.

- 9600 TERMINAL
- Rechargeable Li-ion battery pack
- Stylus
- Hand Strap
- USB charging & communication cable
- Universal power adaptor
- Product CD
- Quick Guide

ACCESSORIES

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

- Belt Holster
- Protective Cover
- Spare rechargeable Li-ion battery
- USB host cable (for connecting external USB device)
- Charging & Communication Cradle

QUICK START

OVERVIEW

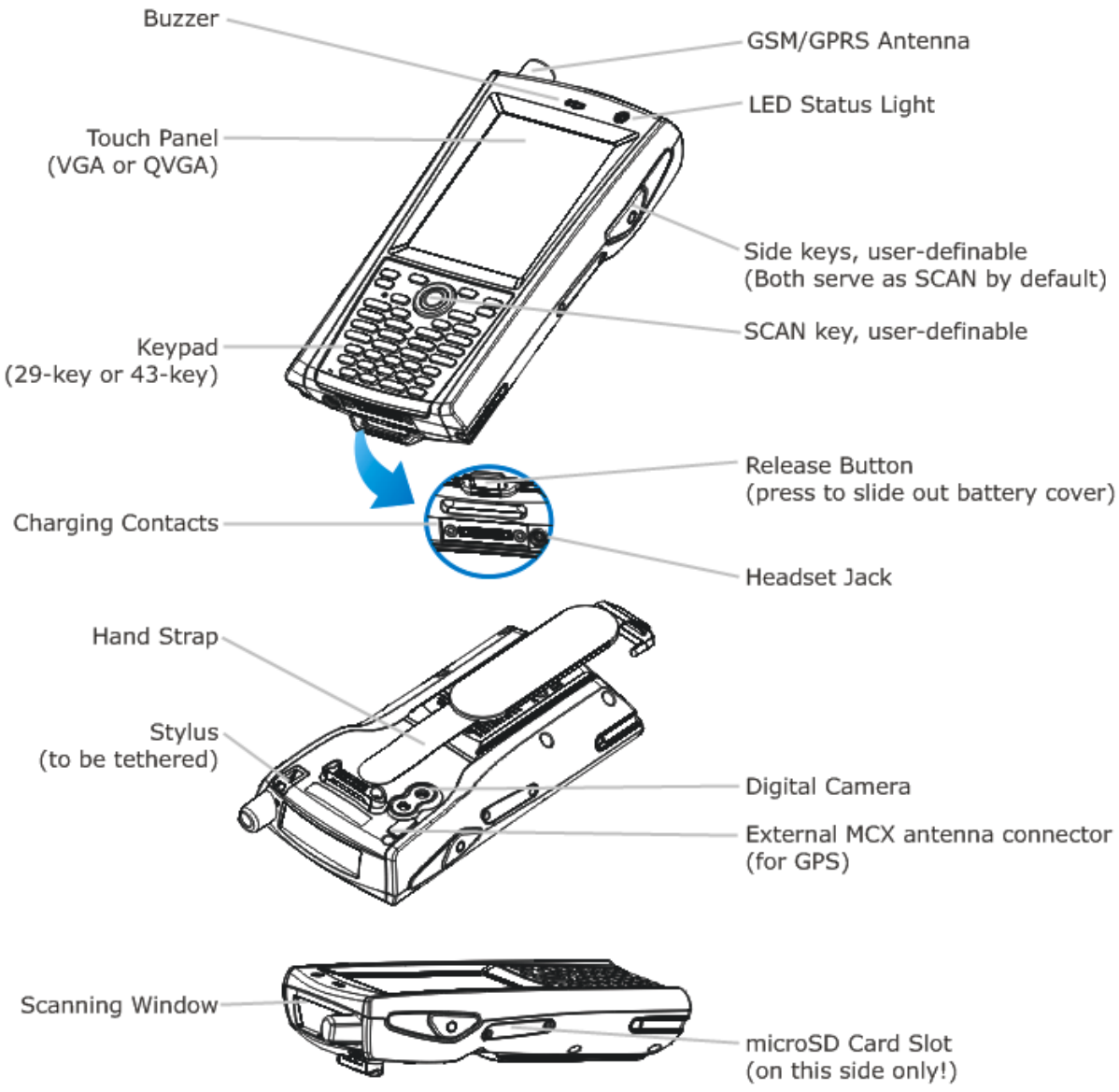

Figure 1: Overview

INSTALLING HAND STRAP

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

Warning: Always make sure the hand strap is well hooked and attached before use.

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

1) Place the TERMINAL face down on a flat and clean surface.
2) Insert the free end of the strap through the slit and adhere to the strap itself.
3) Hook the other end of the hand strap to the bottom.
4) Make sure the hand strap is securely installed to the TERMINAL.
5) Adjust the length of the hand strap to suit your handbreadth.

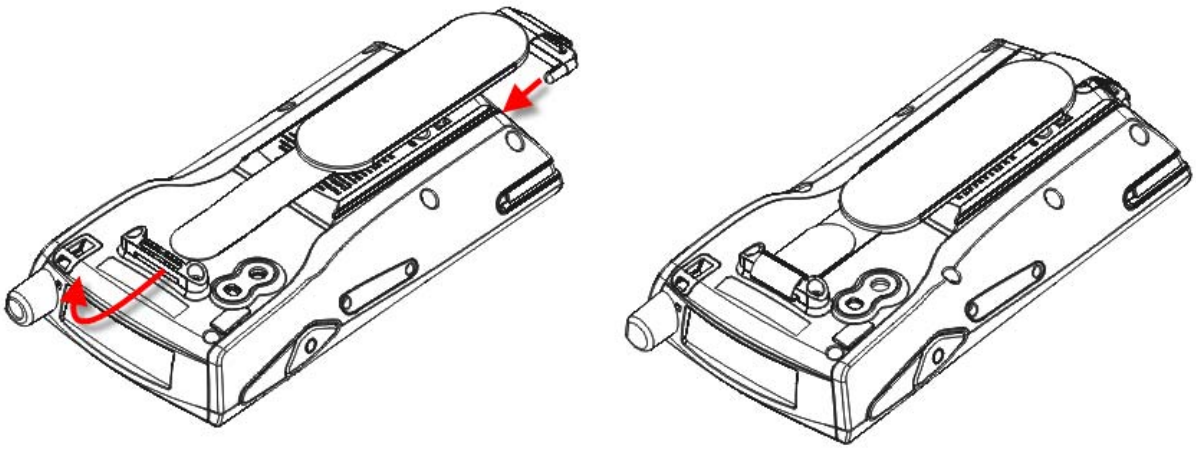

Figure 2: Installing the Hand Strap

INSERTING MEMORY CARD

If you wish to expand memory, follow these steps to insert your memory card (microSD or microSDHC) to the SD card slot:

1) Press  for the TERMINAL to enter suspend mode.
2) Place the TERMINAL 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 TERMINAL face down) as shown below.
4) Insert the memory card with contacts facing down. Use the stylus to push it into the slot until you hear a click.

5) Replace the side plate and tighten the screws.

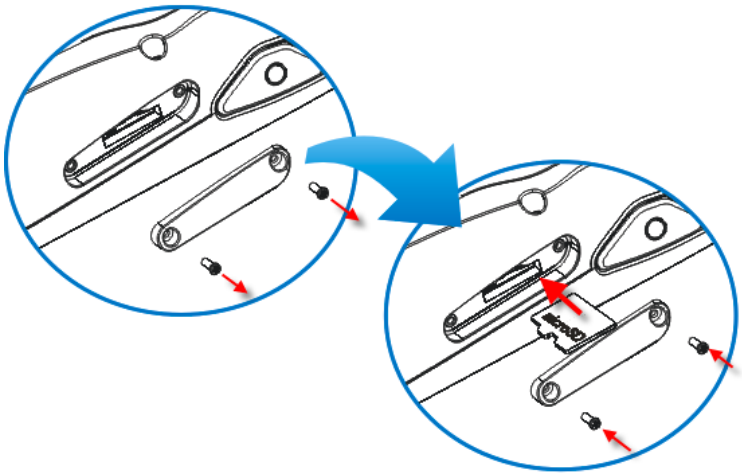

Figure 3: Inserting the microSD Card

REMOVING MEMORY CARD

If you wish to remove the memory card, simply use the stylus to push the card after removing the side plate. It will be rejected automatically. However, you need to use a pair of needle-nose pliers to fetch it out.

INSERTING SIM CARD

1) Press  for the TERMINAL to enter suspend mode.
2) Hold the TERMINAL 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.
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.

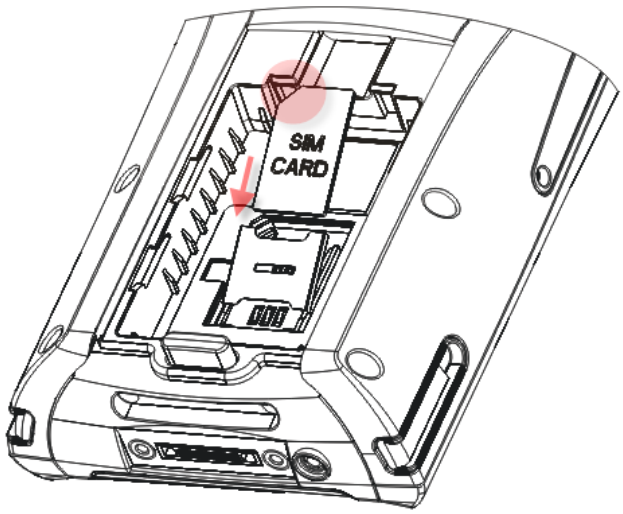

Figure 4: Inserting SIM Card

CONNECTING HEADSET

Connect the headset to the headset jack (2.5 mm DIA) at the bottom of the TERMINAL. You can use the headset for audio playback or communication via _Dialer, Messenger, etc.

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

INSTALLING 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 TERMINAL 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) Remove the hand strap.
2) Hold the TERMINAL still and press the release button to unlock the battery cover.
3) Slide off the battery cover.
4) 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.
5) 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.
6) Slide the battery cover back onto the TERMINAL until it clicks into place.
7) If the battery is charged, the TERMINAL turns on. If the TERMINAL does not turn on, charge the battery.

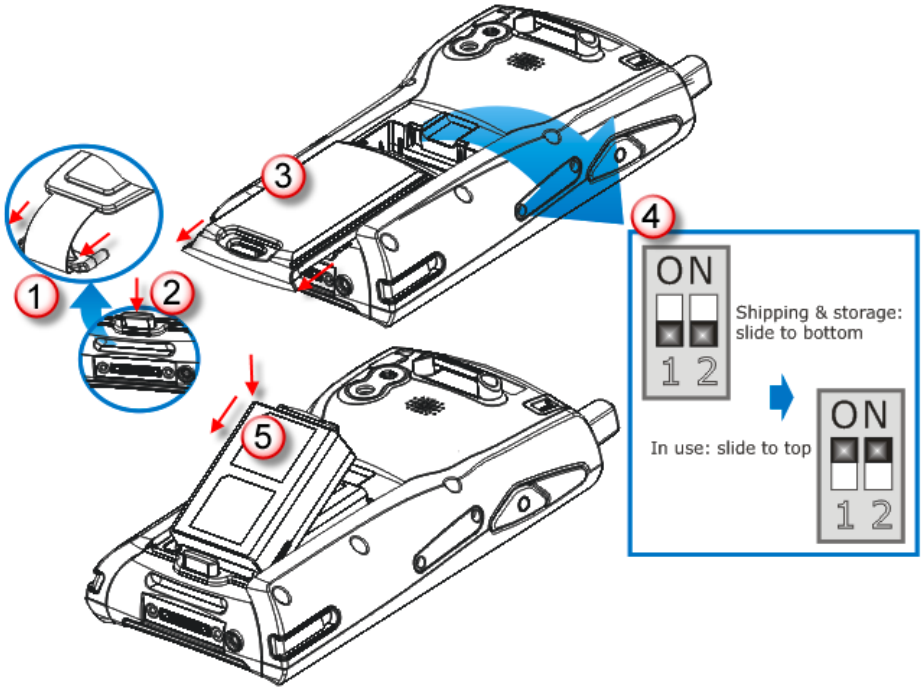

Figure 5: Installing the Main Battery

CHARGING & COMMUNICATIONS

The main and backup batteries may not be charged to full for shipment. When you first receive the package, you will need to charge the main battery to full before using the TERMINAL. Instead of direct charging, you may use a cradle or charger to charge the TERMINAL or spare batteries.

Note: For initial charging, it takes approximately 8 hours to fully charge the main battery. After the initial charging, it takes only 4 hours to charge the main battery to full.

Warning: It is recommended that the charging devices be operated at room temperature (18°C to 25°C) for optimal performance. The charging devices will not charge the battery when the temperature exceeds 40°C.

Because the internal backup battery is constantly charged from the main battery, the initial charging requires inserting the battery pack to the TERMINAL and then connecting the TERMINAL for direct charging or via cradle. This will have both the main and backup batteries charged at the same time. It takes at least 48 hours to fully charge the backup battery. However, it is not necessary to fully charge the backup battery for the TERMINAL to work.

Note: (1) To charge the backup battery, make sure that you slide the DIP switch inside the battery compartment to the ON position.
(2) In order to charge the backup battery to full, you must insert the main battery and leave it for at least 48 hours, whether the TERMINAL is in use or not.

USING WIRELESS NETWORKS

The TERMINAL 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. You may choose to have the GPRS module embedded for a total wireless solution for data and voice communications. Refer to the associated utilities.

USING CABLE

1) Connect the USB charging & communication cable.

Note: Tighten the two screw-in connectors to secure the cable.

2) Join the power supply cord to the power receptacle on the cable connector.
3) Connect the other end of the power cord to a suitable power outlet.

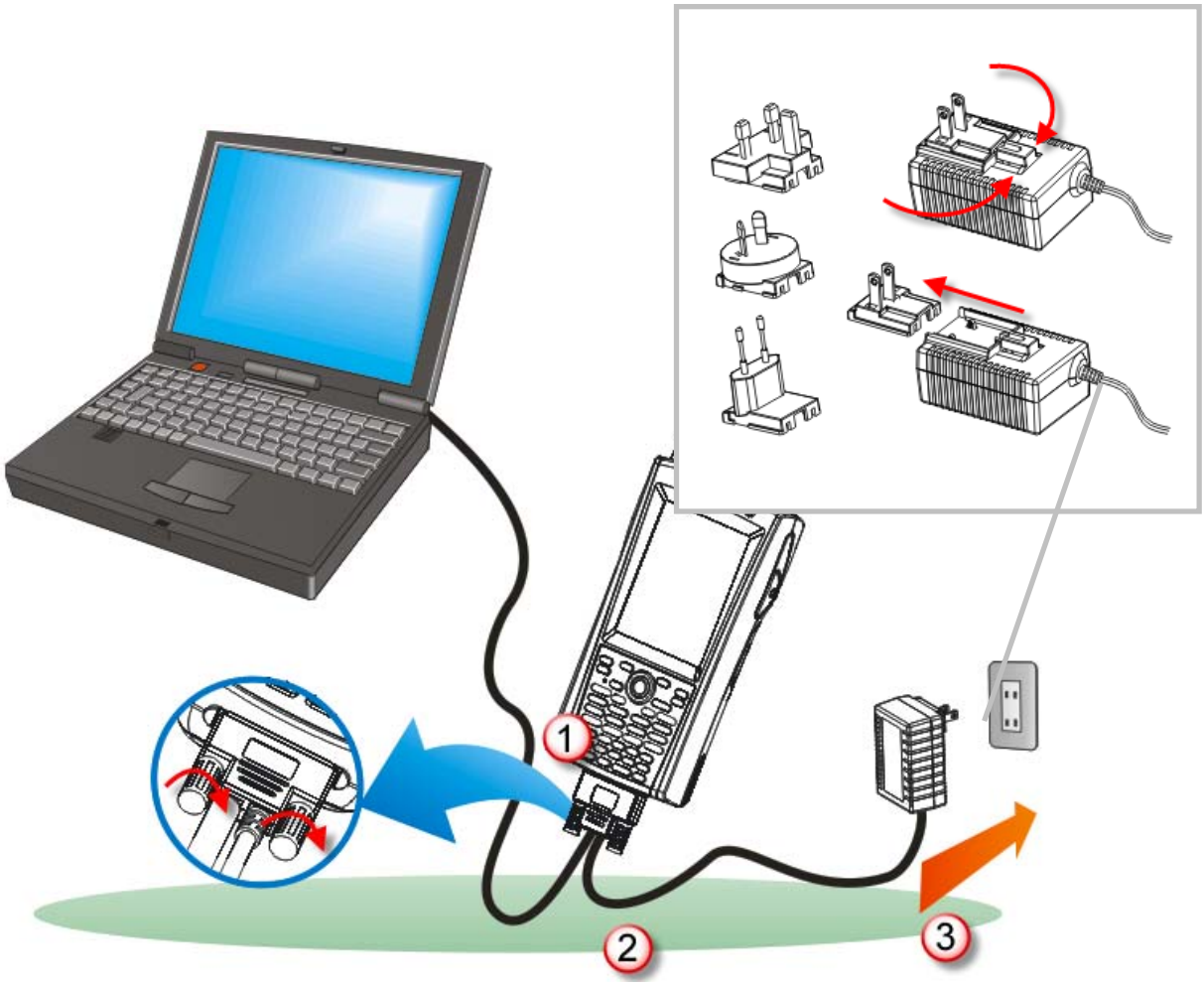

Figure 6: Using Cable

USING CRADLE

1) Seat the TERMINAL in the cradle.
2) Connect the power supply cord to the power receptacle on the cradle.
3) Connect the other end of the power cord to a suitable power outlet.
4) Connect the USB charging & communication cable if data transmission is required. Refer to Using ActiveSync.

Note: Make sure that you have Microsoft ActiveSync installed on your computer before you connect the cable from the cradle to your computer.

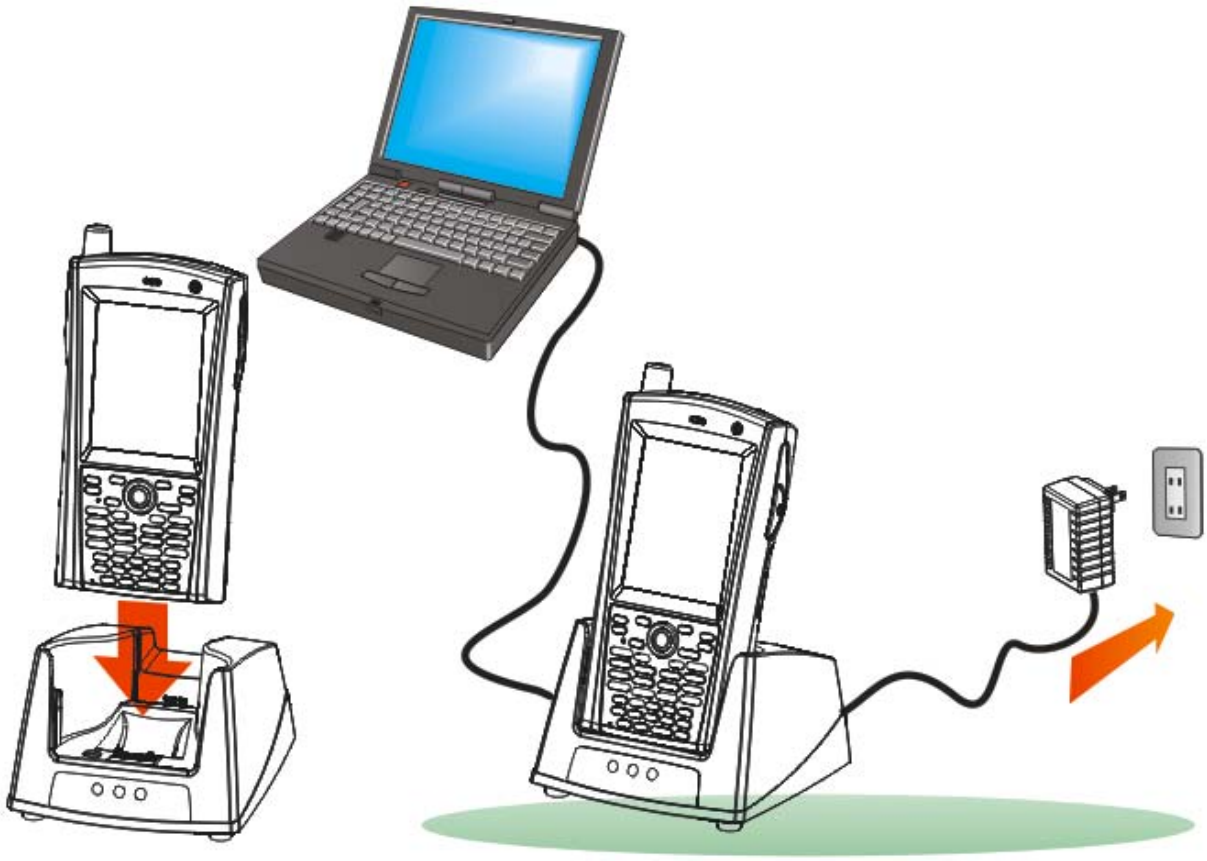

Figure 7: Using Cradle

Chapter 1

USING 9600 TERMINAL

This chapter explains the features and usage of 9600 TERMINAL.

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錯誤! 找不到參照來源。 .....錯誤! 尚未定義書籤。

1.1 BATTERY

- Main Battery

  9600 TERMINAL is powered by a rechargeable 3.7 V/2700 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 TERMINAL 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/80 mAh rechargeable Lithium button cell helps retain data in SRAM and maintain the system running in suspend mode for at least 24 hours without the main battery. In the meantime, you have to replace the main battery as soon as possible.

Warning:	The battery cover must be in position; otherwise, the TERMINAL cannot turn on. 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.

1.1.1 UNDERSTANDING THE BATTERY ICONS

The battery pack is the only power source for the TERMINAL 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, you need to replace the battery pack with a charged one or charge it as soon as possible. Most of all, you should backup important data on a regular basis.
By looking at the battery icon, you can tell battery charge remaining in the main battery – the higher the green level, the more power in the main battery. Double-tap a battery icon so that you can quickly access the [Power Properties] dialog box.

Battery Icons	Description
	External power source is connected and main battery is charging
	External power source is connected but main battery needs no charging
	Main battery level 100% ~ 80%
	Main battery level 79% ~ 60%
	Main battery level 59% ~ 40%
	Main battery level 39% ~ 31%
	Main battery charge becomes low (30% ~ 15%) and needs charging
	Main battery charge becomes very low (14% ~) and needs charging immediately
	Backup battery charge becomes low and needs charging.
	Backup battery charge becomes very low and needs charging immediately.

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.

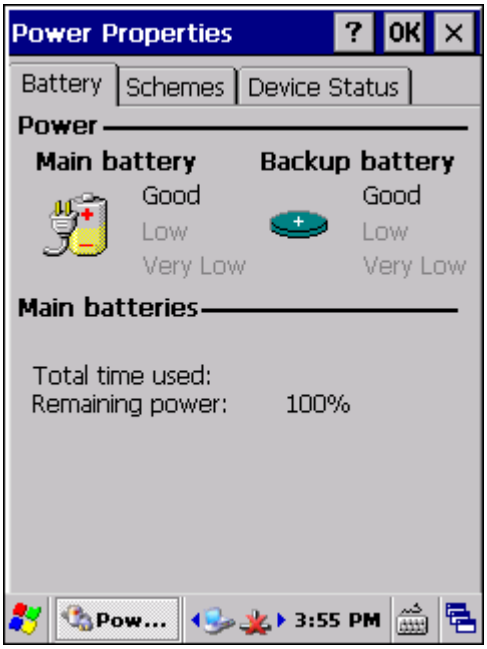
1.1.2 POWER MANAGEMENT

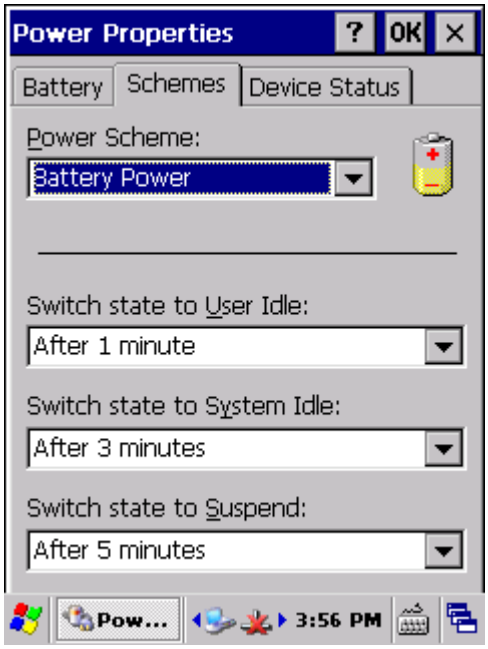
For any portable device, power management is a critical issue especially when you are on the road. Below are some tips to help you save battery power.

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

- Bring a second battery pack on the road.
- Stop wireless connectivity, Bluetooth, 802.11b/g or GPRS that is not in use.
- Go to **Start** | **Settings** | **Control Panel** and double-tap the **Display** icon. Refer to 1.4.1 Adjusting the Backlight.
- Go to **Start** | **Settings** | **Control Panel** and double-tap the **Power** icon. (below)

  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.

1.2 MEMORY

- Read-only Memory (ROM)

  1 GB flash memory for storing OS (Windows CE 6.0) and custom application programs. Yet a portion of the memory is referred to as DiskOnChip, which can store data and programs that you wish to retain even after hardware reset.

- Random-access Memory (RAM)

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

- Expansion Slot

  The TERMINAL is equipped with one microSD card slot, which is user accessible. You may upgrade memory by inserting an optional microSD 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 24 hours, on condition that the backup battery has already been fully charged.
If you want to put away the TERMINAL 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 TERMINAL!

1.2.2 CHECKING THE STORAGE SPACE

- Go to **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, 128 MB.

2. You may tap, hold, and drag the slider to re-allocate the memory.

SDRAM	Storage Memory (left)	Program Memory (right)
128 MB onboard	It refers to the memory allocated for file and data storage.	It refers to the memory allocated for running programs.

- Double-tap **My Device** on the desktop, and then tap and hold the **DiskOnChip** icon. Select Properties from the pop-up menu. In the Properties tab, it displays the current capacity and usage of DiskOnChip.

Note: The DiskOnChip is part of the onboard 1 GB flash memory. Because the flash memory is non-volatile, data or programs stored in DiskOnChip will not be erased after hardware reset.

- Go to **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 (SD or CF).

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

1.3 KEYPAD

Silicon rubber has been chosen for their durability and prompt feedback.

Note: Functionality of keys is application-dependent.

The 29-key keypad includes alphanumeric, navigation, function keys, and so on. This keypad is set to numeric mode by default.

Figure 8: 29-key Layout

The 43-key keypad includes numeric, alphabetic, function and other modifier keys, as well as keys for navigation and assorted characters.

Figure 9: 43-key Layout

1.3.1 KEYPAD SETTINGS

The LED backlight of keypad is turned off by default. Press  to toggle it from off to on, and vice versa. 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 power.

The Character Repeat functionality is enabled by default. Go to **Start** | **Settings** | **Control Panel** and double-tap the **Keyboard** icon. 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.

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
1	N/A	Numbers
a	Press α one time	Lower-case alphabetic
A	Press α two times	Upper-case alphabetic

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 SPECIAL KEY

Status Icon	Shift Key	Input Mode
⇧S	Press ⇧ one time	The Shift key modifies the next key pressed. ▸ For 29-key keypad operation, it will result in different symbols. Refer to 錯誤! 找不到參照來源。.

1.3.4 FUNCTION KEY

The [FN] (function) key serves as a modifier key, and the functionality of each key combination is application-dependent.

1) To enable this modifier key, press fn on the keypad. Its icon Fn will appear on the status bar.
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 [FN] key, repeat the above steps.
4) To abort the key modification, press fn again, and the icon will go off.

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

Below is a list of the factory setting for a variety of key combinations.

Key Combination	Action
fn, △	Move text up one screenful (Page Up)
fn, ▽	Move text down one screenful (Page Down)
fn, ◁	Move to the beginning of screen or document (Home)
fn, ▷	Move to the end of screen or document (End)
☼	Toggle ON/OFF the backlight of keypad only

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

1.3.5 PROGRAMMABLE KEYS

The following keys are user-definable. They can be re-defined as another key or to serve as a shortcut key for launching a specific program. Refer to 錯誤! 找不到參照來源。.

- SCAN
- SEND
- END
- Two side triggers on each side of the touch screen

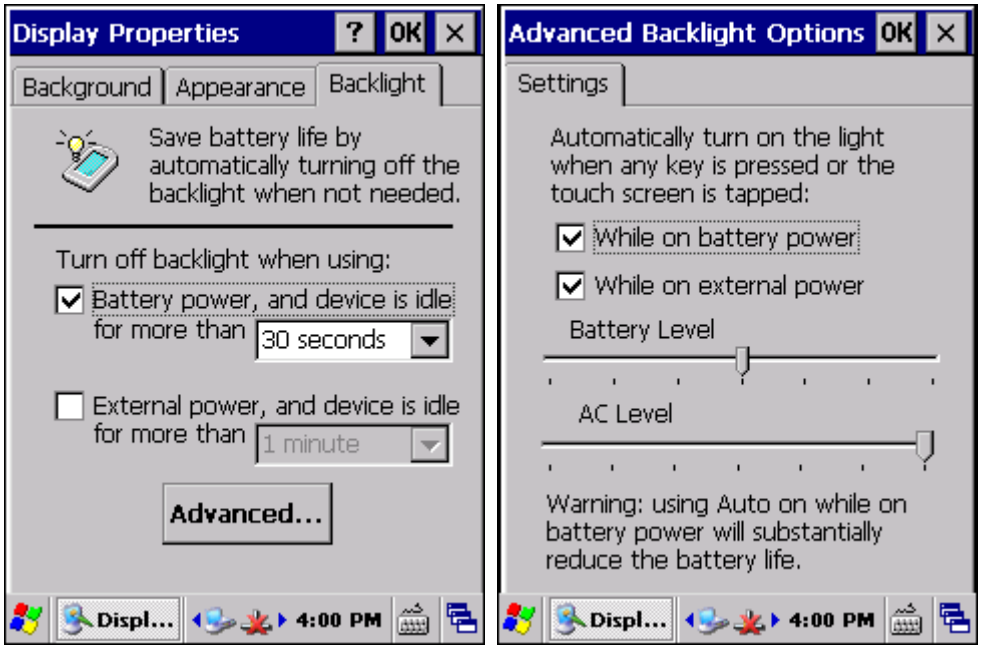
1.4 TOUCH SCREEN

The TERMINAL comes with a 3.5" TFT graphic LCD, 320 by 240 pixels resolution (QVGA) or 640 by 480 pixels resolution (VGA). 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 power. It is suggested to dim the backlight while working in a well-lit area or automatically turn off the TERMINAL when not in use.

1.4.1 ADJUSTING THE BACKLIGHT

1) Go to **Start** | **Settings** | **Control Panel** and double-tap the **Display** icon.
2) Tap the Backlight tab. (left below)



3) 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.

4) Tap the [Advanced] button.

5) In the Settings tab (right above), 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.

1) Go to **Start** | **Settings** | **Control Panel** and double-tap the **Stylus** icon.

2) 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. The green LED is also used for "Good Read" while collecting data.

Tasks	Green LED	Red LED	Blue
Charging 9600	---	On	---
Charging done	On	---	---
Good Read	On	---	---
Bluetooth enabled	---	---	On

1.5.2 AUDIO

- Buzzer

  The buzzer on the front can be programmed for status feedback. Its frequency and duration are software programmable.

- Speaker

  The mono speaker on the back can be used to play sounds for events in Windows and programs, or play 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 TERMINAL 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, the TERMINAL is capable of scanning barcodes of a number of symbologies that are enabled by default while running ReaderConfig.exe. If you need to scan barcodes that are encoded in a different symbology, enable the symbology first. Refer to Appendixes for details on scan engine settings.

Note: The TERMINAL 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 in the TERMINAL is specifically designed for collecting image data. We provide an image capture utility that is specifically designed to turn on the camera and capture image.

1.7 CRADLES

1.7.1 CRADLE OPTIONS

Item	Description	Remark
A	Charging slot for seating the TERMINAL	
B	Charging slot for spare battery	
C	LED Indicators (POWER, DATA, READY)	See table below.
D	Cable Connector (USB or RS-232)	
E	Power Jack	
F	Line/Phone Jack	Modem Cradle only
G	Ethernet Port (RJ-45)	Ethernet Cradle only

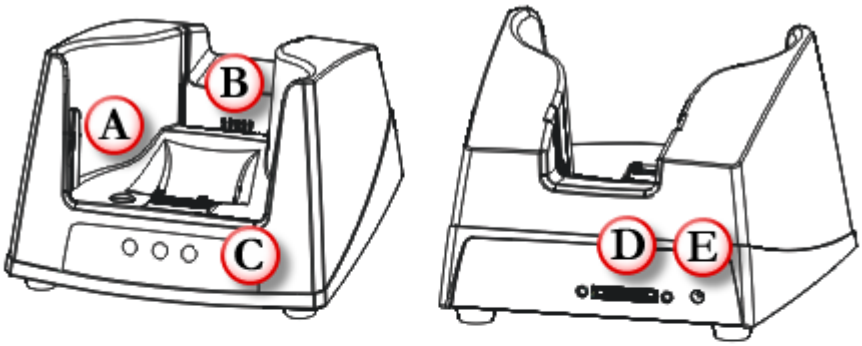


Figure 10: Charging & Communication Cradle

1.7.2 UNDERSTANDING CRADLE

INDICATORS

The cradle provides three LED indicators on the front panel to indicate connection status.

Indicator	Status	Description	Remark
POWER	Off	Power off	
	Red, flashing	Error occurs	
	Red, solid	Power on	
	Orange, solid	Charging	
	Green, solid	Charging done	
DATA	Off	No activity	
	Green, flashing	Data transmission	
READY	Off	No activity	
	Green, solid	Connection established	

Chapter 2

LEARNING WINDOWS CE BASICS

This chapter mainly describes the basic skills to work with 9600 TERMINAL. The add-on utilities for applications regarding data collection, processing, and transmission, are introduced in the following chapters.
9600 TERMINAL is specifically designed for real-time data collection in the Windows CE 6.0 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  on the toolbar to close an active window, a dialog box, or a running application.

  If the button is not displayed, press [ESC] 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 [Enter] on the physical keypad.
- Tap  on the toolbar for Windows CE Help, if there is any.

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2.1 Getting Started 29
2.2 Managing Programs 36
2.3 Using ActiveSync 37
2.4 Using Windows Explorer..... 41
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2.6 Auto Run 43

2.1 GETTING STARTED

When 9600 TERMINAL is fully charged, press  for about 1 second to turn on the TERMINAL and wait for the Windows CE desktop to come up. If you are using the TERMINAL 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**.

2.1.1 SUSPEND MODE

Like your PDA, Pocket PC and most handheld devices, 9600 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)

Press  for about 1 second to turn on the TERMINAL.

Turn Off (= Suspend)

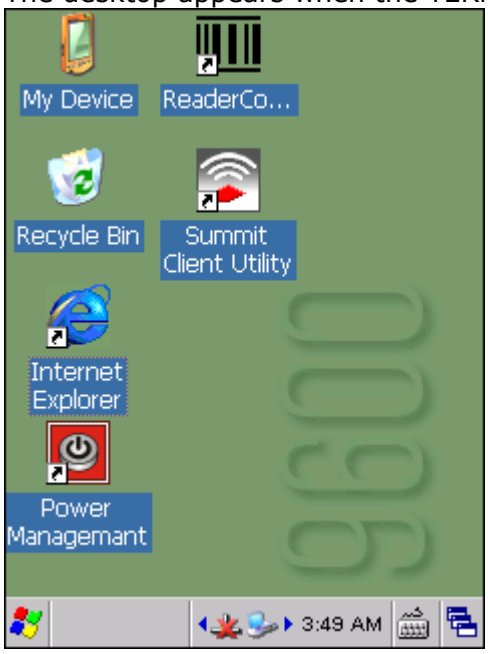
Press  for about 3 seconds to turn off the TERMINAL. Alternatively, you may select Suspend from the Start Menu.

- 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.

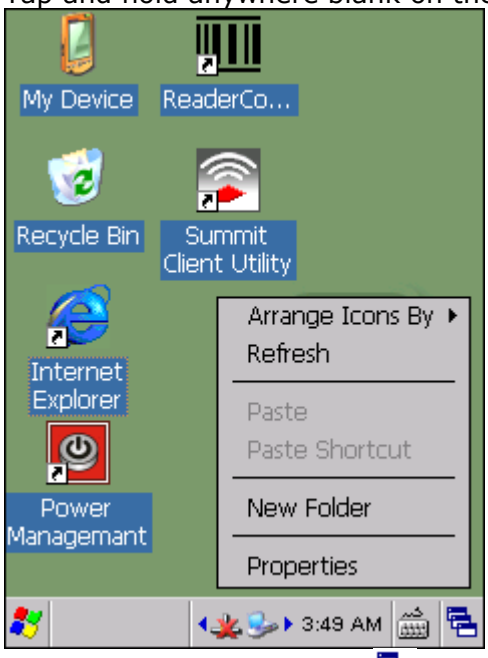
Warning: To save battery power, it is suggested that the TERMINAL is set to be automatically turned off when not in use. Refer to 1.1.2 Power Management for more information about saving power.

2.1.2 DESKTOP

The desktop appears when the TERMINAL is turned on.



Tap and hold anywhere blank on the screen to manage or configure the desktop.



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

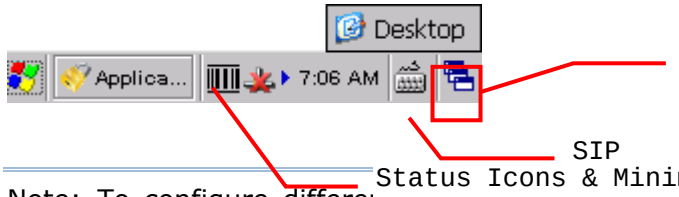
Note: To customize the desktop, tap anywhere blank on the desktop and select **Properties**.

2.1.3 TASKBAR

The taskbar is at the bottom of the screen for displaying the following:

- **Start** button

- **SIP** button
- **Switch Task** button
- Status icons for various connections, minimized program windows, and so on.



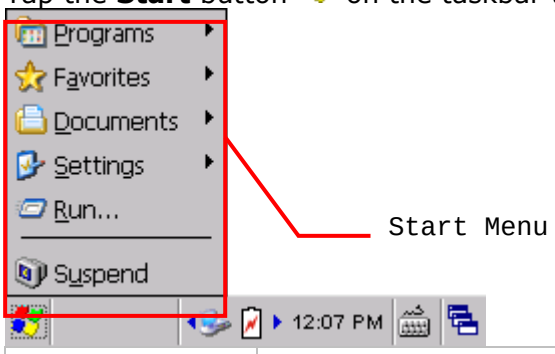
Note: To configure differe **s** and select **Network and Dial-up Connections**.

Icon	Description	See Also
	Tap it to switch to desktop or any task, such as a running program or window.	Switch Task
	Tap it to change the input method.	Software Input Panel (SIP)
	It indicates external power source is connected.	1.1.1 Understanding the Battery Icons
	It indicates the amount of battery charge remaining in the main battery. The higher the green level, the more power in the main battery.	
	It indicates the main battery status.	
	It indicates the backup battery status.	
1 a A	It indicates the current input mode of keypad.	1.3.2 Alpha Key
S	It indicates Shift is enabled.	1.3.3 Special Key
Fn	It indicates Fn is enabled. (= Function mode)	1.3.4 Function Key
	The USB connection for ActiveSync operation is successfully established. ▸ Double-tap it to view status. Tap [Disconnect] if necessary.	3.4 Connection Settings
	It indicates a specific network connection fails (= disconnected). Double-tap it to access the Wireless Information tab if there is any. ▸ Bluetooth PAN connection ▸ 802.11b/g wireless connection ▸ Ethernet connection	Using Bluetooth Using 802.11 Radio
	It indicates a specific network connection has been established successfully. Double-tap it to view or renew IP Information. ▸ Bluetooth PAN connection ▸ 802.11b/g wireless connection ▸ Ethernet connection	

	It provides control of the power to the 802.11b/g and GPRS modules. ▸ Double-tap any of these icons to configure the power setting.	**Power Management** 
	It indicates the GPRS module is enabled. ▸ See GPRS status icon  below.	錯誤! 找不到參照來源。
	The GPRS connection has been opened. If it fails, the icon will be gone. If the icon persists, it means the GPRS connection is successfully established. ▸ Double-tap it to view status. Tap [Disconnect] if necessary.	6.2 GPRS Connection
	It indicates the Wi-Fi module (802.11b/g) is enabled. The more green bars, the stronger the signal. ▸ See wireless status icons  below.	**Summit Client Utility** 
	It provides access to the Bluetooth services. ▸ Initially, you need to go to **Start** | **Programs** | **BTManager** to open the Bluetooth Manager so that this icon will appear on the taskbar.	Using Bluetooth
	It provides access to the Reader Configuration Utility. ▸ Initially, you need to double-tap the ReaderConfig.exe shortcut on the desktop so that this icon will appear on the taskbar.	

2.1.4 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 ▸ Control Panel ▸ Network and Dial-up Connections ▸ Taskbar and Start Menu
Run...	Opens a program or folder or document.
Suspend	Enters the Suspend mode.

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

2.1.5 INPUT METHODS

Data entry can be performed by the following methods:

Physical Keypad

Type with the physical keypad.

Data Capture

Scan barcode or RFID tag in applications, e.g. WordPad, CipherLab's FORGE Application Generator, etc.

Software Keypad

Type or write using SIP (Soft Input Panel):

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.

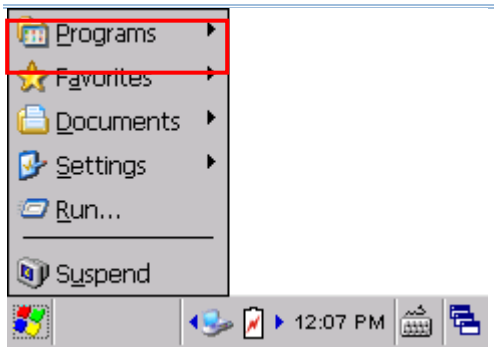
Options	Description
Keyboard	To type using the virtual keyboard.
Transcriber	To write freely on the screen in applications, such as WordPad, Inbox, etc.

2.2 MANAGING PROGRAMS

2.2.1 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].

2.2.2 SWITCH AMONG PROGRAMS AND DESKTOP

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

2.2.3 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.

Tap  to close an active window, a dialog box, or a running application. If the button is not displayed on the toolbar, press [ESC] on the physical keypad.

Tap  to save the current settings and exit the application (or minimize the window in some applications). If the button is not displayed on the toolbar, press [Enter] on the physical keypad.

Note: Some programs, such as the Reader Configuration Utility (ReaderConfig.exe), may create an associated icon on the taskbar. You may tap the icon and select [Exit] from the pop-up menu.

2.3 USING ACTIVESYNC

ActiveSync is used to synchronize information between 9600 TERMINAL and your desktop computer, to install programs on the TERMINAL, and to backup and restore the TERMINAL.

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/activesync/activesync45.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 charging & communication cable from the TERMINAL or via a cradle to your computer.
   - Connect the power cable to a nearby power outlet.
   - Turn on the TERMINAL or seat it in the cradle.
2) Your computer will automatically detect the USB device. Click [OK] when the connection is established.

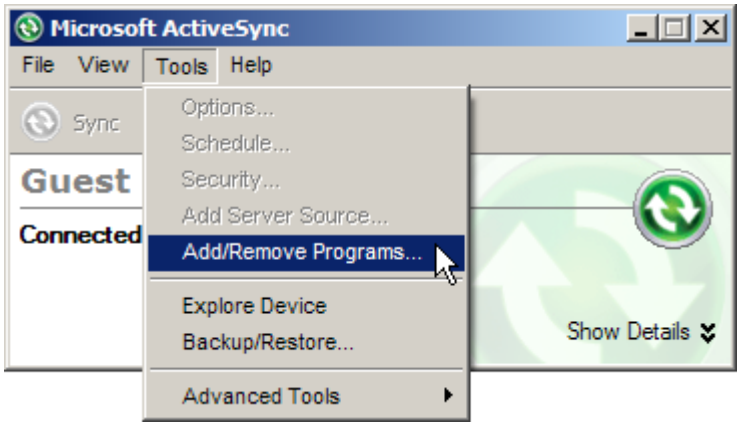
3) Select which partnership to set up. If you want to synchronize data between the TERMINAL and your personal computer, select Standard Partnership; otherwise, select Guest Partnership.

4) Wait a few seconds for the TERMINAL to get connected (and synchronized if a Standard Partnership is selected).

Note: For ActiveSync via Bluetooth, refer to Using Bluetooth.

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 un-install a program that is designed to be used on a mobile device running Windows CE.



Alternative to Install New Programs (Copy & Paste)

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 (\Windows\Programs), 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 TERMINAL, go to **Start** | **Programs** and the new program will appear.

Alternative to Remove Programs (Control Panel)

You may un-install a new program manually.

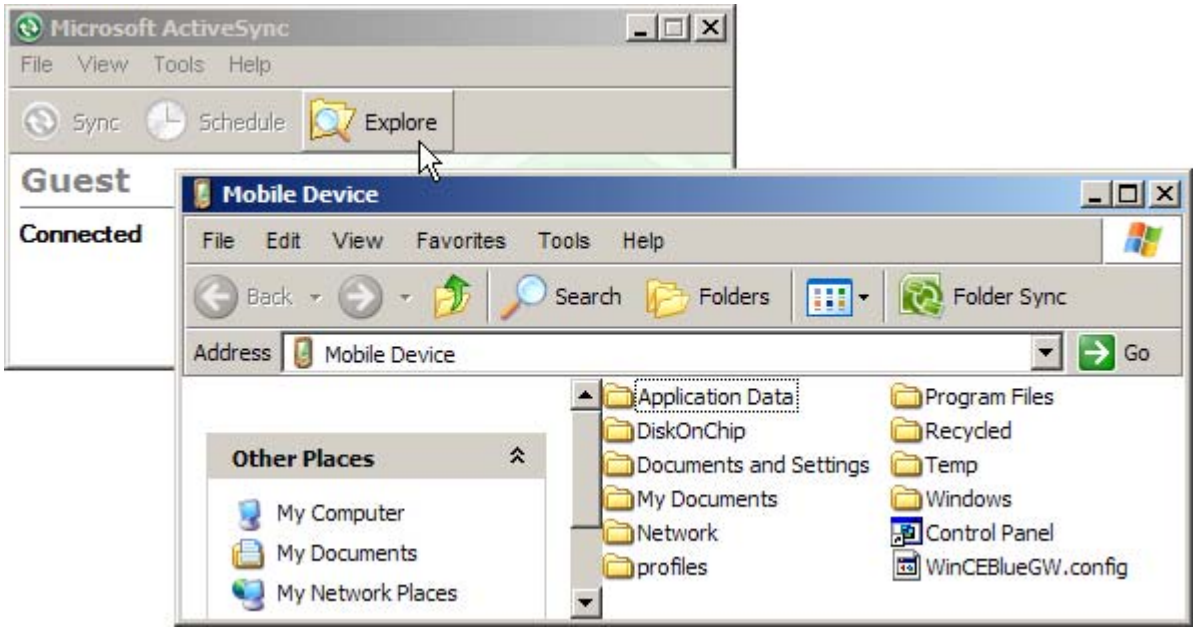
1. Go to **Start** | **Settings** | **Control Panel** and select **Remove Programs**.
2. Tap the name of the program that you want to delete.
3. Tap [Remove].
4. Tap [Yes] to un-install the program.

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 EXPLORE DEVICE

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 TERMINAL, go to **Start** | **Programs** and the new program will appear now.

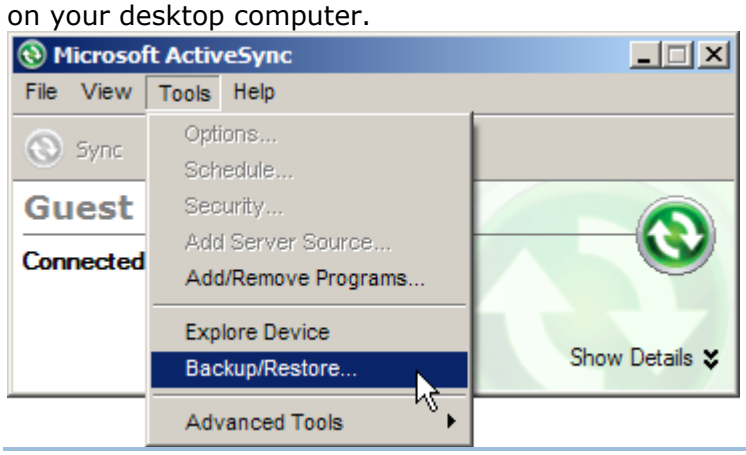
Note: [Create Shortcut], [Cut], and [Paste]: The same result can be performed by [Copy] and [Paste Shortcut].

Create 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.

2.3.4 BACKUP/RESTORE

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

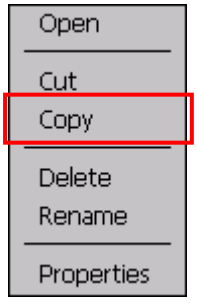


Note: The CipherLab Backup Utility is provided for the same purposes, and will save the backup file to the DiskOnChip folder.

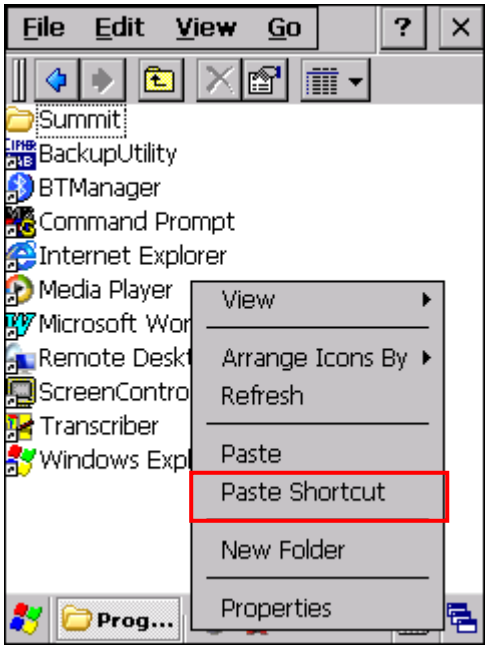
2.4 USING WINDOWS EXPLORER

2.4.1 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.



4) Navigate to the Programs folder – **My Device\Windows\Programs**.



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.

2.4.2 CREATE 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) Tap and hold anywhere blank on the window and select [New Folder] from the pop-up menu. A subfolder will be created.

2.5 SYSTEM RESET

Reset the TERMINAL when it stops responding to input.

- Software Reset: Simply press the [Reset] button.
- Hardware Reset: Press the [Reset] button and  at the same time.

Warning: Never perform hardware reset unless software reset cannot solve your problems.

2.5.1 SOFTWARE RESET (WARM REBOOT)

Software reset, also known as a warm boot, will restart the TERMINAL and keep all the saved files. To perform software reset, use the stylus to press the [Reset] button.
During operation, the removal of main battery will start software reset too.

Warning: Data loss may occur when files are not properly closed before software reset.

2.5.2 HARDWARE RESET (COLD REBOOT)

Hardware reset, also known as a cold boot, will restart the TERMINAL too. However, it performs a full restore of the TERMINAL to its factory settings and initializes SDRAM. To perform hardware reset, press  and [Reset] button at the same time. Data and program files stored in SDRAM will be erased after hardware reset. But you can restore data that is previously synchronized with your computer by performing an ActiveSync operation, or backed up by using CipherLab Backup Utility.

Warning: Only the files stored in the Flash File System are retained during hardware reset.

2.6 AUTO RUN

Upon hardware or software reset, the OS shall automatically execute **AutoRun.exe** and/or **AutoRun.ini** if any of the two files can be found in the "\DiskOnChip" folder or on microSD card.

If AutoRun.exe exists

- Upon cold boot, the OS shall automatically execute **AutoRun.exe**
- Upon warm boot, the OS shall automatically execute **AutoRun.exe**

If AutoRun.ini exists

- Upon cold boot, the OS shall automatically check the contents of **AutoRun.ini** and execute them (if there is any).

Any line prefixed with a semicolon ";" is supposed to be a comment line only; otherwise it is an executable file or command and shall be executed (line by line). The line to execute a cabinet file (.cab) must be specified with two dots ". ." for the absolute path. For example,

```
\DiskOnChip\cerdisp.exe
:\DiskOnChip\ReaderConfig.exe
;\DiskOnChip\RF9600_CE.exe
..\DiskOnChip\cerdisp.cab
:..\DiskOnChip\ReaderConfig.cab
```

- Upon warm boot, the OS shall automatically check the contents of **AutoRun.ini** and execute any line that is prefixed with a colon ":".

  Any line prefixed with a semicolon ";" is supposed to be a comment line only. The line to execute a cabinet file (.cab) must be specified with a colon ":", followed by two dots ". ." for the absolute path. For example,

```
:\DiskOnChip\ReaderConfig.exe
;\DiskOnChip\RF9600_CE.exe
:..\DiskOnChip\ReaderConfig.cab
```

Note: Because the cabinet files are designed to install the application, tidy up, and then "self destruct", they will be automatically deleted from your TERMINAL after installation. However, **AutoRun.ini** will backup the original files (.cab) while installing cabinet files, and restore them after installation. Consequently, these cabinet files will be automatically re-installed to your TERMINAL upon cold boot or warm boot, if specified in **AutoRun.ini**.

Chapter 3

CONFIGURING 9600 TERMINAL

In this chapter, a brief on the system settings is provided for your reference. The **Application Manager** is specifically designed for the administrator to manage the accessibility of applications and protect the integrity of the system on the TERMINAL. It serves as a portal that allows launching routine application programs automatically upon a reboot, preventing users from running potentially distracting applications, as well as to restricting access to changing device settings.

Note: User settings are stored in SDRAM and will be overwritten by the system defaults after hardware reset. However, you can use the CipherLab Backup Utility to backup the current registry for restore purpose.

IN THIS CHAPTER

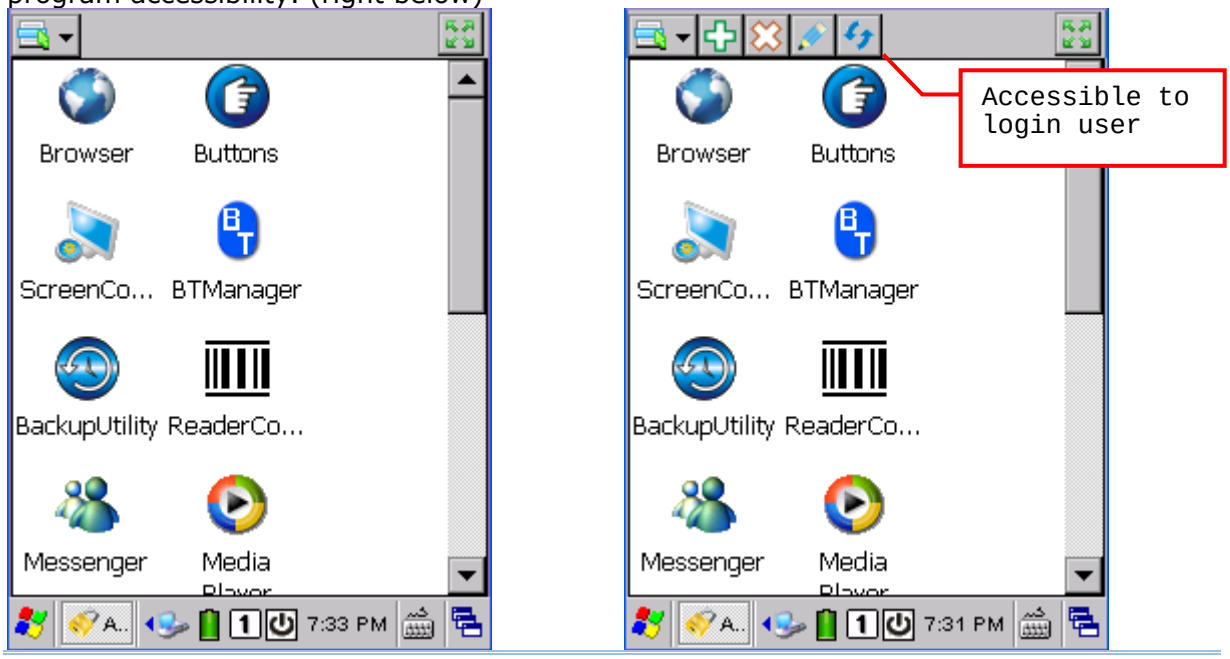
3.1 Application Manager 46
3.2 Device Name & Configuration 46
3.3 System Settings 48
3.4 Connection Settings 52
3.5 Upgrading OS Image 54

3.1 APPLICATION MANAGER

Application Manager has powerful features and is easy to use —

- Provides full control over executable files of the Programs folder, desktop and Control (Panel)
- Can limit access to essential device settings
- Can prevent from potentially distracting applications
- Can execute routine application automatically upon a reboot
- Provides user name and/or password protection
- Allows setting up an administrator account
- Supports multiple languages
- Supports show/hide taskbar
- Supports enable/disable taskbar, partially or fully
- Distributes user settings at a few clicks

After restarting the TERMINAL upon completion of installation, the **Application Manager** automatically starts up with programs and settings made accessible based on the system. (left below) If you have logged in as an administrator, you are allowed to manage program accessibility. (right below)

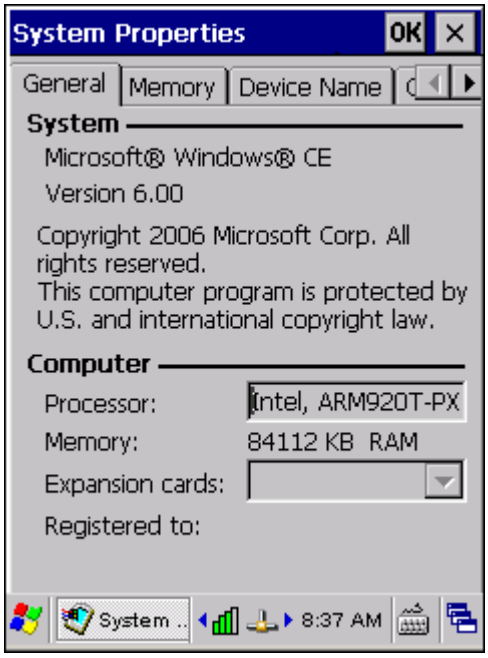


Note: This tool is available in the Partner Zone on our website or the product CD.
For details on the installation and usage, please refer to the separate user guide.

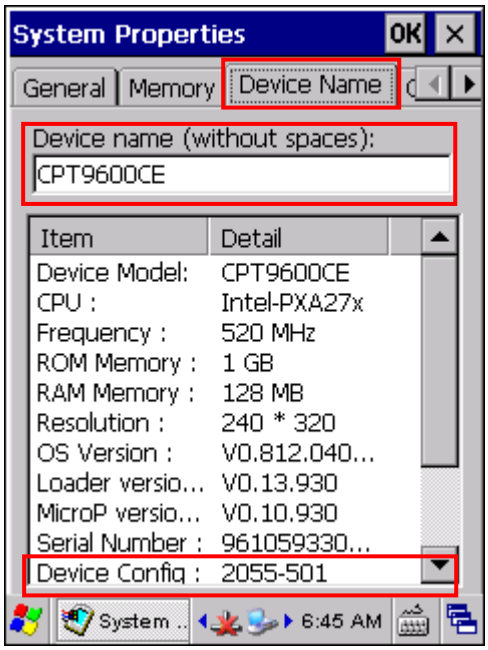
3.2 DEVICE NAME & CONFIGURATION

3.2.1 CHANGING DEVICE NAME

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 TERMINAL.



3.2.2 UNDERSTANDING DEVICE CONFIGURATION

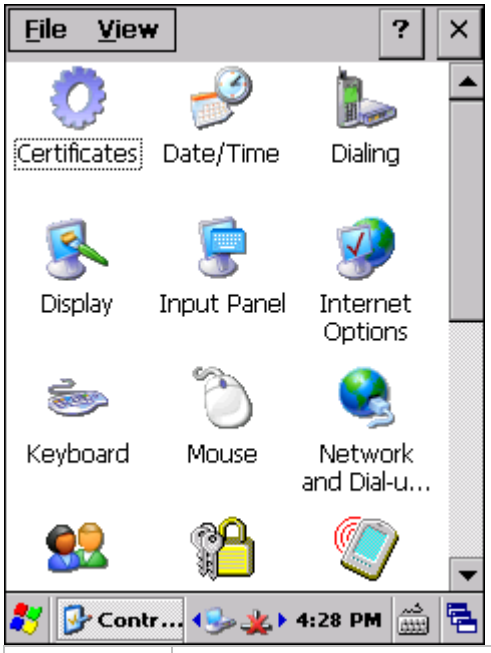
The device configuration of 9600 TERMINAL is displayed in 7 digits: xxxx-xxx
Take the screenshot of System Properties above for example. Its device configuration is "2055-501"; therefore, the TERMINAL has the following features –

- 29-key, VGA screen
- A scan engine that employs Laser scan engine
- Integrated communications: Bluetooth, Wi-Fi and GPRS
- Integrated GPS receiver and camera

Device Code	Modular Component	Types
1st digit	Reader module	0= none 1= Linear Imager (CCD) 2= Laser (SE950) 3= 2D Imager
2nd digit	RFID module	0= none 1= RFID reader
3rd digit	Bluetooth, GPRS	0= none 1= Bluetooth 4= GPRS 5= Bluetooth + GPRS
4th digit	Wi-Fi, GPS	0= none 1= Wi-Fi (Summit) 2= Wi-Fi (Marvell) 4= GPS 5= Wi-Fi (Summit) + GPS 6= Wi-Fi (Marvell) + GPS
5th digit	LCD, camera	0= QVGA 1= VGA 4= QVGA + Camera 5= VGA + Camera
6th digit	Keypad	0= 29-key 1= 43-key
7th digit	PCB main board	0= EVT 1= DVT 2= PVT 3= MP 1.0

3.3 SYSTEM SETTINGS

Go to **Start** | **Settings** | **Control Panel**.



Items	Description
Certificates	In the [Certificates] dialog box, you may view or modify digital certificates that some application use to establish trust for secure connections.
Date/Time	In the [Date/Time] dialog box, you may change date, time, and time zone settings.
Dialing	In the [Dialing Properties] dialog box, you may configure settings for modem communications, such as the GPRS modem.
Display	In the [Display Properties] dialog box, ▸ Background tab: Select an image for the background. ▸ Appearance tab: Select a desired color scheme for windows, dialog boxes, and items. ▸ Backlight tab: Specify for how long the TERMINAL is idle and then the backlight will be automatically turned off while on battery power and external power respectively. Tap the [Advanced] button to move the slider and adjust the brightness of the LCD backlight when it is set to be automatically turned on once a key is pressed or you tap the touch screen.
Input Panel	In the [Input Panel Properties] dialog box, you may configure how the Soft Input Panel (SIP) works.

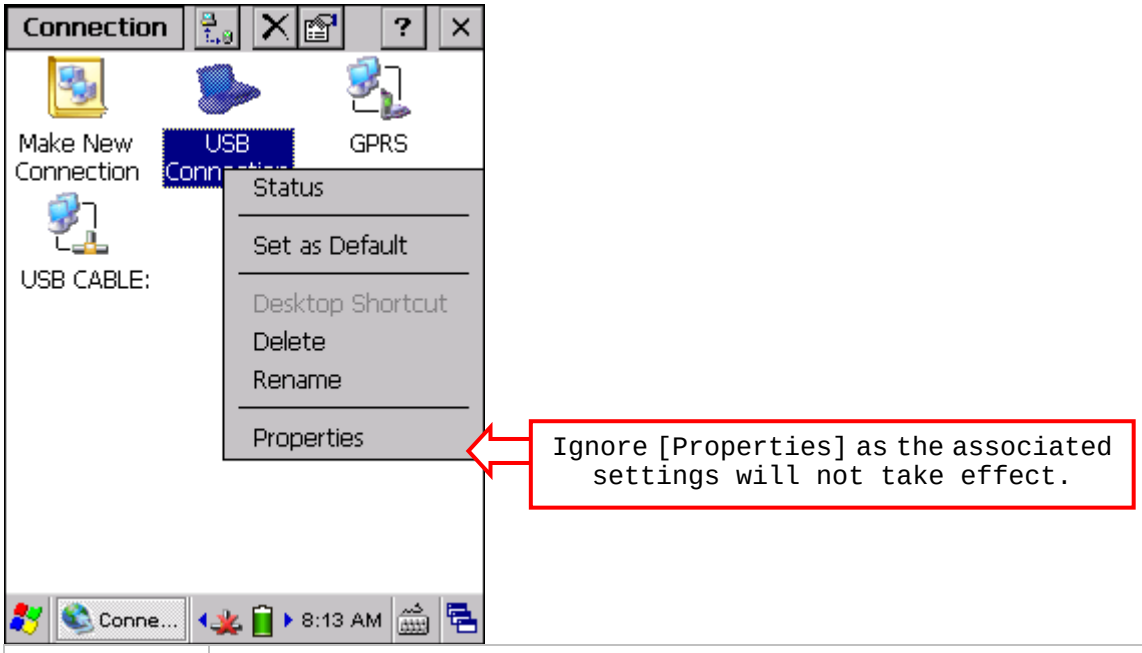
 Internet Options	In the [Internet Options] dialog box, you may configure how the TERMINAL connects to the Internet.
 Keyboard	Connect an external keyboard to the TERMINAL or cradle via the USB host cable. In the [Keyboard Properties] dialog box, you may configure settings for character repeat.
 Mouse	Connect a mouse to the TERMINAL or cradle via the USB host cable. In the [Mouse Properties] dialog box, you may configure and test your double-click settings.
 Network and Dial-up Co...	In the [Network and Dial-up Connections] window, you may configure settings for the TERMINAL connects to a network directly or through a modem. Alternatively, you may tap **Start** | **Settings** | **Network and Dial-up Connections**. ▸ USB Connection (ActiveSync via USB cable) ▸ GPRS (through a GPRS modem) ▸ AX88772 (via Ethernet Cradle) ▸ SDCCF10G1 (via 802.11b/g) ▸ BTPAN (via Bluetooth)
 Owner	In the [Owner Properties] dialog box, ▸ Identification/Notes tab: Type your contact information or notes. ▸ Network ID tab: Type the user name, password, and domain name used to log on to the remote network.
 Password	In the [Password Properties] dialog box, you may apply password protection at power-on to limit access to the TERMINAL.
 PC Connection	In the [PC Connection Properties] dialog box, you may disable the direct connection between the TERMINAL and a desktop computer. ▸ By default, the TERMINAL is allowed to directly connect to a desktop computer via the USB or RS-232 charging & communication cable. Alternatively, you may tap **Start** | **Settings** | **Network and Dial-up Connections** and select USB Connection. ▸ You may change to use Bluetooth if ActiveSync via Bluetooth has been enabled in the Bluetooth Manager
 Power	In the [Power Properties] dialog box, ▸ Battery tab: You may view the current status of main and backup batteries. ▸ Schemes tab: You may configure the power scheme and switching. ▸ Device Status tab: You may view the devices that are consuming power.
 Regional Settings	In the [Regional and Language Settings] dialog box, ▸ Region tab: You may customize the appearance and formatting to your geographic region. ▸ Language tab: By default, it is set to English (United States). ▸ Input tab: By default, it is set to English (United States)-US.

 Remove Programs	In the [Remove Programs] dialog box, you may remove any program that is installed earlier.
 Storage Manager	In the [Storage Properties] dialog box, ▸ Storage Manager tab: You may reformat the available storage device, either the DiskOnChip folder or storage card. Actions include "Dismount the storage device", "Format the storage device", and "Set up disk partitions". The Storage Manager is for the use of system administrators only.
 Stylus	In the [Stylus Properties] dialog box, ▸ Double-Tap tab: You may configure and test your double-tap settings. ▸ Calibration tab: You may need to re-calibrate the touch screen if it is not responding properly to your taps.
 System	In the [System Properties] dialog box, ▸ General tab: You may view the system information. ▸ Memory tab: You may move the slider and adjust the SDRAM allocation. ▸ Device Name tab: You may type a name and description for identifying the TERMINAL. ▸ Copyrights tab: You may view the important statements on copyrights.
 Terminal Server Clie...	Client access licenses (CALs) issued by the Terminal Server license server allow clients to connect to the terminal server. Use Remote Desktop Connection to log onto a Windows Terminal Server or a computer remotely. You may access all of the programs, files, and network resources on the remote host or terminal server.
 Volume & Sounds	In the [Volume & Sounds Properties] dialog box, ▸ Volume tab: You may move the slider and adjust the volume and select to play sounds for Events, Applications or Notifications. ▸ Sounds tab: You may configure sounds for different Windows events.
 Wi-Fi	Refer to 4.2 Summit Client Utility.

3.4 CONNECTION SETTINGS

There are two ways to access the connections settings:

- Go to **Start** | **Settings** | **Control Panel** and select **Network and Dial-up Connections**.
- Go to **Start** | **Settings** | **Network and Dial-up Connections**.



Connections	Description
 USB Connection	This is a shortcut to USB Connection, and the selected interface is USB for factory setting. This connection is reflected in the control panel for direct PC connection:  PC Connection **Start** | **Settings** | **Control Panel** | The USB connection is specifically for performing the ActiveSync operation via the USB or RS-232 charging & communication cable. Generally, it will automatically establish the connection and start the ActiveSync operation when you seat the TERMINAL in the cradle. To stop the ActiveSync operation, simply remove the TERMINAL. Alternatively, you may double-tap the status icon  from the taskbar and tap [Disconnect]. ▸ When connected, the status icon will appear on the taskbar. ▸ When disconnected, this icon will disappear.

 USB CABLE:	This is the control of networking over USB cable. It is enabled automatically when the TERMINAL is connected to PC via USB cable.
 AX887721	This is the control of Ethernet module AX88772. It is enabled automatically when the TERMINAL is seated in the Ethernet Cradle. ▸ When available, the connection status icon will appear on the taskbar. ▸ When connected, this icon will become . ▸ When disconnected, this icon will become again.
 GPRS	This is a shortcut to GPRS connection. Note that the power to the /PRS module must be turned on through **Power Management** for establishing a connection. ▸ When GPRS power is turned on, the icon will become . ▸ When connected to a GPRS modem, the status icon will appear on the taskbar. ▸ When disconnected, this icon will disappear.
 SDCCF10G1	This is the control of 802.11b/g module for wireless local area networking (WLAN) connection, which is not available until the power to 802.11b/g module is turned on through **Power Management**. ▸ When available, the connection status icon will appear on the taskbar. ▸ When connected, this icon will become . ▸ When disconnected, this icon will become again.
 BTPAN1	This is the control of Bluetooth module for wireless personal area networking (WPAN) connection, which is not available until the **Bluetooth Manager** is executed. ▸ When available, the connection status icon will appear on the taskbar. ▸ When connected, this icon will become . ▸ When disconnected, this icon will become again.

Note: By default, DHCP is enabled for networking. Instead of using DHCP, select [Properties] and specify a static IP address to the TERMINAL. Only change these settings according to your network administrator's instructions.

Toolbar Items	Description	Remarks
Connection	Tap this button to open the Connection menu. The available options depend on the connection you select.	Tap and hold the icon of a desired connection type. Then, select an option from

	Tap this button to toggle on/off the connection you select. The toggle is used for Enable/Disable or Connect/Disconnect.	its associated menu.
	Tap this button to delete the connection you select.	
	Tap this button to view the properties of the connection you select.	

3.5 UPGRADING OS IMAGE

You can upgrade the OS image on your TERMINAL either via microSD card or run the program "DLDR.exe" on the desktop of your computer. Please contact your sales representative for the OS upgrade utility "DLDR.exe".
The OS upgrade should be performed with great caution because everything on the TERMINAL will be erased.

Warning: Backup user-installed applications and files to your computer first.

3.5.1 SD DOWNLOAD

The SD download method allows upgrading image from your microSD storage card.

1) Copy the image file to the root directory of your microSD storage card ("\SD Card"), and rename it to "NK.nb0".
2) Press [Reset] +  to perform hardware reset on 9600.
3) Press  +  to enter SD Download mode.

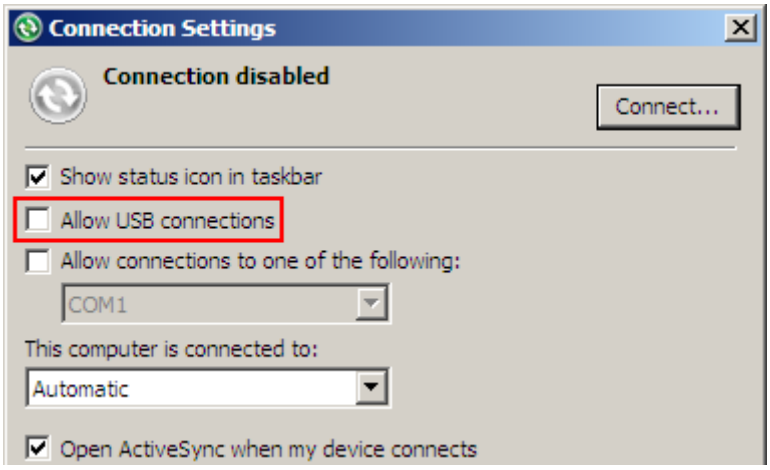
   It will take approximately 5 minutes before a message is displayed on the TERMINAL to indicate the OS upgrade is completed successfully.
4) Press [Reset] +  to perform hardware reset on 9600 again.

Warning: Do not press any key on the TERMINAL while upgrading OS image. Upon completion, you cannot reload any older image.

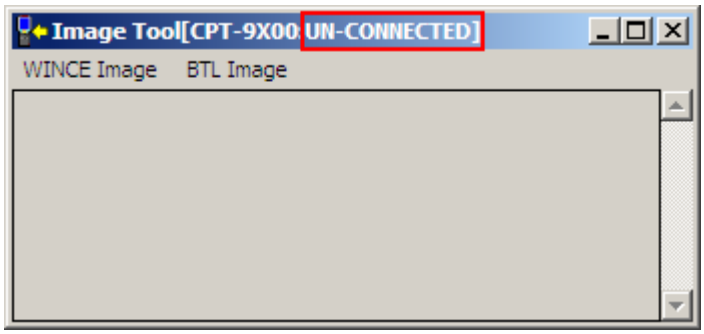
3.5.2 RUN DLDR.EXE

1) Install Microsoft ActiveSync on your computer. For initial ActiveSync operation, refer to Using ActiveSync for details.

   Now, you must disable the ActiveSync operation as shown below.



2) Run the Image Tool "DLDR.exe" on your computer.

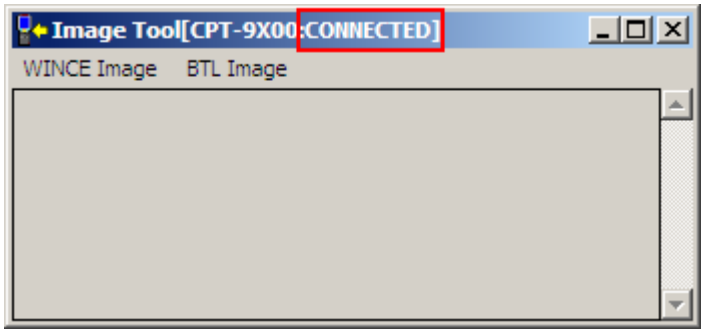


3) Press [Reset] +  to perform hardware reset on 9600.

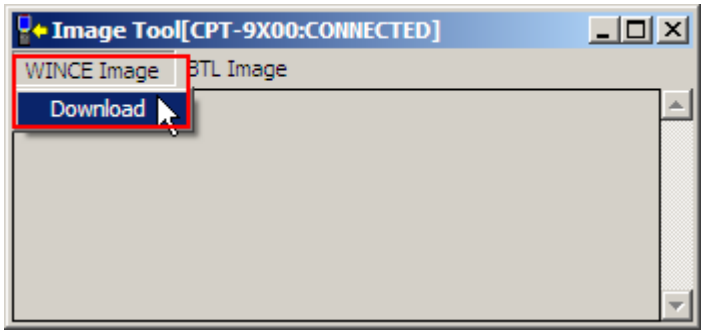
4) Seat 9600 in the cradle.

5) Press  +  on 9600 to start the download process. It will try to connect to your computer.

6) In the Image Tool, it will show 9600 has been connected successfully.



Go to **WINCE Image** | **Download**, and select the desired image file (*.nb0).



It will take approximately 5 minutes before a message is displayed on the TERMINAL to indicate the OS upgrade is completed successfully. It will then perform hardware reset on 9600 automatically.

Warning: Do not press any key on the TERMINAL while upgrading OS image. Upon completion, you cannot reload any older image.

Chapter 4

USING 802.11 RADIO

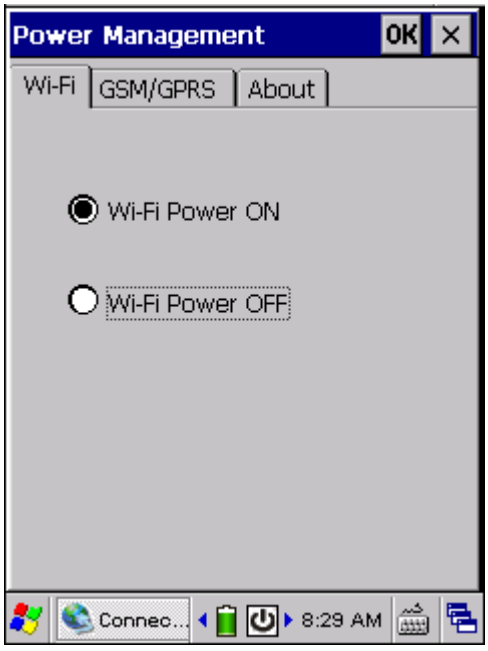
Summit Client Utility, also referred to as SCU, lets you configure and connect to network wirelessly.

IN THIS CHAPTER

4.1 Turn On Wi-Fi Power 59
4.2 Summit Client Utility 60

4.1 TURN ON WI-FI POWER

1) Double-tap the associated icon on the taskbar to access **Power Management**.

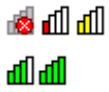


2) Select [Wi-Fi Power ON] and tap OK.

Warning: When both GPRS and 802.11b/g are enabled on battery power, the main battery charge will drop down substantially.

3) It takes several seconds to turn on the power to module and install the driver.

The Summit system tray icon will appear as shown below:



- The icon indicates that 802.11b/g power is turned on, and the green bars indicate the wireless signal strength. The more the bars, the stronger the signal.
- Double-tap any of these icons to access **Summit Client Utility**.

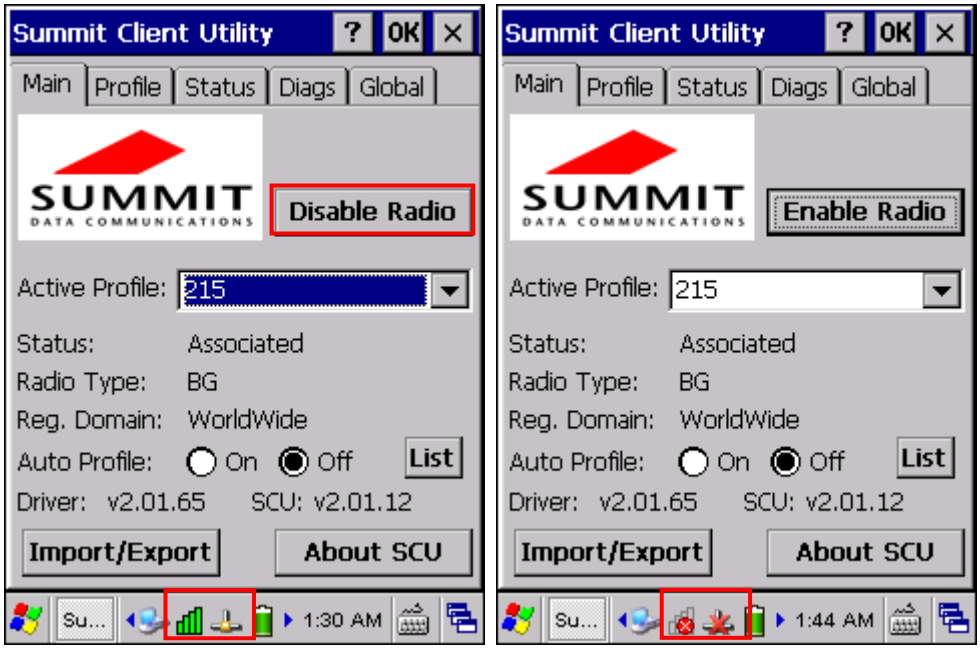
4.2 SUMMIT CLIENT UTILITY

Profile settings are radio and security settings that are stored in the registry as part of a configuration profile. When a profile is selected as the active profile, the settings for the profile become active. You may create, rename, edit, and delete profiles, as well as alter global settings that apply to every profile or to SCU itself. For more detail on the profile settings, please go to http://www.summitdatacom.com/documentation.htm for more documents, such as
http://www.summitdatacom.com/Documents/Summit_Users_Guide_2.01_200805.htm
http://www.summitdatacom.com/Documents/Summit_Quick_Start_Guide_2.01.pdf

4.2.1 MAIN SETTINGS

Enable/Disable Radio

Tap [Disable Radio] to turn off wireless signal.



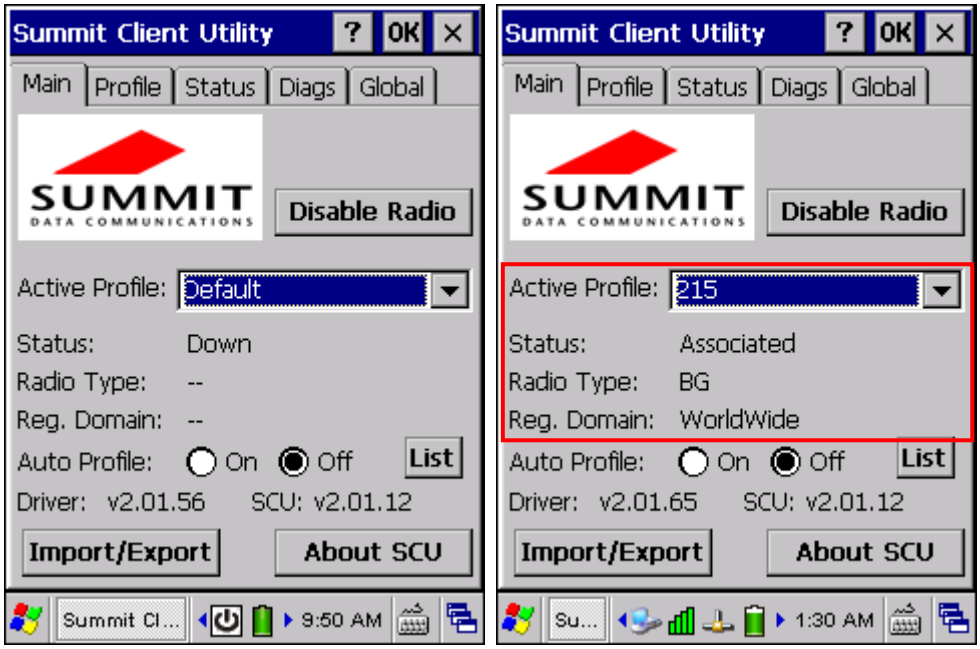
- The signal bars of the Summit Client Utility icon will become to indicate no signal.
- The connection status icon will become .

Note: You may need to turn off the wireless power or simply stop the wireless signals at times, in order to conserve battery power, or in situations where the use of radio is prohibited, such as on airplanes, in hospitals, etc.

Active Profile

Profile settings are radio and security settings that are stored in the registry as part of a configuration profile. When a profile is selected as the active profile, the settings for the profile become active. Information on the Active Profile is displayed.

Item	Description
Active Profile	Options are "Default", "ThirdPartyConfig", and custom profiles.
Status	Potential values are ▸ Down: not recognized ▸ Disabled ▸ Not Associated ▸ Associated ▸ (EAP type) Authenticated
Radio Type	"BG" means a Summit radio that supports 802.11b and 802.11g.
Regulatory Domain	It indicates the regulatory domain or domains for which the radio is configured by factory. "Worldwide" means that the radio can be used in any domain.



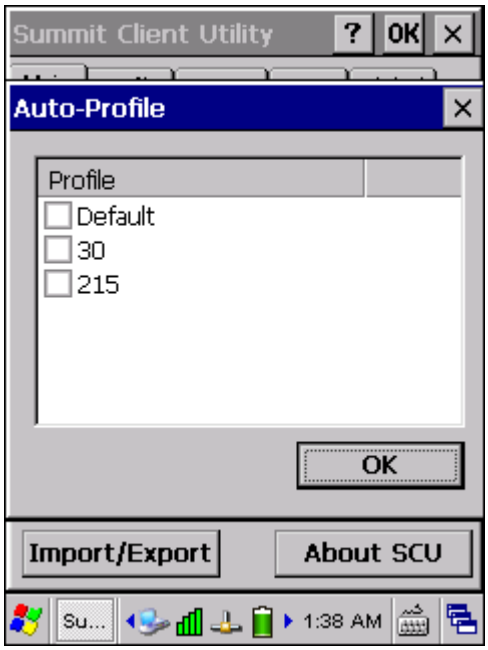
Note: If "ThirdPartyConfig" is selected, after the TERMINAL goes through a power cycle, Windows Zero Config (WZC) or another application is used for configuration of all radio and security settings. The Summit Client Utility can only be used to define the Client Name, Power Save, Tx Power, Bit Rate, Radio Mode settings, as well as the global settings.

Auto Profile & List

Activate or deactivate an automatic profile selection facility. It makes use of a list of profiles you

created. If such list does not exist, tap [List] to select the profiles in use.

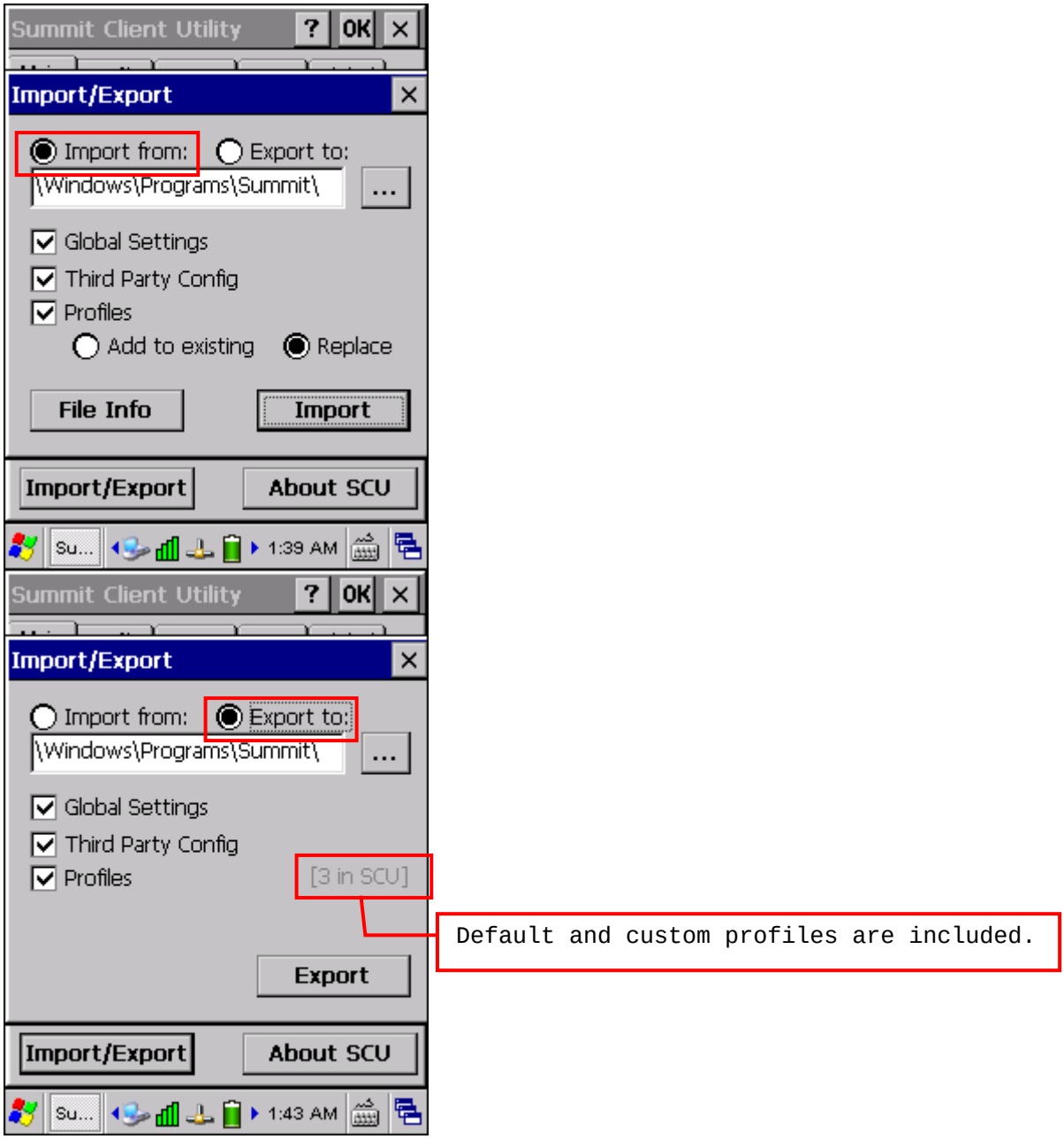
When the facility is active and the radio is not associated to an access point, SCU runs through the list and tries each profile one by one until the radio associates to an access point using the values in a profile. The profile becomes the Active Profile and remains so until the radio disassociates or disconnects from the network.



Import/Export

It is made easy to clone the profile(s) and global settings from a master TERMINAL to others. Tap [Import/Export] and select the task to perform: "Import from" or "Export to".

- By default, the file name is "SummitSettings.sdc".
- Export to: Export global settings, all standard SCU profiles, and the special profile "ThirdPartyConfig" from the SCU area of the registry to a file.
- Import from: Import global settings, all standard SCU profiles, and the special profile "ThirdPartyConfig" from a file (created using the Export facility above) to the SCU area of registry. If you are importing a file and select [Add to existing], then the imported information will be merged with the information that was in the registry previously. If you select [Replace] instead, then the imported information will overwrite the information that was in the registry previously.

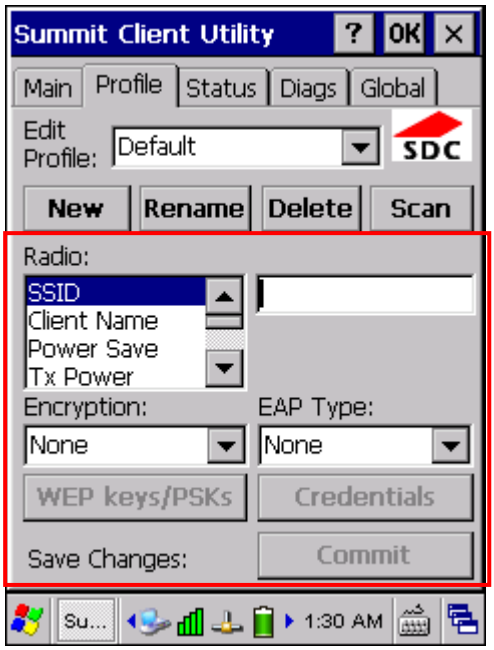


4.2.2 PROFILE EDITING

Any changes made to a profile will not be saved until you tap [Commit].

Edit Profile

By default, information of the profile "Default" is displayed. Select a profile from the drop-down menu and configure the Radio settings, Encryption, EAP Type, and so on. For example, select "SSID" from the Radio list and enter a preferred name for the network.



Radio	Configuration
SSID	Service Set Identifier (SSID) for WLAN to which the radio will connect If no SSID is specified, the radio will only associate to an access point that broadcasts its SSID. ▸ Value: A string of up to 32 characters ▸ Default: None
Client Name	Name assigned to the TERMINAL with Summit radio installed ▸ Value: A string of up to 16 characters ▸ Default: None
Power Save	Power save mode for radio ▸ Value: CAM — Constantly awake mode Maximum — Maximum power savings Fast — Fast power save mode ▸ Default: Fast

Tx Power	Transmit power that can be overridden by Cisco AP if CCX global setting

	is ON and AP defines maximum transmit power for client as lower value ▸ Value: Maximum (Maximum power defined for the current regulatory domain) or the specified value in milliwatts (50, 30, 20, 10, 5, 1) ▸ Default: Max
Bit Rate	Bit rate used by the radio when interacting with AP; however, if a specified bit rate is selected, the radio will not connect to an AP unless the specified SSID is configured for only the selected bit rate. ▸ Value: Auto (rate negotiated automatically with AP) or the specified value in megabits per second (1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 ▸ Default: Auto
Radio Mode	Use of 802.11b and/or 802.11g when interacting with AP ▸ Value: B rates only, BG rates full, G rates only, BG subset, Ad Hoc ▸ Default: BG rates full
Auth Type	802.11 authentication type used when associating to AP ▸ Value: Open, Shared (shared-key), LEAP (Network-EAP) ▸ Default: Open

Encryption & WEP keys/PSKs

Type of encryption (and decryption) used to protect transmitted data

- Value:

None	No encryption
Manual WEP	WEP with up to four static keys, 40-bit or 128-bit in ASCII or hex
Auto WEP	WEP with key generated during EAP authentication
WPA PSK	TKIP with PSK, ASCII passphrase or hex PSK
WPA TKIP	TKIP with key generated during EAP authentication
WPA2 PSK	AES with PSK, ASCII passphrase or hex PSK
WPA2 AES	AES with key generated during EAP authentication
CCKM TKIP	TKIP with key generated during EAP authentication and with Cisco key management protocol for fast re-authentication
CKIP manual	WEP with up to four static keys, 40-bit or 128-bit in ASCII or hex, plus Cisco TKIP and/or Cisco MIC if configured on AP
CKIP Auto	WEP with key generated during EAP authentication, plus Cisco TKIP and/or Cisco MIC if configured on AP

- Default: None

EAP Type & Credentials

Extensible Authentication Protocol type used for 802.1X authentication to AP

- Value:

None	
EAP-FAST	Credentials values for EAP-FAST

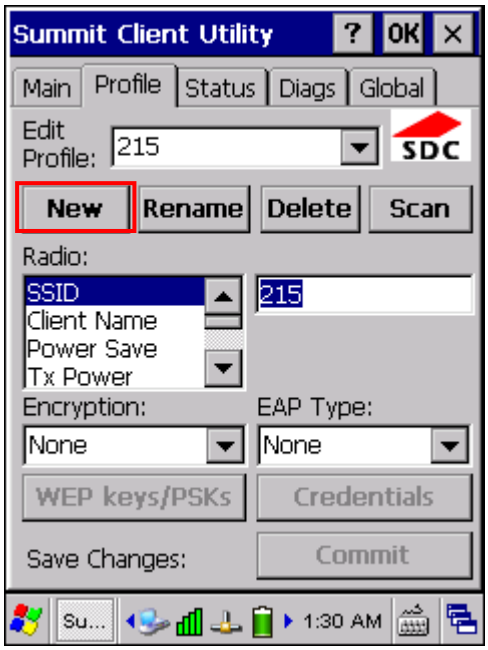
	▸ User: Username or Domain\Username (up to 64 characters) ▸ Password (up to 32 characters)
EAP-FAST	Credentials values for EAP-FAST ▸ User: Username or Domain\Username (up to 64 characters) ▸ Password (up to 32 characters) ▸ PAC Filename (up to 32 characters) ▸ PAC Password (up to 32 characters)
PEAP-MSCHAP PEAP-GTC EAP-TLS	Credentials values for PEAP-MSCHAP, PEAP-GTC, EAP-TLS ▸ User: Username or Domain\Username (up to 64 characters) ▸ Password (up to 32 characters) ▸ "Validate server" checkbox: Select this if using a CA certificate to validate an authenticate server. When selected, enter a certificate filename in the CA Cert field or select the "Use MS store" checkbox. ▸ CA Cert: Filename of root certificate authority (CA) digital certificate (up to 32 characters); leave blank if the "Use MS store" checkbox is selected. ▸ "Use MS store" checkbox: Select this if the Microsoft certificate store should be used for a CA certificate. This is applicable only when "Validate server" is in use. Additional values for EAP-TLS ▸ User Cert: Tap the […] button to select a user (or client) certificate from the Microsoft certificate store. You may not enter a filename because the user certificate must reside in the Microsoft certificate store. When you browse for a certificate, the pop-up box shows two fields, "Issued By" and "Issued to". ▸ Priv. key pwd: Password for user certificate (up to 32 characters)

▸ Default: None for both EAP type and credentials

New

Tap [New] and enter a unique name for this profile. Up to 32 characters are allowed. Configure the Radio settings, Encryption, EAP Type, and so on.

- Define up to 20 profiles, not including the special profile "ThirdPartyConfig".



Rename

Select a profile from the drop-down menu and tap [Rename]. Enter a unique name for this profile. Up to 32 characters are allowed.

Delete

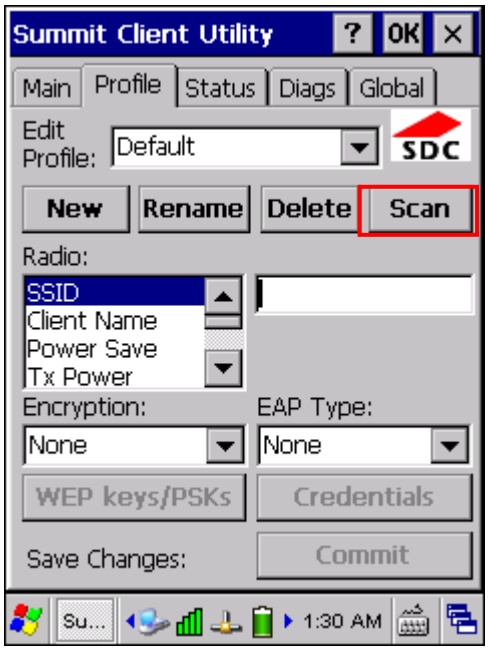
Select a profile from the drop-down menu and tap [Delete].

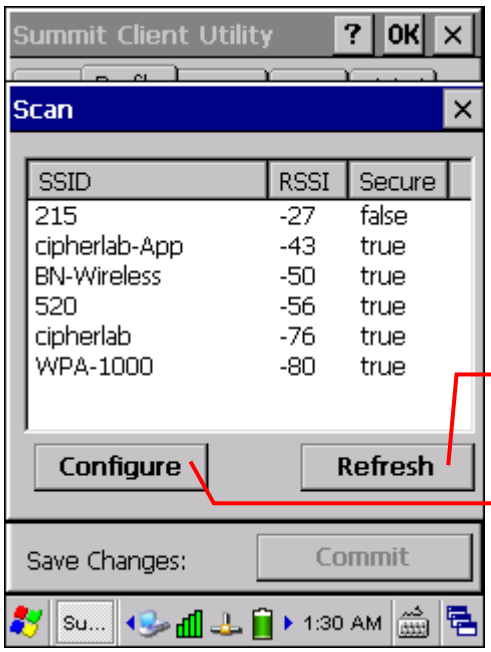
- You cannot delete the Active Profile.

Scan

Tap [Scan] to view a list of access points that are broadcasting their SSIDs. You may sort the list by tapping the column headers. Select one and create a profile for it.

Item	Description
SSID	Service Set Identifier (SSID)
RSSI	Received Signal Strength Indication (RSSI)
Secure	It indicates whether data encryption is in use: true or false



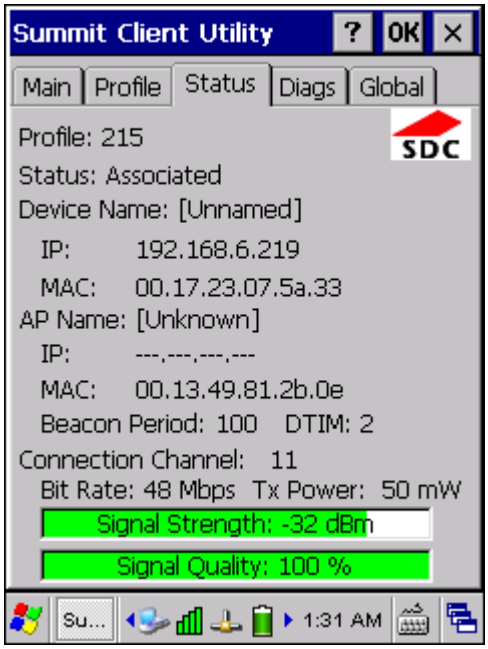


Tap to update the list.

Select one SSID and tap to create a new profile. Enter credentials or keys if necessary.

4.2.3 CONNECTION STATUS

View status of the current wireless network connection, information on the access point and the connection established between the two.



Profile

Name of Active Profile

Status

Potential values are

- Down: not recognized
- Disabled
- Not Associated
- Associated
- (EAP type) Authenticated

Device Name, IP, MAC

Information on the TERMINAL

AP Name, IP, MAC, Beacon Period

Information on the access point to which the radio is associated

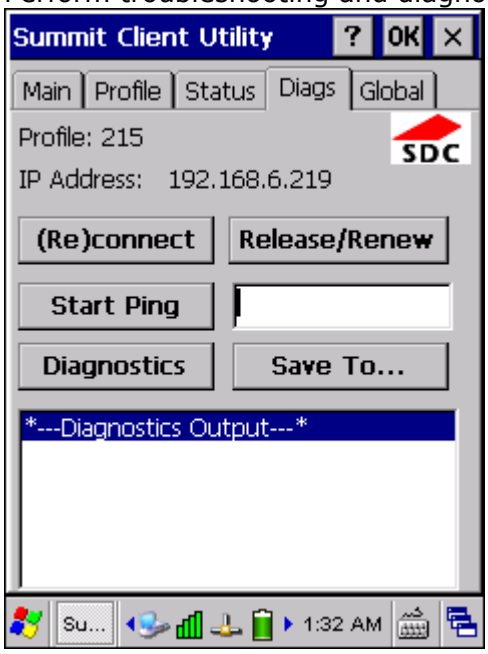
- Beacon Period: Amount of time between access point beacons in kilomicroseconds, where one Kμsec equals 1024 microseconds.
- DTIM: A multiple of the beacon period that specifies how often the beacon contains a delivery traffic indication message (DTIM), which tells power-save client devices that a packet is waiting for them (e.g. a DTIM interval of 3 means that every third beacon contains a DTIM).

Connection Channel, Bit Rate, Tx Power, Signal Strength, Signal Quality

Information on the wireless connection between the radio and access point, including graphic indication of signal strength and quality.

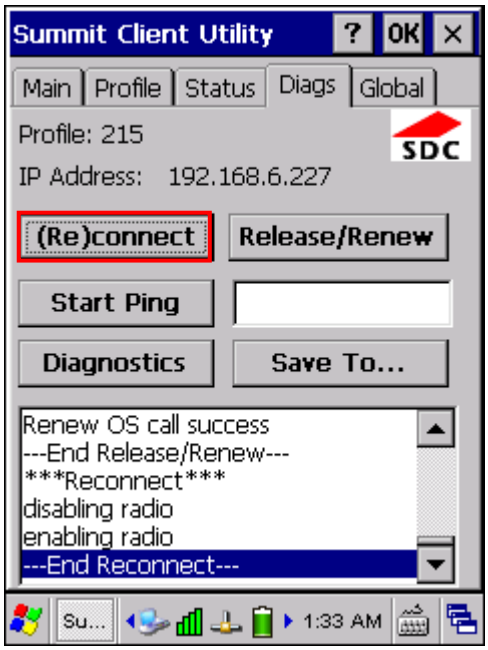
4.2.4 DIAGNOSTICS

Perform troubleshooting and diagnostic tests if necessary.



(Re)connect

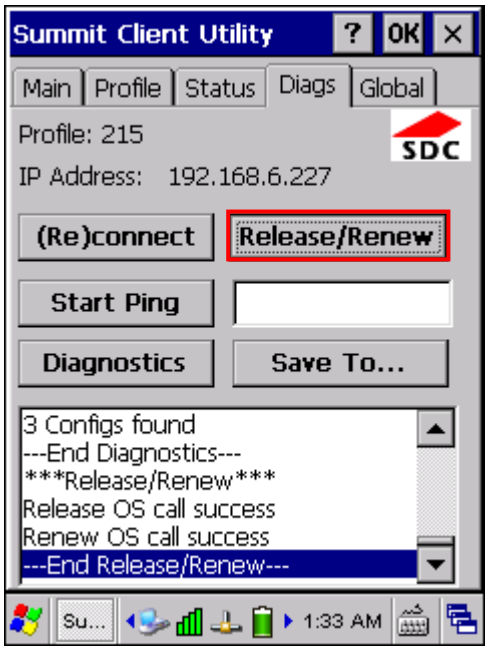
Disable and enable the radio, apply or re-apply the current profile, attempt to associate and authenticate to the wireless network, and log all activity in the output area at the bottom.



Release/Renew

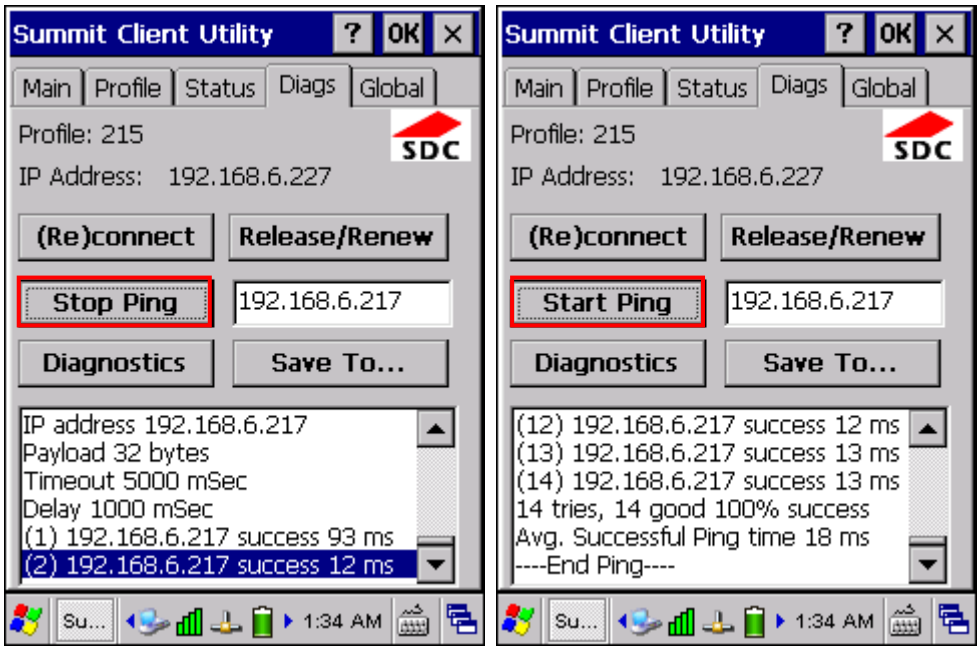
Obtain a new IP address through DHCP release/renew, and log all activity in the output area at

the bottom.

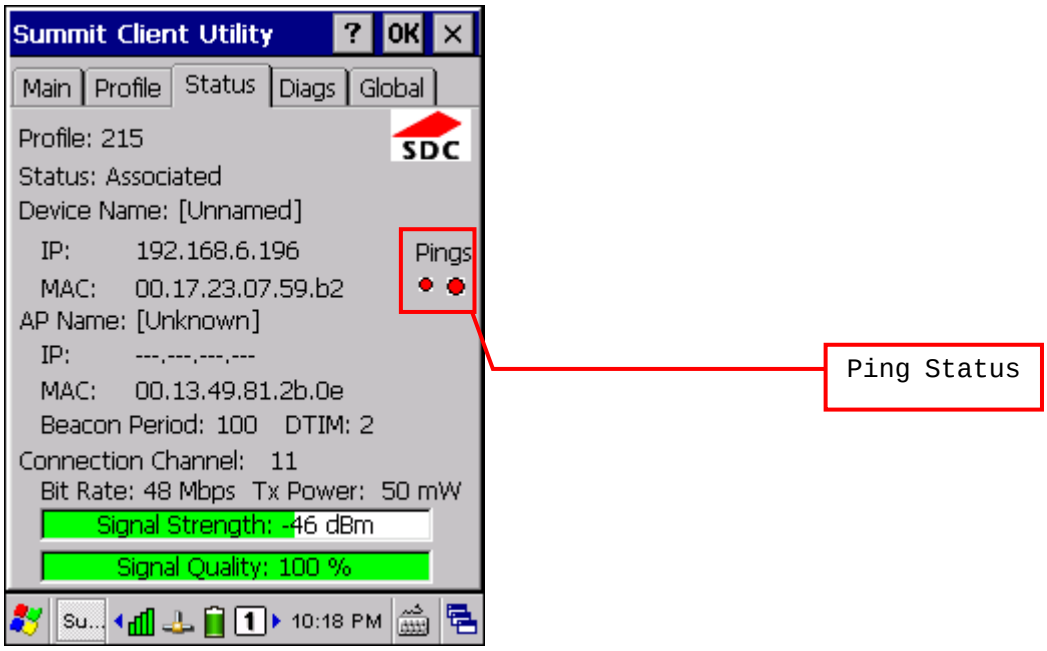


Start Ping

Start a continuous ping to the address in the edit box next to the button. Once the button is tapped, its name and function will change to [Stop Ping]. Pings will continue until you tap the [Stop Ping] button, move to an SCU window other than Diags or Status, exit SCU, or remove the radio. Also, it log all activity in the output area at the bottom.

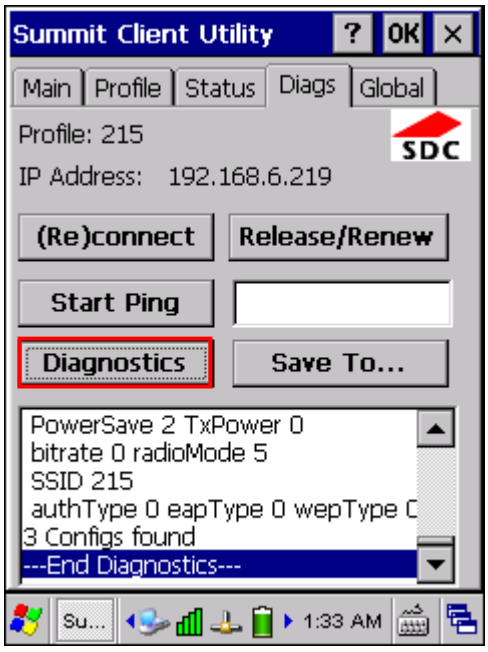


When a ping initiated on the Diags window is active, the Status window displays a ping indicator consisting of two "lights" that take turns to show green (for a successful ping) or red (for an unsuccessful ping).



Diagnostics

Attempt to (re)connect to an access point, and provide a more thorough dump of data then is obtained with (Re)connect. The dump will include radio state, profile settings, global settings, and a BSSID list of APs in the area.



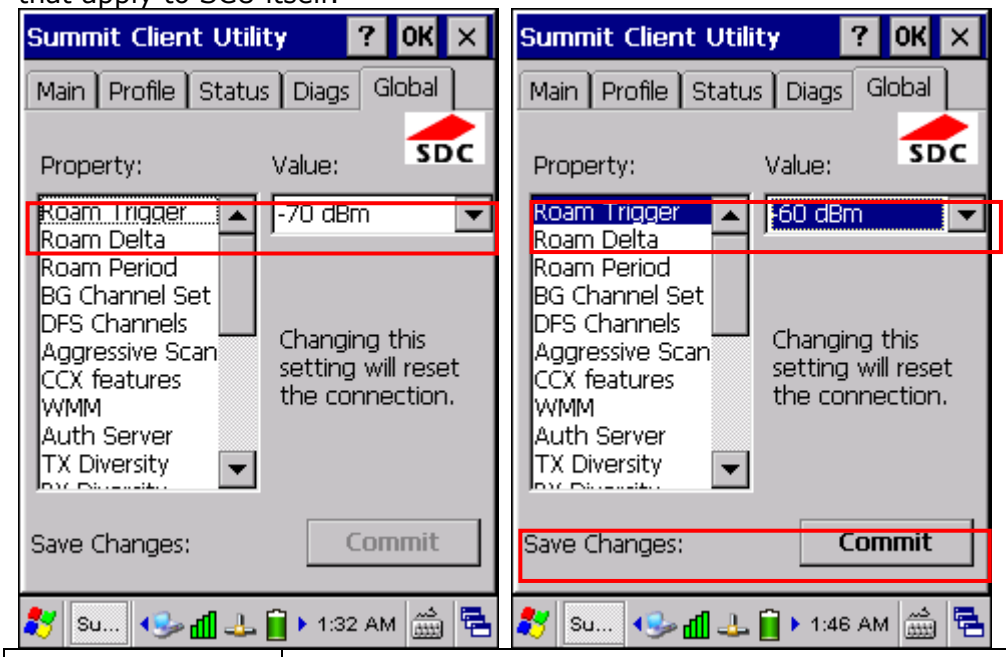
Save to

Save the diagnostics output to a file.

- By default, the file name is “sdc_diags.txt”.

4.2.5 GLOBAL SETTINGS

Global settings include radio and security settings that apply to all profiles and settings that apply to SCU itself.



Property	Value
Roam Trigger	When the moving average RSSI from the current AP is weaker than Roam Trigger, radio does a roam scan where it probes for an AP with a signal that is at least Roam Delta dBm stronger — ▸ Value: -50, -55, -60, -65, -70, -75, -80, -85, -90 ▸ Default: -70 dBm
Roam Delta	When Roam Trigger is met, a second AP's signal strength (RSSI) must be Roam Delta dBm stronger than the moving average RSSI for the current AP before radio will attempt to roam to the second AP — ▸ Value: 5, 10, 15, 20, 25, 30, 35 ▸ Default: 10 dBm
Roam Period	After association or roam scan (with no roam), radio will collect RSSI scan data from Roam Period seconds before considering roaming — ▸ Value: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 ▸ Default: 10 (seconds)
BG Channel Set	Defines the 2.4 GHz channels to be scanned when the radio is contemplating a roam and needs to determine what APs are available. ▸ Value: Full — All channels 1, 6, 11 — The most commonly used 2.4 GHz channels 1, 7, 13 — For ETSI and TELEC radios only ▸ Default: Full
DFS Channels	N/A

<table>
<tr><td>Aggressive Scan</td><td>Aggressive scanning complements and works in conjunction with the standard scanning that is configured through the Roam Trigger, Roam Delta, and Roam Period settings. It is recommended that aggressive scanning is enabled unless there is significant co-channel interference because of overlapping coverage from APs that are on the same channel.
Value: On, Off
Default: On</td></tr>
<tr><td>CCX features</td><td>Whether to allow the use of three CCX features (AP-assisted roaming, AP-specified maximum transmit power, and radio management) —
Value: On, Off (Use “On” only when Cisco-only APs are in use)
Default: Optimized</td></tr>
<tr><td>WMM</td><td>Whether to allow the use of Wi-Fi Multimedia Extensions (WME) or not —
Value: On, Off
Default: Off</td></tr>
<tr><td>Auth Server</td><td>Type of authentication server being used for EAP authentication —
Value:<table><tr><td>Type 1</td><td>Cisco Secure ACS or another server that uses PEAPv1 for PEAP with EAP-MSCHAPV2 (PEAP-MSCHAP)</td></tr><tr><td>Type 2</td><td>A different authentication server, such as Juniper Networks Steel Belted RADIUS, that uses PEAPv0 for PEAP-MSCHAP</td></tr></table>
Default: Type 1</td></tr>
<tr><td>TX Diversity</td><td>How to handle antenna diversity when transmitting data to AP —
Value:<table><tr><td>Main Only</td><td>Use main antenna only</td></tr><tr><td>Aux Only</td><td>Use auxiliary antenna only</td></tr><tr><td>On</td><td>Use diversity</td></tr></table>
Default: On</td></tr>
<tr><td>RX Diversity</td><td>How to handle antenna diversity when receiving data from AP —
Value:<table><tr><td>Main Only</td><td>Use main antenna only</td></tr><tr><td>Aux Only</td><td>Use auxiliary antenna only</td></tr><tr><td>On-start on Main</td><td>On startup, use main antenna</td></tr><tr><td>On-start on Aux</td><td>On startup, use auxiliary antenna</td></tr></table>
Default: On-start on Main</td></tr>
<tr><td>Frag Thresh</td><td>If packet size exceeds threshold, then it is fragmented —
Value: 256 ~ 2346
Default: 2346 (bytes)</td></tr>
</table>

<table>
<tr><td>RTS Thresh</td><td>Packet size above which RTS/CTS is required on link —
Value: 0 ~ 2347</td></tr>
</table>

	▸ Default: 2347 (bytes)
LED	N/A
Tray Icon	Whether to enable the system tray icon or not — ▸ Value: On, Off ▸ Default: On
Hide Passwords	Whether to hide the passwords and other sensitive information, such as WEP keys, in SCU as well as EAP authentication dialog boxes — ▸ Value: On, Off ▸ Default: Off
Admin Password	N/A
Auth Timeout (s)	Specifies how long it will wait for an EAP authentication request to succeed or fail. If authentication credentials are specified in the active profile and the authentication times out, then association will fail. If authentication credentials are not specified in the active profile and the authentication times out, then the user will be required to enter credentials again. ▸ Value: 3 ~ 60 ▸ Default: 8 (seconds)
Certs path	File path where the certificate for EAP authentication is stored ▸ Value: A valid directory path of up to 64 characters ▸ Default: Depends on device
Ping Payload	The amount of data to be transmitted on a pin — ▸ Value: 32, 64, 128, 256, 512, 1024 ▸ Default: 32 (bytes)
Ping Timeout (ms)	The amount of time that elapses without a response before ping request is considered a failure — ▸ Value: 0 ~ 30000 ▸ Default: 5000 (milliseconds)
Ping Delay (ms)	The amount of time that elapses between successive ping requests — ▸ Value: 0 ~ 7200000 ▸ Default: 1000 (milliseconds)

Note: SCU stores values in the registry. The purpose of "Custom" is to prevent SCU from overriding a change to the registry that was made manually. Selecting "Custom" has no real effect! (1) If SCU displays a value of "Custom" for a global setting, then the operating system registry has been edited to include a value that is not available for selection on the Global window. (2) If SCU displays a value other than "Custom" and you select the value of "Custom" and tap [Commit], then SCU reverts to the value that is displayed before you selected "Custom".

4.2.6 SUMMIT SYSTEM TRAY ICON

The Summit system tray icon provides a visual status for the radio and enables the user to launch **Summit Client Utility** by tapping the icon. It is only available when all of the following is true:

- A Summit radio is present.
- The power to the radio is turned on through **Power Management**.
- Windows Zero Config (WZC) is NOT active.
- The global setting of the SCU Tray Icon is turned ON (the default setting).

Icon	Indication
	The radio is not associated or authenticated to an access point (AP).
	The signal strength (RSSI) for the current AP (to which the radio is associated) is -80 dBm or weaker.
	The RSSI for the current AP is stronger than -80 dBm but not stronger than -60 dBm.
	The RSSI for the current AP is stronger than -60 dBm but not stronger than -40 dBm.
	The RSSI for the current AP is stronger than -40 dBm.

Chapter 5

USING BLUETOOTH

Bluetooth Manager lets you configure the Bluetooth settings and use the Bluetooth services provided on the remote devices.

IN THIS CHAPTER

5.1 Turn on Bluetooth Power..... 77
5.2 Search Devices..... 79
5.3 Pair Devices..... 81
5.4 File Transfer..... 85
5.5 Object Push..... 88
5.6 Serial Port Service..... 89
5.7 Manage Local Services..... 91

5.1 TURN ON BLUETOOTH POWER

1) Go to **Start** | **Programs** | **BTManager** to open the **Bluetooth Manager**.

2) It takes several seconds to enable the Bluetooth services. The associated icon will appear on the taskbar. Meanwhile, the LED on the TERMINAL will turn blue and flash slowly.

Tap to stop all Bluetooth connections and exit the application. The LED on the TERMINAL will go off.

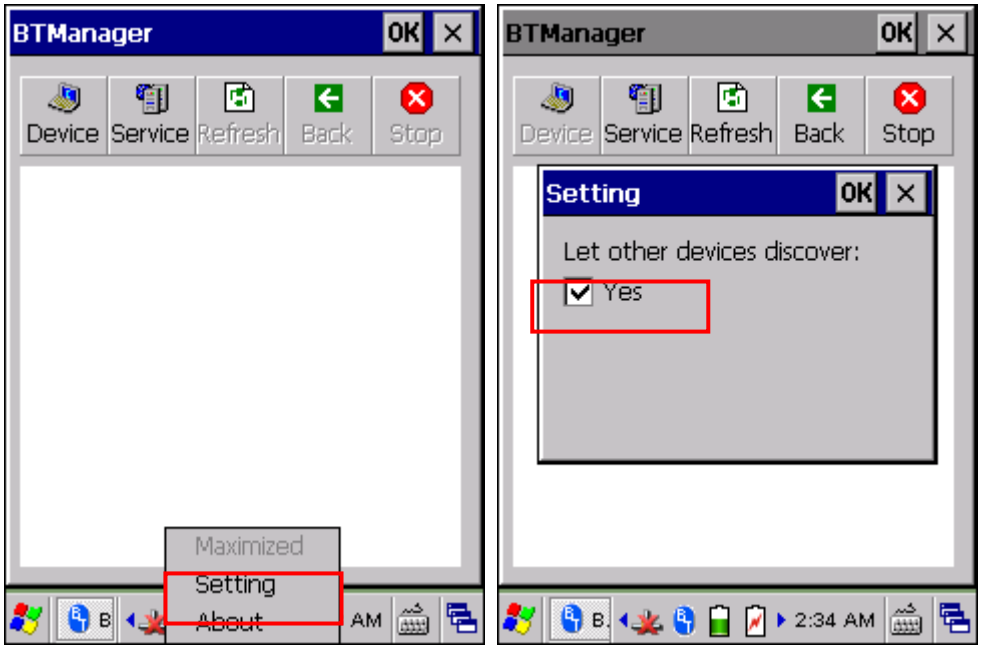
Note: You may need to stop using the Bluetooth services at times, in order to conserve battery power, or in situations where the use of radio is prohibited, such as on airplanes, in hospitals, etc.

5.1.1 BLUETOOTH TOOLBAR

<table>
<tr><th>Buttons</th><th>Description</th></tr>
<tr><td> 
</td><td>Tap this button to view the Bluetooth devices discovered during this session.
If you tap the button for the first time, it will start the inquiry process to discover nearby Bluetooth devices.</td></tr>
<tr><td> 
</td><td>Tap this button to view the Bluetooth services provided on 9600.
▸ By default, File Transfer and Object Push services are made available, and therefore, displayed along with a plug icon “”.
▸ To change properties of a service, tap and hold it to select [Change Local Path] from the pop-up menu.
<table>
<tr><th>Local Path</th><th>Bluetooth Service on 9600</th></tr>
<tr><td>\Temp\Ftp</td><td>File Transfer</td></tr>
<tr><td>\My documents</td><td>Object Push</td></tr>
</table></td></tr>
<tr><td> 
</td><td>Tap this button to stop inquiring, disconnect a connection or unload a service.</td></tr>
<tr><td> 
</td><td>Tap this button to refresh the device list.</td></tr>
<tr><td> 
</td><td>Tap this button to restore the previous window.</td></tr>
</table>

5.1.2 SET DISCOVERABLE

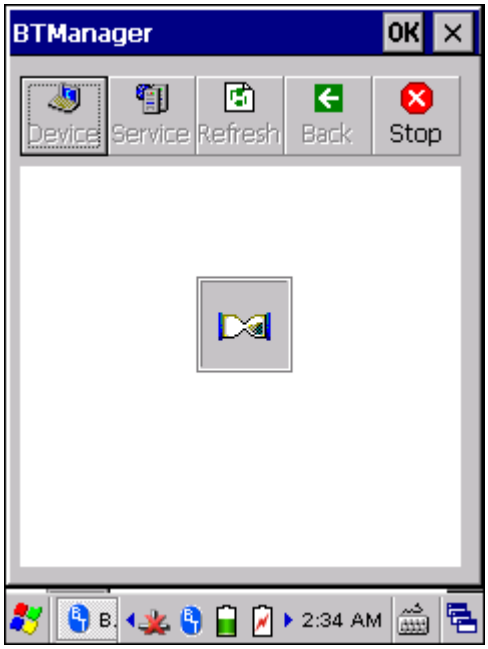
Cancel the check box to hide the TERMINAL from other Bluetooth devices.



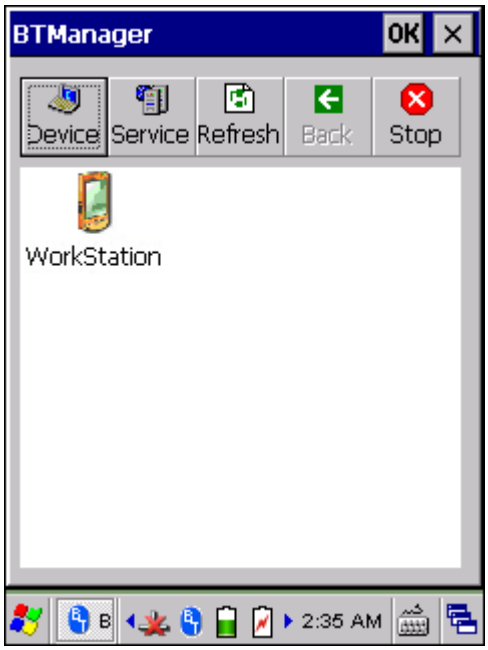
5.2 SEARCH DEVICES

1) Tap 

to discover nearby Bluetooth devices.



2) Wait for a few seconds, and it will list the discovered devices.



3) If you do not see the device that you want to connect to, make sure it is set discoverable.

Tap  to search again.

5.3 PAIR DEVICES

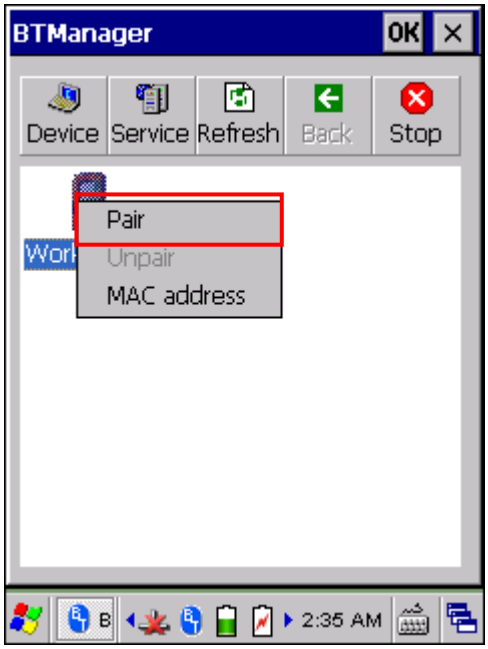
5.3.1 IDENTIFY REMOTE DEVICE

From the device list, tap and hold the desired device to select [MAC address] from the pop-up menu.

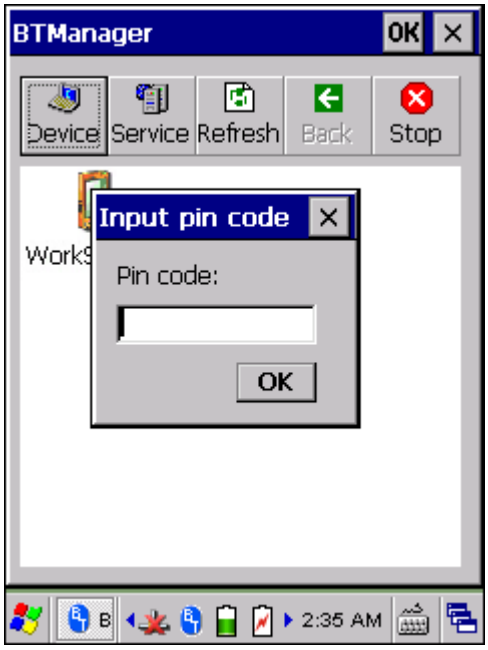
5.3.2 PAIR

When authentication is enabled on the remote device, you will have to exchange a passkey (= pair) with it before starting a connection.

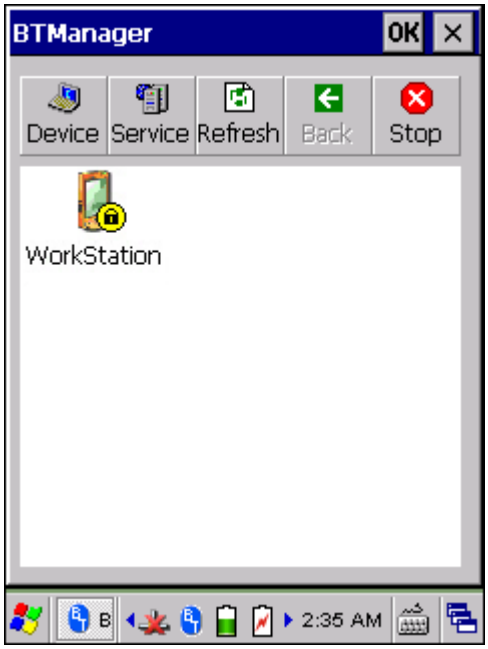
1) From the device list, tap and hold the desired device to select [Pair] from the pop-up menu.



2) Enter the PIN code that is specified on the remote device. (right above)



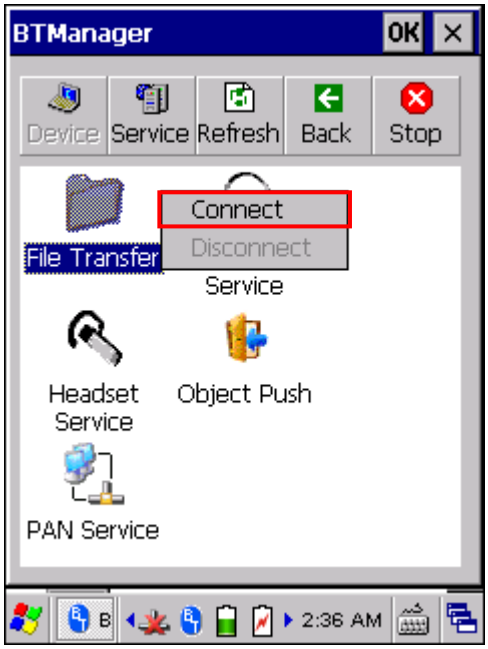
3) Once paired successfully, the paired device will be displayed along with a lock icon "".



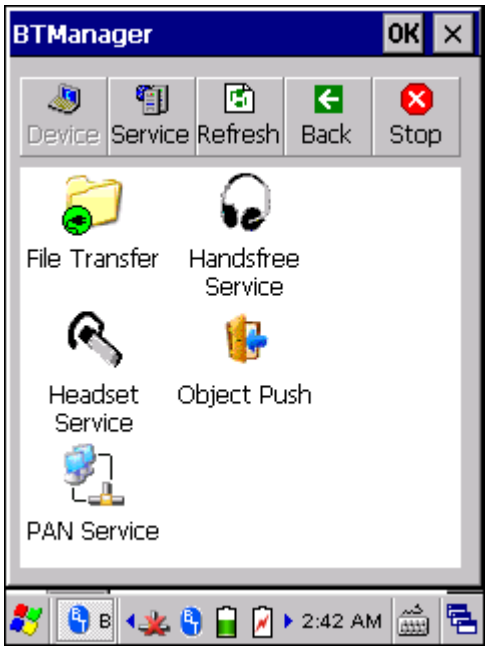
4) Double-tap the remote device to find out the available Bluetooth services.

5) Tap and hold a desired Bluetooth service. Select [Connect] or [Push File] from the pop-up menu. Refer to the following sections:

5.4 File Transfer
5.5 Object Push
5.6 Serial Port Service

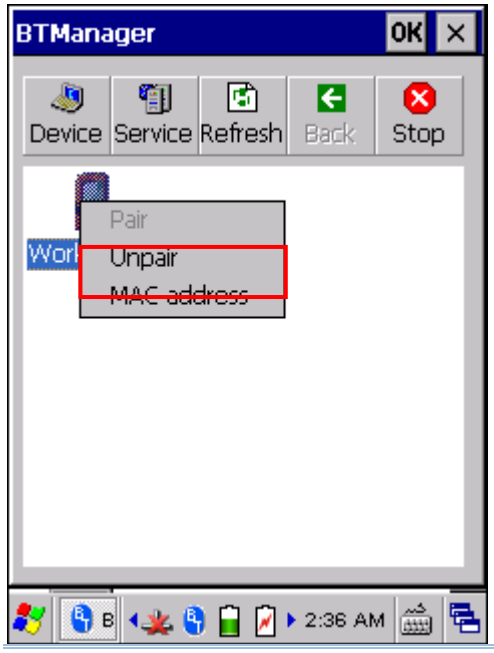


6) Once the connection has been established, the connected service will be displayed along with a plug icon "".



5.3.3 UNPAIR

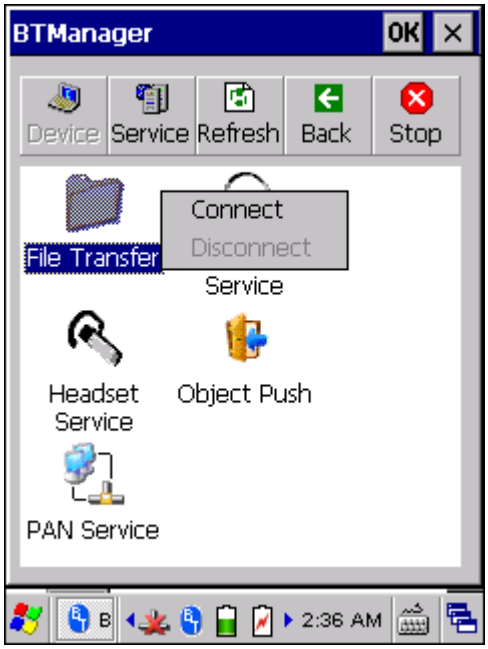
From the device list, tap and hold the desired device to select [Unpair] from the pop-up menu.



Note: The TERMINAL must be unpaired on the remote device as well. For example, remove it from the device list on PC. (Both devices must be unpaired!)

5.4 FILE TRANSFER

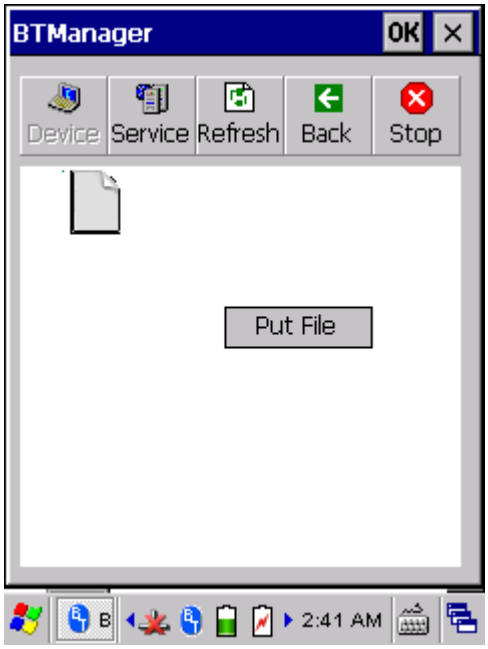
1) Tap and hold the File Transfer service.



2) Select [Connect] (and assign COM port if necessary).

5.4.1 UPLOAD A FILE

3) Tap and hold anywhere blank to select [Put File] from the pop-up menu.

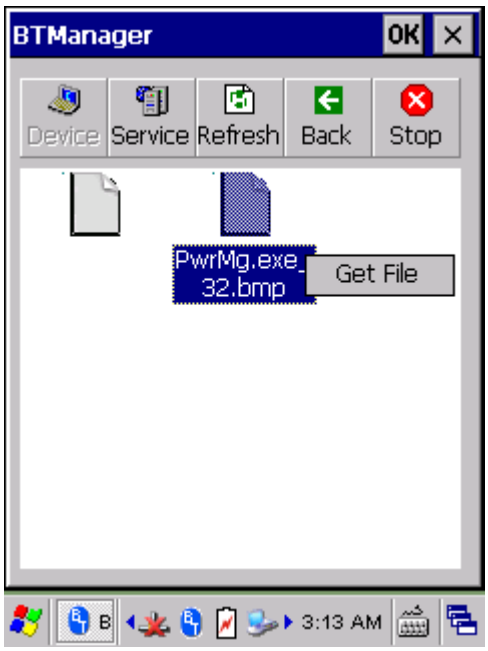


4) Choose the file you wish to upload to the remote device.

5) The TERMINAL will start uploading the file to the remote device.

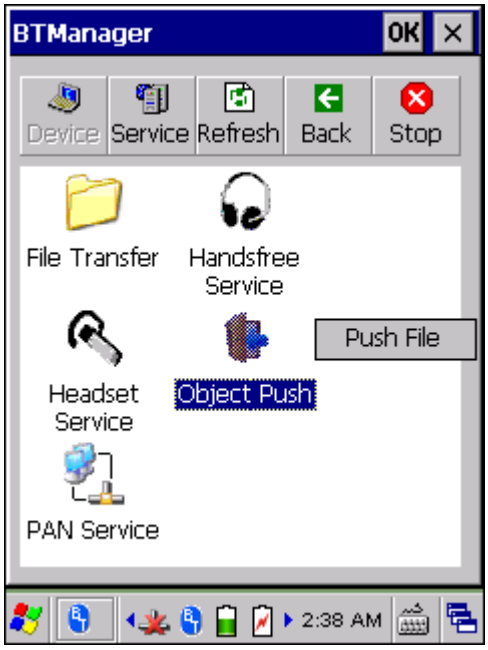
5.4.2 DOWNLOAD A FILE

6) Tap and hold a desired file to select [Get File] from the pop-up menu. The TERMINAL will start downloading the file from the remote device.



5.5 OBJECT PUSH

1) Tap and hold the Object Push service.

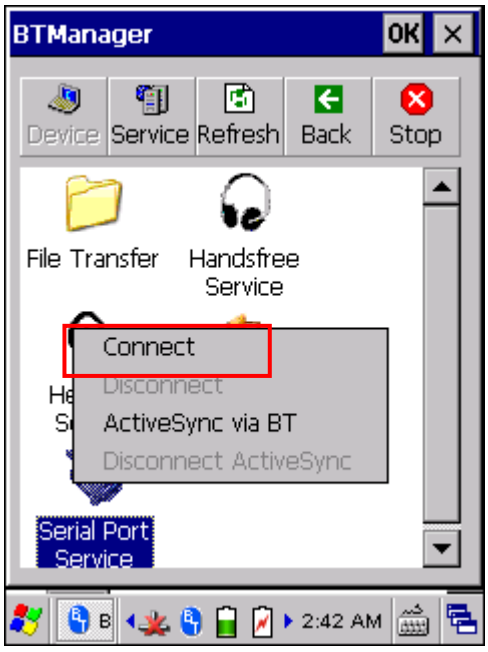


2) Select [Push file] to send a file.
3) Choose a file you wish to send.
4) The TERMINAL will start sending the file.

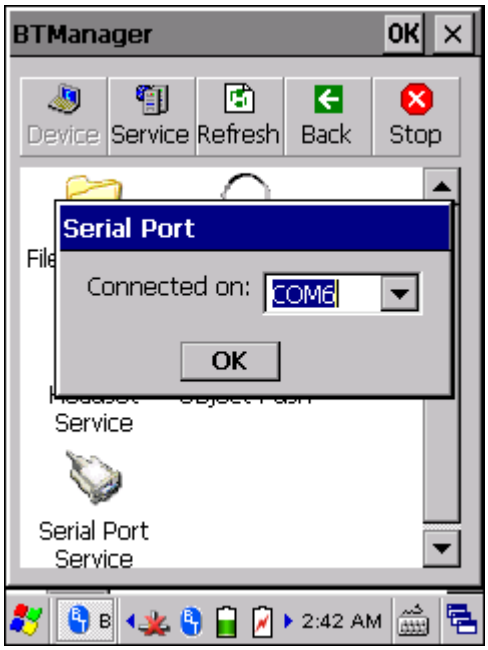
5.6 SERIAL PORT SERVICE

5.6.1 SERIAL PORT SERVICE

1) Tap and hold the Serial Port Service.



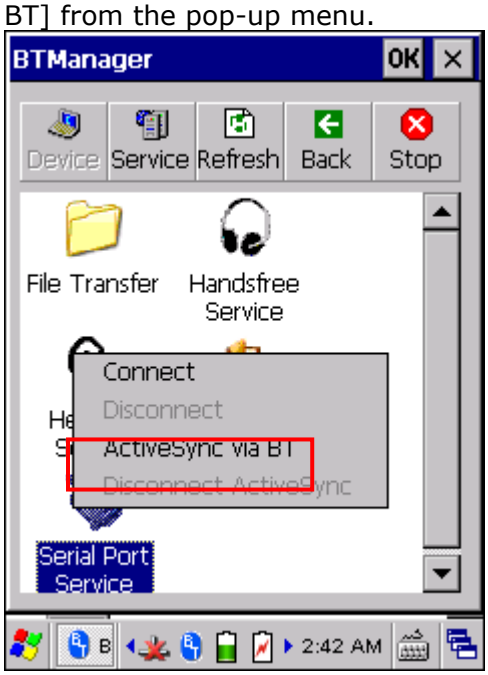
2) Select [Connect] (and assign COM port if necessary).



3) Once the connection has been established, the connected service will be displayed along with a plug icon "".

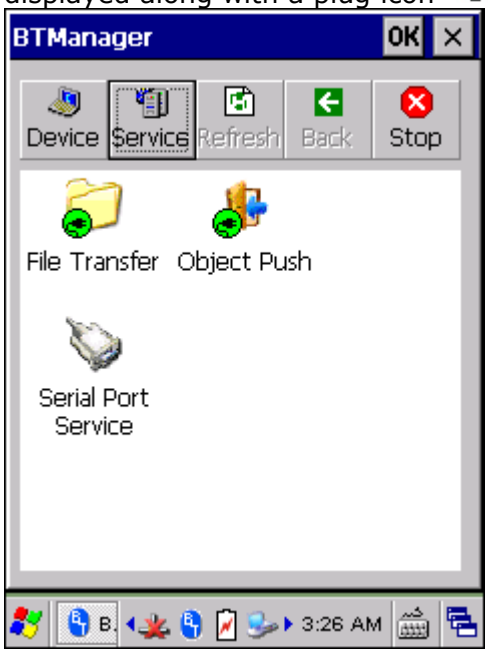
5.6.2 BLUETOOTH ACTIVESYNC

For ActiveSync via Bluetooth, tap and hold Serial Port Service to select [ActiveSync via BT] from the pop-up menu.



5.7 MANAGE LOCAL SERVICES

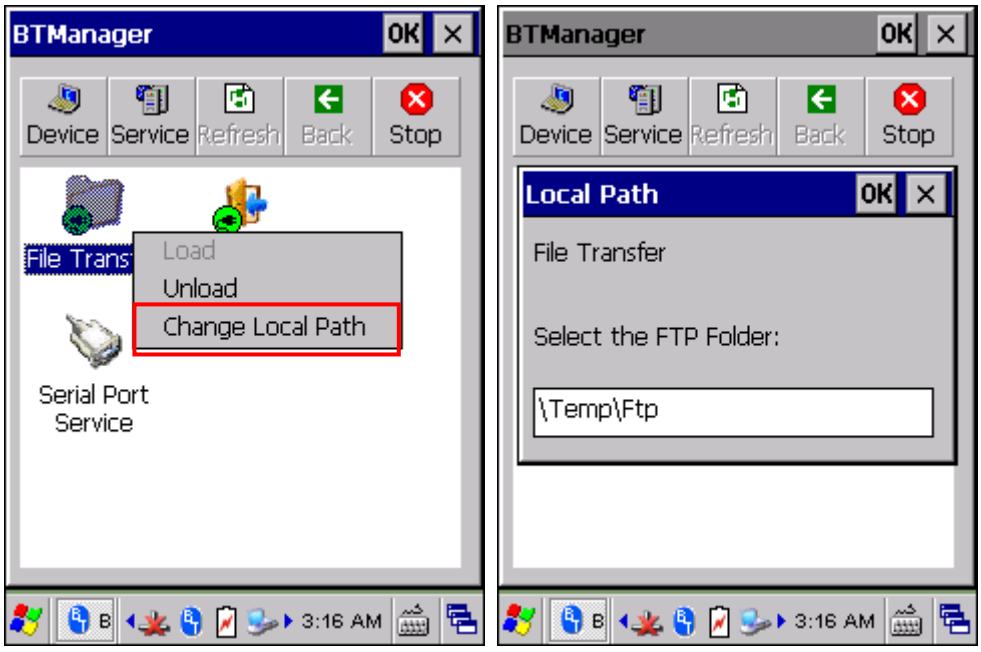
By default, File Transfer and Object Push services are made available, and therefore, displayed along with a plug icon "".



5.7.1 FILE TRANSFER

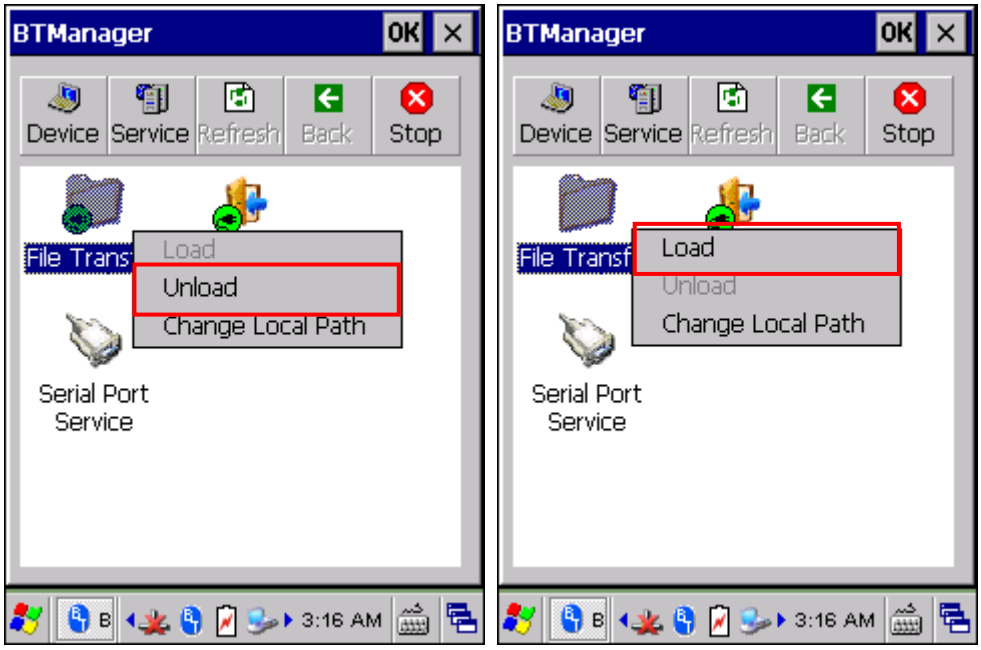
Change Local Path

You can change the FTP folder. Tap and hold it to select [Change Local Path] from the pop-up menu.



Unload/Load Service

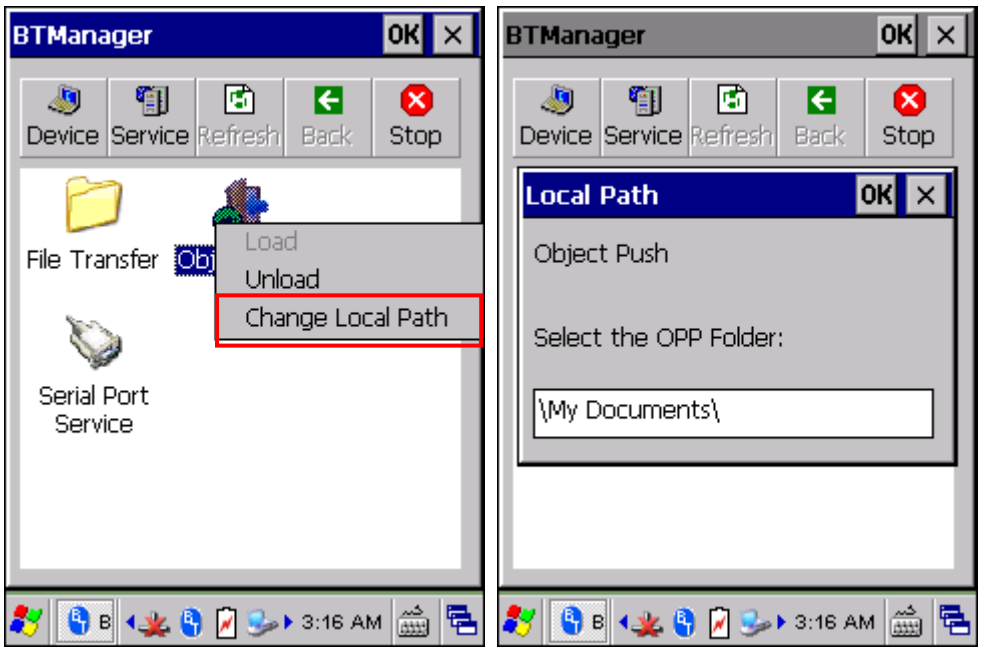
You can unload or re-load the service. When unloaded, it becomes unavailable to a remote device.



5.7.2 OBJECT PUSH

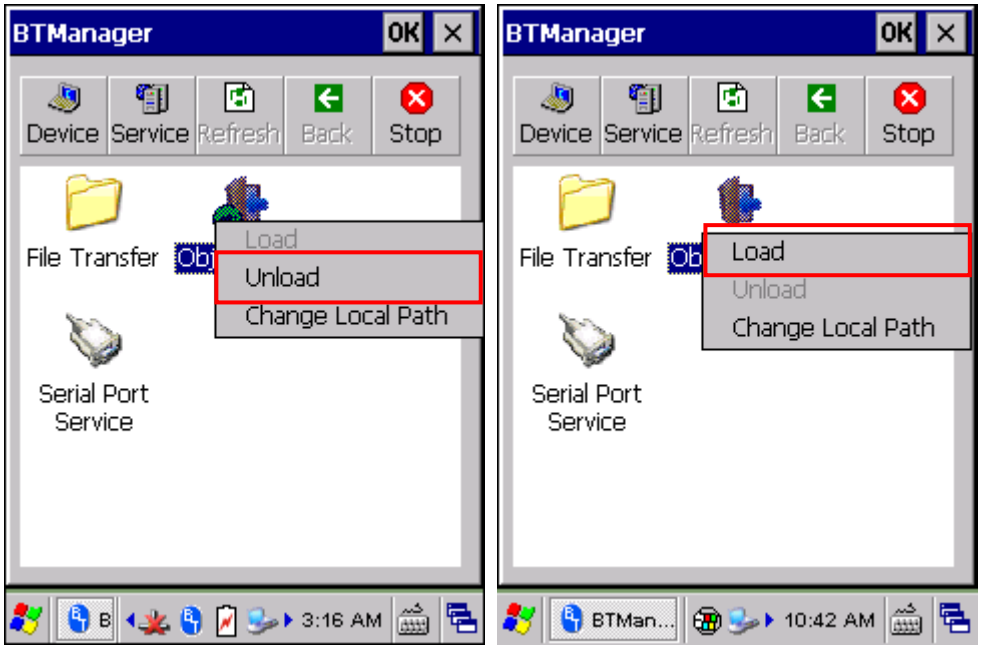
Change Local Path

You can change the exchange folder for Object Push. Tap and hold it to select [Change Local Path] from the pop-up menu.



Unload/Load Service

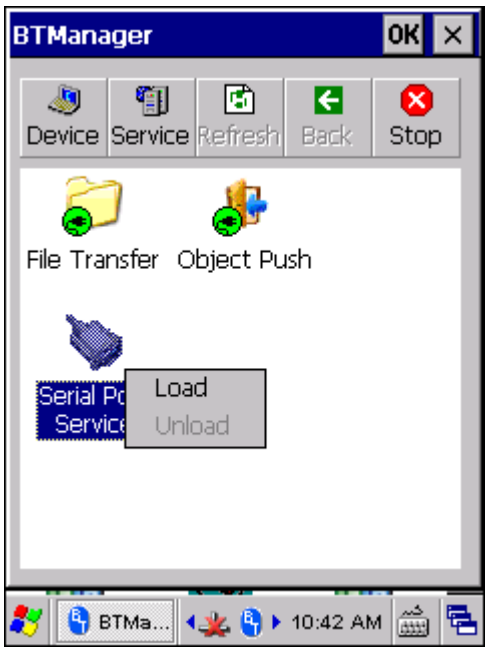
You can unload or re-load the service. When unloaded, it becomes unavailable to a remote device.



5.7.3 SERIAL PORT SERVICE

Unload/Load Service

You can unload or re-load the service. When unloaded, it becomes unavailable to a remote device.



Unload/Load Service

You can unload or re-load the service. When unloaded, it becomes unavailable to a remote device.

Chapter 6

USING GPRS

9600 TERMINAL allows making phone calls or connecting to network over General Packet Radio Service (GPRS). Insert SIM card before turning on the power to GPRS module. Refer to Inserting SIM Card.

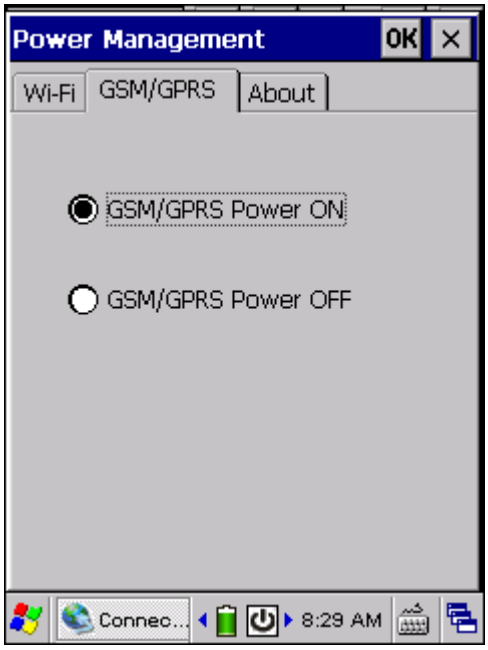
Warning: When both GPRS and 802.11b/g are enabled on battery power, the main battery charge will drop down substantially.

IN THIS CHAPTER

6.1 Turn On GPRS Power..... 95
6.2 GPRS Connection..... 97
錯誤! 找不到參照來源。 .....錯誤! 尚未定義書籤。

6.1 TURN ON GPRS POWER

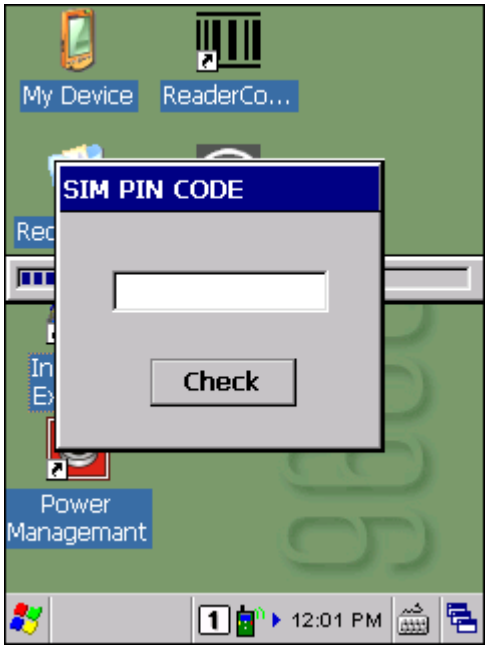
1) Double-tap the associated icon on the taskbar to access **Power Management**.



2) Select [GPRS Power ON] and tap OK.

You may need to turn off the wireless power or simply stop the wireless signals at times, in order to conserve battery power, or in situations where the use of radio is prohibited, such as on airplanes, in hospitals, etc.

3) A dialog box will be displayed asking you to enter the PIN code.



Note: The PIN verification on the TERMINAL only allows two attempts because the system will always process the default number first (= "1234" for factory setting). Unless it matches the PIN code of your SIM card, you will have to manually input the correct PIN code. If you succeed, the PIN code you input will overwrite the factory setting and become the default PIN code. If you fail two times, the PIN will be blocked, and you will need to obtain the PUK code from your network operator and unblock the SIM card on your cellular phone.

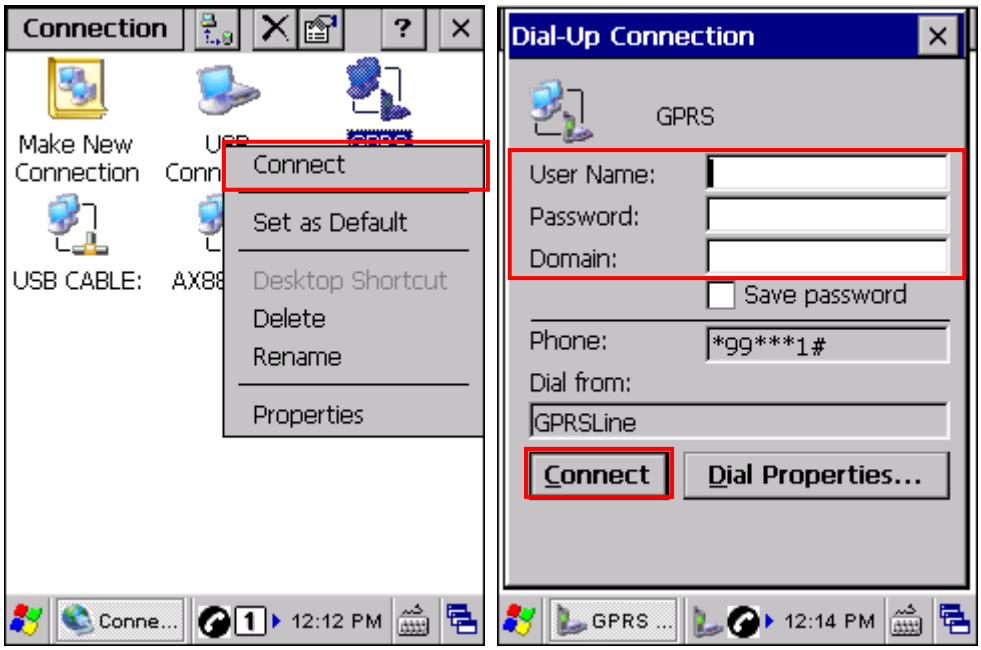
4) It takes several seconds to turn on the power to module and install the driver.

The icon will become to indicate that GPRS power is turned on.

6.2 GPRS CONNECTION

6.2.1 CONNECTING TO GPRS MODEM

1) Go to **Start** | **Settings** | **Network and Dial-up Connections**.
2) Tap and hold "GPRS" to select [Connect] from the pop-up menu.



3) If your dial-up configuration is correct, tap the [Connect] button in the Dial-Up Connection dialog box. Refer to 6.2.2 Configuring Dialing Properties.

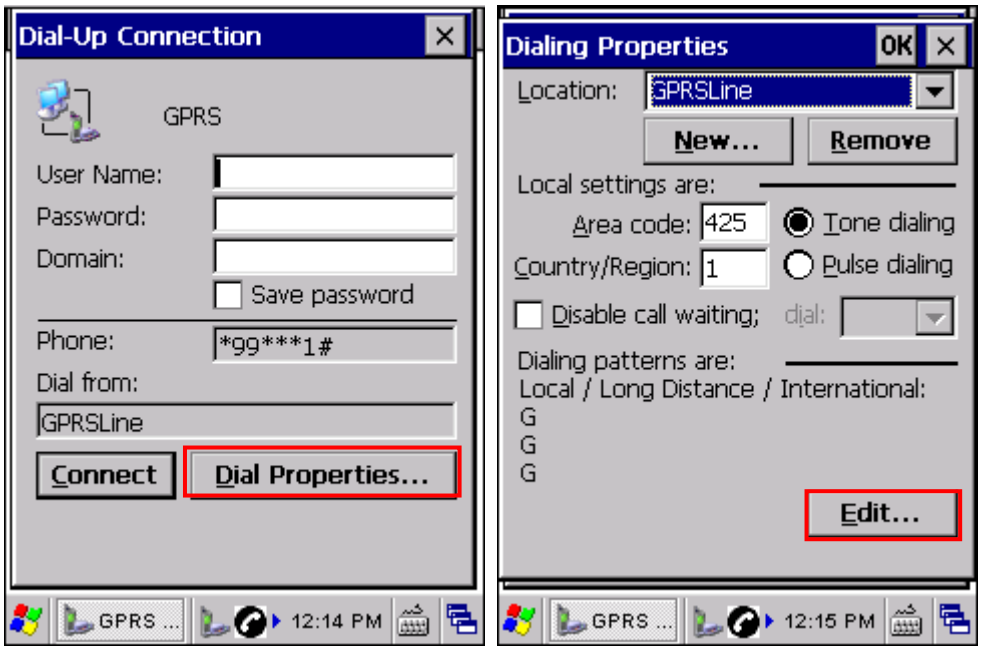
Note: You must connect to the GPRS modem specified by the mobile phone operator.

4) After you tap the [Connect] button, the GPRS status will go through opening port, user authenticated, device connected until it is connected finally.

   The status icon will appear on the taskbar to indicate the GPRS connection has been established successfully. If you want to disconnect, double-tap the icon and tap the [Disconnect] button.

6.2.2 CONFIGURING DIALING PROPERTIES

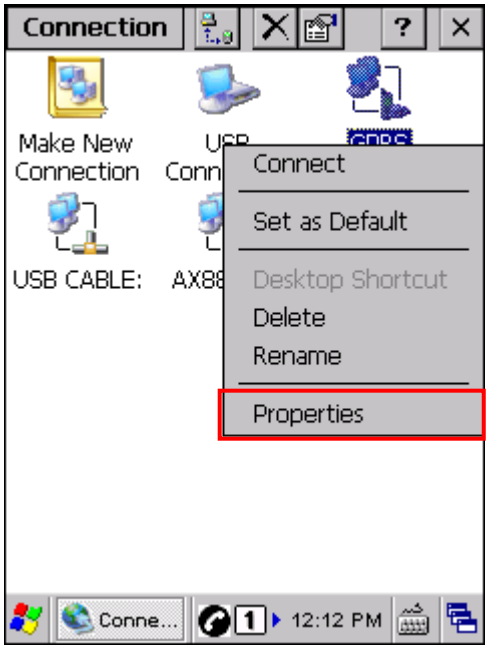
If you need to configure the dial-up settings, tap the [Dial Properties] button in the Dial-Up Connection dialog box.



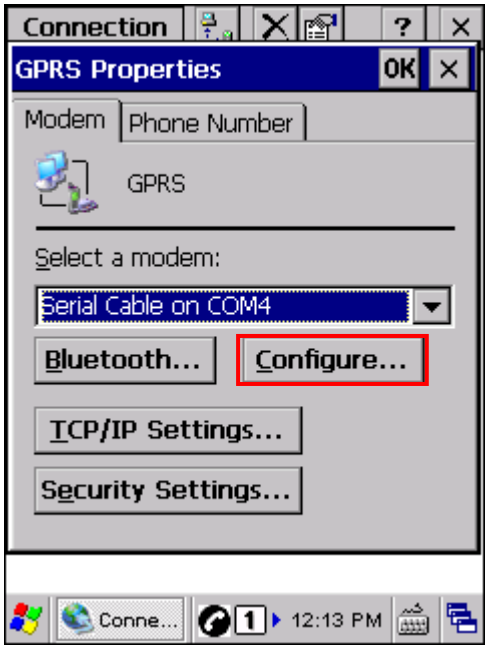
Note: Alternatively, you may go to **Start** | **Settings** | **Control Panel** and select **Dialing**.

6.2.3 CONFIGURING GPRS PROPERTIES

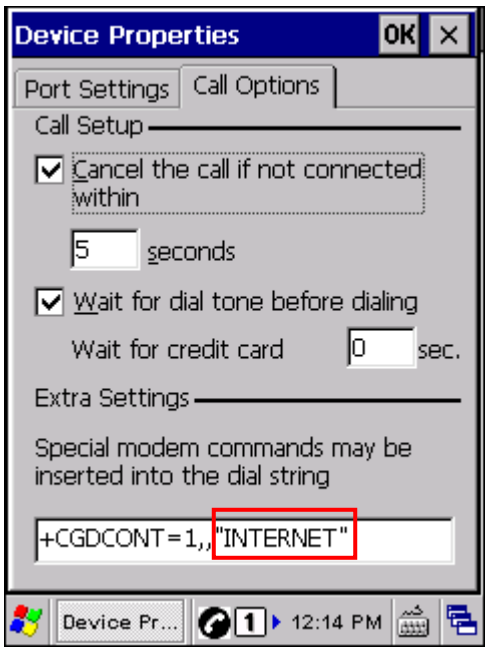
1) Go to **Start** | **Settings** | **Network and Dial-up Connections**.
2) Tap and hold "GPRS" to select [Properties] from the pop-up menu.



3) As long as SIM card is present, the default GPRS modem will appear as shown below. Tap [Configure].



4) Select the Call Options tab. The special modem commands inserted into the dial string must be [+CGDCONT=1,,"AP name"]. For example, change "INTERNET" below to the name of your GPRS AP.



Chapter 7
USING READER CONFIGURATION UTILITY

Reader Configuration Utility is the tool that lets you manage the barcode and RFID readers integrated on the TERMINAL.

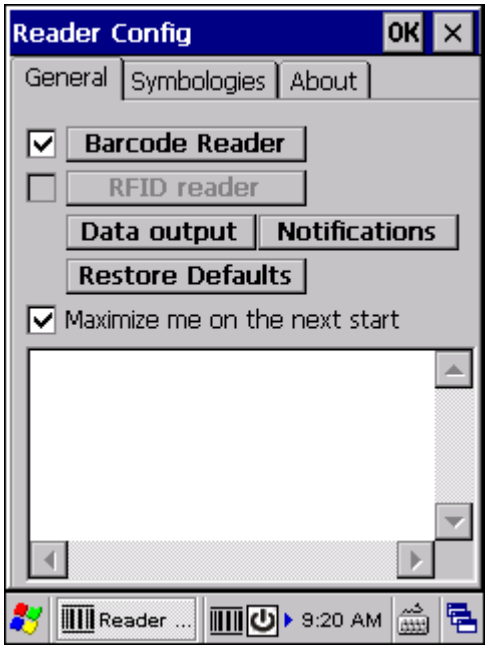
Note: Before executing the utility, make sure you have closed the program ImageMaker.exe.

IN THIS CHAPTER

7.1 Run ReaderConfig.exe 101
7.2 Barcode Reader Settings.....103
7.3 RFID Reader Settings 103
7.4 Data Output.....105
7.5 Notifications (for Good Read).....107
7.6 Symbology Settings 107

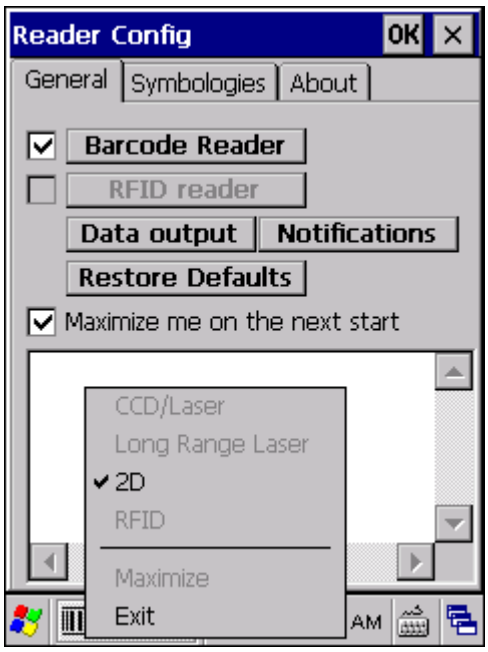
7.1 RUN READERCONFIG.EXE

1) Go to **Start** | **Programs** | **ReaderConfig** to open the **Reader Configuration Utility**. The associated icon will appear on the taskbar.



2) Tap and hold the icon to access the menu that allows you to choose and enable one or both of the readers. There will be a check mark in front of the reader if it is enabled.

If the RFID Reader is installed, the option will be available.

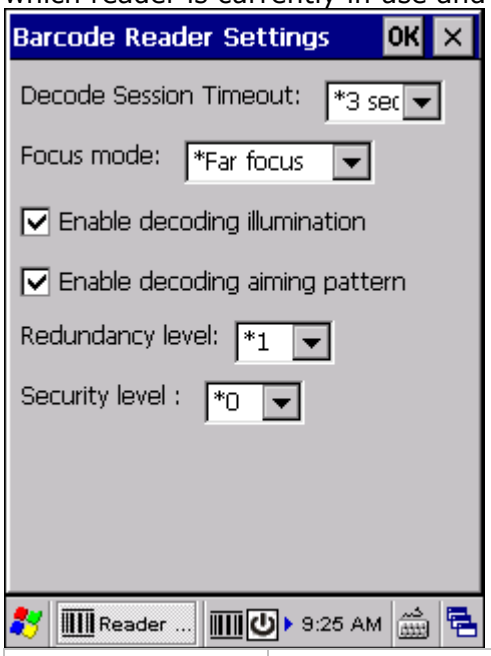


3) To meet your application requirements, proceed to configure associated reader settings as well as barcode settings.

Note: (1) The ReaderConfig.exe utility will automatically detect the reader module(s) that is currently installed in the TERMINAL.
(2) If you wish to reload the default settings, delete the ReaderCfgINI.txt file in DiskOnChip or tap [Restore Defaults] on the General tab.

7.2 BARCODE READER SETTINGS

The barcode reader configurations depend on the scan engine(s) installed. You can tell which reader is currently in use and make necessary changes on the General tab.



Barcode Reader	Description
CCD/Laser Reader	If installed, tap the [Barcode Reader] button to configure the reader settings for CCD or Laser scan engine. ▸ Refer to the Reader Settings Table in Appendix II - 錯誤! 找不到參照來源。.
2D Reader	The 2D scan engine is capable of reading linear and 2D barcodes. If installed, tap the [Barcode Reader] button to configure the reader settings for 2D scan engine. ▸ Refer to the Reader Settings Table in Appendix III - 錯誤! 找不到參照來源。.

7.3 RFID READER SETTINGS

If the RFID scan engine is present, configurable options will be displayed.

Note: Because it is possible to read barcode and RFID tag at the same time, it is recommended that only one scan engine is enabled at a time to prevent from misreading.

Some RFID tags support both read/write operations, on a page-by-page basis. You may find it necessary to define your own read/write operation. For reference only, the table below lists the start page for read/write operation on a number of RFID tags.

Start Page	Tag Type	Standard
-1	Start from byte 0 of the default page (see below) for all tags	
3	Mifare Ultralight	ISO 14443A
4	SR176	ISO 14443B
3	ICODE SLI	ISO 15693
0	LRI512	ISO 15693
3	SRF55VxxP	ISO 15693
0	EM4135	ISO 15693
0	Tag-it HF-I	ISO 15693
0	Others	ISO 15693
5	ICODE	ICODE® (Phillips)
0	Tag-it	Tag-it® (TI)

Note: Please refer to the specifications of your RFID tags for memory organization.

7.3.1 READ OPERATION

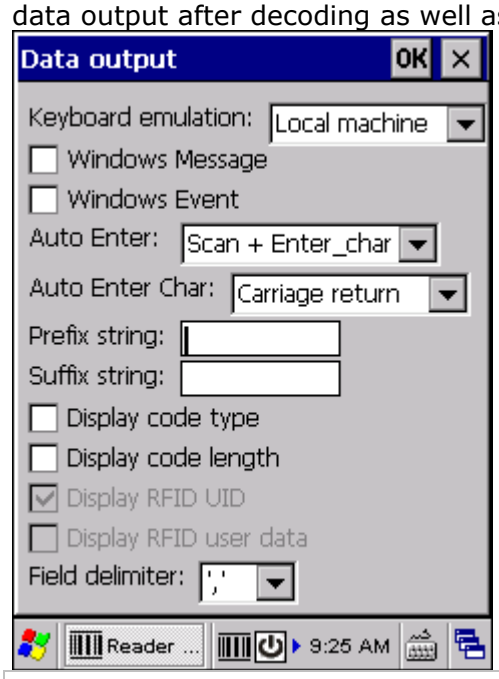
By default, the RFID tag is read from byte 0 of the default page. However, the default page, amount of bytes and number of pages of each tag may be different. Specify how many bytes of data you want to read from the tag.
Generally, the read data is user data obtained from the user block. If you are sure that the data is to be read from a non-user block, such as the lock block, you need to select the check box of [Display hex values] first.

7.3.2 WRITE OPERATION

Type the string that you want to write to a tag. By default, the string is written to the tag from byte 0 of the default page. However, the default page, amount of bytes and number of pages of each tag may be different. Therefore, the input string will automatically be truncated to fit into pages, and data may be discarded when it comes to the end of pages available.
Generally, it will write the input string to the user block, which is free for custom use. The string will be displayed as "user data". If you wish to write the string to a non-user block, such as the lock block, you need to select the check box of [Use hex values] first.
Once you have selected to use hex values for the string, the string length must be even. For example, if you want to write 0x0A, 0x0B and 0x00 to a tag, the string you input must be "0A0B00" instead of "AB0".

7.4 DATA OUTPUT

Tap the [Data Output] button on the General tab to choose from the three options for data output after decoding as well as configure associated settings.



Data Output		Default
Keyboard Emulation	Data is emulated as typed text and sent to the active Window. ▸ When "Local machine" is selected, simply run your application or built-in program, such as WordPad, to start with data collection. ▸ When "RDP server" is selected, run the Remote Desktop Connection program to connect to a remote computer. Note that this option is unable to emulate double bytes, such as Big-5 or Unicode characters on the remote PC.	Local machine

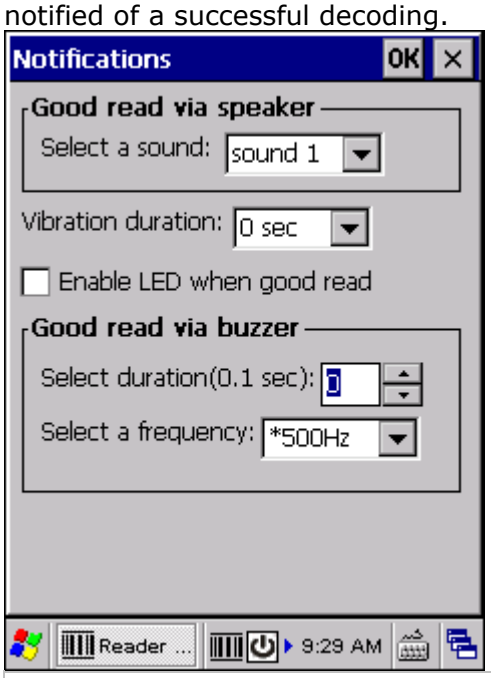
Windows Message	When selected, a Windows message will be broadcasted after decoding. ▸ Intercept the decode message in your application. ▸ Call Windows API (ReadMsgQueue) in your application to retrieve the decoded data.	Disable
Windows Event	When selected, a Windows event will be broadcasted after decoding. ▸ Intercept the decode event in your application. ▸ Call Windows API (ReadMsgQueue) in your application to retrieve the decoded data.	Disable

Note: (1) Refer to CipherLab WinCE Products Programming Guide for details on Windows Message and Windows Event. Sample programs are provided by request.
(2) For the use of a different program rather than ReaderConfig.exe, a dynamic-link library (DLL) file is provided.

Auto ENTER	This function can spare you the trouble of pressing the [Enter] key on the TERMINAL to confirm each scan. It will automatically add an ENTER character in front or to the end of one scan. ▸ No ▸ Scan + ENTER ▸ ENTER + Scan	Scan + ENTER
Auto ENTER Character	*Auto ENTER must be enabled. ▸ None ▸ Carriage Return ▸ Tab ▸ Space ▸ Comma ▸ Semicolon	Carriage Return
Prefix String	0~10 characters	NULL
Suffix String	0~10 characters	NULL
Display Code Type	Select the check box to prefix the code type to barcode data after decoding a barcode.	Disabled
Display Code Length	Select the check box to suffix the code length to barcode data after decoding a barcode.	Disabled
Display RFID UID	Select the check box to display UID after decoding an RFID tag.	Enabled
Display RFID User Data	Select the check box to display user data after decoding an RFID tag.	Disabled
Field Delimiter	Decide whether or not to use a delimiter to separate data fields after decoding a barcode or an RFID tag — Code type, barcode data, and code length if more than one field is displayed ▸ UID and user data if both are displayed	‘ , ’ (comma)

7.5 NOTIFICATIONS (FOR GOOD READ)

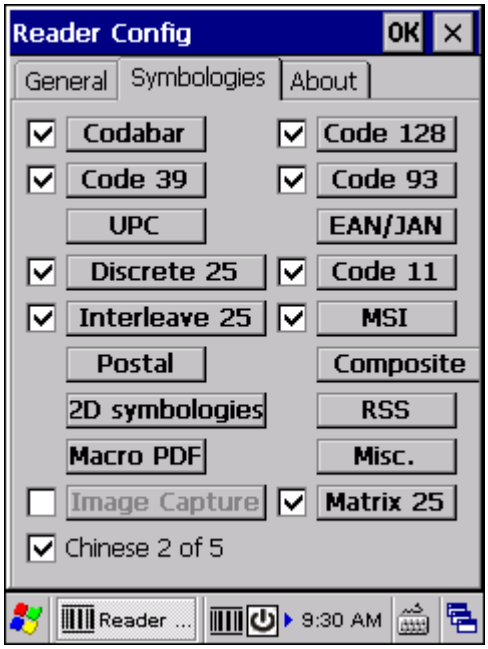
Tap the [Notifications] button on the General tab to configure how you want to be notified of a successful decoding.



Sound / Vibration		Default
Good Read via speaker	Mute, or Sound 1~9	Sound 1
Good Read via buzzer	Specify frequency and duration ▸ Duration 0~255 (0.1 sec.); 0 = Disable the buzzer	0 (= Disable)
Good Read via vibrator	0~30 (sec.) ▸ 0 = Disable the vibrator	0 (= Disable)
Good Read LED	Select the check box to enable Good Read LED. The LED will become green to indicate a successful decoding.	Disable

7.6 SYMBOLOGY SETTINGS

For barcode settings, tap the Symbologies tab.



- Refer to Appendix I - 錯誤! 找不到參照來源。 for the symbologies or RFID tags supported by a scan engine.
- Refer to the Symbology Settings Table in Appendix II - 錯誤! 找不到參照來源。.
- Refer to the Symbology Settings Table in Appendix III - 錯誤! 找不到參照來源。.

Chapter 8

SPECIFICATIONS

PLATFORM, PROCESSOR & MEMORY

Operating System

	Microsoft Windows CE 6.0

CPU

	Intel PXA270 at 520 MHz

Memory

ROM	1 GB non-volatile NAND flash memory
RAM	128 MB on-board SDRAM memory
	▸ Ordering Option - 256 MB on-board SDRAM memory
Expansion Slot	One microSDHC card slot

COMMUNICATIONS & DATA CAPTURE

Communications

USB Host/Client	USB 1.1 Specification
WPAN	Built-in module for Bluetooth version 2.0 Class 2 connectivity
WLAN	Built-in module for 802.11b/g networking
	▸ Wi-Fi certified Summit radio, certified for Cisco Compatible Extensions (CCX) version 4
WWAN	Ordering Option - built-in module for GPRS/EDGE
	▸ Quad-Band - 900, 1800 MHz (Europe); 850, 1900 MHz (U.S.)

Data & Image Capture

Digital Camera	2 mega-pixel CMOS type	
Barcode Reader	Ordering options include	▸ Linear imager (CCD) ▸ Laser (SE950)
RFID Reader	Frequency 13.56 MHz	

ELECTRICAL CHARACTERISTICS

Batteries

Main Battery Pack	Rechargeable Li-ion battery – 3.7 V, 2700 mAh
Backup Battery	Rechargeable Lithium battery – 3.7 V, 80 mAh
	Data retention for at least 24 hours

Power Adapter

Input	AC 100~240 V, 50/60 Hz
Output	DC 5 V, 3 A (Charging & Comm. Cradle, Travel Charger)
	DC 6 V, 6 A (4-Slot Battery Charger)

Working Time (Laser, one scan per 5 seconds)

Wi-Fi Mode with 50% backlight	10 hours (Wi-Fi in power-saving mode)

PHYSICAL CHARACTERISTICS

Color Touch Screen Display

Display	3.5” Transflective TFT-LCD, 65536 colors
Resolution	QVGA (320 × 240 pixels)
	▸ Ordering Option – VGA (640 × 480 pixels)

Keypad

Layout	29 keys for alphanumeric layout
	▸ Ordering Option – 43-key layout
Backlight	White LED backlight for display and keypad

Notifications

Status LED	Triple-color LED – Red / Green / Blue
Audio	Integrated with one mono speaker (front) and buzzer (back)
	Headset jack – 2.5 mm DIA stereo earphone jack with microphone input
	▸ Bluetooth headset supported
Vibrator	0.5G

Enclosures

Materials	Plastic & metal
Dimensions	170 mm (L) 90 mm (W) 38 mm (H)
Weight	Approx. 400 g (configuration-dependent)

ENVIRONMENTAL CHARACTERISTICS

Temperature

Operating	-10 °C to 50 °C
Storage	-20 °C to 60 °C

Humidity

Operating	10% to 90%, non-condensing
Storage	5% to 95%, non-condensing

Resistance

Impact Resistance	1.5 m, 5 drops per 6 sides
Tumble Test	100 cm, 500 cycles
Splash/Dust Resistance	IP 64
Electrostatic Discharge	± 15 kV air discharge, ± 8 kV contact discharge

PROGRAMMING SUPPORT

Development Environment & Tools

Integrated Development Environment	Visual Studio 2008
	Visual Studio 2005
	Visual Studio .NET 2003
	eMbedded Visual C++ 4.0 SP4
Software Development Kit	9600 SDK or Windows CE 6.0 Standard SDK
	System API (static and DLL) for system configuration
	ReaderDLL for reader configuration

Software & Utilities

Cipherlab software package	▸ Reader Configuration Utility
	▸ MIRROR Emulator (CipherNet) for VT100/220 or IBM 5250 emulation
	▸ FORGE Application Generator
	▸ STREAM Wireless Studio
	▸ MIRROR Browser for web application
Third-party software	▸ Wavelink Avalanche Enabler & Telnet Client
	▸ MCL Collection - MCL Client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