



PA966BTG/PA967BTG

Product Reference Guide



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P/N 400489 REV.B

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Chapter 1. Introduction

Thank you for purchasing PA966.

Your PA966 is a rugged, compact and lightweight palm-size computer. It utilizes the Windows CE operating system, and incorporates two optional scanning laser device, laser & imager, color LCD with touch screen, keypad, and wireless communication capability.

It provides the user with a standard Windows-based environment for customizing and operating the device.

This PA966 product reference guide will guide you to access your PA966.

PA967 is PA966 with add-on gun grip for more convenient barcode scanning.



Unitech PA966 and Unitech PA967

This user manual is shared and used by the series below:

PA966BTG- terminal with bluetooth and 802.11g

PA967BTG- PA966 terminal with bluetooth and 802.11g and with add-on gun grip for more convenient barcode scanning.

NOTICE

This unit is equipped with a battery pack and backup battery. It is possible that the Unitech PA966 may not power on due to battery discharge as a result of storage.

In the above situation, plug the PA966 to the USB cable with DC in port or put the unit into the Unitech PA96x Cradle (with 12V/2A AC-DC adapter), and recharge the unit for 16 hours in order to fully charge its backup battery.

The backup battery will charge from external power or the main battery (if the main battery still has enough power to turn on). In the event the main battery is fully charged, refrain from using the PA966 for 16 hours in order for the main battery to fully charge the backup battery.

Backing up data by backup battery only, without the main battery installed in battery compartment may take as long as 6 hours. Therefore, in order to prevent data protection failure due to backup battery failure, do not leave the PA966 without the rechargeable battery pack installed, or without connection to AC power for an extended period of time.

Federal Communication Commission Interference Statement

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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

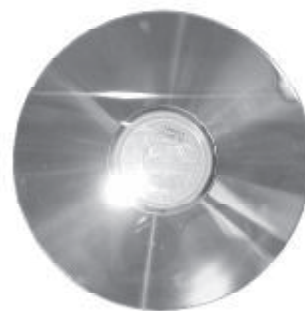


Unitech PA966 & Accessories

After opening the box, please make sure the following accessories for the PA966 are present:



PA966 Main Body



PA966 CD



Battery pack



Quick Reference Guide



Stylus



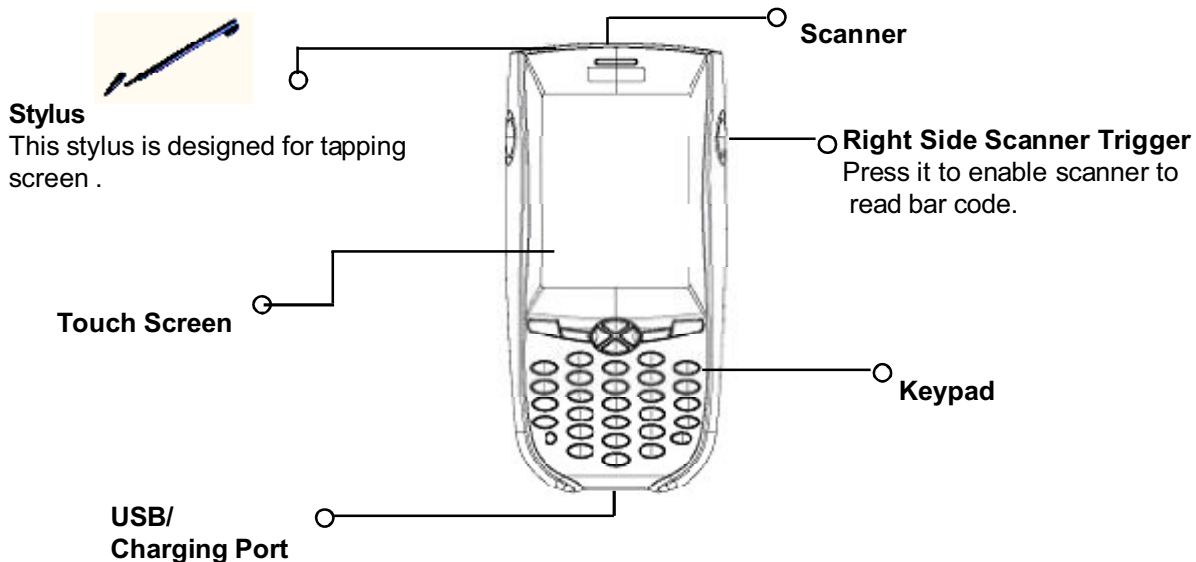
CF slot drawer for PA966



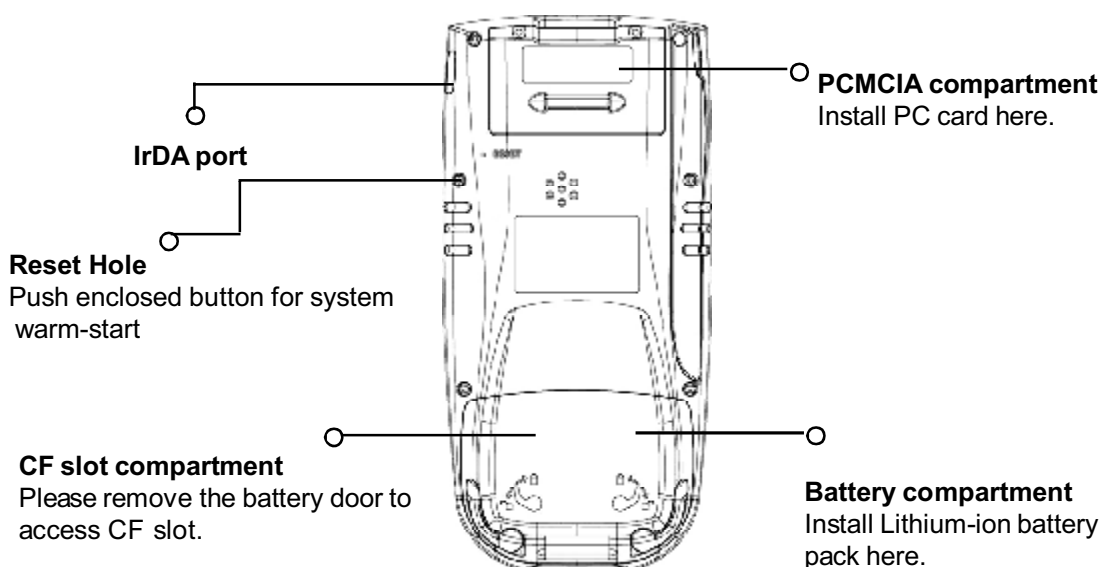
Pulling-tags



Tour of the Unitech PA966



PA966 Back





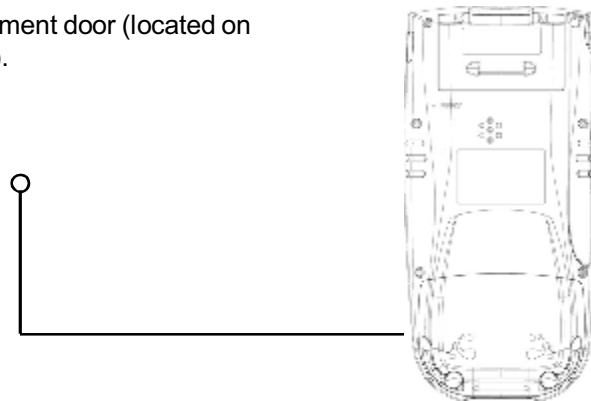
First Steps with the Unitech PA966

- Rechargeable Lithium-Ion battery pack
- USB/Charging cable
- Docking Station

NOTE: Data you entered may not be properly stored until the built-in backup battery has been adequately charged. Please remember to turn on the back up battery before you charge the terminal.

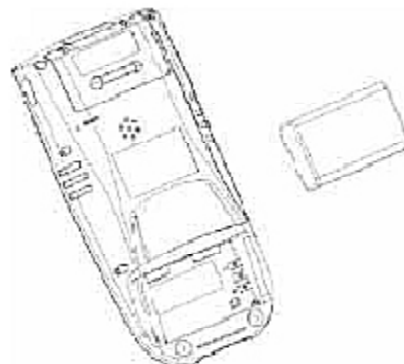
Installing the Battery Pack

1.Remove the battery compartment door (located on the lower back side of the unit).

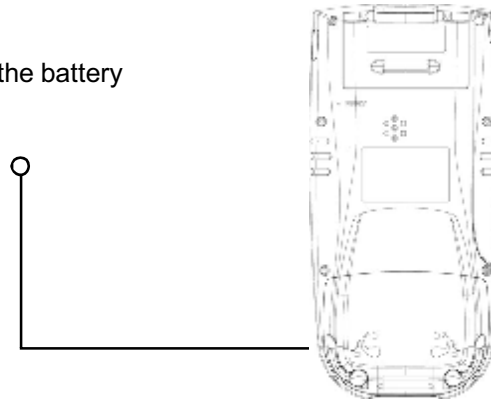


2.Position the battery pack with the label side towards you, and the battery pack strap towards the bottom of the unit. Insert and fully seat the battery pack, making sure the shape of the battery pack fits the shape of the battery compartment.

:



3. Position the battery pack and install the battery compartment door.



Charging the Main and Backup Batteries for the First Time

It may take up to 16 hours to fully charge the empty backup battery. The first time charge should be at least 16 hours to ensure a proper charge.

CAUTION: Operating the PA966 for the first time without the AC adapter, and without fully charging the backup battery may result in loss of data stored in RAM memory.

Using the Stylus

CAUTION: Never use anything other than the PA966's stylus on the screen. Using object other than a stylus could cause permanent damage.



1. Hold the stylus as you hold a pencil.
2. To make a choice from a menu, lightly tap the tip of the stylus on that choice.
3. To write data into a field on a form, use the stylus to print the letters or numbers. Use very light pressure.

PCMCIA Pulling Tags

Pulling Tags simplify the removal of PCMCIA cards from the PA966. Before inserting a PCMCIA card, remove one of the three Pulling Tags from the Pulling Tag sheet and adhere it to both sides of the PCMCIA card, leaving a short (approx. 1/2") tab. To remove the PCMCIA card, simply pull outwards on this tab.



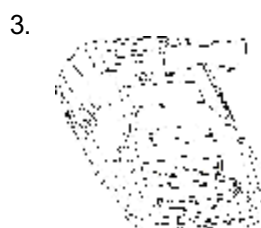
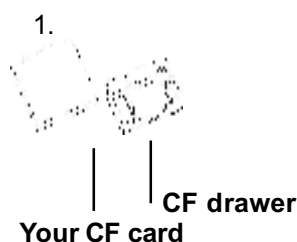
If a PCMCIA card is inserted into the PA966 without previously attaching a Pulling Tag, the card can be removed by affixing a length of adhesive tape to the surface of the card and pulling the card out by pulling outward on the piece of tape.



Insert CF card to PA966

Front side of PCMCIA card

Find the CF drawer from PA966 package, insert CF card to the CF drawer. Then insert the CF drawer to the PA966 and place the CF slot door. Re-install the battery door to PA966.



Protective Screen Film

The PA966 screen ships with a protective plastic film. You may remove this if desired by peeling from one corner. The screen will be more susceptible to scratching without the film, but will be more readable.

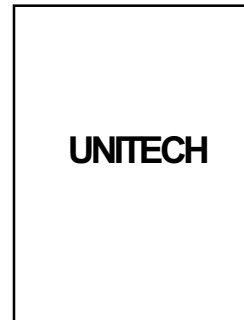
First Operation of the Unitech PA966

Pressing the ON/OFF Key

The Unitech PA966 welcome screen appears. The Windows CE® screen will appear shortly.

Adjusting Screen Brightness

Press **[FUNC]** key and Cursor key to decrease or increase screen brightness.



Calibrating the PA966

This screen will automatically appear when the unit is powered on for the first time or after the system is reset. This screen can also be accessed at any time by pressing the hot key **[FUNC]** and the **[ESC]** key.

The PA966 will prompt you to calibrate the unit by tapping a sequence of screen locations. Tap gently but firmly. When you have completed the series of taps, press the **[ENT]** key to confirm it or press the **[ESC]** key to cancel it.

Calibrating the PA966 unit. Tap the cross of the target
to adjust the screen. Press
[ESC] to exit the screen.
After the calibration is completed.



Setting Time Zone, Date, and Time

After Calibrating the PA966, the "Date/Time Properties" dialog box will appear. Follow the steps below to set the date and time.



Setting the Time Zone first

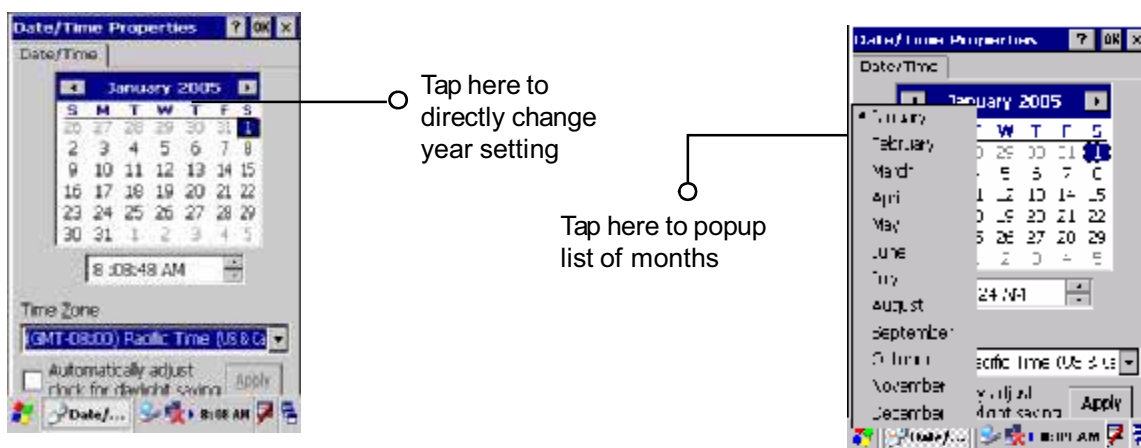
Follow the steps below to set up your time zone.

1. Tap the location arrow to see a list of cities.
2. Choose your location (or nearest listed one).
3. Select the Daylight Savings Time check box, if necessary.
4. Tap the APPLY button.



Setting Year and Month

Tap the Left or Right arrows to scroll the month.



Or directly tap location of year or month to change the year or month setting.

Exiting Date/Time Properties Settings

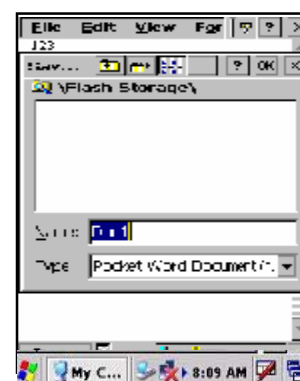
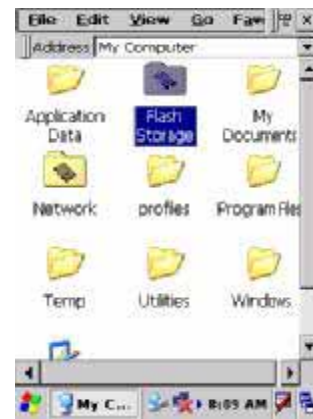
Tap **OK** or **X** (cancel) button at upper-right corner to exit.

Flash Memory

Flash Memory is a re-writable location for programs and data files. The benefit of this feature is that files and programs saved in Flash Memory are unaffected by the PA966's power status.

To access the contents of Flash Memory, simply select "My Computer" on the desktop and then select "Flash Storage". The programs and data files currently stored in Flash Memory will be displayed.

To save to Flash Storage, select File, Save To, and select Flash Storage.



Chapter 2. Using the Keypad and Scanner





Keypad

The PA966 series keypad contains 36 keys, including Cursor key, Numeric Key, Alpha key, ON/OFF, Function, Escape, Backspace, and Enter key. Please refer to the picture below.



Hot Key

[ON/OFF]	When the unit is off, pressing the On/OFF key will turn the unit on. Alternatively, when the unit is on, this key must be pressed and held down for about two seconds in order to turn the unit off.
[ESC]	The Escape key will perform the same function as tapping the CANCEL button or the X button on the touch screen.
[Backspace]	The Backspace key is used to erase previously input characters.
[FUNC]	The Function key is used to perform alternative key functions.
[TAB]	The Tab key is used to toggle between data fields or to place the cursor at pre-determined places in a programming or word processing application.
[ENT]	The Enter key is used to initiate a process or confirm a selection made by the user.
[Cursor]	This Cursor key is used to navigate among applications.
[Alpha]	This Alpha key is used to toggle between Numeric & Alpha Mode. This Alpha key is also used to toggle CAPS at Alpha Mode.

TO Get	Press
System information	Func + 9
Power Status	Func + 8
Scanner Setting	Func + 7
LCD Backlight on	Func 
Keypad Backlight on	Func 
Display Brightness – brighter	Func 
Display Brightness – darker	Func 

Keypad Input Method

When the PA966 boots, the default condition is Numeric Mode on. When you toggle to Alpha Mode, the default condition is CAPS mode off.

Key Pos.	Alpha Off (Default)		Alpha On	
	FUNC Up	FUNC Down	FUNC Up	FUNC Down
ESC	ESC	ESC	ESC	ESC
Backspace	Backspace	Backspace	Backspace	Backspace
Enter	Enter	Enter	Enter	Enter
1/F1/a	1	F1	a	A
2/F2/b	2	F2	b	B
3/F3/c	3	F3	c	C
TAB/d	TAB	`	d	D
4/F4/e	4	F4	e	E
5/F5/f	5	F5	f	F
6/F6/g	6	F6	g	G
+/^/h	+	^	h	H
%/BL/i	%	Backlight	i	I
7/F7/j	7	F7	j	J
8/F8/k	8	F8	k	K
9/F9/l	9	F9	l	L
-/_/m	-	_	m	M
.;/n	.	;	n	N
@/!/o	@	!	o	O
0/\$/p	0	\$	p	P
(/)/q	()	q	Q
*/#/r	*	#	r	R
SPACE/s	SPACE	SPACE	s	S
"/'/t	"	'	t	T
,/?/u	,	?	u	U
[/]/v	[]	v	V
/\w	/	\	w	W
</>/x	<	>	x	X
=/&/y	=	&	y	Y
DEL/z	DEL	~	z	Z

Software Keyboard (Windows CE Keyboard)

The Windows CE provides software keypad which allows users to input more characters.

Opening the Windows CE Keyboard:

The Windows CE keyboard can be opened by tapping the “keyboard” icon on the task bar. (Refer to picture).



Double-tap here

Keying-in Characters:

After tapping the “keyboard” icon, the Windows CE keyboard pops up. Character input is the same as on a standard PC. Simply tap the on-screen button corresponding to the character you want to input.

International Character Support:

Tap the [áú] button to switch from the standard English keyboard to the European keyboard.

Moving the Keyboard:

Use the stylus to point to the title bar (the bar displaying “Input panel”) and then move the stylus without lifting it from the screen.



Title Bar

Closing the Keyboard:

Tap the keyboard icon to close the Windows CE keyboard.

Using the Laser Scanner

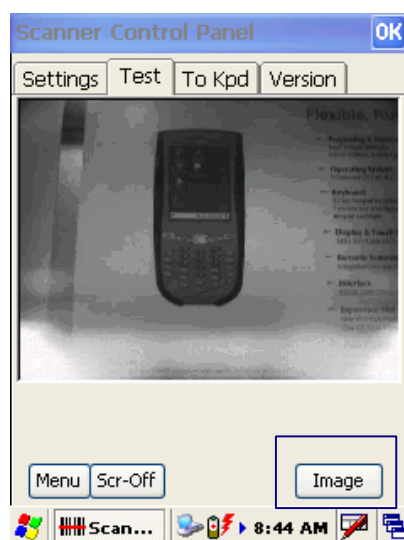
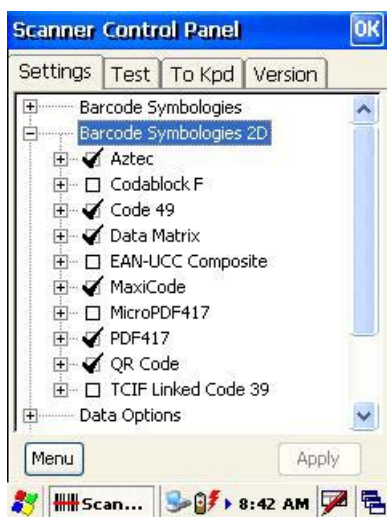
Note: Reading software must be enabled in order to operate the scanner. This can be a user-loaded application or a pre-loaded utility such as Scanner Setting.exe.

Scanner

The PA966 has two optional integrated scanners: Laser Scanner and Imager Scanner.

Trigger keys are located on the left and right sides of the unit. Press either one.

The PA966 also has a built-in Scanner Setting.exe program that allows the user to test the barcode scan function for 1D & 2D also for image capturing. Scanner Setting.exe is located in directory \Windows\Control



Chapter 3. Power system

Charging the Lithium-Ion Battery Pack

The optional Docking Station is a convenient accessory for daily use of the PA966. The charging will be completed within 3 hours. When using the included Charging / USB cable the charging time of the battery pack is about 3 hours.



Power Supplier (P/N 1010-600381)



USB Cable (P/N 1550-600623)

Note: The power supply must work with power cord.

Charging the Main and Backup Battery for the First Time

Note: Before using the PA966 for the first time, charge the unit for 16 hours to fully charge the empty backup battery. Operating the PA966 for the first time without the AC adapter, and without fully charging the backup battery may result in loss of data stored in RAM memory.

Note: Backing up data by backup battery only without the main battery installed in the battery compartment may take as long as 6 hours. Therefore, in order to prevent data protection failure due to backup battery failure, do not leave the PA966 without the rechargeable battery pack installed, or without connection to AC power for an extended period of time.

It may take up to 72 hours to backup data when the PA966 is automatically shut down because of very low battery power while the depleted batteries are still installed in the battery compartment.

Power Status Indication

Four different icons are displayed on the status bar to indicate the on-board power status.

“Plug” icon:

When displayed, this icon indicates that the battery is charging. The PA966 is either plugged-in via the DC 12V/2A power adapter or in the docking station.



Plug with power adapter

“Battery Low” icon:

When displayed indicates the battery is low and needs to be charged. In other words, there is no external power supply, the battery charge is low or very low, and charging the PA966 is recommended.



Battery Low

“Battery Very Low” icon:

When displayed indicates the battery is very low. Stopping the operation and charging the PA966 immediately is highly recommended.



Battery Very Low

No icon:

When displayed means there is no external power supply to the PA966 but its battery power status is good.



“Backup Battery Low” icon:

When displayed indicates the backup battery is low and needs to be charged.



Backup Battery Low

“Backup Battery Very Low” icon:

When displayed indicates the backup battery is very low. Stopping the operation and charging the PA966 immediately is highly recommended.



Backup Battery Very Low or Backup Battery is not turned on.

Checking Main and Backup Battery Status

Enter “Power Properties”:

If the above mentioned “Plug” icon or “Battery” icon is displayed, double tap this icon to bring up the “Power Properties” screen.

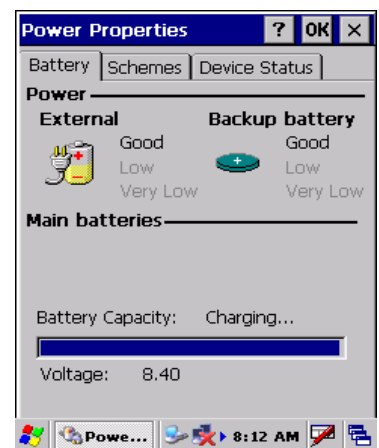
Or, select **Settings/Control Panel** from the **Start** menu and then double tap the “**Power**” icon to display “Power Properties”.



Check Battery Status:

The battery menu item will show the status of the main and backup batteries. There are 3 kinds of status indicators — “Good”, “Low” and “Very Low”. Bold characters indicate the actual status, e.g. battery icons in the illustration at right mean both the main and backup batteries are “GOOD”.

It is necessary to charge the battery when “Low” or “Very Low” are displayed in bold characters. If “Low” or “Very Low” are still displayed after charging, please contact Unitech Technical Support.



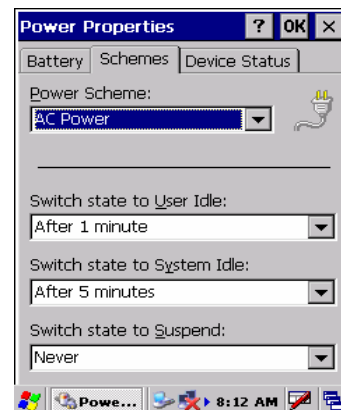
How to Save Battery Power

Automatic shut-down of the PA966

The PA966 will enter idle mode when there is no task, or all tasks are waiting for input. In default setting, the PA966 will automatically turn itself off if it remains idle for 3 minutes and when there is no external charging power applied. Pressing the power button will return the PA966 to the same point at the time of automatic shutdown.

In Power Properties, select "Power Off". Customize automatic shut off time by tapping the arrow to select from a list of time periods. The available time periods are 1, 2, 3, 4, and 5 minutes.

This function can also be activated when the PA966 is plugged into the power adapter or placed in its cradle by tapping the check box and then tapping the arrow to select from a list of time periods. The available time periods are 1, 2, 5, 10, 15 and 30 minutes.



Backlight Setting

Because the power consumption of the LCD backlight is high, turn off the backlight if it is not necessary. If a backlight is required, set "automatically turn off the backlight" function.

To change backlight settings, select Settings / Control Panel from the Start menu, and then double tap the "Display" icon.

Tap the "Backlight" menu item to display the following 3 selections:



Automatically turn off the backlight when using battery power:

Tap the check box to toggle this function. Available idle times are: 15 and 30 seconds, and 1, 2, and 5 minutes

Automatically turn off the backlight when using external power:

Tap the check box to toggle this function. Available idle times are: 15 and 30 seconds, and 1, 2, 5, 10, 15, and 30 minutes.

Automatically turn on the backlight when key

This function is only activated by the PA966's keypad instead of the Windows CE keyboard.

Warm Boot / Cold Boot

Warm Boot

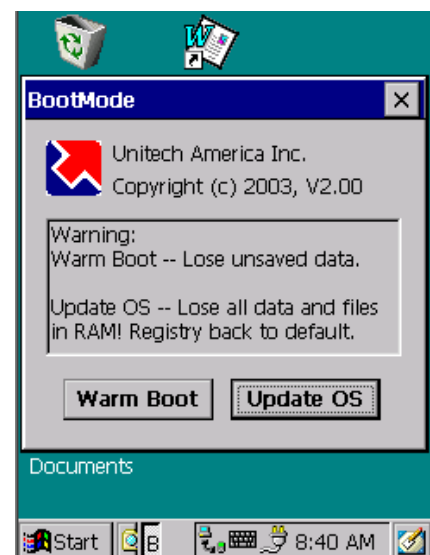
- To perform a warm boot while the PA966 is operating, insert a pin (paper clip works well) into the reset hole on the back of the terminal, right below the PCMCIA cover.
- Under the Windows folder of your terminal, locate the file BootMode.exe, execute the program, and confirm the warning message.

WARNING: Warm Boot will cause unsaved data to be lost.

Cold Boot

Press the coldboot button underneath the PCMCIA cover, the terminal will perform cold boot.

NOTE: Cold Boot will cause the PA966 to return to its original factory settings.



Charging Considerations

It is important to consider the environment temperature whenever you are charging the Lithium-Ion battery pack. The process is most efficient at normal room temperature or slightly cooler. It is essential that you charge batteries within the stated range of 18°C to 25°C. Charging batteries outside of the specified range could damage the batteries and shorten their charging life cycle.

Storage and Safety Precautions

Although charged, Lithium-Ion batteries may be left unused for several months, their capacity may be depleted due to build up of internal resistance. If this happens they will require recharging prior to use. Lithium-Ion batteries may be stored at temperatures between -20°C to 60°C, however they may be depleted more rapidly at the high end of this range. It is recommended to store batteries within normal room temperature ranges.



Chapter 4. Communication

Introduction

The Unitech PA966 allows users to link to a host computer via USB, IrDA, or RF connection for data communication.

This chapter provides an overview of the communication of the PA966. The following subchapters cover these topics:

- "Microsoft ActiveSync" for details about serial communication via USB port or Bluetooth.
- "RF Communication" for details about wireless communication between mobile PA966 and host computers.

Connecting

Serial or USB Cable

Plug the USB end of the communication cable to the PC's 9 pin Com Port and the other into the PA966 USB/Charging Port (see page 3). Plug the Power Supply into the Power Receptacle on the USB plug.



Docking Station

Plug in the USB end of the communication cable to the PC's USB port and the other end into the cradle's USB port. Plug the power supply into the power jack of the docking station.



ActiveSync

In order to exchange data between your desktop computer and the PA966, Microsoft ActiveSync must be installed on your desktop computer.

With Microsoft ActiveSync you can:

- Transfer data.
- Back up and restore PA966 data.
- Add programs to and remove programs from the PA966.

This chapter will introduce Microsoft ActiveSync version 4.2. ActiveSync provides a user-friendly interface and it can be downloaded free of charge from Microsoft's Web site.

Installing Microsoft ActiveSync

Before beginning installation, carefully read the following:

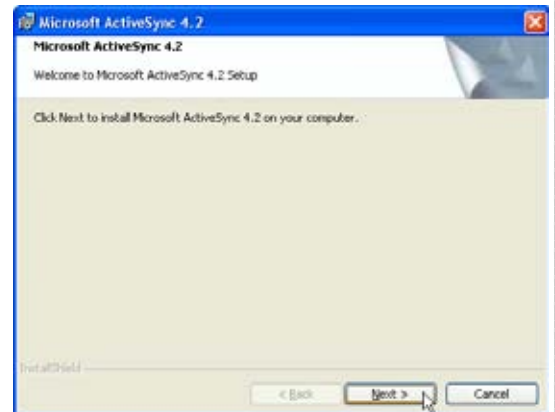
- Because you will be restarting your computer during installation, save your work and quit all programs before you begin.
- To set up your communication settings, a PA966 serial cable is required to connect the PA966 to your host computer.
- If you run the Windows NT® operating system with a service pack, you will be informed during setup that you may need to reinstall the service pack. Try connecting first, and if unsuccessful, reinstall the latest service pack.

Installation

Follow the installation procedure below to install Microsoft ActiveSync, connect your PA966 to your desktop computer, and establish a partnership for synchronization (if desired):



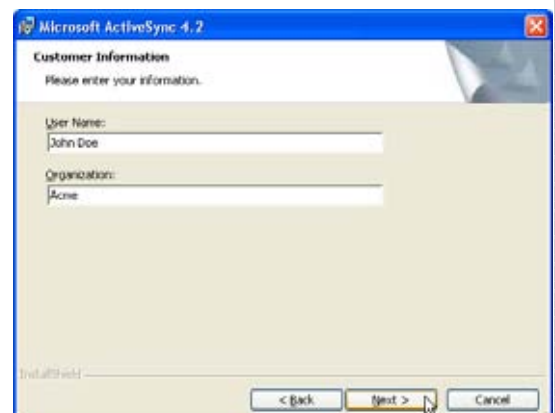
- Download the ActiveSync software from the Microsoft web site at: <http://www.microsoft.com/windowsmobile/downloads/activesync42.msp>. The installation wizard begins.



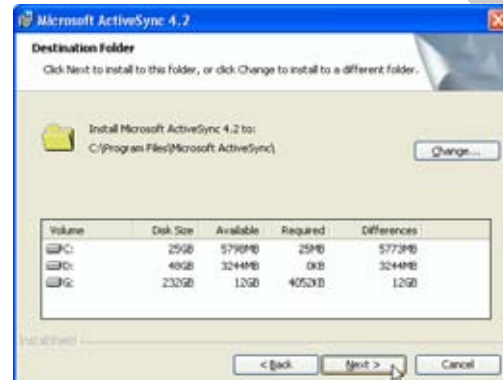
- Click Next. You are prompt to read the End User Licensing Agreement(EULA).



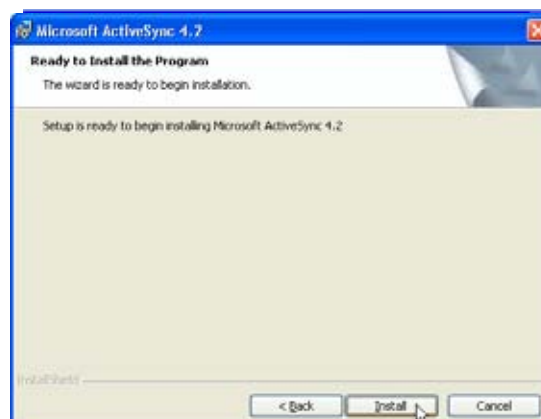
Accept the license agreement terms and click **Next**. You are prompt for user information.



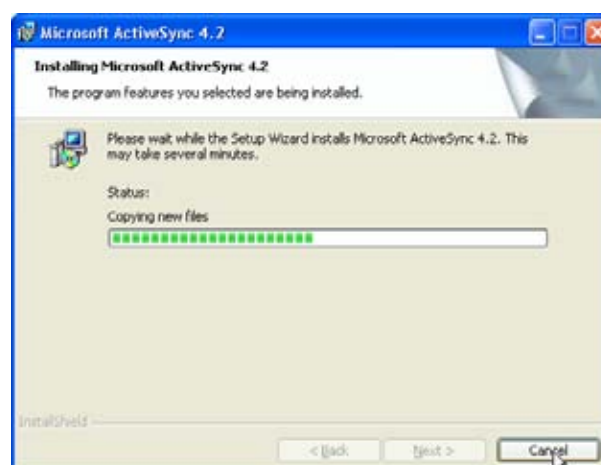
- Type the user's name and organization and click Next. You are prompted for destination folder.



- Select a drive to install the program and click Next. The installation wizard has gathered the information it needs to install Activesync and prompts you to begin the installation.

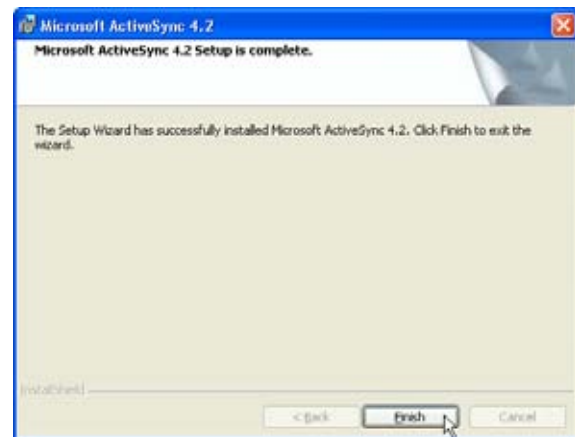


- Click **Install**. The program begins the Installation.





- After the program has finished installing you will see the following screen.



Click Finish. You may be prompted to restart your computer.

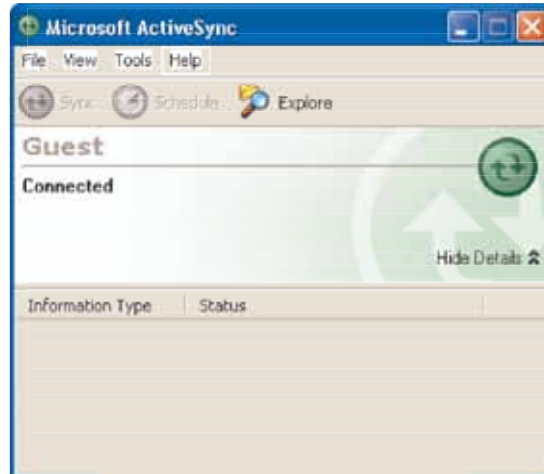
After you have installed ActiveSync and restarted your computer, the ActiveSync icon appears on your computer's desktop.

Connecting the Device to Your Computer

1. After Activesync has been installed, connect the USB charging cable to the universal connector on the bottom of your device.
2. Plug the other end of the USB charging cable into a USB port on your computer.
3. Turn the device on.
4. Activesync starts automatically and configure the USB port to work with the PA966. The New Partnership setup wizard will automatically start.

Note: If Activesync does not start automatically, click **Start > Programs > Microsoft Activesync**. If a message appears indicating that it is unable to detect a connection, click the **Cancel** button and manually configure the communication settings.

5. Follow the onscreen instruction.
6. When the configuration process is complete, the Activesync window appears.



7. Synchronization will be initialized and will take place if you have chosen to synchronize periodically or upon connection.

Note: Your computer can create a partnership with multiple PA966s. Also, a PA966 can create a partnership with up to two computers.

Synchronizing with your computer

Synchronization takes place according to the options you choose while setting up ActiveSync on your computer. If you accept the default (On Connect) synchronization option in the Microsoft ActiveSync Setup Wizard, you'll be able to simply connect Your PA966 to your desktop computer and synchronization will take place.

If you have not enabled the On Connect feature in ActiveSync, you can start ActiveSync in either of the following ways:

On your computer, double click My computer > Mobile Devices folder.
Connect the USB cable between the computer and PA966.

Connection options

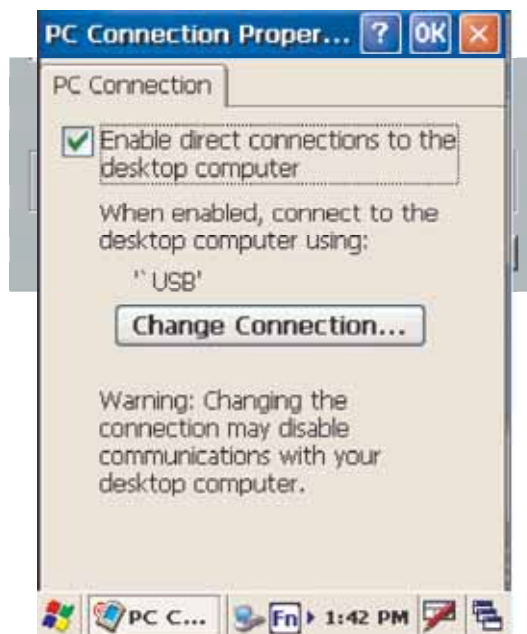
You can set remote synchronization with your computer using the following connection options:

- USB connection
- Infrared connection
- Bluetooth connection
- WiFi connection

USB Connection

To synchronize with your computer using a USB connection:

1. Connect your device to your computer using the USB charging cable.
2. Initiate connection by tapping **Start > Settings > Control Panel > PC connection**.
3. Select **Enable direct connections to the desktop computer** using this check box.
4. Tap **OK**.



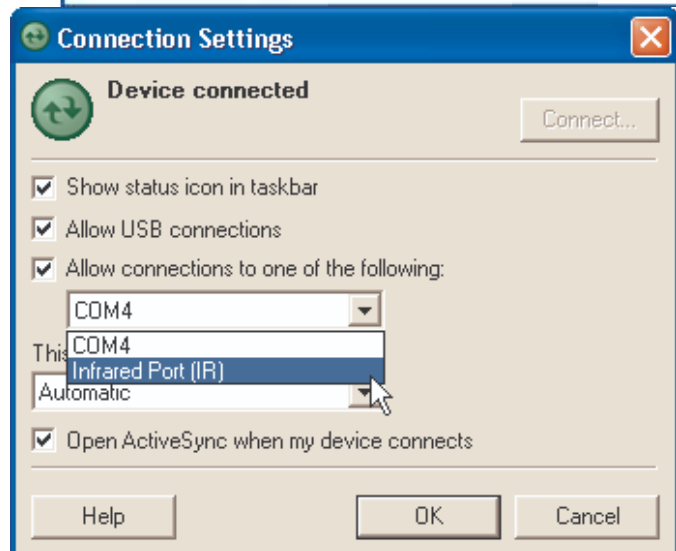
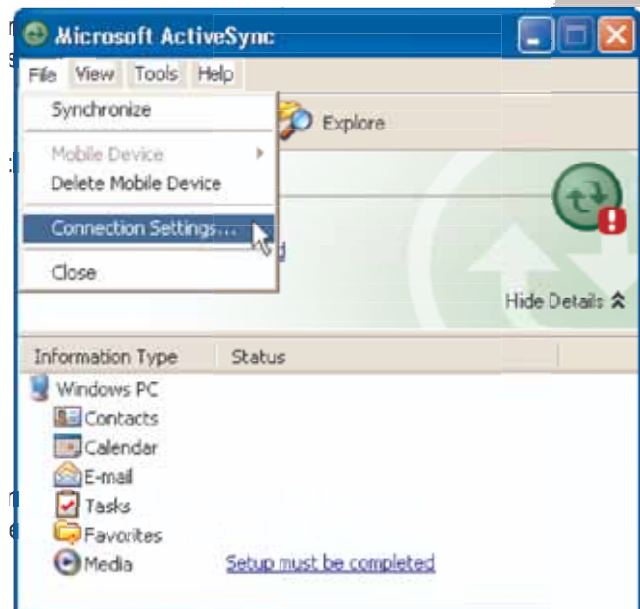
Infrared Connection

The infrared port allows you to synchronize information with an infrared enabled computer. Align the infrared port of your device with the infrared port on the computer. This method is ideal for quickly switching between multiple devices since there are no cables or adapters to change.

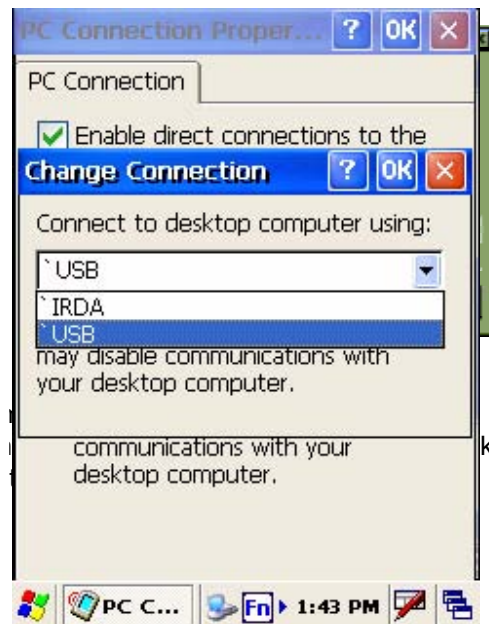
1. Perform the steps below on your computer:
 - a. Configure an infrared port on your computer following the manufacturer's instructions.
 - b. Once your computer's IR port is ready, open ActiveSync.
 - c. Click **File > Connection Settings**.

d. Check **Allow connections to one of the following and select Infrared Port (IR)** from the drop-down list.

e. Click **OK**.



2. Perform the steps below on your device:
 - a. Align the IR port of your PA966 with the IR port on your computer so that they are unblocked and within close range.
 - b. Initiate connection by tapping **Start > Settings > Control Panel > PC Connection**.
 - c. Select **Enable direct connections to the desktop computer** using this check box.
 - d. Tap the **Change Connection**.
 - e. Select **IrDA**.
 - f. Tap **OK**.
 - g. Tap **My Device > Windows > Repllog.exe**



Bluetooth Connection

For details of bluetooth connection, please refer to the Utility Manual.

Synchronizing Information

All files created on the device are stored in PA966 > My Document folder (if the designated device name is PA966). You can view files by double clicking the PA966 > My Documents icon on your computer.

If you have enabled file synchronization, your PA966 files are automatically synchronized in the My Document folder on your computer, unless a different name was chosen for PA966.

Synchronization Options

Synchronization options can be modified, including when you synchronize and what gets synchronized. In the Mobile Device window, click **Tools > Sync Options**. For each type of information, the synchronization process can be hastened by limiting the amount of data to be synchronized. To do this, select a service and click the Settings button. After enabling a service, you must close and reopen the ActiveSync.

Using ActiveSync to Exchange Files

You can use activesync to exchange information from your device to your computer and vice versa. changes you made to the information on one location will not affect the information on the other one. if you want to automatically update information on both your device and computer, synchronize the information instead.

You can copy two types of information to your device: files and Pocket Access Windows CE Store information.

The procedure below only applies to copying files. Refer to the ActiveSync Help on your computer for instructions on how to copy Pocket Access Windows CE store Information.

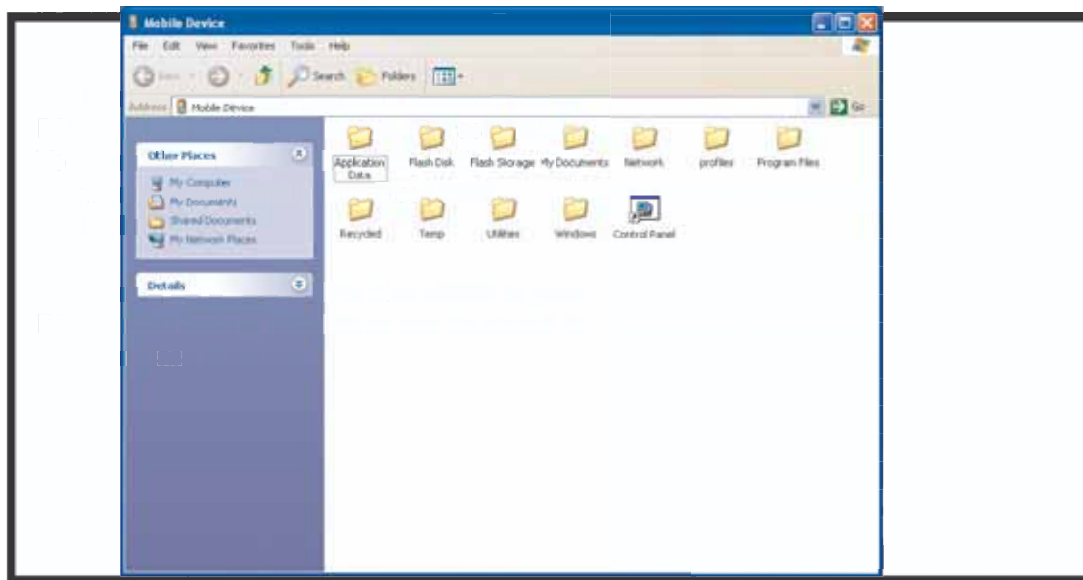
Note: Files created on your computer may need to be converted by ActiveSync So that they can be viewed and edited on your device, and vice versa.

To copy files:

1. Connect your device to your Computer.
2. In ActiveSync on your computer, Click **Explore**.



Windows Explorer opens the Mobile Device window for your device.



InBox

Following is an overview of InBox. Step-by-Step information on how to use this program can be found in the Help function on the PA966. To view Help, tap **Start**, and then **Help**.

Sending and Receiving E-Mail with InBox

Use InBox to send and receive e-mail messages using any of these methods:

- Send and receive messages using a dial-up connection to a service provider or your corporate network.
- Send and receive messages using a wireless network card to a local area network (LAN).

Note: You can send and receive messages with InBox, but this function cannot be synchronized with Outlook.

Sending Mail Remotely

In addition to exchanging mail messages with your desktop computer, you can send and receive mail from a remote mail server by setting up an e-mail account with a service provider.

Note: If you're setting up an Internet mail account with an ISP (Internet Service Provider), the ISP must use a POP3 mail server and an SMTP mail gateway.

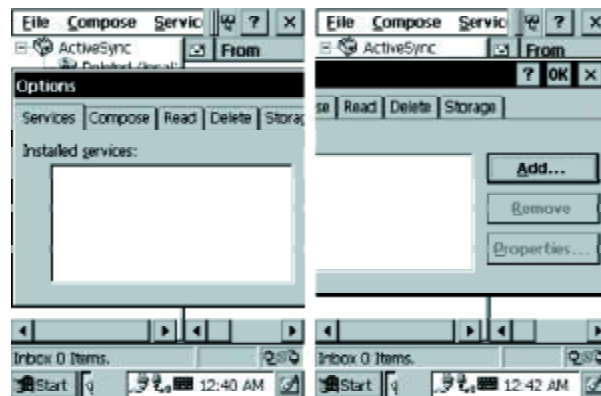
For dial-up connections, you'll require an internal PCMCIA type modem card or external modem for the PA966. You'll also need to set up the remote connection on the PA966 using the Connections program.

For wireless connections, you'll require a RF card for the PA966. You'll also need to set up the remote connection on the PA966 via the **Network** setting.

Setting Up Remote Mail

You can use multiple mail services to obtain mail. For each mail service you will access, first set up and name each mail service. If you will use the same service to connect to different mailboxes, set up and name each mailbox connection.

In the InBox on the PA966, tap **Compose**, **Options**, the **Services** tab, and then the **Add** button. A setup wizard will walk you through the steps.



The software for creating an Internet Mail connection to an ISP is pre-installed on the PA966.

Work Remotely

Mail received via dial-up connection appears in the InBox folder on the PA966, together with the mail you synchronize with your desktop computer. Messages received remotely are linked to your mail server rather than to your desktop computer.

You can work online, which means that you read and respond to messages while connected to the server. Messages are sent as soon as you tap **Send**, which saves space on your device.

You can also work offline. Once you've downloaded new message headers or partial messages, you can disconnect from the server and then decide which message to download completely. The next time you connect, InBox automatically downloads the complete messages you've marked for retrieval and sends the messages you've composed.

Receiving Messages

Messages received by synchronizing with your desktop computer and through remote connections appear together in your InBox. Double-tap a message to read it.

When you connect to your Internet mail service, the InBox downloads only the first 100 lines of each new message to the InBox folder by default. No mail attachments are downloaded. When you synchronize with your desktop computer, only the first 50 lines of each new message remains on the mail server or your desktop computer.

You can mark the messages that you want to retrieve in their entirety the next time you synchronize or connect to your mail service. Select the message, tap **Service**, and then tap **Retrieve Full Copy**. The icons in the InBox messages list give you a visual indication of the message status.



Specify your downloading preferences when setting up the service or selecting your synchronization options. You can change them at any time.

- To change InBox delivery options for mail synchronization: In the Mobile Devices window on your desktop computer select your WinCE icon, click **Tools**, and then click **ActiveSync Options**. Select **Message** and then click **Options**. (For the **Options** button to be available, you must have previously enabled message synchronization.)
- To change InBox delivery options for remote mail: In InBox on your PA966, tap **Service** and then tap the service name. Then tap **Service** again and tap **Properties**.

You'll need to download a full message before you can view its attachments.

Sending Messages

To compose a new message, tap the **New Message** button on the command bar. Enter an e-mail address in the **To** field or select a name from the Address Book. All e-mail addresses entered in the e-mail fields in Contacts appear in the Address Book.

To send your message, tap **File** and **Send**. Messages are placed in your OutBox folder on the PA966 and will be delivered to their destination in one of two ways:

- They are transferred to the OutBox folder in Exchange or Outlook on your desktop computer the next time you synchronize.
- They are transmitted to your mail server the next time you connect remotely. In InBox, make sure the appropriate service is selected on the **Service** menu. Then tap **Connect**.

RF Communication

Windows CE can support TCP/IP protocol, so the user can easily connect to the Internet by Modem or RF. The following chapter is an introduction on how to connect the PA966 to a network via TCP/IP.

PA966 come with a built-in RF card. The driver and the utility are also built in the firmware.

RF networks look and operate similarly to Ethernet networks. The only difference is that a radio transmission replaces the hard-wire connection between the various nodes. This means all of your existing applications that currently operate over Ethernet will also function utilizing WLAN without any special wireless network software. This picture illustrates a typical network topology including the PA966 with RF.





Setting the RF Communication

1. Double tap **Summit Client Utility**.



2. Under “Main” tab, for **Active Profile**, select “ThirdPartyConfig”. Tap “OK”.



3. Warm Start the terminal. Once the terminal is warm started, the RF card is detected. You will see the RF setting window pop up. Tap **Add New**.



4. Enter the SSID. Uncheck **“The key is provided automatically”**. Enter the network key. Tap **OK**.



5. Start to search for RF signal and RF is connected.

Appendix A

Technical Specifications

CPU/Memory

CPU	Intel X-Scale 400MHz 32 CPU. Built-in real-time clock.
Flash ROM	64MB Built -in (Flash Memory Manager included)
SDRAM	64MB

OS and Software Programming Tools

OS	Microsoft Windows CE 5.0 Professional Plus
Development Language	Microsoft Embedded Visual Tool for VB and VC programming Unitech PA966 Software Development Kit

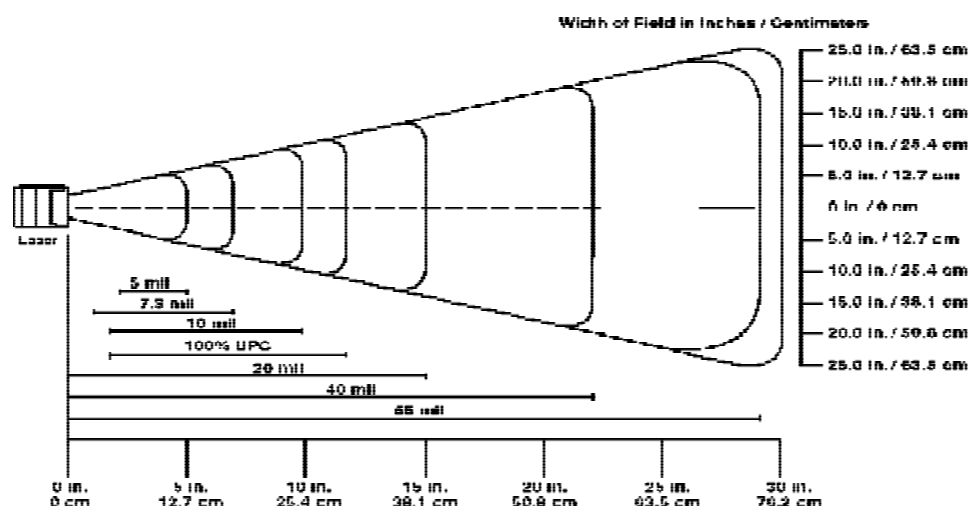
Input/Output

Input Devices	Touch screen, stylus, keypad, software keyboard, bar code laser scanner and imager scanner.
Keypad	36 physical keys with backlight including cursor key, numeric keypad, alpha keypad, TAB, ESC, FUNC, brightness and contrast controls
Audio Output	A piezoelectric buzzer with software controlled volume
Display	240 x 320 transfective TFT backlight color LCD supports 256K color with touch panel and heating system. Contrast adjustable by software hotkey
LED Indicator	Dual colors (green/red) for barcode good read indication

Laser Scan Engine

Light Source:	Visible Laser Dicode(VLD) 650nm.
Scan Rate:	39±Scan/Sec
Scan angle:	±53° from normal
Min. print contrast:	25% absolute dark/light reflectance at 650nm
Power Consumption:	65mA typicle@5V

Laser Typical Depth of Field



Typical Depth of Field in Inches/Centimeters

*Minimum distance determined by symbol length and scan angle

Note: typical performance at 68°F (20°C) on high-quality symbols

Decode Zone

	N e a r	F a r
5 m i l	2.0 in. (5.1 cm)	5.2 in. (13.2 cm)
7.5 m i l	1.7 in. (4.3 cm)	8.0 in. (20.3 cm)
10 m i l	1.8 in. (4.6 cm)	10 in. (25.4 cm)
100% U P C	1.9 in. (4.8 cm)	13 in. (33 cm)
20 m i l	*	20 in. (50.8 cm)
40 m i l	*	25 in. (63.5 cm)
55 m i l	*	30 in. (76.2 cm)
* D e p e n d e n t u p o n s y m b o l w i d t h		

Barcode/Symbology

Symbology	Codabar	EAN128
	Code 11	Interleaved 2 of 5
	Code 32	Label Code
	Code 39	MSI/Plessey
	Code 39 Full ASCII	Standard 2 of 5
	Code 93	Toshiba
	Code 128	Telpen
	Delta Code	Toshiba
	EAN-8, 13	UPC-A, E

Imager Scan Engine

Performance

Focal Point: 7 inches (17.8cm) from lens plate (nominal)

Working Range	8 mil Linear (.020cm)	10 mil PDF417 (.025cm)	13 mil UPC (.033cm)	15 mil PDF417 (.038cm)	15 mil Data Matrix (.038cm)	35 mil MaxiCode (.089cm)
Near:	3.5 in. (8.9cm)	3.1 in. (7.9cm)	2.5 in. (6.4cm)	3.5 in. (8.9cm)	3.7 in. (9.4cm)	2.0 in. (5.1cm)
Far:	7.6 in. (19.3cm)	9.0 in. (22.9cm)	12.5 in. (31.8cm)	11.2 in. (28.4cm)	6.5 in. (16.5cm)	13 in. (33cm)

Viewing Angle: $\pm 40^\circ$

Ambient Light: 535 to 100,000 lux (full sunlight)

Aiming

Illumination LEDs	626nm +30nm
Green Aiming LEDs	526nm +30nm
Red Aiming LEDs	626nm +30nm
Laser Aiming	650nm +10nm

Barcode/Symbology

2D	PDF 417	Aztec
	MicroPDF417	Aztec Mesas
	MixiCode	Code 49
	Data Matrix	EAN
	QR Code	UCC Composite

Postal	Postnet	Canadian Post
	Planet Code	Japanese Post
	British Post	KIX Post

Linear	Codabar	Interleaved 2 of 5
	Code 39	Reduced Space Symbology
	Code 128	Code 93
	UPC	Codablock F
	EAN	

Power

Power Options

Lithium-Ion @7.4V, 1850mAH Main Battery Pack
(Battery pack can be recharged 500 cycles or more)

External AC/DC adapter @12VDC/2A with regulator

Power Consumption

Using Maing Battery at At 8V 25 °C

Active mode: 117mA (Laser Engine power on, Backlight power on)
Active mode: 217mA (Imager Engine power on, Backlight power on)
Heaater turn on: 230mA typical (Heater only)
Standby mode: 100mA
Suspend: 5mA

Battery Charge

3 hours with external AC/DC adapter
3 hours with docking station

Backup Battery

1 rechargeable 3.7V, 120mAH Ni-MH battery cell for data backup

Power Management

Power consumption indicated on status bar

Interface Port

USB/Charging Port

Power charging and USB supports full duplex asynchronous communications and baud rate up to 115.2K bps.

IrDA

Compliant to IrDA 1.2 (SIR). Baud rate up to 115.2K bps.

PCMCIA & CF

PCMCIA Type II slot & CF Type I & Type II slot accept memory, modem, and RF card

Mechanical and Environmental

Dimensions -PA966 Length: 7.28" (18.5cm)
Width: 3.49" (8.76cm)
Depth: 1.60" (4.06cm)

Dimensions -PA967 Length: 7.28" (18.5cm)
Width: 3.49" (8.76cm)
Depth: 5.91" (15.01cm)

Weight - PA966 454g with battery pack

Weight - PA967 560g with battery pack

IP Rating IP 54

Humidity 5% to 95% RH non-condensing

Shock Multiple 4.0' (1.2m) drops to concrete

Temperature Storage: -20°C to 60°C
Operation: Depends on product configuration

Laser with BT only	Laser with BT & RF	Imager with BT only	Imager with BT & RF
-20~50°C	0~50°C	-15~50°C	0~50°C

Note: RF stands for pre-loaded WiFi CF card in PA966 or PA967.

Pin Assignment of Charge and Communication Port

Pin	Assignment	Description
1	DCD	
2	RXD	Receive Data
3	TXD	Send Data
4	DTR	Data Transmit Ready
5	SG	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indicator
10	USB 5V	USB 5V
11	12V	12V Input
12	NC	
13	NC	
14	GDN	Ground
15	UDC	USB Differential Data Signal High Side
16	/UDC	USB Differential Data Signal Low Side



Accessories List

Accessories
Car Kit
Modem Cradle
4 Slot Multi-bay
Battery Pack
Universal Power Supply
Power Cord (US)
Power Cord (EU)
Power Cord (UK)
2 Slot Battery Charger
4 Slot Battery Charger
USB Cable w/ DC in port
USB Cable (Cradle to PC)
Stylus (Standard)
Tethered Stylus (Option)

Docking Station

Interface	1 modem port via PC/computer, 1 USB port
Power Input	<p>16 pin connector for charging and communication pads to main unit</p> <p>Quick charging typically takes 3 hours</p> <p>AC/DC adapter @ 12 VDC/2A with regulator</p>

Appendix B

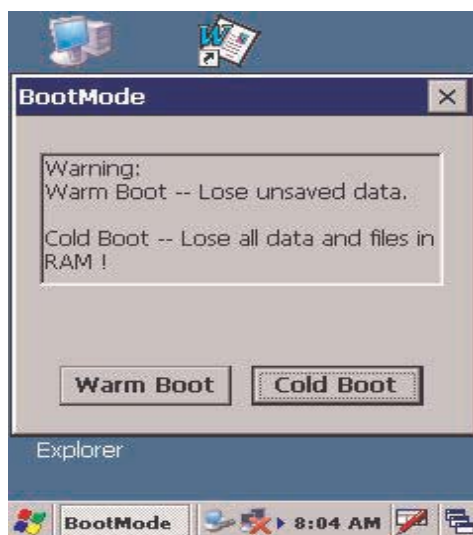
Update and Upgrade OS

Update OS via Compact Flash or USB

You may choose update OS via CF or USB, select the Bootmode in PA966 Utilities.



Insert
CompactFlash chip
into PC Card
Adapter



After the OS is successfully updated, the PA966 will automatically cold-start with the new OS.

For details of OS upgrade,
please refer to PA966
Service Manual.



Appendix C

Troubleshooting Guide

Problem	Solution
Terminal does not power on.	Battery needs recharging or replacement.
	Ensure that battery is installed correctly.
Terminal shuts itself down.	Adjust " Power Properties"
	Battery needs recharging.
Battery life is short	Adjust " Power Properties" - especially if peripherals are used.
	Adjust backlight of LCD or Keypad.
	Replace battery pack if old(battery can be recharged approximately 500 cycles.)
"Low Backup Battery" message	Charge terminal for 16 hours.
Screen is blank	Make sure terminal is powered on.
	Adjust screen brightness.
Terminal either do not respond, or responds inaccurately to touch screen input.	Calibrate touch screen.
	Perform a warm boot - WARNING - Unsaved data will be lost.
	Perform a cold boot - WARNING - Terminal will be reset to default settings and data will be lost.
Bar code not read.	Make sure scanning application is loaded and operational.
	Run " Scanner Setting" program to modify barcode read setting.
	Bar code might be distorted and should be replaced.
	Battery needs recharging or replacement.
Terminal will not shut off.	If terminal is processing data, attach charging cable to ensure the battery is not depleted.
	If terminal is connected to AC power, disconnect.
	Perform a warm boot - WARNING - Unsaved data will be lost.
	Perform a cold boot - WARNING - Terminal will be reset to default settings and data will be lost.

FCC Statement

This is a FCC Part 15 Class B product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte les exigences du Règlement sur le matériel brouilleur du Canada.

The device is certified to the requirements of RSS-139-1 for 2.4 GHz spread spectrum devices.

European Conformity Statement

Declaration of Conformity with Regard to the R&TTE 1999/5/EC and EMC 89/336/EEC directives.

Laser Information

The Unitech PA960 series is certified in the U.S. to conform to the requirements of DHHS/CDRH 21CFR Subchapter J and to the requirements of IEC 825-1. Class II and Class 2 products are not considered to be hazardous. The PA960 series contains internally a Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. The scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or during prescribed service operations.

CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, and magnifying glasses. This does not include eye glasses worn by the user.

The laser safety warning label required by the DHHS/IEC for the PA960 series's optional laser scanner module is located on the memory compartment cover, on the back of the unit.

Unitech Customer Support

America	http://www.ute.com http://latin.unitech-adc.com	e-mail: inquiry@ute.com e-mail: info@latin.unitech-adc.com
UTP	http://www.unitech-adc.com	e-mail: aidcsales@adc.unitech.com
China	http://www.ute.com.cn	e-mail: unitech@ute.com.cn
EMEA	http://www.unitech-europe.com	e-mail: sales@unitech-europe.nl
Japan	http://www.unitech-japan.co.jp	e-mail: sales@unitech-japan.co.jp
Taiwan	http://adc-utt.unitech.com.tw	e-mail: barcode@unitech.com.tw
Head Office	http://www.unitech-adc.com	e-mail: marketing@adc.unitech.com.tw