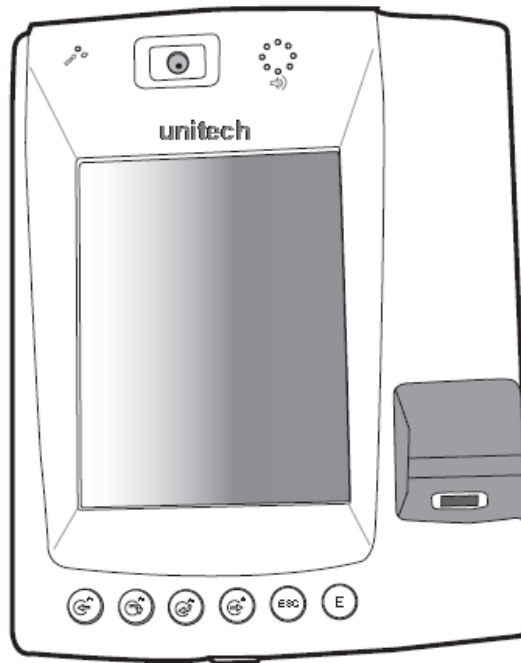


MT650 Video T&A Terminal

MT650



**User's Manual**

400815G Version 1.1

**unitech**

**TASHI**

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## Preface

### About This Manual

This manual explains how to install, operate and maintain the MT650 Video T&A Terminal. No part of this publication may be reproduced or used in any form, or by any electrical or mechanical means, without permission in writing from the manufacturer. This includes electronic or mechanical means, such as photocopying, recording, or information storage and retrieval systems. The material in this manual is subject to change without notice.

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## Regulatory Compliance Statements

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### FCC Warning 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 or more of the following:

- Relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit that is different from

the receiver.

- Consult the dealer or an experienced radio/television technician for help.
1. This Transmitter must not cohabitate or operate in conjunction with any other antenna(s) or transmitter(s).
  2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmission.
  3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

### **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.

### **European Conformity Statement**

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

### **RoHS Statement**



This device conforms to RoHS (Restriction of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

## **Notices**

The unit is equipped with a Lithium-Ion battery pack. After extended storage periods, however, the unit may not power-on without external power due to battery discharge. In this case connect the unit to the power cable and recharge the unit for about 6 hours to charge the battery to full capacity.

The battery supplies operational power to the unit for approximately 1 hour

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(depending on hardware configuration and with limited backlight use) or provides backup RTC data for 6 days when there is no external power connected.

### **Battery Charge Notice**

It is important to consider the environmental temperature whenever the Lithium-Ion battery pack is charged. Charging is most efficient at normal room temperature or in a slightly cooler environment. It is essential that the battery are being charged within the stated range of 0°C to 45°C. Charging the battery outside of the specified range could damage the battery and shorten their charging life cycle

### **Storage and Safety Notice**

Although charged Lithium-Ion battery 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 battery 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 the battery within normal room temperature ranges and replace the used battery with a new one every year.

## **Warranty**

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Under unitech limited Warranty, the following items are covered:

- The MT650 Video T&A Terminal is covered by one-year limited warranty.
- Cables are covered by one-year limited warranty.
- Battery is covered by a one-year warranty.

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## Getting Started

### Introducing the MT650

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Thank you for purchasing the MT650 Video T&A Terminal. Your MT650 was designed for users needing a compact and durable computer for data collection and real time transactions.

The MT650 is a T&A (Time management and access control) terminal with a large 480 x 640 pixel color touch screen and the Windows CE operating system. The MT650 was designed to meet the requirements of Time & Attendance, Loyalty Programs, and Work-In-Process applications.

The MT650 communicates with central host security and T&A systems through standard Ethernet or WLAN networks. The built-in CMOS digital camera, microphone, and audio speaker provide complete area security with a small footprint.

The MT650 features a variety of built-in readers including proximity and finger print identification. Powered by Windows CE.NET 6.0, the MT650 package includes programming tools and support software for developing custom security and provides cost-efficient solution for T&A applications.

## Features

### Powerful system

- Microsoft Windows CE 6.0 Professional Plus operating system
- Samsung 6410 processor with speeds up to 667Mhz

### System memory

- 256 MB SDRAM
- 256 MB Flash ROM

### Expansion slot

- SD memory slot

### Proximity reader

- EM, 125kHz
- HID, 125kHz
- Mifare, 13.56MHz

### Wireless connectivity

- 802.11b/g

### Communication

- RS232/485
- USB 1.1 host
- Output relays x 2
- Ethernet connection
- Power over Ethernet

### Display

- 5.7inch VGA LCD touch-sensitive screen
- 480 x 640 resolution

### Multimedia

- 2.0 megapixel CMOS camera
- Audio output via 0.8 watt speaker
- Built-in microphone

### Fingerprint reader

- Sensor: Suprema SFM3020-OP
- Verification time: 1 second
- Equal Error Rate: <0.1%
- Enrollment time: 1 second
- Template capacity: 1900 at 1MB flash
- Template format: Suprema or ISO 19794-2 standard

### Battery life

- Normal usage: 1 hour
- Charging time: 6 hours

### User interface

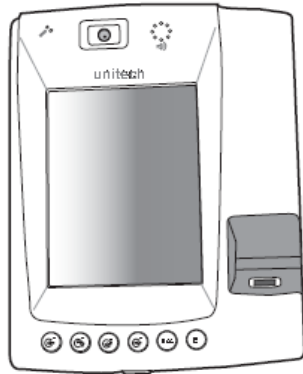
- Six hard keys
- Touch-sensitive screen with stylus

### Software programming tools

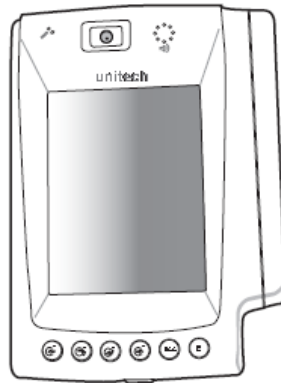
- Visual Studio
- C++, C#, VB.NET

## Package Contents

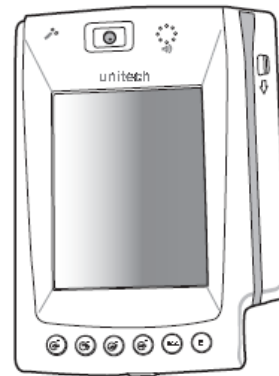
After opening the box, ensure the following items are present:



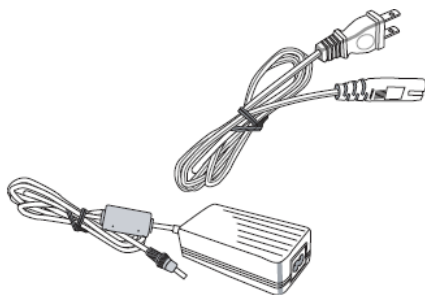
**MT650 Proximity + Finger  
Print Model**



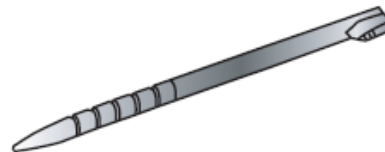
**MT650 Proximity Model**



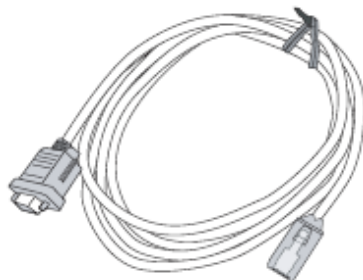
**MT650 with Barcode Model**



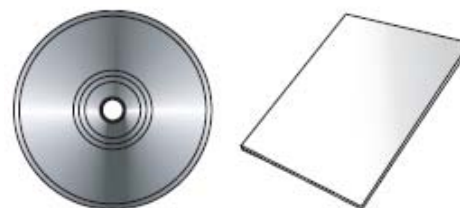
**Power Adapter and Cable**



**Stylus**



**RS232 Cable**



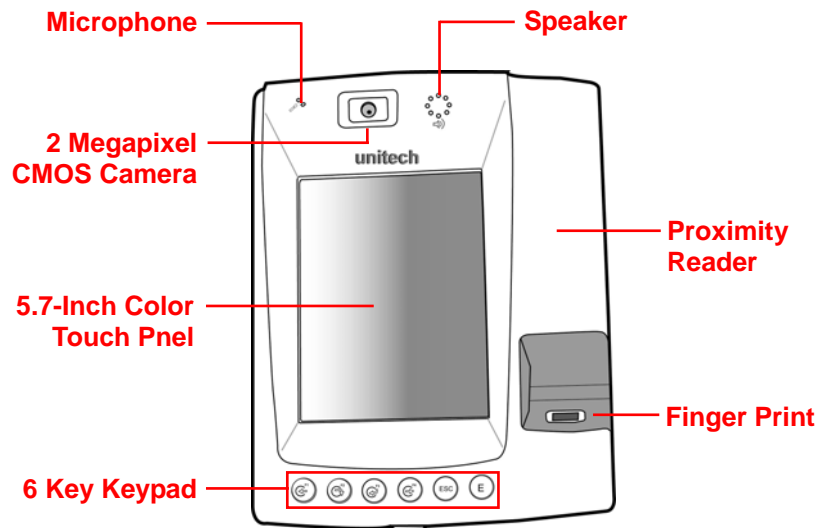
**Manual CD-ROM and unitech MT650 Quick  
Reference Guide**

If anything is missing or appears damaged in any way, contact your dealer.

**NOTE: The MT650 screen ships with a protective plastic film. You may remove it if desired by peeling from one corner. The screen will be more susceptible to scratching without the film, but will be more readable.**

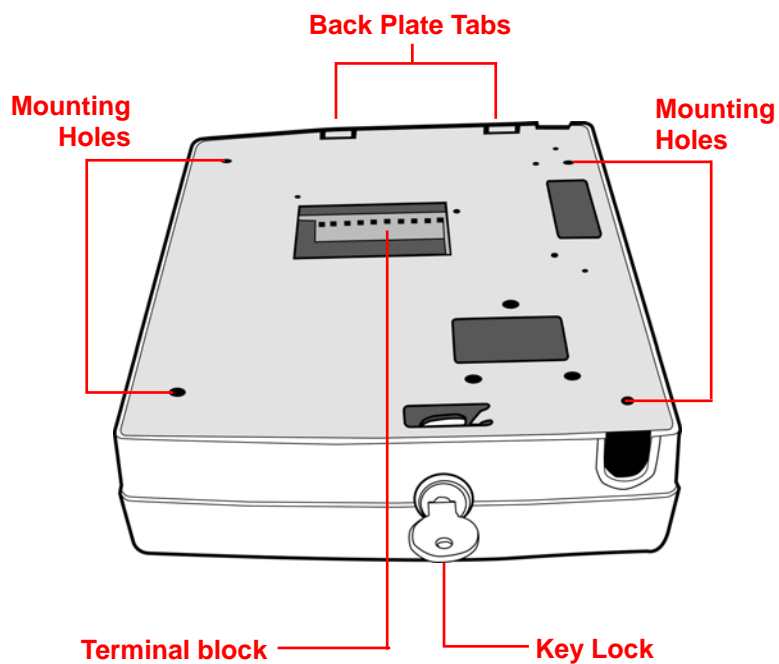
## Tour of the MT650

The following sections describe the main components and features of the MT650.



MT650 Proximity + Finger Print Model

## Rear



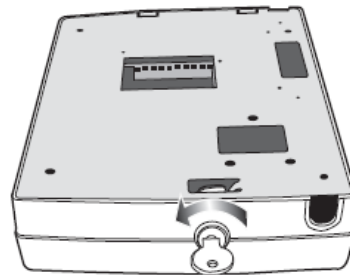
## Setting up the MT650

This section explains how to charge the battery and how to turn on the MT650 for the first time.

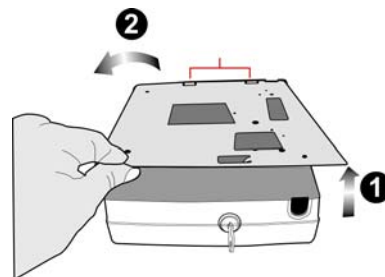
### Opening the Back-plate

Follow these instructions to open the back-plate for accessing the MT650's internal components.

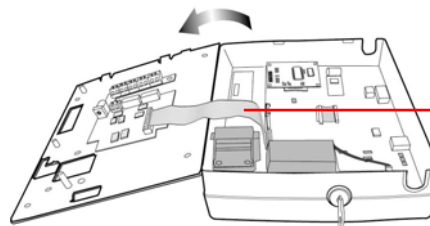
1. Insert the key provided into the security lock and then turn the key counterclockwise.



2. Lift the back-plate up to a 45-degree angle (1) and pull the plate in the direction of the arrow slightly to free the cover from the back plate tabs (2).



3. Flip the back plate over to the left.



#### **Warning:**

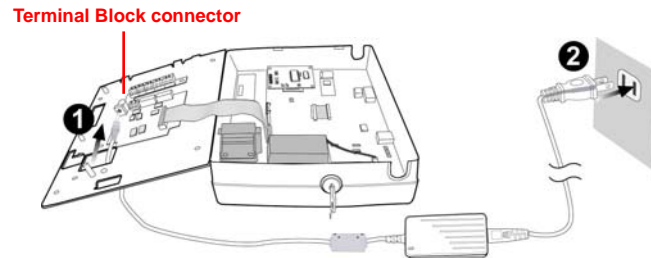
1. **Be careful not to stretch this cable!**
2. **Power off the terminal before plugging and unplugging the ribbon cable.**

Be careful not to stretch this cable

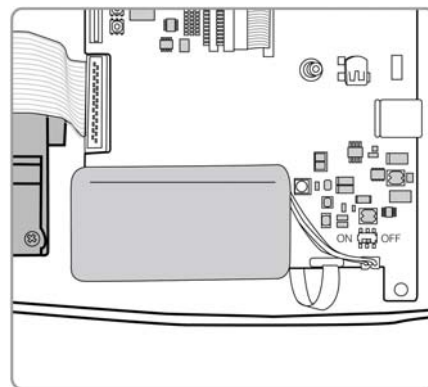
## Connecting Power

Follow these instructions to connect power to the MT650.

1. Plug the 12V DC connector into the terminal block (1)



2. Plug the adapter into a power socket (2).
3. Switch on the battery switch to charge the battery.



## Charging the Battery

Before using the MT650 for the first time, you need to charge it for about 22 hours. The battery begins charging as soon as you connect the power cable and then turn ON the battery switch.

## Turning the MT650 on for the First Time

After you have initially charged your device for about 22 hours, the device is ready to be used. You can now start up your device where you'll calibrate the display, and set up the system time zone, date and time.

## Powering On

The MT650 automatically starts when the 12V DC power adapter is plugged-in. The MT650 welcome screen appears followed by the Windows CE screen.

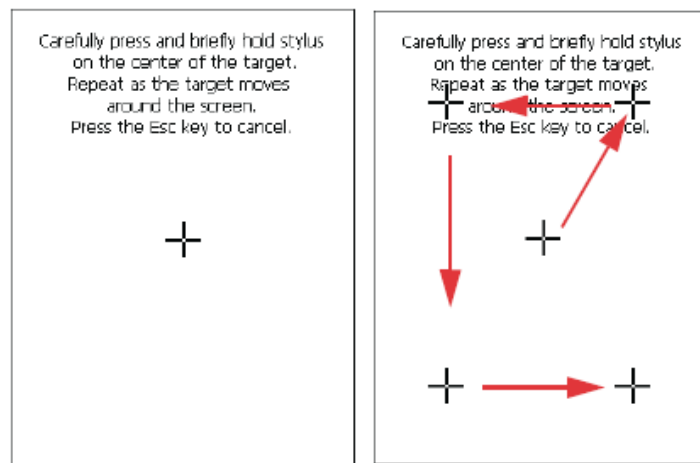
## Calibrating the MT650 Screen

The calibrate screen automatically appears when the unit is powered-on for the first time or after the system is reset.

The MT650 prompts you to calibrate the unit by tapping a sequence of screen locations. Tap gently but firmly with the stylus.

When you have completed the series of taps, press the [E] key to confirm calibration or press the [ESC] key to cancel it.


After confirming calibration, the Date/Time Properties screen appears prompting you to set the date and time.

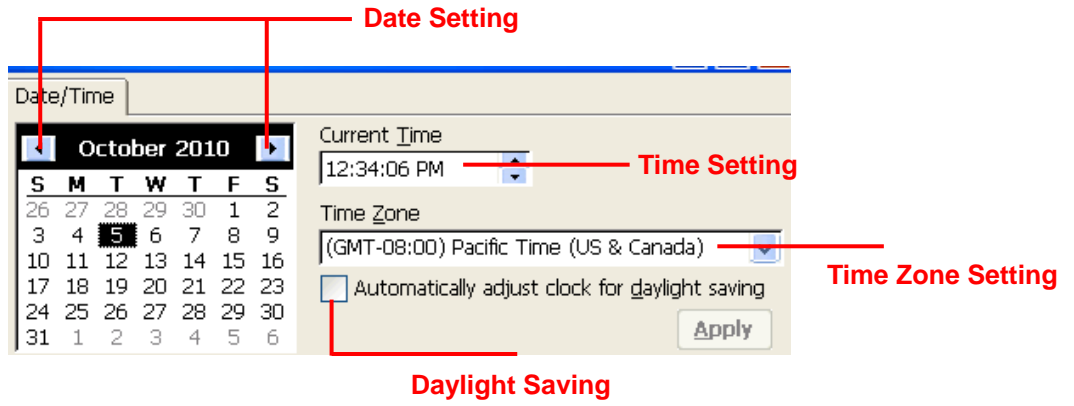


## Setting the Date and Time

In the Date/Time Properties window, use the stylus to select the current date and time, time zone, and daylight saving time option.

- Tap the Left or Right arrows to scroll the year and month you desire or directly tap location of year or month to change the year or month setting.
- Tap on the Hr/Min/Sec AM/PM to input the Hr/Min/Sec to set the time.
- Tap the arrow and set the correct time zone from the drop-down list.
- Check the box to enable Windows to automatically adjust for daylight saving.
- Tap OK to save the settings and exit the Date/Time Properties dialog or tap X to exit without saving.

**NOTE:** To change the time and date at any time tap  → Settings → Control Panel → Date/Time.





# Using the Hardware

## Using the Keypad

The MT650 is featured with six functional buttons.



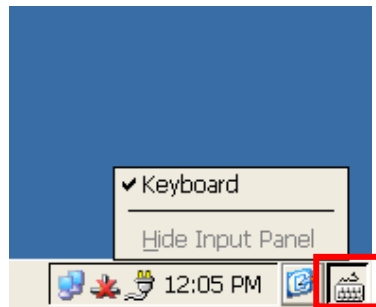
The following table describes the keys.

Key	Main Function
	Clock-in [F1]: Function Key
	Break-out [F2]: Function Key
	Break-in [F3]: Function Key
	Clock-out [F4]: Function Key
	[ESC] Performs the same function as tapping the  button on the touch screen.
	[ENTER] Enters a carriage return or executes a command.

## Using Windows CE Keyboard

The Windows CE Software provides a touch screen keyboard for alphanumeric input. The Windows based keyboard replicates the layout of a standard PC keyboard.

Open the Windows CE keyboard by tapping the “keyboard” icon on the task bar and tapping Keyboard.



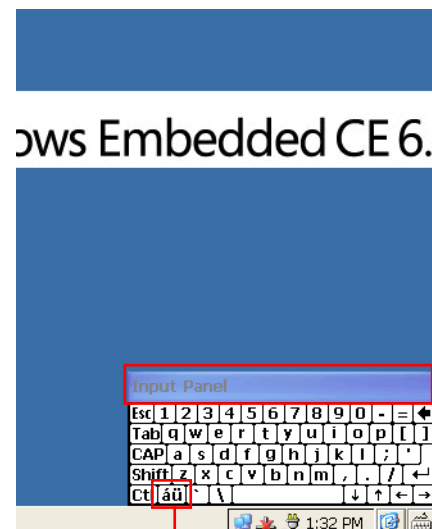
Keyboard Icon

## Entering Characters

Character input is the same as on a standard PC keyboard. Tap the on-screen button corresponding to the character you want to input.

### International Character Support

Tap the [áü] button to switch from the Standard English keyboard to the European keyboard or switch from the standard keyboard to perform the desired special characters.



Title bar

Tap to enter special characters

## Moving the Keyboard

Tap the title bar and drag the keyboard to the desired location.

## Closing the Keyboard

Tap the keyboard icon and tap Hide Input Panel to close Windows CE keyboard.

## Using the Stylus

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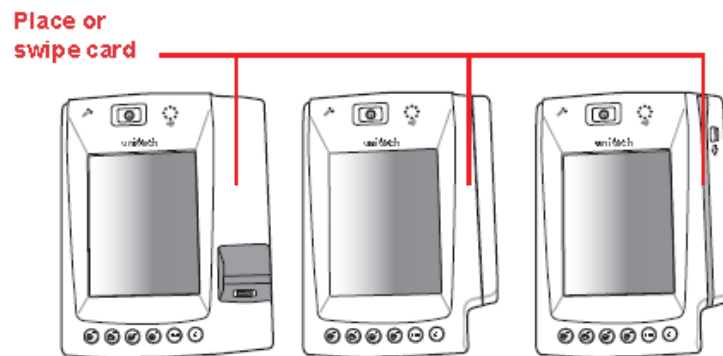
**CAUTION!** Never use anything other than the MT650 stylus on the screen. Using an object other than the stylus could cause permanent damage.

1. Hold the stylus as you would hold a pencil.
2. To make a choice from a menu, lightly tap the tip of the stylus on that choice.
3. Double-tap to open programs.
4. To write data into a field on a form, use the stylus to print the letters or numbers.

## Using Proximity, MSR, or Barcode Reader

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The MT650 features an integrated proximity reader (EM125kHz, HID 125kHz and 13.56MHz Mifare), MSR, and barcode reader which can read proximity cards, magnetic stripe cards, and barcode labels respectively.

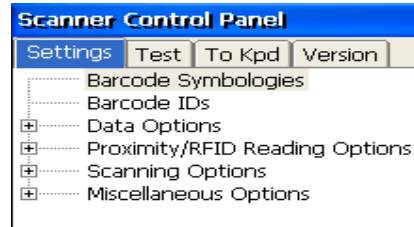


**NOTE:** Reading software must be enabled in order to operate the scanner. This can be a user-loaded application or a pre-loaded utility such as Scanner Setting.

## Testing Reader Data

The MT650 has a built-in Scanner Control Panel that enables you to test the device's barcode scan function.

1. To launch Scanner Control Panel, tap My Device on desktop → Windows → ScanCpl. The Scanner Control Panel opens.

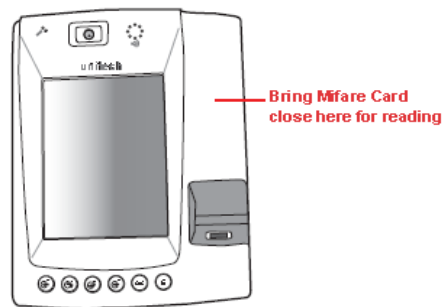


2. To test the barcode scanner, tap the Test tab and then perform a scan.



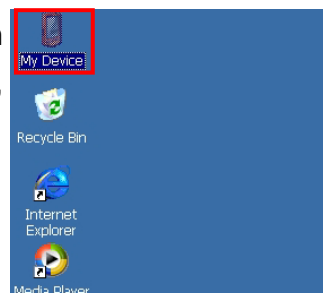
## Using the Mifare Reader

The MT650 has an optional integrated Mifare reader that has verification in a few seconds.



## Testing Mifare Card Verification

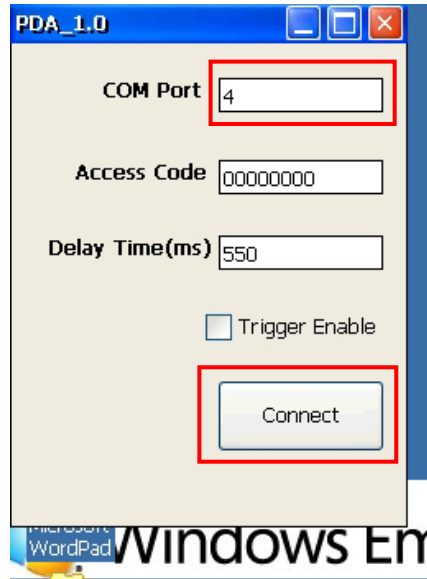
1. Double-tap the My Device icon on the Windows CE desktop. Then, tap the Windows folder.



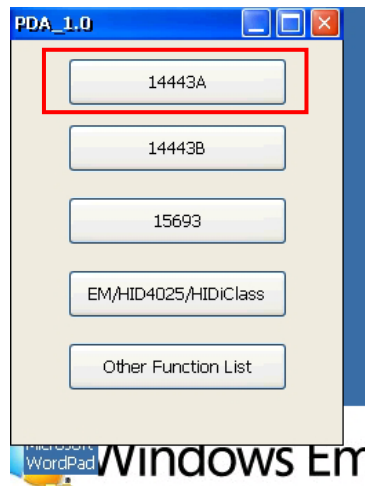
2. Double-tap PDA\_1.0 to open the program.



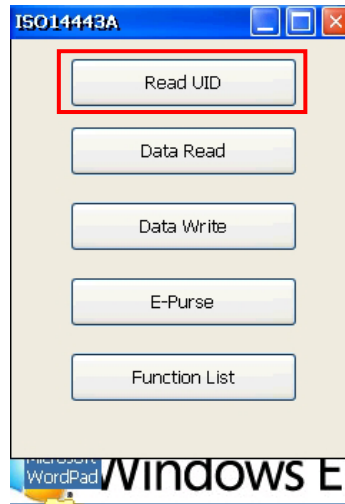
3. Input "4" in the column of Com port and then tap Connect.



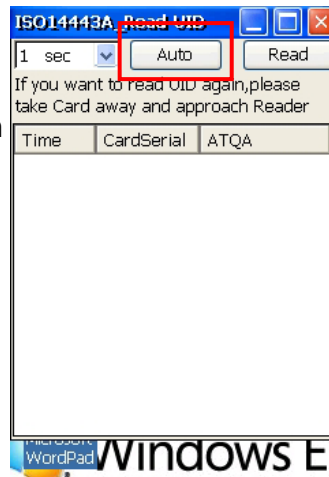
4. For example, tap 14443A.



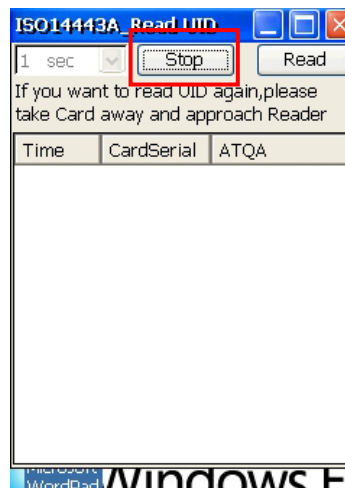
5. Tap Read UID.



6. Tap Auto and bring the Mifare Card close to the sensor. The code will be read and displayed on the following field.

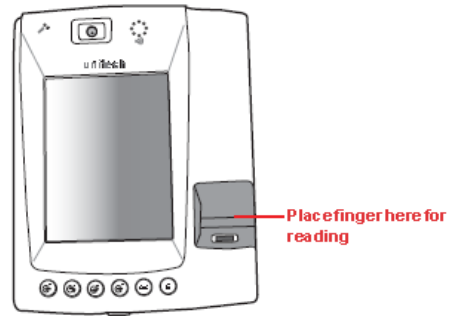


7. You will see the program running. Tap Stop Read to end reading.



## Using the Finger Print Reader

The MT650 has an optional integrated Finger Print reader that has a verification of less than 2 seconds. The Finger Print Reader comes with 4000 templates.

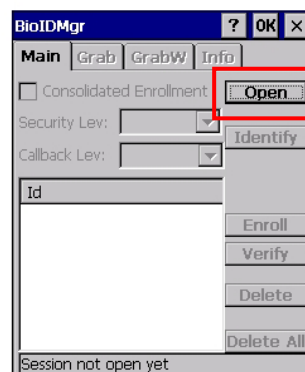
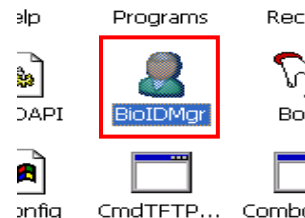
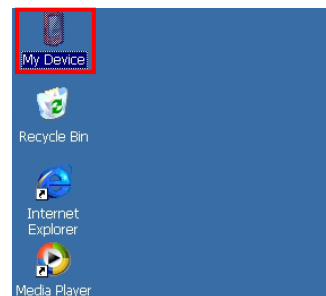


## Testing Finger Print Verification

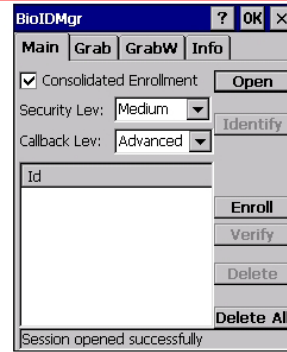
The MT650 has a built-in BIO ID Manager programs that enable the user to test finger print verification. To test finger print verification:

### For UPEK

1. Double-tap the My Device icon on the Windows CE desktop. Then, tap the Windows folder.
2. Double-tap BioIDMgr to open the program.
3. Tap Open to activate the program.

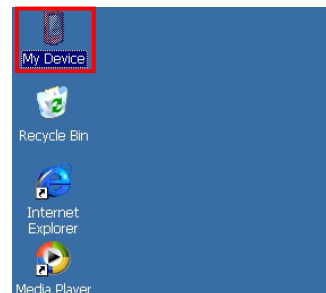


4. You will see the program running.



## For Suprema

1. Double-tap the My Device icon on the Windows CE desktop.



2. Double-tap the Windows folder.

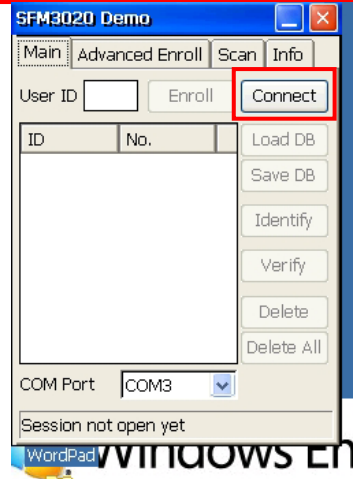


3. Double-tap SFM3020\_Demo to open the program.

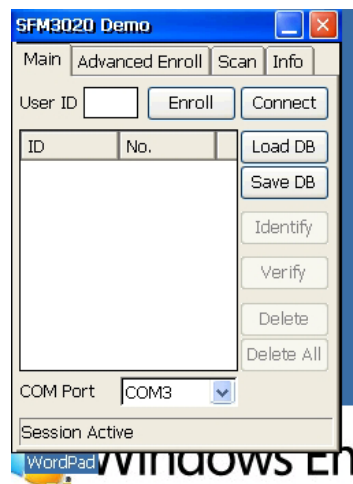




4. Tap Connect to activate the program.



5. You will see the program running.



## Using the Camera

The MT650 has a built-in 1.3 megapixel camera which provides the following extra functionality:

- Enables users to capture still pictures when a card is being read
- Checks attendant time with a photo image
- Records video continuously
- Functions as an audio/video intercom

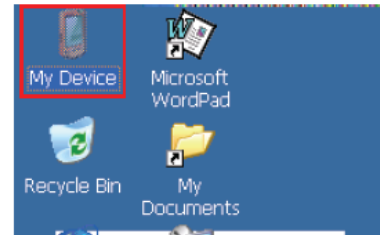
Additionally, facial recognition can be incorporated using third party software.

The MT650 has a demo program that enables users to capture a still picture with a card number and time stamp when an EM proximity card is read.

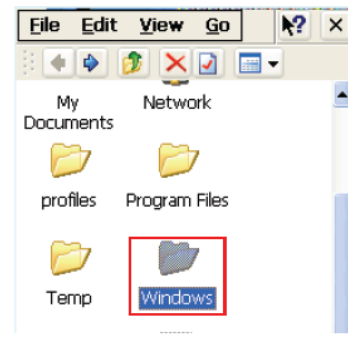
## Testing Imager

To open the camera demo:

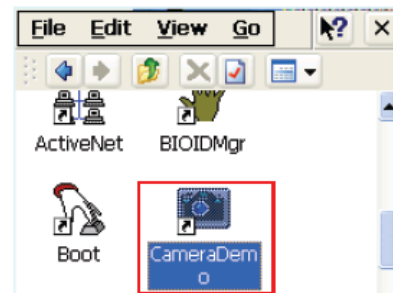
1. Double-tap the My Device icon on the Windows CE desktop.



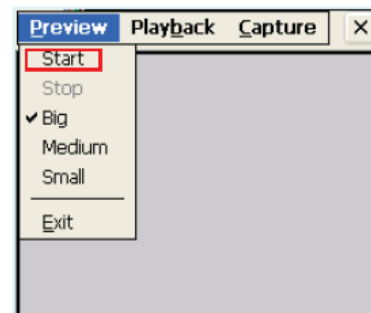
2. Double-tap the Windows folder.



3. Double-tap CameraDemo to open the program. The testing program is displayed.



4. Tap Preview → Start.



A continuous image is displayed enabling users to capture and playback video.

## Data Communication

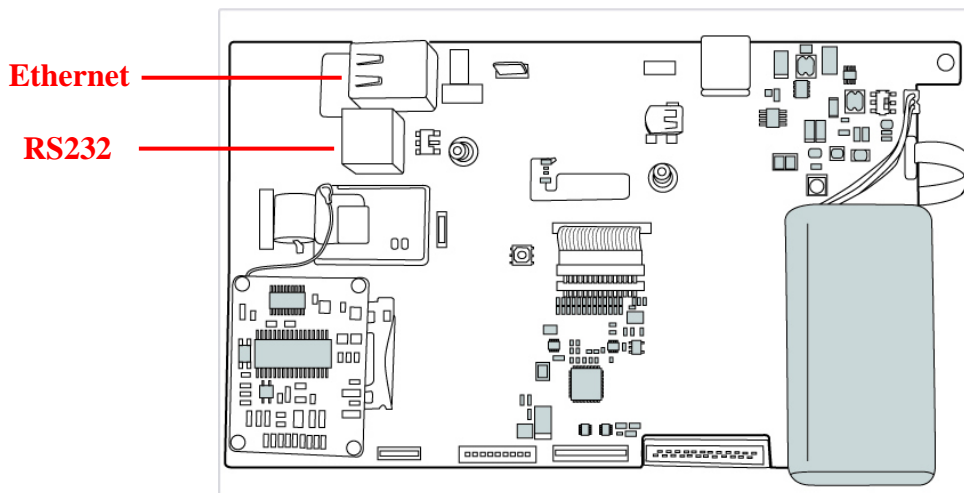
The MT650 enables users to link to a host computer via RS-232, Ethernet or an RF connection for data communication.

### Establishing Device-PC Connection

The following connection methods are provided.

#### Serial Cable

1. Plug the provided RS232 communication cable into the PC's 9-pin COM port.
2. Connect the other end to the MT650 RS232 interface Port.



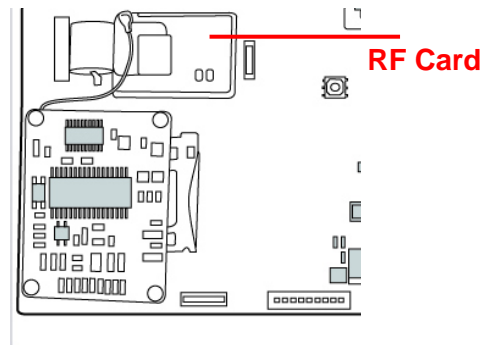
#### Ethernet Cable

1. Plug an Ethernet cable into the PC's RJ-45 Ethernet Port.
2. Connect the other end of the cable to the MT650 Ethernet Port.

**NOTE:** In order for the optional power over Ethernet module to support power over the RJ-45 Ethernet cable, the client side must have a POE Hub.

## Wireless Communications

The MT650 supports wireless communications with an optional CF card for 802.11b+g Wireless communication installed. Refer to Installing the WLAN RF Card (Optional).



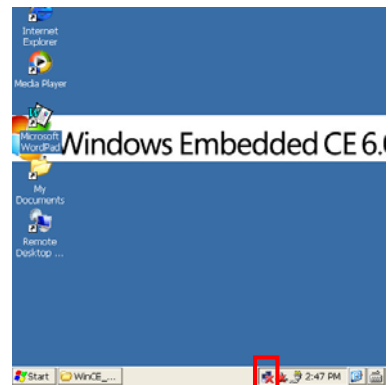
## Setting up the Wireless Local Area Network Card

The MT650 automatically detects RF cards during the first-time installation.

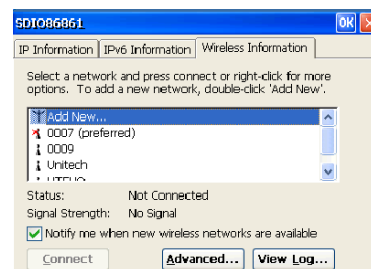
### WiFi Connection

Unitech terminals come with built-in RF facility. This chapter guides you through the RF setting.

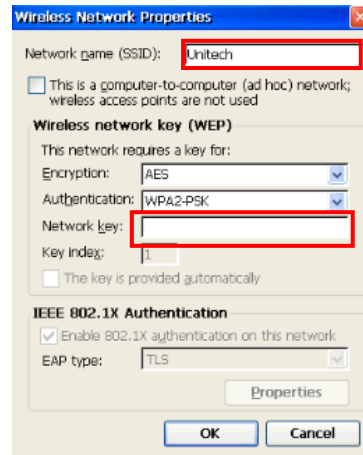
1. Tap the wireless network icon as a shortcut on the desktop.



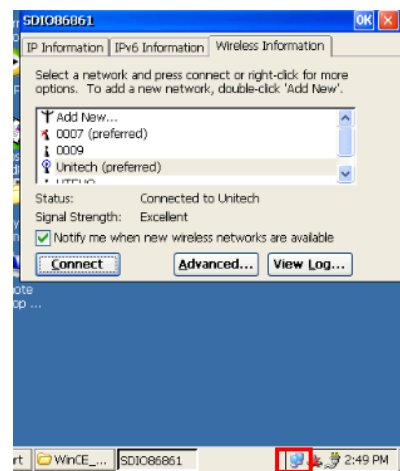
2. Move to **Wireless Information**, and tap **Add New** or double tap a preferred network.



3. Enter a Network Name (SSID) and a Network Key. For the detailed instruction on wireless network encryption setting, please visit Microsoft website.  
Then, tap OK.



4. The network icon appears on the taskbar when the RF is connected.



## Using ActiveSync

Using Microsoft ActiveSync, you can synchronize and transfer information between your desktop computer and terminal.

### **Additional Capabilities**

With ActiveSync, you can also:

- Back up and restore your device data.
- Copy (rather than synchronize) files between your device and desktop computer.
- Control when synchronization occurs by selecting a synchronization mode. For example, you can synchronize continually while connected to your desktop computer or only when you choose the synchronize command.
- Select which information types are synchronized and control how much data is synchronized. For example, you can choose how many weeks of past appointments you want to synchronize.

### Requirements

To synchronize, ActiveSync version 4.1 or higher must be installed on both your desktop computer and the MT650 terminal. The MT650 terminal is shipped with ActiveSync already installed. You can download and install the most current version of ActiveSync from [www.microsoft.com](http://www.microsoft.com).

### Installing Microsoft ActiveSync

In order to exchange data between your computer and the MT650, Microsoft ActiveSync must be installed on your computer.

**NOTE:** If you have a previous version of the Microsoft ActiveSync installed in your computer, uninstall it first before installing the latest version of Microsoft ActiveSync. The MT650 Video T&A Terminal requires ActiveSync version 4.2 or higher.

To install Microsoft ActiveSync on your computer:

1. Close any open programs, including those that run at startup, and disable any virus-scanning software.
2. Download the ActiveSync software from the Microsoft ActiveSync Download page at <http://www.microsoft.com/windowsmobile/downloads/activesync42.msp>.
3. Browse to the location of the downloaded file, and double-click it. The installation wizard begins.
4. Follow the instructions on the screen to install Microsoft ActiveSync.

### Connecting the Device to Your Computer

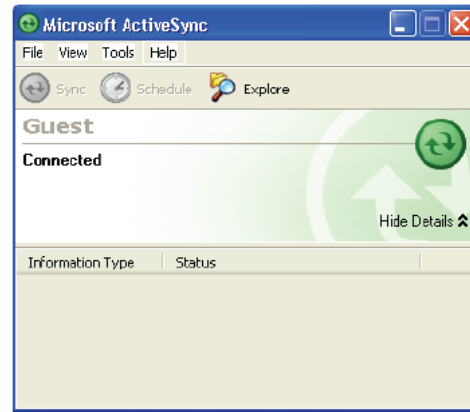
1. After ActiveSync has been installed, connect the MT650 to your PC.
2. Turn the MT650 on.
3. ActiveSync starts automatically and configure the communication port to work with the MT650. The New Partnership setup wizard automatically starts.



**NOTE:** If ActiveSync doesn't start automatically, click  → Pro-grams →


Microsoft Active-Sync. If a message appears indicating that it is unable to detect a connection, click the Cancel button and manually configure the communication settings.

4. Follow the onscreen instructions.
5. When the configuration process is complete, the ActiveSync window appears.



6. Synchronization will be initialized and will take place if you've chosen to synchronize periodically or upon connection.

**NOTE:** Your computer can create a partnership with multiple MT650s. Also, a MT650 can create a partnership with up to two computers.

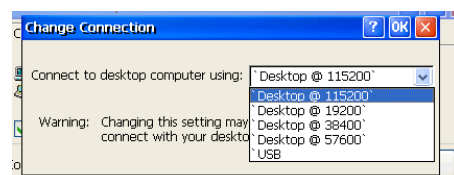
7. On MT650, tap  → Settings → Control Panel → PC Connection.



8. Check "Allow connection with desktop computer when device is attached". Tap "Change...".



9. Select the type of connection you want to use. Then, Connect MT650 to a PC.









## Power System

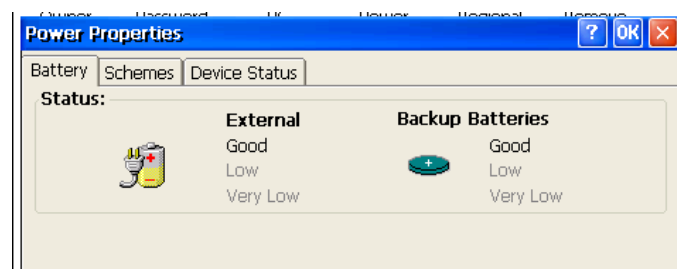
### Charging the Backup Battery for the First Time


The MT650 is equipped with a Lithium-Ion battery pack. After long storage periods, the unit may not power-on without an external power adapter due to battery discharge. In this case, connect the MT650 to the power adapter and recharge the unit for about 22 hours to fully charge the battery.


**NOTE:** The MT650 can operate for approximately 1 hour (depending on the hardware configuration and backlight usage) or can store data for 6 days when there is no external power. Operating with the backlight at 100% brightness and using the finger print utility consumes more power. Therefore, when the MT650 is disconnected from external power, the unit will enter sleep mode and turn off the backlight. When you tap the touch panel, the backlight is set to minimum brightness to saving battery power.

### Checking the Battery Status

If the main battery level becomes low in the course of normal use, a status icon  appears on the device taskbar indicating low or very low battery status. If the battery level reaches low status, the device will enter suspend mode; if the battery level reaches very low status, the device will enter deep sleep mode. In this case, you have about 72 hours to recharge your device after which you risk losing all data on your device's internal memory. When the backup battery is low, an icon  appears in the Taskbar indicating that you should recharge the backup battery as soon as possible.



Check the Power Properties by tapping  → Settings → Control Panel → Power.

**CAUTION!** When there is no external power and the backup battery icon  appears in the system tray, you should backup the data from MT650 immediately.


## Extending Battery Life

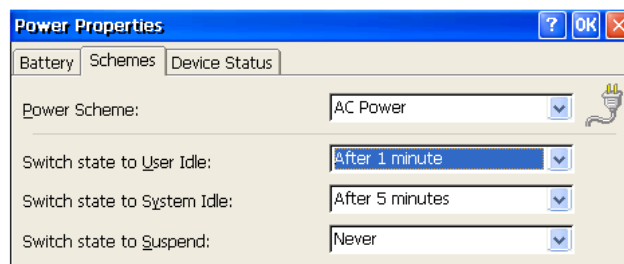
You can extend the MT650 battery life by doing either of the following:

- Changing the automatic power settings
- Reducing CPU speed
- Minimizing the use of backlight

### Changing the Automatic Power Settings

The MT650 enters idle mode when there is no task, or all tasks are waiting for input. In the default setting, the MT650 enters User Idle mode when there is no user input after one minute. The terminal remains idle after 3 minutes when there is no external charging power connected. Pressing the power button returns the MT650 to the previous screen at the time of automatic shutdown. To change the automatic power settings:

1. Open the Power Properties by tapping  → Settings → Control Panel → Power.
2. Tap the Schemes tab.
3. Tap the automatic shut off time arrow to select from a list of time periods for the following modes:



- Switch state to User Idle: the MT650 switches to User Idle mode when there is no user input after the selected time.
- Switch state to System Idle: the MT650 switches to from User Idle mode to System Idle mode when the system is inactive after the selected time.
- Switch state to Suspend: the MT6

- 50 switches from System Idle mode to Suspend mode when the system is inactive after the selected time.  
The available time periods are 1, 2, 5, 10, 15, 30 minutes and Never.

## Adjusting the Backlight

This section describes screen settings and how to conserve battery power by adjusting the backlight.

**NOTE:** The MT650 screen contrast has been preset at the factory for optimum performance

The backlight for the color display is user-defined. There are two tabs – one for Battery Power and the other for External Power.

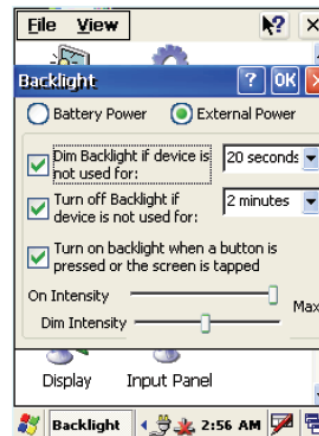
Adjust the screen brightness by tapping  → Settings → Control Panel → Backlight.

Set the backlight behavior and drag the On Intensity and Dim Intensity sliders to the desired levels.

**Dim Backlight if:** Select how many minutes you want to elapse before the backlight dims.

**Turn Off Backlight if:** Select how many minutes you want to elapse before the backlight automatically turns off.

**Turn on Backlight:** Select this option if you want the backlight to turn on when a button is pressed or the touch screen is tapped.



## Performing a Hardware Reset

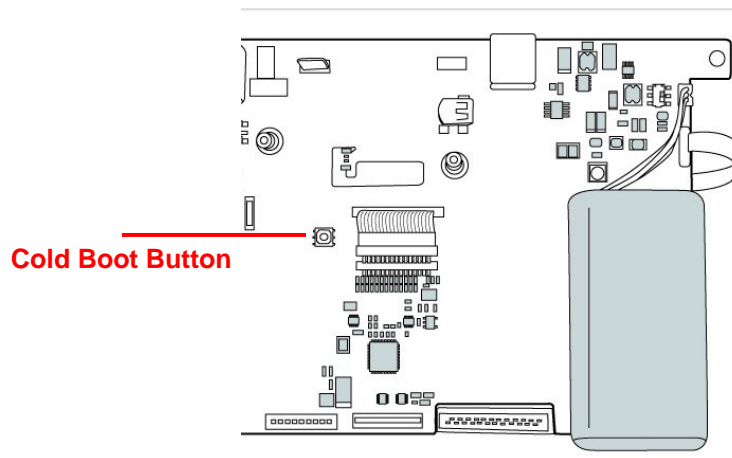
You may have to perform a reset if the device freezes (i.e., device no longer responds to the buttons on the screen).

### Performing a Cold Boot

A cold boot will erase all data and all programs you have added and will restore the device to the default factory settings. However, data and application programs stored in the Flash Storage will be not be deleted.

Never perform a cold boot unless a warm boot does not correct your problem. When you perform your next ActiveSync operation, you can restore any data that you previously synchronized to your computer or you can restore data that you backed up to a storage card.

You can perform a cold boot using the Boot Mode utility in the operating system, or by pressing the Cold Boot hardware reset button in the unit.



You would perform a cold start in any of the following situations.

- Reset the operating system.
- Restore the terminal back to factory defaults.
- Reset the terminal after a boot loader, keyboard and kernel upgrade.

**WARNING!** A cold start erases all data and installed applications in RAM memory.

To perform a cold boot:

1. Remove the back-plate as described in ***Opening the Back-plate.***
2. Press the Cold Start button.

## Appendix A

# System Specification

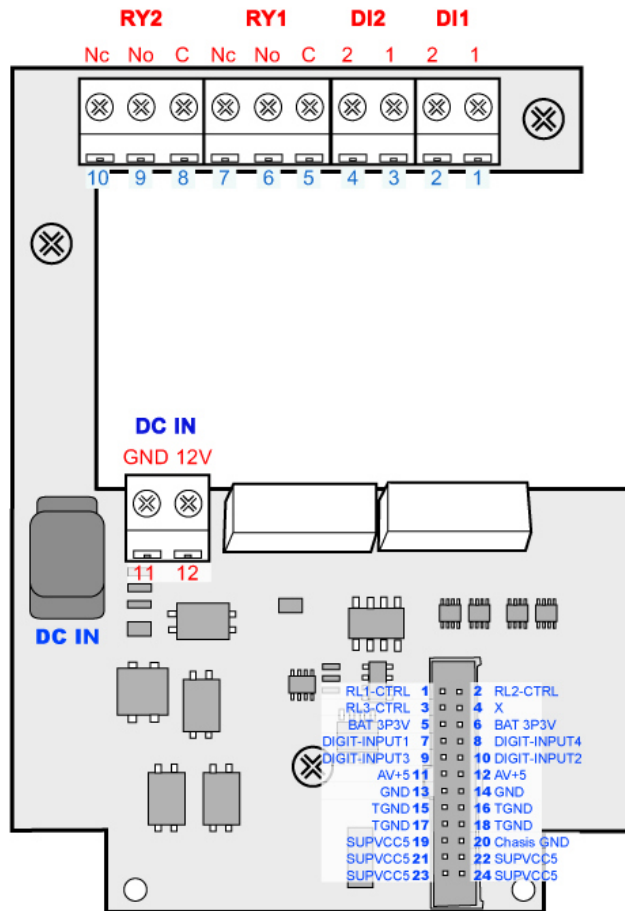
Processor/Memory	CPU	Samsung 6410, 667Mhz	
	Memory	SDRAM: 256 MB Flash ROM: 256 MB	
OS	Microsoft Windows CE 6.0 Professional Plus		
Keypad	Six-key [Clock In (F1)Clock Out (F2)Break In (F3)Break Out (F4)Enter (Yes) Escape (No)]		
Display	5.7-inch 480 x 640 VGA, Color Transflective TFT with Touch Screen & backlight		
Communication and I/O	RS232/485	Output relays x 2	
	USB 1.1 host	Ethernet connection	
	802.11b/g (optional)	Power over Ethernet	
Multimedia	Camera: 2.0 megapixel CMOS camera Audio output: 0.8 W speaker Microphone input		
Expansion Slot	SD slot for memory expansion		
Power Source	Battery	Lithium-Ion @ 7.4V 1400mAh main battery pack	
Enclosure	Weight	700g	
	Dimension	Approximately 305.4mm x 212.9mm x 48.2mm Max.	
Environmental	Operating temperature	- 10°C to 50°C (14°F~ 122°F)	
	Storage temperature	-20°C to 70°C (-4°F~ 158°F)	
	Relative Humidity	10~ 90 % RH non-condensing	
Certification	CE, FCC, NCC, VCCI, RoHS compliant		
Software	Visual Studio C++, C#, VB.NET		
Proximity Reader	EM, 125 kHz HID, 125 kHz Mifare, 13.56MHz		



Appendix B

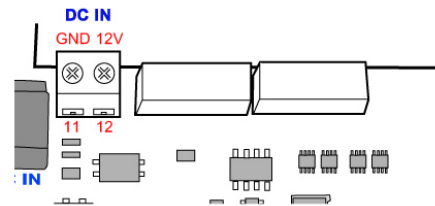
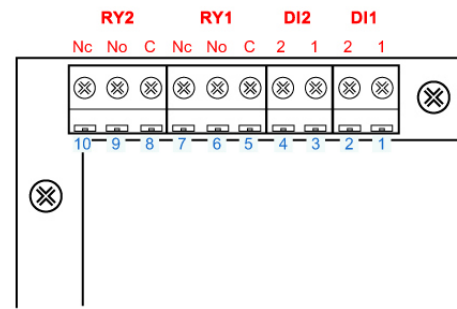
Terminal Block

Overview of the Terminal Block



**Terminal Block Pin Assignment**

No.	Name	Description
1	DI1-1	Photo-In Cathode(+)
2	DI1-2	Photo-In Anode(-)
3	DI2-1	Photo-In Cathode(+)
4	DI2-2	Photo- In
5	RYI-C	Common
6	RYI-No	Normal Open
7	RYI-Nc	Normal Close
8	RY2-C	Common
9	RY2-No	Normal Open
10	RY2-Nc	Normal Close
11	GND	GND
12	DC IN	+12V, 2A



**Relay**

RL1 – CTRL → High	RY1(C & NC Linked)
RL1 – CTRL → Low	RY1(C & NO Linked)
RL2 – CTRL → High	RY2(C & NC Linked)
RL2 – CTRL → Low	RY2(C & NO Linked)

**Digit Input**

DI1-1 and DI1-2 are the positive and negative nodes of the external power input.

DI1 = High	Digit-Input1= High
DI1 = Low	Digit-Input1= Low

DI2-1 and DI2-2 are the positive and negative nodes of the external power input.

DI2 = High	Digit-Input2= High
DI2 = Low	Digit-Input2= Low



**Appendix C**

**Worldwide Support**

At unitech, we have a professional support team to answer your questions or any related technical issues. If the equipment problem occurs, you may contact our regional services representatives to get the quick response. We have eight regional services center, and choose your region to get our quick support and their contact information can be found in our websites provided as below.

<b>Region</b>	<b>Web Site</b>
Global Operation Center	<a href="http://www.ute.com">http://www.ute.com</a>
Unitech Taiwan	<a href="http://tw.ute.com">http://tw.ute.com</a>
Unitech Asia Pacific & Middle East	<a href="http://apac.ute.co">http://apac.ute.co</a> <a href="http://india.ute.com">http://india.ute.com</a>
Greater China Division	<a href="http://cn.ute.com">http://cn.ute.com</a>
Unitech Japan	<a href="http://jp.ute.com">http://jp.ute.com</a>
Unitech America	<a href="http://us.ute.com">http://us.ute.com</a> <a href="http://can.ute.com">http://can.ute.com</a>
Unitech Latin America	<a href="http://www.latin.ute.com">www.latin.ute.com</a>
Unitech Europe	<a href="http://eu.ute.com">http://eu.ute.com</a>