



iPOS TX



Product Reference Guide



iPOS TX
Product Reference Guide

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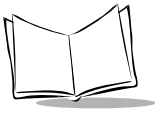
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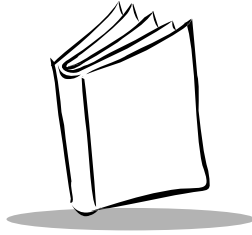
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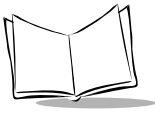
About This Guide

Introduction

The *iPOS TX Product Reference Guide* provides instructions for installing and configuring the iPOS TX Transaction System.

Chapter Descriptions

- [Chapter 1, *Getting Started*](#), provides an overview of the iPOS TX system.
- [Chapter 2, *Setting Up the iPOS TX System*](#), describes how to connect the terminal to a host, connect peripherals, install the active screen guard, and install the optional swivel mount.
- [Chapter 3, *Configuring the iPOS TX*](#), provides information on configuring the iPOS TX using the Setup Menu, and how to test terminal functions.
- [Appendix A, *Technical Specifications*](#), provides specification information for the terminal.



Notational Conventions

The following conventions are used in this document:

- *Italics* are used to highlight specific items in the general text, and to identify chapters and sections in this and related documents. It also identifies names of screens, menus, menu items, and fields within screens.
- Courier text identifies buttons to be tapped or clicked on screens.
- Bullets (•) indicate:
 - action items
 - lists of alternatives
 - lists of required steps that are not necessarily sequential
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

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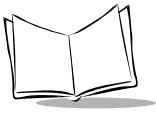
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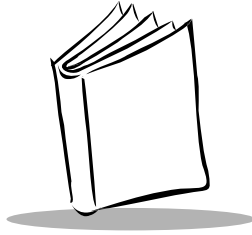
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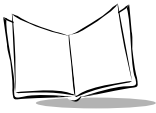
Chapter 1

Getting Started

Introduction

The iPOS TX offers the most advanced payment functions to meet merchants' transaction requirements. The device completely integrates credit, debit, EBT, and smart card to streamline point-of-sale transactions and back-end operations. The iPOS TX features:

- Electronic signature capturing
- Virtual PIN pad for debit transactions
- Physical and data security design
- Patented pressure-sensitive technology
- Large and vibrant backlit color display
- Microsoft® Windows® CE 3.0 operating system
- Built-in 3-track magnetic stripe reader (MSR)
- RS-232, RS-485, or USB interface
- Integrated smart card reader
- Infrared (IrDA) port
- posClient transaction application
- Optional iPOS TX software development suite.



Parts of the iPOS TX

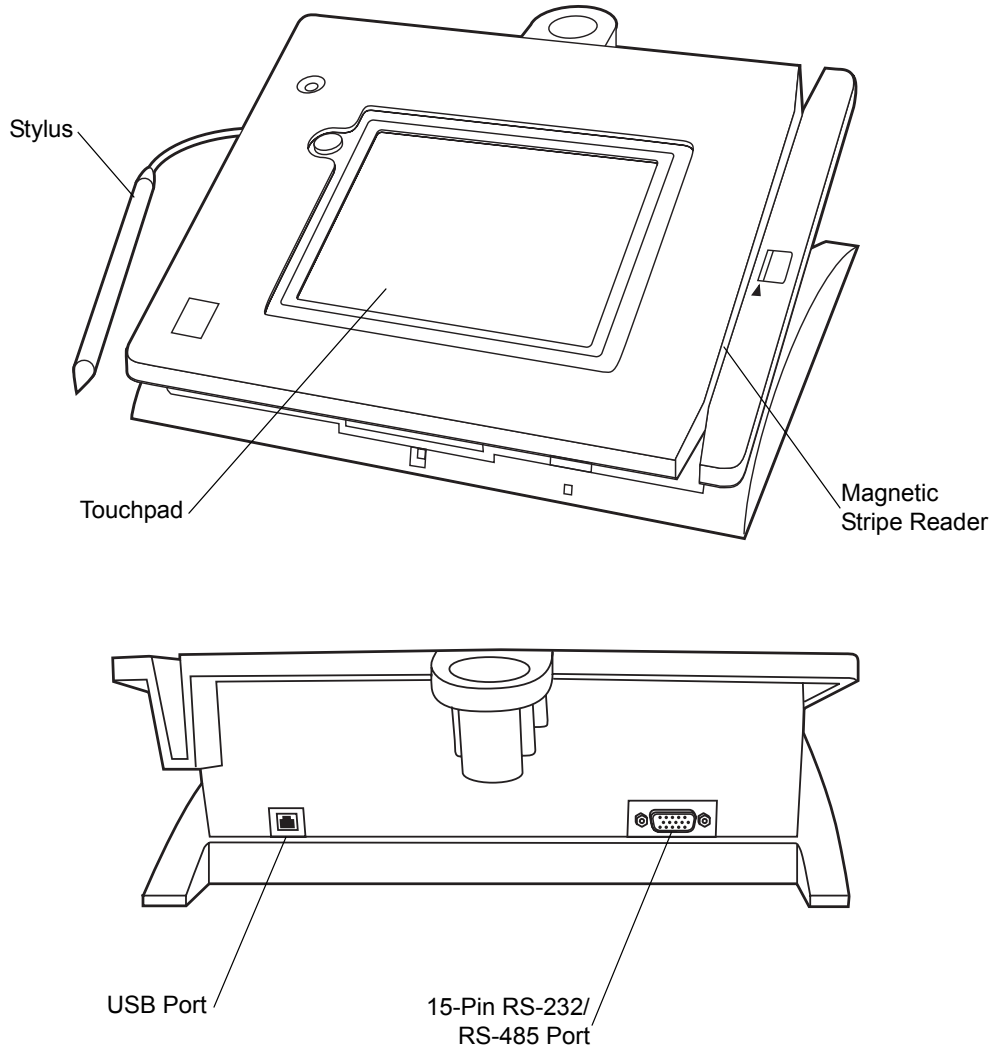


Figure 1-1. Parts of the iPOS TX

POS Host Interface

The iPOS TX supports standard RS-232/RS-485 or Universal Serial Bus (USB) interfaces to a POS host device, allowing the terminal to collect line-item purchase and account information, personal identification numbers (PINs), credit and debit authorization, and signatures.

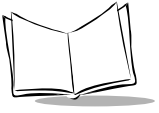
posClient Transaction Application

The iPOS TX features the posClient transaction application which enables digital signature capture from the touchpad, a secure PIN pad for debit transactions, and display of purchased item detail, advertising and promotions. For more information, see the *posClient Online Reference System*, available at <http://devzone.symbol.com/>.

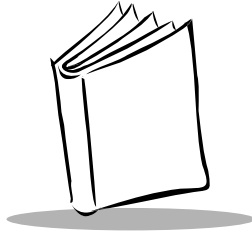
Integrated Security

The iPOS TX conforms to ANSI X9.24 and X9.8 standards, and uses DES or triple DES PIN encryption, accommodates an EMV Level 1 certified Smart Card Reader, and illuminates an LED security icon on the tamper-resistant casing when performing secured functions, such as receiving a PIN for a debit purchase.

If the iPOS TX terminal's casing is breached, all debit keys are erased.



iPOS TX Product Reference Guide



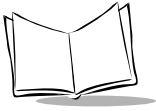
Chapter 2

Setting Up the iPOS TX System

Introduction

This chapter provides information on installing the iPOS TX, including:

- connecting to a POS host device
- installing peripherals
- installing and replacing the screen guard
- mounting the terminal on a counter or tabletop.



Installing the iPOS TX System

The following items are required to install the iPOS TX system, and are provided with the terminal:

Table 2-1. Connection Items

| Connection | Cables/Parts Required | Page Number |
|------------------------|--|--------------------|
| Host via RS-232 | HDB15/DB9 serial cable AC power adapter cable | 2-3 |
| Host via RS-485 | HDB15/SDL (Shielded Data Link) serial cable | 2-4 |
| Host via Unpowered USB | USB cable HDB15/DB9 serial cable, or DB15 power adapter AC power adapter cable | 2-5 |
| Host via Powered USB | USB cable | 2-6 |
| Peripheral Connection | HDB15/Dual DB9 Y-cable AC power adapter cable | 2-7 |

RS-232 Installation

To install the iPOS TX in an RS-232 configuration:

1. Shut off power on the PC host device.
2. Plug the serial cable's 15-pin connector (HDB15) into the serial port on the back of the iPOS TX.
3. Plug the serial cable's 9-pin connector (DB9) into a serial port (typically COM1) on the host device.
4. Insert the connector on the AC power adapter cable into the port on the back of the serial cable's 9-pin connector (DB9).
5. Connect the end of the AC adapter to a standard 120V, 60 Hz AC power outlet.
6. Power on the host device. The iPOS TX autoconfigures to RS-232.

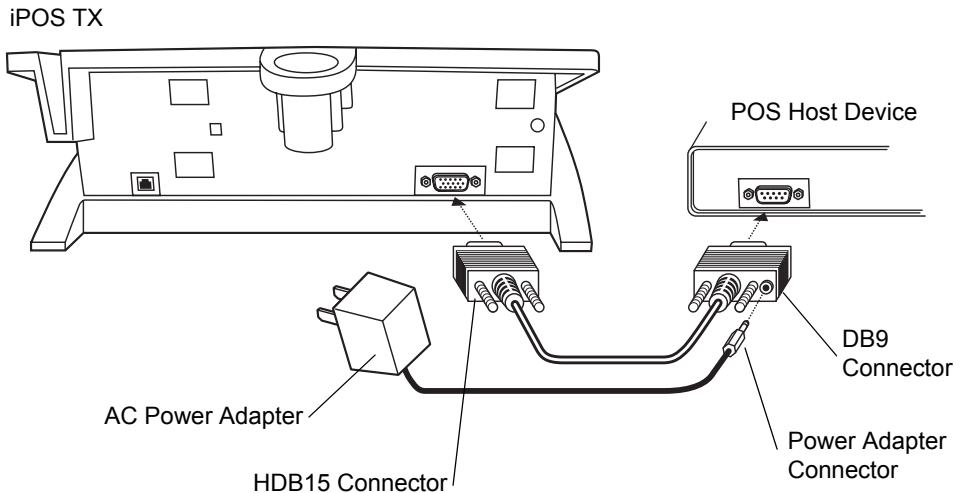
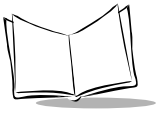


Figure 2-1. RS-232 Configuration



RS-485 Installation

To install the iPOS TX in an RS-485 configuration:

1. Shut off power on the host device.
2. Plug the serial cable's 15-pin connector (HDB15) into the serial port on the back of the iPOS TX.
3. Plug the SDL connector into one of the following ports on the POS host device: 4B, 9A, 9B, or 9E.
4. Turn on the host device. The iPOS TX autoconfigures to RS-485.

iPOS TX

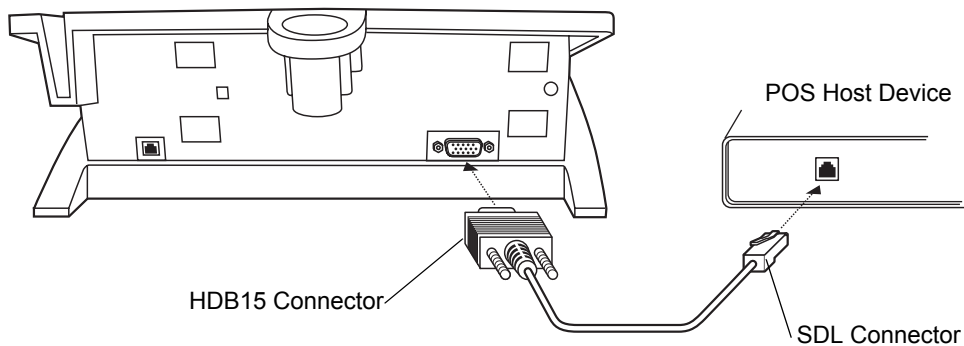


Figure 2-2. RS-485 Configuration

USB Installation

The iPOS TX connects to a powered or unpowered USB-enabled host device.

Unpowered USB Installation

To install the iPOS TX:

1. Shut off power on the host device.
2. Insert the Type B connector of the USB cable into the USB port on the back of the iPOS TX.
3. Insert the Type A connector of the USB cable into the USB port on the host device.
4. If using the HDB15/DB9 serial cable, plug the 15-pin connector of the cable into the serial port of the iPOS TX, and the 9-pin connector into the host. Insert the connector on the AC power adapter cable into the port on the back of the serial cable's 9-pin connector (DB9).

If using the DB15 Power Adapter, insert this adapter into the serial port of the iPOS TX, and plug the connector of the AC power adapter cable into the socket on the back of the DB15 Power Adapter.

5. Connect the end of the AC adapter to a standard 120V, 60 Hz AC power outlet.
6. Turn on the host device. The iPOS TX autoconfigures to USB.

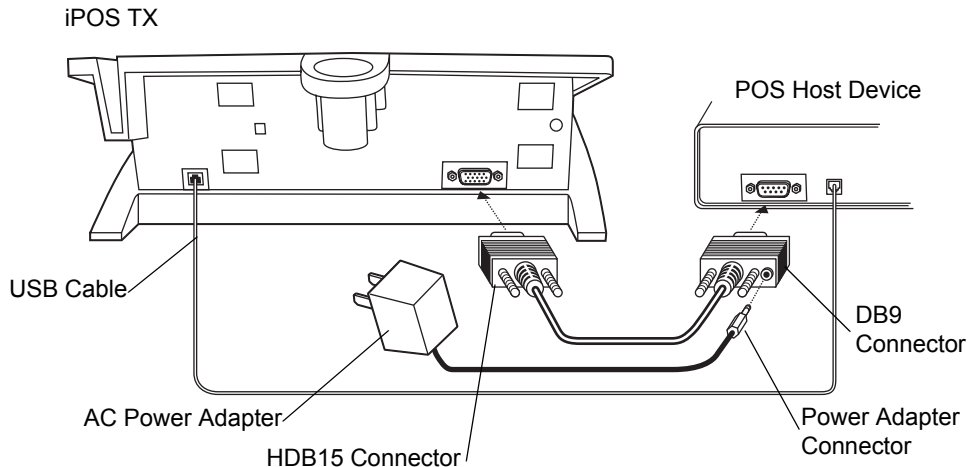
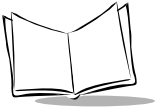


Figure 2-3. Unpowered USB Configuration



Powered USB Installation

To install the iPOS TX:

1. Shut off power on the host device.
2. Insert the Type B connector of the USB cable into the USB port on the back of the iPOS TX.
3. Insert the Type A connector of the USB cable into the USB port on the host device.
4. Turn on the host device. The iPOS TX autoconfigures to USB.

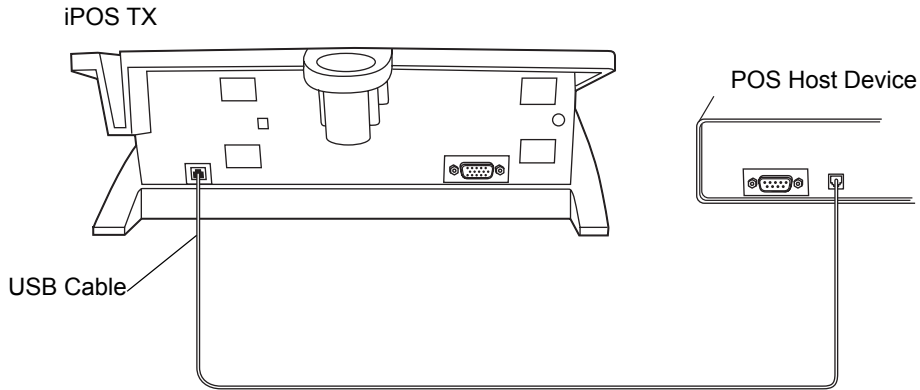


Figure 2-4. Powered USB Configuration

Connecting Peripherals

To connect a peripheral device to the iPOS TX, use the Y-cable (HDB15/Dual DB9) that splits at the HDB15 connector:

1. Plug the cable's 15-pin connector (HDB15) into the serial port on the back of the iPOS TX.
2. Plug one DB9 connector of the Y-cable into a serial port (typically COM1) on the host device.
3. Connect the other DB9 connector of the Y-cable to the peripheral device.
4. Insert the connector on the AC power adapter cable into the port on the back of the serial cable's 9-pin connector (DB9) that is connected to the host device.
5. Connect the end of the AC adapter to a standard 120V, 60 Hz AC power outlet. Note that the peripheral requires its own power supply.

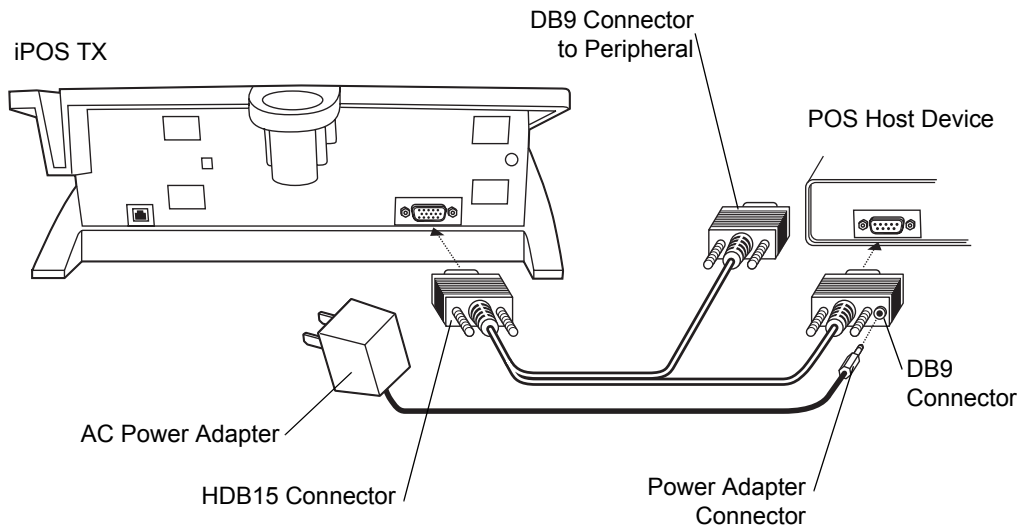
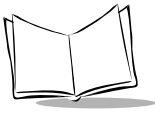


Figure 2-5. Peripheral Connection



Installing the Screen Guard

The screen guard protects the iPOS TX's screen from typical wear such as scratches and spills. To install the screen guard:

1. Disconnect power from the iPOS TX.
2. Clean the surface of the terminal and touchscreen using a cloth dampened with non-abrasive glass cleaner. **Do not spray liquid directly onto the terminal.** Wait until the terminal and glass are completely dry.
3. On the back of the screen guard, remove the paper adhesive guard.
4. Place the adhesive side down onto the iPOS TX reserved recess area. Apply gentle pressure to the screen guard to ensure proper adhesion.

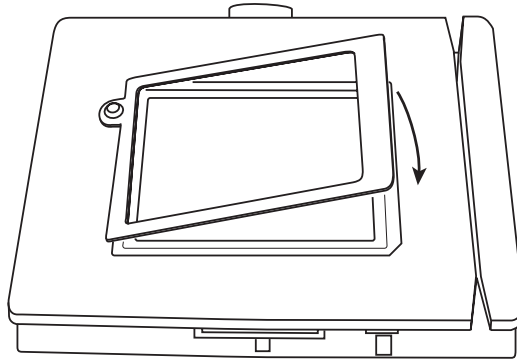


Figure 2-6. Placing Screen Guard on Terminal

The screen guard can be removed and repositioned in case of misalignment.

Replacing the Screen Guard

Replace the screen guard when scratches are visible or when liquid is spilled on the iPOS TX. This maintenance extends the operation of the iPOS TX:

Caution

If liquid is spilled on the iPOS TX, wipe up all liquid before replacing the screen guard.

Using a small, flat blade screwdriver (e.g., a jeweler screwdriver), lift the round tab of the screen guard, and gently pull off from left to right to remove.

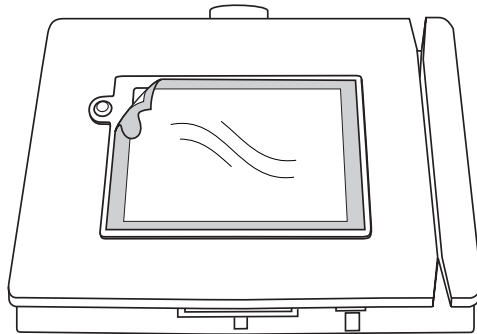
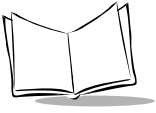
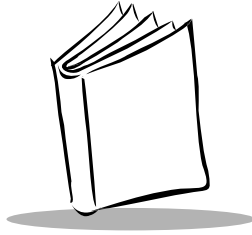


Figure 2-7. Removing Screen Guard

Follow the instructions in *Installing the Screen Guard* on page 2-8 to install the new screen guard on the iPOS TX.



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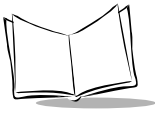


Chapter 3

Configuring the iPOS TX

Overview

The iPOS TX includes a setup program that configures terminal settings, such as screen brightness, calibration, and date and time. It also tests certain terminal functions such as MSR, audio, and LCD.



iPOS TX Setup Mode

Upon powerup, the iPOS TX displays the following screen.

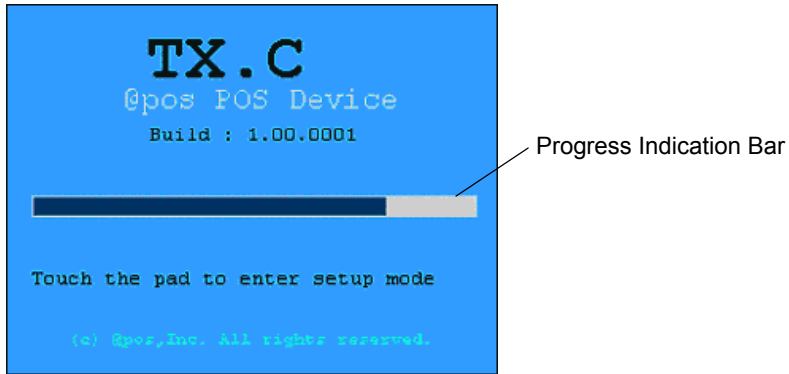


Figure 3-1. iPOS TX Startup Screen

Tap the screen before the progress indication bar completes to access Setup Mode, which allows customizing settings, or do not tap the screen to use the default settings or previously configured settings.

After tapping the screen, enter the Setup Mode password using the virtual keyboard on the screen, then tap the enter/return key on the keyboard. The default password is *password*.

Security Activation

If the security module is not initialized, the Security Activation screen appears. If this screen appears, return the iPOS TX to Symbol Technologies for activation.



Figure 3-2. Security Activation Screen

Main Setup Screen

After entering the Setup password, the *Configurations/Settings* screen appears.

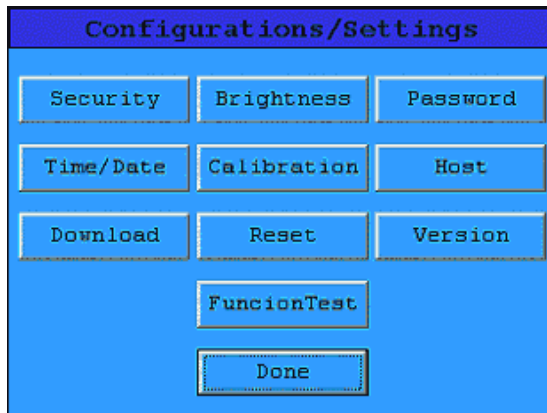
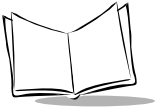


Figure 3-3. Configuration/Settings Screen



This screen contains 11 buttons that enable access to setup options for the terminal:

- Tap the `Security` button to view Security Module Key Manager screen.
- Tap `Brightness` to change screen brightness.
- Tap `Password` to change the setup password.
- Tap `Date/Time` to set the date and time for the terminal.
- Tap `Calibration` to calibrate the touchpad.
- Tap the `Host` button to select the *Host Settings* screen.
- Tap `Download` to access download mode.
- Tap the `Reset` button to reset the iPOS TX, which restores the default settings.
- Tap `Version` to view system version information.
- Tap `FunctionTest` to test terminal functions.
- Tap `Done` to submit the new values and start the posClient application.

The following sections provide more detail on each of these configuration functions.

Security Module Key Manager

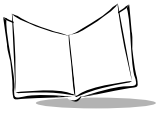
Tap `Security` on the *Configurations/Settings* screen to access the *Security Module Key Manager* screen.



Figure 3-4. Security Module Key Manager Screen

This screen sets new keys to the device security module, which are loaded using a download manager. Use a key-loading utility (e.g., Mixor) to load DUKPT or master/session keys.

To delete the security keys, tap `Erase All Keys`.



Changing Screen Brightness

Tap **Brightness** on the *Configurations/Settings* screen to access the *Change LCD Brightness* screen.

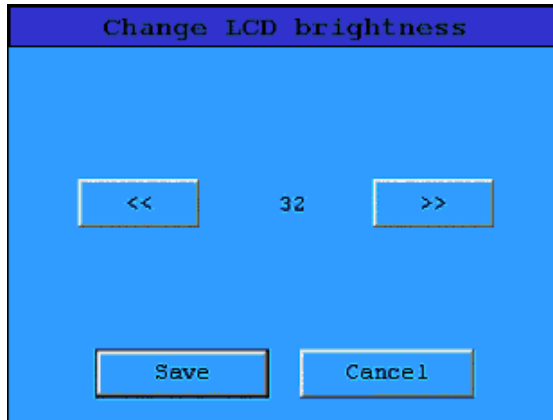


Figure 3-5. Change LCD Brightness Screen

To increase brightness, tap the right-arrows button; to decrease brightness, tap the left-arrows button. Set brightness in the range of 0 to 63.

Tap **Save** when the desired brightness is achieved to save the value and return to the *Configurations/Settings* screen. Tap **Cancel** to return to the *Configurations/Settings* screen without changing the brightness.

Changing the Setup Password

Tap **Password** on the *Configurations/Settings* screen to access the *Password* screen.

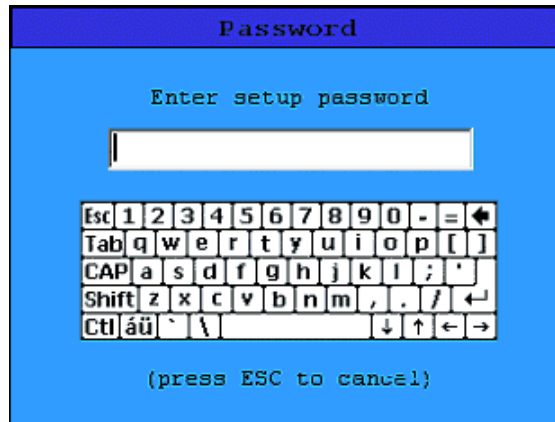
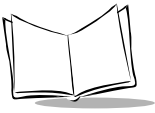


Figure 3-6. Password Screen

To change the password required to enter Setup Mode:

1. Enter the current password using the virtual keyboard, then tap the enter/return key on the keyboard. (The default password is *password*.)
2. Enter the new password. The password must be between 6 and 12 characters long. Tap the enter/return key.
3. Enter the new password again to confirm. The iPOS TX returns to the *Configurations/Settings* screen.



Setting System Date and Time

Tap **Time/Date** on the *Configurations/Settings* screen to access the *Date/Time Settings* screen.

| Date/Time settings | | | |
|--------------------|-----|--------|------|
| | Day | Month | Year |
| Date: | 1 | Jan | 2000 |
| | Hrs | Min | Sec |
| Time: | 01 | 02 | 03 |
| Save | | Cancel | |

Figure 3-7. Date/Time Settings Screen

Enter the date and time using the drop-down menus, and tap **Save** to save the value and return to the *Configurations/Settings* screen. Tap **Cancel** to return to the *Configurations/Settings* screen without changing the date or time.

Calibrating the Screen

Tap **Calibration** on the *Configurations/Settings* screen to re-calibrate the iPOS TX.

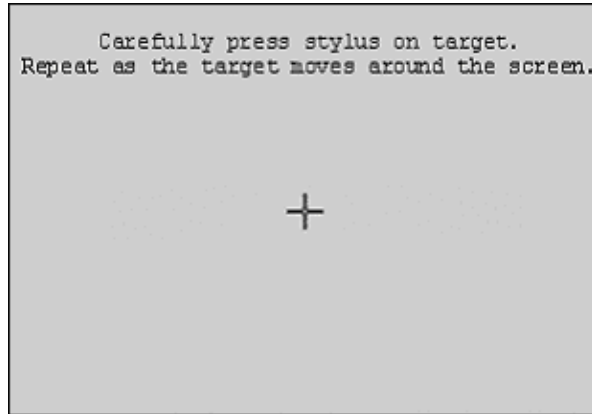
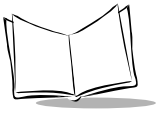


Figure 3-8. Calibration Screen

To calibrate the touchpad, tap the center of the target each time it moves on the screen. As the screen indicates, tap the screen within 30 seconds to save the new settings, or wait 30 seconds to discard the new calibration settings. The iPOS TX returns to the *Configurations/Settings* screen.



Host Settings

Tap **Host** on the *Configurations/Settings* screen to set the communication address of the RS-485 port.

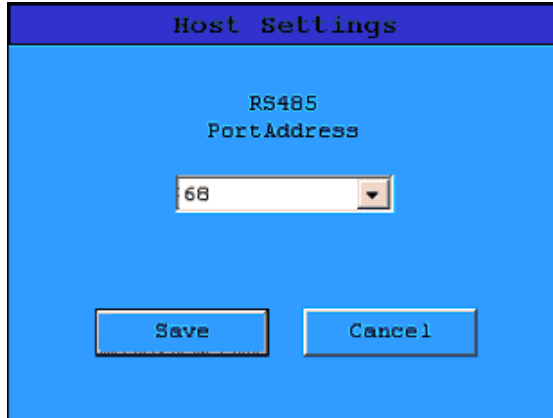


Figure 3-9. Host Settings Screen

Select the port address from the drop-down menu and tap **Save**. Available addresses are 64, 65, 68, and 69.

Tap **Cancel** to return to the *Configurations/Settings* screen without changing the address.

Download Mode

Tap **Download** on the *Configurations/Settings* screen to enter Download Mode, which allows downloading new system software to the iPOS TX.

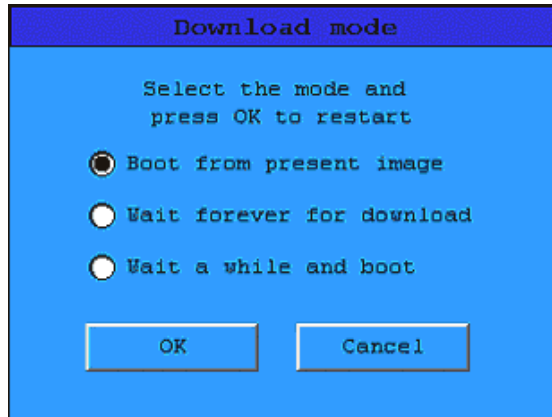


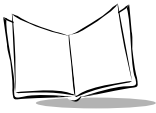
Figure 3-10. Download Mode Screen

Select a download mode:

- *Boot from present image* - the iPOS TX boots from the current flash image without waiting for a new image to be downloaded.
- *Wait forever for download* - the iPOS TX waits for instruction to download an image. To abort the download while the terminal is waiting, restart the terminal by disconnecting and reconnecting power.
- *Wait a while and boot* - the iPOS TX waits five seconds for a new image to download, then it boots from the current flash image.

After selecting a mode, tap **OK**. The iPOS TX downloads the new files in the manner selected.

Note: *There must be a download utility on the host device before a download can be executed.*



Loading TX New NK.Bin Instructions

The following items are required to download a new CE image onto the iPOS TX:

- TX_XX.zip, a file containing NkDnld.bat, Nk.bin, and Nkdownload.exe. This file is available at <http://devzone.symbol.com/>
- Host PC running Windows 9x, Windows NT, or Windows 2000
- iPOS TX with serial cable and power supply.

To download the demo image provided in the zip file:

1. Connect the power supply to the iPOS TX.
2. Connect the serial cable to the host PC.
3. Save the TX_XX.zip file to a folder on the host PC and unzip the file.
4. Click on the TX_XX folder to open it.
5. Connect the serial cable to the iPOS TX.
6. After the first beep, click on the NkDnld.bat file in the TX_XX folder within four seconds. The application erases the current flash images on the iPOS TX, and downloads the new CE image.

Note: *If you don't click on the NkDnld.bat file within four seconds, the iPOS beeps twice and boots from the current OS image in flash. If this occurs, unplug the serial cable from the iPOS TX and perform steps 5 and 6 again.*

Within five seconds, the following message appears:

Flash successfully erased, sending segment now

followed by a list of headers ranging from 1 to 78. This may take a few minutes.

7. Disconnect the serial cable from the host PC when the iPOS TX beeps and displays the new graphic, indicating that uploading is complete.

Resetting the iPOS TX

Tap **Reset** on the *Configurations/Settings* screen to reset the terminal. Brightness is set to its default value of 32, the RS-485 address is set to 0x68, and USER DATA, which is used by posClient, is cleared.

Viewing System Information

Tap **Version** on the *Configurations/Settings* screen to display system version information, including class ID of the system board, system build version number, and applications and system components installed on the iPOS TX.

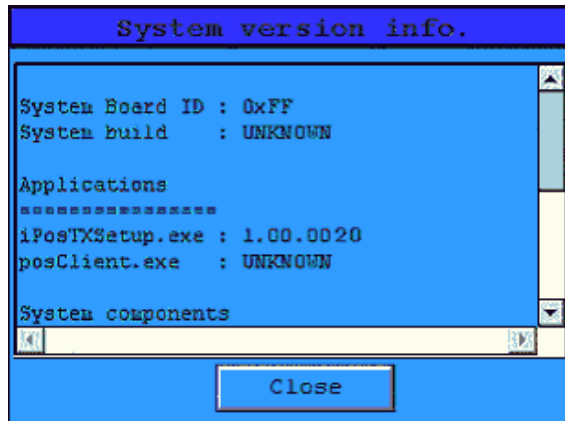
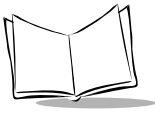


Figure 3-11. System Version Information Screen



iPOS TX Function Test Menu

Tap `FunctionTest` on the *Configurations/Settings* screen to test terminal functions.

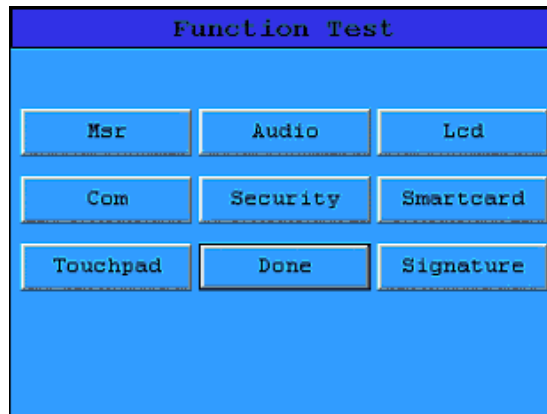


Figure 3-12. Function Test Screen

This screen contains nine buttons for testing the following functional areas of the iPOS TX:

- Magnetic Stripe Reader
- Audio output
- LCD display
- Communication port
- Security
- Touchpad
- Signature pad
- Smart Card.

Testing MSR Function

Tap `Msr` on the *Function Test* screen to test the functionality of the MSR, which is used for retrieving credit and debit card information in a transaction.

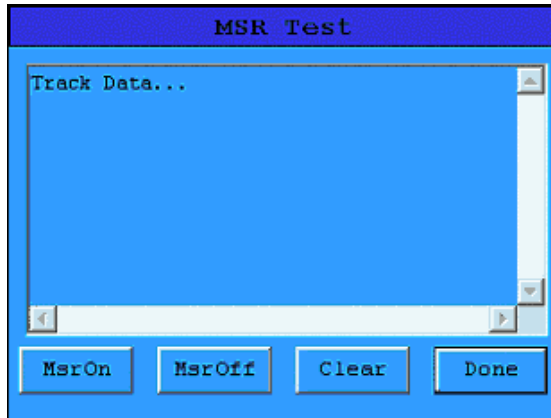


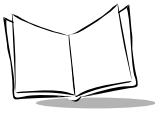
Figure 3-13. MSR Test Screen

Tap the following buttons to run MSR testing:

- `MsrOn` activates the MSR. A message prompts you to swipe a card. After you swipe the card, the screen displays track values and parsed data such as account number and first name.
- `MsrOff` deactivates the MSR.
- `Clear` erases track information.
- `Done` exits the MSR Test screen.

Testing Audio Function

Tap `Audio` on the *Function Test* screen to test the sound output of the iPOS TX. The terminal plays an audio clip if functioning properly.



Testing Display Function

Tap `Lcd` on the *Function Test* screen to test the display of text, graphics, colors, and the backlight.

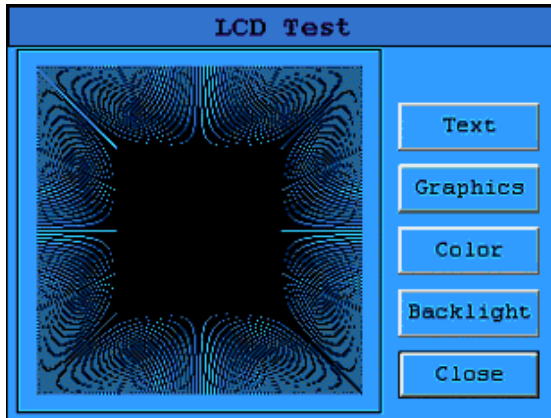


Figure 3-14. LCD Test Screen

Tap the following buttons to run LCD testing:

- `Text` displays text on the screen.
- `Graphics` displays sample graphics, such as the one above.
- `Color` displays a color selection pad. Tap a color to view its RGB value and index (the sum of the X-axis and Y-axis). The screen supports 256 colors.
- `Backlight` toggles the backlight on and off.
- `Close` exits the LCD Test screen.

Testing Communication Ports

Tap **Com** on the *Function Test* screen to test the functionality of the terminal's communication ports.

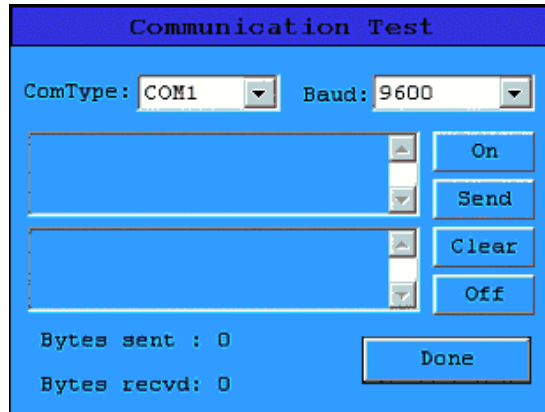
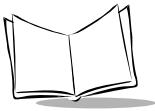


Figure 3-15. Communication Test Screen

The iPOS TX communicates through COM1, COM2, IrDA, and USB ports. Select the port from the *ComType* drop-down menu, and set the baud rate from the *Baud* drop-down menu. Baud rates available for COM1 are 9600, 19200, 38400, 57600, or 115200.

Tap the following buttons to run testing:

- **On** opens the selected port.
- **Send** sends data from the terminal to the communication test application (e.g., Hyper Terminal). The bytes sent display on the screen.
- **Clear** clears the data displayed on the screen.
- **Off** closes the selected port.
- Type text in the application and send this data to the terminal. This data appears in the Data Received text box.
- Bytes received display on the screen.
- **Done** exits the *Communication Test* screen.



Testing Security Module

Tap **Security** on the *Function Test* screen to test if the security module is functioning properly.

The screenshot shows the 'Encryption Test' screen with the following details:

- Encryption type:** DUKPT
- MSKeyID:** 0
- Acc. No:** 764012345678909
- PIN No:** 1234
- Sess. Key:** 0123456789ABCDEF
- Buttons:** Encrypt, Done
- Text Box:** Empty

Figure 3-16. Encryption Test Screen

Select an encryption type from the *Encryption Type* drop-down menu:

- Select **DUKPT** to test DUKPT encryption. Tap **Encrypt** to encrypt the account number and PIN number. Encrypted data appears in the text box. Note that for DUKPT encryption, the MSKeyID and the Session Key are not used.
- Select **MasterSession** to test Master/Session encryption, then select an MSKeyID between 0 and 9. Tap **Encrypt** to encrypt the account number and PIN number using the Session Key. Encrypted data appears in the text box.

Decrypt the encrypted data using a decryption program, and compare this with the initial test data. If this information is the same, the security module is functioning properly.

Tap **Done** to exit the *Encryption Test* screen.

Testing Smart Card Reader

Tap `Smartcard` on the *Function Test* screen to test the Smart Card reader.

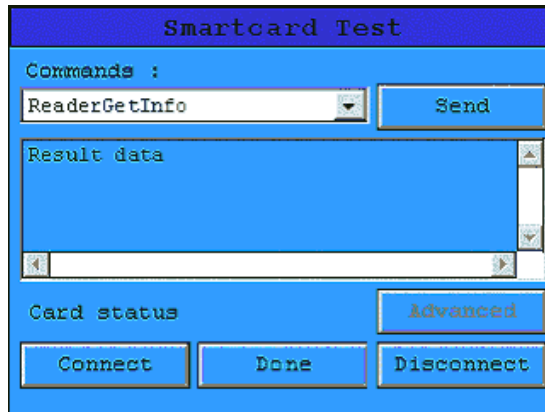
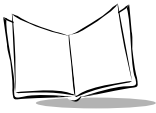


Figure 3-17. Smartcard Test Screen

To test the Smart Card reader:

1. Tap `Connect` to connect to the Smart Card reader. The version number of the reader appears in the *Result data* text box and a message appears stating that a card is present (if a card is inserted in the reader).
2. Select a command to be issued to the reader in the *Commands* drop-down menu.
3. Tap `Send` to send the command to the reader. The resulting data displays in the text box.
4. Tap `Disconnect` to disconnect from the reader, then `Done` to exit the *Smartcard Test* screen.



Testing the Touchpad

Tap Touchpad on the *Function Test* screen to view the *Touchpad Test* screen.

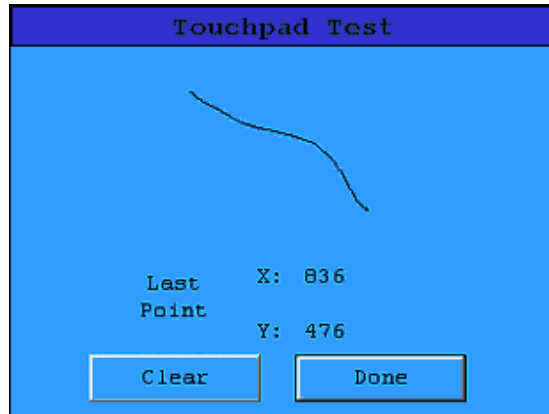


Figure 3-18. Touchpad Test Screen

Tap the touchpad at various points. The screen displays the X, Y coordinates of the last point tapped. Write on the screen; the coordinates change as they follow the stylus point.

Tap `Clear` to erase lines drawn on the screen. Tap `Done` to return to the *Function Test* screen.

Testing the Signature Pad

Tap *Signature* on the *Function Test* screen to test if the signature pad is working properly.

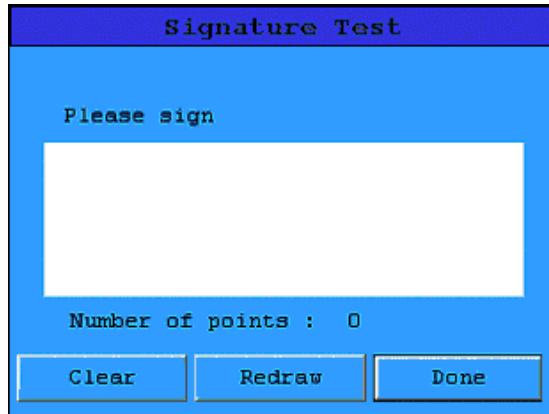
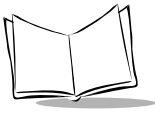


Figure 3-19. Signature Test Screen

Sign the pad using the stylus. The iPOS TX counts the number of points used for the signature and displays this value. The signature data is stored in the internal buffer; tap *Redraw* to re-display the signature.

Tap *Clear* to erase the signature from the screen and buffer. Tap *Done* to return to the *Function Test* screen.



Software Development Suite (optional)

The optional iPOS TX software development suite allows customized application development for the iPOS TX to provide additional data gathering and an enhanced consumer experience.

JPOS

The JPOS library and standards provide Java drivers for transaction functionality that allows the host to interact with the iPOS TX. This is only supported for script mode. For more information, see the *JPOS for iPOS TX Online Reference System*, available at <http://devzone.symbol.com/>.

IBM 4690 SDK

The IBM 4690 SDK development tool includes C-BASIC libraries and utility software for signature capture, debit/credit transaction, and graphics display in an IBM 4690 OS environment. For more information, see the *IBM 4690 SDK Online Reference System*, available at <http://devzone.symbol.com/>.

OPOS

The OPOS development tool provides drivers for the host to interface with the iPOS TX using the OPOS library and standards. OPOS operates in the 32-bit Windows environment only, and includes an OPOS-compliant OLE Service Object and OPOS-compliant Active-X Control Objects for signature capture, MSR, PIN pad, etc. For more information, see the *OPOS for iPOS TX Online Reference System*, available at <http://devzone.symbol.com/>.

posBuilder

The most advanced developer's toolkit, the posBuilder development tool is designed for 32-bit Windows with a group of ActiveX controls and sample utility software for signature capture, debit/credit transactions, and graphics display. posBuilder is also available for DOS PCs with C libraries.

For more information, see the *posBuilder Software Development Toolkit*, p/n 72E-63755-01, available at <http://devzone.symbol.com/>.

posDesigner

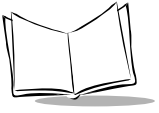
This visual development environment is used in conjunction with Visual Basic. The posDesigner development tool is a combination PC host and client device developer's

toolkit for the iPOS TX, and is used to develop script running on the client device or host applications such as debit, credit, signature capture, PIN entry, advertising, and surveys. For more information, see the *posDesigner Online Reference System*, available at <http://devzone.symbol.com/>.

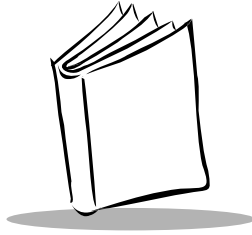
posVisual

This visual development environment is used in conjunction with Visual Basic. The posVisual development tool is a combination PC host and client device developer's toolkit for the iPOS TX, and is used to develop script running on the client device or host applications such as debit, credit, signature capture, PIN entry, advertising, and surveys.

For more information, see the *posVisual Online Reference System*, available at <http://devzone.symbol.com/>.



iPOS TX Product Reference Guide



Appendix A

Technical Specifications

Table A-1. iPOS TX Specifications

| Item | Description |
|---------------------------------|--|
| Physical Characteristics | |
| Dimensions | 9.5 in. L x 6.7 in. W x 4.7 in. H/ 241.3 mm L x 170.2 mm W x 119.4 mm H |
| Weight | 1 lb 11 oz/0.8 kg |
| Display | High-contrast, color backlit LCD |
| LCD Size | 4.5 in. L x 3.5 in. W; 5.7 in. diagonal/ 114.3 mm L x 88.9 mm W; 144.8 mm diagonal |
| LCD Resolution | Color 1/4 VGA 320 L x 240 W |
| Touchpad | Resistive transparent, pressure sensitive |
| Touchpad Resolution | 1024 x 1024 x, y coordinates (207 Hori. x 286 Ver. dpi) |
| Power Requirements | Regulated 12V DC, 1A rating |
| Power Source | 12V DC regulated, Domestic 120V AC input; 12V DC regulated from ECR; 12V DC, 1A rating Universal Power Adapter |
| Terminal Interface | Auto detect and auto selection of RS-232 or RS-485; one RS-232 port; one RS-485 (supports IBM Tailgate protocol); one self-powered USB slave port (supports 3 endpoints); one aux port for RS-232 pass through |

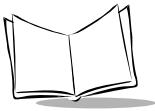
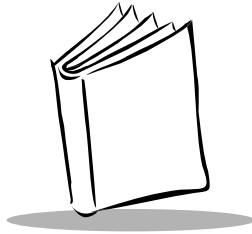


Table A-1. iPOS TX Specifications (continued)

| Item | Description |
|-------------------------------------|---|
| Magnetic Stripe Reader | Bi-directional 3 track reader |
| Smart Card Reader | ISO 7816 – 1, 2, 3, 4; synchronous and T=0, T=1 asynchronous cards; EMV level 1 certified |
| IrDA (infrared port) | Data rate up to 115.2 kbps |
| Performance Characteristics | |
| Memory | ROM: 4MB Flash Memory (expandable up to 16MB) RAM: 8MB SDRAM (expandable up to 32MB) |
| Security | Secure key injection; tamper-resistant; Triple DES or DES PIN Encryption with Master/Session or DUKPT for key management; PED compliant |
| Firmware | Microsoft® Windows® CE® based operating system with advanced command set interpreter that manages point-of-sale payment process |
| Peripherals and Accessories | |
| TX Software Suite (Optional) | posBuilder, posDesigner, IBM 4690 SDK Operating systems supported: DOS, Windows 98/2000 and NT 3.51 or higher, IBM 4680/4690 Formats supported: BMP and JPG for graphics, SIG, CMP and VBC for signature Object tools: support for VBX, ActiveX, OPOS and JPOS |
| Regulatory | |
| Electrical Safety | CE, UL |
| EMI/RFI | FCC Class A |



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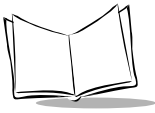
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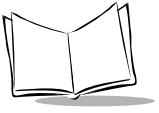
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Tell Us What You Think...

We'd like to know what you think about this Manual. Please take a moment to fill out this questionnaire and fax this form to: (631) 738-3318, or mail to:

Symbol Technologies, Inc.
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Holtsville, NY 11742-1300
Attention: Technical Publications Manager

IMPORTANT: If you need product support, please call the appropriate customer support number provided. Unfortunately, we cannot provide customer support at the fax number above.

User's Manual Title: _____
(please include revision level)

How familiar were you with this product before using this manual?

Very familiar Slightly familiar Not at all familiar

Did this manual meet your needs? If not, please explain.

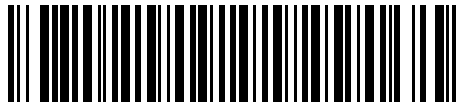
What topics need to be added to the index, if applicable?

What topics do you feel need to be better discussed? Please be specific.

What can we do to further improve our manuals?

Thank you for your input—We value your comments.

iPOS TX Product Reference Guide



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