# Omni 7xxx Series

*Installation Guide*

Omni 7xxx Series Installation Guide
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**Comments?** Please email all comments on this document to your local VeriFone Support Team.

This guide is your primary source of information for setting up and installing the Omni 7xxxMPD family of terminals.

**Intended Audience**

This guide is useful for anyone installing and configuring the Omni 7xxxMPD series terminals. Basic description of the terminal features are also provided.

**Document Organization**

This guide is organized as follows:

Chapter 1, Features, explains the features of the Omni 7xxxMPD series teminals.

Chapter 2, Installation, explains the installation procedure of the Omni 7xxxMPD series terminals.

Chapter 3, Maintenance, explains how to maintain your Omni 7xxxMPD series terminals.

Chapter 4, Troubleshooting, provides trouble shooting guidelines, should you encounter a problem in terminal installation configuration.

Chapter 5, VeriFone Service and Support, provides information on contacting your VeriFone representative or service provider. You will also find information on how to order accessories or documentation from VeriFone.

Chapter 6, Specifications, provides information on power, environment and dimensions of the hardware.

**Conventions Used in This Document**

The following table describes the conventions used:

**Table 1          Document Conventions**

| Convention | Meaning |
|---|---|
| Blue | Text in blue indicates terms that are cross referenced. |
| Italics | Italic typeface indicates book titles or emphasis. |
| ScreenText | ScreenText format is used while specifying on screen text, such as text that you would enter at a command prompt, or to provide an URL. |
| NOTE | The pencil icon is used to highlight important information. |
| CAUTION | The caution symbol indicates hardware or software failure, or loss of data. |

## Abbreviations

The following table describes the Abbreviations used:

**Table 2          Abbreviations**

| Convention | Meaning |
| --- | --- |
| PED | PIN Entry Device |
| DUKPT | Derived Unique Key Per Transaction |
| TIFF | Tagged Image File Format |
| SAM | Security Access Module |
| ECR | Electronic Cash Register |
| MRA | Merchandise Return Authorization |

# Features

This chapter presents an overview and feature list for two complementary families of POS terminals: Omni 7000MPD (Modular Payment Device) and Omni 7100MPD.

Both families of terminals are designed to offer multi-lane retailers outstanding flexibility with the help of the terminals' unique modular design. The terminals support a full line of payment and value-added applications such as loyalty or pre-paid cards. Signature capture capability is optional on both the Omni 7000MPD and on the 1/4 VGA Omni 7100MPD. In addition, the terminals are easy to use, secure, and highly reliable-backed by VeriFone's two decades of leadership in electronic payment.

## Overview

Omni 7000MPD and Omni 7100MPD terminals are highly compatible, offering retailers the opportunity to efficiently mix the terminals within the same store or chain of stores-saving time and money on implementation, maintenance, and training. The two product families:

| | |
|---|---|
| Share the same architecture | • Same TXO operating system.<br>• Similar printed circuit boards.<br>• Many of the same IBM, NCR, or Multipay (PP201) applications. |
| Interchangeable upgrade modules | • Can swap as needed between families (Omni 7000LE does not accept modules)<br>• Terminals in different locations can be equipped with different modules, as needed.<br>• Built-in upgradeability protects a retailer's investment allowing stores to adapt to changing trends. |
| Same cabling and power supplies | • Reduces cost by simplifying implementation and maintenance. |
| Same mounting stands and wedges | • Share the same keyhole pattern for secure mounting. |
| Similar footprint and "look and feel" | • Offers consistency and simplifies training.<br>• Omni 7100MPD is operated exclusively by touch screen. |

## Omni 7000MPD

Omni 7000MPD terminals offer outstanding flexibility due to the modular design. Modules that can be added for:

• Signature capture

- EMV smart cards

- Ethernet/USB (Universal Serial Bus) connectivity

- Contact less smart cards using radio frequency identification (RFID) based on ISO 14443 standards.

The terminals support a full line of payment capabilities and feature an easy-to-use ATM style interface to reduce clerk errors and speed checkout lanes.

**Omni 7000LE**  Omni 7000LE (Lite Edition) provides an entry-level POS solution for multi-lane retailers. Omni 7000LE terminals have same specifications, features and benefits as that of Omni 7100MPD except that it cannot support I/O modules or RS-485 LAN. Omni 7000LE terminals have the same user interface, logical triple-track card reader, and footprint as Omni 7000MPD terminals, so they integrate seamlessly in mixed installations. The terminals handle a complete selection of payment and value-added applications, provide the same stringent security protections, and use the same stands and cabling as the rest of the family.

**Omni 7100MPD**  Omni 7100MPD terminals are VeriFone's first 1/4 VGA payment devices. The terminals offer:

- A crisp, bright blue screen and attractive, upscale appearance that appeals to many retailers.

- Modular design that incorporates the same modules as the Omni 7000MPD.

- A long-lasting, scratch-resistant capacitive touch screen that allows consumers to make selections with their fingertip or electronic stylus.

- Large display that handles signature capture, scrolling line item detail, regulatory disclosures, credit applications, and more.

- Smallest footprint of any VGA product on the market.

## Features and Benefits

The following are the features and benefits for Omni 7xxxMPD series terminal:

**Table 3**  **Features and Benefits**

| Features | Benefit | Omni 7000MPD | Omni 7100MPD |
|---|---|---|---|
| Optional upgradeable modules | Lets retailers economically address today's needs, while adding capabilities as desired; protects investment. | Yes | Yes |
| Safety glass touch panel | Capacitive and electrostatic technologies highly effective; better response with fingertip and active stylus; scratch-resistant. | | Yes |

**Table 3**    **Features and Benefits (Continued)**

| Features | Benefit | Omni 7000MPD | Omni 7100MPD |
|----------|---------|--------------|--------------|
| Resistive touch screen | Smaller, resistive touch screen offers lower-cost solution; passive stylus; removable display lens can be replaced as needed. | Yes | |
| Optional signature capture capability* | Speeds customers through lanes; allows digital storage and retrieval-lowering costs. | Yes | Yes |
| Triple-track magnetic card reader | Logically oriented for improved read rates; handles all mag-stripe cards, including driver's licenses. | Yes | Yes |
| Smart card reader/writer* | Accepts chip cards conforming to the latest global standards (EMV 4.0) | Yes | Yes |
| Visa PED-compliant PINpad | Physical PINpad (Omni 7000) and virtual PINpad (Omni 7100) comply with Visa regulations for improved security. | Yes | Yes |
| Large backlit display | Up to 8 lines to support graphics and double-high fonts; commands can be written out, not abbreviated; backlighting improves readability. | Yes | |
| 1/4 VGA display | High resolution (320 x 240 pixels), backlit LCD, white characters on blue screen; attractive, modern, upscale, and highly readable. | | Yes |
| ATM-style interface | 4 screen-addressable keys and 4 programmable function keys; highly intuitive operation; minimizes errors and training. | Yes | |
| Privacy shield | Optional, PED-compliant privacy shield surrounds the keypad, protecting the consumer's PIN entry. | Yes | Yes |
| Sophisticated security protections | Includes 3DES encryption, Master Key/Session Key and Derived Unique Key Per Transaction (DUKPT) key management; also incorporates VeriShield file authentication and tampering safeguards to minimize fraud. | Yes | Yes |
| 32-bit microprocessor | Streamlines processing, even on complex transactions; keeps lanes moving. | Yes | Yes |
| 3 Mbytes of memory (2 Mbytes of flash, 1 Mbyte of SRAM) | Ample memory to support multiple payment and value-added applications simultaneously. | Yes | Yes |

**Table 3** **Features and Benefits (Continued)**

| Features | Benefit | Omni 7000MPD | Omni 7100MPD |
|---|---|---|---|
| Ethernet/USB connectivity* | Allows LAN connections for high-speed data transfer and back-end clearing, and settlement; supports connections to ECRs and PCs using USB or Ethernet. | Yes | Yes |
| RS-232/RS-485 ports | Provides connectivity for ECRs in tailgate mode using RS-485, and for peripherals such as printers and bar code scanners using RS-232. | Yes | Yes |

* Omni 7000LE model does not support any of the optional modules available for the Omni 7000MPD or Omni 7100MPD

## Optional Modules

The Omni 7000MPD and Omni 7100MPD offers a number of interchangeable modules that can be installed in the factory or upgraded after distribution to the field. These modules include signature capture, EMV smart card, Ethernet/USB connectivity, and contactless RFID smart card readers based on the ISO 14443 standard. All modules can be installed easily and efficiently. Complete installation instructions are found in the Installing Optional Modules section.

### Signature capture

The optional signature capture capability allows capture of virtual signatures, which are stored as tagged image file format (TIFF) files.

Omni 7000MPD uses cost-effective, modular resistive touch technology. Pressing on the flexible top sheet of the display screen creates electrical contact between two resistive layers to indicate x and y coordinates.

Because resistive displays are subject to scratching, the Omni 7000MPD touch screen is replaceable without requiring the unit to be returned to the factory. The smaller size of the screen when compared to a 1/4 VGA display is considerably more affordable than replacing a 1/4 VGA-sized touch screen.

As Omni 7100MPD is operated exclusively by touch panel, VeriFone offers a signature capture stylus that uses capacitive touch screen technology. The safety glass used in the screen is inherently resistant to wear and tear as well as breakage, and responsiveness does not degrade noticeably over time. The active stylus supplied with the unit has fewer points of failure and cost less than other active styli. See Installing Optional Modules section for more information.

### Smart Card Module

The optional smart card module fully conforms to global EMV standards allowing consumers to use smart cards to complete the transactions under guidelines originally formulated by Europay, MasterCard, and Visa (EMV). Smart cards are increasing in popularity in many regions worldwide. They can be used for payment

transactions as well as for a wide array of value-added applications such as loyalty, gift card, and pre-pay cards. The smart card module can be ordered and installed with or without Ethernet/USB ports on board. See Installing Optional Modules for more information.
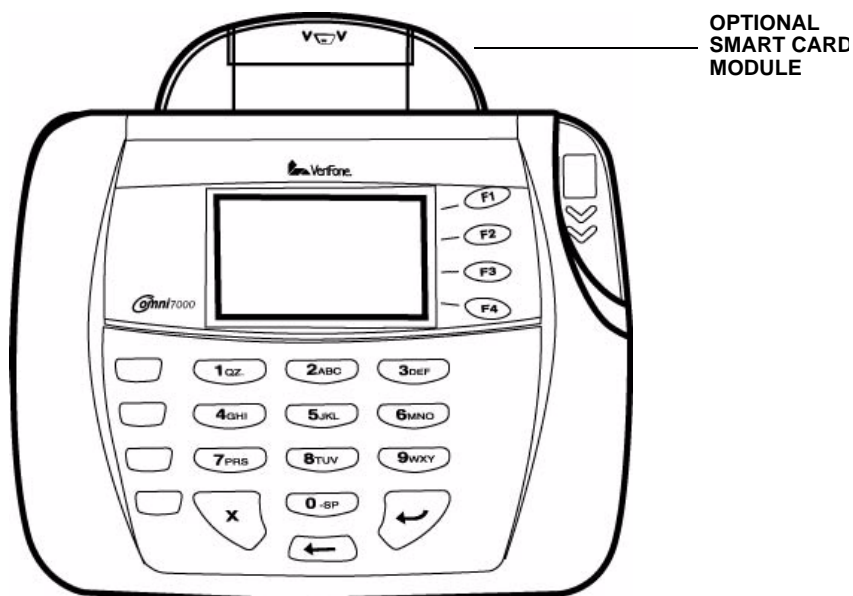


**Figure 1        Smart Card Option**

### Ethernet/USB Module

The optional Ethernet/USB module allows you to connect Ethernet-based LANs for high-speed data transfer. It has a broad range of applications which include streamlining the back-end clearing, and settlement, or to efficiently capture consumer data at the POS. The USB port supports devices such as an electronic cash register (ECR) or PC that uses a USB connection. See Installing Optional Modules for more information.
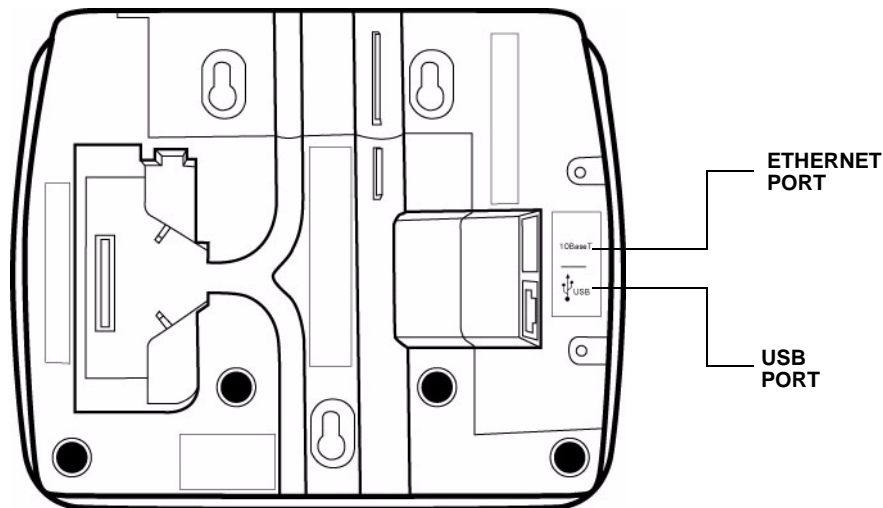
**Figure 2    Omni 7xxxMPD Series Bottom View: Ethernet/USB Module**

### Contactless Reader Module

The optional contactless smart card module incorporates RFID technology based on the ISO 14443 worldwide standard. The "tap-and-go" design conforms to AMEX and MasterCard specifications. Smart cards are read when it is placed in close proximity -1 to 3.9 in. (2.5 to 10 cm)-to the reader, reducing wear and tear on card readers, and cards. Contactless readers can be used to support any number of payment and value-added applications. See I/O Module for more information.

### Privacy Shield

The Omni 7xxxMPD series terminals includes an optional, PED-compliant privacy shield to protect the customer's PIN entry. See I/O Module for installation procedures.

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**NOTE**    Install VeriFone's Omni 7000 terminal privacy shield VPN 22648-01 or Omni7100 terminal privacy shield VPN 29294-01 to ensure compliance with ISO 9564 standards and Visa PED requirements.

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**Figure 3        Omni 7000MPD Terminal with Privacy Shield**
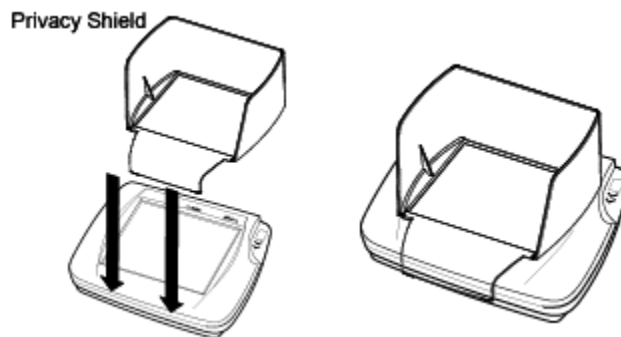


**Figure 4        Omni 7100MPD Terminal with Privacy Shield**

### Applications

Standard payment applications are available from VeriFone to interface with most ECR's. Applications for the two families of terminals are written using a C based programming language. These programs can be downloaded directly from an ECR, another Omni 7000MPD or Omni 7100MPD terminal, or a development PC using the Omni 7000MPD or Omni 7100MPD terminal system modes.

Terminal system mode can also be used for diagnostics, changing the password, and Master Key injection. For further information on system mode, see Chapter 4.

### Total Cost of Ownership

Omni 7000MPD and Omni 7100MPD terminals have been designed to be flexible and "future proof', delivering an exceptional total cost of ownership.

Both families of modular terminals can be configured at the factory or in the field by a trained technician. The terminals can be purchased with necessary modules equipped to meet today's requirements and other capabilities can be added as and when needed.

This can include modules with Ethernet and USB connectivity, signature capture, EMV 4.0 Type Approved smart card support, or contactless smart card support.

The flexibility and versatility of the two families allow retailers to use terminals with different capabilities in different stores or locations. It also makes it easy and economical to adapt changing needs or technology over time-for example, with modules that support next-generation scanning technologies or biometrics for check cashing-that can be installed in the future.

# Installation

This chapter describes the terminal installation procedure mainly as:

- Installation instructions.
- Connection examples.

## Installing the Device

This section presents Omni 7000MPD installation guidelines.

### Unpacking the Shipping Carton

**NOTE**

- Inspect the shipping carton and contents for shipping damage (Figure 5). If the Omni 7xxxMPD series terminal or any other component appears damaged, immediately file a claim with the shipping company and notify your terminal provider.
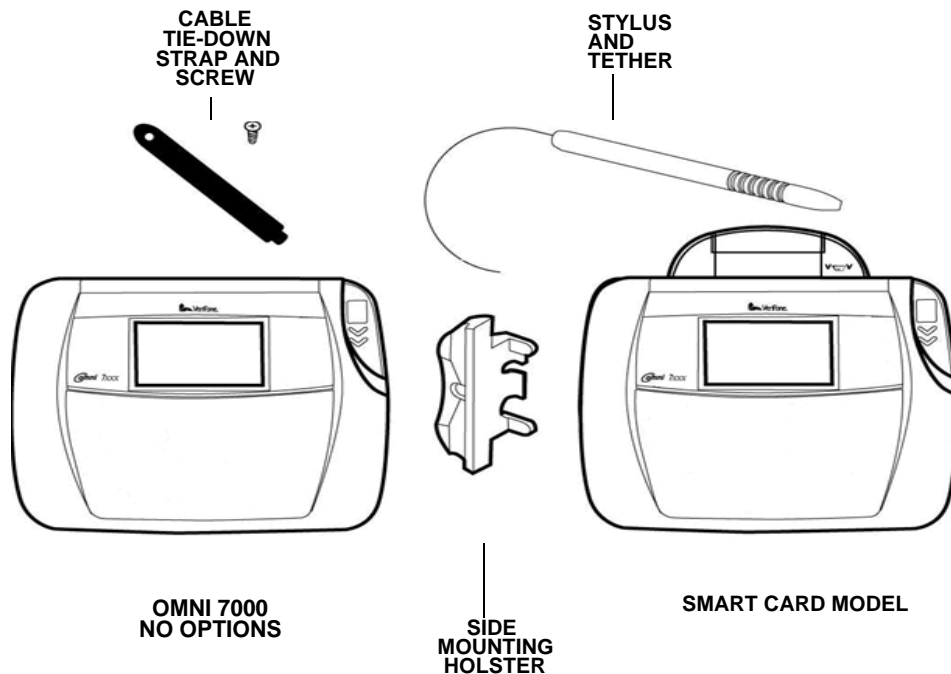- Do not use a damaged terminal.



**Figure 5     Example of Terminal Product Components**

Follow these steps to unpack the carton:

**1** With the shipping carton right side up, open the top and remove all items from the carton:

- Cable tie-down strap and screw

- Stylus, tether, and mounting holster

**2** Remove the protective plastic wrap from the display or other components.

**3** Place the components on a table or countertop.

**4** Save the shipping carton and packing material for repacking or moving in the future.

### Selecting a Location

**1** Select a location for the Omni 7xxxMPD series terminal convenient for the user and merchant that offers adequate ventilation and protection.

**CAUTION**

The Omni 7xxxMPD series terminal is designed for indoor use only.

**2** Place the Omni 7xxxMPD series terminal on a flat surface, such as a table or countertop or mount on a mounting stand supplied by VeriFone. Avoid areas with:

- Excessive heat or dust

- Oil or moisture

- Devices that cause excessive voltage fluctuations or electrical noise, such as air conditioners, fans, electric motors, neon signs, or high-frequency security devices.

- Direct sunlight or objects that radiate heat

**3** Locate the peripheral conveniently in relation to power and ECR or LAN connections. The power pack cable is approximately 1.8 meters (6 feet) long.

**WARNING**

Do not use this product near water, including a bathtub, wash bowl, kitchen sink, or laundry tub. Do not use in a wet basement or near a swimming pool.

**4** Before connecting the terminal to the power supply, complete the installation by connecting all the cables (see Connecting the Device and Power Up with the Multiport Cable).

**Installing Privacy Shield**

The privacy shield protects the customer's PIN entry from being seen by the cashier or other customers. To install the privacy shield:

**1** Clean the area around the keypad with a cloth dampened with one or two drops of alcohol.

**2** Remove the backing from the double-stick tape on the rear of the privacy shield.

**3** Align the front edge of the privacy shield with the front edge of the Omni 7xxxMPD series terminal in front of the key pad (Figure 6). Ensure that the privacy shield window clears all keys.
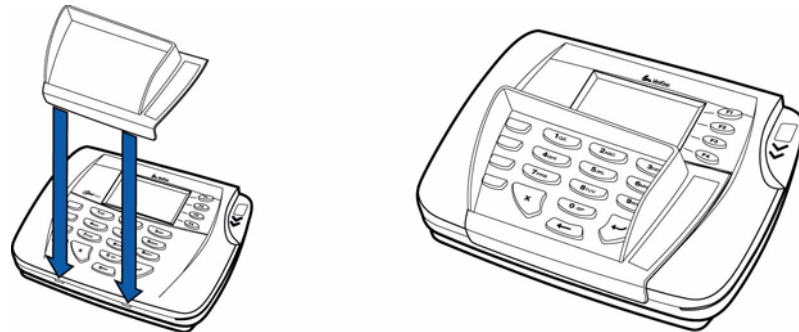


**Figure 6        Installing the Privacy Shield of Omni 7000MPD**
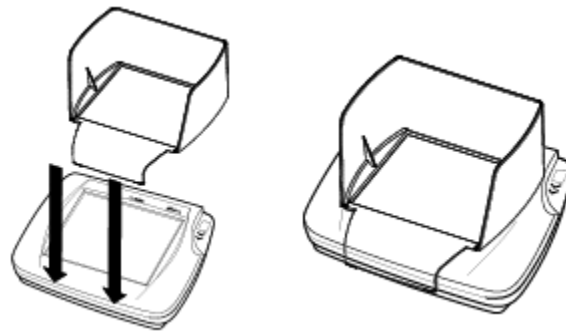


**Figure 7        Installing the Privacy Shield of Omni 7100MPD**

**4** Press firmly on all edges around the privacy shield to ensure it is correctly seated.

**Installing Countertop Wedge**

The countertop wedge raises the rear by 10% angle of the Omni 7xxxMPD series terminal to make easy use of the keypad (Figure 8).
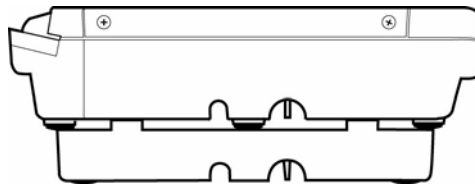


**Figure 8        Countertop Wedge: Rear View of the Omni 7xxxMPD Series**

To install the countertop wedge:

**1** Align the pins in the countertop wedge with the two key holes on the bottom of the Omni 7xxxMPD series terminal (Figure 9).

**2** Slide the countertop wedge firmly into position.

**3** Route the multiport cable through the races in the countertop wedge or through the races underneath the wedge.
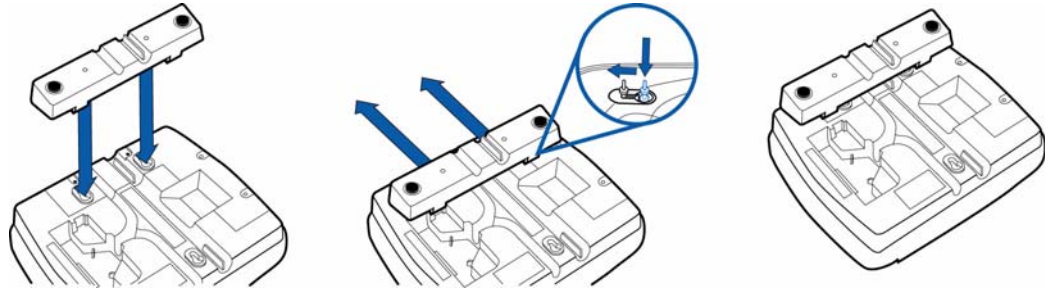
**Figure 9        Installing the Countertop Wedge of Omni 7xxxMPD Series**

**Stand Mount**

In most retail spaces, the Omni 7xxxMPD series terminal is mounted on a stand mount. To stand mount the Omni 7xxxMPD series terminal:

**1**  Install the stand mount on the countertop in the desired lane over an appropriate hole to thread the wiring connections through.
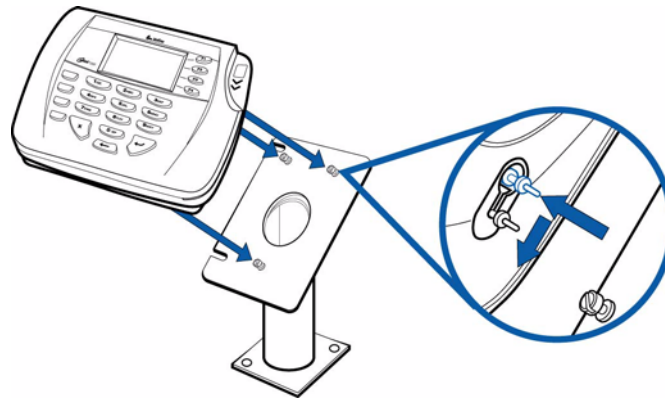


**Figure 10      Aligning the Mounting Pins of Omni 7xxxMPD Series**

**2**  Thread all wiring connections through the center of the stand mount.

**3**  Make all wiring connections.

**4**  Attach cable tie-down strap with the supplied screw (Figure 25).

**5**  Align and seat the three pins on the top plate of the stand mount platform with the three key-hole slots on the bottom of the Omni 7xxxMPD series terminal (Figure 10).

**6**  Slide the Omni 7xxxMPD series terminal down until the unit seats securely (Figure 11).

**Figure 11    Stand Mounted Omni 7xxxMPD Series Terminal**

**Wall Mount**  Although it is not recommended, the Omni 7xxxMPD series terminal can be mounted on a wall. To wall mount the Omni 7xxxMPD series terminal:

**1**  Create a template of the three key hole slots on the bottom of the Omni 7xxxMPD series terminal (Figure 12).



KEY HOLE SLOTS
MOUNTING HOLES
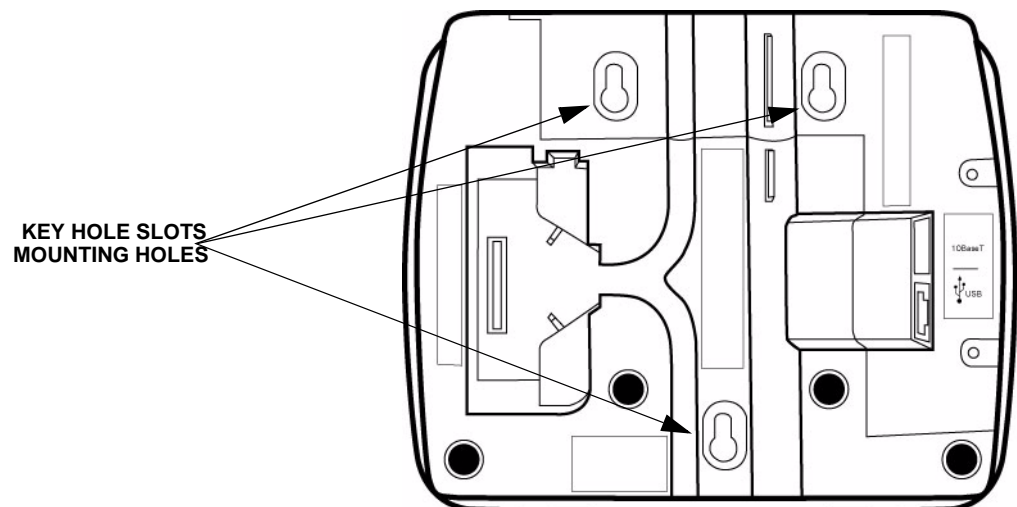
**Figure 12    Omni 7xxxMPD Series Terminal Bottom View**

**2**  Locate a wall stud to base center placement of the Omni 7xxxMPD series terminal unit.

**3**  Mark the hole placement on the desired wall location.

**4**  Prepare holes for screw placement. For mounting into drywall use 1/8" Hollow Wall Anchors. Other stud mountings use #6 trim screws. After installation apply 30 pounds force downward to ensure proper mounting.

**a**  Create a small hole in which to screw in self-tapping wood screws, or

**b**  Insert molly screws into prepared holes in sheet rock wall.

**5**  Insert screws into prepared holes, leaving approximately 6.35mm (1/4") of the screw above the level of the wall.

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**NOTE**

Adjust the screw depth till the unit is firmly mounted.

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**6**  Align and seat screws in the key hole slots.

**7**  Slide the Omni 7xxxMPD series terminal down until the unit seats securely.

## Installing Optional Modules

This section presents installation procedures for the Omni 7xxxMPD Series terminal's optional modules. The Omni 7xxxMPD series terminal model you have, may already have some of these options. Modules can be installed at manufacture or in the field.

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**NOTE**

The retaining screws are *captive*, which means they do not actually separate from their seats, but only from the mounting hole.

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## Signature Capture Module

To remove the lens covering the display of the Omni 7000MPD and install the signature capture module:

**1**  Loosen the two retaining screws on the back panel of the Omni 7000MPD (Figure 13) until the lens panel can tilt up.
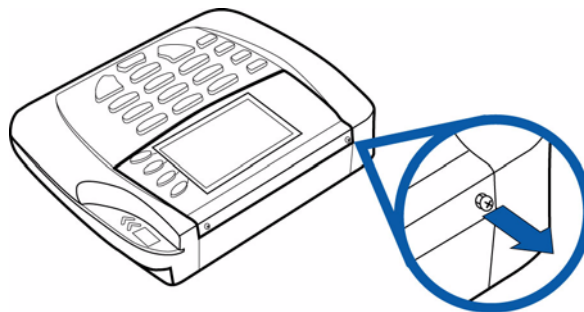


**Figure 13      Unscrew the Lens Retaining Screws**

**1**  Lift off the lens as shown in Figure 14.

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**NOTE**

If you encounter any resistance, press the F4 key to free the lens.

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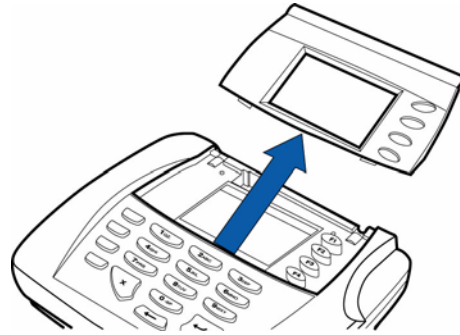
**Figure 14     Lift Off Lens**

**2**  Insert the signature capture module tabs into the mounting holes below the lens slot (Figure 15). Gently push the top into place.
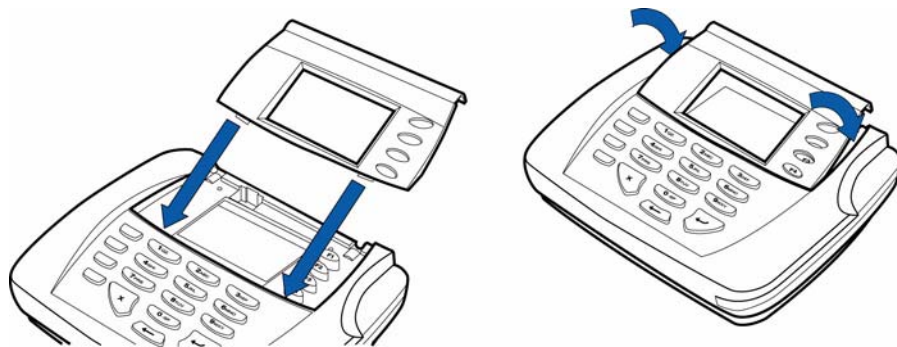


**Figure 15     Install Signature Capture Module**

**3**  Tighten the two retaining screws (Figure 16).
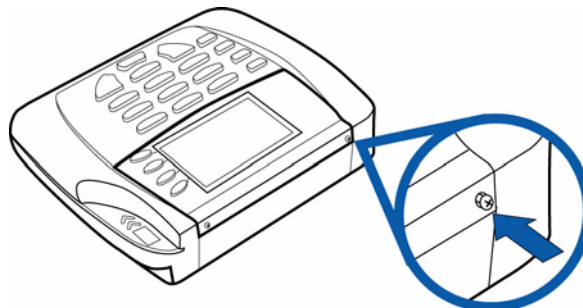


**Figure 16     Tighten Retaining Screws**

**4**  Remove any protective film covering the display.

On the next terminal power up, the Omni 7000MPD senses that a signature capture module is installed and runs a calibration sequence.

**NOTE**

The Omni 7100 uses a large capacitive technology touch screen, and is replaceable only by a certified repair depot.

**I/O Module**    The following are the steps required to install optional I/O modules:

**1**    Loosen the module retaining screw on the bottom of the Omni 7000MPD (Figure 17) until the old module can slide out.
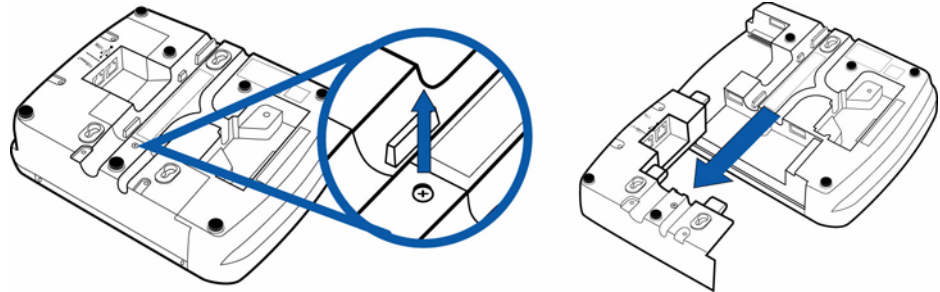


**Figure 17        Removing the Old I/O Module**

**2**    Slide the smart card module into place (Figure 18) and secure the retaining screw.
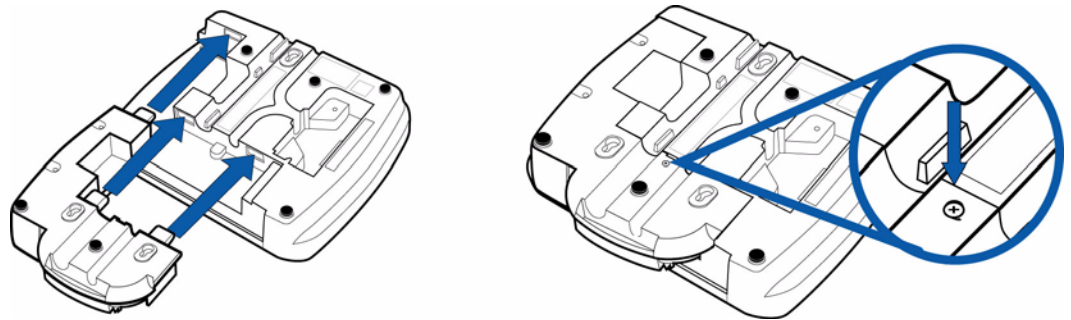


**Figure 18        Installing the Smart Card Module**

**Installing SAM Cards - Additional Steps**

The following are the additional steps required to install SAM cards once the first two steps of Installation is completed.

Often merchants are issued SAM cards to run small applications, such as, loyalty programs. SAM cards are only used with Omni 7xxxMPD series terminal Smart Card configurations.

To Install SAM cards:

**1**    Follow the above procedure to remove the smart card I/O module.

There are three SAM cardholders in the SAM card slot (Figure 19).
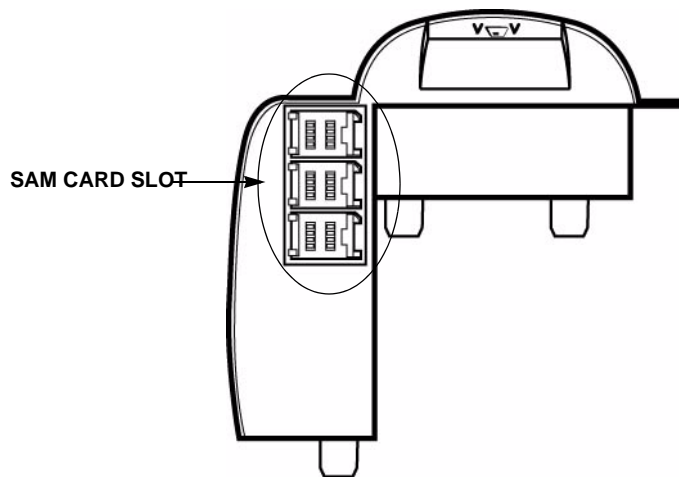
**Figure 19      SAM Card Slot Viewed from Top of Smart Card Module**

**2**   Unlock and open the desired SAM card holder (Figure 20).
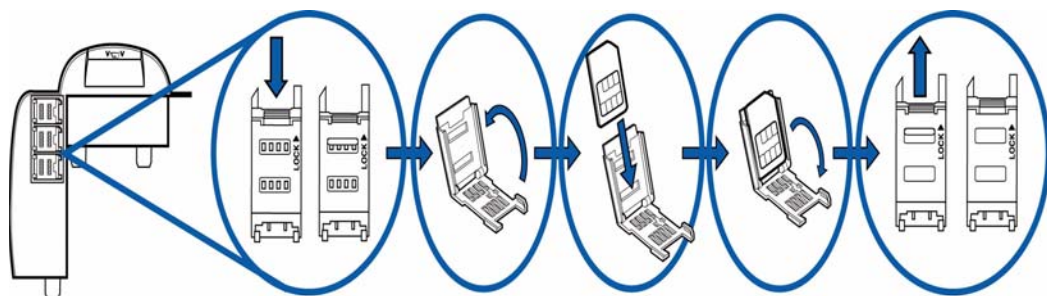


**Figure 20      Installing SAMs in the SAM Cardholder**

**3**   Insert the SAM card in the cardholder, contacts up and ensuring that the cut corner of the SAM card aligns with the notch in the cardholder.

**4**   Close and lock the SAM cardholder.

**5**   Replace the smart card module and secure the retaining screw.

## Connecting the Device

Brief descriptions of possible Omni 7xxxMPD series terminal device connections and the power pack connection are provided in this section. For complete information about installing and using an optional device, refer to the user documentation supplied with that device. For a list of compatible cables for these connections, see Accessories.

**WARNING**

Before connecting the Omni 7xxxMPD series terminal, ensure all units are not connected to a power source. Unplug all power packs from the wall jack.

## Multiport Cable

The Omni 7xxxMPD series terminal uses a *multiport* cable (Figure 21) to make most connections, including connections to

- an ECR,

- an RS-485 LAN, or

- a development/host PC.

Ethernet LAN and USB connections are made using the I/O Module option. See Figure 24.



POWER
PORT

CONNECTOR
BLOCK

SDLC
PLUG

TERMINAL
CONNECTOR

LAN
CONNECTOR
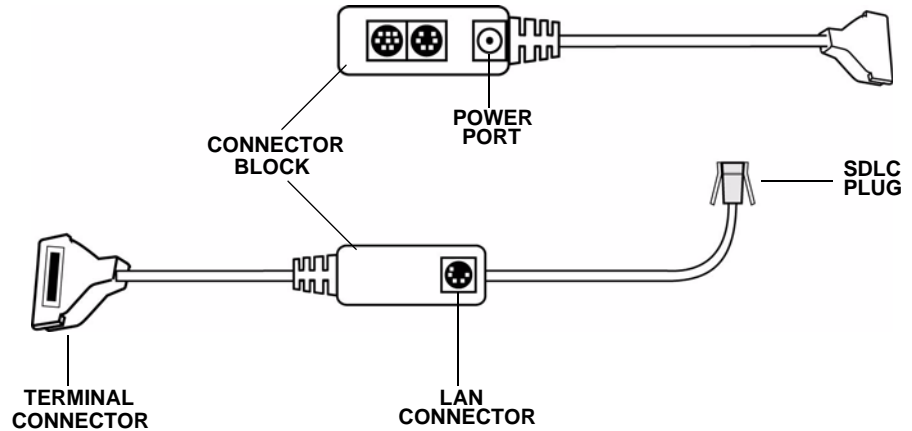
**Figure 21      Multiport Cable: Front and Rear**

**Disconnecting Multiport**

The following are the precautions to be taken while disconnecting the Multiport:

- Improper installation or removal of the terminal connector may permanently damage the O7xxxMPD.

- Do not force the terminal connector into place.

- Always make sure all of the pins are lined up in correct parallel fashion before applying light pressure to snap the terminal connector into place.

- Do not attempt to remove the terminal connector by pulling directly on the cable. Instead, firmly grasp the sides of the terminal connector with thumb and forefinger, then pull straight away at the same angle the connector on the terminal is facing.

- Disconnecting the power source during transaction processing may cause loss of transaction data.

**Connecting ECR in Tailgate Mode**

To connect an ECR to the Omni 7xxxMPD series terminal (see Figure 22):

1   Insert the multiport cable into the rear of the ECR.

2   Insert the multiport cable plug into the bottom socket on the Omni 7xxxMPD series terminal, as shown in Figure 22.
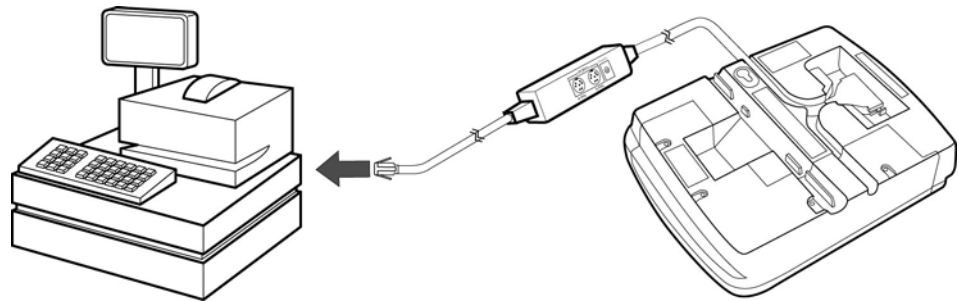


**Figure 22      Example ECR Connection**

**Connecting to a Host PC**

To connect the Omni 7xxxMPD series terminal to a development PC (Figure 23)
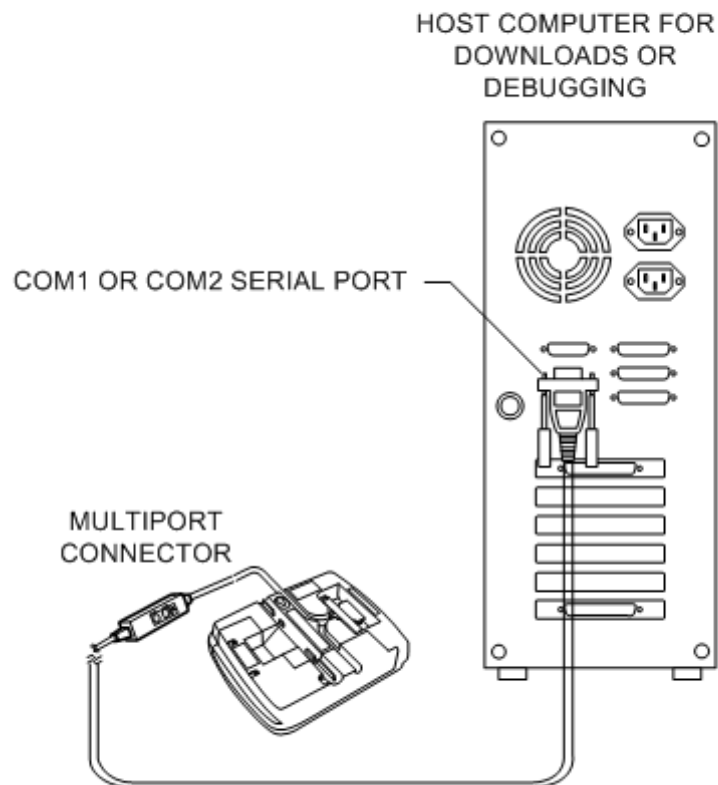


**Figure 23      Host PC Connection**

**Connecting to the Ethernet LAN**

To connect the Omni 7xxxMPD series terminal to an Ethernet LAN through the 10BaseT port, using a standard Ethernet cable (Figure 24):

**1**    Insert the LAN cable from the LAN router or hub into the 10Base-T port on the bottom of the Omni 7xxxMPD series terminal.



Router/Hub
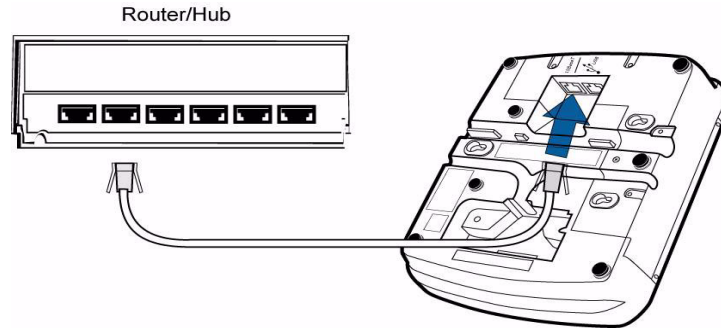
**Figure 24        Ethernet Connection**

**Connecting to USB Host or Hub**

Connecting to a USB host or hub requires a VeriFone USB cable (VPN 22982-xx). To connect to a USB host or hub:

**1**    Insert the modular plug on the USB cable into the USB jack.

**2**    Route the cable through the slots to the desired exit side.

**3**    Plug the other end of the USB cable into the USB host or hub.

| NOTE | The Omni 7xxxMPD series terminal can be connected to an ECR through the USB cable. When connected through a USB cable, the Omni 7xxxMPD series terminal gets power through the USB cable and does not require the multiport cable. |
|------|---|

**Power Up with the Multiport Cable**

This section describes how to connect the Omni 7xxxMPD series terminal to a power source with the multiport cable (see Figure 26).

If connected to an ECR, the Omni 7xxxMPD series terminal gets power from the ECR.

| CAUTION | Do not plug the power pack into an outdoor outlet or operate the terminal outdoors. |
|---------|---|

**1**    Make all other connections before connecting the power pack.

**2**    Insert the multiport cable connector into the port on the back of the Omni 7xxxMPD series terminal (see Figure 26).

**3**    Route the cable through the slots to the desired exit side.

**4**    Affix the cable tie-down strap and secure with screw (Figure 25).
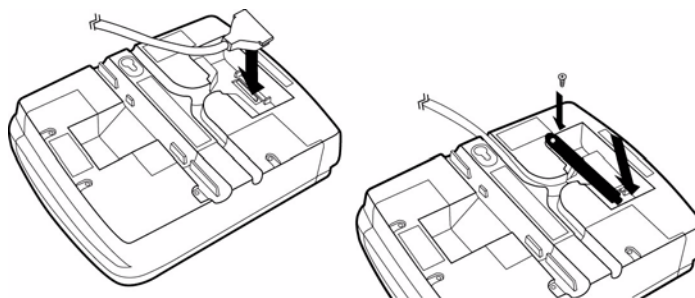
**Figure 25     Plugging in Multiport Cable and Affixing Cable Tie-down Strap**

**5**  Plug the power pack into an indoor electrical power outlet (Figure 26).
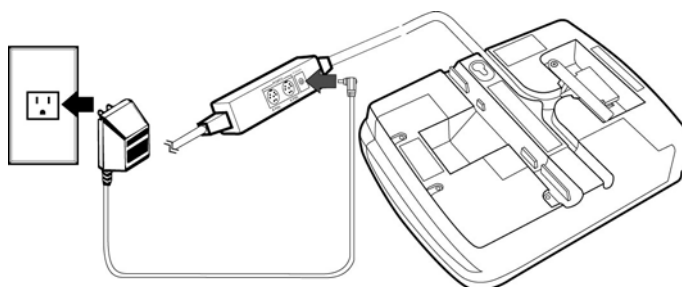


**Figure 26     Power Pack Connection**

If no application is installed in the terminal, the message DOWNLOAD NEEDED displays for a moment, then the main Omni 7xxxMPD series terminal screen displays. An application-specific prompt displays when an application executes.

## Power Up without the Multiport Cable

This section describes about connecting the Omni 7xxxMPD series terminal to a power source when no multiport cable is required.

> **NOTE**
>
> If connected to an ECR using a USB cable, the Omni 7xxxMPD series terminal gets power from the ECR.

Use the following guidelines when Omni 7xxxMPD series terminal connected to power:

**1**  Make all the cable connections before connecting the power cable.

**2**  Insert the modular power connector either into the USB or 10Base-T port, whichever is available.

**3**  Plug the power pack into an indoor electrical wall outlet.

# Maintenance

The Omni 7xxxMPD Series Terminal has no user-maintainable parts.

**Cleaning the Terminal**

To clean the terminal, use a clean cloth slightly dampened with water and a drop or two of mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner. For best results, use a VeriFone Cleaning Kit. For further details refer *02746-01 VeriFone Cleaning Kit*.

**CAUTION**

Never use thinner, trichloroethylene, or ketone-based solvents – they may deteriorate plastic or rubber parts. Do not spray cleaners or other solutions directly onto the keypad or LCD screen.

**Smart Card Reader**

Do not attempt to clean the smart card reader. Doing so may void any warranty. For smart card reader service, contact your VeriFone distributor or service provider.

# Troubleshooting

During normal, day-to-day operation of your Omni 7xxxMPD series terminal, it is possible that minor malfunctions can occur. Following are some examples of possible problems, and steps to resolve them.

VeriFone follows stringent quality control standards in the manufacture of Omni 7xxxMPD Series terminals. Each unit that leaves the factory receives numerous tests to ensure quality and reliable operation. However, should you encounter a problem in operation, read this section for possible causes and solutions.

**NOTE**

- Perform only those adjustments or repairs specified in this guide. For all other services, contact your local VeriFone distributor or service provider. Service conducted by parties other than authorized VeriFone representatives may void the product warranty.

- The Omni 7xxxMPD Series terminal comes equipped with tamper-evident labels. Do not, under any circumstance, attempt to disassemble the terminal.

## Smart Card

The smart card implementation is a proprietary hardware solution that has no serviceable parts.

## Troubleshooting

The troubleshooting guidelines provided in this section identify various problems and suggest appropriate corrective action(s). If you have problems operating your Omni 7xxxMPD Series terminal, please read through these troubleshooting examples. If the problem persists or if it is not described below, contact your local VeriFone representative for assistance.

## Blank Display

The following are the corrective steps taken if the Terminal Display does not show correct or readable information:

1   Check all cable connections.

2   If the problem persists, contact your local VeriFone representative for assistance.

## Serial Port Does Not Work

The following are the corrective steps taken if the Serial Port does not work:

1   The serial port on the multiport cable of the Omni 7xxxMPD Series series terminal is identified by the "RS-232" icon. Check that the device connected to the serial port has power and is functioning correctly. If possible, perform a self-test on the device.

2   The cable connecting the optional device to the Omni 7xxxMPD Series terminal serial port may be defective. Try a different serial cable.

**3**  If the problem persists, contact your local VeriFone representative for assistance.

## Transaction Fail to Process

The following are the corrective steps taken if the Terminal does not process the transaction:

There are several possible reasons why the terminal may not be operating correctly or processing transactions. To check the most likely causes, follow the steps below.

### Step 1: *Check the magnetic card reader*

**1**  Make sure you are swiping cards correctly with the Omni 7xxxMPD Series terminal. The Omni 7xxxMPD Series terminal reader, the black, magnetic stripe on the card should face down and towards the keypad.

**2**  Perform a test transaction using several different magnetic stripe cards to ensure the problem is not a defective card.

**3**  Process a transaction manually using the keypad instead of the card reader. If the manual transaction works, the problem may be a defective in card reader. Contact your VeriFone distributor or service provider.

**4**  If the manual transaction does not work, proceed to Step 3.

### Step 2: *Check the smart card reader*

**1**  Make sure you are inserting the cards correctly with the Omni 7xxxMPD Series terminal smart card reader, the chip on the card should face down and inward.

**2**  Perform a test transaction using several different smart cards to ensure that the problem is not with the card.

**3**  Ensure any MSAM cards are correctly inserted and the cardholders are properly secured.

**4**  If the problem persists, contact your VeriFone distributor or service provider.

### Step 3: *Check the cable connections*

**1**  Ensure that all cables are correctly connected.

   If cables are connected properly:

**2**  Check that the cable is in working order by connecting a known good cable. If transactions process with this cable, replace the bad cable.

**3**  If the problem persists, contact your local VeriFone representative for assistance.

## Keypad Does Not Respond

The following are the corrective steps taken if the Keypad does not respond:

**1**  Check the display panel. If it displays the wrong character or blank when you press a key, follow the steps outlined in Blank Display.

**2** If pressing a function key does not perform the expected action, refer to the user documentation for that application to be sure you are entering data correctly.

**3** If the problem persists, contact your local VeriFone representative for assistance.

**No Response From the Stylus**

The following are the corrective steps taken if the terminal does not respond to the stylus inputs:

**1** Check the documentation to ensure that the Terminal supports stylus.

**2** Unplug the stylus that does not respond, connect a known working stylus (Omni 7100 only).

**3** If the problem persists, contact your local VeriFone representative for assistance.

**Gap in Captured Signature**

The following are the corrective steps taken if there is a gap in captured signature:

**1** Ensure that the stylus is pressed hard during signature capture.

**2** Replace Signature Capture module with new or known good module.

**3** If the problem persists, contact your local VeriFone representative for assistance.

**No Response From the Touch Panel**

The following are the corrective steps taken if the Touch Panel does not respond or incorrect response.

**1** Make sure you power off and power on.

**NOTE**

Keep your hands away from the Touch Panel while terminal powers up.

**2** Replace Signature Capture module with new or known good module.

**3** If the problem persists, contact your local VeriFone representative for assistance.

# VeriFone Service and Support

For Omni 7xxxMPD Series terminal problems, contact your local VeriFone representative or service provider.

For Omni 7xxxMPD Series product service and repair information:

- USA – VeriFone Service and Support Group, 1-800-834-9133, Monday - Friday, 8 A.M. - 7 P.M., EST

- International – Contact your VeriFone representative.

**Return a Terminal for Service**

Before returning the Omni 7xxxMPD Series terminal to VeriFone, obtain a Merchandise Return Authorization (MRA) number. The following procedure describes how to return one or more Omni 7xxxMPD Series terminals for repair or replacement (U.S. customers only).

**NOTE**

International customers, please contact your local VeriFone representative for assistance with your service, return, or replacement.

**CAUTION**

Do not, under any circumstances, attempt any service, adjustments, or repairs on this equipment, other than the simple cleaning processes discussed in chapter 4. Instead, contact your local VeriFone distributor or service provider for assistance. Failure to comply can invalidate the product warranty.

**WARNING**

This terminal comes equipped with a tamper-evident label. This Tamper Warning label covers a screw hole on the case bottom and indicates if an unauthorized party has opened the terminal case. Opening the case will make the terminal inoperable and void the product warranty!

1 Gather the following information from the printed labels (see Figure 27) on the bottom of *each* Omni 7xxxMPD Series terminal to be returned:

- Product ID, including the model and part number. For example, Omni 7000 terminal has "OMNI 7000" and "M077-011-00".

- Serial number (S/N xxx-xxx-xxx)

2 Within the United States, call VeriFone toll-free at 1-800-834-9133.

3 Select the MRA option from the automated message. The MRA department is open Monday–Friday, 8 A.M.–7 P.M., EST.

**4** Give the MRA representative the information gathered in Step 1.
If the list of serial numbers is long, fax the list, along with the information gathered in Step 1, to the MRA department at 727-953-4172.

   • Please address the fax clearly to the attention of the "VeriFone MRA Dept."

   • Include a telephone number where you can be reached, as well as your fax number.

   • You will be issued MRA number(s) and the fax will be returned to you.

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**NOTE**

One MRA number must be issued for each Omni 7xxxMPD Series terminal returned to VeriFone, even if you are returning several times the same model.

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**5** Describe the problem(s).

**6** Provide the shipping address where the repaired or replacement unit must be returned.

**7** Keep a record of the following items:

   • Assigned MRA number(s).

   • VeriFone serial number assigned to the Omni 7000MPD Series terminal you are returning for service or repair (terminal serial numbers are located on the bottom of the unit (see Figure 27).

   • Shipping documentation, such as air bill numbers used to trace the shipment.

   • Model(s) returned (model numbers are located on the VeriFone label on the bottom of the Omni 7xxxMPD Series terminal).
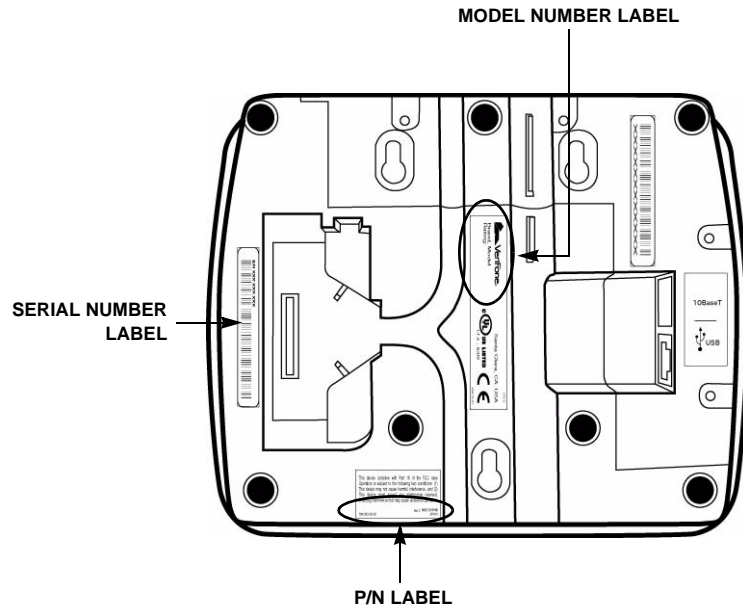
MODEL NUMBER LABEL

SERIAL NUMBER
LABEL

P/N LABEL

**Figure 27      Product Information Labels**

## Accessories

Accessories for the Omni 7xxxMPD are listed below. When ordering, please refer to the part number in the left column.

## Optional I/O Modules

| | |
|---|---|
| P077-001-00 (Omni 7000MPDonly) | Standard display (no function) |
| P077-002-00 (Omni 7000MPDonly) | Signature capture display |
| P077-010-00 | Blank IO Module (no function) |
| P077-020-00 | USB/Ethernet I/O module |
| P077-030-00 | Smart card module |
| P077-040-00 | Smart card and Ethernet/USB I/O module |
| P077-050-00 | Contactless I/O module |
| P077-060-00 | Contactless/Ethernet/USB I/O module |

## Optional Accessories

| | |
|---|---|
| 22647-XX (Omni 7000MPD only) | Overlay |
| 22648-01 (Omni 7000MPD only) | Privacy Shield |
| 22930-01 (Omni 7000MPD only) | Stylus holster, top |
| 22931-01 (Omni 7000MPD only) | Stylus holster, left |
| 22932-01 (Omni 7000MPD only) | Stylus with Tether |
| 22967-01 | Countertop wedge |
| 23228-01 (Omni 7100MPD only) | Stylus, switched |

23294-01 (Omni 7100MPD only)          Privacy shield

23323-01 (Omni 7100MPD only)          Stylus, not switched.

**Cables**   XX in part numbers indicates different cable lengths, as follows:

| XX = | Length Metric | Length Feet |
|------|---------------|-------------|
| 00   | 0.36 m        | 1.2'        |
| 01   | 1.0 m         | 3.3'        |
| 02   | 2.0 m         | 6.6'        |
| 03   | 3.0 m         | 9.8'        |
| 05   | 5.0 m         | 16.4'       |

### Mini-DIN Style Multiport Cables

13984-XX   1 6/8-pin mini-DIN serial port and 2 ECR tailgates; flying lead to connect to ECR

17820-XX   2 serial port; 1 ECR port

17881-XX   2 serial ports; flying lead to connect to ECR

17882-XX   1 serial port and 1 5-pin LAN port; flying lead to connect to ECR

17883-XX   2 serial ports; RJ11 flying lead to connect to LAN

17884-XX   3 serial ports; no flying lead

17885-XX   3 serial ports; D89F serial port flying lead to connect to PC

**NOTE**

Use standard Ethernet cables (MOD8-MOD8) to complete the 10Base-T connection.

### Additional Cables

00124-03   Telco cable; Omni 7000MPD to RJ11 phone jack

05602-00   RJ45-DB9; Omni 7000MPD to PC AT

07042-XX   RJ45-RJ11; Omni 7000MPD to PINPad

22089-XX   RJ45-SDL8; Omni 7000MPD to IBM ECR 46xx (port 5A)

22090-XX   RJ45-SDL4; Omni 7000MPD to IBM 46xx ECR (SDL4 port)

22091-XX   RJ45-8-pin Mini DIN; Omni 7000MPD to printer 250, 900, or 355

22092-XX   RJ45-RJ45; Omni 7000MPD to Omni series POS terminal

22093-XX   RJ45-SDL8; Omni 7000MPD to IBM ECR 46xx (port 5B)

22172-XX   RJ45-SDL8; Omni 7000MPD to IBM ECR keyboard (SDL8 port)

22982-XX   Omni 7xxxMPD USB to PC USB

**Documentation**    When ordering, please refer to the part number in the left column.

22934    *Omni 7000MPD Quick Installation Guide*

23255    *Omni 7100MPD Quick Installation Guide*

22936    *Omni 7000MPD Signature Capture/Touch Screen Module Quick Installation Guide*

23434    *Omni 7xxx Series I/O Module Quick Installation Guide*

23432    *Omni 7xxx Series Programmers Guide*

23433    *Omni 7xxx Series Reference Manual*

**Support Packages**    When ordering, please refer to the part number in the left column.

*P006-277-xx-MK*    *Omni 7000MPD Programmers Support Package Kit*

*P006-278-xx-MK*    *Omni 7100MPD Programmers Support Package Kit*

# Specifications

## Omni 7000 MPD Specifications

**Table 4**      **Omni 7000MPD Terminal Specifications**

| | |
|---|---|
| Power | • Peripheral power requirements: DC power pack: 12 V DC at 1.0 A<br>• Power pack requirements:120 V AC at 60 Hz (U.S.) |
| Environmental | • Operating temperature: 0° to 40° C (32° to 104° F)<br>• Storage temperature: – 18° to + 66° C (0° to 150° F)<br>• Humidity: 15% to 95% relative humidity; no condensation |
| Dimensions | Base Unit<br>• Height: 153 mm (6.0 inches)<br>• Width: 192 mm (7.5 inches)<br>• Depth: 52 mm (2 inches) |
| Weight | • Terminal weight: 0.71 kg (1.56 lb) |

Shipping weight: 1.08 kg (2.38 lb); includes terminal, cable tie down strap and screw, and quick installation guide.

## Omni 7100 MPD Specifications

**Table 5**      **Omni 7100MPD Terminal Specifications**

| | |
|---|---|
| Power | • Peripheral power requirements: DC power pack: 12 V DC at 1.0 A<br>• Power pack requirements:120 V AC at 60 Hz (U.S.) |
| Environmental | • Operating temperature: 0° to 40° C (32° to 104° F)<br>• Storage temperature: – 18° to + 66° C (0° to 150° F)<br>• Humidity: 15% to 95% relative humidity; no condensation |
| Dimensions | Base Unit<br>• Height: 153 mm (6.0 inches)<br>• Width: 192 mm (7.5 inches)<br>• Depth: 56 mm (2 inches) |
| Weight | • Terminal weight: 0.74 kg (1.62 lb)<br>• Shipping weight: 1.11 kg (2.44 lb) |

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# Omni 7xxx Series

*Installation Guide*