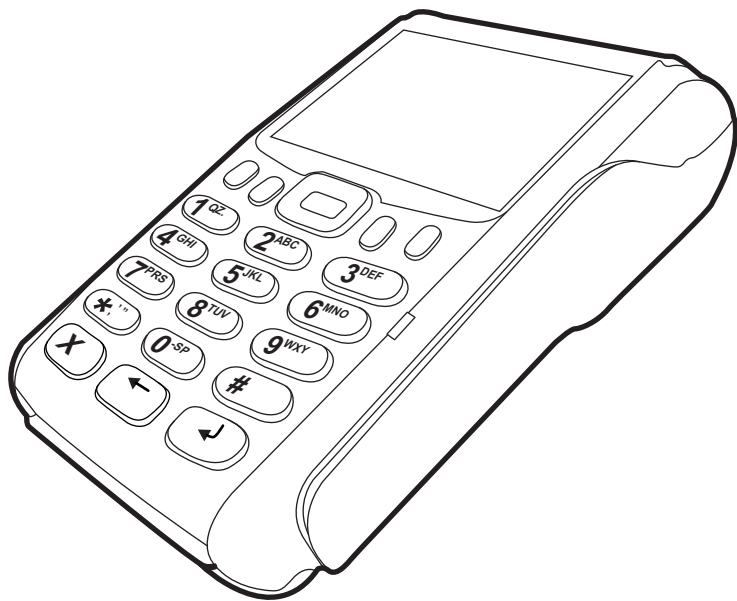


VX 675

Installation Guide



VX 675 Installation Guide
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This guide is your primary source of information for setting up and installing the VX 675 terminal.

Audience

This guide is useful for anyone installing and configuring a VX 675 terminal. Basic descriptions of the terminal features are also provided.

Organization

This guide is organized as follows:

[Chapter 1, Terminal Overview](#). Provides an overview of the VX 675 terminal.

[Chapter 2, Terminal Setup](#). Explains how to set up and install the VX 675 terminal. Provides information on how to select a location, establish power, and how to configure optional peripheral devices.

[Chapter 3, Specifications](#). Discusses power requirements and dimensions of the VX 675 terminal.

[Chapter 4, Maintenance](#). Explains how to maintain your VX 675 terminal.

[Chapter 5, VeriFone Service and Support](#). Provides information on contacting your local VeriFone representative or service provider, and information on how to order accessories or documentation from VeriFone.

[Chapter 6, Troubleshooting Guidelines](#). Provides troubleshooting guidelines, should you encounter a problem in terminal installation and configuration.

Related Documentation

To learn more about the VX 675 terminal, refer to the following set of documents:

VX 675 Certifications and Regulations Sheet	VPN DOC265-001-EN
VX 675 Quick Installation Guide	VPN DOC265-002-EN
VX 675 Reference Guide	VPN DOC265-004-EN
Verix eVo Volume I: Operating System Programmers Manual	VPN DOC00301
Verix eVo Volume II: Operating System and Communications Programmers Manual	VPN DOC00302
VX 675 USB Only Base Quick Installation Guide	DOC265-025-EN
VX 675 Full-Feature Base Quick Installation	DOC265-026-EN
VX 675 ECR Quick Installation Guide	DOC265-028-EN




Conventions and Acronyms

This section describes the conventions and acronyms used in this guide.

Document Conventions

Various conventions are used to help you quickly identify special formatting. Table 1 describes these conventions and provides examples of their use.

Table 1 Document Conventions

Convention	Meaning	Example
Blue	Text in blue indicates terms that are cross referenced.	See Conventions and Acronyms .
<i>Italics</i>	Italic typeface indicates book titles or emphasis.	You <i>must</i> install a roll of thermal-sensitive paper in the printer.
Courier	The courier type face is used while specifying onscreen text, such as text that you would enter at a command prompt, or to provide an URL.	<code>http://www.verifone.com</code>
	The pencil icon is used to highlight important information.	RS-232-type devices do not work with the PINpad port.
	The caution symbol indicates possible hardware or software failure, or loss of data.	The terminal is not waterproof or dustproof, and is intended for indoor use only.
	The lightning symbol is used as a warning when bodily injury might occur.	Due to risk of shock do not use the terminal near water.

Acronym Definitions Various acronyms are used in place of the full definition. [Table 2](#) presents acronyms and their definitions.

Table 2 Acronym Definitions

Acronym	Definitions
AC	Alternating Current
CDMA	Code Division Multiple Access
EMV	Joint Europay, MasterCard and Visa Standard
GPRS	General Packet Radio Service
GSM	Global System for Mobile Communication
ITP	Internal Thermal Printer
LCD	Liquid Crystal Display
LED	Light Emitting Diode
MRA	Merchandise Return Authorization
MSAM	Micromodule-Size Security Access Module
PED	PIN Entry Device
PIN	Personal Identification Number
POS	Point-of-Sale
QVGA	Quarter Video Graphics Array
RJ45	Registered Jack 45
RS-232	Recommended Standard 232
R-UIM	Removable User Identity Module
SAM	Security Access Module
SD	Secure Digital
SIM	Subscriber Identity Module
TFT	Thin Film Transistor
UART	Universal Asynchronous Transmitter/Receiver
USB	Universal Serial Bus
VPN	VeriFone Part Number

Terminal Overview

This chapter provides a brief description of the VX 675 terminal. This terminal features a color screen display, fast processor, abundant memory, and PCI 3.0 security.

The VX 675 terminal is a portable, battery-powered device designed to fit comfortably during handheld consumer-facing applications. It features a 2.8" TFT LCD display and a backlit spill-resistant keypad. It supports GPRS, 3G, Bluetooth, and WiFi communications technology.



VeriFone ships variants of the VX 675 terminal for different markets. Your terminal may have a different configuration—it may or may not have dual SIM slots or the optional removable SD flash memory, among others. VX 675 with fiscal ECR functionality is specific only to Turkey market.



Figure 1 The VX 675 Terminal

Features at a Glance

The following are the features of VX 675:

- 400 MHz ARM11 RISC processor delivers power and usability in a convenient “hand-over” design.
- Multi-application operating environment.
- Advanced memory architecture to meet tomorrow’s needs with support for 192 MB.
- Backward compatibility with VeriFone solutions help reduces development costs.
- Drop-resistant design minimizes breakage.
- 32-bit processing and multi-tasking capabilities.
- Security architecture exceeds specifications for PCI-PED and sophisticated file authentication.
- Securely supports and runs payment and value-added applications along with signature capture.
- Offers unsurpassed performance on EMV smart card transactions
- Max UI design provides large 2.8” color LCD display, and large blue backlit keys for easier viewing.
- Adds vibrant color screen to the smallest purpose-built wireless payment device.
- Multiple connectivity options.
- Spill-resistant design forces liquid down and off the front of the terminal.

Features and Benefits

VX 675 terminals provide the right combination of features and functions including a triple-track magnetic stripe card reader, smart card reader, integrated PIN pad, color screen display, and a quiet yet fast internal thermal printer (ITP).

Exceptional Ease of Use

- Lightweight, tapered design, compact, stylish and the ergonomic balance allows convenient terminal hand-off to the consumer for PIN entry or other input.
- 2.8” TFT LCD display for boundless application possibilities and easy readability under various lighting conditions.
- Large, blue backlit keys provide tactile response to simplify usage and minimize finger slips.
- 25 mm (for GPRS model only) and 40 mm diameter paper roll support with a trouble-free, drop-in, “clam shell” loading and dual tear bar that allow receipts to be torn in any direction.
- Quiet and fast integrated thermal printer.
- Vertical magnetic stripe card reader with an extended blade for optimal card reading.

Performance and Durability

- Fast transactions due to powerful 400 MHz ARM11 processor.
- High-capacity 3.6V 2200 mAh Li-ion battery. 3G and WiFi-BT support 3.7V 2450 mAh Li-ion battery pack.
- Base for drop-and-go charging.
- Rounded corners and drop resistant to 3 feet on concrete floor to minimize breakage.

- 192 MB of memory with optional removable flash memory.

Security

- PCI PED 3.0 approved for debit and other PIN-based transactions.
- EMV Level 1 and 2 Type Approval.
- Tamper-resistant construction, SSL protocols, and VeriShield file authentication.

Communication Technology

- VX 675 GPRS and 3G: Long-range wireless payment for retailers that have no physical location limitations.
- VX 675 WiFi: Ideal for retailers that need multiple wireless devices and have existing IP infrastructure.
- VX 675 Bluetooth: Simple, plug-and-play installation for locations that need short-range wireless capability.



Terminal Setup

This chapter describes terminal setup procedures. You will learn about:

- Selecting Terminal Location
- Unpacking the Shipping Carton
- Examining Terminal Features
- Examining Connection Port
- Installing the Paper Roll
- Installing the SIM Card
- Installing and Replacing SD Card
- Using the Battery
- Battery Behavior (No Power Pack)
- Charging the Battery
- Connecting the Terminal Power Pack
- VX 675 Base Stations
- Powering Up the Base
- Docking the Terminal on the Base
- Undocking the Terminal from the Base
- Connecting to USB Host
- Conducting a Bluetooth Transaction
- Conducting Wireless Transactions
- Conducting Smart Card Transactions
- Using the Magnetic Card Reader
- ECR (Fiscal Module) Support

Selecting Terminal Location

Use the following guidelines when selecting a location for your VX 675 terminal.

Environmental Factors

- The VX 675 unit is a portable terminal. Select a flat support surface, such as a countertop or table, to keep the terminal safe in between uses.
- Do not use the terminal where there is high heat, dust, humidity, moisture, or caustic chemicals or oils.
- Keep the terminal away from direct sunlight and anything that radiates heat, such as a stove or motor.
- Do not use the terminal outdoors.



The terminal is not waterproof or dustproof, and is intended for indoor use only. Any damage to the unit from exposure to rain or dust may void any warranty.

Electrical Considerations

- Avoid using this product during electrical storms.
- Avoid locations near electrical appliances or other devices that cause excessive voltage fluctuations or emit electrical noise (for example, air conditioners, electric motors, neon signs, high-frequency or magnetic security devices, or computer equipment).
- Do not use the terminal near water or in moist conditions.

Bluetooth Base Considerations

The BT base requires the following:

- A power source within two meters.
- A telephone socket within three meters (for PSTN version)
- A location with minimal obstruction for communication with terminals.
- Install the BT Base two meters from the ground to allow LEDs to be seen, and the state of connection be easily confirmed.

Unpacking the Shipping Carton

Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage. The device is a secure product and any tampering may cause it to cease functioning properly.

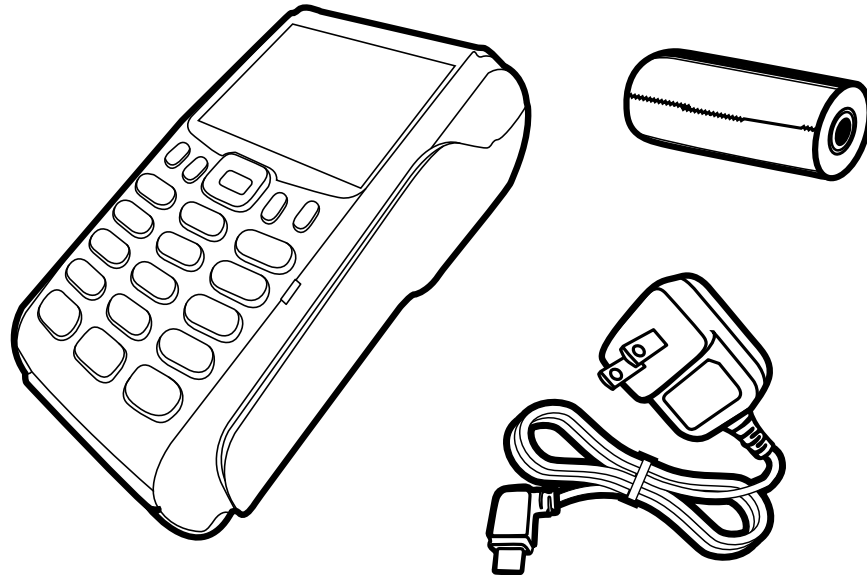


Figure 2 VX 675 Shipping Carton Contents

To unpack the Shipping Carton

- 1 Remove and inspect the following items:
 - Terminal
 - Power pack
 - Paper roll
- 2 Remove all plastic wrapping from the terminal and other components.
- 3 Remove the clear protective film from the LCD screen.



Do not use a terminal that has been damaged or tampered with. The terminal comes equipped with tamper-evident labels. If a label or component appears damaged, please notify the shipping company and your VeriFone representative or service provider immediately.

- 4 Save the shipping carton and packing material for future repacking or moving the terminal.

Examining Terminal Features

Before you continue the installation process, see the terminal features illustrated below.

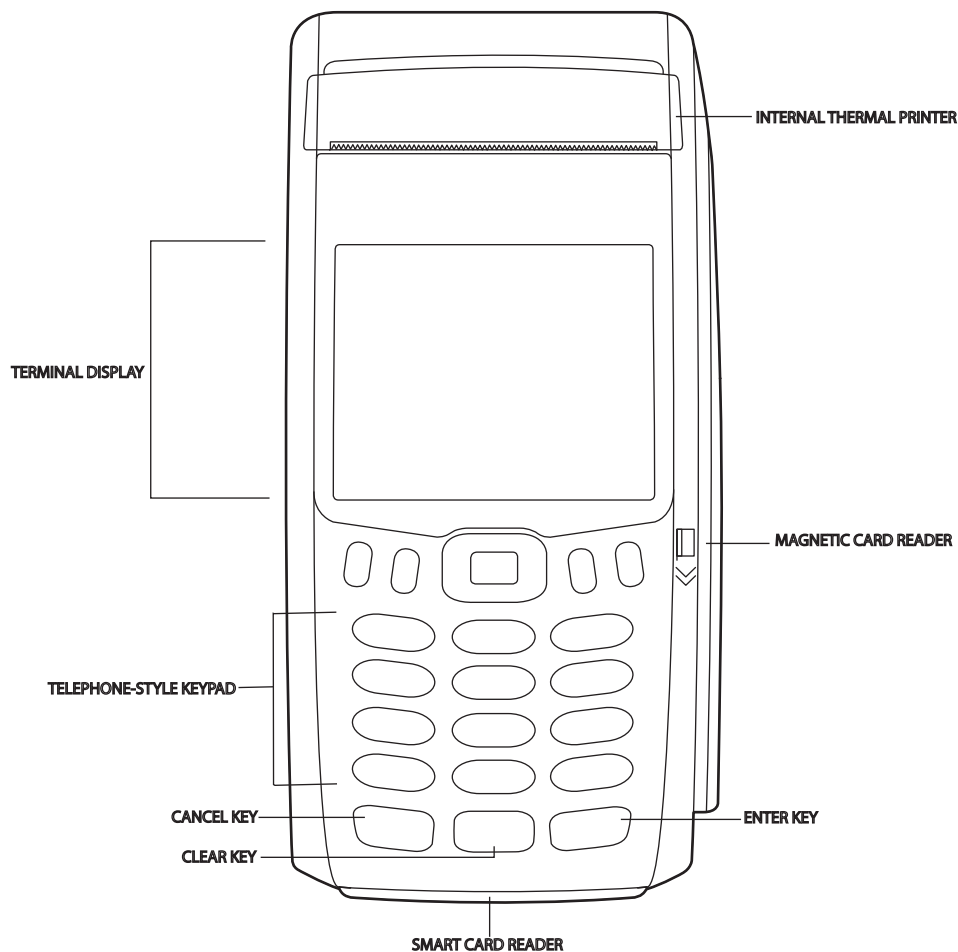


Figure 3 VX 675 Terminal Features (Front Panel)

Front Panel The front panel includes the following features:

- A 2.8" TFT LCD display.
- The keypad consists of:
 - a** A 12-key, **telephone-style keypad** (keypads may vary in style).
 - b** Three **color-coded keys** below the keypad (from left to right: CANCEL, CLEAR, ENTER).
 - c** Four **function keys** below the display (PF1, PF2, PF3, PF4) and a five-way navigational key in the middle.
- A **magnetic card reader**, built into the right side. Swipe the card using the proper direction, with the magnetic stripe down and facing inward, toward the keypad.
- An **internal thermal printer** at the top front of the terminal.

- A **smart card reader**, built into the bottom of the terminal. For directions on how to use a smart card, see [Conducting Smart Card Transactions](#).
- A **SAM (security access module) compartment**, built into the bottom of the terminal inside the back compartment. The VX 675 terminal contains an MSAM cardholder to support stored-value card programs or other merchant card requirements.



NOTE VeriFone ships variants of the VX 675 terminal for different markets. Your terminal may have a different configuration. However, the basic processes described in this guide remain the same, regardless of terminal configuration.

Examining Connection Port

VX 675 has one primary micro-USB port used for power and download. VX 675 3G and VX 675 WiFi-BT support USB Host function via primary micro-USB port.

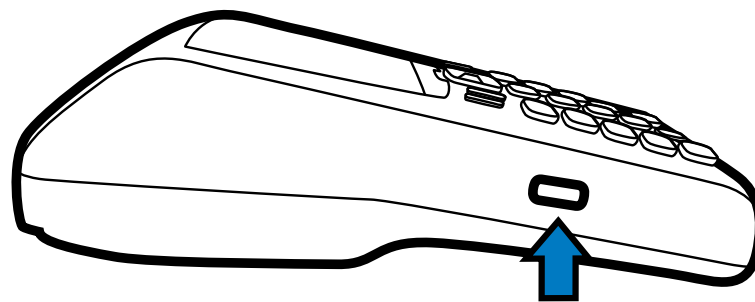


Figure 4 The VX 675 Primary Micro-USB Port

3G Support

VX 675 3G variant uses Cinterion PHS8-P radio module that incorporates 3G High-Speed Packet Access (HSPA+) connectivity. To connect to existing 3G operator-provided infrastructure, check that SIM has been inserted, see [Installing the SIM Card](#).

WiFi Bluetooth Support

VX 675 WiFi-BT integrated module uses Broadcom BCM4329 chip, which provides SDIO interface for WiFi and UART interface for Bluetooth.

The module includes an integrated WLAN RF transceiver optimized for use in Wireless LAN systems with advanced power management unit, and an integrated radio transceiver optimized for use in Bluetooth wireless systems.

Installing the Paper Roll

A fast, quiet thermal printer is built into the VX 675 terminal. Before you can process transactions that require a receipt or record, you *must* install a roll of thermal-sensitive paper in the printer.

The ITP uses a roll of single-ply, thermal-sensitive paper—25 mm (for GPRS model only) and 40 mm. A pink *out-of-paper* indicator line appears on the edge of the paper approximately 18 inches before the end of the roll. After this line appears, there is enough paper remaining on the roll to conclude at least one transaction.



Poor-quality paper can jam the printer and create excessive paper dust. To order high-quality VeriFone paper, refer to [Accessories and Documentation](#).

Store thermal paper in a dry, dark area. Handle thermal paper carefully: impact, friction, temperature, humidity, and oils affect the color and storage characteristics of the paper.

Never load a roll of paper with folds, wrinkles, tears, or holes at the edges in the print area.

- To Install a Paper Roll**
- 1 Gently pull the latch located on the bottom of the terminal to unlock the paper roll cover.

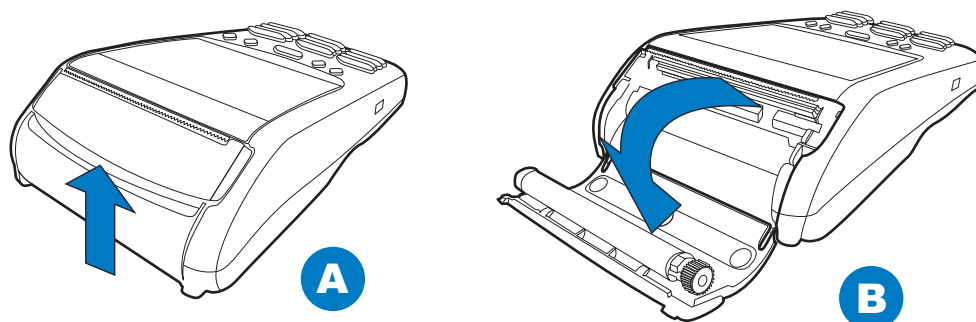


Figure 5 **Unlocking the Printer Cover**

- 2 Lift the printer cover up and back.
- 3 Remove any partial roll of paper in the printer tray.
- 4 Loosen the glued leading edge of the new roll of paper or remove the protective strip, if applicable. Unwind the paper roll past any glue residue.
- 5 Hold the roll so the paper feeds from the *bottom* of the roll when the terminal is inverted (see illustration below).

- 6 Drop the paper roll into the printer tray.

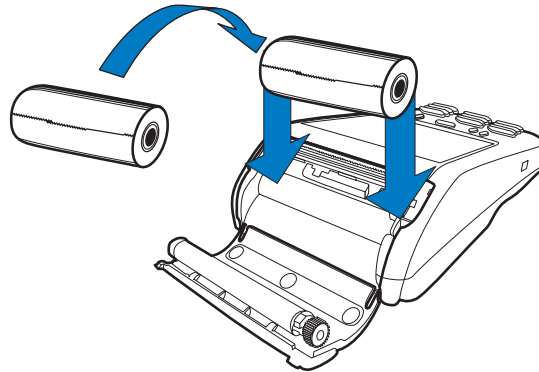


Figure 6 Loading a 25mm Paper Roll

- 7 Pull paper up past the glue residue on the paper roll.
- 8 Close the paper roll cover by gently pressing directly on the cover until it clicks shut, allowing a small amount of paper past the glue residue to extend outside the printer door.



To prevent damaging the print roller, always gently press down on the paper roll cover to close it.

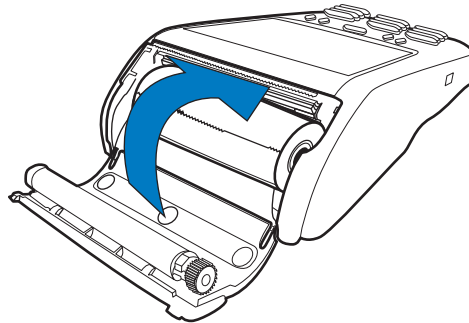


Figure 7 Closing Paper Roll Cover

- 9 Tear the paper off against the serrated plastic strip in the printer.

Installing the SIM Card

VX 675 supports GSM SIM (Subscriber Identity Module).

To install or replace the card

- 1 Turn off the terminal.
- 2 Place the terminal upside down on a soft, clean surface to protect the lens from scratches.
- 3 Unscrew and remove the back compartment cover.
- 4 Lift the battery pack.

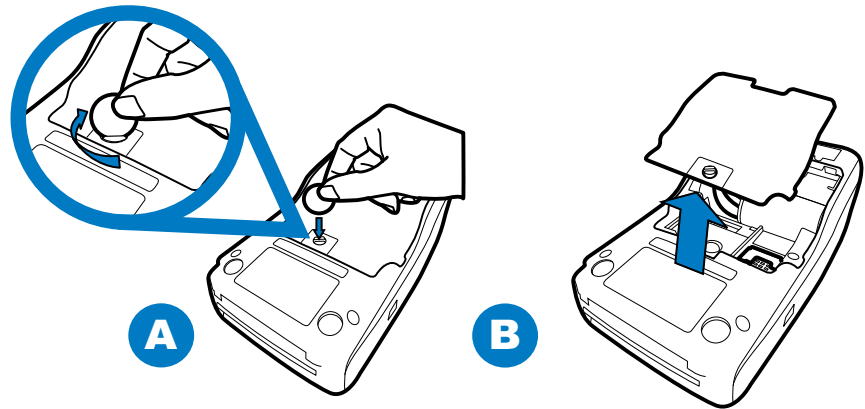


Figure 8 Removing the Back Compartment Cover

- 5 Insert the SIM card into the cardholder as shown below.



NOTE

Ensure that the card's gold contacts are facing the compartment. The cardholder connector base has a set of contacts and a notch to ensure the SIM card is positioned correctly. The SIM card has a notch on one corner to ensure that it fits into the connector base in only one way.

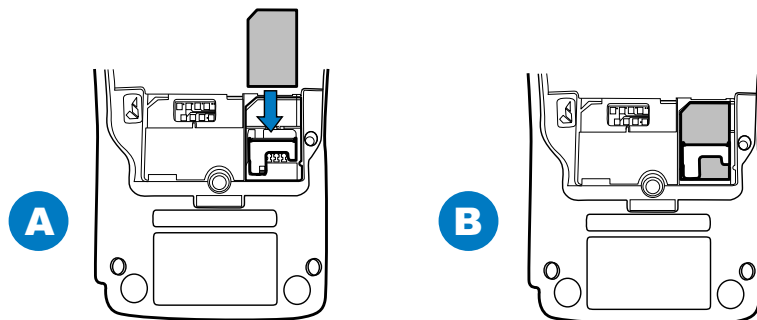


Figure 9 Inserting the SIM Card

- 6 Return the battery pack to its original position.
- 7 Close and screw the back compartment cover.

Dual SIM VX 675 3G supports dual SIM and SIM detect behavior for SIM 2. SIM 1 is the primary default SIM and SIM 2 acts as backup SIM.

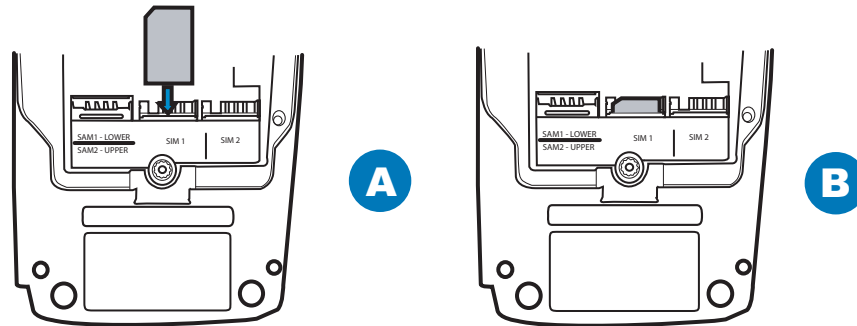


Figure 10 VX 675 3G SIM Installation

Installing and Replacing SD Card

Vx675 3G and WiFi-BT support an optional SD flash memory.

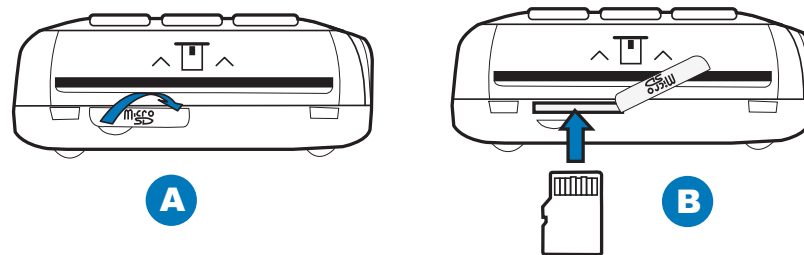


Figure 11 SD Card Installation/Replacement on VX 675 3G/VX 675 WiFi-BT

To install or replace SD card

- 1 Turn off the terminal.
- 2 Gently pull the rubber covering of the SD card slot located near the smart card reader and slide sideways to expose the card slot.
- 3 Insert the card into the slot.
- 4 Return the cover of the card slot.

Using the Battery

The VX 675 terminal uses a single cell Li-ion battery (see [Accessories and Documentation](#) for ordering information). The internal logic of the battery prevents both overcharging and undercharging (a fault condition in which the battery level goes well below the minimum acceptable charge and the battery becomes unusable).

NOTE



The VX 675 terminal will only operate when the battery is installed.

Battery Features The following are features of the battery:

- Single Li-ion cell.
- A safety circuit that:
 - Prevents cell damage from overcharge, over-discharge, or overheating.
 - Activates when the battery is left in an unused terminal for extended periods.

NOTE



VX 675 battery pack is not customer changeable and therefore should not be disconnected and removed.

Li-ion batteries are not affected by shallow charging. When the terminal has no external power source or battery, the coin cell battery provides power to the security circuit.

Disconnecting and removing the battery, as well as unplugging the terminal power pack, reduce the life of the coin cell battery, which does not recharge and must be replaced if drained.

Conserve battery power by turning the VX 675 terminal off when not in use. Keep the Li-ion battery inserted in the terminal and power up the terminal periodically to check the battery charge. Do not let the battery charge fall below 10% for extended periods of time as this may permanently diminish the battery capacity. Recharge the battery by attaching the micro-USB end of the power pack to the terminal and plugging the other end of the power pack into a wall outlet.

Battery Behavior (No Power Pack)

The terminal shifts to power pack mode and starts up automatically when the VX 675 is connected to a non-battery power source, regardless of the battery charge state.

Manual Startup

Hold the green key down for about 4 seconds until the terminal displays the startup screen.

NOTE



The 4-second power-up delay prevents terminal startup if the green key is accidentally held down. The time required to hold the green key down to power up the terminal is configurable (for more information, see the *VX 675 Reference Guide – VPN DOC265-004-EN-A*).

The terminal lights up once the power is on.

NOTE



The VeriFone copyright screen starts and displays a unique copyright screen once the terminal loads an application. However, **DOWNLOAD NEEDED** appears on screen after the initial VeriFone copyright screen if there is no available application in the terminal.

Manual Shutdown Hold the red key down for about 4 seconds until the terminal displays the shutdown verification screen. Keep holding the red key until the VX 675 terminal shuts down.

NOTE

- The 4-second shutdown delay that prevents terminal shutdown if the red key is accidentally held down. The time required to hold the red key down to shut down the terminal is configurable (for more information, see the *VX 675 Reference Guide – VPN DOC265-004-EN-A*).
- The screen is blank when the terminal has no power.

Connecting the Terminal Power Pack

After installing the battery, connect the VX 675 terminal to the provided power source for initial charging.

CAUTION

Using an incorrectly rated power supply may damage the terminal or cause it not to work as specified. Before troubleshooting, ensure that the power supply being used to power the terminal matches the requirements specified on the bottom of the terminal. (See [Specifications](#) for detailed power supply specifications.) Obtain the appropriately rated power supply before continuing with troubleshooting.

WARNING

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

During a transaction, disconnecting the power by removing the battery or unplugging the terminal from a wall power while at very low battery charge may cause transaction data files not yet stored in the terminal memory to be lost.

Each VX 675 terminal comes with power supply (VPN PWR265-001-01-A) used to connect the terminal directly to a power outlet and to charge the battery. The VX 675 unit comes with a universal input power pack capable of operating from voltages of 100 V to 240 V AC.

To Connect the Terminal Power Supply

- 1 Insert the micro-USB plug into the micro-USB port of the VX 675, as shown in the figure below.

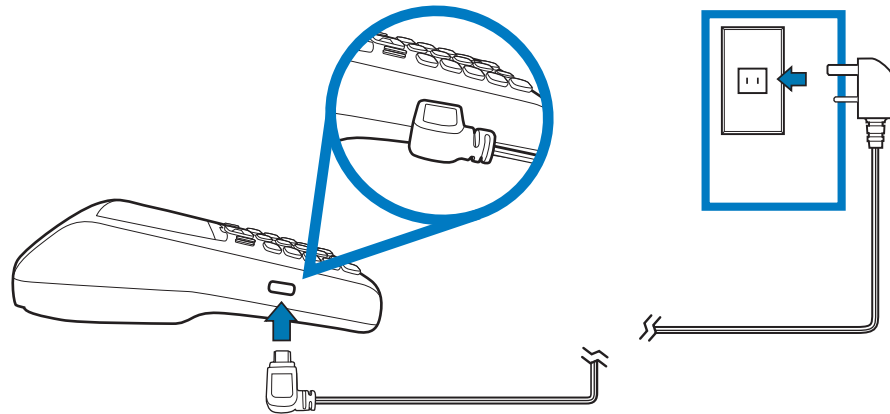


Figure 12 VX 675 Power Supply Connection

- 2 Plug the AC power pack into a wall outlet or powered surge protector.



To protect against possible damage caused by lightning strikes and electrical surges, consider installing a power surge protector.

Once it loads the application, the terminal starts the initial VeriFone copyright screen and displays a unique copyright screen. If there is no available application in the terminal, **DOWNLOAD NEEDED** appears on screen after the initial VeriFone copyright screen.

Charging the Battery

After unpacking your VX 675 terminal, connect the power pack to the unit for 6 hours or until fully charged.



The terminal charges the VX 675 battery when the terminal is on the base. For more information, see [Docking the Terminal on the Base](#).

The battery has a safety circuit to protect the Li-ion cells from overcharging and over-discharging. If the battery is over-discharged, the safety circuit shuts down the battery. The battery must then be recharged to restore operation.



The VX 675 terminal automatically shuts off when the battery reaches the *critically low* charge state. If this occurs, the battery must be recharged for a minimum of 1/2 hour before it can power the terminal. *It may take several recharge attempts to reset the safety circuit* when charging a battery that has been discharged below this critical state.

Battery Life Charging and discharging the VX 675 battery hundreds of times will wear out the battery. Significantly reduced operating times indicate the need for battery replacement (see [Accessories and Documentation](#) for ordering information).

WARNING Do not dispose of batteries in a fire. Li-ion batteries must be recycled or disposed of properly. Do not dispose of Li-ion batteries in municipal waste sites.



VX 675 Base Stations

Like the terminal, VeriFone ships variants of the VX 675 base for different markets. Your base may have a different configuration.

USB Base A charging base to charge the terminal and provide a docking station when the terminal is not in use. It also has USB Host port for downloading applications and secure keys via USB flash drive. The base can be positioned on a countertop.

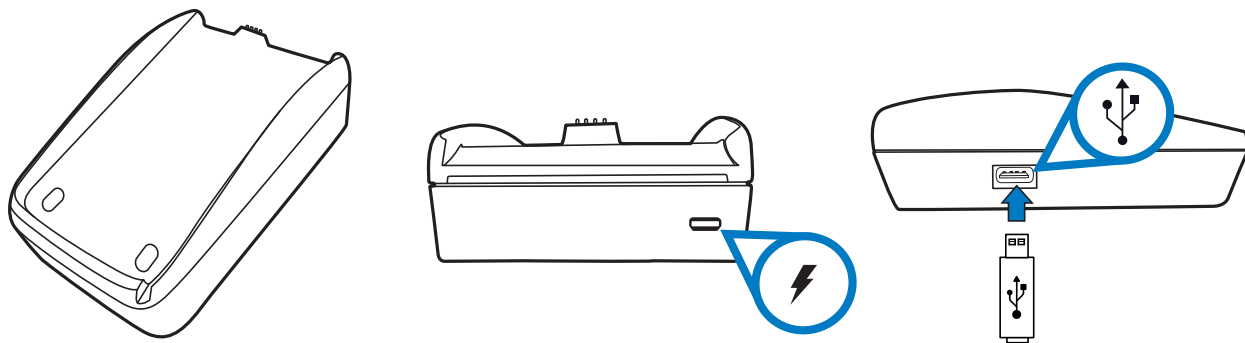


Figure 13 USB Base Showing Micro-USB and USB Host Ports

Full-Feature Base A charging base with Dial, Ethernet, Serial, and USB host for full back-up connectivity options and support to some peripherals like ECR, check reader, and barcode reader, among others.

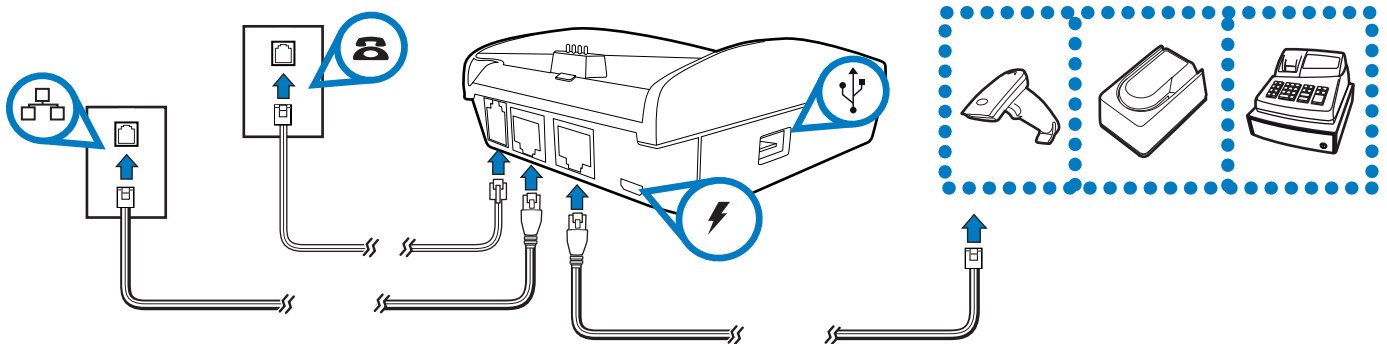


Figure 14 Full-Feature Base Showing Dial, Ethernet, Serial, Micro-USB and USB Host Ports

Bluetooth Base A base station that relays wireless data received from the terminal via modem and transmits back the response to the terminal. It also supports Dial and Ethernet connectivity options.

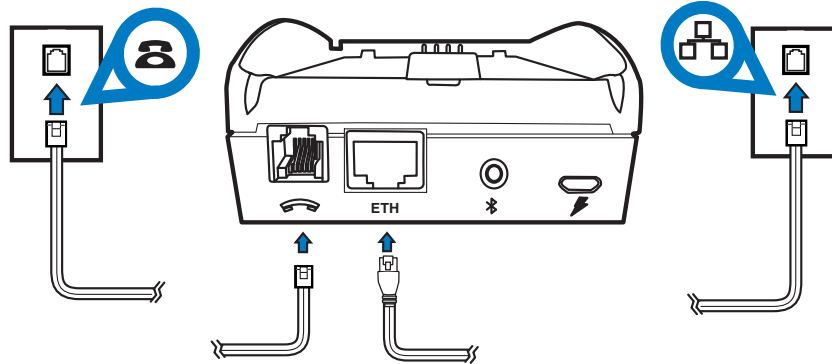


Figure 15 Bluetooth Base

Powering Up the Base

Use the procedure below to connect VX 675 Base to a power source.

- To power up the base** 1 Insert the micro-USB plug into the micro-USB port of the base, as shown in the figure below.

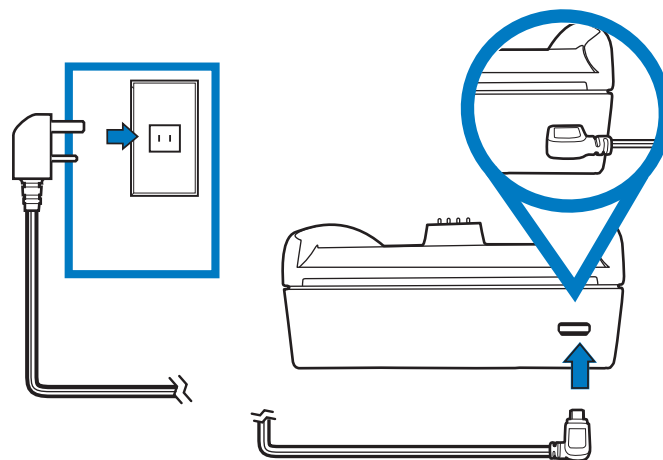


Figure 16 Connecting the Base to a Power Source

- 2 Plug the AC power pack into a wall outlet or power surge protector.

Docking the Terminal on the Base

The VX 675 terminal can be placed on the base when not in use for continuous charging of its battery.

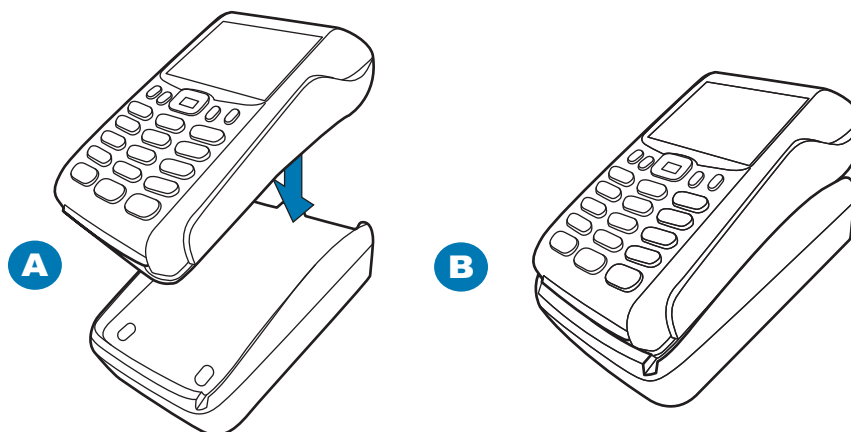


Figure 17 Docking the VX 675 Terminal on the Base

To place the terminal on the base

- 1 Place the top portion of the terminal on the base. Ensure that the recess on the bottom of the terminal sits on top of the pogo pins.
- 2 Push the terminal to dock. You will hear a snap indicating that the terminal is securely hooked to the base.

Undocking the Terminal from the Base

The VX 675 terminal can be taken from the base when in use.

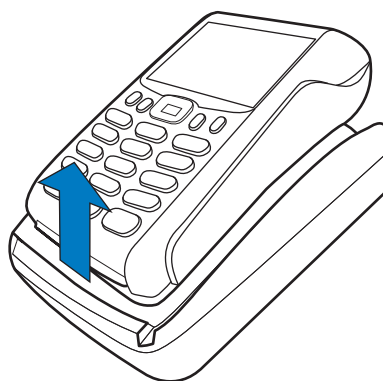


Figure 18 Undocking the VX 675 Terminal from the Base

NOTE



To protect against possible damage caused by lightning strikes and electrical surges, consider installing a power surge protector.

WARNING



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

Disconnecting the power during a transaction may cause transaction data files not yet stored in terminal memory to be lost.

Connecting to USB Host

USB Host lets you download applications and secure keys via USB flash drive.

To connect to the USB Host

- 1 Power up the base. Insert the micro-USB plug into the micro-USB port of the base and plug the AC power pack into a wall outlet or power surge protector.
- 2 Make sure that the terminal is docked on the base.
- 3 Insert the USB flash drive into the USB port on the left side of the base.

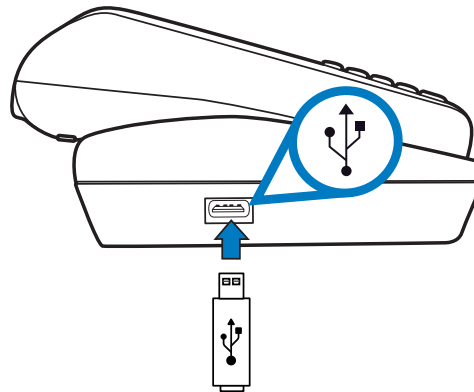


Figure 19 Connecting USB Flash Drive to the USB Host

Conducting a Bluetooth Transaction

VX 675 BT Base relays wireless data received from the terminal via modem and then transmits back the response to the terminal. It pairs with the Bluetooth Base to go online for authorization. These are both Class 1 Bluetooth devices providing secure radio communication.

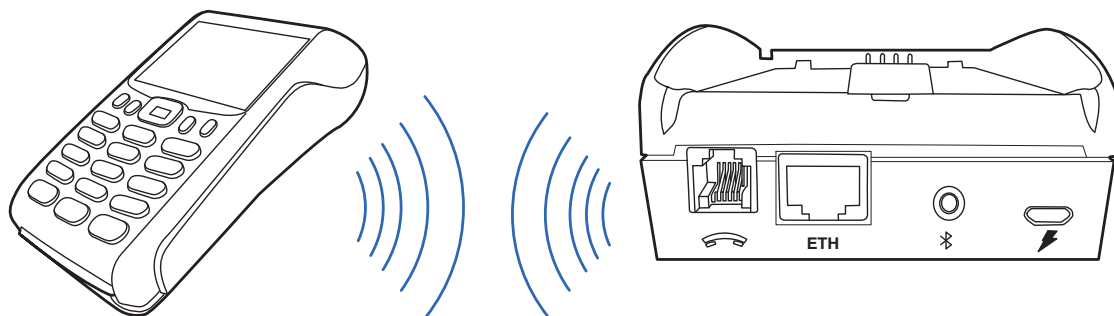


Figure 20 VX 675 WiFi-BT Terminal Communicating with the Bluetooth Base

To improve the range performance of the terminal, place the Bluetooth Base in a location that services all of the card payment areas in the premises. Ideally, place it within line of sight of all areas of card acceptance.

To Conduct a Bluetooth Transaction:

- Ensure that the terminal is paired with the Bluetooth Base not more than 100 meters away.
- Follow the on-screen instructions provided with your application.

Conducting Wireless Transactions

To conduct a wireless transaction:

- Ensure the terminal is in an optimal position for transmitting.
- Follow the on-screen instructions provided with your application.

Conducting Smart Card Transactions

The smart card transaction procedure may vary from one application to another. Verify the procedure with your application provider before performing a smart card transaction.

To Conduct a Smart Card Transaction

- 1 Position a smart card with the contacts facing upward (see illustration below).
- 2 Insert the smart card into the smart card reader slot in a smooth, continuous motion until it seats firmly.
- 3 Remove the card only when the application indicates the transaction is complete.

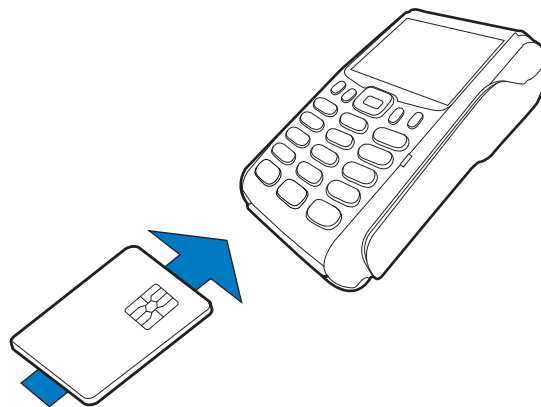


Figure 21 **Inserting a Smart Card**



Do not remove the smart card in the card reader until the transaction is complete. Premature card removal will invalidate the transaction.

Using the Magnetic Card Reader

The VX 675 terminal supports credit/debit card transactions.

To Conduct a Credit or Debit Card Transaction

- 1 Position a magnetic card with the stripe in the card reader and facing inward, toward the keypad.
- 2 To ensure a proper read of the magnetic swipe card, the user should insert the magnetic card from the top of the unit, as shown in the following illustration.
- 3 Swipe the card through the magnetic card reader.

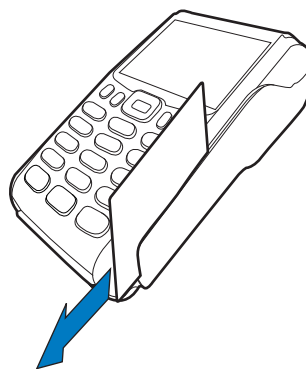


Figure 22 Using the Magnetic Card Reader

ECR (Fiscal Module) Support

The fiscal module allows the ECR to have direct connection to the Ministry of Finance servers. When a mobile transaction is made, the transaction data is sent to the Ministry of Finance servers, and then to the banking host system.

The fiscal module stores transaction data of up to 2MB. It is secured by a metallic seal placed on the right side of the terminal, under the MSR.

Customer Display There is a 42mm single-line, customer-facing display at the bottom of the paper roll cover. This displays up to eight characters including “,” or “.” between any character.

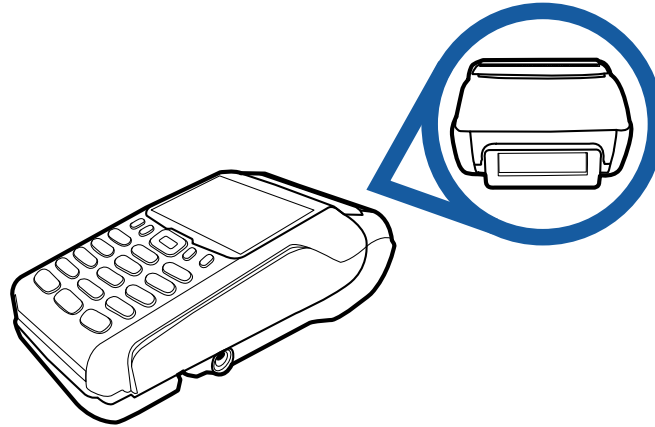


Figure 23 VX 675 Customer Display



Specifications

This chapter discusses power requirements, dimensions, and other specifications of the VX 675 terminal.

Power 5V DC 1.0 A

DC Power Pack UL, ITE listed, LPS power supply:

- a** Input rated: 100-240V AC, 50/60 Hz
- b** Output rated: 5V DC 1.0 A

- Temperature**
- Operating temperature: 0°C to 50° C (32°F to 122° F)
 - Non-operating temperature: -30°C to 60° C (-22°F to 140° F)
 - Relative humidity: 5% to 90%; non-condensing

- External Dimensions**
- Length: 148 mm (5.8 in)
 - Width: 78 mm (3.1 in)
 - Depth: 42 mm (1.6 in)

SPECIFICATIONS

External Dimensions

Maintenance

The VX 675 terminal and base have no user-serviceable parts.

Cleaning the Terminal

To clean the terminal and base, 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.

CAUTION



Never use thinner, trichloroethylene, or ketone-based solvents – they may cause deterioration of plastic or rubber parts.

Do not spray cleaners or other solutions directly onto the keypad or terminal display.

Terminal Contacts

Gently swab the contacts with alcohol or contact cleaner to remove the dirt. It is important that the exposed contacts of the VX 675 battery stay clean and unbent.

CAUTION



Avoid touching the contacts of the VX 675 battery and the recessed area on the terminal. Finger oils tarnish contacts, causing bad connections. When operating on battery power and experiencing a high occurrence of bad or incomplete data transfers, clean the contacts.

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.



VeriFone Service and Support

For VX 675 terminal problems, contact your local VeriFone representative or service provider.

For VX 675 product service and repair information:

- USA – VeriFone Service and Support Group, 1-800-VeriFone (837-4366), Monday - Friday, 8 A.M. - 8 P.M., Eastern time
- International – Contact your VeriFone representative

Returning a Terminal for Service

Before returning a VX 675 terminal or base to VeriFone, you must obtain an MRA number. The following procedure describes how to return one or more VX 675 terminals or bases for repair or replacement (U.S. customers only).

NOTE



Customers outside the United States are advised to contact their local VeriFone representative for assistance regarding service, return, or replacement of terminals or batteries.

To Return a Terminal for Service

- 1 Get the following information from the printed labels on the bottom of *each* VX 675 terminal or base to be returned:
 - Product ID, including the model and part number. For example, “VX 675” and “M265-XXX-XX-XXX-2.”
 - Serial number (S/N nnn-xxx-xxx)
- 2 Obtain the MRA number(s) by completing one of the following:
 - a Call VeriFone toll-free within the United States at 1-800-VeriFone and follow the automated menu options.
 - Select the MRA option from the automated message. The MRA department is open Monday to Friday, 8 A.M.–8 P.M., Eastern Time.
 - Give the MRA representative the information you gathered in Step 1. If the list of serial numbers is long, you can fax the list, along with the information gathered in Step 1, to the MRA department at 727-953-4172 (U.S.).
 - b Address a fax to “VeriFone MRA Dept.” with the model and part number(s)
 - Include a telephone number where you can be reached and your fax number.

- c Complete the Inquiry Contact Form at http://www.verifone.com/aboutus/contact/contact_form.cfm.
 - Address the Subject box with to “VeriFone MRA Dept.”
 - Reference the model and part number in the Note box.



One MRA number must be issued for each VX 675 terminal you return to VeriFone, even if you are returning several of the same model.

- 3 Describe the problem(s).
- 4 Provide the shipping address where the repaired or replacement unit must be returned.
- 5 Keep a record of the following items:
 - Assigned MRA number(s).
 - VeriFone serial number assigned to the VX 675 terminal or base you are returning for service or repair (terminal serial numbers are located on the bottom of the unit).
 - 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 VX 675 terminal).

Accessories and Documentation

VeriFone produces the following accessories and documentation for the VX 675 terminal. When ordering, please refer to the part number in the left column.

- VeriFone online store at www.store.verifone.com
- USA – VeriFone Customer Development Center, 800-VeriFone (837-4366), Monday - Friday, 7 A.M. - 8 P.M., Eastern time
- International – Contact your VeriFone representative

Power Pack

Contact your local VeriFone distributor to determine which power pack fits your needs.

VPN PWR265-001-01-A	DC Power Pack (Universal)
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Printer Paper

VPN PPR265-001-01-A	25 mm (0.98 in) diameter, 57 mm (2.24 in) wide
VPN PPR268-001-01-A	40 mm (1.57 in) diameter, 57 mm (2.24 in) wide

VeriFone Cleaning Kit

VPN 02746-01	Cleaning Kit
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Micro-USB Cable

VPN SUB265-001-01-A

Micro-USB service dongle

Documentation

VX 675 Certifications and Regulations Sheet	VPN DOC265-001-EN
VX 675 Quick Installation Guide	VPN DOC265-002-EN
VX 675 Reference Guide	VPN DOC265-004-EN
Verix eVo Volume I: Operating System Programming Manual	VPN DOC00301
Verix eVo Volume II: Operating System and Communications Programmers Manual	VPN DOC00302
VX 675 USB Only Base Quick Installation Guide	DOC265-025-EN
VX 675 Full-Feature Base Quick Installation	DOC265-026-EN
VX 675 ECR Quick Installation Guide	DOC265-028-EN

Troubleshooting Guidelines

The troubleshooting guidelines provided in the following section are included to help you install and configure your VX 675 terminal successfully. Typical examples of malfunction you may encounter while operating your VX 675 terminal and steps you can take to resolve them are listed in this chapter.

If the problem persists even after performing the outlined guidelines or if the problem is not described below, contact your local VeriFone representative for assistance.



NOTE The VX 675 terminal comes equipped with tamper-evident labels. The VX 675 unit contains no user serviceable parts. Do not, under any circumstance, attempt to disassemble the terminal. Perform only those adjustments or repairs specified in this guide. For all other services, contact your local VeriFone service provider. Service conducted by parties other than authorized VeriFone representatives may void any warranty.



CAUTION Use only a VeriFone-supplied power pack. Using an incorrectly rated power supply may damage the terminal or cause it not to work as specified. Before troubleshooting, ensure that the power supply being used to power the terminal matches the requirements specified on the bottom of the terminal. (See [Specifications](#), for detailed power supply specifications.) Obtain the appropriately rated power supply before continuing with troubleshooting.

Terminal Does Not Start

- Ensure that the battery charge state is not below the critically low level.
- Recharge or replace the battery.
- Ensure that you pressed the green ENTER/ON key for approximately 4 seconds, until the unit lights up.

Terminal Display Does Not Show Correct/Readable Info

- Recharge or replace the battery.
- Connect the VX 675 terminal into a known-good power supply (if you have one) to see if this clears the problem.
- If the problem persists, contact your local VeriFone representative for assistance.

Battery Does Not Charge

The VX 675 battery must initially receive a full charge to ensure proper operation.

NOTE



- Allow the VX 675 terminal to remain connected to the power pack for 6 hours to ensure the battery receives a full charge.
- Li-ion batteries are not affected by shallow charging. Furthermore, when the terminal has no external power source or battery the coin cell battery provides power to the security circuit.
- Uninstalling the battery and unplugging the terminal power pack reduce the life of the coin cell battery, which does not recharge and must be replaced if drained.
- Conserve battery power by turning the VX 675 terminal off when not in use. Keep the Li-ion battery inserted in the terminal and power up the terminal periodically to check the battery charge. Do not let the battery charge fall below 10% for extended periods of time as this may permanently diminish the battery capacity. Recharge the battery by attaching USB end of the power pack to the terminal and plugging the other end of the power pack into a wall outlet.
- The VX 675 terminal automatically shuts off when the battery reaches the *critically low* charge state. If this occurs, the battery must recharge a minimum of 1/2 hour before it can power the terminal. *It may take several recharge attempts to reset the safety circuit* when charging a battery that has been discharged below this critical state.

Blank Display

When the VX 675 terminal display screen does not show correct or clearly readable information:

- The battery pack may not be connected properly. Remove and reinstall the battery pack.
- Check terminal power connection.
- Remove and reapply power to the terminal.
- If the problem persists, contact your local VeriFone service provider.

Printer Does Not Print

If the printer does not work properly:

- Make sure the battery is properly installed in the terminal. The printer will not print if there is no battery in the terminal.
- Check battery status or terminal power connection. The printer will not print if there is an insufficient charge remaining in the battery to complete the print operation.
- Check if the printer is out of paper (slow red blinking light) and that the roll is properly installed. Open the paper roll cover and install a new roll of printer paper or ensure that the roll is feeding correctly. A solid red indicator light indicates a printer error.

- Verify that the printer door is properly latched.
- If the problem persists, contact your VeriFone distributor or service provider.

Printer Paper Jam

If paper jams inside the printer:

- Press the button at the bottom of the terminal to unlatch the paper roll cover, then open the cover.
- Remove the damaged paper from the paper roll and clear the feed mechanism.
- Install a roll of printer paper, as described in [Installing the Paper Roll](#).
- If the problem persists, it may be due to poor paper quality. Install a new roll of higher-quality paper.

WARNING



Poor-quality paper may jam the printer. To order high-quality VeriFone paper, refer to [Accessories and Documentation](#).

Keypad Does Not Respond

If the keypad does not respond properly:

- Check the terminal display. If it displays the wrong character or nothing at all when you press a key, follow the steps outlined in [Transactions Fail to Process](#).
- If pressing a function key does not perform the expected action, refer to the user documentation for that application to ensure you are entering data correctly.
- If the problem persists, contact your local VeriFone representative.

Transactions Fail to Process

There are several reasons why the terminal may not be processing transactions. Use the following steps to troubleshoot failures.

Check the Magnetic Card Reader

- Perform a test transaction using one or more different magnetic stripe cards to ensure the problem is not a defective card.
- Ensure that you are swiping cards properly. With the VX 675 card reader, the black magnetic stripe on the card should face down and inward, toward the keypad and must be inserted from the top of the terminal (see [Figure 22](#)).
- Process a transaction manually, using the keypad instead of the card reader. If the manual transaction works, the problem may be a defective card reader.
- Contact your VeriFone distributor or service provider.
- If the manual transaction does not work, proceed to [Check the Signal Strength](#).

Check the Smart Card Reader

- Perform a test transaction using several different smart cards to ensure the problem is not a defective card.
- Ensure that the card is inserted correctly and that the card is not removed prematurely.
- Contact your VeriFone distributor or service provider.
- If the manual transaction does not work, proceed to [Check the Signal Strength](#).

Check the Signal Strength

- On-screen signal-strength indicator displays at least one bar to indicate connectivity to radio network.
- Ensure that the radio has been activated by your service provider.

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- ◆ Reorient or relocate the receiving antenna.
- ◆ Increase the separation between the equipment and receiver.
- ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ◆ Consult the dealer or an experienced radio/TV technician for help.

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This device meets the government's requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless device employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands.

Industry Canada statement

- ◆ This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
 - (1) this device may not cause interference, and
 - (2) this device must accept any interference, including interference that may cause undesired operation of the device.

- ◆ Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
 - (1) l'appareil ne doit pas produire de brouillage, et
 - (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

- This Class B digital apparatus complies with Canadian ICES-003.
- Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radiation Exposure Statement:

The product comply with the Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

Déclaration d'exposition aux radiations:

Le produit est conforme aux limites d'exposition pour les appareils portables RF pour les Etats-Unis et le Canada établies pour un environnement non contrôlé.

Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. La réduction aux expositions RF peut être augmentée si l'appareil peut être conservé aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible.

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

- Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.



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San Jose, CA, 95110 USA
1-800-VERIFONE
www.verifone.com

VX 675

Installation Guide

