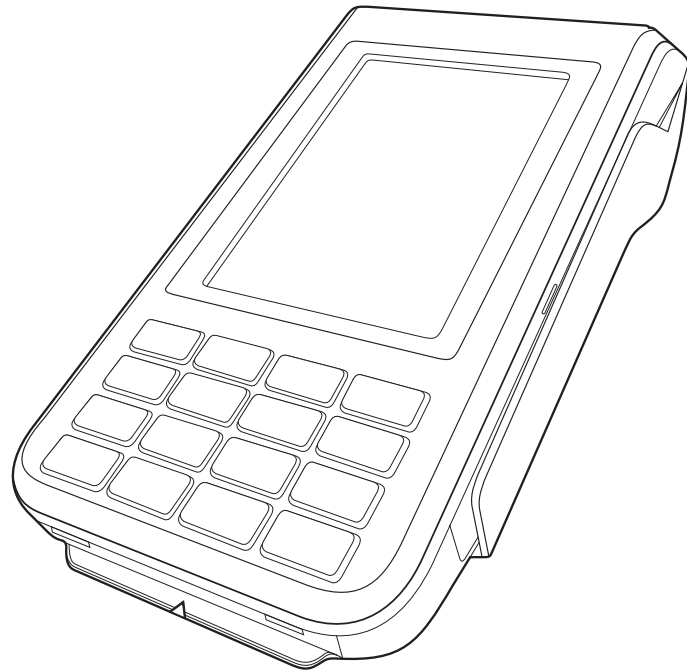


C680 3G-BT-WiFi

Installation Guide



C680 3G-BT-WiFi Installation Guide

© 2016 Verifone, Inc.

All rights reserved. No part of the contents of this document may be reproduced or transmitted in any form without the written permission of Verifone, Inc.

The information contained in this document is subject to change without notice. Although Verifone has attempted to ensure the accuracy of the contents of this document, this document may include errors or omissions. The examples and sample programs are for illustration only and may not be suited for your purpose. You should verify the applicability of any example or sample program before placing the software into productive use. This document, including without limitation the examples and software programs, is supplied "As-Is."

Verifone, the Verifone logo, VeriCentre, and Verix are registered trademarks of Verifone. Other brand names or trademarks associated with Verifone's products and services are trademarks of Verifone, Inc.

All other brand names and trademarks appearing in this manual are the property of their respective holders.

Comments? Please e-mail all comments on this document to your local Verifone Support Team.

DRAFT
REVISION B.6
Verifone®

Verifone, Inc.
1-800-Verifone
www.verifone.com

Verifone Part Number DOC268-063-EN-B, Revision B.6



CONTENTS

PREFACE 5

Audience 5

Organization 5

Related Documentation 5

Conventions and Acronyms 6

 Document Conventions 6

 Acronym Definitions 7

CHAPTER 1
Terminal Overview

 Features and Benefits 10

 Exceptional Ease of Use 10

 Performance and Durability 10

 Security 10

 Communication Technology 10

CHAPTER 2
Setup

 Terminal Location 11

 Ease of Use 11

 Environmental Factors 11

 Electrical Considerations 12

 Contactless Considerations 12

 PIN Protection Measures 12

 Inside the Shipping Carton 12

 Terminal Features 14

 3G Support 15

 CDMA Support 15

 Wi-Fi/BT Support 15

 Installing the SIM/SAM/R-UIM/Micro-SD Cards 15

 Connection Ports 17

 Cabling Connections 17

 Dedicated Micro-USB Device Port Connection 17

 Micro-USB Host Port Connection 17

 Powered RS-232/4-Pin Connection 18

 Powered RS-232/RJ11 Connection 18

 Installing the Paper Roll 18

 Installing the Dongle 19

 Power Supply 20

 Using the Battery 21

 Battery Features 21

 Battery Behavior (No Power Pack) 22

 Manual Startup 22

 Manual Shutdown 22

 Charging the Battery 22

 Battery Life **C680 3G-BT-WiFi** 22

 Conducting Smart Card Transactions 23

 Using the Magnetic Card Reader 23

	Conducting a Contactless Transaction	24
	Wireless Transactions	24
	Bluetooth Transactions	24
	3G and CDMA Connectivity	24
	Dial-up/Ethernet Connectivity	24
	Periodic Inspection	25
CHAPTER 3		
Specifications and Maintenance		
	Power Pack	27
	Temperature	27
	External Dimensions	27
	Maintenance	27
	Cleaning the Terminal	27
	Terminal Contacts	28
	Smart Card Reader	28
CHAPTER 4		
Verifone Service and Support		
	Returning a Terminal for Service	29
	Accessories and Documentation	30
	Dongle	30
	Power Pack	30
	Printer Paper	30
	Verifone Cleaning Kit	30
	Micro-USB Cable	31
	Documentation	31
CHAPTER 5		
Troubleshooting Guidelines		
	Terminal Does Not Start	33
	Does Not Show Correct/Readable Info	33
	Battery Does Not Charge	34
	Blank Display	34
	Printer Does Not Print	34
	Printer Paper Jam	35
	Keypad Does Not Respond	35
	Transactions Fail to Process	35



This guide is your primary source of information for setting up and installing the C680 3G-BT-WiFi terminal.

Audience This guide is useful for anyone installing and configuring a C680 3G-BT-WiFi 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 terminal.

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

Chapter 3, [Specifications and Maintenance](#). Discusses power requirements, dimensions, and how to maintain the terminal.

Chapter 4, [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 5, [Troubleshooting Guidelines](#). Provides troubleshooting guidelines, should you encounter a problem in terminal installation and configuration.

Related Documentation To learn more about the C680 3G-BT-WiFi terminal, refer to the following set of documents:

C680 Certifications and Regulations Sheet	DOC268-061-EN
C680 Quick Installation Guide	DOC268-062-EN
C680 Reference Guide	DOC268-064-EN
C680 3G Certifications and Regulations Sheet	DOC268-065-EN
C680 WiFi-BT Certifications and Regulations Sheet	DOC268-067-EN
C680 WiFi-BT Quick Installation Guide	DOC268-068-EN
C680 CDMA Certifications and Regulations Sheet	DOC268-069-EN
C680 FF Dongle Certifications and Regulations Sheet	DOC268-070-EN
C680 FF Dongle Quick Installation Guide	DOC268-071-EN
C680 TriComm Certifications and Regulations Sheet	DOC268-XXX-XX
C680 TriComm Quick Installation Guide	DOC268-XXX-XX
Verix eVo Volume I: Operating System Programmers Manual	DOC00301
Verix eVo Volume II: Operating System and Communications Programmers Manual	DOC00302




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
HDMI	High-Definition Multimedia Interface
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
RJ11	Registered Jack 11
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



DRAFT
REVISION B.6
Verifone®



Terminal Overview

C680 features a color screen display, fast processor, abundant memory, and PCI 4.0 security.

It is a portable, battery-powered device designed to fit comfortably during handheld consumer-facing applications. It features a 3.5" TFT LCD display and spill-resistant keypad. It supports the GPRS, 3G, CDMA, Wi-Fi, and Bluetooth communications technology.

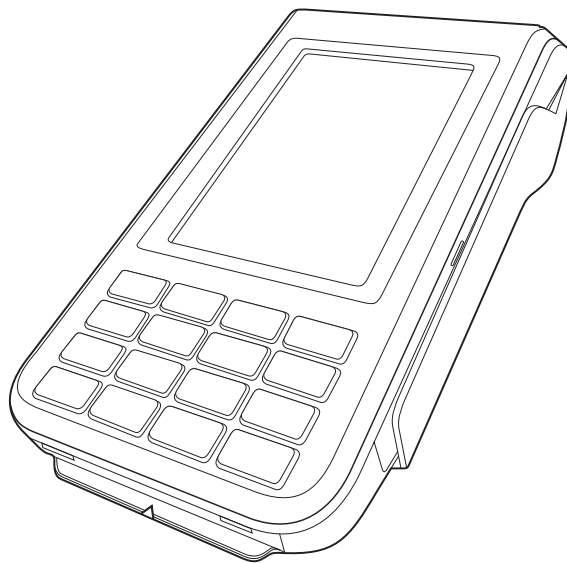


Figure 1 C680 Terminal

NOTE



Verifone ships variants of this terminal for different markets. Your terminal may have a different configuration.

Features and Benefits

This terminal provides the right combination of features and functions including a triple-track magnetic stripe card reader, smart card reader, 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.
- 3.5" TFT LCD display for boundless application possibilities and easy readability under various lighting conditions.
- keypad provides tactile response to simplify usage and minimize finger slips.
- 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 3.7 V, 2450 mAh Li-ion battery.
- Base for drop-and-go charging.
- Rounded corners and drop resistant to 3 feet on concrete floor to minimize breakage.
- 192 MB of memory.

Security

- PCI PED 4.0 approved for debit and other PIN-based transactions.
- EMV Level 1 Type Approval.
- Tamper-resistant construction, SSL protocols, and VeriShield file authentication.

Communication Technology

- GPRS and 3G: Long-range wireless payment for retailers that do not have physical location limitations.
- CDMA: Long-range wireless payment for Non-GPS coverage areas.
- Wi-Fi: Ideal for retailers who need multiple wireless devices and have existing IP infrastructure.
- Bluetooth: Simple, plug-and-play installation for locations that need short-range wireless capability.

Setup

This chapter describes the terminal setup procedures for:

- Terminal Location
- Inside the Shipping Carton
- Terminal Features
- Installing the SIM/SAM/R-UIM/Micro-SD Cards
- Connection Ports
- Installing the Paper Roll
- Installing the Dongle
- Power Supply
- Using the Battery
- Battery Behavior (No Power Pack)
- Charging the Battery
- Conducting Smart Card Transactions
- Using the Magnetic Card Reader
- Conducting a Contactless Transaction

Terminal Location

Use the following guidelines when selecting a location for the terminal.

Ease of Use

- Select a location convenient for both merchant and cardholder.
- Select a flat support surface, such as a countertop or table.
- Select a location near a power outlet, ECR, or computer connected to the terminal. Do not string cables or cords across a walkway for safety.

Environmental Factors

- Do not use where there is high heat, dust, humidity, moisture, or caustic chemicals or oils.
- Keep away from direct sunlight and anything that radiates heat, such as a stove or motor.

- Do not use outdoors.

CAUTION

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

Electrical Considerations

- Avoid using the unit 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 near water or in moist conditions.
- Disconnect the device from its POS terminal before cleaning.

WARNING

Do not use near water, including a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool to avoid shock or damage.

Contactless Considerations

Avoid having metallic objects in proximity of the contactless antenna. If you need to mount the terminal to vertical or inclined surfaces, use a flat, non-metallic mounting plate.

PIN Protection Measures

The C680 is a handover device. Always exercise extreme caution when conducting transactions, specially during PIN entry.

- Hand the terminal directly to the cardholder for PIN entry.
- Encourage the cardholder to hold the terminal close to avoid others from seeing the information being entered.

Ensuring User Privacy

Use the following guidelines to protect the user's privacy when he enters his personal identification number (PIN):

- The area of visibility should be no larger than a cone taken from the number 5 key at an angle of 45° and covering an area of 270° directly in front of the user.

Inside the Shipping Carton

Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage. The terminal is a secure product. Tampering causes it to cease to function or to operate in an unsecured manner.

Unpacking the Shipping Carton

To unpack the shipping carton:

- 1 Remove and inspect the following items:
 - Terminal
 - Power pack
 - Paper roll

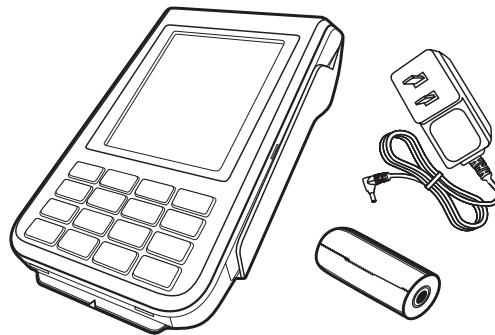


Figure 2 Items Inside the Box

- 2 Remove all plastic wrapping from the terminal and other components.
- 3 Remove the clear protective film from the LCD screen.
- 4 Save the shipping carton and packing material for future repacking or moving the terminal.



CAUTION Do not use a unit 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.

Terminal Features

Familiarize yourself with the terminal features before continuing with the installation process:

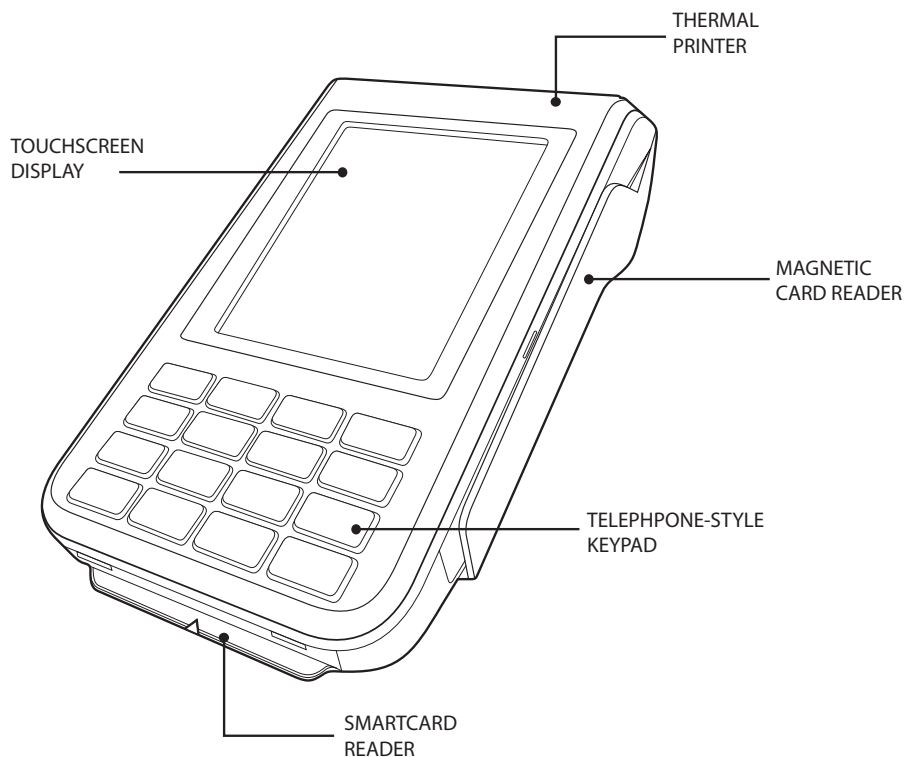


Figure 3 C680 Terminal Features

NOTE



Verifone ships variants of C680 terminals to different markets. Your terminal may have a different configuration from the features described in this section.

The unit offers the following features:

- A 3.5" touch screen, TFT LCD display.
- A set of keys that include:
 - a** A 12-key, telephone-style keypad (keypads may vary in style).
 - b** Four color-coded function keys from top to bottom (POWER, CANCEL, CLEAR, ENTER).
- A magnetic card reader, built into the right side. An icon illustrates the proper card 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. An icon indicates the proper card position and insertion point.
- A SAM (Security Access Module) compartment, built into the bottom of the terminal inside the back compartment.

3G Support The 3G variant uses Gemalto EHS6 radio module that incorporates 3G High-Speed Packet Access (HSPA) connectivity.

CDMA Support The CDMA variant uses Telit CE910-SC module, a single-band 800 MHz CEMA 1XRTT wireless module designed for APAC networks requiring R-UIM card technology.

Wi-Fi/BT Support The Wi-Fi/BT integrated module variant uses Broadcom BCM43340 single chip solution, which provides SDIO interface for Wi-Fi 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 the Bluetooth wireless systems.



C680 TriComm variant features Wi-Fi, BT, and 3G connectivity.

Installing the SIM/SAM/R-UIM/Micro-SD Cards

You may need to install or replace a GSM SIM (Subscriber Identity Module) or R-UIM (Removable User identity Module) card, one or two SAM (Security Access Module) cards, or a micro-SD card.

To Install or Replace a SIM Card

- 1 Ensure that the terminal is turned off.
- 2 Place the terminal upside down on a soft, clean surface to protect the lens from scratches.
- 3 Gently push the compartment cover's locking mechanism to release. Lift and remove the cover.

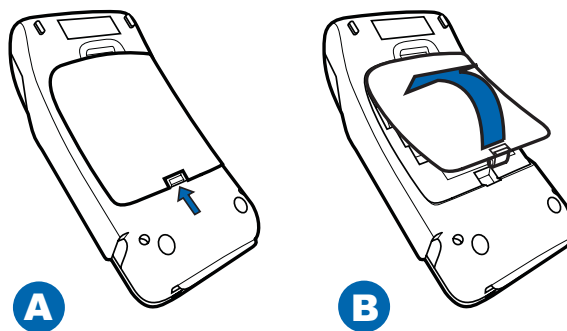


Figure 4 Remove Terminal Back Cover

- 4 Lift the battery pack.

- 5 Remove the card slot cover by pushing the movable side of of the terminal with your finger or by using a screw driver to release.

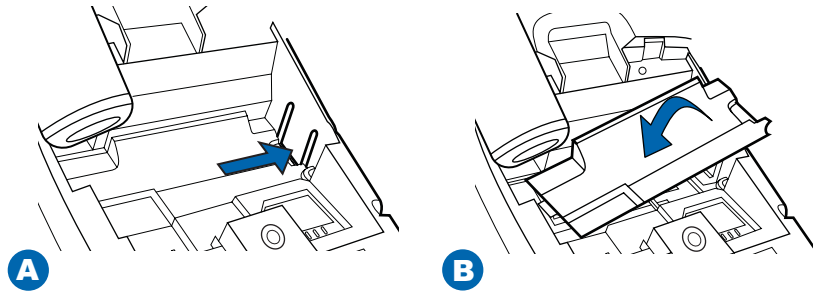


Figure 5 Remove Card Slot Cover

- 6 With the gold contacts facing down, insert the SIM/SAM/R-UIM card into the cardholder.

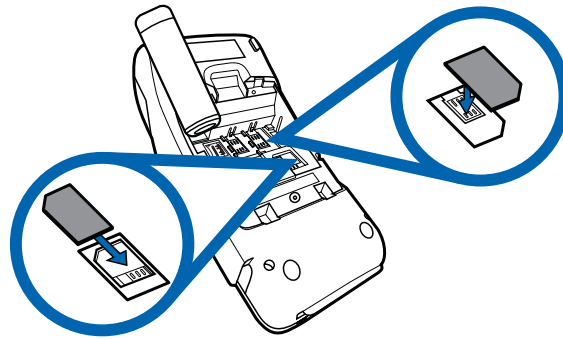


Figure 6 SIM/SAM Card Installation

For micro-SD card, slide down the card slot cover to open. Insert the SD card facing down and slide back the slot cover to lock.

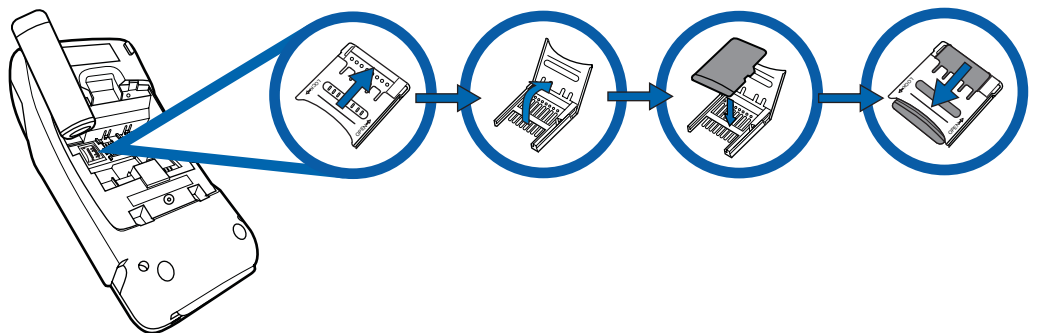


Figure 7 SD Card Installation

- 7 Return the card card slot cover.
- 8 Return the battery pack to its original position.
- 9 Close and screw the back compartment cover.

Connection Ports

The terminal has one primary micro-USB port on the side used for power and/or download.

There is another micro-USB connector USB Host located at the back of the terminal for peripheral connection. Powered RS-232 is supported via RJ11 for modem connection, and via a 4-pin connector debug and OS download.

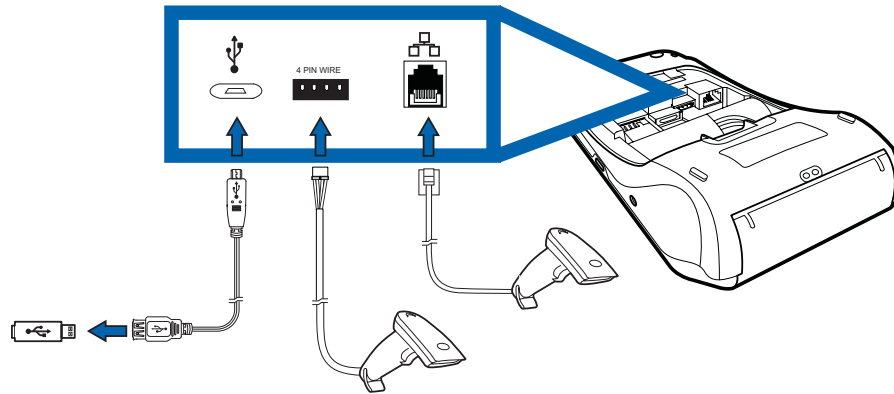


Figure 8 Connection Ports

Cabling Connections

The following are cabling scenarios for your unit:

- 1 Dedicated Micro-USB Device Port Connection
- 2 Micro-USB Host Port Connection.
- 3 Powered RS-232/4-Pin Connection.
- 4 Powered RS-232/RJ11 Connection

Dedicated Micro-USB Device Port Connection

The micro-USB Device port on the side of the unit is dedicated to download/power charging. Insert the micro-USB plug end of the Host connector cable to the micro-USB port on the terminal to connect.

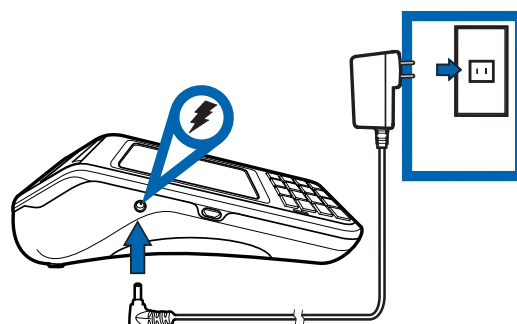


Figure 9 Dedicated Micro USB Device Port

Micro-USB Host Port Connection

The micro-USB Host port on the back of the unit is used for connecting peripheral devices. Insert the micro-USB plug end of the peripheral cord to the micro-USB port on the back of the terminal to connect.

Powered RS-232/4-Pin Connection

The powered RS-232/4-pin connector on the back of the terminal is mainly designed for 1D/2D barcode scanner.

Powered RS-232/RJ11 Connection

Similar to 4-pin connection, powered RS-232/RJ11 connector on the back of the terminal is designed for 1D/2D barcode scanner.

Installing the Paper Roll

A fast, quiet thermal printer is built into the 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 40 mm single-ply, thermal-sensitive paper. 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.



CAUTION 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 and handle 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 top of the terminal to unlock the paper roll cover.

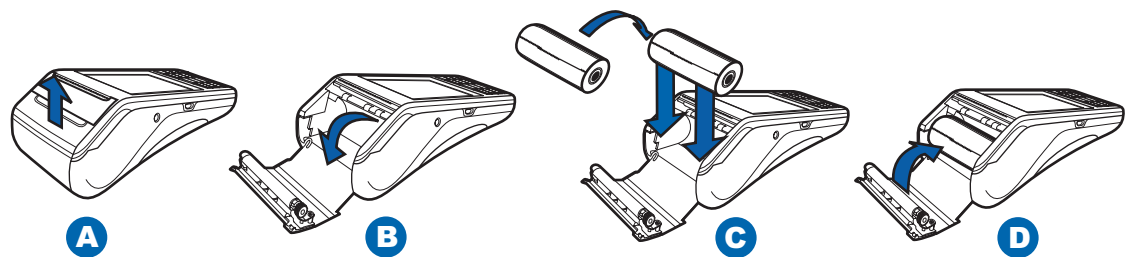


Figure 10 Paper Roll Installation

- 2 Lift the printer cover up to open.
- 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.
- 6 Drop the paper roll into the printer tray.
- 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.

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

Installing the Dongle

C680 Dongle is supported in some countries. It provides dial-up/Ethernet connectivity and offers USB and peripheral devices connection. It is shipped together with a retrofitted terminal cover to accommodate the Dongle's Y cable.

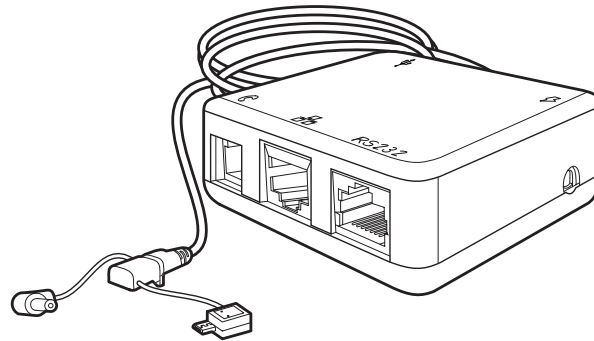


Figure 11 C680 Dongle

To install the Dongle:

- 1 Remove the terminal's original back cover to access the ports.
- 2 Insert the Dongle's micro-USB connector to the terminal's micro-USB port and connect the power barrel connector to the power port on the side of the terminal.

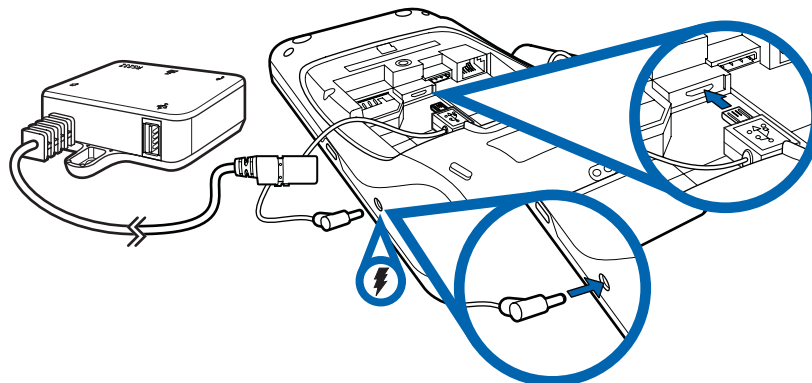


Figure 12 Micro-USB and Power Connection

- 3 Replace the original cover with the new retrofitted cover and slide it back in place to unexpose the ports. Screw to secure.

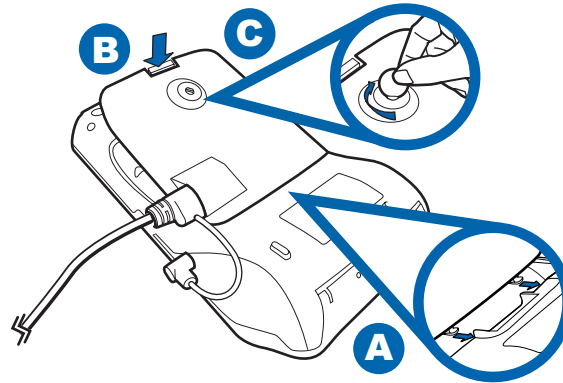


Figure 13 Replacing Old Cover with Retrofitted Cover To Close

- 4 Plug the power pack to the power outlet to prepare the Dongle for the necessary connections (dial-up, LAN, peripheral device, and USB). See [Power Supply](#) for more information.

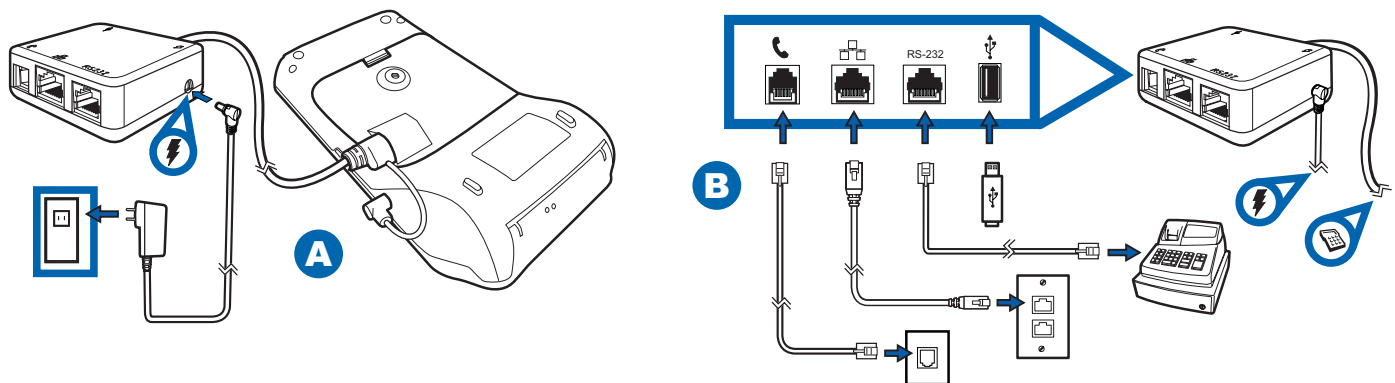


Figure 14 Plugging the Dongle to the Power Outlet and Supported Connections to the Dongle

Power Supply

After establishing all necessary connections, connect the power pack to the terminal and into a wall outlet or powered surge protector to charge the battery for six hours or until fully charged.



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 C680 terminal comes with power supply (VPN PWRXXX-001-XX-A) used to connect the terminal directly to a power outlet and to charge the battery.

The C680 unit comes with a universal input power pack capable of operating from voltages of 100 V to 240 V AC.



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.

Using the Battery

The C680 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).



The C680 terminal will only operate when the battery is installed.

Battery Features

The following are features of the battery:

- Single cell Li-ion 2450 mAH battery pack.
- 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.



- C680 battery pack (PN BPK260-001-01-A) not customer changeable and therefore should not be disconnected and removed.
- 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.
- 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 C680 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 C680 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 *C680 Reference Guide – VPN DOC269-004-EN*.

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 C680 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 *C680 Reference Guide – VPN VPN DOC269-004-EN*).
- The screen is blank when the terminal has no power.

Charging the Battery

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.

NOTE



The 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 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.



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.

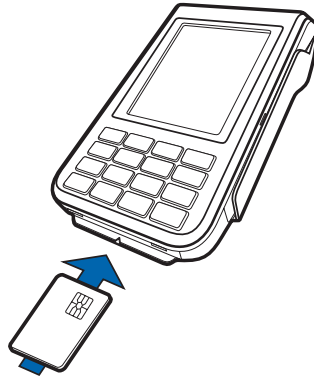


Figure 15 Smart Card Transaction

- 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.



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 C680 terminal supports credit/debit card transactions.

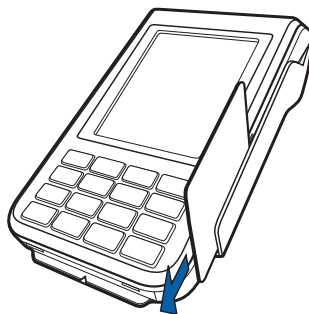


Figure 16 Credit/Debit Card Transaction

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.

Conducting a Contactless Transaction

- 3 Swipe the card through the magnetic card reader.

The C680 terminal supports contactless transactions through an integrated contactless module. The terminal only becomes active for contactless smart card transactions when initialized by an application.



Figure 17 Conducting Contactless Transactions

To Conduct a Contactless Transaction

- 1 Gently tap the card onto or hold the card (within 4 cm) against the surface of the display.
- 2 An activated LED visual on the display accompanied by a short beeping sound indicates a successful transaction.

Wireless Transactions

To conduct a wireless transaction, ensure that the terminal is in optimal position for transmitting. Follow the on-screen instructions provided on your application.

Bluetooth Transactions

To conduct a Bluetooth transaction, ensure that the terminal is paired with another Bluetooth device not more than 100 meters away. Follow the on-screen instructions provided on your application.

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

3G and CDMA Connectivity

To connect to existing 3G/CDMA operator-provided infrastructure, check that valid SIM is inserted. See [Installing the SIM/SAM/R-UIM/Micro-SD Cards](#).

Dial-up/Ethernet Connectivity

There are specific markets that require the use of a C680 FF Dongle, which provides dial-up/Ethernet connectivity. When these are properly configured, connection to the network is made available.

- 1 Check that the Dongle is properly installed. See [Installing the Dongle](#) for more information.
- 2 Ensure that RJ11 cable is plugged to the telephone port on the Dongle and the other end is plugged to the telephone jack on the wall.

- 3 Ensure that RJ45 cable is plugged to the LAN port on the Dongle and the other end is plugged to the network port on the wall.
- 4 Ensure that connections are properly created and configured before connecting.

Periodic Inspection

Periodically inspect the terminal for possible tampering. Signs of tampering include:

- Wires protruding out of the device.
- Foreign objects inserted into the smart card or mag stripe slot.
- Signs of damage to the tamper-evident labels.
- Warning message on the device display.

NOTE

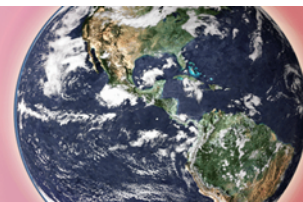


If any device is found in tamper state, please remove it from service immediately. Keep it available for potential forensics investigation and notify your company security officer and your local Verifone representative or service provider. For contacting Verifone, refer to [Verifone Service and Support](#).

DRAFT
REVISION B.6
Verifone®

DRAFT
REVISION B.6
Verifone®





Specifications and Maintenance

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

Power Pack 5 VDC 2.2 A (11W), compliant with ERP/EUP Stage 2.

- a** Input rated: 100-240 VAC, 50/60 Hz
- b** Output rated: 5 VDC 2.2 A

Temperature Operating Environment

- Temperature: -5 C to 40 C (23 F to 104 F)
- Relative humidity: 5% to 95% RH non-condensing

Non-Operating Environment

- temperature: -20 C to 50 C (-4 F to 122 F)
- Relative humidity: 5% to 95% RH non-condensing

External Dimensions

- Length: 172.86 mm (6.8 in)
- Width: 82.25 mm (3.2 in)
- Depth: 59.3 mm (2.3 in)
- Weight: 352 g

Maintenance The C680 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. These 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 battery stay clean and unbent.

CAUTION



Avoid touching the contacts of the 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.

DRAFT
REVISION B.6
Verifone®

Verifone Service and Support

For terminal problems, contact your local Verifone representative or service provider. For 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 terminal or base to Verifone, you must obtain an MRA number. The following procedure describes how to return one or more 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* C680 terminal or base to be returned:
 - Product ID, including the model and part number. For example, “C680” and “MXXX-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 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 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 terminal).

Accessories and Documentation

Verifone produces the following accessories and documentation for the 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

Dongle

The Dongle or the Y cable solution provides dial-up/Ethernet connectivity. It supports a Host port, a serial port, an Ethernet port, and a dial-up modem port.

VPN XXXXX-XXX-XX-X	C680 Dongle
--------------------	-------------

Power Pack

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

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

Printer Paper

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
--------------	--------------

Micro-USB Cable

VPN SUB265-001-01-A

Micro-USB service dongle

Documentation

C680 Certifications and Regulations Sheet	DOC268-061-EN	
C680 Quick Installation Guide	DOC268-062-EN	
C680 Reference Guide	DOC268-064-EN	
C680 3G Certifications and Regulations Sheet	DOC268-065-EN	
C680 WiFi BT Certifications and Regulations Sheet	DOC268-067-EN	
C680 WiFi BT Quick Installation Guide	DOC268-068-EN	
C680 CDMA Certifications and Regulations Sheet	DOC268-069-EN	
C680 FF Dongle Certifications and Regulations Sheet	DOC268-070-EN	
C680 FF Dongle Quick Installation Guide	DOC268-071-EN	
Verix eVo Volume I: Operating System Programming Manual	DOC00301	
Verix eVo Volume II: Operating System and Communications Programmers Manual	DOC00302	

DRAFT
REVISION B.0
Verifone®

DRAFT
REVISION B.6
Verifone®



Troubleshooting Guidelines

The troubleshooting guidelines provided in the following section are included to help you install and successfully configure the device. Typical examples of malfunction you may encounter while operating the device 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 device comes equipped with tamper-evident labels. It does not come with user serviceable parts. Do not, under any circumstance, attempt to disassemble the device. Perform only the 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 and Maintenance](#), for detailed power supply specifications.) Obtain the appropriately rated power supply before continuing with troubleshooting.

Terminal Does Not Start

If the 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.

Does Not Show Correct/Readable Info

If the terminal does not show the correct/readable information:

- Recharge or replace the battery.
- Connect the 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 terminal's battery must initially receive a full charge to ensure proper operation.

- Allow the 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 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 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 terminal display screen does not show the 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 C680 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.
- 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.

DRAFT
REVISION B.6
Verifone®



Verifone, Inc.
1-800-Verifone
www.verifone.com

DRAFT
REVISION B.6
Verifone®

C680

Installation Guide

