

V^x810CTLS

Installation Guide



V*810CTLS Installation Guide
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This guide is the primary source of information for setting up and installing Vx810CTLS.

Audience

This guide provides simple descriptions of Vx810CTLS features, as well as basic information for the installation and configuration of the Vx810CTLS.

Organization

This guide is organized as follows:

Chapter 1, Overview. Provides an overview of the Vx810CTLS.

Chapter 2, Setup. Explains setup and installation of Vx810CTLS, selecting a location and establishing connections with other devices.

Chapter 3, Specifications. Discusses power requirements and dimensions of the Vx810.

Chapter 4, Maintenance and Cleaning. Explains maintenance of the Vx810CTLS.

Chapter 5, Service and Support. Provides information on contacting your VeriFone service provider and information on how to order accessories or documentations 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 Vx810CTLS, refer to the following set of documents:

Vx810 Certification and Regulation Sheet	VPN 24960
Vx810 Quick Installation Guide	VPN 24961
Vx810 Reference Guide	VPN 24964
Vx810 Privacy Shield Quick Installation Guide	VPN 24965
Vx810 Stand Adapter Quick Installation Guide	VPN 24966

Guide 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 references.	See Guide Conventions .
<i>Italics</i>	Italic typeface indicates book titles or emphasis.	You <i>must</i> not use this unit underwater.
NOTE 	The pencil icon is used to highlight important information.	RS232-type devices do not work on the Vx810CTLS communication port.
CAUTION 	The caution symbol indicates hardware or software failure, or loss of data.	The unit is not waterproof or dustproof, and is intended for indoor use only.
WARNING 	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
AES	Advanced Encryption Standard Algorithm
API	Application Programming Interface
ARM	Advanced RISC Machines
CAPK	Certification Authority Public Key as in the EMV standard
CBC	Cipher Block Chaining mode, as defined in ANSI X3.106
COG	Chip on Glass
COGS	Cost of Goods Sold
CTS	Clear to Send
DEA/DES	Data Encryption Algorithm/Standard, as defined in ANSI X3.92
DUKPT	Derived Unique Key Per Transaction Method as defined in the VISA's POS Equipment Requirement: PIN processing and Data Authentication, International Version 1.0, August 1988
ECB	Electronic Code Book mode, as defined in ANSI X3.106
ECR	Electronic Cash Register
EMV	Joint Europay, MasterCard and Visa Standard
ERS	Engineering Requirements Specification

Table 2 **Acronym Definitions** (continued)

Acronym	Definitions
GID	Group Identifier - Concept inherited from Verix terminals file system
HDLC	High-level Data Link Control
ICC	Integrated Chip Card (Smart Card)
LCD	Liquid Crystal Display
MAC	Message Authentication Code, as defined in ANSI X9.19
MMU	Memory Management Unit
MSAM	Multiple Secure Access Module
MSR	Magnetic Stripe Reader
OS	Operating System
PED	PIN Entry Device
PIN	Personal Identification Number
POS	Point-of-Sale
PRD	Product Requirement Document
PSCR	Primary Smart Card Reader
RFID	Radio Frequency Identification
RTS	Ready to Send
SOC	System on Chip
SAM	Secure Access Module
SC	Smart Card (Integrated Chip Card)
SD	Secure Digital
SDK	Software Development Kit
SL3	Security Level 3 and 4
SR	Ship Release
SRAM	Static Random Access Memory
STN	Super Twisted Nematic
UI	User Interface
USB	Universal Serial Bus
VSS	VeriShield Security Scripts

V^x810 Overview

This chapter provides a brief description of the V^x810. The V^x810 is a customer-facing premium PIN pad brought about by VeriFone's innovative Purpose Inspired Design program which focuses on real-world usage.

Apart from its sleek, compact, and functional design, the V^x810 features a triple-track, high coercivity magnetic stripe reader (MSR) and a Smart Card reader, both built and proven to perform consistently, even under the heaviest volumes. It also has an SD card slot for supporting application download via SD memory card. The SD card slot also serves as an SDIO expansion port to simplify upgrades to contactless or other emerging technologies – without replacing the PIN pad.

The V^x810 also offers an array of connectivity options all from a single port (including serial, USB, or optional Ethernet) so you can connect to almost any device or ECR. Plus, the V^x810 gives you the option to add a base unit with a printer and modem to create a fully-loaded payment solution with a hand-over PIN pad – all in one single device.



Figure 1 **The V^x810**

NOTE



VeriFone ships variants of the V^x810 for different markets. Your device may have a different configuration. For example, the V^x810 may or may not have a PSCR; it may or may not have an MSR; it may have none or 3 SAMs; flash ROM size may be from 4MB, to 8MB or 16MB; and SRAM size may be from 2MB to 4MB. However, the basic processes described in this guide remain the same, regardless of configuration.

Features and Benefits

Acclaimed Vx Solutions Reliability and Security Guarantees Extra Protection

- Runs on Verix-based platform, proven in millions of VeriFone V^x Solutions installed worldwide.
- Has exceptionally reliable magnetic stripe and smart card readers to reduce read errors.
- Is PCI-PED approved for secure, reliable PIN entry on debit transactions.
- Has received EMV Level 1 and 2 Type Approval for smart card transactions.
- Provides end-to-end SSL security and supports the latest security options – including 3DES encryption, and Master/Session and DUKPT (Derived Unique Key Per Transaction) key management.
- Relies on VeriShield file authentication to help stop fraud and misuse, such as downloading rogue files or physical tampering.
- Hardware and software application separation minimizes or eliminates the need to re-certify existing payment applications every time an application is added or modified.

Flexibility and Future-Proofing Can Put You Years Ahead to Safeguard Your Investment

- Includes an SD card slot for supporting application download via SD memory card. The SD card slot also serves as an SDIO expansion port to simplify upgrades to contactless (the V^x810 CTLS) or other emerging technologies – without replacing the PIN pad.
- Provides for a wide range of connectivity via a single connector – including RS-232, USB, and optional Ethernet – to accommodate nearly any ECR and fit most merchant needs.
- Offers the option of adding a base unit (the V^x810 DUET) that transforms the V^x810 PIN pad into an all-in-one countertop payment solution with thermal printer, modem, Ethernet, USB, and serial ports.
- Extensive memory (6 MB standard, 12 MB or 20 MB optional) to support multiple applications, including revenue-producing value-added solutions.
- Uses a 200 MHz, 32-bit, ARM 9 processor for trouble-free multitasking.

Setup

This chapter describes the setup procedure for V^x810, in the following sections:

- Selecting Location
- Unpacking the Shipping Carton
- Examining the V^x810 Features
- Installing/Replacing MSAM Cards
- Options
- Cable Connections
- Power Supply
- Using the Primary Smart Card Reader
- Using the Magnetic Stripe Card Reader
- Using the SDIO Contactless Module

Selecting Location

Use the following guidelines to select a location for the V^x810.

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 and the other VFI device, ECR, or computer connected to the V^x810. For safety, do not string cables or cords across a walkway.

Environmental Factors

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

CAUTION



The device is not waterproof or dustproof, and is intended for indoor use only. Any damage to the device from exposure to rain or dust can void 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 Vx810 near water or in moist conditions.

WARNING

Due to risk of shock or damage, do not use the Vx810 near water, including a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.

Unpack Shipping Carton

Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage. The Vx810 is a secure product and any tampering can cause it to cease to function or to operate in an unsecured manner.

- 1 Remove and inspect the contents of the shipping carton, since the Vx810 ships in multiple configurations, the carton may include any or all of the following:
 - Vx810CTLS
 - Data cable
 - Power pack
 - Power cord
 - ECR cable
 - Privacy shield
- 2 Remove all plastic wrapping from the terminal and components.
- 3 Remove the clear protective film from the display.
- 4 Save the shipping carton and packing material for future repacking or moving of the device.

WARNING

Do not use a unit that has been tampered with or damaged.

The Vx810 comes equipped with tamper-evident labels. If a label or component appears damaged, please notify the shipping company and your VeriFone service provider immediately.

Examine V^x810 Features

Before you continue with the installation process, familiarize yourself with the V^x810 features:

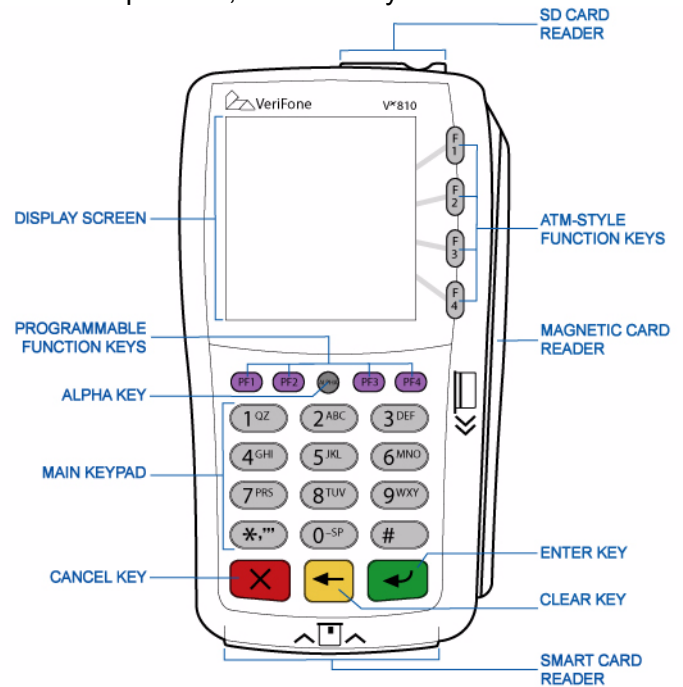


Figure 2 V^x810 Features

The V^x810 includes the following features:

- A **display**.
- Three types of keys:
- Keypad matrix for **four ATM-style** keys and **four Function** keys.
- **Alpha** key for entering text.
- Three **color-coded function keys** below the keypad (CANCEL [RED], BACKSPACE [YELLOW], ENTER [GREEN]).
- A **magnetic card reader**, built into the top side. An icon shows the proper swipe direction, with the stripe facing down and towards the keypad.
- A **smart card reader**, built into the unit's front side. An icon indicates the proper card position and insertion direction. (Optional)
- A **SAM (Security Access Module) compartment**, built into the back side of the unit. The V^x810 contains multiple-SAM (MSAM) cardholders to support multiple stored-value card programs or other merchant card requirements. (Optional)

Install/Replace MSAM Cards

You may need to install one or more multiple security access module (MSAM) cards or replace the old cards.



CAUTION Observe standard precautions in handling electrostatically sensitive devices. Electrostatic discharges can damage the equipment. VeriFone recommends using a grounded anti-static wrist strap.

To change or install MSAMs

- 1 Remove the data cable from the back of the unit.
- 2 Place the V×810 facedown on a soft, clean surface to protect the lens from scratches.
- 3 Loosen the retaining screw. The restraining screw is captive, which means that it cannot be fully removed from the slot.

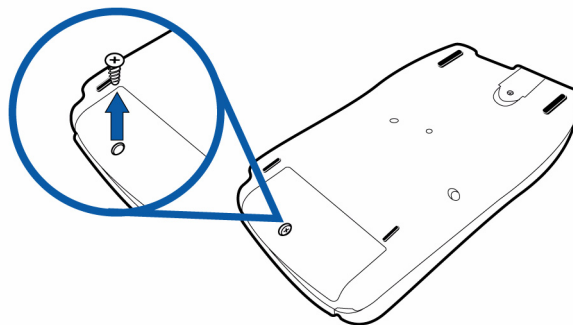


Figure 3 MSAM Compartment Door and Locking Screw

- 4 Lift open the compartment door. The MSAM cardholders are now accessible. Each cardholder consists of a slot inboard of a numbered tray.

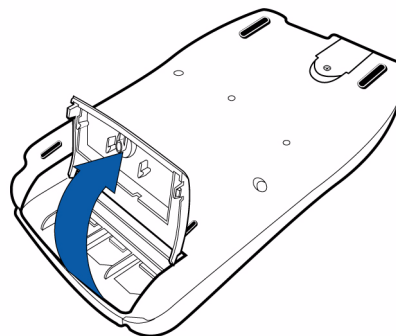


Figure 4 Opening MSAM Compartment Door



NOTE Before inserting the MSAM card, position it as shown in [Figure 5](#), with the card's gold contacts facing away from you, toward the unit. The cardholder slot in the V×810 has a set of contacts. The MSAM card has a notch on one corner to ensure that it fits into the connector base in only one way; the V×810 has a matching notch cast into the backside of the MSAM compartment door to ensure the MSAM card is positioned correctly when the cover is closed.

- 5 Install the MSAM card by aligning the card to match the embossed number and carefully sliding it into the slots until fully inserted.

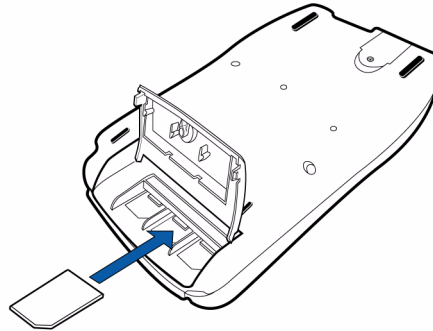


Figure 5 MSAM Insertion

- 6 Close the MSAM compartment door and tighten the locking screw.

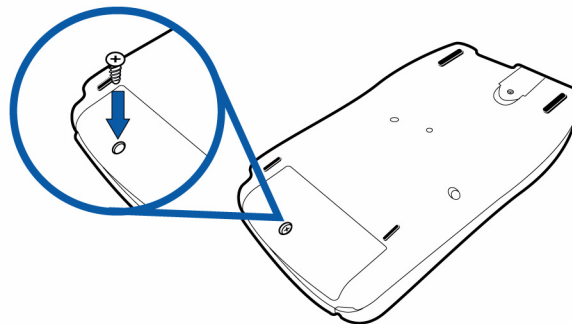


Figure 6 Closed MSAM Compartment

Options

VeriFone ships variants of the Vx810 for different markets. Your device may have a different configuration. Additionally, these variants can be ordered with different options.

SDIO Contactless Module

This SD card slot on the Vx810 also serves as an SDIO expansion port for installing an optional SDIO contactless module used for contactless smart card transactions.

Installing the SDIO Contactless Module

To install the SDIO contactless module:

- 1 Place the device facedown on a soft, clean surface to protect the lens from scratches.
- 2 Insert the SD card of the RFID canopy into the SD card slot of the Vx810.



Figure 7 Sliding the RFID Canopy

- 3 Install the metal plate onto the back of the RFID canopy and Vx810. Use the locking screws to lock the metal plate into position.



Figure 8 Installing the Metal Plate



Figure 9 Installed SDIO Contactless Module

NOTE



Proper care to ensure that the contactless module is working properly includes:

- Preventing the module from coming into contact with other metallic surfaces while in use.
- Turning off the module when not in use.

Privacy Shield This figure shows an example of a Vx810 with the privacy shield installed.



Figure 10 Installed Privacy Shield

Cable Connections

The Vx810 has six general cabling scenarios, depending on what the Vx810 connects to:

- 1 Connection to another VeriFone Terminal
- 2 RS232 Connection using an External Power Brick
- 3 Direct USB Connection
- 4 USB-Download Support using an External Power Brick
- 5 Terminal using a PoweredUSB connection
- 6 Ethernet Connection with External Power Brick



CAUTION Using an incorrectly rated power supply can damage the unit or cause it not to work properly. Use only a power pack with VPN CPS11212-3A-(R) (see [Specifications](#) for detailed power supply specifications).

Connection to another VeriFone Terminal

The V^x810 connects to a VeriFone terminal via a straight cable. There is a minimum power requirement for the V^x810, currently specified as 3.5W. In cases where the terminal is only able to provide a 7 V DC output to power the V^x810, the terminal must be able to source at least 0.5 A of current. Otherwise, proper functioning of the V^x810 is not guaranteed.

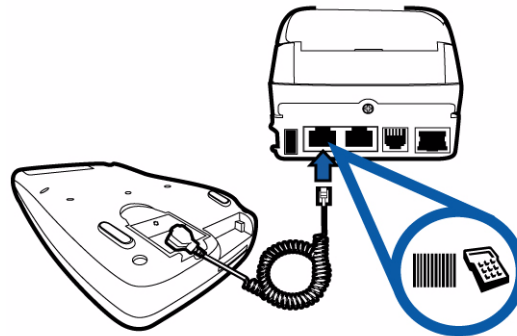


Figure 11 V^x810 Connected to Another VeriFone Terminal

RS232 Connection using an External Power Brick

A special dongle cable is used, where one end of the cable plugs into the V^x810 while the other end terminates in a DB-9 connector housing. On the housing, a DC jack is provided to connect to an external power brick. This is a generic cable for all RS232-based hosts.

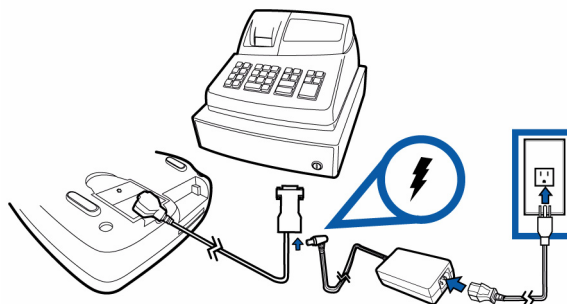


Figure 12 V^x810 with an RS232 Connection Using an External Power Brick

Direct USB Connection Similarly, a dongle cable is required in standard USB environments. For this cable option, the host end has a molded housing which exposes the standard USB plug.

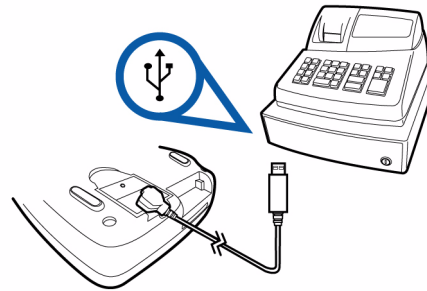


Figure 13 Direct USB Connection

USB-Download Support using an External Power Brick This cable option comes with a junction box that provides a mini-style Type B USB socket for connecting to the USB-based host and a DC jack for external power connection.

In addition, a Type A USB socket is provided on the junction box to support application download via a USB thumb drive.

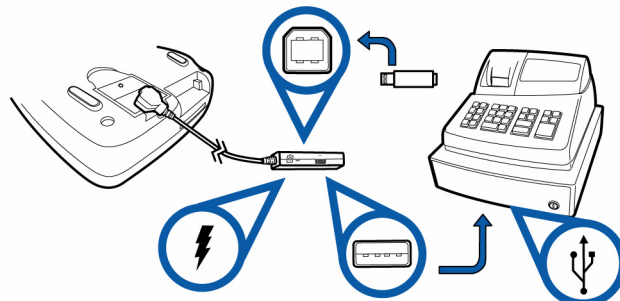


Figure 14 Vx810 Connected to a USB with Download Support

Terminal using a PoweredUSB connection For a USB-based host with PoweredUSB feature, a straight cable is all that is required. The Vx810 supports the 12 V DC option.

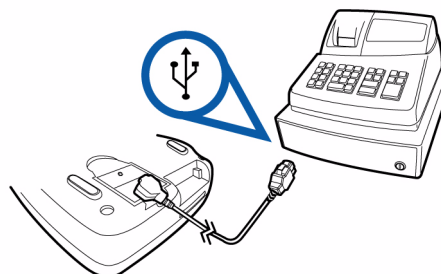


Figure 15 PoweredUSB Connection

Ethernet Connection with External Power Brick

The cable required junction box that provides a standard RJ-45 LAN socket and a DC jack. However, since most hosts do not support peer-to-peer LAN connection to a PIN pad, an additional RJ-45 socket is provided on the junction box to allow a direct connection between V^x810 and the host.

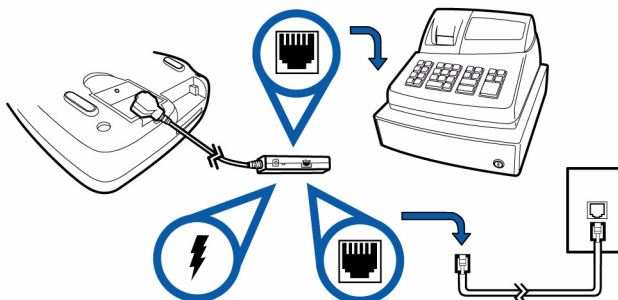


Figure 16 Ethernet Connection with External Power Brick

Power Supply

Not all V^x810 configurations and device contexts require the use of a power supply – VeriFone ships power supplies with the V^x810 as required.

If you have changed the context in which the V^x810 is used or have questions about which power supply should be used, contact your VeriFone representative.



CAUTION Using an incorrectly rated power supply can damage the unit or cause it not to work properly. Use only a power pack with VPN CPS11212-3A-(R) (see [Specifications](#) for detailed power supply specifications).

Before connecting a power supply, disconnect the power pack cord from the power outlet.

Connect and route all cables between the V^x810, ECR, and PC before plugging the power pack cord into a wall outlet or surge protector.



WARNING Do not plug the power pack into an outdoor outlet or operate the V^x810 outdoors. Also, disconnecting power during a transaction can cause transaction data files not yet stored in memory to be lost.



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

When the V^x810 has power and an application is loaded, the application starts after the initial VeriFone copyright screen and displays a unique copyright screen. If no application is loaded, **DOWNLOAD NEEDED** appears on the display after the initial VeriFone copyright screen.

Smart Card Reader Use

The smart card transaction procedure can vary depending on the application. Verify the proper procedure with your application provider before performing a smart card transaction.

To Conduct a Smart Card Transaction

- 1 Position the smart card with the gold contacts facing upward (see [Figure 14](#)).
- 2 Insert it into the smart card reader slot in a smooth, continuous motion until it seats firmly.
- 3 Remove the card when the display indicates the transaction is completed.

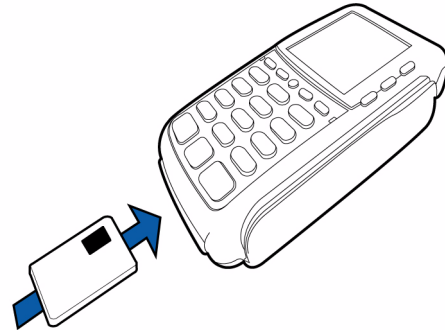


Figure 17 Smart Card Reader Use



Leave the smart card in the card reader until the transaction is completed. Premature removal can void the transaction.

Magnetic Card Reader Use

The V^x810 has a magnetic card reader that uses a triple track stripe reader. This gives the unit greater reliability over a wide range of swipe speeds and operating environments.

To Conduct a Credit/Debit Card Transaction

- 1 Position a magnetic card with the stripe facing the keypad.
- 2 Swipe it through the magnetic card reader.

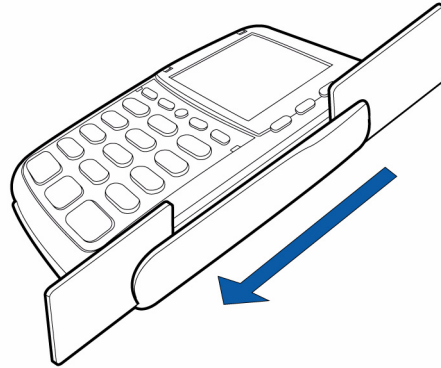


Figure 18 Magnetic Card Reader Use

Using the SDIO Contactless Module

To conduct a contactless smart card transaction:

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



Figure 19 Contactless Smart Card Reader Use

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Specifications

This chapter describes the technical specifications for the Vx810 device.

Product Specifications

Model	Vx810
Processor	200 MHz Samsung S3C2410 ARM920 32-bit microprocessor
Flash ROM	4MB installed (expandable to 8MB or 16MB)
SRAM	2MB installed (expandable to 4MB)
Operating System	Verix V platform. Built specifically to provide true and secure multi-application capability, as well as dynamic memory allocation and file authentication.
Display	128 x 128 pixel (2.75-inch) graphical LCD with high-contrast white backlighting. Supports 16 lines x 21 characters with standard font set.
Magnetic Card Reader	(Optional) Triple-track. High coercivity. Bi-directional. Compliant to ISO 7810 and ISO 7811.
Primary Smart Card Reader	(Optional) Support for ISO 7816, 1.8V, 3V, 5V or synchronous and asynchronous cards. EMV Level 1 and Level 2 Type approved.
SAM Card Reader	(Optional) 1-3 Security Access Modules.
SD Card Reader	Support for standard SD memory card.
SDIO Contactless Module	(Optional) Wireless Dynamics SDiD 1050 RFID Canopy with RFID SD Card. <ul style="list-style-type: none">• Reading range: 0 to 4 cm.• Support for ISO 14443 A&B, Mifare, NFC, and FeliCa card types.• Support for standard payment applications: PayPass MChip and MSD, Visa qVSDC and MSD, Express Pay, Discover Contactless, and NETS CEPAS.

Input Device Rubber keys:

- 4 ATM-style function keys (F1 to F4)
- 4 programmable function keys (PF1 to PF4)
- 1 ALPHA key
- Main keypad (0 to 9, *, and #)
- 3 command keys (CANCEL, CLEAR, and ENTER)

Peripheral Ports Single multi-connector, which supports power, RS-232, USB Client, USB Host, Ethernet, and power over Ethernet. SDIO interface supports optional expansion module for contactless payments or SD memory card.

Supported Memory Media SD Memory Card

- Sandisk SD: SDSDB-512 / SDSDB-256 / SDSDB-128

USB Flash Drive

- Sandisk Cruzer Mini: SDCZ2-256-A10
- Memorex Thumbdrive: 32507725
- Kingston DataTraveler: KUSB DT1256
- PNY USB Flash: PFD256U20RF
- Lexar USB Pro: JD256-80-231

Security 3DES encryption, Master / Session and DUKPT key management. PCI-PED approved. VeriShield file authentication.

Audio Output Monophonic

Physical Standard: Length: 150 mm (5.9 in.). Width: 85 mm (3.3 in.). Height: 32 mm (1.2 in.). Weight: terminal, 270 g (0.59 lbs.); full shipping, 850 g (1.87 lbs.).

With contactless module: Length: XXX mm (XXX in.). Width: 85 mm (3.3 in.). Height: XXX mm (XXX in.). Weight: terminal, XXX g (XXX lbs.); full shipping, XXX g (XXX lbs.).

Voltage Input: AC 100-240V, 50-60Hz. Output: DC 5-12V. 2.5-W maximum consumption.

Environmental, Regulatory and Performance Specifications

The Vx810 meets all the necessary environmental, regulatory and performance standards for its intended use and expected market. VeriFone recognizes its responsibility to minimize the environmental impacts of its operations and products.

The Vx810 is classified as a “portable general purpose” device. It is designed for operation in retail environments where the product is handed over the counter to the consumer for payment transactions, PIN verification, etc.

This device is *not* intended for outdoor use and is certified for indoor use only.

Temperature and Humidity

Operating Temperature and Humidity

- Temperature: 0°C to +40°C (+32°F to +104°F)
- Humidity: 5% to 90% RH, non-condensing

Storage Temperature and Humidity

- Temperature: -40°C to +70°C (-40°F to +158°F)
- Humidity: 15% to 95% RH, non-condensing

Compliance Certifications

Emission Standards

This device is compliant to the following emission standards for information technology equipment: Radiated and Conducted Emissions (EN 55022:2006 / CISPR22).

Immunity Standards

This device is compliant to the following immunity standards for information technology equipment: Immunity Limits & Methods of Measurement (EN 55024:1998+A1:2001+A2:2003), Electrostatic Discharge (ESD) Immunity (IEC 61000-4-2:2001), Radiated Immunity (IEC 61000-4-3:2006), Electrical Fast Transients (EFT) Burst Immunity (IEC 61000-4-4:2004), Surge (IEC 61000-4-5:2005), Conducted Immunity (IEC 61000-4-6:2004+A1:2004+A2:2006), Magnetic Field Susceptibility (IEC 61000-4-8:2001), Voltage Dips (IEC 61000-4-11:2004), Harmonic Current Emissions (EN 61000-3-2:2006), Flicker (EN 61000-3-3:1995+A1:2001+A2:2005).

Safety Standards

This device is compliant to the following immunity standards for information technology equipment: UL 60950-1:2003 (1st Ed.) and EN 60950-1:2001+A11:2004.

Other Standards

This device is compliant to the following PTT certifications: CFR 47 Part 68 and CS-03.

Maintenance and Cleaning

The V^x810CTLS has no user-serviceable parts.

Clean the PIN Pad

To clean the unit, use a clean cloth slightly dampened with water and a drop or two of mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner. For best results, use a VeriFone Cleaning Kit (refer to the [Accessories and Documentation](#) section).



CAUTION Never use thinner, trichloroethylene, or ketone-based solvents – they can deteriorate plastic or rubber parts.

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

Card Readers

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

Service and Support

For V^x810CTLS problems, contact your local VeriFone representative or service provider.

For V^x810CTLS product service and repair information:

- USA – VeriFone Service and Support Group, 1-800-834-4366, Monday - Friday, 8 A.M. - 8 P.M., eastern time.
- International – Contact your VeriFone representative.

Service Returns

Before returning the V^x810 to VeriFone, you must obtain a Merchandise Return Authorization (MRA) number. The following procedure describes how to return one or more V^x810 for repair or replacement (U.S. customers only).



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

- 1 Gather the following information from the printed labels (see [Figure 16](#)) on the bottom of each V^x810 to be returned:
 - Product ID, including the model and part number. For example, “m108-xxx-xx” and “PTID xxxxxxxx.”
 - Serial number (S/N xxx-xxx-xxx).
- 2 Within the United States, call VeriFone toll-free at 1-800-834-4366.
- 3 Select the MRA option from the automated message. The MRA department is open Monday–Friday, 8 A.M.–8 P.M., eastern time.
- 4 Give the MRA representative the information 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 1-727-953-4172 (U.S.).
 - Please address the fax clearly to the attention of the “VeriFone MRA Dept.”
 - Include a telephone number where you can be reached and your fax number.

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



One MRA number must be issued for each V^x810 you return to VeriFone, even if you are returning several of the same model.

- 5 Describe the problem(s) and provide the shipping address where the repaired or replacement unit must be returned.
- 6 Keep a record of the following items:
 - Assigned MRA number(s).
 - VeriFone serial number assigned to the V^x810 you are returning for service or repair (serial numbers are located on the bottom of the unit (see Figure 16)).
 - 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 V^x810).

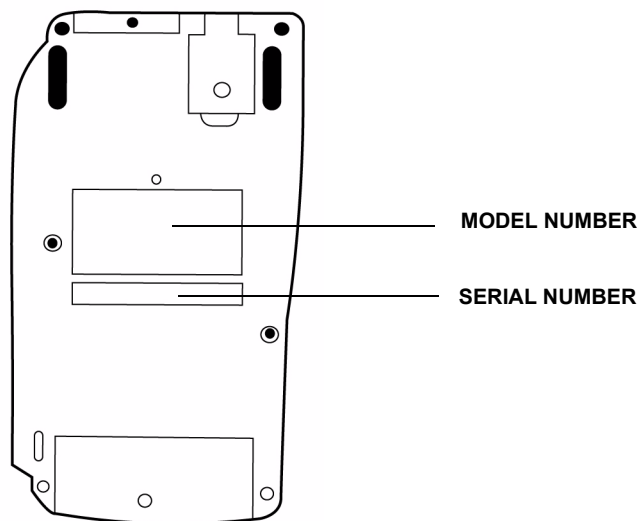


Figure 20 Information Label on Unit Bottom

Accessories and Documentation

VeriFone produces accessories and documentation for the V^x810CTLS. 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, 1-800-834-4366, Monday - Friday, 7 A.M. - 8 P.M., eastern time
- International – Contact your VeriFone representative

Supplementary Hardware

08392-01-(R) Mounting adapter
08368-01-(R) Privacy shield

Data Cables

08361-XX-(R) Connects V^x810 to V^x510, V^x570 and, V^x610 terminals (Mod-10)

08398-XX-(R) Connects V^x810 to ECR with USB Type A

Various others, depending on what they connect to. Contact your local VeriFone representative or service provider to identify the best cable for your needs.

Power Supply

Power packs are optional, except in certain instances (see [Power Supply](#)).

CPS11212-3A-R	DC power pack (universal)
07152-02-R	AC power cord (US)

Power Cord

07152-xx United States of America

Various others, by country: contact your local VeriFone representative or service provider to identify the best power cord for your needs.

Cleaning Kit

02746-01-(R) VeriFone Cleaning Kit

Documentation

To learn more about V^x810, refer to the following set of documents:

V ^x 810 Certification and Regulation Sheet	VPN 24960
V ^x 810 Quick Installation Guide	VPN 24961
V ^x 810 Reference Guide	VPN 24964
V ^x 810 Privacy Shield Quick Installation Guide	VPN 24965
V ^x 810 Stand Adapter Quick Installation Guide	VPN 24966

Troubleshooting Guidelines

This chapter lists typical examples of malfunctions that you may encounter while operating your V^x810 and the steps that you can take to resolve them.

The troubleshooting guidelines provided in the following section are included to assist successful installation and configuration of the V^x810. If you are having problems operating your V^x810, please read these troubleshooting examples. If the problem persists even after performing the outlined guidelines or if the problem is not described, contact your local VeriFone representative for assistance.

NOTE



The V^x810 comes equipped with tamper-evident labels. The V^x810 contains no user-serviceable parts. Do not, under any circumstance, attempt to disassemble the unit. 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



Not all units require use of a power supply.

Using an incorrectly rated power supply may damage the unit or cause it not to work properly. Before troubleshooting, ensure that the power supply used to power the unit matches the requirements specified on the back of the unit (see [Specifications](#) for detailed power supply specifications). If not, obtain the appropriately rated power supply before continuing with troubleshooting.

Blank Display

When the V^x810 display does not show correct or clearly readable information:

- Check all power and cable connections.
- If the problem persists, contact your local VeriFone service provider.

Keypad Does Not Respond

If the keypad does not respond properly:

- Check the 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 possible reasons why the unit may not be processing transactions. Use the following steps to troubleshoot failures.

Check 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 (see [Magnetic Card Reader Use](#)).
- 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.
- If the problem persists, contact your local VeriFone representative.

Check 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 (see [Smart Card Reader Use](#)).
- Ensure the MSAM cards are properly inserted in the slots and are properly secured (see [Install/Replace MSAM Cards](#)).
- If the problem persists, contact your local VeriFone representative.

Vx810 CTLS Certifications and Regulations

FCC Compliance

The following product has been tested and certified as compliant with the regulations and guidelines set forth in Part 15 of FCC Rules:

Manufacturer: VeriFone, Inc.
Model: Vx810 CTLS

Part 15 of FCC Rules

The equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- This device must not cause harmful interference; and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment generates and uses 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.

In the unlikely event that there is interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by one or more of the following 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 with the dealer or ask an experienced radio/TV technician for help.

Any changes or modifications to this equipment not expressly approved by VeriFone could void the user's authority to operate this equipment.

Warning

The IC Warning Message operation is subject to the following conditions:

- This device may not cause interference, and
- This device must accept any interference that may cause undesired operation of the device.

To comply with the FCC RF exposure compliance requirements, make sure to use only the antenna that is included with the device. This device and its antenna must not be in the same location or operating in the same area in conjunction with any other antenna or transmitter.

RF Exposure

This device was verified for RF exposure. To comply with Council Recommendation 1999/519/EC, IC RSS-102, and FCC RF exposure requirements, a minimum separation distance of 20 cm must be maintained between the user's body and the device, including the antenna. Any metallic components should be far from this device. Conditions that do not meet these requirements may not comply with Council Recommendation 1999/519/EC, IC RSS-102 and FCC RF exposure requirements and should be avoided.

Other Information

This equipment may be operated in AUT, BUL, HRV, CZE, CYP, DNK, EST, FIN, F, D, GRC, HNG, ISL, IRL, I, LIE, LUX, HOL, POL, POR, ROU, SVN, SVK, E, S, SUI, G.

The use of this equipment requires a licence in BEL, LVA, LTU, NOR.



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VX810 CTLS

Installation Guide

