

Verifone®

T650m

Installation Guide



T650m Installation Guide
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Product Warranty:

For product warranty information, go to <http://www.verifone.com/terms>.

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

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This guide is your primary source of information for setting up T650m.

Audience

This guide is useful for anyone installing the T650m.

Organization

This guide is organized as follows:

[Chapter 1, Device Overview](#). Provides an overview of the T650m device.

[Chapter 2, Device Setup](#). Explains how to set up the T650m device. It tells you how to select a location and establish a power connection.

[Chapter 3, Specifications](#). Discusses power requirements and dimensions of the T650m.

[Chapter 4, Maintenance and Cleaning](#). Explains how to maintain your T650m device.

[Chapter 5, Verifone Service and Support](#). Provides information on how to contact 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 device installation.

Related Documentation

To learn more about the T650m, refer to the following set of documents:




<i>T650m Certifications and Regulations</i>	VPN - DOC560-040-EN
<i>T650m Quick Installation Guide</i>	VPN - DOC560-042-EN
<i>T650m Charging Base Quick Installation</i>	VPN - DOC560-043-EN

Conventions and Acronyms

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

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>
 NOTE	The pencil icon is used to highlight important information.	RS-232-type devices do not work with the PIN pad port.
 CAUTION	The caution symbol indicates possible hardware or software failure, or loss of data.	The device is not waterproof or dustproof and is intended for indoor use only.
 WARNING	The lightning symbol is used as a warning when a bodily injury might occur.	Due to the risk of shock do not use the device near water.

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
ARM	Acorn RISC Machine
EMV	Europay MasterCard and VISA
LCD	Liquid Crystal Display
NFC	Near Field Communication
MRA	Merchandise Return Authorization
PCI	Payment Card Industry
PED	PIN Entry Device
PIN	Personal Identification Number
USB	Universal Serial Bus
VPN	Verifone Part Number

Device Overview

The Verifone T650m device is a powerful all-in-one mPOS solution, which allows electronic payment transactions to be processed. This payment processing solution with a fully integrated POS can scan barcodes, QR codes, and products with the help of an integrated camera.

It has the ability to run Android applications, like loyalty and inventory. It also enables clients to remotely monitor and update their devices using Verifone's estate management solution. The T650m device supports Bluetooth and Wi-Fi and meets PCI-PTS 6.X SRED requirements for maximum security.

The Verifone T650m device supports all payment methods - magnetic stripe, EMV, and NFC/Contactless Reader, including Apple Pay, Google Pay, and Samsung Pay mobile wallets. The easy-to-read color touch screen supports all payment-related user interactions and keypad for secure PIN entry.

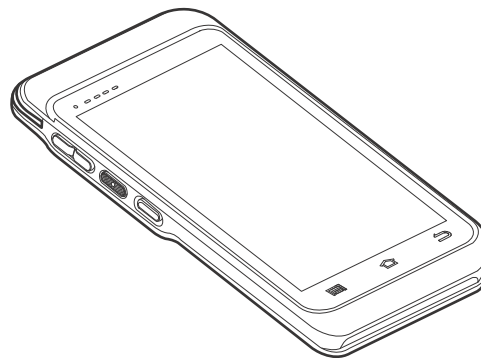


Figure 1 T650m Device

Features and Benefits

Following are the features and benefits.

Exceptional Ease of Use

- Large 5" LCD for unlimited application possibilities and easy readability under various lighting conditions.

- Touchscreen for icon-based applications or electronic signature capture support.
- Magnetic stripe card reader for optimal card reading.
- Audio jack to facilitate accessibility for the visually impaired.

Performance and Durability

- Fast transactions due to powerful 1.1 GHz ARM Cortex A7 quad-core processor.
- Rounded corners and drop resistant to less than 1m on the concrete floor to minimize breakage.
- 2GB/16GB, Optional 1GB/8GB, SD card slot that supports up to 32GB SD memory expansion.

Security

- Incorporates tamper-sensing circuitry to detect unauthorized intrusion and supports a broad spectrum of software-based security features.
- PCI-PTS 6.X approved for debit and other PIN-based transactions.
- EMV Level 1 Type Approval.
- Supports reliable security features including TLS, VeriShield file, authentication and VeriShield Protect to help prevent fraud and other intrusions.

Contactless Capability

- Advanced contactless architecture that future-proofs investment with a single contactless interface (SingleCI), SoftSAMs, and side-by-side application architecture.
- Dedicated tap zone for optimized user experience.
- Accepts EMV, NFC, QR Code and mag-stripe contactless payments as well as PIN-based transactions.

Communication Technology

- Bluetooth: Simple, plug-and-play installation for locations that need short-range wireless capability. Eddystone and iBeacon profiles are also supported.
- Supports 4G/3G/2G LTE
- Dual-band Wi-Fi.

Connectivity

- Wired interfaces:
- USB port type C

Device Setup

This chapter describes the device setup procedure. You will learn about:

- Device Location
- Inside the Shipping Carton
- Device Features
- SAM Card
- Examining Connection Port
- Using the Battery
- Connecting the Terminal Power Pack
- Charging the Battery
- Using the Smart Card Reader
- Using the Magnetic Card Reader
- CTLS Transaction
- Wi-Fi/BT Support
- Cable Connections
- Optional Accessories
- Accessories and Documentation

Device Location The following are the guidelines for selecting an ideal location for the device.

- Ease of Use**
- The T650m portable solution is a lightweight powerhouse that is styled to easily fit in hand and go where you go.
 - Easily accept payments anywhere, any type, including mobile wallets and alternative payment methods.

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



The device 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.

Personal Security Considerations

The T650m can be used as a handover device. Always exercise extreme caution when conducting transactions especially during PIN entry.

- Hand over the T650m directly to the cardholder for PIN entry.
- Encourage the cardholder to hold the T650m close to avoid others from seeing the information entered.

Electrical Considerations

- Avoid using this product during electrical storms.
- Due to the risk of electric shock or damage to the terminal, do not use this equipment near a water source, for example near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool. Likewise, avoid using this product during thunderstorms causing power cuts. Avoid placing the terminal near electrical devices or other units that could cause large voltage fluctuations or electrical interference, such as air conditioners, neon signs, high-frequency safety devices, or electrical equipment.
- Avoid using the device near water or in moist conditions.
- Disconnect the device from its POS device before cleaning.

WARNING



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

Inside the Shipping Carton

Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage. The device 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 Carefully inspect the shipping carton and its contents for possible tampering or damage.
- 2 Validate the authenticity of the sender by verifying the shipping tracking number and other information located on the product order paperwork.
- 3 Remove and inspect the following items:
 - T650m unit
 - USB-C to USB cable
 - Power Adaptor

NOTE



Verifone ships variants of the T650m for different markets. Your unit may have different options or accessories described in this section.

- 4 Remove all plastic wrapping from the device and components.
- 5 Remove the clear protective film from the display.

- 6 Inspect the terminal for possible tampering. See how to identify signs of tampering in section **Periodic Inspection**.
- 7 Save the shipping carton and packing material for future repacking or moving of the device.



WARNING Do not use a tampered or damaged unit. The device comes equipped with tamper-evident labels. If a label or component appears damaged, please notify the shipping company and your Verifone service provider immediately.

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

- Overlays in the PIN pad area
- Foreign objects inserted into the smart card slot or magnetic stripe slot
- Any bumps in the casing below the mag stripe slot and any noticeable additional mag stripe head from the side
- Signs of damage to the tamper-evident labels
- A Tamper Warning message on the device display

If any device is found to have been tampered with, please remove it from service immediately, keep it available for a potential forensics investigation, and notify your company security officer and your local Verifone representative or service provider. To contact Verifone, please see [Verifone Service and Support](#).

Device Features

Familiarize yourself with the features before continuing with the installation process.

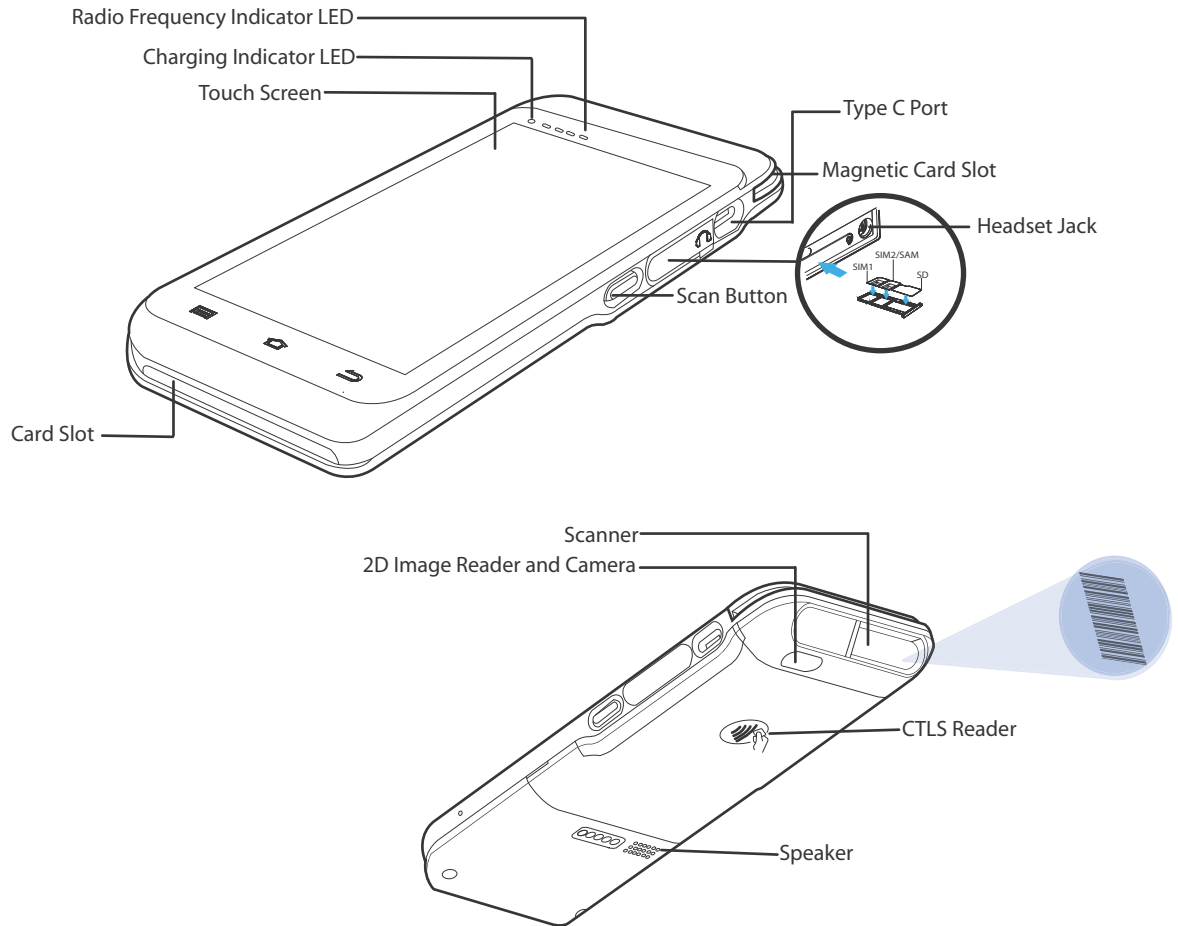


Figure 2 T650m Device

Front Panel The front panel offers the following features:

- The T650m device has a colored touch screen display.
- A smart card reader is built into the device to process smart card-based debit or credit transactions. For directions on how to use a smart card, see [Using the Smart Card Reader, Figure 6](#).
- A magnetic card reader is built into the device for performing debit or credit card transactions. The card can be swiped from either direction. To ensure a proper read of the magnetic swipe card, insert the magnetic card from the side of the device as shown in [Using the Magnetic Card Reader, Figure 7](#).
- Contactless Reader and EMV have dedicated LEDs to display for contactless payments. For directions on how to conduct contactless transactions, see [CTLS Transaction, Figure 8](#).
- A 3.5 mm audio jack to facilitate accessibility for the visually impaired.

SIM/SAM Card When you first receive your T650m, you may need to install SIM and SAM cards, or you may need to replace old cards.



CAUTION Observe standard precautions when handling electrostatically sensitive devices. Electrostatic discharges can damage this equipment. Verifone recommends using a grounded anti-static wrist strap.

Installing or Replacing

To install or replace SIM/SAM cards:

- 1 Power off the device.
- 2 Use the SIM/SAM Ejector Tool to pop open the card tray on the right side of your device.
- 3 Place your new SIM/SAM card into the tray. Align the notch on your SIM /SAM card with the notch on the tray. The SIM/SAM card should face up.

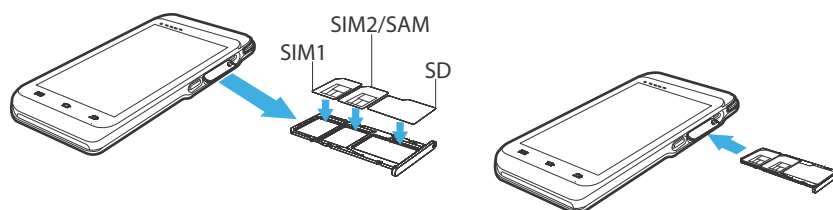


Figure 3 SIM/SAM Insertion

- 4 Carefully slide the tray back into the device. The correct orientation of the SIM/SAM card is as indicated in the figure.

Examining Connection Port

The T650m device has one primary USB-C port used for power and download.

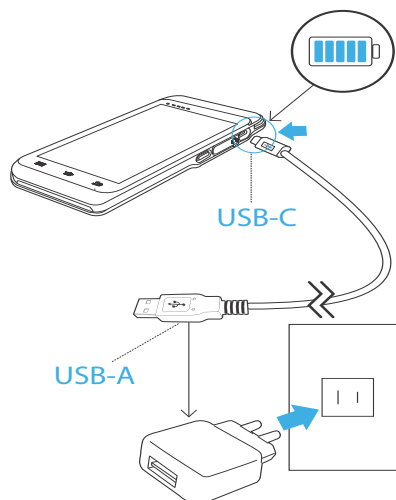


Figure 4 T650m Primary USB-C Port

Using the Battery

The T650m device uses a Li-Ion battery. 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).

Battery Features

The following are features of the battery:

- Li-Ion
- A safety circuit that:
 - Prevents cell damage from overcharge, over-discharge, or overheating
 - Activates when the battery is left in an unused device for an extended period

NOTE



- Charge the T650m device for eight hours before initial use.
- Disconnecting and unplugging the device power pack, reduces the life of the coin cell battery, which does not recharge and must be replaced if drained.
- Conserve battery power by turning the T650m device off when not in use. Do not let the battery charge fall below 10% for an extended period of time as this may permanently diminish the battery capacity. Recharge the battery by placing the T650m device on the charging base. The T650m charging time with a charging base is 5.8hrs.

Manual Startup

Hold the start button for about 3 seconds until the device displays the startup screen.

NOTE



Once the device is powered up, The Verifone Home screen is displayed.

Manual Shutdown Hold the start button for about 1 second until the message is displayed on the screen. Touch the "Off" selection to turn off.

NOTE

The screen is blank when the device has no power.

Connecting the Terminal Power Pack

Connect the T650m device to the provided USB cable and insert the other end into any USB charger head for initial charging.

CAUTION

Using an incorrectly rated power supply may damage the device or cause it not to work as specified. Before troubleshooting, ensure that the power supply being used to power the device matches the requirements specified on the bottom of the device. (See [Specifications](#) for detailed power supply specifications.) You can use any standard USB charger.

WARNING

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

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

Each T650m device comes with a power supply cable, USB-A to USB-C cable is used to connect the device directly to a USB outlet to charge the battery. The T650m unit is equipped with a USB-capable universal port.

To Connect the Terminal Power Supply

Insert the USB-C to the T650m and USB-A port to the power supply or Desktop.

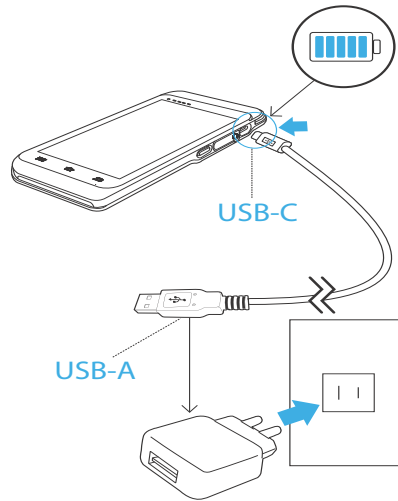


Figure 5 T650m Power Supply Connection



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

Charging Base

The T650m is designed to work with a charging base. The user can alternatively place the terminal on the available charger base to conveniently charge the battery and prevent the discharge to less than 10%.

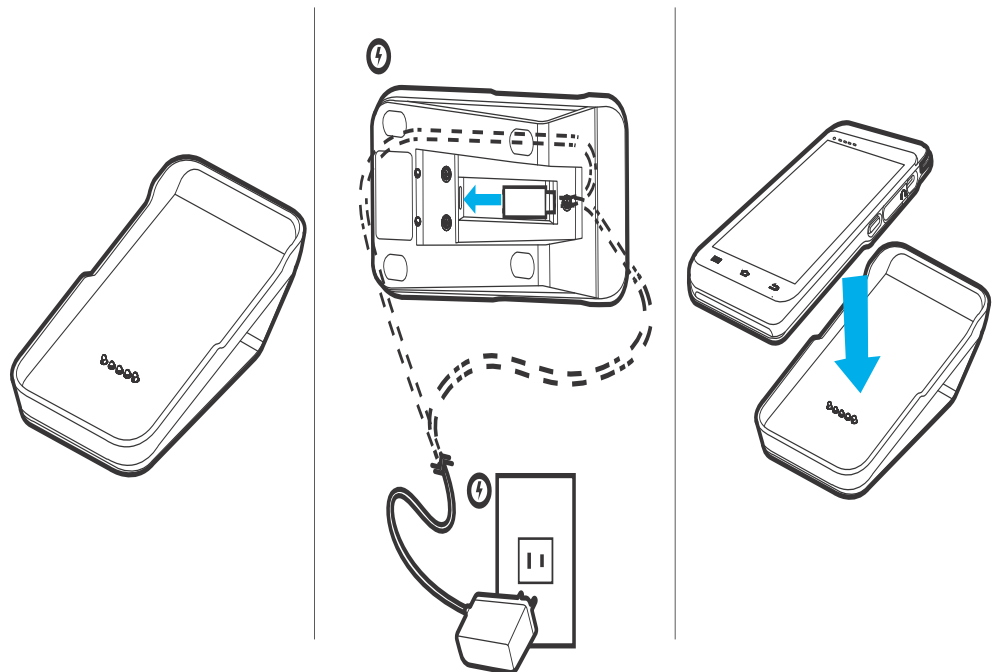


Figure 6 T650m Docking with Charging Base

Charging the Battery

After unpacking your T650m device, connect the power pack to the unit for eight hours or until fully charged. Refer to the [Using the Battery](#) section for more details.

Battery Life Charging and discharging the battery will cause normal wear on the battery.



Li-Polymer and Li-Ion batteries must be recycled or disposed of properly as per local guidelines/regulations.



Using the Smart Card Reader

Insert the smart card to proceed with the EMV transaction. EMV supports credit card and debit card transactions.

To Conduct a Smart Card Transaction

- 1 Position the smart card with the contacts facing upward.
- 2 Insert the card into the reader slot in a smooth, continuous motion until it seats firmly.
- 3 Wait for the application to indicate a completed transaction before removing the card. Premature card removal invalidates the transaction.

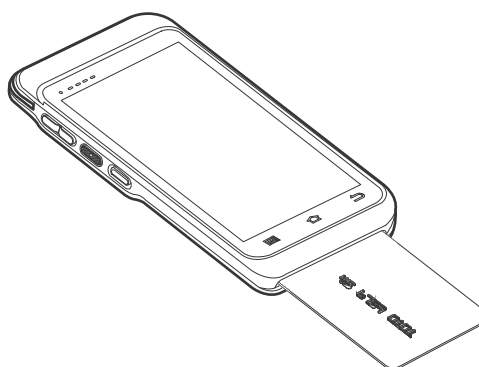


Figure 7 Inserting a Smart Card

Using the Magnetic Card Reader

Use the magnetic stripe reader to perform credit and debit card transactions.

Using a Smart Card Reader - Debit or Credit Card Transaction

- 1 Position the card with the magnetic stripe facing backward.

- 2 To ensure a proper read of the magnetic swipe card, insert the magnetic card from the top of the device, as shown in the illustration below.

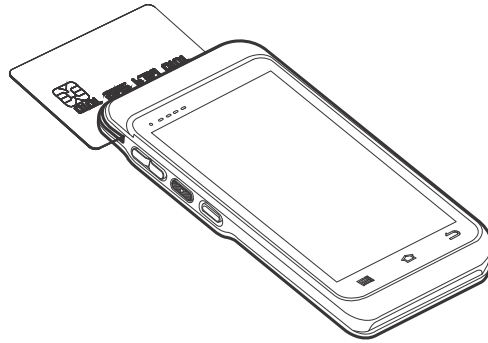


Figure 8 Using Magnetic Stripe Card

- 3 Swipe the card through the magnetic card reader.

CTLS Transaction

The T650m supports contactless credit or debit card transactions. To perform a contactless transaction, gently tap the card or hold the card against the surface of the display.

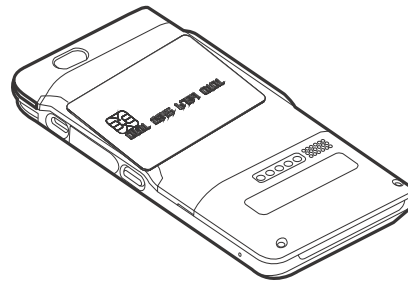


Figure 9 Using the CTLS Reader

Wi-Fi/BT Support

The T650m device includes an integrated WLAN RF transceiver for Wireless LAN systems with advanced power management and an integrated radio transceiver for Bluetooth wireless systems.

Bluetooth Support

Supports BR/EDR and LE.

Wireless Transaction

The T650m device supports wireless transactions.

Accessories and Documentation

Verifone produces the following accessories and documentation for the T650m device. When ordering, please take note of the part number.

- Verifone online store at www.estore.verifone.com
- USA – Verifone Customer Development Center, 1-800-837-4366, Monday to Friday, 7 A.M. - 8 P.M., Eastern time
- International – Contact your Verifone representative

Accessories

Verifone Certified Power Adapter	PWR560-002-00-A
Verifone MSR Cleaning Kit	PN 02746-02

Documentation

<i>T650m Certifications and Regulations</i>	VPN -DOC560-040-EN-A
<i>T650m Quick Installation Guide</i>	VPN -DOC560-042-EN-A
<i>T650m Charging Base Quick Installation</i>	VPN - DOC560-043-EN

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Specifications

This chapter discusses the power requirements and dimensions of the T650m device.

Processor	<ul style="list-style-type: none">• Quad-core Cortex A7 1.1 GHz
Memory	<ul style="list-style-type: none">• 2GB/16GB• Optional 1GB/8GB• 32GB Micro SD memory expansion
Display	<ul style="list-style-type: none">• 5.0" display• Color LCD 1280 x 720 HD resolution• Capacitive touch screen• Screen rotation
Keypad	<ul style="list-style-type: none">• On-screen, Navigator possible
Payment	<ul style="list-style-type: none">• MSR• SCR• CTLS• QR Code
Multimedia	<ul style="list-style-type: none">• Speaker; audio jack & volume buttons• Integrated microphone• HD video decode
Communication	<ul style="list-style-type: none">• WI-FI: 5 GHZ+ 2.4 GHZ• Bluetooth® 4.2 low energy• 4G LTE• USB OTG TYPE C• 802.11 b/g/n
GPS	<ul style="list-style-type: none">• GPS, GLONASS
Physical Interface	<ul style="list-style-type: none">• USB port type C
Camera/Barcode Scan	<ul style="list-style-type: none">• Integrated Rear: 5MP CMOS• Barcode, OCR and QR code scanning

Dimensions	<ul style="list-style-type: none">• Length: 157mm (6.1")• Width: 78mm (3.0")• Height: 16mm• Weight: 271 gms
Security	<ul style="list-style-type: none">• PCI PTS 6.X approved
Power adaptor	<ul style="list-style-type: none">• Input: 110V~240V/50~60Hz/0.5A• Output: 5V DC/2A
Battery	<ul style="list-style-type: none">• 3.7V, 2800mAh
SIM/SAM	<ul style="list-style-type: none">• 1x SIM + 1 x SAM or 2 x SIMs
Card Reader	<ul style="list-style-type: none">• Triple track MSR: ISO 7810, 7811, 7813 smart card reader• Synchronous and asynchronous cards
Environmental	<ul style="list-style-type: none">• Operating temperature: 0°C to 45°C (32° F to 113° F)• Storage temperature: -20° to 60°C (-4° to 158° F)• Relative humidity: 10% to 90%• Non-condensing
LEDs	<ul style="list-style-type: none">• 4 CTLS Indicator• Power Indicator<ul style="list-style-type: none">- Red = charging indicator- Green = fully charged indicator
Unit Power Requirement	<ul style="list-style-type: none">• Input power rating: 5V DC, 2A• Charging via USB-C to an external dock connector• 2800mAh/3.7V Li-Ion rechargeable battery
Magnetic Card Reader	<ul style="list-style-type: none">• Triple-track• Supports bi-directional card read• Swipe speed at 10 IPS to 40 IPS
Audio Jack	<ul style="list-style-type: none">• Loudspeaker, microphone



Maintenance and Cleaning

The T650m device has no user-maintainable parts. It can, however, be cleaned.

General Care

Your device is a product of superior design and craftsmanship and should be treated with care. The following suggestions will help you protect your warranty coverage.

- Keep the device dry. Precipitation, humidity, and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device gets wet, switch off the power, and allow the device to dry completely before replacing it.
- Do not use or store the device in dusty and dirty areas. Its moving parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. It can form moisture inside the device and damage the electronic circuit boards when the device returns to its normal temperature.
- Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not paint the device. Paint can clog the moving parts and prevent proper operation.
- Keep the device free from any small and loose items (such as paper clips, staples, or coins) that could accidentally get inside it through an opening, such as the SAM slots or the primary smart card reader slot.
- Do not attempt to open the device other than as instructed in this guide. This device has security features that protect it from tampering. For example, the file content will be deleted if the device's outer casing is opened.
- Use only the power adapter that came with your device. Adapters of other electronic devices may look similar, but they may affect your device's performance or damage it.
- Do not use this device in any area with a potentially explosive atmosphere. Follow all signs and instructions. The potentially explosive atmosphere includes areas where you would normally be advised to turn off your vehicle engine. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

These suggestions apply equally to your device, or any of its attachments, or accessories. If your device is not working properly, then take it to the nearest authorized service facility for servicing or replacement. For your safety, have this device serviced only by a Verifone-authorized service provider.

Additional Safety Information

The following are additional safety information in using this device.

Surface Cleaning

To clean the device, use a slightly clean 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 can deteriorate plastic or rubber parts.

Do not spray cleaners or other solutions directly onto the device.

Smart Card Reader Cleaning

The Smart Card Reader (SCR) must be cleaned regularly, as dirt accumulation can lead to SCR reading problems. SCR can be cleaned using commercially available card reader cleaning cards or using recommended Verifone cleaning card (PN 02746-02).

Cleaning the SCR

To clean the SCR:

- 1 Inspect the device's SCR for the presence of foreign objects before cleaning the Customer Smart Card.
 - a If the unit shows no presence of foreign objects, test the SCR function and record results. Proceed to [Step 2](#).



CAUTION Send your device to a Verifone authorized repair center if foreign objects are found in the SCR at any time during SCR inspection, test diagnostics, or cleaning process. Removal of foreign objects from the SCR by customers may void the device warranty.

- 2 Clean the SCR with an approved or recommended Verifone cleaning card. It is always advised to use new cleaning cards every time.



NOTE If using a commercially available cleaning card use **ONLY** an approved SCR cleaning card made specifically for POS SCR devices or Petroleum SCR.

- 3 Test the SCR after cleaning.
 - a If SCR tests out okay as “passing”, then the unit is ready for Customer Smart Card use.
 - b If SCR tests out as “failing”, then send the unit for repair. Provide details to repair center when SCR fails to test, either before cleaning OR after cleaning OR both before and after cleaning.

Magnetic Stripe Cleaning The Magnetic Stripe Reader (MSR) must be cleaned regularly (daily to once a week, depending on usage), as dirt accumulation can lead to MSR reading problems. MSR can be cleaned using commercially available card reader cleaning cards or using recommended Verifone cleaning card (PN 02746-02).

NOTE



If using a commercially available cleaning card use **ONLY** an approved MSR cleaning card made specifically for POS MSR Card reader devices or Petroleum MSR card readers.

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Verifone Service and Support

Contact your local Verifone representative or service provider for any problems with your device.

For product service and repair information:

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

Service Returns

You must obtain a Merchandise Return Authorization (MRA) number before returning the device to Verifone. The following procedure describes how to return one or more devices for repair or replacement (U.S. customers only).



For international customers, please contact your local Verifone representative for assistance with your service, return, or replacement.

Returning One or More Devices for Repair or Replacement

- 1 Gather the following information from the printed labels on the bottom of each device to be returned:
 - Product ID, including the model and part number. For example, “T650m”, “M560-xxx-xx”, and “PTID xxxxxxxx.”
 - Serial number (S/N xxx-xxx-xxx).
- 2 Obtain the MRA numbers by completing the following:
 - Call Verifone within the United States toll-free 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 gathered in [Step 1](#).
 - Complete the Inquiry Contact Form at:
https://support.verifone.com/verifone/support/repair_inquiry.do
 - 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 device you return to Verifone, even if you are returning several devices 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 device you are returning for service or repair (serial numbers are located at the bottom of the unit).
 - Shipping documentation, such as air bill numbers that can be used to trace the shipment.
 - Model(s) returned (model numbers are located on the Verifone label at the bottom of the device).

Troubleshooting Guidelines

The troubleshooting guidelines provided in the following section are included to help you install and configure your T650m successfully. Typical examples of malfunction you may encounter while operating your T650m 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 T650m comes equipped with tamper-evident labels. The T650m unit contains no user-serviceable parts. Do not, under any circumstance, attempt to disassemble the device. 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 Before troubleshooting, ensure that the power supply being used to power the device matches the requirements specified at the bottom of the device. (See [Specifications](#), for detailed power supply specifications.) Obtain the appropriately rated power supply before continuing with troubleshooting.

Device Does Not Start

If the device does not start:

- Ensure that the device is plugged into a dedicated power source.
- Check if the power cable connector is plugged in properly.

Device Display Does Not Show Correct/Readable Info

If the device display does not show correct/readable info:

- Check all the cable connections. If the problem persists, then contact your local Verifone representative for assistance.

Blank Display

When the device display is blank:

- If the device display is dark, tap the screen with the stylus or your finger. If the unit was in screen-saver mode, the screen will turn on when touched.
- If the display does not show correct or readable information, then check all the cable connections. If the problem persists, then contact your local Verifone representative for assistance.

Keypad Does Not Respond

If the keypad does not respond properly:

- Check the device 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](#).
- Refer to the user documentation for that application if pressing a function key does not perform the expected action to ensure you are entering correct data correctly.
- Contact your local Verifone representative if the problem persists.

Transactions Fail to Process

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

Checking Magnetic Card Reader

To check magnetic card reader:

- 1 Perform a test transaction using one or more different magnetic stripe cards to ensure that the problem is not a defective card.
- 2 Ensure that you are swiping the card properly (see [Using the Magnetic Card Reader](#)).
- 3 Process a transaction manually using the keypad instead of the card reader. If the manual transaction works, then the problem may be a defective card reader.
- 4 Contact your local Verifone representative if the problem persists.

Checking Smart Card Reader

To check smart card reader:

- 1 Perform a test transaction using several different smart cards to ensure the problem is not a defective card.
- 2 Ensure that the card is inserted correctly (see [Using the Smart Card Reader](#)).
- 3 Ensure that the MSAM cards are properly inserted in the slots and are properly secured (see [SIM/SAM Card](#)).
- 4 Contact your local Verifone representative if the problem persists

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T650m

Installation Guide

