Verifone®

T650p

Installation Guide

Verifone Part Number DOC560-006-EN-A, Revision A

T650p Installation Guide

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.

Verifone, Inc.
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CONTENTS

PREFACE

This guide is your primary source of information for setting up T650p.

Audience

This guide is useful for anyone installing the T650p device.

Organization

This guide is organized as follows:

Chapter 1, Device Overview. Provides an overview of the T650p device.

Chapter 2, Device Setup. Explains how to set up the T650p device. It tells you how to select a location and establish power connection.

Chapter 3, Specifications. Discusses power requirements and dimensions of the T650p.

Chapter 4, Maintenance and Cleaning. Explains how to maintain your T650p.

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 T650p, refer to the following set of documents:

T650p Certifications and Regulations	VPN -DOC560-005-EN-A
T650p Quick Installation Guide	VPN -DOC560-007-EN-A
T650p Base Full Feature Quick Installation Guide	VPN -DOC560-008-EN-A
T650P B-FF Certifications and Regulations	VPN -DOC560-009-EN-A

Conventions and Acronyms

This section describe 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.
Italics	Italic typeface indicates book titles or emphasis.	You *must* 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.	`http://www.verifone.com`
	The pencil icon is used to highlight important information.	RS-232-type devices do not work with the PIN pad port.
	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.
	The lightning symbol is used as a warning when bodily injury might occur.	Due to 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
PSAM	Purchase Security Application Module
PIN	Personal Identification Number
USB	Universal Serial Bus
VPN	Verifone Part Number

CHAPTER 1

Device Overview

This chapter provides a brief description of the T650p.

The Verifone T650p device is a best-in-class, single-screen media-capable and consumer or merchant facing device, 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.

In combination with Verifone Connect digital services, it offers self check-out/self check-in, payment, and the ability to run Android applications, like loyalty and inventory. It also enables clients to remotely monitor and update their device using Verifone's estate management solution. The T650p device supports Bluetooth and Wi-Fi and meets PCI-PTS 5.X SRED requirements for maximum security.

The Verifone T650p 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.

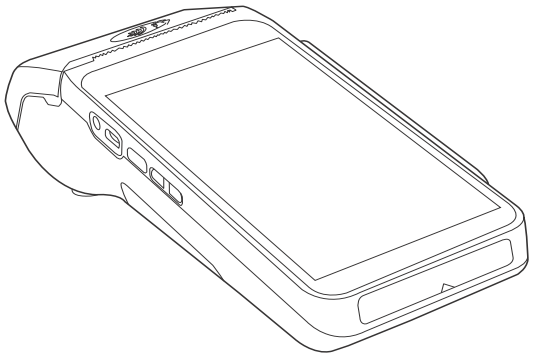


Figure 1 T650p Device

Key Features and Benefits

Processor	• Cortex A7 Quad Core, 1.1GHz • (QCOM 8909)
Memory	• 2 GB RAM/16 GB ROM • 32 GB SD
Display	• 5.5" (1280 × 720) HD IPS LCD touchscreen • Screen rotation
Keypad	• On-screen, Navigator possible
Payment	• MSR • SCR • CTLS • QR Code
Multimedia	• Speaker and audio jack and Volume Buttons • Integrated microphone • Video HD • Video Decode
Communication	• Bluetooth 4.2 BLE • 2.4 GHz + 5 GHz WiFi • 802.11 b/g/n
GPS	• GPS, GLONASS
Physical Interface	• USB port type C
Camera/Barcode Scan	• 5 MP (forward QR/Barcode Scanner) • Embedded forward facing camera - 5MP • Front facing camera - 2MP
Dimensions	• Length: 208 mm • Width: 84 mm • Height: 64 mm • Weight: 363 g
Security	• PCI PTS 5.X-approved • SRED • Supports AES DUKPT
Power adaptor	• Input: AC 110V~240V/50~60Hz/0.3A • Output: DC 5V/2A
Battery	• standard configuration 2600mAh/7.2V

SIM/SAM	• 2 SAM + 1 SIM or • 1 SAM + 2 SIM
Card Reader	• Triple track MSR • EMV L1-approved smart card • ISO • NFC/CTLS
Environmental	• Operating temperature: 10° to 45° C (32° to 113° F) • Storage temperature: -20° to 70° C (-4° to 158° F) • Relative humidity: 10% to 90% • Non-condensing
Printer	Built-in high-speed thermal printer, print speed greater than 18 lines / sec support paper roll with width of 58mm, 40mm diameter support black mark positioning
LEDs	• 4 CTLS Indicator • Power Indicator - Red = charging indicator - Green = fully charged indicator

Features and Benefits

Following are the features and benefits.

Exceptional Ease of Use

- Large 5.5” LCD display 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 GHz ARM Cortex quad-core ARM Cortex-A7 1.1 GHz processor.
- Rounded corners and drop resistant to less than 1m on concrete floor to minimize breakage.
- 2GB RAM / 16GB ROM, SD card slot that supports up to 32GB SD memory.

Security

- Incorporates tamper-sensing circuitry to detect unauthorized intrusion and supports a broad spectrum of software-based security features.
- PCI-PTS 5.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.
- Dual band Wi-Fi.

Connectivity

Wired interfaces:

- USB port type C

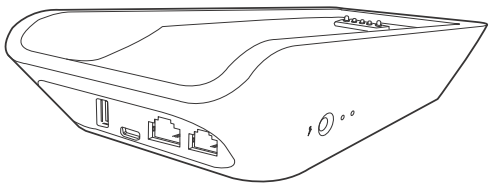
T650p Base

The T650p Base provides a stable mounted platform for the T650p terminal. The Base comes Full-Feature Base.

The Full-Feature Base supports several connectivity options and provides serial connection for peripherals (like ECR, check reader, barcode reader, etc.). The USB host port is for maintenance purposes and supports a USB flash drive.

T650p Full-Feature Base

The FF Base supports any failover communication and Ethernet connections for T650p. The failover will be supported in all network interfaces available in a terminal.



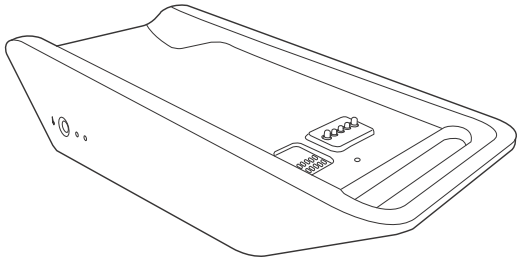


Figure 2 T650p FF Base, Front and Rear

The FF Base supports a maximum of seven simultaneous terminal connections via Bluetooth (BT) as well as the following:

Cable	Configuration
Ethernet port	RJ-45 socket (for connecting PINPad to LAN infrastructure)
RS232 port	RS232 socket (for connecting PINPad to LAN infrastructure)
USB ports	Mini USB and type A USB

CHAPTER 2

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
- Loading a Paper Roll in Device
- 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 used to select an ideal location for the device.

Ease of Use

- The T650p 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

- Select a flat support surface, such as a countertop or table, place the device. Please store your T650p device in a dry area:
  - Operation temperature is 0--45 degree Celsius (32° F to 113° F).
  - Storage temperature is -20--70 degree Celsius (-4° F to 158° F).
- Select a location convenient for both the merchant and the cardholder.
- Select a flat support surface, such as a countertop or table, place the device.

- 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.

CAUTION

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 T650p can be used as handover device. Always exercise extreme caution when conducting transactions especially during PIN entry.

- Hand the T650p directly to the cardholder for PIN entry.
- Encourage the cardholder to hold the T650p close to avoid others from seeing the information entered.

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).
- 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, wash bowl, 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:
   - T650p unit
   - USB-C to USB cable

- Paper roll

NOTE

Verifone ships variants of the T650p 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
- Wires protruding out of the device
- 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 potential forensics investigation, and notify your company security officer and your local Verifone representative or service provider. To contact Verifone, please see Service and Support.

Device Features

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

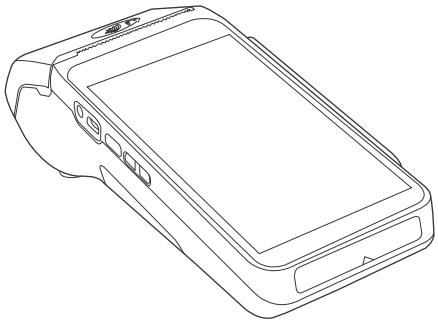


Figure 3 T650p (Front Panel)

Front Panel

The front panel offers the following features:

- The T650p device has a colored touch screen display.
- A smart card reader is built into the front of 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.
- A magnetic card reader 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 Figure 11.
- Contactless Reader and EMV have dedicated LEDs lower to the left of the display for contactless payments. For directions on how to conduct contactless transactions, see Using the Contactless Reader.
- A 3.5 mm audio jack to facilitate accessibility for the visually impaired.

SAM Card

When you first receive your T650p, you may need to install one or more SAM cards, or you may need to replace old cards. You may need to install one or two Multiple Security Access Module cards or replace an old one.

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 SAM Card

To install or replace SAM cards:

1. Power off the device.
2. Place the device face down on a soft and clean surface.
3. Remove the back cover of the unit.

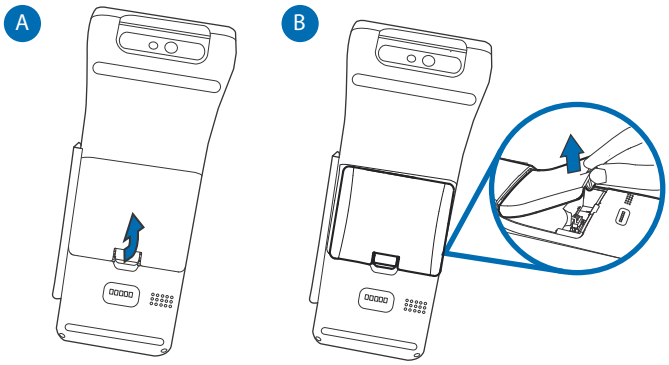


Figure 4 Removing Back Cover

4 Remove the battery from the battery compartment.

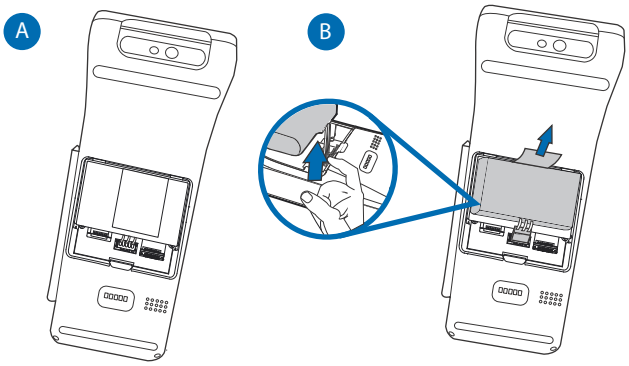


Figure 5 Removing Battery

5 Insert the SAM cards. Carefully slide the cards one at a time into the slots until fully inserted. The correct orientation of the SAM card is as indicated in figure 6.

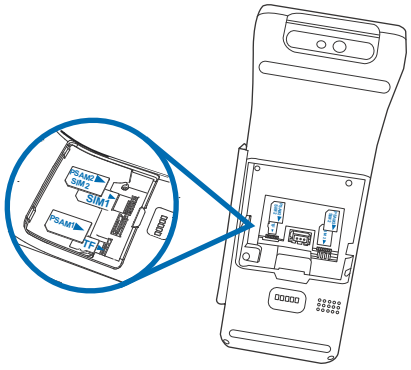


Figure 6 SIM/SAM Insertion

6 Close the back cover.

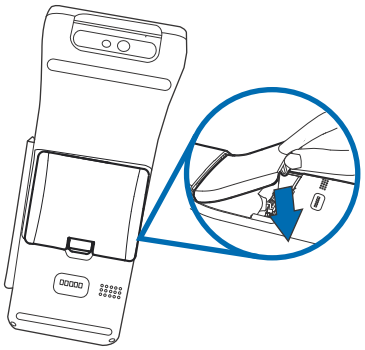


Figure 7 Closing back cover

NOTE Position the card's gold contacts facing downward towards the user. The card slot in the device has a set of contacts. The SAM card has a notch on one corner to ensure that it fits into the connector base in only one way.

To replace SAM card, gently slide out the old SAM card before inserting a new one.

Examining Connection Port

The T650p device has one primary USB-C port used for power and download.

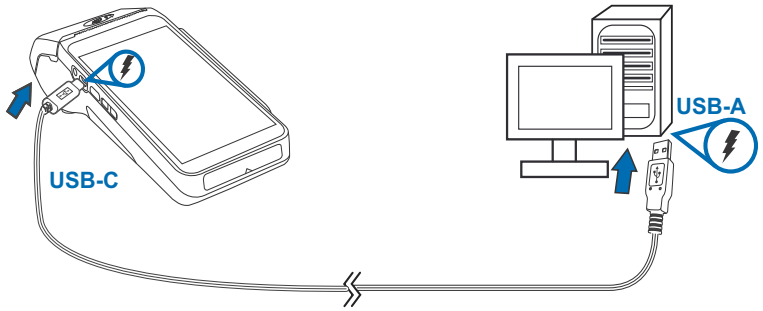


Figure 8 T650p Primary USB-C Port

Using the Battery

The T650p device uses dual cell 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:

- Two Li-Ion cells.
- A safety circuit that:
  - Prevents cell damage from overcharge, over-discharge, or overheating

- Activates when the battery is left in an unused device for extended period

NOTE

- Charge the T650p 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 T650p device off when not in use. Do not let the battery charge fall below 10% for extended period of time as this may permanently diminish the battery capacity. Recharge the battery by attaching the USB-C end of the power pack to the device and plugging the other end of the power pack into a wall outlet.

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 ADK MAC 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 T650p 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 very low battery charge may cause transaction data files not yet stored in the device memory to be lost.

Each T650p device comes with a power supply cable, USB-A to USB-C cable is used to connect the device directly to an USB outlet to charge the battery. The T650p unit is equipped with an USB capable universal port.

To Connect the Terminal Power Supply

- Insert the USB-C to the T650p and USB-A port to the power supply or Desktop.

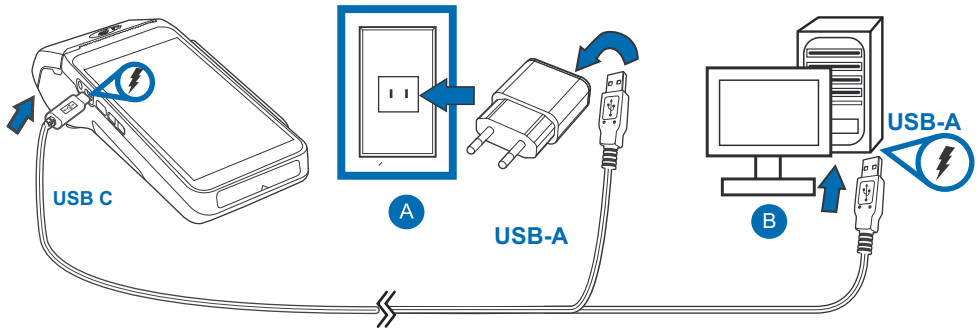


Figure 9 T650p Power Supply Connection

TIP

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

Loading a Paper Roll in Device

Install a paper roll before you can start transactions that require a receipt.

The T650p Stand uses a roll of 58 mm x 40 mm, single-ply, thermal-sensitive paper.

A pink out-of-paper indicator line appears on the edge of the paper before the end of the roll. After this line appears, there is enough paper remaining on the roll to perform at least one more transaction.

NOTE

A message is always displayed to indicate that the printer is out of paper.

CAUTION

Poor-quality paper can jam the printer and create excessive paper dust. To place order for high-quality Verifone paper, refer to Accessories and Documentation.

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

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

To install a paper roll

1. Hold both sides of the paper door, which is on the upper corner of the device and open the paper door by pulling outside (See below Figure 10).

2 Remove any partial roll of paper in the tray.

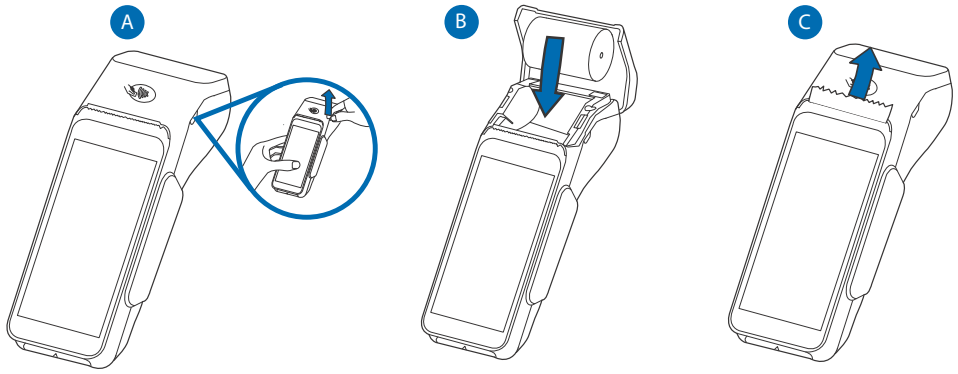


Figure 10 Steps to Install a Paper Roll in T650p

3 Loosen the glued leading edge of the new paper roll or remove the protective strip. Unwind the paper roll past any glue residue.

4 Hold the roll so that paper feeds from the top of the roll.

5 Pull the paper past the printer door.

6 Align the printer paper to the tabs to the paper guides and hold the paper up when closing the door.

7 With the printer paper extending outside, close the printer door by swinging upward until the door clicks shut, allowing the printer paper to extend outside the printer door.

Charging the Battery

After unpacking your T650p 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.

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

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 (see Figure 11).
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.

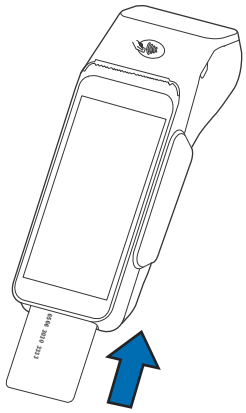


Figure 11 Inserting a Smart Card

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

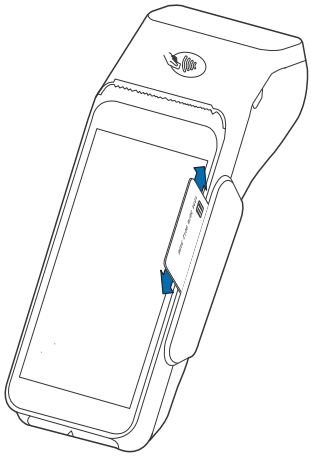


Figure 12 Using Magnetic Stripe Card

3. Swipe the card through the magnetic card reader.

CTLS Transaction

The T650p 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.

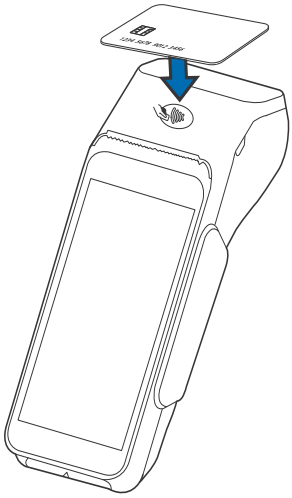


Figure 13 Using the CTLS Reader

Wi-Fi/BT Support

The T650p 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 T650p device supports wireless transactions.

Cable Connections

You can connect the T650p to peripherals using the Full-Function Base.

- Cable Connections Using the Full-Feature Base.

WARNING

Turn off or unplug the terminal when connecting or disconnecting the device to avoid device memory corruption and data loss.

Refer to the controlling device instructions for any terminal-specific warnings.

Cable Connections Using the Full-Feature Base

To connect the terminal to other devices via Ethernet, RS-232, and USB, use the T650p Full-Feature (FF) Base. The FF Base provides a standard RJ-45 LAN socket, RS-232 port, a mini-USB port. The T650p terminal must be docked on the base to utilize cable connectivity and the Full Feature Base supports BT pairing with the T650p. If the terminal is paired with the base the wired base connection will be routed to the terminal via its BT connection.

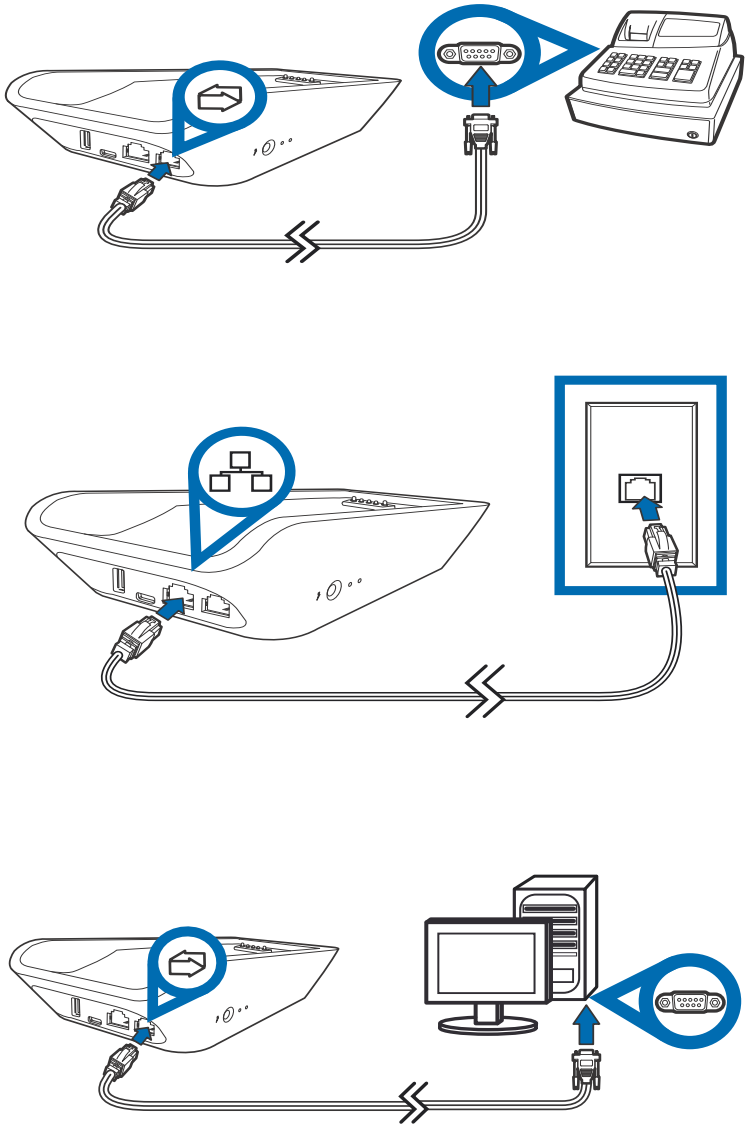


Figure 14 Full-Feature Base Peripheral Connections

Cable	Configuration
Ethernet port	RJ-45 socket (for connecting PINPad to LAN infrastructure)
RS232 port	RS232 socket (for connecting PINPad to LAN infrastructure), MOD-8 socket, Mini USB & DC-in jack
USB ports	Mini USB and type A USB

Optional Accessories

These accessories can be used to further enhance the device's functionality. See Accessories and Documentation for additional information.

Bluetooth paring Between Full-Feature Base and T650P

1 Download and Install Base Control app.

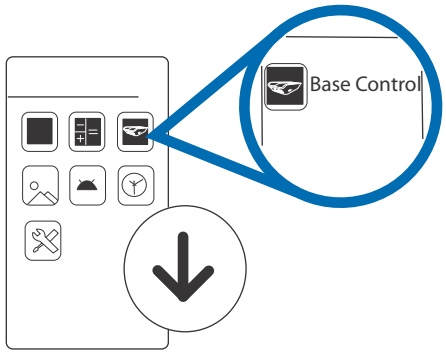


Figure 15 Download Base Control app

2 Make sure Bluetooth is turned ON and go to "PAIR A NEW DOCK" option in the app.

3 Follow the instruction from the app to press pairing button on the base.

4 On the next screen, use the camera to align the circles over the LED lights on the side of the base while the device lays on its side.

5 Make sure the circles and the LED lights on the base are lined up, hold still T650p and pairing will start automatically.

6 Follow the instruction on the screen to hold the pairing button on the base for 3 seconds and release the button.

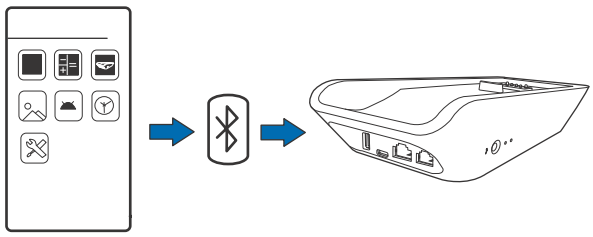


Figure 16 T650p Bluetooth Pairing with base

7 Once pairing is successfully completed, the base with its S/N will show up under "Connected Docks" on the screen.

Full-Feature Base

The Full-Feature Base (VPN M474-S02-08) provides Bluetooth (BT) 5.0 as well as All BT 5.0 features. It also supplies power, Dial up, Ethernet, USB Host and USB Device, plus powered RS232 connection. See Cable Connections Using the Full-Feature Base.

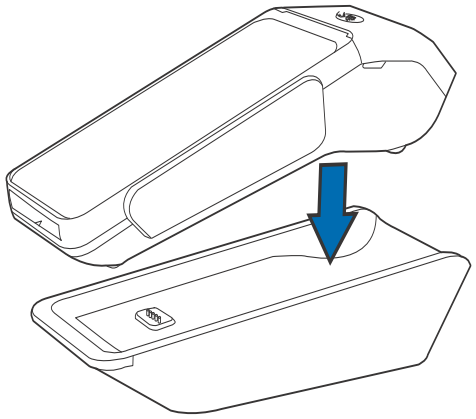


Figure 17 T650p Docking with Full-Feature Base

Accessories and Documentation

Verifone produces the following accessories and documentation for the T650p 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 - 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

T650p Certifications and Regulations	VPN -DOC560-005-EN-A
T650p Quick Installation Guide	VPN -DOC560-007-EN-A
T650p Base Full Feature Quick Installation Guide	VPN -DOC560-008-EN-A
T650P B-FF Certifications and Regulations	VPN -DOC560-009-EN-A

CHAPTER 3

Specifications

This chapter discusses the power requirements and dimensions of the T650p.

Unit Power Requirement

- Input power rating: 5V DC, 2A
- Charging via USB-C to and external dock connector
- 2600mAh/7.2V Li-Ion rechargeable battery

Temperature

- Operating Environment:
  - Temperature: 0° C to 45°C (32° F to 113° F)
  - Relative humidity: 10% to 95% RH non-condensing
- Non-Operating Environment:
  - Temperature: -20°C to 70°C (-4° F to 158° F)

Relative humidity: 5% to 95% RH non-condensing

Memory

- RAM: 2GB / 16GB ROM
- 32GB SD

Magnetic Card Reader

- Triple-track
- Supports bi-directional card read
- Swipe speed at 10 IPS to 40 IPS

Smart Card Reader

- ISO 7816, 1.8V, 3V, 5V
- Synchronous and asynchronous cards

SAM Card Reader

- Two Security Access Modules (SAMs) card slots.

Integrated Contactless Reader

- ISO 14443, ISO 18092, EMV

Display

- 5.5" (720 × 1280) HD IPS LCD touchscreen

External Dimensions

- Length: 208 mm (8.1 in.)
- Width: 84 mm (3.3 in.)
- Depth: 64 mm (2.5 in.)

Audio Jack

- Loudspeaker, microphone

Security

- Complies to PCI-PTS 5.x requirements, as well as many regional security requirements.

Communication

- Bluetooth 4.2 BLE
- 2.4 GHz + 5 GHz WiFi
- 802.11 b/g/n

GPS

- GPS, GLONASS

Camera

- 5 MP (front QR/Barcode Scanner)
- Embedded forward facing camera - 5MP
- Front facing camera - 2MP
- LED torch

Printer

- High-speed thermal printer: 30 lps
- Paper roll: Max 58mm Length x Max 40mm Diameter

T650p Base

Full-Feature Base

- Aside from charging, the FF Base provides:
  - Bluetooth
  - 10/100M Ethernet
  - Powered RS-232
  - BT LE V4.2
  - USB host
  - USB device

Unit Power Requirements

- Operating Power: 5V DC, 2.2A (FF Base)
  5V DC, 2A (Charging Base)

Temperature

- Charging Base Operating temperature: 0° to 50° C (32° to 122° F)
- Full -Feature Base Operating Temperature: 0° to 40° C (32° to 104° F)

- Storage temperature: -20° to 60° C (-4° to 140° F)

Humidity

- Relative humidity: 5% to 95% (RH non-condensing)

Security

- PCI 5.x Compliant.

CHAPTER 4

Maintenance and Cleaning

The T650p 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 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. Potentially explosive atmospheres include 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 clean cloth slightly dampened with water and a drop or two of mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner.

CAUTION

Never use thinner, trichloroethylene, or ketone-based solvents – they 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 on a regular basis, 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 presence of foreign objects before cleaning Customer Smart Card.
   a. If 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 device warranty.

2. Clean the SCR with 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 testing, either before cleaning OR after cleaning OR both before and after cleaning.

Magnetic Stripe Cleaning

The Magnetic Stripe Reader (MSR) must be cleaned on a regular basis (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.

CHAPTER 5

Verifone Service and Support

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

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

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).

NOTE

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, “T650p”, “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–Friday, 8 A.M.–8 P.M., Eastern time.
     - Give the MRA representative the information gathered in Step 1. If the list of serial numbers is long, then you can fax the list, along with the information gathered in Step 1, to the MRA department at 1-727-953-4172 (U.S.).
   - 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.
   - 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.

NOTE

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).

CHAPTER 6

Troubleshooting Guidelines

The troubleshooting guidelines provided in the following section are included to help you install and configure your T650p successfully. Typical examples of malfunction you may encounter while operating your T650p 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 T650p comes equipped with tamper-evident labels. The T650p 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 cards properly (see 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 Smart Card Reader).
3. Ensure that the MSAM cards are properly inserted in the slots and are properly secured (see MSAM Card).
4. Contact your local Verifone representative if the problem persists

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

T650p

Installation Guide

Verifone Part Number DOC560-006-EN-A, Revision A