Verifone®

e280

Installation Guide

e280 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.

Verifone, Inc.
1-800-Verifone

www.verifone.com

Verifone Part Number DOC087-603-EN-D, Revision D01

This guide is your primary source of information for setting up e280 and e280s V2 devices.

Audience   This guide is intended for the users involved in e280/e280s V2 device installation.

Organization   This guide is organized as follows:

Chapter 1, Device Overview. Provides an overview of the e280

/e280s V2 device.

Chapter 2, Device Setup. Explains how to set up the e280/e280s V2 device. It also covers the preferred location to the establish power connection.

Chapter 3, Specifications. Provides the power requirements and dimensions of the e280/e280s V2 device.

Chapter 4, Maintenance and Cleaning. Explains how to maintain your e280/e280s V2 device.

Chapter 5, Verifone Service and Support. Provides information on how to contact your local Verifone representative or service provider. It also provides information on how to order accessories or documentation from Verifone.

Chapter 6, Troubleshooting Guidelines. Provides troubleshooting guidelines to self asses when you encounter a problem during the installation.

Related Documentation   To learn more about the e280/e280s V2 device, refer to the following set of documents:

e280 Certifications and Regulations	VPN - DOC087-601-EN
e280 Quick Installation Guide	VPN - DOC087-602-EN
e280s V2 Certifications and Regulations	VPN - DOC087-605-EN
e280s V2 Quick Installation Guide	VPN - DOC087-606-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.
Italics	Italic typeface indicates book titles or emphasis.	You *must* install a roll of thermal-sensitive paper in the printer.
Courier	The courier typeface 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`
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 bodily injury might occur.	Due to the risk of shock do not use the device near water.

Various acronyms are used in place of full definition. Table 2 lists acronyms and their definitions.

Table 2   Acronym Definitions

Acronym	Definitions
AC	Alternating Current
EMV	Europay MasterCard and VISA
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

This chapter provides a brief description of the e280/e280s V2 device.

The e280/e280s V2 device is a secure wireless handheld mobile payment device that 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 enables clients to remotely monitor and update their devices using Verifone's estate management solution. The e280/e280s V2 device supports Bluetooth and Wi-Fi. It also meets PCI-PTS 5.X SRED requirements for maximum security.

The e280/e280s V2 device's small, sleek, design makes it easily pocketable while supporting all payment methods like Magnetic stripe, EMV, and NFC/CTLS, including Apple Pay, Google Pay, and Samsung Pay mobile wallets. The easy-to-read color touch screen supports all payment-related user interactions, including barcode scanner and secure PIN entry.
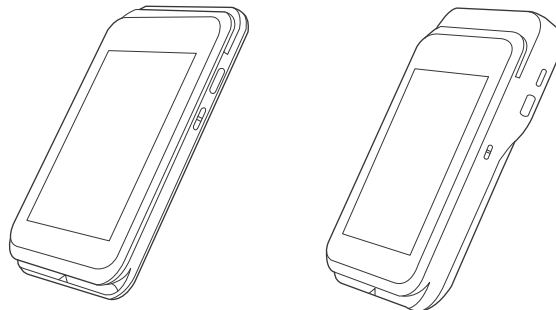
Figure 1   e280 and e280s V2 Devices

Key Features and Benefits

Processor	• Cortex A9, 300 MHz
Memory	• 512MB Flash • 512MB DDR
Display	• 3.5" HVGA Color Touchscreen
Keypad	• On-screen, Navigator possible
Payment	• MSR • SCR • CTLS • QR Code
Communication	• Bluetooth 4.2 BLE • 2.4 GHz + 5 GHz Wi-Fi • 802.11 a, b, g, n, ac
Physical Interface	• USB-C port
Barcode Scanner	• Integrated image engine for 1D and 2D barcode reading.
Terminal Dimensions	**For e280** • Length: 121 mm • Width: 67 mm • Height: 14.15 mm • Weight: 165 g **For e280s V2** • Length: 128.4 mm • Width: 67 mm • Height: 23 mm • Weight: 225 g
Security	• PCI PTS 5.X - approved • SRED • Supports AES DUKPT
Power Supply	• Input: AC 110V~240V/50~60 Hz/0.3A • Output: DC 5V/1A

Card Reader	• Triple track MSR
	• EMV L1-approved smart card
	• ISO
	• NFC/CTLS
Environmental	• Operating temperature: 0° to 45° C (32° to 113° F)
	• Storage temperature: -20° to 60° C (-4° to 140° F)
	• Relative humidity: 5% to 95%
	• Non-condensing
Battery	• **e280** - Embedded 1660mAh battery
	• **e280s V2** - Embedded 2890mAh battery

Features and Benefits

Following are the features and benefits:

Exceptional Ease of Use

• The e280/e280s V2 device is Verifone's perfect companion with ultimate flexibility catering to micro-merchants to tier 1 retailers.

• The lightweight, compact, stylish, and ergonomically balanced device provides a convenient payment experience for the user.

• Easy to hold, easy to carry. The e280/e280s V2 device's compact size allows it to easily fit in your pocket and handle with a wrist or neckband through lanyard holes.

• The customer-friendly color touchscreen device supports easy on-screen interaction, signature capture and secure PIN entry.

• The LCD for unlimited application possibilities and easy readability under various lighting conditions.

• Magnetic stripe card reader for optimal card reading.

Performance and Durability

• Secure and powerful 300 MHz processing encrypts and completes transactions quickly.

• High-capacity, embedded, lithium-ion battery pack (1660mAh for e280 and 2890mAh for e280s V2).

• The USB-C port allows a convenient way for product charging as well as connecting to accessories.

• Rounded corners and drop resistant to less than 1.2m on the concrete floor to minimize breakage.

• The dynamic combination of Bluetooth and Wi-Fi, wireless payment convenience, fewer dropped transactions and flexible point-of-sale options.

Application Environment
- Reliable operating system and powerful tools to create a rich customer experience.

Payment Types

Accommodates all payment types:

- Magnetic stripe
- EMV
- Contactless/NFC
- Mobile wallets with barcode scanner and signature capture.

Security
- PCI PED 5.0 approved for PIN-based transactions
- SSL protocols
- Direct key injection using industry-standard HSMs
- VeriShield Retain
- VeriShield Remote Key
- Verifone Secure Data
- VeriShield Total Protect
- MasterCard TQM
- IPP8 functionality plus multiple DUKPT engines
- EMV L1 and L2
- ISO7816-3, ISO7816-10 and EMV 4.3 standards

Connectivity

USB host/device port

- Support UART0 software debug (TXD0, RXD0)
- USB 2.0 high speed
- Support 5V/200mA for external USB peripherals
- USB host or device is configured by the software
- USB-C port is on the left hand side

Bluetooth (wireless communication)

- Bluetooth 4.2 BLE
- Support Eddystone + iBeacon
- RF transmitter output power Class 1
- RF receiver GFSK typical -90 dBm, n/4 PSK typical -90 dBm, 8 DPSK typical -83 dBm
- UART3 interface for SOC communicates to BT

Wi-Fi

- Wi-Fi 2.4 GHz and 5 GHz; a, b, g, n, ac

- Supports 2.5 GHz and 5 GHz

- SDIO for host interface

Charger IC
- Single-cell switching mode Li-Ion battery charger

- Power path management integrated

- Programmable charging parameters

- Support dual inputs from either charging pins or USB connector

Main Battery For e280 device

- Non-removable battery pack

- Use ID pin of battery to identify different battery sources by AIN5_BATT_ID

- Nominal capacity/voltage: 1660mAh/3.8V

For e280s V2 device

- Non-removable battery pack

- Use ID pin of battery to identify different battery sources by AIN5_BATT_ID

- Nominal capacity/voltage: 2890mAh/3.8V

Fuel Gauge
- Host-side fuel gauge with Coulomb counter function.

Bluetooth Pairing The e280/e280s V2 device can pair with any phone or tablet, any POS and a variety of accessories to create the perfect mobile solution.

The micro-merchants can easily accept payments on the go when the e280/e280s V2 device is paired with Verifone's iOS/Android POS application and gateway.

Device Setup

This chapter describes the device setup procedure. Following are the sections:

- Device Location
- Unpacking the Shipping Carton
- Examining e280 Device Features
- Examining Connection Port
- Using the Battery
- Battery Behavior (No Power Pack)
- Connecting the Terminal Power Pack
- Charging the Battery
- Using the Smart Card Reader
- Using the Magnetic Card Reader
- CTLS Transaction
- Using the Barcode
- Wi-Fi/BT Support

Device Location

The following are the guidelines used to select an ideal location for the device.

Ease of Use
- The e280/e280s V2 is a portable lightweight device that is styled to easily fit into your pocket.
- 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, to keep the device. Please store your e280/e280s V2 device in a dry area:
  - Operation temperature is 0 to 45 degrees (32° to 113° F).
  - Storage temperature is -20 to 60 degrees (-4° to 140° F).
- Select a location convenient for both the merchant and the cardholder.
- 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 e280 device can be used as a handover device. Always exercise extreme caution while processing the transaction especially during the PIN entry session.

• Handover the e280 device directly to the cardholder for PIN entry.

• Encourage the cardholder to hold the e280 device as close as possible to secure the data entry.

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.

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 of the devices. The e280 device is a secure product and any tampering may cause it to cease the function or to operate in a secured way.

To unpack 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:

• e280 unit

• USB-C to USB-A cable

NOTE

Verifone ships variants of e280/e280s V2 devices for different markets. Your unit may have different options or accessories described in this section.

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4 Remove all plastic wrapping from the device and other components.

5 Remove the clear protective film from the display.

6 Inspect the device for possible tampering. See how to identify signs of tampering in section Periodic Inspection section.

7 Save the shipping carton and packing material for future repacking or moving of the device.

CAUTION Do not use a tampered or damaged device. This 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 device for possible tampering. Signs of tampering include:

- Overlays in the PIN pad area.

- Wires protruding out of the device.

- Foreign objects are inserted into the smart card slot or magnetic stripe slot.

- Any bumps in the casing below the magnetic stripe slot and any noticeable additional magnetic stripe head from the side.

- Signs of damage to the tamper-evident labels.

- A Tamper Warning message appearing on the device display.

- If any device is found to be tampered, 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 Verifone Service and Support section.

NOTE
- Charge the e280/e280s V2 device for eight hours before initial use.
- The e280/e280s V2 device includes an embedded coin cell battery that will power the security circuit of the device in case the main battery fails to charge. This internal coin cell battery is not rechargable and has a life of 2 years.
- Ensure not to store the device for more than 1 week without charging, else the secondary battery gets discharged in turn reducing the life of the battery.

Device Features

Familiarize yourself with the features before continuing with the installation process.
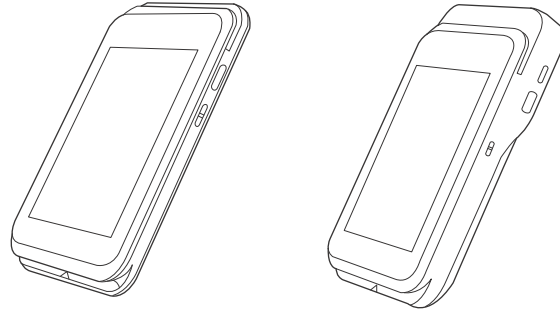
Figure 2   e280 and e280s V2 Device Features (Front Panel)

Front Panel

The front panel includes the following features:

- The e280/e280s V2 device has a colored capacitive-touch LCD Display.

- A smart card reader is built into the bottom of the device to process smartcard-based debit or credit transactions. For directions on how to use a smart card, see Using the Smart Card Reader.

- A magnetic card reader is built into the top part of 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 left to right, magnetic stripe facing the back using the proper direction, with the magnetic stripe facing up. For directions on how to use a magnetic card, see Using the Magnetic Card Reader.

Examining Connection Port

The e280 device has one primary USB-C port for power-up and download.

Figure 3   The e280s V2 Primary USB-C Port

Using the Battery

The e280 device uses a single-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 Following are the features of the battery:

- Single Li-ion cell.

- A safety circuit that:

  - Prevents cell damage from overcharge, over-discharge, or overheating.

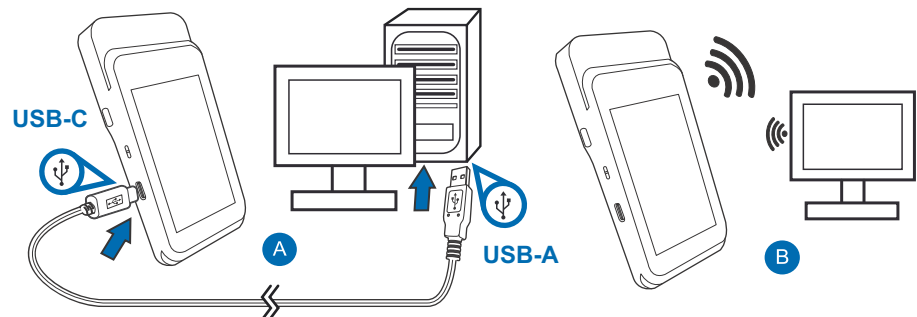 - Activates when the battery is left in an unused device for extended periods.

NOTE

- Charge the e280/e280s V2 device for eight hours before initial use.

- The e280/e280s device includes an embedded coin cell battery that will power the security circuit of the device in case the main battery fails to charge. This internal coin cell battery is not rechargeable and has a life of 2 years.

- Ensure not to store the device for more than 1 week without charging, else the secondary battery gets discharged in turn reducing the life of the battery.

- 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 e280 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 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.

Battery Behavior (No Power Pack) The device shifts to power pack mode and starts automatically when the e280 device is connected to a non-battery power source, regardless of the battery charge state.

Manual Startup Hold the start button for about 10 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 10 seconds 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 e280 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 the 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 e280 device comes with a power supply cable, a USB-C cable is used to connect the device directly to the USB outlet for charging the battery. The e280 device is equipped with USB universal input.

To Connect the Terminal Power Supply

1   Insert the USB-C plug into the USB-C port of the e280 device, as shown in the figure below.
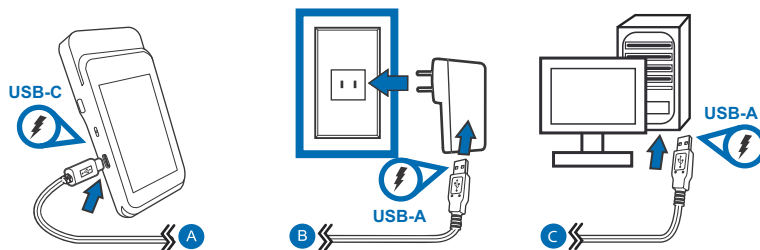
Figure 4   e280s V2 Power Supply Connection

2   Plug the USB cable into a USB wall outlet or to the output of a standard USB power supply.

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

Charging the Battery

Once you unpack the e280/e280s V2 device, connect the power pack to the unit for eight hours or until fully charged.

• Charge the e280/e280s V2 device for eight hours before initial use.

• In case the device is tampered, and the main battery fails to charge, the extra battery provided with the e280/e280s V2 device will power the security of the device. This extra battery has a life of 2 yrs.

• Ensure not to store the device for more than 1 week without charging, else the secondary battery gets discharged in turn reducing the life of the battery.

• Disconnecting and unplugging the device power pack will reduce the life of the coin cell battery and might not recharge. You might have to replace the battery if the battery is drained.

• Conserve the battery power by turning the e280/e280s V2 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 reduce the battery capacity. Recharge the battery by attaching the USB-C end of the power pack to the device and plug the other end of the power pack into a wall outlet.

• The e280 device automatically shuts down when the battery reaches the critically low charge state. In this case, the battery must be recharged for a minimum of half an hour before it can power the device. It may take several recharge attempts to reset the safety circuit when charging the battery that has been discharged below this critical state.

Battery Life Charging and discharging the battery will reduce the life of the battery.

WARNING Do not dispose of the battery in fire. Li-ion batteries must be recycled or disposed of properly. Do not dispose of 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 illustration below).

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.
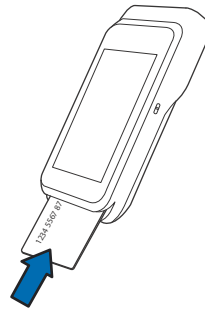
Figure 5   Inserting a Smart Card

Using the Magnetic Card Reader

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

To Conduct a 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 and swipe the card from left to right, as shown in the illustration below.
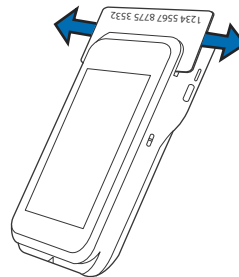
Figure 6   Using Magnetic Stripe Card

3 Swipe the card through the magnetic card reader.

CTLS Transaction

The e280 device 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.
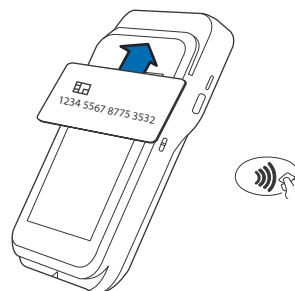
Figure 7 Using the CTLS Reader

Using the Barcode

The e280s V2 device supports a barcode scanner. To scan the barcode, press the first button located on the left side of the device.
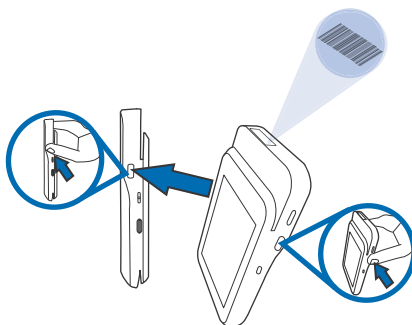
Figure 8 Using the Barcode Reader

Wi-Fi/BT Support

The e280/e280s V2 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 e280/e280s V2 device supports wireless transactions.

MFi Support

The e280/e280s V2 device is MFi-certified. MFi (Made for iPod, iPhone, iPad) means Apple has certified that product for use with specific iOS devices via interfaces such as lightning connector, Bluetooth, Wi-Fi etc.

Accessories and Documentation

Verifone produces the following accessories and documentation for the e280. While ordering, please take a note of the part number.

• Verifone online store at `www.estore.verifone.com`

• USA – Verifone Customer Development Center, 800-Verifone (837-4366), Monday - Friday, 7 A.M. - 8 P.M., Eastern time

- International – Contact your Verifone representative

Accessories

Verifone Certified Power Adapter	PWR087-300-01-A
Verifone Cleaning Kit	PN 02746-01

Documentation

e280 Certifications and Regulations	VPN - DOC087-601-EN
e280 Quick Installation Guide	VPN - DOC087-602-EN
e280 V2 Certifications and Regulations	VPN - DOC087-605-EN
e280 V2 Quick Installation Guide	VPN - DOC087-606-EN

Specifications

This chapter describes the power requirements and dimensions of the e280 and e280s V2 devices.

Power Rating
- Input power rating: 5V DC, 1A
- Charging via USB-C to computer system or you can use any smartphone or tablet USB power adapter.

Temperature
- Operating Environment:
  - Temperature: 0° to 45° C (23° F to 113° F)
  - Relative humidity: 5% to 90% RH non-condensing
- Non-Operating Environment:
  - Temperature: -20° to 60° C (-4° F to 140° F)
  - Relative humidity: 5% to 93% RH non-condensing

External Dimensions

	e280	e280s V2
Length:	121 mm	128.4 mm
Width:	67 mm	
Height:	14.15 mm	23 mm

Weight

	e280	e280s V2
Weight	165 g	225 g

Memory
- 512MB Flash
- 512MB DDR

Magnetic Stripe Card
- Triple-track
- Supports bi-directional card reader
- Swipe speed at 10 IPS to 40 IPS

Communication
- BT 4.2 BLE (Bluetooth Low Energy)
- Wi-Fi 2.4 GHz (a, b, g,n, ac), MFI Certified

Display

- 3.5" HVGA color touchscreen

Maintenance and Cleaning

The e280/e280s V2 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 get damaged.

- Do not store the device in hot areas. The high temperature can shorten the life of electronic devices, damage batteries 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. The 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

Following is the additional safety information for using this device.

Surface Cleaning

To clean the device, use a clean cloth slightly damped with water and with 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 the SCR test passes, then the unit is ready for the Customer to use the Smart Card.

    b If the SCR test fails, then send the unit for repair. Provide the details to the repair center, 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 the 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, then use ONLY an approved MSR cleaning card made specifically for POS MSR Card reader devices or Petroleum MSR card readers.

WARNING   **Potentially Explosive Environment**

When using the device in areas with a potential risk of explosion, such as gas stations, follow the advice of all signs and instructions. If there is a leak do not use this device.

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).

> **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 the part number. For example, "e280", "M87x-1xx-xx-xxx-x", and "PTID xxxxxxxx."

- Serial number (S/N xxx-xxx-xxx).

2 Obtain the MRA numbers by performing the following steps:

- 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 from 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.

> **NOTE**
>
> One MRA number for each device is issued when the device is returned to Verifone, even if you are returning several of the same models.

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 on the bottom of the unit).

- Shipping documentation, such as air bill numbers used to trace the shipment.

- Model(s) returned (model numbers are located on the Verifone label on the bottom of the device).

Troubleshooting Guidelines

The troubleshooting guidelines provided in the following section are included to help you install and configure your e280 device successfully. Typical examples of malfunction you may encounter while operating your e280 device and steps that 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 e280 device comes equipped with tamper-evident labels. The e280 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 battery charge state is not below the critically low level.

- 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 display does not turn on, press and hold the power key for 8-10 seconds.

- Plug the charger.

- If the problem persists, contact your local Verifone service provider.

Battery Does Not Charge

The e280 device battery must initially be charged fully to ensure proper operation.

NOTE

- Allow the e280 device to remain connected to the power pack for eight hours to ensure the battery receives a full charge.

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

- 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 e280 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 attaching the USB end of the power pack to the device and plugging the other end of the power pack into a wall outlet.

- The e280 device automatically shuts down when the battery reaches the critically low charge state.

- Charge the device once a week even if the device is not in use.

Transactions Fail to Process

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

Check the Magnetic Card Reader

- Perform a test transaction using one or more different magnetic stripe cards to ensure the problem is not a defective card.

- Ensure that you are swiping the card properly. With the e280 card reader, the black magnetic stripe on the card should face down and outward (see Figure 6 for more details).

- Process a transaction manually. If the manual transaction works, the problem may be a defective card reader.

- Contact your Verifone distributor or service provider if the problem persists.

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

e280

Installation Guide