Table of contents

Introduction ......................................................................................................................... 3
  Audience ........................................................................................................................... 3
  Objectives ......................................................................................................................... 3
  Assumptions ..................................................................................................................... 3
Product overview ................................................................................................................ 4
  Warranty, service, and support ......................................................................................... 5
    Warranty .......................................................................................................................... 5
    Service strategy ............................................................................................................. 5
    Support strategy ............................................................................................................ 5
  Components ..................................................................................................................... 6
  Software ........................................................................................................................... 8
Setting up the HP Retail Jacket for ElitePad ....................................................................... 9
  Check the shipment .......................................................................................................... 9
  Install the drivers ........................................................................................................... 10
    OPOS, JPOS, and POS for .NET drivers ...................................................................... 10
    Downloading and installing drivers ............................................................................ 11
  Install the hardware ....................................................................................................... 12
  Verify the installation ..................................................................................................... 14
    Verify the Barcode Scanner ........................................................................................ 14
    Verify the MSR ............................................................................................................ 14
Using the product .............................................................................................................. 16
  Barcode scanner ............................................................................................................. 16
  MSR ............................................................................................................................... 16
  Key injection ................................................................................................................... 16
Troubleshooting and support ............................................................................................. 17
  Diagnostics ..................................................................................................................... 17
  Customer support issues ............................................................................................... 18
    The MSR and/or the scanner in the HP Retail Jacket for ElitePad does not function at all. ............................................................................................................. 18
    The MSR does not read a card or Barcode Scanner does not read a barcode ............. 19
    The MSR and Barcode Scanner reads data in Notepad, but does not work with my POS application ......................................................................................... 20
  ElitePad NFC .................................................................................................................. 20
Summary ............................................................................................................................ 21
Introduction

HP Retail mobility solutions for 2013 include the introduction of the HP Retail Jacket for ElitePad. This product provides magnetic stripe reading and barcode scanning capabilities to the HP ElitePad tablet.

This white paper discusses the features and components of the HP Retail Jacket for ElitePad. You will also learn how to set up, use, troubleshoot, and support the product.

Audience

This whitepaper is intended for:

- Service engineers
- Support engineers
- Field service engineers

Objectives

After completing this white paper, you should be able to:

- Recognize the features and components of the product
- Assist a customer with setting up and configuring the peripheral hardware and device drivers
- Assist a customer with using the product
- Indicate support issues with product

Assumptions

This white paper assumes you are familiar with Retail Point of Sale (RPOS) peripheral functionality and the HP ElitePad product. Be sure to take the additional following training as necessary (available on grow@hp):

- HP Point of Sale System Peripherals Service and Support (Grow @HP ID 00089068, TLC ID 00075231)
- HP ElitePad 900 Technology, Service, and Support (Grow @HP ID 00156249, TLC ID 00728909)
Product overview

The HP Retail Jacket for ElitePad is a retail-ready Smart Jacket that mounts directly to the HP ElitePad tablet PC. It includes an integrated magnetic stripe reader (MSR) and barcode scanner to provide POS functionality in a mobile environment.

The HP Retail Jacket for ElitePad provides the following features:

- Bi-directional, 3-track MSR allows processing of credit, loyalty, or gift cards with a magnetic stripe.
- 1D and 2D omni-directional bar code scanner can scan merchandise, coupons or ads.
- Pass through stereo sound, camera, and line out, an additional USB 3.0 port, and a secondary battery (optional) increase the effectiveness of the tablet.
- Triple DES and AES encryption with DUKPT and Fixed key management is supported on the MSR.
- Two Easy Access Trigger Buttons work with barcode scan applications.
- Hand strap and shoulder sling mounting points provide for ease of use. The hand strap is included with the product shipment. Customers can purchase a shoulder sling separately.
- The integrated Wi-Fi or Bluetooth in the HP ElitePad allows wireless transmission of a receipt to e-mail or to a mobile printer.
- Sales can be transacted anywhere on the floor.

The HP Retail Jacket for ElitePad is offered as an after-market option (AMO), or as a drop-in-box (DIB) item together with the HP ElitePad when the customer orders the HP ElitePad Mobile POS Solution. Note that at product launch, the jacket is AMO only in EMEA. Users can order the product with or without an optional battery.

Note: The MSR is shipped in unencrypted mode. Encryption mode may be enabled by the customer using a separately purchased injection service.
Warranty, service, and support

The HP Retail Jacket for ElitePad is available worldwide.

Warranty

The HP Retail Jacket for ElitePad is offered as an after-market option (AMO), or as a drop-in-box (DIB) item together with the HP ElitePad when the customer orders the HP ElitePad Mobile POS Solution. The HP Retail Jacket for ElitePad has its own serial number that is used to track warranty.

<table>
<thead>
<tr>
<th>If the customer purchases the HP Retail Jacket for ElitePad:</th>
<th>Then the Smart Jacket warranty:</th>
</tr>
</thead>
<tbody>
<tr>
<td>As an AMO</td>
<td>1 year parts and labor, with no onsite service (except in APJ for regions that do not support carry-in repair)</td>
</tr>
<tr>
<td>DIB with HP ElitePad</td>
<td>Assumes the warranty of the HP ElitePad</td>
</tr>
</tbody>
</table>

Care Packs are available to extend the warranty term or to provide Advanced Service Exchange.

Service strategy

The HP Retail Jacket for ElitePad has several replaceable components in the event the product requires service. The following are replaceable components.

- Top cap
- Front cover
- Magnetic Stripe Reader (MSR) and MSR board (left and right)
- Bar code scanner and Barcode scanner board
- Volume control button
- Battery connector board
- System board
- Rear cover
- Battery

**Note:** The HP Services Media Library (SML) provides animated videos that show how to remove and replace these items. The service procedures are not provided in this white paper.

Support strategy

The HP ElitePad support team takes all calls for both the HP ElitePad and the HP Retail Jacket for ElitePad.
Components

The HP Retail Jacket for ElitePad consists of two pieces: a top piece and a bottom piece. The HP ElitePad is installed in between the two pieces. The following graphics show the components of the top and bottom of the case.

Rear view:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barcode scanner trigger buttons (2)</td>
</tr>
<tr>
<td>2</td>
<td>Rear camera cutout</td>
</tr>
<tr>
<td>3</td>
<td>Flash LED cutout</td>
</tr>
<tr>
<td>4</td>
<td>Magnetic stripe reader</td>
</tr>
<tr>
<td>5</td>
<td>Volume control button</td>
</tr>
<tr>
<td>6</td>
<td>Hand strap connection points (4)</td>
</tr>
<tr>
<td>7</td>
<td>Accessory connector</td>
</tr>
</tbody>
</table>
Top view:

1. Headset jack cutout
2. Rotation lock switch cutout
3. Barcode scanner
4. Microphone ports (2)
5. Power button

Bottom view:

1. Shoulder sling connection point (2)
   **Note:** Shoulder sling is purchased separately.
2. System connector
3. USB port
Software

The Retail Jacket for HP ElitePad uses native windows drivers when the devices are used in Human Interface Device (HID) mode. The retail jacket also supports OPOS, JPOS, and POS for .NET drivers.

If the customer purchases the HP ElitePad Mobile POS Solution, then all drivers are preinstalled in the HP ElitePad system image.

Customers who purchase the retail jacket as an AMO option can download the additional drivers from the HP ElitePad Software & Drivers web site.

---

**Note:** The HP ElitePad Mobile POS Solution does not include a POS application. Customers are responsible for purchasing and installing their own POS application.
Setting up the HP Retail Jacket for ElitePad

Setting up the HP Retail Jacket for ElitePad involves the following tasks:

1. Check the shipment
2. Install the drivers (if necessary)
3. Install the hardware (jacket)
4. Verify the installation

Check the shipment

Before setting up the HP Retail Jacket for ElitePad, verify that all items have been received. The customer can use the BOM included in the package to verify the items received. In general, the product ships with the following items:

- HP Retail Jacket for ElitePad (2 pieces)
- Secondary battery (optional)
- Hand strap
Install the drivers

Native Windows drivers are included in the HP ElitePad software image. If the customer plans to use the scanner and the MSR in USB-HID-KB mode, then no further drivers need to be installed. Both the MSR and the scanner are shipped in USB-HID-KB mode by default.

When the device is first connected, Windows displays the new hardware wizard in the System Tray.

OPOS, JPOS, and POS for .NET drivers

The HP Retail Jacket for ElitePad also supports OPOS, JPOS, and POS for .NET drivers. As with all HP POS peripherals, customers should install any additional drivers that are required by their POS software application.

Scanner

If the customer purchased the HP Retail Jacket for ElitePad as an AMO option, and the customer’s POS application requires OPOS or JPOS drivers, the customer must download and install the driver SoftPaq. The SoftPaq includes the appropriate setup and test utilities needed to configure the drivers.

Once installed, the scanner must be placed in USB-COM mode.

**Note:** Refer to the *HP Retail Jacket Scanner.pdf* document, which provides detailed information on installing the OPOS and JPOS drivers using the correct utilities, placing the scanner in USB_COM mode, and running the tests to ensure the scanner is operating correctly.

The guide is located in the c:\SWSetup\Point of Sale folder on the hard drive in the HP factory image (products that are shipped with the HP Retail Jacket for ElitePad DIB). For SoftPaq installations, the guide is located in the folder where the files are extracted.
**MSR**

If the customer purchased the HP Retail Jacket for ElitePad as an AMO option, and the customer’s POS application requires OPOS or JPOS drivers, the customer must download the driver and install the driver SoftPaq. The SoftPaq includes the appropriate setup and test utilities needed to configure the drivers.

---

**Note:** Refer to the *HP USB MSR Utility Info.pdf* document, which provides detailed information on installing the OPOS and JPOS drivers using the correct utilities, as well as running the tests to ensure the scanner is operating correctly.

The guide is located in the `c:\SWSetup\Point of Sale` folder on the hard drive in the HP factory image (products that are shipped with the HP Retail Jacket for ElitePad DIB). For SoftPaq installations, the guide is located in the folder where the files are extracted.

---

**Downloading and installing drivers**

Users can download the driver SoftPaq directly to the HP ElitePad if the ElitePad is connected to the Internet. Users can also download the SoftPaq to a USB flash drive using a second system that is connected to the Internet.

Locate and install the SoftPaqs as follows:

1. Go to [www.hp.com](http://www.hp.com) and click **Support & Drivers**, then click **Drivers & Software**.
2. In the Search box, enter **HP ElitePad Tablet PC** and click the **Search** button.
3. Download the SoftPaqs to any convenient folder. If using a second system, download the SoftPaqs to a USB flash drive, and then insert the USB flash drive into an available USB port on the HP ElitePad.
4. Click each SoftPaq to install and then follow the on-screen prompts to complete the installation.

---

**Note:** The SoftPaq installs the selected drivers as well as the utilities that are required to configure and test them.

The hardware does not need to be installed prior to installing the drivers.
Install the hardware

The HP Retail Jacket for ElitePad connects to the HP ElitePad using the System Connector and is secured with four screws. Customers should follow the instructions provided in the kit to install the hardware.

A small Phillips screwdriver is required to complete the assembly. In general, the installation involves the following steps:

1. Install the secondary battery if one is included with the kit and is not already installed.

   If the secondary battery is shipped installed in the jacket, a plastic tab that covers the battery connector must be removed.

2. Loosen 4 Phillips head captive screws (1 and 2) to detach the two pieces of the jacket.

   **Note:** The Phillips screws are captive. The diagram shows the screws in expanded view for clarity.
3. Insert the HP ElitePad in between the two pieces of the jacket, ensuring the System Connector is properly seated.

4. Tighten the 4 captive screws to secure the jacket to the HP ElitePad

Show me!
You can view an animation that shows the installation procedure for the HP Retail Jacket for ElitePad onto the HP ElitePad. The animation is available on the HP Services Media Library (SML).

Note: The HP ElitePad cannot be docked in the HP ElitePad Docking Station when the HP Retail Jacket for ElitePad is installed.
Verify the installation

Verify the installation of the HP Retail Jacket for ElitePad by testing the barcode scanner and MSR functionality.

Verify the Barcode Scanner

To test the barcode scanner in USB_HID_KD mode, scan a barcode.

1. Open Microsoft Notepad and scan a barcode.
2. Verify that data appears in Notepad.

Any barcode can be used for this test. If the user does not have a barcode available, the samples shown to the left on this page can be used.

If the data does not appear, verify that the scanner is in USB-HID-KBD mode. To do this, scan the Set All HP Default barcode shown to the right, wait 10 seconds, and then try and scan any one of the other barcodes and see if the output is seen in Notepad.

**Note:** To test the scanner in OPOS mode, use the OPOS test utility included with the OPOS driver SoftPaq. An OPOS aware POS application that interfaces with the barcode scanner OPOS drivers is also required.

The *HP Retail Jacket Scanner*.pdf document provides detailed information on using this utility.

Verify the MSR

To test the MSR in USB_HID_KD mode, swipe a credit card.

1. Open Microsoft Notepad and swipe a credit card.
2. Verify that data appears in Notepad. Most of the data will be unreadable.
3. If nothing appears in Notepad, confirm that the MSR is in USB-HID-KB mode by following these steps:
   a. Run `HPhIDKBCfg.exe` (located in the c:\SWSetup\Point of Sale directory). When the utility is running you should see a graphical GUI similar to the following:

   **MSR Configuration V1.08 for:**
   
   **HP USB Mini MSR**

   ![MSR Configuration GUI](image)

   b. The reader emits three long beeps to confirm that the settings have been changed.

   c. The application displays a message to indicate a successful installation and the application exits automatically and the process is complete.

   **Note:** To test the MSR in OPOS mode, use the OPOS test utility included with the OPOS drivers SoftPaq. An OPOS aware POS application that interfaces with the barcode scanner OPOS drivers is also required.

   The *HP USB MSR Utility Info.pdf* document provides detailed information on using this utility.
Using the product

Once the HP Retail Jacket for ElitePad is installed and the installation verified, it is ready for use.

Barcode scanner

To scan a barcode, press one of the Easy Access Trigger buttons on the underside of the jacket. Position the scanner window over the barcode, ensuring that the laser scan line crosses every bar and space of the symbol.

MSR

Use the MSR in the same way as the HP Mini-MSR or HP POS Keyboard with MSR. That is, ensure the card is facing the correct direction, with its magnetic stripe in contact with the read head while passing through the reader. The card can be swiped in either direction.

Key injection

The MSR supports Triple DES and AES encryption algorithms with DUKPT or Fixed key management which can be used to protect sensitive cardholder information. The device is shipped in with encryption disabled and will need to be injected with the encryption solution provider’s encryption key before the encryption can be enabled.

The encryption keys are to be injected by certified key injection facility. Advise customers to contact their local Sales Representative to get more information about key injection process.
Troubleshooting and support

Diagnostics

Standard diagnostics tools provided on the HP ElitePad, including the HP Support Assistant and HP PC Hardware Diagnostics, can be used to test the ElitePad and attached peripherals.

HP PC Hardware Diagnostics can be used to test components of the Smart Jacket, such as the optional battery and ports. The HP Retail Jacket for ElitePad must be installed on the ElitePad to run these diagnostic tests.

![Component Tests Diagram](image)

**Note:** The Battery test will test the functionality of both batteries (the primary ElitePad battery and the optional secondary battery installed in the Smart Jacket). However, the ElitePad BIOS does not support charge control, meaning the user cannot force the first or second battery to charge at a given moment to test the functionality. To test the secondary battery, ensure the primary battery on the ElitePad is fully charged first.

Customers should use the OPOS and JPOS tools to test functionality of the MSR and bar code scanner. These tools are discussed in the previous section of this document.
Customer support issues

Customers might have the following issues with the HP Retail Jacket for ElitePad.

- The MSR and/or the scanner in the HP Retail Jacket for ElitePad does not function at all.
- The MSR does not read a card or Barcode Scanner does not read a barcode.
- The MSR and Barcode Scanner read data in Notepad, but do not work with my POS application.
- Can I use the HP ElitePad NFC to perform transactions?

The next topics discuss how to resolve and handle these issues.

The MSR and/or the scanner in the HP Retail Jacket for ElitePad does not function at all.

The first step to resolving this issue is to determine if the issue is caused by the HP ElitePad or the HP Retail Jacket for ElitePad. Open the Device Manager and verify that both the MSR and Barcode Scanner are present and functioning correctly. The MSR and scanner can appear differently in Device manager depending on how they are configured.

After determining if the MSR and/or scanner is present in Device Manager:

| If: One of the devices is not present | Then: The issue is most likely with the HP Retail Jacket for ElitePad | Ask the customer to: Remove the HP Retail Jacket for ElitePad and then re-insert the HP Retail Jacket for ElitePad into the HP ElitePad, insuring that the System Connector is fully inserted into the HP ElitePad. If the problem continues, replace the HP Retail Jacket for ElitePad. |
| If: Neither device is present | Then: The issue could be with the HP ElitePad or the HP Retail Jacket for ElitePad | Remove the HP Retail Jacket for ElitePad. Attach the USB accessory to the ElitePad System Connector, and then plug a USB device into the USB port. If the USB device functions on the HP ElitePad, the issue is with the HP Retail Jacket for ElitePad. Reconnect the HP Retail Jacket for ElitePad, insuring that the System Connector is fully inserted into the HP ElitePad. If the device still does not function, the HP Retail Jacket for ElitePad must be repaired or replaced. |
The MSR does not read a card or Barcode Scanner does not read a barcode

Verify that the Barcode Scanner and MSR are functioning by opening Notepad and then scanning a barcode and swiping a credit card.

<table>
<thead>
<tr>
<th>If:</th>
<th>Then:</th>
<th>Actions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data appears in Notepad</td>
<td>The device is functioning correctly.</td>
<td>Ask the customer to check the POS application configuration and ensure that the correct drivers are installed (Windows Native, OPOS, or JPOS).</td>
</tr>
<tr>
<td>Data does not appear in Notepad</td>
<td>There is an issue with the device or the drivers</td>
<td>Open Windows Device Manager and ensure all drivers are installed correctly (no yellow bangs). If the problem persists, the HP Retail Jacket for ElitePad must be repaired or replaced.</td>
</tr>
</tbody>
</table>

Notes:

If MSR encryption is enabled, the data will appear corrupt. The encrypted data can only be read by the POS application software.

The MSR must be in USB_HID_KB mode to perform this test. The default shipping mode for the MSR and Scanner is USB_HID_KB mode, however the customer may have changed the mode and you will need to change the MSR or Scanner back to USB_HID_KB mode in order to see data appear in notepad when doing a credit card swipe or barcode scan.
The MSR and Barcode Scanner reads data in Notepad, but does not work with my POS application

If the device is present in the Windows Device Manager and data appears in Notepad during the scan test, ask the customer to use the appropriate OPOS or JPOS test utility provided in the MSR and Scanner SoftPaqs for the jacket. The SoftPaqs are located on www.hp.com under the HP ElitePad device.

Note: Detailed instructions on how to use the OPOS and JPOS test utilities are located in the HP Retail Jacket Scanner.pdf document. The document is located in the c:\SWSetup\Point of Sale folder on the hard drive in the HP factory image (products that are shipped with the HP Retail Jacket for ElitePad DIB). For SoftPaq installations, the guide is located in the folder where the files are extracted.

<table>
<thead>
<tr>
<th>If test is:</th>
<th>Then:</th>
<th>Ask the customer to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful</td>
<td>The issue is likely with the customer’s POS application configuration.</td>
<td>Verify the application configuration.</td>
</tr>
<tr>
<td>Not successful</td>
<td>The drivers might not be installed correctly or the device might not be in the correct mode.</td>
<td>Use the mode switch utility (provided with the SoftPaq) to ensure the device is in the correct mode. Check the HP web site to see if later versions of the OPOS and JPOS drivers are available. Reinstall the drivers and check device functionality again</td>
</tr>
</tbody>
</table>

ElitePad NFC

Consider this:

A customer wants to know if he can use the integrated NFC on the HP ElitePad to transact payments. What are the considerations for doing this?

While the HP ElitePad NFC solution meets NFC forum requirements, it does not meet industry payment standards. The NFC is a good option for sharing loyalty coupons, but should not be used for more secure transactions.
Summary

Keep the following in mind when supporting the HP Retail Jacket for ElitePad:

- The HP Retail Jacket for ElitePad is a magnetic stripe reader and barcode-scanning Smart Jacket that leverages the power of the HP ElitePad Tablet PC product to enable a mobile point of sale solution.
- Customers can purchase the HP Retail Jacket for ElitePad as an AMO kit for the HP ElitePad, or they can order the HP ElitePad with the HP Retail Jacket for ElitePad as a DIB item.
- The HP Retail Jacket for ElitePad carries a 1/1/0 warranty.
- The HP Retail Jacket for ElitePad has several replaceable components in the event the product requires service.
- The HP ElitePad customer support team supports both the HP ElitePad and the HP Retail Jacket for ElitePad.
- The scanner and MSR use native Windows drivers for USB_HID_KB mode. Customers can download and install OPOS or JPOS drivers if required by their POS application.
- Standard diagnostics tools can be used to test the functionality of the Smart Jacket, including HP Support Assistant and HP PC Hardware Diagnostics. Customers should use the OPOS and JPOS testing utilities to test functionality of the MSR and barcode scanner.