Contents

Introduction .......................................................................................................................................................4
1.0 List of Accessories..........................................................................................................................................4
   1.0.1 Hardware ...........................................................................................................................................4
   1.0.2 Accessory Drivers .............................................................................................................................4
   1.0.3 OPOS and CCO Drivers/Application.................................................................................................4
2.0 Port Information ..........................................................................................................................................5
   2.1.0 Ports ..................................................................................................................................................5
3.0 Accessories Connection ...............................................................................................................................6
   3.1.0 Hardware ...........................................................................................................................................6
      3.0.1 Cash Drawer ...........................................................................................................................6
      3.0.2 Printer ......................................................................................................................................8
      3.0.3 Bar Code Scanner / MSR / Keyboard .....................................................................................9
4.0 Windows Driver Installation ......................................................................................................................10
   4.1.0 Cash Drawer – RJ45 .......................................................................................................................10
   4.2.0 Printer ..............................................................................................................................................10
   4.3.0 Keyboard .........................................................................................................................................12
   4.4.0 Scanner ...........................................................................................................................................14
   4.5.0 Magnetic Stripe Reader (MSR) .......................................................................................................15
   4.6.0 If prompted for native driver location (New Hardware Wizard) .......................................................16
5.0 OPOS Driver Installation ..........................................................................................................................19
   5.1.0 OPOS and CCO Drivers/Application ...............................................................................................19
   5.2.0 Cash Drawer – RJ12 .......................................................................................................................19
   5.3.0 Printer ..............................................................................................................................................19
   5.4.0 Keyboard .........................................................................................................................................19
   5.5.0 Scanner ...........................................................................................................................................19
   5.6.0 Magnetic Stripe Reader (MSR) .......................................................................................................19
6.0 Confirmation that Accessories are working outside of the Point of Sale Application ................................20
   6.1.0 Cash Drawer ...................................................................................................................................20
      6.1.1 First Utility ..................................................................................................................................20
      6.1.2 Second Utility ................................................................................................................................22
   6.2.0 Printer ..............................................................................................................................................24
   6.3.0 Keyboard .........................................................................................................................................25
   6.4.0 Scanner ...........................................................................................................................................26
   6.5.0 Magnetic Stripe Reader (MSR) .......................................................................................................26
7.0 Q & A ........................................................................................................................................................27
Introduction

This document contains examples and information in regards to HP Point of Sale (POS) accessories.

1.0 List of Accessories

1.0.1 Hardware

<table>
<thead>
<tr>
<th>HP Product Name</th>
<th>Description</th>
<th>Connector Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP Cash Drawer</td>
<td>Cash Drawer</td>
<td>RJ45 from printer.</td>
</tr>
<tr>
<td>HP USB POS Keyboard</td>
<td>POS Keyboard with touchpad without the top rows of keys.</td>
<td>USB</td>
</tr>
<tr>
<td>HP USB Receipt Printer</td>
<td>Thermal Printer</td>
<td>USB</td>
</tr>
<tr>
<td>HP USB Barcode Scanner</td>
<td>Scanner</td>
<td>USB</td>
</tr>
<tr>
<td>HP USB Mini-MSR</td>
<td>Magnetic Strip Reader (MSR)</td>
<td>USB</td>
</tr>
</tbody>
</table>

1.0.2 Accessory Drivers

<table>
<thead>
<tr>
<th>HP Product Name</th>
<th>Description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP Cash Drawer</td>
<td>Cash Drawer</td>
<td>-</td>
</tr>
<tr>
<td>HP USB POS Keyboard</td>
<td>POS Keyboard</td>
<td>-</td>
</tr>
<tr>
<td>HP USB Receipt Printer</td>
<td>Thermal Printer</td>
<td>3.0.11</td>
</tr>
<tr>
<td>HP USB Barcode Scanner</td>
<td>Scanner</td>
<td>-</td>
</tr>
<tr>
<td>HP USB Mini-MSR</td>
<td>MSR</td>
<td>2.31</td>
</tr>
</tbody>
</table>

1.0.3 OPOS and CCO Drivers/Application

On the HP rp5000 Microsoft Windows XP Pro images, the OPOS drivers for the thermal printer / MSR have been installed in the image. The Common Control Object (CCO) version 1.8.001 has been installed and registered in the Windows XP Pro image.

The OPOS and Windows drivers for the accessories may be installed from the HP POS software and documentation CD included in the accessory after market kit or from the HP rp5000 Windows XP Pro image if they are not already present on your image.
2.0 Port Information

2.1.0 Ports

The HP rp5000 uses a board in place of an expansion slot for 3 powered USB ports (two 12V USB ports & one 24V USB port); the fourth powered USB board is on the motherboard.

The following are the connectors on the back of the unit:

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>PS2 Mouse &amp; KB</td>
</tr>
<tr>
<td>6</td>
<td>USB</td>
</tr>
<tr>
<td></td>
<td>2 - 5V USB port</td>
</tr>
<tr>
<td></td>
<td>3 - 12V USB port</td>
</tr>
<tr>
<td></td>
<td>1 - 24V USB port</td>
</tr>
<tr>
<td>1</td>
<td>LPT1</td>
</tr>
<tr>
<td>4</td>
<td>Serial (power configurable)</td>
</tr>
<tr>
<td>1</td>
<td>VGA</td>
</tr>
<tr>
<td>1</td>
<td>Line-In</td>
</tr>
<tr>
<td>1</td>
<td>NIC</td>
</tr>
</tbody>
</table>

The following are the I/O connectors on the back of the unit:

The 12V and 24V powered USB connectors are keyed differently. The following is a close up of 3 powered USB ports (two 12V and one 24V):
3.0 Accessories Connection

The USB accessories should be installed after the Windows XP Pro operating system has been unbundled.

HP recommends installing one accessory at a time, which will help determine which accessory has an issue if an accessory does not function. By installing one accessory at a time, Windows may install the native drivers with very little user interaction needed during the native driver installation.

3.1.0 Hardware

3.0.1 Cash Drawer

The cash drawer will be attached to the back of the printer using a RJ12 type connector (the smaller connector).

**NOTE:** You must use the cable that is provided with the cash drawer in order for the cash drawer to operate correctly.

The following are the cash drawer cable connectors:

The smaller connector connects to the back of the printer, the larger connector connects to the bottom of the cash drawer.

The following is the bottom of the cash drawer where the connector for the cash drawer cable connects to:
The following is the back of the printer with the cover closed:

The following is the back of the printer with the cover open:

Close-up of powered USB connector on back of the printer:
Close-up of cash drawer connector on the back of the printer:

3.0.2 Printer
The print will be installed in the 24V USB (powered) port.

The following is the I/O connectors on the back of the HP rp5000 computer:
The 24V powered USB port is where the printer USB cable will plug into. This port is keyed differently than 12V powered USB connector:

3.0.3 Bar Code Scanner / MSR / Keyboard
The bar code scanner / MSR / keyboard may be plugged into any free USB port. One may plug in a 5V USB (regular USB device or non-powered USB device) into a power USB port. In this configuration the power portion of USB port is not utilized.
4.0 Windows Driver Installation

Please install the Windows drivers for all of the accessories prior to install the OPOS drivers for the accessories.

4.1.0 Cash Drawer – RJ45

There are no drivers for the cash drawer. Confirm that the cash drawer is connected to the back of the printer via the cash drawer cable.

4.2.0 Printer

On the HP rp5000 unit for Windows XP Pro the drivers are installed on the image from the factory. When the USB connector is attached to the unit, Windows will load the drivers for the HP POS printer.

If the Windows drivers are needed they can be found on the HP POS software and documentation CD included with the accessory after market kit in the "x:\Receipt Printer\USB" sub-directory, where "x" represents the CD drive letter. On the HP rp5000 images that have the drivers preloaded, the Windows USB printer drivers can be found in "C:\COMPAQ\POS\POS Printer USB" sub-directory.

The following is the Device Manager window when the printer is connected to the unit via the USB cable and Windows has found the device.
The following is the Device Manager window after the driver has been loaded:
4.3.0 **Keyboard**

The HP POS keyboard uses native drivers for Windows XP Pro. Windows will load several drivers for the keyboard and touch pad. If during the driver installation, Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to “If prompted for native driver location (New Hardware Wizard)” section. If prompted for the driver installation you may need to go through the new hardware wizard 5 or 6 times to load the Windows HID drivers.
The following is the Device Manager window after all the drivers are loaded for the HP POS keyboard:
4.4.0 Scanner

The HP POS scanner uses native drivers for Windows XP Pro. If during the driver installation Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to "If prompted for native driver location (New Hardware Wizard)" section.

The following is the Device Manager window after all the drivers are loaded for the HP USB Barcode Scanner:
4.5.0 Magnetic Stripe Reader (MSR)

The scanner is natively supported by Windows XP Pro as a Human Interface Device (HID). If during the driver installation Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to "If prompted for native driver location (New Hardware Wizard)" section.

The following is the device manager window after all the drivers are loaded for the HP USB Mini MSR:
4.6.0 If prompted for native driver location (New Hardware Wizard)

The MSR / Scanner / POS keyboard use the native driver that comes with Windows XP Pro. When you plug in one of these devices you receive the Windows’ New Hardware Wizard dialog. The user needs to accept the defaults to install the drivers. Depending on the device you may not receive all the screens that are shown below to load the native drivers.

For the question “Can Windows connect to Windows Update to search for software?” user should select the option “NO, not this time”:
For the following screens accept the default option:

**Found New Hardware Wizard**

This wizard helps you install software for:

USB Human Interface Device

If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?

- Install the software automatically (Recommended)
- Install from a list or specific location (Advanced)

Click Next to continue.

**Found New Hardware Wizard**

Please wait while the wizard installs the software...

USB Human Interface Device

hidusb.sys
To C:\WINDOWS\System32\DRIVERS

---
When finished, click “FINISH” to complete the installation of the native drivers.
5.0 OPOS Driver Installation
On the HP rp5000 Windows XP Pro images the OPOS drivers for thermal printer / MSR have been installed in the image. The Common Control Object (CCO) version 1.8.001 has been installed and registered in the Windows XP Pro image.

The OPOS and Windows drivers for the accessories may be installed from the HP POS software and documentation CD included with the after market kit accessory or from the HP rp5000 Windows XP Pro image if they are not already present on your image.

5.1.0 OPOS and CCO Drivers/Application
The Common Control Object drivers’ version 1.8.001 can be found on the CD in “x:\CCO" sub-directory, where “x" represents the CD drive letter. On the HP rp5000 images that have the drivers installed the Windows printer drivers can be found in “C:\COMPAQ\POS\CCO” sub-directory. Launch the OPOSCCOS-1_6_001.EXE file that is found in this sub-directory and follow the instructions that are presented on the screen.

5.2.0 Cash Drawer – RJ12
The OPOS drivers for the cash drawer are included in the printer driver installation.

5.3.0 Printer
The OPOS drivers can be found on the HP POS software and documentation CD included with the after market kit in “x:\Receipt Printer\OPOS” sub-directory, where “x” represents the CD drive letter. On the HP rp5000 images that have the drivers installed, the Windows printer drivers can be found in “C:\COMPAQ\POS Printer OPOS\OPOS Drivers” sub-directory. Launch the INSTALL.BAT file select “YES” to the registry question.

5.4.0 Keyboard
There are no OPOS drivers needed for this device.

5.5.0 Scanner
There are no OPOS drivers needed for this device.

5.6.0 Magnetic Stripe Reader (MSR)
The OPOS drivers can be found on the HP POS software and documentation CD included with the after market kit in “x:\MSR\OPOS” sub-directory, where “x” represents the CD drive letter. On the HP rp5000 images that have the drivers installed the Windows printer drivers can be found in “C:\COMPAQ\POS\MSR OPOS” sub-directory. Launch the SETUP.EXE file that is found in this sub-directory and follow the instructions that are presented on the screen.
6.0 Confirmation that Accessories are working outside of the Point of Sale Application

If you have finished installing the drivers from the previous section, please select the re-start option in Windows to ensure the drivers are fully started/loaded.

The utilities that are mentioned in the following sections are designed to be used to confirm that the device is properly attached to the unit and if appropriate, the OPOS drivers are able to communicate to the device properly. The utilities are not intended for everyday usage or to replace the point of sale application.

6.1.0 Cash Drawer

There are no drivers for the cash drawer. You need only to confirm the cash drawer is connected to the back of the printer via dash cash drawer cable.

The cash drawer may be tested with one of two utilities. The first utility will only test the cash drawer; the second utility will allow you to test both the cash drawer and the printer.

6.1.1 First Utility

The following is overview of the steps to test the cash drawer followed by details steps:

1. Start the "A794_OPOS_SampleApp.exe" application. This application is included on the POS software and documentation CD with the POS accessory after market kit, in “x:\Cash_Drawer\Sample Application” sub-directory, where “x” represents the CD drive letter or on the HP rp5000 image in the “C:\Compaq\POS\Cash Drawer Printer OPOS” sub-directory.
2. Click on “Cash Drawer”
3. Close the cash drawer and the GUI should give the status that the cash drawer is closed.

Start the OPOS printer sample application

The cash drawer installation may be tested using the OPOS printer sample application. This application is included on the POS software and documentation CD with the POS accessory after market kit in "x:\Cash_Drawer\Sample Application" sub-directory, where “x” represents the CD drive letter or on the HP rp5000 image in the “C:\Compaq\POS\Cash Drawer Printer OPOS” sub-directory. Once in this sub-directory run "A794_OPOS_SampleApp.exe".
The following is the main GUI of the A794_OPOS_SampleApp application when it is launched:

![Cash Drawer Test Utility](image1)

After clicking "OPEN CASH DRAWER" the utility should show the status of OPEN for the cash drawer.

![Cash Drawer Test Utility](image2)
After clicking the “closing the cash drawer” button the utility will show the status of the cash drawer as “Cash Drawer is Closed or Not Connected”.

6.1.2 Second Utility
The following is overview of the steps to test the cash drawer followed by details steps:
1. Start the “HPSampleApp.EXE” application found on the POS software and documentation CD, included with the POS accessory after market kit, in “x:\Receipt_Printer\Sample Application” sub-directory, where “x” represents the CD drive letter or on the HP rp5000 image in the “C:\Compaq\POS\POS PRINTER OPOS” sub-directory.
2. Click “Cash Drawer”
3. Click “OPEN”
4. Click “ENABLE”
5. Click “OPEN” and the cash drawer should open. The GUI should also show status that the cash drawer is open.
6. Close the cash drawer and the GUI should give the status that the cash drawer is closed.

Start the OPOS printer sample application
The cash drawer installation may be tested using the OPOS printer sample application. This application is included on the POS software and documentation CD with the POS accessory after market kit in “x:\Receipt_Printer\Sample Application” sub-directory, where “x” represents the CD drive letter or on the HP rp5000 image in the “C:\Compaq\POS\POS PRINTER OPOS” sub-directory. Once in this sub-directory run “HPSampleApp.EXE”.

![Cash Drawer Test Utility](image.png)
The following is the main GUI of the HPSampleApp sample application when it is launched:

When you select OPEN / ENABLE and the status should state OPOS_SUCCESS as shown below in the screen capture.

Select OPEN DRAWER, the drawer should open and status should change to OPEN:
When you close the drawer the status changes to CLOSED:

6.2.0 Printer

The following is an overview of the steps to test the printer followed by details steps:

1. Start the “HPSampleApp.EXE” application. This application is included on the POS software and documentation CD with the POS accessory after market kit in “x:\Receipt_Printer\Sample Application” sub-directory, where “x” represents the CD drive letter or on the HP rp5000 image in the “C:\Compaq\POS\POS PRINTER OPOS” sub-directory.
2. Click “Printer”
3. Click “OPEN PRINTER”
4. Click “CLAIM PRINTER”
5. Click “ENABLE PRINTER”
6. Click “Print Normal.” The information typed in the “Sample Text to Print” box will be sent to the printer.
7. To test bitmap or barcode print to the printer:
   a. If you have not enabled the printer, complete steps 1 – 7 above.
   b. Click on “Bitmap & Barcode Tests”
      Bitmap
      i. There are three test bitmaps (GRID.BMP / HP.BMP / TEST.BMP) that can be used. They are located in the “C:\Compaq\POS\POS Printer OPOS” directory or on the POS software and documentation CD in the “x:\Receipt_Printer\Sample Application” sub-directory. Put in the complete directory name and bitmap that you would like to use in testing the portion of the printer
      ii. Select the bitmap alignment (left / center / right).
      iii. Select “I’ll set it” option. Set it to 500 in the Bitmap Width.
iv. Click on PrintBitmap button. The printer should have printed the selected bitmap.

Barcode
i. Select the bar code alignment (left / center / right).
ii. Select “Human Readable Characters” (Above / Below / None).
iii. Select Bar Code Width (Small / Medium / Large).
iv. Select Interleaved 2 of 5 in the drop down box.
v. Type in the text.
vi. Click on PrintBarCode. The printer should have printed the barcode.

6.3.0 Keyboard
Use the keyboard like a standard keyboard and the touchpad will function like a mouse.
6.4.0 **Scanner**

In order to test the scanner one can open an application like Microsoft Notepad and scan a barcode. You may use one of the barcodes below for testing if you do not have an item with a barcode handy.

![Barcode Images]

6.5.0 **Magnetic Stripe Reader (MSR)**

Open Microsoft Notepad and scan a credit card. In Notepad you will get what appears as nonsense along with credit card information (%B, ^ characters are couple of examples). In Notepad this is OK.
**Question:** When I run the sample application I receive a message stating dependencies not correctly registered. How do I correct this?

**Answer:** If you run the cash drawer sample application and receive the following screen, it indicates that either the CCO or the OPOS drivers are not installed and registered. Install the CCO drivers and install the printer OPOS package. After the installation is complete restart Windows.

Cash Drawer Sample Application Error message:

![Cash Drawer Sample Application Error message](image1)

Printer Sample Application Error message when you click on cash drawer option

![Printer Sample Application Error message when you click on cash drawer option](image2)

Printer Sample Application Error message when you click on printer option

![Printer Sample Application Error message when you click on printer option](image3)