# Hardware Reference Guide

HP Engage Go Convertible System
HP Engage Go Mobile System
HP Engage Go Dock

**Product notice**

This guide describes features that are common to most models. Some features may not be available on your system.

Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. Go to http://www.microsoft.com.

To access the latest user guide, go to http://www.hp.com/support, and follow the instructions to find your product. Then select **User Guides**.

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For any further information or to request a full refund of the price of the computer, please contact your seller.

# About This Book

This guide provides basic information for upgrading the mobility system.

⚠ **WARNING!** Indicates a hazardous situation that, if not avoided, **could** result in death or serious injury.

⚠ **CAUTION:** Indicates a hazardous situation that, if not avoided, **could** result in minor or moderate injury.

📝 **IMPORTANT:** Indicates information considered important but not hazard-related (for example, messages related to property damage). An Important alert warns the user that failure to follow a procedure exactly as described could result in loss of data or in damage to hardware or software. Also contains essential information to explain a concept or to complete a task.

📝 **NOTE:** Contains additional information to emphasize or supplement important points of the main text.

💡 **TIP:** Provides helpful hints for completing a task.

# Table of contents

# 1 Product overview

## Standard features



Standard features include the following:

- Modern design and slim form factor provide for a clean counter look

- High-resolution, high-nit 31.2 cm (12.3-inch) display for excellent viewing of software

- Optional integrated barcode scanner with audible and visual feedback and ergonomically positioned trigger buttons for single and dual hand scanning capability

- Powerful productivity with an Intel® Pentium® or Core™ processor, battery life of 13 hours, and HP Fast Charge

- Hand strap attachment to assist with carrying

- Blind-mate, magnet-assisted, one-handed docking experience

- Optional countertop mounting bracket

- Low-profile, electromechanical attach point for the convertible dock, enabling connectivity to a smart locking system and POS peripherals

- Indicator light that shows status of the locking state

- Optional HP peripherals:

    - Carrying case with shoulder strap for hands-free retailing or extended use outdoors

    - Integrated magnetic stripe reader (MSR) (integrated into the carrying case)

    - HP ElitePOS Basic or Advanced I/O Connectivity Base

    - Integrated column printer or standalone printer

    - HP ElitePOS biometric fingerprint reader (connects to an I/O connectivity base)

    - Swivel, tilt, and interchangeable columns for different heights including a printer column

# Mobility head unit features
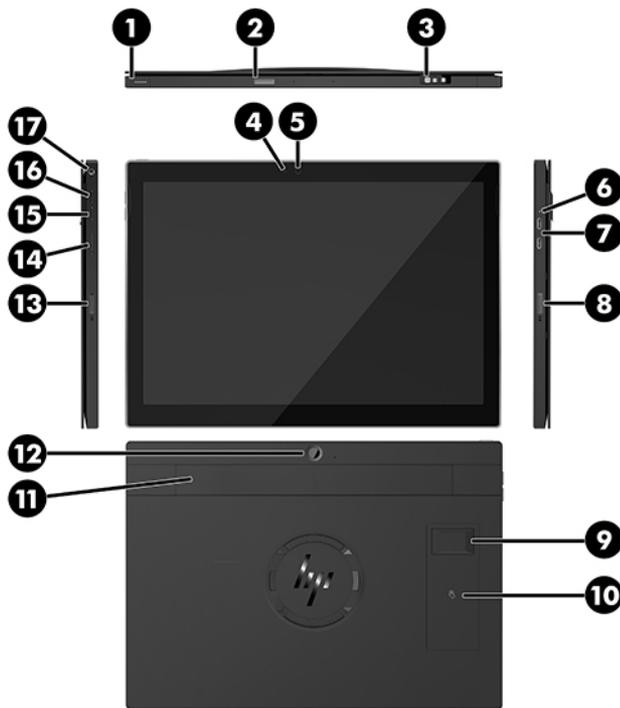
**Features**

| | | | |
|---|---|---|---|
| (1) | Power button | (10) | Near Field Communications (NFC) (optional) |
| (2) | Barcode scanner button | (11) | Hand strap |
| (3) | Barcode scanner (optional) | (12) | Rear-facing webcam |
| (4) | Webcam light | (13) | Barcode scanner button |
| (5) | Webcam | (14) | SIM card door |
| (6) | Charging light | (15) | Volume down button |
| (7) | USB SuperSpeed charging ports (2) | (16) | Volume up button |
| (8) | Barcode scanner button | (17) | Audio jack |
| (9) | Fingerprint reader (optional) | | |

**NOTE:** You cannot have a WWAN (LTE) module and a barcode scanner in the same unit. You can have neither, or either, but not both.

# Integrated features

Other than the display, the integrated devices shown below are optional.



**Features**

| | | | |
|---|---|---|---|
| (1) | 12.3" 1920 × 1280 WUXGA display | (5) | HP ElitePOS Mobile Retail Case |
| (2) | HP ElitePOS Integrated Column Printer | (6) | Integrated MSR |
| (3) | Docking lock release button | (7) | HP ElitePOS Biometric Fingerprint Reader |
| (4) | Choice of two ElitePOS I/O Connectivity Bases | | |

The display panel is an anti-glare WLED SVA 400 nits panel.

**NOTE:** The nits rating indicates the typical brightness of the panel prior to anti-glare coating.

# Dock options



| Options | |
|---|---|
| (1) | Rotate/tilt dock with integrated column printer |
| (2) | Rotate/tilt dock |

**NOTE:** The docks are shown on a stability base.

# HP ElitePOS Basic I/O Connectivity Base components



| Basic components | | | |
|---|---|---|---|
| (1) | Cash drawer jack | (7) | USB Type-C port |
| (2) | Power connector | (8) | RJ-45 (network) jack |
| (3) | USB Type-C power port | (9) | Security cable slot |
| (4) | Powered serial ports (3) | (10) | MicroSD card reader |
| (5) | USB 2.0 ports (4) | (11) | Audio-out (headphone)/Audio-in (microphone) jack |
| (6) | USB 3.0 ports (2) | | |

**IMPORTANT:** To avoid damage to the system, DO NOT plug a telephone cable into the cash drawer jack.

# HP ElitePOS Advanced I/O Connectivity Base components
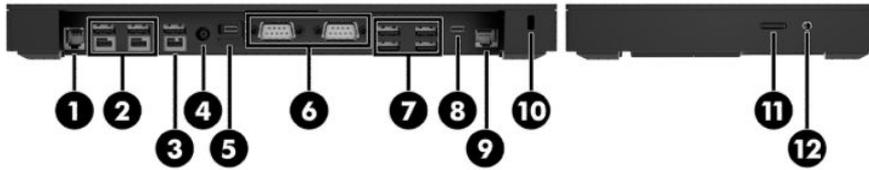
**Advanced components**

| | | | | |
|---|---|---|---|---|
| (1) | Cash drawer jack | (7) | USB 3.0 ports (4) |
| (2) | Powered USB 12 V ports (2) | (8) | USB Type-C port |
| (3) | Powered USB 24 V port | (9) | RJ-45 (network) jack |
| (4) | Power connector | (10) | Security cable slot |
| (5) | USB Type-C power port | (11) | MicroSD card reader |
| (6) | Powered serial ports (2) | (12) | Audio-out (headphone)/Audio-in (microphone) jack |

**IMPORTANT:** To avoid damage to the system, DO NOT plug a telephone cable into the cash drawer jack.

# Connecting an AC adapter to power

To connect an AC adapter to the I/O connectivity base, connect one end of the power cord to the AC adapter (1) and the other end to a grounded AC outlet (2), and then connect the AC adapter to the power connector on the I/O connectivity base (3).
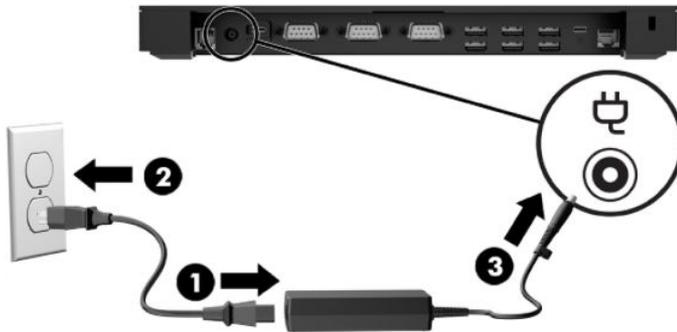


To connect an AC adapter to the mobility system when it is not connected to an I/O connectivity base, connect the AC adapter to a grounded AC outlet (1), and then connect the power adapter's USB Type-C connector to the USB Type-C power port on the underside of the dock's column (2).

📝 **NOTE:** The image below is shown with a stability base.
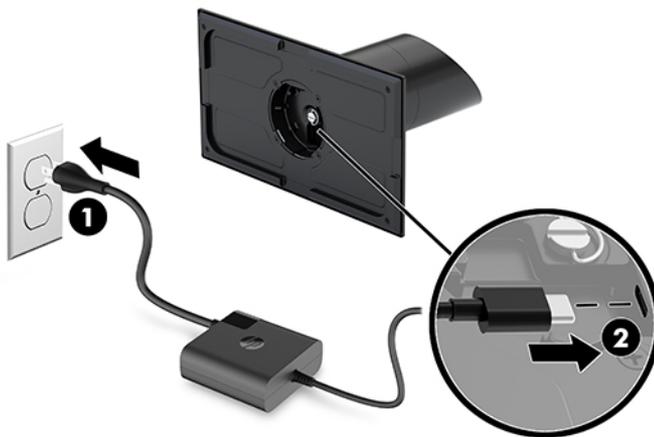
# Locating the mobility head unit power button

The power button is located on the top left edge of the bezel.

# Locating the I/O connectivity base power button

The I/O connectivity base power button is located on the underside of the I/O connectivity base.
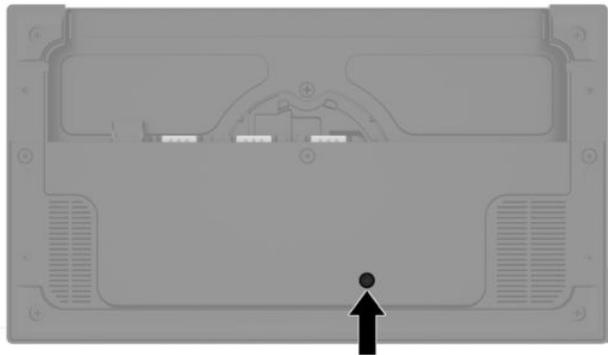
The mobility head unit controls the I/O connectivity base. When the mobility head unit is turned off, the I/O connectivity base is turned off and power is available only from the I/O connectivity base's USB Type-C port that connects to the mobility head unit. That port remains powered so that it can continue to communicate with the mobility head unit and allow the I/O connectivity base to turn back on when the mobility head unit is turned on.

After the system has been turned off, you can press the power button on the underside of the I/O connectivity base to allow power to be available on the I/O connectivity base ports while the mobility head unit remains turned off.

# Adjusting the mobility head unit

You can tilt and swivel the mobility head unit to set it to a comfortable viewing angle. The angle can be set between 50° and 60°.



The mobility head unit can be swiveled 180° in either direction.

# Mobility head unit serial number location

Each mobility head unit has a unique serial number and a product ID number that are located on the exterior of the mobility head unit. Keep these numbers available for use when contacting customer service for assistance.
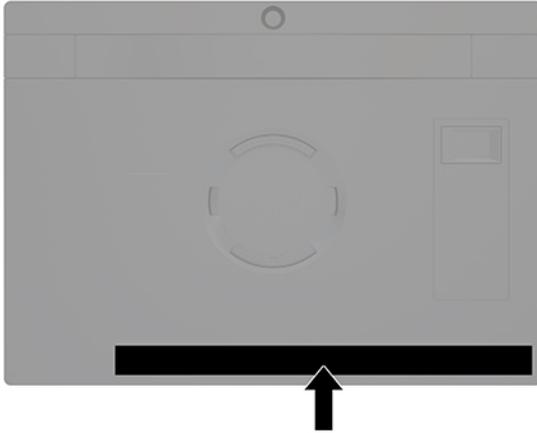
# I/O connectivity base serial number location

Each I/O connectivity base has a unique serial number and a product ID number that are located on the exterior of the I/O connectivity base. Keep these numbers available for use when contacting customer service for assistance.
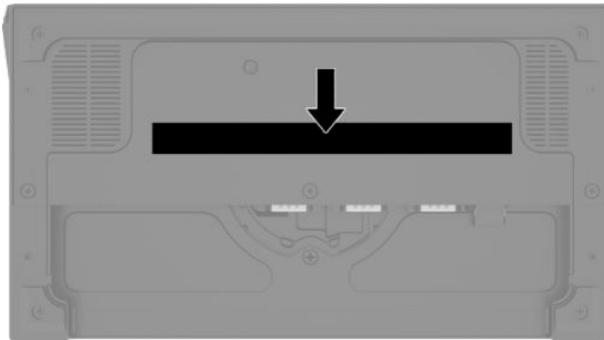
Regulatory information is located in the base plate. Install the base plate back if it is removed.

# 2 Cable routing configurations

## Cable matrix for HP Engage Go Convertible System with integrated column printer and basic I/O connectivity base
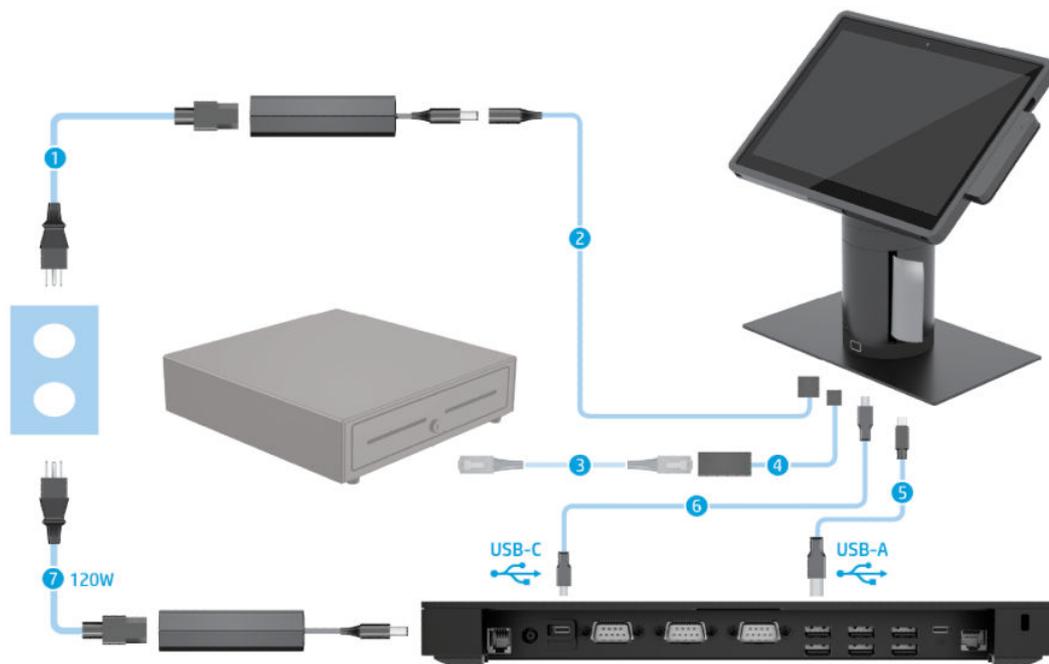


| Cables | | | |
|---|---|---|---|
| (1) | Column printer AC power cord | (5) | I/O connectivity base mini USB Type-B to USB Type-A data cable |
| (2) | Column printer AC adapter cable | (6) | I/O connectivity base USB Type-C cable |
| (3) | Cash drawer cable (purchased separately with cash drawer) | (7) | I/O connectivity base 120 W AC power cord |
| (4) | Column printer cash drawer cable | | |

# Cable matrix for HP Engage Go Convertible System with integrated column printer and advanced I/O connectivity base
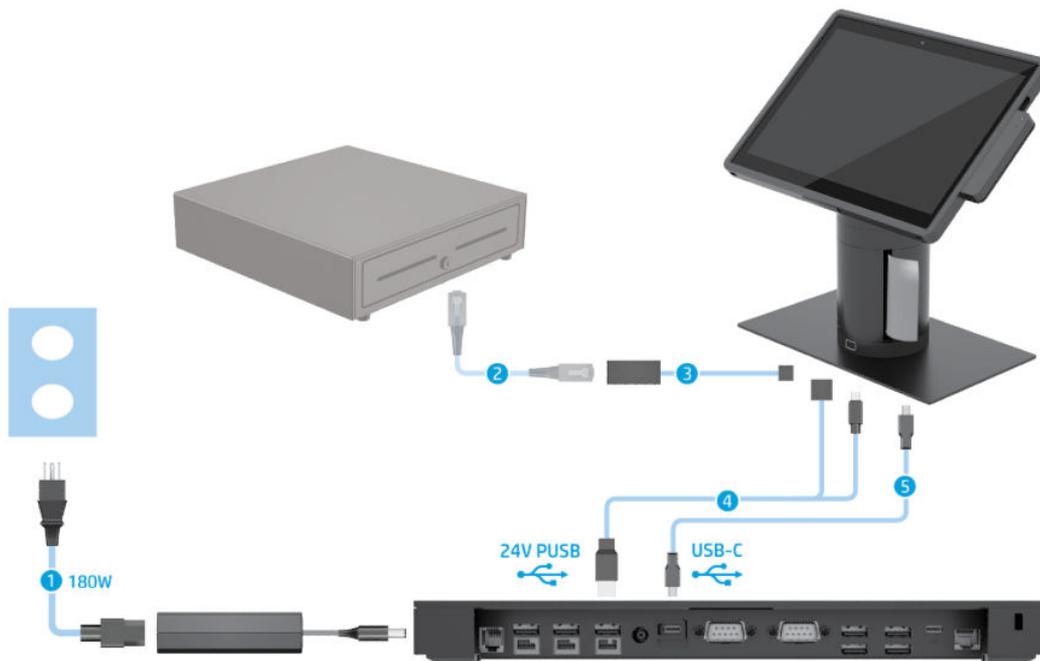


**Cables**

| | | | | |
|---|---|---|---|---|
| (1) | I/O connectivity base 180 W AC power cord | (4) | Column printer 24 V PUSB power and data Y cable |
| (2) | Cash drawer cable (purchased separately with cash drawer) | (5) | I/O connectivity base USB Type-C cable |
| (3) | Column printer cash drawer cable | | |

# Cable matrix for HP Engage Go Convertible System without I/O connectivity base
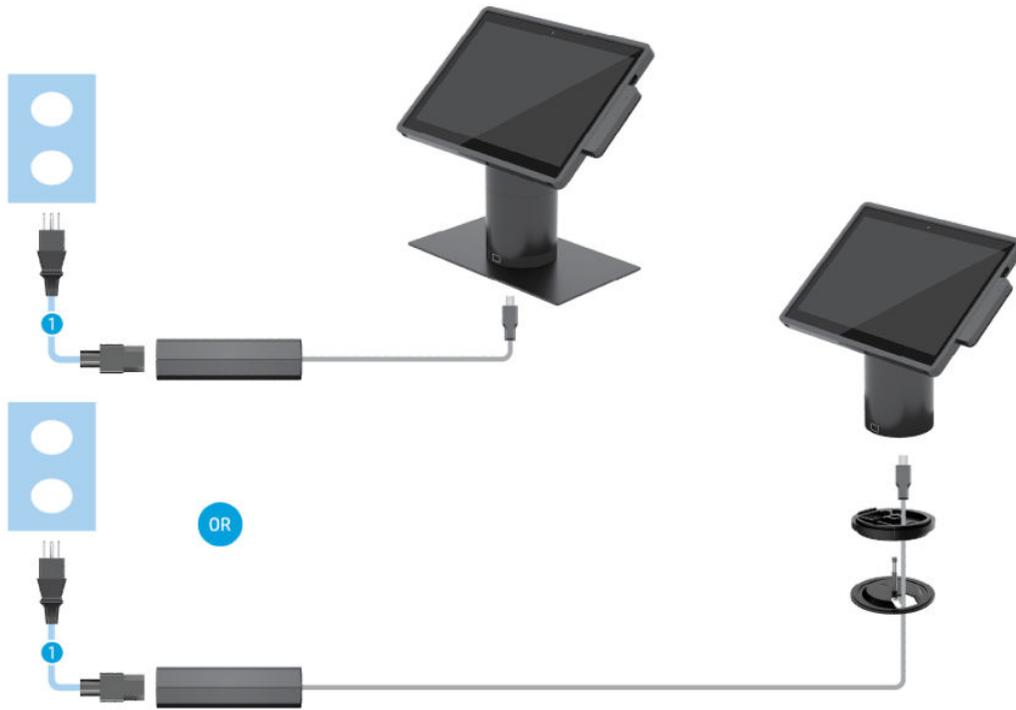


**Cables**

(1)    AC power cord

# Cable matrix for HP Engage Go Convertible System with I/O connectivity base
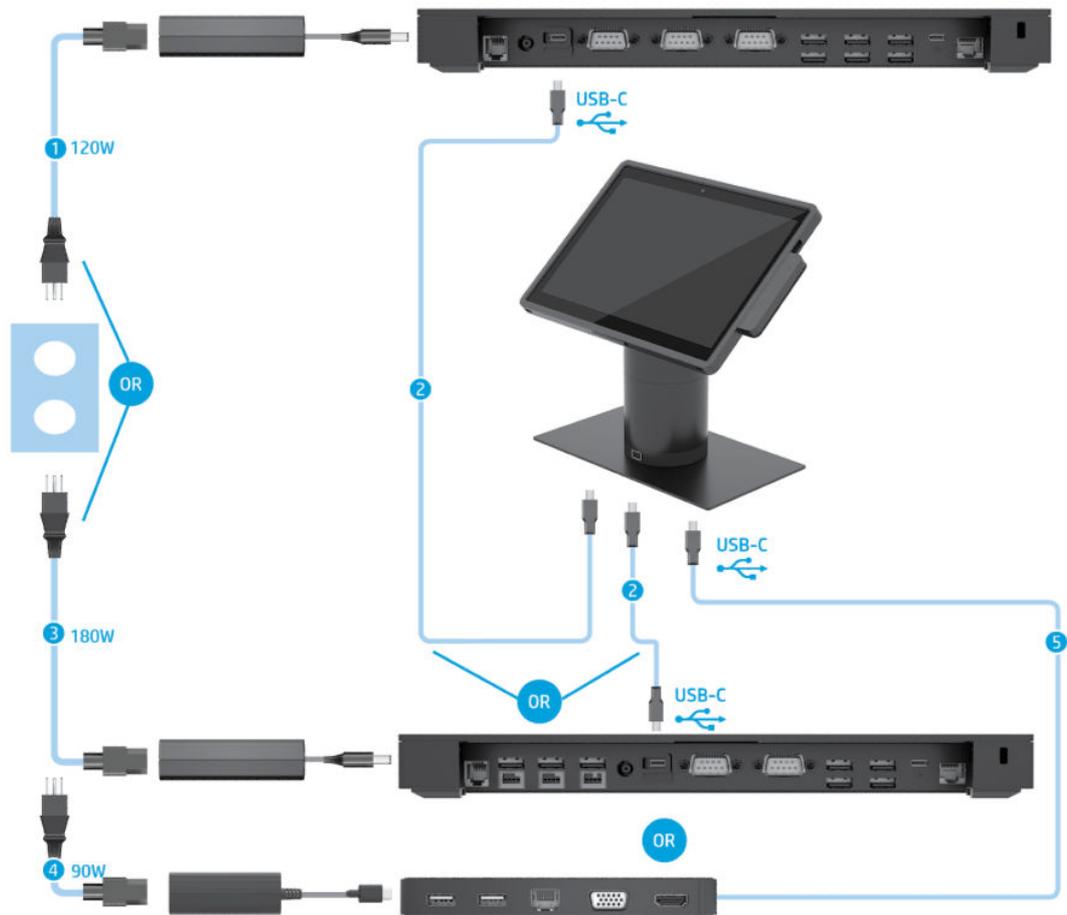


**Cables**

| | | | |
|---|---|---|---|
| (1) | Basic I/O connectivity base 120 W AC power cord | (4) | USB-C mini dock 90 W AC power cord |
| (2) | I/O connectivity base USB Type-C cable | (5) | USB-C mini dock captive USB Type-C cable |
| (3) | Advanced I/O connectivity base 180 W AC power cord | | |

**NOTE:** In the European region, the USB-C mini dock is sold as an aftermarket option kit only. In all other regions, the USB-C mini dock is sold as drop-in-box option.

# Cable matrix for HP Engage Go Convertible System with basic I/O connectivity base and standalone printer
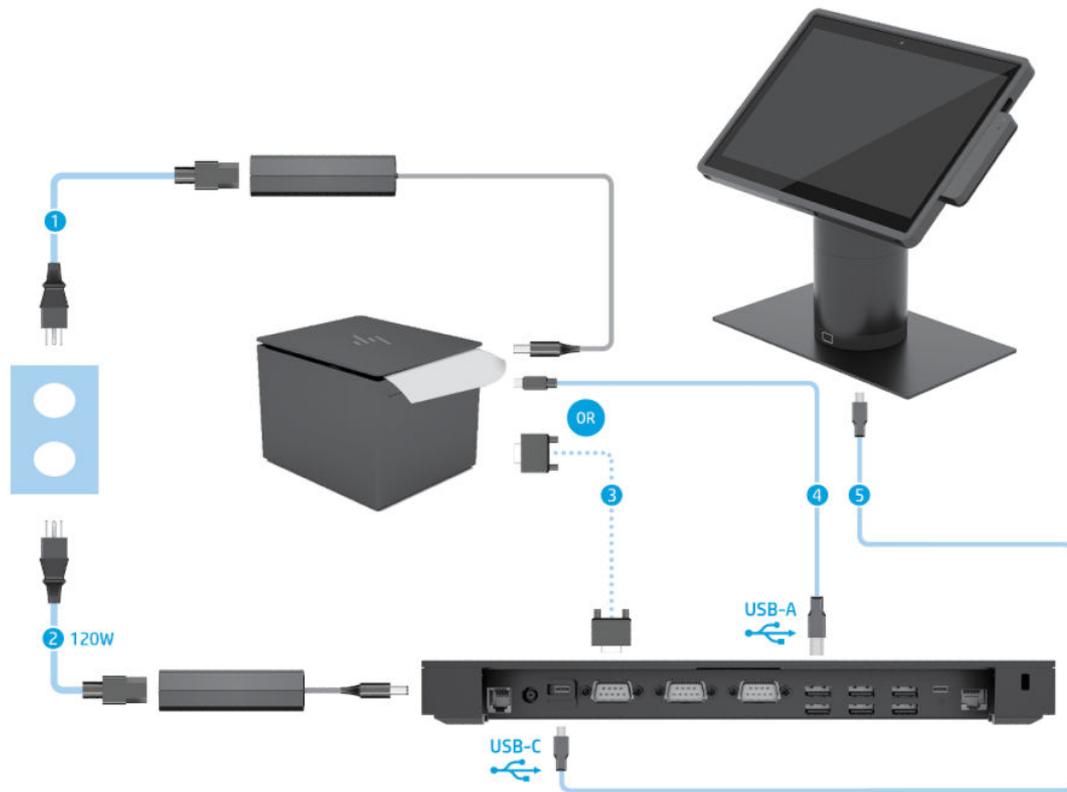


**Cables**

| | | | |
|---|---|---|---|
| (1) | Printer AC power cord | (4) | Printer USB Type-A to Type-B data cable |
| (2) | Basic I/O connectivity base 120 W AC power cord | (5) | Basic I/O connectivity base USB Type-C cable |
| (3) | Printer serial data cable | | |

**IMPORTANT:** Connect either the serial data cable (3) *or* the USB Type-A data cable (4) between the I/O connectivity base and the printer. Do not connect both.

# Cable matrix for HP Engage Go Convertible System with advanced I/O connectivity base and standalone printer
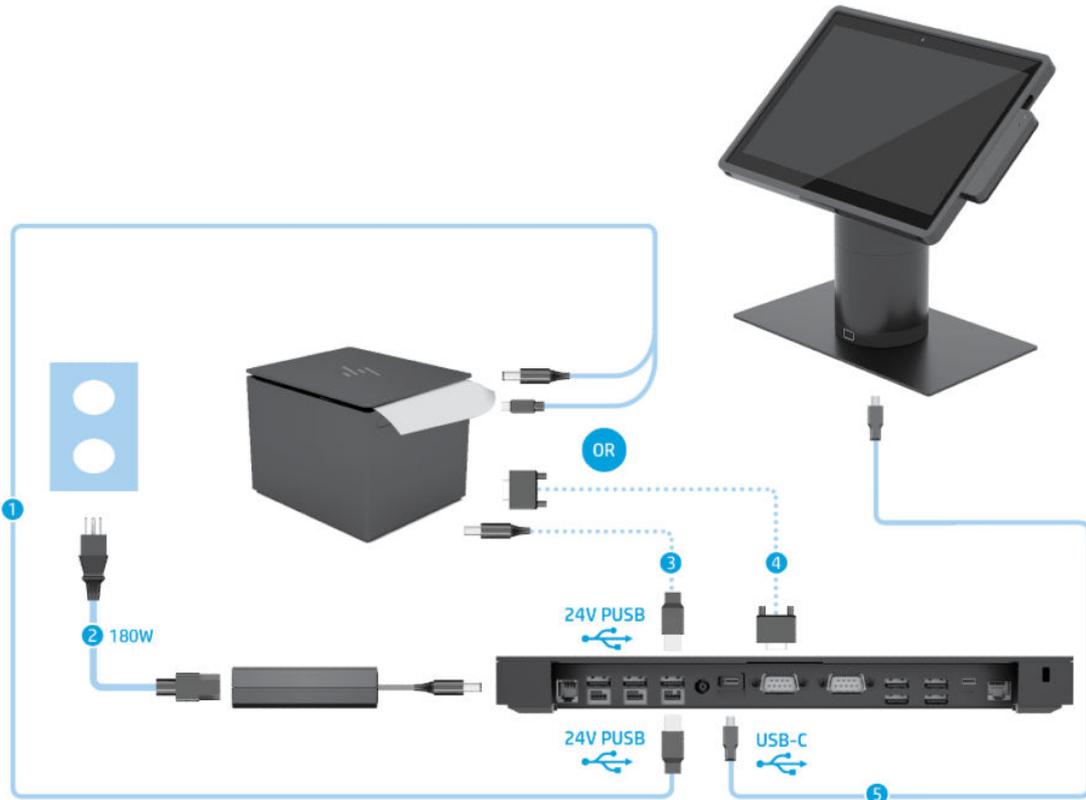


**Cables**

| | | | |
|---|---|---|---|
| (1) | Printer 24 V PUSB power and data Y cable | (4) | Printer serial data cable |
| (2) | Advanced I/O connectivity base 180 W AC power cord | (5) | Advanced I/O connectivity base USB Type-C cable |
| (3) | Printer 24 V PUSB power cable | | |

**IMPORTANT:** Connect either the 24 V PUSB power and data Y cable (1) *or* the 24 V PUSB power cable (3) and serial data cable (4) between the I/O connectivity base and the printer. Do not connect all three.

# 3 Hardware configurations and upgrades

## Warnings and cautions

Before performing upgrades be sure to carefully read all of the applicable instructions, cautions, and warnings in this guide.

⚠ **WARNING!** To reduce the risk of personal injury from electric shock, hot surfaces, or fire:

Disconnect the power cord from the AC outlet before removing the enclosure. Energized parts are inside.

Allow the internal system components to cool before you touch them.

Replace and secure the enclosure before restoring power to the equipment.

Do not connect telecommunications or telephone connectors to the network interface controller (NIC) receptacles.

Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

Plug the power cord in a grounded (earthed) AC outlet that is easily accessible at all times.

For your safety, do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the AC outlet, grasp the cord by the plug.

To reduce the risk of serious injury, read the *Safety & Comfort Guide.* It describes proper workstation setup and provides guidelines for posture and work habits that increase your comfort and decrease your risk of injury. It also provides electrical and mechanical safety information. This guide is located on the web at http://www.hp.com/ergo.

📝 **IMPORTANT:** Static electricity can damage the electrical components of the system or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object. See Electrostatic discharge on page 42 for more information.

When the system is plugged into an AC power source, voltage is always applied to the system board. You must disconnect the power cord from the power source before opening the system to prevent damage to internal components.

# Locking and unlocking the mobility head unit

The mobility head unit automatically locks to the dock when attached. To unlock the mobility head unit, press the lock release button on the front of the dock's column.

There are two authentication methods that can be used to unlock the mobility head unit. The authentication methods can be set up using the HP SureLock wizard.

- **Windows® user authentication** - A group can be defined that allow users belonging to the group to unlock the mobility head unit based on their Windows login password.

- **PIN authentication** - A PIN is required to unlock the mobility head unit.

**NOTE:** Both authentication methods can be used or there can be no authentication method required to unlock the mobility head unit. No authentication required is the default method.

The light on the dock's lock release button indicates the locking status.

- **Amber** - The mobility head unit is locked and can not be unlocked without the proper Windows login permission.

- **White** - The mobility head unit is locked and can be unlocked but may require a PIN.

- **Green** - The mobility head unit is unlocked and can be removed.

# Attaching the mobility head unit to the dock

Align the rear of the mobility head unit with the top of the dock's column, and place the mobility head unit onto the dock. The mobility head unit automatically locks to the dock when attached.

# Removing the mobility head unit from the dock

Press the lock release button (1) on the front of the dock's column, and then lift the mobility head unit (2) off the dock.

**NOTE:** Your system may require a PIN to unlock the mobility head unit from the dock. See Locking and unlocking the mobility head unit on page 17.



# Attaching the integrated MSR to the mobility head unit

The carry case must be installed on the mobility head unit to attach an integrated MSR.

1.  Turn off the mobility system properly through the operating system, and turn off any external devices.

2.  Disconnect the power cord from the mobility system.

    **IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components.

3.  Connect the MSR to the bottom USB Type-C port on the right side of the mobility head unit. Be sure to press the MSR in firmly so that the clips on the side of the MSR click in place.

# Removing the integrated MSR from the mobility head unit

1. Turn off the mobility system properly through the operating system, and turn off any external devices.

2. Disconnect the power cord from the mobility system.

   **IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components of the system.

3. Press down on the top of the MSR (1) with your thumbs, and then tilt the MSR (2) up slightly and pull the MSR (3) from the USB Type-C port and clips.
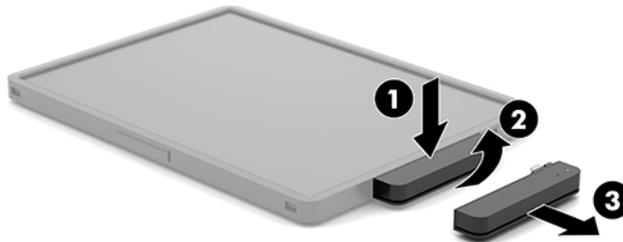
# Attaching the carry case to the mobility head unit

You can help protect your mobility head unit from accidental drops and bumps with the optional carry case. The carry case also allows you to attach a shoulder strap for hands-free retailing and add a magnetic stripe card reader (MSR).

1. Remove the mobility head unit from the dock if it is attached.

2. Slide the right side of the mobility head unit (1) into the groove on the right side of the carry case (1), then press one corner of the left side of the mobility head unit (2) into the carry case and then press the other corner of the mobility head unit (3) into the carry case.
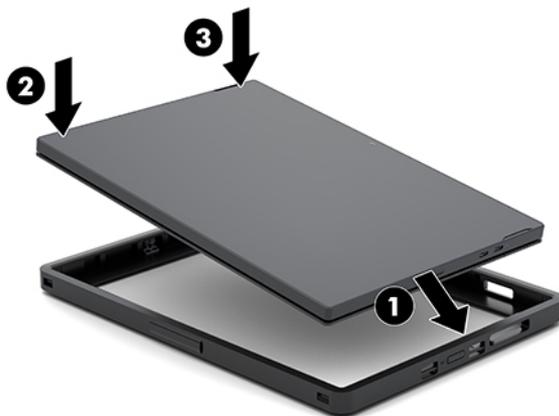
# Removing the carry case from the mobility head unit

1. Remove the mobility head unit from the dock if it is attached.

2. Remove the MSR from the mobility head unit if it is attached.

3. Pull one corner on the left side of the mobility head unit (1) from the carry case, and then pull the other corner on the left side of the mobility head unit (2) from the carry case. Then slide the right of the mobility head unit (3) out of the carry case.
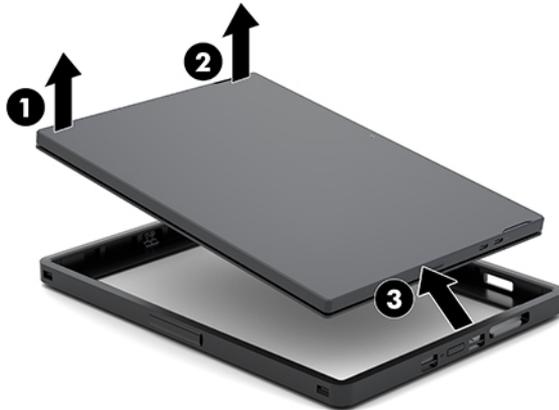
# Replacing the hand strap on the mobility head unit

Follow the procedure below if you must replace the integrated hand strap on the rear of the mobility head unit.

1. Remove the mobility head unit from the dock if it is attached.

2. Turn off the mobility head unit properly through the operating system.

3. Lift the hand strap up (1).

4. To remove the hand strap, slide the screw covers (2) on each side of the hand strap back and then up. Then remove the screws (3) that secure the strap to the mobility head unit.
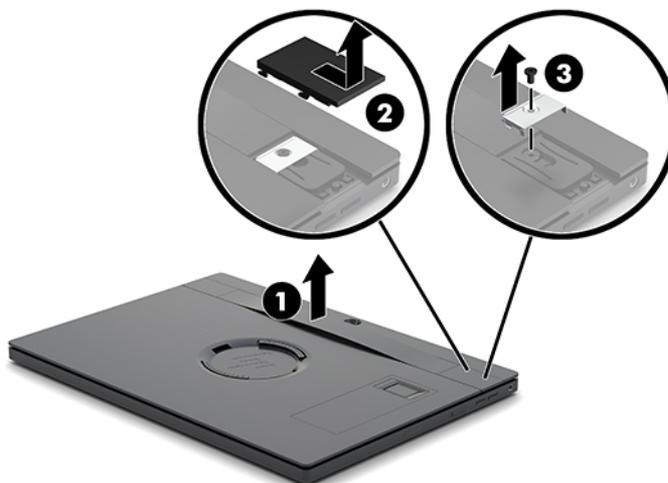
**5.** To attach the new hand strap, secure the hand strap with the screws (1) on each side of the mobility head unit. Then replace the screw covers by pressing the covers (2) down onto the mobility head unit and then sliding the covers forward.
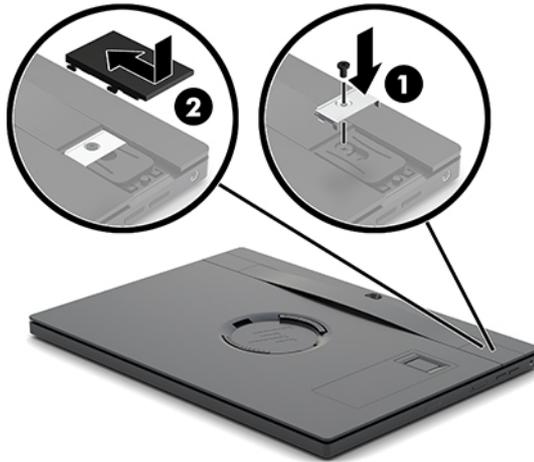
# Attaching an I/O connectivity base to the HP Engage Go Convertible System

You can attach an I/O connectivity base to the bottom of the mobility system dock's stability base.

1. Turn off the mobility system properly through the operating system, and turn off any external devices.

2. Disconnect the power cords from the mobility system and I/O connectivity base.

📝 **IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components.

3. Remove the cover on the I/O connectivity base by removing the four screws on the underside of the I/O connectivity base (1), and then lifting the cover off the I/O connectivity base (2).
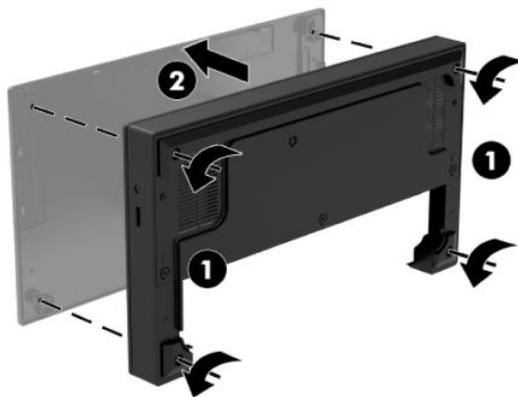


4. Connect the USB Type-C power cable to the USB Type-C port on the underside of the dock's column.

**5.** Place the I/O connectivity base onto the bottom of the dock's stability base (1), and then tighten the four screws on the underside of the I/O connectivity base (2) to secure the I/O connectivity base to the dock. Be sure that the USB Type-C power cable is routed through the gap between the back of the I/O connectivity base and the dock's column.
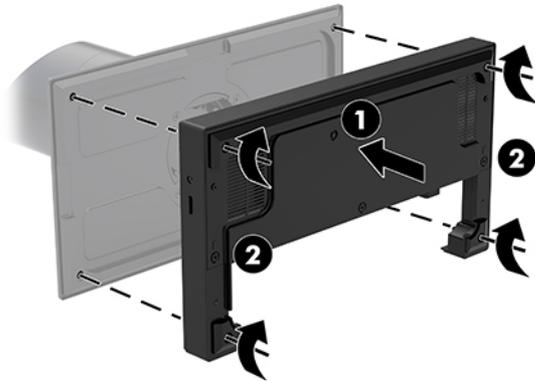


**6.** To connect and secure the USB Type-C power cable, attach the cable clip to the cable (1), insert the cable tie into the hole (2) below the USB Type-C port on the hub, and then slide the cable clip onto the cable tie and connect the cable to the port (3).
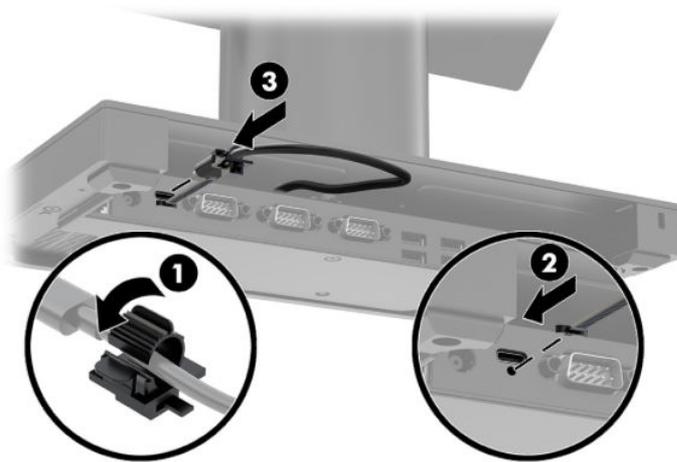


**7.** Connect the I/O connectivity base's AC adapter to the I/O connectivity base and a grounded AC outlet. See Connecting an AC adapter to power on page 6.

# Connecting a standalone I/O connectivity base to the HP Engage Go Convertible System

1. Turn off the mobility system properly through the operating system, and turn off any external devices.

2. Disconnect the power cords from the mobility system and I/O connectivity base.

   **IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components.

3. Connect the USB Type-C power cable to the USB Type-C port on the underside of the dock's column and to the USB Type-C power port on the I/O connectivity base.
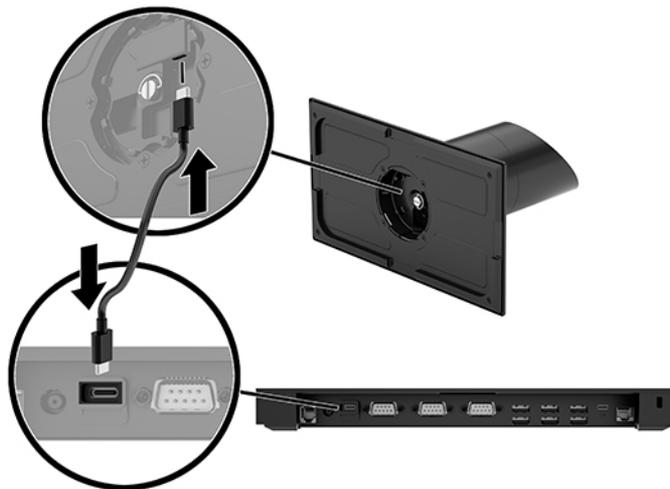


4. Connect the I/O connectivity base's power supply to the I/O connectivity base and a grounded AC outlet. See .

# Configuring the I/O connectivity base's powered serial ports

The serial ports can be configured as standard (non-powered) serial ports or powered serial ports. Some devices use a powered serial port. If the serial port is configured as a powered port, devices that support a powered serial interface do not require an external power source.

**IMPORTANT:** The system must be powered off before connecting or disconnecting serial port devices.

**NOTE:** The I/O connectivity base ships with all serial ports configured in standard non-powered serial mode (0 volts) by default.

There are three voltage settings for each serial port.

- 0 volts

- 5 volts

- 12 volts

To change the voltage settings for a powered serial port:

1. Turn off the mobility system properly through the operating system, and turn off any external devices.

2. Disconnect the power cord and all peripheral devices from the I/O connectivity base.

   **IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components of the I/O connectivity base.

3. Remove the five screws on the underside of the I/O connectivity base (1) that secure the bottom plate to the I/O connectivity base, and then remove the bottom plate from the I/O connectivity base (2).
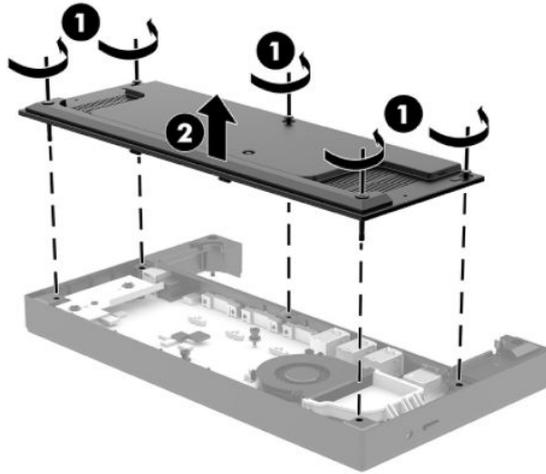
4. Adjust the voltage select switch behind each serial port to the appropriate setting.
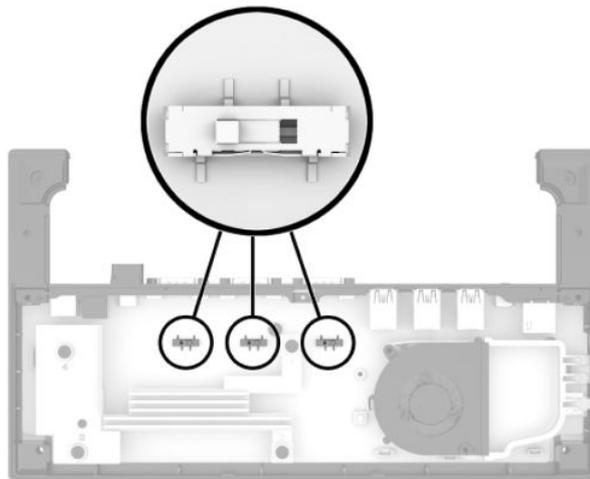
5. Place the bottom plate onto the I/O connectivity base (1), and then secure the plate to the I/O connectivity base with the five screws (2).
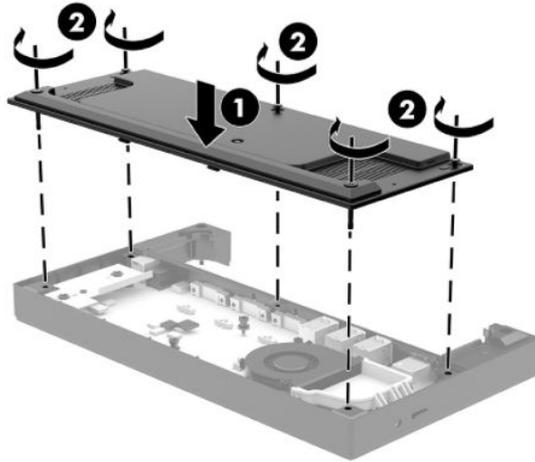
6. Reconnect the I/O connectivity base's power cord and peripheral devices.

# Connecting a standalone optional fingerprint reader to the I/O connectivity base

The optional fingerprint reader can be used as a standalone device or it can be attached to the I/O connectivity base. Follow the procedure below to connect a standalone fingerprint reader to the I/O connectivity base.

1. Turn off the mobility system properly through the operating system, and turn off any external devices.

2. Disconnect the power cords from the mobility system and I/O connectivity base.

**IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components.

3.  Connect the USB cable to the fingerprint reader (1) and route the cable through the routing channel (2) on the fingerprint reader.
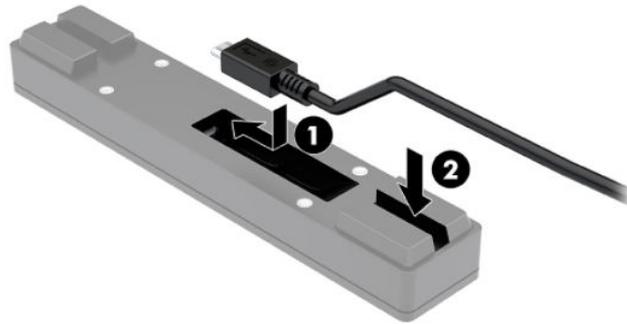
4.  Connect the fingerprint reader USB cable to a USB Type-A port on the I/O connectivity base.

5.  Reconnect the I/O connectivity base and power cords.

# Attaching an optional fingerprint reader to the I/O connectivity base

The optional fingerprint reader can be used as a standalone device or it can be attached to the I/O connectivity base. Follow the procedure below to attach the fingerprint reader to the I/O connectivity base.

**NOTE:** You can attach the fingerprint reader to either side of the I/O connectivity base, but if you attach it to the left side of the I/O connectivity base, the fingerprint reader covers the microSD slot and the headset jack on the I/O connectivity base.

1.  Turn off the mobility system properly through the operating system, and turn off any external devices.

2.  Disconnect the power cords from the mobility system and I/O connectivity base.

**IMPORTANT:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord and wait approximately 30 seconds for the power to drain to avoid damage to the internal components.

**3.** Place the fingerprint reader (1) on the riser (2), and then attach the mounting bracket (3) and cable routing clip (4) to the fingerprint reader and riser with the two long screws (5) included with the fingerprint reader.
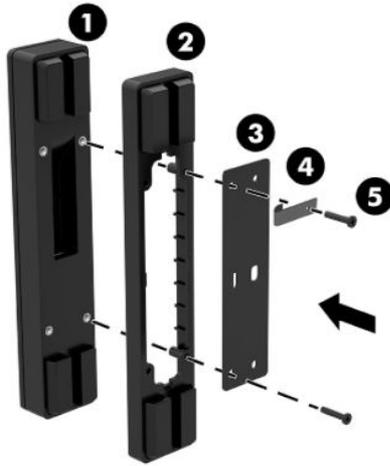
**4.** Connect the USB cable to the fingerprint reader (1) and route the cable under the routing clip on the fingerprint reader (2). Remove the mounting screw (3) from the underside of the I/O connectivity base, and then attach the bracket on the fingerprint reader assembly to the underside of the I/O connectivity base (4) using the screw that was removed from the base and the short screw included in the kit.
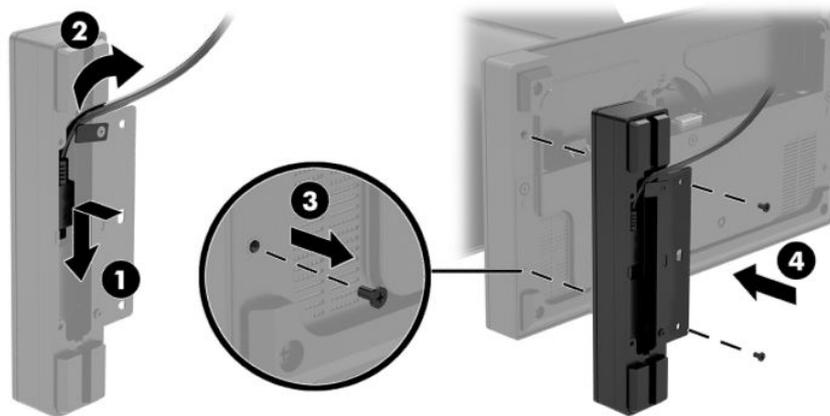
5.   Connect the fingerprint reader cable to a USB Type-A port on the I/O connectivity base.



6.   Reconnect the I/O connectivity base and power cords.

# Mounting the HP Engage Go Convertible System to a countertop

You can use an optional countertop mounting bracket to mount the mobility system's column to a countertop.

📝 **NOTE:**   The mounting bracket requires an 80 mm hole in the countertop. The thickness of the countertop must be 10 mm to 50 mm.

1.   If the dock's stability base is attached to the column, remove the screw on the underside of the column (1), and then remove the base (2) from the column.
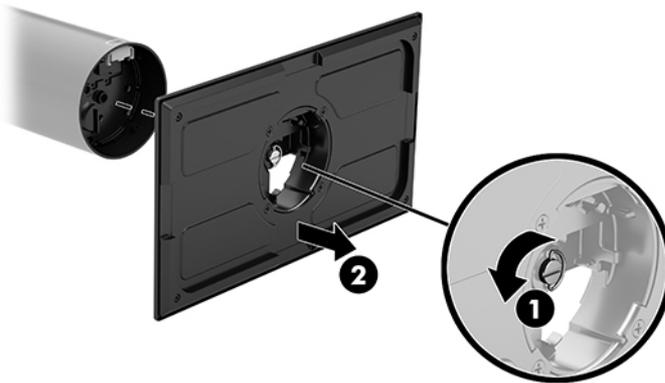
2. Route the cable(s) through the routing hole on the top piece of the mounting bracket (1) and attach the cable(s) to the bottom of the column (2).

📝 **NOTE:** If the column has a printer, there are four cables to connect. If it does not have a printer, there is one cable to connect.



3. Hold the top piece of the mounting bracket against the bottom of the column, route the cables through the hole in the mounting surface, and then place the column over the hole on the mounting surface.
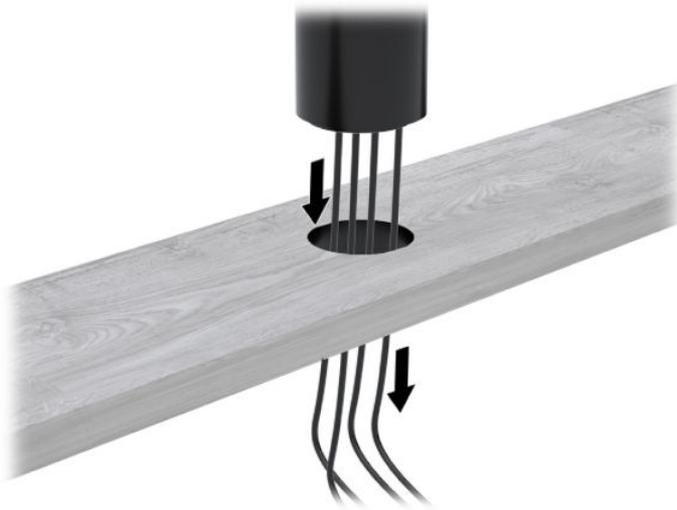


4. The bottom piece of the mounting bracket can be oriented in two ways, depending on the thickness of your mounting surface. Orient the bracket properly for your application before attaching it.
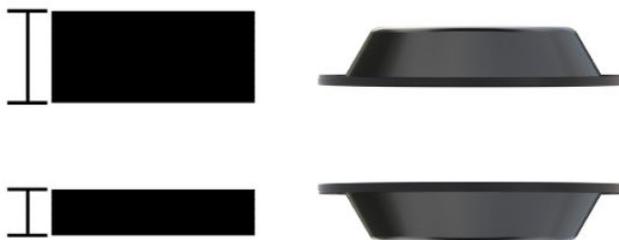
**5.** Route the cables through the hole in the bottom piece of the mounting bracket (1). Press the mounting bracket against the bottom of the mounting surface (2), and then insert the screw (3) though the mounting bracket. Then tighten the screw (4) so that the screw is fully inserted into the column, and then tighten the wing nut (5) on the screw to fasten the bracket to the mounting surface.
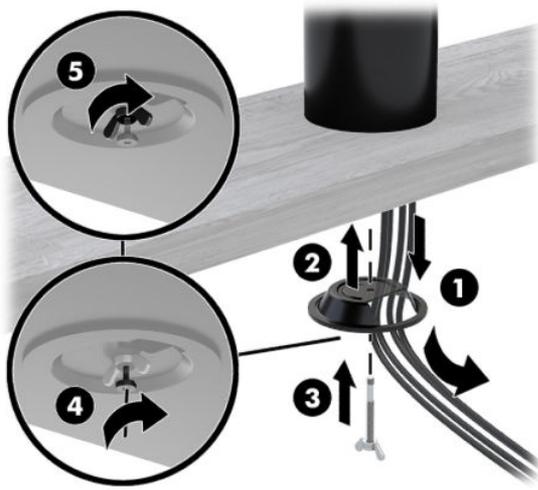


# Installing a security cable lock on the I/O connectivity base

You can secure the I/O connectivity base to a fixed object with an optional security cable lock available from HP. Insert the security cable lock into the security cable slot. Then lock it in place with the key.

**NOTE:** The security cable lock is sold separately as an aftermarket option kit only.
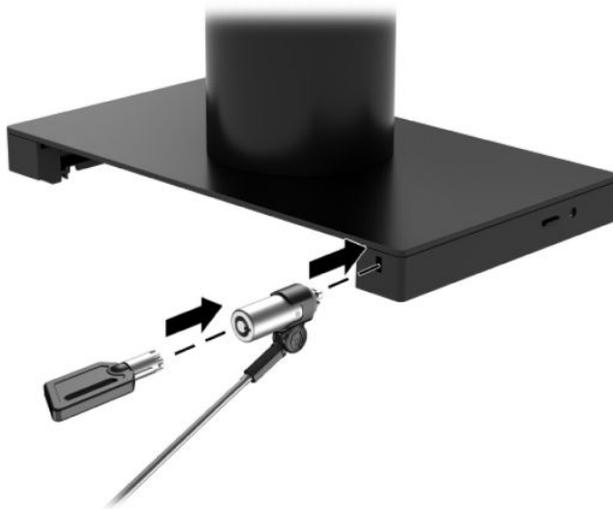
# Installing a security cable lock on the HP Engage Go Convertible System column

You can secure the I/O connectivity base to a fixed object with an optional security cable lock and an optional security cable extension available from HP.

**NOTE:** The security cable lock and security cable extension are sold separately as an aftermarket option kit only.

1. Remove the screw from the bottom of the column (1).

2. Attach the security cable extension to the bottom of the column using the tamper-resistant screw (2) included with the security cable extension.

3. Secure the other end of the security cable extension with a security cable lock (3), and then lock it in place with the key.
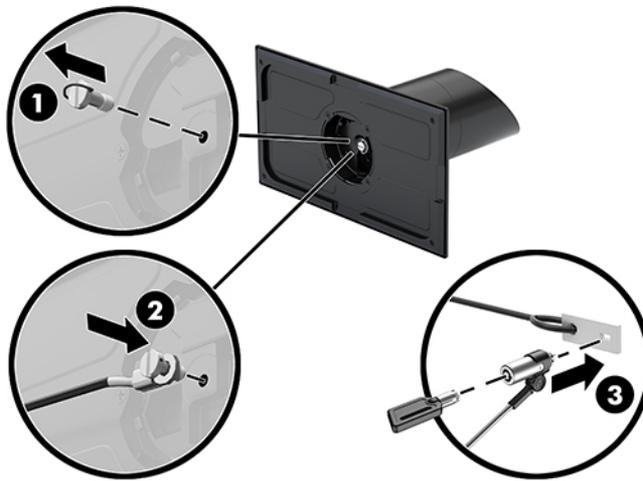
# 4    Using the column printer

The column printer is an optional component that may be included with your system.

## Standard features

| Standard features | |
| --- | --- |
| Interface | USB |
| Memory/firmware | 8 MB flash memory, History EEROM, 4k buffer |
| Energy-savings | Option to configure printer to enter low-power (1 watt) idle state if no data is received after user-specified number of minutes |
| Resident character sets | PC code pages 437 (US), 720 (Arabic), 737 (Greek), 775 (Baltic), 850 (Multilingual), 852 (Latin II), 857 (Turkish), 858 (with Eurosymbol), 860 (Portuguese), 862 (Hebrew), 863 (French Canadian), 864 (Arabic), 865 (Nordic), 866 (Cyrillic), 874 (Thai), 1250 (Windows Central Europe), 1251 (Windows Cyrillic), 1252 (Windows Latin I), 1254 (Windows Turkish), 1255 (Windows Hebrew), 1256 (Windows Arabic), 1257 (Windows Baltic), 28591 (Windows Latin 1), 28592 (Windows Latin 2), 28594 (Windows Baltic), 28596 (Windows Arabic), 28599 (Windows Turkish), 28605 (Windows Latin 9), Katakana, and KZ_1048 (Kazakh) |
| Downloadable fonts | Code pages 932 (Kanji), 949 (Korean), 936 (Simplified Chinese), and 950 (Traditional Chinese) |
| Integrated barcodes | Code 39, Code 93, Code 128, UPC–A, UPC–E, JAN8 (EAN), JAN13 (EAN), Interleaved 2 of 5, Codabar, Code 128, PDF-417 (two-dimensional), Code 128 extended, GS1 Databar, QR code, and Datamatrix |
| Print | Monochrome in either 44 (standard) or 56 (compressed) columns on 80 mm wide thermal paper |
| Paper path | 80.0 mm |
| Roll Diameter | 50.8 mm max. (2 inches) |
| Print resolution | 8-dots/mm |
| Speed | Up to 114 mm/second throughput (monochrome) |
| Paper sensing | Paper out |
| Human interface | Audible tone from speaker (software-driven). Simple commands in configuration menu issued through paper feed button. Green status light, located next to the paper feed button. |
| Cash drawer driver | Connector for one or two cash drawers (obtain a " cord for two drawers) |
| Knife | Paper cutter standard on all units |

## Printing features

The printer is versatile, with diverse printing options available. Text, graphics, and barcodes can be presented in many different forms and sizes. For more information on programming the printer to change text, graphics, or other characteristics, refer to the *Programming Guide.*

# When to change the receipt paper

Change the paper when it is near the end of the roll or when the roll is empty. When the paper is low, you must monitor usage to avoid running out part of the way through a transaction. When the roll is empty, you must load a new roll immediately or data may be lost.

- When the paper is low, a colored stripe appears on the receipt paper (if the paper purchased has a stripe) indicating that enough paper remains for a small transaction.

- When the roll is empty, a green light on the printer flashes quickly indicating the paper must be installed.

**IMPORTANT:** Do not try to operate the printer or host system if the printer runs out of paper. The printer may continue to accept data from the host system even though it is unable to print. Data may be lost as a result.

# Loading the printer receipt paper

1. Open the receipt cover by pushing up evenly on each side of the cover (1) until it unsnaps.

2. Remove the test printout or used paper roll if necessary.

3. Place the receipt paper into the paper compartment on the spindle (2) so that it unrolls from the inside. Leave a few inches of paper sticking out of the printer. To prevent jamming, be sure that the paper is between the guidelines.

4. While holding the paper in place, close the receipt cover (3) making sure to apply a little more pressure after the first click to ensure that it is fully latched. When fully latched with paper installed, the light stops blinking.
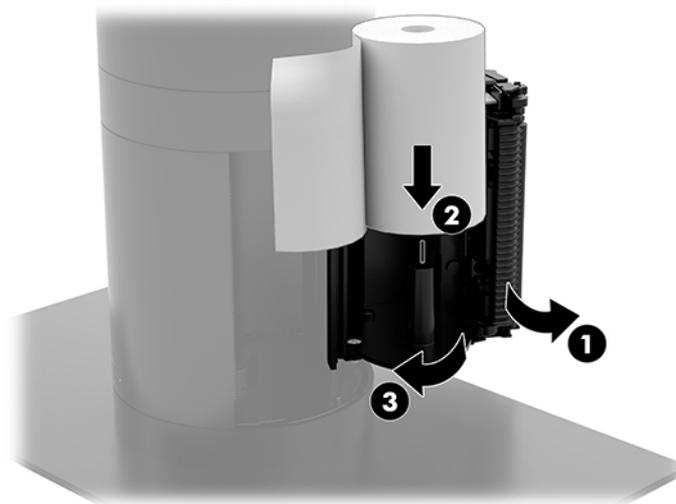
5. To test that the paper is loaded correctly, advance the paper with the paper feed button (1), and then tear the excess paper off against the knife on the cover. A steady green light (2) means the printer is on and operating normally. If the light is flashing, the cover may not be completely shut.
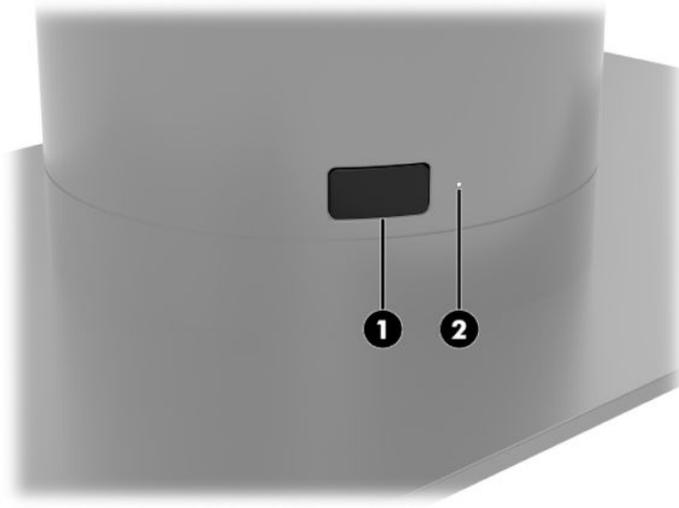


# Thermal paper specifications

The printer requires qualified thermal paper with the following dimensions:

- **Width**: 80 +0/-0.6 mm (3.15 +0/-0.03")

- **Diameter**: 50.8 mm max. (2")

The paper must not be attached at the roll's core. Use paper with a colored stripe at the end to indicate that the paper is running low.

The above figures are based on a core diameter of 22 ± 0.5 mm (0.87") outside and 11.5 ± 0.5 mm (0.45") inside.

# Qualified paper grades

Contact the manufacturer of your choice to order paper. HP recommends the following paper grades produced by their respective manufacturers. There are a number of paper manufacturers qualified to provide this paper, provided the POS paper rolls are from the recommended grades for monochrome (black ink) paper.

| Qualified manufacturers | Phone/Fax | Paper grade |
| --- | --- | --- |
| Appvion, Inc. (USA) | Voice: (800) 922–1729 | Alpha 400-2.3 (was T1030) |
| 825 E. Wisconsin Ave. | Fax: (800) 922–1712 | Alpha 800-2.4 (was T1012A) |
| Appleton, WI 54912 | | POS-Plus 600-2.4 |
| http://www.appvion.com | | Alpha 900-3.4 (was Superior) |
| | | All current Appvion papers are BPA-free |
| Jujo Thermal Ltd. | Voice: 358 (0) 10 303 200 | AF50KS–E3 |
| P.O. Box 92 FI–27501 | Fax: 358 (0) 10 303 2419 | AP62KS–E3 |

| Qualified manufacturers | Phone/Fax | Paper grade |
|---|---|---|
| Kauttua, Finland<br><br>http://www.jujothermal.com/ | | |
| Kanzaki Specialty Papers (USA)<br><br>20 Cummings St.<br><br>Ware, MA 01082–2002<br><br>http://www.kanzakiusa.com/ | Voice: (888) 526–9254<br><br>Fax: (413) 731–8864 | P30023 (was P–300), P31023 (was P–310),<br><br>P35024 (was P–350), P35032 (was P–354),<br><br>P39023 (BPA free, was P–390), P30521 (BPA free),<br><br>P30523 (BPA free), P31523 (BPA free), P35532 (BPA free) |
| Koehler UK Ltd. (Great Britain)<br><br>2 White Oak Square<br><br>London Road<br><br>Swanley, Kent BR8 7AG, U.K.<br><br>http://www.koehlerpaper.com/en/ | Voice: (44) 1322 661010<br><br>Fax: (44) 1322 614656 | KT55-F20 |
| Koehler AG<br><br>Hauptstr. 2-4<br><br>D-77704 Oberkirch, Germany<br><br>http://www.koehlerpaper.com/en/ | Voice: (49) 7802 81-0<br><br>Fax: (49) 7802 81-4330 | KT55-F20 |
| Mitsubishi Int'l Corp. (USA)<br><br>655 Third Ave.<br><br>New York, New York 10017<br><br>http://www.mitsubishicorp.com/us/en/ | Voice: (212) 605–2000<br><br>Fax: (212) 605–2597 | P–5035<br><br>T–8051<br><br>TP–8065<br><br>PP-5051 |
| OJI Paper Company Ltd.<br><br>Ginza 4-chome<br><br>Tokyo 104, Japan<br><br>http://www.ojipaper.co.jp/english/ | Voice: (81)3–3563-1111<br><br>Fax: (81)3–3563-1135 | KF–60<br><br>PD–170R<br><br>PD–170R |
| Thermal Solutions Intl, Inc.<br><br>6740 Broadview Ave, Suite D<br><br>Jacksonville, FL 32254<br><br>http://thermalsolutionsinternational.com | Voice: (800) 479-6070, (904) 860-1966<br><br>Fax: (904) 646-4530 | 19018RDT<br><br>Features: 30% post-consumer waste, recycled/BPA free |

# Troubleshooting the printer

The printer is generally trouble-free; however, unexpected conditions may arise. Refer to the following sections to diagnose and solve these printer conditions. To resolve complex issues, you may need to contact an authorized HP service representative.

## Printer tone and green light

| Condition | Possible causes | Possible solutions | Where to go for more information |
| --- | --- | --- | --- |
| Green light, quick steady flashing. | Paper roll is empty. | Load a new paper roll. | See Loading the printer receipt paper on page 34. |
| | Receipt cover is open. | Close the cover. If the problem persists, continue opening and closing the cover until the light stops blinking. | |
| | The knife is unable to return to the home position. | Stop using the printer. | Contact your authorized HP service representative. |
| Green light, slow steady flashing. | Other problems may be indicated. | Stop using the printer. | Contact your authorized HP service representative. |
| Printer beeps (two-tone—low frequency, high frequency). | Printer has been turned on and is ready to operate. | No action is required. | |
| Printer beeps and the green light flashes in various combinations. | These all indicate a serious condition. | Stop using the printer. | Contact your authorized HP service representative. |

## Printing issues

| Condition | Possible causes | Possible solutions | Where to go for more information |
| --- | --- | --- | --- |
| Colored stripe on the receipt. | Paper is low. | Change the paper. | See Loading the printer receipt paper on page 34. |
| Receipt does not come out all the way. | Paper is jammed. | Open the receipt cover, inspect the knife, and clear any jammed paper. | |
| Printer starts to print, but stops while the receipt is being printed. | Paper is jammed. | Open the receipt cover, inspect the knife, and clear any jammed paper. | |
| Receipt is not cut. | Paper is jammed. | Open the receipt cover, inspect the knife, and clear any jammed paper. | |
| Print is light or spotty. | Paper roll is loaded incorrectly. | Reload the paper correctly. | See Loading the printer receipt paper on page 34. |
| | Thermal printhead is dirty. | Use recommended thermal receipt paper and clean the printhead with 99% isopropyl alcohol. | |

| Condition | Possible causes | Possible solutions | Where to go for more information |
|---|---|---|---|
| | Variations in paper. | Increase print density in **Set Hardware Options** of the printer configuration menu to 110% or 120% as necessary. | Contact your authorized HP service representative. |
| Vertical column of print is missing. | This indicates a serious condition with the printer electronics or missing dot on printhead. | Stop using the printer. | Contact your authorized HP service representative. |
| One side of receipt is missing. | This indicates a serious condition with the printer electronics. | Stop using the printer. | Contact your authorized HP service representative. |

**NOTE:** Using nonrecommended paper may damage the printhead and void the warranty.

## Printer does not function

| Condition | Possible causes | Possible solutions | Where to go for more information |
|---|---|---|---|
| Printer does not function when turned on and light is off. | Power is not plugged in. | Check that the host or power supply is getting power. | |
| Printer does not function when turned on and the light is blinking. | Receipt cover is not fully closed. | Close and latch the receipt cover. | |
| Printer stops functioning. | Printhead has overheated. | Allow the printhead to cool down. | |
| | Printer is in energy-saving mode. | Press the paper feed button to revive the printer. | |
| Printer does not open. | Receipt cover is stuck. | Release the latch failsafe. | See Latch failsafe on page 39. |

# Latch failsafe

In the event that the receipt cover becomes stuck, the printer has a failsafe to release the cover's latches. Using a thin pointed object, press the rectangular button adjacent to the printhead. With enough pressure, the latches should release, and the receipt cover should open.

# 5 Configuring the software

## Touch screen calibration for Windows 10 Professional and Windows 10 IoT Enterprise for Retail

📝 **NOTE:** The Windows calibration tool works only in digitizer touch mode. If you install a retail touch utility, it sets the touch screen to POS mode (mouse mode) by default and does not allow the Windows calibration tool to run.

To calibrate the touch module in Windows 10 Professional and Windows 10 IoT Enterprise for Retail:

1. Open Control Panel. You can type `Control Panel` in the Search box to access it.

2. In Control Panel, type `calibrate` in the Search box. Under **Tablet PC Settings**, tap the **Calibrate the screen for pen or touch input** link. In the **Tablet PC Settings** dialog box, tap the **Calibrate** button, and then proceed to step 3.

3. Follow the on-screen instructions to press the target marks on the touch screen. At the end of the calibration process, the touch module should be aligned with the video and the touch points will be accurate.

## Configuring optional HP integrated peripheral modules

To configure the integrated USB peripheral, refer to the *HP Point of Sale Configuration Guide* (available in English only). The guide is located with the documentation on your retail system and at http://www.hp.com/support. To access the guide on the retail system, select **Start**, and then select **HP Point of Sale Information**.

📝 **NOTE:** Check http://www.hp.com/support for updated software or documentation that became available between the time your product was manufactured and the time it was delivered to you.

# A    Enabling encryption on the MSR

The MSR has optional encryption functionality. HP has partnered with IDTECH Products to perform key injection services remotely. For more information about their service, contact the IDTECH Products sales team at Sales@idtechproducts.com.

# B     Electrostatic discharge

A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

## Preventing electrostatic damage

To prevent electrostatic damage, observe the following precautions:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly.

## Grounding methods

There are several methods for grounding. Use one or more of the following methods when handling or installing electrostatic-sensitive parts:

- Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm +/- 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
- Use heelstraps, toestraps, or bootstraps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
- Use conductive field service tools.
- Use a portable field service kit with a folding static-dissipating work mat.

If you do not have any of the suggested equipment for proper grounding, contact an HP authorized dealer, reseller, or service provider.

**NOTE:** For more information on static electricity, contact an HP authorized dealer, reseller, or service provider.

# C  Operating guidelines, routine care, and shipping preparation

## Laser compliance

⚠ **WARNING!**   Use of controls or adjustments, or performance of procedures other than those specified in the laser product installation guide, may result in hazardous radiation exposure. To reduce the risk of exposure to hazardous radiation:

> LASER RADIATION. DO NOT STARE INTO BEAM. CLASS 2 LASER PRODUCT
> MAX. 1mW: 650 nm.  IEC 60825-1:2007 and IEC 60825-1:2014. PULSE DURATION
> OF 16.8mSec. COMPLIES WITH 21 CFR 1040.10 and 1040.11 EXCEPT FOR
> DEVIATIONS PURSUANT TO LASER NOTICE No 50, DATED JUNE 24, 2007.

## Input power

The power information in this section may be helpful if you plan to travel internationally with the computer.

The computer operates on DC power, which can be supplied by an AC or a DC power source. The AC power source must be rated at 100–240 V, 50–60 Hz. Although the computer can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source supplied and approved by HP for use with this computer.

The computer can operate on DC power within the following specifications. The voltage and current for your computer is located on the regulatory label.

| Input power | Rating |
|---|---|
| Operating voltage and current | 5 V dc @ 3 A / 9 V dc @ 3 A / 10 V dc @ 5 A / 12 V dc @ 5 A / 15 V dc @ 4.33 A / 20 V dc @ 3.25 A – 65 W USB-C |
|  | HP ElitePOS Basic I/O Connectivity Base: 120 W (19.5 V / 6.15 A) |
|  | HP ElitePOS Advanced I/O Connectivity Base: 180 W (19.5 V / 9.23 A) |

📝 **NOTE:**   This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V ms.

## Operating environment

| Factor | Metric | U.S. |
|---|---|---|
| **Temperature** | | |
| Operating (writing to optical disc) | **5°C to 35°C** | 41°F to 95°F |
| Nonoperating | -20°C to 60°C | -4°F to 140°F |

| Factor | Metric | U.S. |
|---|---|---|
| **Relative humidity** (noncondensing) | | |
| Operating | **10% to 90%** | 10% to 90% |
| Nonoperating | **5% to 95%** | 5% to 95% |
| **Maximum altitude** (unpressurized) | | |
| Operating | **–15 m to 3,048 m** | –50 ft to 10,000 ft |
| Nonoperating | **–15 m to 12,192 m** | –50 ft to 40,000 ft |

# Operating guidelines and routine care

Follow the guidelines below to properly set up and care for the system:

- HP recommends a 17 mm clearance around the vents on the mobility head unit and I/O connectivity base for heat dissipation.

- Keep the system away from excessive moisture, direct sunlight, and extremes of heat and cold.

- Never operate the system with any access panels removed.

- Do not stack systems on top of each other or place them so near each other that they are subject to each other's recirculated or preheated air.

- If the system is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above still apply.

- Keep liquids away from the mobility system and I/O connectivity base.

- Never cover the vents on the mobility system or I/O connectivity base with any type of material.

- Install or enable power management functions of the operating system or other software, including sleep states.

- Turn off the mobility system before you do either of the following:

  - Wipe the exterior with a soft, damp cloth as necessary. Using cleaning products may discolor or damage the finish.

  - Occasionally clean the air vents on all vented sides of the mobility system. Lint, dust, and other foreign matter can block the vents and limit the airflow.

📝 **NOTE:** For more information on your retail system care and maintenance, refer to "Retail Point of Sales Systems - Routine Care and Maintenance" available at http://www.hp.com/support.

# Touch screen maintenance

Keep your display and touch sensor clean. The touch sensor requires very little maintenance. HP recommends that you periodically clean the glass touch sensor surface. Be sure to turn off your display before cleaning. Typically, an isopropyl alcohol and water solution ratio of 50:50 is the best cleaning agent for your touch sensor. It is important to avoid using any caustic chemicals on the touch sensor. Do not use any vinegar-based solutions.

Apply the cleaner with a soft, lint-free cloth. Avoid using gritty cloths. Always dampen the cloth and then clean the sensor. Be sure to spray the cleaning liquid onto the cloth, not the sensor, so that drips do not seep inside the display or stain the bezel.

# MSR maintenance

To clean the MSR (magnetic stripe reader), swipe a standard cleaning card through the MSR a couple of times. You can order a standard cleaning card online. You can also put a thin oil-free cloth around a credit card.

# Cleaning the printer

Because of the way the printer sits while in use, it is likely there is a buildup of paper and other debris from the knife. HP recommends that you keep the printer in working order by periodically cleaning the debris from the printer.

To clean the printer, open the cover, remove the paper roll, and then use a can of compressed air to blow the debris out from the bottom plate where it accumulates.

# Cleaning I/O ports

The mobility system has a series of ports. Dust and debris can collect in these ports, which can reduce connectivity and performance. Use a battery-powered vacuum to remove any debris that has accumulated in and around these ports.

# Updating drivers and firmware

HP recommends that you regularly download and install the latest drivers and firmware updates to help enhance system performance, resolve known issues, and avoid replacing parts unnecessarily.

Go to http://www.hp.com/support to download and install the latest drivers and BIOS updates for your specific Retail Point of Sale model.

# Shipping preparation

Follow these suggestions when preparing to ship the mobility system:

1.  Back up the hard drive files. Be sure that the backup media is not exposed to electrical or magnetic impulses while stored or in transit.

    **NOTE:** The hard drive locks automatically when the mobility system power is turned off.

2.  Remove and store all removable media.

3.  Turn off the mobility system and external devices.

4.  Disconnect the power cord from the AC outlet, and then from the mobility system.

5.  Disconnect the mobility system components and external devices from their power sources, and then from the mobility system.

6.  Pack the mobility system components and external devices in their original packing boxes or similar packaging with sufficient packing material to protect them.

# D    Accessibility

HP designs, produces, and markets products and services that can be used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

## Supported assistive technologies

HP products support a wide variety of operating system assistive technologies and can be configured to work with additional assistive technologies. Use the Search feature on your device to locate more information about assistive features.

**NOTE:**    For additional information about a particular assistive technology product, contact customer support for that product.

## Contacting support

We are constantly refining the accessibility of our products and services and welcome feedback from users. If you have an issue with a product or would like to tell us about accessibility features that have helped you, please contact us at (888) 259-5707, Monday through Friday, 6 a.m. to 9 p.m. Mountain Time. If you are deaf or hard-of-hearing and use TRS/VRS/WebCapTel, contact us if you require technical support or have accessibility questions by calling (877) 656-7058, Monday through Friday, 6 a.m. to 9 p.m. North American Mountain Time.

**NOTE:**    Support is in English only.

# Index