Hardware Reference Guide

HP Thin Client

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About This Book

WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

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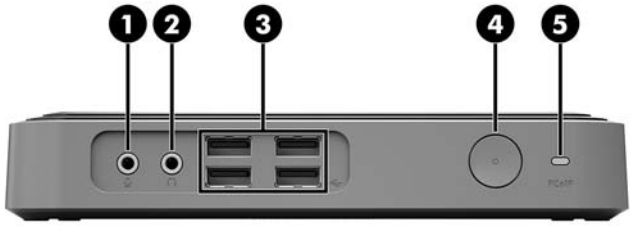
1 Product features

This guide describes the features of the thin client. For more information about the hardware and software installed on this thin client, go to http://www.hp.com/go/quickspecs and search for this thin client.

Various options are available for your thin client. For more information about some of the available options, go to the HP website at http://www.hp.com and search for your specific thin client.

Front panel components

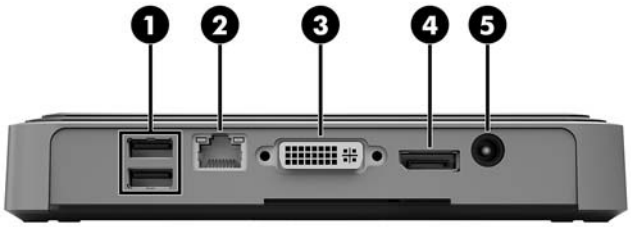
For more information, go to http://www.hp.com/go/quickspecs and search for your specific thin client to find the QuickSpecs.



Item	Component	Item	Component
1	Microphone jack	4	Power button
2	Headset jack	5	PC over IP (PCOIP) port
3	USB ports (4)		

Rear panel components

For more information, go to http://www.hp.com/go/quickspecs/ and search for your specific thin client to find the QuickSpecs.



Item	Component	Item	Component
1	USB ports (2)	4	DisplayPort port
2	Small Form Pluggable (SFP) fiber transceiver port	5	Power connector
3	DVI-D port		

Serial number location

Every thin client includes a unique serial number located as shown in the following illustration. Have this number available when contacting HP customer service for assistance.

2 Setup

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 or equipment damage from electric shock, hot surfaces, or fire:

Disconnect the AC power cord from the AC outlet and allow the internal system components to cool before you touch them.

Do not plug telecommunications or telephone connectors into the SFP fiber transceiver port.

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

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

To reduce the risk of serious injury, read the *Safety & Comfort Guide*. It describes proper workstation setup, posture, and health and work habits for thin client users, and provides important electrical and mechanical safety information. The *Safety & Comfort Guide* is located on the HP website at http://www.hp.com/ergo.

⚠ **WARNING!** Energized parts inside.

Disconnect power to the equipment before removing the enclosure.

Replace and secure the enclosure before re-energizing the equipment.

⚠ **CAUTION:** Static electricity can damage the electrical components of the thin client or optional equipment. Before beginning the following procedures, be sure that you are discharged of static electricity by briefly touching a grounded metal object. See Preventing electrostatic damage on page 12 for more information.

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

Attaching the stand

⚠ **CAUTION:** If the thin client is to be positioned upright, it should be operated with the stand attached for stability and to ensure proper airflow around the thin client.

The thin client can be used in a tower orientation with the stand included with the thin client.

1. Remove/disengage any security devices that prohibit opening the thin client.
2. Remove all removable media, such as USB flash drives, from the thin client.
3. Turn off the thin client properly through the operating system, and then turn off any external devices.
4. Disconnect the AC power cord from the AC outlet and disconnect any external devices.
5. Attach the stand to the thin client.
   a. Turn the thin client upside down and locate the indentation and screw hole in the bottom of the thin client.

b. Position the stand over the bottom of the thin client and line up the protrusion and screw hole in the stand with the holes in the thin client.

c. Insert and tighten the included screw securely.

6. Reconnect the AC power cord and then turn the thin client on.

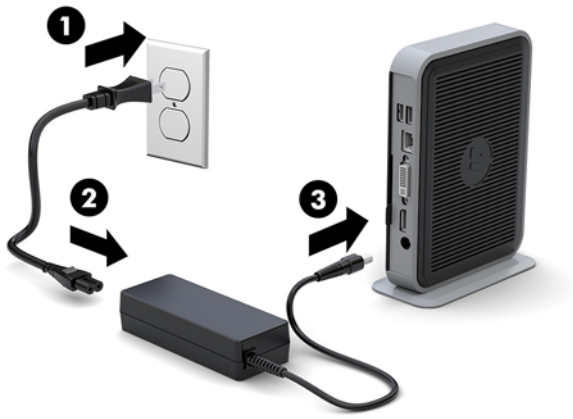
NOTE: Be sure that at least 10.2 centimeters (4 inches) of space on all sides of the thin client remain clear and free of obstructions.

7. Lock any security devices that were disengaged when the thin client cover or access panel was removed.

NOTE: An optional Quick Release mounting bracket is available from HP for mounting the thin client to a wall, desk, or swing arm. When the mounting bracket is used, do not install the thin client with the I/O ports oriented towards the ground.

Connecting the AC power cord

1. Connect the AC power cord to an AC outlet (1) and the other end to the power adapter (2).
2. Connect the power adapter to the power supply connector on the rear of the thin client (3).



Securing the thin client

These thin clients are designed to accept a security cable. The security cable prevents unauthorized removal of the thin client, as well as preventing access to the secure compartment. To order this option, go to the HP website at http://www.hp.com and search for your specific thin client.

The thin client has two security cable slots: one on the bottom and one on the side. If a stand is attached, use the slot on the side. If a stand is not attached and the thin client is in the horizontal position, use the slot on the bottom.

1. Locate one of the security cable slots.
2. Insert the security cable lock into the slot, and then use the key to lock it.

NOTE: The security cable is designed to act as a deterrent, but it may not prevent the thin client from being mishandled or stolen.

Mounting and orienting the thin client

HP Quick Release

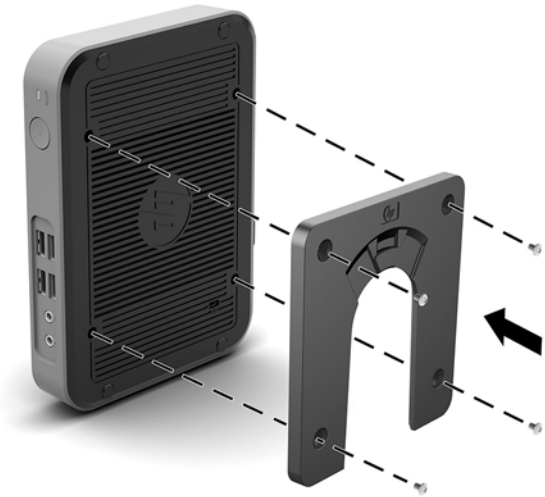
An optional Quick Release mounting bracket is available from HP for mounting the thin client to a wall, desk, or swing arm. When the mounting bracket is used, do not install the thin client with the I/O ports oriented towards the ground.

This thin client incorporates four mounting points on the right side of the unit. These mounting points follow the VESA (Video Electronics Standards Association) standard, which provides industry-standard mounting interfaces for Flat Displays (FDs), such as flat panel monitors, flat displays, and flat TVs. The HP Quick Release connects to the VESA-standard mounting points, allowing you to mount the thin client in a variety of orientations.

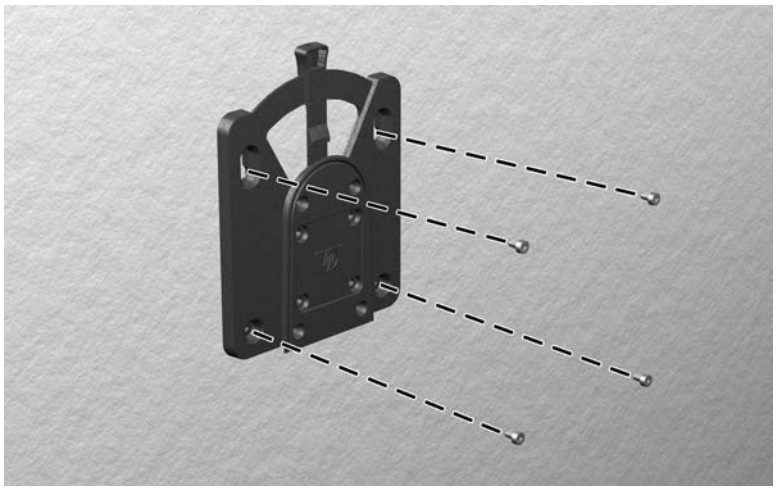
NOTE: When mounting to a thin client, use the 10 mm screws supplied with the HP Quick Release.

To use the HP Quick Release:

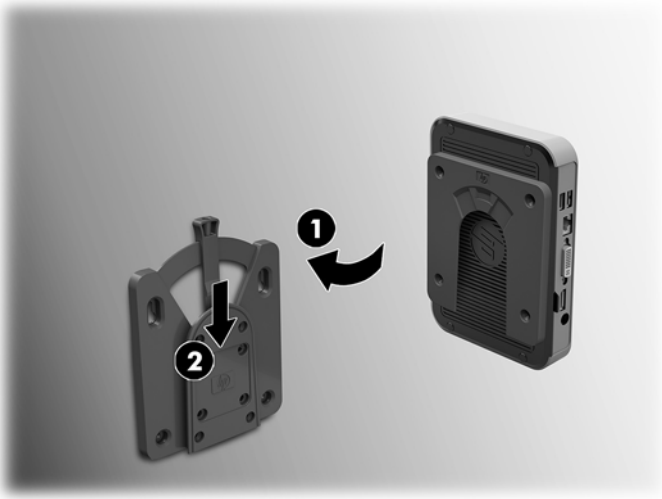
1. Using four 10 mm screws included in the mounting device kit, attach one side of the HP Quick Release to the thin client, as shown in the following illustration.



2. Using four screws included in the mounting device kit, attach the other side of the HP Quick Release to the device to which you will mount the thin client. Make sure the release lever points upward.



3. Slide the side of the mounting device attached to the thin client (1) over the other side of the mounting device (2) on the device on which you want to mount the thin client. An audible 'click' indicates a secure connection.



CAUTION: To ensure proper function of the HP Quick Release and a secure connection of all components, make sure both the release lever on one side of the mounting device and the rounded opening on the other side face upward.

NOTE: When attached, the HP Quick Release automatically locks in position. You only need to slide the lever to one side to remove the thin client.

Supported mounting options

The following illustrations demonstrate some of the supported mounting options for the mounting bracket.

- On the back of a monitor:

- On a wall:

- Under a desk:

Supported orientation and placement

⚠ **CAUTION:** You must adhere to the HP-supported orientation to ensure your thin clients function properly.

Unless the thin client is mounted with the HP Quick Release, it must be operated with the stand attached to ensure proper airflow around the thin client.

- HP supports the horizontal orientation for the thin client:

- HP supports the vertical orientation with a stand attached for the thin client:

- The thin client may be placed under a monitor stand with at least 2.54 cm (1 in) clearance:

Non-supported placement

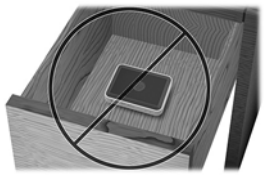
HP does not support the following placements for the thin client:

CAUTION: Non-supported placement of thin clients could result in operation failure and/or damage to the devices.

Thin clients require proper ventilation to maintain operating temperature. Do not block the vents.

Do not put thin clients in drawers or other sealed enclosures. Do not place a monitor or other object on top of the thin client. Do not mount a thin client between the wall and a monitor. Thin clients require proper ventilation to maintain operating temperatures.

- In a desk drawer:



- With a monitor on the thin client:

Routine thin client care

Use the following information to properly care for your thin client:

- Never operate the thin client with the outside panel removed.
- Keep the thin client away from excessive moisture, direct sunlight, and extreme heat and cold. For information about the recommended temperature and humidity ranges for the thin client, go to http://www.hp.com/go/quickspecs.
- Keep liquids away from the thin client and keyboard.
- Turn off the thin client and wipe the exterior with a soft, damp cloth as needed. Using cleaning products may discolor or damage the finish.

3 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 Thin Client chassis. Wrist straps are flexible straps of 1 megohm +/- 10 percent resistance in the ground cords. To provide proper grounding, 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 about static electricity, contact an HP authorized dealer, reseller, or service provider.

4 Shipping information

Shipping preparation

Follow these suggestions when preparing to ship the thin client:

1. Turn off the thin client and external devices.
2. Disconnect the AC power cord from the AC outlet, and then from the thin client.
3. Disconnect the system components and external devices from their power sources, and then from the thin client.
4. Pack the system components and external devices in their original packing boxes or similar packaging with sufficient packing material to protect them.

NOTE: For environmental nonoperating ranges, go to http://www.hp.com/go/quickspecs.

Important service repair information

In all cases, remove and safeguard all external options before returning the thin client to HP for repair or exchange.

In countries that support customer mail-in repair by returning the same unit to the customer, HP makes every effort to return the repaired unit with the same internal memory and flash modules that were sent.

In countries that do not support customer mail-in repair by returning the same unit to the customer, all internal options should be removed and safeguarded in addition to the external options. The thin client should be restored to the **original configuration** before returning it to HP for repair.

5 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. Mountain Time.

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