HP 517 Unified Walljack Installation Guide

Abstract

This document describes the procedure to install and initially configure the HP 517 Unified Walljack (HP 517). It is intended for professional installers who are trained in RF installation and knowledgeable in local regulations including building and wiring codes, safety, channel, power, indoor/outdoor restrictions, and license requirements for the country of use.

Contents

1 Getting started

The HP 517 Unified Walljack is a single-radio dual-band 3x3:3 802.11ac walljack that can support up to 50 wireless clients.

In its factory default state, the HP 517 can be provisioned through its web-based management tool using Microsoft Internet Explorer 8 or later, or Mozilla Firefox 17 or later.

NOTE: When operating, the HP 517 is warm to the touch. When operating at room temperature, the face of the unit can be as high as 40°C (104°F). This is expected.

Overview

Figure 1 (page 4) shows multiple views of an HP 517.

Figure 1 HP 517

Front view	Back view	Side and bottom views
1. Status LEDs Power, Uplink, Radio	4. Pass Through port	7. Pass Through port
	5. PoE Uplink port	8. Power adapter socket
2. LAN port status LEDs	6. Console port	9. Ethernet LAN ports 1–3
3. PoE PSE/port 4 LED		10. PoE PSE Ethernet LAN port 4

Ports

The following ports are located on the HP 517:

- **Four Gigabit Ethernet ports:** Auto-sensing 1000 BASE-T Ethernet ports with RJ-45 connectors. Port 4 supports IEEE 802.3af Power over Ethernet (PoE) to supply power to one device. Located at the bottom of the unit.

- **A Gigabit Ethernet uplink port:** Auto-sensing 1000 BASE-T Ethernet port with RJ-45 connector. Located at the back of the unit.

- **Two (in and out) pass-through ports:** Cat5e-compatible ports with RJ-45 connectors. Located on the back and side of the unit.

- **Console port:** Reserved for HP-directed debugging. Located at the back of the unit.

PoE PSE port power

802.3af powered	No power out PSE port 4
802.3at powered	Class 2 power via PSE port 4[1]
Local DC powered	Class 2 or 3 power via PSE port 4

[1] Because up to 11 watts can be supplied, the software supports a class 3 override option.

Radio and antennas

The HP 517 provides a single IEEE 802.11a/b/g/n/ac radio for 802.11ac very-high throughput (VHT) applications and IEEE 802.11a/b/g/n for legacy support applications.

There are three antennas supporting 3x3 MIMO spatial streams for up to 1.3 Gbps PHY rates.

The HP 517 supports 802.11b/g/n operation modes at 2.4 GHz or 802.11a/n/ac operation modes at 5 GHz.

NOTE: The HP 517 does not support concurrent operation at 2.4 GHz and 5 GHz.

Reset button

The reset button is accessible through a hole on the side panel of the HP 517.

2 Installing the HP 517

The HP 517 is designed to be mounted on a standard NEMA-WD6 (US) or BS 4662 (International) electrical outlet box.

If you use the optional HP Unified Wired-WLAN Walljack Table/Flush Wall Mount Kit (JL022A), the HP 517 can be mounted on a desktop or wall.

The end user is responsible for ensuring that installation and use comply with local safety and radio regulations.

⚠ **IMPORTANT:** This device requires professional installation. Consult a professional installer trained in RF installation and knowledgeable in local regulations including:

- Building and wiring codes
- Safety regulations
- Channel, power, and indoor/outdoor restrictions
- License requirements for the intended country

Planning the installation site

Determine an appropriate location to mount the unit. Use the following guidelines to select the installation site.

⚠ **CAUTION:** To ensure adequate ventilation when installed on an electrical box or wall, the ventilation slots must not be blocked in any way. Ensure that there is at least 15.25 cm (6 inches) of clearance from all vents.

Be sure to install the unit in an area that is well ventilated and maintains an ambient temperature of less than 40°C (104°F). If the installation area has any obstructions to air flow, you must take steps to ensure adequate airflow is maintained. Do not install in enclosed spaces, at ground level, or close to or directly above any heat sources or heat-emitting devices, such as:

- Radiators
- Portable room heaters
- The back of refrigerators or compressors
- Direct sunlight
- Transformers
- Power pack units of halogen or similar lighting fixtures or appliances

⚠ **CAUTION:** To avoid signal interference, do not install the HP 517 near or behind known RF absorbers, reflectors, and interference sources. Examples of sources that degrade RF performance include:

- Cement and brick
- Objects that contain water
- Metal
- Microwave ovens
- Wireless phones and headsets
- Mirrors

Remove product from packaging

Inspect the package contents and verify that they are free from defects. The package contains:

- HP 517 Unified Walljack
- Mounting bracket
- Ethernet jumper cable
- Screws
- Documentation

Installing on an electrical box

Before you begin, run the required network cables through the bottom of the electrical outlet box on which you are installing the HP 517. Be sure to provide enough cable length to reach the HP 517.

NOTE: The HP 517 is shipped with two pairs of mounting screws. The two shorter mounting screws are for a standard NEMA-WD6 (US) electrical box. The two longer mounting screws are for a BS 4662 (worldwide) electrical outlet box.

1. Place the mounting bracket, with the UP arrow pointing up, on the electrical outlet box, and then use two mounting screws to secure the bracket to the box.
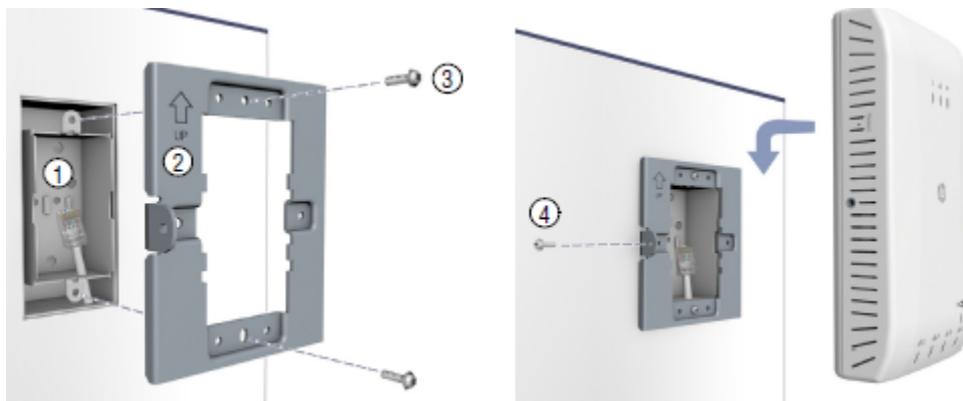
| 1. Electrical box | 3. Screws |
| 2. Mounting bracket | 4. Bracket screw |

2. Connect the network cable from the box to the RJ-45 Uplink port on the back of the HP 517.

   If required, also connect the cable providing support for pass-through devices to the Pass Through port on the back of the HP 517.

3. Push the HP 517 onto the mounting bracket on the box, then slide it down until it is fully engaged. Do not let go of the HP 517 until you confirm that it is securely in place.

4. Use the supplied small Phillips head bracket screw to secure the side of the HP 517 to the bracket.

5. Connect cables:

   - Connect equipment that requires PoE to Port 4.
   - Connect other equipment to Ports 1, 2, 3, and 4.
   - Connect equipment that will use the pass-through feature (such as a digital telephone) to the Pass Through port on the side of the HP 517.

Installing on a wall

When installing the HP 517 on a wall, ensure that the surface to which you attach the HP 517 and the fasteners you use can support at least 0.9 kg (2 lbs). Allow extra weight for cables.

1. Hold the optional Unified Wired WLAN Walljack Table/Flush Wall Mount panel in a vertical orientation against the wall where it will be installed. Mark two holes for the screws or user-supplied wall anchors.
2. If using wall anchors, drill two holes, typically 4.7 mm (3/16 inch) in diameter, and then insert the anchors and tap them flush with the wall.
3. Use the supplied two screws to loosely attach the mount panel to the wall.

4. Run the required network cables through the top, bottom, or sides of the wall mount panel allowing sufficient length for the cables to reach the not-yet installed HP 517.
5. Tighten the screws to secure the mount panel to the wall.
6. Place the mounting bracket, with the UP arrow pointing up, on the wall mount panel, and then use four mounting screws to secure the bracket to the panel.
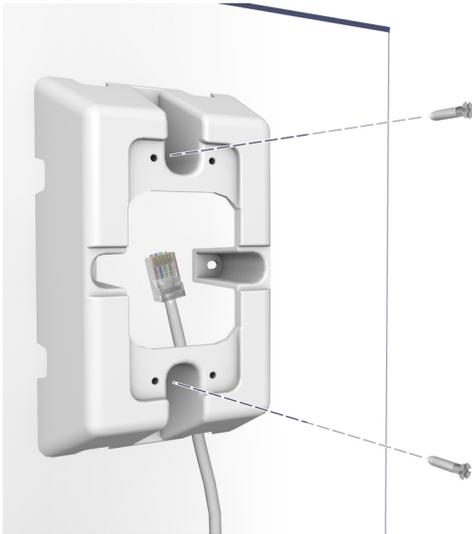
7. Connect the network cable from the panel to the RJ-45 Uplink port on the back of the HP 517.

   If required, also connect the cable providing support for pass-through devices to the Pass Through port on the back of the HP 517.

8. Push the HP 517 onto the mounting bracket on the box, then slide it down until it is fully engaged. Do not let go of the HP 517 until you confirm that it is securely in place.
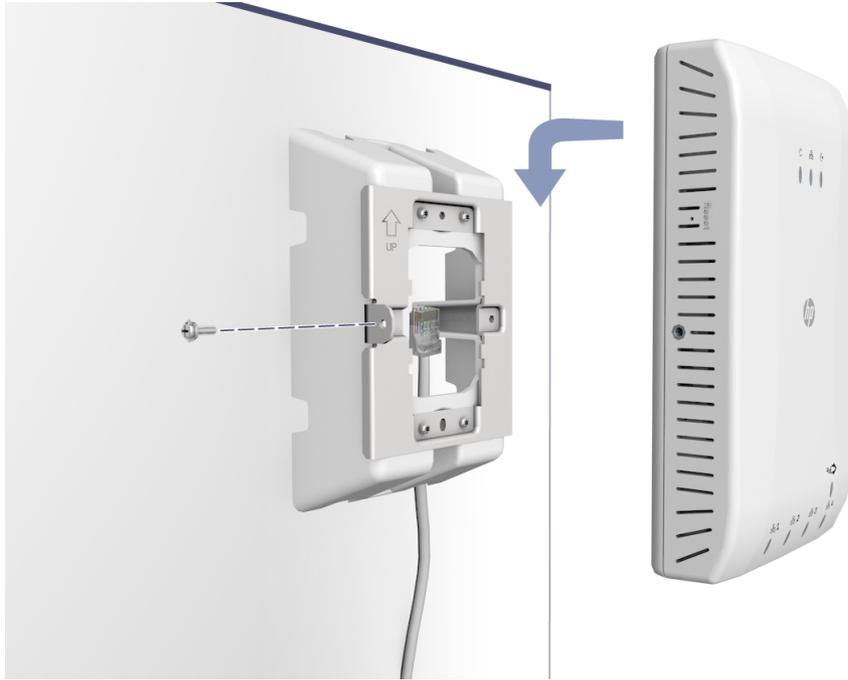
9. Use the supplied small Phillips head bracket screw or Torx-10 security screw to secure the side of the HP 517 to the bracket.

10. Connect cables:

   - Connect equipment that requires PoE to Port 4.

   - Connect other equipment to Ports 1, 2, 3, and 4.

   - Connect equipment that will use the pass-through feature (such as a digital telephone) to the Pass Through port on the side of the HP 517.

Installing on a desktop

△ **CAUTION:** Be sure to install the units in an area that is well ventilated and maintains an ambient temperature of less than 40°C (104°F). Do not install in enclosed spaces or close to or directly above any heat sources or heat-emitting devices. If the installation area has any obstructions to air flow, you must take steps to ensure adequate airflow is maintained. The ventilation slots must not be blocked in any way. Ensure that there is at least 15.25 cm (6 inches) of clearance from all vents.

1. Hold the optional Unified Wired WLAN Walljack Table/Flush Wall Mount panel on the desktop where it will be installed. Mark two holes for the screws.
2. Use the supplied two screws to loosely attach the mount panel to the table.
3. Run the required network cables through the top, bottom, or sides of the mount panel allowing sufficient length for the cables to reach the not-yet installed HP 517.
4. Tighten the screws to secure the mount panel to the table.
5. Place the mounting bracket, on the mount panel, and then use four mounting screws to secure the bracket to the panel.

6. Connect the network cable from the panel to the RJ-45 Uplink port on the back of the HP 517. If required, also connect the cable providing support for pass-through devices to the Pass Through port on the back of the HP 517.

7. Push the HP 517 onto the mounting bracket, then slide it down until it is fully engaged. Do not let go of the HP 517 until you confirm that it is securely in place.

8. Use the supplied small Phillips head bracket screw or Torx-10 security screw to secure the side of the HP 517 to the bracket.

9. Connect cables:

   - Connect equipment that requires PoE to Port 4.

   - Connect other equipment to Ports 1, 2, 3, and 4.

   - Connect equipment that will use the pass-through feature (such as a digital telephone) to the Pass Through port on the side of the HP 517.

Initial configuration

When the Uplink port is connected and the HP 517 is powered on, the device is designed to automatically discover and associate with an HP MSM wireless controller in the connected network.

In its factory default state, the HP 517 can be provisioned through its web-based management tool using Microsoft Internet Explorer 8 or later, or Mozilla Firefox 17 or later.

NOTE: Direct configuration of the HP 517 is only possible when the HP 517 is in its factory-default state, meaning that it has not been provisioned or has not discovered an HP MSM wireless controller since last being reset to factory defaults. To force the HP 517 into its factory-default state, insert a paper clip into the reset button hole, and press and hold the reset button until the status LEDs flash three times, then release.

The following procedure describes how to perform initial configuration for a factory-default HP 517. For instructions on how to perform other configuration procedures, see the *HP 517 802.11ac Unified Walljack Configuration Guide*.

NOTE: Do not power on the HP 517 until directed.

1. Configure your computer:
   a. Disconnect your computer LAN port and configure it to use a static IP address in the range **192.168.1.2** to **192.168.1.254**, and a subnet mask of **255.255.255.0**. Set the default gateway to **192.168.1.1**, and DNS server to **192.168.1.1**.
   b. Disable any wireless connection on your computer.

2. Connect the cables and power on the HP 517.

> **IMPORTANT:** When using the PoE PSE Ethernet LAN port 4 to power a 802.3af powered device (PD), the cable length from LAN port 4 to the PD must be no more than 3 m.

a. Connect the cables:
   - If using a PoE switch, use an Ethernet cable to connect an unused factory-default PoE switch port to the HP 517 Uplink port.
   - If using a PoE injector, use Ethernet cables to connect a network switch to the data-in port of the PoE injector and the HP 517 Uplink port to the data and power-out port of the PoE injector.

     If connecting a PoE injector to a port on a PoE capable switch, be sure to disable the power output on the PoE switch.
   - If using an AC/DC adapter, connect it to the power connector on the HP 517.

b. Power on the HP 517 by powering on the PoE switch, power injector, or by plugging in the AC/DC adapter.

   Initially, the HP 517 power LED is amber. Wait approximately one minute until it turns green before proceeding to the next step.

c. Connect the LAN port on your computer to the uplink port, directly or through a switch.

For detailed information on how to configure and manage the HP 517, see "Working with controlled APs" in the *HP 517 802.11ac Unified Walljack Configuration Guide*.

> **NOTE:** When operating, the HP 517 is warm to the touch. This is expected.

3 LEDs

Table 1 Startup behavior

Power LED	Uplink LED	Radio LED	Description
Off	Off	Off	The HP 517 has no power.
Amber	—	—	Power is applied. If the power LED remains amber for several minutes, the software has failed to load. If this occurs, reset or power cycle the HP 517. If this condition persists, contact HP support.
Flashing green	—	—	Flashing every two seconds: The HP 517 is starting up. Flashing every second: The HP 517 is looking for an IP address or building the list of VLANs on which to support discovery.
Flashing green in sequence			The HP 517 has obtained an IP address and is attempting to discover a controller.
Green	Alternately flashing green		The HP 517 is attempting to establish a management tunnel with a controller.
Alternately flashing green (quickly)	Off		The HP 517 has received a discovery reply form two or more controllers with the same priority setting.
Alternately flashing green (slowly)	Off		The HP 517 is attempting to establish an Ethernet connection to the uplink port.

Table 2 Controlled behavior

LED	State	Description
Power	Amber	The HP 517 has power applied.
	Green	The HP 517 is associated with a wireless controller and is fully operational.
Uplink	Off	The port is not connected or there is no activity.
	Flashing amber	Network activity on a valid 10/100 Mbps link.
	Flashing green	Network activity on a valid 1000 Mbps link.
Radio	Off	Either the radio is disabled or there is no network activity.
	Flashing amber	Wireless network activity in 2.4 GHz mode.
	Flashing green	Wireless network activity in 5 GHz mode.
LAN (1 to 4)	Off	The port is not connected or there is no activity.
	Flashing amber	Network activity on a valid 10/100 Mbps link.
	Flashing green	Network activity on a valid 1000 Mbps link.
PoE	Off	No PoE device is connected.
	Amber	Class 1 or 2 power is being supplied to the device attached to port 4.
	Flashing amber	A fault condition while a Class 1 or 2 PoE device is configured on port 4.

Table 2 Controlled behavior *(continued)*

LED	State	Description
	Green	Class 3 power is being supplied to the device attached to port 4.
	Flashing green	A fault condition while a Class 3 PoE device is configured on port 4.

4 Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Related information

The following documents provide related information:

- *HP 517 802.11ac Unified Walljack Configuration Guide*
- *HP 517 802.11ac Unified Walljack Quickstart*

You can find these documents on the Manuals page of the HP Support Center website:

http://www.hp.com/support/manuals

Enter your product name or number, and click **GO**.

Websites

- HP Technical Support website: http://www.hp.com/support
- HP Networking Support website: www.hp.com/networking/

Typographic conventions

Table 3 Document conventions

Convention	Element
Blue text: Table 3 (page 14)	Cross-reference links
Blue, underlined text: http://www.hp.com	Website addresses
Bold text	- Keys that are pressed - Text typed into a GUI element, such as a box - GUI elements that are clicked or selected, such as menu and list items, buttons, tabs, and check boxes
Italic text	Text emphasis

Table 3 Document conventions *(continued)*

Convention	Element
`Monospace` text	- File and directory names - System output - Code - Commands, their arguments, and argument values
`Monospace, italic` text	- Code variables - Command variables
`Monospace, bold` text	Emphasized monospace text

⚠ **WARNING!**   Indicates that failure to follow directions could result in bodily harm or death.

△ **CAUTION:**   Indicates that failure to follow directions could result in damage to equipment or data.

ⓘ **IMPORTANT:**   Provides clarifying information or specific instructions.

NOTE: Provides additional information.

5 Documentation feedback

HP is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (**docsfeedback@hp.com**). Include the document title and part number, version number, or the URL when submitting your feedback.

A Regulatory information

For important safety, environmental, and regulatory information, see *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at http://www.hp.com/support/Safety-Compliance-EnterpriseProducts.

Turkey RoHS material content declaration

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Ukraine RoHS material content declaration

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

Warranty information

HP Networking Products

http://www.hp.com/support/Networking-Warranties