

HP 527 802.11ac Dual Radio Unified Walljack Access Device Series



Key features

- 802.11ac Dual Radio Walljack with one Gigabit Ethernet (GbE) uplink and three GbE access ports
- Four high-gain embedded antennas providing extended coverage and high-speed connectivity
- A single GbE Power over Ethernet (PoE) cable drop, reducing cabling, switch ports, and local power
- Pass-through port as well as PoE out, reducing additional power needs to IP-based VoIP phone
- Includes Limited Lifetime Warranty 2.0 with 24x7 phone support for three years at no additional cost

Product overview

The HP 527 802.11ac Dual Radio Unified Walljack Access Device is a dual radio 2.4 GHz and 5 GHz unified wired-wireless access point and GbE switch that works in sync with HP Unified controllers, delivers high-performance networking solutions. The controllers provide advanced radio resource management (RRM).

HP 527 Walljack provides one GbE uplink port, three GbE ports, one 802.11b/g/n radio, one 802.11ac radio, and a pass-through RJ-45 connection to support a range of service and user connectivity options. One of the front panel GbE ports can be configured as an IEEE 802.3af-compliant PoE forwarding port to enable devices such as IP telephones to be powered directly from the Walljack.

The HP 527 802.11ac Dual Radio Unified Walljack uses a single PoE cable drop, reducing cabling, switch ports, and power sourcing equipment. The HP 527 Walljack provides unified wired-wireless connectivity into a low-profile design that can be quickly, easily, and discretely installed in a standard wall outlet box. The HP 527 Walljack is designed to provide wireless coverage for one or more rooms.

Features and benefits

Management

- HP Wi-Fi Clear Connect
 - Provides a system-wide approach to improving WLAN reliability by proactively determining and adjusting to changing RF conditions; helps optimize WLAN performance by detecting interference from Wi-Fi and non-Wi-Fi sources using spectrum analysis capabilities built into the Walljack, identifying rogue activity, and making decisions at a system-wide level
- Advanced radio resource management
 - Automatic radio power adjustments
 - Include real-time power adjustments based on changing environmental conditions and signal coverage adjustment
 - Automatic radio channel
 - Provides intelligent channel switching and real-time interference detection
 - Intelligent client load balancing
 - Determines number of clients across neighboring APs and adjusts client allocation to balance the load
 - Airtime fairness
 - Provides equal RF transmission time for wireless clients
- Spectrum analysis
 - Power/frequency spectrum analysis
 - Measures noise from IEEE 802.11 remote sources
 - Signal detection/classification
 - Identifies source of RF interference, for example, Bluetooth®, cordless phones, and microwave ovens
 - Evaluation of channel quality
 - Helps detect severe channel degradation and improve the reporting of poor RF performance
- Integrated wireless IDS/IPS
 - Detects and locates and mitigates unknown and rogue devices (see controller datasheet for details)
- HP Intelligent Management Center and Wireless Services Manager
 - Provides central management for discovery, logging, status, and configuration management
- Enhanced AP survivability
 - Continues to operate using the existing configuration while the AP searches for a new controller
- Compatible with HP Unified controllers
 - Refer to the HP Access Point—Controller Compatibility Matrix at h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA5-0345ENW&cc=us&lc=en

Quality of service (QoS)

- Rate limiting
 - Supports per-wireless client ingress-enforced maximums and per-wireless client, per-queue guaranteed minimums
- Centralized traffic
 - Maintains Layer 2 and Layer 3 QoS settings when using centralized traffic or guest access
- IEEE 802.1p prioritization
 - Delivers data to devices based on the priority and type of traffic
- Wireless
 - L2/L3/L4 classification
 - IEEE 802.1p VLAN priority and DiffServ
 - Multiple SSIDs per radio
 - Wi-Fi MultiMedia (WMM), IEEE 802.11e EDCF, and Service-Aware priority

Connectivity

- IEEE 802.3af Power over Ethernet support
 - Simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location. Unit can be powered by IEEE 802.3af or IEEE 802.3at (PoE+) source
- Power forwarding
 - PoE Class 1/2/3 when powered via IEEE 802.3at (PoE+)
- Auto-MDIX
 - Automatically adjusts for straight-through or crossover cables on all Ethernet interfaces

Mobility

- Two spatial stream MIMO technology
 - 2x2:2 MIMO
 - Provides 802.11b/g/n and 802.11ac Wi-Fi technology, which allows for 867 Mbps of signaling at 5 GHz and 300 Mbps for 802.11n
 - Embedded antenna
 - Provides excellent coverage through use of two 3 dBi at 2.4 GHz and 5dBi at 5GHz embedded antennae; no need for the added cost of external antennas
- Interoperability
 - Meets Wi-Fi Alliance certifications, including IEEE 802.11b/g/n/ac to help ensure multivendor interoperability
- Multiple SSIDs
 - Up to 16 SSIDs per radio, each with unique MAC address, configurable SSID broadcasts
 - Individual security and QoS profiles
 - Configurable DTIM and minimum data rate
 - Each mapped to separate IEEE 802.1Q VLANs
 - WMM and/or WMM-PS
 - Security filter
 - IP filter

- AP client access control functions
 - Offers IEEE 802.1X authentication using EAP-SIM, EAP-FAST, EAP-TLS, EAP-TTLS, and PEAP
 - Delivers MAC address authentication using local or RADIUS access lists
 - Provides RADIUS AAA using EAP-MD5, PAP, CHAP, and MS-CHAPv2
 - Supports RADIUS client (RFC 2865 and 2866) with location-aware support
 - Provides Layer 2 wireless client isolation

Security

- Choice of IEEE 802.11i, WPA2, or WPA
 - Locks out unauthorized wireless access by authenticating users prior to granting network access; robust Advanced Encryption Standard (AES) or Temporal Key Integrity Protocol (TKIP) encryption secures the data integrity of wireless traffic
- IEEE 802.1X support
 - Provides port-based user authentication with support for Extensible Authentication Protocol (EAP) MD5, TLS, TTLS, and PEAP with choice of AES, TKIP, and static or dynamic WEP encryption for protecting wireless traffic between authenticated clients and the access point
- Local wireless bridge client traffic filtering
 - Prevents communication between wireless devices associated with the same access point

Additional information

- RFC Support
 - Refer to the controller datasheet for specific RFCs and other industry standards supported

Warranty and support

- Limited Lifetime Warranty 2.0
 - Advance hardware replacement with next-business-day delivery (available in most countries). See hp.com/networking/warrantysummary for duration details
- Electronic and telephone support (for Limited Lifetime Warranty 2.0)
 - Limited 24x7 telephone support is available from HP for the first three years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to hp.com/networking/warrantysummary

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Specifications



HP 527 Dual Radio 802.11ac (AM) Unified Wired-WLAN Walljack (JH048A)
HP 527 Dual Radio 802.11ac (WW) Unified Wired-WLAN Walljack (JH049A)
HP 527 Dual Radio 802.11ac (JP) Unified Wired-WLAN Walljack (JH050A)
HP 527 Dual Radio 802.11ac (IL) Unified Wired-WLAN Walljack (JH051A)
HP 527 Dual Radio 802.11ac (AM) 20-unit Eco-pack Unified Wired-WLAN Walljack (JH052A)
HP 527 Dual Radio 802.11ac (WW) 20-unit Eco-pack Unified Wired-WLAN Walljack (JH053A)

I/O ports and slots

2 RJ-45 autosensing 10/100/1000 customer-facing ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
1 RJ-45 autosensing 10/100/1000 PoE customer-facing port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
1 RJ-45 autosensing 10/100/1000 PoE/PoE+ uplink port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af/IEEE 802.3at PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
1 RJ-45 pass through port

Additional ports and slots

1 USB 2.0

AP characteristics

Radios (built-in) 802.11a/n/ac + 802.11b/g/n
Radio operation modes Client access, Packet capture
AP operation modes Controlled
Wi-Fi Alliance Certification a/b/g/n/ac Wi-Fi Certified
Antenna (2) 3 dBi 2.4 GHz and (2) 5 dBi 5 GHz omnidirectional antennas
Number of internal antennas 4

Physical characteristics

Dimensions 3.4(w) x 5.91(d) x 1.38(h) in (8.6 x 15 x 3.5 cm)
Weight 0.77 lb (0.35 kg) mounting bracket

Memory and processor

Processor MIPS 74K @ 720 MHz, 128 MB NAND flash, 256 MB DDR2 DIMM

Mounting and enclosure

Includes mounting bracket, screws for wall installation and Torx security screw.

Environment

Operating temperature 32°F to 113°F (0°C to 45°C)
Operating relative humidity 5% to 95%, noncondensing
Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity 5% to 95%, noncondensing

Electrical characteristics

Description The HP 527 Walljack, when powered through the uplink GbE PoE/PoE+ port, acts as a PoE PD complying with the IEEE 802.3af/at standards. The HP 527 Walljack can also provide power to its USB 2.0 port (maximum 5V/0.5A output). Power Consumption
Maximum power rating 12.9 W without supplying power and 25.5 W supplying 802.3af power out the customer facing port

Notes

Optional 48 VDC power supply

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Frequency band and operating channels

| | |
|---|---|
| Americas | 2.412 - 2.462 GHz (1 - 11 channels) 5.180 - 5.320 GHz (36 - 64 channels) 5.500 - 5.700 GHz (100 - 140 (excluding 5600-5650 MHz) channels) 5.745 - 5.825 GHz (149 - 165 channels) |
| European Union | 2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.320 GHz (36 - 64 channels) 5.500 - 5.700 GHz (100 - 140 (excluding 5600-5650 MHz) channels) |
| Rest of World (Actual channels designated by selecting country in UI) | 2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.320 GHz (36 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels) 5.745 - 5.825 GHz (149 - 165 channels) |
| Taiwan | 2.412 - 2.462 GHz (1 - 11 channels) 5.280 - 5.320 GHz (56 - 64 channels) 5.500 - 5.700 GHz (100 - 140 (excluding 5600-5650 MHz) channels) 5.745 - 5.825 GHz (149 - 165 channels) |
| Japan | 2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.320 GHz (36 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels) |
| Israel | 2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.320 GHz (36 - 64 channels) |

Radio FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU); KCC approval (Korea)

Safety UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1

Medical EN60601-1-2

RF Exposure FCC Bulletin OET-65C; RSS-102; CFR 47, Part 2, Subpart J; ANSI/IEEE C95.1 (99); Ministry of Health Safety Code 6; Australian Radiation Protection Std.

Features Dual radio: IEEE 802.11a/n/ac for very high-throughput applications and IEEE 802.11b/g/n for legacy support applications

- Integrated antennas for both IEEE radios, supporting two spatial streams and 2x2 MIMO
- Four embedded antennas
- Both radios operate at full power and full performance on IEEE 802.3af PoE/Gigabit Ethernet

Emissions EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B

Notes Supported data rates

- 802.11b: 1, 2, 5.5, 11 Mbps
- 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
- 802.11n: 6.5 to 300 Mbps (MCS0 to MCS15, 1 and 2 spatial streams)
- 802.11ac: 6.5 Mbps to 867 Mbps (MCS0 to MCS9, 1 and 2 spatial streams)
- 802.11n high-throughput (HT) 20/40
- 802.11ac very high throughput (VHT) 20/40/80
- 802.11n/ac packet aggregation A-MPDU and A-MSDU

The HP 527 Walljack power information listed includes the embedded antenna. Review the HP documentation for your AP to understand the maximum output setting for your AP based on your country's regulations.

Two spatial stream AP Walljack, supporting 867 Mbps in the 5GHz band and 300 Mbps in the 2.4GHz band. Maximum transmit power varies by country.

Regulatory model number: BJNGA-FB0005

Services Refer to the HP website at hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

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Note

This transmit power data is EIRP and includes the embedded antennas. The receiver sensitivity also includes the antenna gain.

IEEE 802.11ac 5GHz @ 80MHz channel

| | | |
|----------------------|-----------------|----------------|
| Data rate | MCS9 - 867 Mbps | MCS0 - 65 Mbps |
| Receiver sensitivity | -59 dBm | -85 dBm |
| Transmit power | 21 dBm | 25 dBm |

IEEE 802.11ac 5GHz @ 40MHz channel

| | | |
|----------------------|-----------------|----------------|
| Data rate | MCS9 - 400 Mbps | MCS0 - 30 Mbps |
| Receiver sensitivity | -62 dBm | -88 dBm |
| Transmit power | 21 dBm | 25 dBm |

IEEE 802.11n 5GHz @ 40MHz channel

| | | |
|----------------------|------------------|----------------|
| Data rate | MCS15 - 300 Mbps | MCS8 - 30 Mbps |
| Receiver sensitivity | -69 dBm | -88 dBm |
| Transmit power | 22 dBm | 25 dBm |

IEEE 802.11n 5GHz @ 20MHz channel

| | | |
|----------------------|--------------------|------------------|
| Data rate | MCS15 - 144.4 Mbps | MCS8 - 14.4 Mbps |
| Receiver sensitivity | -72 dBm | -92 dBm |
| Transmit power | 22 dBm | 25 dBm |

IEEE 802.11n 2.4GHz @ 40MHz channel

| | | |
|----------------------|------------------|----------------|
| Data rate | MCS15 - 300 Mbps | MCS8 - 30 Mbps |
| Receiver sensitivity | -69 dBm | -89 dBm |
| Transmit power | 21 dBm | 23 dBm |

IEEE 802.11n 2.4GHz @ 20MHz channel

| | | |
|----------------------|--------------------|------------------|
| Data rate | MCS15 - 144.4 Mbps | MCS8 - 14.4 Mbps |
| Receiver sensitivity | -72 dBm | -93 dBm |
| Transmit power | 21 dBm | 23 dBm |

IEEE 802.11a 5GHz

| | | |
|----------------------|---------|---------|
| Data rate | 54 Mbps | 6 Mbps |
| Receiver sensitivity | -75 dBm | -92 dBm |
| Transmit power | 21 dBm | 23 dBm |

IEEE 802.11b/g 2.4GHz

| | | | | |
|----------------------|---------|---------|---------|---------|
| Data rate | 54 Mbps | 11 Mbps | 6 Mbps | 1 Mbps |
| Receiver sensitivity | -76 dBm | -89 dBm | -93 dBm | -96 dBm |
| Transmit power | 21 dBm | 23 dBm | 23 dBm | 23 dBm |

Standards and Protocols

(applies to all products in series)

Mobility

IEEE 802.11a High Speed Physical Layer in the 5 GHz Band
IEEE 802.11ac WLAN Enhancements for Very High Throughput
IEEE 802.11b Higher-Speed Physical Layer Extension in the 2.4 GHz Band

IEEE 802.11d Global Harmonization
IEEE 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band
IEEE 802.11h Dynamic Frequency Selection
IEEE 802.11i Medium Access Control (MAC) Security Enhancements

IEEE 802.11n Dual Band WLAN Enhancements for Higher Throughput

Note

All of the above standards are now included in IEEE 802.11-2012

HP 527 802.11ac Dual Radio Unified Walljack Access Device Series accessories

Power Supply

HP 1-port Power Injector (J9407B)
HP Single-Port 802.3at Gigabit PoE In-Line Power Supply (J9867A)
HP Gigabit Intellijack 48V Power Supply (JD055B)

Mounting Kit

HP Unified Wired-WLAN Walljack Table/Flush Wall Mount Kit (JL022A)

Learn more at
hp.com/networking



HP access points and access devices are Wi-Fi Certified, providing our customers with the assurance that these products have met and passed the rigorous interoperability testing performed by the Wi-Fi Alliance Organization. See the Specifications section of this series for more information.

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