HPE 525 802.11ac Dual Radio Access Point Series

Key features

- Two-spatial stream 802.11ac MIMO Access Point with optional external antennas

- Up to 866 Mbps on the 802.11ac radio and 300 Mbps on the 2.4 GHz 802.11n radio

- Built-in spectral analysis scans the 2.4 GHz and 5 GHz bands to identify sources of RF interference

- Comprehensive WLAN security with intrusion detection and prevention offers threat protection

Product overview

HPE 525 802.11ac Dual Radio Access Point Series bring 866 Mbps performance, faster application processing, and increased range to 802.11 clients over 802.11n access points. Ideal for dense client environments and high bandwidth applications, the access points can be powered by Power over Ethernet (PoE) and offer full compatibility with legacy 802.11 clients and existing HPE Unified wireless controllers.

The access points provide Radio Frequency spectrum analysis with detection and classification of non-IEEE 802.11 interference and has the ability to automatically avoid interference. Wireless security is comprehensive when it operates with a controller along with integrated wireless IDS/IPS. It provides support for internal and external authentication, authorization, and accounting (AAA) servers, offers built-in stateful firewall, allows per-user VLAN mapping, and facilitates authentication.

Features and benefits

Management
- 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 access points, identifies rogue activity, and takes decisions at a system-wide level.

- Advanced radio resource management

  – Automatic radio power adjustments

    Includes 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 improves the reporting of poor RF performance

- Integrated wireless IDS/IPS

  Detects, locates, and mitigates unknown and rogue devices (see controller data sheet for details)

- Access point management via a wireless controller

  Provides secure Web browser (SSL and VPN), command-line interface, SNMP v2c, SNMP v3, MIB-II with traps, and RADIUS Authentication Client MIB (RFC 2618); offers embedded HTML management tool with secure access (SSL and VPN); implements scheduled configuration and firmware upgrades from a central controller

- HPE Intelligent Management Center and Wireless Services Manager Software

  Provides central management for discovery, logging, status, and configuration management

- Diagnostics

  Records association, authentication, and DHCP events in client event log; packet capture tool for Ethernet and IEEE 802.11 interfaces (PCAP format); includes data rate matrix

- Compatible with HPE Unified Switches, Controllers, and Module

  – Refer to the HPE Access Point—Controller Compatibility Matrix at
    h20195.www2.hpe.com/V2/GetDocument.aspx?docname=4AA5-0345ENW&cc=us&lc=en

  – Refer to the release notes for minimum version numbers required.

Quality of Service (QoS)

• Rate limiting

Supports per-wireless client ingress-enforced maximums and per-wireless client, per-queue enabled 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

Supports IEEE 802.1p VLAN priority, SpectraLink SVP, and DiffServ

– Multiple SSIDs per radio

Wi-Fi MultiMedia (WMM), IEEE 802.11e EDCF, and Service-Aware priority

Connectivity

• IEEE 802.3 PoE

– Simplifies deployment and dramatically reduces installation costs by helping eliminate the time and cost involved in supplying local power at each access point location

– Both radios operate at full performance with 802.11af PoE

• Auto-MDIX

Adjusts automatically for straight-through or crossover cables on the Ethernet interface

Mobility

• Two spatial stream MIMO technology

Provides the latest in Wi-Fi technology, which allows for 866 Mbps in the 5 GHz frequency band and 300 Mbps in the 2.4 GHz band of signaling

• Band steering

Redirects 5 GHz-capable clients automatically to the less-congested 5 GHz spectrum

• HPE 525 embedded antennas

Provides excellent coverage through use of embedded high-gain antennas (4 dBi antenna at 2.4 GHz and 5 dBi antenna at 5 GHz); no need for the added cost of external antennas

• External antenna

– Optional external antenna for better antenna placement via RP-SMA connectors

• Anywhere, anytime wireless coverage

Dual-radio IEEE 802.11b/g/n and 802.11a/n/ac access point; per-radio software-selectable configuration of frequency bands; self-healing, self-optimizing local mesh that extends network availability; Wi-Fi Alliance certifications for interoperability with all IEEE 802.11a/b/g/n/ac client devices

- Medical standards

  Meets the European EN60601-1-2 standard for healthcare

- 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

- 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

- Integrated IDS support

  – Automated AP and client classification

    Reduces manual effort (administrator can override AP classification)

  – Comprehensive detection capabilities

    Detects a wide range of attacks

  – Flexible event reporting

  – Enables configuration of events that result in notifications Location tracking capabilities

    Helps identify the rogue device location

  – Flexible deployment models

    Supports time slicing or dedicating a radio to detect full-time

  – See the controller data sheet for more detail IEEE 802.1X support

- 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

- TKIP/WEP encryption

  Is supported only on legacy IEEE 802.11a/b/g clients as it has been deprecated from the IEEE 802.11n and 802.11ac standards

- Local wireless bridge client traffic filtering

  Prevents communication between wireless devices associated with the same access point

Additional information

• RFC and standards

Refer to the controller data sheet for details

Warranty and support

• Limited Lifetime Warranty

See **hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase.

• Software releases

To find software for your product, refer to **hpe.com/networking/support**; for details on the software releases available with your product purchase, refer to **hpe.com/networking/warrantysummary**

HPE 525 802.11ac Dual Radio Access Point Series

SPECIFICATIONS	**HPE 525 Wireless Dual Radio 802.11ac (AM) Access Point (JG993A)** **HPE 525 Wireless Dual Radio 802.11ac (WW) Access Point (JG994A)** **HPE 525 Wireless Dual Radio 802.11ac (JP) Access Point (JG995A)** **HPE 525 Wireless Dual Radio 802.11ac (IL) Access Point (JG996A)** **HPE 525 Wireless Dual Radio 802.11ac (AM) 8-unit Eco-pack Access Points (JG997A)** **HPE 525 Wireless Dual Radio 802.11ac (WW) 8-unit Eco-pack Access Points (JG998A)**
I/O ports and slots	1 RJ-45 autosensing 10/100/1000 PoE port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (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
Additional ports and slots	1 RJ-45 serial console port
AP characteristics Radios (built-in) Radio operation modes AP operation modes Wi-Fi Alliance Certification Antenna Number of internal antennas Number of external antennas	 802.11b/g/n, a/n/ac Client access, Local mesh, Packet capture Controlled a/b/g/n/ac Wi-Fi Certified (2) 4 dBi 2.4 GHz and (2) 5 dBi 5 GHz omnidirectional antennas 4 4
Physical characteristics Dimensions Weight	 8.66(w) x 8.66(d) x 2.36(h) in (22 x 22 x 6 cm) 1.65 lb (0.75 kg) mounting bracket
Memory and processor	Single core @ 720 MHz, 128 MB flash, 256 MB SDRAM
Mounting and enclosure	Indoor, plenum rated; Includes ceiling/wall mount kit as well as two ceiling mounting clips
Environment Operating temperature Operating relative humidity Nonoperating/Storage temperature Nonoperating/Storage relative humidity	 32°F to 113°F (0°C to 45°C) 5% to 95%, noncondensing -40°F to 158°F (-40°C to 70°C) 5% to 95%, noncondensing

SPECIFICATIONS	**HPE 525 Wireless Dual Radio 802.11ac (AM) Access Point (JG993A)**
	HPE 525 Wireless Dual Radio 802.11ac (WW) Access Point (JG994A)
	HPE 525 Wireless Dual Radio 802.11ac (JP) Access Point (JG995A)
	HPE 525 Wireless Dual Radio 802.11ac (IL) Access Point (JG996A)
	HPE 525 Wireless Dual Radio 802.11ac (AM) 8-unit Eco-pack Access Points (JG997A)
	HPE 525 Wireless Dual Radio 802.11ac (WW) 8-unit Eco-pack Access Points (JG998A)

Electrical characteristics

| Description | IEEE 802.3af PoE compliant for Gigabit Ethernet |
| Maximum power rating | 12.9 W |

Notes
Optional 48V DC power supply

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. |

SPECIFICATIONS	**HPE 525 Wireless Dual Radio 802.11ac (AM) Access Point (JG993A)** **HPE 525 Wireless Dual Radio 802.11ac (WW) Access Point (JG994A)** **HPE 525 Wireless Dual Radio 802.11ac (JP) Access Point (JG995A)** **HPE 525 Wireless Dual Radio 802.11ac (IL) Access Point (JG996A)** **HPE 525 Wireless Dual Radio 802.11ac (AM) 8-unit Eco-pack Access Points (JG997A)** **HPE 525 Wireless Dual Radio 802.11ac (WW) 8-unit Eco-pack Access Points (JG998A)**
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 • External antenna, optional
Emissions	EN 55022 Class B; 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 866 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 HPE 525 access point power information listed includes the embedded antenna. Review the HPE documentation for your AP to understand the maximum output setting for your AP based on your country's regulations. Two spatial stream AP, supporting 866 Mbps in the 5GHz band and 300 Mbps in the 2.4GHz band. Maximum transmit power varies by country. Regulatory model number: BJNGA-FB0004
Services	Refer to the Hewlett Packard Enterprise website at **hpe.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 Hewlett Packard Enterprise sales office.

SPECIFICATIONS

HPE 525 Wireless Dual Radio 802.11ac (AM) Access Point (JG993A)
HPE 525 Wireless Dual Radio 802.11ac (WW) Access Point (JG994A)
HPE 525 Wireless Dual Radio 802.11ac (JP) Access Point (JG995A)
HPE 525 Wireless Dual Radio 802.11ac (IL) Access Point (JG996A)
HPE 525 Wireless Dual Radio 802.11ac (AM) 8-unit Eco-pack Access Points (JG997A)
HPE 525 Wireless Dual Radio 802.11ac (WW) 8-unit Eco-pack Access Points (JG998A)

Radio characteristics:
HPE 525 Wireless Dual Radio 802.11ac (AM) Access Point (JG993A)
HPE 525 Wireless Dual Radio 802.11ac (WW) Access Point (JG994A)
HPE 525 Wireless Dual Radio 802.11ac (JP) Access Point (JG995A)
HPE 525 Wireless Dual Radio 802.11ac (IL) Access Point (JG996A)
HPE 525 Wireless Dual Radio 802.11ac (AM) 8-unit Eco-pack Access Points (JG997A)
HPE 525 Wireless Dual Radio 802.11ac (WW) 8-unit Eco-pack Access Points (JG998A)

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 - 866 Mbps	MCS0 - 65 Mbps
Receiver sensitivity	-64 dBm	-89 dBm
Transmit power	22 dBm	27 dBm

IEEE 802.11ac 5GHz @ 40MHz channel

Data rate	MCS9 - 400 Mbps	MCS0 - 30 Mbps
Receiver sensitivity	-67 dBm	-92 dBm
Transmit power	22 dBm	27 dBm

IEEE 802.11n 5GHz @ 40MHz channel

Data rate	MCS15 - 300 Mbps	MCS8 - 30 Mbps
Receiver sensitivity	-72 dBm	-92 dBm
Transmit power	24 dBm	27 dBm

IEEE 802.11n 5GHz @ 20MHz channel

Data rate	MCS15 - 144.4 Mbps	MCS8 - 14.4 Mbps
Receiver sensitivity	-75 dBm	-95 dBm
Transmit power	24 dBm	27 dBm

IEEE 802.11n 2.4GHz @ 40MHz channel

Data rate	MCS15 - 300 Mbps	MCS8 - 30 Mbps
Receiver sensitivity	-72 dBm	-91 dBm
Transmit power	26 dBm	26 dBm

SPECIFICATIONS

HPE 525 Wireless Dual Radio 802.11ac (AM) Access Point (JG993A)
HPE 525 Wireless Dual Radio 802.11ac (WW) Access Point (JG994A)
HPE 525 Wireless Dual Radio 802.11ac (JP) Access Point (JG995A)
HPE 525 Wireless Dual Radio 802.11ac (IL) Access Point (JG996A)
HPE 525 Wireless Dual Radio 802.11ac (AM) 8-unit Eco-pack Access Points (JG997A)
HPE 525 Wireless Dual Radio 802.11ac (WW) 8-unit Eco-pack Access Points (JG998A)

IEEE 802.11n 2.4GHz @ 20MHz channel

Data rate	MCS15 - 144.4Mbps	MCS8 - 14.4 Mbps		
Receiver sensitivity	-75 dBm	-95 dBm		
Transmit power	26 dBm	26 dBm		

IEEE 802.11a 5GHz

Data rate	54 Mbps	6 Mbps		
Receiver sensitivity	-78 dBm	-95 dBm		
Transmit power	25 dBm	27 dBm		

IEEE 802.11b/g 2.4GHz

Data rate	54 Mbps	11 Mbps	6 Mbps	1 Mbps
Receiver sensitivity	-78 dBm	-93 dBm	-95 dBm	-98 dBm
Transmit power	26 dBm	26 dBm	26 dBm	26 dBm

STANDARDS AND PROTOCOLS
(applies to all products in series)

Mobility	IEEE 802.11a High Speed Physical Layer in the 5 GHz Band	IEEE 802.11b Higher-Speed Physical Layer Extension in the 2.4 GHz Band	IEEE 802.11h Dynamic Frequency Selection
	IEEE 802.11ac WLAN Enhancements for Very High Throughput	IEEE 802.11d Global Harmonization	IEEE 802.11i Medium Access Control (MAC) Security Enhancements
		IEEE 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band	IEEE 802.11n WLAN Enhancements for Higher Throughput

HPE 525 802.11ac Dual Radio Access Point Series accessories

Power Supply	HPE 1-port Power Injector (J9407B) HPE Gigabit IntelliJack 48V Power Supply (JD055B)
External Antenna	HPE Indoor Omnidirectional Dual Band 2.5/6dBi MIMO 4 Element Antenna (JG696A)

Learn more at
hpe.com/networking

HPE 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.

f   y   in   ✉

Sign up for updates

★ Rate this document

Hewlett Packard
Enterprise