Overview

HPE 417 802.11n Unified Walljack Access Device Series

Models

HP 417 Single Radio 802.11n (AM) Unified Wired-WLAN Walljack	JG971A
HP 417 Single Radio 802.11n (WW) Unified Wired-WLAN Walljack	JG972A
HP 417 Single Radio 802.11n (AM) 20-unit Eco-pack Unified Wired-WLAN Walljack	JG973A
HP 417 Single Radio 802.11n (WW) 20-unit Eco-pack Unified Wired-WLAN Walljack	JG974A

Key features

- 802.11n single radio walljack with one Gigabit Ethernet (GbE) uplink and three 100BASE-T ports
- Two 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
- Passthrough port as well as PoE out, reducing addional power needs to IP-based VoIP phone
- Limited Lifetime Warranty

Product overview

The HPE 417 802.11n Unified Walljack is a single 2.4GHz radio unified wired-wireless access point and 100BASE-T Ethernet switch that works in sync with HPE Unified controllers, delivers high-performance networking solutions. The controllers provide advanced radio resource management (RRM).

The 417 Unified Walljack provides one GbE uplink port, three 100BASE-T Ethernet ports, one 802.11b/g/n wireless access point and a pass-through RJ-45 connection to support a range of service and user connectivity options. One of the front panel Ethernet 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 HPE 417 802.11n Unified Walljack uses a single PoE cable drop, reducing cabling, switch ports, and power sourcing equipment. The HPE 417 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 HPE 417 is designed to provide wireless coverage for one rooms.

Features and benefits

Management

- **Hewlett Packard Enterprise 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

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  - **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)
- **HPE 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 HPE Unified Controllers**
  Refer to the HPE Access Point—Controller Compatibility Matrix at
  http://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 when powered by IEEE 802.3af or 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 MIMO**
    provides 802.11b/g/n Wi-Fi technology, which allows for 300 Mbps of signaling
  - **Embedded antenna**

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provides excellent coverage through use of a 3.3 dBi embedded; no need for the added cost of external antennas

- **Interoperability**
  - meets Wi-Fi Alliance Certifications, including IEEE 802.11b/g/n to help ensure multivendor interoperability
- **Multiple SSIDs**
  - Up to 16 SSIDs, 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 v2.0**
  see **http://www.hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase.

Configuration

Build To Order: BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

HP 417 802.11n (AM) Unified Walljack — JG971A
- 1 RJ-45 autosensing 10/100/1000 WAN port
- 3 RJ-45 autosensing 10/100 LAN ports
- Wireless - 802.11 b/g/n

See Configuration **NOTE:**1

HP 417 802.11n (WW) Unified Walljack — JG972A
- 1 RJ-45 autosensing 10/100/1000 WAN port
- 3 RJ-45 autosensing 10/100 LAN ports
- Wireless - 802.11 b/g/n

See Configuration **NOTE:**2

HP 417 802.11n (AM) 20 Pk Unifd Walljack — JG973A
- 1 RJ-45 autosensing 10/100/1000 WAN port
- 3 RJ-45 autosensing 10/100 LAN ports
- Wireless - 802.11 b/g/n

See Configuration **NOTE:**1

HP 417 802.11n (WW) 20 Pk Unifd Walljack — JG974A
- 1 RJ-45 autosensing 10/100/1000 WAN port
- 3 RJ-45 autosensing 10/100 LAN ports
- Wireless - 802.11 b/g/n

See Configuration **NOTE:**2

Configuration Rules:

Note 1 Only available in AMS. (Warning in Clic only)

Note 2 Not available in AMS. (Warning in Clic only)

417 Unified Walljack Options

External Power Supplies

HP Single-PRT 802.3at Gig PoE PS — J9867A

See Configuration **NOTE:**1, 5

HP 1-port Power Injector — J9407B

See Configuration **NOTE:**4, 5

Configuration Rules:

Configuration

Note 1	This power supply is supported on the following Walljacks:	
	HP 417 Single Radio 802.11n (AM) Unified Wired-WLAN Walljack	JG971A
	HP 417 Single Radio 802.11n (WW) Unified Wired-WLAN Walljack	JG972A
	HP 417 Single Radio 802.11n (AM) 20-unit Eco-pack Unified Wired-WLAN Walljack	JG973A
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Note 4	Using this 1-port Power Injector will only enable Class 1e PoE Output port on the HP 417. It is recommended you use the J9867A - HP Single-PRT 802.3at Gig PoE PS instead:	
	HP 417 Single Radio 802.11n (AM) Unified Wired-WLAN Walljack	JG971A
	HP 417 Single Radio 802.11n (WW) Unified Wired-WLAN Walljack	JG972A
	HP 417 Single Radio 802.11n (AM) 20-unit Eco-pack Unified Wired-WLAN Walljack	JG973A
	HP 417 Single Radio 802.11n (WW) 20-unit Eco-pack Unified Wired-WLAN Walljack	JG974A
Note 5	Localization required. (See Localization Menu)	

Mounting Kit

HP Unified Walljack Table Mount Kit	JL022A See Configuration **NOTE:**1

Configuration Rules:

Note 1	This Mounting Kit is supported on the following Walljacks:	
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Technical Specifications

HP 417 Single Radio 802.11n (AM) Unified Wired-WLAN Walljack (JG971A)
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I/O ports and slots	1 RJ-45 auto-negotiating 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) 2 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 RJ-45 autosensing 10/100 PoE port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Duplex: half or full 1 RJ-45 pass through port	
AP characteristics	**Radios (built-in)**	802.11b/g/n
	Radio operation modes	Client access, Packet capture
	AP operation modes	Controlled
	Wi-Fi Alliance Certification	b/g/n Wi-Fi Certified
	Antenna	Internal omnidirectional antenna
	Number of internal antennas	2
Physical characteristics	**Dimensions**	3.39(w) x 0.98(d) x 4.72(h) in (8.6 x 2.49 x 12 cm)
	Weight	0.42 lb (0.19 kg)
Memory and processor	Single core @ 560 MHz, 128 MB flash, 128 MB SDRAM	
Mounting and enclosure	Indoor; Designed for mounting in a standard wall outlet box or on optional Flush Mount / Desktop Mount kit.	
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-4°F to 158°F (-20°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Altitude	up to 13,123 ft (4 km)
Electrical characteristics	**Description**	Powered Device (PD): The device will be powered by any standard IEEE 802.3af PoE source and with PoE it will provide Class 1 or 2 on port 3. To provide Class 3 PoE output on port 3, the unit must be powered via IEEE 802.3at PoE+ power.
	DC voltage	Powered by PoE
	Maximum power rating	6 W
	Notes	Power Consumption is 6W (with no device attached to designated PoE port).
Frequency band and Operating channels	**Americas**	2.412 - 2.462 GHz (1 - 11 channels)
	Rest of World (non	2.412 - 2.472 GHz (1 - 13 channels)

Technical Specifications

	Americas countries)
Radio	EN 300 328; ARIB STD-T66; RSS-Gen (Canada); IDA (Singapore); OFTA (Hong Kong); DSPR (Japan); RCR STD-33; RSS-210; FCC Parts 15.207, 15.209 & 15.247 (US); MSIP (Korea).
Safety	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; EN 50385; CFR 47, Part 2, Subpart J; ANSI/IEEE C95.1 (99); Ministry of Health Safety Code 6; Australian Radiation Protection Std.
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 • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: 6.5 to 300 Mbps (MCS0 to MCS15, 1 and 2 spatial streams) • 802.11n high-throughput (HT) 20/40MHz Bandwidths • 802.11n packet aggregation A-MPDU and A-MSDU The HP 417 unified Walljack's power information listed includes the embedded antenna. The software will automatically adjust the maximum power levels based on the country of operation. Two spatial stream AP, supporting 300Mbps Maximum transmit power varies by country. Regulatory model number BJNGA-FB0003
Services	Refer to the Hewlett Packard Enterprise website at **http://www.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.

NOTE: This transmit power data is EIRP and includes the embedded antennas. The receiver sensitivity also includes the antenna gain. Maximum power levels will vary by channel and country of operation.

IEEE 802.11n 2.4GHz @ 40MHz channel	Data rate	MCS15 – 300 Mbps	MCS8 – 30 Mbps
	Receiver sensitivity	-71 dBm	-86 dBm
	Transmit power	21 dBm	23 dBm

IEEE 802.11n 2.4GHz @ 20MHz channel	Data rate	MCS15 – 144 Mbps	MCS8 - 14.4 Mbps
	Receiver sensitivity	-74 dBm	-89 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	-91 dBm	-88 dBm	-97 dBm
	Transmit power	21 dBm	23 dBm	23 dBm	23 dBm

Standards and Protocols
(applies to all products in series)

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

Technical Specifications

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

Accessories

HPE 417 802.11n 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

Mounting Kit

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

Summary of Changes

Date	Version History	Action	Description of Change:
01-Dec-2015	From Version 2 to 3	Changed	Overview and Technical Specifications updated
01-Dec-2014	From Version 1 to 2	Changed	Warranty and support updated

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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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