

# HP 501 Wireless Client Bridge Series



## Product overview

The HP 501 Wireless Client Bridge enables you to easily integrate devices with no native wireless support into a wireless LAN (WLAN). The 501 Wireless Client Bridge can bridge up to 15 Ethernet client devices running a legacy networking protocol to the WLAN, extending wireless network access to a wide range of protocols. An integrated serial to TCP/IP converter enables a RS-232 asynchronous terminal device to communicate with a compatible station on the network. Strong enterprise-class layered security features, including an IEEE 802.1X supplicant, protect the network from intrusions. And hardware-accelerated encryption provides high performance when using WPA2/AES security.

The bridge enables organizations to unwire a broad range of computing devices and realize the benefits of mobility. Electronic cash registers, scales, servers, printers, medical equipment, manufacturing machinery, and other devices can be deployed in any location where a WLAN signal is available—saving the time and expense need for installing Ethernet cables for network access.

The HP 501 Wireless Client Bridge integrates into the HP Mobility System; and it is interoperable with an IEEE 802.11b/g/n or 802.11a/n/ac WLAN network infrastructure from HP or any other vendor.

### **A summary of the highlights of the 501 Wireless Client Bridge Series:**

- Linking of up to 15 Ethernet devices or an RS232 serial device to a wireless network at Gigabit speeds
- One dual-band three spatial-stream MIMO radio running up to 1.3 Gb/s
- Support for IEEE 802.11b/g/n and 802.11a/n/ac WLAN networks
- Fast roaming between access points
- Web-based configuration
- Managed via HP Intelligent Management Center

## **Features and benefits**

### **Quality of Service (QoS)**

- Network management
  - Support for DSCP and WMM
  - SNMP v2c, SNMP v3, MIB-II with traps, and RADIUS authentication client MIB (RFC 2618)
  - Embedded HTML management tool with secure access
  - Scheduled configuration and firmware upgrades via a network management station
- Diagnostic
  - RSSI logging
  - Email alert tool

### **Connectivity**

- IEEE 802.3af PoE support
  - Simplifies deployment and dramatically reduces installation costs by helping eliminate the time and cost involved in supplying local power at each client bridge
- Auto-MDIX
  - Provides automatic adjustments for straight-through or crossover cables on all 10/100/1000 ports
- IEEE 802.11h with International-Telecommunication-Union (ITU) compliance
  - Selects the channel automatically, based on the access point it connects to; and avoids DFS (Dynamic-Frequency-Selection) issues by following the access point to a clear channel

### **Mobility**

- Anywhere, anytime wireless coverage
  - Provides single IEEE 802.11a/b/g/n/ac radio client bridge
  - Offers radio software-selectable configuration of frequency bands
  - Utilizes IEEE 802.3af PoE or local power supply
- Interoperability
  - Meets Wi-Fi Alliance Certification standards, including IEEE 802.11a/b/g/n/ac and WPA2—to help ensure multivendor interoperability
- Supported devices
  - Support Windows-based PCs equipped with Ethernet cards; include point-of-sale devices, scales, network printers, thin clients Mac/Apple machines, Linux/Unix workstations, Ethernet-enabled appliances, medical equipment, manufacturing machinery and/or mix of all the devices listed here
  - Connects RS232 asynchronous terminal devices to the wireless network
- Multiple devices
  - Connects up to 15 Ethernet-enabled devices via a multiport switch

### **Security**

- IEEE 802.1X support
  - Provides user authentication with support for EAP-TLS and PEAP—with choice of Advanced Encryption Standard (AES), Temporal Key Integrity Protocol (TKIP), and Wired Equivalent Privacy (WEP) encryption for protecting wireless traffic between authenticated clients and the access point
- Choice of IEEE, WPA2, WPA, or WEP
  - Secures the data integrity of wireless traffic, using robust AES or TKIP encryption

### **Warranty and support**

- Lifetime Warranty 2.0
  - Advance hardware replacement is offered for as long as you own the product with next-business-day delivery (available in most countries)<sup>1</sup>
- Electronic and telephone support (for Lifetime Warranty 2.0)
  - Limited 24x7 telephone support is provided by HP for the first three years; limited electronic and telephone support during business hours is provided by HP for the complete warranty period; to reach our support centers, visit [hp.com/networking/contact-support](http://hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, visit [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary)
- Software releases
  - To find software for your product, visit [hp.com/networking/support](http://hp.com/networking/support); for details on the software releases available with your product purchase, visit [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary)

<sup>1</sup> HP warranty includes repair or replacement of hardware for as long as you own the product, with next-business-day advance replacement (available in most countries). The disk drives included—with the HP AllianceOne Advanced Services and Services z1 Modules, HP Threat Management Services z1 Module, HP AllianceOne Extended z1 Module with Riverbed Steelhead, HP MSM765 z1 Mobility Controller, and HP Survivable Branch Communication z1 Module powered by Microsoft® Lync—each have a five-year hardware warranty. For details, refer to the software license and hardware warranty statements at [hp.com/networking/warranty](http://hp.com/networking/warranty).

## HP 501 Wireless Client Bridge Series

### Specifications




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#### HP 501 Wireless Client Bridge (J9835A)

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##### I/O ports and slots

1 RJ-45 autosensing 10/100/1000 port; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)  
1 RS-232C serial console port

##### AP characteristics

Radios (built-in)	802.11 a/b/g/n/ac
Radio operation modes	Client bridge
Wi-Fi Alliance Certification	a/b/g/n/ac Wi-Fi Certified
Antenna connector	Three RP-SMA
Antenna	2dBi dual-band omnidirectional
Number of external antennas	3

##### Physical characteristics

	5.5 (w) x 1.3 (d) x 5.0 (h) in (13.97 x 3.3 x 12.7 cm)
Weight	2.01 lb (0.91 kg)

##### Environment

Operating temperature	32°F to 122°F (0°C to 50°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
Shock and vibration	EN 61373
Altitude	10,000 feet (3,048 meters)

##### Electrical characteristics

Description	IEEE 802.3af PoE compliant or 5-15 VDC from available AC power supply
Maximum power rating	9 W
Power Inputs	5 VDC
PoE power	11 W PoE

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**HP 501 Wireless Client Bridge (J9835A)**


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**Frequency band and operating channels**

FCC	2.412 - 2.462 GHz (1 - 11 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 144 channels) 5.745 - 5.825 GHz (149 - 165 channels)
European Union	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 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 - 144 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 - 144 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) 5.550 - 5.700 GHz (100 - 140 channels)
Israel	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.320 GHz (36 - 64 channels)

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<b>Radio</b>	FCC Part 15.247; EN 300 328; FCC Part 15.407; MIC Notice No. 88, App. 43 & 45; EN 301 893; RSS-210
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<b>Safety</b>	UL 2043; UL 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1
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<b>RF Exposure</b>	FCC Bulletin OET-65C; RSS-102; EN 62311
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<b>Features</b>	<p>Single IEEE 802.11a/b/g/n/ac radio for 802.11ac high-throughput applications and IEEE 802.11a/b/g/n for legacy support applications</p> <ul style="list-style-type: none"> <li>• Three spatial streams for up to 1.3 Gb/s PHY rate</li> <li>• Three RP-SMA connectors for a range of antenna options (NOTE: when using outdoor antennas, customer must supply RP-SMA to Type N adapter)</li> <li>• Operates via PoE or local power</li> </ul>
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<b>Emissions</b>	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, VCCI Class B
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**HP 501 Wireless Client Bridge (J9835A)**


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<b>Notes</b>	<p>Maximum transmit power varies by country.</p> <p>Supported data rates</p> <ul style="list-style-type: none"> <li>• 802.11b: 1, 2, 5.5, 11 Mbps</li> <li>• 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>• 802.11n: 6.5 to 450 Mbps (MCS0 to MCS23, 1 to 3 spatial streams)</li> <li>• 802.11ac: 6.5 Mbps to 1.3Gbps (MCS0 to MCS9, 1 to 3 spatial streams)</li> </ul> <p>The HP 501 Wireless Client Bridge EIRP information listed includes the 2dBi dipole antenna that is included. Review the HP documentation to understand the maximum output setting for your client bridge based on your country's regulation.</p> <p>Maximum transmit power varies by country. Regulatory model number: MRLBB-1302</p>
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<b>Services</b>	<p>1-year, 4-hour onsite, 13x5 coverage for hardware (U0EK6E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware (U0EK7E)</p> <p>1-year Support Plus 24 (U0EK8E)</p> <p>1-year, 6 hour Call-To-Repair Onsite for hardware (U0EK9E)</p> <p>1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U0EJ7E)</p> <p>1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U0EJ8E)</p> <p>3-year, 4-hour onsite, 13x5 coverage for hardware (U0EL0E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware (U0EL1E)</p> <p>3-year Support Plus 24 (U0EL2E)</p> <p>3-year, 6 hour Call-To-Repair Onsite for hardware (U0EM2E)</p> <p>3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U0EK0E)</p> <p>3-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U0EK2E)</p> <p>3-year NBD Onsite Proactive Care (U0EL3E)</p> <p>3-year 4 hr/24x7 Proactive Care (U0EM0E)</p> <p>3-year 6hr CTR Proactive Care (U0EM6E)</p> <p>4-year, 4-hour onsite, 13x5 coverage for hardware (U0EL4E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware (U0EL5E)</p> <p>4-year Support Plus 24 (U0EL7E)</p> <p>4-year, 24x7 SW phone support, software updates (U0EJ6E)</p> <p>4-year, 6 hour Call-To-Repair Onsite for hardware (U0EM7E)</p> <p>4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U0EK1E)</p> <p>4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U0EK3E)</p> <p>4-year NBD Onsite Proactive Care (U0EL8E)</p> <p>4-year 4 hr/24x7 Proactive Care (U0EM5E)</p> <p>4-year 6hr CTR Proactive Care (U0EN1E)</p> <p>5-year, 4-hour onsite, 13x5 coverage for hardware (U0EL9E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware (U0EM1E)</p> <p>5-year Support Plus 24 (U0EL9E)</p> <p>5-year, 24x7 SW phone support, software updates (U0EJ9E)</p> <p>5-year, 6 hour Call-To-Repair Onsite for hardware (U0EN0E)</p> <p>5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U0EK4E)</p> <p>5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U0EK5E)</p> <p>5-year NBD Onsite Proactive Care (U0EM4E)</p> <p>5-year 4 hr/24x7 Proactive Care (U0EM8E)</p> <p>5-year 6hr CTR Proactive Care (U0EN2E)</p> <p>Refer to the HP website at <a href="http://hp.com/networking/services">hp.com/networking/services</a> 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.</p>
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**HP 501 Wireless Client Bridge (J9835A)**


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**Radio characteristics****HP 501 Wireless Client Bridge (J9835A)****Note**

This transmit power data is EIRP and includes the dipole antenna that ships with the HP 501 Wireless Client Bridge. The receiver sensitivity also includes the dipole antenna gain.

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**IEEE 802.11ac 5GHz @ 80MHz channel**

Data rate	MCS9 - 1300 Mbps	MCS0 - 97.5Mbps
Receiver sensitivity	-59 dBm	-86 dBm
Transmit power	18 dBm	25 dBm

**IEEE 802.11n 5GHz @ 40MHz channel**

Data rate	MCS23 - 450 Mbps	MCS16 - 45Mbps
Receiver sensitivity	-68 dBm	-90 dBm
Transmit power	20 dBm	25 dBm

**IEEE 802.11n 5GHz @ 20MHz channel**

Data rate	MCS23 - 144.4 Mbps	MCS16 - 14.4 Mbps
Receiver sensitivity	-71 dBm	-93 dBm
Transmit power	20 dBm	23 dBm

**IEEE 802.11n 2.4GHz @ 40MHz channel**

Data rate	MCS23 - 450 Mbps	MCS16 - 14.4Mbps
Receiver sensitivity	-68 dBm	-90 dBm
Transmit power	19 dBm	19 dBm

**IEEE 802.11n 2.4GHz @ 20MHz channel**

Data rate	MCS23 - 144.4 Mbps	MCS16 - 14.4 Mbps
Receiver sensitivity	-71 dBm	-93 dBm
Transmit power	21 dBm	26 dBm

**IEEE 802.11a 5GHz**

Data rate	54 Mbps	6 Mbps
Receiver sensitivity	-75 dBm	-92 dBm
Transmit power	24 dBm	25 dBm

**IEEE 802.11b/g 2.4GHz**

Data rate	54 Mbps	11 Mbps	6 Mbps	1 Mbps
Receiver sensitivity	-75 dBm	-88 dBm	-93 dBm	-96 dBm
Transmit power	24 dBm	26 dBm	26 dBm	26 dBm

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## Standards and Protocols

(applies to all products in series)

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### 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 802.11i Medium Access Control (MAC) Security Enhancements  
IEEE 802.11ac WLAN Enhancements for Very High  
IEEE 802.11d Global Harmonization IEEE 802.11n Dual Band WLAN Enhancements for Higher Throughput  
IEEE 802.11e QoS enhancements  
IEEE 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band Throughput

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## HP 501 Wireless Client Bridge Series accessories

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### Power Supply

HP MSM31x/MSM32x Power Supply (J9405B)  
HP 1-port Power Injector (J9407B)

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### External Antenna

HP Antenna Lightning Arrester (J8996A)  
HP Outdoor Omnidirectional 6dBi at 2.4GHz MIMO 3 Element Antenna (J9719A)  
HP Outdoor Omnidirectional 8dBi at 5GHz MIMO 3 Element Antenna (J9720A)  
HP Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna (J9170A)

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### Learn more at

[hp.com/networking](http://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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