Overview

Model

HP E-M111 Client Bridge US	J9389A
HP E-M111 Client Bridge JP	J9523A

Key features

- Can connect wired device to a wireless network
- Single radio
- IEEE 802.11a/b/g
- Two external antennas
- Indoor enclosure

Introduction

Legacy client devices can be easily integrated into a wireless LAN (WLAN) using the HP E-M111 Client Bridge. The E-M111 Client Bridge can bridge an Ethernet client device running a legacy networking protocol to the WLAN, extending wireless network access to a wide range of DECnet, IPX, AppleTalk, and other devices. An integrated serial to TCP/IP converter enables a TIA-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. Hardware-accelerated encryption provides high performance when using WPA2 (AES), WPA, or WEP security.

Features and benefits

Quality of Service (QoS)

- 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, SpectraLink SVP, DiffServ, VTP/TCP, and Post
  - Wi-Fi MultiMedia (WMM), IEEE 802.11e EDCF, and Service-Aware priority assigned by VSC
  - Maximum VoIP call capacity: 12 active calls on IEEE 802.11a/b/g
- Network management:
  - SNMP v2c, SNMP v3, MIB-II with Traps, and RADIUS Authentication Client MIB (RFC 2618)
  - Embedded HTML management tool with secure access (SSL and VPN)
  - Scheduled configuration and firmware upgrades from central server
  - Diagnostic:
  - Client event log records association, authentication, and DHCP events
  - Packet capture tool for Ethernet and IEEE 802.11 interfaces (PCAP format)
  - Data rate matrix
  - RF management: Automatically selects channel on power-up and continuously improves channel selection based on background interference scan
  - Configurable background rogue scanning
  - Automatically adjusts transmit power to reduce interference

Connectivity

- Auto-MDIX: automatically adjusts for straight-through or crossover cables on all 10/100 ports
- IEEE 802.3af Power over Ethernet (PoE) 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

Overview

Mobility

- Anywhere, anytime wireless coverage:
  - Single IEEE 802.11a/b/g access points
  - Radio software-selectable configuration of frequency bands
  - Self-healing, self-optimizing local mesh extends network availability
  - Wi-Fi Alliance certified for interoperability with all 802.11a/b/g client devices
  - IEEE 802.3af PoE or external power cord on selected models
- Interoperability: Wi-Fi Alliance certifications, including IEEE 802.11g Wi-Fi and WPA2 to help ensure multivendor interoperability
- Virtual Service Communities (VSCs):
  - Up to 16 SSIDs, each with a unique MAC address, and configurable SSID broadcasts
  - Individual security and QoS profiles per VSC
  - Configurable DTIM and minimum data rate per VSC
  - Each VSC mapped to separate IEEE 802.1Q VLANs
  - WMM and/or WMM-PS
  - Security filter
  - IP filter
- AP client access control functions:
  - IEEE 802.1X authentication using EAP-SIM, EAP-FAST, EAP-TLS, EAP-TTLS, and PEAP
  - MAC address authentication using local or RADIUS access lists
  - RADIUS AAA using EAP-MD5, PAP, CHAP, and MS-CHAPv2
  - RADIUS Client (RFC 2865 and 2866) with location-aware support
  - Layer 2 wireless client isolation
- Location flexibility:
  - 100 mW radio and antenna diversity provide excellent range
  - Configurable IEEE 802.11 a/b/g radio with external antenna connectors
  - Plenum rated
  - Centrally manageable as part of the HP Intelligent Mobility system
- Wireless: Maximum bridge clients: 20 client IEEE 802.11a/b/g devices

Security

- Choice of IEEE 802.11i, Wi-Fi Protected Access 2 (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
- Local wireless bridge client traffic filtering: when enabled, prevents communication between wireless devices associated with the same access point
- IEEE 802.1X: 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

Warranty and support

- Warranty: lifetime warranty with the exception of the hard disk which has a 5-year warranty: for as long as you own the product, with next-business-day advance replacement (available in most countries)

HP E-M111 Client Bridge (J9389A)		
Ports	1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	
	1 RS-232C serial console port	
AP characteristics	Radios	Single (a/b/g)
	Radio operation modes	Client bridge
	AP operation modes	Autonomous
	Wi-Fi Alliance Certification	a/b/g Wi-Fi Certified
Physical characteristics	Dimensions	5(d) x 5.5(w) x 1.3(h) in. (12.7 x 13.97 x 3.3 cm)
	Weight	2.0 lb. (0.91 kg)
	Enclosure	Indoor, plenum rated
Environment	Operating temperature	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, non-condensing
	Non-operating/ Storage temperature	-40°F to 176°F (-40°C to 80°C)
	Non-operating/ Storage relative humidity	5% to 95%, non-condensing
	Shock and vibration	EN 61373
Electrical characteristics	Description	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply
	Power consumption	5 W
	Antenna Connector	RP-SMA with diversity
	Antenna	2 dBi dual-band omnidirectional
	Number of external antennas	2
Frequency band and Operating channels	FCC	2.412 – 2.462 GHz (1-11 channels) 5.180 – 5.240 GHz (36-48 channels) 5.745 – 5.825 GHz (149-165 channels)
	EN	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 (excluding 120, 124, and 128) channels)
	RCR	2.412 – 2.472 GHz (1-13 channels) 5.180 – 5.240 GHz (36-48 (excluding 38, 42 & 46) channels) 5.260 – 5.320 GHz (52-64 channels) 5.500 – 5.700 GHz (100-140 (excluding 120, 124, and 128) channels)
Radio	FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)	
Safety	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	
RF Exposure	FCC Bulletin OET-65C; RSS-102; EN 50385	
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	Maximum transmit power varies by country.	

Technical Specifications

Services	3-year, parts only, global next-day advance exchange (UN655E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UN656E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN657E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN658E) 1-year, post-warranty, parts only, global next-day advance exchange (UN659PE) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (UN660PE) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (UN661PE) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN662PE) 3 Yr 6 hr Call-to-Repair Onsite (UW333E) Refer to the HP website at www.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.

Radio characteristics:

	IEEE 802.11a	IEEE 802.11a	IEEE 802.11g	IEEE 802.11g	IEEE 802.11b	IEEE 802.11b
Data rate	6 Mbps	54 Mbps	6 Mbps	54 Mbps	1 Mbps	11 Mbps
Receiver sensitivity	-90 dBm	-72 dBm	-92 dBm	-72 dBm	-90 dBm	-90 dBm
Transmit power	20 dBm	16 dBm	20 dBm	16 dBm	20 dBm	20 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 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band IEEE 802.11i Medium Access Control (MAC) Security Enhancements

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Accessories

HP E-MSM31x and E-MSM32x Power Supply	J9405B
HP E-MSM31x and E-MSM32x Power Supply	J9405A
HP 1-Port Power Injector	J9407A

To learn more, visit www.hp.com/networking