HP ProCurve MultiService Access Point Series

Product overview

HP ProCurve MultiService Mobility Access Points (MSM APs) bring intelligence to the network edge by providing scalable, seamless wireless access anywhere, anytime. Their feature set is abundantly rich, dispensing multiple network services, enforcing robust security, and delivering high-performance client access–unlike “thin” or “lite” access points. An integral component of the HP ProCurve Intelligent Mobility Solution, MSM APs support a plug-and-play automatic configuration and ongoing central control by ProCurve MultiService Mobility Controllers for the highest degree of configurability and ease of management.

Key features

- Single, dual, and tri radio
- IEEE 802.11a/b/g and 802.11n access points
- Self-healing, self-optimizing local mesh

Features and benefits

Industry-leading warranty

Mobility

• **Anywhere, anytime wireless coverage:**
- Single-, dual-, and tri-radio IEEE 802.11a/b/g and 802.11n access points
- Per-radio software-selectable configuration of the 2.4 GHz and 5 GHz frequency bands
- Plenum-rated enclosures for indoor wireless coverage
- Self-healing, self-optimizing local mesh extends network availability to areas without an Ethernet infrastructure
- Wi-Fi Alliance certified for interoperability with all IEEE 802.11a/b/g/n client devices
- IEEE 802.3af Power over Ethernet (PoE) or external power cord on selected models. (The HP ProCurve MSM422 and MSM410 Access Points operate at full-power IEEE 802.11n 3x3 MIMO from a single IEEE 802.3af PoE source.)

Warranty and support

• **ProCurve Lifetime Warranty:** for as long as you own the product, with next-business-day advance replacement (available in most countries).

• **Electronic and telephone support:** limited electronic and telephone support is available from HP. Refer to the HP Web site at www.procurve.com/support for details on the support provided and the period during which support is available.

• **Software releases:** refer to the HP Web site at www.procurve.com/support for details on the software releases provided and the period during which software releases are available.

 For as long as you own the product, with next-business-day advance replacement (available in most countries). The following hardware products and their related series modules have a one-year hardware warranty with extensions available: HP ProCurve Routing Switch 9300m series, HP ProCurve Switch 8100fl series, HP ProCurve Network Access Controller 800, and HP ProCurve DCM Controller. The following hardware mobility products have a one-year hardware warranty with extensions available: HP ProCurve M111 Client Bridge, HP ProCurve MSM3xx-R Access Points, HP ProCurve MSM7xx Mobility and Access Controllers, HP ProCurve RF Manager IDS/IPS Systems, HP ProCurve MSM Power Supplies, HP ProCurve 1 Port Power Injector, and HP ProCurve CNMS Appliances. Disk drives in the HP ProCurve ONE Services zl modules have a five year hardware warranty. Standalone software, upgrades, or licenses may have a different warranty duration. For details, refer to the ProCurve Software License, Warranty, and Support booklet at http://www.procurve.com/warranty.

Specifications

	 **HP ProCurve MSM422 Access Point WW (J9359A)**	 **HP ProCurve MSM410 Access Point WW (J9427A)**	 **HP ProCurve MSM335 Access Point WW (J9357A)**
Ports	1 RJ-45 auto-sensing 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 1 RS-232C DB-9 console port	1 RJ-45 auto-sensing 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 1 RJ-45 serial console port	1 RJ-45 auto-sensing 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 1 RS-232C DB-9 console port
Physical characteristics			
Dimensions	6.7(d) x 8.8(w) x 2.6(h) in. (17.02 x 22.35 x 6.6 cm)	6.16(d) x 5.19(w) x 1.94(h) in. (15.64 x 13.17 x 4.94 cm)	6.7(d) x 8.8(w) x 2.6(h) in. (17.02 x 22.35 x 6.6 cm)
Weight	4.0 lb. (1.81 kg)	3.0 lb. (1.36 kg)	4.0 lb. (1.81 kg)
Enclosure	Indoor, plenum rated	Indoor, plenum rated	Indoor, plenum rated
Environment			
Operating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Non-operating/Storage temperature	-40°F to 176°F (-40°C to 80°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 176°F (-40°C to 80°C)
Non-operating/Storage relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Electrical characteristics			
Description	IEEE 802.3af PoE compliant; IEEE 802.3af PoE injector for Gigabit Ethernet or External power supply available as accessory.	IEEE 802.3af PoE compliant for Gigabit Ethernet	IEEE 802.3af PoE compliant; IEEE 802.3af PoE injector for Gigabit Ethernet or external power supply available as accessory.
Power consumption	12 W	8 W	12 W
Antenna Connector	(3) IEEE 802.11n RP-SMA, (1) IEEE 802.11a/b/g RP-SMA		(3) RP-SMA
Antenna	(2) Integrated, dual-band, omni, (3) IEEE 802.11n fixed 3x3 MIMO, 2 x IEEE 802.11a/b/g (diversity)	(3) Integrated, dual-band 2.4/5 GHz omnidirectional antennas	(3) Integrated, dual-band 2.4/5 GHz omnidirectional or directional patch antennas (per flap)
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. Integrated, dual-band 2.4/5 GHz omnidirectional antennas, - (3) IEEE 802.11n Draft 2.0 (fixed 3x3 MIMO configuration) - Gain: 2.7 dBi @ 2.4 GHz, 6.2 dBi @ 5.25 GHz, 4.5 dBi @ 5.875 GHz	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Frequency band and Operating channels			
FCC (US & Canada)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.484 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)
European Union	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 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)	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)	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	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03
Emissions	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B
RF Exposure			

Specifications (continued)

	HP ProCurve MSM422 Access Point WW (J9359A)	HP ProCurve MSM410 Access Point WW (J9427A)	HP ProCurve MSM335 Access Point WW (J9357A)
	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102
Features	Integrated antennas for both IEEE 802.11a/b/g (diversity) and 802.11n (3x3 MIMO) Accepts external IEEE 802.11a/b/g (non-diversity) and 802.11n (3) antennas Will operate both radios; full power on IEEE 802.3af PoE for Gigabit Ethernet	Features - Integrated antennas for both IEEE 802.11a/b/g (diversity) and 802.11n (3x3 MIMO)	Features - Accepts external IEEE 802.11a/b/g (non-diversity) - Will operate all 3 radios; full power on IEEE 802.3af for Gigabit Ethernet
Notes	IEEE 802.11a, IEEE 802.11g, IEEE 802.11b, WPA-Enterprise, WPA2-Enterprise, WMM, WMM Powersave, EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM*, IEEE 802.11d, IEEE 802.11h IEEE 802.11n Draft 2.0 Capabilities: 3x3 MIMO with 2 spatial streams, Cyclic Shift Diversity (CSD), 20 MHz and Auto 20/40 MHz channels, data rates up to 300 Mbps, Maximal Ratio Combining (MRC), transmit beamforming, Packet aggregation: A-MPDU, A-MS Maximum transmit power varies by country.	Wi-Fi compliance: IEEE 802.11n DRAFT 2.0, IEEE 802.11a, IEEE 802.11g, IEEE 802.11b, WPA-Enterprise, WPA2-Enterprise, WMM, WMM Powersave, EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM*, IEEE 802.11d, IEEE 802.11h IEEE 802.11n Draft 2.0 Capabilities: 3x3 MIMO with 2 spatial streams, Cyclic Shift Diversity (CSD), 20 MHz and Auto 20/40 MHz channels, data rates up to 300 Mbps, Maximal Ratio Combining (MRC), Transmit beamforming, Packet aggregation: A-MPDU, A-MSD Maximum transmit power varies by country.	Wi-Fi compliance: IEEE 802.11a, IEEE 802.11b, IEEE 802.11g WPA and WPA2 Wireless Multimedia (WMM), WMM Powersave EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM** IEEE 802.11d, IEEE 802.11h Maximum transmit power varies by country.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UN667E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN668E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN670E) 3-year, 24x7 SW phone support, software updates (UN669E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN684E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN686E) 3-year, 24x7 SW phone support, software updates (UN685E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN671E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN672E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN674E) 3-year, 24x7 SW phone support, software updates (UN673E) Refer to the HP Web site at www.procurve.com/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.

HP ProCurve MSM422 Access Point WW (J9359A)

Radio characteristics: IEEE 802.11a/b/g + IEEE 802.11a/b/g/n Draft 2.0

Data rate	IEEE 802.11n 20 MHz Channel MCS0/8 Mbps	IEEE 802.11n 20 MHz Channel MCS7/15 Mbps	IEEE 802.11n 40 MHz Channel MCS0/8 Mbps	IEEE 802.11n 40 MHz Channel MCS7/15 Mbps	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-82 dBm	-64 dBm	-79 dBm	-61 dBm	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-94 dBm	-87 dBm
Transmit power	18 dBm	10 dBm	17 dBm	10 dBm	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

HP ProCurve MSM410 Access Point WW (J9427A)

Radio characteristics: IEEE 802.11a/b/g/n Draft 2.0

Data rate	IEEE 802.11n (5GHz) 20 MHz MCS0/MCS8 Mbps	IEEE 802.11n (5GHz) 20 MHz MCS7/MCS1 5 Mbps	IEEE 802.11n (5GHz) 40 MHz MCS0/MCS8 Mbps	IEEE 802.11n (5GHz) 40 MHz MCS7/MCS1 5 Mbps	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11n (2.4GHz) 20 MHz MCS0/MCS8 Mbps	IEEE 802.11n (2.4GHz) 20 MHz MCS7/MCS1 5 Mbps	IEEE 802.11n (2.4GHz) 40 MHz MCS0/MCS8 Mbps	IEEE 802.11n (2.4GHz) 40 MHz MCS7/MCS1 5 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps
Receiver sensitivity	-82 dBm	-64 dBm	-79 dBm	-61 dBm	-87 dBm	-67 dBm	-82 dBm	-64 dBm	-79 dBm	-61 dBm	-87 dBm	-70 dBm
Transmit power	18 dBm	10 dBm	17 dBm	10 dBm	18 dBm	12 dBm	19 dBm	10 dBm	17 dBm	10 dBm	18 dBm	13 dBm

HP ProCurve MSM335 Access Point WW (J9357A)

Radio characteristics: 3 IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-94 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

Specifications (continued)

	HP ProCurve MSM422 Access Point WW (J9359A)	HP ProCurve MSM410 Access Point WW (J9427A)	HP ProCurve MSM335 Access Point WW (J9357A)
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 802.11d Global Harmonization IEEE 802.11g Further Higher Data Rate Extension	in the 2.4 GHz Band IEEE 802.11i Medium Access Control (MAC) Security Enhancements

Specifications (continued)

	HP ProCurve MSM422 Access Point WW (J9359A)	HP ProCurve MSM410 Access Point WW (J9427A)	HP ProCurve MSM335 Access Point WW (J9357A)

HP ProCurve MSM422 Access Point WW (J9359A)

MCS Index	800 nS		400 nS	
	20MHz Rate (Mbps)	40MHz Rate (Mbps)	20MHz Rate (Mbps)	40MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

HP ProCurve MSM410 Access Point WW (J9427A)

MCS Index	800 nS		400 nS	
	20MHz Rate (Mbps)	40MHz Rate (Mbps)	20MHz Rate (Mbps)	40MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

Specifications

	 HP ProCurve MSM325 Access Point WW (J9373A)	 HP ProCurve MSM320 Access Point WW (J9364A)	HP ProCurve MSM310 Access Point WW (J9379A)
Ports	2 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full	2 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full	2 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full
Physical characteristics			
Dimensions	6.52(d) x 6.40(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)	6.52(d) x 6.40(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)	6.52(d) x 6.40(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)
Weight	3.0 lb. (1.36 kg)	3.0 lb. (1.36 kg)	3.0 lb. (1.36 kg)
Enclosure	Indoor, plenum rated	Indoor, plenum rated	Indoor, plenum rated
Environment			
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Non-operating/Storage temperature	-40°F to 176°F (-40°C to 80°C)	-40°F to 176°F (-40°C to 80°C)	-40°F to 176°F (-40°C to 80°C)
Non-operating/Storage relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Electrical characteristics			
Description	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply	IEEE 802.3af PoE compliant or 5 VDC form available AC power supply
Power consumption	8.6 W	8.6 W	6.5 W
Antenna Connector	(4) RP-SMA with diversity	(4) RP-SMA with diversity	(2) RP-SMA with diversity
Antenna	(4) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas	(4) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas	(2) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas;
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Frequency band and Operating channels			
FCC (US & Canada)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.472 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)
European Union	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 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)	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)	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; IEC 60950; EN 60950-1; CSA 22.2 No. 950-95; CAN/CSA-C22.2 No. 60950-1-03; EN 60601-1-2	UL 2043; UL 60950; IEC 60950; EN 60950-1; CSA 22.2 No. 950-95; CAN/CSA-C22.2 No. 60950-1-03; EN 60601-1-2	UL 2043; UL 60950; IEC 60950; EN 60950-1; CSA 22.2 No. 950-95; CAN/CSA-C22.2 No. 60950-1-03; EN 60601-1-2
Emissions	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B
RF Exposure			
	FCC Bulletin OET-65C; RSS-102; EN 50385	FCC Bulletin OET-65C; RSS-102; EN 50385	FCC Bulletin OET-65C; RSS-102; EN 50385
Features			
	Integrated security sensor - Integrated security sensor for use with the HP ProCurve RF Manager IDS/IPS system	Dual radio External antenna	
Notes	Maximum transmit power varies by country.	Maximum transmit power varies by country.	Maximum transmit power varies by country.

Specifications (continued)

	HP ProCurve MSM325 Access Point WW (J9373A)	HP ProCurve MSM320 Access Point WW (J9364A)	HP ProCurve MSM310 Access Point WW (J9379A)
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UN679E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN680E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN682E) 3-year, 24x7 SW phone support, software updates (UN681E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN684E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN686E) 3-year, 24x7 SW phone support, software updates (UN685E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN687E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN688E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN690E) 3-year, 24x7 SW phone support, software updates (UN689E) Refer to the HP Web site at www.procurve.com/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.

HP ProCurve MSM325 Access Point WW (J9373A)

Radio characteristics: Dual IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-87 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

HP ProCurve MSM320 Access Point WW (J9364A)

Radio characteristics: Dual IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-87 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

HP ProCurve MSM310 Access Point WW (J9379A)

Radio characteristics: IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-87 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 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 802.11d Global Harmonization
IEEE 802.11g Further Higher Data Rate Extension
in the 2.4 GHz Band
IEEE 802.11i Medium Access Control (MAC) Security Enhancements

HP ProCurve MultiService Access Point Series

Specifications

	 HP ProCurve MSM422 Access Point US (J9358A)	 HP ProCurve MSM410 Access Point US (J9426A)	 HP ProCurve MSM335 Access Point US (J9356A)
Ports	1 RJ-45 auto-sensing 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 1 RS-232C DB-9 console port	1 RJ-45 auto-sensing 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 1 RJ-45 serial console port	1 RJ-45 auto-sensing 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 1 RS-232C DB-9 console port
Physical characteristics			
Dimensions	6.7(d) x 8.8(w) x 2.6(h) in. (17.02 x 22.35 x 6.6 cm)	6.16(d) x 5.19(w) x 1.94(h) in. (15.64 x 13.17 x 4.94 cm)	6.7(d) x 8.8(w) x 2.6(h) in. (17.02 x 22.35 x 6.6 cm)
Weight	4.0 lb. (1.81 kg)	3.0 lb. (1.36 kg)	4.0 lb. (1.81 kg)
Enclosure	Indoor, plenum rated	Indoor, plenum rated	Indoor, plenum rated
Environment			
Operating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Non-operating/Storage temperature	-40°F to 176°F (-40°C to 80°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 176°F (-40°C to 80°C)
Non-operating/Storage relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Electrical characteristics			
Description	IEEE 802.3af PoE compliant; IEEE 802.3af PoE for Gigabit Ethernet or external power supply available as accessory.	IEEE 802.3af PoE compliant for Gigabit Ethernet	IEEE 802.3af PoE compliant; IEEE 802.3af PoE for Gigabit Ethernet or External power supply available as accessory
Power consumption	12 W	8 W	12 W
Antenna Connector	(3) IEEE 802.11n RP-SMA, 1 IEEE 802.11a/b/g RP-SMA		(3) RP-SMA
Antenna	Integrated, dual-band, omnidirectional, 3 x IEEE 802.11n fixed 3x3 MIMO, 2 x 802.11a/b/g (diversity)	(3) Integrated, dual-band 2.4/5 GHz omnidirectional antennas	(3) Integrated, dual-band 2.4/5 GHz omnidirectional or directional patch antennas (per flap)
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. Integrated, dual-band 2.4/5 GHz omnidirectional antennas, - (3) IEEE 802.11n Draft 2.0 (fixed 3x3 MIMO configuration) - Gain: 2.7 dBi @ 2.4 GHz, 6.2 dBi @ 5.25 GHz, 4.5 dBi @ 5.875 GHz	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Frequency band and Operating channels			
FCC (US & Canada)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)
European Union	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 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)	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)	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	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03
Emissions	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B
RF Exposure			
	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102
Features			

Specifications (continued)

	HP ProCurve MSM422 Access Point US (J9358A)	HP ProCurve MSM410 Access Point US (J9426A)	HP ProCurve MSM335 Access Point US (J9356A)
	Dual radio–IEEE 802.11n for high-throughput applications and IEEE 802.11a/b/g for legacy support Integrated antennas for both IEEE 802.11a/b/g (diversity) and 802.11n (3x3 MIMO) Accepts external IEEE 802.11a/b/g (non-diversity) and 802.11n (3) antennas Will operate both radios; full power on IEEE 802.3af PoE for Gigabit Ethernet		Integrated security sensor - Integrated security sensor for use with the HP ProCurve RF Manager IDS/IPS system
Notes	Wi-Fi compliance: IEEE 802.11n DRAFT 2.0, IEEE 802.11a, IEEE 802.11g, IEEE 802.11b, WPA-Enterprise, WPA2-Enterprise, WMM, WMM Powersave, EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM*, IEEE 802.11d, IEEE 802.11h IEEE 802.11n Draft 2.0 Capabilities: 3x3 MIMO with 2 spatial streams, Cyclic Shift Diversity (CSD), 20 MHz and Auto 20/40 MHz channels, data rates up to 300 Mbps, Maximal Ratio Combining (MRC), transmit beamforming, Packet aggregation: A-MPDU, A-MSD Maximum transmit power varies by country.	Wi-Fi compliance: IEEE 802.11n DRAFT 2.0, IEEE 802.11a, IEEE 802.11g, IEEE 802.11b, WPA-Enterprise, WPA2-Enterprise, WMM, WMM Powersave, EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM*, IEEE 802.11d, IEEE 802.11h IEEE 802.11n Draft 2.0 Capabilities: 3x3 MIMO with 2 spatial streams, Cyclic Shift Diversity (CSD), 20 MHz and Auto 20/40 MHz channels, data rates up to 300 Mbps, Maximal Ratio Combining (MRC), transmit beamforming, Packet aggregation: A-MPDU, A-MSD Maximum transmit power varies by country.	Wi-Fi compliance: IEEE 802.11a, IEEE 802.11b, IEEE 802.11g WPA and WPA2 Wireless Multimedia (WMM), WMM Powersave EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM** IEEE 802.11d, IEEE 802.11h Maximum transmit power varies by country.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UN667E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN668E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN670E) 3-year, 24x7 SW phone support, software updates (UN669E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN684E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN686E) 3-year, 24x7 SW phone support, software updates (UN685E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN671E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN672E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN674E) 3-year, 24x7 SW phone support, software updates (UN673E) Refer to the HP Web site at www.procurve.com/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.

HP ProCurve MSM422 Access Point US (J9358A)

Radio characteristics: IEEE 802.11a/b/g + 802.11a/b/g/n Draft 2.0

Data rate	IEEE 802.11n 20 MHz Channel MCS0/8 Mbps	IEEE 802.11n 20 MHz Channel MCS7/15 Mbps	IEEE 802.11n 40 MHz Channel MCS0/8 Mbps	IEEE 802.11n 40 MHz Channel MCS7/15 Mbps	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-82 dBm	-64 dBm	-79 dBm	-61 dBm	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-94 dBm	-87 dBm
Transmit power	18 dBm	10 dBm	17 dBm	10 dBm	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

HP ProCurve MSM410 Access Point US (J9426A)

Radio characteristics: IEEE 802.11a/b/g/n Draft 2.0

Data rate	IEEE 802.11n (5GHz) 20 MHz MCS0/MCS8 Mbps	IEEE 802.11n (5GHz) 20 MHz MCS7/MCS1 5 Mbps	IEEE 802.11n (5GHz) 40 MHz MCS0/MCS8 Mbps	IEEE 802.11n (5GHz) 40 MHz MCS7/MCS1 5 Mbps	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11n (2.4GHz) 20 MHz MCS0/MCS8 Mbps	IEEE 802.11n (2.4GHz) 20 MHz MCS7/MCS1 5 Mbps	IEEE 802.11n (2.4GHz) 40 MHz MCS0/MCS8 Mbps	IEEE 802.11n (2.4GHz) 40 MHz MCS7/MCS1 5 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps
Receiver sensitivity	-82 dBm	-64 dBm	-79 dBm	-61 dBm	-87 dBm	-67 dBm	-82 dBm	-64 dBm	-79 dBm	-61 dBm	-87 dBm	-70 dBm
Transmit power	18 dBm	10 dBm	17 dBm	10 dBm	18 dBm	12 dBm	19 dBm	10 dBm	17 dBm	10 dBm	18 dBm	13 dBm

HP ProCurve MSM335 Access Point US (J9356A)

Radio characteristics: 3 IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-94 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

Specifications (continued)

	HP ProCurve MSM422 Access Point US (J9358A)	HP ProCurve MSM410 Access Point US (J9426A)	HP ProCurve MSM335 Access Point US (J9356A)
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 802.11d Global Harmonization IEEE 802.11g Further Higher Data Rate Extension	in the 2.4 GHz Band IEEE 802.11i Medium Access Control (MAC) Security Enhancements

Specifications (continued)

	HP ProCurve MSM422 Access Point US (J9358A)	HP ProCurve MSM410 Access Point US (J9426A)	HP ProCurve MSM335 Access Point US (J9356A)

HP ProCurve MSM422 Access Point US (J9358A)

MCS Index	800 nS		400 nS	
	20MHz Rate (Mbps)	40MHz Rate (Mbps)	20MHz Rate (Mbps)	40MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

HP ProCurve MSM410 Access Point US (J9426A)

MCS Index	800 nS		400 nS	
	20MHz Rate (Mbps)	40MHz Rate (Mbps)	20MHz Rate (Mbps)	40MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

Specifications

	 HP ProCurve MSM325 Access Point US (J9369A)	 HP ProCurve MSM320 Access Point US (J9360A)	HP ProCurve MSM310 Access Point US (J9374A)
Ports	2 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full	2 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full	2 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full
Physical characteristics			
Dimensions	6.52(d) x 6.40(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)	6.52(d) x 6.4(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)	6.52(d) x 6.4(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)
Weight	3.0 lb. (1.36 kg)	3.0 lb. (1.36 kg)	3.0 lb. (1.36 kg)
Enclosure	Indoor, plenum rated	Indoor, plenum rated	Indoor, plenum rated
Environment			
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Non-operating/Storage temperature	-40°F to 176°F (-40°C to 80°C)	-40°F to 176°F (-40°C to 80°C)	-40°F to 176°F (-40°C to 80°C)
Non-operating/Storage relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing	5% to 95%, non-condensing
Electrical characteristics			
Description	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply
Power consumption	8.6 W	8.6 W	6.5 W
Antenna Connector	(4) RP-SMA with diversity	(4) RP-SMA with diversity	(2) RP-SMA with diversity
Antenna	(4) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas	(4) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas	(2) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas;
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Frequency band and Operating channels			
FCC (US & Canada)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	2.412 - 2.472 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)
European Union	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels)	2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.240 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 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)	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)	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; IEC 60950-1; EN 60950-1; EN 60601-1-2	UL 2043; IEC 60950-1; EN 60950-1; EN 60601-1-2	UL 2043; IEC 60950-1; EN 60950-1; EN 60601-1-2
Emissions	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B
RF Exposure	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102
Features			
Notes	Maximum transmit power varies by country.	Maximum transmit power varies by country.	Maximum transmit power varies by country.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UN679E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN680E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN682E) 3-year, 24x7 SW phone support, software updates (UN681E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN684E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN686E) 3-year, 24x7 SW phone support, software updates (UN685E) Refer to the HP Web site at www.procurve.com/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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UN687E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN688E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN690E) 3-year, 24x7 SW phone support, software updates (UN689E) Refer to the HP Web site at www.procurve.com/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.

Specifications (continued)

	HP ProCurve MSM325 Access Point US (J9369A)	HP ProCurve MSM320 Access Point US (J9360A)	HP ProCurve MSM310 Access Point US (J9374A)

HP ProCurve MSM325 Access Point US (J9369A)

Radio characteristics: Dual IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-87 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

HP ProCurve MSM320 Access Point US (J9360A)

Radio characteristics: Dual IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-87 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 dBm

HP ProCurve MSM310 Access Point US (J9374A)

Radio characteristics: IEEE 802.11a/b/g

Data rate	IEEE 802.11a 6 Mbps	IEEE 802.11a 54 Mbps	IEEE 802.11g 6 Mbps	IEEE 802.11g 54 Mbps	IEEE 802.11b 1 Mbps	IEEE 802.11b 11 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-87 dBm	-70 dBm	-87 dBm	-87 dBm
Transmit power	18 dBm	12 dBm	18 dBm	13 dBm	18.5 dBm	18.5 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 802.11d Global Harmonization
IEEE 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band
IEEE 802.11i Medium Access Control (MAC) Security Enhancements

HP ProCurve MultiService Access Point Series accessories

HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM335 and MSM422 Power Supply (J9406A)
HP ProCurve 1-Port Power Injector (J9407A)

HP ProCurve MSM422 Access Point WW (J9359A)

HP ProCurve MSM335 and MSM422 Power Supply (J9406A)

HP ProCurve MSM335 Access Point WW (J9357A)

HP ProCurve MSM335 and MSM422 Power Supply (J9406A)

HP ProCurve MSM325 Access Point WW (J9373A)

HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM310/MSM320 AP Mounting Bracket (J9403A)

HP ProCurve MSM320 Access Point WW (J9364A)

HP ProCurve MSM320 RF sensor license (J9384A)
HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM310/MSM320 AP Mounting Bracket (J9403A)

HP ProCurve MSM310 Access Point WW (J9379A)

HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM310/MSM320 AP Mounting Bracket (J9403A)

HP ProCurve MSM422 Access Point US (J9358A)

HP ProCurve MSM335 and MSM422 Power Supply (J9406A)

HP ProCurve MSM335 Access Point US (J9356A)

HP ProCurve MSM335 and MSM422 Power Supply (J9406A)

HP ProCurve MSM325 Access Point US (J9369A)

HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM310/MSM320 AP Mounting Bracket (J9403A)

HP ProCurve MSM320 Access Point US (J9360A)

HP ProCurve MSM320 RF sensor license (J9384A)
HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM310/MSM320 AP Mounting Bracket (J9403A)

HP ProCurve MSM310 Access Point US (J9374A)

HP ProCurve MSM31x and MSM32x Power Supply (J9405A)
HP ProCurve MSM310/MSM320 AP Mounting Bracket (J9403A)

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