

Cisco Aironet 1815w Access Point

With a sleek design and small form factor, the Cisco Aironet 1815w Access Point brings a full slate of Cisco high-performance functionality to multiple-dwelling-unit deployments.

Product Overview

The Cisco® Aironet® 1815w Access Point (Figure 1) offers a compact, wall plate mountable access point, ideal for hospitality, cruise ships, residential halls, or other multiple-dwelling-unit deployments.

Packing 802.11ac Wave 2 wireless standards support and Gigabit Ethernet wired connectivity into a sleek device, the 1815w is built to take full advantage of existing cabling infrastructure while blending into the visual footprint. This combination provides best-in-class performance while reducing total cost of ownership.

Figure 1. Cisco Aironet 1815w Access Point

Features and Benefits

By adhering to the 802.11ac Wave 2 standard, the 1815w provides a data rate of up to 867 Mbps on its 5-GHz radio. This exceeds the data rates offered by access points that support the 802.11n standard. It also enables a total aggregate dual-radio data rate of up to 1 Gbps. This provides the necessary foundation for enterprise and service provider networks to stay ahead of the performance expectations and needs of their wireless users.

In recent years corporate users have increasingly preferred wireless access as their form of network connectivity, due to the simplicity of deployment and the ability to support mobile, on-the-go activities, but should enable a high-performance experience while allowing users to move about freely. The 1815w delivers industry-leading performance with highly secure and reliable wireless connections that provide a robust, mobile end-user experience.



Item	Specification								
Ethernet ports	Authentication with 802.1X or MAC filtered Dynamic VLAN or per port Traffic locally switched or tunneled back to wireless LAN controller								
Bluetooth (future Availability)	Integrated Bluetooth 4.1 (including BLE) radio Maximum transmit power: 4 dBm Antenna gain: 2 dBi								
Data rates supported	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps								
	802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps								
	802.11n data rates on 2.4 GHz:								
	MCS Index ¹	GI ² = 800 ns			GI = 400 ns				
		20-MHz Rate (Mbps)			20-MHz Rate (Mbps)				
	0	6.5			7.2				
	1	13			14.4				
	2	19.5			21.7				
	3	26			28.9				
	4	39			43.3				
	5	52			57.8				
	6	58.5			65				
	7	65			72.2				
	8	13			14.4				
	9	26			28.9				
	10	39			43.3				
	11	52			57.8				
	12	78			86.7				
	13	104			115.6				
	14	117			130				
	15	130			144.4				
		802.11ac data rates on 5 GHz:							
		MCS Index	Spatial Streams	GI = 800 ns			GI = 400 ns		
				20-MHz Rate (Mbps)	40-MHz Rate (Mbps)	80-MHz Rate (Mbps)	20-MHz Rate (Mbps)	40-MHz Rate (Mbps)	80-MHz Rate (Mbps)
		0	1	6.5	13.5	29.3	7.2	15	32.5
		1	1	13	27	58.5	14.4	30	65
		2	1	19.5	40.5	87.8	21.7	45	97.5
3		1	26	54	117	28.9	60	130	
4		1	39	81	175.5	43.3	90	195	
5		1	52	108	234	57.8	120	260	
6		1	58.5	121.5	263.3	65	135	292.5	
7		1	65	135	292.5	72.2	150	325	
8		1	78	162	351	86.7	180	390	
9		1		180	390		200	433.3	
0		2	13	27	58.5	14.4	30	65	
1		2	26	54	117	28.9	60	130	

Item	Specification							
	2	2	39	81	175.5	43.3	90	195
	3	2	52	108	234	57.8	120	260
	4	2	78	162	351	86.7	180	390
	5	2	104	216	468	115.6	240	520
	6	2	117	243	526.5	130	270	585
	7	2	130	270	585	144.4	300	650
	8	2	156	324	702	173.3	360	780
	9	2		360	780		400	866.7
	Maximum number of non-overlapping channels	A (A regulatory domain): 2.412 to 2.462 GHz; 11 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) 5.745 to 5.825 GHz; 5 channels				K (K regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.620 GHz; 7 channels 5.745 to 5.805 GHz; 4 channels		
B (B regulatory domain): 2.412 to 2.462 GHz; 11 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.720 GHz; 12 channels 5.745 to 5.825 GHz; 5 channels				N (N regulatory domain): 2.412 to 2.462 GHz; 11 channels 5.180 to 5.320 GHz; 8 channels 5.745 to 5.825 GHz; 5 channels				
	C (C regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.745 to 5.825 GHz; 5 channels				Q (Q regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.700 GHz; 11 channels			
	D (D regulatory domain): 2.412 to 2.462 GHz; 11 channels 5.180 to 5.320 GHz; 8 channels 5.745 to 5.825 GHz; 5 channels				R (R regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 5.660 to 5.700 GHz; 3 channels 5.745 to 5.805 GHz; 4 channels			
	E (E regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)				S (S regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.700 GHz; 11 channels 5.745 to 5.825 GHz; 5 channels			
	F (F regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.745 to 5.805 GHz; 4 channels				T (T regulatory domain): 2.412 to 2.462 GHz; 11 channels 5.280 to 5.320 GHz; 3 channels 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) 5.745 to 5.825 GHz; 5 channels			
	G (G regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.745 to 5.865 GHz; 7 channels				Z (Z regulatory domain): 2.412 to 2.462 GHz; 11 channels 5.180 to 5.320 GHz; 8 channels 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) 5.745 to 5.825 GHz; 5 channels			
	H (H regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 5.745 to 5.825 GHz; 5 channels							
	I (I regulatory domain): 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels							
Note: This varies by regulatory domain. Refer to the product documentation for specific details for each regulatory domain.								

Item	Specification	
Available transmit power settings	2.4 GHz	5 GHz
	20 dBm (100 mW) 17 dBm (50 mW) 14 dBm (25 mW) 11 dBm (12.5 mW) 8 dBm (6.25 mW) 5 dBm (3.13 mW) 2 dBm (1.56 mW) -1 dBm (0.78 mW)	20 dBm (100 mW) 17 dBm (50 mW) 14 dBm (25 mW) 11 dBm (12.5 mW) 8 dBm (6.25 mW) 5 dBm (3.13 mW) 2 dBm (1.56 mW) -1 dBm (0.78 mW)
Note: The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details.		
Integrated antennas	2.4 GHz, gain 2 dBi 5 GHz, gain 3 dBi	
Interfaces	1 x 10/100/1000BASE-T autosensing (RJ-45), Power over Ethernet (PoE) Management console port (4-pin connector) Three 10/100/1000BASE-T ports (local Ethernet ports), including one PoE out port: <ul style="list-style-type: none"> PoE out provides 802.3af (class 0) when access point is powered by 802.3at, or no output when powered by 802.3af One passive pass-through port RJ-45 (back to bottom)	
Indicators	Status LED indicates boot loader status, association status, operating status, boot loader warnings, boot loader errors	
Dimensions (W x L x H)	Access point (without mounting bracket): 3.5 x 5.5 x 1.25 in (89 x 140 x 31.5 mm)	
Weight	Access point without mounting bracket or any other accessories: 10 oz (280 g)	
Environmental	Operating <ul style="list-style-type: none"> Temperature: 32° to 104°F (0° to 40°C) Humidity: 10% to 90% (non-condensing) Max. altitude: 9843 ft (3,000 m) @ 40°C Non-operating (storage and transportation) <ul style="list-style-type: none"> Temperature: -22° to 158°F (-30° to 70°C) Humidity: 10% to 90% (non-condensing) Max. altitude: 15,000 ft (4,500 m) @ 25°C 	
System	1 GB DRAM 256 MB flash 710 MHz quad-core	
Powering options	802.3af/at Ethernet switch Optional Cisco power injectors (AIR-PWRINJ5=, AIR-PWRINJ6=)	
Power draw	8.5W (maximum, without PoE out) 0 0 1 206.54 236.48 Tm0 g[205-BDC q192.14 231.92 374.56 13.98 reW*nBT/F1	

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Item	Specification
	<p>Radio approvals:</p> <ul style="list-style-type: none"> ◦ FCC Part 15.247, 15.407 ◦ RSS-247 (Canada) ◦ EN 300.328, EN 301.893 (Europe) ◦ ARIB-STD 66 (Japan) ◦ ARIB-STD T71 (Japan) ◦ EMI and susceptibility (Class B) ◦ FCC Part 15.107 and 15.109 ◦ ICES-003 (Canada) ◦ VCCI (Japan) ◦ EN 301.489-1 and -17 (Europe) ◦ EN 50385 <p>IEEE standards:</p> <ul style="list-style-type: none"> ◦ IEEE 802.11a/b/g, 802.11n, 802.11h, 802.11d ◦ IEEE 802.11ac <p>Security:</p> <ul style="list-style-type: none"> ◦ 802.11i, WPA2, WPA ◦ 802.1X ◦ AES <p>Extensible Authentication Protocol (EAP) types:</p> <ul style="list-style-type: none"> ◦ EAP-Transport Layer Security (TLS) ◦ EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) ◦ Protected EAP (PEAP) v0 or EAP-MSCHAPv2 ◦ EAP-Flexible Authentication via Secure Tunneling (FAST) ◦ PEAP v1 or EAP-Generic Token Card (GTC) ◦ EAP-Subscriber Identity Module (SIM) <p>Multimedia:</p> <ul style="list-style-type: none"> ◦ Wi-Fi Multimedia (WMM) <p>Other:</p> <ul style="list-style-type: none"> ◦ FCC Bulletin OET-65C ◦ RSS-102

¹ MCS Index: The Modulation and Coding Scheme (MCS) index determines the number of spatial streams, the modulation, and the coding rate and data rate values.

² A guard interval (GI) between symbols helps receivers overcome the effects of multipath delay spreads.

Table 2. RF Specifications

Transmit Power and Receive Sensitivity (1815w)					
	Spatial Streams	2.4-GHz Radio		5-GHz Radio	
		Total TX Power (dBm)	RX Sensitivity (dBm)	Total TX Power (dBm)	RX Sensitivity (dBm)
802.11/11b					

1 Mbp30-BDC 494.9 212 6

Transmit Power and Receive Sensitivity (1815w)					
MSC7	1	20	-75	16	-75
MSC8	2	20	-90	20	-90
MSC12	2	20	-80	18	-79
MSC15	2	20	-72	16	-72
802.11n HT40					
MSC0	1			20	-90
MSC4	1			18	-79
MSC7	1			16	-72
MSC8	2			20	-87
MSC12	2			18	-76
MSC15	2			16	-69
802.11ac VHT20					
MSC0	1			20	-93
MSC4	1			18	-82
MSC7	1			16	-75
MSC8	1			15	-71
MSC0	2			20	-90
MSC4	2			18	-79
MSC7	2			16	-72
MSC8	2			15	-68
802.11ac VHT40					
MSC0	1			20	-90
MSC4	1			18	-79
MSC7	1			16	-72
MSC8	1			15	-68
MSC9	1			15	-66
MSC0	2			20	-87
MSC4	2			18	-76
MSC7	2			16	-69
MSC8	2			15	-65
MSC9	2			15	-63
802.11ac VHT80					
MSC0	1			20	-87
MSC4	1			18	-77
MSC7	1			16	-69
MSC8	1			15	-65
MSC9	1			15	-63
MSC0	2			20	-84
MSC4	2			18	-74
MSC7	2			16	-66
MSC8	2			15	-62
MSC9	2			15	-60
Note: The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details.					

Ordering Information

Table 3 provides ordering information for the Cisco Aironet 1815w Access Point. To place an order, visit the [Cisco Ordering Home Page](#). To download software, visit the [Cisco Software Center](#).

Table 3. Ordering Information

Product Name	Part Number
Cisco Aironet 1815w	<p>AIR-AP1815w-x-K9: Dual-band, controller-based 802.11a/g/n/ac, Wave 2</p> <p>AIR-AP1815w-x-K9C: Dual-band 802.11a/g/n/ac Wave 2 with default software Mobility Express</p> <ul style="list-style-type: none">◦ Regulatory domains: (x = regulatory domain)◦ For Mobility Express, part number AIR-AP1815w-x-K9C offers default software option Mobility Express <p>Customers are responsible for verifying approval for use in their individual countries. To verify approval that corresponds to a particular country or the regulatory domain used in a specific country, visit https://www.cisco.com/go/aironet/compliance.</p> <p>Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.</p>

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For more details, visit: <https://www.cisco.com/c/en/us/products/wireless/service-listing.html>.

Warranty Information

The Cisco Aironet 1815w Access Point comes with a Limited Lifetime Warranty that provides full warranty coverage of the hardware for as long as the original end user continues to own or use the product. The warranty includes 10-day advance hardware replacement and ensures that software media is defect-free for 90 days. For more details, visit: <https://www.cisco.com/go/warranty>.

Find warranty information on Cisco.com at the [Product Warranties](#) page.

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