

Cisco Aironet 1850 Series Access Points



Product Overview

Ideal for small and medium-sized networks, the Cisco[®] Aironet[®] 1850 Series delivers industry-leading performance for enterprise and service provider markets via enterprise-class 4x4 MIMO, four-spatial-stream access points that support the IEEE's new 802.11ac Wave 2 specification. The Aironet 1850 Series extends support to a new generation of Wi-Fi clients, such as smartphones, tablets, and high-performance laptops that have integrated 802.11ac Wave 1 or Wave 2 support.

Features and Benefits

With 802.11ac Wave 2, the Aironet 1850 Series provides a data rate of up to 1.7 Gbps on the 5-GHz radio, more than triple the rates offered by today's high-end 802.11n access points. It also enables a total aggregate dual-radio data rate of 2.0 Gbps, providing the necessary foundation for enterprise and service provider networks to stay ahead of the performance and bandwidth expectations and needs of their wireless users.

Due to its convenience, wireless access is increasingly the preferred form of network connectivity for corporate users. Along with this shift, there is an expectation that wireless should not slow down users' day-to-day work, but should enable a high-performance experience while allowing users to move freely. The 1850 Series delivers industry-leading performance for highly secure and reliable wireless connections and provides a robust mobility experience that includes:

- 802.11ac Wave 2 with 4x4 multiple-input multiple-output (MIMO) technology with four spatial streams when operating in single-user MIMO mode and three spatial streams while operating in multiuser MIMO mode, offering 1.7-Gbps rates for more capacity and reliability than competing access points.
- Multiuser MIMO, allowing transmission of data to multiple 802.11ac Wave 2 capable clients simultaneously
 to improve client experience. Prior to multiuser MIMO, 802.11n and 802.11ac Wave 1 access points could
 transmit data to only one client at a time, typically referred to as single-user MIMO.
- Transmit beamforming technology to improve downlink performance to mobile devices, including one-, two-, and three-spatial-stream devices on 802.11ac, while improving battery life on mobile devices such as smartphones and tablets.

• Flexible deployment mode through the Cisco Mobility Express Solution is ideal for small to medium-sized deployments that that require 25 or fewer access points. Easy setup allows the 1850 Series to be deployed on networks without a physical controller.

All of these features help ensure the best possible end-user experience on the wireless network. Cisco also offers the industry's broadest selection of 802.11n and 802.11ac antennas, delivering optimal coverage for a variety of deployment scenarios.

Product Specifications

Table 1. Product Specifications

Feature	Specifications							
Software		Network Software Relea		controllers:				
		r the Cisco Aironet 1850						
Deployment modes	Centralized local, Stan	dalone [*] , Sniffer, Cisco Flo	exConnect [™] **,Monitor**,C	officeExtend**,Mesh**				
Supported wireless LAN controllers	Module 2 (WiSM2) Series Wireless Co	Wireless Controllers, Cis for Catalyst [®] 6500 Series introllers, Cisco 8500 Se introllers, Cisco Catalyst ress	s Switches, Cisco 5500 S eries Wireless Controllers	Series Wireless Controller s, Cisco Virtual Wireless (rs, Cisco Flex [®] 7500 Controller ^{**} , Cisco 5760			
802.11n version 2.0 (and related) capabilities	 Maximal ratio comb 20- and 40-MHz ch PHY data rates up Packet aggregation 802.11 dynamic free 	 4x4 MIMO with four spatial streams Maximal ratio combining (MRC) 20- and 40-MHz channels PHY data rates up to 600 Mbps (40 MHz with 5 GHz) Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) 802.11 dynamic frequency selection (DFS) Cyclic shift diversity (CSD) support 						
802.11ac Wave 1 and 2 capabilities	 4x4 MIMO with three MRC 802.11ac beamforn 20-, 40-, and 80-MI PHY data rates up 	 802.11ac beamforming (transmit beamforming) 20-, 40-, and 80-MHz channels PHY data rates up to 1.7 Gbps (80 MHz in 5 GHz) Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) 802.11 DFS 						
Data rates supported	802.11a: 6, 9, 12, 18, 2	24, 36, 48, and 54 Mbps						
	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps							
	802.11n data rates on 2.4 GHz (only 20 MHz and MCS 0 to MCS 23) and 5 GHz:							
	MCS Index ¹	GI ² = 800 ns	GI = 800 ns	GI = 400 ns	GI = 400 ns			
		20-MHz Rate (Mbps)	40-MHz Rate (Mbps)	20-MHz Rate (Mbps)	40-MHz 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			

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

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

eature	Specifications									
ata rates supported	MCS Index ³		GI ⁴ =	800 ns	GI = 800	ns	GI = 400 ns		GI = 4	00 ns
			20-M	Hz Rate (Mbps)	40-MHz	Rate (Mbps)	20-MHz Rate (Mbps)		40-MHz Rate (Mbps)	
	7	65			135		72.2		150	
	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	2 78			162		86.7		180	
			104	104			115.6		240	
	14		117		243		130		270	
	15		130		270		144.4		300	
	16		19.5		40.5		21.7		45	
	17		39		81		43.3		90	
	18		58.5		121.5		65		135	
	19		78				86.7		180	
	20		117		243		130		270	
	21	156			324		173.3		360	
	22	175.		<u> </u>	364.5		195		405	
	23	195		405			216.7		450	
	24	26			54		28.9		60	
	25	52		108			57.8		120	
	26	78			162		86.7		180	
	27	10		104			115.6		240	
	28	156			324		173.3		360	
	29		208		432		231.1		480	
	30		234	234			260		540	
	31		260				288.9		600	
	802.11ac da	ta rates (5	GHz):							
	MCS Index	Spatial Streams	i	GI = 800 ns			GI = 400 ns			
				Rate	40-MHz Rate (Mbps)	80-MHz Rate (Mbps)	20-MHz Rate (Mbps)	40-MH (Mbps	z Rate)	80-MHz Rat (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

³ MCS Index: The Modulation and Coding Scheme (MCS) index determines the number of spatial streams, the modulation, the coding rate, and data rate values.

⁴ GI: A guard interval (GI) between symbols helps receivers overcome the effects of multipath delay spreads.

Feature	Specificat	tions						
	MCS Index	Spatial Streams	GI = 800 ns	5		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)
	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
	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
	0	3	19.5	40.5	87.8	21.7	45	97.5
	1	3	39	81	175.5	43.3	90	195
	2	3	58.5	121.5	263.3	65	135	292.5
	3	3	78	162	351	86.7	180	390
	4	3	117	243	526.5	130	270	585
	5	3	156	324	702	173.3	360	780
	6	3	175.5	364.5	-	195	405	-
	7	3	195	405	877.5	216.7	450	975
	8	3	234	486	1053	260	540	1170
	9	3	260	540	1170	288.9	600	1300
	0	4	26	54	117	28.9	60	130
	1	4	52	108	234	57.8	120	260
	2	4	78	162	351	86.7	180	390
	3	4	104	216	468	115.6	240	520
	4	4	156	324	702	173.3	360	780
	5	4	208	432	936	231.1	480	1040
	6	4	234	486	1053	260	540	1170
	7	4	260	540	1170	288.9	600	1300
	8	4	312	648	1404	346.7	720	1560
	9	4	-	720	1560	-	800	1733.3

Feature	Specifications				
Maximum number of	A (A regulatory domain):		K (K regulatory domain):		
nonoverlapping	• 2.412 to 2.462 GHz; 11 chann	nels	• 2.412 to 2.472 GHz; 13 channel	els	
channels	• 5.180 to 5.320 GHz; 8 channel	els	• 5.180 to 5.320 GHz; 8 channel		
	• 5.500 to 5.700 GHz; 8 channel	els	• 5.500 to 5.620 GHz; 7 channel		
	(excludes 5.600 to 5.640 GHz	z)	• 5.745 to 5.805 GHz; 4 channel		
	• 5.745 to 5.825 GHz; 5 channel	els	N (N regulatory domain):		
	B (B regulatory domain):		• 2.412 to 2.462 GHz; 11 channel	els	
	2.412 to 2.462 GHz; 11 channels		• 5.180 to 5.320 GHz; 8 channel		
	• 5.180 to 5.320 GHz; 8 channel	els	 5.745 to 5.825 GHz; 5 channels Q (Q regulatory domain): 2.412 to 2.472 GHz; 13 channels 		
	• 5.500 to 5.720 GHz; 12 chann				
	• 5.745 to 5.825 GHz; 5 channel	els			
	C (C regulatory domain):	1-	• 5.180 to 5.320 GHz; 8 channel		
	• 2.412 to 2.472 GHz; 13 chann		• 5.500 to 5.700 GHz; 11 channel		
	• 5.745 to 5.825 GHz; 5 channel	els	R (R regulatory domain):	513	
	D (D regulatory domain):		• 2.412 to 2.472 GHz; 13 channel	ole	
	• 2.412 to 2.462 GHz; 11 chann		• 5.180 to 5.320 GHz; 8 channel		
	• 5.180 to 5.320 GHz; 8 channel		,		
	• 5.745 to 5.825 GHz; 5 channel	els	• 5.660 to 5,805 GHz; 7 channels		
	E (E regulatory domain):		S (S regulatory domain):		
	 2.412 to 2.472 GHz; 13 channel 		• 2.412 to 2.472 GHz; 13 channels		
	• 5.180 to 5.320 GHz; 8 channel		• 5.180 to 5.320 GHz; 8 channels		
	• 5.500 to 5.700 GHz; 8 channel		• 5.500 to 5.700 GHz; 11 channels		
	(excludes 5.600 to 5.640 GHz	<u>2)</u>	• 5.745 to 5.825 GHz; 5 channels		
	F (F regulatory domain):	a a la	T (T regulatory domain):		
	• 2.412 to 2.472 GHz; 13 chann		• 2.412 to 2.462 GHz; 11 channels		
	• 5.745 to 5.825 GHz; 4 channel	eis	• 5.280 to 5.320 GHz; 3 channel		
	H (H regulatory domain):	1.	• 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)		
	• 2.412 to 2.472 GHz; 13 chann		• 5.745 to 5.825 GHz; 5 channels		
	• 5.150 to 5.350 GHz; 8 channe		Z (Z regulatory domain):	15	
	• 5.745 to 5.825 GHz; 5 channel	els	• 2.412 to 2.462 GHz; 11 channel	ole	
	I (I regulatory domain):		• 5.180 to 5.320 GHz; 8 channel		
	• 2.412 to 2.472 GHz; 13 chann		• 5.500 to 5.700 GHz; 8 channels		
	• 5.180 to 5.320 GHz; 8 channe	els	(excludes 5.600 to 5.640 GHz)		
			• 5.745 to 5.825 GHz; 5 channels		
Nata : 0ta					
	esponsible for verifying approval for cisco.com/go/aironet/compliance	r use in their individual cour	ntries. To verify approval that corresp	oonds to a particular	
Maximum number of	2.4 GHz				
	2.4 GHZ		E CU-		
nonoverlapping	. 000 445/		5 GHz		
	• 802.11b/g:		• 802.11a:		
	。 20 MHz: 3		• 802.11a: • 20 MHz: 25		
	∘ 20 MHz: 3 • 802.11n:		802.11a: 20 MHz: 25 802.11n:		
	。 20 MHz: 3		802.11a: 20 MHz: 25 802.11n: 20 MHz: 25		
	∘ 20 MHz: 3 • 802.11n:		 802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 		
	∘ 20 MHz: 3 • 802.11n:		802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac:		
	∘ 20 MHz: 3 • 802.11n:		802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21		
	∘ 20 MHz: 3 • 802.11n:		802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12		
	∘ 20 MHz: 3 • 802.11n:		802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21		
channels	。 20 MHz: 3 ● 802.11n: 。 20 MHz: 3	uct documentation for speci	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12	n.	
Note: This varies by reg		·	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domain	n.	
Note: This varies by reg		802.11g (non HT20)	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domail 802.11a (non HT20)	n.	
Note: This varies by reg	∘ 20 MHz: 3 • 802.11n: ∘ 20 MHz: 3 gulatory domain. Refer to the produ • 802.11b (CCK) ∘ -101 dBm @ 1 Mbps	● 802.11g (non HT20) • -96 dBm @ 6 Mbps	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domail 802.11a (non HT20) -96 dBm @ 6 Mbps	n.	
channels		• 802.11g (non HT20) • -96 dBm @ 6 Mbps • -95 dBm @ 9 Mbps	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domail 802.11a (non HT20) -96 dBm @ 6 Mbps -95 dBm @ 9 Mbps	n.	
Note: This varies by reg	○ 20 MHz: 3 ○ 802.11n: ○ 20 MHz: 3 gulatory domain. Refer to the produ ○ 802.11b (CCK) ○ -101 dBm @ 1 Mbps ○ -98 dBm @ 2 Mbps ○ -92 dBm @ 5.5 Mbps	• 802.11g (non HT20) • -96 dBm @ 6 Mbps • -95 dBm @ 9 Mbps • -94 dBm @ 12 Mbps	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domail 802.11a (non HT20) -96 dBm @ 6 Mbps -95 dBm @ 9 Mbps -94 dBm @ 12 Mbps	n.	
Note: This varies by reg		• 802.11g (non HT20) • -96 dBm @ 6 Mbps • -95 dBm @ 9 Mbps • -94 dBm @ 12 Mbps • -92 dBm @ 18 Mbps	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domain 802.11a (non HT20) -96 dBm @ 6 Mbps -95 dBm @ 9 Mbps -95 dBm @ 12 Mbps -92 dBm @ 18 Mbps	n.	
Note: This varies by reg	○ 20 MHz: 3 ○ 802.11n: ○ 20 MHz: 3 gulatory domain. Refer to the produ ○ 802.11b (CCK) ○ -101 dBm @ 1 Mbps ○ -98 dBm @ 2 Mbps ○ -92 dBm @ 5.5 Mbps	• 802.11g (non HT20) • -96 dBm @ 6 Mbps • -95 dBm @ 9 Mbps • -94 dBm @ 12 Mbps • -92 dBm @ 18 Mbps • -88 dBm @ 24 Mbps	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domain 802.11a (non HT20) -96 dBm @ 6 Mbps -95 dBm @ 9 Mbps -95 dBm @ 12 Mbps -94 dBm @ 12 Mbps -92 dBm @ 18 Mbps -88 dBm @ 24 Mbps	n.	
Note: This varies by reg	○ 20 MHz: 3 ○ 802.11n: ○ 20 MHz: 3 gulatory domain. Refer to the produ ○ 802.11b (CCK) ○ -101 dBm @ 1 Mbps ○ -98 dBm @ 2 Mbps ○ -92 dBm @ 5.5 Mbps	• 802.11g (non HT20) • -96 dBm @ 6 Mbps • -95 dBm @ 9 Mbps • -94 dBm @ 12 Mbps • -92 dBm @ 18 Mbps	802.11a: 20 MHz: 25 802.11n: 20 MHz: 25 40 MHz: 12 802.11ac: 20 MHz: 12 802.11ac: 20 MHz: 21 40 MHz: 12 80 MHz: 6 fic details for each regulatory domain 802.11a (non HT20) -96 dBm @ 6 Mbps -95 dBm @ 9 Mbps -95 dBm @ 12 Mbps -92 dBm @ 18 Mbps	n.	

Feature	Specifications							
Receive sensitivity	2.4 GHz		5 GHz		5 GHz			
	• 802.11n (HT20)		• 802.1	1n (HT20)	• 802.11n (HT40)			
	∘ -96 dBm @ MCS	0	∘ -96	dBm @ MCS0	 -93 dBm @ MCS0 			
	• -93 dBm @ MCS	1	∘ -92	dBm @ MCS1	 -90 dBm @ MCS1 			
	∘ -90 dBm @ MCS	2	∘ -90	dBm @ MCS2	 -87 dBm @ MCS2 			
	• -87 dBm @ MCS			dBm @ MCS3	 -84 dBm @ MCS3 			
	• -84 dBm @ MCS			dBm @ MCS4	∘ -80 dBm @ MCS4			
	• -79 dBm @ MCS			dBm @ MCS5	• -76 dBm @ MCS5			
	• -78 dBm @ MCS			dBm @ MCS6	• -75 dBm @ MCS6			
	• -76 dBm @ MCS			dBm @ MCS7	• -73 dBm @ MCS7			
	• -93 dBm @ MCS			dBm @ MCS8	• -90 dBm @ MCS8			
	-90 dBm @ MCS-87 dBm @ MCS			dBm @ MCS9 dBm @ MCS10	 -87 dBm @ MCS9 -84 dBm @ MCS10 			
	• -84 dBm @ MCS			dBm @ MCS10	• -84 dBm @ MCS10			
	-81 dBm @ MCS			dBm @ MCS11	• -77 dBm @ MCS12			
	-76 dBm @ MCS			dBm @ MCS12	• -73 dBm @ MCS13			
	-75 dBm @ MCS			dBm @ MCS14	∘ -72 dBm @ MCS14			
	∘ -73 dBm @ MCS			dBm @ MCS15	∘ -70 dBm @ MCS15			
	∘ -91 dBm @ MCS			dBm @ MCS16	∘ -88 dBm @ MCS16			
	∘ -88 dBm @ MCS	17		dBm @ MCS17	· -85 dBm @ MCS17			
	∘ -85 dBm @ MCS	18	∘ -85	dBm @ MCS18	· -82 dBm @ MCS18			
	∘ -82 dBm @ MCS	19	∘ -81	dBm @ MCS19	· -79 dBm @ MCS19			
	· -79 dBm @ MCS	∘ -79 dBm @ MCS20			· -75 dBm @ MCS20			
	∘ -74 dBm @ MCS	21	∘ -74	dBm @ MCS21	· -71 dBm @ MCS21			
	· -73 dBm @ MCS	22	∘ -72	dBm @ MCS22	· -70 dBm @ MCS22			
	· -71 dBm @ MCS	23	∘ -71 dBm @ MCS23		· -68 dBm @ MCS23			
			∘ -89	dBm @ MCS24	· -86 dBm @ MCS24			
			∘ -85	dBm @ MCS25	 -83 dBm @ MCS25 			
				dBm @ MCS26	 -80 dBm @ MCS26 			
				dBm @ MCS27	• -77 dBm @ MCS27			
				dBm @ MCS28	• -73 dBm @ MCS28			
			• -72 dBm @ MCS29		• -69 dBm @ MCS29			
			 -70 dBm @ MCS30 -69 dBm @ MCS31 		• -68 dBm @ MCS30			
	000 44 D 1 0		° -09	dbiii @ MCS31	∘ -66 dBm @ MCS31			
	802.11ac Receive Sensitivity							
	802.11ac (non HT80)							
	-89 dBm @ 6 Mbps-73 dBm @ 54 Mbp							
	MCS Index	Spatial Streams						
			VHT20	VHT40	VHT80			
	0	1	-96 dBm	-93 dBm	-89 dBm			
	7	1	-76 dBm	-73 dBm	-70 dBm			
	8	1	-71 dBm	-69 dBm	-66 dBm			
	9	1	NA -93 dBm	-67 dBm	-64 dBm			
		0 2		-90 dBm	-86 dBm			
	7	2	-73 dBm	-70 dBm	-67 dBm			
	8	2	-68 dBm	-66 dBm	-63 dBm			
	9	2	NA OA dD	-64 dBm	-61 dBm			
	0	3	-91 dBm	-88 dBm	-84 dBm			
	7	3	-71 dBm	-68 dBm	-65 dBm			
	8	3	-66 dBm	-64 dBm	-61 dBm			

Feature	Specifications						
T Gataro	9	3	-64 dBm		-62 dBm	-59 dBm	
	MCS Index	Spatial Streams	04 dBill		OZ GBIII	03 dBiii	
	INCO ITIUEX	Opatiai Streams	VHT20		VHT40	VHT80	
	0	4	-89 dBm		-86 dBm	-82 dBm	
	7	4	-69 dBm		-66 dBm	-63 dBm	
	8	4	-64 dBm		-62 dBm	-59 dBm	
	9	4	NA NA		-60 dBm	-57 dBm	
Maximum transmit power	2.4 GHz • 802.11b • 22 dBm, 3 antennas • 802.11g • 22 dBm, 3 antennas • 802.11n (HT20) • 22 dBm, 3 antennas			802.11 23 d 802.11 23 d 802.11 0 non- VHT VHT	Bm, 4 antennas n (HT20) Bm, 4 antennas n (HT40) Bm, 4 antennas ac HT80: 23 dBm, 4 antennas 20: 23 dBm, 4 antennas 40: 23 dBm, 4 antennas 80: 23 dBm, 4 antennas		
Note: The maximum pospecific details.	ower setting will vary by	channel and according to	o individual co	ountry regula	ations. Refer to the pr	oduct documentation for	
Available transmit power settings	2.4 GHz • 22 dBm • 19 dBm • 16 dBm • 13 dBm • 10 dBm • 7 dBm • 4 dBm • 1 dBm			5 GHz			
Note: The maximum pospecific details.	ower setting will vary by	channel and according to	o individual co	ountry regula	tions. Refer to the pr	oduct documentation for	
Integrated antenna		ti, internal omni, horizont internal omni, horizontal					
External antenna (sold separately)		th antenna gains up to 6 dustry's broadest selection				a variety of deployment	
Interfaces	 1 x 10/100/1000BASE-T autosensing (RJ-45), Power over Ethernet (PoE) 1 x 10/100/1000BASE-T autosensing (RJ-45), AUX (used for Link Aggregation) Management console port (RJ-45) USB 2.0 (enabled via future software) 						
Indicators	Status LED indicate	es boot loader status, as	sociation stat	us, operatin	g status, boot loader	warnings, boot loader errors	
Dimensions (W x L x H)	Access point (without)	out mounting bracket): 8.	.3 x 8.3 x 2 in.	. (210.8 x 21	0.8 x 50.8 mm)		
Weight	• 3.12 lb (1.41 kg)						
Environmental	 • 3.12 lb (1.41 kg) Cisco Aironet 1850i • Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) • Nonoperating (storage) altitude test: 25°C, 15,000 ft. • Operating temperature: 32° to 104°F (0° to 40°C) • Operating humidity: 10% to 90% (noncondensing) • Operating altitude test: 40°C, 9843 ft. Cisco Aironet 1850e • Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) • Nonoperating (storage) altitude test: 25°C, 15,000 ft. 						

Feature	Specifications
Environmental	 Operating temperature: -4° to 122°F (-20° to 50°C) Operating humidity: 10% to 90% (noncondensing) Operating altitude test: 40°C, 9843 ft.
System memory	1 GB DRAM256 MB flash
Input power requirements	 AP1850: 44 to 57 VDC Power supply and power injector: 100 to 240 VAC; 50 to 60 Hz
Power draw	• 20.9W Note: When deployed using a Power over Ethernet (PoE) specification, the power drawn from the power sourcing equipment will be higher by some amount, depending on the length of the interconnecting cable.
Powering options	 802.3at Enhanced PoE Cisco power injector, AIR-PWRINJ4= Cisco local power supply, AIR-PWR-C= Cisco power injector, AIR-PWRINJ5= (Note: this injector supports 802.3af only) 802.3af Note: If 802.3af PoE is the source of power,(1) the 1852e 2.4-GHz radio will shift to 2x3 from 3x4,(2)The USB port and AUX Ethernet port are disabled on both the 1852i and 1852e.
Warranty	Limited lifetime hardware warranty
Compliance standards	□ UL 60950-1 □ CAN/CSA-C22.2 No. 60950-1 □ UL 2043 □ IEC 60950-1 □ EN 60950-1 □ EN 60950-1 □ EN 50155 ■ Radio approvals: □ FCC Part 15.247, 15.407 □ RSS-210 (Canada) □ EN 300.328, EN 301.893 (Europe) □ ARIB-STD 66 (Japan) □ ARIB-STD 66 (Japan) □ ARIB-STD 171 (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 60601-1-2 EMC requirements for the Medical Directive 93/42/EEC ■ IEEE standards: □ IEEE 802.11a/b/g, 802.11n, 802.11h, 802.11d □ IEEE 802.11a/b/g, 802.11n, 802.11h, 802.11d □ IEEE 802.11a Draft 5 ■ Security: □ 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA □ 802.1X □ Advanced Encryption Standard (AES), Temporal Key Integrity Protocol (TKIP) ■ Extensible Authentication Protocol (EAP) types: □ EAP-Transport Layer Security (TLS) □ EAP-Transport Layer Security (TLS) □ EAP-Transport Layer Security (TLS) □ Protected EAP (PEAP) v0 or EAP-MSCHAPv2 □ Protected EAP (PEAP) v1 or EAP-Generic Token Card (GTC) □ EAP-Elexible Authentication via Secure Tunneling (FAST) □ PEAP v1 or EAP-Generic Token Card (GTC) □ EAP-Subscriber Identity Module (SIM) ■ Multimedia: □ Wi-Fi Multimedia (WMM) ■ Other: □ FCC Bulletin OET-65C □ RSS-102

^{*} Supported via Cisco Mobility Express with controller function running on the access point - not Cisco IOS® Software Autonomous based.

[&]quot; Future.

Warranty Information

The Cisco Aironet 1850 Series Access Points come 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 are defect-free for 90 days. For more details, visit http://www.cisco.com/go/warranty.

Ordering Information

To place an order, visit the Cisco How to Buy page. To download software, visit the Cisco Software Center.

Table 2. Ordering Information

Product Name	Part Number
Aironet 1850 Series	Cisco Aironet 1852i Access Point: Indoor environments, with internal antennas • AIR-AP1852l-x-K9: Dual-band, controller-based 802.11a/g/n/ac, Wave 2 • AIR-AP1852l-x-K9C: Dual-band, controller-based 802.11a/g/n/ac, Wave 2, configurable • Regulatory domains: (x = regulatory domain)
	Cisco Aironet 1852e Access Point: Indoor, challenging environments, with external antennas • AIR-AP1852E-x-K9: Dual-band, controller-based 802.11a/g/n/ac, Wave 2 • AIR-AP1852E-x-K9C: Dual-band, controller-based 802.11a/g/n/ac, Wave 2, configurable • Regulatory domains: (x = regulatory domain)
	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 http://www.cisco.com/go/aironet/compliance . Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.

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Cisco Wireless LAN Services

- AS-WLAN-CNSLT: Cisco Wireless LAN Network Planning and Design Service
- AS-WLAN-CNSLT: Cisco Wireless LAN 802.11n Migration Service
- AS-WLAN-CNSLT: Cisco Wireless LAN Performance and Security Assessment Service

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For More Information

For more information about the Cisco Aironet 1850 Series, visit http://www.cisco.com/go/wireless or contact your local account representative.



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