

Cisco Aironet 1700 Series Access Points



Dual-Band Access Points with 802.11ac Wave 1 Support on the Integrated 5-GHz Radio

Ideal for Office Environments

- Sleek design with internal antennas
- Automatic remedial action
- UL 2043 plenum-rated for above-ceiling installation or suspension from drop ceilings
- · Controller-based and standalone deployments

Troubleshooting Forensics

- Historic interference information for back-intime analysis and faster problem solving
- 24x7 monitoring
- Air quality index provides a snapshot of network performance and interference impact

Robust Security and Policy Enforcement

- Detects rogue access points and denial-ofservice attacks
- Management frame protection detects malicious users and alerts network administrators
- Policies prohibit devices that interfere with or jeopardize network security



Product Overview

If you operate a small or medium-sized enterprise network, deploy the Cisco® Aironet® 1700 Series Access Point for the latest 802.11ac Wi-Fi technology at an attractive price. The 1700 Series meets the growing requirements of wireless networks by delivering better performance than 802.11n and providing key RF management features for improved wireless experiences.

The 1700 Series supports 802.11ac Wave 1 standard capabilities. That includes a theoretical connection rate of up to 867 Mbps. The added throughput lets you stay ahead of growing bandwidth requirements as:

- · More wireless clients associate with the network
- Users tap into bandwidth-heavy multimedia applications
- Mobile workers increasingly use multiple Wi-Fi devices

Features and Benefits

Building on the Cisco Aironet heritage of RF excellence, the 1700 Series access points run on a purpose-built, innovative chipset with a best-in-class RF architecture. The 1700 Series is a component of Cisco's flagship, 802.11ac-enabled Aironet access points that deliver robust mobility experiences.

 Table 1.
 Primary Capabilities and How You Benefit

Feature	Benefit
802.11ac Wave 1 support with 3x3 multiple input and multiple output (MIMO) and two spatial streams	Delivers higher rates over a greater range for more capacity and reliability than competing access points. Provides up to three times more bandwidth than 802.11n networks.
Cisco CleanAir® Express Spectrum Intelligence	Detects RF interference and provides basic spectrum analysis capabilities while simplifying ongoing operations across 20-, 40-, and 80-MHz-wide channels
Optimized access point roaming	Directs client devices to associate with the access point in their coverage range, offering the fastest data rate available
MIMO equalization	Boosts uplink performance and reliability by reducing the impact of signal fade

Product Specifications

Item	Specification
Part numbers	Cisco Aironet 1700i Access Point: Indoor environments, with internal antennas
	AIR-CAP1702I-x-K9: Dual-band, controller-based 802.11a/g/n/ac
	AIR-CAP1702I-xK910: Eco-pack (dual-band 802.11a/g/n/ac) 10 quantity access points
	Cisco SMARTnet® Service for the Cisco Aironet 1700i Access Point with internal antennas
	CON-SNT-C172Ix: SMARTnet 8x5xNBD for 1700i access point (dual-band 802.11a/g/n/ac)
	CON-SNT-C172Ix10: SMARTnet 8x5xNBD for 10-quantity eco-pack 1700i access point (dual-band 802.11a/g/n/ac)
	Regulatory domains: (x = regulatory domain)
	Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain that corresponds to a particular country, visit https://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.
	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
Software	Cisco Unified Wireless Network Software Release 8.0 or later
	Cisco Autonomous AP IOS Software Release 15.3.3-JAB or later
Supported wireless LAN controllers	Cisco 2500 Series Wireless Controllers, Cisco Wireless Controller Module for ISR G2, Cisco Wireless Services Module 2 (WiSM2) for Cisco Catalyst [®] 6500 Series Switches, Cisco 5500 Series Wireless Controllers, Cisco Flex [®] 7500 Series Wireless Controllers, Cisco 8500 Series Wireless Controllers, Cisco Virtual Wireless Controller; Cisco 5760 Wireless LAN Controller, Cisco Catalyst 3850 Series Switches, Cisco Catalyst 3650 Series Switches
802.11n version 2.0 (and related) capabilities	 3x3 MIMO with two spatial streams Maximal ratio combining (MRC) 802.11n and 802.11a/g beamforming 20- and 40-MHz channels PHY data rates up to 300 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 capabilities	 3x3 MIMO with two spatial streams MRC 802.11ac standard explicit beamforming 20-, 40-, and 80-MHz channels PHY data rates up to 867 Mbps (80 MHz in 5 GHz) Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) 802.11 DFS CSD support

ltem	Specification	Specification									
Data rates supported	802.11a: 6, 9,	802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps									
	802.11g: 1, 2,	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:									
	MCS Index ¹		GI ² = 800 ns		GI = 400 ns						
				20-MHz Rate (Mbps)							
	0		6.5	6.5							
	1		13	13							
	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	8		13							
	9	9		26							
	10	10		39							
	11	11		52							
	12	12		78							
	13	13			115.6						
	14	14			130						
	15	15			144.4						
	802.11ac data	rates (5 GHz):									
	MCS Index ³	MCS Index ³ Spatial Streams		GI ⁴ = 80)0ns		GI = 400ns				
			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			

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 delays.

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coding rate, and data rate values.

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

Item	Specification								
	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	
Frequency band	A (A regulatory	y domain):			N (N regulatory do	main):			
and 20-MHz operating channels	• 2.412 to 2.4	162 GHz; 11 chai	nnels		• 2.412 to 2.462	GHz; 11 char	nnels		
operating channels	• 5.180 to 5.3	320 GHz; 8 chanı	nels		• 5.180 to 5.320	GHz; 8 chanr	nels		
		700 GHz; 8 chan			• 5.745 to 5.825	GHz; 5 chanr	nels		
	,	6.600 to 5.640 GH	•		Q (Q regulatory domain):				
		325 GHz; 5 chanı	neis		• 2.412 to 2.472 GHz; 13 channels				
	C (C regulatory	•			• 5.180 to 5.320 GHz; 8 channels				
		172 GHz; 13 chai			• 5.500 to 5.700 GHz; 11 channels				
		325 GHz; 5 chanı	neis		•				
	D (D regulatory	•			R (R regulatory domain): • 2.412 to 2.472 GHz; 13 channels				
		162 GHz; 11 cha							
		320 GHz; 8 chanı			• 5.180 to 5.320				
	• 5.745 to 5.825 GHz; 5 channels E (E regulatory domain): • 2.412 to 2.472 GHz; 13 channels • 5.180 to 5.320 CHz; 8 channels				• 5.660 to 5.805 GHz; 7 channels				
					S (S regulatory domain):				
					 2.412 to 2.472 GHz; 13 channels 5.180 to 5.320 GHz; 8 channels 				
	• 5.180 to 5.320 GHz; 8 channels								
		700 GHz; 8 chan 5.600 to 5.640 GH			• 5.500 to 5.700 GHz; 11 channels				
	F (F regulatory	domain):			• 5.745 to 5.825 GHz; 5 channels				
	• 2.412 to 2.4	172 GHz; 13 chai	nnels		T (T regulatory domain):				
	• 5.745 to 5.8	305 GHz; 4 chanı	nels		• 2.412 to 2.462	GHz; 11 char	nnels		
	H (H regulatory	y domain):			• 5.280 to 5.320 GHz; 3 channels				
	• 2.412 to 2.4	172 GHz; 13 chai	nnels		• 5.500 to 5.700	GHz; 8 chanr	nels		
	• 5.180 to 5.3	350 GHz; 8 chanı	nels		(excludes 5.600 to 5.640 GHz)				
	• 5.745 to 5.8	325 GHz; 5 chanı	nels		• 5.745 to 5.825 GHz; 5 channels				
	I (I regulatory domain):				Z (Z regulatory domain):				
	• 2.412 to 2.4	172 GHz; 13 chai	nnels		• 2.412 to 2.462 GHz; 11 channels				
	 5.180 to 5.320 GHz; 8 channels K (K regulatory domain): 2.412 to 2.472 GHz; 13 channels 				• 5.180 to 5.320 GHz; 8 channels				
					5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)				
	• 5.180 to 5.3	320 GHz; 8 chanı	nels		• 5.745 to 5.825 GHz; 5 channels				
	• 5.500 to 5.6	620 GHz; 7 chani	nels						
	• 5.745 to 5.8	305 GHz; 4 chani	nels						
Nata Customas and	Note: Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain								

Note: Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain that corresponds to a particular country, visit https://www.cisco.com/go/aironet/compliance.

ltem	Specification							
Maximum number of nonoverlapping channels	2.4 GHz • 802.11b/g: • 20 MHz: 3 • 802.11n: • 20 MHz: 3				5 GHz • 802.11a: • 20 MHz: 24 • 802.11n: • 20 MHz: 24 • 40 MHz: 11 • 802.11ac: • 20 MHz: 24 • 40 MHz: 11 • 80 MHz: 11			
Note: This varies by r	egulatory domain	. Refer to the pro	duct document	ation for specifi	ic details for each re	gulatory doma	in.	
Receive sensitivity	• 802.11b (C	0 0 1 Mbps 0 2 Mbps 0 5.5 Mbps	 -92 dBr -92 dBr -91 dBr -88 dBr -85 dBr -80 dBr 	n @ 6 Mbps n @ 9 Mbps n @ 12 Mbps n @ 18 Mbps n @ 24 Mbps n @ 36 Mbps n @ 48 Mbps	• 802.11a (non	6 Mbps 9 Mbps 12 Mbps 18 Mbps 24 Mbps 36 Mbps 48 Mbps		
	2.4 GHz		° -79 dBr	n @ 54 Mbps	∘ -79 dBm @	54 IVIDPS	5 GHz	
	• 802.11n (HT20) • 93 dBm @ MCS0 • 92 dBm @ MCS1 • 90 dBm @ MCS2 • 87 dBm @ MCS3 • 84 dBm @ MCS5 • 78 dBm @ MCS5 • 78 dBm @ MCS6 • 77 dBm @ MCS7 • 92 dBm @ MCS8 • 90 dBm @ MCS9 • 88 dBm @ MCS10 • 85 dBm @ MCS11 • 82 dBm @ MCS12 • 78 dBm @ MCS13 • 76 dBm @ MCS13 • 75 dBm @ MCS15 802.11ac Receive Sensitivity 802.11ac (non HT80) • 86 dBm @ 6 Mbps • 86 dBm @ 6 Mbps				• 802.11n (HT2	MCS0 MCS1 MCS2 MCS3 MCS4 MCS5 MCS6 MCS7 MCS8 MCS9 MCS10 MCS11 MCS12 MCS13 MCS14	• 802.11 • -90 d • -88 d • -87 d • -81 d • -76 d • -75 d • -82 d • -85 d • -74 d • -73 d	n (HT40) IBm @ MCS0 IBm @ MCS1 IBm @ MCS2 IBm @ MCS3 IBm @ MCS4 IBm @ MCS5 IBm @ MCS6 IBm @ MCS7 IBm @ MCS7 IBm @ MCS10 IBm @ MCS10 IBm @ MCS113 IBm @ MCS12 IBm @ MCS14 IBm @ MCS14 IBm @ MCS15
	MCS Index ⁵	Spatial Streams						
			VHT20	VHT40	VHT80	VTH20- STBC	VHT40- STBC	VHT80- STBC
	0	1	-92 dBm	-89 dBm	-85 dBm	-92 dBm	-89 dBm	-85 dBm
	8	1	-73 dBm			-73 dBm		
	9	1		-68 dBm	-65 dBm		-68 dBm	-65 dBm
	0	2	-91 dBm	-87 dBm	-84 dBm			

 $^{^{5}}$ MCS Index: The Modulation and Coding Scheme (MCS) index determines the number of spatial streams, the modulation, the coding rate, and data rate values.

Item	Specification							
	8	2	-71 dBm					
	9	2		-66 dBm	-62 dBm			
Maximum transmit power	9 2.4 GHz • 802.11b • 22 dBm, 3 • 802.11g • 22 dBm, 3 • 802.11n (H	3 antennas 3 antennas T20)		-66 dBm	-62 dBm 5 GHz ■ 802.11a □ 22 dBm, 3 antennas ■ 802.11n (HT20) □ 22 dBm, 3 antennas ■ 802.11n (HT40) □ 22 dBm, 3 antennas ■ 802.11ac □ non-HT80: 22 dBm, 3 antennas □ VHT20 22 dBm, 3 antennas □ VHT40: 22 dBm, 3 antennas □ VHT80: 22 dBm, 3 antennas □ VHT80: 22 dBm, 3 antennas □ VHT80: 22 dBm, 3 antennas □ VHT90-STBC: 22 dBm, 3 antennas □ VHT40-STBC: 22 dBm, 3 antennas □ VHT80-STBC: 22 dBm, 3 antennas □ VHT80-STBC: 22 dBm, 3 antennas			
Note: The maximum p specific details.	ower setting will	vary by channel a	and according to	o individual cou	ıntry regulations. Refe	er to the produ	ct documentat	ion for
Available transmit power settings	2.4 GHz • 22 dBm (160 mW) • 19 dBm (80 mW) • 16 dBm (40 mW) • 13 dBm (20 mW) • 10 dBm (10 mW) • 7 dBm (5 mW) • 4 dBm (2.5 mW) • 2 dBm (1.25 mW)				5 GHz • 22 dBm (160 mW) • 19 dBm (80 mW) • 16 dBm (40 mW) • 13 dBm (20 mW) • 10 dBm (10 mW) • 7 dBm (5 mW) • 4 dBm (2.5 mW) • 1 dBm (1.25 mW)			
Note: The maximum p specific details.	ower setting will	vary by channel a	and according to	o individual cou	intry regulations. Refe	er to the produ	ct documentat	ion for
Integrated antenna	 2.4 GHz, gain 4 dBi, internal omni, horizontal beamwidth 360° 5 GHz, gain 4 dBi, internal omni, horizontal beamwidth 360° 							
Interfaces		2x10/100/1000BASE-T autosensing (RJ-45) Management console port (RJ-45)						
Indicators	Status LED	indicates boot lo	ader status, as	sociation status	s, operating status, bo	ot loader warr	nings, boot load	der errors
Dimensions (W x L x H)	Access point	nt (without mount	ing bracket): 8.0	69 x 8.69 x 1.9	9 in. (22.1 x 22.1 x 5.1	1 cm)		
Weight	• 2.2 lb (1.0 kg)							
Environmental	Cisco Aironet 1702i Non-operating (storage) temperature: -22° to 158°F (-30° to 70°C) Non-operating (storage) altitude test: 25°C, 15,000 ft. Operating temperature: 32° to 104°F (0° to 40°C) Operating humidity: 10% to 90% percent (non-condensing) Operating altitude test: 40°C, 9843 ft.							
System memory	512 MB DRAM 64 MB flash							
Input power requirements	AP1700: 44Power supp	to 57 VDC bly and power inje	ector: 100 to 24	0 VAC; 50 to 6) Hz			
Power draw	• AP1700: 15	5W						

Item	Specification
Powering options	 802.3af PoE 802.3at PoE+ Enhanced PoE Cisco AP1700 power injectors (AIR-PWRINJ5=) Cisco AP1700 local power supply (AIR-PWR-C= or AIR-PWR-D=)
Warranty	Limited lifetime hardware warranty
Compliance standards	 □ UL 60950-1 □ CANCSA-C22.2 No. 60950-1 □ UL 2043 □ IEC 60950-1 □ EN 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 77 (Japan) □ ARIB-STD 771 (Japan) □ EMI and susceptibility (Class B) □ FCC Part 15.107 and 15.109 □ ICES-003 (Canada) □ VCGI (Japan) □ EN 301.489-1 and -17 (Europe) □ EN 60601-1-2 EMC requirements for the Medical Directive 93/42/EEC □ 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: □ 802.11; Wi-Fi Protected Access 2 (WPA2), WPA □ 802.11 □ 802.11 □ Avanced Encryption Standards (AES), Temporal Key Integrity Protocol (TKIP) ■ Extensible Authentication Protocol (EAP) types: □ EAP-Transport Layer Security (TLS) □ EAP-Transport Layer Security (TLS) □ PAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) □ PAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) □ PAP-Tensport Layer Security (TLS) □ EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) □ PAP-Typ or EAP-Seneric Token Card (GTC) □ EAP-Subscriber Identity Module (SIM) ● Multimedia: □ Wi-Fi Multimedia (WMM) ● Other: □ FCC Bulletin OET-6SC □ RSS-102 Wi-Fi CERTIFIED ™ a, b. g. n, ac
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Ordering Information

To place an order, visit the Cisco Ordering Home Page. To download software, visit the Cisco Platform Suite.

 Table 2.
 Ordering Information

Product Name/Description	Part Number
Cisco Aironet 1702i access point; dual-band, controller-based 802.11a/g/n/ac (individual)	AIR-CAP1702I-x-K9
Cisco Aironet 1702i access point; dual-band, controller-based 802.11a/g/n/ac eco-pack (10 quantity)	AIR-CAP1702I-xK910

Limited Lifetime Hardware Warranty

The Cisco Aironet 1700 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 makes sure that software media are defect-free for 90 days. For more details, visit https://www.cisco.com/go/warranty.

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For More Information

For more information about the Cisco Aironet 1700 Series, visit https://www.cisco.com/go/wireless or contact your local account representative.



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