

Cisco Aironet 1560 Series Outdoor Access Points



Cisco Aironet[®] 1560 Series Outdoor Access Points offer the latest 802.11ac Wave 2 functions in a rugged, low-profile housing that service providers and enterprises can deploy easily.

Ideal for applications requiring rugged outdoor Wi-Fi coverage, the Cisco Aironet 1560 Series Access Points offer the latest IEEE 802.11ac Wave 2 radio standard in a compact, aesthetically pleasing, easy-to-deploy package. The 1560 Series offers flexible deployment options for service providers and enterprise networks, that need the fastest links possible for mobile, outdoor clients (smartphones, tablets, and laptops) and wireless backhaul. With options for internal or external antennas, the 1560 Series Access Points give network operators the flexibility to balance their desired wireless coverage with their need for easy deployment. The Cisco Aironet 1560 Series is built on the strong base of Cisco[®] wireless innovations such as:

- Cisco CleanAir® technology for spectrum intelligence
- Cisco ClientLink technology for beamforming
- Radio Resource Management (RRM) for dynamic transmitter channel and power control

Whether deployed as a traditional access point or wireless mesh access point, the Cisco Aironet 1560 Series provides the throughput capacity needed for today's bandwidth-hungry devices.

Features and Benefits

Table 1 lists the features and benefits of the Cisco Aironet 1560 Series.

Table 1. Features and Benefits of Cisco Aironet 1560 Series

Feature	Benefit
802.11ac Wave 2 radio	Provides up to 1.3-Gbps data rates with 3 x 3 multiple input, multiple output (MIMO) and up to three spatial streams
Multiuser MIMO (MU-MIMO)	Allows transmission of data to multiple 802.11ac Wave 2-capable clients simultaneously to improve client experience; prior to 802.11ac Wave 2, access points could transmit data to only one client at a time, typically referred to as single-user MIMO
Flexible deployment modes	Allows f or deployment of the 1560 in a variety of ways including point -to-point and mesh networks (future availability); it can also be deployed with the Cisco Mobility Express Solution, which is ideal f or small to medium - sized deployments that supports multiple access points without a physical controller; all deployment modes are easy to set up and configure
Small Form-Factor Pluggable (SFP) port	Supports optical fiber-based network connectivity for remote locations

Prominent Feature/Differentiator/Capability

The Cisco Aironet 1560 Series offers the following features:

- Improved performance for multiple client devices: The 802.11ac Wave 2 access points use MU-MIMO technology, which allows different data streams to all flow at once from the access point to multiple 802.11ac Wave 2-supported devices. Now, multiple 802.11ac Wave 2 devices can connect at the same time, getting the information they need quicker.
- 5-GHz support: The Cisco Aironet 1560 Series doubles the scale of 5 -GHz mobile devices and raises the performance of high-density environments.
- Cisco Flexible Antenna Port technology uses software configurable for either single- or dual-band antennas.
 It allows you to use the same antenna ports for either dual-band antennas to reduce footprint or single-band antennas to optimize radio coverage.
- Cisco Mobility Express: This solution is designed to bring enterprise-class wireless access to small and
 medium-sized networks. Easy to set up with low maintenance, Mobility Express includes advanced features
 from Cisco and does not require a physical controller appliance.
- Cisco High Density Experience (HDX): Cisco HDX comes standard on the 1560, giving this access point
 top-of-the-line network efficiency over a large number of wireless clients. HDX uses customized chipsets to
 target the needs of high-density networks. It is built with best-in-class RF architecture and gives a better
 user experience for high-performance applications.

Product Specifications

Table 2 lists the specifications of the 1560 access point.

 Table 2.
 Specifications of Cisco Aironet 1560 Series

Item	Specification							
802.11ac Wave 1 and 2 capabilities	 1562E/D 2 x 2 Multi- and sing Maximal ratio c 802.11ac beam 20-, 40-, and 8 PHY data rates Packet aggregs 	 1562I: 3 x 3 MIMO with three spatial streams 1562E/D 2 x 2 MIMO with two spatial streams Multi- and single-user MIMO Maximal ratio combining (MRC) 802.11ac beamforming (transmit beamforming) 20-, 40-, and 80-MHz channels PHY data rates up to 1.3 Gbps (80 MHz in 5 GHz) Packet aggregation: A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx) 802.11 dynamic frequency selection (DFS) 						
802.11n (and related) capabilities	1562E/D: 2 x 2MRC20- and 40-MHPHY data rates	 1562I: 3 x 3 MIMO with three spatial streams 1562E/D: 2 x 2 MIMO with two spatial streams MRC 20- and 40-MHz channels PHY data rates up to 450 Mbps Packet aggregation: A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx) 802.11 DFS 						
Data rates supported		8, 24, 36, 48, and 5 , 6, 9, 11, 12, 18, 24	4 Mbps -, 36, 48, and 54 Mbps					
	802.11n data rates	on 2.4 and 5 GHz:						
	MCS Index	GI4 = 800 ns		GI = 400 ns				
		20-MHz Rates (Mbps)	40-MHz Rates (Mbps)	20-MHz Rates (Mbps)	40-MHz Rates (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	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	78	162	86.7	180			
	13	104	216	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			

Item	Specificatio	n									
	19	7	8	162			86.7		180		
	20	1	17	243			130		270		
	21 1		21 156				173.3			360	
	22	1	75.5	364.5	j		195		405	405	
	23	1	95	405			216.7		450		
	802.11ac Da	802.11ac Data Rates (5 GHz)									
	Spatial Streams	MCS	GI =	800 ns				GI = 400 n	s		
			20 M	Hz	40 MHz	80 1	ИHz	20 MHz	40 MHz	80 MHz	
	1	0	6.5		13.5	29.3	3	7.2	15	32.5	
	1	1	13		27	58.5	5	14.4	30	65	
	1	2	19.5		40.5	87.8	3	21.7	45	97.5	
	1	3	26		54	117		28.9	60	130	
	1	4	39		81	175	.5	43.3	90	195	
	1	5	52		108	234		57.8	120	260	
	1	6	58.5		121.5	263	.3	65	135	292.5	
	1	7	65		135	292	.5	72.2	150	325	
	1	8	78		162	351		86.7	180	390	
	1	9	_		180	390		_	200	433.3	
	2	0	13		27	58.5	5	14.4	30	65	
	2	1	26		54	117		28.9	60	130	
	2	2	39		81	175	.5	43.3	90	195	
	2	3	52		108	234		57.8	120	260	
	2	4	78		162	351		86.7	180	390	
	2	5	104		216	468		115.6	240	520	
	2	6	117		243	526	.5	130	270	585	
	2	7	130		270	585		144.4	300	650	
	2	8	156		324	702		173.3	360	780	
	2	9	_		360	780		_	400	866.7	
	3	0	19.5		40.5	87.8	3	21.7	45	97.5	
	3	1	39		81	175	.5	43.3	90	195	
	3	2	58.5		121.5	263		65	135	292.5	
	3	3	78		162	351		86.7	180	390	
	3	4	117		243	526	.5	130	270	585	
	3	5	156		324	702		173.3	360	780	
	3	6	175.	5	364.5	_		195	405	_	
	3	7	195		405	877	.5	216.7	450	975	
	3	8	234		486	105		260	540	1170	
	3	9	260		540	117		288.9	600	1300	

Item	Specification
Frequency band and	A:
20- MHz operating	2.412 to 2.462 GHz, 11 channels
channels (regulatory domains)	5.280 to 5.320 GHz, 3 channels
domanio	5.500 to 5.580 GHz, 5 channels
	5.660 to 5.700 GHz, 3 channels
	5.745 to 5.825 GHz, 5 channels
	B:
	2.412 to 2.462 GHz, 11 channels
	5.180 to 5.240 GHz, 4 channels
	5.260 to 5.320 GHz, 4 channels
	5.500 to 5.720 GHz, 12 channels
	5.745 to 5.825 GHz, 5 channels C:
	2.412 to 2.472 GHz, 13 channels
	5.745 to 5.825 GHz, 15 channels
	D:
	2.412 to 2.462 GHz, 11 channels
	5.745 to 5.865 GHz, 7 channels
	E:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.580 GHz, 5 channels
	5.660 to 5.700 GHz, 3 channels
	F:
	2.412 to 2.472 GHz, 13 channels
	5.745 to 5.805 GHz, 4 channels G:
	2.412 to 2.472 GHz, 13 channels
	5.745 to 5.825 GHz, 5 channels
	-H:
	2.412 to 2.472 GHz, 13 channels
	5.745 to 5.825 GHz, 5 channels
	-1 :
	2.412 to 2.472 GHz, 13 channels
	-K: 2.412 to 2.462 GHz, 11 channels
	5.280 to 5.320 GHz, 3 channels
	5.500 to 5.620 GHz, 7 channels
	5.745 to 5.805 GHz, 4 channels
	-L:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.620 GHz, 7 channels
	5.745 to 5.865 GHz, 7 channels
	-M: 2.412 to 2.472 GHz, 13 channels
	5.500 to 5.580 GHz, 5 channels
	5.660 to 5.700 GHz, 3 channels
	5.745 to 5.805 GHz, 4 channels
	-N:
	2.412 to 2.462 GHz, 11 channels
	5.745 to 5.825 GHz, 5 channels
	-Q:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.700 GHz, 11 channels
	-R: 2.412 to 2.472 GHz, 13 channels
	5.260 to 5.320 GHz, 4 channels
	5.660 to 5.700 GHz, 3 channels
	5.745 to 5.825 GHz, 5 channels
	5.745 to 5.825 GHz, 5 channels

Item	Specification							
Item	-S: 2.412 to 2.472 GHz, 13 c 5.500 to 5.700 GHz, 11 c 5.745 to 5.825 GHz, 5 ch -T: 2.412 to 2.462 GHz, 11 c 5.500 to 5.580 GHz, 5 ch 5.660 to 5.700 GHz, 3 ch 5.745 to 5.825 GHz, 5 ch -Z: 2.412 to 2.462 GHz, 11 c	-S: 2.412 to 2.472 GHz, 13 channels 5.500 to 5.700 GHz, 11 channels 5.745 to 5.825 GHz, 5 channels -T: 2.412 to 2.462 GHz, 11 channels 5.500 to 5.580 GHz, 5 channels 5.600 to 5.700 GHz, 3 channels 5.745 to 5.825 GHz, 5 channels						
Nata Contantant	5.745 to 5.825 GHz, 5 ch		Midden I commission To					
country, please visit								

Item	Specification				
802.11n HT40	-				
MCS0	1	-88	-86	-90	-90
MCS4	1	-82	-80	-85	-83
MCS7	1	-75	-74	-78	-76
MCS8	2	-87	-86	-90	-90
MCS12	2	-80	-78	-82	-81
MCS15	2	-72	-70	-75	-73
MCS16	3	-87		-90	
MCS20	3	-78		-81	
MCS23	3	-71		-74	
802.11ac VHT20					
MCS0	1			-95	-94
MCS4	1			-88	-86
MCS7	1			-81	-79
MCS8	1			-77	-75
MCS0	2			-94	-93
MCS4	2			-86	-84
MCS7	2			-78	-76
MCS8	2			-74	-72
MCS0	3			-93	
MCS4	3			-85	
MCS7	3			-78	
MCS8	3			-72	
MCS9	3			-69	
802.11ac VHT40					
MCS0	1			-91	-90
MCS4	1			-85	-84
MCS7	1			-79	-77
MCS8	1			-75	-73
MCS9	1			-73	-71
MCS0	2			-91	-90
MCS4	2			-83	-82
MCS7	2			-76	-74
MCS8	2			-73	-70
MCS9	2			-71	-68
MCS0	3			-91	
MCS4	3			-82	
MCS7	3			-74	
MCS8	3			-69	
MCS9	3			-68	

Item	Specification						
802.11ac VHT80		_					
MCS0	1				-88		-88
MCS4	1				-83		-81
MCS7	1				-75		-73
MCS8	1				-71		-69
MCS9	1				-69		-67
MCS0	2				-88		-88
MCS4	2				-80		-78
MCS7	2				-73		-71
MCS8	2				-69		-67
MCS9	2				-67		-65
MCS0	3				-88		
MCS4	3				-78		
MCS7	3				-71		
MCS8	3				-67		
MCS9	3				-65		
Maximum conducted	15621		1562D	'		1562E	
transmit power	• 2.4 GHz: 29 dBm with			GHz: 27 dBm with 2 ante			7 dBm with 2 antennas
No. 7	• 5 GHz: 29 dBm with 3			Hz: 27 dBm with 2 antenr			dBm with 2 antennas
specific details.	wer setting will vary by cha	nnei and acco	raing to in	dividual country regulation	ons. Ke	rer to the product	documentation f or
Interfaces	 WAN port 10/100/1000BASE-T Ethernet, autosensing (RJ-45), PoE in SFP port (fiber or electrical) Management console port (RJ-45) Multicolor LED DC power input Reset button 						
Uplink options	Ethernet, SFP, and wirele	ss mesh (futu	re availabi	lity)			
Dimensions (L x W x D)	1562l: 9.0 x 6.8 x 3.9 in. (22.9 x 17.1 x 9.8 cm) 1562D: 9.0 x 6.8 x 4.3 in. (22.9 x 17.1 x 10.9 cm) 1562E:: 9.0 x 6.8 x 3.9 in. (22.9 x 17.1 x 9.8 cm)						
Weight	1562l: 5.6 lb (2.5 kg) 1562D: 5.7 lb (2.6 kg) 1562E: 5.6 lb (2.5 kg)						
Environmental	Operating temperature: - 40 to 65°C (-40 to 149°F) ambient air with no solar loading - 40 to 55°C (-40 to 131°F) ambient air with solar loading Storage temperature: -40 to 85°C (-40 to 185°F) Wind resistance: - Up to 100-mph sustained winds - Up to 165-mph wind gusts						
Environmental ratings	Solar radiation EN	MA 250-2008 MA 250-2008 60068-2-5 (1 STD-810	(600 hou	·			

Item	Specification							
Antennas	Integrated dual-band semi- 4 dBi (5 GHz)	-omnidirectional antenn	a radome, vertically po	olarized (1562l) 7 dBi (2.4 GHz),				
	• Integrated dual-band directional antenna radome, dual polarized (1562D) 9 dBi (2.4 GHz), 10 dBi (5 GHz)							
	Dual Band							
	∘ AIR-ANT2568VG-N	6 dBi (2.4 GHz),	8 dBi (5 GHz)	Omni				
	∘ AIR-ANT2547VG-N	4 dBi (2.4 GHz),	7 dBi (5 GHz)	Omni				
	∘ AIR-ANT2547V-N	4 dBi (2.4 GHz),	7 dBi (5 GHz)	Omni				
	∘ AIR-ANT2588P3M-N=	8 dBi (2.4 GHz),	8 dBi (5 GHz)	Directional				
	∘ AIR-ANT2513P4M-N=	13 dBi (2.4 GHz),	13 dBi (5 GHz)	Directional				
	 Single Band 							
	2.4 GHz							
	∘ AIR-ANT2450V-N=	5 dBi (2.4 GHz),	Omni					
	∘ AIR-ANT2450VG-N=	5 dBi (2.4 GHz),	Omni, vertical pola	rized				
	∘ AIR-ANT2450HG-N=	5 dBi (2.4 GHz),	Omni, horizontal po	olarized				
	∘ AIR-ANT2480V-N=	8 dBi (2.4 GHz),	Omni					
	∘ AIR-ANT2413P2M-N=	13 dBi (2.4 GHz),	Directional, dual po	plarized				
	5 GHz							
	∘ AIR-ANT5150VG-N=	5 dBi (5GHz),	Omni, vertical pola	rized				
	∘ AIR-ANT5150HG-N=	5 dBi (5GHz),	Omni, horizontal po	olarized				
	∘ AIR-ANT5180V-N=	8 dBi (5GHz),	Omni					
	∘ AIR-ANT5114P2M-N=	14 dBi (5GHz),	Directional, dual po	plarized				
	For antenna details, please re	efer to the antenna web	page: https://www.ci	sco.com/go/antennas				
Powering options	AC (with AIR-PWRADPT)	-RGD1=, AC/DC outd	oor power adapter)					
	• 44–57 VDC input							
	Universal Power of Ethernet (UPoE), 802.3at							
	Cisco power injectors:							
	AIR-PWRINJ-60RGD1= (outdoor rated, 60W, with NEMA 5-15 AC plug)							
	AIR-PWRINJ-60RGD2=(outdoor rated, 60W, unterminated AC cable)							
	AIR-PWRINJ6= (indoor, 802.3at)							
	Note: If 802.3at Power over Et	hernet (PoE) is the sou	rce of power, the 1562	21 radios will shift from 3 x 3 to 2 x 2.				
Power consumption	1562I 32 W (3x3:3,	full power)						
	1562D/E 25 W							
Compliance	Safety							
-	• UL60950, 2 nd Edition							
	• CAN/CSA-C22.2 No. 60950, 2 nd Edition							
	• IEC 60950, 2 nd Edition							
	• EN 60950, 2 nd Edition							
	Immunity							
	• <= 5 mJ f or 6kV/3kA @ 8/20 ms waveform							
	• ANSI/IEEE C62.41							
	EN61000-4-5 Level 4 AC Surge Immunity							
	EN61000-4-4 Level 4 Electrical Fast Transient Burst Immunity							
	EN61000-4-3 Level 4 EMC Field Immunity							
	EN61000-4-2 Level 2 ESD Immunity							
	EN60950 Overvoltage Category IV							
	Radio Approvals							
	• FCC Part 15.247, 15.407							
	FCC Bulletin OET-65C							
	• RSS-247							
	• RSS-102							
	• AS/NZS 4268.2003							
	ARIB-STD 66 (Japan)							
	ARIB-STD T71 (Japan)							
	• EN 300 328							
	• EN 301 893							

Item	Specification
	EMI and Susceptibility
	• FCC part 15.107, 15.109
	• ICES-003
	• EN 301 489-1, -17
	Security
	Wireless bridging/mesh (future availability)
	• X.509 digital certificates
	MAC address authentication
	Advanced Encryption Standard (AES)
	Wireless Access
	• 802.11i, Wi-Fi Protected Access 2 (WPA2), and WPA
	 802.1X authentication, including Extensible Authentication Protocol (EAP) and Protected EAP (EAP-PEAP), EAP Transport Layer Security (EAP-TLS), EAP-Tunneled TLS (EAP-TTLS), EAP-Subscriber Identity Module - (EAP-SIM), and Cisco LEAP
	VPN pass-through
	IP Security (IPsec)
	Layer 2 Tunneling Protocol (L2TP)
	MAC address filtering
Warranty	1-y ear limited hardware warranty

Ordering Information

Table 3 gives ordering information for the Cisco Aironet 1560 Series.

Table 3. Ordering Information for Cisco Aironet 1560 Series

Part Number	Product Description
Aironet 1560 Series	AIR-AP1562I-x-K9: Dual-band 802.11a/g/n/ac, Wave 2, internal semi-omni antennas
	AIR-AP1562E-x-K9: Dual-band 802.11a/g/n/ac, Wave 2, external antennas
	AIR-AP1562D-x-K9: Dual-band 802.11a/g/n/ac, Wave 2, internal directional antennas
	Regulatory domains: (x = regulatory domain)
	Customers are responsible f or verifying approval f or 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.
	• AIR-AP1562I-D-K9I: Dual-band 802.11a/g/n/ac, Wave 2, internal semi-omni antennas (India only)
	Cisco SMARTnet [™] Service for the Cisco Aironet 1560 Series Access Points
	Refer to the Service part numbers available on Cisco Commerce Workspace f or available service offerings.

Warranty Information

The Cisco Aironet 1560 Series Outdoor Access Points come with a 1-year limited warranty that provides full warranty coverage of the hardware. The warranty includes 10 –day advance hardware replacement and helps ensure 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 1560 Series, visit https://www.cisco.com/go/wireless or contact your local Cisco account representative.



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