Data sheet Cisco public CISCO
The bridge to possible

Cisco Catalyst 9130AX Series Access Points



Zapraszamy do kontaktu! Więcej informacji: www.kreski.pl



Contents

Secure infrastructure	5
Cisco DNA Software support	5
Product specifications	6
Licensing	15
Warranty information	15
Cisco environmental sustainability	15
Cisco Services	16
Smart Account	16
Cisco Capital	16
Document history	17



The Cisco Catalyst 9130AX Series Access Points are the next generation of enterprise access points. They are resilient, secure, and intelligent.



With the emergence of high-density networks and the Internet of Things (IoT), we are more dependent on wireless networks than ever before. Increasing numbers of devices connect to the network every year, ranging from high-performance client devices to low-bandwidth IoT devices. Cisco Catalyst 9130AX Series Access Points provide a seamless experience anywhere for everyone, with high scaling and unmatched performance in diverse network deployments. Going beyond the Wi-Fi 6 (802.11ax) standard, the 9130AX Series provides integrated security, resiliency, and operational flexibility as well as increased network intelligence.

Extending Cisco's intent-based network and perfect for networks of all sizes, the Cisco Catalyst 9130AX Series scales to meet the growing demands of IoT while fully supporting the latest innovations and new technologies. The 9130AX Series is also a leader in performance, security, and analytics.

The Cisco Catalyst 9130AX Series Access Points, paired with the Cisco Digital Network Architecture (Cisco DNA), are enterprise-class products that will address both your current and future needs. They are the first step in updating your network to take better advantage of all of the features and benefits that Wi-Fi 6 provides.

Table 1. Features and benefits

Feature	Benefits
Wi-Fi 6 (802.11ax)	The IEEE 802.11ax emerging standard, also known as High-Efficiency Wireless (HEW) or Wi-Fi 6, builds on 802.11ac. It delivers a better experience in typical environments with more predictable performance for advanced applications such as 4K or 8K video, high-density, high-definition collaboration apps, all-wireless offices, and IoT. Wi-Fi 6 is designed to use both the 2.4-GHz and 5-GHz bands, unlike the 802.11ac standard.
Cisco RF ASIC	The Cisco RF Application-Specific Integrated Circuit (ASIC) is a fully integrated Software-Defined Radio (SDR) that can perform advanced RF spectrum analysis and delivers features such as Cisco CleanAir, Wireless Intrusion Prevention System (WIPS), FastLocate, and Dynamic Frequency Selection (DFS) detection.
Uplink/downlink OFDMA	Orthogonal Frequency-Division Multiple Access (OFDMA)-based scheduling splits the bandwidth into smaller frequency allocations called Resource Units (RUs), which can be assigned to individual clients in both the downlink and uplink directions to reduce overhead and latency.
Uplink/downlink MU-MIMO technology	Supporting eight spatial streams, Multiuser Multiple Input, Multiple Output (MU-MIMO) enables access points to split spatial streams between client devices to maximize throughput.



Feature	Benefits
BSS coloring	Spatial reuse (also known as Basic Service Set [BSS] coloring) allows the access points and their clients to differentiate between BSSs, thus permitting more simultaneous transmissions.
Target Wake Time	A new power-saving mode called Target Wake Time (TWT) allows the client to stay asleep and to wake up only at prescheduled (target) times to exchange data with the access point. This offers significant energy savings for battery-operated devices, up to three to four times the savings achieved by 802.11n and 802.11ac.
Intelligent Capture	Intelligent Capture probes the network and provides Cisco DNA Center with deep analysis. The software can track more than 240 anomalies and instantaneously review all packets on demand, emulating the onsite network administrator. Intelligent Capture allows for more informed decisions on your wireless networks.
Flexible Radio Assignment (FRA) with tri-radio mode	FRA allows the access points to intelligently determine the operating mode of serving radios based on the RF environment and traffic demands. The access points can operate in the following modes: • Dual-radio mode: One 8x8 5 GHz and one 4x4 2.4 GHz. One radio will serve clients on the 5-GHz band, while the other serves clients on the 2.4-GHz band.
	 Tri-radio mode: Dual 4x4 5 GHz and one 4x4 2.4 GHz. With two 4x4 5-GHz and one 4x4 2.4-GHz radios (tri-radio) inside the access point, client device capacity can be increased on demand. The access point's default mode is dual radio with 8x8 5 GHz and 4x4 2.4 GHz. It has the ability to split the 8x8 radio into two separate 4x4 5-GHz radios through software, thereby enabling the benefits of FRA while allowing the 2.4-GHz radio to remain active.
Industry first 8x8 external antenna access point with smart antenna connector	The Cisco Catalyst 9130AX Series Access Points are the first in the industry to provide an 8x8 radio architecture with external antennas. Additionally, these antennas can be split into a dual 4x4 radio architecture. An intelligent physical antenna connector is included on the 9130AX Series with an external antenna. This connector provides advanced network design flexibility for high-density and large open-area environments such as auditoriums, convention centers, libraries, cafeterias, and arenas/stadiums.
Cisco Embedded Wireless Controller (EWC)	An Embedded Wireless Controller on the Catalyst 9130AX access points is designed for networks of all sizes, including small and medium-sized businesses and distributed enterprises. It provides industry-leading wireless LAN technology without the need for a physical wireless controller. For more details refer to the EWC data sheet .
Application Hosting on Catalyst 9100 Access	Application Hosting on Catalyst 9100 Access Points helps future-proof and simplify IoT deployments by eliminating the need to install and manage overlay networks. Utilizing the USB interface, containerized applications and hardware modules can be deployed to reduce cost and complexity. Adding Cisco DNA Center provides workflows and deployment-wide application lifecycle management.
Multigigabit Ethernet support	Multigigabit Ethernet provides uplink speeds of 5 Gbps and 2.5 Gbps, in addition to 100 Mbps and 1 Gbps. All speeds are supported on Category 5e cabling, as well as 10GBASE-T (IEEE 802.3bz) cabling.
Bluetooth 5	Integrated Bluetooth Low Energy (BLE) 5 radio enables location-based use cases such as asset tracking, wayfinding, and analytics.
Container support for applications	Container support enables edge computing capabilities for IoT applications on the host access point.



Feature	Benefits
Apple features	Apple and Cisco have partnered to create an optimal mobile experience for iOS devices on corporate networks based on Cisco technologies. Using new features in Apple iOS, in combination with the latest software and hardware from Cisco, businesses can now more effectively use their network infrastructure to deliver an enhanced user experience across all business applications. At the center of the collaboration is a unique handshake between the Cisco WLAN and Apple devices. This handshake enables the Cisco WLAN to provide an optimal Wi-Fi roaming experience to Apple devices. Additionally, the Cisco WLAN trusts Apple devices and gives priority treatment for business-critical applications specified by the Apple device. This feature is also known as Fast Lane.

For more details about Wi-Fi 6, see Cisco's technical white paper on Wi-Fi 6.

For more details about Catalyst 9130AX feature support, see Cisco's Feature Matrix.

Secure infrastructure

Trustworthy systems built with Cisco Trust Anchor Technologies provide a highly secure foundation for Cisco products. With the Cisco Catalyst 9100 Access Points, these technologies enable assurance of hardware and software authenticity for supply chain trust and strong defense against man-in-the-middle attacks that compromise software and firmware. Trust Anchor capabilities include:

- Image signing
- Secure Boot
- Cisco Trust Anchor module

Cisco DNA Software support

Pairing the Cisco Catalyst 9130AX Series Access Points with Cisco DNA Software allows for a total network transformation. Cisco DNA Software allows you to truly understand your network with real-time analytics, quickly detect and contain security threats, and easily provide networkwide consistency through automation and virtualization. The 9130AX Series supports Software-Defined Access (SD-Access), Cisco's leading enterprise architecture.

Working together, the Cisco Catalyst 9130AX Series and Cisco DNA Software offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- · Cisco DNA Analytics and Assurance

The result? Your network stays relevant, becomes digital ready, and is the lifeblood of your organization.

Note: For information about Cisco DNA Software, refer to the Cisco DNA Software for Wireless.



Product specifications

 Table 2.
 Specifications

Item	Specification
Part numbers	Cisco Catalyst 9130AXI Access Point: Indoor environments, with internal antennas
	C9130AXI-x: Cisco Catalyst 9130AX Series
	C9130AXI-EWC-x: Cisco Catalyst 9130AX Series with Embedded Wireless Controller
	Cisco Catalyst 9130AXE Access Point: Challenging indoor environments, with external antennas
	C9130AXE-x: Cisco Catalyst 9130AX Series
	C9130AXE-EWC-x: Cisco Catalyst 9130AX Series with Embedded Wireless Controller
	Cisco Catalyst 9130AXE-STA Access Point: C9130 AP with C-ANT9104 Stadium antenna
	C9130AXE-STA-x: Cisco Catalyst 9130AX Series
	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 and/or regional price lists.
	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: <u>Cisco Wireless LAN Performance and Security Assessment Service</u>
Software	Catalyst 9130AXI
	Cisco Unified Wireless Network Software Release 8.10.x or later
	Cisco IOS XE Software Release 16.12.1 with AP Device Pack, or later
	Catalyst 9130AXE
	Cisco Unified Wireless Network Software Release 8.10 MR1 or later
	Cisco IOS XE Software Release 17.1.1 or later
	Cisco Catalyst 9130AXE Stadium Antenna Access Point, external antenna (C-ANT9104)
	Cisco IOS XE Software Release 17.6.1 or later
Supported wireless LAN controllers	 Cisco Catalyst 9800 Series Wireless Controllers Cisco 3504, 5520, and 8540 Wireless Controllers and Cisco Virtual Wireless Controller Note: C9130AXE-STA-x is not supported on AireOS controllers
802.11n version 2.0 (and related) capabilities	 • 4x4 MIMO with four spatial streams • Maximal Ratio Combining (MRC) • 802.11n and 802.11a/g • 20- and 40-MHz channels • PHY data rates up to 1.5 Gbps (40 MHz with 5 GHz and 20 MHz with 2.4 GHz) • Packet aggregation: Aggregate MAC Protocol Data Unit (A-MPDU) (transmit and receive), Aggregate MAC Service Data Unit (A-MSDU) (transmit and receive) • 802.11 Dynamic Frequency Selection (DFS) • Cyclic Shift Diversity (CSD) support



Item	Specification
802.11ac	 8x8 downlink MU-MIMO with eight spatial streams MRC 802.11ac beamforming 20-, 40-, 80-, and 160-MHz channels PHY data rates up to 3.4 Gbps (8x8 80 MHz or Dual 4x4 80+80 MHz on 5GHz) Packet aggregation: A-MPDU (transmit and receive), A-MSDU (transmit and receive) 802.11 DFS CSD support Wi-Fi Protected Access (WPA) 3 support
802.11ax	 8x8 uplink/downlink MU-MIMO with eight spatial streams Uplink/downlink OFDMA TWT BSS coloring MRC 802.11ax beamforming 20-, 40-, 80-, and 160-MHz channels PHY data rates up to 5.38 Gbps (8x8 80 MHz or Dual 4x4 80+80 MHz on 5GHz and 4x4 20 MHz on 2.4) Packet aggregation: A-MPDU (transmit and receive), A-MSDU (transmit and receive) 802.11 DFS CSD support WPA3 support
Integrated antenna	 2.4 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth 5 GHz: Peak gain 6 dBi, internal antenna, omnidirectional in azimuth
External antenna with smart antenna connector	 The Cisco Catalyst 9130AXE Access Point is certified for use with antenna gains up to 13 dBi (2.4 GHz and 5 GHz) Cisco offers the industry's broadest selection of antennas, delivering optimal coverage for a variety of deployment scenarios Supports Self-Identifiable Antennas (SIA) on the smart antenna connector Smart antenna connector is a compact multi-RF connector with 8-DART interface Requires the AIR-CAB002-D8-R= 2 ft smart antenna connector when used with antennas with a RP-TNC connector Requires the AIR-CAB003-D8-N= 3 ft smart antenna connector when used with AIR-ANT2513P4M-N= antenna For more details, see the Catalyst 9130AX Series Getting Started Guide. For more details on C9130AXE-STA, see C-ANT9104 Hardware Installation Guide
Interfaces	 1x 100, 1000, 2500, 5000 Multigigabit Ethernet (RJ-45) Management console port (RJ-45) USB 2.0 at 4.5W
Indicators	Status LED indicates boot loader status, association status, operating status, boot loader warnings, and boot loader errors



Item	Specification	Specification						
Dimensions (W x L x H)	C9130AXI: 8C9130AXE:	 Access point (without mounting brackets): C9130AXI: 8.9 x 8.9 x 1.88 in. (22.6 x 22.6 x 4.8 cm) C9130AXE: 9.17 x 9.17 x 1.58 in. (23.3 x 23.3 x 4.0 cm) C9130AXE-STA: 18.2 X 23.5 X 5.8 in. (59.70 X 46.23 X 14.8 cm) 						
Weight	• 3.2 lb. (1.45 kg Cisco Catalyst 9 • 3.78 lb. (1.71 k Cisco Catalyst 9	Cisco Catalyst 9130AXI • 3.2 lb. (1.45 kg) Cisco Catalyst 9130AXE • 3.78 lb. (1.71 kg) Cisco Catalyst 9130AXE-STA • 15.5 lbs (7.03 Kg)						
Input power requirements	Cisco power inj802.3af PoE	 802.3at Power over Ethernet Plus (PoE+), 802.3bt Cisco Universal PoE (Cisco UPOE) Cisco power injector, AIR-PWRINJ6= 802.3af PoE Cisco power injector, AIR-PWRINJ5= (Note: This injector supports only 802.3af) 						
	Catalyst 9130AXI							
	Power source	2.4-GHz radio	5-GHz radio	-GHz radio Link speed		USB	Max PoW Power Consumption	
	802.3at (PoE+)	4x4	8x8	5G		N	25.5W	
	802.3at (PoE+)	4x4	4x4	5G		Y [4.5W]	25.5W	
	802.3bt (Cisco UPOE)	4x4	8x8	5G		Y [4.5W]	30.5W	
	Cisco Catalyst 9	9130AXE						
	Power source	2.4-GHz radio	5-GHz radio	io Link speed USB Max PoE Power Consumpti				
	802.3at (PoE+)	4x4	8x8	5G		N	25.5W	
	802.3at (PoE+)	4x4	4x4	5G	Y [4.5W]	25.5W		
	802.3bt (Cisco 4x4 8x8 5G Y [4.5W] 30.5W UPOE)							
	Cisco Catalyst 9130AXI and 9130AXE Power source 2.4-GHz radio 5-GHz radio Link speed USB Max PoE Power Consumption							
							Power	
	802.3af	PoE	1x1	1x1	1G	N	13.4W	



Item	Specification				
	Note: Actual power consumption may very depending on AP usage. It is recommended that you ensure that LLDP/CDP is enabled to allow proper power negotiation.				
Environmental	Cisco Catalyst 9130AXI Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) Nonoperating (storage) altitude test: 25°C, 15,000 ft (4600 m) Operating temperature: 32° to 122°F (0° to 50°C) Operating humidity: 10% to 90% (noncondensing) Operating altitude test: 40°C, 9843 ft (3000 m) Note: When the ambient operating temperature exceeds 40°C, the access point will shift from 8x8 to 4x4 on the 5 GHz radio, uplink Ethernet will downgrade to 1 Gigabit Ethernet; however, the USB interface will remain enabled. Cisco Catalyst 9130AXE Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) Nonoperating (storage) altitude test: 25°C, 15,000 ft (4600 m) Operating temperature: -4° to 122°F (-20° to 50°C) Operating humidity: 10% to 90% (noncondensing) Operating altitude test: 40°C, 9843 ft.(3000 m)				
System memory	• 2048 MB DRAM • 1024 MB flash				
Warranty	Limited lifetime hardware warranty				
Available transmit power settings	2.4 GHz • 23 dBm (200 mW) • -4 dBm(0.39 mW) 5 GHz • 26 dBm (400 mW) • -1 dBm (0.79 mW)				
Regulatory domains	Note: Customers are responsible for verifying appreciation verify approval and to identify the regulatory dominant visit https://www.cisco.com/go/aironet/complian For information about regulatory domain support, repaper.	nain that corresponds to a particular country, ce.			
Compliance standards	• Safety: • IEC 60950-1 • EN 60950-1 • UL 60950-1 • CAN/CSA-C22.2 No. 60950-1 • AS/NZS60950.1 • UL 2043 • Class III equipment • Emissions: • CISPR 32 (rev. 2015) • EN 55032 (rev. 2012/AC:2013) • EN 55032 (rev. 2015) • EN 61000-3-2 (rev. 2014)	 Radio: EN 300 328 (v2.1.1) EN 301 893 (v2.1.1) AS/NZS 4268 (rev. 2017) 47 CFR FCC Part 15C, 15.247, 15.407 RSP-100 RSS-GEN RSS-247 China regulations SRRC LP0002 (rev 2018.1.10) Japan Std. 33a, Std. 66, and Std. 71 RF safety: EN 50385 (rev. Aug 2002) 			



Item		Specification							
		 KN61000-3-3 AS/NZS CISPR 32 Class B (rev. 2015) 47 CFR FCC Part 15B ICES-003 (rev. 2016 Issue 6, Class B) VCCI-CISPR 32 CNS (rev. 13438) KN-32 QCVN 118:2018/BTTTT Immunity: CISPR 24 (rev. 2010) EN 55024 + AMD 1(rev. 2010) EN 55035: 2017 KN35 Emissions and immunity: EN 301 489-1 (v2.1.1 2017-02) EN 301 489-17 (v3.1.1 2017-02) QCVN (18:2014) QCVN 112:2017/BTTTT KN 489-1 KN 489-17 EN 60601-1-2:2015 EN 61000-6-1: 2007 				AS/ EN RSS FIEEE ST FIEEE ST FIEEE	2.11i, (WPA2, W 2.11X vanced Encryption sible Authentics 2-Transport Lay 2-Tunneled TLS sillenge Handsha 3CHAP) v2 tected EAP (PEA 2-Flexible Authenneling (EAP-FA AP v1 or EAP-Ga 2-Subscriber Ide	2016) 2010)	(EAP) types: (S) rosoft tion Protocol MSCHAP v2 ecure Card (GTC) (SIM)
Data rate, power, re- sensitivity	ceive	For more detaile to the Cisco RF		out data rate,	trans	mit powe	er, and receive	sensitivity, p	nease refer
Transmit ((Tx) power	and receive (Rx)	sensitivity						
			5-GHz primary	radio	5-G	iHz secoi	ndary radio	2.4-GHz ra	dio
	Spatial streams	Number of active antennas Total Tx power (dBm) Rx Total power (dBm) (dBm) (dBm)				Rx sensitivity (dBm)	Total Tx power (dBm)	Rx sensitivity (dBm)	
802.11/11	b								
1 Mbps	1	4	_	-	_		_	23	-104
11 Mbps	1	4	-	-	-		_	23	-96
802.11a/g									

-100

-92

-84

23

22

21

-99

-92

-83

23

22

20

4

4

4

23

22

21

6 Mbps

24 Mbps 1

54 Mbps 1

1

-98

-91

-82

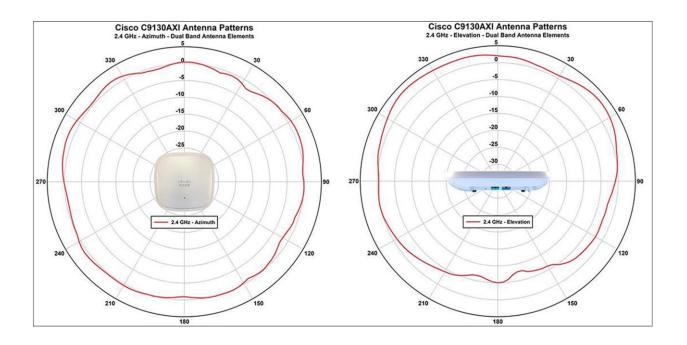


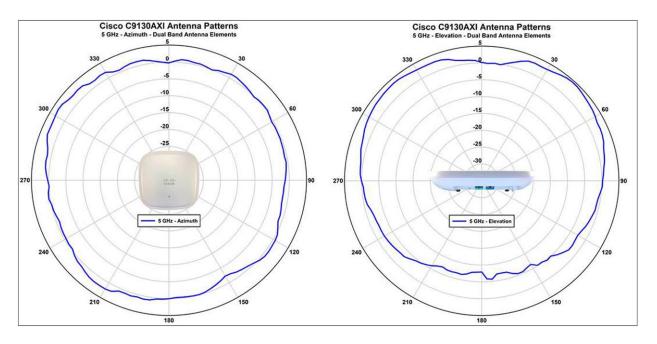
Item		Specification							
802.11n H	802.11n HT20								
MCS0	1	4	23	-99	23	-99	23	-98	
MCS31	4	4	20	-77	20	-77	20	-75	
802.11n HT40									
MCS0	1	4	23	-96	23	-96	_	-	
MCS31	4	4	20	-75	20	-75	_	-	
802.11ac	VHT20								
MCS0	1	4	23	-100	23	-99	_	_	
MCS9	4	4	-	-	_	-	_	-	
MCS0	1	8	26	-102	_		_	-	
MCS8	8	8	23	-73	-		_	-	
MCS9	8	8	_	_	_		_	-	
802.11ac	VHT40								
MCS0	1	4	23	-96	23	-96	_	-	
MCS9	4	4	19	-69	19	-69	_	-	
MCS0	1	8	26	-99		-	_	_	
MCS9	8	8	22	-69		-	_	-	
802.11ac	VHT80								
MCS0	1	4	23	-93	23	-93	_	-	
MCS9	4	4	19	-65	19	-64	_	_	
MCS0	1	8	26	-95		_	_	-	
MCS9	8	8	22	-65		-	-	-	
802.11ac	VHT160								
MCS0	1	4	26	-89		_	-	_	
MCS9	4	4	21	-61		_	_	-	



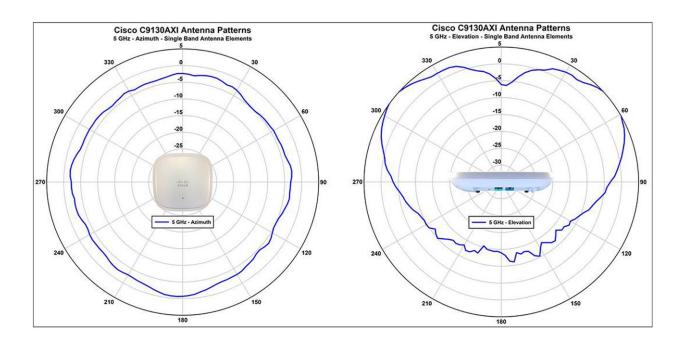
Item		Specification							
802.11ax l	802.11ax HE20								
MCS0	1	4	23	-99	23	-99	23	-98	
MCS11	4	4	18	-66	18	-66	17	-65	
MCS0	1	8	26	-102		_	_	_	
MCS11	8	8	21	-65		-	-	_	
802.11ax l	802.11ax HE40								
MCS0	1	4	23	-96	23	-96	_	_	
MCS11	4	4	18	-63	18	-62	-	_	
MCS0	1	8	26	-99		_	_	_	
MCS11	8	8	21	-63		_	_	_	
802.11ax l	HE80								
MCS0	1	4	23	-93	23	-93	_	_	
MCS11	4	4	17	-59	17	-59	-	_	
MCS0	1	8	26	-96		_	_	_	
MCS11	8	8	20	-59		-	-	_	
802.11ax l	HE160								
MCS0	1	4	26	-88	_		_	_	
MCS11	4	4	19	-56	_		-	_	

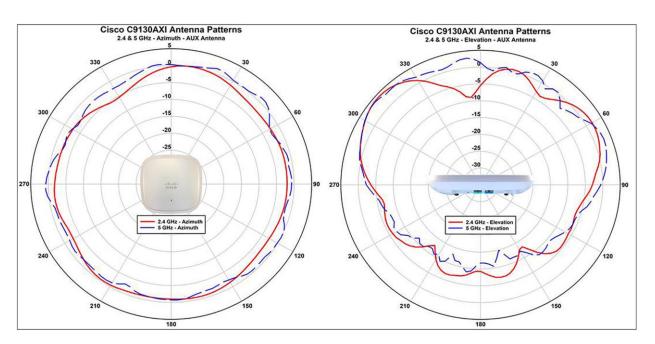














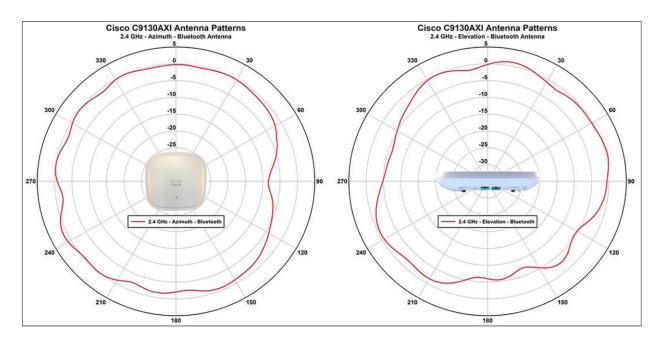


Figure 1. Antenna profiles

Note: For information about feature support, refer to the Cisco Catalyst 9100 Release Notes.

Licensing

For information about licensing and packaging, refer to Cisco DNA Software for Wireless.

Warranty information

The Cisco Catalyst 9130AX 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 https://www.cisco.com/go/warranty.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's <u>Corporate Social Responsibility</u> (CSR) Report.

Reference links to information are below

Information on product material content laws and regulations: Materials.

Information on electronic waste laws and regulations, including products, batteries, and packaging: WEEE compliance.

Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.



Cisco Services

With Cisco Services, you can achieve infrastructure excellence faster with less risk. From an initial WLAN readiness assessment to implementation, full solution support, and in-depth training, our services for the Cisco Catalyst 9130AX Series provide expert guidance to help you successfully plan, deploy, manage, and support your new access points. With unmatched networking expertise, best practices, and innovative tools, Cisco Services can help you reduce overall upgrade, refresh, and migration costs as you introduce new hardware, software, and protocols into the network. With a comprehensive lifecycle of services, Cisco experts will help you minimize disruption and improve operational efficiency to extract maximum value from your Cisco DNA-ready infrastructure.

Smart Account

Creating a Smart Account by using the Cisco Smart Software Manager (SSM) enables you to order devices and licensing packages and also manage your software licenses from a centralized website. For more information on Smart Accounts, refer to https://www.cisco.com/go/smartaccounts.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. <u>Learn more</u>.



Document history

New or revised topic	Described in	Date	
Cisco DNA Spaces name change	Updated product name to Cisco Spaces	Oct 18, 2022	



Zapraszamy do kontaktu! Więcej informacji: www.kreski.pl

Americas Headquarters Cisco Systems, Inc. San Jose, CA Asia Pacific Headquarters Cisco Systems (USA) Pte. Ltd. Singapore

Europe Headquarters Cisco Systems International BV Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at https://www.cisco.com/go/offices.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: https://www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Printed in USA C78-742900-12 11/23