Data sheet Cisco public



Cisco Wireless 9178 Series Access Points

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Cisco Wireless Wi-Fi 7 access points create wireless networks for the Al enterprise, bridging the gap between physical and digital experiences.



Product overview

Cisco's Wi-Fi 7 access points power the next generation of wireless experiences, designed to revolutionize connectivity and digital experiences. Offering unprecedented speeds, enhanced security, and resilient connectivity, these products are ideal for high-density environments and critical applications. They seamlessly integrate into your existing network, whether on-premises, cloud-based, or hybrid, providing flexible deployment options to suit various organizational needs.

The Cisco® Wireless Wi-Fi 7 access points enable transformative user experiences. Enterprises can leverage the predictability and low latency of Wi-Fi 7 to support better video streaming, augmented reality (AR), and virtual reality (VR) applications. By connecting people and things within physical spaces, Cisco's wireless solutions with Wi-Fi 7 offer real-time insights and actions such as indoor navigation and personalized user experiences.

Create differentiated customer experiences, accelerate digital business transformation, and prepare networks for the future with Cisco's Wi-Fi 7 solutions. With faster data transfer rates, reduced network congestion, and simplified network management with Al-driven insights and automation, the Cisco Wireless 9178 Series Access Points provide the foundation for the future of wireless.

Features and benefits

Table 1. Features and benefits

Feature	Benefit
Wi-Fi 7 (802.11be)	The IEEE 802.11be standard, also known as Extremely High Throughput (EHT) or Wi-Fi 7, is the latest in Wi-Fi with enhancements such as 4K-QAM, multilink operation (MLO), enhanced orthogonal frequency-division multiple access (OFDMA), preamble puncturing support for a 320MHz channel width built to increase data transfer rates and connection performance, especially for applications requiring low latency like AR and VR apps.
Wi-Fi 6E (802.11ax)	The IEEE 802.11ax 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 the Internet of Things (IoT). Wi-Fi 6E is Wi-Fi 6 "extended" into the 6-GHz frequency band.

Feature	Benefit
Dual 10G Multigigabit Ethernet	Dual Multigigabit Ethernet provides power-redundant and link-redundant uplink ports, each with speeds up to 10 Gbps. Link and power redundancy provides hitless performance during failover.
	Note: Cat6/Cat6A cabling is required for 10 Gbps port speeds. Cat 5e cable can support speeds up to 5 Gbps.
Built-in GNSS/GPS	A built-in GNSS/GPS antenna allows seamless co-location onboarding, with the AP intelligently selecting regulatory domain and location information.
Integrated Ultra-Wideband (UWB) radio	For precision asset tracking and location services using Cisco Wi-Fi 7 APs, an integrated UWB radio provides the flexibility to enable more use cases for enterprises.
AP power optimizations (AP Power Save Mode)	AP Power optimizations (AP Power save mode) allow the access point to reduce its power consumption by e.g. shutting off radios during off-hours and weekends – while still being smart enough to re-engage all features should they be needed. This both saves power and reduces the carbon footprint of running a wireless network.
Band steering	Enhanced to help clients that are 6-GHz capable to leave the 5-GHz radio and connect to the 6-GHz radio. Wi-Fi 6E-capable clients are automatically directed to connect to the 6-GHz radio to take advantage of the benefits that that radio offers while clearing the 2.4-and 5-GHz radios for legacy clients.
Intelligent Capture	Intelligent Capture probes the network and provides Cisco Catalyst™ 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 quad-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:
	• Tri-radio mode: One 4x4 6-GHz radio, one 4x4 5-GHz radio, and one 4x4 2.4-GHz radio
	• In quad-radio mode, the access point features one 4x4 6-GHz radio, dual 4x4 5-GHz radios, and one 4x4 2.4-GHz radio. With four total 4x4 radios (quad-radio) inside the access point, client device capacity can be increased on demand.
	The access point's default mode is tri-radio with 4x4 for 5 GHz, 6 GHz, and 2.4 GHz. It has the ability to operate in quad-radio mode, thereby enabling the benefits of FRA while allowing the 2.4- and 6-GHz radios to remain active.
Bluetooth/BLE	The integrated Bluetooth Low Energy (BLE) 5.3 radio enables location-based use cases such as asset tracking, wayfinding, and analytics. Upgradeable to BLE 6 with future software update.
Application hosting	Application hosting helps simplify IoT deployments and ready them for the future by eliminating the need to install and manage overlay networks. Using the USB interface, containerized applications and hardware modules can be deployed to reduce cost and complexity. Adding Cisco Catalyst Center provides workflows and deployment-wide application lifecycle management.
Container support for applications	Container support enables edge computing capabilities for IoT applications on the host access point.
Accelerometer	A built-in accelerometer allows continuous, post-deployment verification of how the AP is installed.

Introducing global use access points and Cisco Networking Subscription

Global use access points

Expanding our comprehensive 6-GHz wireless portfolio, the 9178 Series global use access points offer a resilient, scalable solution for your modern wireless network. These access points seamlessly operate in either deployment mode, giving you the flexibility and investment protection you need for the future.

With the Cisco Wireless Wi-Fi 7 access points, you get an intelligent process for management mode discovery that's seamless, scalable, and straightforward. The global use access points' onboarding process eliminates the need for stack-specific and regulatory domain-specific products, saving you time and effort during installation.

Cisco's Wi-Fi 7 global use access points further unify our wireless product portfolio. Whether you choose onpremises or cloud-managed networking, the 9178 Series access points help you build future proof networks with ease.

Cisco Networking Subscription

The Cisco Networking Subscription streamlines the purchasing and use of Cisco software, hardware, services, and platforms. This unified licensing model offers the flexibility to manage your network on-premises, in the cloud, or in a hybrid manner, using the same unified licenses, product support, and hardware.

You can purchase our new unified licenses (Cisco Wireless Essentials or Advantage) in a Cisco Networking Subscription. These licenses include product support for both your hardware and software. With an active subscription, you can align renewal dates to your cost-center needs, add licenses without changing renewal dates, and upgrade entitlements midterm. The Cisco Networking Subscription provides flexible management options, supporting your network investment today and protecting it for the future.

Note: For more information about the Cisco Networking Subscription, refer to the data sheet.

Secure infrastructure

Trustworthy systems built with Cisco Trust Anchor Technologies provide a highly secure foundation for Cisco products. Cisco Wireless access points help 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 Catalyst Center and Catalyst 9800 Series support

Pairing the Cisco Wireless 9178 Series Access Points with a Catalyst 9800 Series WLC and Cisco Catalyst Center allows for a total network transformation. Cisco Catalyst Center 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 Cisco Wireless 9178 Series supports Software-Defined Access (SD-Access), Cisco's leading enterprise architecture.

The Cisco Wireless 9178 Series access points, combined with Cisco solutions, offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco DNA Analytics and Assurance along with Intelligence Capture (iCAP)

Note: For information about Cisco Catalyst Center, refer to the Cisco Catalyst Center Solution Overview.

Cisco Meraki cloud management

Pairing the Cisco Wireless 9178 Series Access points with the Cisco Meraki® cloud platform gives organizations a unified IT experience for network monitoring and management. The Meraki dashboard provides an intuitive and interactive web interface connecting your network to the industry's leading cloud IT platform.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices, and manage a full-stack network, from SD-WAN to access to IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Cisco Wireless 9178 Series and Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- · Meraki Health intelligent optimization and assurance
- Meraki Vision, smart cameras, and sensors

Note: For information about Cisco Meraki, refer to https://meraki.cisco.com/products/.

Licensing

Cisco Wi-Fi 7 access points, including the 9178 Series, require a Cisco Networking Subscription for wireless, either Essentials or Advantage licenses.

For information about licensing features and support, refer to the https://www.cisco.com/c/en/us/products/collateral/networking/software/networking-subscription-ds.html.

Product specifications

Table 2. Product specifications

Item	Specification			
Part numbers	Cisco Wireless 9178l Access Point: Internal antennas • CW9178l			
Software	Cisco Wireless 9178I • Cisco IOS® XE Software Release 17.15.2 or later			
Supported wireless LAN controllers	 Catalyst 9800 Series Wireless Controllers (physical or virtual) Cisco Catalyst 9000 switches with Embedded Wireless Controller in SDA mode 			
802.11be	 4x4 + 4x4 uplink/downlink MU-MIMO with 4 spatial streams each (5 GHz) 4x4 uplink/downlink MU-MIMO with four spatial streams (2.4 and 6 GHz) 4096 QAM Multilink operation Preamble puncturing Uplink/downlink OFDMA TWT BSS coloring Maximal Ratio Combining (MRC) 20-, 40-, 80-, 160- and 320-MHz channels (6 GHz) 20-, 40-, 80-, and 160-MHz channels (5 GHz) 20-MHz channels (2.4 GHz) PHY data rates: in Quad radio mode, up to 24 Gbps (4x4 320 MHz on 6 GHz, 4x4 + 4x4 160 MHz on 5 GHz, and 4x4 20 MHz on 2.4 GHz); in Tri radio mode, up to 18 Gbps (4x4 320 MHz on 6 GHz, 4x4 160 MHz on 5 GHz, and 4x4 20 MHz on 5 GHz and 4x4 20 MHz on 5 GHz and 4x4 160 MHz on 5 GHz and 4x4 160 MHz on 5 GHz and 4x4 160 MHz on 5 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 Wi-Fi Protected Access 3 (WPA3) support 			
802.11ax	 4x4 + 4x4 uplink/downlink MU-MIMO with four spatial streams each (5 GHz) 4x4 uplink/downlink MU-MIMO with four spatial streams (2.4 and 6 GHz) Uplink/downlink OFDMA 1024 QAM TWT BSS coloring MRC 802.11ax beamforming 20-, 40-, 80-, and 160-MHz channels (5 and 6 GHz) 20-MHz channels (2.4 GHz) PHY data rates up to 10.2 Gbps (4x4 160 MHz on 6 GHz, 4x4 + 4x4 80 MHz on 5 GHz, and 4x4 20 MHz on 2.4 GHz) Packet aggregation: A-MPDU (transmit and receive), A-MSDU (transmit and receive) 802.11 DFS CSD support WPA2/WPA3 support 			

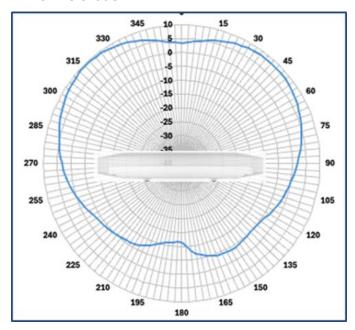
Item	Specification						
802.11ac	 4x4 + 4x4 downlink MU-MIMO with 4x4 spatial streams MRC 802.11ac beamforming 20-, 40-, 80-, and 160-MHz channels PHY data rates up to 3.4 Gbps (dual 4x4 160 MHz on 5 GHz) Packet aggregation: A-MPDU (transmit and receive), A-MSDU (transmit and receive) 802.11 DFS CSD support WPA2/WPA3 support 						
802.11n version 2.0 (and related) capabilities	 4x4 MIMO with four spatial streams MRC 802.11n and 802.11a/g beamforming 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: A-MPDU (transmit and receive), A-MSDU (transmit and receive) 802.11 DFS CSD support 						
Integrated antenna	 2.4 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth 6 GHz: Peak gain 6 dBi, internal antenna, omnidirectional in azimuth loT: Peak gain 3 dBi, internal antenna, omnidirectional in azimuth UWB: Peak gain 7 dBi, internal antenna, omnidirectional in azimuth GNSS: (L1) Peak gain 5 dBi, (L5) Peak gain 2 dBi, internal antenna, omnidirectional in azimuth 						
Interfaces	 2x 100M/1000M/2.5G/5G/10G Multigigabit Ethernet (RJ-45) Management console port (RJ-45) with default speed of 115200 bps USB 2.0 at 9W 						
Indicators	 Status LED indicates boot loader status, association status, operating status, boot loader warnings, and boot loader errors 						
Dimensions (W x L x H)	 Access point (without mounting brackets): 9.9 x 9.9 x 2.0 in. (25.1 x 25.1 x 5.1 cm) 						
Weight	4.1 lb. (1.87	kg)					
Input power requirements	 802.3bt Cisco Universal PoE (Cisco UPOE®), 802.3at Power over Ethernet Plus (PoE+), 802.3af PoE (only for configuring staging, all radios off) (Or) Cisco Power Injector - CW-INJ-8 				PoE+), 802.3af		
	Power Source	2.4-GHz radio	5-GHz radio	6-GHz radio	Link speed	USB	Max PoE power consumption
	802.3bt (Class 6) (UPOE)	4x4	4x4(LB) + 4x4(HB)	4×4	2x 10G	Y (9W)	47W
	802.3at (PoE+) (Quad Radio mode)	2x2	2x2 (LB) + 2x2 (HB)	2x2	2x 2.5 G	N	25.5W

Item	Specification	Specification						
	802.3at (POE+) (Tri Radio Mode)	2x2	4x4 (FB)	2x2	2x	1G	N	25.5W
	802.3af (PoE)	-	-	-	1x	1G	N	13.95W
	recommend	Note: Actual power consumption may vary depending on access point usage. It is recommended that you ensure that Link Layer Discovery Protocol (LLDP)/Cisco Discovery Protocol is enabled to allow proper power negotiation.						
	Note: FB is Bands (UNII	Full Band, LB 2E and 3).	is Lower UN	III Bands	s (UNII 1 a	and 2) and	d HB is Hig	her UNII
	Note: Above	e power draw	table startir	ng with I	OS-XE ve	ersion 17.	.15.3.	
Environmental	 Nonoperating Operating Operating Operating Note: When will shift from 	 Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) Nonoperating (storage) altitude test: 25°C (77°F) at 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 (104°F) at 9843 ft (3000 m) Note: When the ambient operating temperature exceeds 40°C (104°F), the access point will shift from 4x4 to 2x2 on the 2.4-GHz, 5-GHz and 6-GHz radio(s); however, the USB interface will remain enabled. 						
System memory	4096 MB I16 GB stor							
Available transmit power settings	2.4 GHz • 23 dBm (2 • -4 dBm (0	•		Bm (200 Bm (0.39	•	No use not cur the dis ena sof is c	e of the 6-0 c allowed or crent software 6-GHz radiabled. The abled with tware, once	tries where GHz band is r there is no are support, dio will be radio may be future the product operate in 6
Compliance standards	Ed.2 De EN 609 Ed.2 De UL 609 Deviation CAN/C: CAN/C: Ed.2 De	p50-1 / IEC 623 eviation annex) 50-1 / EN 6236 eviation annex) 50-1 / UL6236 on annex) SA-C22.2 No. eviation annex) 660950.1 / AS/ d.2 Deviation an	68-1 Ed.3 (wi 8-1 3rd (with 60950-1 / 62368-1 3rd	th Ed.2 (with	 EN 30 EN 30 AS/NI 47 CF RSP- RSS- LP000 	ZS 4268 (I FR FCC Pa 100 GEN 247 02 (109)		

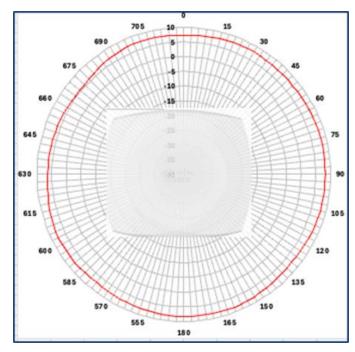
Item	Specification	
	 Class III equipment Emissions: CISPR 32 (rev. 2015) +AMD1:2019 EN 55032:2015/A11:2020 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013+A1:2019 AS/NZS CISPR32: 2015+AMD1:2020 47 CFR FCC Part 15B ICES-003 (Issue 7, Class B) VCCI-CISPR 32:2016 CNS 13438:2006 (95) KS C 9832:2019 QCVN 118:2018/BTTTT Immunity: EN 55035:2017+A11:2020 KS C 9835:2019 Emissions and immunity: EN 301 489-1 V2.2.3 (2019-11) EN 301 489-17 V3.2.4 (2020-09) QCVN (18:2014) QCVN 112:2017/BTTTT KS X 3124:2020 KS X 3126:2020 EN 61000-6-1:2019 EN 60601-1-2:2015+A1:2021 	RF safety: EN 50385:2017 AS/NZS 2772 (rev. 2016) 47 CFR Part 2.1091 RSS-102 IEEE standards: IEEE 802.3 IEEE 802.3ab IEEE 802.3af/at IEEE 802.11a/b/g/n/ac/ax/be IEEE 802.11h, 802.11d Security: 802.11i (WPA2, WPA3) 802.1x/802.1x - SHA256 Enhanced Open/OWE Advanced Encryption Standard (AES) - GCMP128, GCMP256 and CCMP256 Extensible Authentication Protocol (EAP) types: EAP-Transport Layer Security (TLS) EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol (MSCHAP) v2 Protected EAP (PEAP) v0 or EAP-MSCHAP v2 EAP-Flexible Authentication via Secure Tunneling (EAP-FAST) PEAP v1 or EAP-Generic Token Card (GTC)
Certifications	 Wi-Fi Alliance: Wi-Fi 7 (R1), Wi-Fi 6 (R2), Wi Security Bluetooth SIG: Bluetooth Low Energy 	 EAP-Subscriber Identity Module (SIM) -Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open

Antenna patterns - Cisco Wireless 91781

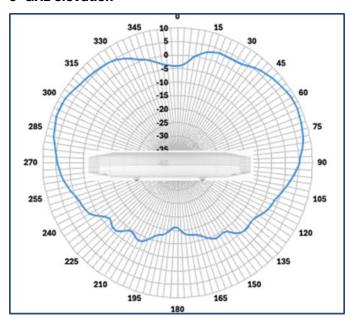
2.4-GHz elevation



2.4-GHz azimuth



5-GHz elevation



5-GHz azimuth

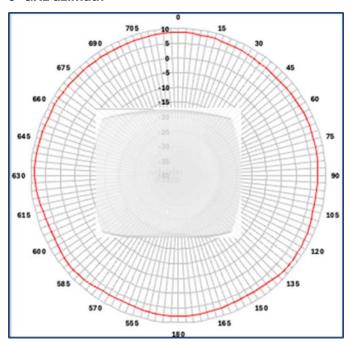
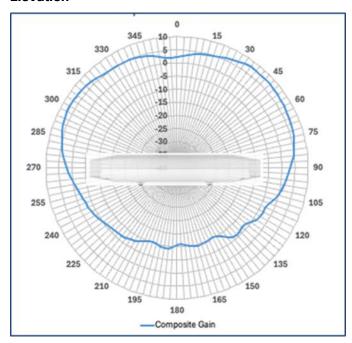


Figure 1. Antenna patterns

Elevation



Azimuth

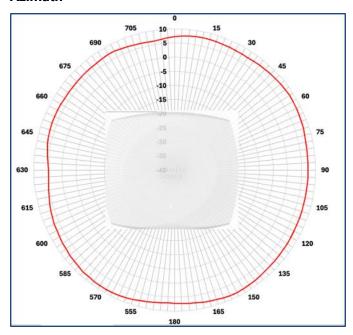
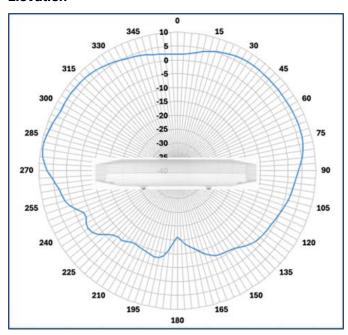


Figure 2. 5-GHz slot 2 radio antenna patterns

Elevation



Azimuth

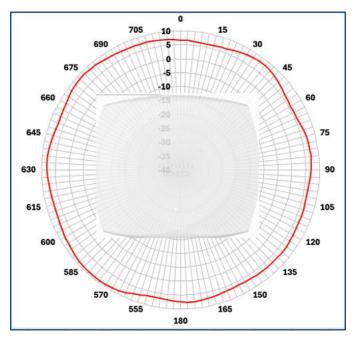
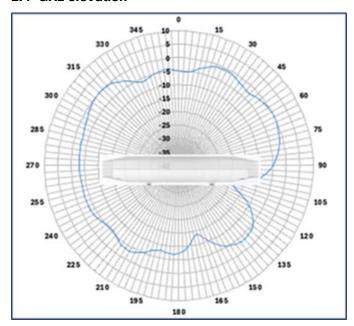
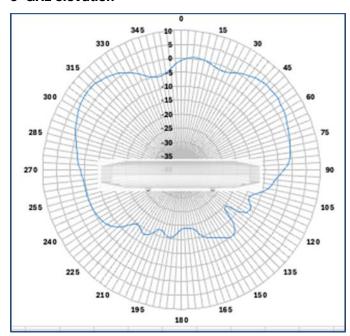


Figure 3. 6-GHz radio antenna patterns

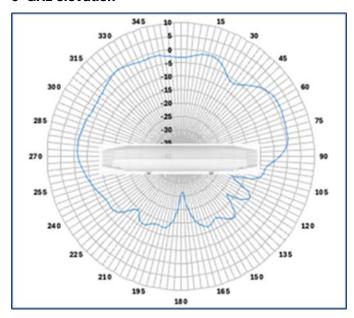
2.4-GHz elevation



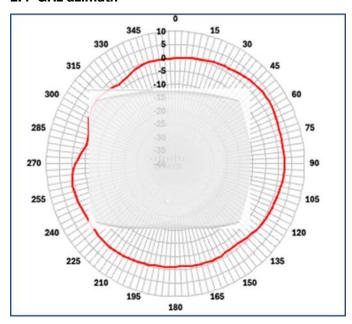
5-GHz elevation



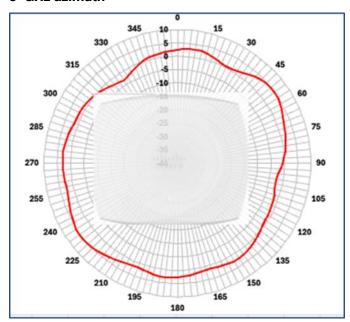
6-GHz elevation



2.4-GHz azimuth



5-GHz azimuth



6-GHz azimuth

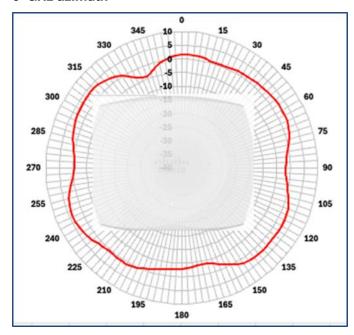
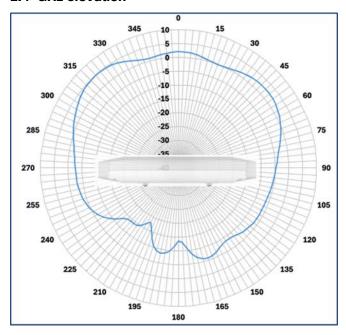


Figure 4. Al/ML-driven scan radio antenna patterns

2.4-GHz elevation



2.4-GHz azimuth

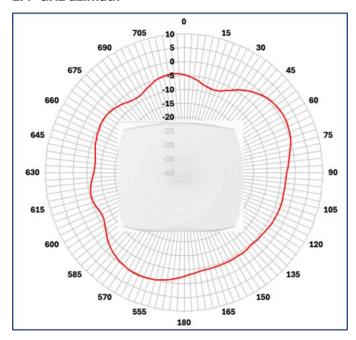
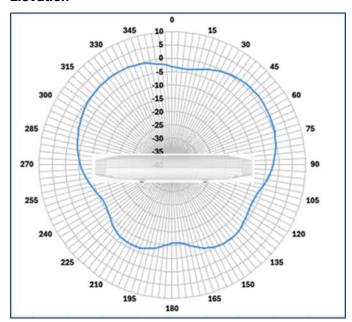


Figure 5. IoT radio antenna patterns

Elevation



Azimuth

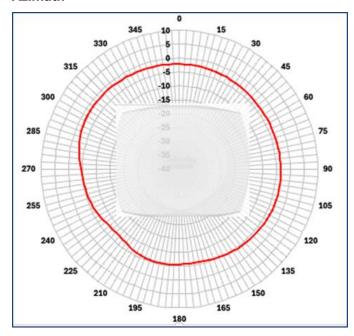


Figure 6. GNSS antenna patterns

Ordering information

The Cisco Wireless 9178 Series Access Points are available. To order, please visit the <u>Cisco Ordering</u> <u>homepage</u> or the <u>Cisco Wireless Ordering Guide</u>.

For additional product numbers, please check the <u>Cisco Wi-Fi 7 products</u> price list or contact your local Cisco account representative.

Warranty information

The Cisco Wireless 9178 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 5-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.

Product sustainability

Information about Cisco's environmental, social, and governance (ESG) initiatives and performance is provided in Cisco's corporate social responsibility and sustainability reporting.

Table 3. Cisco environmental sustainability information

Sustainability Top	pic	Reference	
General	Information on product-material-content laws and regulations	<u>Materials</u>	
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance	
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program	
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com	
Material	Product packaging weight and materials	Contact: environment@cisco.com	

Cisco and partner 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 Wireless 9178 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 infrastructure. For more information, please visit http://www.cisco.com/qo/services.

Cisco Capital

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