Cisco Aironet 3800 Series Access Points

The Cisco® Aironet® 3800 Series Wi-Fi access points are highly versatile and deliver the most functionality of any access points in the industry.

Product overview

For organizations paving the way for the new 802.11ac Wave 2 standard, the Cisco Aironet 3800 Series is the perfect solution. The access points go beyond getting ready for the new standard, providing the ultimate in flexibility and versatility.

For large enterprise organizations that rely on Wi-Fi to engage with customers, the 3800 Series is a hands-off product that's intelligent enough to make decisions based on end-device activities and usage. This automation allows you to devote time to other pressing matters, secure in the knowledge that your Wi-Fi network is performing to its utmost potential.

The Aironet 3800 Series is packed with the features and capabilities that have made Cisco the industry leader, at a price point that is ideal for managing wireless growth, capacity, and coverage gaps in dense indoor environments.

Features and benefits

Feature	Benefit
802.11ac Wave 2 support	Provides a theoretical connection rate of up to 2.6 Gbps per radio—roughly double the rates offered by today's high-end 802.11ac access points.
High-density experience	Best-in-class RF architecture that provides high-performance coverage for a high density of client devices, giving the end user a seamless wireless experience. Features include custom hardware in 802.11ac Wave 2 radios, Cisco CleanAir®, Cisco ClientLink 4.0, cross-access point noise reduction, and an optimized client roaming experience.
Multiuser Multiple-Input Multiple-Output (MU-MIMO) technology	Supporting three spatial streams, MU-MIMO enables access points to split spatial streams between client devices, to maximize throughput.
Multigigabit Ethernet support	Providing multiple gigabit uplink speeds of 2.5 Gbps and 5 Gbps in addition to 100-Mbps and 1-Gbps speeds. All speeds are supported on Category 5e cabling for an industry first, as well as 10GBASE-T(IEEE 802.3bz) cabling.

Feature	Benefit
Flexible Radio Assignment	Allows the access points to intelligently determine the operating mode of serving radios based on the RF environment. The access points can operate in the following modes: • **2.4-GHz and 5-GHz mode:** One radio serves clients in 2.4-GHz mode, while the other serves clients in 5-GHz mode • **Dual 5-GHz mode:** Both radios inside the access point operate on the 5-GHz band, maximizing the benefits of 802.11ac Wave 2 and increasing client device capacity • **Wireless Security Monitoring and 5-GHz mode:** One radio serves 5-GHz clients while the other is scanning the full spectrum for attackers, RF interference, and rogue devices
Dual 5-GHz radio support	Enables both radios to operate in 5-GHz client serving mode, allowing an industry-leading 5.2 Gbps (2 x 2.6 Gbps) over-the-air speed while increasing client capacity.
Smart antenna connector	An intelligent second physical antenna connector is included on 3800 Series models 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, cafeteria, and arenas/stadiums, allowing two sets of antennas to be connected and active on a single access point.
Modular architecture	Second-generation modular architecture first introduced by the 3600 Series access points. New side-mount connection allows companies to add and remove modules as needed without having to dismount the access point from the ceiling, further simplifying the customer's time and dollars when performing network upgrades. The new side-mount architecture allows for additional flexibility in the form factor of a 3800 Series module, and in the choice of solutions with integrated or even external antennas of their own. We have doubled the amount of power available to 3800 Series modules from 9W to 18W, broadening the potential module applications and solutions.
160-MHz channel support	Supporting channels up to 160 MHz wide, Dynamic Bandwidth Selection allows the access point to dynamically switch between 20-, 40-, 80-, and 160-MHz channels, depending on the RF channel conditions, providing the industry's best-performing wireless network.
Zero-impact Application Visibility and Control*	Uses dedicated hardware acceleration to improve the performance of line-speed applications such as Cisco Application Visibility and Control.
Cisco ClientLink 4.0	Cisco ClientLink 4.0 technology improves downlink performance to all mobile devices, including one-, two-, and three-spatial-stream devices on 802.11a/b/g/n/ac while improving battery life on mobile devices such as smartphones and tablets.
Cisco CleanAir 160 MHz*	Cisco CleanAir technology, enhanced with 160-MHz channel support, provides proactive, high-speed spectrum intelligence across 20-, 40-, 80-, and 160-MHz-wide channels to combat performance problems due to wireless interference.
Cross-access point noise reduction	A Cisco innovation that enables access points to intelligently collaborate in real time about RF conditions so that users connect with optimized signal quality and performance.
Optimized access point roaming	Helps ensure that client devices associate with the access point in their coverage range that offers the fastest data rate available.
Automatic link aggregation (LAG) support	802.3ad (Link Aggregation Control Protocol [LACP]) compliant, allowing both Ethernet interfaces to automatically enable LAG, increasing overall throughput to the access point.
Cisco Mobility Express	Flexible deployment mode through the Cisco Mobility Express solution is ideal for high density environments and can support up to 100 access points. Easy setup allows the 3800 Series access points to be deployed on networks without a physical controller.
Apple Features	Apple and Cisco have responded to this challenge by partnering to create an optimal mobile experience for iOS devices on corporate networks based on Cisco® technologies. Specifically, using new features in iOS 10 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 Cisco WLAN and Apple devices. This handshake enables Cisco WLAN to provide an optimal Wi-Fi roaming experience to Apple devices. Additionally, Cisco WLAN trusts Apple devices and gives priority treatment for business-critical applications specified by the Apple device.

802.11ac Wave 2 and beyond

The Aironet 3800 Series extends 802.11ac speed and features to a new generation of smartphones, tablets, and high-performance laptops, providing a greater end-user experience. Whether your project involves wholesale changes to your current wireless network or upgrading your legacy Wi-Fi deployments (802.11a/b/g/n/ac Wave 1 deployments), the Aironet 3800 Series can handle the job.

The Aironet 3800 Series supports 802.11ac Wave 2, providing a theoretical connection rate of up to 5.2 Gbps—that's roughly four times the rate offered by today's high-end 802.11ac access points. The boost helps you stay ahead of the performance and bandwidth expectations of today's mobile worker, who usually uses multiple Wi-Fi devices instead of just one. As such, users are adding proportionally larger traffic loads to the wireless LAN, which has outpaced Ethernet as the default enterprise access network.

Cisco DNA support

Pairing the 3800 Series access points with the Cisco Digital Network Architecture (Cisco DNA™) allows for a total network transformation. Cisco DNA 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. By decoupling network functions from the hardware, you can build and manage your entire wired and wireless network from a single user interface.

Working together, the 3800 Series and Cisco DNA offer such features as:

- Flexible Radio Assignment
- Cisco Connected Mobile Experiences
- Cisco High Density Experience
- Apple FastLane
- Cisco Identity Services Engine
- And much more

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

High-density experience

Building on the Cisco Aironet heritage of RF excellence, the Cisco Aironet 3800 Series Access Points run on a purpose-built, innovative chipset with a best-in-class RF architecture. This chipset provides a high-density experience for enterprise networks designed for mission-critical, high-performance applications. The 3800 Series is part of Cisco's flagship portfolio of 802.11ac-enabled access points, delivering a robust mobility experience. It features 802.11ac Wave 2 with 4x4 MU-MIMO technology supporting three spatial streams. MU-MIMO enables access points to split spatial streams between client devices, to maximize throughput.

With two radios built into each access point, the Aironet 3800 Series is more versatile than any access point currently on the market. These radios are outfitted with Flexible Radio Assignment, which means that the access points automatically self-optimize to better serve the environment. For example, one of the radios broadcasts its signal on the 5-GHz channel and the other sends out a 2.4-GHz signal. The access point understands the wireless environment and will automatically switch the 2.4-GHz signal to a 5-GHz signal, increasing the reliability of your customers' Wi-Fi use. This setting automatically works in reverse too: the access point can recognize that the RF environment has changed and revert back to its original configuration.

The 3800 Series also dynamically changes the radio settings based on the wireless environment. The access point will allow one of the radios to operate in Wireless Security Monitoring mode, allowing you to detect wireless security threats and interference and combat rogue access. This valuable information can be culled in an easy-to-understand matrix to inform you about your wireless users. Flexible Radio Assignment also allows you to convert a radio into Wireless Service Assurance mode, providing proactive health monitoring of the network.

- **Optimized access point roaming** helps ensure that client devices associate with the access point in their coverage range that offers the fastest data rate available
- **Cisco ClientLink 4.0** improves downlink performance to all mobile devices, including one-, two-, and three-spatial-stream devices on 802.11a/b/g/n/ac. At the same time, the technology improves battery life on mobile devices
- **Cisco CleanAir** is technology enhanced with 160-MHz channel support. It delivers proactive, high-speed spectrum intelligence across 20-, 40-, and 80-, and 160-MHz-wide channels to combat performance problems due to wireless interference
- **MIMO equalization capabilities** optimize uplink performance and reliability by reducing the impact of signal fade
- **Apple roaming features** such as 802.11r Fast Transition, 802.11v BSS Transition, and Assisting Roaming enables Cisco WLAN to provide an optimal Wi-Fi roaming experience to Apple devices

Modular architecture

The 3800 Series carries forward the modular architecture first introduced with the Aironet 3600 Series, providing unparalleled investment protection for forward-looking modular solutions. The 3800 Series delivers an enhanced second-generation modular architecture in the following ways:

- **Moving the module connection from the bottom to the side of the access point.** This allows for easier addition and removal of a module without having to dismount the access point and also allows for flexibility in module design with respect to size and appropriate antenna placement
- **Increasing the power available to a module to 18W**, providing additional flexibility for future module solutions
- The **Cisco Aironet Developer Platform** framework works in tandem with the Aironet 3800 Series as the perfect solution, allowing your network to work for you. Modularity brings intent-based networking to the edge, customizing your ability to tackle new use cases and emerging technology standards, so that your deployments are ready for the future. The Cisco Aironet Developer Platform program transforms the access point into a powerful development platform for mobility and IoT convergence.
- The **Cisco Beacon Point Module** is the virtual beacon solution that is leading the way in the indoor location-based services space. Cisco technology brings both easy deployment and superior location accuracy to the industry. All it takes to move a virtual beacon is a mouse click and technologies that can identify assets from 1 to 3 meters away. The Cisco Beacon Point Module is the perfect add-on to augment your Cisco Aironet 3800 Series Access Point and will strengthen your wireless network. This solution is well suited to industries such as retail (properly engage customers), healthcare (accurately track assets), and offices (optimize workspaces).

As wireless LAN continues to grow as the dominant method of connecting to private and public networks, the access point becomes a perfect integration point into an enterprise corporate network or carrier service network for a wide variety of solutions. Companies can use a single Ethernet cable drop from their wired network to provide high-speed network access and also typically for Power over Ethernet (PoE) to the access point and solutions that are integrated with and interconnected through the 3800 Series access points.

Product specifications

Item	Specification
Part numbers	**Cisco Aironet 3800i Access Point: Indoor environments, with internal antennas** ● AIR-AP3802I-**x**-K9: Dual-band, controller-based 802.11a/b/g/n/ac ● AIR-AP3802I-**x**K910: Eco-pack (dual-band 802.11a/b/g/n/ac) 10 quantity access points ● AIR-AP3802I-D-K9I: Dual-band, controller-based 802.11a/b/g/n/ac (India only) **Cisco Aironet 3800i Access Point Configurable: Indoor environments, with internal antennas** ● AIR-AP3802I-x-K9C: Dual-band, controller-based 802.11a/g/n/ac, configurable ● AIR-AP3802I-xK910C: Eco-pack (dual-band 802.11a/g/n/ac) 10 quantity access points, configurable **Cisco Aironet 3800e Access Point: Indoor, challenging environments, with external antennas** ● AIR-AP3802e-**x**-K9: Dual-band controller-based 802.11a/b/g/n/ac ● AIR-AP3802e-**x**K910: Eco-pack (dual-band 802.11a/b/g/n/ac), 10 quantity access points **Cisco Aironet 3800e Access Point Configurable: Indoor, challenging environments, with external antennas** ● AIR-AP3802E-**x**-K9C: Dual-band controller-based 802.11a/g/n/ac, configurable ● AIR-AP3802E-**x**K910C: Eco-pack (dual-band 802.11a/g/n/ac), 10 quantity access points, configurable **Cisco Aironet 3800p Access Point: Indoor, challenging environments, with external antennas** ● AIR-AP3802p-**x**-K9: Dual-band controller-based 802.11a/b/g/n/ac ● AIR-AP3802p-**x**K910: Eco-pack (dual-band 802.11a/b/g/n/ac), 10 quantity access points **Cisco Aironet 3800p Access Point Configurable: Indoor, challenging environments, with external antennas** ● AIR-AP3802p-**x**-K9C: Dual-band controller-based 802.11a/g/n/ac, configurable ● AIR-AP3802p-**x**K910C: Eco-pack (dual-band 802.11a/g/n/ac), 10 quantity access points, configurable **Cisco Smart Net Total Care™ for the Cisco Aironet 3800i Access Point with internal antennas** ● CON-SNT-AIRPIBK9: SNTC-8X5XNBD 802.11ac Ctrlr AP 4x Duration: 12 Month(s) **Cisco Smart Net Total Care for the Cisco Aironet 3800e Access Point with external antennas** ● CON-SNT-AIRPID38E: SNTC-8X5XNBD 802.11ac Ctrlr AP 4x4:3SS w/ CleanAir; Ex Duration: 12 Month(s) **Cisco Smart Net Total Care for the Cisco Aironet 3800p Access Point with external antennas** ● CON-SNT-AIRAP382: SNTC-8X5XNBD 802.11ac Ctrlr AP 4x Duration: 12 Month(s) **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 Smart Net Total Care Service:** https://www.cisco.com/go/sntc **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 and supported wireless LAN controllers	● Cisco Unified Wireless Network Software Release 8.2.111.0 or later ● Cisco IOS® XE Software Release 16.3 ● Cisco 2500 Series Wireless Controllers, Cisco 3500 Series Wireless Controllers, Cisco Wireless Controller Module for ISR G2, Cisco Wireless Services Module 2 (WiSM2) for 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 Catalyst 3850 Series and 3650 Series Switches ● Cisco Mobility Express

Item	Specification
802.11n version 2.0 (and related) capabilities	● 4x4 MIMO with three spatial streams ● Maximal Ratio Combining (MRC) ● 802.11n and 802.11a/g beamforming ● 20- and 40-MHz channels ● PHY data rates up to 450 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	● 4x4 MIMO with three spatial streams ● MRC ● 802.11ac 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), A-MSDU (Tx/Rx) ● 802.11 DFS ● CSD support
802.11ac Wave 2 capabilities	● 4x4 MU-MIMO with three spatial streams ● MRC ● 802.11ac beamforming ● 20-, 40-, 80, 160-MHz channels ● PHY data rates up to 5.2 Gbps ● Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) ● 802.11 DFS ● CSD support
Wi-Fi Alliance Certified	● Wi-Fi Certified a, b, g, n, ac ● Wi-Fi Vantage ● WMM ● Passpoint
Integrated antenna	**Flexible radio (either 2.4 GHz or 5 GHz)** ● 2.4 GHz, gain 4 dBi, internal antenna, omnidirectional in azimuth ● 5 GHz, gain 6 dBi, internal directional antenna, elevation plane beamwidth 90° **Dedicated 5-GHz radio** ● 5 GHz, gain 5 dBi, internal antenna, omnidirectional in azimuth
External antenna (sold separately)	● 3802e Series access points are certified for use with antenna gains up to 6 dBi (2.4 GHz and 5 GHz) ● 3802p Series access points are certified for use with antenna gains up to 13 dBi (2.4 GHz and 5 GHz) with the AIR-ANT2513-P4M-N= antenna ● Cisco offers the industry's broadest selection of antennas, delivering optimal coverage for a variety of deployment scenarios
Smart Antenna Connector	● Available on the 3802e Series and 3802p Series access points only ● Requires the AIR-CAB002-DART-R= 2 ft smart antenna connector to RP-TNC connectors to connect a second antenna to the access point ● Required when running the flexible radio as either a: ◦ Second 5-GHz serving radio ◦ Wireless Security Monitoring radio
Interfaces	◦ 2 Ethernet ports ◦ 100/1000/2500/5000 Multigigabit Ethernet (RJ-45) – IEEE 802.3bz ◦ CAT 5e cabling ◦ Higher-quality 10GBASE-T (CAT 6/6a) cabling ◦ 100/1000BASE-T autosensing (RJ-45 - AUX port) ◦ Management console port (RJ-45)
Indicators	● Status LED indicates boot loader status, association status, operating status, boot loader warnings, boot loader errors

Item	Specification	
Dimensions (W x L x H)	• Access point (without mounting brackets): 3802I: 8.66 x 8.68 x 2.46 in. (22 x 22 x 6.25 cm), 3802E: 8.66 x 8.68 x 2.62 in. (22 x 22 x 6.7 cm), 3802P: 8.66 x 8.68 x 2.62 in. (22 x 22 x 6.7 cm)	
Weight	• 4.6 lb (2.09 kg)	
Input power requirements	• 802.3at PoE+, Cisco Universal Power over Ethernet (Cisco UPOE®) • 802.3at power injector (AIR-PWRINJ6=) • 50W power supply (AIR-PWR-50=)	
Power draw	• 30W at the PSE (25.5W at the PD) with all features enabled except for the USB 2.0 port • 34W at the PSE (31.1W at the PD) with the USB 2.0 port enabled	
Environmental	**Cisco Aironet 3800i** • 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% percent (noncondensing) • Operating altitude test: 40˚C, 9843 ft. **Cisco Aironet 3800e** • Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) • Nonoperating (storage) altitude test: 25˚C, 15,000 ft. • Operating temperature: -4° to 122°F (-20° to 50°C) • Operating humidity: 10% to 90% (noncondensing) • Operating altitude test: 40˚C, 9843 ft. **Cisco Aironet 3800p** • Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) • Nonoperating (storage) altitude test: 25˚C, 15,000 ft. • 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	• 1024 MB DRAM • 256 MB flash	
Available transmit power settings	**2.4 GHz** • 23 dBm (200 mW) • 20 dBm (100 mW) • 17 dBm (50 mW) • 14 dBm (25 mW) • 11 dBm (12.5 mW) • 8 dBm (6.25 mW) • 5 dBm (3.13 mW) • 2 dBm (1.56 mW)	**5 GHz** • 23 dBm (200 mW) • 20 dBm (100 mW) • 17 dBm (50 mW) • 14 dBm (25 mW) • 11 dBm (12.5 mW) • 8 dBm (6.25 mW) • 5 dBm (3.13 mW) • 2 dBm (1.56 mW)
Frequency band and 20-MHz operating channels	**A (A regulatory domain):** • 2.412 to 2.462 GHz; 11 channels • 5.180 to 5.320 GHz; 8 channels • 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) • 5.745 to 5.825 GHz; 5 channels **B (B regulatory domain):** • 2.412 to 2.462 GHz; 11 channels • 5.180 to 5.320 GHz; 8 channels • 5.500 to 5.720 GHz; 12 channels • 5.745 to 5.825 GHz; 5 channels **C (C regulatory domain):** • 2.412 to 2.472 GHz; 13 channels • 5.745 to 5.825 GHz; 5 channels	**I (I regulatory domain):** • 2.412 to 2.472 GHz; 13 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 5.620 GHz; 7 channels • 5.745 to 5.805 GHz; 4 channels **N (N regulatory domain):** • 2.412 to 2.462 GHz; 11 channels • 5.180 to 5.320 GHz; 8 channels • 5.745 to 5.825 GHz; 5 channels **Q (Q regulatory domain):** • 2.412 to 2.472 GHz; 13 channels • 5.180 to 5.320 GHz; 8 channels • 5.500 to 5.700 GHz; 11 channels

Item	Specification	
	D (D regulatory domain): ● 2.412 to 2.462 GHz; 11 channels ● 5.180 to 5.320 GHz; 8 channels ● 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 GHz; 8 channels ● 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) **F (F regulatory domain):** ● 2.412 to 2.472 GHz; 13 channels ● 5.745 to 5.805 GHz; 4 channels **G (G regulatory domain):** ● 2.412 to 2.472 GHz; 13 channels ● 5.745 to 5.825 GHz; 5 channels **H (H regulatory domain):** ● 2.412 to 2.472 GHz; 13 channels ● 5.150 to 5.320 GHz; 8 channels ● 5.745 to 5.825 GHz; 5 channels	**R (R regulatory domain):** ● 2.412 to 2.472 GHz; 13 channels ● 5.180 to 5.320 GHz; 8 channels ● 5.660 to 5.700 GHz; 3 channels ● 5.745 to 5.805 GHZ; 4 channels **S (S regulatory domain):** ● 2.412 to 2.472 GHz; 13 channels ● 5.180 to 5.320 GHz; 8 channels ● 5.500 to 5.700 GHz;, 11 channels ● 5.745 to 5.825 GHz; 5 channels **T (T regulatory domain):** ● 2.412 to 2.462 GHz; 11 channels ● 5.280 to 5.320 GHz; 3 channels ● 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) ● 5.745 to 5.825 GHz; 5 channels **Z (Z regulatory domain):** ● 2.412 to 2.462 GHz; 11 channels ● 5.180 to 5.320 GHz; 8 channels ● 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz) ● 5.745 to 5.825 GHz; 5 channels
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.		
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: 25 FCC, 16 EU ● 802.11n: ◦ 20 MHz: 25 FCC, 16 EU ◦ 40 MHz: 12 FCC, 7 EU ● 802.11ac: ◦ 20 MHz: 25 FCC, 16 EU ◦ 40 MHz: 12 FCC, 7 EU ◦ 80 MHz: 6 FCC, 3 EU ◦ 160 MHz 2 FCC, 1 EU
Note: This varies by regulatory domain. Refer to the product documentation for specific details for each regulatory domain.		
Compliance standards	◦ UL 60950-1 ◦ CAN/CSA-C22.2 No. 60950-1 ◦ UL 2043 ◦ IEC 60950-1 ◦ EN 60950-1 ◦ EN 50155 for 3800e (Operating temperature -20° to 50°C) ● Radio approvals: ◦ FCC Part 15.107, 15.109, 15.247, 15.407, 14-30 ◦ RSS-247 (Canada) ◦ EN 300.328, EN 301.893 (Europe) ◦ ARIB-STD 66 (Japan) ◦ ARIB-STD T71 (Japan) ◦ EMI and susceptibility (Class B) ◦ 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:	

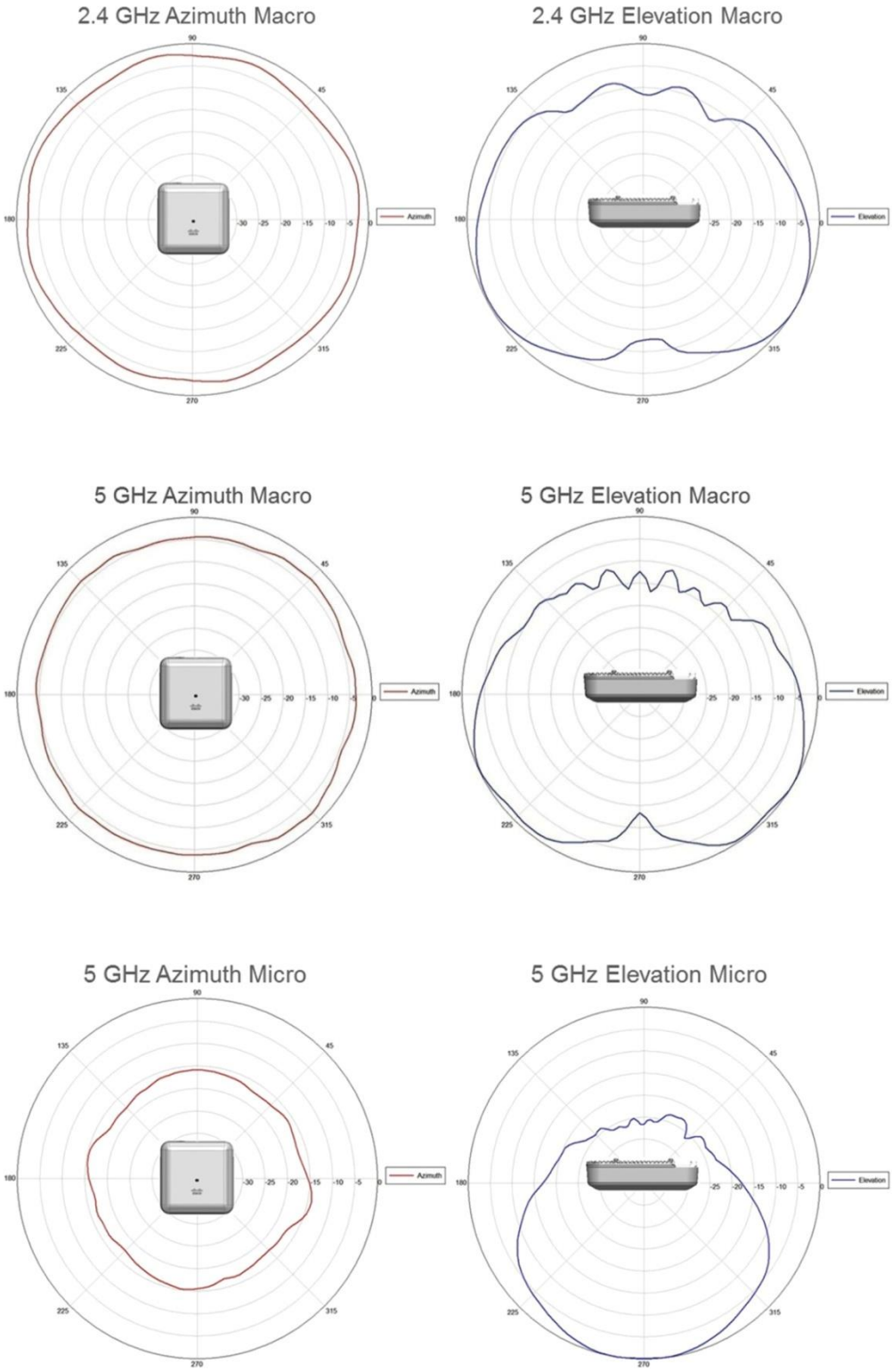
Item	Specification
	◦ IEEE 802.11a/b/g, 802.11n, 802.11h, 802.11d, 802.11r, 802.11k, 802.11v, 802,11u, 802.11w ◦ IEEE 802.11ac ● Security: ◦ 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA ◦ 802.1X ◦ Advanced Encryption Standards (AES), Temporal Key Integrity Protocol (TKIP) ● Extensible Authentication Protocol (EAP) types: ◦ EAP-Transport Layer Security (TLS) ◦ EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) ◦ Protected EAP (PEAP) v0 or EAP-MSCHAPv2 ◦ EAP-Flexible 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
Warranty	Limited lifetime hardware warranty
Data rates supported	802.11b: 1, 2, 5.5, and 11 Mbps
	802.11a/g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps
	802.11n HT20: 6.5 to 216.7 Mbps (MCS0 to MCS23)
	802.11n HT40: 13.5 to 450 Mbps (MCS0 to MCS23)
	802.11ac VHT20: 6.5 to 288.9 Mbps (MCS0 to 8 – SS 1, MCS0 to 9 – SS 2 and 3)
	802.11ac VHT40: 13.5 to 600 Mbps (MCS0 to 9 – SS 1 to 3)
	802.11ac VHT80: 29.3 to 1300 Mbps (MCS0 to 9 – SS 1 to 3)
	802.11ac VHT160: 58.5 to 2304 Mbps (MCS0 to 9 – SS 1 and 2, MCS0 to 8 – SS 3)

Transmit power and receive sensitivity

		5-GHz radio		2.4-GHz flexible radio		5-GHz flexible radio	
	Spatial streams	**Total Tx power (dBm)**	**Rx sensitivity (dBm)**	**Total Tx power (dBm)**	**Rx sensitivity (dBm)**	**Total Tx power (dBm)**	**Rx sensitivity (dBm)**
802.11/11b							
1 Mbps	1	NA	NA	23	-101	NA	NA
11 Mbps	1	NA	NA	23	-88	NA	NA
802.11a/g							
6 Mbps	1	23	-93	23	-91	23	-92
24 Mbps	1	23	-89	23	-87	23	-89
54 Mbps	1	23	-81	23	-77	22	-80
802.11n HT20							
MCS0	1	23	-93	23	-91	23	-93
MCS4	1	23	-88	23	-86	23	-87
MCS7	1	23	-79	23	-77	22	-78
MCS8	2	23	-93	23	-91	21	-93
MCS12	2	23	-86	23	-85	23	-86
MCS15	2	23	-79	23	-77	21	-78
MCS16	3	23	-93	23	-91	23	-92
MCS20	3	23	-85	23	-84	22	-84

Item		Specification					
MCS23	3	23	-78	23	-76	18	-77
802.11n HT40							
MCS0	1	23	-90			23	-89
MCS4	1	23	-85			23	-84
MCS7	1	23	-76			23	-75
MCS8	2	23	-90			23	-89
MCS12	2	23	-83			23	-83
MCS15	2	23	-76			21	-76
MCS16	3	23	-90			23	-89
MCS20	3	23	-82			23	-81
MCS23	3	23	-75			20	-74
802.11ac VHT20							
MCS0	1	23	-93			23	-92
MCS4	1	23	-88			23	-87
MCS7	1	23	-82			22	-80
MCS8	1	23	-77			21	-75
MCS0	2	23	-93			23	-91
MCS4	2	23	-86			23	-84
MCS7	2	23	-79			21	-77
MCS8	2	23	-75			20	-73
MCS9	2	NA	NA			NA	NA
MCS0	3	23	-93			23	-91
MCS4	3	23	-85			22	-83
MCS7	3	23	-78			20	-76
MCS8	3	23	-74			19	-72
MCS9	3	23	-72			18	-70
802.11ac VHT40							
MCS0	1	23	-90			23	-89
MCS4	1	23	-85			23	-84
MCS7	1	23	-78			22	-77
MCS8	1	23	-75			21	-73
MCS9	1	23	-73			20	-72
MCS0	2	23	-90			23	-89
MCS4	2	23	-83			23	-82
MCS7	2	23	-76			21	-75
MCS8	2	23	-73			20	-72
MCS9	2	23	-71			19	-69
MCS0	3	23	-90			23	-89
MCS4	3	23	-82			23	-80
MCS7	3	23	-74			20	-73
MCS8	3	23	-70			19	-68
MCS9	3	23	-69			18	-67

Item		Specification					
802.11ac VHT80							
MCS0	1	23	-87			23	-86
MCS4	1	23	-83			23	-81
MCS7	1	23	-76			22	-74
MCS8	1	23	-72			21	-70
MCS9	1	23	-69			20	-68
MCS0	2	23	-87			23	-86
MCS4	2	23	-80			23	-79
MCS7	2	23	-73			21	-72
MCS8	2	23	-69			20	-68
MCS9	2	23	-67			19	-66
MCS0	3	23	-87			23	-86
MCS4	3	23	-77			23	-77
MCS7	3	23	-72			20	-70
MCS8	3	23	-67			19	-66
MCS9	3	22	-65			18	-64
802.11ac VHT160							
MCS0	1	23	-83			23	-83
MCS4	1	23	-78			23	-78
MCS7	1	23	-71			22	-71
MCS8	1	23	-67			21	-68
MCS9	1	23	-66			20	-66
MCS0	2	23	-83			23	-83
MCS4	2	23	-76			23	-76
MCS7	2	23	-69			21	-69
MCS8	2	23	-65			20	-66
MCS9	2	23	-63			19	-63
MCS0	3	23	-82			23	-83
MCS4	3	23	-74			22	-74
MCS7	3	23	-67			20	-68
MCS8	3	23	-62			19	-62



Warranty information

The Cisco Aironet 3800 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.

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