Cisco 4800 Access Point Datasheet

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CONTENT

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OVERVIEW

The Cisco® Aironet® 4800 Access Point is packed with an abundance of features that offer users a better experience, top-notch security, and high-speed connectivity. The Aironet 4800 makes troubleshooting easier and enhances the context shown in Cisco DNA Assurance.

The access point's functionality is spread out over four internal radios, so these features run simultaneously over your network. The Aironet 4800 expands the current rich capabilities of our current Aironet portfolio (with features such as built-in Flexible Radio Assignment, Hyperlocation, and Bluetooth Low Energy [BLE]) and adds a fourth internal radio to provide rich performance and location and security analytics. With more radios embedded in the access point, your wireless network achieves higher security and data analysis without degrading performance — you'll never again have to trade security for network performance.

FEATURES AND BENEFITS

Table 1. Features and benefits of Cisco 4800 AP

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	Provides 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.
Intelligent Capture	Intelligent Capture probes the network and provides the Cisco DNA Center with deep analysis. The software can track 240+ anomalies and instantaneously review all packets on demand, emulating the on-site network administrator. With this data, administrators can make more informed decisions on their wireless networks. The software basically "senses" all packets instantaneously and sends all that information

	back to Cisco DNA Center for deep analysis.
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 operate on the 5-GHz band, maximizing the benefits of 802.11ac Wave 2 and increasing client device capacity.
Hyperlocation	An ultraprecise location solution that combines Wi-Fi and BLE technologies to pinpoint beacons, inventory, and personal mobile devices.
24x7 total security monitoring	**Dedicated security monitoring:** Dedicates your security radio to scan both 2.4 GHz and 5 GHz for Cisco CleanAir non-Wi-Fi interference, security threats, and rogue devices as they join the network.
Bluetooth Low Energy (BLE)	Proximity technology to enhance location services for mobile devices.
Four radios	Enables both Wi-Fi 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.
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 regarding 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	802.3ad (Link Aggregation Control Protocol [LACP]) compliant, allowing both

aggregation (LAG) support	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 Aironet 4800 to be deployed on networks without a physical controller.
Access point as a Cisco DNA Assurance Active Sensor	Provides proactive network monitoring, detecting network issues before your user does.
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 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 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.

*** After First Customer Shipment (FCS).**

APPEARANCE

Figure 1. Cisco 4800 Access Point

802.11AC WAVE 2 AND BEYOND

The Aironet 4800 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 4800 can handle the job.

The Aironet 4800 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 Aironet 4800 access point 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 Aironet 4800 and Cisco DNA offer such features as:

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

HIGH-DENSITY EXPERIENCE

Building on the Aironet heritage of RF excellence, the Cisco Aironet 4800 Access Point runs 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 Aironet 4800 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 four radios built into each access point, the Aironet 4800 is more versatile than any access point currently on the market. Two of the four 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 users' 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 Aironet 4800 also dynamically changes the radio settings based on the wireless environment.

- 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 enhanced with 160-MHz channel support. It delivers proactive, high-speed spectrum intelligence across 20-, 40-, 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 Assisted Roaming enable Cisco WLAN to provide an optimal Wi-Fi roaming experience to Apple devices.

PRODUCT SPECIFICATIONS

Table 2 lists the features and specifications of the Cisco IP Phone 6800 Series.

Table 2. Features and specifications

Item	Specification
Part numbers	Cisco Aironet 4800 Access Point: Indoor environments, with internal antennas ● AIR-AP4800- **x**-K9: Dual-band, controller-based 802.11a/b/g/n/ac

	● AIR-AP4800- **x-**K9C: Dual-band, controller-based 802.11a/b/g/n/ac, configurable Cisco Smart Net Total Care® Service for the Aironet 4800 with internal antennas ● CON-SNT-AIRPIBK9: 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. 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 8.7 or later ● Cisco 3500 Series Wireless Controllers, 5520 Series Wireless Controllers, 8540 Series Wireless Controllers, and Virtual Wireless Controller, Cisco Catalyst ® 9800 Series Wireless Controllers ● Cisco IOS ® XE Software Release 16.9 ● Cisco Catalyst 3850 Series and 3650 Series Switches
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 certifications	● Wi-Fi Certified a, b, g, n, ac ● Wi-Fi Vantage ● Wi-Fi Multimedia (WMM) ● Passpoint
Integrated antenna	**Flexible radio (either 2.4 GHz or 5 GHz)** ● 2.4 GHz, gain 2.5 dBi, internal antenna, omnidirectional in azimuth ● 5 GHz, gain 5 dBi, internal directional antenna, elevation plane beam width 90° **Dedicated 5-GHz radio** ● 5 GHz, gain 3.5 dBi, internal antenna, omnidirectional in azimuth Third dedicated radio ● 2.4 GHz and 5 GHz capable ● Hyperlocation antenna array BLE radio ● 2.4 GHz, gain 2.5 dBi, internal antenna, omnidirectional in azimuth
Interfaces	● 2 Ethernet ports ● 100/1000/2500/5000 Multigigabit Ethernet (RJ-45) – IEEE 802.3bz - Category 5e cabling - Higher-quality 10GBASE-T (Category 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
Dimensions (W x L x H)	● Access point (without mounting brackets): 8.68 x 9.9 x 2.9 in. (22 x 25 x 7.35

	cm)
Weight	• 5.6 lb (2.5 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 Power Source Equipment (PSE) with all features enabled except Multigigabit, AUX Ethernet, and USB support • 31W at the PSE with full functionality
Environmental	• 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. (noncondensing)
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)

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 ● 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: - 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 3 (WPA3), WPA2, WPA - 802.1X - Advanced Encryption Standard (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: - 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)

ORDERING INFORMATION

Table 3. Ordering information

Product number	Product description
AIR-AP4800-A-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -A Domain
AIR-AP4800-B-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -B Domain
AIR-AP4800-B1-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -B Domain
AIR-AP4800-D-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -D Domain
AIR-AP4800-E-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -E Domain
AIR-AP4800-E1-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -E Domain
AIR-AP4800-F-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -F Domain
AIR-AP4800-H-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -H Domain
AIR-AP4800-I-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -I Domain
AIR-AP4800-K-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -K Domain
AIR-AP4800-N-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -N Domain
AIR-AP4800-Q-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -Q Domain
AIR-AP4800-R-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -R Domain
AIR-AP4800-S-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -S Domain
AIR-AP4800-T-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -T Domain

AIR-AP4800-Z-K9	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -T Domain
AIR-AP4800-A-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -A Domain, Configurable
AIR-AP4800-B-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -B Domain, Configurable
AIR-AP4800-B1-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -B Domain, Configurable
AIR-AP4800-D-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -D Domain, Configurable
AIR-AP4800-E-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -E Domain, Configurable
AIR-AP4800-E1-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -E Domain, Configurable
AIR-AP4800-F-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -F Domain, Configurable
AIR-AP4800-H-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -H Domain, Configurable
AIR-AP4800-I-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -I Domain, Configurable
AIR-AP4800-K-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -K Domain, Configurable
AIR-AP4800-N-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -N Domain, Configurable
AIR-AP4800-Q-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -Q Domain, Configurable
AIR-AP4800-S-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -S Domain, Configurable
AIR-AP4800-Z-K9C	802.11ac W2 Analytics AP w/CA; 4×3:3; Location; mGig -Z Domain, Configurable

WHERE TO BUY

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SOURCES

https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-4800-access-point/nb-09-air-4800-acces-ds-cte.html