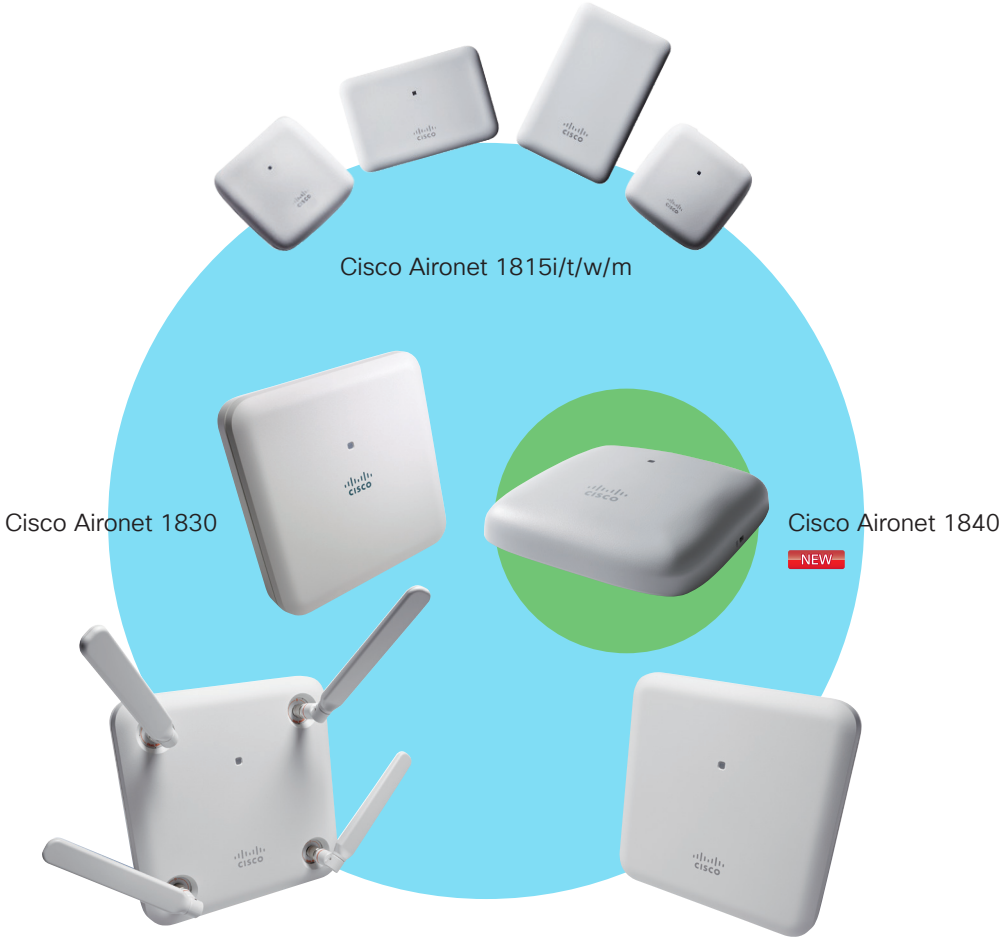
Cisco Aironet 1800 Series

Set It, Forget It and Never Regret It

Due to its convenience, wireless access is increasingly the essential form of network connectivity for SMB users. Along with this shift, there is an expectation that wireless should not slow down users' day-to-day work, but should enable a high-performance experience while allowing users to move freely.

Ideal for small and medium-sized networks, the **Cisco Aironet 1800 Series** delivers a highly secure, reliable, and easy-to-deploy wireless network with Wi-Fi 5 (802.11ac Wave 2) specifications and the **Cisco Mobility Express** controller-less Wi-Fi management.



Highlights

- **Enterprise-class Features**

  Cisco Aironet 1800 equips small networks with enterprise-class features, without breaking the budget, for example;
  - Apple Fast Lane and iOS optimized roaming
  - 802.11k and 802.11v roaming standard
  - Superior Radio Resource Management (RRM)
- **Wi-Fi 5 (802.11ac Wave 2)**

  The standard delivers a better experience in typical environments, and a more predictable performance for advanced applications such as HD video, collaboration apps, all-wireless offices and Internet-of-Things (IoT).
- **Bluetooth Low Energy (BLE)**

  Integrated BLE radio enables location-based use cases such as wayfinding and asset tracking (Aironet 1815i/1815m/1815w/1840).
- **Cisco Mobility Express**

  Cisco Mobility Express is designed for small businesses that want a controller-less solution with Wi-Fi management functions embedded in the Cisco Aironet access point itself. It Offers SMB's Cisco's industry-leading enterprise capabilities at a fraction of the enterprise cost.

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Cisco Aironet 1800 Series

Cisco Aironet 1800 Series Positioning Map

Performance (High ←)		
1,733 Mbps (5 GHz) + 216 Mbps (2.4 GHz)	4×4:3 DL MU-MIMO + 3×4:3 SU-MIMO	Aironet 1850 Series
1,733 Mbps (5 GHz) + 144 Mbps (2.4 GHz)	4×4:4 DL MU-MIMO + 2×2:2 SU-MIMO	NEW Aironet 1840 Series
867 Mbps (5 GHz) + 144 Mbps (2.4 GHz)	3×3:2 DL MU-MIMO + 3×3:2 SU-MIMO	Aironet 1830 Series
867 Mbps (5 GHz) + 144 Mbps (2.4 GHz)	2×2:2 DL MU-MIMO + 2×2:2 SU-MIMO	Office Extend, Wired & Wireless Aironet 1815t; Wired & Wireless Aironet 1815w; Aironet 1815i; Higher Power Aironet 1815m

Wireless Client Density → High

Cisco's Wi-Fi 6 Access Points

The next Wi-Fi standard, **Wi-Fi 6** is ready to power entirely new mobile experiences today, offering faster speeds for immersive-experience applications and more device and IoT capacity for high-density environments such as university lecture halls, malls, stadiums, and manufacturing facilities. Take a look at Cisco Wi-Fi 6-supported wireless access points:

- Cisco Catalyst 9100 Series
- Cisco Meraki MR36/46/56

Cisco Catalyst 9100 Series

Cisco Meraki MR36/46/56

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Cisco Aironet 1800 Series

Cisco Aironet 1815 Series

Product SKU	Service SKU CSE 8×5×NBD	Software Image	Radio					Uplinks	Downlinks		PoE (PD)		Power Supply
			2.4 GHz	5 GHz	BLE	Antenna	Clients	1GE RJ45	1GE RJ45	1GE PoE RJ45	802.3af	802.3at	
AIR-AP1815I-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 2×2:2	11ac 2×2:2	✓	Internal	400	1			✓	✓	
AIR-AP1815I-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 2×2:2	11ac 2×2:2	✓	Internal	400	1			✓	✓	
AIR-AP1815M-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 2×2:2	11ac 2×2:2	✓	Internal	400	1			✓	✓	
AIR-AP1815M-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 2×2:2	11ac 2×2:2	✓	Internal	400	1			✓	✓	
AIR-AP1815T-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 2×2:2	11ac 2×2:2		Internal	400	1	2	1			✓
AIR-AP1815W-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 2×2:2	11ac 2×2:2	✓	Internal	400	1	2	1	✓*1	✓	
AIR-AP1815W-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 2×2:2	11ac 2×2:2	✓	Internal	400	1	2	1	✓*1	✓	

*1 Some features are disabled when powered via 802.3af PoE.

Cisco Aironet 1830 Series

Product SKU	Service SKU CSE 8×5×NBD	Software Image	Radio					Uplinks	Downlinks		PoE (PD)		Power Supply
			2.4 GHz	5 GHz	BLE	Antenna	Clients	1GE RJ45	1GE RJ45	1GE PoE RJ45	802.3af	802.3at	
AIR-AP1832I-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 3×3:2	11ac 3×3:2		Internal	400	1			✓*1	✓	✓*2
AIR-AP1832I-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 3×3:2	11ac 3×3:2		Internal	400	1			✓*1	✓	✓*2

*1 Some features are disabled when powered via 802.3af PoE. *2 Sold separately.

Cisco Aironet 1840 Series NEW

Product SKU	Service SKU CSE 8×5×NBD	Software Image	Radio					Uplinks	Downlinks		PoE (PD)		Power Supply
			2.4 GHz	5 GHz	BLE	Antenna	Clients	1GE RJ45	1GE RJ45	1GE PoE RJ45	802.3af	802.3at	
AIR-AP1840I-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 2×2:2	11ac 4×4:4	✓	Internal	400	2			✓*1	✓	
AIR-AP1840I-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 2×2:2	11ac 4×4:4	✓	Internal	400	2			✓*1	✓	

*1 Some features are disabled when powered via 802.3af PoE.

Cisco Aironet 1850 Series

Product SKU	Service SKU CSE 8×5×NBD	Software Image	Radio					Uplinks	Downlinks		PoE (PD)		Power Supply
			2.4 GHz	5 GHz	BLE	Antenna	Clients	1GE RJ45	1GE RJ45	1GE PoE RJ45	802.3af	802.3at	
AIR-AP1852I-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 3×4:3	11ac 4×4:3*1		Internal	400	2			✓*3	✓	✓*2
AIR-AP1852I-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 3×4:3	11ac 4×4:3*1		Internal	400	2			✓*3	✓	✓*2
AIR-AP1852E-*x*-K9C	CON-SMBS-*xxxxxxxx*	Moblity Exp.	11n 3×4:3	11ac 4×4:3*1		External*2	400	2			✓*3	✓	✓*2
AIR-AP1852E-*x*-K9	CON-SMBS-*xxxxxxxx*	CAPWAP	11n 3×4:3	11ac 4×4:3*1		External*2	400	2			✓*3	✓	✓*2

*1 4×4:3 (MU-MIMO) or 4×4:4 (SU-MIMO). *2 Sold separately. *3 Some features are disabled when powered via 802.3af PoE.

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Cisco Aironet 1800 Series

CISCO DESIGNED

Cisco Aironet Power Injectors & Power Supplies

Product SKU	Description	Compatible Model							
		1815i	1815m	1815t	1815w	1830	1840	1850i	1850e
AIR-PWRINJ5=	Power Injector (802.3af)	✓	✓		✓	✓*1	✓*1	✓*1	✓*1
AIR-PWRINJ6=	Power Injector (802.3at)	✓	✓		✓	✓	✓	✓	✓
AIR-PWR-C=	Power Supply (Black)					✓		✓	✓
AIR-PWR-D=	Power Supply (White)			✓		✓		✓	✓

*1 Some features are disabled.

Cisco Aironet Antennas

Product SKU	Description	Compatible Model							
		1815i	1815m	1815t	1815w	1830i	1840	1850i	1850e
AIR-ANT2524DB-R	Dual-Band Dipole Antenna (Black)								✓
AIR-ANT2524DG-R	Dual-Band Dipole Antenna (Gray)								✓
AIR-ANT2524DW-R	Dual-Band Dipole Antenna (White)								✓
AIR-ANT2535SDW-R	Short Dual-Band Omni Antenna (White)								✓
AIR-ANT2524V4C-R	Dual-Band Ceiling Mount Omnidirectional Antenna								✓
AIR-ANT2544V4M-R	Dual-Band Wall-Mounted Omnidirectional Antenna								✓
AIR-ANT2566P4W-R	Dual-Band Patch Antenna								✓
AIR-ANT2566D4M-R	Dual-Band Polarization-Diverse Directional Array Antenna								✓

AIR-ANT2524DB-R

AIR-ANT2524DG-R

AIR-ANT2524DW-R

AIR-ANT2535SDW-R

AIR-ANT2524V4C-R

AIR-ANT2544V4M-R

AIR-ANT2566P4W-R

AIR-ANT2566D4M-R

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Cisco Aironet 1800 Series

Enterprise-class, Controller-less Wi-Fi

The **Cisco Mobility Express** puts the wireless control function right into Cisco Aironet access points. It is designed for simple deployment, secure and reliable operation, and insightful analytics. Cisco Mobility Express is ideal for businesses that want to quickly deploy a wireless network without requiring substantial IT resources. It delivers Cisco's industry-leading reliability and capabilities without the cost or footprint of a wireless controller.

- **Low cost "set-it-and-forget-it" solution**
  With Mobility Express, you get the most affordable Cisco enterprise-class wireless solution with no physical controller cost, no access point license cost, and no ongoing subscription fee. All with best practices enabled by default, allowing you to focus on achieving your business outcome rather than worrying about the network.
- **Manage single-site or multi-site deployments while optimizing the user experience**
  Control and prioritize the applications in your network with Application Visibility and Control. Optimize the Wi-Fi experience for iOS devices and business applications with the Apple and Cisco partnership. Set up, troubleshoot, and manage single or multiple sites with a mobile app, web UI, Cisco Prime, or Cisco DNA Center.
- **Secure, self-healing, and self-optimizing**
  Mobility Express helps secure your devices, air, and network. Protect the employee and guest network with robust 802.1X security and Authentication, Authorization, and Accounting (AAA). Defend user and Internet of Things (IoT) devices with Cisco Umbrella and Identity PSK. Safeguard the air with Cisco CleanAir, ClientLink, and spectrum intelligence. The end result: safe, self-healing, and self-optimizing Wi-Fi.
- **Best-in-class guest and user engagement experience**
  Offer flexible guest onboarding options with built-in internal or external guest splash pages and authentication options, including social login integration. Seamless integration with Cisco DNA Spaces helps you gain insights and drive engagement with customers.
- **Flexible and scalable with investment protection**
  Start with the right number of access points for your organization. Then simply add more as your Wi-Fi coverage and capacity needs grow. Reuse the same access points and connect them to a physical controller if needed to allow a switch to a controller-based network. Use Cisco DNA Center to manage multiple Mobility Express Wi-Fi sites for your distributed enterprises.

Wireless Control Function
Right into Cisco Aironet Access Point

- Best practices settings enabled by default
- Application visibility and control.
- Integrated Cisco Umbrella support
- Bandwidth, connection, time and Chromecast/AppleTV service control
- Better security — Embedded authentication server allows enterprise-class security

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Cisco Aironet 1800 Series

Supported Cisco Aironet Access Points

Cisco Mobility Express solution consists of the following components:

- **Master Access Point**
  Cisco Aironet 1815i, 1815m, 1815w, 1830, 1850, 2800, and 3800 Series 802.11ac Wave 2 access points running the virtual WLAN Controller function
- **Subordinate Access Points**
  Cisco Aironet 802.11ac Wave 1 & 2 access points

Master Access Point functions as Wireless LAN Controller, manages Subordinate Access Points.

Master Access Point Scalability

Aironet 1815i/m/w

Aironet 1830 Series

Aironet 1850 Series

ISR 1100W Series
(AP1815 Software Image)

50 APs, 1,000 Clients

Aironet 2800 Series

Aironet 3800 Series

100 APs, 2,000 Clients

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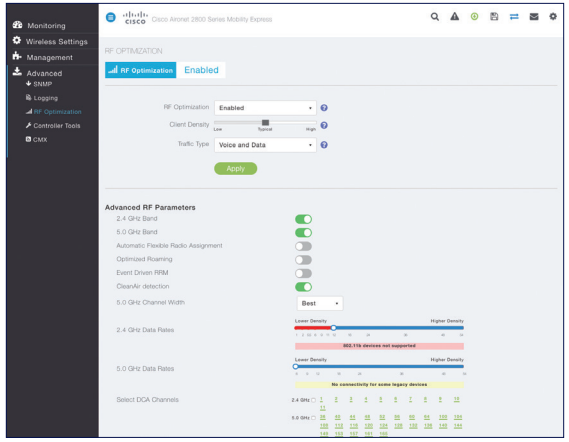
Cisco Aironet 1800 Series

Key Findings from "Miercom Performance Verified" Testing

Miercom was engaged by Cisco Systems to independently assess the Cisco Mobility Express solution — a simplified enterprise-class AireOS offering that revamps Wireless LAN (WLAN) deployment and management processes. Mobility Express can handle up to 100 Access Points (APs) and 2,000 wireless clients per instance, accommodating small to medium-sized businesses or distributed enterprises with one or more sites. To evaluate this solution, a representative Wi-Fi network was recreated and tested with specific use cases to demonstrate functionality. The key findings and observations are;

- **Integrated Controller**
  Mobility Express integrates a WLAN controller on all Aironet 802.11ac Wave 2 APs. With no other physical controller hardware, software or license required, making this solution ideal for small to medium sites or branch deployments.
- **Simplified Setup**
  With a Mobility Express image installed on each AP, initial configuration can be done over-the-air via a web browser graphical user interface (GUI), the Cisco Wireless mobile application for iOS and Android, or using the command line interface (CLI). The wizard-driven setup is intuitive and easy to follow. With only a dozen input values, a full out-of-box setup can be completed within 10 minutes.
- **Advanced Enterprise Features**
  We found that Mobility Express, though simple to deploy and manage, can also comprehensively deliver a rich set of enterprise features, management, and assurance capabilities similar to those supported by Wi-Fi vendors like Aruba and Ruckus.
- **Enterprise Management**
  Mobility Express fully integrates with Cisco DNA Center and Cisco Prime Infrastructure enterprise management systems to enable deployment, provisioning, monitoring, and troubleshooting for multi-site management in distributed enterprises.
- **Performance and Scale**
  We verified Cisco's rated claim of supporting up to 100 APs and 2,000 clients by witnessing a real, live deployment of 100 APs and approximately 900 5-GHz clients on a corporate network using Mobility Express.

WLAN Express Setup Wizard
3-step over-the-air wireless network configuration



RF optimization

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