

# Cisco Aironet 1830 Series Access Points



## Product Overview

Ideal for small and medium-sized networks, the Cisco® Aironet® 1830 Series delivers industry-leading wireless performance with support for the latest Wi-Fi standard, IEEE's new 802.11ac Wave 2 specification, and meets the growing requirements of wireless networks by delivering a better user experience. The 1830 Series extends support to a new generation of Wi-Fi clients, such as smartphones, tablets, and high-performance laptops that have integrated 802.11ac Wave 1 or Wave 2 support.

## Features and Benefits

With 802.11ac Wave 2, the 1830 Series provides a data rate of up to 867 Mbps on the 5-GHz radio, exceeding the data rates offered by today's high-end 802.11n access points. It also enables a total aggregate dual-radio data rate of up to 1 Gbps, providing the necessary foundation for enterprise and service provider networks to stay ahead of the performance and bandwidth expectations and needs of their wireless users.

Due to its convenience, wireless access is increasingly the preferred form of network connectivity for corporate 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. The 1830 Series delivers industry-leading performance for highly secure and reliable wireless connections and provides a robust mobility experience that includes:

- 802.11ac Wave 2 with 3x3 multiple-input multiple-output (MIMO) technology with two spatial streams when operating in single-user or multiuser MIMO mode, offering 867-Mbps rates for more capacity and reliability than competing access points.
- Multiuser MIMO (MU-MIMO) allows transmission of data to multiple 802.11ac Wave 2 capable clients simultaneously to improve client experience. Prior to MU-MIMO, 802.11n and 802.11ac Wave 1 access points could transmit data to only one client at a time, typically referred to as single-user MIMO.
- Transmit beamforming technology improves downlink performance to mobile devices, including one- and two-spatial-stream devices on 802.11ac, while improving battery life on mobile devices such as smartphones and tablets.

- Flexible deployment mode through the [Mobility Express Solution](#) is ideal for small to medium-sized deployments that require 25 or fewer access points. Easy setup allows the 1830 Series to be deployed on networks without a physical controller.

All of these features help ensure the best possible end-user experience on the wireless network.

## Product Specifications

**Table 1.** Product Specifications

| Feature                                        | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                    |                    |                    |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------|--------------------|--------------------|
| Software                                       | Cisco Unified Wireless Network Software Release with AireOS wireless controllers: <ul style="list-style-type: none"><li>8.1 MR1 or later for the Cisco Aironet 1830 Series Access Points</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                    |                    |                    |
| Deployment modes                               | Centralized, standalone,* sniffer, Cisco FlexConnect™, ** monitor,** OfficeExtend,** mesh**                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                    |                    |                    |
| Supported wireless LAN controllers             | <ul style="list-style-type: none"><li>Cisco 2500 Series Wireless Controllers, Cisco Wireless Controller Module for ISR G2, Cisco Wireless Services Module 2 (WiSM2) for Cisco Catalyst® 6500 Series Switches, Cisco 5500 Series Wireless Controllers, Cisco 5520 Series Wireless Controllers, Cisco Flex® 7500 Series Wireless Controllers, Cisco 8500 Series Wireless Controllers, Cisco 8540 Series Wireless Controllers, Cisco Virtual Wireless Controller, Cisco 5760 Wireless LAN Controller,** Cisco Catalyst 3650 and 3850 Series Switches with integrated controller**</li><li>Cisco Mobility Express</li></ul> |                          |                    |                    |                    |
| 802.11n version 2.0 (and related) capabilities | <ul style="list-style-type: none"><li>3x3 MIMO with two spatial streams</li><li>Maximal ratio combining (MRC)</li><li>20- and 40-MHz channels</li><li>PHY data rates up to 300 Mbps (40 MHz with 5 GHz)</li><li>Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx)</li><li>802.11 dynamic frequency selection (DFS)</li><li>Cyclic shift diversity (CSD) support</li></ul>                                                                                                                                                                                                                                              |                          |                    |                    |                    |
| 802.11ac Wave 1 and 2 capabilities             | <ul style="list-style-type: none"><li>3x3 MIMO with two spatial streams, single-user or multiuser MIMO</li><li>MRC</li><li>802.11ac beamforming (transmit beamforming)</li><li>20-, 40-, and 80-MHz channels</li><li>PHY data rates up to 867 Mbps (80 MHz in 5 GHz)</li><li>Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx)</li><li>802.11 DFS</li><li>CSD support</li></ul>                                                                                                                                                                                                                                        |                          |                    |                    |                    |
| Data rates supported                           | 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                    |                    |                    |
|                                                | 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                    |                    |                    |
|                                                | 802.11n data rates on 2.4 GHz (only 20 MHz and MCS 0 to MCS 23) and 5 GHz:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                    |                    |                    |
|                                                | MCS Index <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | GI <sup>2</sup> = 800 ns | GI = 800 ns        | GI = 400 ns        | GI = 400 ns        |
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20-MHz Rate (Mbps)       | 40-MHz Rate (Mbps) | 20-MHz Rate (Mbps) | 40-MHz Rate (Mbps) |
|                                                | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 6.5                      | 13.5               | 7.2                | 15                 |
|                                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 13                       | 27                 | 14.4               | 30                 |
|                                                | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 19.5                     | 40.5               | 21.7               | 45                 |
|                                                | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 26                       | 54                 | 28.9               | 60                 |
|                                                | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 39                       | 81                 | 43.3               | 90                 |
| 5                                              | 52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 108                      | 57.8               | 120                |                    |
| 6                                              | 58.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 121.5                    | 65                 | 135                |                    |

<sup>1</sup> MCS Index: The Modulation and Coding Scheme (MCS) index determines the number of spatial streams, the modulation, the coding rate, and data rate values.

<sup>2</sup> GI: A guard interval (GI) between symbols helps receivers overcome the effects of multipath delay spreads.

| Feature              | Specifications               |                          |                    |                    |                    |                    |                    |
|----------------------|------------------------------|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Data rates supported | MCS Index <sup>3</sup>       | GI <sup>4</sup> = 800 ns | GI = 800 ns        |                    | GI = 400 ns        |                    | GI = 400 ns        |
|                      |                              | 20-MHz Rate (Mbps)       | 40-MHz Rate (Mbps) |                    | 20-MHz Rate (Mbps) |                    | 40-MHz Rate (Mbps) |
|                      | 7                            | 65                       | 135                |                    | 72.2               |                    | 150                |
|                      | 8                            | 13                       | 27                 |                    | 14.4               |                    | 30                 |
|                      | 9                            | 26                       | 54                 |                    | 28.9               |                    | 60                 |
|                      | 10                           | 39                       | 81                 |                    | 43.3               |                    | 90                 |
|                      | 11                           | 52                       | 108                |                    | 57.8               |                    | 120                |
|                      | 12                           | 78                       | 162                |                    | 86.7               |                    | 180                |
|                      | 13                           | 104                      | 216                |                    | 115.6              |                    | 240                |
|                      | 14                           | 117                      | 243                |                    | 130                |                    | 270                |
|                      | 15                           | 130                      | 270                |                    | 144.4              |                    | 300                |
|                      | 802.11ac data rates (5 GHz): |                          |                    |                    |                    |                    |                    |
| MCS Index            | Spatial Streams              | GI = 800 ns              |                    |                    | GI = 400 ns        |                    |                    |
|                      |                              | 20-MHz Rate (Mbps)       | 40-MHz Rate (Mbps) | 80-MHz Rate (Mbps) | 20-MHz Rate (Mbps) | 40-MHz Rate (Mbps) | 80-MHz Rate (Mbps) |
| 0                    | 1                            | 6.5                      | 13.5               | 29.3               | 7.2                | 15                 | 32.5               |
| 1                    | 1                            | 13                       | 27                 | 58.5               | 14.4               | 30                 | 65                 |
| 2                    | 1                            | 19.5                     | 40.5               | 87.8               | 21.7               | 45                 | 97.5               |
| 3                    | 1                            | 26                       | 54                 | 117                | 28.9               | 60                 | 130                |
| 4                    | 1                            | 39                       | 81                 | 175.5              | 43.3               | 90                 | 195                |
| 5                    | 1                            | 52                       | 108                | 234                | 57.8               | 120                | 260                |
| 6                    | 1                            | 58.5                     | 121.5              | 263.3              | 65                 | 135                | 292.5              |
| 7                    | 1                            | 65                       | 135                | 292.5              | 72.2               | 150                | 325                |
| 8                    | 1                            | 78                       | 162                | 351                | 86.7               | 180                | 390                |
| MCS Index            | Spatial Streams              | GI = 800 ns              |                    |                    | GI = 400 ns        |                    |                    |
|                      |                              | 20-MHz Rate (Mbps)       | 40-MHz Rate (Mbps) | 80-MHz Rate (Mbps) | 20-MHz Rate (Mbps) | 40-MHz Rate (Mbps) | 80-MHz Rate (Mbps) |
| 9                    | 1                            | –                        | 180                | 390                | –                  | 200                | 433.3              |
| 0                    | 2                            | 13                       | 27                 | 58.5               | 14.4               | 30                 | 65                 |
| 1                    | 2                            | 26                       | 54                 | 117                | 28.9               | 60                 | 130                |
| 2                    | 2                            | 39                       | 81                 | 175.5              | 43.3               | 90                 | 195                |
| 3                    | 2                            | 52                       | 108                | 234                | 57.8               | 120                | 260                |
| 4                    | 2                            | 78                       | 162                | 351                | 86.7               | 180                | 390                |
| 5                    | 2                            | 104                      | 216                | 468                | 115.6              | 240                | 520                |
| 6                    | 2                            | 117                      | 243                | 526.5              | 130                | 270                | 585                |
| 7                    | 2                            | 130                      | 270                | 585                | 144.4              | 300                | 650                |
| 8                    | 2                            | 156                      | 324                | 702                | 173.3              | 360                | 780                |
| 9                    | 2                            | –                        | 360                | 780                | –                  | 400                | 866.7              |

<sup>3</sup> MCS Index: The Modulation and Coding Scheme (MCS) index determines the number of spatial streams, the modulation, the coding rate, and data rate values.

<sup>4</sup> GI: A guard interval (GI) between symbols helps receivers overcome the effects of multipath delay spreads.

| Feature                                   | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Maximum number of nonoverlapping channels | <b>A (A regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.462 GHz; 11 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>B (B regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.462 GHz; 11 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.720 GHz; 12 channels</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>C (C regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>D (D regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.462 GHz; 11 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>E (E regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)</li></ul> <b>F (F regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.745 to 5.805 GHz; 4 channels</li></ul> <b>H (H regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.150 to 5.350 GHz; 8 channels</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>I (I regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li></ul> |                                                                                                                                                                                                                                                                                                                                           | <b>K (K regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.620 GHz; 7 channels</li><li>• 5.745 to 5.805 GHz; 4 channels</li></ul> <b>N (N regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.462 GHz; 11 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>Q (Q regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.700 GHz; 11 channels</li></ul> <b>R (R regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.660 to 5.805 GHz; 7 channels</li></ul> <b>S (S regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.472 GHz; 13 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.700 GHz; 11 channels</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>T (T regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.462 GHz; 11 channels</li><li>• 5.280 to 5.320 GHz; 3 channels</li><li>• 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> <b>Z (Z regulatory domain):</b> <ul style="list-style-type: none"><li>• 2.412 to 2.462 GHz; 11 channels</li><li>• 5.180 to 5.320 GHz; 8 channels</li><li>• 5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)</li><li>• 5.745 to 5.825 GHz; 5 channels</li></ul> |  |
|                                           | <b>Note:</b> Customers are responsible for verifying approval for use in their individual countries. To verify approval that corresponds to a particular country, visit <a href="http://www.cisco.com/go/aironet/compliance">http://www.cisco.com/go/aironet/compliance</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| Maximum number of nonoverlapping channels | <b>2.4 GHz</b> <ul style="list-style-type: none"><li>• 802.11b/g:<ul style="list-style-type: none"><li>◦ 20 MHz: 3</li></ul></li><li>• 802.11n:<ul style="list-style-type: none"><li>◦ 20 MHz: 3</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                           | <b>5 GHz</b> <ul style="list-style-type: none"><li>• 802.11a:<ul style="list-style-type: none"><li>◦ 20 MHz: 25</li></ul></li><li>• 802.11n:<ul style="list-style-type: none"><li>◦ 20 MHz: 25</li><li>◦ 40 MHz: 12</li></ul></li><li>• 802.11ac:<ul style="list-style-type: none"><li>◦ 20 MHz: 21</li><li>◦ 40 MHz: 12</li><li>◦ 80 MHz: 6</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|                                           | <b>Note:</b> This varies by regulatory domain. Refer to the product documentation for specific details for each regulatory domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| Receive sensitivity                       | <ul style="list-style-type: none"><li>• 802.11b (CCK)<ul style="list-style-type: none"><li>◦ -101 dBm @ 1 Mbps</li><li>◦ -98 dBm @ 2 Mbps</li><li>◦ -92 dBm @ 5.5 Mbps</li><li>◦ -89 dBm @ 11 Mbps</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <ul style="list-style-type: none"><li>• 802.11g (non HT20)<ul style="list-style-type: none"><li>◦ -96 dBm @ 6 Mbps</li><li>◦ -95 dBm @ 9 Mbps</li><li>◦ -94 dBm @ 12 Mbps</li><li>◦ -92 dBm @ 18 Mbps</li><li>◦ -88 dBm @ 24 Mbps</li><li>◦ -85 dBm @ 36 Mbps</li><li>◦ -81 dBm @ 48 Mbps</li><li>◦ -79 dBm @ 54 Mbps</li></ul></li></ul> | <ul style="list-style-type: none"><li>• 802.11a (non HT20)<ul style="list-style-type: none"><li>◦ -96 dBm @ 6 Mbps</li><li>◦ -95 dBm @ 9 Mbps</li><li>◦ -94 dBm @ 12 Mbps</li><li>◦ -92 dBm @ 18 Mbps</li><li>◦ -88 dBm @ 24 Mbps</li><li>◦ -85 dBm @ 36 Mbps</li><li>◦ -80 dBm @ 48 Mbps</li><li>◦ -79 dBm @ 54 Mbps</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |

| Feature                                                                                                                                                               | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Receive sensitivity                                                                                                                                                   | 2.4 GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 5 GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         | 5 GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                       | <ul style="list-style-type: none"><li>802.11n (HT20)<ul style="list-style-type: none"><li>-96 dBm @ MCS0</li><li>-93 dBm @ MCS1</li><li>-90 dBm @ MCS2</li><li>-87 dBm @ MCS3</li><li>-84 dBm @ MCS4</li><li>-79 dBm @ MCS5</li><li>-78 dBm @ MCS6</li><li>-76 dBm @ MCS7</li><li>-93 dBm @ MCS8</li><li>-90 dBm @ MCS9</li><li>-87 dBm @ MCS10</li><li>-84 dBm @ MCS11</li><li>-81 dBm @ MCS12</li><li>-76 dBm @ MCS13</li><li>-75 dBm @ MCS14</li><li>-73 dBm @ MCS15</li></ul></li></ul> |  | <ul style="list-style-type: none"><li>802.11n (HT20)<ul style="list-style-type: none"><li>-96 dBm @ MCS0</li><li>-92 dBm @ MCS1</li><li>-90 dBm @ MCS2</li><li>-86 dBm @ MCS3</li><li>-83 dBm @ MCS4</li><li>-79 dBm @ MCS5</li><li>-77 dBm @ MCS6</li><li>-76 dBm @ MCS7</li><li>-93 dBm @ MCS8</li><li>-89 dBm @ MCS9</li><li>-87 dBm @ MCS10</li><li>-83 dBm @ MCS11</li><li>-80 dBm @ MCS12</li><li>-76 dBm @ MCS13</li><li>-74 dBm @ MCS14</li><li>-73 dBm @ MCS15</li></ul></li></ul>                   |         | <ul style="list-style-type: none"><li>802.11n (HT40)<ul style="list-style-type: none"><li>-93 dBm @ MCS0</li><li>-90 dBm @ MCS1</li><li>-87 dBm @ MCS2</li><li>-84 dBm @ MCS3</li><li>-80 dBm @ MCS4</li><li>-76 dBm @ MCS5</li><li>-75 dBm @ MCS6</li><li>-73 dBm @ MCS7</li><li>-90 dBm @ MCS8</li><li>-87 dBm @ MCS9</li><li>-84 dBm @ MCS10</li><li>-81 dBm @ MCS11</li><li>-77 dBm @ MCS12</li><li>-73 dBm @ MCS13</li><li>-72 dBm @ MCS14</li><li>-70 dBm @ MCS15</li></ul></li></ul> |
|                                                                                                                                                                       | 802.11ac Receive Sensitivity                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                       | 802.11ac (non HT80) <ul style="list-style-type: none"><li>-89 dBm @ 6 Mbps</li><li>-73 dBm @ 54 Mbps</li></ul>                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                       | MCS Index                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | Spatial Streams                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | VHT20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | VHT40   | VHT80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 0                                                                                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | -96 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -93 dBm | -89 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 7                                                                                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | -76 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -73 dBm | -70 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 8                                                                                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | -71 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -69 dBm | -66 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 9                                                                                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -67 dBm | -64 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0                                                                                                                                                                     | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | -93 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -90 dBm | -86 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 7                                                                                                                                                                     | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | -73 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -70 dBm | -67 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 8                                                                                                                                                                     | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | -68 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -66 dBm | -63 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 9                                                                                                                                                                     | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -64 dBm | -61 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Maximum transmit power                                                                                                                                                | 2.4 GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 5 GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                       | <ul style="list-style-type: none"><li>802.11b<ul style="list-style-type: none"><li>22 dBm, 3 antennas</li></ul></li><li>802.11g<ul style="list-style-type: none"><li>22 dBm, 3 antennas</li></ul></li><li>802.11n (HT20)<ul style="list-style-type: none"><li>22 dBm, 3 antennas</li></ul></li></ul>                                                                                                                                                                                        |  | <ul style="list-style-type: none"><li>802.11a<ul style="list-style-type: none"><li>23 dBm, 3 antennas</li></ul></li><li>802.11n (HT20)<ul style="list-style-type: none"><li>23 dBm, 3 antennas</li></ul></li><li>802.11n (HT40)<ul style="list-style-type: none"><li>23 dBm, 3 antennas</li></ul></li><li>802.11ac<ul style="list-style-type: none"><li>non-HT80: 23 dBm, 3 antennas</li><li>VHT20 23 dBm, 3 antennas</li><li>VHT40: 23 dBm, 3 antennas</li><li>VHT80: 23 dBm, 3 antennas</li></ul></li></ul> |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Note:</b> The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Feature                                                                                                                                                               | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Available transmit power settings                                                                                                                                     | <b>2.4 GHz</b> <ul style="list-style-type: none"> <li>• 22 dBm</li> <li>• 19 dBm</li> <li>• 16 dBm</li> <li>• 13 dBm</li> <li>• 10 dBm</li> <li>• 7 dBm</li> <li>• 4 dBm</li> <li>• 1 dBm</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        | <b>5 GHz</b> <ul style="list-style-type: none"> <li>• 23 dBm</li> <li>• 20 dBm</li> <li>• 17 dBm</li> <li>• 14 dBm</li> <li>• 11 dBm</li> <li>• 8 dBm</li> <li>• 5 dBm</li> <li>• 2 dBm</li> </ul> |
| <b>Note:</b> The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                    |
| Integrated antenna                                                                                                                                                    | <ul style="list-style-type: none"> <li>• 2.4 GHz, gain 3 dBi, internal omni, horizontal beamwidth 360°</li> <li>• 5 GHz, gain 5 dBi, internal omni, horizontal beamwidth 360°</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                    |
| Interfaces                                                                                                                                                            | <ul style="list-style-type: none"> <li>• 1 x 10/100/1000BASE-T autosensing (RJ-45), Power over Ethernet (PoE)</li> <li>• Management console port (RJ-45)</li> <li>• USB 2.0 (enabled via future software)</li> </ul>                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                    |
| Indicators                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Status LED indicates boot loader status, association status, operating status, boot loader warnings, boot loader errors</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                    |
| Dimensions (W x L x H)                                                                                                                                                | <ul style="list-style-type: none"> <li>• Access point (without mounting bracket): 8.3 x 8.3 x 2 in. (210.8 x 210.8 x 50.8 mm)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                    |
| Weight                                                                                                                                                                | <ul style="list-style-type: none"> <li>• 3.12 lb (1.41 kg)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                    |
| Environmental                                                                                                                                                         | <b>Cisco Aironet 1830i</b> <ul style="list-style-type: none"> <li>• Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)</li> <li>• Nonoperating (storage) altitude test: 25° C, 15,000 ft.</li> <li>• Operating temperature: 32° to 104°F (0° to 40°C)</li> <li>• Operating humidity: 10% to 90% (noncondensing)</li> <li>• Operating altitude test: 40° C, 9843 ft.</li> </ul>                                                                                                                                                                                |                                                                                                                                                                                                    |
| System memory                                                                                                                                                         | <ul style="list-style-type: none"> <li>• 1 GB DRAM</li> <li>• 256 MB flash</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                    |
| Input power requirements                                                                                                                                              | <ul style="list-style-type: none"> <li>• AP1830: 44 to 57 VDC</li> <li>• Power supply and power injector: 100 to 240 VAC; 50 to 60 Hz</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                    |
| Power draw                                                                                                                                                            | <ul style="list-style-type: none"> <li>• 16W</li> </ul> <b>Note:</b> When deployed using a PoE specification, the power drawn from the power sourcing equipment will be higher by some amount, depending on the length of the interconnecting cable.                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                    |
| Powering options                                                                                                                                                      | <ul style="list-style-type: none"> <li>• 802.3af/ 802.3at</li> <li>• Enhanced PoE</li> <li>• Cisco local power supply, AIR-PWR-C=</li> <li>• Cisco power injector, AIR-PWRINJ5= (Note: This injector supports 802.3af only)</li> </ul> <b>Note:</b> If 802.3af PoE is the source of power, the USB port is disabled.                                                                                                                                                                                                                                                        |                                                                                                                                                                                                    |
| Warranty                                                                                                                                                              | Limited lifetime hardware warranty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                    |
| Compliance standards                                                                                                                                                  | <ul style="list-style-type: none"> <li>◦ UL 60950-1</li> <li>◦ CAN/CSA-C22.2 No. 60950-1</li> <li>◦ UL 2043</li> <li>◦ IEC 60950-1</li> <li>◦ EN 60950-1</li> <li>• Radio approvals:               <ul style="list-style-type: none"> <li>◦ FCC Part 15.247, 15.407**</li> <li>◦ RSS-210 (Canada)</li> <li>◦ EN 300.328, EN 301.893 (Europe)</li> <li>◦ ARIB-STD 66 (Japan)</li> <li>◦ ARIB-STD T71 (Japan)</li> <li>◦ EMI and susceptibility (Class B)</li> <li>◦ FCC Part 15.107 and 15.109**</li> <li>◦ ICES-003 (Canada)</li> <li>◦ VCCI (Japan)</li> </ul> </li> </ul> |                                                                                                                                                                                                    |

| Feature | Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | <ul style="list-style-type: none"> <li>◦ EN 301.489-1 and -17 (Europe)</li> <li>• IEEE standards: <ul style="list-style-type: none"> <li>◦ IEEE 802.11a/b/g, 802.11n, 802.11h, 802.11d</li> <li>◦ IEEE 802.11ac Draft 5</li> </ul> </li> <li>• Security: <ul style="list-style-type: none"> <li>◦ 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA</li> <li>◦ 802.1X</li> <li>◦ Advanced Encryption Standard (AES), Temporal Key Integrity Protocol (TKIP)</li> </ul> </li> <li>• Extensible Authentication Protocol (EAP) types: <ul style="list-style-type: none"> <li>◦ EAP-Transport Layer Security (TLS)</li> <li>◦ EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2)</li> <li>◦ Protected EAP (PEAP) v0 or EAP-MSCHAPv2</li> <li>◦ EAP-Flexible Authentication via Secure Tunneling (FAST)</li> <li>◦ PEAP v1 or EAP-Generic Token Card (GTC)</li> <li>◦ EAP-Subscriber Identity Module (SIM)</li> </ul> </li> <li>• Multimedia: <ul style="list-style-type: none"> <li>◦ Wi-Fi Multimedia (WMM)</li> </ul> </li> <li>• Other: <ul style="list-style-type: none"> <li>◦ FCC Bulletin OET-65C</li> <li>◦ RSS-102</li> </ul> </li> </ul> |

\* Supported via Cisco Mobility Express with controller function running on the access point - not Cisco IOS® Software Autonomous based.

\*\* Future.

## Warranty Information

The Cisco Aironet 1830 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 <http://www.cisco.com/go/warranty>.

## Ordering Information

To place an order, visit the [Cisco How to Buy page](#). To download software, visit the [Cisco Software Center](#).

**Table 2.** Ordering Information

| Product Name              | Part Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cisco Aironet 1830 Series | <b>Cisco Aironet 1832i Access Point: Indoor environments, with internal antennas</b><br><b>Universal Regulatory Domain</b> <ul style="list-style-type: none"> <li>• AIR-AP1832I-UXX9: Dual-band, controller-based 802.11a/g/n/ac, Wave 2</li> <li>• AIR-AP1832I-UXX910: Eco-pack (dual-band 802.11a/g/n/ac) 10 quantity access points, Wave 2</li> <li>• AIR-AP1832I-UXX9C: Dual-band, controller-based 802.11a/g/n/ac, Wave 2, configurable</li> <li>• AIR-AP1832I-UXX910C: Eco-pack (dual-band 802.11a/g/n/ac) 10 quantity access points, Wave 2, configurable</li> </ul> <b>Individual Regulatory Domain</b> <ul style="list-style-type: none"> <li>• AIR-AP1832I-x-K9: Dual-band, controller-based 802.11a/g/n/ac, Wave 2</li> <li>• AIR-AP1832I-x-K9C: Dual-band, controller-based 802.11a/g/n/ac, Wave 2, configurable</li> <li>• Regulatory domains: (x = regulatory domain)</li> </ul> <p>Customers are responsible for verifying approval for use in their individual countries. To verify approval that corresponds to a particular country or the regulatory domain used in a specific country, visit <a href="http://www.cisco.com/go/aironet/compliance">http://www.cisco.com/go/aironet/compliance</a>.<br/> Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.</p> |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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### For More Information

For more information about the Cisco Aironet 1830 Series, visit <http://www.cisco.com/go/wireless> or contact your local account representative.



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