



# CBW151AXM Cisco Business Mesh Extender User Manual

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**CBW151AXM Cisco Business Mesh Extender**



Ideal for smaller networks, the Cisco® Business 151AXM Mesh Extender brings a full slate of Cisco high-performance functionality to the business environment at an affordable price point.

### **Product overview**

- The Cisco Business 151AXM Mesh Extender delivers industry-leading wireless performance with support for the latest Wi-Fi 6 standard, IEEE's 802.11ax (Figure 1). It also meets the growing flexibility of wireless networks by introducing mesh technology, which enables scalable expansion of the network where network cabling may not exist—all while delivering a simple user experience, deployable with the Cisco Business Mobile app or the integrated WebUI.
- The 151AXM Mesh Extender extends coverage and capacity to Wi-Fi clients such as smartphones, tablets, and high-performance laptops that have integrated Wi-Fi 6 capabilities, while being backwards compatible with the previous 802.11ac Wave 1 or Wave 2 standards.



## Features and benefits

- By adhering to the 802.11ax standard, the Cisco Business 151AXM Mesh Extender delivers a data rate of up to 1.2 Gbps on its 5-GHz radio. This exceeds the data rates offered by mesh extenders that support the 802.11ac Wave 1 and Wave 2 standards. It also enables a total aggregate dual-radio data rate of up to 1 Gbps, providing the necessary foundation to stay ahead of the performance expectations and needs of wireless users.
- In recent years, small businesses have increasingly preferred wireless access as the principal form of network connectivity. Along with this shift, there is an expectation that wireless should enable a high-performance experience. The Cisco Business 151AXM Mesh Extender delivers industry-leading performance for highly secure and reliable wireless connections, for an optimal end-user experience.

Table 1 lists the features and benefits of the Cisco Business 151AXM Mesh Extender.

**Table 1. Features and benefits**

Feature	Benefits
<b>Wi-Fi 6 (802.11ax)</b>	The IEEE 802.11ax emerging standard, also known as High-Efficiency Wireless (HEW) or Wi-Fi 6, builds on 802.11ac. It delivers a better experience in typical environments with more predictable performance for advanced applications such as 4K or 8K video, high-density, high-definition collaboration apps, all-wireless offices, and IoT. Wi-Fi 6 is designed to use both the 2.4-GHz and 5-GHz bands, unlike the 802.11ac standard.
<b>Uplink/downlink OFDMA</b>	Orthogonal frequency-division multiple access (OFDMA)-based scheduling splits the bandwidth into smaller frequency allocations called Resource Units (RUs), which can be assigned to individual clients in both the downlink and uplink directions to reduce overhead and latency.
<b>Downlink MU-MIMO technology</b>	Supporting two spatial streams, multi-user, multiple input, multiple output (MU-MIMO) enables access points to split spatial streams between client devices to maximize throughput.
<b>Simplified management</b>	<p>Easily deploy and manage multiple Cisco Business Wireless CBW150AX Access Points and CBW151AXM Mesh Extenders as one entity, without a physical controller or licensing, by using your favorite web browser with the integrated WebUI, or by using your mobile device with the Cisco Business Mobile app.</p> <p>Optional multisite remote management is available through the Cisco Business Dashboard, which is free to use for up to 25 devices.</p>
<b>Mesh technology support</b>	Easily enhance your wireless coverage and capacity without network cabling and Ethernet switches. Mix and match Cisco Business Wi-Fi 6 Access Points and/or Mesh Extenders to extend seamless Wi-Fi coverage throughout your business or workplace.
<b>Bluetooth 5</b>	Integrated Bluetooth Low Energy (BLE) 5 radio.
<b>Flexible deployment</b>	Flexible deployment models supporting multiple concurrent use cases required by small businesses, including point of sale systems, surveillance cameras, secure guest access, and more.
<b>Optional Cloud-based Security</b>	Cisco Umbrella offers a cloud-based security service to protect your business and connected wireless users, devices, and guests. The seamless integration enables content filtering, blocks malware and phishing attacks, and is always up-to-date.

## Prominent features

- Increased wireless performance and coverage, featuring mesh technology
- The Cisco Business 151AXM Mesh Extender supports the latest Wi-Fi 6 standard for higher performance, greater coverage, and higher-density networks. With simultaneous dual radios and dual bands with 802.11ax

functionality, this access point can manage the increasing number of high-bandwidth devices and applications that will soon become a common part of the network.

- Integrated mesh technology enables deployment flexibility that is simple and secure. You can easily expand coverage and capacity using Cisco Business Wi-Fi 6 wireless access points and mesh extenders, which include models that can be placed on a desktop, or plugged directly into an AC electrical outlet.

### Cisco Business Mobile app

The Cisco Business 151AXM Mesh Extender can be easily deployed and managed with your favorite mobile device using the Cisco Business Mobile app. This intuitive mobile application dramatically simplifies the traditional challenges associated with wireless network deployment, all without having to be an IT or networking expert. You can easily extend your network by adding new mesh extenders using Quick Response (QR) codes and wireless network activation in minutes. A robust management capability dynamically changes network configuration, such as enabling secure guest access. Network usage, traffic patterns, and network throughput can be closely monitored, providing a real-time snapshot; this not only provides peace of mind, it also enables optimal user experience. The Cisco Business Mobile app is available on app stores for both iPhone and Android devices.

### Mounting

This sleek, compact mesh extender is designed to be plugged directly into an AC power outlet.

### Product specifications

Table 2 lists the specifications for the Cisco Business 151AXM Mesh Extender.

**Table 2. Specifications**

Item	Specification
<b>Authentication and security</b>	<ul style="list-style-type: none"><li>● Wi-Fi Protected Access – with WPA2 or WPA3, including WPA2-Enterprise authentication</li><li>● 802.1X, RADIUS Authentication, Authorization, and Accounting (AAA)</li><li>● Segmentation via VLANs (up to 16)</li><li>● 802.11r and 802.11i</li><li>● Guest network can also authenticate against a Social Login account: Google and Facebook</li></ul>
<b>Maximum clients</b>	<ul style="list-style-type: none"><li>● Maximum number of associated wireless clients: 200 per Wi-Fi radio, for a total of 400 clients per access point, or 1000 in a system</li></ul>
<b>Maximum # of Access Points</b>	<ul style="list-style-type: none"><li>● 50</li><li>● Recommended up to 25</li></ul>
<b>Max # of Mesh Extenders</b>	<ul style="list-style-type: none"><li>● Maximum number of associated Cisco Business mesh extenders: 25 per Access Point, up to 8 hops</li></ul>

<b>Management Compatibility</b>	<ul style="list-style-type: none"> <li>● A group of access points and mesh extenders comprised of only CBW150AX and CBW151AXM devices may be managed as a single entity</li> <li>● CBW150AX and CBW151AXM devices are supported by Cisco Business Dashboard version 2.4.1 and higher</li> </ul>
<b>802.11ax</b>	<ul style="list-style-type: none"> <li>● 2x2 downlink MU-MIMO with two spatial streams</li> <li>● Uplink/downlink OFDMA</li> <li>● Target wake time (TWT)</li> <li>● Basic Service Set (BSS) coloring</li> <li>● Maximal Ratio Combining (MRC)</li> <li>● 802.11ax beamforming</li> <li>● 20-, 40-, 80-channels</li> <li>● PHY data rates up to 1.488 Gbps (80 MHz with 5 GHz and 20 MHz with 2.4 GHz)</li> <li>● Packet aggregation: Aggregate MAC Protocol Data Unit (A-MPDU) (transmit and receive); Aggregate MAC Service Data Unit (A-MSDU) (transmit and receive)</li> <li>● 802.11 Dynamic Frequency Selection (DFS)</li> </ul>

<b>Item</b>	<b>Specification</b>
	<ul style="list-style-type: none"> <li>● Cyclic Shift Diversity (CSD) support</li> <li>● WPA3 support</li> </ul>
<b>802.11ac</b>	<ul style="list-style-type: none"> <li>● 2x2 single-user/multi-user MIMO with two spatial streams, up to 867 Mbps in 5GHz</li> <li>● 20-, 40-, and 80-MHz channels</li> <li>● DFS</li> </ul>
<b>Data rates supported</b>	<b>802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps</b>
	<b>802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps</b>
	<b>802.11n data rates on 2.4 GHz: 6.5 to 300 Mbps (MCS0-MCS15, HT 20/40)</b>

802.11ac data rates on 5 GHz: 6.5 to 867 Mbps (MCS0-MCS9)		
802.11ax data rates on 2.4 & 5GHz: 6.5 to 1200 Mbps (MCS0-MCS11)		
Maximum number of non-overlapping channels	<p><b>A (A regulatory domain):</b></p> <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 <ul style="list-style-type: none"> <li>○ excludes 5.600 to 5.640 GHz</li> </ul> </li> <li>● 5.745 to 5.825 GHz; 5 channels</li> </ul> <p><b>B (B regulatory domain):</b></p> <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> <p><b>E (E regulatory domain):</b></p> <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</li> </ul> <p><b>I (I regulatory domain):</b></p> <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>	<p><b>Q (Q regulatory domain):</b></p> <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> <p><b>R (R regulatory domain):</b></p> <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 5.700 GHz; 3 channels</li> <li>● 5.745 to 5.805 GHz; 4 channels</li> </ul> <p><b>Z (Z regulatory domain):</b></p> <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 <ul style="list-style-type: none"> <li>○ excludes 5.600 to 5.640 GHz</li> </ul> </li> <li>● 5.745 to 5.825 GHz; 5 channels</li> </ul>
	<p><b>Note:</b> This varies by regulatory domain. Refer to the product documentation for specific details for each regulatory domain.</p>	

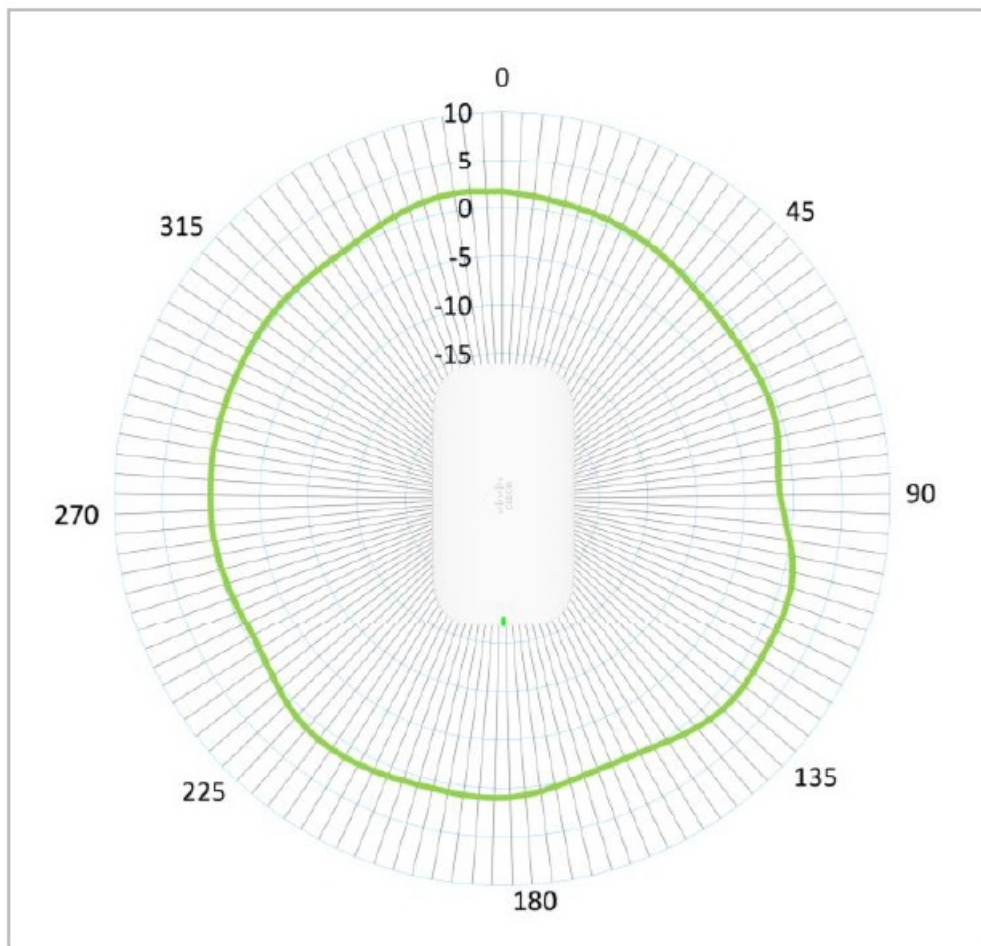
<b>Available transmit power settings</b>	<b>2.4 GHz</b> Up to 20 dBm	<b>5 GHz</b> Up to 20 dBm
<b>Note:</b> The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details.		
<b>Integrated antennas</b>	<ul style="list-style-type: none"> <li>● 2.4 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth</li> <li>● 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth</li> </ul>	
<b>Indicators</b>	<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>	

Item	Specification
<b>Dimensions (W x L x H)</b>	<ul style="list-style-type: none"> <li>● CBW151AXM-x-NA: 6.7 x 3.6 x 2.1 in. (170.2 x 91.5 x 53.4 mm)</li> <li>● CBW151AXM-x-EU: 6.7 x 3.6 x 2.7 in. (170.2 x 91.5 x 68.6 mm)</li> <li>● CBW151AXM-x-UK: 6.7 x 3.6 x 2.4 in. (170.2 x 91.5 x 61 mm)</li> <li>● CBW151AXM-x-AU: 6.7 x 3.6 x 2.2 in. (170.2 x 91.5 x 55.9 mm)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>● CBW151AXM-x-NA: 10 oz (285 g)</li> <li>● CBW151AXM-x-EU: 10.3 oz (291 g)</li> <li>● CBW151AXM-x-UK: 10.6 oz (300 g)</li> <li>● CBW151AXM-x-AU: 10.2 oz (289 g)</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>● Operating <ul style="list-style-type: none"> <li>○ Temperature: 32° to 104°F (0° to 40°C)</li> <li>○ Humidity: 10% to 90% (noncondensing)</li> <li>○ Maximum altitude: 9843 ft (3000 m) at 40°C</li> </ul> </li> <li>● Nonoperating (storage and transportation) <ul style="list-style-type: none"> <li>○ Temperature: –22° to 158°F (–30° to 70°C)</li> <li>○ Humidity: 10% to 90% (noncondensing)</li> <li>○ Maximum altitude: 15,000 ft (4500 m) at 25°C</li> </ul> </li> </ul>

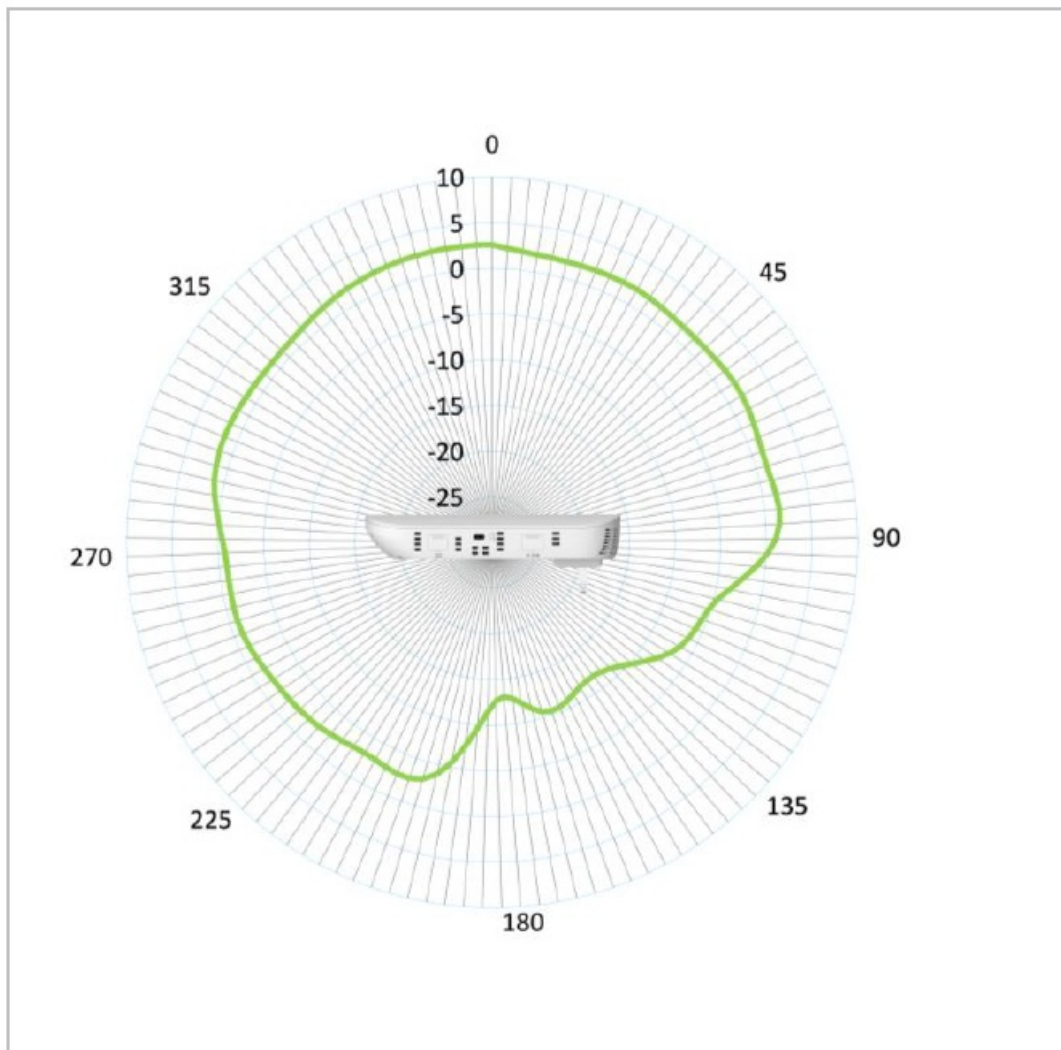


<b>System</b>	<ul style="list-style-type: none"> <li>● 1 GB DRAM, 256 MB flash</li> <li>● 1GHz quad core processor</li> </ul>
<b>Powering options</b>	<ul style="list-style-type: none"> <li>● 100-240V 50/60Hz AC Power</li> </ul>
<b>Power draw</b>	<ul style="list-style-type: none"> <li>● 8.3W</li> </ul>
<b>Physical security</b>	<ul style="list-style-type: none"> <li>● Kensington lock slot</li> </ul>
<b>Warranty</b>	Cisco Business 3-year limited hardware warranty Free software updates, no service contract required
<b>Compliance</b>	<ul style="list-style-type: none"> <li>● Safety: <ul style="list-style-type: none"> <li>○ UL 60950-1</li> <li>○ CAN/CSA-C22.2 No. 60950-1</li> <li>○ IEC 60950-1</li> <li>○ EN 60950-1</li> <li>○ IEC 62368-1</li> <li>○ EN 62368-1</li> <li>○ UL/CUL 62368-1</li> </ul> </li> <li>● Radio approvals: <ul style="list-style-type: none"> <li>○ FCC Part 15.247, 15.407</li> <li>○ RSS-247</li> <li>○ EN 300.328, EN 301.893</li> <li>○ EN 50385</li> <li>○ ARIB-STD 66</li> <li>○ ARIB-STD T71</li> </ul> </li> <li>● EMC: <ul style="list-style-type: none"> <li>○ EMI and susceptibility (Class B)</li> <li>○ FCC 15B</li> </ul> </li> </ul>

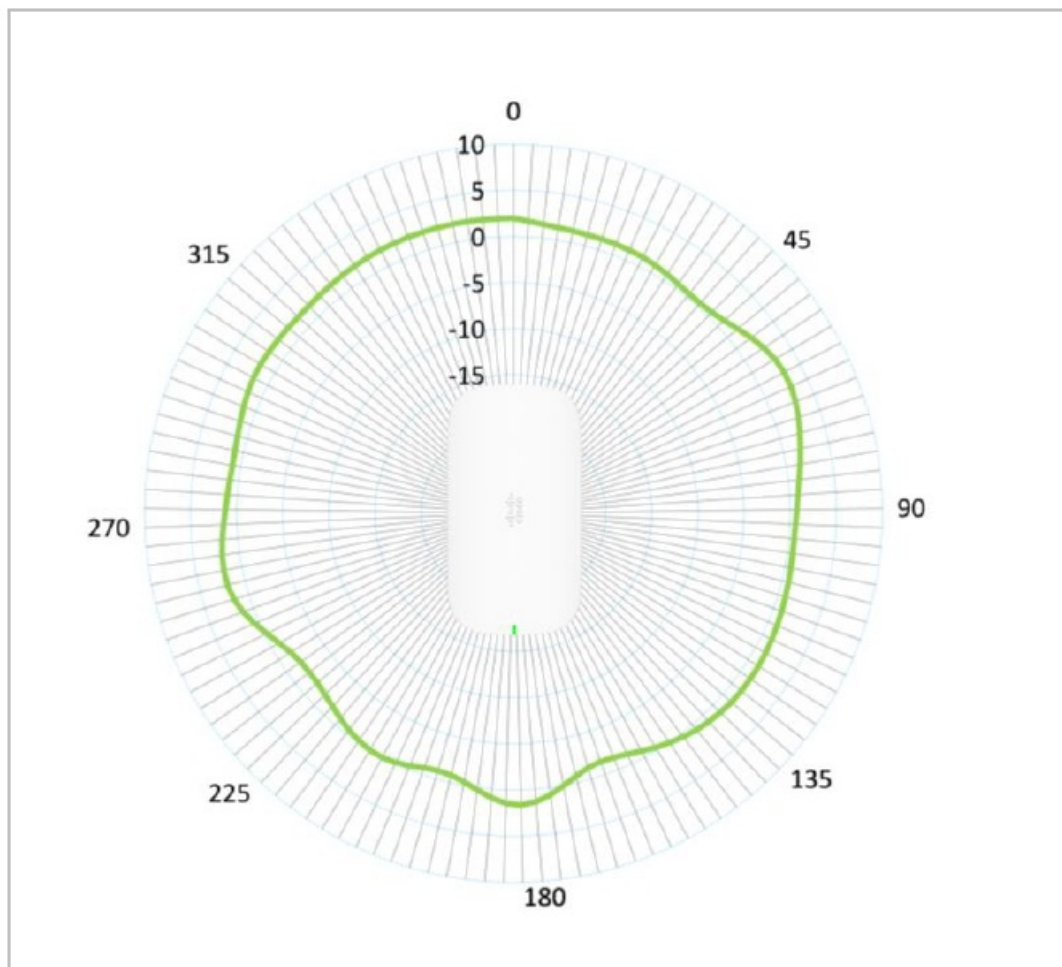
Item	Specification
	<ul style="list-style-type: none"> <li>○ ICES-003</li> <li>○ VCCI (Japan)</li> <li>○ EN 301.489-1 and -17</li> <li>○ EN 55032, EN55035</li> <li>● IEEE standards: <ul style="list-style-type: none"> <li>○ IEEE 802.11a/b/g/n/ac/ax</li> <li>○ IEEE 802.11h, 802.11d</li> </ul> </li> <li>● Security: <ul style="list-style-type: none"> <li>○ 802.11i, WPA2, WAP3, WPA</li> <li>○ 802.1X</li> <li>○ AES</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>



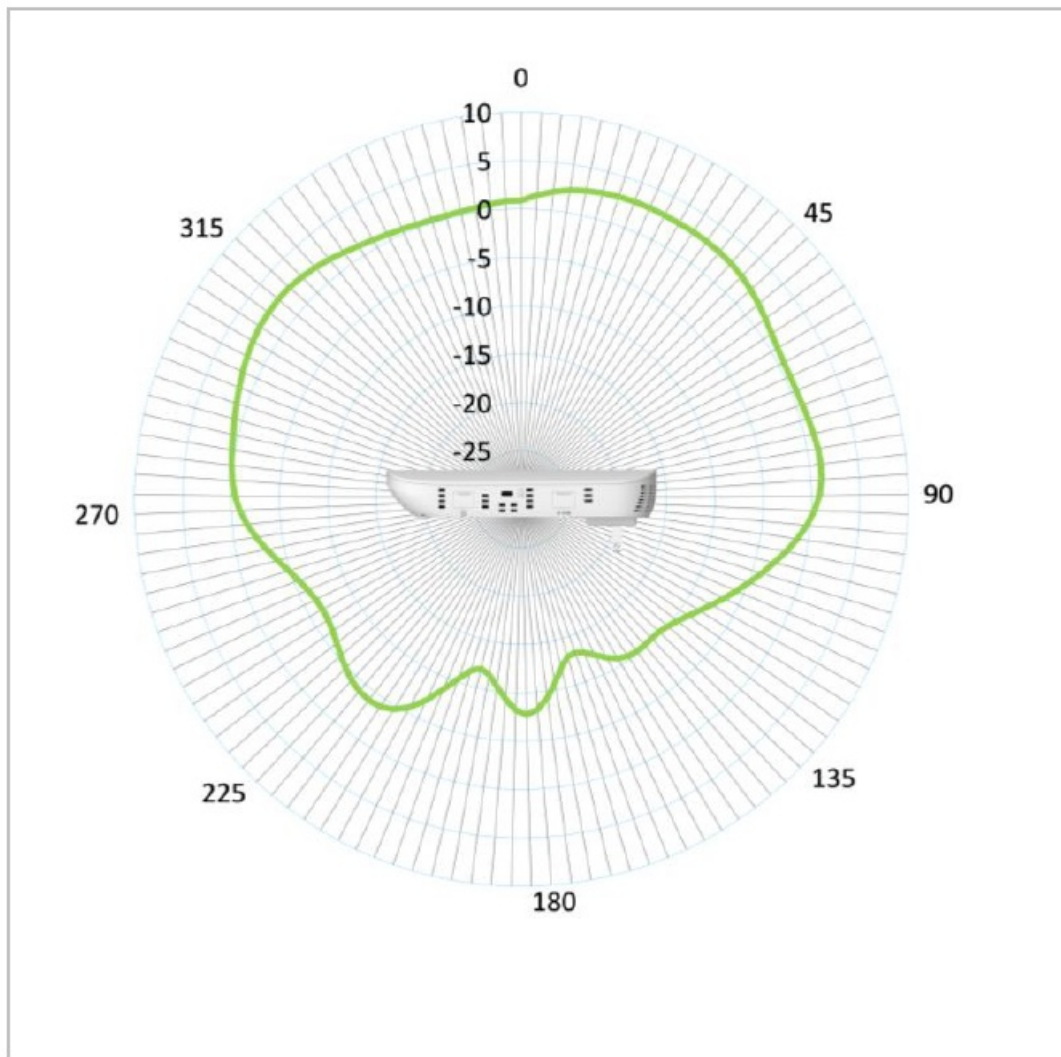
**Figure 2.**  
Cisco CBW151AX Antenna Pattern 2.4GHz Azimuth



**Figure 3.**  
Cisco CBW151AX Antenna Pattern 2.4GHz Elevation



**Figure 4.**  
Cisco CBW151AX Antenna Pattern 5GHz Azimuth



**Figure 5.**  
Cisco CBW151AX Antenna Pattern 5GHz Elevation

### Ordering information

- Table 3 provides ordering information for the Cisco Business 151AXM Mesh Extender.
- To download software, visit the Cisco Software Center.
- Table 3. Ordering information for the Cisco Business Wireless Mesh Extender. To place an order, visit the Cisco Ordering homepage.

Part number	Description
<b>CBW151AXM-x</b>	Cisco Business 151AXM Wi-Fi 6 Mesh Extender, Wall Mounted
<p><b>Note:</b> Customers are responsible for verifying approval for use in their individual countries.</p> <p>To verify approval that corresponds to a particular country or the regulatory domain used in a specific country, visit <a href="https://www.cisco.com/go/compliance">https://www.cisco.com/go/compliance</a>.</p> <p>Regulatory domain approval occurs in phases. As they are approved, the part numbers will be available on the Cisco Wholesale Price List (WPL).</p> <p>Regulatory domains: (x = regulatory domain).</p>	

### **Cisco 3-year limited hardware warranty for Cisco Business products**

This Cisco Business product comes with a 3-year limited hardware warranty. Product warranty terms and other information applicable to Cisco products are available at <https://www.cisco.com/go/warranty>.

### **Cisco Business Support Service**

Achieve infrastructure excellence faster with less risk. Cisco Services for Small Business provide expert guidance to help you successfully deploy, manage, and support the Cisco Business products and solutions. With unmatched networking expertise, best practices, and innovative tools, Cisco Services can help you reduce overall upgrade, refresh, and migration costs as you introduce new hardware, software, and protocols into the network. With a comprehensive lifecycle of services, Cisco experts will help you minimize disruption and improve operational efficiency to extract maximum value from your Cisco Business infrastructure. Learn more about Cisco Services for Small Businesses.

### **Product sustainability**

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

### **Table 4. Cisco Environmental Sustainability Information**

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	<a href="#">Materials</a>
	Information on electronic waste laws and regulations, including products, batteries, and packaging	<a href="#">WEEE Compliance</a>
	Information on product takeback and reuse program	<a href="#">Cisco Takeback and Reuse Program</a>
	Sustainability inquiries	Contact: <a href="mailto:csr_inquiries@cisco.com">csr_inquiries@cisco.com</a>
Material	Product packaging weight and materials	Contact: <a href="mailto:environment@cisco.com">environment@cisco.com</a>

## Cisco Capital

- Flexible payment solutions to help you achieve your objectives
- Cisco Capital® financing makes it easier to get the right technology to achieve your objectives, enable business transformation, and help you stay competitive. We can help you reduce total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services, and complementary third-party equipment in easy, predictable payments. Learn more.
- For more information
- For more information on Cisco Business products and solutions, visit:  
<https://www.cisco.com/c/en/us/products/wireless/business-100-series-access-points/index.html>.

## CONTACT

### Americas Headquarters

- Cisco Systems, Inc.
- San Jose, CA

### Asia Pacific Headquarters

- Cisco Systems (USA) Pte. Ltd.
- Singapore

### Europe Headquarters

- Cisco Systems International BV Amsterdam,




- The Netherlands










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## Documents / Resources

	<p><a href="#">CISCO CBW151AXM Cisco Business Mesh Extender</a> [pdf] User Manual CBW151AXM Cisco Business Mesh Extender, CBW151AXM, Cisco Business Mesh Extender, Business Mesh Extender, Mesh Extender, Extender</p>
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## References

- [www-1.compliance2product.com/c2p/getAttachment.do?code=YM6Y0yThdO6Wj1FxxYPYfUG2dtFkTeFWGpzLRO8tcURFEifUCRV403Tq2ZMWP6Ai](http://www-1.compliance2product.com/c2p/getAttachment.do?code=YM6Y0yThdO6Wj1FxxYPYfUG2dtFkTeFWGpzLRO8tcURFEifUCRV403Tq2ZMWP6Ai)
-  [Materials - Cisco](#)
-  [WEEE Compliance - Cisco](#)
-  [Cisco Product Takeback and Reuse - Cisco](#)
-  [Cisco Business 100 Series Access Points - Cisco Business 100 Series Access Points - Cisco](#)
-  [IT Services and Support for Small Business - Cisco](#)
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