Cisco Wireless 9174 Series Wi-Fi 7 Access Points

Scalable, AI-ready wireless connectivity for future-proofed spaces

Elevate your network infrastructure with next-generation wireless performance

The Cisco® Wireless 9174 (CW9174) Series represents a significant leap forward in wireless networking technology, delivering:

- **AI-ready connectivity:** Wi-Fi 7 technology with up to 10 spatial streams helps ensure that your network can handle tomorrow's bandwidth demands today.
- **Flexible deployment options:** External DART-8 antenna system on the CW9174E model allows customized coverage patterns for challenging environments.
- **Unified management experience:** Global use access points enable seamless deployment across either on-premises or cloud platforms from a single hardware unit and license.
- **Enhanced power efficiency:** Advanced 802.3bt (Cisco UPOE®) support with intelligent power profiles optimizes performance while managing energy consumption.
- **Investment protection:** Simplified upgrade path from previous models with familiar mounting and cabling infrastructure.

The CW9174 Series is engineered for organizations requiring maximum flexibility in challenging RF environments. Where the previous-generation Cisco Catalyst™ 9120AXE and Cisco Meraki™ MR46E delivered solid 4x4:4 dual-radio performance, the CW9174 Series advances the standard with:

Tri-band flexibility

Configure for your specific needs:

- **Dual-band mode:** 2.4 GHz 4x4:4 and 5 GHz 4x4:4.
- **Tri-band mode:** 2.4 GHz 2x2:2 and 5 GHz 4x4:4 and 6 GHz 4x4:4.

Integrated intelligence

- **Cisco CleanAir® Pro:** Advanced RF interference detection and mitigation.
- **AI-Enhanced Radio Resource Management (AI-RRM):** Automated, intelligent radio frequency management.
- **Dedicated scan radio:** Continuous monitoring without impacting client performance.
- **Bluetooth Low Energy (BLE)/IoT support:** Native integration for location services and IoT sensors.
- **USB 2.0 port:** 9W output for powering external devices.

Unified hardware for modern network infrastructure

The CW9174 Series revolutionizes deployment planning with the **global use Access Point (AP)** architecture:

- **Single SKU:** One part number (CW9174I/E) works in both Catalyst on-premises controllers and Meraki dashboard environments.
- **Automatic detection:** Plug in the AP, and it automatically detects whether to operate in Wireless Controller (WLC) or Meraki mode.
- **Simplified inventory:** Partners and enterprises maintain one inventory for all deployment scenarios.
- **No Technical Assistance Center (TAC) calls:** Freely move APs between management platforms without support intervention.
- **Unified licensing:** Consistent pricing and licensing across both management options with migration product IDs available for existing deployments.

Minimum software requirements:

- **WLC customers:** Cisco IOS® XE 17.18.2 or later
- **Meraki customers:** Firmware 32.1.5 or later
- **Catalyst Center:** 2.3.7.11 or 3.2.3 or later

Power requirements:

- **802.3bt Class 5 (UPOE) or MA-PWR-50WAC DC power supply** for full 10-stream, 5-Gbps operation
- Compatible injectors: CW-INJ-8, AIR-PWRINJ7, MA-INJ-6

The Cisco Wireless 9174 Series Access Points provide versatile, next-generation Wi-Fi 7 in both internal and external antenna models. They support a broad range of deployment scenarios, provide a simple upgrade path from previous models, and emphasize backward compatibility, installation efficiency, and best-in-class connectivity. Multiple accessories and mounting options further enhance their flexibility for different customer environments.

The CW9174 Series is available in two versions: with an integrated internal antenna (CW9174I) or with an external antenna connector (CW9174E).

The 9174I has an internal omnidirectional antenna and is designed for a standard wireless signal in environments like offices, healthcare, and retail.

The 9174E is the external antenna model and supports specialized use cases such as warehouses (high ceilings, narrow aisles), cold storage and hospital clean rooms (antenna inside, AP outside), and public venues (airports, under-seat installations).

Key features

- Operating modes: Supports both tri-radio and dual-radio operation. This capability enables cost-effective, flexible Wi-Fi 7 upgrades for Wi-Fi 6 customers.
- Interfaces and power options: Includes dedicated IoT and scan radios, 5-Gbps uplink, USB port, and a DC power jack (for more power options).
- Antenna options: Internal omnidirectional antenna or external antenna with DART-8 connectors.
- Mounting: Compatible with existing brackets; global use support.
- Backward compatibility: Many existing accessories (DART-8 cables and antennas with DART-8 connectors) remain compatible, simplifying upgrades and reducing installation costs via adapters.

External antenna advantage

The CW9174E's external antenna capability provides:

- Customizable radiation patterns for directional or omnidirectional coverage.
- Superior performance in high-ceiling warehouses, cold storage facilities, and clean rooms.
- Backward compatibility with existing DART-8 antenna infrastructure.
- CW-ACC-ADPT1: Adapter for brownfield upgrades with C-ANT9103 mounts

CW-ANT-T-O2-D8: Omnidirectional ceiling antenna with accelerometer and DART-8 connector.

CW-ANT-T-D2-D8: Directional patch antenna with accelerometer and DART-8 connector (includes CW-MNT-ART2 mount).

CW-ANT-T-O4-R: Omnidirectional dipole tri-band antenna with RP-TNC connector.

CW-MNT-9: Integrated AP mount for unified installation.

Table 1. CW9174E versus Meraki MR46E and Catalyst 9120AXE

Feature	MR46E	9120AXE	CW9174E	Advantage
Wi-Fi standard	Wi-Fi 6	Wi-Fi 6	Wi-Fi 7	Future-ready technology
Spatial streams	8 (4x4 + 4x4)	8 (4x4 + 4x4)	10 or 8 (2x2+4x4+4x4 or 4x4+4x4)	Up to 25% more capacity
6-GHz support	No	No	Yes	Access to clean spectrum
Interface	2.5 Gbps	2.5/5 Gbps	5 Gbps (with UPOE)	Consistent high throughput
Management	Meraki only	WLC only	WLC or cloud	Deployment flexibility
USB power	No	4.5W	9W	Support for power-hungry devices
Antenna options	External	External	External	Parity with enhanced DART-8 ecosystem

Specific use cases and configuration examples for the CW9174E

- Healthcare/hospital clean rooms
- Warehousing
- Under-seat use in stadiums
- Airports or other public venues
- Cold storage or refrigerated units
- Lecture halls or theaters

Healthcare facilities – Clean room deployment

Challenge: Hospital operating rooms and clean rooms require external antenna placement due to strict contamination protocols.

Configuration:

- **Model:** CW9174E with CW-ANT-T-O2-D8 omnidirectional ceiling-mounted antennas.
- **Mode:** Tri-band (2.4-GHz 2x2 + 5-GHz 4x4 + 6-GHz 4x4).
- **Power:** 802.3bt UPOE providing 5-Gbps uplink speed.
- **Value:** Medical-grade devices operate on 5 GHz while new 6-GHz spectrum handles high-bandwidth imaging and telehealth applications without interference.

Warehouse operations – High-ceiling coverage

Challenge: 40-foot ceiling heights in cold storage warehouse with narrow aisles and metal racking cause RF interference.

Configuration:

- **Model:** CW9174E with CW-ANT-T-D2-D8 directional antennas.
- **Mounting:** CW-MNT-9 integrated mount for unified AP and antenna installation.
- **Mode:** Dual-band (2.4-GHz 4x4 + 5-GHz 4x4) for maximum range.
- **Value:** Directional antennas focus RF energy down aisles, supporting handheld scanners, IoT sensors, and mobile workstations with consistent coverage.

Stadium and under-seat deployment – High-density venue

Challenge: Thousands of concurrent users in confined seating areas with thick concrete construction and metal infrastructure, requiring mobile ticketing, social media connectivity, and cashless concession systems during peak event moments.

Configuration:

- **Model:** CW9174E with CW-ANT-T-D2-D8 directional patch antennas.
- **Mode:** Tri-band (2.4-GHz 2x2 + 5-GHz 4x4 + 6-GHz 4x4) for maximum client density.
- **Power:** UPOE with 5-Gbps uplink to prevent backhaul congestion during peak usage.
- **Value:** 10 spatial streams serve 40 to 50 concurrent clients per AP, an improvement of approximately 60% over the 9120AXE's practical limit. Directional antennas concentrate RF energy into seating sections while minimizing spillover, reducing AP count by 25% compared to the previous generation. Tri-band architecture segregates legacy devices (2.4/5 GHz) from Wi-Fi 7 clients (6 GHz), helping ensure a premium experience for the newest smartphones during critical moments like halftime and venue-wide promotions.

Airport terminal – Public venue deployment

Challenge: Large, open spaces with high-density client populations requiring seamless roaming and capacity.

Configuration:

- **Model:** CW9174E with CW-ANT-T-D2-D8 directional patch antennas.
- **Mode:** Tri-band for maximum client capacity.
- **Power:** UPOE with 5-Gbps uplink to support high-throughput demands.
- **Value:** 10 spatial streams to handle hundreds of concurrent clients across multiple frequency bands, while the dedicated scan radio helps ensure optimal channel selection.

Refrigeration and cold storage – Commercial kitchen deployment

Challenge: Metal-walled walk-in coolers and freezers create RF barriers requiring external antenna placement, while temperature extremes prevent AP installation inside refrigerated spaces. Critical wireless connectivity is needed for IoT temperature sensors, inventory management tablets, and kitchen display systems.

Configuration:

- **Model:** CW9174E with CW-ANT-T-D2-D8 directional patch antennas.
- **Mode:** Dual-band (2.4-GHz 4x4 + 5-GHz 4x4) for maximum wall penetration
- **Power:** UPOE with 5-Gbps uplink for reliable KDS video streaming and real-time inventory systems.
- **Value:** 4x4 spatial streams on 2.4 GHz deliver 6 dB MIMO gain, enabling better penetration through metal barriers compared to the previous generation, enabling single-AP coverage where the 9120AXE required multiple units. Directional antennas mounted above cooler doors penetrate 20 to 25 feet into refrigerated spaces, supporting IoT sensors and tablets without requiring APs in temperature-extreme zones.

Upgrade – Leveraging existing infrastructure

Challenge: Replace legacy 9120AXE installations while reusing existing antenna mounts and cabling.

Configuration:

- **Upgrade path:** From the 9120AXE (4x4 dual-band) to the CW9174E (up to 10 streams tri-band).
- **Antenna compatibility:** Existing C-ANT9103 mounts work with the CW-ACC-ADPT1 adapter.
- **Legacy support:** DART-8 cables and RP-TNC antennas from previous deployments remain functional.
- **Value:** Minimize installation costs while achieving a 2.5x improvement in spatial stream capacity.

Deploy with confidence. Scale with certainty.

For detailed technical specifications, antenna selection guidance, and deployment best practices, check out the data sheet at https://www.cisco.com/c/en/us/products/collateral/wireless/catalyst-9100ax-access-points/wireless-9174-series-access-points-ds.html.

Connect what's next with the Cisco Wireless 9174 Series

Performance to power what's next:

- **Capacity:** The CW9174 Series APs in tri-band mode deliver **10 spatial streams** versus 8 in similar previous standard models, representing up to a 25% increase in theoretical client capacity.
- **Spectrum efficiency:** By operating 4x4:4 streams on the clean 6-GHz band while maintaining 5-GHz 4x4:4 and 2.4-GHz 2x2:2, the CW9174E effectively segregates legacy devices (2.4/5 GHz) from modern Wi-Fi 7 clients (6 GHz), reducing contention and improving overall network efficiency.
- **Uplink throughput:** The 5-Gbps multigigabit uplink (with UPOE) helps ensure that no backhaul bottleneck occurs, even when multiple high-bandwidth clients are active simultaneously.

The **CW9174 Series** represents the ideal choice for organizations with challenging RF environments requiring external antenna flexibility. Upgrade today and take advantage of:

- **25% more spatial streams** for increased client capacity
- **Clean 6-GHz spectrum** for next-generation devices
- **External antenna versatility** for customized coverage patterns (with the CW9174E)
- **Management flexibility** with the global use AP architecture
- **Investment protection** through legacy antenna compatibility

C22-5734228-00 02/26