

Cisco Catalyst CW9166I

DATASHEET

Flagship Tri-Band 4x4 Wi-Fi 6E Access Point (CW9166I-ROW)

Product Overview: The Cisco Catalyst CW9166I Access Point is the flagship Wi-Fi 6E indoor access point designed for ultra-high-density enterprise applications. Featuring full 4x4 MU-MIMO across all three client-serving bands (2.4 GHz, 5 GHz, 6 GHz), an integrated 5 Gbps Multigigabit uplink, environmental telemetry sensors, and dual management (Catalyst On-Premises or Cisco Meraki Cloud), it delivers unmatched performance up to 7.78 Gbps aggregate speed.

KEY CAPABILITIES & FEATURES

Full 4x4 MU-MIMO Tri-Band Radios

- **Tri-Band 4x4 Stream Architecture:** 4x4:4 spatial streams on 2.4 GHz, 5 GHz, and 6 GHz radios.
- **Peak PHY Rate:** Up to 7.78 Gbps total aggregate physical frame rate.
- **Flexible Radio Assignment (FRA):** Software-configurable XOR radio operation for 5 GHz or 6 GHz.

Dual Architecture Management

- **Cisco Meraki Cloud:** Centralized dashboard monitoring, zero-touch deployment, and AI-driven insights.
- **Cisco Catalyst Controller:** Enterprise control via Catalyst 9800 WLC & Catalyst Center.
- **Seamless Stack Migration:** Change management modes on-demand without changing hardware.

Smart Building Telemetry & IoT

- **Environmental Sensors:** Built-in Temperature, Relative Humidity, and Air Quality (TVOC) sensors.
- **Integrated BLE 5.1 & Zigbee:** Native IoT radio for location services, wayfinding, and beacons.
- **5 Gbps Multigigabit Uplink:** 5GbE (mGig) port eliminating wired bottlenecks.

Proactive Spectrum & Security

- **Dedicated Scanning Radio:** 24x7 CleanAir Pro spectrum analysis and security threat monitoring.
- **WPA3-192-bit Security:** Highest grade encryption for high-density enterprise environments.
- **Hardware Trust Anchor:** Secure Boot and module protection against unauthorized code.

HARDWARE SPECIFICATIONS

Parameter	Specification
Model Number	CW9166I-ROW (Rest of World Regulatory Domain)
Wireless Standard	IEEE 802.11ax (Wi-Fi 6E), 802.11a/b/g/n/ac compatible
Radio Configuration	2.4 GHz (4x4), 5 GHz (4x4), 6 GHz / XOR (4x4) + Dedicated Scanning Radio

INTERFACE & PHYSICAL OVERVIEW

CW9166I Rear Ports and Interface View

Figure 1: Rear interface layout showing 5G Multigigabit RJ-45 uplink, Console, USB, and DC Power ports.

POWER REQUIREMENTS & OPERATING MODES

Power Source	Functional Level	Operational Notes
802.3bt (UPOE)	Full Functionality	All 3 radios active (4x4 on all bands), 5GbE speed enabled, USB port enabled (4.5W). Max power: 30.5W.
802.3at (PoE+)	Full Wireless Functionality	All 3 radios active (4x4 on all bands), 5GbE speed enabled; USB port disabled. Max power: 25.0W.
802.3af (PoE)	Not Supported	802.3af does not provide sufficient power for AP boot.
DC Power Input	Full Functionality	DC 54V direct power jack supply.

PHYSICAL & ENVIRONMENTAL SPECIFICATIONS

Metric	Details
Dimensions (W x L x H)	24.1 cm x 24.1 cm x 5.7 cm (9.5 in. x 9.5 in. x 2.2 in.)
Weight	1.6 kg (3.5 lbs)
Integrated Telemetry	Air Quality (TVOC), Temperature, and Humidity sensors
Operating Temperature	0°C to 50°C (32°F to 122°F)
Non-Operating Temp.	-30°C to 70°C (-22°F to 158°F)
System Memory	2 GB DRAM / 1 GB Flash Memory

REGULATORY & REGIONAL DOMAIN (-ROW)

Rest of World Domain (-ROW): The **CW9166I-ROW** model is designed for worldwide deployment outside North America and Europe. It dynamically tunes 6 GHz spectrum allocation and transmit power levels in accordance with local country spectrum regulations.