Dell Networking 200 Series Access Points

Delivering superior wireless capabilities with 802.11ac technology

Multifunctional and affordable Dell Networking 200 Series 802.11ac wireless APs maximize mobile device performance in medium-density enterprise Wi-Fi environments.

These compact and cost-effective dual-radio APs deliver wireless data rates of up to 867Mbps to 5GHz devices with 802.11ac technology leveraging two spatial MIMO streams while simultaneously supporting 2.4GHz 802.11n clients with data rates of up to 300Mbps.

The W-AP205 and W-IAP205 models feature four integrated omni-directional downtilt antennas, while the W-AP204 and W-IAP204 support external detachable dual-band antennas using two RP-SMA antenna connectors.

Unique benefits

Wi-Fi client optimization

- To eliminate sticky client behavior while users roam, 200 Series APs feature patented ClientMatch™ technology, which continuously gathers session performance metrics from mobile devices.

- If a mobile device moves away from an AP or if RF interference impedes performance, ClientMatch automatically steers the device to a better AP.

Advanced Cellular Coexistence (ACC)

- ACC lets WLANs perform at peak efficiency by minimizing interference from 3G/4G LTE networks, distributed antenna systems and commercial small cell/femtocell equipment.

Quality of service for unified communication apps

- 200 Series APs support priority handling and policy enforcement for unified communication apps, including Microsoft Lync with encrypted videoconferencing, voice, chat and desktop sharing.

Choose your operating mode

200 Series APs offer a choice of operating modes to meet your unique management and deployment requirements.

- Controller-managed AP or Remote AP (RAP) running AOS. When managed by Dell networking W-Series Mobility Controllers, 200 Series APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding. Please refer to the Mobility Controller data sheets for more details.
- Instant AP running InstantOS™. In Instant mode, a single AP automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up an Instant AP, configure it over the air, and plug in the other APs — the entire process takes about five minutes.
- Spectrum analyzer identifies sources of RF interference.
- Air monitor provides wireless intrusion protection.
- Self healing, secure enterprise mesh provides increased reliability and redundancy.

If WLAN requirements change, a built-in migration path allows 200 Series Instant APs to become part of a WLAN that is managed by a Mobility Controller.

200 Series specifications

- W-AP205 and W-IAP205
  - 2.4GHz (300Mbps max rate) and 5GHz (867Mbps max rate) radios, each with 2x2 MIMO and four integrated omni-directional downtilt antennas.
- W-AP204 and W-IAP204
  - 2.4GHz (300Mbps max rate) and 5GHz (867Mbps max rate) radios, each with 2x2 MIMO and two combined, diplexed external RP-SMA antenna connectors.

W-AP204 access point

W-AP205 access point

Advanced features

- RF management
  - Adaptive Radio Management™ (ARM) technology automatically assigns channel and power settings, provides airtime fairness and ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs.
  - 200 Series APs can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.
- Spectrum analysis
  - Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4GHz and 5GHz radio bands to identify sources of RF interference.
- Security
  - With an OpenDNS service subscription, Dell Instant RAPs deliver integrated web filtering, malware and botnet protection to every device connected to the WLAN.
  - Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys.
  - SecureJack-capable for secure tunneling of wired Ethernet traffic.

Operating modes

- Instant AP
- Mobility Controller-managed AP
- Remote AP (RAP) for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid
- Secure enterprise mesh

Wireless radio specifications

- AP type: Indoor, dual radio, 5GHz 802.11ac and 2.4GHz 802.11n 2x2:2
- Software-configurable dual radio supports 5GHz (Radio 0) and 2.4GHz (Radio 1)
- 2x2 MIMO with two spatial streams and up to 867Mbps wireless data rate
- Supported frequency bands (country-specific restrictions apply):
  - 2.4000 to 2.4835GHz
  - 5.150 to 5.250GHz
  - 5.250 to 5.350GHz
  - 5.470 to 5.725GHz
  - 5.725 to 5.850GHz
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)

- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
  - 2.4GHz band: +21 dBm (18 dBm per chain)
  - 5GHz band: +21 dBm (18 dBm per chain)
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Short guard interval for 20MHz, 40MHz and 80MHz channels
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Transmit beamforming (TxBF) for increased reliability in signal delivery
- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: 6.5 to 300 (MCS0 to MCS15)
  - 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

Antennas

- W-AP204/W-IAP204: Two RP-SMA connectors for external dual band antennas. Internal loss between radio interface and external antenna connectors (due to diplexing circuitry): 1.5 dB in 2.4GHz and 3.0 dB in 5GHz.
- W-AP205/W-IAP205: Four integrated down-tilt omnidirectional antennas for 2x2 MIMO with maximum antenna gain of 4.0 dBi in 2.4GHz and 6.0 dBi in 5GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP

Other interfaces

- 10/100/1000BASE-T Ethernet network interface (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - PoE-PD: 48V DC (nominal) 802.3af PoE
- DC power interface, accepts 1.7/4.0 mm center-positive circular plug with 9.5 mm length
- Visual indicators (LEDs):
  - Power/system status
  - Ethernet link status (ENET)
  - Radio status (two; RAD0, RAD1)
- Reset button: factory reset (during device power up)
- Serial console interface (RJ-45)
- Kensington security slot

Power

- Maximum (worst-case) power consumption: 12.5 watts (PoE) or 11.7 watts (DC)
- Maximum (worst-case) power consumption in idle mode: 8.4 watts (PoE) or 7.7 watts (DC)
- Direct DC source: 12V DC nominal, +/- 5%
- Power over Ethernet (PoE): 48V DC (nominal) 802.3af-compliant source
- Power sources sold separately
- When both power sources are available, DC power takes priority

Mounting

- Included with AP:
  - Mounting brackets (2) for attaching to 9/16-inch or 15/16-inch T-bar drop-tile ceiling
- Spare mounting kit:
  - AP-220-MNT-C1: Dell AP mounting kit contains two ceiling-grid rail adapters for flat rails
- Optional mounting kits:
  - AP-220-MNT-C2: Dell AP mounting kit contains two ceiling-grid rail adapters for Interlude and Silhouette style rails
  - AP-220-MNT-W1: Dell AP mounting kit contains one basic flat-surface wall/ceiling mounting bracket
  - AP-200-MNT-W2: Dell AP mounting kit contains one secure flat-surface wall/ceiling mounting cradle

Mechanical

- Dimensions/weight (unit, excluding mounting accessories):
  - 150 mm x 150 mm x 41.5 mm (W x D x H)
  - 380 g
- Dimensions/weight (shipping):
  - 190 mm x 187 mm x 57 mm (W x D x H)
  - 550 g

Environmental

- Operating:
  - Temperature: 0° C to +40° C (+32° F to +104° F)
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)

Regulatory

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1995/5/EC
- Low Voltage Directive 72/23/EEC
- EN 300 328
- EN 301 489
- EN 301 893
- UL/IEC/EN 60950
- EN 60601-1-1, EN60601-1-2

For more country-specific regulatory information and approvals, please contact your Dell sales representative.

Reliability

MTBF: 711,187 hours (81.2 years) at +25° C operating temperature

Regulatory model numbers

- W-AP204 and W-IAP204: APIN0204
- W-AP205 and W-IAP205: APIN0205

Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n/ac

Warranty

- Extended lifetime warranty

Minimum operating system software versions

- AOS 6.4.1.0
- InstantOS 4.1.1.0

RF performance table

	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4GHz		
802.11b		
1Mbps	18.0	-95.0
11Mbps	18.0	-88.0
802.11g		
6Mbps	18.0	-92.0
54Mbps	16.0	-74.0
802.11n HT20		
MCS0/8	18.0	-91.0
MCS7/15	16.0	-71.0
802.11n HT40		
MCS0/8	18.0	-88.0
MCS7/15	16.0	-68.0
5GHz		
802.11a		
6Mbps	18.0	-93.0
54Mbps	16.0	-75.0
802.11n HT20		
MCS0/8	18.0	-91.0
MCS7/15	15.0	-71.0
802.11n HT40		
MCS0/8	18.0	-88.0
MCS7/15	15.0	-68.0
802.11ac VHT20		
MCS0	18.0	-91.0
MCS9	12.0	-64.0
802.11ac VHT40		
MCS0	18.0	-88.0
MCS9	12.0	-62.0
802.11ac VHT80		
MCS0	18.0	-85.0
MCS9	12.0	-59.0

Maximum capability of the hardware provided. Maximum transmit power is limited by local regulatory settings.
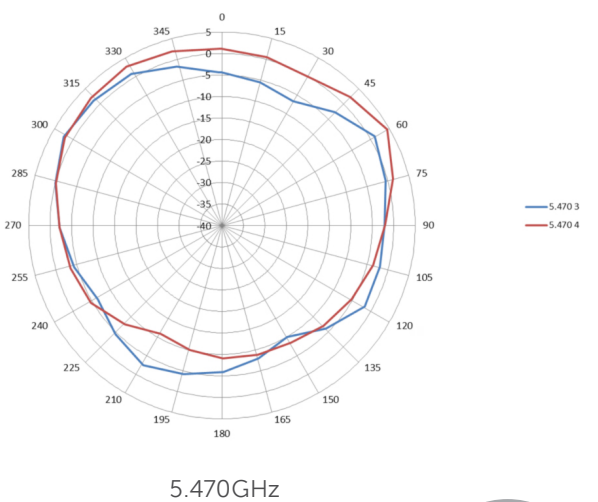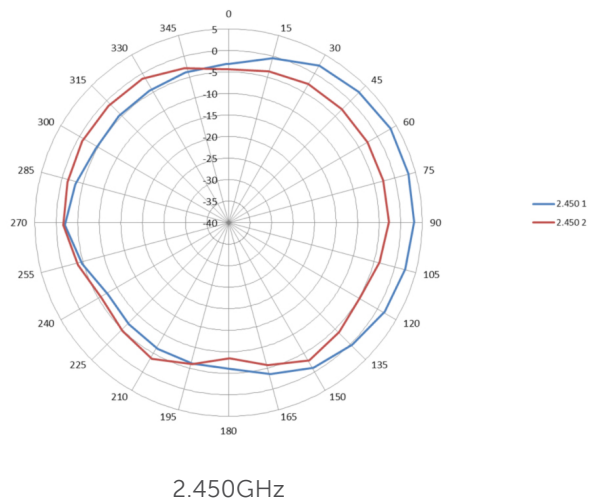
Antenna pattern plots

Horizontal or azimuth plane (top view), 0 degrees downtilt

2.450GHz

5.470GHz
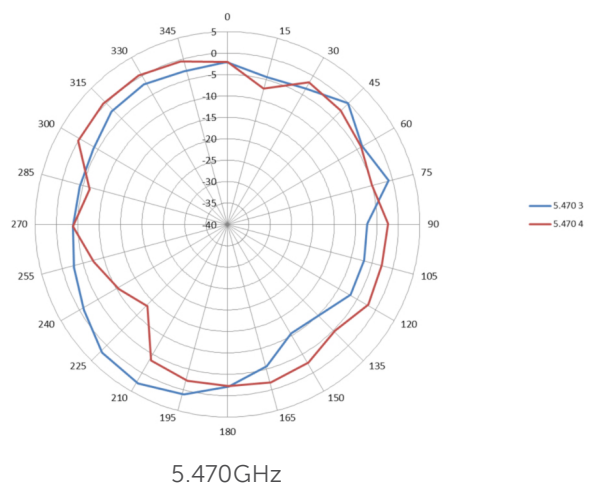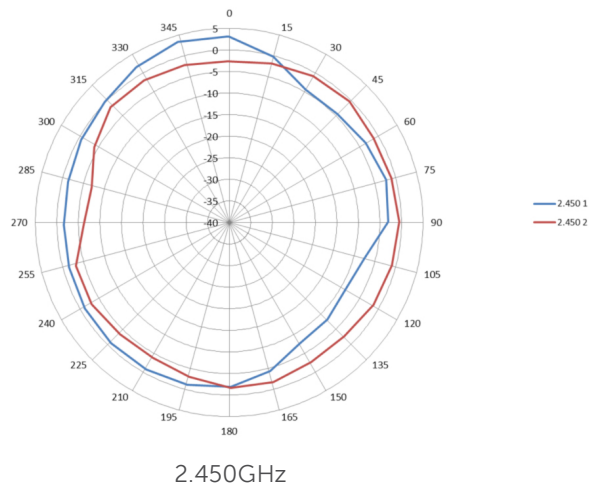
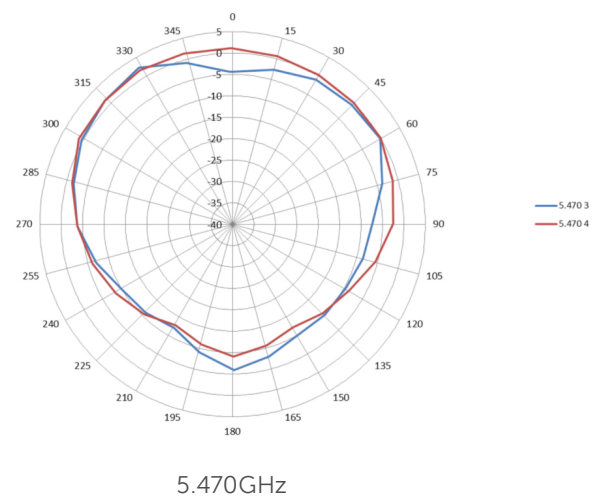Horizontal or azimuth plane (top view), 30 degrees downtilt

2.450GHz

5.470GHz
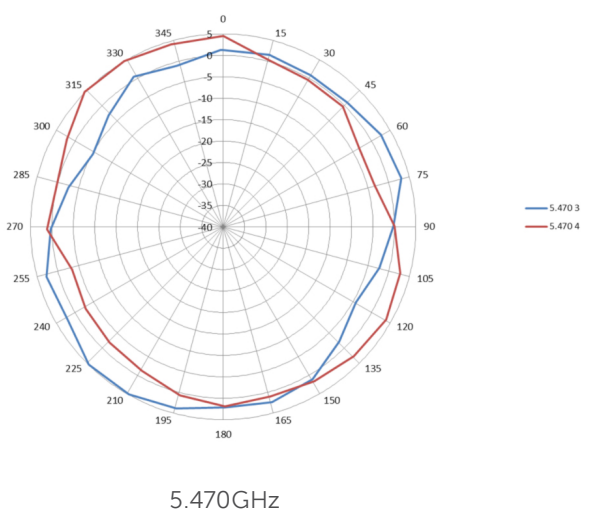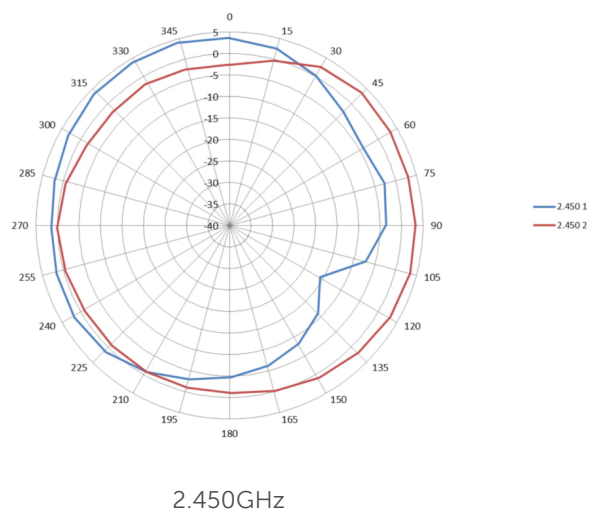
Elevation plane (side view, 0 degrees angle)

2.450GHz

5.470GHz

Antenna pattern plots

Elevation plane (side view, 90 degrees angle)

2.450GHz

5.470GHz
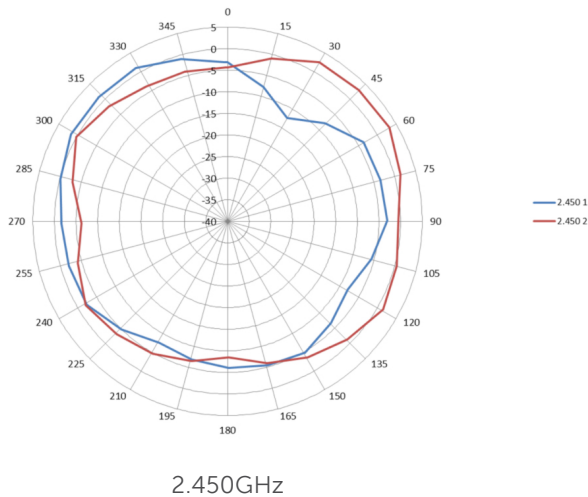
Ordering information

Part number	Description
Access points	
W-AP204	Dell W-AP204 Wireless Access Point, 802.11n/ac, 2x2:2, dual radio, antenna connectors
W-IAP204-RW	Dell W-IAP204 Wireless Instant Access Point, 802.11n/ac, 2x2:2, dual radio, antenna connectors – Restricted regulatory domain: Rest of World
W-IAP204-US	Dell W-IAP204 Wireless Instant Access Point, 802.11n/ac, 2x2:2, dual radio, antenna connectors – Restricted regulatory domain: United States
W-AP205	Dell W-AP205 Wireless Access Point, 802.11n/ac, 2x2:2, dual radio, integrated antennas
W-IAP205-RW	Dell W-IAP205 Wireless Instant Access Point, 802.11n/ac, 2x2:2, dual radio, integrated antennas – Restricted regulatory domain: Rest of World
W-IAP205-US	Dell W-IAP205 Wireless Instant Access Point, 802.11n/ac, 2x2:2, dual radio, integrated antennas – Restricted regulatory domain: United States
Mounting spares	
AP2-20-MNT-C1	Dell Access Point Mounting kit (ceiling grid). Contains 2x ceiling grid rail adapters (for flat rails). Spare.
Mounting accessories	
AP-220-MNT-C2	Dell Access Point Mounting kit (ceiling grid). Contains 2x ceiling grid rail adapters (for Interlude and silhouette style rails).
AP-220-MNT-W1	Dell Access Point Mounting kit (basic, flat surface). Contains 1x flat surface wall/ceiling mounting bracket.
AP-200-MNT-W2	Dell Access Point Mounting kit (secure, flat surface). Contains 1x flat surface wall/ceiling mounting cradle.
Generic indoor AP accessories	
AP-AC-UN	12V/18W Indoor Access Point AC power adapter. Universal, ships with 8 country-specific plug inserts (US, EU, UK, Australia, China, Korea, Argentina, Brazil), covering all Dell core countries.
AP-AC-12V18	12V/18W Indoor Access Point AC power adapter. Does not include country-specific power cord (order separately).
PD-3501G-AC	15.4W 802.3af PoE midspan injector, 10/100/1000BASE-T Ethernet

Learn More at Dell.com/Networking.

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