

Dell Networking 270 Series Outdoor Access Points

Setting a higher standard for 802.11ac



Innovative and aesthetically-designed 270 Series outdoor wireless access points deliver gigabit Wi-Fi performance to 802.11ac mobile devices under any weather condition. The 270 Series is also the only outdoor access point (AP) that enables 802.11n clients to operate three-times faster at greater distances.

Purpose-built to survive in the harshest outdoor environments, 270 Series APs withstand exposure to extreme high and low temperatures, persistent moisture and precipitation, and are fully sealed to keep out airborne contaminants. All electrical interfaces include industrial-strength surge protection.

With a maximum data rate of 1.3 Gbps in the 5GHz band and 600 Mbps in the 2.4GHz band, 270 Series outdoor APs supports concurrent dual-radio operation at speeds that greatly exceed Fast Ethernet.

Wi-Fi client optimization

To eliminate sticky client behavior and ensure consistently high performance, every Dell Networking AP includes ClientMatch™ technology, which gathers session performance metrics that steer mobile devices to the best AP and radio on the WLAN in real time.

Unique benefits

- Innovative industrial design
 - Eliminates installation complexity
 - Inconspicuous design that improves aesthetics
 - Delivers IP66- and IP67-rated protection from the elements

- Best-in-class RF management
 - Integrated Adaptive Radio Management™ technology manages the 2.4GHz and 5GHz radio bands and ensures that APs stay clear of RF interference
- Reliable and predictable Wi-Fi performance
 - Patented ClientMatch™ technology ensures that roaming clients associate with the best AP to maximize performance
 - AppRF™ technology identifies and prioritizes applications on the network
- Spectrum analysis
 - Capable of part-time or dedicated spectrum analysis, which scans the 2.4GHz and 5GHz radio bands to identify sources of RF interference
- Extended lifetime warranty – an industry first for outdoors

Choose your operating mode

The 270 Series outdoor APs offers a choice of operating modes to meet your unique management and deployment requirements.

- Controller-managed AP operating in campus or remote mode. When managed by Dell Networking W-Series Mobility Controllers running AOS™, the 270 Series offers centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding.
- Instant AP running InstantOS™. In Instant mode, one AP automatically distributes the network configuration to other APs. Just power-up one Instant AP, configure it over the air, and plug in the other Instant APs – the entire process takes about five minutes.

In addition to operation mode, the APs can be optionally configured to perform the following functions:

- Spectrum analysis: Dedicated scan mode identifies sources of RF interference.
- Air monitoring: Dedicated scan mode provides wireless intrusion protection.
- Hybrid AP: Serves Wi-Fi clients and simultaneously provides wireless intrusion protection and spectrum analysis.

If WLAN and network requirements change, a built-in migration path allows 270 Series Instant APs to become part of a WLAN that is centrally managed by a Mobility Controller.

Access point models

- W-AP275 and W-IAP275
 - 2.4GHz and 5GHz radios, each with 3x3 MIMO and three integrated omni-directional antennas
- W-AP274 and W-IAP274
 - 2.4GHz and 5GHz radios, each with 3x3 MIMO and three combined, diplexed external antenna connectors

Wireless radio specifications

- AP type: Outdoor, dual radio, 5GHz 802.11ac and 2.4GHz 802.11n
 - In addition to 802.11n data rates, the 2.4GHz radio supports 802.11ac 256-QAM modulation. This gives TurboQAM-enabled clients a 33% boost to deliver up to 600 Mbps.
- Supported frequency bands (country-specific restrictions apply):
 - 2.4000GHz to 2.4835GHz
 - 5.150GHz to 5.250GHz
 - 5.250GHz to 5.350GHz
 - 5.470GHz to 5.725GHz
 - 5.725GHz to 5.875GHz
- Available channels: Dependent upon 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)
 - 802.11n/ac: 3x3 MIMO with up to three spatial streams
- Supported modulation types:
 - 802.11b: BPSK, QPSK, CCK
 - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (with TurboQAM clients)
 - 802.11ac: 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: +28 dBm (23 dBm per chain)
 - 5GHz bands: +28 dBm (23 dBm per chain)
- Advanced cellular coexistence (ACC) feature to minimize interference from cellular systems
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay diversity (CDD) for improved downlink RF performance
- Short guard interval for 20-MHz, 40-MHz and 80-MHz 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
- Explicit transmit beam-forming (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 450 (MCS0 to MCS23, 1 to 3 spatial streams)
- 802.11ac: 6.5 to 1,300 (MCS0 to MCS9, 1 to 3 spatial streams)
- 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 Power
- Maximum power consumption: 23 watts
- Direct AC source: 100-240-Volt AC
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3at-compliant source

Antennas

- W-AP274 and W-IAP274: Six N-type female connectors for external antennas
- W-AP275 and W-IAP275: Six integrated omni-directional antennas for 3x3 MIMO with maximum antenna gain of 5 dBi in 2.4GHz and 5 dBi in 5GHz. Built-in antennas are optimized for horizontal mounted orientation of W-AP275 and W-IAP275.

Other interfaces

- One PoE+ PD port 10/100/1000BASE-T Ethernet network interface (RJ-45)
- One port 10/100/1000BASE-T Ethernet network interface (RJ-45)
- AC power interface, power cords sold separately
- Serial console interface (micro USB)
- Reset button
- Visual indicator (LED):
 - Power/system status; automatically disabled after initial operation period

Mounting

- Must be ordered separately
- Optional mounting kits:
 - AP-270-MNT-V1: 270 Series AP long mount kit for pole/wall mounting. Reduces impact of obstruction by pole or extends away from corner.
 - AP-270-MNT-V2: 270 Series AP short mount kit for pole/wall mounting

Mechanical

W-AP274 and W-IAP274

- Dimensions/weight (excluding mount):
 - With aesthetic cover
 - 23 cm (W) x 24 cm (D) x 19 cm (H)
 - 9.0" (W) x 9.4" (D) x 7.5" (H)
 - 2.7 kg/6 lbs
 - Without aesthetic cover
 - 23 cm (W) x 24 cm (D) x 14 cm (H)
 - 9.0" (W) x 9.4" (D) x 5.5" (H)
 - 2.4 kg/5.3 lbs

W-AP275 and W-IAP275

- Dimensions/weight (excluding mount):
 - 23 cm (W) x 24 cm (D) x 27 cm (H)
 - 9.0" (W) x 9.4" (D) x 10.6" (H)
 - 2.4 kg/5.3 lbs



Environmental

- Operating:
 - Temperature: -40° C to +65° C (-40° F to +150° F)
 - Humidity: 5% to 95% non-condensing
- Storage and transportation:
 - Temperature: -40° C to +70° C (-40° F to +158° F)
- Operating Altitude: 3000m
- Chassis Rating: IP66 and IP67
- Wind Survivability: Up to 165 mph
- Shock and Vibration: ETSI 300-19-2-4 spec T41.E 4M3

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 see your Dell representative.

Regulatory model numbers

- W-AP274 and W-IAP274: APEX0101
- W-AP275 and W-IAP275: APEX0100

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 6.4.0.1
- InstantOS 4.1.0.0



RF performance table

	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
802.11b 2.4GHz		
1 Mbps	23.0	-92.0
2 Mbps	23.0	-92.0
5.5 Mbps	23.0	-90.0
11 Mbps	23.0	-88.0
802.11g 2.4GHz and 802.11a 5GHz		
6 Mbps	23.0	-88.0
54 Mbps	18.0	-75.0
802.11n HT20 2.4 and 5GHz		
MCS0/8	23.0	-88.0
MCS7/15	17.0	-71.0
802.11n HT40 2.4 and 5GHz		
MCS0/8	23.0	-85.0
MCS7/15	17.0	-68.0
802.11ac VHT20 5GHz		
MCS0	23.0	-88.0
MCS9	16.0	-65.0
802.11ac VHT40 5GHz		
MCS0	23.0	-85.0
MCS9	16.0	-62.0
802.11ac VHT80 5GHz		
MCS0	23.0	-82.0
MCS9	16.0	-59.0



Ordering information

Part Number	Description
W-AP270 series access points	
W-AP274	Dell Networking W-AP274 Outdoor Wireless Access Point, 802.11ac, 3x3:3, dual radio, antenna connectors
W-IAP274-RW	Dell Networking W-IAP274 Outdoor Wireless Instant Access Point, 802.11ac, 3x3:3, dual radio, antenna connectors – Restricted regulatory domain: Rest of World
W-IAP274-US	Dell Networking W-IAP274 Outdoor Wireless Instant Access Point, 802.11ac, 3x3:3, dual radio, antenna connectors – Restricted regulatory domain: United States
W-AP275	Dell Networking W-AP275 Outdoor Wireless Access Point, 802.11ac, 3x3:3, dual radio, integrated antennas
W-IAP275-RW	Dell Networking W-IAP275 Outdoor Wireless Instant Access Point, 802.11ac, 3x3:3, dual radio, integrated antennas – Restricted regulatory domain: Rest of World
W-IAP275-US	Dell Networking W-IAP275 Outdoor Wireless Instant Access Point, 802.11ac, 3x3:3, dual radio, integrated antennas – Restricted regulatory domain: United States
W-AP270 series accessories	
PD-9001GR-AC	PD-9001GR-AC 30W 802.3at Indoor PoE midspan injector, 10/100/1000BASE-T Ethernet
PD-9001GO-DC	PD-9001GO-DC 30W 802.3at Outdoor PoE midspan injector, 12-24V DC in, 10/100/1000BASE-T Ethernet, Surge Protected, North America Power Cable
PD-9001GO-NA	PD-9001GO-AC 30W 802.3at Outdoor PoE midspan injector, 10/100/1000BASE-T Ethernet, Surge Protected, North America Power Cable
PD-9001GO-INTL	PD-9001GO-AC 30W 802.3at Outdoor PoE midspan injector, 10/100/1000BASE-T Ethernet, Surge Protected, International Power Cable
AP-270-MNT-V1	AP-270-MNT-V1 270 Series Access Point Long Mount Kit. Pole/Wall Mount for AP-270 300 mm from vertical mounting asset
AP-270-MNT-V2	AP-270-MNT-V2 270 Series Access Point Short Mount Kit. Pole/Wall Mount for AP-270 75-mm from vertical mounting asset

*Select Dell Networking products carry an Extended Life Warranty with Basic Hardware Service. Warranty covers repair or replacement of the product for as long as it remains in use by the customer. In the event of discontinuance of product manufacture, Dell Extended Life Warranty extends until five (5) years after end of product model sales. Warranty limits any power supply, antennae or accessories to one (1) year from date of purchase. Warranty does not include troubleshooting, configuration, or other advanced service provided by Dell ProSupport. The Extended Life Limited Hardware Warranty is not transferrable. For more information see dell.com/warranty.

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