Dell Networking W-IAP134 and W-IAP135 Instant Access Points

Dell Networking W-IAP134 and W-IAP135 are 802.11n based instant access points (IAPs) that delivers enterprise grade Wi-Fi network with affordability and simplicity of an entry level Wi-Fi network.

The W-IAP134 features two 3x3 MIMO dual-band 2.4-GHz/5-GHz radios with the interface to connect external antennas while the W-IAP135 features the same radios with integrated internal antennas. Both delivers data rate of 450Mbit/s per radio and are built to provide years of trouble-free operation and are backed by a Extended Lifetime Warranty.

Virtual controller technology

The virtual controller technology in Networking W-IAP134/135 delivers enterprise grade controller capabilities without needing a separate access point controller. The virtual controller in a single IAP is capable of controlling multiple number of other IAPs in a network that are either local or dispersed across multiple locations. Like a dedicated controller an IAP is able to perform key tasks such as AP auto discovery, 802.1X authentication, role- and device-based policy enforcement, rogue detection as well as specialized Adaptive Radio Management (ARM) that optimizes Wi-Fi client behavior by making sure that IAPs stay clear of RF interference. When multiple IAPs are connected together, a single IAP acts as a primary virtual controller. In the event of primary virtual controller failure, another W-Series IAP in a chain automatically takes on the role with no disruption to services. Scalability of IAP network is bounded by Layer-2 network design best practices. However, for W-IAP92/93 based networks the maximum limit is sixteen.

Ease of deployment

W-IAP is designed to be up and running in minutes. From a laptop, simply connect wirelessly to perform over-the-air provisioning in quick easy steps. To expand the network, simply add more W-IAPs—configuration is automatically uploaded to new units. You can dedicate one radio in a dual-radio W-IAPs to form a wireless mesh type of network and eliminate cabling between W-IAPs.

Management and visibility

Multiple W-IAP networks can be securely and centrally managed by Dell Networking W-Series AirWave software management suite, allowing W-IAPs to operate in hundreds of remote locations. With W-Series AirWave, IT has real-time visibility into users, mobile devices, Wired and Wireless LANs infrastructure all from a single management console.

In addition, Dell also offers the OpenManage Network Manager 5.0 (OMNM 5.0) management software that is an easy-to-use, web-based management interface tool that can be customized. OMNM 5.0 delivers support for the full line of Dell Networking products, including Networking and W-Series wireless devices and offers enhanced features for traffic flow analysis, deployment, monitoring, and management. OMNM 5.0 comes with ten free licenses. Each IAP based network uses one license, you can use remaining nine licenses to use for your other devices.

Investment protection

As WLAN requirements expand, PowerConnect W-IAP can be re-imaged as an 802.11n campus AP and migrate to a centralized Mobility Controller architecture capable of supporting hundreds and thousands of APs. Firmware to covert IAP to campus AP is available upon request. In addition to providing WLAN access, campus APs in a centralized, controller architecture can provide wireless intrusion protection and powerful spectrum analysis capabilities.

Ultra high performance 900 Mbps 802.11n access point, with built in virtual controller offering simplicity, manageability and access point clustering capability.

Specifications

Operating mode

- Multiservice concurrent 802.11a/n + b/g/n
- Backward compatible with 802.11a/b/g and mixed mode 802.11a/b/g/n deployments
- Air Monitor, Remote AP, Spectrum Monitor, Secure enterprise mesh

Radios

- Multifunction, dual radio capable of 2.4-GHz and 5-GHz operation
- Both 802.11n radios implement 3x3 MIMO with up to three spatial streams, providing up to 450Mbps data rate per radio
- Maximum ratio combining (MRC) for improved receiver performance
- Maximum transmit power per radio: 23dBm

Wireless radio specifications

- AP type: Dual-radio, dual-band 802.11n indoor
- Supported Frequency Bands (country-specific restrictions apply):
  - 2.400 - 2.4835 GHz
  - 5.150 - 5.250 GHz/5.250 - 5.350 GHz/5.470 - 5.725 GHz/5.725 - 5.850 GHz with Dynamic Frequency Selection (DFS) capability
- Available Channels: Controller-managed, dependent upon configured regulatory domain Supported Radio Technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n: Orthogonal frequency division multiplexing (OFDM)
  - 802.11n: 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
- Maximum Transmit Power (aggregated for three active transmit chains):
  - 2.4 GHz: up to 23 dBm (limited by local regulatory requirements)
  - 5 GHz: up to 23 dBm (limited by local regulatory requirements)
- Association Rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0—MCS23 (6.5 Mbps to 450 Mbps)
- 802.11n High-Throughput (HT) Support: HT 20/40
- 802.11n Packet Aggregation: A-MPDU, A-MSDU

Antenna

- IAP-134: Three RP-SMA antenna interfaces for external dual-band antennas. External Antenna selection guide is available from Dell representative or downloadable from Dell.com/Wireless
- IAP-135: Six internal downtilt omni-directional antennas; three per frequency band
  - 2.4 to 2.5 GHz/3.5 dBi
  - 5.150 to 5.875 GHz/4.5 dBi

Power

- 48 V DC 802.3af PoE or 802.3at PoE+
- 12 V DC external AC supplied power (adapter sold separately)
- Maximum power consumption: 15 watts

Interfaces

- Network:
  - 1 x 10/100/1000Base-T Ethernet (RJ45),auto-sensing, MDI/MDX
- Power:
  - 1 x DC power connector
- Other:
  - 1 x RJ45 console interfaceMounting
- Standard:
  - Wall mounting using built-in mount features
  - Recessed ceiling-tile rail mounting using one of two adapters supplied with the AP (9/16" and 15/16" rails)

Mechanical

- Dimensions/Weight:
  - 170 mm x 170 mm x 45 mm (6.69" x 6.69" x 1.77")
  - Unit: 760 g (1.68lb)

Environmental

- Operating:
  - Temp: 0° C to +50° C (+32° F to +122° F)
  - Relative humidity: 5 to 95% non-condensing
- Storage and Transportation Temperature Range:
  - Temp: -40° C to +70° C (-40° F to +158° F)

Certifications/Regulartory

- Wi-Fi certified: 802.11a/b/g/n

Product meets EMC, safety and wireless standards of over 50 countries inclusive of; USA (FCC), Canada, EU, Japan, Korea, China. For more country-specific regulatory information, and approvals, please see your Dell representative.

Minimum OS Version

6.1.2.3 - 2.0.0.3

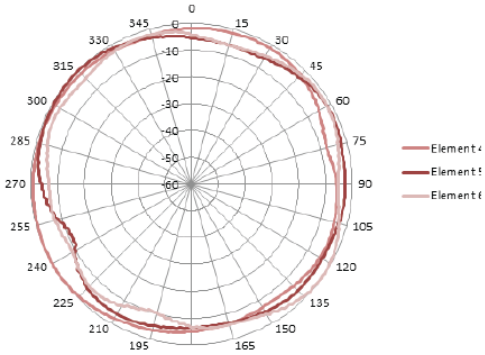
Extended Life Warranty*

W- IAP135 RF PERFORMANCE TABLE				
	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)
	2.4 GHz		5 GHz	
802.11b				
1Mbps	18	-97	--	--
11Mbps	18	-92	--	--
802.11a/g				
6 Mbps	18	-94	18	-94
54 Mbps	16	-81	16	-82
802.11n HT20				
MCS0/8/16	17	-94	17	-94
MCS7/15/23	12	-78	12	-78
802.11n HT40				
MCS0/8/16	17	-92	17	-92
MCS7/15/23	11	-75	11	-74

RF performance numbers for W-IAP134 slightly lower due to additional internal RF circuitry.

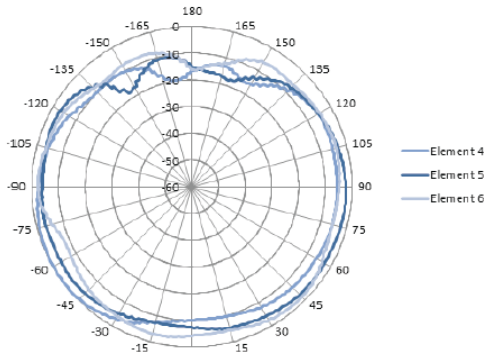
W-IAP135 ANTENNA PATTERN PLOTS

2.450 GHz, H-Plane, 20 degrees down-tilt



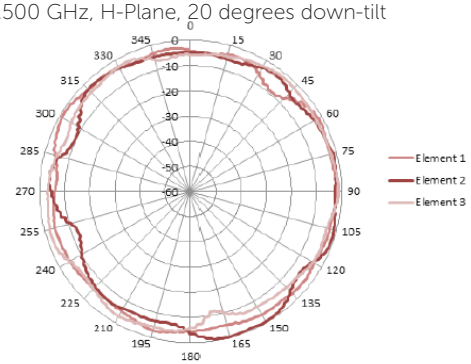
H-plane

2.450 GHz, E-Plane, AP facing down



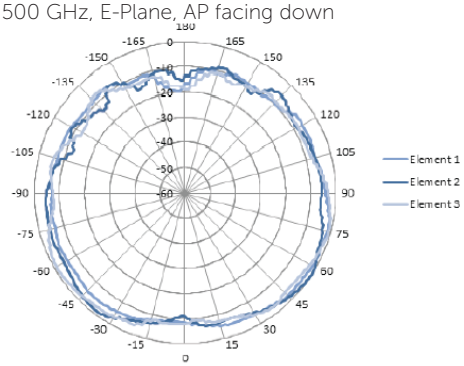
E-plane

5.500 GHz, H-Plane, 20 degrees down-tilt



H-plane

5.500 GHz, E-Plane, AP facing down



E-plane

Ordering Information	
Part number	Description
W-IAP134	W-AP134 AP (802.11a/n and 802.11b/g/n) with the interface to connect external antennas
W-IAP135	W-AP135 AP (802.11a/n and 802.11b/g/n) – Integrated Antennas.
W-AP-AC-UN	12 V DC Universal AC Power Adapter Kit - North America, Japan, United Kingdom, Italy, EC (Schuko), Australia, China, India, Korea
AP-DC-CAR	12VDC Car Power Adapter Kit
W-AP130-MNT	W-IAP134/135 Access Point Mounting Kit for flat surfaces

*Select PowerConnect 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

Learn more at Dell.com/Wireless

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