



# Dell PowerConnect W-IAP92 & W-IAP93 Instant Access Points

Dell PowerConnect W-IAP92 and W-IAP93 are 802.11n based instant access points (IAP) that deliver the affordability and simplicity of an entry-level enterprise-grade Wi-Fi network.

The W-IAP92 has a single radio that works in either 2.4 or 5GHz band (single radio, dual band) with the interface to connect external antennas while the W-IAP93 offers the same features as IAP-92 but has built in internal omni-directional antennas. Both are built to provide years of trouble-free operation and are backed by Extended Lifetime Warranty.

## Virtual controller technology

The virtual controller technology in PowerConnect W-IAP92 and W-IAP93 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

PowerConnect W-IAP is up and running in minutes. From a laptop, simply connect wirelessly to an SSID to perform over-the-air provisioning in quick easy steps. To expand, just install more PowerConnect W-IAP – configuration is automatically applied to new units.

## Management and visibility

Multiple PowerConnect W-IAP networks can be securely and centrally managed by Dell PowerConnect W-Series AirWave software management suite, allowing W-IAPs to operate hundreds of remote locations. With Dell PowerConnect 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 Force10, PowerConnect 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.

Entry level 300 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 or b/g/n WLAN
- Backward compatible with 802.11a/b/g and mixed-mode 11a/b/g/n deployments

### Radios

- Multifunctional single radio capable of supporting either 2.4 or 5 GHz
- 802.11n radio implements 2x2 MIMO with 2 spatial streams, providing up to 300 Mbps data rate per radio

### Wireless radio specifications

- Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835 GHz
  - 5.150 to 5.250 GHz, 5.250 to 5.350 GHz, 5.470 to 5.725 GHz, 5.725 to 5.850 GHz with dynamic frequency selection (DFS) capability
- Available channels: dependent upon configured regulatory domain
- Transmit power: Configurable in increments of 0.5 dBm
  - 2.4GHz: Up to 23 dBm (limited by local regulatory requirements)
  - 5 GHz: up to 23 dBm (limited by local regulatory requirements)
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n: Orthogonal frequency division multiplexing (OFDM)
  - 802.11n: 2x2 MIMO with 2 spatial streams
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
- Association rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0 - MCS15 (6.5 Mbps - 300 Mbps)
  - 802.11n high-throughput (HT) Support: HT 20/40
  - 802.11n packet aggregation: A-MPDU, A-MSDU

### RF management

- Automatic transmit power and channel management control with auto coverage hole correction via Adaptive Radio Management (ARM)
- Maximum ratio combining (MRC) for improved receiver performance

### Advanced features

- Wireless intrusion detection
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys

### Antenna

- IAP-92: dual, RP-SMA interfaces for external antenna support. External Antenna selection guide is available from Dell representative or downloadable from [Dell.com/wireless](http://Dell.com/wireless)
- IAP-93: integrated, Omni-directional antenna elements (supporting up to 2x2 MIMO with spatial diversity)
  - 2.4 GHz/2.5 dBi, 5 GHz/5.8 dBi

### 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 interface

### Power options

- 48V DC 802.3af PoE or 802.3at PoE+
- External AC power providing 12 V DC to AP (adapter sold separately)
- Maximum power consumption: 10 watts

### Mounting

- Wall Mount
- Ceiling tile rail (15/16" & 9/16" recessed or non-recessed)

### Mechanical

- 120 mm x 130 mm x 35 mm (4.7" x 5.1" x 1.4")
- Weight: 260g (9 oz)

### Certifications/Regulatory

- 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

- 5.0.3.0-1.1.0.0

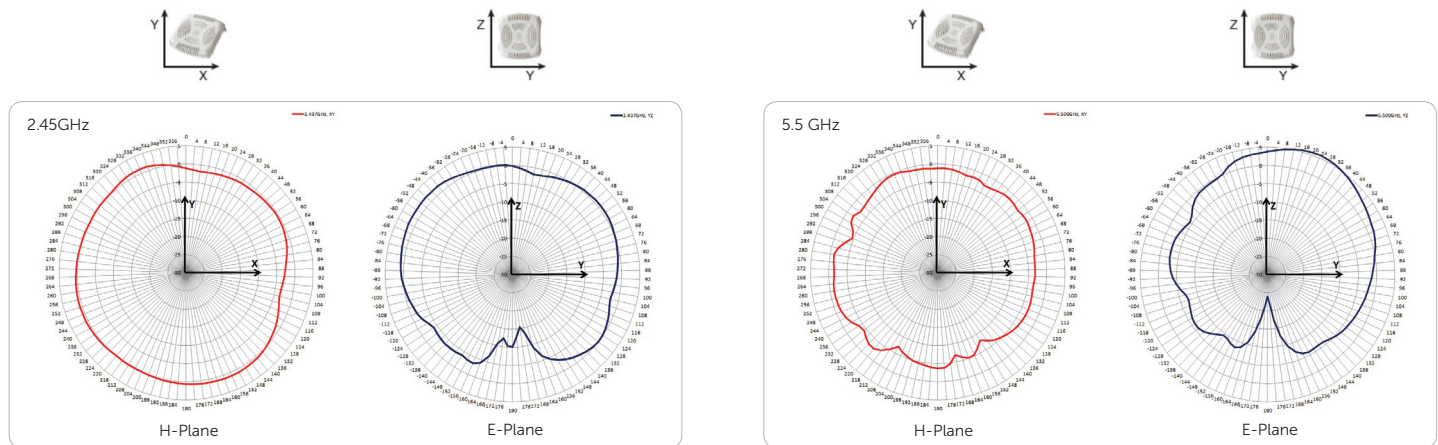
### Extended Life Warranty\*



W-IAP92 / W-IAP93 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	
<b>802.11b</b>				
1Mbps	18	-96	-	-
2Mbps	18	-96	-	-
5.5Mbps	18	-94	-	-
11Mbps	18	-93	-	-
<b>802.11a/g</b>				
6Mbps	18	-93	18	-93
9Mbps	18	-93	18	-93
12Mbps	18	-87	18	-87
18Mbps	18	-87	18	-87
24Mbps	18	-85	18	-85
36Mbps	15	-82	15	-82
48Mbps	14	-80	14	-80
54Mbps	14	-80	14	-80
<b>802.11n HT20</b>				
MCS0	18	-93	18	-93
MCS1	17	-93	17	-93
MCS2	17	-87	17	-87
MCS3	16	-87	16	-87
MCS4	16	-83	16	-83
MCS5	15	-80	15	-80
MCS6	14	-77	14	-77
MCS7	13	-75	13	-75
MCS8	18	-93	18	-93
MCS9	17	-93	17	-93
MCS10	17	-87	17	-87
MCS11	16	-87	16	-87
MCS12	16	-83	16	-83
MCS13	15	-80	15	-80
MCS14	14	-77	14	-77
MCS15	13	-75	13	-75
<b>802.11n HT40</b>				
MCS0	18	-90	18	-90
MCS1	17	-90	17	-90
MCS2	17	-87	17	-87
MCS3	16	-84	16	-84
MCS4	16	-80	16	-80
MCS5	15	-77	15	-77
MCS6	14	-77	14	-77
MCS7	13	-73	13	-73
MCS8	18	-90	18	-90
MCS9	17	-90	17	-90
MCS10	17	-87	17	-87
MCS11	16	-84	16	-84
MCS12	16	-80	16	-80
MCS13	15	-77	15	-77
MCS14	14	-77	14	-77
MCS15	13	-73	13	-73

RF performance numbers for AP-92 are slightly lower due to additional internal RF circuitry.

## W-IAP93 Antenna Plots



## Ordering Information

Part number	Description
W-IAP92	Dell PowerConnect W-IAP92 AP (802.11a/n and 802.11b/g/n) – with the interface to connect external antennas
W-IAP93	Dell PowerConnect W-IAP93 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-AP90-MNT	W-AP90 Series 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](http://dell.com/warranty).

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Learn more at [Dell.com/Wireless](http://Dell.com/Wireless)

