

# Dell PowerConnect W-IAP105 Instant Access Point

Dell PowerConnect W-IAP105 is 802.11n based instant access point (IAP) that delivers the affordability and simplicity of an entry-level enterprise-grade Wi-Fi network.

The W-IAP105 has dual radio, each radio capable of working in either 2.4 or 5GHz band, (dual radio, dual band) and has built in internal omni-directional antennas. The W-IAP105 delivers 300Mbit/s per radio and is built to provide years of trouble-free operation and are backed by an Extended Lifetime Warranty.

## Virtual controller technology

The virtual controller technology in PowerConnect W-IAP105 delivers enterprise-grade controller capabilities without needing a separate access point controller. The virtual controller in a single IAP is capable of controlling a 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 designed to be 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 the network, just install more PowerConnect W-IAP – 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 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.

Mainstream 600 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 dual radio capable of supporting 2.4 GHz and 5 GHz operation
- 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

- 4 x integrated, Omni-directional antenna elements (supporting up to 2x2 MIMO with spatial diversity). Maximum antenna gain:
  - 2.4 GHz/2.5 dBi, 5.150 GHz to 5.875 GHz/4.0 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: 12.5 watts

### Mounting

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

### Mechanical

- 132 mm x 135 mm x 45 mm (5.2" x 5.3" x 1.8")
- Weight: 300g (10.6 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

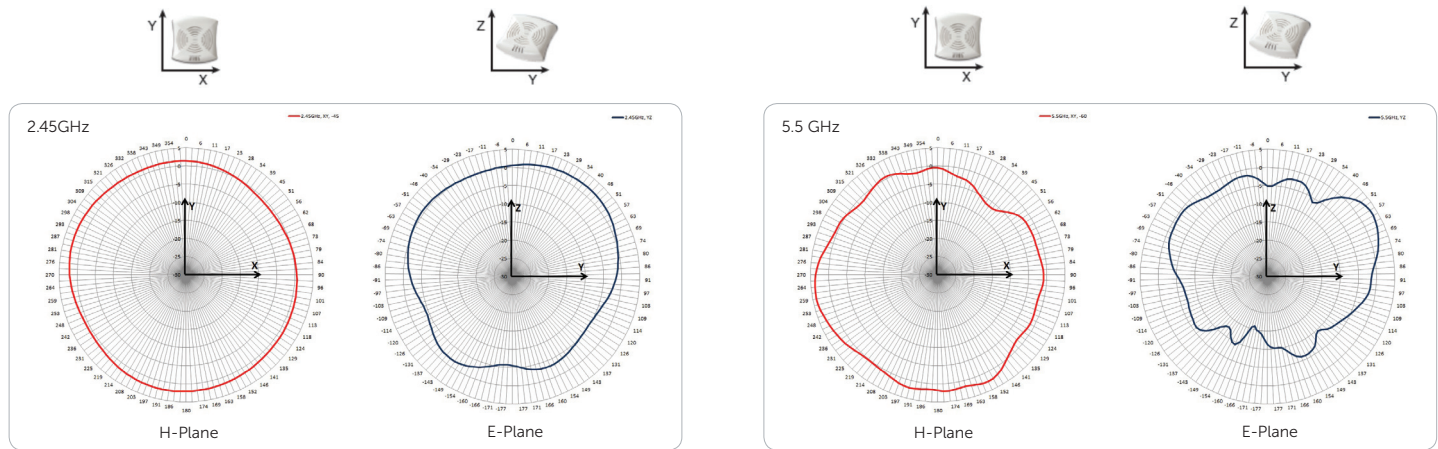
### Extended Life Warranty\*



**W- IAP105 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	20	-96	-	-
2Mbps	20	-96	-	-
5.5Mbps	20	-94	-	-
11Mbps	20	-93	-	-
<b>802.11a/g</b>				
6Mbps	20	-96	20	-96
9Mbps	20	-96	20	-96
12Mbps	20	-96	20	-96
18Mbps	20	-95	20	-95
24Mbps	20	-92	20	-91
36Mbps	19	-89	19	-88
48Mbps	18	-85	18	-84
54Mbps	17	-83	17	-83
<b>802.11n HT20</b>				
MCS0	20	-96	20	-93
MCS1	20	-95	20	-93
MCS2	20	-93	20	-87
MCS3	20	-90	20	-87
MCS4	19	-87	19	-83
MCS5	18	-82	18	-80
MCS6	17	-81	17	-77
MCS7	15	-80	15	-75
MCS8	20	-95	20	-93
MCS9	20	-93	20	-93
MCS10	20	-91	20	-87
MCS11	20	-87	20	-87
MCS12	19	-84	19	-83
MCS13	18	-81	18	-80
MCS14	17	-80	17	-77
MCS15	15	-77	15	-75
<b>802.11n HT40</b>				
MCS0	20	-93	20	-92
MCS1	20	-93	20	-92
MCS2	20	-90	20	-89
MCS3	20	-86	20	-86
MCS4	19	-83	19	-83
MCS5	18	-79	18	-80
MCS6	17	-77	17	-77
MCS7	15	-76	15	-76
MCS8	20	-92	20	-92
MCS9	20	-89	20	-90
MCS10	20	-87	20	-87
MCS11	20	-84	20	-84
MCS12	19	-82	19	-81
MCS13	18	-76	18	-77
MCS14	17	-76	17	-75
MCS15	15	-73	15	-73

## W-IAP105 Antenna Pattern Plots



## Ordering Information

Part number	Description
W-IAP105	Dell PowerConnect W-IAP105 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-AP105-MNT	W-AP105 Series Access Point Mounting Kit for flat surfaces or wall boxes (Covers DC power Interface)
W-AP105-MNT-C	W-AP105 Series Access Point Ceiling Mounting Kit (Rail Adapters)
W-AP105-MNT-DC	W-AP105 Series Access Point Mounting Kit for flat surfaces or wall boxes (Leaves DC power Interface)

\*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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