



Dell Networking W-IAP104 and W-IAP105 Access Points

Dell Networking W-IAP104 and W-IAP105 802.11n-based Instant Access Points (IAPs) deliver the affordability and simplicity of an entry-level, enterprise-grade WiFi network.

The W-IAP104 features 2x2 MIMO dual-band 2.4/5GHz radios with the interface to connect external antennas while the W-IAP105 features the same radios with integrated internal antennas. Both deliver data rates of 300Mbit/s per radio built to provide years of trouble-free operation backed by an Extended Lifetime Warranty.

Virtual controller technology

Virtual controller technology in the Dell Networking W-IAP 104/105 delivers enterprise-grade controller capabilities without requiring a separate access point controller. The virtual controller in a single IAP is capable of controlling multiple IAPs in a network. 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 WiFi 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 within the same network 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 limit is 16.

Ease of deployment

Dell Networking W-IAPs are 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 Dell Networking W-IAPs — configuration is automatically uploaded to new units. You can dedicate one radio in a dual-radio W-IAP to form a wireless mesh type of network and eliminate cabling between W-IAPs.

Management and visibility

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

In addition, Dell also offers the OpenManage Network Manager (OMNM) management software — an easy-to-use, customizable web-based management interface tool. OMNM with minimum OS version 5.0 delivers support for the full line of Dell Networking products, including W-Series wireless devices, and offers enhanced features for traffic flow analysis, deployment, monitoring and management. OMNM comes with 10 free licenses. Each IAP-based network uses one license, while the remaining nine licenses may be used for your other devices.

Investment protection

As WLAN requirements expand, the Dell Networking 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. In addition to providing WLAN access, campus APs in a centralized controller architecture can provide more advanced wireless intrusion protection and powerful spectrum analysis capabilities.

Mainstream 600Mbps
802.11n access point
with built-in virtual
controller offering
simplicity, manageability
and access point
clustering capability.

Specifications

Operating modes

- Multiservice concurrent 802.11a/n + 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 and 5GHz operation
- 802.11n radio implements 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio

Wireless radio specifications

- Supported frequency bands (country-specific restrictions apply):
 - 2.400 to 2.4835GHz
 - 5.150 to 5.250GHz, 5.250 to 5.350GHz, 5.470 to 5.725GHz, 5.725 to 5.850GHz with dynamic frequency selection (DFS) capability
- Available channels: Dependent upon configured regulatory domain
- Transmit power:
 - 2.4GHz: Up to 23 dBm (limited by local regulatory requirements)
 - 5GHz: Up to 23 dBm (limited by local regulatory requirements)
 - Transmit power configurable in increments of 0.5 dBm
- 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 to 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 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

- W-IAP104:
 - 4 x RP-SMA antenna interface connectors for external antenna support. External Antenna selection guide is available from Dell representative or downloadable from Dell.com/wireless
- W-IAP105:
 - 4 x integrated, omni-directional antennas
 - Maximum antenna gain:
 - 2.4GHz/2.5dBi
 - 5.150 to 5.875GHz/4.0dBi

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 12V DC to AP (adapter sold separately)
- Maximum power consumption: 12.5 watts

Mounting

- Ceiling tile rail (15/16" and 9/16" recessed or non-recessed)
- Wall mount

Mechanical

- 132 mm x 135 mm x 45 mm (5.2" x 5.3" x 1.8")
- Weight: 300g (10.56 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 AOS version

- W-AP104: 6.1.3.0
- W-AP105: 5.0.2.0

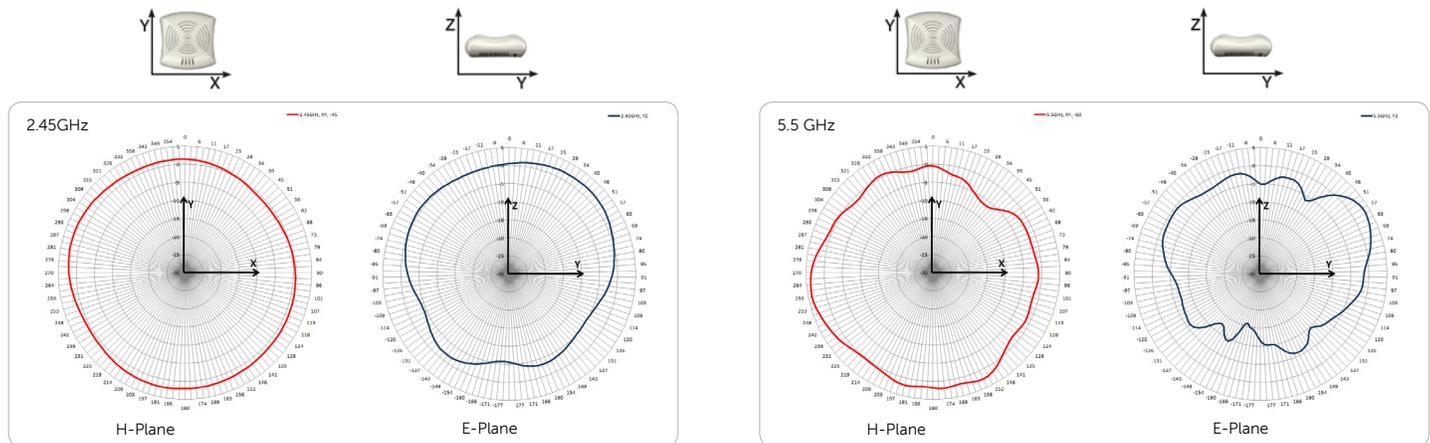
Extended Life Warranty*



W-IAP104 and 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)
	2.4GHz		5GHz	
802.11b				
1Mbps	20	-96	-	-
2Mbps	20	-96	-	-
5.5Mbps	20	-94	-	-
11Mbps	20	-93	-	-
802.11a/g				
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
802.11n HT20				
MCS0	20	-96	20	-96
MCS1	20	-95	20	-94
MCS2	20	-93	20	-92
MCS3	20	-90	20	-89
MCS4	19	-87	19	-86
MCS5	18	-82	18	-82
MCS6	17	-81	17	-80
MCS7	15	-80	15	-79
MCS8	20	-95	20	-95
MCS9	20	-93	20	-92
MCS10	20	-91	20	-90
MCS11	20	-87	20	-87
MCS12	19	-84	19	-84
MCS13	18	-81	18	-80
MCS14	17	-80	17	-78
MCS15	15	-77	15	-77
802.11n HT40				
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

Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.

W-IAP105 antenna plots



Ordering information

Part number	Description
W-IAP104	Dell Networking W-IAP104 AP (802.11a/n and 802.11b/g/n) with the interface to connect external antennas
W-IAP105	Dell Networking 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 Access Point Mounting Kit for flat surfaces or wall boxes (note: covers DC power interface)
W-AP105-MNT-C	W-AP105 Access Point Ceiling Mounting Kit (rail adapters)
W-AP105-MNT-DC	W-AP105 Access Point Mounting Kit for flat surfaces or wall boxes (leaves DC power interface exposed)
W-AP-ANT-xx	Detachable antennas (for use with W-AP104 only) – Please refer to W-Series Antenna Selection matrix and Antenna plots.

*Select 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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