

Dell PowerConnect W-AP104 and W-AP105 Access Points

The multifunction Dell PowerConnect W-AP104 and W-AP105 are indoor, dual-radio 802.11n access points (AP) designed for high-density deployments in offices, hospitals, schools and retail stores. These compact, high speed APs delivers wire-like performance at data rates up to 300 Mbps per radio.

The W-AP104 features two 2x2 MIMO dual-band 2.4-GHz/5-GHz radios with the interface to connect external antennas while the W-AP105 features the same configuration with integrated internal antennas. Both are built to provide years of trouble-free operation and are backed by an Extended Lifetime Warranty.

Working with Dell's line of centralized PowerConnect W Series Controllers, the W-AP104 and W-AP105 deliver secure, high-speed wireless network services for user mobility that works seamlessly within enterprise, branch and campus network deployments.

802.11n provides speed and reliability similar to a wired LAN. It also increases performance by utilizing techniques such as channel bonding, block acknowledgement and MIMO radios. Advanced antenna technology also increases range and reliability.

Key to ensuring wire-like performance and reliability is Adaptive Radio Management (ARM) capability, which manages the 2.4-GHz and 5-GHz radio bands to deliver maximum client performance. Adaptive Radio Management enables different 802.11 a, b, g and n wireless clients to operate on the same network at maximum possible performance through the use of band steering, airtime fairness policies between clients, and by managing channel interference that may occur between access points.

The multifunction W-AP104 and W-AP105 can be configured through the controller to provide wireless LAN (WLAN) access with part-time air monitoring, dedicated air monitoring for wireless intrusion protection, Remote AP (RAP) functionality or secure enterprise mesh. The W-AP104 and W-AP105 feature dual 100/1000 BASE-T Ethernet interfaces and operate from standard Power-over-Ethernet (PoE) sources or a 12-volt DC power supply.

Mainstream
600 Mbps 802.11n
access point for
secure dual-band
wireless mobility.

Specifications

Operating modes

- Multiservice concurrent 802.11a/n + b/g/n WLAN
- Can be configured to operate individually or simultaneously as:
 - 802.11a/b/g/n access point
 - Air monitor, spectrum monitor
 - Remote AP
 - Secure enterprise mesh
- Backward compatible with 802.11a/b/g and mixed-mode 11a/b/g/n deployments

Radios

- Multifunction, dual radio capable of 2.4-GHz and 5-GHz operation
- Both 802.11n radios implement 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio
- Maximal ratio combining (MRC) for improved receiver performance

Wireless radio specifications

- Supported frequency bands (country-specific restrictions apply):
 - 2.400 to 2.4835 GHz
 - 5.150 to 5.250 GHz with Dynamic Frequency Selection (DFS) capability
 - 5.250 to 5.350 GHz with Dynamic Frequency Selection (DFS) capability
 - 5.470 to 5.725 GHz with Dynamic Frequency Selection (DFS) capability
 - 5.725 to 5.850 GHz with Dynamic Frequency Selection (DFS) capability
- Available channels: Controller-managed, dependent upon configured regulatory domain
- Transmit power:
 - 2.4 GHz: Up to 23 dBm (limited by local regulatory requirements)
 - 5 GHz: 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

Antenna

- W-AP104:
 - 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-AP105:
 - 4 x integrated, omni-directional antennas.
 - Maximum antenna gain:
 - 2.4GHz/2.5dBi
 - 5GHz /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" & 9/16" recessed or non-recessed)
- Desk stand and wall outlet mount plate
- Wall box mount bracket (for US single gang wall mount)
- Solid wall stand-off

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
- FIPS/TAA certified SKU available



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

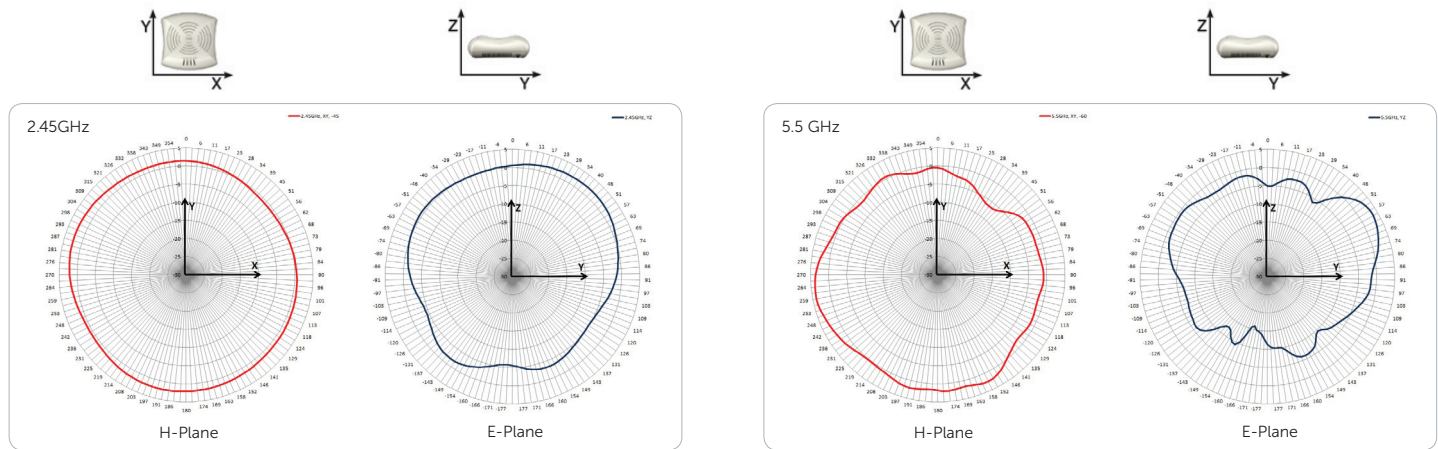
Extended Life Warranty*



W-AP104 and W-AP105 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	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-AP105 Antenna Plots



Ordering Information

Part number	Description
W-AP104	Dell PowerConnect W-AP104 AP (802.11a/n and 802.11b/g/n) with the interface to connect external antennas
W-AP105	Dell PowerConnect W-AP105 AP (802.11a/n and 802.11b/g/n) – Integrated Antennas
W-AP104-F1	Dell PowerConnect W-AP104 AP (802.11a/n and 802.11b/g/n) – with the interface to connect external antennas, FIPS/TAA Compliant
W-AP105-F1	Dell PowerConnect W-AP105 AP (802.11a/n and 802.11b/g/n) – Integrated Antennas FIPS/TAA Compliant
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 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.

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