Dell Networking W-Series
Quick reference guide

Dell Networking W-Series wireless products deliver industry-leading connectivity for enterprise mobility. The Dell W-Series provides highly differentiated, context-aware access policies based on the type of user, device, application and location, as well as the flexibility to use any mobile or computing device when implementing a BYOD access policy.

Learn more at Dell.com/Wireless

Wireless controllers	3rd generation								2nd generation		
	W-7005	W-7010	W-7024	W-7030	W-7205	W-7210	W-7220	W-7240/XM	W-3200	W-3400	W-3600
Description	Campus and branch				Headquarters, high density campus or large enterprise				Headquarters, large campus		
Max LAN-connected APs	16	32	32	64	256	512	1,024	2,048	32	64	128
Max remote access points	16	32	32	64	256	512	1,024	2,048	128	256	512
Max concurrent users/devices	1,024	2,048	2,048	4,096	8,192	16,384	24,576	32,768	2,048	4,096	8,192
Firewall throughput	2Gbps	4Gbps	4Gbps	8Gbps	12Gbps	20Gbps	40Gbps	40Gbps	3Gbps	4Gbps	4Gbps
Maximum VLANs	4,094	4,094	4,098	4,094	2,048	4,094	4,094	4,094	128	256	512
GbE Ports (GBIC or SFP)	n/a	2 SFP	2 SPF+	8 (combo)	4 SFP+	2 (combo)	2 (combo)	2 (combo)	4	4	4
10/100/1000Base-T Ports (auto-neg)	4	16	24	8 (combo)	4	2 (combo)	2 (combo)	2 (combo)	4	4	4
10GbE ports	0	0	0	0	0	4 SFP+	4 SFP+	4 SFP+	0	0	0
Power-over-Ethernet ports (802.3af/802.3at)	0	12 (max 150W)	0	0	0	0	0	0	0	0	0
USB ports	1	2	1 USB 2.0	1	1 USB 2.0	None	None	None	None	None	None
Form factor/footprint	Compact	1RU	1RU	1RU	1RU	1RU	1RU	1RU	1RU	1RU	1RU
Active firewall sessions	16,384	32,768	32,768	65,536	1,000,000	2,015,291	2,015,291	2,015,291	128,000	128,000	128,000
Concurrent IPSec sessions	512	1,024	1,024	2,048	4,096	16,384	24,578	32,768	2,048	4,096	4,096
Encrypted throughput (3DES, AES-CBC)	1.2Gbps	2.4Gbps	2.4Gbps	2.4Gbps	2.4Gbps	10Gbps	30Gbps	40Gbps	1.6Gbps	4Gbps	8Gbps
Encrypted throughput (AES-CCM)	2.2Gbps	3.6Gbps	3.6Gbps	4.4Gbps	3.6Gbps	6Gbps	20Gbps	40Gbps	800Mbps	2Gbps	4Gbps
Redundant power	n/a	n/a	n/a	n/a	n/a	Yes	Yes	Yes	n/a	n/a	n/a
Max power consumption	16.6W (with USB); can be powered by PoE	190W (with PoE)	450W (with PoE)	55W	75.2W	110W	125W	165W	35W	45W	60W
Certifications	802.11 a/b/g/n/ac certified. FIPS/TAA certified products available for government use.										
Optics available	SFP-LX, SFP-SX, SFP-TX, XFP-LR, XFP-SR, SFP-10GE-LR, SFP-10GE-LR and SFP-10GE-LRM. Options vary based on controller.										
Encryption types	WEP, TKIP, DES, AES-CCMP, 3DES, AES-CBC										
Authentication types	WPA-Enterprise, WPA-PSK, WPA2-Enterprise, WPA2-PSK, 802.1X, MAC address, captive portal										
Management	Dell AirWave Management Suite. Also supports SNMP, web, CLI using SSH, Telnet and console port.										
Hardware and software warranty	One year hardware, 90 day software. These can be further supplemented with Dell services ProSupport										
Optional Dell services	Dell offers a variety of services ranging from product support to installation and complete IT outsourcing. Get a free consultation at Dell.com/networkconsulting										
Optional controller functionality (Optional licenses)	•Wireless Intrusion Protection (WIP): Safeguard against wireless security threats, provide visibility into sources of RF interference, and eliminate the need for separate RF sensors and security appliances. •Policy Enforcement Firewall (PEF): Provide identity-based controls to enforce application-layer security, prioritization, traffic forwarding and network performance policies for wired and wireless networks. •Policy Enforcement Firewall with VPN (PEFV): Create a secure tunnel and allow your virtual private network (VPN) traffic to enter the controller. Also works with ViA client device software. •Advanced Cryptography (ACR): Deliver military-grade cryptography and enable secure access to networks that handle classified information.										

Access Points and Instant Access Points

The Dell W-Series controller-based ecosystem is ideal for enterprises that require maximum security, functionality and centralized management features. This architecture can enforce policies and security from one console and meets stringent government and military encryption certifications. Controller-based ecosystems can also serve as a termination point for your VPN.

Dell W-Series Instant Access Points (IAPs) combine enterprise capabilities with entry-level simplicity. These intelligent devices have a built-in virtual controller and firewall, and require no additional licenses. IAPs can be set up in minutes: simply configure the first device and the other IAPs automatically form a unified cluster. Add capacity by plugging in more IAPs. The devices can even migrate to a controller-based ecosystem to expand to a centralized wireless network. The IAP portfolio includes several wired and wireless IAPs that are ideal for remote APs for teleworker and branches.

Models		802.11ac						
		W-AP324 and W-AP325, W-IAP324 and W-IAP325	W-AP277 W-AP274 and W-AP275 W-IAP274 and W-IAP275	W-AP228 and W-IAP228	W-AP224 and W-AP225 W-IAP224 and W-IAP225	W-AP214 and W-AP215 W-IAP214 and W-IAP215	W-AP205H and W-IPA205H	W-AP204 and W-AP205 W-IAP204 and W-IAP205
Description		Highest capacity, performance, and efficiency for high-density environments + Wave 2 MU-MIMO.	Gigabit speeds for the highest number of mobile devices. Ruggedized for outdoor and harsh environments.	Gigabit performance for harsh, weather protected areas.	Gigabit speeds for the highest number of mobile devices.	Maximize mobile device performance in medium-density, high-performance Wi-Fi environments.	High performance for hospitality and branch deployment.	Maximize mobile device performance in medium-density enterprise Wi-Fi environments.
Radios		Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n	Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n	Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n	Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n	Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n	Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n	Dual radio, 5GHz 802.11ac and 2.4GHz 802.11n
Max data rate	5GHz	1.7Gbps	1.3Gbps	1.3Gbps	1.3Gbps	1.3Gbps	867Mbps	867Mbps
	2.4GHz	800Mbps	600Mbps	600Mbps	600Mbps	450Mbps	400Mbps	450Mbps
Operating modes		Controller-managed AP operating in campus, remote mode, Instant AP running InstantOS Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4GHz and 5GHz radio bands to identify sources of RF interference.						
Number of BSSIDs per radio		Up to 16	Up to 16	Up to 16	Up to 16	Up to 16	Up to 16	Up to 16
Max IPSEC encrypted wired throughput (remote mode)		20Mbps	20Mbps	20Mbps	100Mbps	20Mbps	20Mbps	20Mbps
Minimum controller software version		6.4.4.0 (W-AP324, W-AP325)	6.4.0.1 (W-AP274, W-AP275) 6.4.3.1 (W-AP277)	6.4.3.0	6.3.0.0	6.4.2.0	6.4.3.1	6.4.1.0
Minimum Instant software version		4.2.1.0 (W-IAP324, W-IAP325)	4.1.0.0 (W-AP274, W-AP275) 4.2.0.0 (W-AP277)	4.1.2.0	4.0.0.1	4.1.1.0	4.2.0.0	4.1.1.0
RF management		Adaptive Radio Management™ (ARM) provides dynamic, application-aware channel management to maximize network capacity and ensure fairness in bandwidth availability per user.						
Integrated antennas		8x 2.4 and 5GHz omni (W-AP325)	3x 2.4 and 5GHz omni (W-AP275/W-IAP275) 3x 80° H x 80° V beamwidth directional antennas (W-AP275/W-IAP277)	None	Omni downtilt (W-AP225/W-IAP225)	6x omni downtilt (W-AP215/W-IAP215)	4x semi directional	4x omni downtilt (W-AP205/W-IAP205)
RF connectors		4x RP-SMA (W-AP324)	6x Nf (W-AP274/W-IAP274)	6x Nf	3x RP-SMA, dual-band (W-AP224/W-IAP224)	3x RP-SMA, dual-band (W-AP214/W-IAP214)	No	2x RP-SMA, dual-band (W-AP204/W-IAP204)
Network interfaces		2x GbE	2x GbE	2x GbE	2x GbE	1x GbE	4 x GbE 2 x Pass-through	1x GbE
Jumbo frame support on uplink		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other interfaces		2x 10/100/1000BASE-T Ethernet (RJ-45), DC power, USB 2.0 host, BLE radio	Console Port micro-USB	Console Port micro-USB	12VDC (optional power adapter) Console Port RJ-45	12VDC (optional power adapter) Console Port RJ-45	12VDC (optional power adapter) Console Port RJ-45	12VDC (optional power adapter) Console Port RJ-45
Power over Ethernet (PoE) interfaces		PoE-PD: 802.3at/af POE-PS: Yes	POE-PD: 802.3at POE-PS: No	POE-PD: 802.3at POE-PS: No	POE-PD: 802.3at/af POE-PS: No	POE-PD: 802.3at/af POE-PS: No	POE-PD: 802.3af	POE-PD: 802.3af POE-PS: No
Power consumption		8W	23W	23W	15W, plus up to 2.5W for attached USB device	Maximum (worst-case) power consumption: 14.9W (PoE) or 13.6W (DC) Maximum (worst-case) power consumption in idle mode: 8.2 watts (PoE) or 7.4 watts (DC)	DC: 12W (excluding PoE-PSE, USB) 802.3at PoE: 13W (excluding PoE-PSE, USB) 802.3af PoE: 13W"	Maximum (worst-case) power consumption: 12.5W (PoE) or 11.7W (DC) Maximum (worst-case) power consumption in idle mode: 8.4 watts (PoE) or 7.7 watts (DC)
Environmental	Class	Indoor	Outdoor	Outdoor	Indoor, plenum-rated	Indoor, plenum-rated	Indoor, plenum-rated	Indoor, plenum-rated
	Operating temp.	Temperature: 0° to 50° C (32° to 122° F) Humidity: 5% to 95% non-condensing	Temperature: −40° to 65° C (−40° to 150° F) Humidity: 5% to 95% non-condensing	Temperature: −40° to 60° C (−40° to 140° F) Humidity: 5% to 95% noncondensing	Temperature: 0° to 50° C (32° to 122° F) Humidity: 5% to 95% non-condensing	Temperature: 0° to 50° C (32° to 122° F) Humidity: 5% to 95% non-condensing	Temperature: 0° to 40° C (32° to 104° F) Humidity: 5% to 95% noncondensing	Temperature: 0° to 40° C (32° to 104° F) Humidity: 5% to 95% non-condensing
Accessories		Wall mount brackets, ceiling tile rail adapters, AC power adapters and attachable antennas sold separately. (See Dell W-Series Antenna Matrix)						
Hardware Warranty		Extended lifetime warranty						

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Models		W-AP114 and W-AP115 W-IAP114 and W-IAP115	W-AP103 and W-IAP103	W-AP103H	W-IAP108 and W-IAP109 (Remote IAPs)	W-IAP155 and W-IAP155P	W-IAP3WN and W-IAP3WNP
Description		Support 50% more throughput and mobile devices than previous-generation APs. High-performance capacity and density.	Cost-effective coverage and capacity for low to medium density.	Wall-plate mountable Hospitality AP with Ethernet ports, provide wired and wireless connections in one device.	High-performance wireless and wired networking for branch offices, hotspots and teleworkers.	Desktop AP with additional Ethernet ports to create a small LAN or connect PoE devices. Ideal for small branch offices, hotspots and remote offices/teleworkers.	Desktop AP with additional Ethernet ports to create a small LAN or connect PoE devices. Ideal for remote home offices/teleworker.
Radios		Dual radio, 5GHz and 2.4GHz 802.11n	Dual radio, 5GHz and 2.4GHz 802.11n	Dual radio, 5GHz and 2.4GHz 802.11n	Dual-radio, dual-band 802.11n	Dual radio, dual-band 802.11n	Single radio: 2.4GHz band
Max data rate	5GHz	450Mbps	300Mbps	300Mbps	300Mbps	450Mbps	n/a
	2.4GHz	450Mbps	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps
Operating modes							
Number of BSSIDs per radio		Up to 8	Up to 16	Up to 8	Up to 16	Up to 16	Up to 8
Max IPSEC encrypted wired throughput		20Mbps	10Mbps	10Mbps	20Mbps	100Mbps	20Mbps
Minimum controller software version		6.3.1.0	6.4.0.1	6.4.1.0	6.2.0.0	6.3.0.0	6.1.4.0
Minimum Instant software version		4.0.0.0	4.1.0.0	n/a	3.2.0.0	3.3.0.1	3.0.0.0
RF management							
Integrated antennas		6x omni downtilt (W-AP115/W-IAP115)	2x omni downtilt	2x omni	4x omni (W-IAP109)	5x omni	2x omni
RF connectors		3x RP-SMA, dual-band (W-AP114/W-IAP114)	n/a	n/a	2x RP-SMA, dual-band (W-IAP108)	n/a	n/a
Network interfaces		1x GbE	1x GbE	1x GbE + 2x FE + 1x passthrough RJ-45	1x GbE + 1x FE	5x GbE	3x FE
Jumbo frame support on uplink		No	No	No	No	No	No
Other interfaces		12VDC (optional power adapter) Console Port RJ-45	12VDC (optional power adapter) Console Port Header	12VDC (optional power adapter) Console Port Header	12VDC (optional power adapter) Console Port RJ-45 USB Host Port	W-IAP155: 12VDC (power adapter in-box) W-IAP155P: 54VDC (power adapter in-box, order power cord separately) Console Port Header USB Host Port	W-IAP3WN: 12VDC (power adapter in-box) W-IAP3WNP: 48VDC (power adapter in-box, order power cord separately) Console Port Header USB Host Port
Power over Ethernet (PoE) interfaces		POE-PD: 802.3at/af POE-PS: No	POE-PD: 802.3af POE-PS: No	POE-PD: 802.3af POE-PS: No	POE-PD: 802.3af/at POE-PS: No	POE-PD: No POE-PS: W-IAP155P 1x 802.3at or 2x 802.3af	POE-PD: No POE-PS: W-IAP3WNP 1x 802.3af
Power consumption		Without USB device connected: 13W With USB device: 15.5W	9.5W (POE) or 8W (DC)	9.4W (POE) or 8.3W (DC)	Without USB device connected: 12.5W With USB device: 15W	Without USB device connected: 17.5W With USB device: 20W When sourcing POE power (W-IAP155P only), total power consumption may increase by up to 34W	W-IAP3WN: 4 watts/6.5 watts W-IAP3WNP: 5.5, 8, or 26 watts
Environmental	Class	Indoor, plenum-rated	Indoor	Indoor	Indoor	Indoor	Indoor
	Operating temp.	Temperature: 0° to 50° C (32° to 122° F) Humidity: 5% to 95% non-condensing	Temperature: 0° to 40° C (32° to 104° F) Humidity: 5% to 95% non-condensing	Temperature: 0° to 40° C (32° to 104° F) Humidity: 5% to 95% non-condensing	Temperature: 0° to 40° C (32° to 104° F) Humidity: 5% to 95% non-condensing	Temperature: 0° to 40° C (32° to 104° F) Humidity: 5% to 95% non-condensing	0° to 40° C (32° to 104° F)
Accessories							
Hardware Warranty							

Network management

AirWave Management System (AWMS)

Use Dell's multi-vendor network management software for a consolidated view of the RF environment, controllers, APs, and the wired infrastructure, with an intuitive user interface. AirWave can manage all Dell W-Series wireless products and provide visibilty and troubleshooting for your existing vendor networks.

Easy-to-use web interface
- Role-based access, viewing rights and administrative privileges tailored to job responsibilities.
- Custom graphs of key information allow for pan and zoom for visibility into specific periods of time.
- Identify and search for users by user name.
- Client overview summarizes the types of clients attached to the network and provides visibility into watched or VIP clients.
- Multiple dashboard views provide visibility into every aspect of the wireless network.

Device discovery
- Automatically discovers WLAN infrastructure devices.
- Operates in any network environment, including large distributed networks with multiple locations.

Troubleshooting and diagnostics
- Collects and displays client device data from Dell W-Series ClearPass Policy Manager, including device type, operating system, OS details, manufacturer and model.
- Client search by user name or MAC address provides a diagnostic view of devices as well as network statistic indicators to evaluate overall health and performance.
- Overlay feature helps diagnose issues specific to a client or to a specific area on a floor plan.
- Advanced RF troubleshooting to easily diagnose RF issues in the network.

Real-time monitoring and visibility
- Automatically tracks every user and device – wireless and remote – on the network.
- Provides visibility into the wired infrastructure that connects wireless controllers and APs.
- Provides visibility into clients associated to network including location, SNR, connection speed and more.
- Logs and displays radio and RADIUS errors, including noise floor and channel utilization information.
- Provides rapid drill-down from network-wide to device-level monitoring views.
- Dashboards track RF performance, capacity and application-level statistics as well as network deviations over a 40-week period.
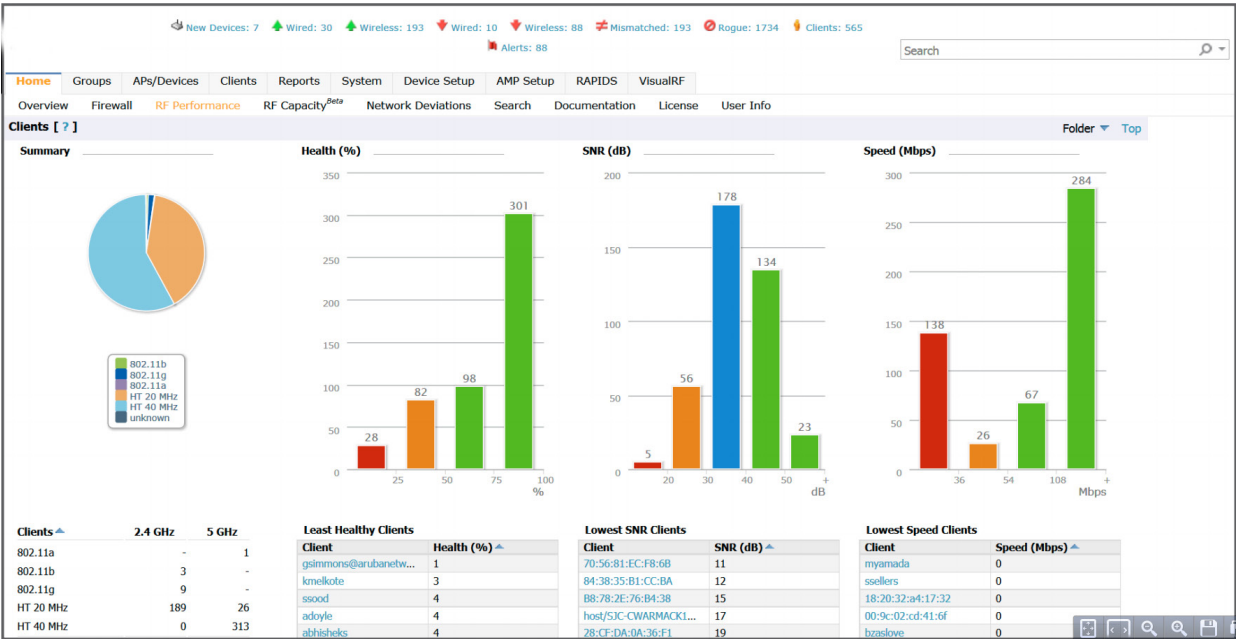
User access management

ClearPass Access Management System

This highly integrated access management solution enables employees, guests and bring your own device (BYOD). The Dell ClearPass device connects to your existing network to securely onboard devices, admit users, display usage, perform health assessments and manage policies while maintaining appropriate security and service levels. Its self registration portal frees your IT staff from the manual setup process. ClearPass models are designed to accommodate from 500 to 25,000 concurrent users/devices.

Enterprise-grade security with high availability
- Unique username and password per user
- Integrated RADIUS database for guest and device accounts
- Role-based access controls
- Assign different access-level privileges based on user type
- Print template and SMS integration delivers wireless security keys out-of-band to ensure scalable and encrypted guest access
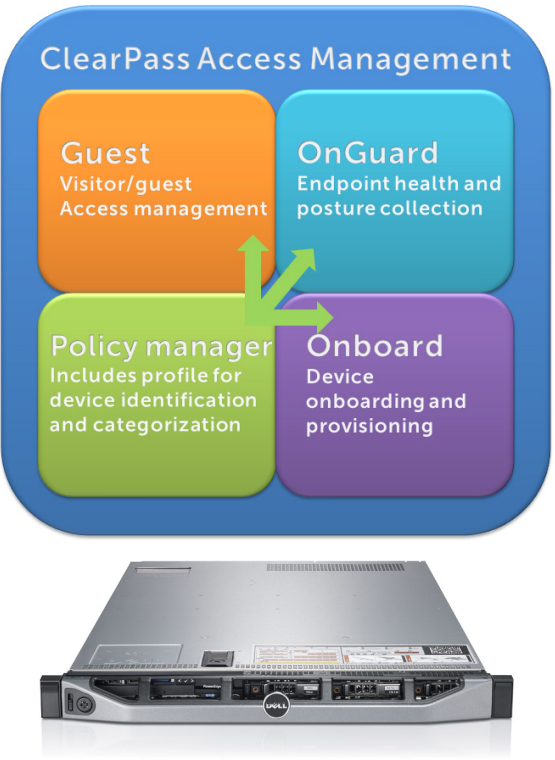
Customization
- Branding unique skin technology delivers a fully customized, corporate – branded user experience
- Advertising services – Advanced content delivery platform for next-generation hotspots. Easily monetizes Wi-Fi access in public access environments using business intelligence data collection and demographic-targeted advertising delivery
- Visitor intelligence – Self-registration collects data about guest preferences and experiences. Intelligent labeling enables matched content delivery
- Seamless integration with third-party multivendor hardware and software

Intuitive, easy to use interface
- Enables reception staff and non-technical personnel to manage guest accounts and configure self-provisioning captive portals
- Visitor management – Create and modify temporary user accounts; delete or set accounts to automatically expire
- Self-registration – Guests and employees can register for access through a customizable web interface

Model	Details
ClearPass 25,000	Up to 25,000 concurrent users/devices
ClearPass 5,000	Up to 5,000 concurrent users/devices
ClearPass 500	Up to 500 concurrent users/devices
ClearPass Modules	Licensing options: Guest, OnBoard, OnGuard for Advanced Policy Management

- ClearPass is available as a hardware appliance or as software only (Virtual machine for VMware™).
- Licenses for these modules are available in different quantities to support deployment scale.

Learn More at Dell.com/Wireless