

# SonicWall Wireless Network Security

Secure, high-speed wireless solutions

SonicWall Wireless Network Security solutions combine high-performance IEEE 802.11ac Wave 2 wireless technology with industry-leading next-generation firewalls. The result is a superior experience for WiFi users that's as secure as any wired connection.

The solutions are based on:

- SonicWall SonicWave series indoor and outdoor wireless access points (APs) which support the 802.11ac Wave 2 wireless standard
- SonicWall TZ, NSA and SuperMassive firewalls, which use deep packet inspection technology to detect and eliminate threats over wired and wireless networks

## Superior user experience

SonicWave APs take advantage of the capabilities in 802.11ac Wave 2 plus features such as band steering and a built-in 2.5 GbE port to deliver high-speed wireless performance. Other features, including 4x4 MU-MIMO and beamforming, improve performance in higher density environments when using bandwidth-intensive applications such as HD multimedia, and cloud and mobile apps.

Each SonicWave access point includes three radios. One operates in the less crowded 5 GHz frequency band, reducing interference from other devices while strengthening signal reliability. Another operates in the 2.4 GHz band to support legacy 802.11b/g/n clients. The third radio is dedicated to security and performs rogue AP detection, passive scanning and packet capturing. With four transmitting and four receiving antennas plus support for 4x4 MU-MIMO, SonicWave APs are engineered to optimize signal quality, range and reliability for wireless devices including Wave 2-enabled clients.

## Comprehensive threat prevention

SonicWall firewalls scan all wireless traffic coming into and going out of the network using deep packet inspection technology and then remove harmful threats such as malware and intrusions, even over SSL/TLS encrypted connections. Other security and control capabilities such as content filtering, application control and intelligence and Capture Advanced Threat Protection provide added layers of protection. The Wireless Network Security solution also integrates additional security-related features including wireless intrusion detection and prevention, virtual access point segmentation, wireless guest services, RF monitoring and wireless packet capture.

## Simplified deployment and centralized management

Access point deployment and setup are greatly simplified, reducing total cost of ownership (TCO). Integrated into every SonicWall firewall is a wireless controller that auto-detects and auto-provisions SonicWave APs across the network. Wireless signal analysis tools provide a visual map to optimize site-based access point placement.

Management and monitoring for wireless and security are handled centrally through the firewall or through SonicWall Global Management System, providing network administrators with a single pane of glass from which to manage all aspects of the network.

## SonicPoint series

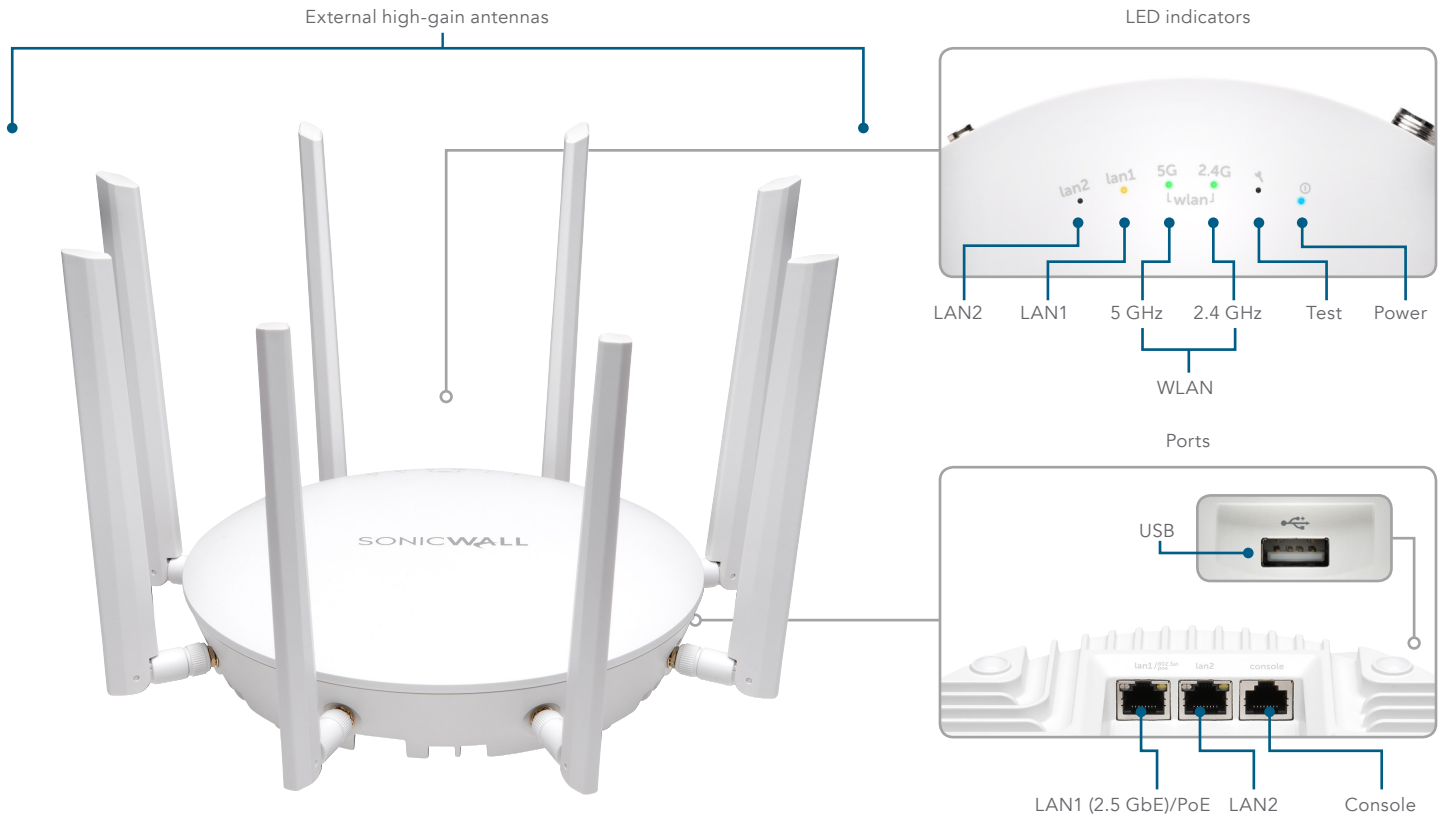
For organizations with a substantial investment in 802.11ac clients, the SonicWall SonicPoint series features dual radios, high-speed 802.11ac performance, 3x3 SU-MIMO and all the security advantages that SonicWall Wireless Network Security solutions offer.



## Benefits:

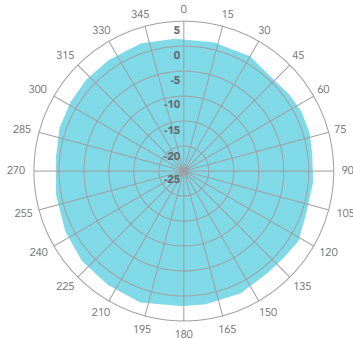
- Superior user experience
  - 802.11ac Wave 2
  - 4x4 MU-MIMO
  - 2.5 GbE port
  - Band steering
  - Beamforming
  - AirTime Fairness
  - Access point dynamic VLANs
- Comprehensive threat prevention
  - Deep packet inspection technology
  - SSL/TLS decryption and inspection
  - Dedicated third scanning radio
  - Virtual access point segmentation
  - Wireless intrusion detection and prevention
- Simplified deployment and centralized management
  - Auto-detection and provisioning
  - Wireless signal analysis tools
  - Single-pane-of-glass management
- Low total cost of ownership
  - Integrated wireless access controller
  - Green AP
  - Indoor and outdoor models

# SonicWave Series Access Points: SonicWave 432e

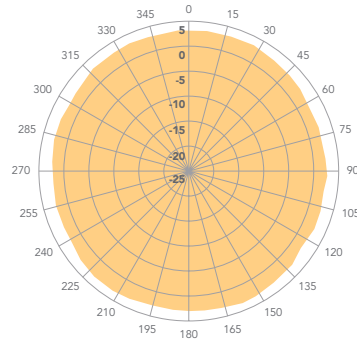


## Radio frequency coverage maps

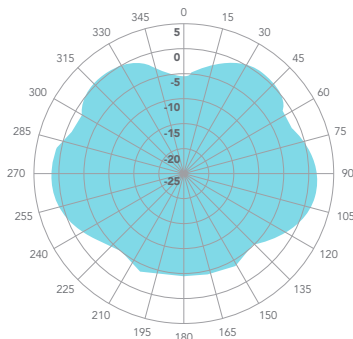
2.4 GHz Vertical



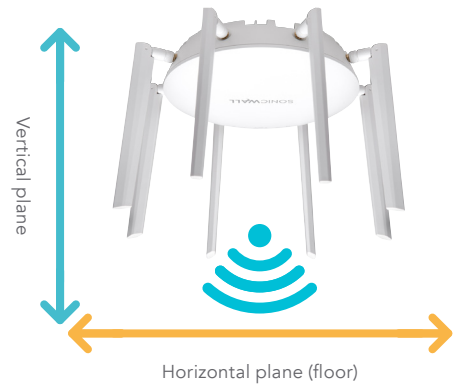
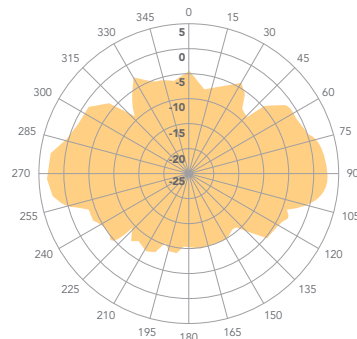
2.4 GHz Horizontal



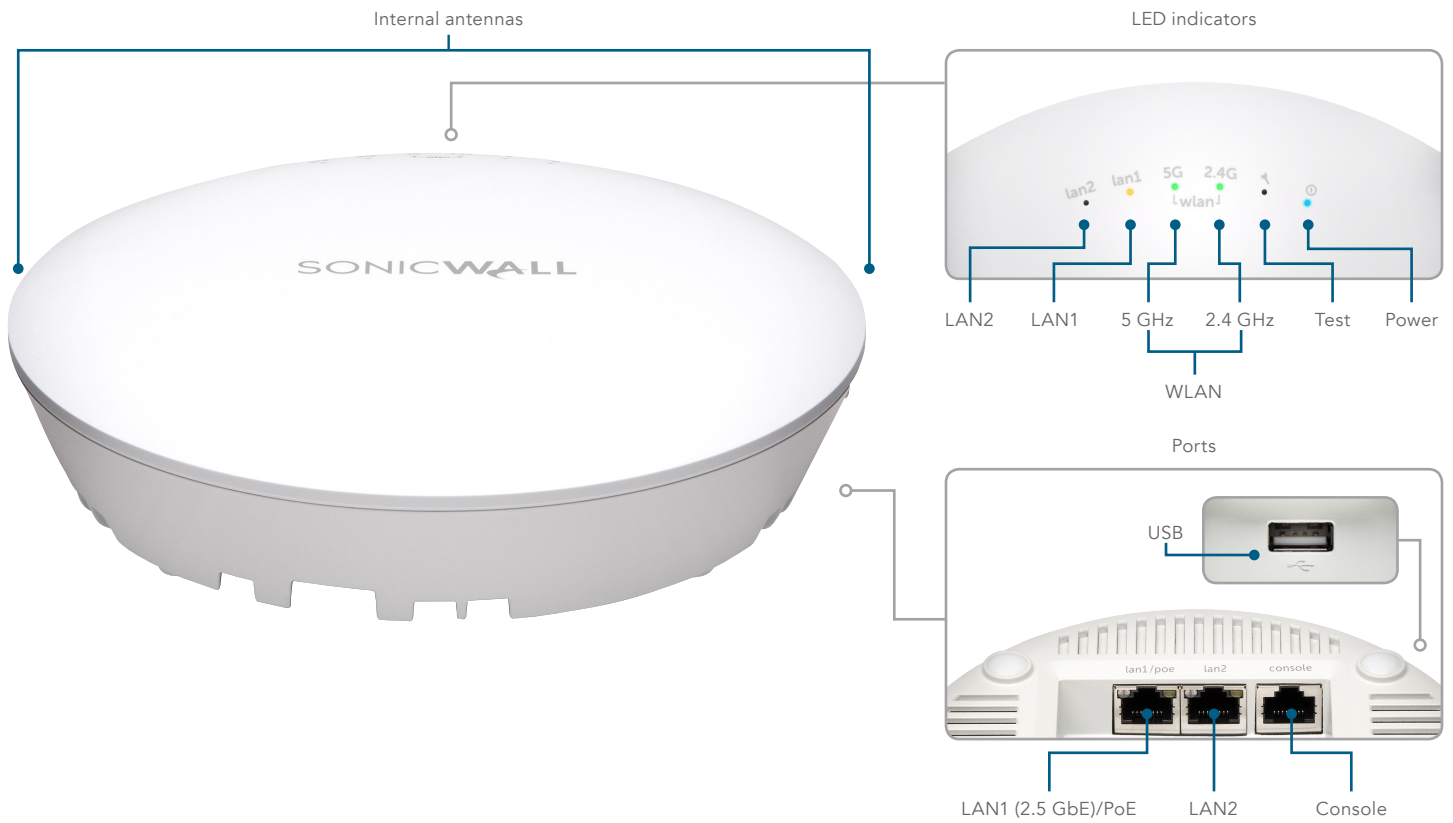
5 GHz Vertical



5 GHz Horizontal

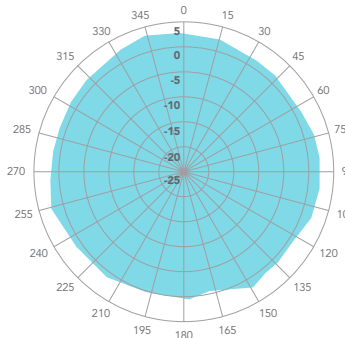


# SonicWave Series Access Points: SonicWave 432i

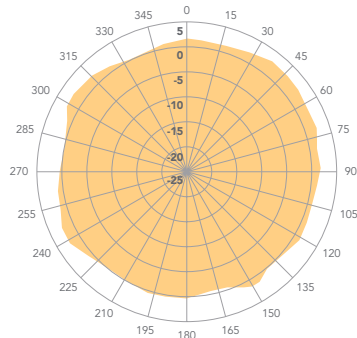


## Radio frequency coverage maps

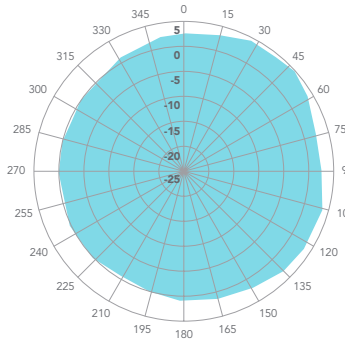
2.4 GHz Vertical



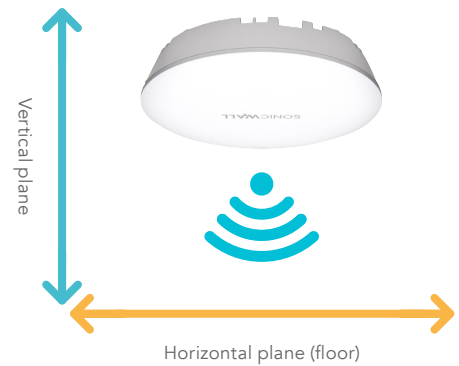
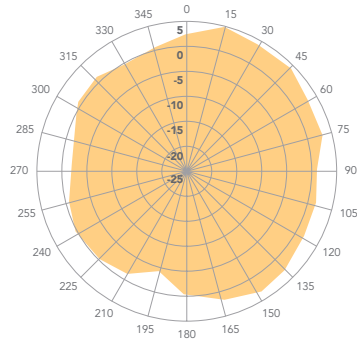
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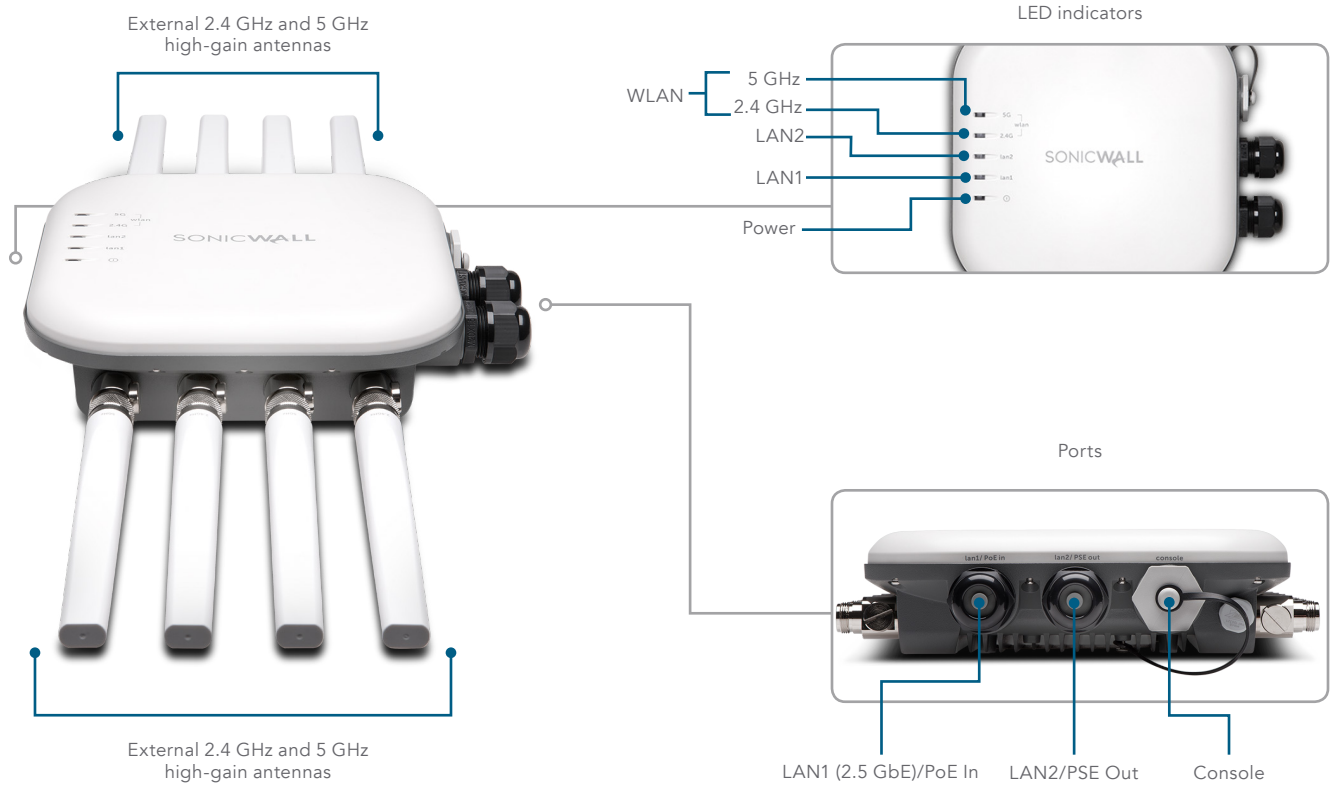
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5 GHz Horizontal

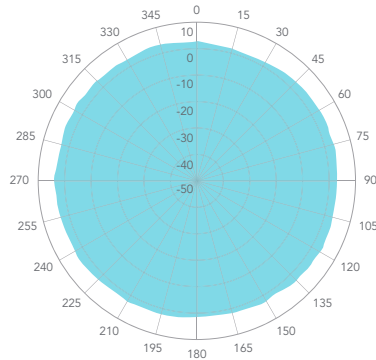


# SonicWave Series Access Points: SonicWave 432o

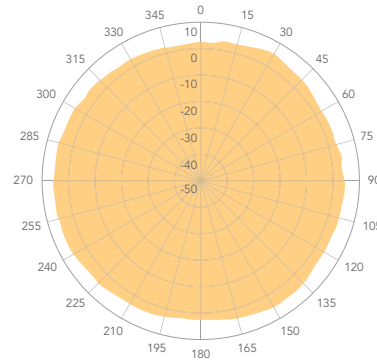


## Radio frequency coverage maps

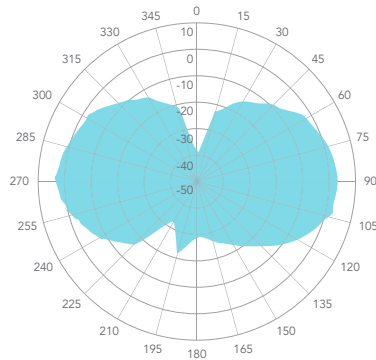
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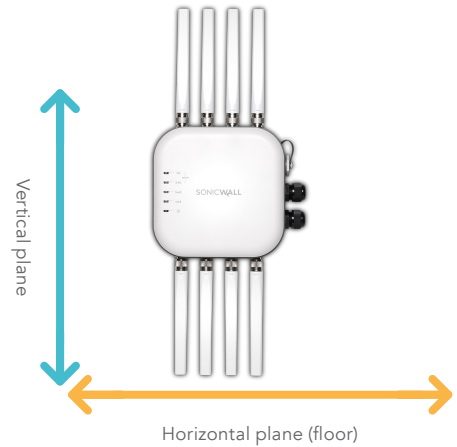
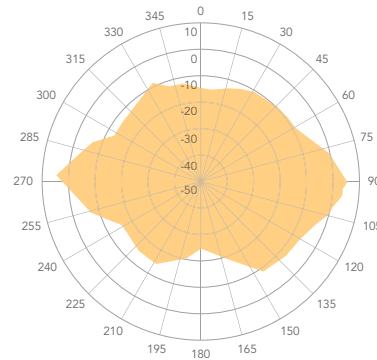
2.4 GHz Horizontal



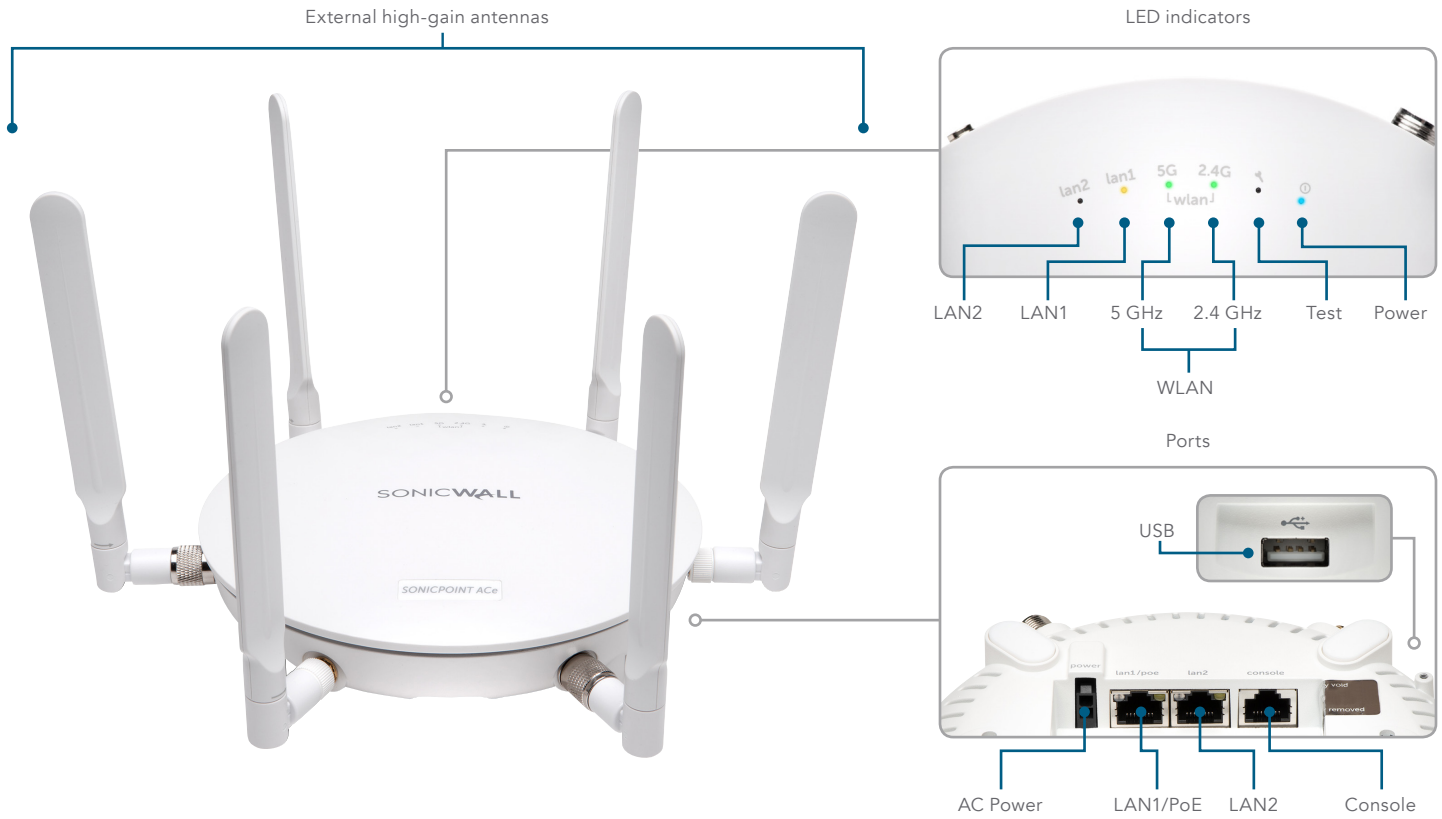
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5 GHz Horizontal

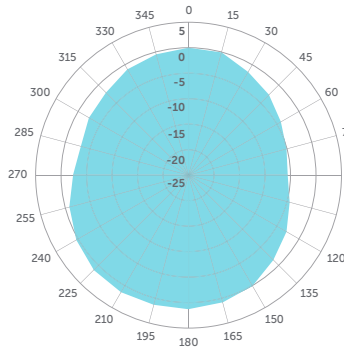


# SonicPoint Series Access Points: SonicPoint ACe

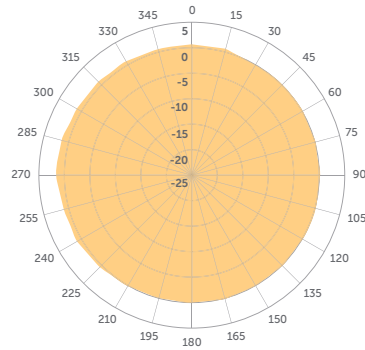


## Radio frequency coverage maps

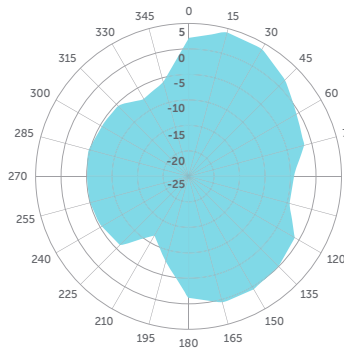
2.4 GHz Vertical



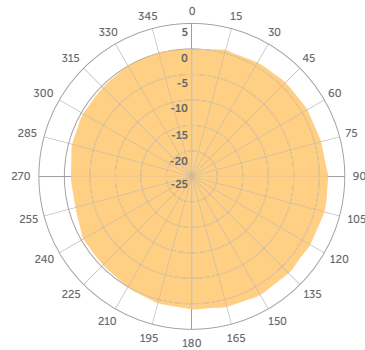
2.4 GHz Horizontal



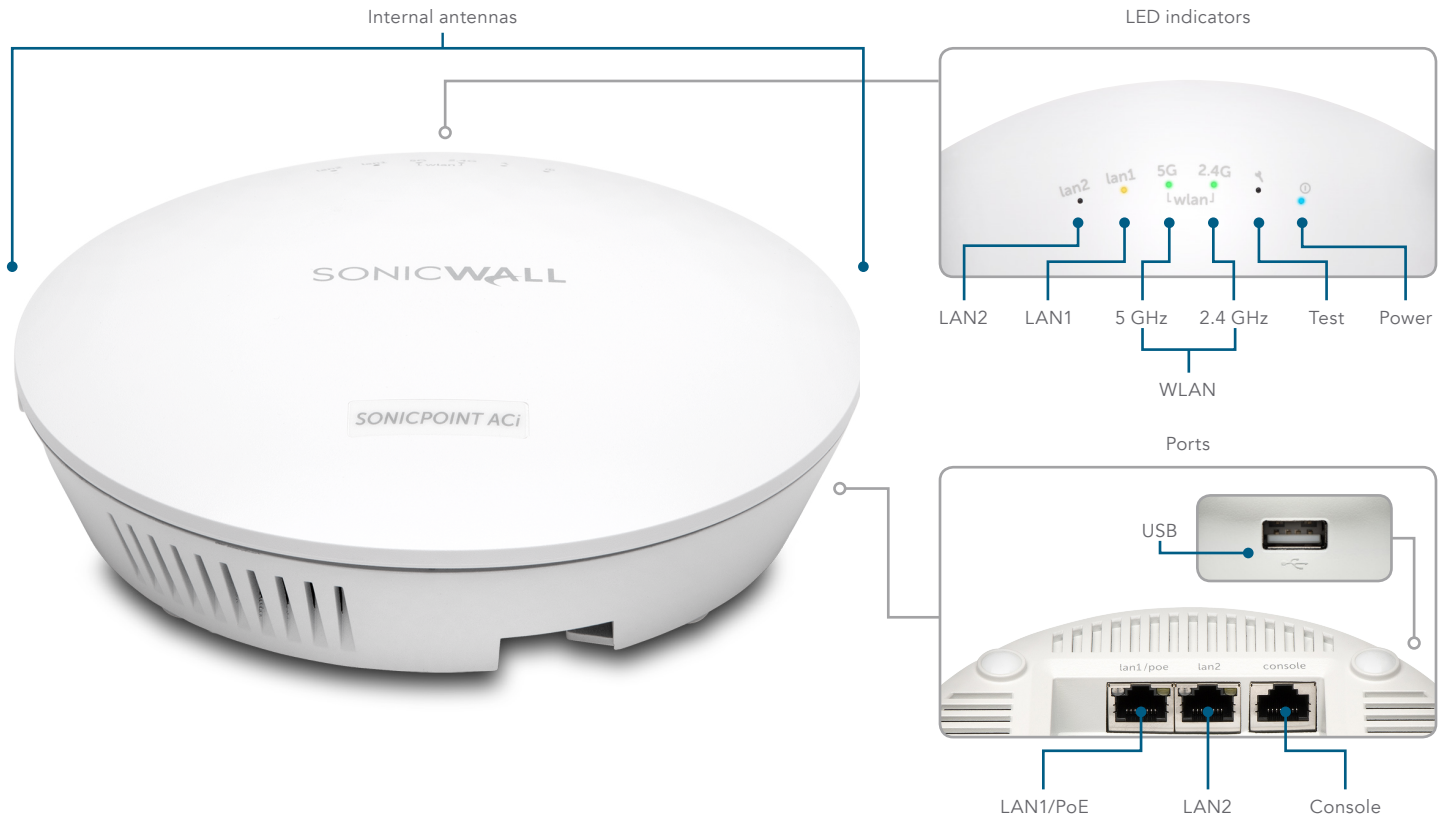
5 GHz Vertical



5 GHz Horizontal

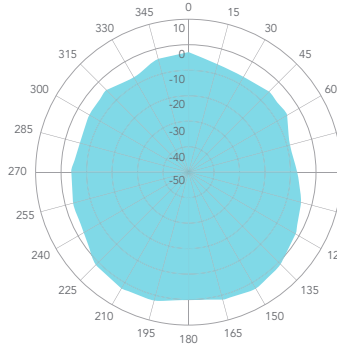


# SonicPoint Series Access Points: SonicPoint ACi

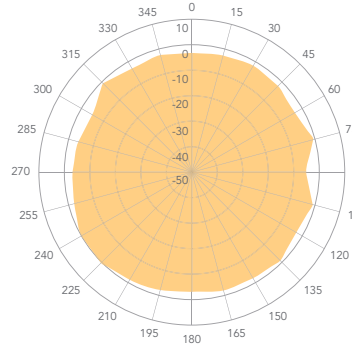


## Radio frequency coverage maps

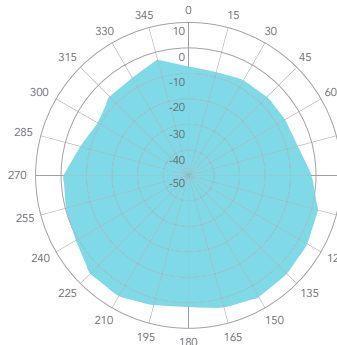
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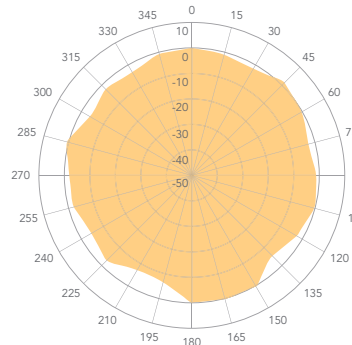
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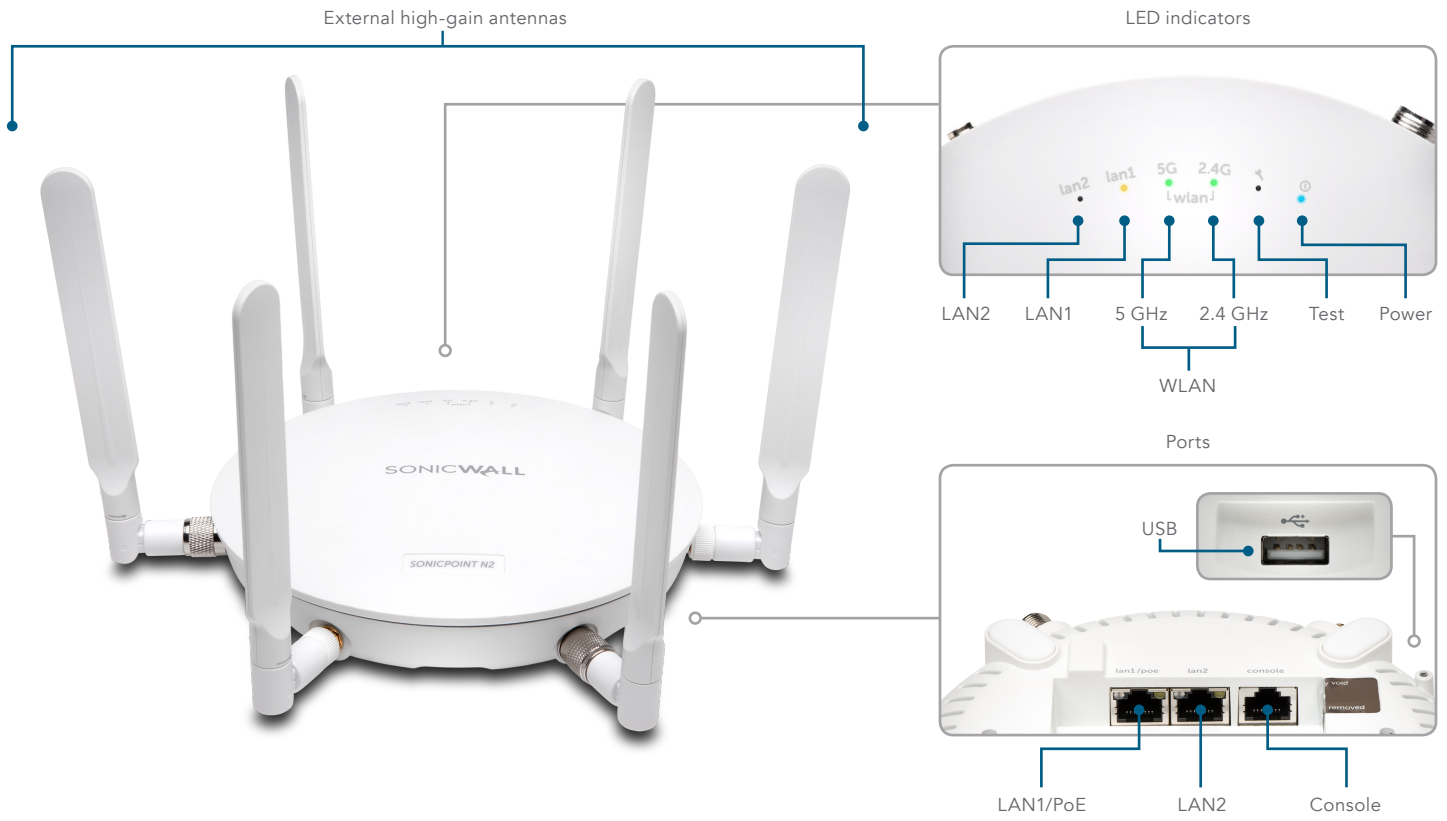
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5 GHz Horizontal

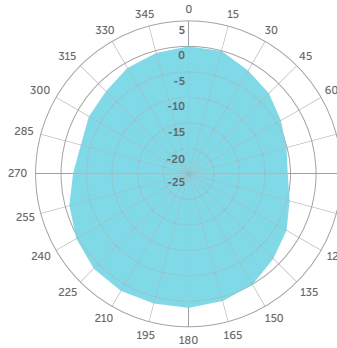


# SonicPoint Series Access Points: SonicPoint N2

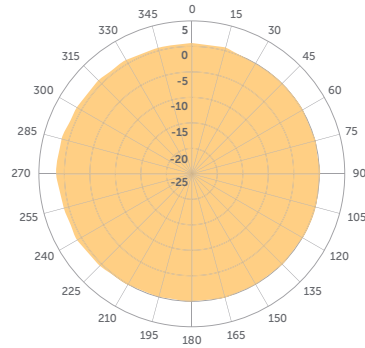


## Radio frequency coverage maps

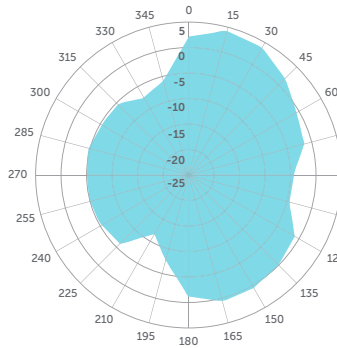
2.4 GHz Vertical



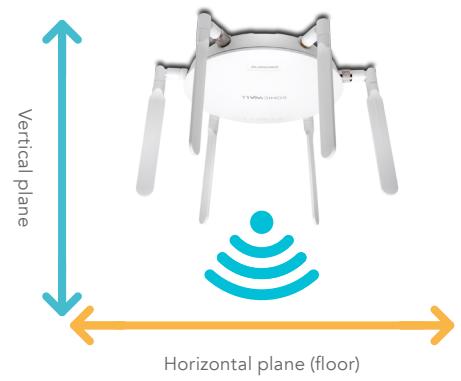
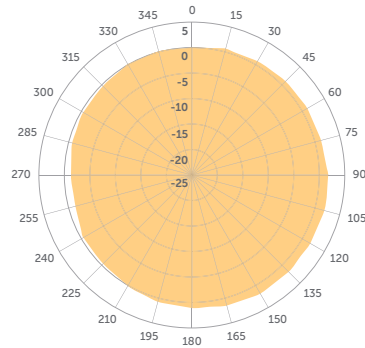
2.4 GHz Horizontal



5 GHz Vertical



5 GHz Horizontal



## SonicWave feature summary

Superior user experience	
Feature	Description
High-speed wireless performance and range	SonicWave access points are based on the 802.11ac Wave 2 standard, which can achieve a PHY rate of up to 2.34 Gbps while maintaining a higher performance level at greater ranges depending on environmental conditions.
Enhanced signal quality	The 802.11ac standard operates in the 5 GHz frequency band, which has fewer wireless devices competing for airspace and is therefore less prone to signal interference.
Increased wireless reliability	The increase in bandwidth capacity and greater number of spatial streams combined with 4x4 MU-MIMO and the improved processing offered by 802.11ac, result in more reliable wireless coverage.
MU-MIMO	MU-MIMO (Multi-user, multiple-input, multiple-output) technology enables simultaneously transmission from the access point to numerous wireless clients instead of just one.
Band steering	Band steering improves the user experience by steering dual-band clients to automatically connect to the less crowded 5 GHz frequency band leaving the more crowded 2.4 GHz frequency for legacy clients.
Beamforming	Beamforming improves wireless performance and range by focusing the wireless signal on an individual client instead of spreading the data transmission equally in all directions.
AirTime Fairness	AirTime Fairness distributes air time equally among connected clients, ensuring faster clients get more data in their time while slower clients receive less.
FairNet wireless bandwidth allocation	FairNet guarantees a minimum amount of bandwidth to each wireless client in order to prevent disproportionate bandwidth consumption by a single user.
Comprehensive wireless security	
Feature	Description
Reassembly-Free Deep Packet Inspection technology	SonicWall next-generation firewalls tightly integrate Reassembly-Free Deep Packet Inspection® (RFDPI) technology to scan all inbound and outbound traffic on wired and wireless networks and eliminate intrusions, ransomware, spyware, viruses and other threats before they enter the network.
SSL/TLS decryption and inspection	The SonicWall firewall decrypts and inspects SSL/TLS traffic on the fly, without proxying, for malware, intrusions and data leakage, and applies application, URL and content control policies in order to protect against threats hidden in SSL/TLS-encrypted traffic.
Dedicated third scanning radio	SonicWave access points include a dedicated that performs continual scanning of the wireless spectrum for rogue access points plus additional security functions that help with PCI compliance.
Wireless intrusion detection and prevention	Wireless intrusion detection and prevention scans the wireless network for unauthorized (rogue) access points and then the managing firewall automatically takes countermeasures, such as preventing any connections to the device.
Wireless guest services	Wireless guest services enables administrators to provide internet-only access for guest users. This access is separate from internal access and requires guest users to securely authenticate to a virtual access point before access is granted.
Lightweight hotspot messaging	Lightweight hotspot messaging extends the SonicWall wireless guest services model of differentiated internet access for guest users, enabling extensive customization of the authentication interface and the use of any kind of authentication scheme.
Captive portal	Captive portal forces a user's device to view a page and provide authentication through a web browser before internet access is granted.
Virtual access point segmentation	Administrators can create up to eight SSIDs on the same access point, each with its own dedicated authentication and privacy settings. This provides logical segmentation of secure wireless network traffic and secure customer access.



Comprehensive wireless security, con't	
Feature	Description
Cloud ACL	An extension to local ACL, cloud ACL is deployed and managed from a centralized RADIUS server in the cloud. This eliminates local ACL scalability issues, enabling organizations to configure authentication accounts based on their specific requirements. In addition, MAC authentication can be enforced on all WiFi-enabled devices even if they are not capable of 802.1x support. This adds another layer of protection to the wireless network.
Multi-RADIUS authentication	Multi-RADIUS Authentication provides enterprise-class redundancy by enabling organizations to deploy multiple RADIUS servers in active/passive mode for high availability. Should the primary RADIUS server fail, the managing SonicWall firewall discovers the failure and switches to the secondary server, ensuring wireless devices can continue to authenticate. Further, multi-RADIUS authentication can be supported on each virtual access point and configured for WPA-Enterprise, WPA2-Enterprise or WPA2-Auto-Enterprise mode.
Granular security policy enforcement	Network administrators can implement and enforce firewall rules on all wireless traffic and control all wireless client communications to any host on the network — wired or wireless.

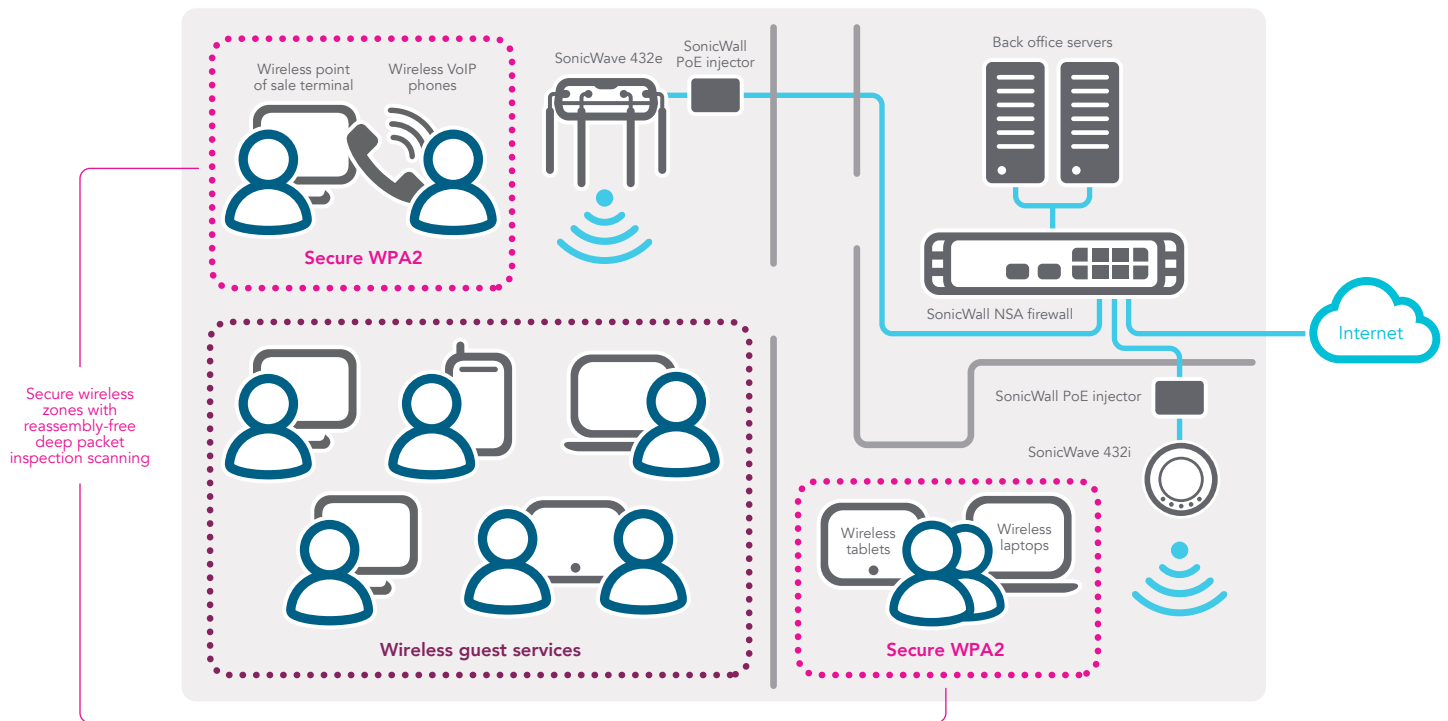
Simplified deployment and centralized management	
Feature	Description
Simplified setup and centralized management	SonicWave access points are automatically detected, provisioned and updated by the wireless controller in the managing SonicWall SuperMassive, NSA or TZ Series firewall. WLAN administration is also handled directly from the managing firewall, simplifying setup and centralizing ongoing management.
Wireless planning tool	To optimize access point placement before deployment, the wireless planning tool provides comprehensive visualization of the WiFi environment including obstacles that impact signal performance plus both covered and non-covered zones.
Floor plan view	Floor plan view is a WiFi planning tool that enables users to upload or create a floor plan and place SonicWave access points appropriately to ensure required wireless coverage.
Topology view	Topology view is a WiFi tool that automatically maps devices and how they are connected in the wireless network architecture in order to aid in troubleshooting.
Plenum rated	SonicWave access points are plenum rated for safe installation in air-handling spaces such as in or above suspended ceilings.
Multiple power options	SonicWave access points are powered from a SonicWall IEEE 802.11at+ Power over Ethernet (PoE) Injector or third-party device for easy deployment where electrical outlets are not readily accessible.
Light controls	With dimmable LEDs (excluding power), SonicPoints fit perfectly into environments that need discreet wireless coverage.
Broad standards and protocols support	SonicWave access points support a wide range of wireless standards and security protocols, including 802.11 a/b/g/n/ac, WPA2 and WPA. This allows organizations to leverage prior investments in devices that are incapable of supporting higher encryption standards.

Low total cost of ownership	
Feature	Description
Low TCO	Features such as simplified deployment, single pane of glass management for both wireless and security, and no need to purchase a separate wireless controller drastically reduce an organization's cost to add wireless into a new or existing network infrastructure.
MiFi extender	MiFi Extender enables the attachment of a 3G/4G/LTE modem to the SonicWave access point for use as either the primary WAN or as a secondary failover WAN link for business continuity.
Bluetooth Low Energy	SonicWave access points include a Bluetooth Low Energy radio that enables the use of ISM (industrial, scientific and medical) applications for healthcare, fitness, retail beacons, security and home entertainment over a low energy link.
Green access points	SonicWave access points reduce costs by supporting green access points, which enables both radios to enter sleep mode for power saving when no clients are actively connected. The access point will exit sleep mode once a client attempts to associate with it.

## Wireless Network Security scenarios

SonicWall Wireless Network Security is the ideal solution for organizations of all sizes and types looking to build a secure, high-speed wireless network. Deploying SonicWave 802.11ac Wave 2 access points in combination with a SonicWall next-generation firewall provides enterprise-class wireless performance and security for businesses, schools, hospitals and other organizations.

**Small networks** — Retail store/medical or dental office deployments



Advanced Gateway Security Suite includes Capture Advanced Threat Protection, Gateway Security, Content Filtering and 24x7 support.

SonicWall Wireless Network Security is perfect for small offices, such as retail businesses, school classrooms, medical/dental businesses and banks. By combining SonicWave series wireless access points with a SonicWall firewall, these organizations can quickly extend wireless network access while providing deep packet inspection for both wired and wireless traffic at the gateway before allowing access to sensitive resources. SonicWall wireless guest services offers password-enforced customer access to the Internet, while virtual access points provide logical segmentation of secure wireless network traffic and in-the-clear customer access.

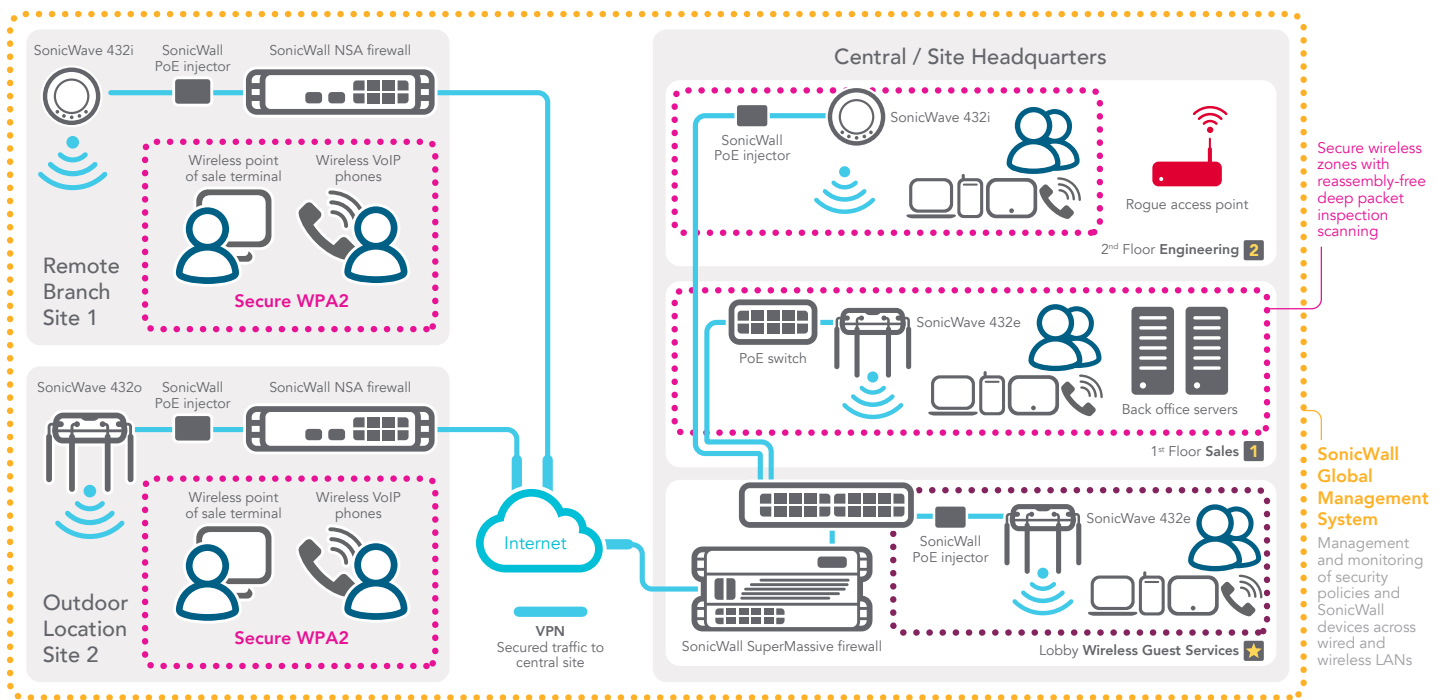
### Features

- SonicWave access points provide multi-gigabit wireless performance with greater signal range and reliability.
- SonicWave access points are auto-discovered and auto-configured by the central management gateway, easing deployment.
- SonicWave access points enable employees to securely access network resources from the wireless network using SSL VPN or WPA2.
- Virtual access points create secure segmentation between trusted and untrusted wireless users by allowing broadcast of up to eight unique SSIDs.
- Deep packet inspection technology detects and eliminates vulnerabilities and threats across all inbound and outbound wireless traffic.
- Key security services, such as application control and content filtering, are enforced over the wired and wireless LANs.
- SonicWall wireless guest services and lightweight hotspot messaging enable organizations to offer customers wireless Internet access from a customized authentication interface.
- SonicWave access points allow the dedication of one radio to rogue access detection while the other two support users, helping achieve and maintain regulatory compliance.

## Wireless Network Security scenarios

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### Distributed networks — Enterprise/campus deployments



Advanced Gateway Security Suite includes Capture Advanced Threat Protection, Gateway Security, Content Filtering and 24x7 support.

In distributed network environments that have a higher density of client associations, such as businesses with remote and branch offices, college campuses, school districts and healthcare provider networks, SonicWave wireless access points with 802.11ac Wave 2 technology provide superior wireless signal performance, range and quality. Employees, students and customers can securely access network resources on the wireless network using SSL VPN or WPA2. Using SonicWall GMS, administrators can centrally manage every SonicWall access point across the entire network, including creating and enforcing wireless policies, which eliminates the need for a separate wireless controller and reduces the total cost of ownership.

### Features

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- SonicWall wireless guest services and lightweight hotspot messaging enable organizations to offer customers wireless Internet access from a customized authentication interface.
- SonicWall GMS provides central management and monitoring of the wired and wireless LANs, including the firewall and all SonicWave access points that are connected to it.

## SonicWave Series Specifications

Hardware Specifications	SonicWave 432e	SonicWave 432i	SonicWave 432o
Location	Indoor	Indoor	Outdoor
Dimensions	8.5 (D) x 2.0 (H) in 21.6 (D) x 5.1 (H) cm	8.5 (D) x 2.0 (H) in 21.6 (D) x 5.1 (H) cm	9.5 (W) x 9.3 (D) x 2.4 (H) in 24.1 (W) x 23.6 (D) x 6.1 (H) cm
Weight	1.1 kg / 2.5 lbs	1.0 kg / 2.2 lbs	2.2 kg / 4.9 lbs
WEEE weight	1.4 kg / 3.1 lbs	1.2 kg / 2.6 lbs	4.1 kg / 9.1 lbs
Shipping weight	1.7 kg / 3.8 lbs	1.5 kg / 3.3 lbs	4.7 kg / 10.4 lbs
PoE injector	802.3at		
Maximum power consumption (W)	18.8 W	18.8 W	21.2 W
Status indicators	Six (6) LED (WLAN/Link) (LAN/Link) Power, Test		
Antennas	4+4 (SMA 2.4 GHz + TNC 5 GHz)	8 fully internal	8 N-type dipole
Wired network ports	(1) 10/100/1000 auto-sensing RJ-45 for Ethernet and Power over Ethernet (PoE); (1) 100/1000/2.5 GbE auto-sensing RJ-45 for Ethernet; (1) RJ-45 console; (1) USB 2.0 (except 432o)		
Accessories included	Wall/ceiling mount kit		
Virtual access points	Up to 8 per access point		
Chassis	UL 1024 plenum rated		
Standards and compliance	SonicWave 432e	SonicWave 432i	SonicWave 432o
IEEE Standard	802.11a/b/g/n/ac Wave 2		
Compliance	IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11ac, IEEE 802.11e, IEEE 802.11i, IEEE 802.3at, IEEE 802.3bz, WPA, TKIP, AES		
Regulatory	FCC/ICES Class B, CE, RCM/ACMA, VCCI Class B, TELEC, BSMI, NCC, MSIP, ANATEL, Customs Union, RoHS (Europe/China), WEEE		
MIMO	MU-MIMO 4x4 (4 streams)		
Max/Recommended connected clients per radio	128/30	128/30	128/30
Safety	UL, cUL, TUV/GS, CB, CE, BSMI, Mexico CoC, Customs Union		
Environmental	SonicWave 432e	SonicWave 432i	SonicWave 432o
Temperature range	32 to 104°F, 0 to 40°C		-40 to 140°F, -40 to 60°C
Humidity	10 - 95%, non-condensing		
Radio specifications	SonicWave 432e/432i/432o		
Radios	Dual: 4x4 11n + 4x4 11ac MU-MIMO; Dedicated third scanning radio; Bluetooth Low Energy radio		
Frequency bands	802.11a: 5.180-5.825 GHz 802.11b/g: 2.412-2.472 GHz 802.11n: 2.412-2.472 GHz, 5.180-5.825 GHz 802.11ac: 2.412-2.472 GHz, 5.180-5.825 GHz		
Operating channels	802.11a: US and Canada 12, Europe 11, Japan 4, Singapore 4, Taiwan 4 802.11b/g: US and Canada 1-11, Europe 1-13, Japan 1-14 (14-802.11b only) 802.11n (2.4 GHz): US and Canada 1-11, Europe 1-13, Japan 1-13 802.11n (5 GHz): US and Canada 36-48/149-165, Europe 36-48, Japan 36-48, Spain 36-48/52-64 802.11ac: US and Canada 36-48/149-165, Europe 36-48, Japan 36-48, Spain 36-48/52-64		
Transmit output power	Based on the regulatory domain specified by the system administrator		
Transmit power control	Supported		
Data rates supported	802.11a: 6,9,12,18,24,36,48,54 Mbps per channel 802.11b: 1,2,5,11 Mbps per channel 802.11g: 6,9,12,18,24,36,48,54 Mbps per channel 802.11n: 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 15, 30, 45, 60, 90, 120, 135, 150 Mbps per channel 802.11ac: 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 86.7, 96.3, 15, 30, 45, 60, 90, 120, 135, 150, 180, 200, 32.5, 65, 97.5, 130, 195, 260, 292.5, 325, 390, 433.3, 65, 130, 195, 260, 390, 520, 585, 650, 780, 866.7, 1040, 1170, 1300, 1560, 1733.4 Mbps per channel		
Modulation technology spectrum	802.11a: Orthogonal Frequency Division Multiplexing (OFDM) 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g: Orthogonal Frequency Division Multiplexing (OFDM)/Direct Sequence Spread Spectrum (DSSS) 802.11n: Orthogonal Frequency Division Multiplexing (OFDM) 802.11ac: Orthogonal Frequency Division Multiplexing (OFDM)		
Security	SonicWave 432e/432i/432o		
Data encryption	WPA2, IPsec*, 802.11i, WPA, 64/128/152-bit WEP, TKIP, AES, SSL VPN**		
Authentication	SonicWave 432e/432i/432o		
Authentication	RADIUS, Active Directory, single sign-on (SSO)		

\*When used with a SonicWall firewall

\*\*When used with SonicWall Secure Mobile Access Series appliance

## SonicWave Series PoE Injector Specifications

Hardware Specifications	SonicWave 432e/432i/432o
Number of ports	2: (1) Data In; (1) data and power out
Dimensions	1.69 (H) x 3.46 (W) x 6.54 (L) in; (43 (H) x 87.9 (W) x 166 (L) mm
Weight	0.91 lbs/(0.41 kg)
WEEE weight	1.2 lbs/(0.54 kg)
Shipping weight	1.28 lbs/(0.58 kg)
Connectors	Shielded RJ-45, EIA 568A and 568B
Status Indicators	LED indicator: Power On (yellow); Power supplied over Ethernet (green); Over current/short circuit (blinking green)
Data rates	10/100/1000 Mbps/2.5 GbE
Power over LAN output	SonicWave 432e/432i/432o
Pin assignment and polarity	4/5 (+), 7/8 (-)
Output power voltage	-55 VDC
Maximum output power	30 W
Input power requirements	SonicWave 432e/432i/432o
AC input voltage	100 to 240 VAC
AC frequency	50 to 60 Hz
AC input current	1.5A at 100-240 VAC
Standards and compliance	SonicWave 432e/432i/432o
Regulatory compliance	CE, EN 55022 Class B (Emissions), FCC Part 15 Class B, EN 55024 (Immunity), VCCI
Safety	UL/CUL 60950-1, GS Mark per IEC 60950-1
Environmental	RoHS, WEEE
Environmental requirements	SonicWave 432e/432i/432o
Operating ambient temperature	14 to 113 °F, -10 to 40 °C
Operating humidity	Maximum 90%, non-condensing
Storage temperature	-4 to 158 °F, -20 to 70 °C
Storage humidity	Maximum 95%, non-condensing

## SonicPoint Series Specifications

Hardware Specifications	SonicPoint ACe	SonicPoint ACi	SonicPoint N2
Location	Indoor	Indoor	Indoor
Dimensions	6.9 (D) x 1.5 (H) in 17.5 (D) x 3.8 (H) cm	6.9 (D) x 1.5 (H) in 17.5 (D) x 3.8 (H) cm	6.9 (D) x 1.5 (H) in 17.5 (D) x 3.8 (H) cm
Weight	0.53 kg / 1.2 lbs	0.48 kg / 1.1 lbs	0.53 kg / 1.2 lbs
WEEE weight	1.2 kg / 2.6 lbs	0.53 kg / 1.2 lbs	0.74 kg / 1.6 lbs
Shipping weight	1.74 kg / 3.8 lbs	0.79 kg / 1.8 lbs	1.1 kg / 2.4 lbs
PoE injector	802.3at		
Power supply	802.3at + AC Adapter (12 v)	802.3at PoE	802.3at PoE
Maximum power consumption (W)	15.2 W	15.6 W	13.7 W
Status indicators	Six (6) LED (WLAN/Link) (LAN/Link) Power, Test		
Antennas	3+3 (SMA 2.4 GHz + TNC 5 GHz)	6 fully internal	3+3 (SMA 2.4 GHz + TNC 5 GHz)
Wired network ports	(2) 10/100/1000 auto-sensing RJ-45 for Ethernet and Power over Ethernet (PoE); (1) RJ-45 console; (1) USB 2.0		
Accessories included	Wall/ceiling mount kit		
Virtual access points	Up to 8 per SonicPoint		
Chassis	UL 2043 plenum rated		
Standards and compliance	SonicPoint ACe	SonicPoint ACi	SonicPoint N2
IEEE Standard	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n
Compliance	IEEE 802.11i, IEEE 802.3e, IEEE 802.3i, IEEE 802.3at, WPA/WPA2, TKIP, AES		
Regulatory	FCC/ICES Class B, CE, RCM/ACMA, VCCI Class B, TELEC, BSMI, NCC, MSIP, ANATEL, Customs Union, RoHS (Europe/China), WEEE		
MIMO	SU-MIMO 3x3 (3 streams)		
Max/Recommended connected clients per radio	128/30	128/30	128/30
Certifications	WiFi, Dynamic Frequency Selection (DFS)		
Safety	UL, cUL, TUV/GS, CB, CE, BSMI, Mexico CoC, Customs Union		
Environmental	SonicPoint ACe/ACi/N2		
Temperature range	32 to 104°F, 0 to 40°C		
Humidity	10 - 95%, non-condensing		
Radio specifications	SonicPoint ACe	SonicPoint ACi	SonicPoint N2
Radios	Dual: 3x3 11n + 3x3 11ac		Dual: 3x3 11n + 3x3 11n
Frequency bands	802.11a: 5.180-5.825 GHz 802.11b/g: 2.412-2.472 GHz 802.11n: 2.412-2.472 GHz, 5.180-5.825 GHz **802.11ac: 2.412-2.472 GHz, 5.180-5.825 GHz		
Operating channels	802.11a: US and Canada 12, Europe 11, Japan 4, Singapore 4, Taiwan 4 802.11b/g: US and Canada 1-11, Europe 1-13, Japan 1-14 (14-802.11b only) 802.11n (2.4 GHz): US and Canada 1-11, Europe 1-13, Japan 1-13 802.11n (5 GHz): US and Canada 36-48/149-165, Europe 36-48, Japan 36-48, Spain 36-48/52-64 **802.11ac: US and Canada 36-48/149-165, Europe 36-48, Japan 36-48, Spain 36-48/52-64		
Transmit output power	Based on the regulatory domain specified by the system administrator		
Transmit power control	Supported		
Data rates supported	802.11a: 6,9,12,18,24,36,48,54 Mbps per channel 802.11b: 1,2,5,11 Mbps per channel 802.11g: 6,9,12,18,24,36,48,54 Mbps per channel 802.11n: 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 15, 30, 45, 60, 90, 120, 135, 150 Mbps per channel **802.11ac: 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 86.7, 96.3, 15, 30, 45, 60, 90, 120, 135, 150, 180, 200, 32.5, 65, 97.5, 130, 195, 260, 292.5, 325, 390, 433.3, 65, 130, 195, 260, 390, 520, 585, 650, 780, 866.7 Mbps per channel		
Modulation technology spectrum	802.11a: Orthogonal Frequency Division Multiplexing (OFDM) 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g: Orthogonal Frequency Division Multiplexing (OFDM)/Direct Sequence Spread Spectrum (DSSS) 802.11n: Orthogonal Frequency Division Multiplexing (OFDM) **802.11ac: Orthogonal Frequency Division Multiplexing (OFDM)		

## SonicPoint Series Specifications (continued)

Security	SonicPoint ACe/ACi/N2
Data encryption	WPA2; IPSec, 802.11i, WPA; 64/128/152-bit WEP, TKIP, AES, SSL VPN*
Authentication	SonicPoint ACe/ACi/N2
Authentication	RADIUS, Active Directory, single sign-on (SSO)
Security	SonicPoint ACe/ACi/N2
Data encryption	WPA2; IPSec, 802.11i, WPA; 64/128/152-bit WEP, TKIP, AES, SSL VPN*
Authentication	SonicPoint ACe/ACi/N2
Authentication	RADIUS, Active Directory, single sign-on (SSO)

\*When used with SonicWall Secure Remote Access Series appliance

\*\*Available on SonicPoint ACe and SonicPoint ACi only

## SonicPoint Series PoE Injector Specifications

Hardware Specifications	SonicPoint ACe/ACi/N2
Number of ports	2: (1) Data In; (1) data and power out
Dimensions	1.22 (H) x 1.97 (W) x 6.30 (L) in; (31 (H) x 50 (W) x 160 (L) mm
Weight	0.5 lbs/(0.3 kg)
WEEE weight	0.85 lbs/(0.38 kg)
Shipping weight	0.87 lbs/(0.4 kg)
Connectors	Shielded RJ-45, EIA 568A and 568B
Status Indicators	System indicator: AC power (yellow); User indicator: channel power active (green)
Data rates	10/100/1000 Mbps
Power over LAN output	SonicPoint ACe/ACi/N2
Pin assignment and polarity	4/5 (+), 7/8 (-)
Output power voltage	-48 VDC
Maximum output power	30 W
Input power requirements	SonicPoint ACe/ACi/N2
AC input voltage	100 to 240 VAC
AC frequency	50 to 60 Hz
AC input current	0.8A at 100-240 VAC
Standards and compliance	SonicPoint ACe/ACi/N2
Regulatory compliance	CB, S Mark, RCM, ICES, cUL, CCC, CE, GS, BIS, PSE, MOM, EAC, KCC/MSIP, BSMI, UL, FCC
Electromagnetic emission and immunity	Class B emission level, EN 55022, CISPR 22, FCC Part 15
Safety	IEC/EN/UL 60950-1
Environmental	EU RoHS, China RoHS, EU WEEE, DOE Level VI, MEPS
Environmental requirements	SonicPoint ACe/ACi/N2
Operating ambient temperature	32 to 104 °F, 0 to 40 °C
Operating humidity	Maximum 90%, non-condensing
Storage temperature	-4 to 158 °F, -20 to 70 °C
Storage humidity	Maximum 95%, non-condensing

## Wireless Access Point and PoE Injector ordering information

SonicWave Series	SKU	
SonicWave 432e with 1-Year Activation and 24x7 Support (Multi-Gigabit 802.3at PoE+)	01-SSC-2498	
SonicWave 432e with 3-Year Activation and 24x7 Support (Multi-Gigabit 802.3at PoE+)	01-SSC-2499	
SonicWave 432e with 5-Year Activation and 24x7 Support (Multi-Gigabit 802.3at PoE+)	01-SSC-2497	
SonicWave 432e 4-Pack with 3-Year Activation & 24x7 Support (No PoE)	01-SSC-2506	
SonicWave 432e 8-Pack with 3-Year Activation & 24x7 Support (No PoE)	01-SSC-2508	
SonicWave 432i with 1-Year Activation and 24x7 Support (Multi-Gigabit 802.3at PoE+)	01-SSC-2478	
SonicWave 432i with 3-Year Activation and 24x7 Support (Multi-Gigabit 802.3at PoE+)	01-SSC-2479	
SonicWave 432i with 5-Year Activation and 24x7 Support (Multi-Gigabit 802.3at PoE+)	01-SSC-2477	
SonicWave 432i 4-Pack with 3-Year Activation & 24x7 Support (No PoE)	01-SSC-2483	
SonicWave 432i 8-Pack with 3-Year Activation & 24x7 Support (No PoE)	01-SSC-2485	
SonicWave 432o with 1-Year Activation and 24x7 Support (No PoE)	01-SSC-2510	
SonicWave 432o with 3-Year Activation and 24x7 Support (No PoE)	01-SSC-2512	
SonicWave 432o with 5-Year Activation and 24x7 Support (No PoE)	01-SSC-2511	
SonicWave 432o 4-Pack with 3-Year Activation & 24x7 Support (No PoE)	01-SSC-2514	
SonicWave 432o 8-Pack with 3-Year Activation & 24x7 Support (No PoE)	01-SSC-2516	
SonicWave Multi-Gigabit 802.3at PoE+ Injector	01-SSC-2450	
SonicWave 432o Sector Antenna S124-12 (Single Band 2.4 GHz)	01-SSC-2461	
SonicWave 432o Sector Antenna S154-15 (Single Band 5 GHz)	01-SSC-2462	
SonicWave 432o Panel Antenna P254-07 (Dual Band)	01-SSC-2465	
SonicWave 432o Panel Antenna P254-13 (Dual Band)	01-SSC-2467	
SonicPoint Series	SKU	
SonicPoint ACe (Includes PoE Injector and one year of 24x7 support)	01-SSC-0868	
SonicPoint ACe (Includes PoE Injector and three years of 24x7 support)	01-SSC-0869	
SonicPoint ACe (Includes PoE Injector and five years of 24x7 support)	01-SSC-0870	
SonicPoint ACe 4-Pack (Includes three years of 24x7 support for each access point)	01-SSC-0877	
SonicPoint ACe 8-Pack (Includes three years of 24x7 support for each access point)	01-SSC-0878	
SonicPoint ACi (Includes PoE Injector and one year of 24x7 support)	01-SSC-0871	
SonicPoint ACi (Includes PoE Injector and three years of 24x7 support)	01-SSC-0872	
SonicPoint ACi (Includes PoE Injector and five years of 24x7 support)	01-SSC-0873	
SonicPoint ACi 4-Pack (Includes three years of 24x7 support for each access point)	01-SSC-0879	
SonicPoint ACi 8-Pack (Includes three years of 24x7 support for each access point)	01-SSC-0880	
SonicPoint N2 (Includes PoE Injector and one year of 24x7 support)	01-SSC-0874	
SonicPoint N2 (Includes PoE Injector and three years of 24x7 support)	01-SSC-0875	
SonicPoint N2 (Includes PoE Injector and five years of 24x7 support)	01-SSC-0876	
SonicPoint N2 4-Pack (Includes three years of 24x7 support for each access point)	01-SSC-0881	
SonicPoint N2 8-Pack (Includes three years of 24x7 support for each access point)	01-SSC-0882	
PoE Injector 802.3at Gigabit AC	01-SSC-0716	

## About Us

SonicWall has been fighting the cyber-criminal industry for over 25 years, defending small, medium size businesses and enterprises worldwide. Our combination of products and partners has enabled a real-time cyber defense solution tuned to the specific needs of the more than 500,000 global businesses in over 150 countries, so you can do more business with less fear.

### SonicWall, Inc.

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Refer to our website for additional information.  
[www.sonicwall.com](http://www.sonicwall.com)

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