

# Dell™ SonicPoint ACi

## Getting Started Guide

Regulatory Model Number: APL27-0B1





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## Legend

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

 **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.

 **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

# Introduction

## In this guide

This *Getting Started Guide* provides instructions for basic installation and configuration of the Dell™ SonicPoint ACi wireless access point in single-unit or multi-unit wireless deployments.

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## Wireless overview

The Dell™ SonicPoint ACi is part of the next evolutionary generation in wireless access points after the Dell SonicWALL SonicPoint N and NDR.

The SonicPoint ACi provides physical layer enhancements for higher throughput with a maximum data rate of 1.3 Gbps. To achieve this, the SonicPoint ACi uses:

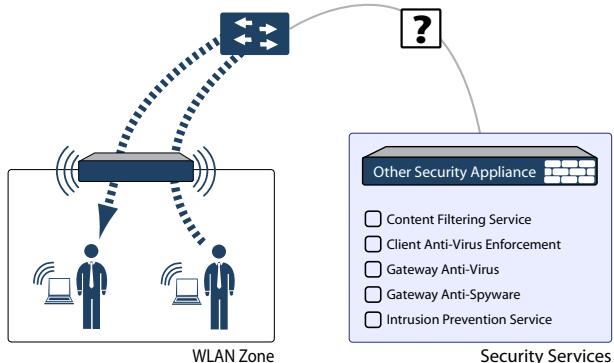
- Wider channels—80 MHz-wide channels for the 802.11ac radio module, while continuing to support 20/40 MHz channels. This allows for dynamic per packet negotiation of channel widths so that when there is interference, the SonicPoint can temporarily fall back to 40 or 20MHz channels.
- More spatial streams—3X3 multiple-input and multiple-output, (MIMO) for the 802.11ac radio module, where the capacity of a radio link is multiplied using multipath propagation.

## Dell SonicWALL wireless firewalling

When a wireless device uses a Dell SonicPoint ACi wireless access point to communicate with a wireless device on another subnet or on a completely different network, traffic between the devices is forced to traverse the Dell SonicWALL network security appliance. This traversal enables security services to be enforced by SonicOS.

Standard practice for wireless firewalling (where one wireless client is communicating with another) bypasses many of the critical security services. The following illustration shows the standard practice for wireless firewalling.

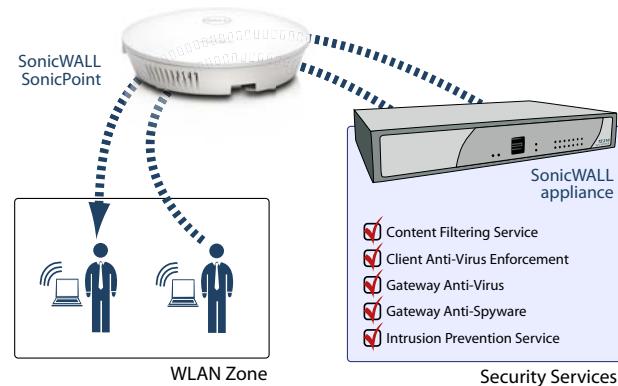
Figure 1. Standard wireless firewalling



Many security products on the market share this potential vulnerability when two users connected by a common hub or wireless access point wish to exchange data.

Dell SonicWALL addresses this security shortcoming by managing the SonicPoint access points from the network security appliance. This allows complete control of the wireless space, including zone enforcement of security services and complete firewalling capabilities.

Figure 2. Secure wireless firewalling



## Frequency bands and channels

There are currently five widely adopted standards for 802.11 wireless network types: a, b, g, n, and ac. 802.11n and 802.11ac are the newest and highest capacity standards, but older client devices may not be able to utilize the newer standards.

**Table 1. Wireless standards**

802.11 (x)	Frequency standard	Maximum data rate
802.11a	5 GHz	54 Mbps
802.11b	2.4 GHz	11 Mbps
802.11g	2.4 GHz	54 Mbps
802.11n	2.4 GHz and 5 GHz	450 Mbps
802.11ac	5 GHz + multichannel + multipath	1.3 Gbps

Different frequency bands provide varying signal strength and quality over different distance ranges. Signals in the 2.4 GHz range tend to pass through physical barriers better and carry farther than those in the 5 GHz range, but they do not provide as high a data rate. Signals in the 5 GHz range provide faster data rates for better throughput, but the signal attenuates faster and is best suited for open spaces.

**Table 2. Strengths and weaknesses of 5 GHz and 2.4 GHz signals**

	5 GHz	2.4 GHz
Strength	Higher speed, more channels	Longer Range, stronger signal penetration
Weakness	Limited penetration of walls, client compatibility	More sources of interference

Refer to [Radio frequency barriers](#) and [RF interference](#) on page 17 for detailed information about RF barriers and interference.

To allow multiple separate wireless networks in a shared and confined space, the RF medium is divided into channels. For devices in the 5 GHz range (802.11a/n/ac), this means the possibility of up to 23 discrete channels.

For devices using the 2.4 GHz range (802.11b/g/n), the wireless space is limited to a maximum of 14 *overlapping* channels. As a result of these overlapping channels, 2.4 GHz technology provides only a total of three discrete channels.

## 802.11 comparison chart

Table 3. 802.11 signal characteristics

	802.11a	802.11b	802.11g	802.11n	802.11ac
# of Channels in USA	23	11	11	11	21
# of Channels in EU	23	13	13	13	16
# of Channels in Japan	15	14	14	14	19
Frequency Band	5 GHz	2.4 GHz	2.4 GHz	2.4/5 GHz	5 GHz
Max. Data Rate	54 Mbps	11 Mbps	54 Mbps	450 Mbps (For 3X3 MIMO)	1.3 Gbps (For QAM-64, MIMO 3X3, and 80 MHz channels)
Radius (Range)	90ft/25m	120ft/35m	120ft/35m	300ft/90m	120ft/35m

 **NOTE:** Although 802.11b/g/n standards provide between 11 and 14 channels, only three of those channels are fully discrete (non-overlapping) channels.

## Initial Setup

This section provides a basic checklist of materials, hardware information, and describes how to connect and configure physical aspects of the Dell SonicPoint ACi including cabling and mounting.

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- [Deployment requirements](#) on page 12
- [SonicPoint ACi available ports/status LEDs](#) on page 13
- [Connecting Ethernet cables](#) on page 15
- [Wireless access point placement considerations](#) on page 16
- [Mounting the SonicPoint ACi](#) on page 18

# Check package contents

Before continuing, ensure that your Dell™ SonicPoint ACi package contains the following materials:

## SonicPoint ACi Appliance Checklist

- 
- Dell SonicPoint ACi Appliance
  - Mounting Kit (Ceiling Brackets, Anchor and Screw Kit)
  - Getting Started Guide

## Any items missing?

If any of the items corresponding to your product are missing from the package, contact Technical Support at:

<https://support.software.dell.com/manage-service-request>

A listing of the most current support documents are available online at:

<https://support.software.dell.com/>

# Deployment requirements

## SonicOS firmware

- Dell SonicPoint ACi access points are centrally managed by Dell SonicWALL network security appliances running the following versions of SonicOS:
  - SonicOS 5.9.1 or a higher 5.9 release
  - SonicOS 6.2.2 or higher

## Power over Ethernet

- An 802.3at compliant PoE injector or PoE-capable switch capable of providing 25 watts of power to each SonicPoint ACi is required.

## Internet connectivity

- An active Internet connection is required for your firewall to download the latest SonicPoint firmware.

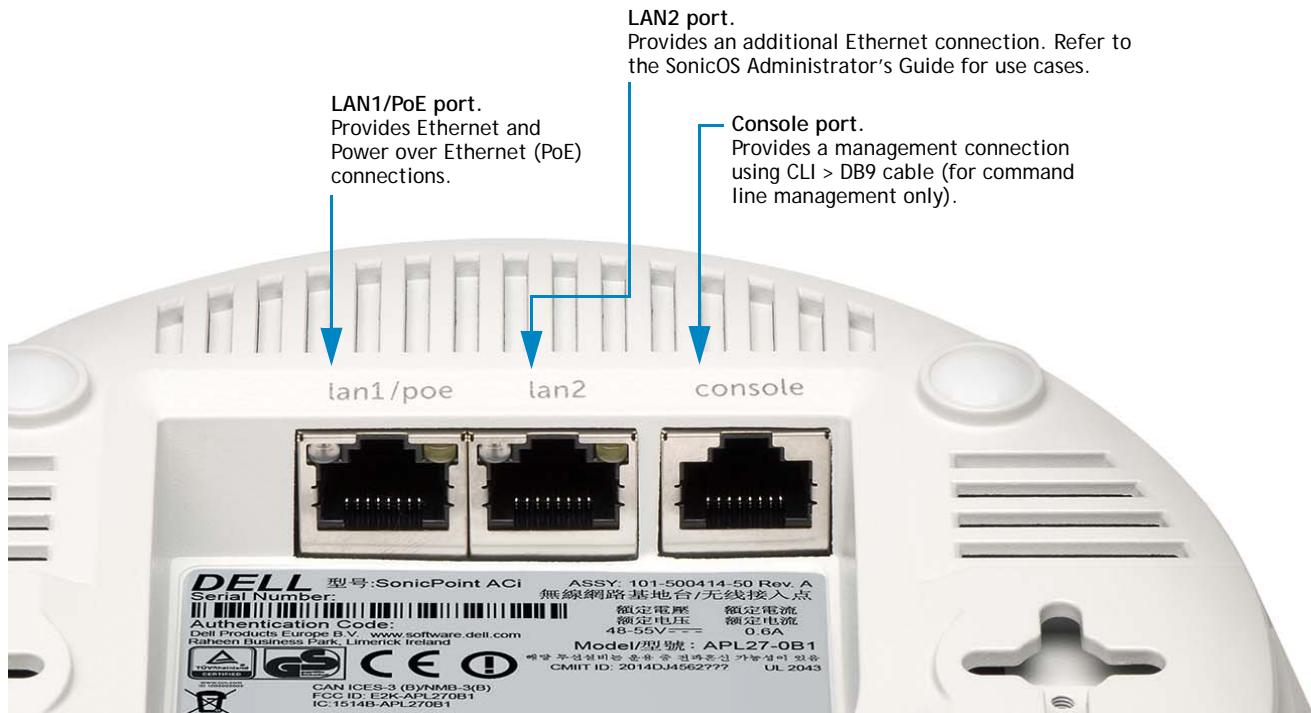
## Gigabit Ethernet connectivity

- 802.11ac wireless hardware requires more bandwidth than a single (or even dual) 10/100 Ethernet connection can handle. Gigabit Ethernet connectivity between the WLAN and the LAN is required to take full advantage of 802.11ac speed.

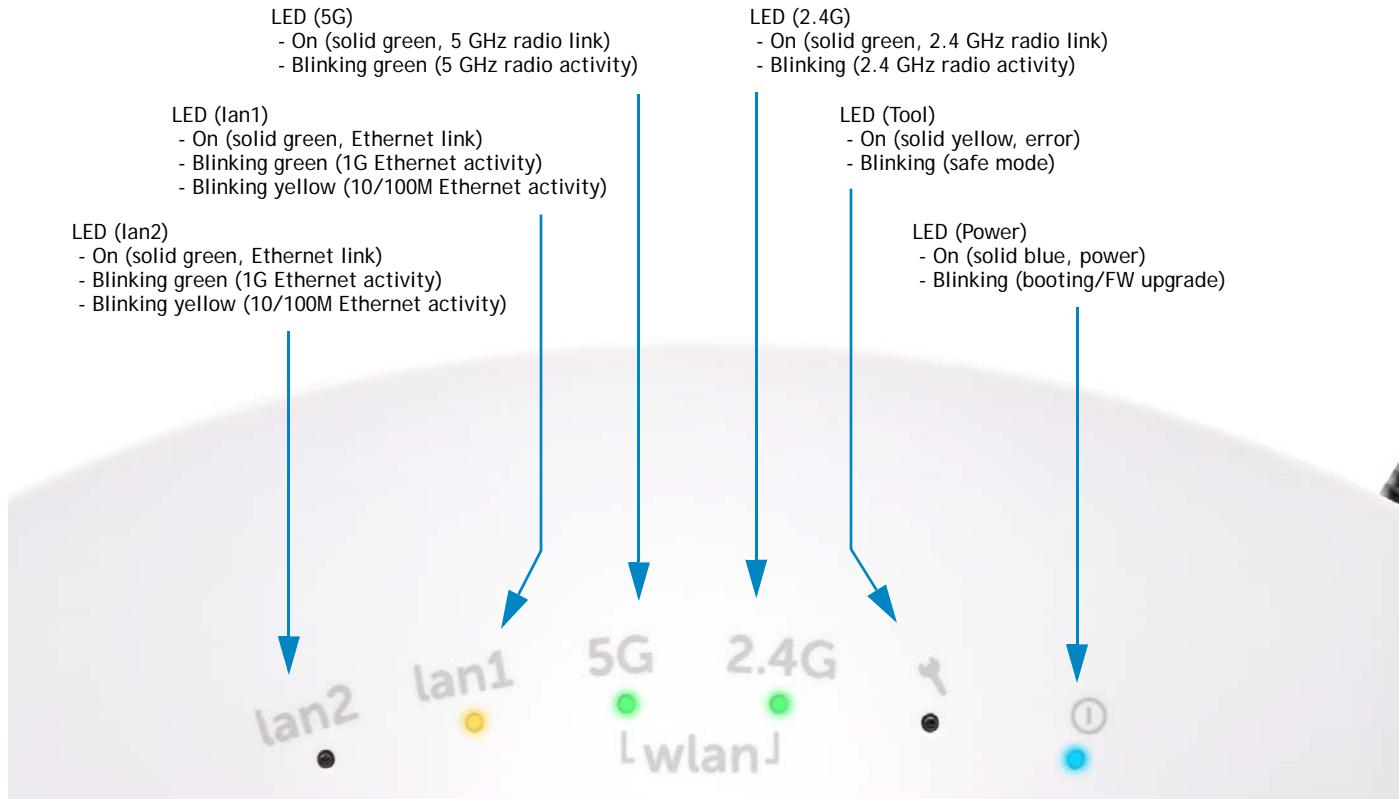
See [Product safety and regulatory information](#) on page 31.

# SonicPoint ACi available ports/status LEDs

Figure 3. Available ports



**Figure 4. Status LEDs**



# Connecting Ethernet cables

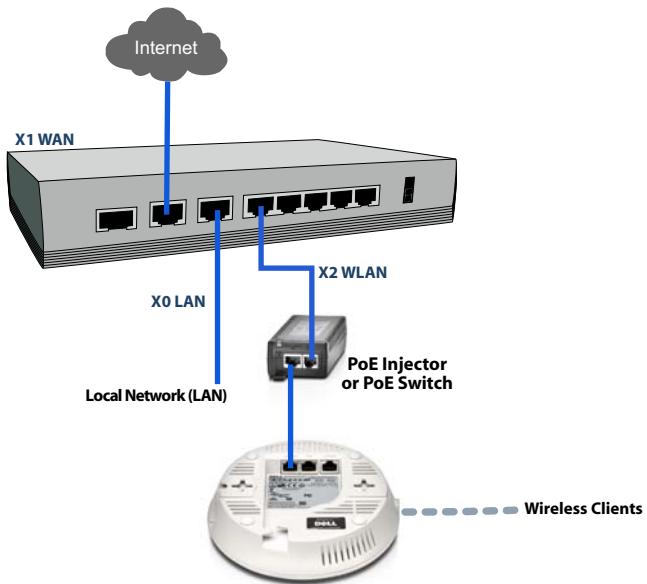
The SonicPoint ACi can be cabled with CAT5, CAT5e, or CAT6 Ethernet cabling.

The SonicPoint ACi is powered using Power over Ethernet (PoE). A Dell SonicWALL 802.3at compliant PoE line injector (sold separately), or an 802.3at compliant switch is required to power each SonicPoint ACi.

## *To connect PoE to your SonicPoint ACi*

- 1 Using an Ethernet cable, connect the **Data in** port on the Dell SonicWALL PoE Injector to an existing WLAN zone interface or to an unused interface to be configured later in SonicOS.
- 2 Using a second Ethernet cable, connect the **Data and Power out** port on the Dell SonicWALL PoE injector to the **LAN1/PoE** port on your SonicPoint ACi.
- 3 Plug the power cord of the Dell SonicWALL PoE injector into an appropriate power outlet.
- 4 Wait for the **LAN1** LED on the SonicPoint ACi to illuminate green. This indicates an active connection.

See [Product safety and regulatory information](#) on page 31.



**CAUTION:** An 802.3at compliant PoE injector or PoE-capable switch capable of providing 25 watts of power to each SonicPoint ACi is required.

To maintain 25 watts of power to the SonicPoint ACi, the maximum length of CAT5e cable from the 802.3at PoE injector to the SonicPoint ACi is 100 meters.

# Wireless access point placement considerations

Physical placement of the SonicPoint ACi wireless access point has a measurable effect on who can and cannot access your wireless signal.

Access points should be kept clear of Radio Frequency (RF) interference sources. RF barriers can be circumvented by deploying multiple access points.

A site survey will help find the optimum wireless access point placement, but you can find usable locations without it.

Considerations include:

- **Number of access points versus user density** - If too many users are serviced by a single access point, maximum transfer rates are reached and that access point may become a bottleneck for the whole system.
- **Bandwidth** - How much data is moving upstream and downstream for a given type of user?
- **Ethernet cabling** - Where are you running the powered Ethernet (PoE) cable to and how are you securing that cable? Is your PoE switch 802.3at compliant and able to power all access points with 25 watts each?

To maintain 25 watts of power to the SonicPoint ACi, the maximum length of CAT5e cable from the 802.3at PoE injector to the SonicPoint ACi is 100 meters.

- **Hubs / Switches** - Your wireless deployment has to tie back into your network security appliance and LAN resources. Consider where your key networking devices are deployed and how they will connect efficiently with your wireless appliances. What speed is needed for your Ethernet connection to accommodate the number of access points you are installing? A Gigabit Ethernet interface is recommended when connecting a SonicPoint ACi to your Dell SonicWALL network security appliance.
- **Legacy clients** - Older laptops and mobile devices may not support 802.11ac. Although clients with 802.11a/g/b hardware are supported by the Dell SonicPoint ACi, the presence of these legacy clients within range of your wireless network could affect the connection speed of your 802.11ac clients.

For example, an 802.11b device authenticated to the SonicPoint ACi could limit all clients connected to that radio to 802.11b data rates.

## Radio frequency barriers

Determining how to circumvent RF barriers can be a challenging part of the placement process, but RF barriers can also be used beneficially in an attempt to block signals where you do not want coverage. The 5 GHz frequency is more sensitive to RF barriers. A wall that allows a 2.4 GHz wireless network to operate could block a 5 GHz one.

**Table 4. Common RF barrier types**

Barrier Type	RF Signal Blocking
Open air	Very Low
Glass, wood, drywall, cube partitions	Low
Floors and outer walls, aquariums (brick/marble/granite/water)	Medium
Concrete, security glass, wire mesh, stacked books/paper	High
Metal partitions, desks, reinforced concrete	Very High

## RF interference

RF interference from home, office, and medical equipment is a common challenge in wireless deployments.

When considering RF interference sources, remember that most cell/wireless phones and Bluetooth devices only utilize the 2.4 GHz frequency. As such, they should not cause significant interference with wireless networks operating in the 5 GHz frequency.

**Table 5. Common sources of RF interference**

Interference Source	Possible Range	Bands Affected
2.4 GHz phones	100 feet	2.4 GHz (802.11 b/g/n)
Bluetooth devices	30 feet	2.4 GHz (802.11 b/g/n)
Microwave oven	10-20 feet	2.4 and 5 GHz, depending on shielding
Scientific and medical equipment	Short distance, varies	2.4 and 5 GHz, depending on shielding

# Mounting the SonicPoint ACi

You can mount your Dell SonicPoint ACi to a wall or ceiling, or you can simply set it on a flat surface.

For safety tips when mounting the SonicPoint ACi, see [Product safety and regulatory information](#) on page 31.

## Mounting using ceiling brackets

The mounting kit includes a large bracket, two small brackets, anchor screws, and screws.

Figure 5. Large ceiling bracket

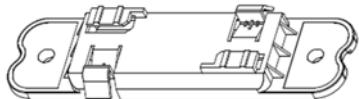
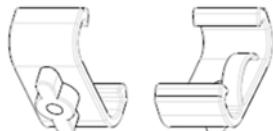
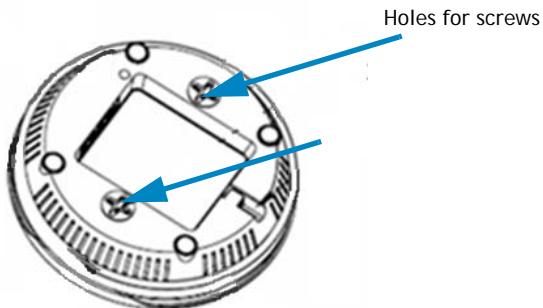


Figure 6. Small ceiling brackets

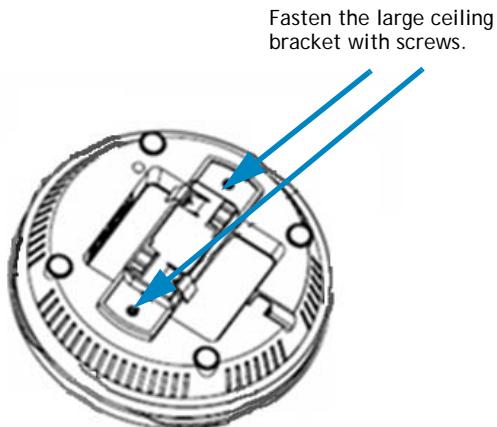


The underside of the SonicPoint ACi has two insertion points for the screws. You can use these insertion points to attach either the large bracket or the two small brackets to the SonicPoint ACi.

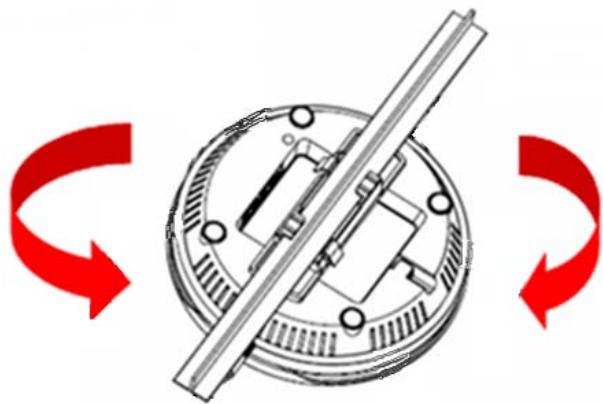


**To mount the SonicPoint ACi to a crossbar between ceiling panels using the large bracket**

- 1 Use the included screws to attach the large bracket to the underside of the SonicPoint.



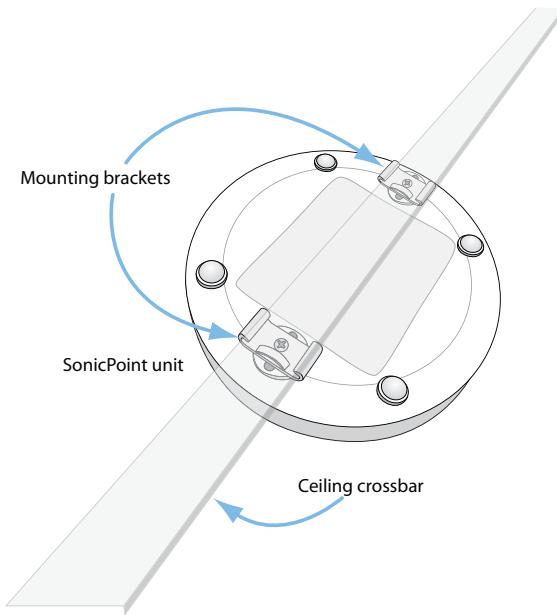
- 2 Supporting the SonicPoint in one hand, position the edge clips of the bracket over the edge of the ceiling crossbar and rotate the SonicPoint *counterclockwise* (to the left when looking up at it) until the bracket is securely attached to the crossbar.



To remove the SonicPoint ACi from the ceiling crossbar, rotate it *clockwise* (to the right when looking up at it) until the bracket detaches from the crossbar.

*To mount the SonicPoint ACi to a crossbar between ceiling panels using the small ceiling brackets:*

- 1 Use the included screws to attach the small brackets to the underside of the SonicPoint, making sure both brackets are parallel.
- 2 Supporting the SonicPoint in one hand, clip the edge of each bracket over the edge of the ceiling crossbar as shown in the following image. Make sure the SonicPoint is securely attached to the crossbar before releasing the device.



## Mounting using anchor screws

*To mount the SonicPoint ACi using the anchor screws*

- 1 On the mounting surface, mark the location to make two screw holes. The marks should be horizontally parallel to each other.
- 2 Screw the anchor screws into the ceiling tile or drywall to their full depth.
- 3 Insert the screws into the anchors, and screw them in deep enough to leave minimal space between the screw heads and the wall surface.
- 4 Supporting the SonicPoint in your hands, securely fit the underside slots of the SonicPoint onto the screw heads.





# Configuring SonicOS for wireless access

This section provides instructions for configuring SonicOS on your Dell SonicWALL network security appliance to connect your SonicPoint ACi to the WLAN zone and manage it as a Layer 2 device. For more advanced configurations, including Layer 3 management of your SonicPoint ACi on a LAN zone, refer to the *SonicOS Administrator's Guide*.

- [Configuring SonicOS for SonicPoint ACi](#) on page 23
- [Verifying SonicPoint operation](#) on page 28
- [Troubleshooting tips](#) on page 28

## Configuring SonicOS for SonicPoint ACi

You only need to complete three simple configuration tasks in SonicOS to prepare your SonicPoint ACi to provide secure wireless access.

- 1 Configure the network interface to which the SonicPoint ACi is connected.
- 2 Configure the WLAN zone for trust and security services.
- 3 Configure the SonicPoint ACi entry for the desired radio frequency, mode, and authentication type.

## Configuring the network interface

Each SonicPoint or group of SonicPoints must be connected to a physical network interface that is configured in a wireless zone. SonicOS provides a standard wireless zone (WLAN) which can be applied to any available interface.

### To configure the network interface in SonicOS

- 1 Navigate to the Network > Interfaces page and click **Configure** for the interface to which your SonicPoint is connected.
- 2 Select WLAN zone for the Zone type.
- 3 Select Static IP Mode for the Mode/IP Assignment.
- 4 In the IP Address field, type in any private IP address that does not interfere with the IP address range of any other interfaces on the appliance.
- 5 Enter a Subnet Mask. The default is 255.255.255.0.
- 6 Use the default settings or select appropriate settings for the other fields and then click OK.

**⚠ CAUTION:** Allowing Management and User Login to the appliance from a wireless zone can pose a security threat, especially if you or your users have not set strong passwords.

Figure 7. SonicOS 5.9 interface settings

The screenshot shows the 'Interface 'X3' Settings' configuration page. It includes fields for Zone (WLAN), Mode / IP Assignment (Static IP Mode), IP Address (172.0.0.1), Subnet Mask (255.255.255.0), SonicPoint Limit (16 SonicPoints), Comment (SonicPoint), Management checkboxes (HTTPS, Ping, SNMP, SSH), User Login checkboxes (HTTP, HTTPS), and a note about enabling redirect from HTTP to HTTPS.

Figure 8. SonicOS 6.2 interface settings

The screenshot shows the 'Interface 'X4' Settings' configuration page. It includes fields for Zone (WLAN), Mode / IP Assignment (Static IP Mode), IP Address (10.10.10.10), Subnet Mask (255.255.255.0), SonicPoint Limit (128 SonicPoints), Reserve SonicPoint Address (Automatically selected), Comment, Management checkboxes (HTTPS, Ping, SNMP, SSH), User Login checkboxes (HTTP, HTTPS), and a note about enabling redirect from HTTP to HTTPS.

# Configuring the WLAN zone

## To configure the WLAN zone in SonicOS

- 1 On the Network > Zones page in the WLAN row, click the icon in the Configure column.
- 2 On the General tab, select the Allow Interface Trust setting to automate the creation of Access Rules to allow traffic to flow between the interfaces within the zone, regardless of the interfaces to which the zone is applied.

For example, if the WLAN zone has both the X2 and X3 interfaces assigned to it, selecting Allow Interface Trust creates the necessary access rules to allow hosts on these interfaces to communicate with each other.

- 3 Select the checkboxes to enable security services on this zone. Minimally, you would enable **Gateway Anti-Virus**, **IPS**, and **Anti-Spyware**. If your wireless clients are all running Dell SonicWALL Client Anti-Virus, select **Enable Client AV Enforcement Service**.
- 4 On the Guest Services tab, optionally configure guest Internet access. For information about Guest Services, see the *SonicOS Administrator's Guide*.

**General Settings**

Name:	<input type="text" value="WLAN"/>
Security Type:	<input type="text" value="Wireless"/> <input type="button" value="▼"/>
<input checked="" type="checkbox"/> Allow Interface Trust	
<input checked="" type="checkbox"/> Auto-generate Access Rules to allow traffic between zones of the same trust level	
<input checked="" type="checkbox"/> Auto-generate Access Rules to allow traffic to zones with lower trust level	
<input checked="" type="checkbox"/> Auto-generate Access Rules to allow traffic from zones with higher trust level	
<input checked="" type="checkbox"/> Auto-generate Access Rules to deny traffic from zones with lower trust level	
<input type="checkbox"/> Enforce Content Filtering Service	
CFS Policy:	<input type="text" value="Default"/> <input type="button" value="▼"/>
<input type="checkbox"/> Enable Client AV Enforcement Service	
<input type="checkbox"/> Enable Client CF Service	
<input type="checkbox"/> Enable SSLVPN Access	
<input checked="" type="checkbox"/> Create Group VPN	<input type="checkbox"/> Enable SSL Control
<input checked="" type="checkbox"/> Enable Gateway Anti-Virus Service	<input checked="" type="checkbox"/> Enable IPS
<input checked="" type="checkbox"/> Enable Anti-Spyware Service	<input type="checkbox"/> Enable App Control Service

- 5 On the Wireless tab, select Only allow traffic generated by a SonicPoint/SonicPointN to allow only traffic from SonicPoints to enter the WLAN zone interfaces, providing maximum security.
- 6 When finished, click OK.

# Configuring the SonicPoint ACi settings

When a SonicPoint ACi is initially connected to an interface, the firewall uses a default provisioning profile to create a SonicPoint ACi entry. It can take up to 5 minutes for the entry to be created.

You can modify the SonicPoint ACi entry to configure the access point name, radio frequency mode, authentication type, and other settings specific to your SonicPoint ACi.

**TIP:** For deployments of multiple SonicPoints that need the same provisioning settings, you can create a custom provisioning profile in the upper section of the [SonicPoint > SonicPoints](#) page. In the [Network > Zones](#) page, you can edit the WLAN zone and specify this profile on the Wireless tab. Any SonicPoints connecting to an interface in the WLAN zone will then be provisioned with the assigned profile. See the *SonicOS Administrator's Guide* for more information.

## To modify the SonicPoint ACi entry in SonicOS

- 1 Navigate to the [SonicPoint > SonicPoints](#) page.
- 2 In the SonicPointNs table, click the configure button in the row for the SonicPoint ACi entry you wish to modify.

### General tab settings

- 3 On the General tab, select **Enable SonicPoint**.
- 4 In the **Name** field, optionally type in a new name for this SonicPoint ACi. The existing name is assigned by the provisioning profile based on the name prefix in the profile with a unique number appended.

This is the access point name that appears in clients' lists of available wireless connections.
- 5 Verify the **Country Code** for the area of operation.
- 6 Configure the remaining options as needed. For more information, see the *SonicOS Administrator's Guide*.

### Radio 0 / Radio1 Basic tab settings

- 7 Click the **Radio 0 Basic** tab, or the **Radio 1 Basic** tab.

The configuration is very similar for the Radio 0 and Radio 1 Basic tabs. The main differences are the radio frequencies:

Radio	Frequency	Default Mode
Radio 0	5 GHz	5 GHz 802.11ac/a Mixed
Radio 1	2.4 GHz	2.4 GHz 802.11ac/g/b Mixed

- 8 Select Enable Radio.
  - 9 Select a Mode or use the default.
  - 10 Under Wireless Security, select the Authentication Type for your wireless network. Dell SonicWALL recommends using WPA2 as the authentication type if all client devices support it.
- TIP:** PSK uses a personal passphrase for authentication, EAP uses an Enterprise RADIUS server.
- 11 Select the Cipher Type. When using WPA and WPA2, Dell SonicWALL recommends AES for maximum security.
  - NOTE:** Older client devices might not support AES.
  - 12 Fill in the fields specific to the authentication type that you selected. The remaining fields change depending on the selected authentication type.
  - 13 Optionally, under ACL Enforcement, select Enable MAC Filter List to enforce Access Control by allowing or denying traffic from specific devices. Select a MAC address object group from the Allow List or Deny List to automatically allow or deny traffic to and from all devices with MAC addresses in the group. The Deny List is enforced before the Allow List.

### *Radio 0 / Radio1 Advanced tab settings*

- 14 Click the Radio 0 Advanced tab, or the Radio 1 Advanced tab.

The configuration is very similar for the Radio 0 Advanced and Radio 1 Advanced tabs. For most advanced options, the default settings give optimum performance. For a full description of the fields on this tab, see the *SonicOS Administrator's Guide*.

- 15 Optionally select the Hide SSID in Beacon checkbox.

The *SSID* refers to the access point name that appears in clients' lists of available wireless connections.

Hiding the SSID provides additional security because it requires the user to know the access point name before connecting.

- 16 When you are finished with configuring all tabs, click OK.

# Verifying SonicPoint operation

To verify that the SonicPoint is provisioned and operational, navigate to the **SonicPoint > SonicPoints** page in SonicOS. In the SonicPointNs table, the Status column displays the SonicPoint ACi status. It should say **Operational**.

## *To verify Internet connectivity via the SonicPoint ACi*

- 1 Connect a client device to the SonicPoint ACi by selecting the appropriate access point name (SSID).
- 2 Ensure that the client device is not connected to any other network connections (wired LAN, 3G/4G WWAN).
- 3 In a browser, enter “<http://software.dell.com>” in the address bar and press **Enter**. The Dell website should display. If you are unable to browse to a website, refer to [Troubleshooting tips](#).

# Troubleshooting tips

When the SonicPoint ACi is correctly connected to a Dell SonicWALL network security appliance, the two units perform an encrypted exchange, and an entry for the SonicPoint ACi is automatically created in the SonicPointNs table on the **SonicPoint > SonicPoints** page in SonicOS.

If the entry does not appear in the table within 5 minutes of connecting the SonicPoint ACi:

- Make sure the SonicPoint ACi is connected to an interface that is configured as part of a wireless zone. Either the default WLAN zone or a custom zone with type set to “wireless” is required.
- Ensure that the SonicPoint ACi is properly connected by Ethernet cable to an 802.3at compliant PoE device. A PoE-capable switch or PoE injector is required.
- If an 802.3at compliant PoE injector is being used, verify that the SonicPoint ACi is connected to the PoE port labeled **Data and Power Out**.

If the SonicPoint ACi has an entry in the table, but reboots frequently or seems non-functional:

- Verify that your PoE switch/injector is 802.3at compliant and rated to deliver 25 watts of power to each PoE port. 802.3af compliant PoE devices do not provide sufficient power to properly run current generation 802.11 devices. An 802.3at compliant switch or PoE injector is required to power the Dell SonicPoint ACi.
- Click **Synchronize SonicPoints** on the **SonicPoint > SonicPoints** page to force SonicOS to download a new SonicPoint firmware image from the Dell SonicWALL back-end server.

# Support and product registration

This section provides information about registering your Dell™ SonicPoint ACi, requirements for receiving technical support, and other online support and training options.

- [Registration and support](#) on page 29
- [Online support and training](#) on page 30

## Registration and support

All Dell™ SonicPoint ACi wireless access points include an initial subscription to Dell SonicWALL 24x7 Support.

SonicOS will automatically register your SonicPoint ACi on MySonicWALL, if connected to the Internet. It may take up to 24 hours for your SonicPoint ACi to be automatically registered.

Optionally, you can manually register the SonicPoint ACi on MySonicWALL by logging into your account at:  
<http://www.mysonicwall.com>.

The SonicPoint ACi will also be associated in MySonicWALL with the registered Dell SonicWALL network security appliance to which it is connected. See the Associated Products section at the bottom of the appliance Service Management page in MySonicWALL. In order to receive technical support, your SonicPoint ACi must have an active Support subscription.

# Online support and training

Dell SonicWALL offers a variety of online support and training options for your convenience.

- **Customer support**

Dell SonicWALL offers telephone, email and Web-based support to customers who have a valid Warranty or who purchased a Support Contract. Review our Warranty Support Policy for product coverage. Dell SonicWALL also offers a full range of consulting services to meet your needs, from our innovative implementation services to traditional statement of work-based services.

For further information, visit:

<https://support.software.dell.com/>

- **Knowledge base**

The Knowledge Base allows users to search for Dell SonicWALL documents by browsing the knowledge base, searching for keywords, or using full-text search.

For further information, visit:

<https://support.software.dell.com/sonicwall-sonicpoint-series/>

- **User forums**

The Dell SonicWALL User Forums are a resource that provide users the ability to communicate and discuss a variety of security and appliance subject matters. The forums are organized by categories.

For further information, visit:

<https://forum.sonicwall.com/>

- **Training**

Dell SonicWALL offers an extensive sales and technical training curriculum. Dell SonicWALL Training provides the E-Training, instructor-led training, custom training, technical certification, and uses authorized training partners.

For further information, visit:

<https://support.software.dell.com/essentials/sonicwall-certification-programs>

- **Related documentation**

- SonicOS Administrator's Guide
- SonicOS Release Notes
- SonicOS Configuration or Deployment Guides

For further information, visit:

<https://support.software.dell.com/>

# Product safety and regulatory information

This section provides product safety and regulatory information.

- [Mounting the appliance](#) on page 32
- [Verwarnung Weitere hinweise zur montage](#) on page 33
- [EU and EFTA](#) on page 34
- [Declaration of conformity](#) on page 34

Products with “UL 2043” printed on their product labels are within the limit specified in the “UL 2043 Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products Installed in Air-Handling Spaces” (Plenum). Applies only when powered through PoE. The PoE power supply is not covered by the UL 2043 evaluation of this Access Point.

 **NOTE:** Additional regulatory notifications and information for this product can be found online at:  
<https://support.software.dell.com/>.

Regulatory Model/Type	Product Name
APL27-0B1	SonicPoint ACi

# Mounting the appliance

## WARNING:

- Mount in a location away from direct sunlight and sources of heat. A maximum ambient temperature of 104° F (40° C) is recommended.
- Route cables away from power lines, fluorescent lighting fixtures, and sources of noise such as radios, transmitters, and broadband amplifiers
- Ensure that no water or excessive moisture can enter the unit.
- Allow unrestricted airflow around the unit and through the vents on the side of the unit. A minimum of 1 inch (25.44mm) clearance is recommended.
- Consideration must be given to the connection of the equipment to the supply circuit and that the effect of overloading the circuits has minimal impact on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings must be used when addressing this concern.
- This device is not intended for use in the direct field of view at visual display workplaces. To avoid incommoding reflections at visual display workplaces, this device must not be placed in the direct field of view.

# Cable connections

## WARNING:

All Ethernet and RS232 (Console) cables are designed for intra-building connection to other equipment. Do not connect these ports directly to communication wiring or other wiring that exits the building where the appliance is located.

# Lithium Battery

## WARNING:

The Lithium Battery used in the Dell appliance cannot be replaced by the user. The appliance must be returned to a Dell authorized service center for replacement with the same or equivalent type recommended by the manufacturer. If, for any reason, the battery or Dell appliance must be disposed of, do so following the battery manufacturer's instructions.

# Power supply information for APL27-0B1

This product's power is provided by the Ethernet cable plugged in to the "LAN" port, this is called "Power Over Ethernet" or "POE." The POE source should only be UL listed marked "Class

2" or "LPS," with an output rated 48 VDC, minimum 0.6 A, Tma: minimum 40 degrees C.

## Verwarnung Weitere hinweise zur montage

- Wählen Sie für die Montage einen Ort, der keinem direkten Sonnenlicht ausgesetzt ist und sich nicht in der Nähe von Wärmequellen befindet. Die Umgebungstemperatur darf nicht mehr als 40 °C betragen.
- Führen Sie die Kabel nicht entlang von Stromleitungen, Leuchtstoffröhren und Störquellen wie Funksendern oder Breitbandverstärkern.
- Das im Lieferumfang enthaltene bzw. die im Lieferumfang enthaltenen Netzkabel sind nur für die Verwendung in bestimmten Ländern und Regionen zugelassen. Überprüfen Sie bitte vor der Verwendung eines Netzkabels, ob es für die Verwendung in Ihrem Land oder Ihrer Region zugelassen ist und den geforderten Normen entspricht.
- Stellen Sie sicher, dass das Gerät vor Wasser und hoher Luftfeuchtigkeit geschützt ist.

- Stellen Sie sicher, dass die Luft um das Gerät herum zirkulieren kann und die Lüftungsschlitzte an der Seite des Gehäuses frei sind. Hier ist ein Belüftungsabstand von mindestens 26 mm einzuhalten.
- Vergewissern Sie sich, dass das Gerät sicher im Rack befestigt ist.
- Das Gerät ist nicht für die Benutzung im unmittelbaren Gesichtsheld am Bildschirmarbeitsplatz vorgesehen. Um störende Reflexionen am Bildschirmarbeitsplatz zu vermeiden, darf dieses Produkt nicht im unmittelbaren Gesichtsfeld platziert werden.

## Verwarnung Kabelverbindungen

Alle Ethernet- und RS232-C-Kabel eignen sich für die Verbindung von Geräten in Innenräumen. Schließen Sie an die Anschlüsse der Dell keine Kabel an, die aus dem Gebäude herausgeführt werden, in dem sich das Gerät befindet.

## Verwarnung Hinweis zur Lithiumbatterie

Die in der Internet Security Appliance von Dell verwendete Lithiumbatterie darf nicht vom Benutzer ausgetauscht werden. Zum Austauschen der Batterie muss die Dell in ein von Dell autorisiertes Service-Center gebracht werden. Dort

wird die Batterie durch denselben oder entsprechenden, vom Hersteller empfohlenen Batterietyp ersetzt. Beachten Sie bei einer Entsorgung der Batterie oder der Dell Internet Security Appliance die diesbezüglichen Anweisungen des Herstellers.

## Informationen zur stromversorgung APL27-0B1

Wenn die Stromversorgung von der Dell-Produktpaket fehlt, wenden Dell den Technischen Support unter <https://support.software.dell.com/manage-service-request>.

Die Stromversorgung durch das Ethernet-Kabel in die "LAN"-Anschluss angeschlossen vorgesehen ist, wird dies als "Power over Ethernet" oder "PoE." Dieses Produkt darf nur in Verbindung mit einem für den Europäischen Markt genehmigten und mit dem Logo „LPS.“ Ausgang: 48 VDC Gleichspannung, mind. 0,6 A, mindest TMA mindestens 40° Grad C, betrieben werden.

## EU and EFTA



5.150-5.350 GHz is limited to indoor use.

This device is approved for use in all EU member states and EFTA countries.

## Declaration of conformity

A "Declaration of Conformity" in accordance with the directives and standards has been made and is on file at Dell Inc. Products Europe BV, Limerick, Ireland.

CE declarations can be found online at [www.dell.com](http://www.dell.com).

**NOTE:** Additional regulatory notifications and information for this product can be found online at: <https://support.software.dell.com/>

Dell listens to customers and delivers worldwide innovative technology, business solutions and services they trust and value. For more information, visit [www.software.dell.com](http://www.software.dell.com).

## Contacting Dell

**Technical support:**

[Online support](#)

**Product questions and sales:**

(800) 306-9329

**Email:**

[info@software.dell.com](mailto:info@software.dell.com)

## Technical support resources

Technical support is available to customers who have purchased Dell software with a valid maintenance contract and to customers who have trial versions. To access the Support Portal, go to <https://support.software.dell.com/>.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. In addition, the portal provides direct access to product support engineers through an online Service Request system.



