

Dell™ SonicPoint N2

Getting Started Guide

Regulatory Model Number: APL26-0B3



© 2014 Dell Inc.
ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Dell Inc.

The information in this document is provided in connection with Dell products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Dell products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, DELL ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL DELL BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF DELL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Dell makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Dell does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:
Dell Inc.

Attn: LEGAL Dept
5 Polaris Way
Aliso Viejo, CA 92656

Refer to our web site (software.dell.com) for regional and international office information.

SonicPoint N2 Getting Started Guide
Updated - 11/26/14
232-002618-50 Rev A




Patents


This product is protected by multiple U.S. Patents. For more information, go to <http://software.dell.com/legal/patents.aspx>.


Trademarks

Dell, the Dell logo, SonicWALL, and all other SonicWALL product and service names and slogans are trademarks of Dell Inc. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims any proprietary interest in the marks and names of others.

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 N2 wireless access point in single-unit or multi-unit wireless deployments.

Chapter 1

Topics

[Introduction](#) on page 5

- [Wireless overview](#) on page 7

Chapter 2

Topics

[Initial Setup](#) on page 11

- [Check package contents](#) on page 12
- [Deployment requirements](#) on page 12
- [SonicPoint N2 available ports/status LEDs](#) on page 13
- [Installing antennas](#) on page 15
- [Connecting Ethernet cables](#) on page 16
- [Wireless access point placement considerations](#) on page 17
- [Mounting the SonicPoint N2](#) on page 19

Chapter 3

Topics

[Configuring SonicOS for wireless access on page 23](#)

- [Configuring SonicOS for SonicPoint N2 on page 23](#)
- [Verifying SonicPoint operation on page 28](#)
- [Troubleshooting tips on page 28](#)

Chapter 4

Topics

[Support and product registration on page 29](#)

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

Chapter 5

Topics

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

- [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](#)

Wireless overview

The Dell™ SonicPoint N2 is part of the next evolutionary generation in wireless access points after the Dell SonicWALL SonicPoint N and NDR.

The SonicPoint N2 provides physical layer enhancements for higher throughput with a maximum data rate of 450 Mbps. To achieve this, the SonicPoint N2 uses:

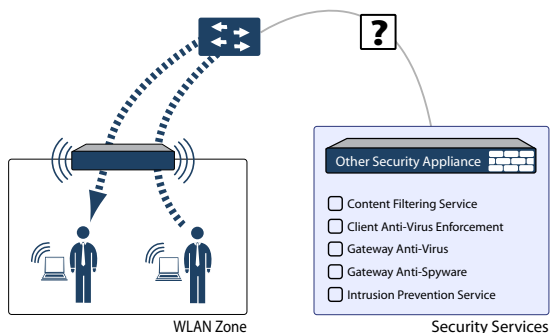
- More antennas—three antennas for the 5 GHz radio, and three more for the 2.4 GHz radio
- Wider channels—40 MHz-wide channels for the 802.11n radio module
- More spatial streams—3X3 multiple-input and multiple-output, (MIMO) for the 802.11n radio module, where the capacity of a radio link is multiplied using multipath propagation.

Dell SonicWALL wireless firewalling

When a wireless device uses a Dell SonicPoint N2 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.

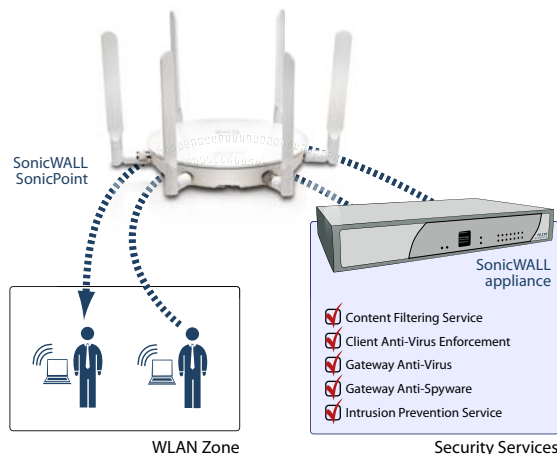
Figure 1. Standard wireless firewalling



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 18 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 N2 including antennas, cabling, and mounting.

- [Check package contents](#) on page 12
- [Deployment requirements](#) on page 12
- [SonicPoint N2 available ports/status LEDs](#) on page 13
- [Installing antennas](#) on page 15
- [Connecting Ethernet cables](#) on page 16
- [Wireless access point placement considerations](#) on page 17
- [Mounting the SonicPoint N2](#) on page 19

Check package contents

Before continuing, ensure that your Dell™ SonicPoint N2 package contains the following materials:

SonicPoint N2 Appliance Checklist

- Dell SonicPoint N2 Appliance
- Antennas (6)
- 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 N2 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 N2 is required.

Internet connectivity

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

Gigabit Ethernet connectivity

- 802.11n 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 802.11n speed.

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

SonicPoint N2 available ports/status LEDs

Figure 3. Available ports

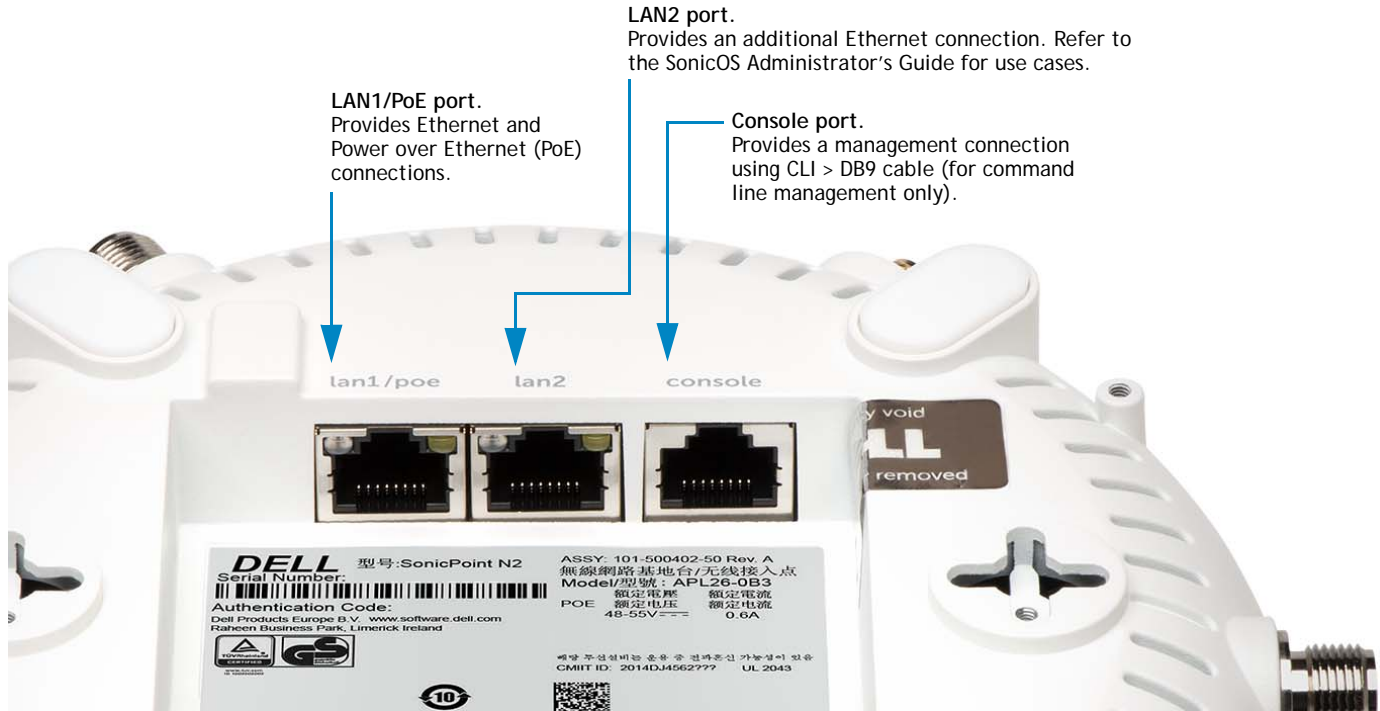
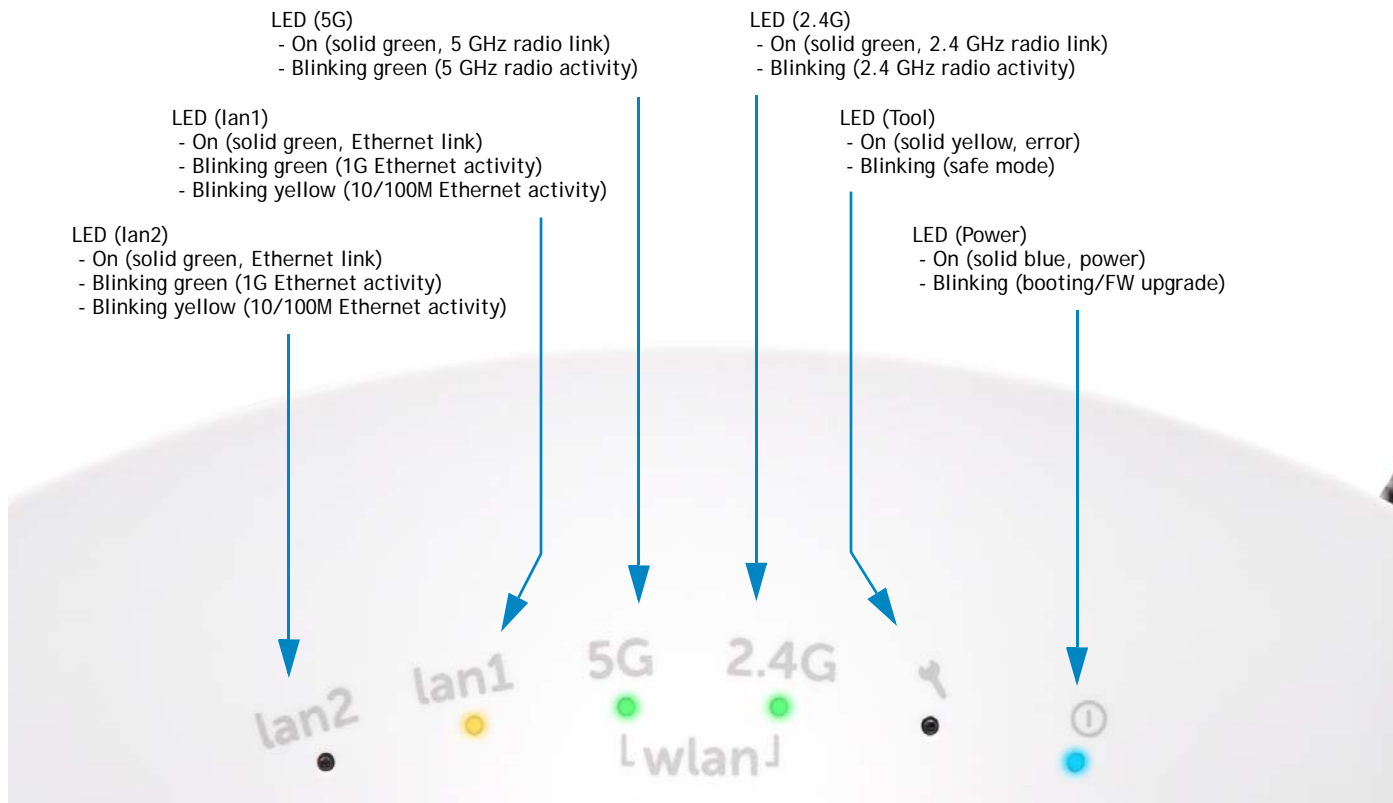


Figure 4. Status LEDs



Installing antennas

To install the antennas on your SonicPoint N2

- 1 Remove all six antennas from their bags and place one on each connector. Match the fittings with the antenna style. There are three of each type.
- 2 Carefully finger-tighten the fittings.
- 3 Adjust the antennas for optimal reception.

For optimal wireless coverage in most cases, the SonicPoint N2 antennas should be oriented vertically. The circular design of the SonicPoint aides in creating a strong multi-directional wireless signal pattern. In most cases, leaving the antennas straight up (as shown in the illustration) provides the best overall coverage.

- TIP:** There may be a “dead” zone directly underneath the SonicPoint N2 when it is mounted on the ceiling with the antennas oriented vertically. You can mitigate this by slightly angling the antennas.



- CAUTION:** The SonicPoint N2 uses dipole antennas with 5.5dBi at 5 GHz and 3.5dBi at 2.4 GHz. Only antennas provided by Dell are authorized for use with the SonicPoint N2. Be aware of the regulations in your region before using other antennas.

Connecting Ethernet cables

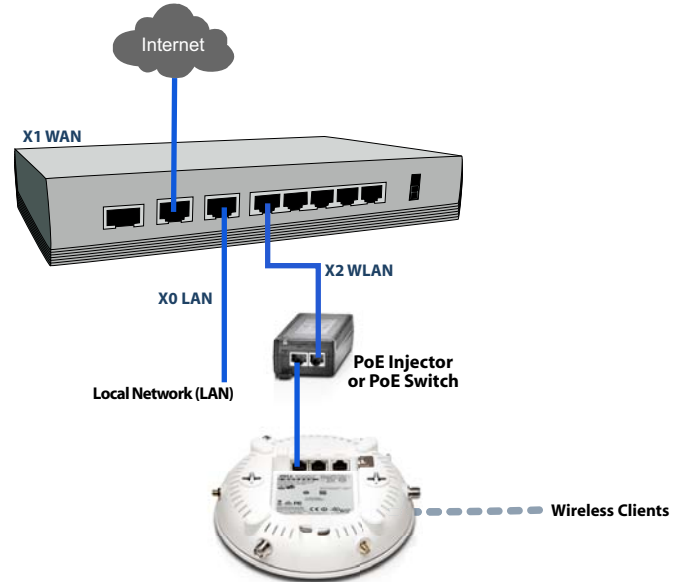
The SonicPoint N2 can be cabled with CAT5, CAT5e, or CAT6 Ethernet cabling.

The SonicPoint N2 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 N2.

To connect PoE to your SonicPoint N2

- 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 N2.
- 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 N2 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 N2 is required.

To maintain 25 watts of power to the SonicPoint N2, the maximum length of CAT5e cable from the 802.3at PoE injector to the SonicPoint N2 is 100 meters.

Wireless access point placement considerations

Physical placement of the SonicPoint N2 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 N2, the maximum length of CAT5e cable from the 802.3at PoE injector to the SonicPoint N2 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 N2 to your Dell SonicWALL network security appliance.
- **Legacy clients** - Older laptops and mobile devices may not support 802.11n. Although clients with 802.11a/g/b hardware are supported by the Dell SonicPoint N2, the presence of these legacy clients within range of your wireless network could affect the connection speed of your 802.11n clients.

For example, an 802.11b device authenticated to the SonicPoint N2 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 may 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 N2

You can mount your Dell SonicPoint N2 to a wall or ceiling, or you can simply set it on a flat surface.

For safety tips when mounting the SonicPoint N2, 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

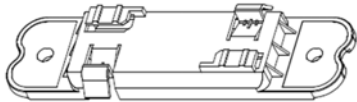
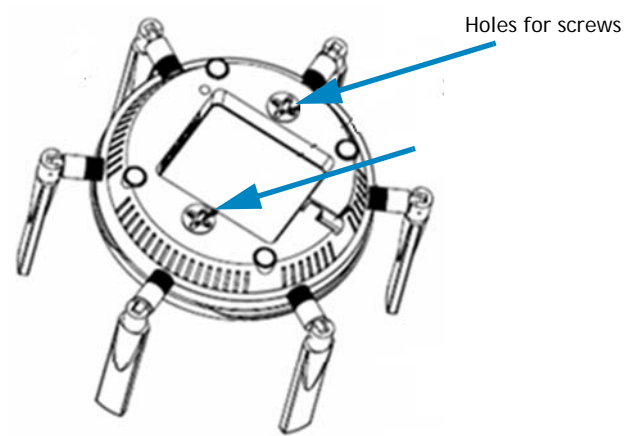


Figure 6. Small ceiling brackets

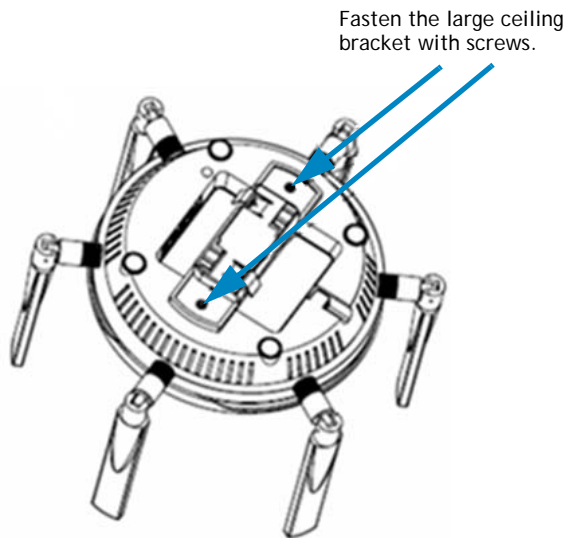


The underside of the SonicPoint N2 has two insertion points for the screws. You can use these insertion points to attach either the large bracket or the two small brackets to the SonicPoint N2.

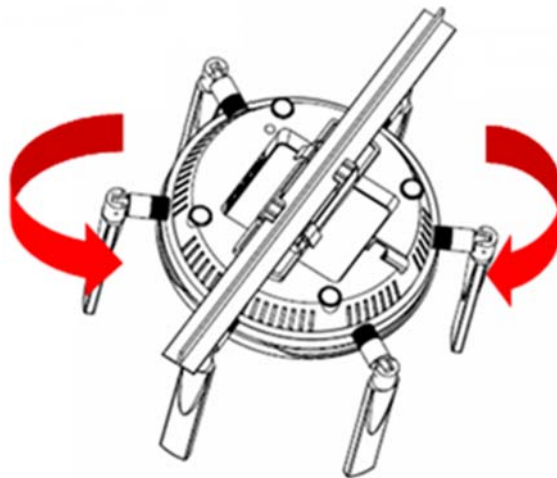


To mount the SonicPoint N2 to a crossbar between ceiling panels using the large bracket

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



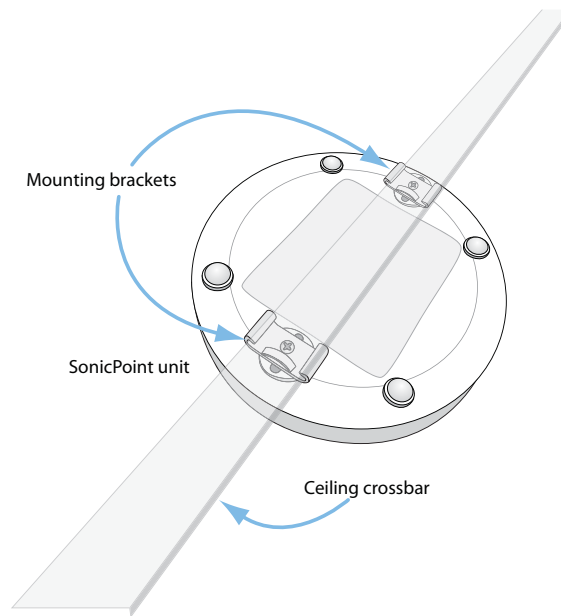
- 2 Supporting the SonicPoint in one hand, position the edge clips of the bracket over the edge of the ceiling crossbar and rotate the SonicPoint *counterclockwise* (to the left when looking up at it) until the bracket is securely attached to the crossbar.



To remove the SonicPoint N2 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 N2 to a crossbar between ceiling panels using the small ceiling brackets:

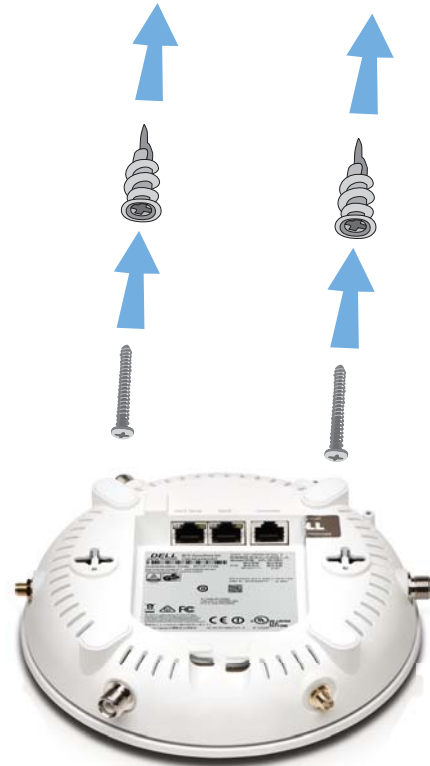
- 1 Use the included screws to attach the small brackets to the underside of the SonicPoint, making sure both brackets are parallel.
- 2 Supporting the SonicPoint in one hand, clip the edge of each bracket over the edge of the ceiling crossbar as shown in the following image. Make sure the SonicPoint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



Mounting using anchor screws

To mount the SonicPoint N2 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 N2 to the WLAN zone and manage it as a Layer 2 device. For more advanced configurations, including Layer 3 management of your SonicPoint N2 on a LAN zone, refer to the *SonicOS Administrator's Guide*.

- [Configuring SonicOS for SonicPoint N2](#) on page 23
- [Verifying SonicPoint operation](#) on page 28
- [Troubleshooting tips](#) on page 28

Configuring SonicOS for SonicPoint N2

You only need to complete three simple configuration tasks in SonicOS to prepare your SonicPoint N2 to provide secure wireless access.

- 1 Configure the network interface to which the SonicPoint N2 is connected.
- 2 Configure the WLAN zone for trust and security services.
- 3 Configure the SonicPoint N2 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' page. It includes the following fields and options:

- Zone:** WLAN (dropdown)
- Mode / IP Assignment:** Static IP Mode (dropdown)
- IP Address:** 172.0.0.1 (text input)
- Subnet Mask:** 255.255.255.0 (text input)
- SonicPoint Limit:** 16 SonicPoints (dropdown)
- Comment:** SonicPoint (text input)
- Management:** HTTPS Ping SNMP SSH
- User Login:** HTTP HTTPS
- Add rule to enable redirect from HTTP to HTTPS

Figure 8. SonicOS 6.2 interface settings

The screenshot shows the 'Interface 'X4' Settings' page. It includes the following fields and options:

- Zone:** WLAN (dropdown)
- Mode / IP Assignment:** Static IP Mode (dropdown)
- IP Address:** 10.10.10.10 (text input)
- Subnet Mask:** 255.255.255.0 (text input)
- SonicPoint Limit:** 128 SonicPoints (dropdown)
- Reserve SonicPoint Address:** Automatically Manually (radio buttons)
- Comment:** (text input)
- Management:** HTTPS Ping SNMP SSH
- User Login:** HTTP HTTPS
- Add rule to enable 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*.

The screenshot shows the 'General Settings' configuration page for a WLAN zone. The 'Name' field is set to 'WLAN' and the 'Security Type' is set to 'Wireless'. The following settings are checked: 'Allow Interface Trust', 'Auto-generate Access Rules to allow traffic between zones of the same trust level', 'Auto-generate Access Rules to allow traffic to zones with lower trust level', 'Auto-generate Access Rules to allow traffic from zones with higher trust level', and 'Auto-generate Access Rules to deny traffic from zones with lower trust level'. The 'Enforce Content Filtering Service' is unchecked, and the 'CFS Policy' is set to 'Default'. Other services like 'Enable Client AV Enforcement Service', 'Enable Client CF Service', 'Enable SSLVPN Access', 'Create Group VPN', 'Enable Gateway Anti-Virus Service', 'Enable Anti-Spyware Service', 'Enable SSL Control', 'Enable IPS', and 'Enable App Control Service' are also shown with their respective checkboxes.

- 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 N2 settings

When a SonicPoint N2 is initially connected to an interface, the firewall uses a default provisioning profile to create a SonicPoint N2 entry. It can take up to 5 minutes for the entry to be created.

You can modify the SonicPoint N2 entry to configure the access point name, radio frequency mode, authentication type, and other settings specific to your SonicPoint N2.

- 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 N2 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 N2 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 N2. 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 802.11n/a Mixed
Radio 1	2.4 GHz	2.4 GHz 802.11n/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.
 - ① **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.
 - ① **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 N2 status. It should say **Operational**.

To verify Internet connectivity via the SonicPoint N2

- 1 Connect a client device to the SonicPoint N2 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 N2 is correctly connected to a Dell SonicWALL network security appliance, the two units perform an encrypted exchange, and an entry for the SonicPoint N2 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 N2:

- Make sure the SonicPoint N2 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 N2 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 N2 is connected to the PoE port labeled **Data and Power Out**.

If the SonicPoint N2 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 N2.
- 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 N2, 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 N2 wireless access points include an initial subscription to Dell SonicWALL 24x7 Support.

SonicOS will automatically register your SonicPoint N2 on MySonicWALL, if connected to the Internet. It may take up to 24 hours for your SonicPoint N2 to be automatically registered.

Optionally, you can manually register the SonicPoint N2 on MySonicWALL by logging into your account at: <http://www.mysonicwall.com>.

The SonicPoint N2 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 N2 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 the 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
APL26-0B3	SonicPoint N2

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 APL26-0B3

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.
- 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 Lüftungsschlitze 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 Bildshirmarbeitsplatz 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 APL26-0B3

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.

- ① **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.

Contacting Dell

Technical support:

[Online support](#)

Product questions and sales:

(800) 306-9329

Email:

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.

