Cisco Aironet Dual-Band Omni-Directional Antenna (AIR-ANT2547V-N, AIR-ANT2547V-N-HZ, and ANT2547VG-N)

This describes the Cisco Aironet AIR-ANT2547V-N, AIR-ANT2547V-N-HZ, and ANT2547VG-N dual-band omni-directional antennas and provides specifications and mounting instructions. These antennas are designed for outdoor use with Cisco Aironet Outdoor Access Points with radios operating in the 2.4 GHz and 5 GHz frequency bands.

These three antennas are functionally the same, and will be referred to as a singular antenna throughout the rest of this guide. The three antennas are:

Table 1 Antenna SKUs

<table>
<thead>
<tr>
<th>SKU</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR-ANT2547V-N</td>
<td>White</td>
</tr>
<tr>
<td>AIR-ANT2547VG-N</td>
<td>Gray</td>
</tr>
<tr>
<td>AIR-ANT2547V-N-HZ</td>
<td>White, Hazardous Locations</td>
</tr>
</tbody>
</table>

These topics are discussed:

- Technical Specifications
- System Requirements
- Safety Precautions
- Installation Notes
## Technical Specifications

<table>
<thead>
<tr>
<th>Table 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antenna type</strong></td>
<td>Omni-directional colinear array</td>
</tr>
<tr>
<td><strong>Operating frequency range</strong></td>
<td>2400–2483 MHz; 5150–5875 MHz</td>
</tr>
<tr>
<td><strong>2:1 VSWR bandwidth</strong></td>
<td>2400–2483 MHz; 5150–5875 MHz</td>
</tr>
<tr>
<td><strong>Nominal input impedance</strong></td>
<td>50 Ohms</td>
</tr>
<tr>
<td><strong>Gain (2400–2483 MHz)</strong></td>
<td>4-dBi</td>
</tr>
<tr>
<td><strong>Gain (5250–5875 MHz)</strong></td>
<td>7-dBi</td>
</tr>
<tr>
<td><strong>Polarization</strong></td>
<td>Linear</td>
</tr>
<tr>
<td><strong>E-plane 3-dB beamwidth</strong></td>
<td>2.4 GHz: 30° for 5 GHz 14°</td>
</tr>
<tr>
<td><strong>H-plane 3-dB bandwidth</strong></td>
<td>Omni-directional</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>11.1 in. (28.2 cm)</td>
</tr>
<tr>
<td><strong>Diameter</strong></td>
<td>1.25 in. (3.17 cm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>6.0 oz. (170.0 g)</td>
</tr>
<tr>
<td><strong>Connector type</strong></td>
<td>N-Male</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>To mast mount the antenna you must purchase the U-bolt bracket from a third party</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-40–185°F (-40–85°C)</td>
</tr>
<tr>
<td><strong>Water/Foreign Body Ingress</strong></td>
<td>IP66, IP67</td>
</tr>
<tr>
<td><strong>Wind rating</strong></td>
<td>100 mph (161 kph) operational 165 mph (265 kph) survival</td>
</tr>
</tbody>
</table>

![Antenna Image](231296)
System Requirements

This antenna is designed for use with the Cisco Aironet Outdoor Access Points, specifically Cisco Aironet 1550 Series Outdoor Access Points.

Safety Precautions

**WARNING:** Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits. When installing the antenna, take extreme care not to come into contact with such circuits, as they may cause serious injury or death. For proper installation and grounding of the antenna, please refer to national and local codes (e.g. U.S.: NFPA 70, National Electrical Code, Article 810, Canada: Canadian Electrical Code, Section 54). Statement 280
For your safety, read and follow these safety precautions.

1. Before you install an antenna, contact your Cisco account representative to explain which mounting method to use for the size and type of antenna that you are about to install.

2. Find someone to help you—installing an antenna is often a two-person job.

3. Select your installation site with safety, as well as performance, in mind. Remember that electric power lines and phone lines look alike. For your safety, assume that any overhead line can kill you.

4. Contact your electric power company. Tell them your plans and ask them to come look at your proposed installation.

5. Plan your installation carefully and completely before you begin. Each person involved in an installation should be assigned to a specific task and should know what to do and when to do it. One person should be in charge of the operation to issue instructions and watch for signs of trouble.

6. When installing your antenna, follow these guidelines:
   a. Do not use a metal ladder.
   b. Do not work on a wet or windy day.
   c. Dress properly: wear shoes with rubber soles and heels, rubber gloves, and a long-sleeved shirt or jacket.

7. If the assembly starts to drop, move away from it and let it fall. Because the antenna, mast, cable, and metal guy wires are all excellent conductors of electrical current, even the slightest touch of any of these parts to a power line completes an electrical path through the antenna and the installer.

8. If any part of the antenna system should come in contact with a power line, do not touch it or try to remove it yourself. Call your local power company to have it removed safely.

9. If an accident should occur with the power lines, call for qualified emergency help immediately.

Installation Notes

The antenna is designed to connect to a dedicated antenna port on the access point. No special tools are required to install the antenna directly to the access point. The antenna can also be mounted on a mast. To mast mount the antenna, you must purchase a suitable U-bolt bracket from a third party.

The antenna is resistant to the full range of outdoor environments. After the antenna is attached to the access point, seal the connections to prevent moisture and other weathering elements from affecting performance. Cisco recommends using a coax seal (such as CoaxSeal) for outdoor connections. Silicone sealant or electrical tape are not recommended for sealing outdoor connections.

Choosing a Mounting Location

The antenna is designed to create an omni-directional broadcast pattern. To achieve this pattern, mount the access point clear of obstructions to the sides of the radiating element. If the mounting location is on the side of a building or tower, the antenna pattern is degraded by the building or tower side. Generally, the higher an antenna is above the ground, the better it performs. Install your antenna about 5 to 10 foot (1.5 to 3 m) above the roof line and away from all power lines and obstructions.

Tools and Equipment Required

No tools are required to mount the antenna directly to the access point. However, you may need a ¼-in. (19-mm) open end or combination wrench (or adjustable wrench) to remove the antenna port covers. To mast mount the antenna, you must purchase the U-bolt bracket from a third party.

For information about tools required to mount the access point, see the appropriate access point documentation.
Mounting the Antenna

To connect the antenna to the access point:

1. If necessary, remove the antenna port cover.
2. Align the antenna’s N connector with the appropriate antenna port.
3. Gently push the antenna into the port.
4. Tighten the antenna hand tight.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see What’s New in Cisco Product Documentation.

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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