

HotPoint<sup>™</sup>

# Hardware Installation Guide

## HotPoint 5100 Access Point



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# About this document

This section lists the audience, purpose, and conventions used in this document.

## Audience

This document is intended for qualified installers and administrators of Firetide products.

## Purpose

This document has the information necessary to configure, install, and do basic troubleshooting for HotPoint 5100 access points.

## Conventions

Certain information has special meaning for the reader. This information appears with an icon that indicates a particular condition, such as a warning or caution, or a label, such as “Note” or “Best Practice”.



**Electrical hazards** are those environments where the danger of electrocution is probable. This image appears before each electrical hazard statement.



**Warnings** contain safety information that you must obey. If you do not obey the instruction in a warning, the result might include serious injury or death. This image appears before each warning statement.



**Cautions** contain information that you should obey to avoid minor injury, inconvenience, and damage to equipment. This image appears before each caution statement.

**Notes** contain optional advice and information particular to a special case or application.

**Best practices** contain specific recommendations based on industry-standard expectations.

## Document feedback

If you find an error or content missing from this document, we want to hear about it. You can send your feedback about any of our documents to [techpubs@firetide.com](mailto:techpubs@firetide.com).

## Contacting customer support

If you need support, depending on the problem, you might be asked for this information:

- Description of the problem
- Computer with HotView Pro and an installed management license
- Channel and frequency plans
- Recent spectrum analysis
- Device topology in Google Earth (KMZ file)
- Network map or topology plan with the names and device information

You must also have administrator access to the mesh to be able to receive technical support.

The next table lists the contact information for customer support.

<b>Worldwide customer support</b>	<b>Days/Hours</b>	<b>Contact</b>
Americas	Monday to Friday 7:00 am to 5:30 pm PST (Pacific standard time)	<a href="http://www.firetide.com/requestsupport">http://www.firetide.com/requestsupport</a> 1 (877) FIRETIDE, extension 2 +1 (408) 399-7771, extension 2 +1 (408) 355-7271
Africa Asia Australia Europe	Monday to Friday 8:00 am to 5:30 pm IST (India standard time)	<a href="http://www.firetide.com/requestsupport">http://www.firetide.com/requestsupport</a> +91 8040215111 Fax +1(408) 317-2257

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# HotPoint access point overview

The Firetide HotPoint 5100 wireless MIMO access point is a standalone access solution for indoor use. This section explains the hardware features of the access point and your management options.

## Hardware features

The HotPoint 5100 access point is a standalone access point. Standalone devices do not require any other network device or equipment to configure or manage them. Each access point, with its antennas, is a complete system for wireless access service delivery.

The next figure shows the HotPoint 5100 access point.



In locations where access to Ethernet or power is limited, HotPoint 5100 access point can receive power from an 802.3af-compliant device. A HotPort 7020 can supply power over an Ethernet connection to a HotPoint 5100 access point.

The HotPoint 5100 access point has a UL2043 plenum-rated enclosure and has these hardware features:

- An RJ-45 connector for attaching to a Firetide HotPort wireless mesh node or a conventional Ethernet port
- Two radios (Radio 1 operates in the 2.4 GHz band and Radio 2 operates in the 5 GHz band)

- LEDs
  - 2.4 GHz
  - 5 GHz
  - Power

## Management options

You can choose to manage HotPoint access points in one of these ways:

- HotView Pro network management software 10.15.0.0 and later
- Web user interface (webUI)

### HotView Pro

HotView Pro is a robust network management software (NMS). It lets you manage many Firetide devices at the same time. To use HotView Pro you need to purchase one management license for each access point.

HotView Pro lets you set up wireless distribution stations and schedule software upgrades for groups of devices.

### Web interface

The web interface is a management interface that comes with each access point. With this software you can configure each access point individually. This method is good for small networks with few devices.

## Power Consumption table

Power input from DC supply: 13 W (Typical), 16 W (Max)



# HotPoint 5100 access point preparation

Before you install an access point, you need to make sure that you have all of the parts, attach the cables and antennas for testing, and make an initial connection from a laptop that is running the web interface or HotView Pro software.

## Verifying the box contents

The box contains these items:

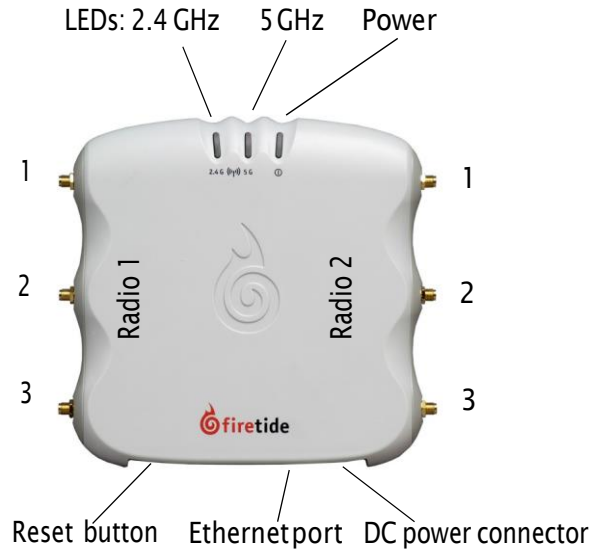
- One HotPoint 5100 access point
- One power adapter
- One power cord (USA type)
- Six dual-band 2.4 GHz and 5 GHz, 3 dBi omni-directional staging antennas
- One Ethernet cable
- Quick Start Guide sheet



If any of these items is missing from the box, call your reseller for help.

## Parts of a HotPoint access point

The next picture shows the radios, LEDs and connectors on the access point.



## Attaching cables and accessories

Before you install the device in a permanent location, attach the staging antennas and cables, and verify that the LEDs come on:

1. Attach the staging antennas to the antenna connectors.
2. Attach the DC power adapter to the power cable.
3. Attach the power assembly to the access point, and then attach the power cord to a power source.
4. Make sure that the 2.4 GHz LED blinks and the power LED is a steady green.



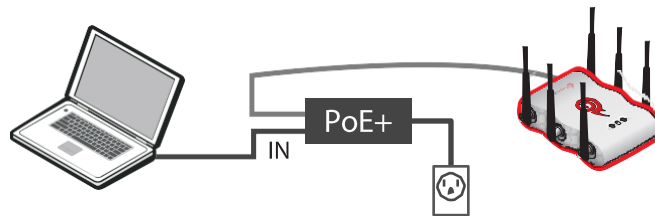
## Using Power over Ethernet

A Power over Ethernet (PoE) injector is available as an optional accessory.

The PoE injector lets a HotPort 7020 mesh node supply power to a HotPoint 5100 access point. It also lets you use a computer to supply power to an access point so you can configure it in the field.

To connect the PoE injector to a computer or mesh node:

- Attach one Ethernet cable from the access point to the OUT port on the PoE injector.
- Attach another Ethernet cable from the computer to the IN port on the PoE injector.
- (Optional) Attach the PoE injector to a power source.



## Connecting a computer to a new access point

You need to change the TCP/IP4 settings on your computer so that you can communicate with the access point. The first time you connect to the access point, you need to change the TCP/IP4 setting on your computer.

**Note:** If you are using PoE, connect your computer directly to the IN port on the POE injector.

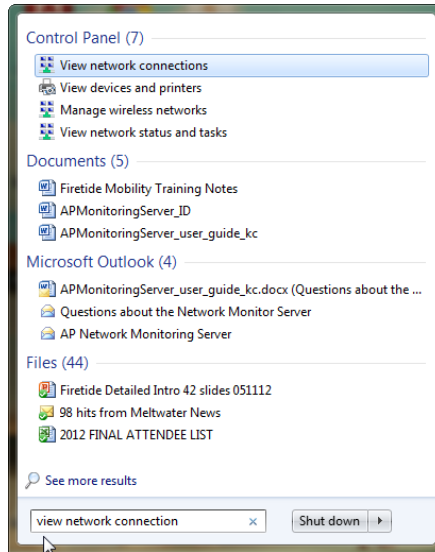
192.168.224.160 is the default IP address of the access point.

1. Attach the Ethernet cable from the Ethernet port on the access point to an Ethernet port on the administrator computer.
2. Supply power to the access point. If you use a PoE injector (optional accessory), the access point receives power from your computer.  
The access point boots in 1.5 (when connected to a direct power source) to 2 minutes (when receiving power from the PoE injector). The power LED glows steady.

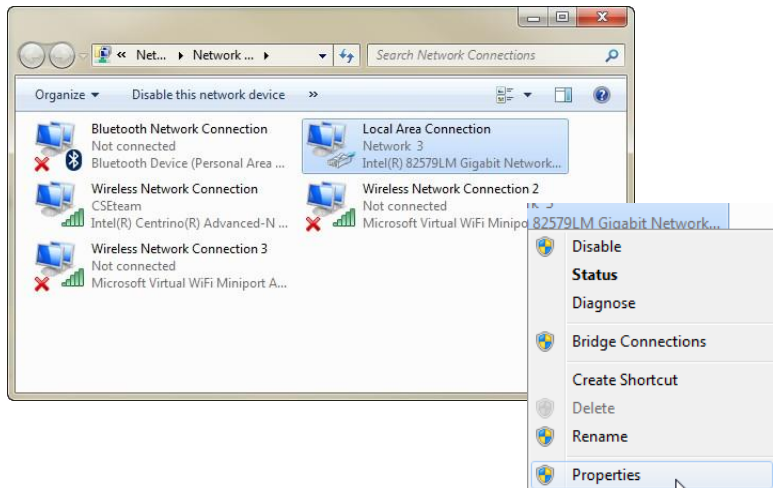
From the computer connected to the access point, do the steps for your operating system.

**Windows 7 users:**

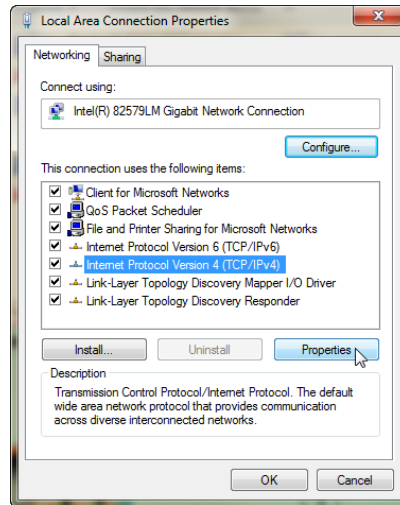
- a. Go to Start, and then in the search box, enter “View Network Connections”.



- b. Right-click **Local Area Connection > Properties**



- c. From the Networking tab, select TCP/IP4.

d. Click **Properties**.**WindowsXP users:**

- a. Go to **Start > Connect To > Show all connections**
- b. Right-click **Local Area Connection** and select **Properties**.
- c. Select **Internet Protocol**, and then click **Properties**.

**Windows 8 users:**

- a. Go to **Network and Internet > Network Connections**
- b. Right-click **Wired Ethernet Connection > Properties**
- c. Select **Internet Protocol Version 4**, and then click **Properties**.

**Windows Vista:**

- a. Go to **Start > Control Panel > Network and Sharing Center (Classic View) > Manage network connections**
  - b. Right-click **Local Area Connections** and select **Properties**.
  - c. Select **Internet Protocol Version 4 (TCP/IPv4)** and select **Properties**.
3. Enter an IP address/subnet mask for your computer of the format 192.168.224.xxx (where xxx is an address on the same subnet as the access point), and then click **Apply**.



**Caution!** Do not use 192.168.224.160. It is the default address of the access point.

4. From a command prompt window, ping the access point to verify connectivity.  
ping 192.168.224.160

The access point is ready to be configured. You can load the access point into HotView Pro to configure it or you can use the embedded web interface. This guide contains procedures with the web interface. For HotView Pro software procedures, refer to the *HotView Pro Reference Guide*.

## LEDs

HotPoint 5100 access points have three LEDs:

- Power
- 2.4GHz radio
- 5GHz radio

### LED boot operation

During boot up, LEDs operate in this order:

1. All LEDs come on for 5 seconds.
2. The 5GHz radio LED goes off.
3. The 5GHz radio LED comes on again after 5 seconds. This action shows that the LED driver started.
4. After 15 seconds, the 2.4 GHz and 5GHz radio LEDs go off. This shows that the system is ready. The power LED stays on.

### LED operation during client association and data traffic

During client association and data traffic, LEDs operate this way:

- When clients associate, the appropriate radio LED comes on.
- After the LED is on, the appropriate LED blinks to indicate the data rate.
- When no clients are available, the radio LED stays off.

### LED operation during a firmware upgrade

During a firmware upgrade, the 2.4GHz radio LED blinks quickly.

## Radios

By default, Radio 1 operates in the 2.4 GHz band, and Radio 2 operates in the 5 GHz band.

# Indoor access point installation

You need to install the access point in a permanent location that meets the product's operational requirements and install the antennas correctly.

## Appropriate locations for an indoor access point

You can install an indoor access point on a desk top or counter.

You can also attach the device to a wall or ceiling. When you intend to install the device to a wall or ceiling, use the correct mount hardware.

## Antenna installation

Follow the manufacturer's installation diagram or procedures that come with the antenna that you want to use with the access point.

## Recommendations for outdoor use

If you want to use this device in an outdoor environment, you need to use special pigtails.

## Operational requirements

The HotPoint 5100 access point operates within these environmental constraints:

- Operating temperature: 0 °C to +50 °C (32 °F to +122 °F)
- Storage temperature: -20 °C to +70 °C (-4 °F to +158 °F)
- Humidity (non-condensing): 10% to 90%
- Storage humidity (non-condensing): 10% to 90%
- Maximum altitude: 4572 m (5,000 feet)

## Installing the mesh node in an enclosure

If you install an access point in an enclosure not manufactured by Firetide, the installation is not supported.

Refer to the product operational requirements to make sure that the enclosure you select is compatible with the operating environment required by the HotPoint 5100 access point.





# Troubleshooting

This section contains troubleshooting information.

## Resetting an indoor node to factory default settings

Do a reset when you:

- Remove a device from the field
- Forget the access credential (password)
- Cannot communicate with a device



**Caution!** When an access point is reset, all configuration information is erased. **Exception:** The system does not erase the USA (840 and 842) country codes.

To return an access point to factory defaults with HotView Pro software:

1. Right-click the access point > **Factory reset this HotPoint**
2. When the confirmation message appears, click **Yes**.

To do a hardware reset:

The back panel of the access point has a recessed reset button. This is useful when returning a unit from field service or in recovering a unit you cannot communicate with.

With a paper clip or stiff wire, press and hold the reset button for 20 seconds. The LEDs flash to indicate that the reset is in progress.

## Improving client experience and device performance

If the access point disconnects clients repeatedly, change the RTS/CTS value to 128.

To improve device performance, assign specific channels to the access point. Do not use the automatic channel selection feature (auto).



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