



HotPort[®] 5020-E edge node

Safety Information

Firetide[®] equipment must be installed by qualified personnel. Follow safe work practices and use approved non-conducting ladders, shoes, and other safety equipment. Make sure all equipment is in good condition. For more information about safety refer to the Firetide website.



Warning! Failure to comply with instructions marked with this symbol might expose you to non-insulated dangerous voltage that might be of sufficient magnitude to cause the risk of lethal electric shock to persons.



Warning! Failure to comply with instructions marked with this symbol might result in severe personal injury including electrical shock or permanent damage to equipment.



Caution! Failure to comply with instructions marked with this symbol might result in data loss or minor injuries.

Documentation

This information is subject to change without notice.
For the current version, visit: <http://www.firetide.com/support/>

Customer support

Contact your Firetide reseller or visit: <http://www.firetide.com/support/>

Items to purchase

You need to purchase and install 50 Ohm terminators (Firetide P/N 7020-1002) on unused antenna connectors.

If you do not already have one, you need to purchase a HotView Pro[™] management license and install it on the HotView Pro server.

Required tools

- Administrator computer
- #2 Phillips screwdriver
- Small adjustable wrench
- Wire cutters to cut tie wraps on cables
- Weatherproofing kit with electrical tape and butyl mastic or silicon tape
- Plastic tie wraps (optional)
- Ladder

1 Unpack the edge node and accessories.



Box contents

- One HotPort edge node
- 5 dBi omni-directional antennas
 - One antenna for HotPort 5020-E
- RP SMA to type N plug adapters
 - One adapter for HotPort 5020-E
- PoE+ injector
- One AC power cable (USA type)
- One Ethernet cable (shielded Cat5e)
- One DC power connector (field installable)
- One weatherized Ethernet RJ-45 connector (field installable)
- Mount kit for pole or wall installation
- Quick start sheet
- Warranty card

2 Connect to a HotPort 5020-E node.

HotPort 5020 edge node connections:

- Attach one plug adapter and then staging antenna to each connector:
 - HotPort 5020-E: Radio 1/Antenna 1
- Attach an Ethernet cable from the computer to the edge node
- Attach the edge node to a power source



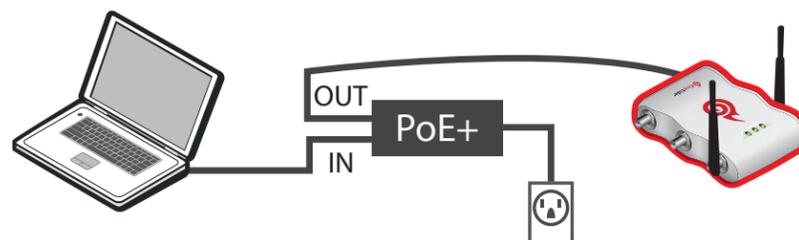
Caution! Do not use port 2 or port 3 of a HotPort 7020 mesh node to power a HotPort 5020 edge node. An edge node needs PoE+ or 802.3af, and the ports of a HotPort 7020 mesh node are PoE 802.3af-compliant only.



Caution! You must use the power cable that comes with the node. If you use a different power cable, you void the product warranty.



Caution! You cannot use a HotPort 7020 power cable (12V) with a HotPort 5020 edge node, which requires 15V.



3 Log into the edge node with a computer.

You need to connect your computer directly to the HotPort 5020 edge node. To do this, you have to change the TCP/IP4 address on the computer to an IP address on the 192.168.224.xxx subnet. 192.168.224.150 is the default IP address of Firetide nodes.

1. From the computer connected to the node, do one of the following:
 - Windows 7 users: go to **Start**, and then enter **View Network Connections** in the search box. Right-click on **Local Area Connection > Properties**. From the Networking tab, select **TCP/IP4**, and then click **Properties**.
 - Windows XP users: go to **Start > Connect To > Show all connections > right-click Local Area Connection** and select **Properties**. Select **Internet Protocol**, and then click **Properties**.
 - Windows 8 users: go to **Network and Internet > Network Connections > right-click Wired Ethernet Connection > Properties > Select Internet Protocol Version 4**, and then click **Properties**.
2. Enter an IP address for your computer of the format 192.168.224.xxx (where xxx is an address on the same subnet as the node), and then click **Apply**. Do not use 192.168.224.150.
3. From a command prompt window, start a continuous ping to verify connectivity.


```
ping 192.168.224.150 -t
```

Logging into HotView Pro

1. Single-click to start the Quick Launch feature of HotView Pro, which opens the server and client software at the same time.
2. When prompted, enter:
 - User name: hv_admin
 - Password: firetide
3. Click **Log In**.



Monitoring the node bring up

1. Give the node power.
2. Go to **Mesh > Add Mesh > login** with the default information:
 - Mesh IP address: 192.168.224.150
 - User name: admin
 - Password: firetide
3. Click **Log In**.
You should see the node appear in the interface within one minute.

4 Configure the edge node.

After you log into the node:

Set the country code and manually configure the wireless settings
—OR—

Apply a saved configuration file compatible with your network settings

Best practice: Copy a configuration file from a HotPort 7000 series mesh node already in your network. You can use a Network Gateway Interface (NGI) or Gateway Server (GWS). The NGI and GWS settings do not copy to edge nodes.

Applying a saved configuration

1. Right-click the HotPort 5020 edge node.
2. Select **Apply Mesh Configuration**.
3. Make manual overrides, such as wireless mode and channel, if necessary.

- Configure the radio or radios.
- Set the extended range feature if the distance between the nodes is more than 0.8 km (0.5 mile). Set the range for the longest individual link in the mesh.
Example: 9 links are about 0.25 miles apart and 1 link is 3 miles apart. The range is 1 to 3 miles.
- Set the multi-hop optimization feature if needed.

Setting the country code

The system periodically prompts you until the country code is set. When the country code is set, the node operates at full radio strength, and the channels are appropriate for the country of operation.



Caution! Make sure you configure the node for the correct country of operation.

1. When the system prompts you to set the country code, select **Set Country Code Now**.
2. Select the country of operation from the drop-down list.
3. Click **Apply**.

Configuring the radios

By default, each HotPort 5020-E node has two radios:

- Radio 1 is 11nag (primary radio).
1. Go to **Configuration > Wireless**
 2. Change the radio settings for your application.
 3. Click **Apply**.



Configuring a preferred neighbor or back up neighbor node

By default HotPort 5020 edge nodes connect to the HotPort 7010/7020 neighbor node with the strongest RSSI. If you want an edge node to connect to a specific neighbor node, you have to manually configure the setting.

To configure a preferred neighbor or a backup neighbor node for a HotPort 5020-ER:

1. Start and log into HotView Pro.
2. Go to **Mesh > Add Mesh >** login with the default user name and password.
3. Right-click the HotPort 5020 edge node > **Edge Mesh Configuration**
4. Do one of the following procedures:
 - By available neighbor links list:
 - a. Select a mesh node from the available neighbor links list.
 - b. Click **Add**.
 - By serial number:
 - a. Enter the serial number of the preferred HotPort 7010/7020 neighbor.
 - b. Select the remote interface: Radio 1 or Radio 2.
 - c. Click **Add**.
5. Click **Save**.

5 Do indoor tests with the staging antennas.

Send data from the administrator computer to another node. After you finish the tests, remove the staging antennas and Ethernet cable and disconnect from power.

6 Prepare the node for installation.



Warning! Use appropriately rated antennas for outdoor applications.



Warning! Failure to comply with these installation instructions might result in severe personal injury including electrical shock or permanent damage to equipment.



Warning! Make sure that all safety equipment is in good condition. Do not use broken or damaged tools or equipment. Always use safe work practices and obey all local and national guidance for earth ground requirements and electricity.

Note: Collect all tools before you install the node.

1. Attach antennas rated for outdoor use.
2. Attach 50 Ohm terminators to unused antenna connectors.
3. To a pole that you can install at a permanent outdoor site, attach these items:
 - C-bracket
 - Antennas
4. Attach the node to the bracket.
5. (Optional) Attach a PoE+ injector.

Note: The PoE+ injector is not weatherproof. Do not expose it to rain or direct sunlight.

7 Check the outdoor environment for safety.

Do not install this product on a windy or rainy day.

8 Install the edge node in a permanent location.

Note: Refer to the *FireTide Best Practices Guide* for detailed instructions.

1. Use the correct safety equipment to install the node in its permanent outdoor location:
 - Install a lightning suppressor.
 - Use shielded Cat5e cable and connect to earth ground at both ends.
 - Install all grounding equipment.
 - Make all cable connections weatherproof.
2. (Optional) Attach the Power over Ethernet assembly to power the device.
 - Caution!** Do not use port 2 or port 3 of a HotPort 7020 mesh node to power a HotPort 5020 node. A HotPort 5020 node needs PoE+ or 802.3at, and the ports of a HotPort 7020 mesh node are PoE 802.3af-compliant only.
3. (Optional) Use plastic tie wraps to keep the cables tidy.
4. Give the node power.
5. Ping the IP address of the node to make sure it works.

Resetting an edge node to factory default settings

Do a reset when you remove a device from the field or when communication with a device is lost. The reset button is behind the pressure relief valve to the left of the port connector.



Caution! When a HotPort 5020 edge node is reset, configuration information is erased. **Exception:** The system does not erase the USA (840) country code.

For this procedure you need:

- Paper clip, stiff wire, or thin piece of plastic or wood
- Computer with HotView Pro
- Ethernet cable
- #2 Phillips screwdriver

To reset a HotPort 5020 edge node:

1. Supply power to the node.
Wait until the power LED comes on. After one minute, the node is ready to be reset.
2. Remove the pressure relief valve, and put it in a safe place.
3. Press and hold for 20 seconds the reset button with the paper clip or other tool.
The Radio 1 LED blinks to indicate that the software is rebooting, and you can stop pressing the reset button.
4. Wait one minute, and then log in with HotView Pro.
5. Configure the node or apply a previously saved configuration file.
6. Replace the pressure relief valve that covers the reset button.

Upgrading the firmware

By default, the system uses the configuration in cache for multiple upgrades.

Best practice: Upgrade the image two times because you want the backup image and primary images to be the same.

By default, the scheduler activates the firmware immediately.

If you select the Activate Later check box, the scheduler copies the firmware image to the node but does not activate the firmware.

1. Go to **Network > Upgrade Firmware**
The upgrade scheduler appears.
2. Click **New Scheduler**.
3. Select **Upgrade**.
4. Select the time: Later. Use the calendar to a future date and time.
5. Click the tab to select a device type (HotPort Nodes for a mesh network), and then select the mesh by ID or name.
- Note:** The system selects all nodes within a mesh for simultaneous upgrade because all of the nodes have to run the same firmware. If a node should not receive the upgrade image, you can remove the mark from the upgrade check box.
6. Select **Activate Later**.
7. Select the upgrade image.
8. Click **OK**.

The “upgrade complete” message means that the image file is on the node and is valid. Activate a few nodes at a time until all of the nodes are running the same firmware version. Each node automatically reboots.

End User License Agreement

Visit the FireTide website to download a copy of the End User License Agreement (EULA).



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