



Wi-Fi Module Configuration Guide

For BaseStation 3200
Irrigation Controllers

April 21, 2015

Customer Service 1-866-294-5847

Baseline Inc.

www.baselinesystems.com

Phone 208-323-1634

FAX 208-323-1834

Toll Free 866-294-5847

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Introduction

In order to remotely connect with your BaseStation 3200 irrigation controller and take advantage of BaseManager, the controller must be able to communicate over the Internet. Using a Wi-Fi module is one option for wireless Internet communication. The Wi-Fi module enables your controller to connect to an existing Wi-Fi network at your site.

When you choose a Wi-Fi module communication package from Baseline, we provide the Wi-Fi module and the firmware that activates the connection from your controller.

To establish communication through your Wi-Fi module, you need to perform the following tasks:

Step 1 – Get network info from your network administrator.

Step 2 – Configure the computer to connect to the Wi-Fi module.

Step 3 – Configure the Wi-Fi module.

Step 4 – Return the computer to the previous settings.

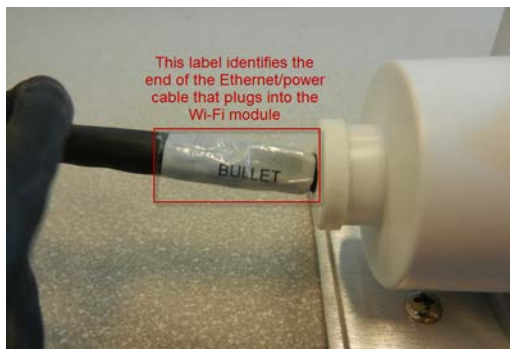
Step 5 – Verify the Wi-Fi connection in the controller.

Guidelines for Successful Wi-Fi Module Operation

Do not bend or kink the antenna cable. When the Wi-Fi module is factory installed, the antenna cable is contained behind the control board cover. If you remove this cover, make sure to return the antenna cable to its former configuration before you replace the cover.

Make sure the antenna cable remains securely attached to the connector on the Wi-Fi module. If the module is powered up with a loose or disconnected antenna, damage may occur to the circuitry. **This damage is not covered by warranty.**

Note the cable coming from the right end of the Wi-Fi module. A label identifies the RJ45 connector that is plugged into the Wi-Fi module. If you ever need to disconnect or replace this cable, make sure to plug the labeled end into the Wi-Fi module. This cable supplies power over Ethernet and plugging it in incorrectly will damage the irrigation controller.



Step 1 – Get Network Info

When you use a Baseline Wi-Fi module to connect BaseStation 3200 controller to an existing wireless network, you need to configure the Wi-Fi module with information specific to that network.

Ask the network administrator at the site for the following information:

Network Name (SSID): _____

Wi-Fi Key or Passcode: _____

Carefully record the Wi-Fi Key or Passcode noting the case of all letters and clearly distinguishing ones and zeroes from similar alpha characters.

Step 2 – Configure the Computer to Connect to the Wi-Fi Module

You need a Microsoft Windows-based computer or a Macintosh computer to configure the Wi-Fi module. You configure the computer to use a static IP address, and then the computer will be able to connect to the Wi-Fi module.

Microsoft Windows

1. To navigate to the Local Area Connection Properties dialog box, use the instructions for the version of Windows operating system that is running on your computer. After you have navigated to the dialog box, continue with Step 2:

XP: Click the Start Menu/Windows Logo > Control Panel Select > Network Connections (if unavailable, select show Classic view). Select Network Connections, right-click Local Area Connection, and then click Properties.

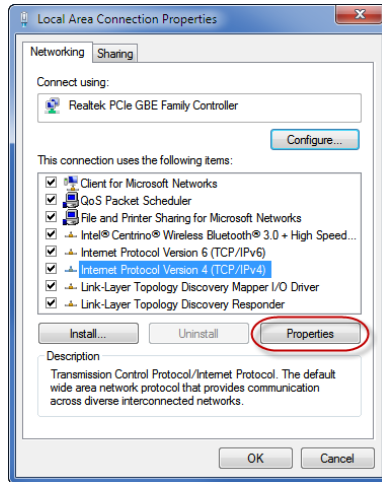
Vista: Click the Start Menu/Windows Logo > Control Panel > Network and Sharing Center > Manage Network Connections. Right-click Local Area Connection, and then click Properties.

Windows 7: Click the Start Menu/Windows Logo > Control Panel (View by needs to be set to Categories) > View Network Status and Tasks > Change Adapter Settings. Right-click Local Area Connection, and then click Properties.

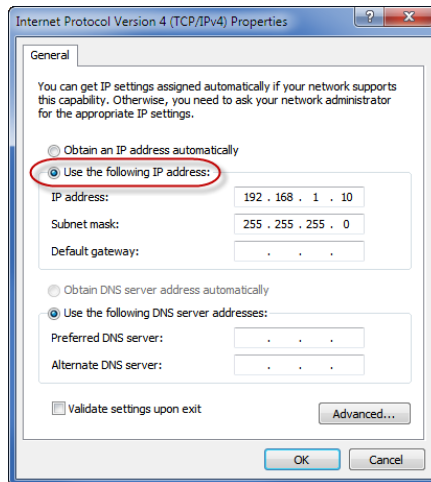
Windows 8: Press the Windows key on your keyboard. The Windows 8 Start Screen opens. In the Search field, type control panel, and then press Enter. Click on View Network Status and Tasks > Change Adapter Settings. Right-click Local Area Connection, and then click Properties.

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- In the items list, select **Internet Protocol (TCP/IP) or Internet Protocol (IPv4)**, and then click **Properties**.



- Select **Use the following IP address**.



- In the **IP Address** field, type **192.168.1.10**
- In the **Subnet mask** field, type **255.255.255.0**
- Click **OK**, and then click **Close** on the Local Area Connection properties dialog box.

Note: After you have finished configuring the Wi-Fi module, you will need to repeat these steps to return the setting to Obtain an IP address automatically.

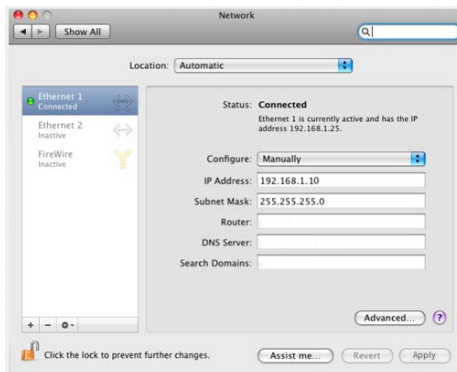
Macintosh OS X 10.7



1. Click the AirPort Status icon in the upper-right corner of screen.
2. In the Network box, click **Turn Airport Off**.
3. Click the Apple icon in the upper-left corner of your screen, and then click the **System Preferences** option.



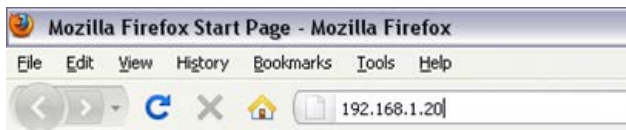
4. In the **Internet & Wireless** section, click the **Network** icon.
5. Select the active network connection that has a green dot in front of it.
6. In the **Configure** field, click the drop-down arrow, and then select **Manually** from the list of options.



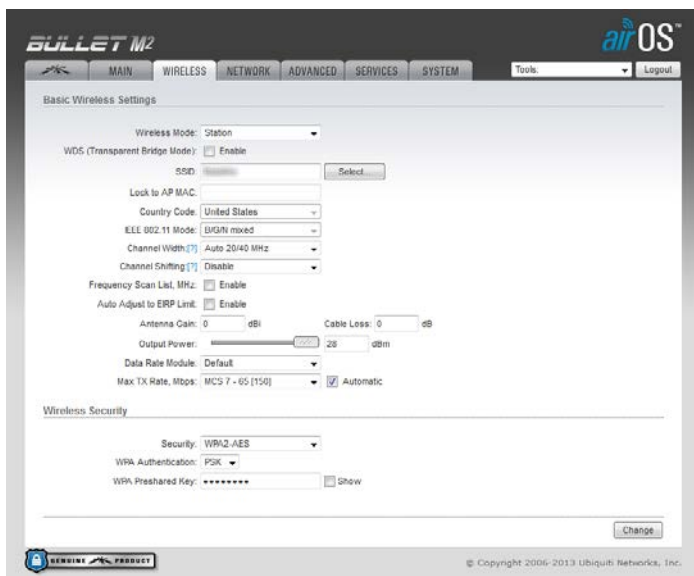
7. In the **IP Address** field, type 192.168.1.10
8. In the **Subnet Mask** field, type 255.255.255.0
9. Click **Apply**.

Step 3 – Configure the Wi-Fi Module

1. Make sure the BaseStation 3200 controller is powered on in order to provide power to the Wi-Fi module.
2. Disconnect the Ethernet cable from the Ethernet port on the BaseStation 3200 controller.
3. Connect the cable to your computer's Ethernet port.
4. Open a web browser (Internet Explorer, Mozilla Firefox, Safari, etc.).
5. Type **192.168.1.20** into the address bar, and then press **Enter**.



6. On the airOS Login page, type **ubnt** in both the **Username** and **Password** fields.
7. In the **Country** field, click the drop-down arrow and select the country where you are located.
8. Change the default language in the **Language** field if necessary.
9. Review the **Terms of Use**, and then click the checkbox to agree to the terms.
10. Click the **Login** button. The main configuration page of the Bullet M² airOS application displays.
11. Click the **Wireless** tab.



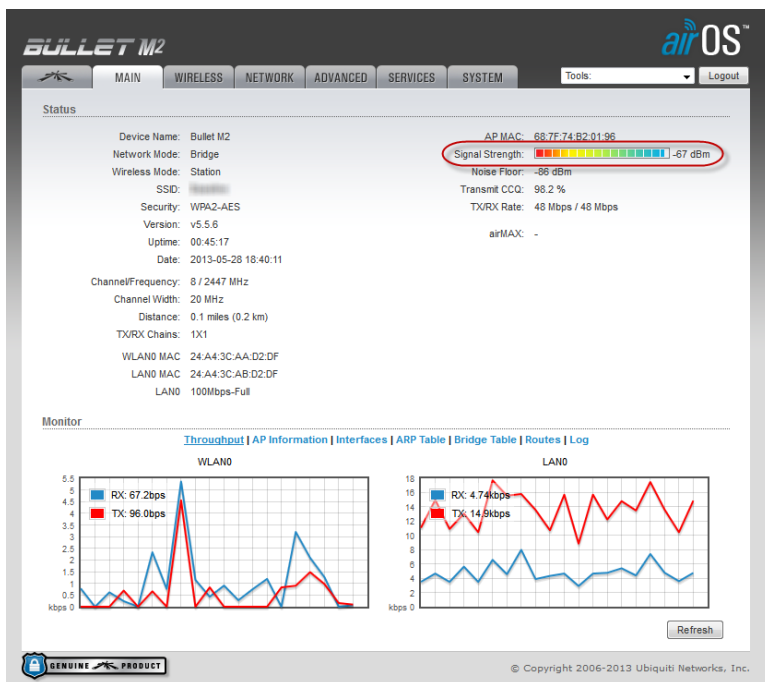
12. Click the drop-down arrow in the **Wireless Mode** field, and then select **Station** from the list of options.
13. In the **SSID** field, click the **Select** button. A window displays the list of available networks.
14. Click the radio button in the row for the network that you want to connect to. Scroll down to the bottom of the window, and then click **Select**. The Wi-Fi module should detect the other network settings and automatically configure them in the airOS application.
15. Depending on the type of security enabled on your network, type your key or passcode in the appropriate field under the Wireless Security section.

Note: Your wireless key or passcode is case sensitive. Pay close to the case when you enter information in this field.

16. Click the **Change** button in the lower-right corner, and then click the **Apply** button in the upper-right corner.
17. Baseline recommends that you change the Administrator password for the airOS application.
 - a. Click the **System** tab.
 - b. Click the magnifying glass icon at the end of the **Administrator Username** field. The password fields display.
 - c. In the **Current Password** field, type **ubnt**.
 - d. In the **New Password** field, type a secure password.
 - e. In the **Verify New Password** field, retype the new password exactly as you typed it in the previous field.
 - f. Click the **Change** button in the lower-right corner, and then click the **Apply** button in the upper-right corner.
 - g. Write down your new password and keep it somewhere safe so you can log into the airOS application when necessary.

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- To verify that the Wi-Fi module is connected to the network, click the Main tab. Review the Signal Strength meter. When the Wi-Fi module is receiving a strong signal, the meter shows light-blue colored indicators at the right end of the bar.



- When you are satisfied that the Wi-Fi module settings are accurate, close the browser tab or window where the airOS application is displayed.
- Disconnect the Ethernet cable from your computer and reconnect it to BaseStation 3200 controller's Ethernet port.

Note: If you need to reset the Wi-Fi module to its factory settings, refer to the instructions at the end of this document.

Step 4 – Return the computer to the previous settings

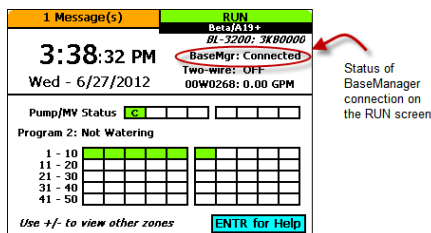
Go back through the steps in the Step 2 section to access the IP properties settings. Change the settings as indicated below:

Microsoft Windows: Click **Obtain an IP address automatically**.

Macintosh: Select **Using DHCP** from the from the **Configure** pop-up menu.

Step 5 – Verify the Connection in the Controller

1. On the BaseStation 3200 controller, turn the dial to the **Network** position.
2. Press the **Next** button to highlight the **Ethernet Setup** option, and then press **Enter**.
3. Ensure that **DHCP** displays in the **IP Address Mode** field. If a different setting displays in the field, press the + or – button to change the value to DHCP.
4. Press the **Back** button to return to the Network menu.
5. Press the **Previous** or **Next** button to highlight the **BaseManager Server Setup** option, and then press **Enter**. The BaseManager Address screen displays.
6. Ensure that **Ethernet** displays in the **Connection** field. If a different setting displays in the field, press the **Next** button to highlight the **Connection** field, and then press the + or – button to change the value to Ethernet.
7. Turn the controller’s dial to the **RUN** position. The status in the **BaseMgr** field should be “Connected.”



If you experience any problems during the installation of your Wi-Fi module, call Baseline Support at 866.294.5847.

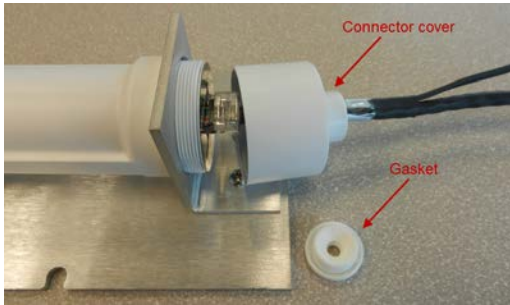
Resetting the Wi-Fi Module to Factory Settings

Perform the reset if your network settings change or if you need to connect to a different network.

1. Power down the irrigation controller.
2. Remove the control board cover and disconnect the antenna cable from the antenna.
3. Disconnect the Wi-Fi module power cable.
4. Disconnect the Ethernet cable from the back of the faceplate.
5. Remove the screws on the Wi-Fi module mounting plate.

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6. Remove the Wi-Fi module from the cabinet and unscrew the cover from the end where the Ethernet cable is plugged in. The gasket will pop out. Be sure to set it aside so you can reuse it.



7. Reconnect the antenna cable, the power cable, and the Ethernet cable.
8. Power on the controller.
9. Use a pointed object to press and hold the Reset button until all the lights flash, and then release the button.



10. Reattach the connector cover and replace the gasket.
11. Reattach the Wi-Fi module mounting plate inside the cabinet.
12. Replace the control board cover.
13. Follow the instructions in the previous sections of this document to reconfigure the Wi-Fi module.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15.247 of the FCC Rules (and Industry Canada RSS-210). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 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.