

RadioLabs

Wireless and Beyond

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**Bullet High Speed Wireless Platform
Client Mode**



**PLEASE READ THESE INSTRUCTIONS BEFORE CONFIGURING OR DEPLOYING YOUR
BULLET HIGH SPEED WIRELESS PLATFORM (S)**

Thank you for purchasing a RadioLabs Bullet High Speed Wireless Platform. The Bullet Client Mode can act as a non-routing LAN extension or as a NAT-enabled gateway to link two locations via the IEEE 802.11N wireless protocol. Using this device, you will be able to lock on to an existing WiFi hotspot via a computer or to rebroadcast via an Access Point. Connection with wireless speeds up to/over 100 megabits/second (condition and distance dependent).

Kit includes:

1 – Bullet High Speed Wireless Platform

1 - Power Over Ethernet Injector & Power Cable

1 – 2.4Ghz Omni 8dBi or 12dBi Wireless Antenna

1 – 25ft or 50ft Category 5 Ethernet Cables

1 - 2ft LMR 400 Coax Cable

1 - Coax Seal Tape (FREE)

1 - Omni Wireless Antenna Mounting Kit

Connecting the Bullet High Speed Wireless Platform to your computer for configuration.

Connect a Category 5 Ethernet cable between your PC/MAC's ethernet port and the **LAN** port of the POE Injector.

Connect a second Category 5 Ethernet cable between the **POE** port of the POE injector and the Ethernet port of the Bullet.

Connect the POE Injector to AC power with the included power cable.

You will **not** need to connect an antenna to the Bullet at this time, you will be prompted to do so further along these instructions.

Before configuring your Bullet High Speed Wireless Platform(s), you will need to disable your internal wireless card or Airport (if applicably) and set a "static" or unchanging IP address.

To set a "static" or unchanging IP address please follow the instructions below for your particular operating system.

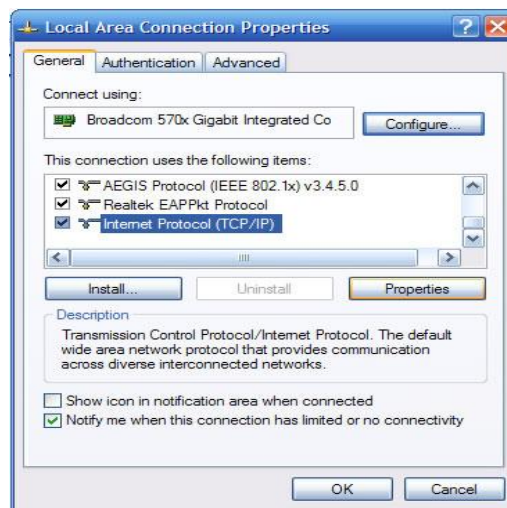
Windows:

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

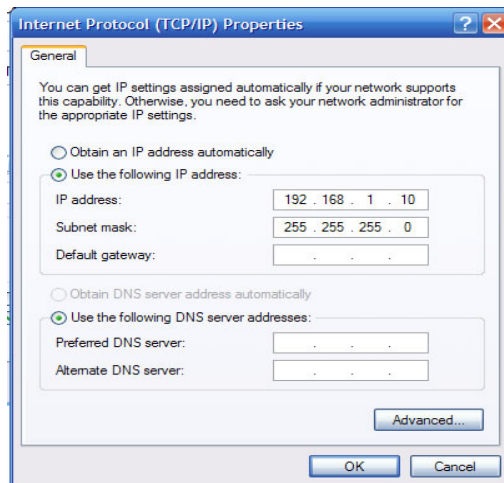
Vista: Start Menu/Windows Logo > Control Panel > Network and Sharing Center > Manage Network Connections > right click "Local Area Connection" and click Properties

Windows 7: 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 click Properties

Select Internet Protocol (TCP/IP) or Internet Protocol (IPv4) and click Properties




Select “Use The Following IP Address” and Enter 192.168.1.10 into the IP Address field and 255.255.255.0 into the subnet mask field



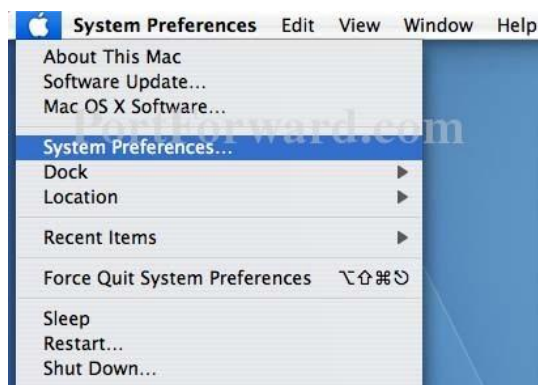
Select “OK” and select “Close” on the Local Area Connection properties window.

Once you have configured your Bullet(s), you will need to follow these steps again and select “Obtain an IP address automatically”

Macintosh OS X

Select the Airport Status Icon  (upper right hand corner of screen) and select “Turn Airport Off”

Click the **Apple** icon in the upper left hand corner of your screen. Then click the **System Preferences..** option.



In the **Internet & Network** section click the **Network** icon.



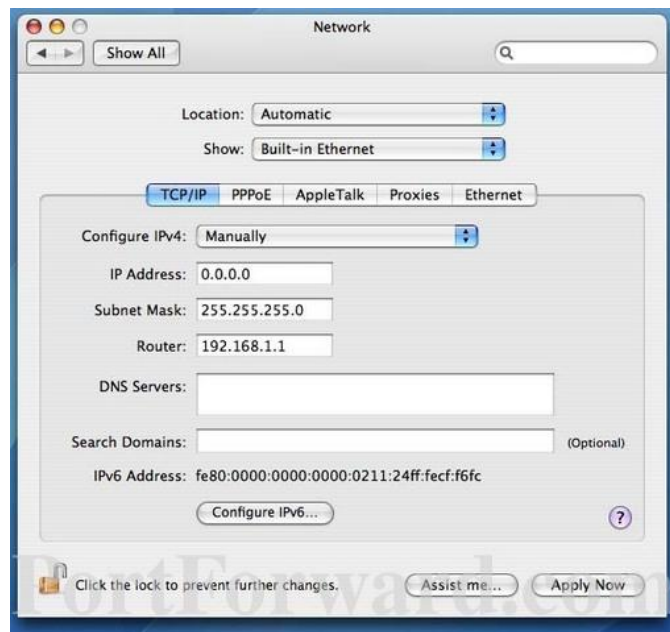
Select the network connection you use to connect to the internet. It will be the one that has a green dot in front of it. The green dot means the connection is active. Then click the **Configure** button which is close to the bottom of the screen.



Click the **Configure IPv4** drop down box and select the **Manually** option.

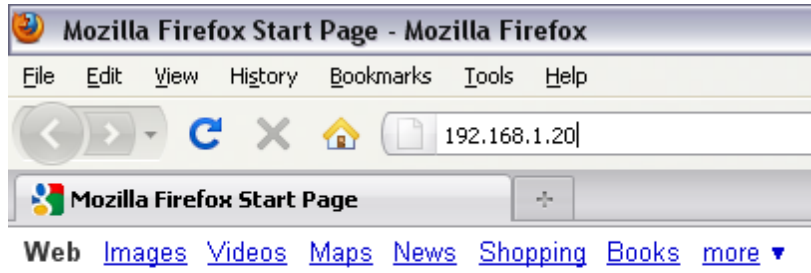


Enter 192.168.1.10 into the IP Address field and 255.255.255.0 into the subnet mask field



Your PC/MAC is now ready to configure the Bullet High Speed Wireless Platform.

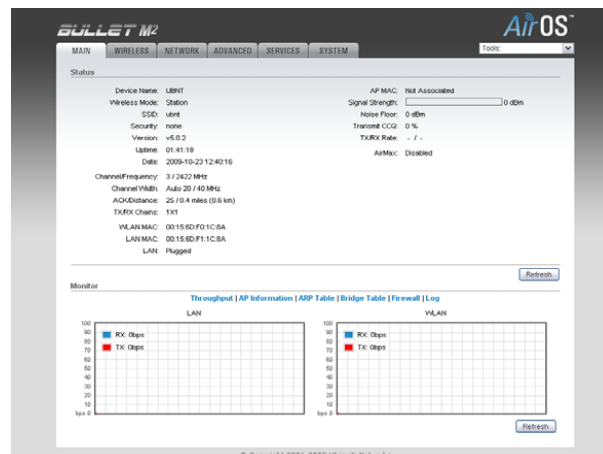
Open a web browser (Internet Explorer, Mozilla Firefox, Safari, etc.) and enter 192.168.1.20 into the address bar and hit "Enter".



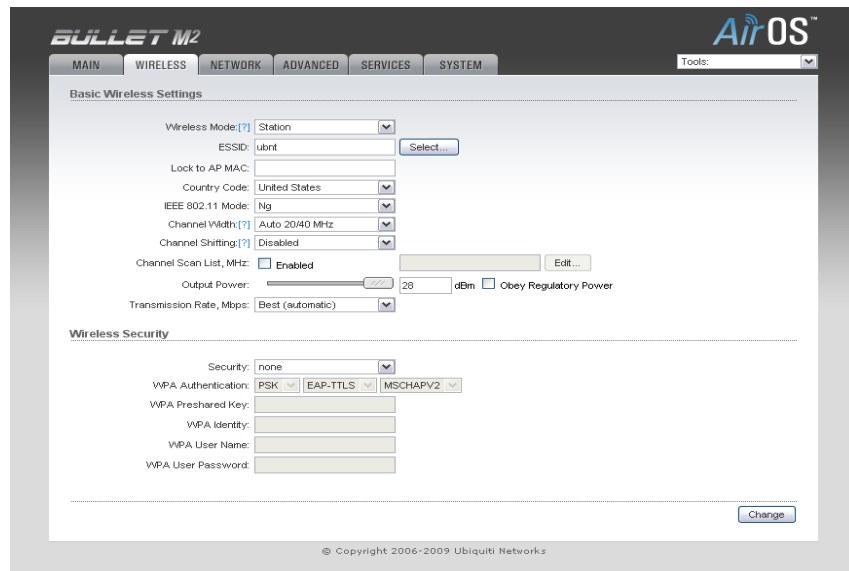
Enter 'ubnt' (minus quotations) into both the User Name and Password field and select "OK"
(This is the default username and password for the Bullet, this can be changed in the **System** tab)



This is the main configuration page of your Bullet High Speed Wireless Platform. This will show the current status of the unit along with LAN/WLAN throughput and signal strength once the unit is configured.

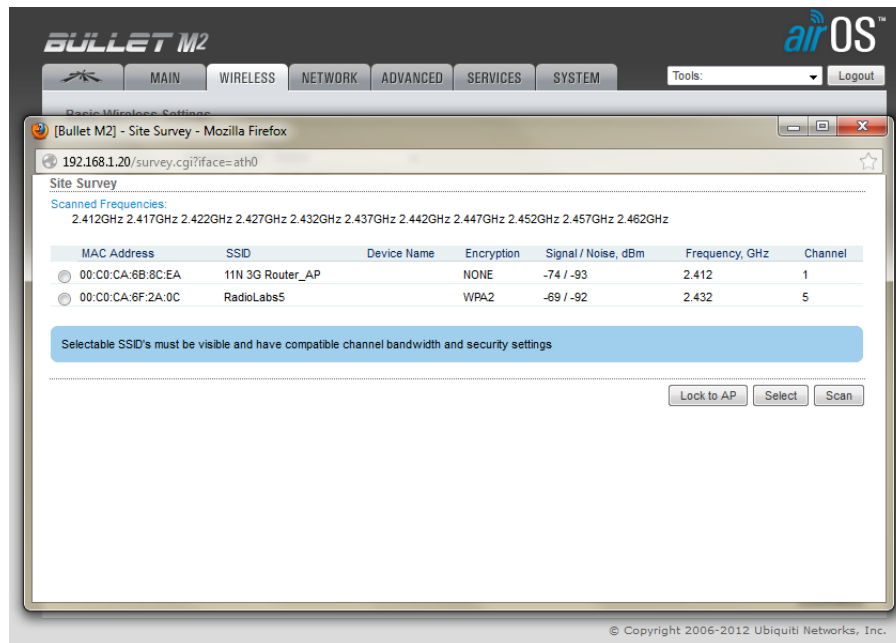


Make sure that the Wireless Mode is set to "Station" and the "Channel Width" to "20 MHz"



In Client Mode since you are receiving the signal, security is not necessary at this time.

Next to the SSID field is a button marked "Select." Click on this button to open the Site Survey page.



This will list all of the wireless networks in the area. Select the network you want to connect to and hit "Select"

If a password is required to access this network, a blank field will appear at the bottom of the page to enter the password.

Select "Change" in the lower right hand corner and then "Apply" at the upper right hand corner.

Select the "Advanced" Tab

BULLET M2 airOS

MAIN WIRELESS NETWORK **ADVANCED** SERVICES SYSTEM Tools: Logout

Advanced Wireless Settings

RTS Threshold: 2346 Off

Distance: miles (0.6 km) Auto Adjust

Aggregation: 32 Frames 50000 Bytes Enable

Multicast Data: Allow All

Installer ERP Control: Enable

Extra Reporting: Enable

Sensitivity Threshold, dBm: -96 Off

Advanced Ethernet Settings

LAN0 Speed: Auto

Signal LED Thresholds

LED1	LED2	LED3	LED4
Thresholds, dBm: -94	-80	-73	-65

Change

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and uncheck the box for "Extra Reporting". This will disable the "Extra Reporting"
Select "Change" in the lower right hand corner and then "Apply" at the upper right hand corner.

Select the "Ubiquiti" tab

BULLET M2 airOS

MAIN WIRELESS NETWORK **ADVANCED** SERVICES SYSTEM Tools: Logout

airMAX Settings airView

airMAX Priority: None

airView Port: 18888

Launch airView

Change

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Double check to make sure that "airMAX Priority". is set at "None"

If any changes were made select "Change" in the lower right hand corner and then "Apply" at the upper right hand corner.

Congratulations your bullet is now set as a Client. You are finished.

Once you have configured your Bullet(s), you will need to set your computer to "Obtain an IP address automatically". Restart your computer at this time.

Your Bullet High Speed Wireless Platform (s) are now configured as a Client. You can now disconnect the Category 5 Ethernet cable from the LAN port of your computer and connect it to the LAN port of the router. This will give you an ethernet connection from the LAN port of the router to the LAN port of the POE injector. Antennas can now be connected to the integrated N-Type connector and the system can be deployed. If you are using a router to rebroadcast a WiFi signal you will need to give the router a different IP address than anything else on the network. Since this may not be your own network, you may have to change the IP address several times as the network you are trying to connect to may have more than one networking device running. Also you will need to disable DHCP on the router so that there is not two networking devices on the same network issuing IP address. If you have a RadioLabs router and do not know how to disable DHCP or change the IP address please contact RadioLabs. If you are using another brands router, please contact the manufacture of that router directly.

Additional Information:

The Bullet High Speed Wireless Platform is, by default, configured as a non-routing, non-addressing network device. If you wish to use these units to forward DHCP assigned addresses to a remote location, the default “Bridge” network mode will suffice (listed under the “**Network**” tab). If you wish to have one of the Bullets act as a DHCP server or NAT gateway, select the “**Router**” option and the unit will allow configuration of your LAN/WLAN addressing and DHCP functionality.

Wireless speeds are affected by many different environmental variables, including line-of-sight, frequency interference and ambient radio noise. The Bullet High Speed Wireless Platform supports speeds up to 100 megabits/second (true throughput), however, due to natural variance in signal and the automatic speed selection, this may vary. If sustained speeds are required, you can lock the Bullet(s) into a throughput rate using the “**Transmission Rate, Mbps**” menu under the “**Wireless**” Tab