

IMSA “Hot Spot” MiFi Device Guidelines

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Disclaimer:

MiFi or “Hot Spot” devices provided by any of the major cellular phone companies (ATT, Verizon, etc...) work using cellular communications technology, the same cellular communications technology your cellular or smartphone uses. We all know that cellular service is not perfect and there are “dead zones” or areas that cellular service is not as reliable. Cellular based communications can also be affected by the device surroundings, i.e. buildings, building construction, etc... Because the “Hot Spot” or MiFi devices use the same technology as your smartphone they can be affected by the same obstructions.

IMSA deploys “Hot Spots” or MiFi devices from Verizon, because of overall reliability experience, capability, coverage area, and cost. Depending on your location in the state or event in the country Verizon’s service may not be 100% perfect.

When to use a “Hot Spot” or MiFi Device

Traditionally “Hot Spots” were used in areas where other Internet connection options were not available, no home Internet, no free Internet service at a local library, coffee house, or other place of business. Now “Hot Spots” are being used for serious educational or business related need. A “Hot Spot” should be your last Internet connection choice, not your first.

Decision Guidelines

A “Hot Spot” maybe your only choice or your best choice under the following conditions:

- There are no other possible choices in your area, no home Internet options, or home Internet options that are expensive.
- Home Internet is already over taxed by the number of other users, family members, who also need Internet connectivity – Below are instructions and examples of how to test your home Internet connection and compare it to a “Hot Spot” connection.
- Home Internet connection has proved unreliable multiple times, not just once. We first recommend you contact your Internet service provider to have your connection and equipment checked.

Testing your Internet Connection

We recommend using the web site <https://www.speedtest.net/> to test your Internet connection. Below is the testing procedure:

1. Turn on your computer
2. Connect to your home Internet or to the IMSA MiFi Device (depends on what you wish to test)
3. Open a web browser on your computer, does not matter which one
4. Go to <https://www.speedtest.net/>
5. Click the big GO button in the middle of the screen
6. Review and compare the results

Result Examples:

- Test Results Location: Shabbona, IL (31 miles west of Aurora, IL; 16 miles south-south west of DeKalb, IL)
- Test Computer: IMSA issued HP ProBook 640 G5 Laptop Computer.

Test Environment 1: Medicacom Internet Connection – Cable Modem (Like ComCast)

Equipment Involved: LinkSys Wireless Router, LinkSys GB Network Switches (2), Medicacom supplied Cable Modem

- Connected to home Internet connection via a wired connection (best solution)
 - Ping (ms - milliseconds): 15 (Lower number is faster)
 - Download (Mbps – Megabits per second): 78.21
 - Upload (Mbps – Megabits per second): 10.72
- Connected to home Internet connection via wireless connection (High Speed – N (5GHz) Connection)
 - Ping (ms - milliseconds): 16
 - Download (Mbps – Megabits per second): 63.27
 - Upload (Mbps – Megabits per second): 10.77
- Connected to home Internet connection via wireless connection (Medium Speed – G (2.4GHz) Connection)
 - Ping (ms - milliseconds): 18
 - Download (Mbps – Megabits per second): 15.52

- Upload (Mbps – Megabits per second): 10.84

Test Environment 2: IMSA provided Verizon “Hot Spot” MiFi Device (Manufacture: Netgear)

- Connected to IMSA provided Verizon “Hot Spot” MiFi Device – Model 8800
 - Ping (ms - milliseconds): 40
 - Download (Mbps – Megabits per second): 47.11
 - Upload (Mbps – Megabits per second): 5.43

Test Environment 3: IMSA provided AT&T “HotSpot” MiFi Device (Manufacture: Netgear)

- Connected to AT&T “Hot Spot” MiFi Device
 - Ping (ms - milliseconds): 58
 - Download (Mbps – Megabits per second): 8.88
 - Upload (Mbps – Megabits per second): 1.09

When you have to use a “Hot Spot” MiFi Device

When you have no choice but to use a “Hot Spot” MiFi device you should follow the guidelines below:

Location is important:

- Do not use the “Hot Spot” in the basement of a house or an apartment below ground, this will impede the cellular signal
- If you live in a multi-story home; position the “Hot Spot” at the highest story possible, or near an outer wall
- If you live in an apartment, position the “Hot Spot” near an outer wall
- Your computer does not have to be right next to the “Hot Spot” it can be several feet away

The “Hot Spot”

- Leave it plugged in and on 24/7. The “Hot Spot” will receive software updates from its manufacture periodically, this will allow the updates to be completed overnight while the “Hot Spot” should not be in use.
- Once a day, recommend first thing in the morning, well before needed for classroom or research, reboot the “Hot Spot”. This will force the completion of any updates and reset the “Hot Spot” for the day’s work.
 - Turn it off by holding in its power button, until it shuts down
 - Wait 10 seconds
 - Turn it back on by holding in its power button, until you see the logo, indicating it is booting up

Using the “Hot Spot” MiFi Device

Each IMSA issued “Hot Spot” has a unique SSID or Wi-Fi Name and password. First turn on the “Hot Spot” if it is not already done, this is done by holding in the power button until your see a MiFi logo on the screen. This can take several seconds. Once the “Hot Spot is booted up you will see a screen like the one below.

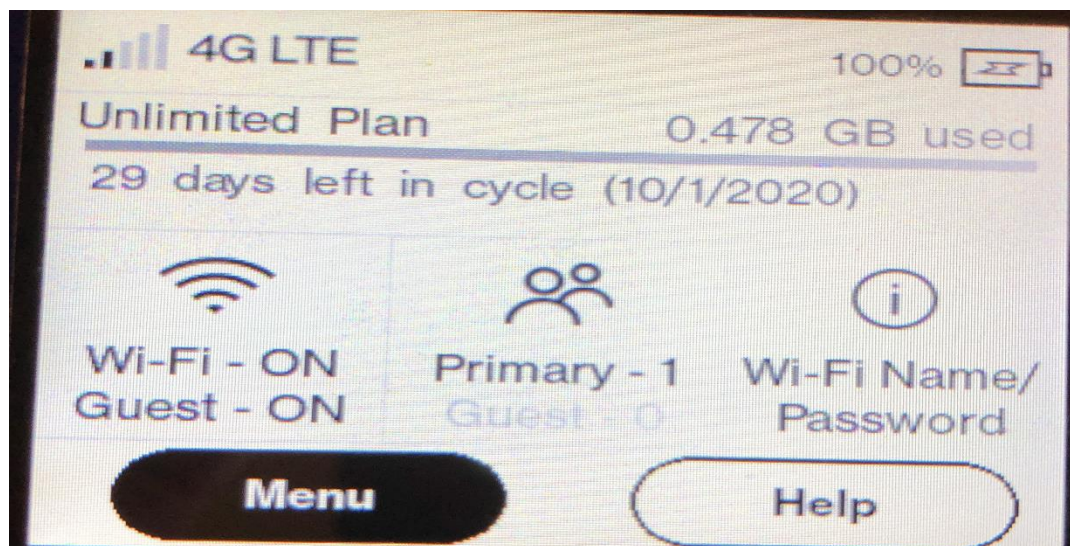


Figure 1 Verizon MiFi Device

The screen is a touch screen so you can touch the different buttons and icons to get more information. First, look at the bars next to 4G LTE, this will indicate signal strength, just like on a smartphone. Try to find a place in your home where you have the most bars.

To find out the device's MiFi Name and Password touch the section of the screen, see above, that says MiFi Name and Password. The screen will change and look similar to the one below. REMINDER: Each MiFi device has a different name and password, below is just an example.

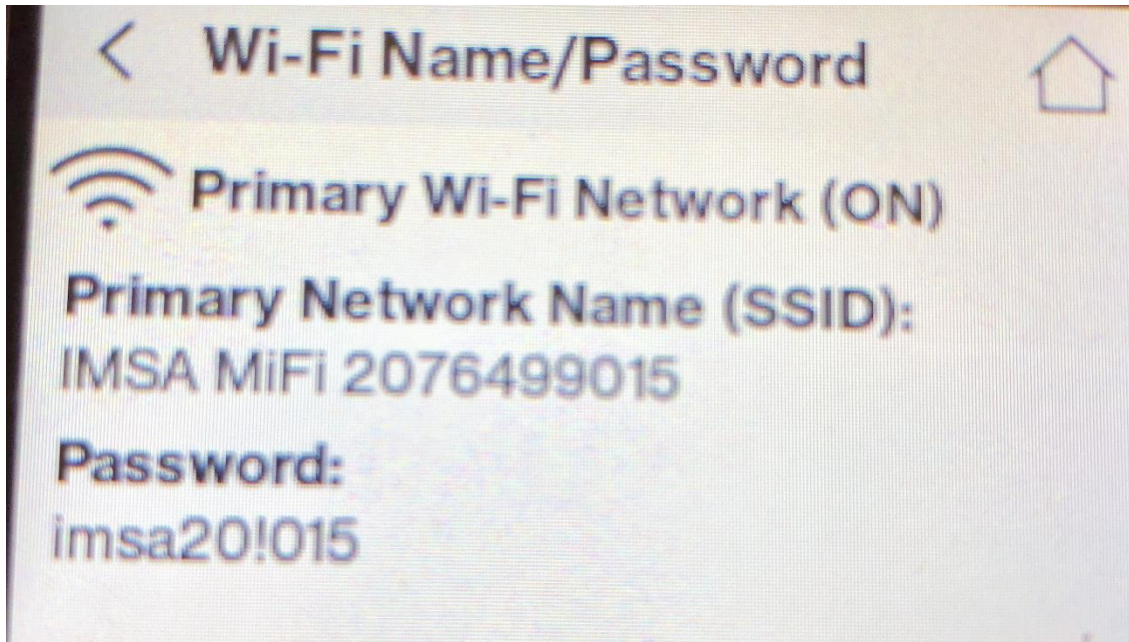


Figure 2: Example Only - Verizon MiFi Device