

# SPRINT MiFi 2200

By John Miller and Doug Waters  
 Images by D. Massarik

It's a MUST HAVE. It's an *ultimate* in mobile electronics. And it's affordable. The name says it all: The Sprint MiFi 2200 Mobile Hotspot. The MiFi 2200 is a 3G (EvDO) Cellular modem and WiFi (802.11b/g) router rolled into a package the size of a stack of 3 credit cards. It is a superb mobile broadband solution for individuals or a small groups, supporting up to five concurrent connections. It's tiny, easy to use, and offers instant Internet access throughout the U.S including Hawaii, Alaska, and Puerto Rico.

Out of the box, the MiFi 2200 is an impressively simple package. It comes with a removable battery, a travel sized wall charger, a cloth carrying case and a very brief setup and user guide.



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Setup of the device was equally simple. The Sprint MiFi activates automatically and requires no software to be installed for activation (instructions related to activation are also included the printed user guide). Configuration of the MiFi 2200 is through a web-based interface that can be accessed wirelessly. The options are complete without being complex. Users desiring the customization ability of a broadband wireless router, such as a Netgear or a Linksys (Cisco) won't be disappointed by a lack of features. The MiFi 2200 allows for election of 802.11 mode (b,g or mixed), choosing your own SSID and the ability to disable broadcast of it, DHCP, VPN pass-through, Security type (WEP, WPA, WPA2 and Mixed WPA), allows for MAC address filtering, port filtering and forwarding, power management, and activity logging. The MiFi 2200 also offers a GPS feature that, when enabled, allows for Sprint's "Location Based Services" that will plot onto a Google, Microsoft or Yahoo map.



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The tiny router (3.5x2.3x.35 inches) is turned on using the large, backlit power button that also functions as battery level indicator. The light is solid green when the device is turned on, red when the battery is low, or flashing green when charging. A second green LED light on the side flashes to indicate router-WiFi activity. Next to the activity LED on the side, there's a Micro-USB port that accommodates the included wall charger or USB cable. Oddly enough the device will not function in WIFI mode when a standard USB cable is connected. A 'power-only' type of USB cable can be acquired for under \$10 that will get around this limitation.

When connected (via WiFi or USB) to a computer for the first time, pointing to the MiFi's default IP address

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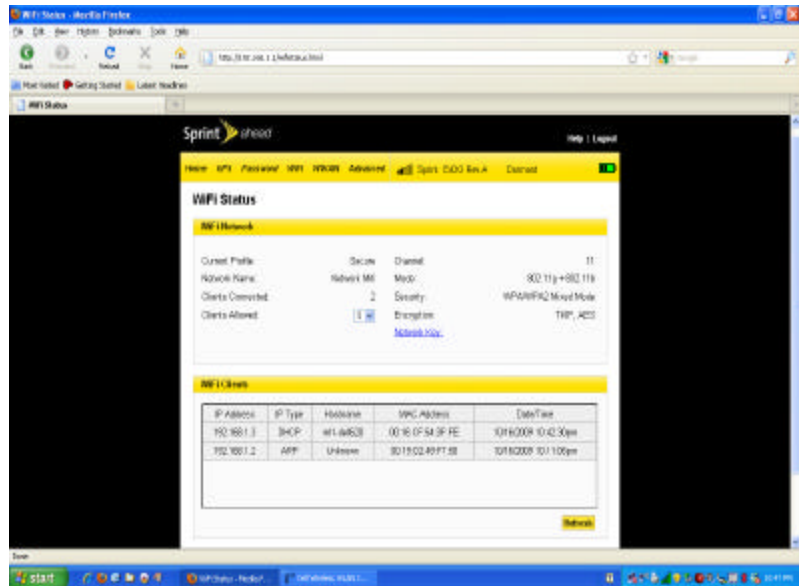
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[192.168.1.1] via a Web browser will launch the MiFi 2200's Setup wizard that will walk the user through first time configuration. You can exit this wizard and configure the settings directly, if you choose, using its built-in browser-based Manager interface. The factory defaults should be changed immediately---the default password and SSID are all too obvious, and no encryption has been enabled.

We obtained 4 units for our test and configured them with a variety of encryption methods including WEP, WPA, WPA2 and mixed WPA/WPA2. Performance was uniformly good with a single connection but suffered as

more users attached and transmitted data. Speed tests revealed Download speeds as high as 894kb/s and Upload speeds as high as 194kb/s. Average speeds, however were more in the range of 650 kb/s Down and 140kb/s Up. Moving the device nearer a window had no impact on WAN speed nor did operating the device on line power versus the battery. Operation of the WiFi was impacted by placement. Inside a walled office, device range through walls

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began to seriously degrade after 40 feet. Unobstructed/clear line of sight permitted excellent connectivity at a ranges of 80 feet, with reduced capability but still functional at 100 feet. The device also successfully operated from with in a moving car on the freeway, but (much to our disappointment) failed to maintain a WAN/cellular signal at the far end of the Malibu, California pier – approximately 100yards out over the Pacific Ocean. Changing the encryption types had little bearing on WiFi performance nor did use of MAC addresses filtering. The die-hard technical users in the test group commented on the desire to have an external antenna option—something that Sprint (actually, manufactured for Sprint by Novatel) isn't planning to offer. WiFi-LAN performance varied from 2Mbps in worst-case situations (through walls) to upwards of 25Mbps when in close proximity. The WiFi speeds aren't a significant issue unless you routinely have 4 or 5 simultaneous users, and even then, the WAN speed will be more of a bottleneck than LAN throughput. We put the MiFi through a full range of internet access tests including navigating Google Maps, WeatherChannel, Twitter, Apple iTunes, Yahoo Finance, ESPN Sportszone, YouTube, Hulu and RedTube. All but the RedTube site (an Adult Video download site) operated smoothly. Given the limitation of the service plan (explained below) downloading any volume video content, adult or otherwise, isn't advisable with the MiFi 2200.



Under single user heavy use, battery life of MiFi was easily 4 hours and it operated nearly 6 hours with sporadic/light use. However, multiple users radically reduce the battery life. With three concurrent testers, lightly accessing the Internet, the 2200 reached low battery (red flashing light) stage in two hours 10 minutes. The battery is rated for up to 40 hours in standby mode. Another battery concern involved a feature that we tested and immediately disabled --- the built-in GPS function. The GPS option, when enabled, determines present location and allows users to search for the nearest location of restaurants, banks, gas stations, Sprint stores (naturally) as well as a freeform-keyword search via Google , Microsoft (BING) and Yahoo. The search function was hit-and-miss in accuracy. Far more important, the GPS function was a battery hog and reduced operational life by over 25 percent. Charging a used up battery while not in use takes approximately two hours to reach full charge.

Retailing for \$99.99 (with a 2 year service plan) the Mifi200 offers only one data plan – 5GB of data per month for \$60.00 and a charge \$0.05 per Megabyte of data over the monthly cap –which makes the resettable traffic counter on MiFi's browser interface invaluable. A small point to note, the plan only allows 300Mb of data (per month) when Roaming off the Sprint network, so checking the Sprint coverage map in advance is important.

The MiFi service cost is not inexpensive. However when compared to the thievery rates that hotel and airport WiFi systems charge, the payback, (financially, as well as convenience and safety is nearly immediate. Selling our management team on the concept of buying the test units was easy. A few well-timed (late at night) emails from the test staff to management that apologized for our slowness to reply because “we had to walk down the street and ‘borrow’ the free WiFi signal from the Denny's Restaurant” expedited the purchase orders.

The Bottom Line: The Sprint Wireless MiFi 2200 mobile hotspot is a must-have Internet solution for business travelers. The ability to have instant WiFi Internet access for up of up to five people justifies its expense. If it has any weakness, it may be its size ---one of our test staff packed up his gear and left the MiFi 2200 behind having overlooked it because of its size. If the cost and data limit of the service plan are tolerable, the Sprint Wireless MiFi 2200 is an excellent means of accessing the Internet..... **ON THE GO**

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