

# Wireless Info

## Wireless Networking At GMU

### Introduction

The wireless access service is designed to complement the existing Ethernet wired ports. While the service is convenient, its performance and reliability do not match that of a modern wired network. The IEEE 802.11b wireless LAN standard is most commonly used as of late 2002, which operates at a frequency range of 2.4 to 2.4385GHz. The Federal Communications Commission (FCC) assigned this part of the radio spectrum to unlicensed "Industrial-Scientific-Medical" equipment uses; this means that 802.11b devices must share the airwaves with unrelated devices such as microwave ovens, some cordless phones, "Bluetooth" personal area networks, and various types of medical equipment.

### Recommended Wireless Cards

George Mason's ITU staff recommend the following brands and models of wireless cards below. All six products work well with the Mason wireless service but the Linksys products have the advantage of being Windows XP certified and have the "Design for Windows XP/2000" logo on their box. Also, 802.11g products are recommended since they are backwardly compatible with our 802.11b wireless service and can take advantage of the faster connection when we provide 802.11g service in the future.

1. Linksys Wireless-G Notebook Adapter (WPC54G)
2. D-Link AirPlus Xtreme G Cardbus Adapter (DWL-G650)
3. Netgear 54 Mbps Wireless PC Card 32-bit CardBus (WG511)
4. Linksys Wireless-B Notebook Adapter (WPC11 v.4)
5. D-Link AirPlus Cardbus Adapter (DWL-650+)
6. Netgear Wireless PC Card (MA521)

If you would like to look up to see whether your wireless cards is Wi-Fi certified, go to Wi-Fi Alliance Certified Product Listing. [http://www.wi-fi.org/OpenSection/certified\\_products.asp?TID=2%20](http://www.wi-fi.org/OpenSection/certified_products.asp?TID=2%20) All Wi-Fi certified 802.11b & 802.11g products should work with Mason wireless service.

### How to Set-Up Your Wireless Connection

If you are a Windows XP user and choose not to install the software that came with your wireless card, getting on the network for the first time is relatively easy. You put in your wireless card and/or turn on your computer and do the following:



< 1) Look for the "Wireless Network Connection" icon at the bottom right of your computer screen and click on it.

2) This opens a window called "Wireless Network Connection". Under "Available wireless networks," you should see gmu. You may see other network names, but select "gmu". On the same screen, you will see a warning: "This wireless network is not secure." Check the box that says "Allow me to connect to the selected wireless network even though it is not secure" and click "Connect."



3) Next open a browser. You will automatically be taken to a login screen where you enter your GMU MEMO userid and password. [Note: This will not work if you have set your homepage to "Use Blank." You must have your homepage set to go to a site, any site will do.]



4) After you login, you will get a pop-up window that tells you that you are logged-in and your browser will go to the go to the home page. Now, you can access the Internet.



5) If you shut down your laptop and turn it on later the same day, you will stay logged in until 11:30pm. The system resets every day at 11:30 pm and logs every laptop off.

If you choose to install the software that comes with your wireless card, you will have to do a bit more work configuring your connection to the wireless network. The most important thing to know is when you are asked to enter a network name (SSID), type gmu (lowercase). Also, you will be asked if the network uses WEP or encryption or some form of security. It does not, so you should NOT select these options.

## Other Information

GMU Wireless Network Guidelines (PDF) <http://itu.gmu.edu/security/sysadmin/wireless-guidelines.pdf>

University Policy Number 1302 on Wireless Networking <http://www.gmu.edu/facstaff/policy/newpolicy/1302gen.html>

## Questions, Problems?

If you have any questions or need help with your wireless card, please contact ITU Support Center at 703 993-8870 or support@gmu.edu. The ITU Support Center (Room 233 in Innovation Hall) is open M-F, 8:00 a.m. to 7:00 p.m.

## User Authentication Process

All users of the wireless and public ports are required to authenticate against their GMU MEMO accounts. The authentication process is done using an SSL enabled web browser. >

## Security

The wireless access service is protected by a secure authentication system with which users need to log in to enable network access. Since wireless networks use radio frequencies as transport medium, information transmitted over the network can be intercepted by others. To protect your personal information, we recommend the use of encryption.

Sensitive data such as passwords, Social Security numbers, credit card information, etc.

should never be sent over a wireless connection (or a wired connection, for that matter!) unless the connection is encrypted. NOTE: Websites having a URL that starts with "https://" are generally safe to use, since the data stream is encrypted with SSL. However, you should check the name and expiration date of the site's certificate to make sure it is valid (click on the padlock icon at the bottom of your browser.) Other tools for encrypting your connection are Secure Shell (SSH), and Virtual Private Network (VPN) tunnels. The IT Security Office <http://itu.gmu.edu/security/> provides general security information. Links below provide specific information on protecting your wireless connection:

- How to Get/Install/Use the Secure Shell: <http://itusupport.gmu.edu/help/keywordcontent.cfm?contentid=214>
- IT Security Factsheet: Includes Suggestions for Desktop Users: <http://itu.gmu.edu/security/practices/ITsecurity.pdf>



Memo user name and password

## Frequently Asked Questions about GMU Wireless Network

Q: Is there a charge for using the Mason wireless service?

A: There is no charge other than the requirement of a wireless network card

Q: How fast is a wireless connection?

A: GMU provides a shared 11Mbps connection. Because it is shared, the more users connected in the same area will cause the speed of the connection to drop.

Q: Will my data be secure?

A: Users should ensure they are using secure communications software when sending sensitive data over wireless networks: SSL Web browsers and SSH. VPN client will provide more security for users that require it. VPN client is compatible with Windows 2000 and XP only

Q: Which platforms are supported for Wireless?

A: Intel-based PC running Windows 95/98, 2000 or NT, iBook(s), iMac, Powerbook(s), PowerMac(s) Windows CE devices and Palms should work with wireless Network but currently will not have support from the help desk - due to the wide range of configurations and devices available. Support for those configurations is available through the vendor.

Q: What are the recommended wireless adapters? Which wireless card(s) does the help desk support?

A: See above, recommended wireless cards, for currently supported adapters.