

Wireless Networking

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What is wireless networking?

Wireless networking technology makes it possible for you to connect to RIT's campus network without needing a network cable to transport data to and from your computer. Wireless base stations have been installed at various campus locations, such as student study areas, lecture halls, and outdoor areas, to allow you to access RIT's wireless network with your portable computer.

Several international wireless networking standards currently exist, and more are under development. The IEEE organization provides information about these standards on the <http://standards.ieee.org/wireless/> web site. RIT's wireless network conforms to the IEEE 802.11b standard.

To access RIT's wireless network:

- you must have a wireless network card installed in your computer that is compatible with RIT's wireless network,
- your network card must be properly installed, configured, and registered, and
- your computer must be within range of a wireless access point (transmitter/receiver).

Typically, a wireless connection is slower, less secure, and less reliable than a wired connection. Connecting your computer to the campus network with a wired Ethernet card, a network cable, and wall jack provides better overall performance and security than using wireless technology.

How do I get help on wireless networking?

This document provides basic instructions on how to get started using wireless technology at RIT. For additional help with wireless networking, or other computer help, contact the ITS HelpDesk (see contact information at the end of this document). To see a current list of on-campus wireless access points, consult the RIT wireless web page at <https://www.rit.edu/network/wireless/wireless.html>.

How do I access RIT's wireless network?

Get a compatible wireless Ethernet card

You can purchase a wireless card and install it in your portable computer. Some computer manufacturers, such as Dell and Apple, allow you to order a wireless card along with a new computer that you are purchasing.

RIT's wireless network conforms to the IEEE 802.11b standard. To access the wireless network, your computer must have a wireless Ethernet card that also conforms to this standard. The table below shows a list of wireless cards that have been tested by ITS for Windows and Macintosh computers. The cards are listed in order of preference as recommended by ITS. If you need additional assistance, contact the ITS HelpDesk.

Windows	Macintosh
Dell TrueMobile 1150	Apple AirPort (internal) ¹
Cisco 350	Lucent Technologies WavLan Gold ²
NetGear MA401	Cisco 350 ²

¹ All current Apple computers (iBook, iMac, PowerMac G4, and PowerBook G4) are AirPort capable.

² Use only if computer is not AirPort capable.

Install your wireless card

Install your wireless card according to the instructions provided by the manufacturer. If you do not have an installation manual and CD, consult the manufacturer's web site for information on obtaining and installing the necessary drivers for your card.

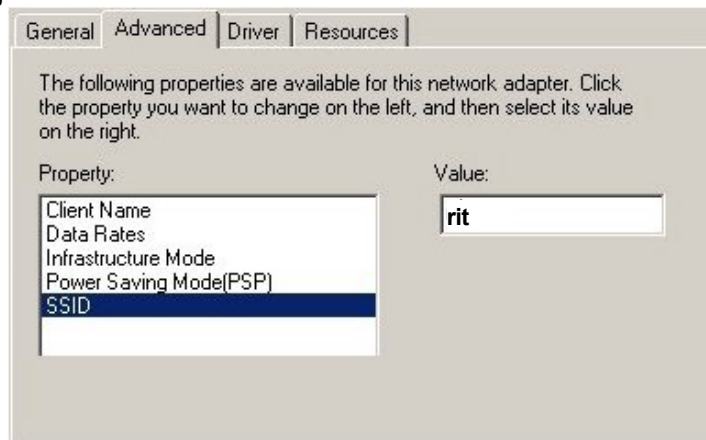
Configure your wireless card

Not all network cards need to be configured to use wireless networking. Some cards will automatically configure themselves to use the correct SSID, or Network Name, when they are within range of an access point. The SSID (Service Set Identifier) acts as a password that allows your wireless card to communicate with the wireless network.

Although you may not need to do this, entering the proper SSID into your wireless card's configuration will help insure that your card will properly communicate with RIT's wireless network. Below are some examples of how to set up the SSID configuration for some of the cards and operating systems that ITS recommends. If you need assistance, contact the ITS HelpDesk.

Cisco 350 or NetGear MA401 with Windows 2000

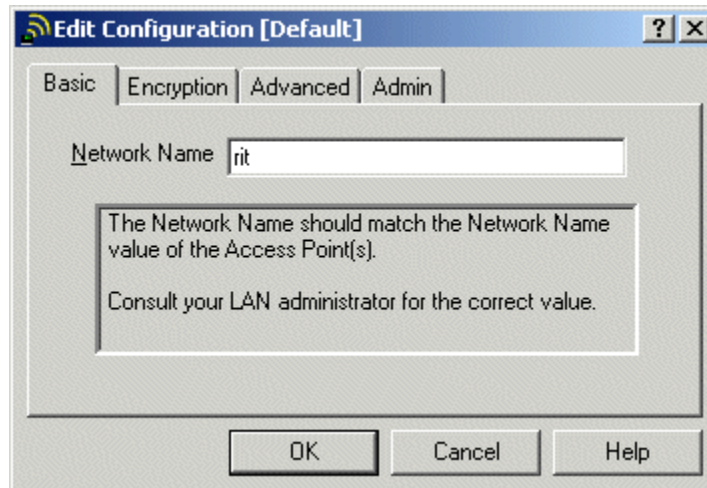
1. Make sure you are logged into a Windows account that has administrator rights.
2. Double-click the "Unplug or Eject hardware" icon in the Windows taskbar in the lower right area of your computer's screen. The "Unplug or Eject hardware" dialog window appears.
3. Click the "Properties" button, and then click the "Advanced" tab.
4. Select "SSID" in the "Property" area to highlight it.



5. Type **rit** in “Value” text box, and then click “OK”.

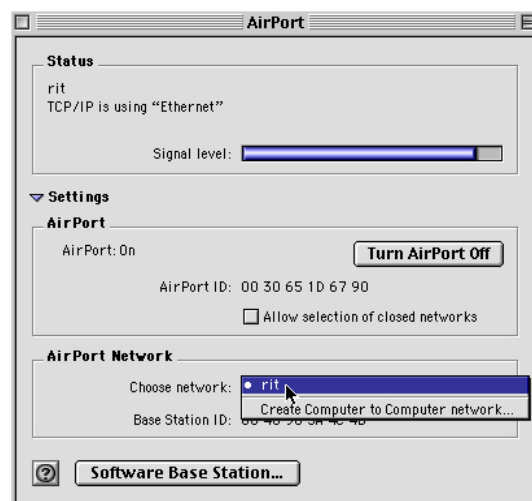
Dell TrueMobile 1150 with Windows 2000

1. Make sure you are logged into a Windows account that has administrator rights.
2. Click on the Windows “Start” button. Select “Programs”, “Dell TrueMobile 1150”, and “PC Card Settings”. The “Add/Edit Configuration Profile” window appears.
3. Select the profile for the wireless card and click “Edit Profile”. The “Edit Configuration” window appears.
4. Type **rit** in “Network Name” text box. Click “OK” to return to the “Add/Edit Configuration Profile” window.
5. Click “OK” to exit the window.



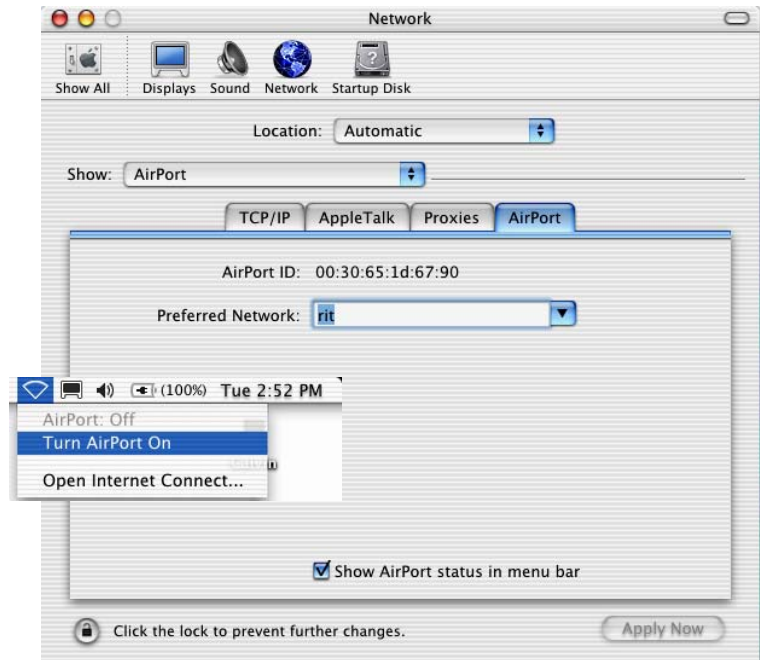
Apple AirPort with Mac OS 9.x

1. Click on the “Apple” menu and choose “AirPort”. The “AirPort” window appears.
2. Click the blue arrow to reveal the “Settings”.
3. Click the pop-up menu in the “AirPort Network” section and choose “rit”.



Apple AirPort with Mac OS X 10.1

1. Click on the “Apple” menu, choose “System Preferences” and then “Network”.
2. Click on the “Show” pop-up menu and choose “AirPort”.
3. Click on the “AirPort” tab.
4. Place a checkmark in the “Show AirPort status in menu bar” box.
5. Click on the AirPort symbol (on the menu bar) and choose “Turn AirPort On”.
6. Go back to the AirPort tab, click on the drop-down menu for “Preferred Network” and choose “rit.”
7. Close the window and save the changes if prompted.



Register your wireless card

After you install and configure your wireless card, you must register the card with the RIT DHCP service. Follow these instructions to register your card:

1. Make sure you are within range of a wireless access point, and that your wireless card is working properly.
2. Start your web browser and enter <https://ipedit.rit.edu> in the “Location:” or “Address” area. The RIT IPedit Registration page appears.
3. Click the “I have a RIT account” button in the “DHCP Registration” area.
4. Type in your RIT username and password, and then click “OK”. The “Welcome to the RIT network” box appears.
5. Read and follow the instructions, and then click “I agree to these terms”. A message appears telling you that your Ethernet card has been successfully registered.

Where can I connect to RIT's wireless network?

You must be within range of a wireless access point (base station) in order to connect to the wireless network. Wireless base stations are located in some student study areas, public areas, lecture halls, and Auditoriums. More locations will be added in the future.

For a current list of access points, consult the RIT wireless web page at <https://www.rit.edu/network/wireless/wireless.html>. The list includes the Wallace Library, Crossroads, and the Student Alumni Union. Signs like the one seen here have been posted at various campus locations to let you know that you are near a wireless access point.



Troubleshooting wireless problems

In order to function effectively, wireless networks depend upon the integrity of a signal that is transmitted through the air. A weak signal may cause the data stream between your computer and the wireless access point to degrade, thus affecting the performance of your network connection. Signal intensity may vary simply by turning your computer in different directions.

Other factors that can affect signal integrity include:

- the proximity of your computer to a wireless access point,
- having solid objects between your computer and the access point,
- the transmission power of your wireless card, and
- the proximity of other devices that may cause interference with your signal.

When troubleshooting wireless problems, start by making sure your computer is close to an access point, the signal is not blocked, and there is no interference from other devices.

Contacting the ITS HelpDesk

Phone Support: (585) 475-HELP or 475-2810 (TTY)

Email: helpdesk@rit.edu

Web Address: <https://www.rit.edu/its/help/>

In Person: Gannett Building, Room 7B-1113

Contacting the Resnet (Residential Computing) HelpDesk

Phone Support: (585) 475-2600 or 475-4927 (TTY)

Email: resnet@rit.edu

Web Address: <https://www.rit.edu/its/services/resnet/>

In Person: Nathaniel Rochester Hall (Building 43), Room 1034

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