PPPoE (Point-to-Point Protocol over Ethernet) allows a point-to-point connection while using Ethernet. Just like the dial up protocol on which it is based, PPPoE uses traditional username and password authentication to establish a direct connection between two Ethernet devices on a network (such as your AirLink modem and your computer or router).

Application examples for PPPoE with your AirLink modem:

- Backup connectivity solution for your network
- Password restricted Internet connection
- Individualized Internet connection on a LAN

**FIGURE 1. Backup connectivity solution for your network**
PPPoE (PPP over Ethernet) Configuration

You only need to configure a PPPoE connection on your computer if you will be connecting from the computer to the AirLink modem on a LAN sharing the same subnet. You may need to use Private Mode in the modem to configure its IP address to be available on the LAN.

Note: If you are using the modem connected to a router as a back up Internet connection for your network, you should configure the router to use the PPPoE connection and not the individual computers. Only one computer, router, or other network device at a time can connect to the AirLink modem using PPPoE.

To configure a PPPoE connection on Microsoft Windows XP, 2000 or NT, you will need administrator privileges to the computer you are configuring or access granted by an administrator on the network to add/remove devices to your computer.

Software Required


Software Recommended

- **AceNet** - Multiple modem configuration and monitoring utility for all AirLink modems. With AceNet, you can save a working configuration in Wireless Ace and then load it into several modems concurrently saving time and ensuring all the modems are configured the same. AceNet is available for separate purchase from your AirLink representative.
Step by Step Configuring your AirLink modem for PPPoE

1. Connect your modem directly to your computer or to a hub to which your computer is also connected.

2. Start Wireless Ace: Start > All Programs > AirLink Communications > Wireless Ace 3G > Wireless Ace 3G
   a. Click the Connect button and select UDP. Enter the IP address and password (the default IP is 192.168.13.31 and the default password is 12345).

   FIGURE 3. Wireless Ace: Connect

   b. When Wireless Ace has connected to your modem, from the groups on the left, select PPP/Ethernet under Common.

   FIGURE 4. Wireless Ace: PPP/Ethernet

Note: Wireless Ace shows the existing values for *HOSTUID and *HOSTPW encrypted and character padded.
3. Configure *HOSTAUTH, *HOSTUID, *HOSTPW, and *DHCPSERVER.

   a. Change *HOSTAUTH to 2.
   b. Enter a username for *HOSTUID for the PPPoE connection.
   c. Enter a password for *HOSTPW for the PPPoE to connect.
   
   If you leave *HOSTUID and *HOSTPW blank, any computer or device can connect to the modem using PPPoE.
   
   d. Set *DHCPSERVER to 2 (Enabled if no other DHCP server is detected).

Optional Configure *MODEMNAME.

PPPoE connections can use a Service Name to differentiate PPPoE devices. You can use Wireless Ace to give your modem a name.

   a. In Wireless Ace, select Dynamic IP from the groups on the left.
   b. Enter a name for *MODEMNAME, such as the modem model or the ESN.

   FIGURE 5. Wireless Ace: *MODEMNAME

The name you choose will not affect the connection but may need to be configured in PPPoE settings for the router, device or computer you will be connecting to your modem.

4. Write the configured settings to your modem.

   a. Click the Write button on the tool bar of Wireless Ace and wait for the message “Write Successful” to appear in the status bar.

   FIGURE 6. Wireless Ace: Write

   b. Press the modem Reset button on the front of the modem. Wait until the modem indicator is lit and the modem has once again registered on the network.
Configuring a PPPoE Connection in Windows

1. Create a new network connection.

   a. Select **Start > Connect To > Show All Connections**. This will open the **Network Connections** window.

   ![Show All Connections](image)

   ![Control Panel](image)

   ![Set Program Access and Defaults](image)

   ![Connect To](image)

   ![Show all connections](image)

   ![Internet Explorer](image)

   ![Notepad](image)

   ![All Programs](image)

   ![Unlock Computer](image)

   ![Log Off](image)

   ![Shut Down](image)

   ![Start](image)

   b. Select **Create a New Connection** under **Network Tasks** in the menu area on the left. Select **Next** to start installing and configuring the PPPoE connection.
c. Select **Connect to the Internet** and then select **Next**.

**FIGURE 11. Connection Type**

- **Connect to the Internet**
  Connect to the Internet so you can browse the Web and read email.

- **Connect to the network at my workplace**
  Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location.

- **Set up an advanced connection**
  Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.

d. Select **Set up my connection manually** and then select **Next**.
FIGURE 12. Preparing the Internet Connection

How do you want to connect to the Internet?

- Choose from a list of Internet service providers (ISPs)
- Set up my connection manually
  - For a dial-up connection, you will need your account name, password, and a phone number for your ISP. For a broadband account, you won't need a phone number.
- Use the CD I got from an ISP

**e.** Select **Connect using a broadband connection**... and select **Next**.

FIGURE 13. Internet Connection

- Connect using a dial-up modem
  - This type of connection uses a modem and a regular or ISDN phone line.
- Connect using a broadband connection that requires a user name and password
  - This is a high-speed connection using either a DSL or cable modem. Your ISP may refer to this type of connection as PPPoE.
- Connect using a broadband connection that is always on
  - This is a high-speed connection using either a cable modem, DSL or LAN connection. It is always active, and doesn't require you to sign in.

**f.** Type in a name for the connection, such as **AirLink PPPoE Connection**. Select **Next**.

**PPPoE**

The name provided here will not effect the connection in any way. It is only a label for the icon. It can be the name of your Wireless Service Provider, your modem, or any other designation for the connection.

FIGURE 14. Connection Name

Type the name of your ISP in the following box.

ISP Name

AirLink PPPoE Connection

The name you type here will be the name of the connection you are creating.

**Optional:** If you have multiple users configured for your computer, you may be prompted for **Connection Availability**. If you select **My use only**, the account currently logged on will be the only one able to use this DUN connection.

**g.** Enter the user name and password you configured for *HOSTUID* and *HOSTPW* above. If you want to allow others to use the same login for the modem, select **Use this account name and password**... Select **Next** to continue.
FIGURE 15. Account Information

Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)

- User name: Same as *HOSTUID configured earlier
- Password: Same as *HOSTPW configured earlier
- Confirm password: 

- Use this account name and password when anyone connects to the Internet from this computer
- Make this the default Internet connection

h. If you want to add a shortcut for this connection to your desktop, check Add a shortcut...
Select Finish to exit the Network Connection Wizard.

FIGURE 16. Finish

2. Configure the connection.

After you complete the New Connection Wizard, there are a few more things you will want to configure in the connection.
FIGURE 17. Connect

![Connect Airlink Modem](image)

a. When the Connect window opens, select Properties.

Optional: On the General tab, if you gave the modem a name with *MODEMNAME above, you can type in that name as the Service Name.

FIGURE 18. Connection Properties

![Connection Properties](image)
b. Select Networking. Select Settings. Remove the checks from all three PPP settings. Select OK.

FIGURE 19. Connection Properties - PPP Settings

![PPP Settings](image)
Optional: You may want to check the Options tab and change the settings for applications you might be using. The default options are generally applicable for most uses.

c. Unless specifically directed to do so by Support or your network administrator, you should not need to make any changes to the options on the Networking, Security, or Advanced tabs.

Connecting to the Internet with PPPoE

Now the PPPoE connection can be run and a data connection can be established.

1. Connect your computer and the modem to the same local network using a hub or a switch.

   Note: If you need to connect your computer directly to the modem without a local network, you will need to disable DHCP in the modem and manually change the IP address of your computer to match the subnet of the IP address the carrier has given to the modem.

2. Start the PPPoE by Start > Connect To > AirLink PPPoE (or whatever you named the connection). It will be listed on your Network Connections window under the heading Broadband.

   FIGURE 20. MS Windows XP: Connect

   ![Connect](image)

   a. Enter the **User name** and **Password** you configured for *HOSTUID and *HOSTPW above.
   b. Select **Connect** to connect to the modem and the Internet. When you’re connected, an icon should appear in the system tray showing the connection status.

   FIGURE 21. MS Windows XP: Connect

   ![Connect](image)
Configuring your router for PPPoE with the AirLink modem

If your network router has PPPoE discovery, the AirLink modem will be discovered on the intranet through PPPoE discovery process, which uses broadcast Ethernet packets. Once found, the modem can be designated as the primary or failover connection.

Your network router should be configured to make a PPPoE connection using the username and password configured with *HOSTUID and *HOSTPW, and the service name configured with *MODEMNAME (optional). It should also be configured to re-route packets through the connection with the modem.

Note: If you will be connecting directly, no hub or switch, from your computer or router to the modem, you may need to disable the modem’s DHCP server completely. To do so, you will need to use a terminal application and typed AT Commands.

AirLink Technical Support

If you encounter problems with operation of your AirLink modem, AirLink’s support staff can help.

Caution: The configuration suggestions offered in this guide are not supported nor is any equipment other than AirLink products. Only the operation of the modem or software obtained directly from AirLink is supported. Refer to the User Guide for your modem or the AirLink website for AirLink product warranties.

AirLink Support Web Site

The AirLink web site is updated frequently with Setup Wizards, Utilities, How-To Guides, and other documentation: http://www.airlink.com/support.

AirLink Documentation and Guides

- **Modem User Guides** - These guides are specific to your modem type, cellular provider, and cellular technology and contain comprehensive information about the operation of the modem and its features.

- **Modem Quick Start guides** - These guides are also specific to the modem type, cellular provider, and cellular technology and are a step by step guide to activating the modem using the Setup Wizard or other steps as applicable.

- **Utility Guides** - These guides focus on the features of one of the AirLink modem utilities: Wireless Ace, AceView, AceNet, Modem Doctor, etc.

- **Application Notes and How-To Guides** - These guides detail configuring the modem to work with a specific feature set or how the modem can be set up to work with a specific 3rd party (non-AirLink) device.
• **Data Sheets** and **White Papers** - These are technology based information documents.

**Contacting Technical Support**

For support assistance please email support@airlink.com or call 510-781-9760 Monday through Friday 5 AM to 5 PM Pacific Time (8 AM to 8 PM Eastern Time). Support is not available weekends or holidays.

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