Dynalink

WLAN USB Adaptor

Quick Setup Guide

QWLL100

This Quick Set-Up Guide only provides you with the basic instructions for setting up these wireless adaptors on your computer. A complete user manual that includes an illustrated step-by-step guide can be found on this CD.

1 Introduction

A Wireless Local Area Network (WLAN) serves the same purposes as a conventional wired Ethernet network (LAN) but only without the wires. Computers are linked together by radio waves. The wireless adaptor is your "wireless network card". It turns your computer into a wireless station, allowing it to connect to other wireless stations or wireless access points to share network resources including Internet access. Your Dynalink wireless adaptor is Wi-Fi certified to the IEEE 802.11b standard. This ensures wireless connectivity among all wireless equipment that meet the same 802.11b standard irrespective of vendors.

THIS PRODUCT CAN BE SET UP ON TWO TYPES OF WIRELESS NETWORKS

1. **Infrastructure network**
   In an infrastructure network, your wireless adaptor connects your computer to a wired network via a wireless access point. This enables your computer to share all available resources including Internet access and peripherals on the wired network.
2. **Ad-hoc (peer to peer) network**
   This is a computer network built of wireless stations. Your wireless adaptor connects your computer to other wireless stations for file sharing.

WIRELESS PRIVACY

Privacy is an important issue with wireless. These functions are provided for access control and security:

1. **Service Set ID (SSID)**
   This is a user specified name that uniquely identifies a wireless domain. You should set your wireless adaptor to use the SSID for the wireless network.
2. **Wired Equivalent Privacy (WEP)** is an authentication algorithm that protects users from eavesdropping. When enabled, all wireless stations always transmit data encrypted using a key of your choice. The receiving station will use the same key for decryption.

2 Installing the adaptor, driver & wireless utility

Plug the QWLL100 into the USB port of your computer. Windows will detect new hardware and ask to install a driver. Insert the manufacturer's CD into your CD drive.

Windows XP and 2000
Windows will display a **Found New Hardware Wizard**. Select **Install from a list or specific location [Advanced] - Next**. Click **Browse** and then **My Computer**.

Browse to **D:\2KXP** (Substitute D: with your CD drive letter). Wait for Windows to finish copying files. Click **Finish** to complete installation.

Windows 98
Windows will display an **Add New Hardware Wizard**. Click **Next** and select **Search for the best driver for your device (Recommended) – Next**. Tick the **CD-ROM drive** option. Click **Next** to allow Windows to search and copy files from the CD. You may need the Windows 98 CD to complete the driver installation. Then click **Finish** to complete and **OK** to restart your computer.

Windows ME
Windows will display an **Add New Hardware Wizard**. Select **Specify the location of the driver (Advanced) – Next**. Tick the **Specify a location** box. **Browse** to **D:\ME** (Substitute D: with your CD drive letter) – **Next** to and copy files from this folder. Then click **Finish** to complete and **OK** to restart your computer.

Both the device driver and wireless configuration utility have been loaded into your computer. Now follow the next section to configure the adaptor properties.

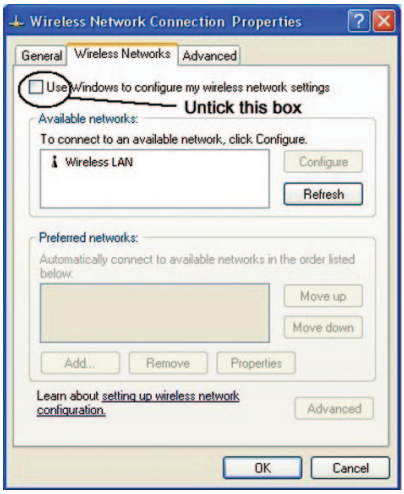
3 Configuring the Wireless Adaptor

Before you start you should know:

1. The type of network you are connecting to, infrastructure or ad-hoc.
2. The SSID of the network you are connecting to.

The SSID is already determined on an existing network by the network administrator. You should set up your adaptor in order to comply. Only when you are setting up a new network, there is the option on choosing SSID.

Windows 2000, Windows ME or Windows 98 users should now follow section 3.2.



3.1 IMPORTANT NOTE FOR WINDOWS XP

Windows XP comes with a built in **Wireless Network Connection** utility for wireless adaptor configuration. After completing the steps in section 2, both the Windows built in wireless network utility and the manufacturer's wireless configuration utility are active.

To avoid confusion, use only one of the two available utilities to configure your wireless adaptor. To disable the Windows XP built in utility, click open the **Network Connection** icon on the system tray.

Select **Advanced** and untick the **Use Windows to configure**... box as illustrated. Click **OK** to finish. Now follow section 3.2.

If you wish to use the Windows XP built in wireless utility instead of the utility supplied by the manufacturer, go directly to section 3.3.

3.2 USING THE MANUFACTURER'S WIRELESS LAN CONFIGURATION UTILITY

After completing the installation as described in section 2, you should see a **Wireless Adapter Status** icon on the lower right hand corner of your Windows desktop.

Alternatively, go to **Control Panel** and open this icon:

Either option will open the **Wireless LAN Configuration Utility**.

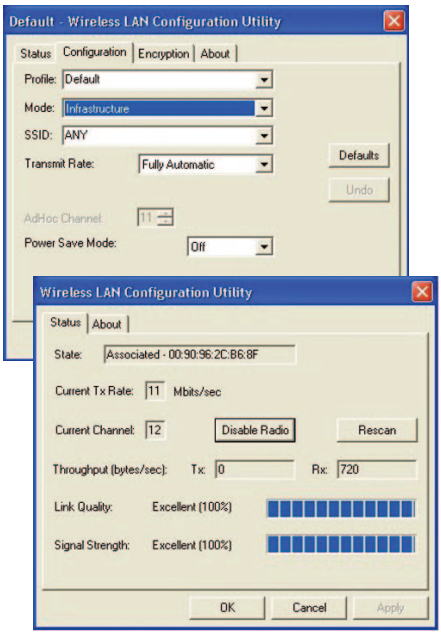
3.2.1 CONNECTING TO A WIRELESS ACCESS POINT (INFRASTRUCTURE MODE)

1. Select the **Configuration** tab.
2. In **Mode**, select **Infrastructure**.
3. In **SSID**, enter the SSID. All wireless adaptors should use the same SSID as the access point.
4. Click **Apply**.

Your adaptor will automatically tune into the channel number of the access point.

In the **Status** page, the wireless link quality indicators are displayed. The MAC address of the access point your adaptor is associated with is displayed under **State.**

If the wireless network has security features enabled, configuration is not complete at this stage. Please proceed to section 4 for setting up wireless privacy.



3.2.2 CONNECTING TO OTHER WIRELESS ACCESS STATIONS (ADHOC OR PEER-TO-PEER MODE)

The procedure is the same as the previous section except:

1. In **Mode**, select 802.11 AdHoc. In **Channel**, select the channel number desired.
2. In **SSID**, enter the SSID. All wireless stations should use the same SSID.

The wireless link quality indicators are not available for this mode of operation.

If the wireless network has security features enabled, configuration is not complete at this stage. Please proceed to section 4 for setting up wireless privacy.

3.3 USING THE WINDOWS XP BUILT IN WIRELESS CONFIGURATION UTILITY

You may choose the Windows built in **Wireless Network Connection** utility for configuration and monitoring. The utility can be accessed via the **Network Connection** icon on the system tray.

1. Double click the **Network Connection** icon to open the **Connect to Wireless Network** window. You will see all the access points or wireless stations that are available.
2. Select the access point or wireless station you intend to join.
3. If the target network has been set with WEP, you must enter the same WEP key in the **Network key** field. Otherwise leave blank. If WEP is not used, tick the **Allow me to connect**... box
4. Click **Connect** to join the target network.

After successful connection to the target network, double-click the icon on the system tray again. The **Wireless Network Connection Status** window displays the link status.

If the wireless network has security features enabled, configuration is not complete at this stage. Please proceed to section 4 for setting up wireless privacy.

4 Setting Up Wireless Privacy

4.1 WEP

WEP is for protection against eavesdropping and prevention of access from unauthorised wireless stations. Both 64-bit and 128-bit encryptions are supported. The 128-bit option is more secure but it impacts more on the effective throughput of the network than the 64-bit option.

The WEP setting is already determined on an existing network by the network

administrator. Only if you are setting up a new network there is the option on the WEP setting.

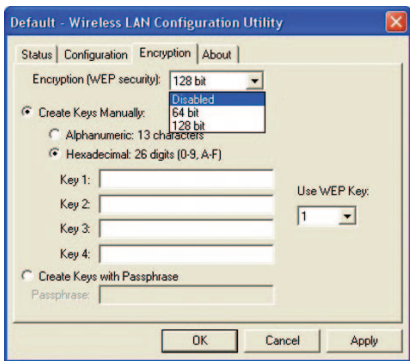
Before you start you should know:

1. The type of encryption, 64 or 128-bit.
2. The encryption keys.
3. The key number to be used.

These settings must be identical to those on the access point or wireless stations. If the network uses no encryption, go to **Encryption** and check that the setting is disabled.

If the network is protected by WEP:

1. Select **Encryption** from the **Wireless LAN Configuration Utility**.
2. Choose **64** or **128 Bit** encryption.
3. Enter the WEP keys in either **Alphanumeric characters** or **Hexadecimal digits**. The four keys, including the one selected as **WEP Key to use**, are used to decrypt the data you receive. In the **Use WEP Key** box, select the key number to encrypt data.
5. Click **Apply** to finish.



4.2 MAC ADDRESS FILTERING OR ASSOCIATION CONTROL

Some access points block access from unauthorised clients by registering the MAC address of all authorised clients. If the network uses this function you must supply the MAC address of your adaptor to the network administrator for inclusion into the access point. The MAC address of your adaptor is printed on a small label affixed to the product. The label reads 0020E0xxxxxx. 0020E0 is the first half of the address.

5 *Removing the wireless adaptor from computer*

It is recommended that you follow the standard Windows procedure for disconnecting a USB device from your computer.

1. Double click the **Safely Remove Hardware** icon on system tray.
2. Select the device, click **Stop** and then **OK.**
3. When the safe to remove message is displayed, click **OK** and remove device.

6 Troubleshooting

1. ***Cannot connect to access point (infrastructure mode) or other wireless stations (ad-hoc mode)***

- Check that the 'ready' light on the adaptor is on. If not, check that wireless radio is not turned off in the **Wireless LAN Configuration Utility**.
- Make sure the adaptor is using the same SSID as the access point or wireless stations.
- In infrastructure mode if MAC address filtering (see section 4.2) is enabled at the access point, contact the network administrator to include your adaptor's MAC address into the list of authorised clients.
- If WEP is used, make sure the same encryption (64- or 128-bit) is selected and the WEP key has been entered correctly.
- Incorrect IP address or network setting could be the reason. Check these settings within Windows TCP/IP settings and make sure they conform to the network settings. Consult the network administrator if necessary.

2. ***How to find the MAC addresses of my wireless adaptor***

- The MAC address of your Dynalink adaptor can be read off from a label affixed on the product. The label reads 0020Exxxxxx. 0020E0 is the first half of the address.
- If the adaptor is already installed, alternatively go to the DOS prompt, type ipconfig /all. The MAC address is shown under **physical address** as a group of 6 double digits.

3. ***Poor Link Quality***

If the link quality is poor, it may be due to one of these reasons:

- Radio interference (see next section).
- Distance between wireless adaptor and access point or other wireless station is too far. Relocate the computer to reduce the distance, or install extra access points to relay the signal.

4. ***How to avoid radio interference***

Other wireless devices and appliances on site may share the same 2.4 GHz band. If undesirable effects are observed, try using a different channel. Alternatively, switch the other devices to use a different channel. Also try the following:

- Move the computer to a different location or orientation.
  If the radio interference source is known, increase the separation between the wireless computers and the device causing the interference.
- Do not share the same AC power socket between the computer and the device generating the interference.
- Stay away from microwave sources, eg. microwave oven and large metal objects.

Warranty

Dynalink Modems Ltd warrants this product against defects in materials and workmanship for a period of twelve months from the original date of purchase. We will, at our discretion, repair or replace the faulty unit, free of charge, provided it is returned to us with proof of purchase from an authorised dealer within the warranty period. Return delivery after repair will be paid for by Dynalink Modems Ltd within New Zealand/Australia. We reserve the right not to repair or replace goods that:

- have been mishandled, abused or not installed according to the guidelines as outlined in the instructions.
- have been subjected to a power surge from other equipment or other external factors.
- have been altered or modified.

Help

Always check that your hardware is installed correctly. Check our web site for the latest information and troubleshooting guide. If you have difficulties, contact Dynalink Technical Support for issues relating to installation and operation.

New Zealand www.dynalink.co.nz/support
Australia www.dynalink.com.au/support

Contact Dynalink Modems Technical Support:

New Zealand
Phone 0800 653 962
Fax 0800 503 962
(Monday-Friday: 8:30am-7:30pm)

Australia
Phone 1800 653 962
Fax 1800 063 962
(Monday-Friday: 8:30am-5:30pm)