

unicorn information system

Model:DW-220U

Chapter 1 Introduction

DW-220U is a 11N wireless USB network adapter with up to 150Mbps wireless transmission rate. It complies with the latest IEEE802.11n standard, and is compatible with 802.11b/g wireless devices. With mini and exquisite design, it is easy to carry along. It supports WPS encryption method to quickly implement wireless encryption and secure network; supports WMM to better smooth video and sound; supports Windows 7, Vista, Windows XP, Windows 2000, MAC OS, Linux operation systems etc.

In conclusion, DW-220U is a high-performance and cost-effective 11N wireless USB network adapter with good signal, long transmission range etc.

1.1 Package Contents

One Wireless USB network adapter

One Software CD (includes user guide)

1.2 LED Indicator Description

There is one status indicator on the side of this wireless network

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adapter. It always remains ON when working correctly and flashes when transferring data.

1.3 Product Features

- Supports 150Mbps receiving and sending rate
- Complies with IEEE 802.11n and is compatible with IEEE 802.11b/g standards
- Provides USB2.0 port
- Supports 20MHz/40MHz frequency width
- Detects network and changes the transmission rate automatically
- Provides two work modes: Infrastructure and Ad-Hoc
- Supports 64/128-bit WEP encryption, and WPA, WPA2 encryption methods
- Provides WPS encryption button to easily implement wireless encryption and secure network
- Compatible with Windows 7, Vista, Windows XP, Windows 2000, MAC OS, Linux systems, etc.
- Supports WMM to better smooth your sound and video

1.4 Product Usage

W311M/W311Ma Wireless USB Adapter offers fast, reliable and cost- effective solution for wireless access. It is best used in the following circumstances:

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1. Enables staff members who require greater mobility in the office to have access to wireless networks anywhere inside their company.
2. Enables wireless communication for companies or places which are not suitable for wired LAN installation because of budget or building environment restrictions, such as historical buildings, rentals, or places for short-term usage.
3. Suits businesses or individual who often changes network topology.
4. Suits company or individual who would like to avoid using expensive cables or renting lines etc.

1.5 Before Installation

1. Please peruse this user guide before you install and use the product.
2. Please close or uninstall the configuration programs of other manufacturers' before you install the configuration programs of W311M/W311Mato avoid possible UI collision.
3. In order to avoid possible network collision between this Unicorn network adapter and those of other manufactures, we recommend you to first disable the network of other

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manufacturer when installing drive.

1.6 Disable other manufacturer's wireless network adapter

1. Right click "My Computer" and select "Properties. Then select "Hardware" and click "Device Manager"
2. Select the wireless network adapter you want to disable then right click and select "Disable"

1.7 Product Maintenance

1. Please keep the product away from water and humid environment to guarantee its normal performance
2. Protect it against other noxious substances (such as acid and alkali etc).
3. Please don't keep the product directly exposed to the sun or other object emitting great heat.

Chapter 2 Installation Guide

This chapter will assist you in installing network adapter software packet by using the included CD. The software packet program has integrated driver and configuration software. So when you are installing driver the configuration software will be automatically installed as well.

Windows XP is used as an example to explain the installation steps. Installation in other operation systems, please refer to their corresponding prompts.

1. Please insert the Wireless USB Adapter into the USB port of your computer.



Or



2. System will pop up a "Found New Hardware" dialogue box. We recommend you to select "Cancel" and use the attached quick installation CD to easily install driver and configuration software.
3. Insert the included CD into the CD drive of your computer to

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auto-run the program. (If it doesn't auto-run, please double click "Unicorn.exe" in the CD.). When the welcome screen appears click "Run" button.

4. Tick "I accept the terms of the license agreement" and click "Next".
5. There are two installation methods: one is to install driver and Unicorn WLAN Config Tool. The other is to install driver only . We recommend you to use the default installation method.
6. Click "Install" to install the driver and configuration software.
7. Click "Finish" to finish the driver and configuration software.

Chapter 3 Client Utility Interface

This wireless USB network adapter uses Unicorn client utility interface (In the following text it is abbreviated to UI). All functions can be configured via this software.

Select "Start"—"All Programs" —"Unicorn Wireless"— Unicorn Wireless Utility", or click the "Unicorn Wireless Utility" shortcut on your PC's desktop to start UI.

Click Unicorn UI on the right-down corner on the desktop to switch Unicorn UI and Zero config, and to exit UI etc.

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Note:

1. In Windows 7 and VISTA, there is no switch function between Unicorn UI and Zero config.
2. Operation on Unicorn UI becomes impossible when wireless is disabled or it is switched to Zero config.
3. In Windows 2000 system, you need to use Unicorn UI to conduct wireless configuration.
4. In Windows XP or Windows 2003 system, if you want to use the system internally attached wireless configuration program to configure the network adapter, please first disable Unicorn UI or switch UI to Zero config.
5. Client application program is "Station Mode" (Client Mode) by default.

mode (Client Mode) and AP mode (soft AP Mode).3

3.1.1 Network Status

The Network Status window displays status information regarding the wireless network as the picture below:

3.1.2 Site Survey

The Site Survey interface displays the available wireless networks in the area. When you select a wireless network name the detailed information of this selected wireless network will be displayed.

Before you connect wireless network, please click "Refresh" to update the wireless network list and select the one you want to connect, then click "Connect" button.

When connecting wireless network, a dialogue box will pop up. For the un-encrypted network, directly confirm instead of changing the configuration, however for the encrypted wireless network, configuration of key is needed.

3.1.3 Profile Management

This window saves the general wireless network parameters and profiles, which helps the wireless adapter to quickly connect to the wireless network you want. Clicking a entry in the list displays the detailed information of the selected profile. To connect to wireless network, click “Connect” or double click wireless network name.

Modify: To modify Site Status and Security Setting of the existing profiles.

Delete: To delete the existing profiles.

New: To create a new profile and configure the site status and security setting.

1. Create a new configuration file

1) Click “New” to create a new file.

2) Configure “Site Status” in the appearing dialogue box. There are Infrastructure and Ad-Hoc two network types and the default is Infrastructure as the below picture shows.

Infrastructure is a application mode which integrates the wired

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and wireless LAN architectures. What makes it different from Ad-Hoc is that the computer installed with the wireless network adapter has to fulfill wireless communication via AP or wireless router. It has “wireless AP + wireless network adapter” mode and “wireless router + wireless network adapter” mode.

Ad-Hoc is a special wireless mobile network application mode. All nodes in the network are all equal.

When you are using wireless network adapter to connect AP or wireless router, please select Infrastructure.

3) Security Setting: enables you to configure authentication type, encryption type, and key. The relevant configurations here must be the same as those of the connected AP or router.

Note: If the wireless router or AP you want to connect closes SSID broadcast function, the wireless network adapter will not be able to scan this wireless network SSID. However, you can create the corresponding configuration file to connect.

4) Finish the above, the added wireless network information will be shown in the profile name list. Select the profile name and

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click “Connect” or double click profile name to connect the wireless network device.

5) After successful connection, click “Status” to view the connection status as the picture below.

2. Ad-Hoc connection

1) Set the IP address of the wireless network adapter you want to connect at the same net segment.

2) Click “New”.

3) Configure Site Status: Input SSID to identify the wireless network and select Ad-Hoc for network type.

4) Security Setting: Configures authentication, encryption type and key. Click OK.

5) The added wireless network information will be shown in the profile list. Select the profile name and click “Connect” or double click the profile name.

6) Search wireless network in devices of other nodes. Double click the wireless network you want to connect and it will prompt you to input a key. After that, click “Connect”.

- 7) It shows as the picture below after successful connection.

3.1.4 Statistics

Statistics is used to calculate the total Rx and Tx data packets, including the successful and error packet amount.

Clear: click this button to delete the existing statistics and restart new statistics.

3.1.6 WPS Setting

WPS setting is enabled only on WPS-compliant wireless devices. It helps you to quickly configure the wireless network security.

Refresh: To update the Pin code.

Rescan: To rescan the WPS-enabled wireless network in the area.

Disconnect: To disconnect from a connected wireless network.

PIN: Click this button for PIN mode connection.

PBC: Click this button for PBC mode connection.

Please refer to appendix 3 for detailed configuration steps for PIN and PBC.

3.2 AP Mode

AP Mode Overview

Wireless network adapter can also serve as an access point to transmit wireless signals and create a wireless network, allowing other wireless clients to access the network.

Click the AP Mode on configuration interface to enter the AP Mode.

3.2.1 Basic Setting

This window is used to configure the AP's basic parameters, including SSID, wireless mode and channel (SSID is Unicorn by default, and channel is 1 by default).

SSID: Wireless network's ID name scanned by wireless adapter as a network identifier.

Channel: 1~11 channels provided.

Restore Default: to restore the set parameters to factory default settings.

Apply: to make the configurations effective.

3.2.2 Security Setting

This window is used to configure the wireless network's security authentication information.

WEP: Supports 10/26 bits Hex characters or 5/13 ASCII.

WPA-PSK: Supports 8-63-bit ASCII or 8-64 Hex characters.

WPA2-PSK: Supports 8-63-bit ASCII or 8-64 Hex characters.

WPA-PSK/WPA2-PSK: Supports 8-63-bit ASCII or 8-64 hex characters.



Note:

The Hex characters include numbers 0~9 and letters a-f.

ASCII characters include any Arabic digits/letters and characters.

1. Configure AP Mode

- 1)First input the SSID which is easy to be identified by you in the basic settings and keep other information unchanged.
- 2) Select “WPA-PSK” in the drop-down menu of authentication type under security setting. Choose “AES” as encryption type, input a key and click “Apply”.
- 3) Other clients can have the following picture after their scanned usable wireless networks are successfully connected.

3.2.3 Access Control

Access Control is based on the MAC address to allow or prohibit

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a specified client's access to this wireless network.

Product Specification

Standard	IEEE802.11g, IEEE802.11b, IEEE802.11n
Port	USB2.0
Frequency Range	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
Transmission Rate	11b:1Mbps 11g:6Mbps 11n(HT20):6.5Mbps 11n(HT40):13.5Mbps
Transmission Power	Max 12.67dBm
Modulation Method	OFDM, CCK
Working Temper.	0°C ~ 45°C
Storage Temper.	-40°C ~ 70°C
Working Humidity	10% ~ 95%RH non-condensing

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.