# **USB Wireless LAN CARD**

# **User Manual**

1.	Product Introduction
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3.	Software Installation

4.

## **1. Product Introduction**

Thank you for using USB WLAN product. This installation guide will help you install USB Wireless LAN CARD and connect to the Internet quick & easy.

## Package Contents

- 1. USB Wireless LAN CARD
- 2. Quick Installation Guide
- 3. Manual & Driver CD Disc
- 4. USB cable (Optional)

### **Form Factor**



### System Requirements

- 1. Desktop/ Laptop with USB port and CD-ROM driver
- 2. Operating System: Linux/ Mac OS X/ Windows 98 SE/ME/2000/XP

## Applied Environments

There are two application modes for this WLAN card, the "Ad-Hoc mode" and the "Infrastructure mode". (For further explain, please refer to the "WLAN Application Modes" below) Different modes require different settings. Please check the environment first.

- **Infrastructure mode**: Via "Access Point" (AP) to connect to the Internet. This mode further gives wireless access to Internet or data sharing under a previously wired environment.
- Ad-Hoc mode: Connecting to other computer with WLAN card. This mode does not need AP to connect to each other.



## WLAN Application Modes

	Ad-Hoc mode is a Peer-to-Peer mode. Without an AP, computers can also					
Ad-Hoc Mode	connect to each other by USB Wireless LAN CARD. With this mode,					
	computers are able to share data or connect to the Internet if one of them					
	is already connected to.					
Infrastructure	Infrastructure mode including an AP, unlike Ad-Hoc mode, enabling users					
Mode	to best utilizes the frequency bandwidth of the AP.					
	This mode enables users to integrate wired and wireless infrastructures.					
	Through APs, wireless users are able to access wired resources, for					
	example: Internet, database, and printers.					
Advantages	Comparing to Ad-Hoc mode, Infrastructure mode has the following					
	advantages:					
	✓ <b>Longer distance:</b> Through AP, the wireless access distance is longer.					
	✓ <b>Roaming:</b> The wireless devices can move within the AP support					
	area.					
	✓ Integration of wired and wireless environment.					

## 2. USB Wireless LAN Card Installation

Note: The screens showed below are from Windows 2000. For other Windows system, the steps are the same, but the screens shown will be a little different.

- 1. After plugging USB Wireless LAN Card, the USB stick, into your PC, it will automatically find and alert a New USB Device. Click "Next" to continue.
- 2. You'll see the following screen. Please choose the default item (with "Recommended") and click "Next".

Found New Hardware Wizard			
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.			
This wizard will complete the installation for this device:			
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.			
What do you want the wizard to do?			
<ul> <li>Search for a suitable driver for my device (recommended)</li> </ul>			
O Display a list of the known drivers for this device so that I can choose a specific driver			
< Back Next > Cancel			

3. Please choose "CD ROM", and insert the "Manual & Driver CD-ROM", then click "Next".

Found New Hardware Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify. To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations: Floppy disk drives
CD-ROM drives
Microsoft Windows Update
< Back Next > Cancel

- 3. Your PC will recognize the device of "USB Wireless LAN Card", and click "Next" to install driver.
- 4. Finally, click the "Finish" to leave this dialogue window.
- 5. After installation, please check whether the installation is success.

#### → Start→ Setting→ Control Panel

Double click "System"→click "Hardware"→Device manager→Network Adapters. If the install is success, it should include "USB Wireless Lan CARD" item.



# 3. Software Installation

1. Insert the "Manual & Driver CD-ROM" into the CD-ROM driver of your PC, and you'll see the software installation window as shown below.

♥USB Wireless LAN Card <b>USB WIRELESS LAN</b> . Setup Driver & Utility						
-	<b>Manua</b> 中文 English	al				
₩1.2						

- 2. Click "Setup Driver & Utility", and choose the "default" item through the installation process.
- 3. After successful installation, you'll see the new icon appear in the Icon Tray.



- 4. The software will automatically search for available APs for connecting to the Internet.
- 5. If the installation fell, the Icon appeared is in red color.



#### **Software Utility**

- 1. Click the icon and the software utility window shows up.
- 2. Status window allows you to change Operation Mode, Channel, SSID, Tx Rate, Int Roaming, and Radio. It also shows the connecting signal and quality for you to adjust related infrastructures and configurations.

USB Wireless LAN CARD Mon	nitor Utility	×
USB Wireless L	LAN Card	
Current Profile:	: Default	
Monitor Statistics Site S	Survey   Encryption   Advanced   Profiles   Info	
Operating Mode	Infrastructure	
Channel	9 Change	
SSID	Dlink	
Tx Rate	Auto	
Int. Roaming	Disabled Cancel	
Radio	On 🔽	
Status	Associated - BSSID: 00-80-C8-AC-B7-D4	
Signal Strength		
Link Quality	100 % 100 %	
	Hide	

3. Statistics window: It shows the real time transmitting and receiving status.

USE	8 Wireless I	LAN CARE	) Monitor Util	ity		2	
	USB Wireless LAN Card						
	Current Profile: Default						
	Monitor Statistics Site Survey Encryption Advanced Profiles Inf						
				Tx	Rx		
	Data Packets Successful Unsuccessful			3349	4679		
				0	0		
	Mgmt Packets						
	Suc	cessful		6	18059		
	Unsuccessful			0	0		
	Reject	ted Packets		0	0		
					Clear		

4. Site Survey window: Click "**Scan**" to search all available WLAN devices and their status in current environment. Double click the device you want to connect.

USB Wireless LAN CARD Monitor Utility	×
USB Wireless LAN Card	
Monitor   Statistics Site Survey   Encryption   Advanced   Profiles   Info	1
ESSID       SSID       Signal       Ch       WEP       Type         00-07-40-76-D9-23       00074035CD26       100 %       11       No       Infrastruc         00-80-C8-AC-B7-D4       Dlink       100 %       9       No       Infrastruc         00-90-CC-25-E0-51       PCi       100 %       7       No       Infrastruc         Image: Comparison of the struct o	
Hide	

5. Encryption window: USB Wireless LAN Card is able to provide 64/128Bit encryption.

USB Wireless L.	AN CARD Monit	or Utility			×
ſ	USB Wireless LA	IN Card			
Monitor   \$	Current Profile: Statistics   Site Su	rvey Encr	yption Advan	ced   Profiles	Info
	Encryption		Disabled	•	
	Key #1 Key #2 Key #3 Key #4	30000000000 30000000000 30000000000	0K 0K 0K		
	WEP Key to u Authentication	ізе і Туре	Key #1 Auto	<b>Y</b>	
				Submit	
				Hide	

6. Advanced window: It provides you to adjust PREAMBLE, Fragmentation Threshold, RTS/CTS Threshold, and Power Save function.

USB Wireless LAN CARD Monitor Utility	×				
USB Wireless LAN Card					
Current Profile: Default	•				
Monitor   Statistics   Site Survey   En	cryption Advanced Profiles Info				
C Long Preamble Type C Short © Auto	Tx Power Level (mW)				
Fragmentation Threshold					
(Disabled)	2346				
(Disabled)	2347				
Power Save	Disabled				
	[Submit]				
	Hide				

7. Profiles window: It provides customers to change settings and save them in the configuration file.

USB Wireless LAN CARD Monitor Utility	×
USB Wireless LAN Card	
Current Profile: Default	
Monitor   Statistics   Site Survey   Encryption   Advanced Profiles   Info	Ε,
Existing profiles       Preview of: 'Default'         Default (in use)       SSID:         Mode:       Infrastructure         Channel:       10         Tx Rate:       Auto         Power Save:       Off         Encryption:       Disabled         Authentication T:       Auto         Radio:       On         Int. Roaming:       Off         Wizard       "Your current profile is"; 'Default' and it is read-only.Use the New' command on the left to create a custom profile.	
Hide	

8. Info window: It shows the latest software version and MAC address.

USB Wireles	s LAN CARD Monitor U	ftility	×
	USB Wireless LAN (	Card	
	Current Profile: D	efault	
Monitor	r   Statistics   Site Survey	y Encryption Advanced Profiles Info	
	Driver	2.9.8.345	
	Firmware	1.102.0.103	
	Application	3.3.4.50	
	MAC Address	00-04-AC-6C-32-70	
		Hide	

# Appendix

1. Operation Mode:

USB Wireless Lan Card has two modes, 'Infrastructure' and 'Ad-Hoc'. The default setting is "Infrastructure".

(Please refer to the Product Introduction)

2. Channel:

The channel setting should follow the regulation of the local government. For '**Infrastructure**' mode, the channel does not need to be set. It will automatically change to the same channel as AP's. In 'Ad-Hoc' mode, users can change the channel to match the connected computer.

3. SSID:

When STA (WLAN card) is in Ad-Hoc mode, all connecting STA should have the same SSID. When STA is in Infrastructure mode, the SSID will change to the same as AP's SSID. <u>Important: Capital and non-capital are different words in SSID setting.</u>

4. Tx Rate:

It determine STA's transmitting rate. There are 5 rated to choose, 1, 2, 5.5, 11Mbps, and Auto. The default setting is "Auto".

- 5. Int. Roaming: Its default setting is 'Disable', and does not need to be adjusted.
- 6. Radio:

The default setting is '**ON**'. It means to stop the STA's RF function. If your WLAN card is embedded, you can stop its function by turning the Radio "ON".

7. Encryption:

USB Wireless Lan Card provides 64/128bits encryption. Choose "disable", if you do not need this function.

When using Encryption, there are two configurations to setting:

- Choose from encryption key  $1 \sim 4$  to encrypt.
  - ✓ For 64bits encryption: <u>Using letters & numbers</u>: 5 digits ("a-z","A-Z","0-9") <u>Hexadecimal</u>: 10 digits ("a-f","A-F","0-9")
  - ✓ For 128bits encryption: <u>Using letters & numbers</u>: 13 digits ("a-z","A-Z","0-9") <u>Hexadecimal</u>: 26 digits ("a-f","A-F","0-9")
- Choose the Authentication type from open system, share key, and auto type. The default setting

is 'auto'.

#### 8. PREAMBLE:

This function determines the PREAMBLE TYPE that physical layer's PLCP will use. There are three modes to choose: LONG, SHORT, and AUTO. The default setting is AUTO, and the system will automatically choose the optimized mode.

9. Tx Power Level (mW): Does not open to change.

#### 10. Fragmentation Threshold:

This configuration determines whether needs to fragment the Frame during transmit. When fragment, if the transmit fell, computer only resent the fell frame instead of the whole file again. When the frequency band used is not clear, i.e. The S/N ratio is low, transmit is easier to fell. Under this situation, fragmentation is a good way to increase efficiency.

#### 11. RTS/CTS:

When frame smaller than the RTS Threshold value, the STA will automatically transmit the frame if the channel is available. If the channel is used, STA will follow the 802.11b regulation that would ask the receiving device whether to send the frame. This will take more time for devices to check with each other, but it also prevents the loss of frames.

#### 12. Power Save:

Determine whether to use power saving mode. The default setting is 'Disable'.