

Model # AWLC3025

User's Manual

Ver. 1A

REGULATORY STATEMENTS

FCC Certification

The United States Federal Communication Commission (FCC) and the Canadian Department of Communications have established certain rules governing the use of electronic equipment.

Part15, Class B

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interface, and
- 2) This device must accept any interface received, including interface 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 off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

DReorient or relocate the receiving antenna.

Dincrease the distance between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

CAUTION:

- To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
- 2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Table of Contents

INTRODUCTION1	
WIRELESS NETWORK OPTIONS 1	
The Peer-to-Peer Network (a.k.a. Ad-Hoc) 1	
The Access Point Network (a.k.a. Infrastructure) 2	
LED INDICATORS FOR WIRELESS CARDBUS CARD	
Power Indicator: (Orange LED)	
Act Indicator: (Green LED)	
INSTALLATION 4	
INSTALL THE DRIVER & UTILITY	
INSTALL THE DEVICE7	
Note for Windows 98 & ME users:7	
Note for Windows 2000 users:	
Note for Windows XP users:	
Verify Device Installation9	
CONFIGURATION11	
Accessing the Configuration Utility11	
MAIN TAB	
Advanced Tab	
Ргіуасу Тав	

WEP Configuration	
CCX Configuration	
WPA settings	
STATISTICS TAB	
About Tab	
UN-INSTALLATION	
APPENDIX	

INTRODUCTION

The **802.11g Wireless LAN Card** is a device that allows you to connect your computer to a Wireless Local Area Network (WLAN). A wireless LAN allows your system to use wireless Radio Frequency (RF) technology to transmit and receive data without having to physically attach to the network. The wireless protocols that come with this product ensure data security and isolation from interference generated by other radio frequencies.

This card also allows you to take full advantage of your computer's mobility with access to real-time information and online services anytime and anywhere. In addition, this device eliminates the hassle of pulling cable through walls and under furniture. It even allows you to place your system in locations where cabling is impossible. Modifying and augmenting networks has never been so easy.

Wireless Network Options

The Peer-to-Peer Network (a.k.a. Ad-Hoc)

This network installation lets you set a small wireless workgroup easily and quickly. Equipped with wireless PC Cards or wireless PCI cards, you can share files and printers between each PC and laptop.



- 1 -

You can also use one computer as an Internet Server to connect to a wired global network and share files and information with other computers via a wireless LAN.



The Access Point Network (a.k.a. Infrastructure)

The network installation allows you to share files, printers, and Internet access much more conveniently. With the Wireless LAN Card, you can connect wirelessly to a wired global network via an access point or wireless router.



- 2 -

LED Indicators For Wireless CardBus Card

Power Indicator: (Orange LED)

This LED will illuminate when the driver is installed.

Act Indicator: (Green LED)

This LED flickers when transmitting/receiving data.

- 3 -

INSTALLATION

Caution: Do not insert the **Cardbus adapter** into your computer until the procedures in "**Install Utility**" have been performed.

Install the Driver & Utility

1. Exit all Windows programs. Insert the CD into the CD drive of your computer.

If the setup menu does not appear automatically, go to your CD drive (e.g. drive D) and double-click on **autorun.exe.**

2. At the setup menu, click **Install Utility** to start the installation.



3. When the Welcome screen appears, click Next to continue.

- 4 -



4. The **Choose Destination Location** screen will show you the default destination chosen by the utility. Click **Next** to continue.

InstallShield Wizard	X
Choose Destination Location Select folder where Setup will install files.	E.
Setup will install WlanUtility in the following folder.	
To install to this folder, click Next. To install to a different folder, cli another folder.	ck Browse and select
Destination Folder	
C:\Program Files\AirLink101\WlanUtility	Browse
InstallShield	
< <u>B</u> ack	Next > Cancel

5. Follow the instruction to select the program folder. Click **Next** to continue.

- 5 -

InstallShield Wizard		×
Select Program Folder Please select a program folder.		
Setup will add program icons to the Program Folder lis name, or select one from the existing folders list. Click Program Folders: ArtLink101	ed below. You may type a new folder Next to continue.	
Existing Folders: Accessories Administrative Tools Adobe	<u>^</u>	
AtLink101 EPSON Printers FlashGet Games iiyama Macromedia		
nstallShield	Back Next > Cancel	

- 6. Remove the Installation CD from the CD drive.
- 7. Restart your computer.

Restarting Windows
Setup has finished copying files to your computer. Before you can use the program, you must restart your computer.
Choose one of the following options and click OK to finish setup.
Yes, I want to restart my computer now
O No, I will restart my computer later.
ОК



Install the device

Note: Make sure the procedures in "**Install Utility**" have been performed. In most cases, Windows will automatically install the driver after the computer is restarted, if the Found New Hardware Wizard appears, follow the steps below.

1. Insert the Cardbus into the cardbus slot.

Note for Windows 98 & ME users:

Before installing the device, make sure you have your Windows 98 or
ME CD at hand. You may be asked to insert the Windows 98 or ME CD
in order to install specific files.



Note for Windows 2000 users:

During the installation, when the "Digital Signature Not Found" screen appears, click "Yes" to continue.

- 7 -



Note for Windows XP users:

1. Select Install the software automatically (Recommended) and click				
	Found New Hardware Wizard Welcome to the Found New Hardware Wizard This wizard helps you install software for: 802.11g Wireless CardBus PC Card			
	If your hardware came with an installation CD If your hardware came with an installation CD What do you want the wizad to do? Installment of the great key and the commended Installment of the great key and the comment of the comment of the great key and the comment of the great key and the			

3. Click Continue Anyway at the Windows Logo testing screen.

- 8 -



4. Click Finish to complete the installation.



Verify Device Installation

To verify that the driver has been properly installed in your computer, go to Start \rightarrow Settings \rightarrow Control Panel \rightarrow System (\rightarrow Hardware) \rightarrow Device Manager. Expand the Network adapters item. If the 802.11g Wireless CardBus PC Card is listed, it means that your device is properly installed and enabled.

- 9 -



- 10 -

CONFIGURATION

After successfully installing the driver and utility, a Utility Icon will appear on the desktop.



If the Utility Icon doesn't appear automatically, go to Start \rightarrow (All) Programs \rightarrow Airlink101 \rightarrow Wireless LAN Utility.

Accessing the Configuration Utility

The Configuration Utility is accessed by double-clicking on the **Wireless** LAN Utility Icon on the Desktop.

All settings are categorized into 5 Tabs:

Main Tab

Advanced Tab

Privacy Tab

Statistics Tab

About Tab

- 11 -

Main Tab

The Main tab displays the current status of the Wireless Network Adapter.

Wireless LAN Configura	tion Uti	lity					
Main Advanced Privacy	Statistics	About	1				,
Status: Connected to network					r	External	Configuration
SSID	Mode	Ch.	Signal	BSS ID			Connect
✓ AP_Router	Acce	6	Normal	00-90-4	B-28-7C-96	;	
							Modify
							Rescan
Current Configuration Pref. SSID: AP Rout		BSS	SID: 00-9	30-4B-28-7	7C-96	Channel	6
BSS Type: Access Po			,			Tx Rate:	54 Mbps
Signal quality		-					10000 1000 100
Normal	-48/0				bps		10 0 K8P5 10 100
							1000 10000 100000
J					эк	Cancel	Apply

Item	Description			
External	Uncheck the box to use this utility to configure the			
Configuration	wireless network adapter. Or check the box to use			
	Windows XP's Wireless Zero Configuration			
	Utility.			
Status	Displays the information about the status of the			
	communication.			
SSID	The SSID is the Network ID shared among all			
	devices in your wireless network.			
	The name must be identical for all devices and			
	points attempting to connect to the same network.			
	✓ No encryption			
	Encryption enabled			
	4 ¥ For TI-Based WLAN			

- 12 -

Item	Description
	For TI-Based WLAN with encryption
Mode	Displays the type of connection: Access Point or Peer-to-Peer.
Ch	Displays the channel that is currently in use.
Signal	Displays the signal strength of the connection between the Wireless Network Adapter and the Access Point it connects to.
BBS ID	Displays the MAC address of the target device.

Current Configuration

5	
Pref. SSID	Shows the current SSID the wireless network
	adapter is connected to.
BSS Type	Shows the current connection type: Access Point or
	Peer to Peer.
Channel	Shows the current channel.
Tx Rate	Shows the current transfer rate.
Signal Quality	Shows the signal strength of the connection
	between the wireless network adapter and the
	device it connects to.
BSSID	The MAC address of the device that the wireless
	network adapter is connected to.

Connect	Highlight one of the devices from the device list and press the Connect button to access it.
	There will be two tabs for you to modify, see the detailed information on next page.
	Searches all available networks. Clicking on this button, the wireless adapter will start to rescan and list all available devices.

- 13 -

Preferred SSID:	AP_Router					- 4x Config ↓ 4× Enable
BSS Type:	Access Point	•	Tx Rat	e: Auto	•	Packet Burst Enabl
Channel:	6 - Pov	wer Mode:	No Power	Save	-	
Tx Power Level		lode	-	Profile		

Preferred SSID	Type in the SSID name of the device you want to
	connect to.
BSS Type	You can select the connection type: Peer-to-Peer,
	Access Point or Auto Mode.
Tx Rate	You can select the data rate or set to auto mode from the
	pull-down menu.
Channel	Select the channel you want to use.
Power Mode	No Power Save : the adapter will be in full active mode.
	Max Power Save : the power save mode will be enabled.
4x Config	Select to disable or enable the TI-Based 4x function.
Packet Burst Enable	Enable this function (if the device you connect
	supports Packet Bursting Mode) to increase the
	efficiency of your network.
Mode	Select IEEE 802.11b(B-Only), 802.11b +(B-Plus),
	802.11g (G-Only) standard or B&G Mode (If you
	choose this option the device will automatically convert
	the suitable standard).
Profile	
	Enter the profile name and click the Save button to
	save your configuration, To open the profiles you



	saved, select the profile from the pull-down menu and then click the Load button.
Tx Power Level	Select the transmit power level: Low Power, Medium-Low Power, Medium Power, Medium-High Power, High Power. The power level function is used to extend the communication distance.

Thresholds		Retry limits		
Fragment Threshold:	4096	Short	10	
RTS Threshold:	4096	Long	4	
Preamble				
Long Preamble				
C Short Preamble				

Fragment Threshold	You can fragment the MSDU or MMPDU into smaller sizes to increasing the reliability of frame transmission. (The maximum value of 4096 means no fragmentation is needed). The throughput performance will decrease however.
RTS Threshold	This value should remain at its default setting of 4096 . Should you encounter inconsistent data flow, only minor modification of this value is recommended.
Preamble	A preamble is a signal used in wireless environment to synchronize the transmission timing, including Synchronization and Start frame delimiter. (Note : If you want to change the Preamble type to Long or

- 15 -

Short , please check the settings of your access point or wireless router.
You can set the number of retries if no acknowledgement appears from the receiving station.

- 16 -

Advanced Tab

The **Advanced** tab displays the current status of the Wireless Network Adapter.

Authentication:	Open System	Encryption:	Disable
Power Mode:	No Power Save	Preamble:	Long
		Reg. Domain:	FCC
Tx Antenna:	Antenna 2	MAC Addr:	00-E0-98-BE-1E-FE
Rx Antenna:	Both	4× State:	4X is Inactive
AP Tx Power Level:	0 db	B/G Mode:	B&G Mode
Tx Power Value:	High Power	Country Code:	NA
letwork Information			
P Address:	192.168.1.101	Fragment Threshold:	4096
Net. Mask:	255.255.255.0	RTS Threshold:	4096
Gateway:	192.168.1.1		

- 17 -

Privacy Tab

Use the **Privacy** Tab to configure your WEP, CCX and WPA settings. **WEP (Wired Equivalent Privacy), CCX (Cisco Compatible Extension) and WPA (WiFi Protected Access)** encryption can be used to ensure the security of your wireless network. Highlight WEP and click on the **Configure** button.

If you uncheck **External Configuration** in the Main tab, functions in the following figure will be enabled.

Wireless LAN Con	iguration Utility	
Main Advanced Pri	vacy Statistics About	
Privacy Mode Au	thentication Mode Configure 12:1X Encryption method None	
<u></u>	OK Cancel	Apply

If you checked **External Configuration** in the Main tab, functions in the following figure will be disabled.

- 18 -



Privacy Mode	Configure your NONE, WEP, CCX, 802.1x and
	WPA settings :
	NONE : No security defined.
	 WEP (Wired Equivalent Privacy) is a data security mechanism based on a 40 Bit (a.k.a. 64 Bit)/128 Bit/256 Bit shared key algorithm. Press the Configure button to change WEP configuration. CCX (Cisco Compatible Extension). It
	provides user-based, centralized authentication, as well as per-user wired equivalent privacy (WEP) session keys. Press the Configure button to change CCX configuration.
	The 802.1x Configuration window is used to configure WEP, CCX and WPA security with 802.1x authentication.
	WPA (WiFi Protected Access) is more secure
	than WEP, and should be used if possible.

- 19 -

WEP Configuration

None:

WEP Configuratio	<u>n</u>	
© 1		Key Size
C 2		40 bit 💌
С 3		40 bit 💌
C 4		40 bit 💌
Authentication — Open System	Key Format Format G Hex C ASCII	
	OK	Cancel

Authentication	The authentication type defines ID verification and access privileges of roaming wireless network cards.
	You may choose from Open System , Shared Key , or Auto Switch .
	Open System: If your access point/wireless router is using " Open System " authentication, then the wireless adapter will need to be set to the same authentication type.
	Shared Key : Shared Key is when both the sender and the recipient share a secret key.
	Auto Switch: Select Auto Switch for the adapter to automatically select the appropriate

- 20 -

	authentication mode.
Encryption 1-4	 WEP (Wired Equivalent Privacy) encryption can be used to ensure the security of your wireless network. Select one Key and Key Size then enter the appropriate key value in the Encryption field. Note: You must use the same Key #, Key Size, and Encryption Key on both the host and destination devices in order to establish a connection. KEY1 ~ KEY 4 : You can specify up to 4 different keys, but only one can be used at a time. Encryption : Enter the key value in this field. A key of 10 hexadecimal characters (0-9, A-F) is required if a 40-bit (a.k.a. 64-bit) Key Size is selected.
	A key of 26 hexadecimal characters (0-9, A-F) is required if a 128-bit Key Size is selected. A key of 58 hexadecimal characters (0-9, A-F) is required if a 256-bit Key Size is selected.
Key size	Select from 40-bit (a.k.a. 64-bit), 128-bit or 256-bit.

802.1x Configuration

The **802.1x Configuration** window is used to configure WEP, CCX and WPA security with 802.1x authentication.

- 21 -

EAP-TLS	Personal Certificate
MSCHAP V2 over PEAP	User Name: Jane
Password	Certificate Not Found
 prompt for password use the following user name and password 	View Browse
	Server Certificate
Login Name:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Password:	
Unmask	

Protocol	This panel enables you to select an authentication protocol.
Password	This panel is available when EAP-TLS is not selected (either MSCHAP V2 over PEAP is selected with WEP or LEAP is selected for CCX). This panel enables you to enter a login name and password or request that the driver prompt for them when you connect to a network.
Personal Certificate	This panel is available when EAP-TLS protocol is selected and enables you to select a certificate for authenticating the station.
User Name	Type in the user name assigned to the certificate.
Browse	Select a certificate by clicking Browse .
Server Certificate	You can select to enable or disable server certificate.

- 22 -

CCX Configuration

Main Advance	d Privacy Statistics About	
Privacy Mode None WEP CCX WPA	Authentication Mode 802.1X Encryption method WEP	

None :

Refer to the previous section for WEP Configuration.

- 23 -

Protocol	Personal Certificate
LEAP	User Name: Jane
Password	Certificate Not Found
🕆 prompt for password	View Browse
use the following user name and password	- Server Certificate
Login Name:	🔽 Validate
Password:	
🔽 Unmask	

EAP-TLS	EAP-TLS is a mutual authentication method, which means that both the client and the server prove their identities.
LEAP	Network administers have been taking advantage of the simplified user and security administration that LEAP provides. Before the security authentication is started, you should enter the user name and password or the authentication process will fail.

WPA settings

Preshared Key

Passphrase :

PSK Configuration	
Pre-shared key	
Passphrase:	
🔽 Unmask	

- 24 -

Enter the key that you are sharing with the network for the WLAN connection.

802.1x:

Refer to the previous section for 802.1x Configuration.

User Name: writer
Certificate Not Found
View Browse.
Server Certificate
, Vandeko

- 25 -

Statistics Tab

The Statistics Tab displays any available statistics including Receive packets, Transmit packets, Association reject packets, Association timeout packets, Authentication reject packets, and Authentication timeout packets.

🛃 Wireless LAN Confi	guration Utili	ity		
Main Advanced Priva	cy Statistics ,	About		
Receive Good Packets:	363		Transmit Good Packets:	205
Partial Packets:	0		Ack Packets:	0
Duplicate Packets:	0		RTS Packets:	0
Error Packets:	0		CTS Packets:	0
Beacons:	9179		Beacons:	0
Total Bytes:	2542		Total Bytes:	2043
Association Rejects:	0		Authentication Rejects:	0
Association Timeouts:	0		Authentication Timeouts:	0
		ОК	Cancel Apply	Help

- 26 -

About Tab

Click on the About tab to view basic version information about the OS Version, Utility Version, Driver Version, Firmware Version and EEPROM Version.

Wireless LAN Configuration Uti	ilit y	
Main Advanced Privacy Statistics	About	
Wireless LAN Configuration Utility. Copyright (C) 2004.		
OS Version:	Windows XP. Service Pack 2. Build 2600.	
Utility Version:	6.0.0.49	
Driver Version:	N/A	_
Firmware Version:	N/A	
EEPROM Version:	N/A	
	OK Cancel	Apply

- 27 -

UN-INSTALLATION

If you need to uninstall the driver and utility, follow the steps below.

(When you uninstall the utility, the driver will be uninstalled as well.)

- 1. Go to Start → (All) Programs → Airlink101→ Uninstall Wireless LAN Utility.
- 2. Click **OK** to continue.



3. Select **Yes**, **I** want to restart my computer now, and then click Finish to complete the uninstalled procedure.

InstallShield Wizard	
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Wilard billity. Before you can use the program, you must restart your computer. Yes, I want to restart my computer now No, I will restart my computer later. Remove any disk from their drives, and then click Finish to complete setup.
	< Back Finish Cancel

- 28 -

- 29 -

Appendix

Technical Support

E-mail: support@airlink101.com

Toll Free: 1-888-746-3238

Web Site: www.airlink101.com

- 30 -