



MIMO XR[™] 802.11g PCI Adapter Model # AWLH5026 User's Manual

Ver. 1A

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1. Introduction

Thank you for purchasing the MIMO XR[™] Wireless PCI Adapter. When used with other Airlink101[™] MIMO XR[™] wireless products, the wireless signal range extends farther than standard 802.11g products.

This Adapter supports 64/128-bit WEP data encryption that protects your wireless network from eavesdropping. It also supports WPA (Wi-Fi Protected Access) feature that combines IEEE 802.1x and TKIP (Temporal Key Integrity Protocol) technologies. Client users are required to authorize before accessing the APs or AP Routers, and the data transmitted through the network is encrypted/decrypted by a dynamically changing secret key.

1.1 Package Contents

Before you begin the installation, please check the items of your package. The package should include the following items:

- One MIMO XR[™] Wireless PCI Adapter
- One Detachable Antenna
- One Quick Installation Guide
- One Installation CD (Driver/Utility/Manual)

2. Installation

2.1 Install Driver & Utility

This section provides instructions on how to install the **MIMO XR™ Wireless PCI Adapter**. The driver is installed along with the utility.

Note: Be sure to turn off your computer before inserting the Adapter.

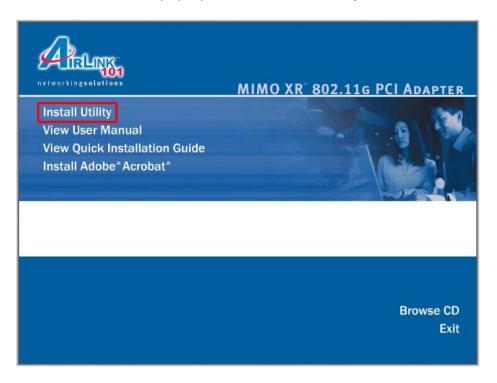
For Windows 98SE and ME users, you may be prompted to insert the Windows 98SE or ME CD during the driver installation. Be sure to have your Windows 98SE or ME CD ready.

Step 1 Insert the PCI adapter into an available PCI slot and turn on your computer.

Step 2 After turning on the computer, Windows will launch the **Found New Hardware Wizard**. The Found New Hardware Wizard appears differently depending on your operating system. Click **Cancel** to quit the wizard and insert the Driver & Utility CD into your CD drive.

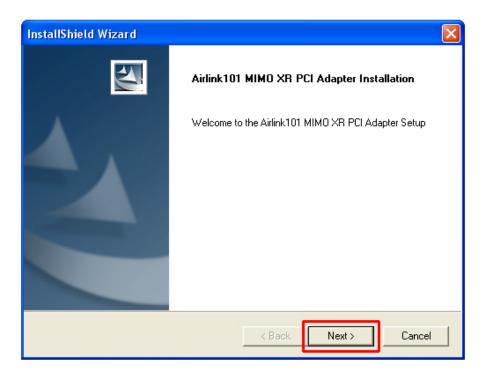


Step 3 The Autorun screen will pop up. Select Install Utility from the menu.

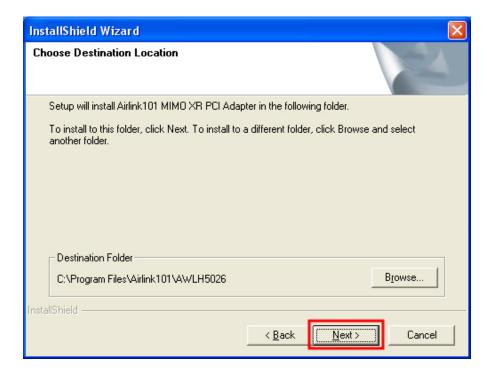


Note: If the Autorun screen doesn't appear automatically go to **Start**, **Run**, and type **D:\autorun.exe** (where **D** is the letter of your CD drive) and click **OK**.

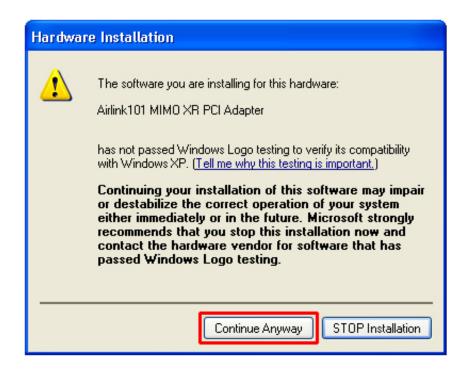
Step 4 Click Next at the welcome screen.



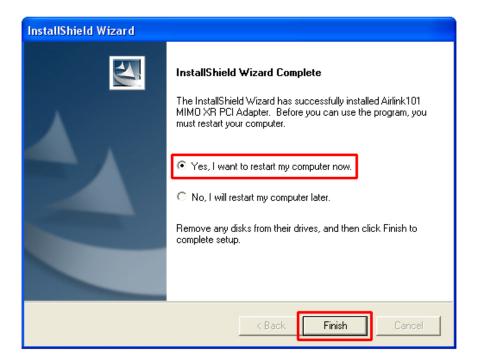
Step 5 Click Next to accept the default destination folder.



Step 6 Click **Continue Anyway** at the Windows Logo Screen. (For Windows 2000, click **Yes** at the Digital Signature Not Found prompt).



Step 7 Verify **Yes, I want to restart my computer now** is selected and click **Finish** to restart your computer.



2.2 Verify Driver Installation

To verify if the driver has been installed successfully, please perform the following steps.

Step 1 Right-click on My Computer from your desktop and select Properties.

Step 2 Select the **Device Manager** tab. (For Windows 2000/XP, select the **Hardware tab** first then click on **Device Manager**).

System Properties
System Restore Automatic Updates Remote General Computer Name Hardware Advanced
Device Manager The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device. Device Manager
Drivers Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers. Driver Signing Windows Update Hardware Profiles
Hardware Profiles Hardware profiles provide a way for you to set up and store different hardware configurations. Hardware Profiles
OK Cancel Apply

Step 3 Expand **Network adapters** from the list and verify that **Airlink101 MIMO XR PCI Adapter** is listed and no yellow question mark is beside it.

🚇 Device Manager	
File Action View Help	
Computer Disk drives Display adapters DVD/CD-ROM drives Ploppy disk controllers Ploppy disk controllers Ploppy disk drives DE ATA/ATAPI controllers Network adapters Monitors Network adapters PCMCIA adapters PCMCIA adapters PCMCIA adapters Ports (COM & LPT) Processors Sumd, video and game controllers System devices Universal Serial Bus controllers	

If **Airlink101 MIMO XR PCI Adapter** is not listed, or you see a yellow question mark beside it, please re-install the driver again.

3. Configure the Wireless PCI Adapter

This section describes how to connect your **MIMO XR™ Wireless PCI Adapter** to a wireless network.

Note to Windows XP Users:

You must disable the Wireless Zero Configuration Utility in order to use the bundled Wireless Utility. Please follow the steps below to disable XP's wireless utility.

Step 1 Double-click on the **Wireless Network Connection Icon** in the system tray and then click on **Properties** or **Advanced**.



Step 2 Go to the **Wireless Networks** tab, uncheck the **"Use Windows to configure my wireless network settings"** check box and click **OK**.

÷ '	Wireless Network Connection 12 Pro	perties 🛛 🕐 🚺			
Ge	eneral Wireless Networks Advanced				
C	Use Windows to configure my wireless netwo	rk settings			
	Available networks:				
	To connect to an available network, click Con	figure.			
2		Configure			
	I 108AP ♀ default	Refresh			
r	Preferred networks:				
[Preferred networks: Automatically connect to available networks in below:	the order listed			
(Automatically connect to available networks in	the order listed			
[Automatically connect to available networks in				
	Automatically connect to available networks in	Move up Move down			

To open the Wireless PCI Adapter's utility go to **Start > (All) Programs > Airlink101 MIMO PCI Utility > Airlink101 MIMO PCI Utility**.

	i.	Programs 🕨	6	Airlink101 MIMO PCI Utility	•	Airlink101 MIMO PCI Utility
	3	Documents •			2	Uninstall Airlink101 MIMO PCI Utility
onal	<u>v</u> -	Settings •				
Profession	P	Search 🕨				
Prof	?	Help and Support				
s XP		Run				
indows	P	Log Off				
Ŵ	0	Turn Off Computer				

Step 1 Go to the **AP List** tab, select the **SSID** (Network Name) of the wireless network you wish to connect to, and click **Connect**.

Monitor				
🕼 Link Information 🛃 AP List 💋	🕈 Profile Setting 🛛 🧖 About 📃			
Network Name Band Signal	Site Information			
👗 default 🛛 G 🛛 95%	Network Type : Access Point			
T ≙ B 20%	Channel : 6			
	Encryption : Off			
	Surveyed at : 00:C0:49:54:11:E4			
Connect Refresh				
	www.airlink101.com			

Step 2 If encryption is not enabled for the selected access point / router, skip to step 6. Otherwise, enter a **Profile Name** for your wireless setting and click **Next**.

Wirdess Monftor	\times
Profile Setting	
Profile Name : default	
Back Next Exit	

Step 3 Verify that the **Network Name** matches the **SSID** of your wireless network and click **Next**.

Witcless (Monitor 🗵
Profile S	etting
Network Name :	default
Network Type :	👗 Access Point 📃 💌
Transfer Rate :	📣 Automatic 📃 💌
	ABC

Step 4 Select the proper encryption setting for your wireless router or access point from the drop-down menu and click **Next**.

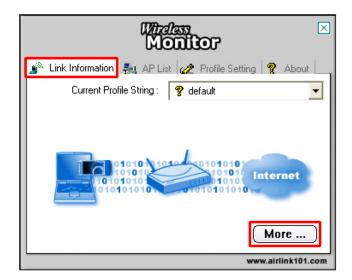
Witeless	Vonitor 🗵
Profile S	etting
Authentication Mode :	🔒 Open System 📃 🚽
Encryption :	€ 4 64 bits ▼
	01010101010101010101010101010101010101
Back	Exit

Step 5 Follow the on-screen instructions to complete the encryption settings. Click **Complete** when finished.

Step 6 You should see a blue circle around the antenna icon indicating a valid connection.

<i>Wireless</i> Mon	
Link Information	Profile Setting ? About Site Information Network Type : Access Point Channel : 6 Encryption : Off Surveyed at :
Connect Refresh	00:C0:49:54:11:E4

Step 7 Go to the **Link Information** tab and click on the **More** button.



Step 8 Verify that you are receiving adequate Signal Strength and Link Quality and that you have been assigned a valid IP address (instead of all 0's).

Wheless Monftor			
└── Wireless Information			
Connect To Network :	default [00:14:A5:01:4F:40]		
Network Type :	Access Point		
Channel :	6		
Encryption :	Off		
Link Speed :	54 Mbits / sec		
Signal Strength	Link Quality		
- IP Information			
DHCP Status :	Automatic/DHCP		
Current IP :	192.168.1.100		
Subnet Mask :	255.255.255.0		
Default Gateway :	192.168.1.1		
DNS Server :	192.168.1.1		
	Back		

If you do not have adequate Signal Strength, try re-orienting the Access Point and/or the Wireless PCI Adapter to get a better reception.

4. Configure the Wireless Utility

This section describes the various functions of the Wireless Utility that you can configure, including the settings of wireless encryption.

4.1 Link Information

The **Link Information** tab shows the current profile in use as well as details of the current network connection.



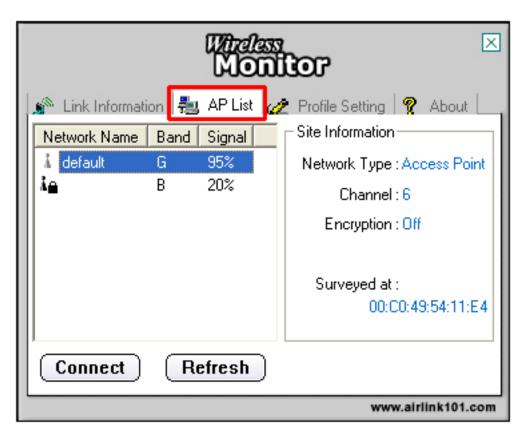
Click on the **More** button to see the details of the current network connection.

Wireless	Monitor 🗵
↓ _ Wireless Information	
Connect To Network :	default [00:14:A5:01:4F:40]
Network Type :	Access Point
Channel :	6
Encryption :	Off
Link Speed :	54 Mbits / sec
Signal Strength	Link Quality
- IP Information	
DHCP Status :	Automatic/DHCP
Current IP :	192.168.1.100
Subnet Mask :	255.255.255.0
Default Gateway :	192.168.1.1
DNS Server :	192.168.1.1
	Back

The Wireless Information displays the current wireless network you are connected to as well as various other statuses such as the Signal Strength and your assigned IP address.

4.2 AP List

The **AP List** tab displays all the available Access Points detected by the Wireless PCI Adapter. Simply select the desired Access Point you wish to connect to and click **Connect**.



The **Site Information** displays a list of status for the selected AP, including the Channel number and the Encryption status.

4.3 Configure Encryption Settings

This section describes how to configure encryption settings for the **Wireless PCI Adapter**.

Note: The encryption settings you set for the Adapter must match the same settings of the Access Point/Wireless Router; otherwise, the encryption will not work properly.

Step 1 From the **AP List** tab, select the Access Point/Wireless Router you want to connect to and click **Connect**.

Monitor ×	
🔊 Link Information 无 AP List 📊	💋 Profile Setting 💡 About 🔄
Network Name Band Signal	Site Information
🚹 default 🛛 G	Network Type : Access Point
i a B 20%	Channel : 6
	Encryption : On
	Surveyed at : 00:C0:49:54:11:E4
Connect Refresh	
	www.airlink101.com

Step 2 Verify the Profile Name is correct and click Next.

Wheless Monftor	\mathbf{X}
Profile Setting	
Profile Name : default	
Back Next Exit	

Witeless Monitor		
Profile S	etting	
Network Name :	default	
Network Type :	👗 Access Point 📃 💌	
Transfer Rate :	📣 Automatic 📃 💌	
Back Ne	Exit	

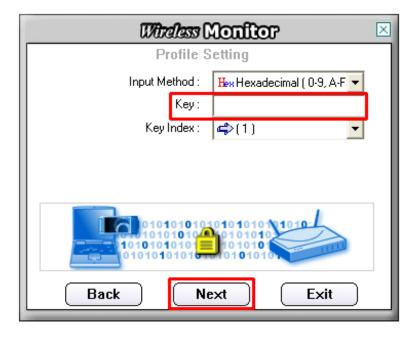
Step 3 Verify the Network Name (SSID) is correct and click Next.

For WEP Settings:

WEP Step 4 Select the appropriate Authentication Mode and Encryption settings and click Next.

Wireless Monftor		
Profile S	Getting	
Authentication Mode :	🔒 Open System 🗨	
Encryption :	🔩 64 bits 💌	
Back No	ext Exit	

WEP Step 5 Select the appropriate Input Method, Key (password), Key Index, and click Next.



WEP Step 6 Click Complete to finish the settings.

Wheless Monftor	
Profile Setting	
IP Setting : 📳 Original Setting 🔽	
10	
Back Complete Exit	

For WPA Settings:

Witeless Monftor		
Profile S	etting	
Authentication Mode :	🔒 WPA-PSK 📃	
Input Method :	🔒 TKIP 🔽	
01010101010	10101010	
Back Ne	ext Exit	

WPA Step 4 Select WPA-PSK and the appropriate Input Method and click Next.

WPA Step 5 Enter the WPA Key (passphrase) and click Next.

Wheless Monftor	\times
Profile Setting	
Key:	
Back Next Exit	

WPA Step 6 Click Complete to finish the settings.

Witeless Monitor	<
Profile Setting	٦
IP Setting : 📳 Original Setting 🔽	
10	
Back Complete Exit	

Step 7 You should see a blue circle around the antenna icon indicating a valid connection. A lock icon beside the antenna indicates the connection is encrypted.

Monitor ×		
Ink Information AP List Image: Comparison of the second seco	Profile Setting R About Site Information Network Type : Access Point Channel : 6 Encryption : On Surveyed at : 00:C0:49:54:11:E4	
Connect Refresh		
www.airlink101.com		

4.4 Profile Setting

The **Profile Setting** tab lists all the profiles you have created. You can create new profiles for different network environments.

Monitor ×		
🗐 🔊 Link Informatio	on 🛼 AP List 🕻	🖉 Profile Setting 🧖 About 🔄
Profile Name	Network Name	Site Information
å⊜ default	default	Network Type : -
		Channel : -
		Encryption : -
		IP Setting : -
Add Edit Delete Connect		
www.airlink101.com		

To add a new profile, follow the steps below:

Step 1 Click on the Add button.



Step 2 Enter a name for your new profile and click **Next**.

Wireless Monitor	\times
Profile Setting	
Profile Name : Office	
	1
	-
Back Next Exit	

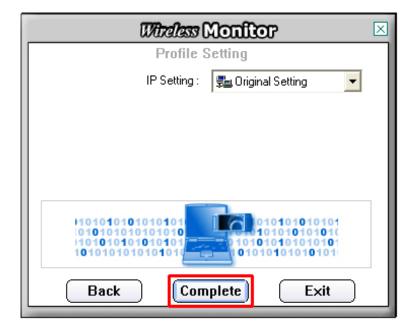
Step 3 Enter the SSID (Network Name) of the wireless network you want to connect to and click **Next**.

Wheless Monitor	
Profile S	etting
Network Name :	Office_AP
Network Type :	🗼 Access Point 📃 💌
Transfer Rate :	🖨 Automatic 📃 🔽
Back Ne	ABC Exit

Step 4 Configure any encryption setting if required and click **Next**.

Witzlass Monftor		
Profile Setting		
Authentication Mode :	🔒 WPA2-PSK 📃 💌	
Input Method :	🔒 TKIP 📃 🔽	
Back	ext Exit	

Step 5 Click Complete to finish the profile setting.



Step 6 Your new profile will be listed in the Profile List.

Monitor		
🕼 Link Information 📇 AP List	🧷 Profile Setting 🧖 About	
Profile Name Network Name	Site Information	
å efault default	Network Type : -	
AP Office Office_AP	Channel : -	
	Encryption : -	
	IP Setting:-	
Add Edit Delete Connect		
www.airlink101.com		

Step 7 You can quickly select which profile you want to use from the **Link Information** tab depending on your network environments without having to reconfigure the settings each time.

Monitor ×		
🔊 Link Information 📇 AP List 🥢 Profile Setting 🧖 About 🔄		
Current Profile String : 💡 default 🗨		
🔏 Office		
? default		
010100101010 10101010 010101010 010101010		
More		
www.airlink101.com		

4.5 Static IP Setting

To change the IP address of the wireless adapter to Static IP, follow the steps below:

Step 1 On the last step of *4.4 Profile Setting*, under IP setting, select **New Setting** and click **Next**.

Wireless Monitor		
Profile Setting		
IP Setting : 📴 New Setting 💌		
IP:#.x.x.x Subnet Mask:#.x.x.x DNS:#.x.x.x		
Back Next Exit		

Step 2 Select Static.

Witcless (lonftor 🗵	
Profile Setting		
DHCP Status :	🕒 Static 🔽	
IP Address :		
Subnet Mask :	255.255.255.0	
Default Gateway :		
DNS Server :		
IP:x.x.x.x Subnet Mask:x.x.x.x DNS:x.x.x.x		
Back Complete Exit		

Step 3 Enter in the information and click **Complete** to finish the setting.

4.6 About

The About tab shows the Utility, Driver, and Firmware version as well as the MAC address of the **MIMO XR[™] Wireless PCI Adapter**.



Technical Support

E-mail: support@airlink101.com

Toll Free: 1-888-746-3238

Web Site: www.airlink101.com

^{*}Theoretical maximum wireless signal rate based on IEEE standard 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, mix of wireless products used, radio frequency interference (e.g., cordless telephones and microwaves) as well as network overhead lower actual data throughput rate.

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Federal Communication Commission Interference Statement

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:

- 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.

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.

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.

IMPORTANT NOTE:

FCC 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.

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

Airlink101 declares that AWLH5026 (FCC ID: MXF-P950427G) is limited in CH1~CH11 for 2.4GHz by specified firmware controlled in U.S.A.