IWAVEPORT WLM54GP30-ESD

USER MANUAL



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FCC NOTICE

This device has been tested and found to comply with the limits for a C lass B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide re asonable protection ag ainst harmful interference in a re sidential installation. This device g enerates, uses and c an r adiate r adio fr equency energy and, if not installed and used in accordance with the instructions, may cause h armful interference to ra dio c ommunications. Ho wever, there is no guarantee that interference will not occur in a particul ar instal lation. If this device do es cause harmful interference to radio or television reception, the user is encouraged to try to correct the in terference by one or more of the following measures:

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

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Compliance 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 acc ept any interference received, including interference that may cause undesired operation.

This device must accept any interference received, including interference that may cause undesired operation.

Caution: Exposure to Radio Frequency Radiation.

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

FCC Caution

 The 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 RF Radiation Exposure Statement: The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
- This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

NOTE: This device is approved for OEM installation with specified antennas as listed in this Manual. It is the responsibility of the Installer to comply with the separation distance for satisfying RF exposure compliance.

End Product Labeling

The final end product must be labeled in a visible ar eawith the following: **"Contains FCC ID: TK4-WLM54GP30ESD"**

ICES 003 Statement

This Class B digital apparatus complies with Canadian ICES-003.

Declaration of Conformity

Compex, Inc. declares the following: Product Name: Compex Wireless Mini-PCI Network Adapter Model No.: Compex iW avePort WLM54GP30-ESD conforms to the following Product Standards:

Radiated Emission Standards:

ETSI EN 300 328-2: July 2000; FCC: 47 CFR Part 15, Subpart B, ANSI C 63.4-1992; 47 CFR Part 15, Subpart C (Section 15.247), ANSI C 63.4-1992. **Conducted Emission Standards:** ETS 300 826: Nov. 1997. **Immunity Standards:** IEC 801-2; IEC 801-3; IEC 801-4 **Low Voltage Directive:** EN 60 950:1992+A1: 1993+A2: 1993+A3; 1995+A4; 1996+A11: 1997

Therefore, this product is in conformity with the following regional standards: **FCC Class B** — following the provisions of FCC P art 15 directive; **CE Mark** — following the provisions of the EC directive.

This Class B digital apparatus complies with Canadian ICES-003.

Technical Support Information

The warranty information and registration form are found in the Quic k Install Guide.

For t echnical support, you may contact Compexor its subsidiaries. For your convenience, you may also seek technical assistance from the local distributor, or from the authorized d ealer/reseller that you have p urchased this p roduct from. For technical support by email, write to support@compex.com.sg.

Refer to the table below for the nearest Technical Support Centers:

Technical Support Centers			
Со	ntact the technical support center that services your location.		
	U.S.A., Canada, Latin America and South America		
🖂 Write	Compex, Inc.		
	840 Columbia Street, Suite B,		
	Brea, CA92821, USA		
🖀 Call	Tel: +1 (714) 482-0333 (8 a.m5 p.m. Pacific time)		
	Tel: +1 (800) 279-8891 (Ext.122 Technical Support)		
Fax	Fax: +1 (714) 482-0332		
Asia	, Australia, New Zealand, Middle East and the rest of the World		
🖂 Write	Compex Systems Pte Ltd		
	135, Joo Seng Road #08-01, PM Industrial Building		
	Singapore 368363		
🖀 Call	Tel: (65) 6286-1805 (8 a.m5 p.m. local time)		
	Tel: (65) 6286-2086 (Ext.199 Technical Support)		
₿ Fax	Fax: (65) 6283-8337		
Internet	E-mail: support@compex.com.sg		
access/	FTPsite: Ftp.compex.com.sg		
Website:	http://www.cpx.com <i>Or</i> http://www.compex.com.sg		

Product Overview

\cdot Introduction

Thank y ou f or p urchasing t his Wireless Network Adapter. Data security is facilitated with WPA, IEEE 802.1x Authentication and 64-bit, 128-bit and 152-bit WEP (Wired Equivalent Privacy). The y support e asy Plug and Play installation and combine simplicity, data privacy, and reliability for your wireless network.

Chapter 1 Basic Setup

This chapter outlines the basic requirement for the installation and configuration of the network adapter.

This network adapter is a plug-and-play device. You can plug it into the PCI slot of your PC for auto-detection.

1.1 H ardware Installation

- 1. Turn off your PC and switch off the pow er from the main power supply.
- 2. R emove the back cover of the PC.
- 3. Then insert the network adapter into your PCI slot as shown below. Ensure that the network adapter is properly seated into the slot.
- 4. Replace the back cover.
- 5. Power on your PC.



1.2 D river & Utility Installation

- 1. Insert the Product CD into your computer CD-ROM drive.
- 2. Click on **Driver & Utility** section and the system will run the *setup.exe* automatically.
- 3. N ext, the Atheros Client Installation Program screen appears. Click on the Next> button to proceed.

Atheros Client Installation P	rogram	×
	Atheros Client Installation Program	
	This program installs the driver and client utilities for your Atheros Wireless LAN Client Adapter.	
	< Back Next > Cancel	

4. When the License Agreement screen appears, you are required to read and accept the agreement to c ontinue. Click on the **Next>** button to proceed.

5. Select your preferred setup:

Atheros Client Installation Program	
Setup Type Select the setup type that best suits your needs.	N.S.
Click the type of setup you prefer.	
Install Client Utilities and Driver (recommended) Install Driver Only Make Driver Installation Diskette(s)	Description Choose this option to install the driver and client utilities. This is the recommended option.
InstallShield	
- KBa	ck Next > Cancel

Install Client Utilities and Driver (Recommended) option

You a rerecommended to select this setup type. This op tion will install both the driver and utility that support your PCI adapter.

Install Driver Only option (For Windows XP user only)

Select th is op tion if y ou are going to u se the W ireless Zero Configuration U tility to configure yo ur PCI a dapter. Note that only Windows XP comes with the Wireless Zero Configuration Utility.

Make Driver Installation Diskette(s)

Select this option if you wish to make a duplicate copy of the driver and store to the diskette/s.

6. Click on the **Next>** button and follow the instructions stated on the screen.

For Windows XP users

 If y ou a re us ing W indows XP as op erating sy stem, t he f ollowing screen will appear. Read the notice carefully and click on the Next> button to proceed.



8. Select your choice of tool to assist you in configuring your adapter. Click on the **Next>** button to proceed.

Atheros Client Installation Program	
Choose Configuration Tool	
Which tool will you use to configure your client adapter?	
 Atheros Client Utility (ACU) and Supplicant. 	
O Third Party Supplicant	
InstallShield	
K Back Next >	Cancel

Atheros Client Utility (ACU) and Supplicant option

Select this option to install your network adapter. (Recommended)

Third Party Supplicant option

Select this option if you decide to use Wireless Zero Configuration Utility to configure your wireless device. Installing this tool will only allow you to view the status of the connected wireless device/s through the utility; configuration using the utility will not be allowed. If y ou have selected **Third Party Supplicant** configuration tool, a screen similar to that the low will appear, prompting y ou to enable/disable the system tray icon.

 Click on the c heckbox bes ides Enable Atheros System Tray Utility and cl ick on the Next> b utton to proceed.

Atheros Client Installation Program Enable Tray Icon	
Would you like to enable the Atheros Sy	stem Tray Utility? This utility provides a
ACU features and is accessible from an	con in the Windows system tray.
nstallShield	(Back Next)

10. The s creen below appears to i nform y ou that the driver will be automatically installed if you have already inserted y our client adapter into the PCI slot of your computer.

Atheros	Client Installation Program
1	The installation program installs the driver automatically when the client adapter is inserted. Insert the adapter now if it is not yet inserted, cancel the Found New Hardware Wizard if it appears, and proceed with the installation. Click OK to continue.
	OK

Cancel the **Found New Hardware** Wizard if it appears and click on the **OK** button to begin the installation.

11. If a similar screen similar to the one shown b elow appears, click on the **Continue Anyway** button to continue the installation.



12. Click on the **OK** button to reboot your system and this will complete the installation.



Chapter 2 Using the System Tray Utility

This chapter will elaborate on the Atheros system tray utility found at the right bottom corner of your screen. Right click on the utility icon and the menu will appear.

Evit	
EXIC	
Open Atheros Client I	Utility
Troubleshooting	
Preferences	
Disable Radio	
Manual Login	
Reauthenticate	
Select Profile	

The following explains the different options available on the menu:

<u>Help</u>

Open the online help.

<u>Exit</u>

Exit the Atheros Client Utility application. Once you exit, the icon will disappear from the system tray.

Open Atheros Client Utility...

Launch the Client Utility.

Wireless-G Excellent Signal Strength Example

Λ Atheros Client Utility - Curre	ent Profile: Default		? 🛛				
Action Options Help				Di	fferent	sianal strenath ind	ications
Current Status Profile Management	Diagnostics						
Total 802.11 Profile Name	: Default		Total 80211		Signal Strength:		No Link
ATHEROS Link Status	: Associated		ATHEROS		Signal Strength:		Fair
Wireless Mode	: 2.4 GHz 54 Mbps	IP Address: 192.10	68.168.28	く			- 10000000
Network Type	: İnfrastructure (Current Channel: 10	\sim		Signal Strength:		Poor
Server Based Authentication	: None [)ata Encryptic : None			Signal Strength:	****************	Excellent
Signal Strength		Excell	lent	L			
			Advanced				
Wireless-AG No L Atheros Client Utility - Current F Action Options Help Current Status Profile Management Total 80211	ink Example Profile: czech Diagnostics		?× Total/ 02/1 [5]				
ATHEROS Link Status	czech	Network Tupe: Infract					
Vicializza Mardari		Connect Channels Connect					
Wireless Mode:	o GHz o4 MDps	Current Channel: Scann	ning				
Server Based Authentication:		Data Encryption:	↓				
IP Address:	0.0.0.0						
Signal Strength:		No Link					
-		[Ady	anced				

<u> Manual LEAP Login</u>

If you select this option, you will have to manually start the LEAP authentication process to login to the n etwork instead of being prompted for y our LE AP username and password during your windows logon.

	Please enter your LEAP username and password to log	ОК
		Cancel
ser Name :	sampleUserName	
Password :	••••••	
Log on to :	sampleDomain	
Card Name :	Atheros USB 2.0 Wireless Network Adapter	
ofile Name :	Default	

Reauthenticate

Reauthenticate to a L EAP-configured access point each time you login to a LEAP network.



Select Profile

Click on a configuration profile name to switch to a particular wireless network. If no configuration profile exists, you will need to add a profile first.

Connection Status

To view the connection status of your wireless PCI adapter.

Alternatively, you may also double click on the utility icon in the system tray.

Active Profile	Displays the name of the active configuration profile.
Auto Profile Selection	Shows whether auto profile selection is enabled.
Connection Status	Displays whether the adapter is connected to a wireless network.

Link Quality	States the quality of the link connection.
SSID	Displays the SSID of the network to which the network adapter is associated.
Access Point Name	Shows the name of the access point the wireless adapter is connected to (if any).
Access Point IP Address	Shows the IP address of the access point the wireless adapter is connected to (if any).
Current Receive Rate	Displays the data rate at which the wireless adapter is currently receiving from the wireless network.
Current Transmit Rate	Displays the data rate at which the wireless adapter is currently transmitting to the wireless network.
Link Speed	States the speed of the link connection.
Client Adapter IP Address	Displays the IP address of the wireless adapter.

Chapter 3 Utility Features

This chapter shows you how to make use of the utility to view the status of your wireless connection, to change y our settings and also to monitor y our wireless performance via the network statistics.

3.1 Current Status Tab

Displays the performance of the network adapter in the wireless network.

Wirele	ss-AG Cur	rent Status
\Lambda Atheros Client Utility - Current	Profile: czech	<u>? ×</u>
Action Options Help		
Current Status Profile Management	Diagnostics	
Total 80211 Profile Name: ATHEROS Link Status: Wireless Mode: Server Based Authentication:	czech Not Associated 5 GHz 54 Mbps	Network Type: Infrastructure Current Channel: Scanning Data Encryption:
IP Address:	0.0.0.0	
Signal Strength:		No Link
-		Advanced

Upon clicking on the **Advanced** b utton, y ou will be able to vie w all information on the respective profile, e.g. the types of en cryption and authentication, the signal strength, the MAC address of the con nected AP (if you are in Infrastructure mode), etc.

Network Name (SSID):	wireless-AP	Current Signal Strength:	-60 dBm
Server Based Authentication:	None	Current Noise Level:	-100 dBm
Data Encryption:	AES	Up Time:	02:40:14
Authentication Type: Message Integrity Check:	Open AES	802.11b Preamble: Current Receive Rate:	Short & Long 36.0 Mbps
Associated AP Name:	Unavailable	Current Transmit Rate:	48.0 Mbps
Associated AP IP Address: Associated AP MAC Address:	Unavailable 00-80-48-00-34-8D	Channel:	1
Power Save Mode: Current Power Level:	Normal 50 mW	Frequency: Channel Set:	2.412 GHz United States
Available Power Levels (802.11b/g):	100, 63, 50, 30, 20, 10 mW	_	

3.2 Prof ile Management Tab

Selecting this tab displays the profiles and the details.

You only need to cr eate a profile if you have more than one wireless connection.

theros Client Utility n Options Help	- Current Profile: Any	?
wireless-AP		New
default Any		Modify
		Remove
		Activate
Details		
Network Type:	Infrastructure	Import
Security Mode:	None	
Network Name (SSID): Any	Export
Network Name 2 (SSI	D2): <empty></empty>	Scan
Network Name 3 (SSI	D3): <empty></empty>	
Auto Select Profiles		Order Profiles

3.3 Diagnostics Tab

The **Diagnostics** tab lists the following receive and transmit diagnostics for packets received by or transmitted to the network adapter.

- Multicast packets transmitted and received
- Broadcast packets transmitted and received
- Unicast packets transmitted and received
- Total bytes transmitted and received

theros Client Utility	- Current Profile: Any	
n Options Help		
rrent Status Profile Mana	agement Diagnostics	
- Transmit		A destas la formation
Multicast Packets:	5	Adapter Information
Broadcast Packets:	180	Advanced Statistics
Unicast Packets:	267	
Total Bytes:	23167	Troubleshooting
Receive		
Multicast Packets:	0	
Broadcast Packets:	62	
Unicast Packets:	3	
Total Bytes:	6756	

This button shows more detailed statistical information on frames that are either received by or transmitted by the network adapter.

Fransmit			
Frames Transmitted OK:	6649	RTS Frames:	0
Frames Retried:	402	CTS Frames:	0
Frames Dropped:	3055	No CTS Frames:	0
No ACK Frames:	47	Retried RTS Frames:	0
ACK Frames:	6649	Retried Data Frames:	402
Receive			
Beacons Received:	588	Authentication Time-Out:	0
Frames Received OK:	20	Authentication Rejects:	0
Frames Received with Errors:	198	Association Time-Out:	0
CRC Errors:	95	Association Rejects:	0
Encryption Errors:	0	Standard MIC OK:	0
Duplicate Frames:	0	Standard MIC Errors:	0
AP Mismatches:	0	CKIP MIC OK:	0
Data Rate Mismatches:	0	CKIP MIC Errors:	0



This button allows you to run the diagnostic test, save the test report and view the test results on the wireless adapter configuration and association.

Atheros Troubleshooting Utility	
Test result / report	
Atheros Troubleshooting Utility	^
Troubleshooter report	
Report date: Wednesday, July 20, 2005	
Name: Driver installation test	
Description: This test is to check the radio driver installation.	
The radio's registry keys are OK.	
Nic name : Atheros AR5005GS Wireless Network Adapter	
Driver name : Atheros AR5005GS Wireless Network Adapter (Microsoft's Packet Sche	du 🛛
Driver path : C:\WINDOWS\System32\DRIVERS\ar5211.sys	
Driver version : 4.0.0.167	
Active Profile Name : Default	
Test Done: The radio driver has been installed.	~
Start Test Save Report View Resu	lts

Chapter 4 Utility Configuration

This chapter will elaborate on the Client Manager configuration of the network adapter using some simple examples.

the wireless clients communica te through router, which are devices that act as base station for all wireless communication. Data packets from the wireless clients a re transferred to the wireless router be fore being transmitted to other hosts on the network. The number of wireless clients supported depends on the router.

4.1 Co nfiguration Mode

In this example, three work station act as wireless clients to communicate with the wireless router. Once all con figuration has been done, wireless clients with the same SSID as the AP will be able to acc ess wirelessly to PC1 via the wireless router



For Router

Ensure that you have enabled the DHCP server in your router and that your wireless clients are set to receive their IP address dynamically so that the wireless router can assign an IP address to them. Note the wireless configuration settings of your router as shown in the figure above.

For PC 1

- 1. Activate your utility.
- 2. Go to the **Profile Management** tab, click on the **Scan** button to look for the wireless AP.

Atheros Client Utility - Current Profile: default	?
tion Options Help	
Current Status Profile Management Diagnostics	
🐜 default	New
	Modify
	Remove
	Activate
C Details	
Network Type: Ad Hoc	Import
None Network Name 1 (SSID1): USB-CLIENT	Export
	Scan
Auto Select Profiles	Order Profiles

3. Click on the **Refresh** button if your system is unable to detect your wireless AP. Once found, se lect the **Network Name (SSID)** used by the router: *wireless-router* and click on the **Activate** button to add it to your profile list.

Network Name (SSID)	¢3	Signal Strength	Channel	Wireless Mode 🧹
👗 Weak Signal Test		1]] 7 dB	3	2.4 GHz 54 Mbp
👗 Weak Signal Test		1]] 4 dB	1	2.4 GHz 54 Mbp
🕻 Weak Signal Test]] 4 dB	3	2.4 GHz 54 Mbp
🕻 Weak Signal Test		_]] 1 dB	3	2.4 GHz 54 Mbp
👗 Weak Signal Test		1 32 dB	10	2.4 GHz 54 Mbp
local-sales	-	1 51 dB	6	2.4 GHz 54 Mbp
A PMD-28G	~ 3	1 35 dB	2	2.4 GHz 54 Mbc
wireless-AP		1 30 dB	8	2.4 GHz 54 Mbp
🕻 Weak Signal Test	w 3	I] 0 98	11	2.4 GHz 54 Mbp
<				>

Notice that the SSID has already been pre-configured in this profile.

The SSID of both the wireless router and the wireless client must be the same for them to communicate with one another.

rofile Management		?
General Security Advar	ced	
Profile Settings		
Profile Name	Workstation 2	
Client Name	shawn	
Network Names		
SSID	wireless-AP	
SSID		
SSID		
<u></u>		

4. E nter the **Profile Name**, e.g. *Workstation 2* for easy identification.

5. Next, proceed to the **Security** tab. The wireless client must us e the same se curity m ode as the router. In our example , s elect **WPA Passphrase** and click on the **Configure...** button.

Profile Management		? 🛛
General Security Advanced		
Set Security Options		
○ WPA/WPA2	WPA/WPA2 EAP Type: LEAP	~
WPA/WPA2 Passphrase		
O 802.1x	802.1x EAP Type: LEAP	~
O Pre-Shared Key (Static WEP)		
◯ None		
Configure	Allow Association to Mixed	i Cells
		OK Cancel

- 6. Enter the encryption key in the field provided. Please note that this key must be the same as the one that you had configured for your wireless router.
- 7. Click on the **OK** button to update the changes.

Define WPA/WPA2 Pre-Shared Key	? 🛛
Enter a WPA/WPA2 passphrase (8 to 63 ASCII or	r 64 hexadecimal characters)
1234567890	
	OK Cancel

Proceed to your **Current Status** tab to mon itor the connection between the router and the wireless client (PC2).

A Atheros Cli	ent Utility - Curren	t Profile: Workstat	ion 2	? 🛛
Action Options	Help			
Current Status	Profile Management D	iagnostics		
Total 802.11	Profile Name:	Workstation 2		Total 80211
ATHEROS	Link Status:	Authenticated		ATHEROS
	Wireless Mode:	2.4 GHz 54 Mbps	IP Address:	192.168.168.43
	Network Type:	Infrastructure	Current Channel:	1
Server	r Based Authentication:	None	Data Encryption:	AES
	Signal Strength:			Excellent
				Advanced

Alternatively, you can a lso check the con nection from the MS-DOS Prompt. From PC2, simply proceed to the **Start** Menu, **Run...** and type in *cmd*. Click on the **OK** button.

In the MS-DOS Prompt window, type *ping 192.168.168.1 –t*, whereby this IP address belongs to your access point.

When the screen appears: Pinging 192.168.168.1: bytes=32 time=2ms TTL=128 Pinging 192.168.168.1: bytes=32 time=2ms TTL=128 Pinging 192.168.168.1: bytes=32 time=2ms TTL=128

This indicates that the con nection between the ac cess point and the wireless client has been established successfully!

4.2 Prof ile Management

This option allows you to manage your profile(s), set your security options, and scan for other wireless networks.

Dealla Mana		
rrent Status Fionie Maria	Diagnostics	
wireless-AP		New
default Any		Modify
		Remove
		Activate
Details		
Network Type:	Infrastructure	Import
	None	
Security Mode:		Export
Security Mode: Network Name (SSID)	: Any	
Security Mode: Network Name (SSID) Network Name 2 (SSII	: Any D2): <empty></empty>	Scan

New...

Click on **New** button to create a new profile. Enter the profile name (a unique name to identify th is profile), a client name and the SSI D of the wireless network to connect to. Note that the **Client name** refers to the name that is registered to your PC. You can enter up to 3 different SSIDs in order of preference, per profile. We are using *ABC* as the profile name and *APP* as the SSID1

	Profile Management		? 🔀
For d etails on h ow to set the different authentication and encryption types available under the Security Tab, kindly refer to Chapter 7 "Types of Authentic ation and Encryption mode"	General Security Advance Profile Vettings Profile Name: Client Names SSID1: SSID2: SSID3:	ABC shawn APP	Cancel

Click on the **OK** button to update the changes.

Notice that ABC has been add ed to the profile list.

tion Options	Help	em Prome: Any	
Current Status	Profile Management	Diagnostics	
wireless default Any ABC	AP		

Modify...

To mod ify a n existing profile, select the profile that you wish to m odify and click on this button. We are using profile: *Any* as an example.

Atheros Client Utility - on Options Help urrent Status Profile Manag	Current Profile: Any	?
wireless-AP		New
default Sanv		Modify
ABC		Remove
		Activate
Details		
Network Type:	Infrastructure	Import
Security Mode:	None	
Network Name (SSID):	Any	Export
Network Name 2 (SSID)	2): <empty></empty>	Scan
Network Name 3 (SSID:	3): <empty></empty>	Joan
Auto Select Profiles		Order Profiles

Remove

To delete an existing profile, select the particular profile that you wish to delete a nd cl ick on this b utton. We are usin g p rofile: *default* as an example.

Note that the active profile (the profile that you are currently using) cannot be deleted!

	A Atheros Client Utility - Current Profile: Any	? 🛛
	Action Options Help	
	Current Status Profile Management Diagnostics	
	wireless-AP default Modify Modify	
	ABC	ove
Activo profilo	Activa	ate
	Details	
indicated by this	Network Type: Infrastructure Impor	rt
Icon cannot be	Network Name (SSID): adfa	rt
deleted!	Network Name 2 (SSID2): <empty> Network Name 3 (SSID3): <empty></empty></empty>	<u></u>
	Auto Select Profiles Order Pro	ofiles

Activate

To activate a profile, select the profile and click on this button. We are using profile: *wireless-AP* as an example.

ent Status Profile Management Diagnostics		
wireless-AP		New
Any ABC		Modify
		Remove
		Activate
Details		^
Network Type:	Infrastructure	Import
Security Mode: Network Name (SSID):	WPA Passphrase wireless-AP	Export
Network Name 2 (SSID Network Name 3 (SSID	2): <empty> 3): <empty></empty></empty>	Scan

Once a profile is activated, this field is activated, this field is activated, the profile name: *wireless-AP*.

theros Client Utility n Options Help rrent Status Profile Mana	- Current Profile: wireless-AP gement Diagnostics	2
wireless-AP		New
Any 45 ABC		Modify
		Remove
		Activate
Details		
Network Type:	Infrastructure	Import
Security Mode: Network Name (SSID)	WPA Passphrase wireless-AP	Export
Network Name 2 (SSI Network Name 3 (SSI)2): <empty>)3): <empty></empty></empty>	Scan
Auto Select Profiles		Order Profiles

Export

This function allows you to save the settings of your profile on to disk. Select the profile that you wish to save and click on this button. We are using profile: *ESSID* as an example.

Choose the folder to save to, enter the name under which to save the profile and click on the **Save** button.

Export Profi	le		? 🛛
Save in: 🥯	DOCUMENT (D:)	O Ø	€• 🖽 •
1-Manual 4-M-Manag b4a550be7 FMlist Outlook Ex Program Fil	ie inductation- le inductation- la 7 press les		
File name:	ESSID		Save
Save as type:	Config files (*.prf)	~	Cancel

Now, your profile is saved to your selected folder.

Import	
Import	

This function allows you to retrieve a saved profile from disk. We are using profile: *ESSI*D as an example.

Go to the folder where you have saved your profile, select *ESSID.prf* and click on the **Open** button.

Import Prof	ile			? 🛛
Look in: 🕯	DOCUMENT (D:)	v 0	D E	9 🛄 -
1-Manual 4-M-Mana b4a550be FMlist Outlook E: Program F	cpress			
File name:	ESSID			Open N
Files of type:	Config files (*.prf)	P	~ (Cancel

Notice that the profile: ESSID has been imported to the list of profiles.

	rement Di uni	
rrent Status Fione Manay	Jemenic Diagnostics	
🝆 wireless-AP		New
Any ABC		Modify
ESSID		Remove
		Activate
Details		
Network Type:	Infrastructure	Import
Security Mode:	None	
Network Name (SSID):	ESSID	Export
Network Name 2 (SSID	(2): <empty></empty>	Scon
	(3): <empty></empty>	Julia
Network Name 3 (SSID		

Order Profiles...

If you have created several profiles, this function allows you to establish the priority order in which the network adapter should try to connect to a WLAN. If the network adapter is unable to connect to a wireless network through the 1 $^{\rm st}$ profile, it will then try to connect using the 2 $^{\rm nd}$ profile and so on.

Notice that if this function is disabled, this means tha t you have not a dded any profile in the **Auto Selected Profiles** list.



Network Name 1 (SSID1): wireless-AP

Network Name 2 (SSID2): <empty> Network Name 3 (SSID3): <empty>

Infrastructure

WPA Passphrase

Details

Network Type:

Security Mode:

🛃 Auto Select Profiles

When auto profile selection is en abled, the network adapter scans for available wireless networks and will connect to the highest priority profile that matches the networks detected.

To do so, simply click on the **Add** button from the **Available Profiles** list. Refer to the screen shown below.

Please note that you need AT LEAST TWO p rofiles to a ctivate the **Auto Select Profiles** function; and that each of your profile must connect to at least one **Network Name (SSID)**.

wireless-AP	A ppA
Any ABC	
ESSID	
-	
o Selected Profiles:	
	Move up
	Move down
	nore domi

Notice that when a selected profile has been added, it will be transferred to the **Auto Selected Profiles** list.

Select and click on the **Add** button to transfer another profile.

ABC	Add
ESSID	
uto Selected Profiles:	
WIEIESSAF	Move up
	Move down

You need to transfer at least two profiles to the **Auto Selected Profiles** list to activate the **Auto Select Profile** function.

Transmit Power Level

Specifies the wire less transmit power to be used. Reducing the power level lowers the risk of interference with other nearby wireless devices and conserves battery power but decreases radio range.

Power Save Mode (Only applicable to Infrastructure mode)

This feature reduces power consumption by the PCI adapter. There are 3 options for this mode:

• Off

The power management is disabled and the card consumes full power from the computer.

• Normal

The driver turns off the power to the adapter for br ief periods over briefly spaced time intervals.

• Maximum

The driver turns off power to the adapter for longer periods over more widely spaced time intervals.

The guideline for choosin g be tween the **Normal** and **Maximum** options:

The P CI ad apter wakes up more often and responds sooner to network requests in **Normal** mode than in **Maximum** mode; and the **Maximum** mode consumes less power than **Normal** mode.

Network Type

Select either **Infrastructure** if y ou are connecting to the W LAN using an access point

802.11b Preamble

The preamble is part of the IEEE 802.11b physical layer specification. It is mandatory for all 802.11b devices to support the long preamble format, but they may op tionally support the short preamble. This P CI ad apter supports both the short and long preambles.

• Short & Long

This option allows communication with other 802.11b devices that support short preamble to boost the throughput.

• Long Only

If your device is having trouble to communicate with other 802.11b devices, you may try to select the Long Only option.

802.11 Authentication Mode (Only applicable to Infrastructure mode, after you have enabled the encryption mode)

Select which mode the wireless a dapter uses to auth enticate to an access point:

• Auto

Causes the P CI a dapter to atte mpt au thentication using share d authentication. It then sw itches to op en a uthentication if shared authentication fails.

• Open

Enables the PCI adapter to attempt authentication regardless of its WEP settings. It will only associa te with the acc ess point if its WEP settings match those of the access point.

• Shared

Allows the ad apter to au thenticate and associate only if it has the same WEP settings as the access point

Appendix 1.Technical Specifications

Network Protocol, Standards and Electrical Emissions		
Industry Standards	 IEEE 802.11g IEEE 802.11b 	
Performance		
Operating Frequency	• 2412~2462MHz	
Modulation	 Binary Phase Shift Keying (BPSK) Quadrature Phase Shift Keying (QPSK) Complementary Code Keying (CCK) 16 QAM 64 QAM DBPSK DQPSK 	
Antenna Type	External 2dBi antenna and an SMA-type connector	
Network Interface	PCI 2.3 compatible	

Physical and Environment	
Environmental Requirements	
Operating temperature:	0°C to 50°C
Storage temperature:	-20°C to 70°C
Operating humidity:	10% to 70% RH
Non-operating humidity:	5% to 90% RH
Power Consumption	3.3V DC, 2A
Physical Dimension	60mm x 46 mm x 14 mm (LxWxD)