Wireless LAN Device Series

WLAN USB Pen-Type Adapter

ZPlus-G250 User's Manual

Version. 1.01 (10.27.2003)

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

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. The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 or more 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 needed.

□ Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter

Shielded interface cables must be used in order to comply with emission limits.

This EUT is incompliance with SAR for general population /uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C



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1 Introduction

This USB device is a Wireless LAN Adapter with a rate of 6,9,12,18,24,36,48 and 54 Mbps operating in the ISM band using Orthogonal Frequency Division Multiplexing (OFDM) transmission, conforming the IEEE 802.11g standard. For these card currently provides Device Drivers for Microsoft Windows[®] 98SE/Me/2000/XP.

1.1 Package Contents

Before you do anything, open your package and verify it includes:

- ZPlus-G250 Adapter
- USB Cable
- Setup Utility CD containing User's Manual
- Quick Start Guide

1.2 System Requirements

- Operating System: Microsoft Windows[®] 98SE/Me/2000/XP.
- Desktop/notebook PC with CD-ROM drive and USB interface.

2 Quick Installation

This section provides a quick step by step guide on how to install your Wireless LAN USB Adapter. Please follow the steps described below and refer to the appropriate sections for further details:

- Power on the computer.
- Please make sure that you don't insert your WLAN USB adapter yet.
- Install the drivers and application:
 - 1. Insert the given Installation CD into your CD-ROM drive.
 - 2. Click "Install/Uninstall software" button to install.
 - 3. Follow the installation instructions from the InstallShield Wizard by pressing the "Next" button.
 - 4. Choose the appropriate of installation, according to your needs (Application, Drivers)
 - 5. If you want to set the path of your choice, select "Browse" and then "Next".
 - 6. Then setup wizard will help you finalize the rest steps.
 - 7. Push the "OK" button, and then reboot system.
 - 8. The installation will be completed after reboot.
- Insert your WLAN USB adapter.
- The "Add New Hardware Wizard" automatically loads the Drivers.
- Refer to sections 3 for more details on the installation and configuration under Microsoft Windows[®] 98SE/Me/2000/XP respectively. Section 4 gives detailed instructions on how to use the Configuration Utility.



3 Installation Procedures Under MS Windows

The procedures described in this section to install and configure the Wireless LAN USB Adapter under MS Windows 98SE/Me/2000/XP.

3.1 Installing the Application and Drivers under Windows 98SE/Me/2000/XP

Please do not plug your USB adapter until the Application setup has been completed. The setup procedure described below installs both the drivers and the Configuration & Monitor Utility.

 Insert the Driver CD to your CD-ROM, the following window will pop up and Click "Install/Uninstall software" button to install. (If the following window doesn't pop up, click the *Start* button at the Taskbar and then select *Run*. Enter *E:\autorun.exe* if E is your CD-drive.)



2. Follow the installation instructions from the InstallShield Wizard by pressing the "Next" button.



3. The installer will install the needed files to a folder named "C:\Program Files\Wireless LAN Series\ZPlus-G250". If you want to change this, Click"Browse" and select a folder. Click "Next" to continue.



4. Choose all program features will be installed. If you want to change this, Click "Custom", Choose which program features you want installed. Click "*Next*" to continue.

InstallShield V	Wizard					×
Wireless LA	AN Series	_				
Please select	a setup type.					
 Complete 	e All program feature	s will be inst	alled. (Requires	the most disł	(space.)	
C Custom	Choose which prog advanced users.	gram feature	s you want insta	alled. Recomr	nended for	ţ
- Destination I	Folder					
E:\Program) Files/Wireless LAN	Series\ZPlu	s-G250\		Brow	/se
InstallShield						
			< Back	Next >		Cancel
				19	83833	19 A

 The installer will create a program folder called ZPlus-G250 802.11g WLAN USB2.0 Adapter. If you want to change this, enter a name or select from the list below. Click "Next" to continue.

stallShield Wizard					
Wireless LAN Series	<i>_</i>				
Setup will add program icons to th	ne Program Folde	er listed belov Slick Newt to	v. You may t	ype a new	folder
Program Folders:	ung loideis list. L	JICK NEXTO	conunue.		
ZPlus-G250 802.11g WLAN USE	32.0 Adapter				
Existing Folders:					
Existing Folders.					
tallShield					
		< Back	Next >		Cancel
			12		

6. Start Setup.

ZP	lus-G250 802.11g WLAN US	5B2.0 /	Adapte	۶r			
	Wireless LAN Series						
	ZPlus-G250 802.11g WLAN USB2	.0 Adapt	ter Setup	o is perform	ing the reque	sted operat	ions.
			0%				
Inst	allShield						Cancel

7. Click "OK" to complete the installation and restart the computer.



8. After the computer restarts, plug WLAN USB Adapter connector into USB port on computer.

Under MS XP-

 After the computer restarts, plug WLAN USB Adapter connector into USB port on computer then Windows XP detects the device automatically, briefly showing a message "Found New Hardware" and starts collecting information for a device information database.



10. When Windows XP is ready to configure the new hardware, it opens the Found New Hardware Wizard dialog box as shown; a dialog box appears asking what you want the wizard to do. Select "Install the software automatically (Recommended)" and Click "Next".



11. Starting search the driver automatically.



12. Starting install driver automatically, Click "Continue Anyway"



13. Hardware installation finished, Click "Finish".



14. You will find an icon in indicated "Wireless LAN USB Adapter" on your system tray. You can double-click on it to configuration.



3.2 Uninstall the Driver/Application

There are three ways to uninstall the driver/application.

- 1. Uninstall from windows "Control Panel"
- 2. Uninstall from "Installation CD"
- 3. Uninstall from windows "Start Menu"

Note: It is recommended to "Exit" the "Configuration & Monitor Utility", when you uninstall. No matter what way you choose to uninstall.

ZPlus Configuration	n Utility	
General Profiles About Connection Connected to (SSID): Network Mode: Channel / Frequency: Max Network Bate:	Not Connect	ed
Security: Power Save: Active Profile:		
Link Status Signal Strength: Sent:	Received:	
Site Survey		Exit

Uninstall form windows "Control Panel"

Under MS Windows 2000/XP

- 1. Open "Control Panel".
- 2. Double click "Add or Remove Programs".

P Control Panel						88
File Edit View Favorites Tools	Help					4
🕒 Back + 🔘 - 🏂 🔎	Search 🌔 Folders 🛄 •					
Address 📴 Control Panel		_				💌 🔁 G
Control Panel 🛞	Accessibility Add Hardman	Add or Remov	Administrative Tools	Date and Time	Sk. Display	Folder Options
See Also (8)	Fonts Game Controllers	Intel(R) Extre	Ditemet Options	🍉 Keyboard	Mouse	Network Connections
Help and Support	Phone and Power Options	Printers and Faxes	Regional and Language	Scanners and Cameras	Scheduled Tasks	Sound Effect Manager
	Sounds and Audio Devices	System	Taskbar and Start Manu	User Accounts		

- 3. Choice the "Change or Remove Programs".
- 4. Select the **"ZPlus-G250 802.11g WLAN USB2.0 Adapter"** from the list.
- 5. Click the "Change/Remove" button.

🐻 Add or Ren	nove Programs		
5	Currently installed programs:	Sort by: Name	*
Change or	🚱 Agere Systems AC'97 Modem		
Programs	🔐 HyperSnap-DX 5	Size	4.26MB
-	🔀 Intel(R) Extreme Graphics Driver	Size	2.16MB
<u></u>	🏷 NetIQ Chariot	Size	35.37MB
Add <u>N</u> ew Programs		Size	5.82MB
rrograms	WinRAR archiver	Size	2.64MB
	🚊 ZPlus-B210M 802. 11b WLAN USB Adapter	Size	0.48MB
Add/Remove	(1) ZPlus-B290 802.11b WLAN USB Adapter		
<u>W</u> indows Components	🔕 ZPlus-G250 802.11g WLAN U582.0 Adapter		
componente	Click here for support information.	Used	frequently
Set Program	To change this program or remove it from your computer, dick Change/Remove.	Last Used On	10/22/2003 je/Remove
Access and Defaults			
	1		

6. Click the "Next" button, and then click "OK".

nstallShield Wizard					
Wireless LAN Serice					
Welcome to the ZPlus-G250 80 This program lets you modify the Modify Confirm Uninstall Do you want to complet	2.11g WLAN U current installa ely remove the OK	SB2.0 Adapter tion. Click one o selected applic Cancel	Setup Maint of the option ation and all	enance pro s below.	gram. X ures?
Remove Remove all instal stallShield	led features.	< Back	Next >		Cancel

Uninstall from Installation CD

Insert the Installation CD to your CD-ROM, the following window will pop up and Click *"Install/Uninstall software"* button to uninstall.



Uninstall from Windows Start Menu

Select "Start->All Program->Wireless LAN Series->ZPlus-G250", Choose "Uninstall".



4 Configuration & Monitor Utility

The **"Configuration & Monitor Utility"** is a powerful application that helps you to configure the Wireless LAN Adapter and monitor the statistics of the communication. Unlike the standard method of configuring the card via the operating system utilities (e.g. Control Panel), this application permits the dynamic modification of the configuration parameters while the adapter is operating. It also offers some more configuration options. Offers the **"Configuration & Monitor Utility"** for Windows 98SE/Me/2000/XP.

Note : Please keep in mind that the Configuration & Monitor Utility can be used to change the above configuration parameters when the cards are active. When the cards are not in use, please use the Control Panel method.

4.1 Quick step-by-step start to connect site

- Double-click the icon on the system tray to open "Configuration & Monitor utility".
 2:31 PM
- Click "Site Survey" button to scan nearby available network.(Figure 4.1.1)
- Select one of available network and click "Connect " button to connect site. (Figure 4.1.2)

😻 ZPlus Configuration	n Utility 📃 🗖 🔀
General Profiles About	1
Connection	
Connected to (SSID):	Not Connected
Network Mode:	
Channel / Frequency:	
Max. Network Rate:	
Security:	<u></u>
Power Save:	
Active Profile:	
Link Status	
Signal Strength:	
Sent:	Received:
Site Survey	Exit

Figure 4.1.1

Link Quality	Network Name (SSID)	Mode	Security	Channel	Rate	MAC	Connect
20%	AV	Ad-Hoc	None	1	11 Mbps	02-60-14-4	
99%	ZSmart-AP	Infrastr	None	1	54 Mbps	00-0C-6E-0	Save Profile
							Edit Conn.
							Rescan
					172		
¢						>	

Figure 4.1.2

• The Link Quality will show by five color icons.



• If adapter connect successfully, you can get the information about *Link Status, Signal Strength*.



Note : Under Windows XP, Operating system will use "Windows Zero Configuration" to set your adapter. If you want to use our "Configuration & Monitor utility", you need to disable "Windows Zero Configuration", first. (See next section: How to disable "Windows Zero Configuration".)

• How to Disable "Windows Zero Configuration".

Step 1. Right click the Wireless Network Connection icon in notification area and select "View Available Wireless Network".



Step 2. Click "Advanced..." button.

Internet Con	ess Networks Adminection Firewall	etwork by limiting	or preventing
Leam more	about <u>Internet Con</u>	m the Internet	

Step 3. Disable "Use Windows to configure my wireless network settings" and click "OK".

usilable networks:	network settings
Fo connect to an available network, clic	k Configure.
💡 ZSmart-AP	Configure
I AV	Refresh
	Move up
I AV	
I AV	Move down
volonialically connect to available netwo pelow:	Move up

4.2 System tray

The **"Configuration & Monitor Utility"** appears as an icon on the system tray of Windows, when the adapter is running. You can open utility by double-clicking on this icon.



4.3 Main dialog box of Utility

You can survey the reachable assess points and the wireless LAN adapter. And get the information about the status of the communication (the SSID of the access point to which the adapter is associated, signal strength, and link quality).

This dialog box consists three items can help you to monitor and configure the Wireless LAN Adapter, the three items are "General", "Profiles" and "About".

- General –About Connected to SSID, Network Mode, Channel/Frequency, Max Network Rate, Security, Power Save, Active Profile and Link Status.
- **Profiles** About Auto-Selection Profiles and Additional Profiles.
- About–About Device Name, Driver Version, Firmware Version, MAC Address, Configuration Utility Version and Language Setting.

ZPlus Configuration	n Utility 📃 🗖 🔀
General Profiles About	
Connection	
Connected to (SSID):	ZSmart-AP
Network Mode:	Infrastructure
Channel / Frequency:	1 / 2.412 GHz - 802.11g
Max. Network Rate:	54 Mbps
Security:	Disabled
Power Save:	Max. Performance
Active Profile:	Profile 3
Link Status	
Signal Strength:	99% (-56dBm)
Sent: 283	Received: 284
Site Survey	Exit

4.4 General

This dialog box consists three items can help you to monitor and configure the Wireless LAN Adapter, the three items are "General", "Profiles" and "About".

SSID: SSID is the group name that will be shared by every member of your wireless network. You will only be able to connect with an Access Point, which has the same SSID.

Network Mode: The 802.11 standard supports two network topologies: Ad Hoc and Infrastructure mode.

- Infrastructure This mode of operation requires the presence of 802.11b and 802.11g Access Point. All communication is done via the Access Point, which relays packets to other wireless Clients in the BSS as well as to modes on a wired network such as Ethernet.
- Ad Hoc This is the 802.11g peer-to-peer mode of operation. All communication is done from Client to Client without the use of an Access Point.
 802.11 Ad Hoc networking uses the same SSID for establishing the wireless connection.

Channel/Frequency: There are 14 channels available. The channels differ from country to country. The detail information see the next section.

As connect the access point, the **Max Network Rate**, **Security, Power Save, Active Profile** and **Link Status** will show on this dialog box.

4.5 Profile

Profile is a named set of operating parameters for your Wireless LAN USB adapter. (Figure 4.5.1) Click the "*New*" button to select Profile Name and Network Mode. If you select Network Mode is Ad-Hoc, there are 14 channels available. The channel differ from country to country. Select the channel to be used. (Figure 4.5.2)

You can set four different WEP keys and specify which one of them to use. First, either enable or disable encryption from the appropriate "None". If you decide to use encryption, you can click "WEP" button to choose any of the available WEP keys (1 to 4). You also have the option to select the WEP Length. Please keep in mind that the WEP keys must be in HEX format. Finally, in order to take effect the changes you wish to make, press the "OK" button at the bottom of the dialog box.(Figure4.5.3)

촇 Wireless LAI	Adapter Utility		
General Profile: Auto-Selection Profile Name Profile 2 Profile 0	About Profiles Network SSID ZPlus-B190 Zplus-g250	Security None None	D
Additional Prof.	iles		
Profile Name	Network SSID	Security	Connect New Edit
Site Survey			Exit

Figure 4.5.1

Profile Configuration	×
General Security	
Profile Name: Profile 1 Network Name(SSID):	
Channel/Frequency Phy Mode: Channel: © 802.11b/g 1 / 2.412 GHz	
1 / 2.412 GHz 2 / 2.417 GHz 3 / 2.422 GHz 4 / 2.427 GHz	
Defaults	
OK Cancel Apply	

Figure 4.5.2

Profile Configuration	
General Security	
Security None Use 802.1x None Encryption Keys(Hex0-9, A-F)	
C Keyi 🛛	40(64) bits 💌
С Кеу2	40(64) bits 💌
С Кеу3	40(64) bits 💌
С Кеу4	40(64) bits 💌
OK	Cancel Apply

Figure 4.5.3

4.6 About

About Device Name, Driver Version, Firmware Version, MAC Address, Configuration Utility Version and Language Setting.

You can choose one of the below language list, then click "Apply Change" button.

🏟 Wireless LAN Adapter Utilit	ty 📃 🗖	×
General Profiles About		
_Information:		
Device Name:	ZPlus-G250	
Driver Version:	1.1.36.1	
Firmware Version:	0002 - 0155 / 0047 - 00C0	
MAC Address:	00-11-22-33-44-66	
Configuration Utility Version:	1.8.0 / 15 Sep 2003	
Language Setting		
English	 Apply Change 	
ZINWELL Wireless		
Site Survey	Exit	

Figure 4.6.1