# **CWL-907** Wireless-N High Power USB Adapter



# **User Manual**

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### **Chapter 1. Introduction**

#### 1.1. About CWL-907

The Wireless-N High Power USB adapter can be installed on most desktops and notebooks and provides true flexibility by allowing the computer to be positioned almost anywhere in the building without the cost and hassle of running network cables. Using the USB adapter, you do not have to worry about thrilling holes on your walls and climbing through the attic or cellar to get connected to the network. Once installed and connected, you can keep in touch with friends and work through e-mail, instant messages and chatting programs as well as sharing files and other network resources such as printer and network storage with other computers.

The Wireless-N High Power USB adapter connects to 802.11n network at an incredible speed of 300Mbps and for added versatility; it is also compatible with almost all of the Wireless-b/g products found in home or business environments as well as public wireless hotspots around the country.

The adapter's antenna is designed to be detachable and adjustable, this making the USB adapter more convenient to carry and use.

#### 1.2. Main Features

The following lists the main features of the Wireless-N High Power USB adapter.

- Complies with IEEE 802.11n and backward compatible with IEEE 802.11b/g
- Maximum transmission rate up to 300Mbps
- WMM(802.11e) improves the quality of VoIP and Video service.
- Supports one touch encryption method (WPS) to simplify the secure establishment of a wireless network
- Supports 64/128bits WEP, WPA1/2-PSK, WPA1/2-802.1x and AES-CCM security
- Easy setup with the setup utility
- Compatible with Windows 2000/2003/XP/Vista/7
- High power design for extended reception coverage and better performance.

### 1.3. Getting to Know CWL-907

This section describes the WPS button and LED indicator of the Wireless-N USB adapter.

LED	State	Description
	On (Stable)	Wireless USB dongle is powered on.
LINK / ACT	Off	Wireless USB dongle is powered off.
	Blinking Fast	WPS mode enabled.
	Blinking Slow	Data is transmitting or receiving.

### Chapter 2. Installing the Software of the USB adapter

Notes: Driver installation process of Windows 2000/2003/Vista/7 is similar to Windows XP

Before installing your Wireless-N USB adapter, insert the Auto-Install CD into your CD-ROM drive. Unless you have disabled the auto-run feature of Windows, the AutoPlay Menu should appear automatically. If not, you can manually access the installation by clicking the **Start** button and choosing **Run**. In the drop-down box type D:\ AUTORUN.EXE (where D: is the drive letter for your CD-ROM drive).

Alternatively, double-click **My Computer** and double-click on the **CD-ROM drive icon**.

1. Click on **Driver** to install driver for your Wireless-N USB adapter.



2. Please select the language what you want to use and click Next.

Wireless LAN - InstallShield Wizard	
Choose Setup Language Select the language for the installation from the choices	below.
Basque Bulgarian Catalan Chinese (Simplified) Chinese (Traditional) Croatian Czech Danish Dutch English Finnish French (Canadian) French (Standard) German Greek	ick Next > Cancel

3. Click **Install** to continue or click **Cancel** to abort the installation process.

Wireless LAN Driver and Utility	K
Wireless LAN Driver and Utility	
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
InstallShield	_
< Back Install Cancel	

4. The software installation should begin. This may take a few minutes.

Wireless LAN Driver and Utility	
Setup Status	
The InstallShield Wizard is installing Wireless LAN Driver and Utility	
Installing	
D:\\{6239EA11-3572-49f1-8B37-F2DC339C5168}\data1.cab	
InstallShield	
	Cancel

5. Click **Finish** to complete the installation. Please select **Yes** if you want to restart your computer, or select **No** to complete the installation.



6. Once the installation is completed, you may now configure your wireless network.

### Chapter 3. Uninstall the USB adapter

You could uninstall the USB adapter driver and utility through uninstall program.

1. Uninstall the WLAN Driver from **Start** -> **All Programs** and click **Uninstall** (or **Change/Remove**) to remove the driver.

	🤠 псещуетсте пізсана	
Programs	CNet	Uninstall
Documents		Vireless LAN Utility



2. Click "Yes" to remove the PCI adapter driver and utility.



3. Then click **Finish** to complete the installation program. You could select **Yes** to restart your computer immediately, or select **No** to go back the computer.

Wireless LAN Driver and U	tility 🛛 🛛
Setup Status	
	noving Wireless LAN Driver and Utility
InstallShield	Cancel
Wireless LAN Driver and U	tility
	Uninstall Complete InstallShield Wizard has finished uninstalling Wireless LAN Driver and Utility.
	< Back Finish Cancel

### Chapter 4. Configuring Your Wireless Network

#### 4.1. Basic Setup

1. Double click on the green wireless signal icon in your taskbar or the shortcut icon on the desktop.



2. It should pop up the Wireless Utility window. And then utility shows the connecting wireless network that connected automatically or was the default network in profile.

🛃 Wireless Utility						
Refresh(R) View(V) About	( <u>A</u> )					
🖃 🚽 MyComputer	General	Profile Availat	ole Network Status	Statistics	Wi-Fi Protect Setup	
	Sig	Speed: Type: Encryption:	Associated Tx:150 Mbps Rx:30 Infrastructure None CWR-935M	00 Mbps	Throughput: Tx:34.2%, Total:37.6%	
<		Network Addr	MAC Address: IP Address: Subnet Mask: Gateway:	192.168 255.255	.1.101 .255.0	
Show Tray Icon Radio Off			Disable Adap		(	Close
Ready						

3. Click the "Available Network" tab to the wireless network surveying page. Click the "Refresh" button to scan the area for wireless network(s). Once the scan is completed, select the desired wireless network from the list and double click it or click the "Add to Profile" button.

Refresh( <u>R)</u> View( <u>V</u> ) Abou	t(A)				
MyComputer	General Profile Available Net	work Satu:	s Statistics V	Wi-Fi Protect Setup	
	Available Network(s)				
	SSID	Channel	Encryption	Network Authentication	Signal 📐
	(p)BR383N_Test	6	None	Unknown	100%
	(main CNET4A	6	WEP	Unknown	62%
	MKT-ST	6	TKIP/AES	WPA Pre-Shared Key	62%
	<sup>[[49]</sup> Mike_CMR-986_1	6	None	Unknown	70%
	[ <sup>[[]]</sup> corega	6	WEP	Unknown	42%
	( <sup>(p)</sup> promise	6	WEP	Unknown	42%
	( <sup>(m)</sup> promise	6	WEP	Unknown	56%
	[ <sup>(p)]</sup> promise	6	WEP	Unknown	8%
	<sup>((作))</sup> CWR-935M	11	AES	WPA2 Pre-Shared Key	100%
	[49] Jeffrey_11g	11	AES	WPA2 Pre-Shared Key	88%
	[1] Seffrey_11n	11	AES	WPA2 Pre-Shared Key	100% 🖳
	[[ipi]LUST	11	TKIP	WPA Pre-Shared Key	8%
	[m]MKT-935M	11	AES	WPA2 Pre-Shared Key	72%
		4.4	חזעד	M/D # 7 Dro Charod Kou	470/
	Refresh	1	ה ר	Add to Profile	
	Note		a		
	Double click on item to	o join/creat	te profile.		
Show Tray Icon		Disable Ac	lapter		Close
Radio Off		Mindowe	Zero Confia		

4. It should pop up the wireless Network Properties window. If you do not have any wireless security (WEP, WPA, WPA2, and etc.) set on your wireless network, simply click the "OK" button and skip to step7. If you do have wireless securities on your wireless network, configure the security setting in "Wireless network security" column.

ireless Network Prop	erties:		
Profile Name:	CWR-935M	802.1x configure	
Network Name(SSID):	CWR-935M	EAP TYPE :	
		GTC	×
		Tunnel : Privision Mode :	
This is a computer-to access points are no	p-computer(ad hoc) network; wireless t used.	· · · · · · · · · · · · · · · · · · ·	×
Channel:	11 (2462MHz) 💌	Username :	
-Wireless network secu	rity		
This network requires	a key for the following:	Identity :	
Netw	vork Authentication: WPA2-PSK		
	Data encryption: AES	Domain :	
	SPHRASE	Password :	
Key index (advanced)	1. 1. 💌	Certificate :	
Network key:			~
****		PAC : Auto Select PAC	
Confirm network key:			~
****			

- 5. Set your wireless securities settings, when it completed, click the "OK" button. Select the Network Authentication and Data encryption to set the encryption type.
  - If you have WEP, typically you select the format and enter your WEP key below the Data encryption.
  - If you have WPA-PSK or WPA2-PSK, typically you only enter your key in the "Network Key" and type again to confirm it.
  - If you have 802.1x configure, typically you only configure your setting in 802.1x configure column.

Profile Name:	CWR-935M	802.1x configure	
Network Name(SSID):	CWR-935M	EAP TYPE :	
		GTC	~
		Tunnel : Privision Ma	ode :
This is a computer-to access points are no	p-computer(ad hoc) network; wireless t-used.	V	×
Channel:	11 (2462MHz) 👻	Username :	
Wireless network secu	irity a key for the following:		
	ork Authentication: WPA2-PSK	Identity :	
Netw	wpaz-psk	Domain :	
	Data encryption: AES	Doman :	
	SPHRASE	Password :	
Key index (advanced)	· 1 💌	Certificate :	
Network key:			~
		PAC : Auto Select PAC	
Confirm network key:			
****			

6. After connected to wireless network, utility will back to "General" page and show the wireless network status. Once the wireless network connected successfully, the Network Address will show the CWL-907 has been assigned an IP address by the AP/Router's DHCP server.

		Canad Canad Canad
Refresh(R) View(V) About		
MyComputer Realtek RTL8191	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
	Status: Associated Throughput:	
	Speed: Tx:150 Mbps Rx:300 Mbps	
	Type: Infrastructure	
	Encryption: None Tx:34.2%, Total:37.6%	
	SSID: CWR-935M	
	Signal Strength: 94%	
	Link Quarty. 100%	
	Network Address:	
	Network Address: MAC Address: 00:E0:4C:72:00:01	
		<u>ן</u>
	MAC Address: 00:E0:4C:72:00:01	
	MAC Address: 00:E0:4C:72:00:01 IP Address: 192.168.1.101	
	MAC Address: 00:E0:4C:72:00:01 IP Address: 192.168.1.101 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1	
	MAC Address: 00:E0:4C:72:00:01 IP Address: 192.168.1.101 Subnet Mask: 255.255.255.0	
	MAC Address: 00:E0:4C:72:00:01 IP Address: 192.168.1.101 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 ReNew IP	
<ul> <li>✓ Show Tray Icon</li> <li>✓ Radio Off</li> </ul>	MAC Address: 00:E0:4C:72:00:01 IP Address: 192.168.1.101 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1	Close

7. Click the "Profile" tab to check the profile page. The wireless network configuration has added in Available Profile(s). It could remove, edit, duplicate and set default the profiles in this page.

33 Wireless Utility			
Refresh(R) View(V) About(	A)		
MyComputer     Sealtek RTL8191	General Profile Availa	ble Network Status Statistics Wi-Fi	Protect Setup
	Profile Name	SSID CWR-935M	Add
	(Development)	CYNYSSIN	Remove
			Edit
			Duplicate
			Set Default
	<		
✓ Show Tray Icon Radio Off		<ul> <li>Disable Adapter</li> <li>Windows Zero Config</li> </ul>	Close
Ready			

#### Wi-Fi Protect Setup (WPS)

WPS is an easy and secure setup solution for Wi-Fi network. Please click the Wi-Fi Protect Setup tab. CWL-907 has two methods, PIN (Pin Input Config) and PBC (Push Button Config), to setup the network.

🛃 Wireless Utility		
Refresh( <u>R</u> ) View(⊻) About	( <u>A</u> )	
MyComputer Realtek RTL8191	General       Profile       Available Network       Status       Statistics       Wi-Fi Protect Setup         Wi-Fi Protected Setup (WPS)         An easy and secure setup solution for Wi-Fi network         Pin Input Config (PIN)         After pushing the PIN button.Please enter the PIN code into your AP.         PIN Code :       75175764         Pin Input Config (PIN)         Push Button         After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.         Push Button Config (PBC)	
Show Tray Icon	Disable Adapter	Close
	Windows Zero Config	
Ready		1

#### Pin Input Config (PIN)

1. Click on the "**Pin Input Config (PIN)**" button, and then it should pop up a message box. If you want to connect to a specific AP, please click the "Yes" button. Or please click the "No" button to continue and skip to step3.

Note: Every time you click the tab to change the page, the PIN code will be changed.

33 Wireless Utility	
Refresh( <u>R</u> ) View(⊻) About	Δ)
WyComputer     Sealtek RTL8191	General       Profile       Available Network       Status       Statistics       Wi-Fi Protect Setup         Wi-Fi Protected Setup (WPS)         An easy and secure setup solution for Wi-Fi network         Pin Input Config (PIN)         After pushing the PIN button.Please enter the PIN code into your AP.         PIN Code : 48324502
	Wi-Fi Protected Setup (WPS)         Push         Afte         or vt         Yes         No         Push Button Config (PBC)
Show Tray Icon Ready	Disable Adapter     Close     Windows Zero Config

2. Select the specific AP which you want to connect. If you can not find the WPS AP in this page, please click the "**Refresh**" button. And then click the "**Select**" button.

🛃 Wireless Utility			
$Refresh(\underline{R})  View(\underline{V})  About(\underline{A})$			
Realtek RTL8191	neral Profile Available Network Wi-Fi Protected Set		ect Setup
	WPS AP Name	WPS AP MAC	ito your AP.
	CWR-935M SALES Jeffrey_11n Mobile-Router BR383N_Test promise test_LAB_TOP_AP ZyXEL Mike_CMR-986_1008 promise promise MKT-935M	00:08:A1:C5:7F:62 00:08:A1:B5:B5:6A 00:1A:EF:08:2E:B6 00:08:A1:C5:7F:92 00:D0:41:BC:96:A1 00:23:F8:2A:59:80 00:08:A1:B5:B4:0C 00:22:B0:C9:9E:5D 00:D0:41:BF:F0:C7 00:23:F8:25:90:2A 00:23:F8:2A:5B:0A 00:08:A1:C4:97:CA	ton on your AP
Show Tray Icon      Radio Off	Select	tefresh Cancel sable Adapter indows Zero Config	Close
Ready			

3. CWL-907 is waiting for the AP to establish the connection. And then enter the PIN code into the AP that you want to connect.

Note: The PIN function in AP should be started before the WPS setup in CWL-907 times out.

33 Wireless Utility		
Refresh( <u>R</u> ) View( <u>V</u> ) Ab	out( <u>A</u> )	
ØyComputer	91 General Profile Available Network Status Statistics Wi-Fi Protect Setup Wi-Fi Protected Setup (WPS) An easy and secure setup solution for Wi-Fi network	
	Wi-Fi Protected Setup - PIN method AP.	
	Wi-Fi Protected Setup - PIN method	
	Please enter the following PIN code into your AP .	
	PIN Code : 94233803 your AP Status : Initial WPS	
	Cancel	
Show Tray Icon	Disable Adapter	
Radio Off	Undows Zero Config	Close



4. Once the WPS connected successfully, wireless utility will show the connection status.

<mark>55 Wireless Utility</mark> Refresh( <u>R)</u> View(⊻) About	(A)
WyComputer     Sealtek RTL8191	General Profile Available Network Status Statistics Wi-Fi Protect Setup
	Status:       Associated       Throughput:         Speed:       Tx:150 Mbps Rx:300 Mbps         Type:       Infrastructure         Encryption:       AES         SSID:       CWR-935M         Signal Strength:       100%         Link Quality:       100%
	Network Address: MAC Address: 00:E0:4C:72:00:01 IP Address: 192,168,1.101
	ReNew IP
Show Tray Icon Radio Off	Disable Adapter     Close     Windows Zero Config

- Push Button (PBC)
  1. Click on the "Push Button Config (PBC)" button. Note: The PBC button can click the visual button on the page or push the physical button on AP.

33 Wireless Utility	
Refresh( <u>R</u> ) View( <u>V</u> ) Abou	t( <u>A</u> )
MyComputer     Realtek RTL8191	General       Profile       Available Network       Status       Statistics       Wi-Fi Protect Setup         Wi-Fi Protected Setup (WPS)         An easy and secure setup solution for Wi-Fi network         Pin Input Config (PIN)         After pushing the PIN button.Please enter the PIN code into your AP.         Pin Code :       75175764         Pin Input Config (PIN)         Push Button         After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.         Push Button Config (PBC)
Show Tray Icon	Disable Adapter
Radio Off	Disable Adapter     Close     Windows Zero Config
Ready	

2. CWL-907 is waiting for the other AP to start the PBC function. The other AP starts the PBC function should be before CWL-907 WPS times out.

B WyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup     Wi-Fi Protected Setup (WPS)     An easy and secure solution for Wi-Fi potwork	
(	Wi-Fi Protected Setup - PBC method	
	Wi-Fi Protected Setup - PBC method	
	If there is more then one AP on the PBC mode, there will be [Session Overlap].Please using PIN method or wait for a while push the button again.	
	Status : AP Sitesurvey	Ir AP
	Complete :	
	Push Button Config (PBC) Cancel	
	8	
<		

🛃 Wireless Utility		
Refresh( <u>R</u> ) View( <u>V</u> ) About	( <u>A</u> )	
🖃 😼 MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
	Status: Associated Throughput: Speed: Tx:150 Mbps Rx:300 Mbps	
	Type: Infrastructure	
	Encryption: AES Tx:0.1%,Total:0.1% SSID: CWR-935M	
	Signal Strength: 100%	
	Link Quality; 100%	
	Network Address:	_
	MAC Address: 00:E0:4C:72:00:01	
	IP Address: 192.168.1.101 Subnet Mask: 255.255.255.0	
	Gateway: 192.168.1.1	
	ReNew IP	
Show Tray Icon Radio Off	Disable Adapter	Close
Ready		

3. Once WPS connected successfully, Wireless Utility will show the connection status.

#### Radio Off

Enable the **Radio Off** will turn off the radio function. It means CWL-907 will turn off the wireless function. The wireless network connection will be disconnected.

🛃 Wireless Utility		
Refresh( <u>R</u> ) View( <u>V</u> ) About	(A)	
B WyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
10001	Status: Radio is Off Throughput:	
	Speed: N/A	
	Туре:	
	Encryption: N/A	
	SSID:	
	Signal Strength:	
	Link Quality;	
	Network Address:	
	MAC Address: 00:E0:4C:72:00:01	
	IP Address: 192.168.1.101	
	Subnet Mask: 255,255,255,0 Gateway: 192,168,1,1	
	Gateway: 192.108.1.1	
	ReNew IP	
<		
Show Tray Icon	Disable Adapter	Close
🗹 Radio Off	Windows Zero Config	
Ready		1 10 16.

#### **Disable Adapter**

Disable the CWL-907 adapter will turn off the USB adapter function. It means all functions of CWL-907 will be turn off.

🛃 Wireless Utility		
$Refresh(\underline{R})$ $View(\underline{V})$ $About(\underline{A})$		
MyComputer Realtek RTL8191	Wireless Utility NoBrand Copyright (c) 2003-2009	
Show Tray Icon	Disable Adapter	Close
Ready		

### Windows Zero Configuration (WZC)

You may also switch the adapter to be controlled by Windows Zero Configuration (WZC) by checking the WZC box.

33 Wireless Utility		
Refresh( <u>R</u> ) View( <u>V</u> ) About(	<u>A)</u>	
Refresh(R) View(Y) About(		
	Vou are in Windows Zero Config mode !! OK MAC Address: 00:E0:4C:72:00:01 IP Address: 0.0.00 Subnet Mask: 0.0.00 Gateway:	
<	ReNew IP	
Show Tray Icon	<ul> <li>□ Disable Adapter</li> <li>☑ Windows Zero Config</li> </ul>	Close
Ready		1

The windows wireless icon on the task bar will be showing disconnected.

44.00 Miles
Wireless Network Connection 2 Not connected. Right-click here for more options.
😰 🔇 🕵 🕵 🖉 🥺 5:09 PM



Double click the wireless icon, and choose desired wireless network to connect.

Then input the encryption key of the access point.

etwork Tasks		Choose a wireless network			
<ul> <li>Refresh network list</li> <li>Set up a wireless network for a home or <u>small office</u></li> </ul>		Click an item in the list below to connect to a wireless network in range or to get more information.			
		((p)) Jeffrey_LAB			
	Wireless Ne	twork Conne	ction 🛛 🔀		
Learn about Learn about networking Change the preferred ne	The network' network key f Type the key,	CWR-935M' requires a network key (also called a WEP key or WPA key). A lelps prevent unknown intruders from connecting to this network. and then click Connect.		0000	
Change adv settings	, Change adv Confirm netwo		Connect Cancel	00000	
			additional information.	J	
		((g))	Jeffrey_11n		

If successful, the wireless icon will be showing it is connected to the wireless network now.



### Troubleshooting

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on when I	Make sure you have turned on your computer
plug in the wireless USB adapter.	Make sure you have installed the correct utility and driver for your WLAN card.
	Restart your computer and plug in the adapter again.
	Make sure there is no hardware conflict. Check your computer resource information.
cannot access the configuration utility	Make sure the WLAN adapter is installed / plugged in properly.
	Make sure you have installed the correct utility version.
I cannot connect to a wireless	Make sure the ACT LED on the WLAN adapter is blinking.
network	Make sure the wireless router is within range. Move your computer closer to the wireless router.
	Make sure that you have set the wireless network settings correctly. For example, the SSID and security settings.
	Make sure there is no radio interference (for example, cordless phones, microwave oven, etc) that may affect wireless transmission quality.

### Appendix 1. Planning Your Wireless Network

#### A2-1 Network Topology

A wireless local area network (WLAN) is exactly like a regular local area network (LAN), except that each computer in the WLAN uses a wireless device to connect to the network. Computers in a WLAN share the same frequency channel and SSID, which is an identification name for wireless devices.

#### A2-2 Ad-hoc versus Infrastructure Mode

An ad-hoc wireless LAN is a group of computers, each equipped with one WLAN adapter, connected as an independent wireless LAN. Computers in a specific ad-hoc wireless LAN must all be configured to share the same radio channel.

#### Figure 4-1 Ad-hoc Mode



An integrated wireless and wired LAN is called an Infrastructure configuration. In this mode, a group of wireless nodes and an Access Point compose a Basic Service Set (BSS). Each wireless node in a BSS can talk to any computer in the wired LAN infrastructure via the Access Point.

#### Figure 4-2 Infrastructure Mode

