

High Power Wireless – N USB Adapter

Manual

Model # AWN-11N-USB

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1 USING THIS DOCUMENT

This document provides detailed user guidelines for Wireless LAN USB Adapter operation and setting-up. Though every effort has been made to ensure that this document is up-todate and accurate, more information may have become available subsequent to the production of this guide.

2 INTRODUCTION

Thank you for purchasing Wireless LAN USB Adapter.Wireless LAN USB Adapter is a perfect combination of both performance and cost-effective product introduced. It is sincerely hoped that you can enjoy the wireless world through this solidly profiled wireless adapter.

It provides a full solution of all the IEEE 802.11 b/g/n protocols, that pass the WiFi tests and are compatible with all the wireless products with WiFi logo. If you have a Wireless LAN USB Adapter on hand, it means you can connect to the wireless world without any difficulty.

It also provides all the data rates in the IEEE 802.11 b/g/n standards, with both short and long preambles to ensure the compatibility of legacy wireless products and new ones, saving the panic works for end users to find compatible products.

Since the security issue has become one of the most important one in the wireless society, it provides you with the full security coverage from the 64/128bits WEP encryptions, second generation WPA-PSK encryption, to the most advanced WPA2-AES encryption. WPA2 is the latest security standard currently approved by WiFi standards.

Saving mode, Ad hoc wireless LAN, Wake on LAN (WOL) and other exciting features are also included in this Wireless LAN USB Adapter. This user manual will guide you through these exciting features in the following chapters and we is believed that you will be greatly satisfied with its performance and ease of use.

3 SYSTEM REQUIREMENTS

Windows System : Windows 98SE, Me, 2000, XP 32/64 bit, Vista 32/64 bit, WIN7 32/64 bit. PCs must have a device driver installed. It allows you to communicate with WLAN USB Adapter.

4 Driver Installation and Uninstallation

Warning! Do not cover or block the airflow to the adapter. The adapter will reach a high temperature during use.

4.1 Driver Installation

Before you proceed with the installation, please notice the following descriptions.

Notes1:

The following installation was operated under Windows 7. (Procedures are similar for Windows 98SE/Me/XP/2000/vista.)

Notes2:

If you have installed the WLAN USB driver & utility before, please uninstall the old version first.

Do not plug the wireless LAN USB adapter into your computer USB port before installing the software program

Insert the software program CD , then auto installation window pops up on following:

Step1: While the following screen pops out, click Driver Installation or browser the CD, click setup.exe

Step 2: Choose a setup language. Click Next to process the installation.

REALTEK 11n USB Wireless LAN Soft	ware - InstallShield Wizard	_ _ x
Choose Setup Language Select the language for the installati	ion from the choices below.	
Basque Bulgarian Catalan Chinese (Simplified) Chinese (Traditional) Croatian Czech Danish Dutch		× E
InstallShield	<back next≻<="" td=""><td>Cancel</td></back>	Cancel

Step 3: Click Next



Step 4: Click Install

REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB 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 Cancel

The system starts software installation of the WLAN USB adapter.



Now installing REALTEK 11n USB Wireless LAN Driver

Step 5: Click Finish to complete the installation.



After click Finish to complete the installation , under Windows7 <ALL Programs> menu , REALTEK 11n USB wireless LAN Utility program installed.

🕏 Default Programs	
😭 Desktop Gadget Gallery	
🚰 Internet Explorer (64-bit)	lptest
📴 Internet Explorer	
🔰 Windows DVD Maker	Documents
Windows Fax and Scan	
🦻 Windows Media Center	Pictures
🔰 Windows Media Player	
🍟 Windows Update	Music
🛋 XPS Viewer	
🔓 Accessories	Games
📙 Games	Franker 1
Mantenance	Computer
REALTEK 11n USB Wireless LAN Utility	Control Docol
REALTEK 11n USB Wireless LAN Utility	Control Panel
🔄 Uninstall	Devices and Printers
🔓 Startup	Derrees and Frances
	Default Programs
	Alexandra Control
	Help and Support
A Back	
a bucks	
Search amazame and files	Shut down
Secien programs and tres	COLORIGAN INST

Realtek Utility shortcut on the desktop.



Insert the wireless LAN USB adapter into your computer USB port , the computer detected and active the wireless LAN USB adapter automatically.

4.2 Driver Uninstallation

Step 1:

Uninstall the WLAN USB Adapter Driver from "Start">"All Programs" >"REALTEK 11n USB Wireless LAN Utility">Click "Uninstall" to remove Wireless LAN USB Adapter driver.



Open Control Panel and click Programs.



Click Uninstall a program



Control Panel Home	Uniostall o	r channe a program						
Vaulariallad radates		n erenge a program						
T an Weekeer Lestoner on ce	ounirstalla	program, select it from the list and th	ren zick Uninstall Change, or Repair.					
of	Organize - L	ninzal					10.0	1
	Name	Un estall this program.	Publisher	Installed On	Size	Version		11
	Cisco EXP-FAS	TModule	Cisco Systemi, Inc.	3/10/2010	1.55 MB	2.234		
	Cisco LEAP Me	d.de	Cisco Systems, Inc.	3/10/2018	644 48	1.0.15		
	Cisce PEAF Ve	stule	Cisco Systems, Inc.	\$129,2910	1.23 MB	110		
	SREALTEK Wirek	ess LAN Driver and Utility	REALTEK Semiconductor Corp.	3/20/2010		1.00 0142		

Select REALTEK Wireless LAN Driver and Utility Click Uninstall

Step2: Click Yes.

ALTEK 1	in USB Wireless LAN D	Priver and Utility	
?	Do you want to comp its features?	letely remove the selected applicati	on and all of
		Yes	No

	-
	100

Now removing REALTEK 11n USB Wireless LAN Driver



Step 3: Click Finish to complete the uninstallation.And restart computer.

5 Wireless LAN Manaement GUI

Introduction of Main Window

	<u> </u>
B. Adapter List Area	General Profie Available Network Status Statistics Wi-R Protect Setup Status: Associated Speed: Tx:54 Mbps Rx:54 Nbps Type: Infrastructure Encryption: AES SSID: 8186RD Signal Strength: Unik Quality: 100%
	Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.25 Gateway: 192.168.1.254
	Reliew IP

A. Main Menu

1. Refresh(R)

When clicking the refresh menu, you can update and re-enumerate the contents of adapter list area.

2. Mode(M)

Wireless configuration is quickly switched to be either [Station] or [Access Point].

Refresh(R) Mo		de(M) About(A)		
	~	Station Access Point	General	Profile

3. About (A)

Click the "About" to show the about dialog. The application version and license information are shown in the about dialog.

REALTEK 11n USB Wireless LAN Util	ty	- O X
Refresh(R) Mode(M) About(A)		
MyComputer Realtek RTL8188SJ Wireless	General Profile Available Network Status Statistics Wi-Fi Protect Setup Status: Associated Speed: Txc54 Mbps Rx:54 Mbps Type: Infrastructure Encryption: AES SSID: 8186RD Signal Strength: 82% Link Quality: 100% REALTEK LIN USB Wurekess LAN Utility Version '300.1601.1209 2009 Copyright (e) 2003-2009 OK ReNewr IP	
Show Tray Icon	Disable Adapter	Close

B. Adapter List Area

All connected adapters on this system with multiple adapter installations are displayed in this area. It is easy for users to change the selected adapter by one click. The contents of properties area are dependent on wireless configuration that the selected adapter is set up. If only single adapter is installed on the system, only one adapter is always selected.

Refresh(R)	Mode(M)	About(A)
	(VIOUC((VI)	About(A)
🖃 😼 My(Computer	
21	Realtek RTL8	188SU Wireless
1		
/		
/		
'		

C. Properties Area

The contents of this area are dependent on current wireless configuration. The current configuration is determined on previous explanation of submenu "Mode". The more detailed contents are described in the following wireless configuration sections for both Station and AP mode.

Status: Associated Speed: Tx:54 Mbps Rx:54 Mbps Type: Infrastructure Encryption: AES SSID: 8186RD Sgnal Strength: 100% Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254	Field Ph	ofile Available	Network	Status	Statistics	Wi-Fi Protect Setup		
Speed: Tx:54 Mbps Rx:54 Mbps Type: Infrastructure Encryption: AES SSID: 8186RD Sgnal Strength: 100% Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254		Status	: Associa	ted				
Type: Infrastructure Encryption: AES SSID: 8186RD Sgnal Strength: 100% Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254		Speed	: Tx:54	Mbps Rx	:54 Mbps			
Encryption: AES SSID: 8186RD Sgnal Strength: 100% Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254		Туре	: Infrastr	ucture				
SSID: 8186RD Sgnal Strength: 100% Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254		Encryption	: AES					
Sgnal Strength: 100% Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254		SSID	: 8186RI	5				
Link Quality: 100% Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254	Sg	gnal Strength	:				100%	
Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254	Network	Link Ouality					100%	
Network Address: MAC Address: 00:1A:EF:07:39:69 IP Address: 192.168.1.109 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.254			and the second					
Gateway: 192.108.1.254		IP Ac Subnet	ddress: 1 Mask: 2	92.168.	1.109			
		Gat	teway: 1	92.108.	1.254			
ReNew IP			_	PaNa	AT ID	1		

D. Global Control Bar

Each control item on this bar affects the adapter or management GUI directly.



Show Tray Icon

Checking "Show Tray Icon" and clicking "Close" button, the management GUI will be minimized and stay on the tray icon located at the right bottom corner of Windows. If not, management GUI will shut down while clicking "Close" button with unchecked condition.

Client mode utility running but no WLAN Adapter plugged.



Client mode utility running and WLAN Adapter scan available network.



Client mode utility running and WLAN Adapter can not scan any AP.



Radio Off

Turn off the radio to save power.While the radio is off, the links with other wireless network nodes are disconnected. User should be aware that while the wireless configuration is in AP mode. The radio off will cause the sub network belonging to the AP to be disconnected with internet/intranet.

Disable Adapter

Stop wireless USB device.

Close

Whether to check or uncheck "Show Tray Icon" is to shutdown or hide the management GUI.

5.1 Station Mode

The following explanations focus on the properties area.

Refresh(F) Mode(M	D About(A)		
Refresh(F) Mode(M - Myc V Sta - Acc)) About(A) tion cess Poin:	S General Profile Available Network Status Statistics Wi-Fi Protect Setup Status: Associated Speed: Tx:<8 Mtps Rx:48 Mtps Type: Infrastructure Encryption: AES SSID: 8185RD Signal Strength:	
Show Tray Iccn Radio Off	Þ	Disable Adapter	Close

Infrastructure and Ad-Hoc

With both Infrastructure and Ad-Hoc types, the properties should look like the picture above. Six property pages present different information of current wireless network status.Please read the following explanations before you reviewing these pages, it could help you to well understand the wireless environment around the system. It is easy to use to switch property pages just by clicking left button of mouse on the title of each page. The following six sections describe detailed information of each page.

5.2 General Page

This page represents the general information of this adapter.

ieneral	Profile	Available Netw	ork Status	Statistics	Wi-Fi Protect Setup		
		Status: Ass	ociated				
		Speed: Tx:	54 Mbps R	c:54 Mbps			
		Type: Infr	astructure				
	E	ncryption: AES	5				
		SSID: 818	6RD				
	Sgnal	Strength: 📻				100%	
	Lin	k Quality:				100%	
	LI						
Netwo	ork Add	ress:					
		MAC Addres	s: 00:1A:E	F:07:39:69	9		
		IP Address	: 192.168	1.109			
		Subnet Mask	: 255.255	.255.0			
		Gateway	: 192.168	1.254			
			ReNe	w IP			

- 1. Status : The status of station connection to AP.
- 2. Speed : Current transition speed in Mbps (Mega-Bits-Per-Second).
- 3. Type : Current wireless LAN configuration type.
- 4. Encryption : Current encryption mode used.
- 5. SSID : Name of wireless network.
- 6. Signal Strength :

The average signal quality of packets received from wireless network. We recommend connecting AP with over 70% signal strength.

7. Throughput Diagram : Current throughput, including transmission (Tx) and total traffic (Total).

- 8. Network Address
 - Mac Address: six two-digital number of this Wireless LAN USB adapter
 - IP Address: assigned network address by DHCP server or self-definition in four three-digital number format.
 - Subnet Mask: the only valid value is 2555.255.255.0
 - Gateway: It comes from connected AP. Your system can not connect internet with this field empty.

5.3 Profile Page

This page provides profiles management such as add, remove, edit and duplicate just by pressing the respected button.

Available Profile(s)

The list box shows all the created profiles.

Profile Name	5510	Add
(C)8186R)	8185RD	Remove
		Fdit
		Duplicate
		Set Default
٠ [II	b

- 1. Add : Add a new profile for AP or IBSS (Ad-Hoc mode).
- 2. Remove : Remove the selected profile.
- 3. Edit : Edit contents of selected profile.
- 4. Duplicate : Make copy of selected profile.
- 5. Set Default : Set the selected profile as default selection.

5.4 Available Network

This page presents all BSS, including AP and IBSS, around this system. You can pick any one of these network connections.

SSID	Channel	Encryption	Network Authentication	Signal	Туре	BSSI
(³⁾ 192.168.1.190	1	None	Unknown	44%	Infrastructure	00:1
1)8186RD	1	AES	WPA2 Pre-Shared Key	96%	Infrastructure	00:1
1 ³⁰ SparkLAN	1	None	Unknown	76%	Infrastructure	00:1
1) ADSL_PPPOE	5	None	Unknown	74%	Infrastructure	00:1
192.168.1.189_C	h8 8	AES	WPA2 Pre-Shared Key	100%	Infrastructure	00:1
🔊 WDS- Bridge	10	None	Unknown	100%	Infrastructure	00:1
WDS-PPPoE	10	None	Unknown	100%	Infrastructure	00:1
< [Þ

1. Refresh : Rescan network connection around this system.

2. Add to Profile :

Create profile for selected network connection and add it to to profile list.

5.5 Status Page

eneral	Profile	Available Network	Status	Statistics	Wi-Fi Protect Setup		
	Ma	anufacturer			REALTEK		
	NE	DIS Driver Version			1086.5.11	11.2009	
	Sh	ort Radio Header			No		
	En	cryption			AES		
	Au	Ithenticate			WPA2-PSK	1	
	Ch	annel Set			FCC		
	MA	AC Address			00:1A:EF:0	7:39:69	
	Da	ta Rate (AUTO)			Tx:54 Mbp	s Rx:54 Mbps	
	Ch	annel (Frequency)		1 (2412 M	Hz)	
	St	atus			Associated		
	SS	ID			8186RD		
	Ne	etwork Type			Infrastruct	ure	
	Po	wer Save Mode			None		
	As	sociated AP MAC			00:1A:EF:0	08:5B:07	
	Up	Time (hh:mm:ss)		0:30:19		

- NDIS Driver Version: Driver version
- Short Radio Header: No
- Encryption: Current encryption mode.
- Authenticate: Authentication state
- Channel Set: Selected channel plan currently.
- MAC Address: MAC address of this adapter.
- Data Rate: Wireless LAN transition speed
- Channel(Frequency): Current channel number
- Status: Wireless network status
- SSID: name of connecting AP
- Network Type: Indicate current network configuration type
- Power Save Mode: Current setting power save mode
- Associated AP MAC: MAC address of connecting AP
- Associated AP IP: IP address of connecting AP
- Up Time: Total connection time

5.6 Statistics Page

You could watch the Tx/Rx status of current wireless connection. This page shows a statistic analysis of packet transition.

Tx OK 188 Tx Error 0 Rx OK 399 Rx Packet Count 390 Rx Retry 19 Rx ICV Error 0 Reset 1	Tx OK 188 Tx Error 0 Rx OK 399 Rx Packet Count 390 Rx Retry 19 Rx ICV Error 0 Reset 1	Counter Name	Value
Tx Error 0 Rx OK 399 Rx Packet Count 300 Rx Retry 19 Rx ICV Error 0	Tx Error J Rx OK 399 Rx Packet Count 390 Rx Retry 19 Rx ICV Error J Reset I	Tx OK	183
Rx OK 399 Rx Packet Count 300 Rx Retry 19 Rx ICV Error 0	Rx OK 399 Rx Packet Count 300 Rx Retry 19 Rx ICV Error 0	Tx Error	0
Rx Packet Count 390 Rx Retry 19 Rx ICV Error 0	Rx Packet Count 390 Rx Retry 19 Rx ICV Error 0	Rx OK	399
Rx Retry 19 Rx ICV Error 3	Rx Retry 19 Rx ICV Error 0	Rx Packet Count	390
Rx ICV Error	Rx ICV Error	Rx Retry	19
Reset	Reset	Rx ICV Error	0
		Reset	

5.7 Wi-Fi Protect Setup

	PIN Code: 90959066	
	Pin Input Config (PIN)	
Push Button		
After pushing AP or visual b	g the PBC button.Please push the physical button on your putton on the WPS config page.	
	Push Button Config (PBC)	

6 Access Point Mode

6.1 General Page

This page provides general information of this AP, including name, MAC address and list of joined stations.

SSID: lptest DSSID: 00:1A Association Table	-PC_AP 4:EF:07:39:69	
AID MAC Address	Life Time	
	Config	

1. SSID : The name of this AP.

2. BSSID : Six two-digital numbers of the MAC address of this AP.

- 3. Association Table : It is the list of joined stations to this AP.
- AID (Association ID) : The AID field is a value assigned by an AP during association that represents 16-bit ID of a station. It is a unique value assigned by AP.
- MAC address : It is the six two-digit numbers that assemble the MAC address of respected joined station.
- 6. Life Time :

It is the timer that counts down from 10 minutes whenever the AP connects the station successfully. If an STA associated to SW AP does not have any interaction with the AP in 10 minutes, it will be disassociated from the Infra-structure BSS.

7. Config : A dialog of this AP is shown for configuration modification.

This is a computer-to access put its are nu	o-computer(ad hoc) network; wireless It used.
Profle Name:	Access Point Mode
Network Name(SSID):	lptest-PC AP
Channel:	1 (2412MI Iz) -
Wireless network seci	irity
This network requires	a key for the following:
Netw	ork Authentication: Open System 🔹
	Data encryption: Disabled
ASCII PAS	SPHRASE
Key index (advanced) Network key:	: 1 -
Confirm network key:	

a. Network Name (SSID) :

Name of the AP searchable by other wireless nodes. The length of SSID should be shorter than 32 characters.

b. Channel : Select the wireless channel within current channel plan.

c. Network Authentication & Data Encryption :

• Open System :

It is combined with data encryption type to be WEP or to be disabled. Disabled: you decide to open this AP to every one without network authentication. WEP: you decide to setup the basic data encryption with a definednetwork key.

• Shared Key + WEP :

You decide to apply both authentication and data encryption to prevent unauthouized login.

• WPA-PSK + TKIP & WPA2-PSK + TKIP :

The most advanced authentication and data encryption that provide the best security protection.

d. ASCII / PASSPHRASE :

• ASCII :

You should provide either 5 or 13 ASCII characters on Network key edit box.

- PASSPHRASE : You could input words on Network
- Key edit box :

64 bits: The generated pass key is 64-bit to be complied with data packets. 128 bits: The generated pass key is 128-bit to be complied with data packets.

Hexadecimal :

While both ASCII and PASSPHRASE are not checked, you should input

hexadecimal number in the network key box. For example, 10 digits hex number for 64-bit WEP or 26 digits hex number for 128-bit WEP.

e. Key index (advanced) (1 ~4) :

At most four key index to represent the opposite network key.

6.2 Advanced Page

Users could setup the advanced characteristics of network packet for transmission on this page.

[]								 	
General	Advanced	Statistics	ICS						
Gener	al								
Gener	Beacon Int	erval							
	100	CIVEI							
	HOO								
	DTIM Perio	d:							
	3								
	Preamble M	lode							
	Short	•							
	Sot	t Defaulte				Annly			
	260	L Delauits				Арріу			

1. Beacon Interval :

This filed indicates the interval between each beacon that this AP sends out in unit of TU (1024 micro-seconds).

2. DTIM Period :

The DTIM Period field is the number of Beacon intervals between successive DTIMs.

3. Preamble Mode :

- Long: higher quality but with lower performance than preamble short mode.
- Short: Normal quality but with higher performance then preamble long mode.
- Auto: select the proper preamble mode by current signal frame information.

6.3 Statistics Page

The Tx/Rx status of current wireless connection is shown. A statistic analysis of packet transition is listed.

	value
Tx OK	703
Tx Error	0
Rx OK	10
Rx Packet Count	10
Rx Retry	1
RX ICV EITOF	0
Reset	

6.4 ICS Page

General Advanced Statistics ICS	
Setting Internet Connection Sharing (ICS)	
ConnName Device Name	
Local Area Connecti Realtek RTL8168C(P)/8111C(P) Family PCI-E Gigabit E	
۲	
Public Network Local Area Connection 2 Realtek RTL8168C(P)/8111C(P) Family PCI-E Gigabit Et	
Apply	

1. ConnName :

List all network connections to this system. You can pick up one from the listed item(s) whose network domain you would want to connect to.

2. Select : Make the desired network connection to public network.

3. ICS :

Internet Connection Sharing. It enables this AP to create the domain to share this internet/intranet network connection.

4. Firewall :

Any of a number of security schemes that prevents unauthorized users from gaining access to a computer network, or that monitors transfers of information to and from the network.

5. Apply : Execute the current settings.