300M Wireless-N USB Adaptor User Manual

REV: V1.0



RECYCLABLE

Certification FCC CE

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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 connected.

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

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices)

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment 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. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

Package Contents

The following items should be found in your package:

- ► 300M USB Wireless Adapter
- ► Quick Installation Guide
- ► CD-Rom

Make sure that the package contains above items. If any of the above items is missing or damaged, please contact the store you bought this product from.

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1. Introduction

1.1. Product Overview

This USB Wireless adapter is a powerful USB 2.0 Adapter that installs quickly and easily with PCs. The Adapter can be used in ad hoc mode to connect directly with other wireless adapters for peer-to-peer file sharing, or in infrastructure mode to connect with a wireless access point or router. The adapter connects with 802.11n networks at up to 300Mbps, and is backwards compatible with 54Mbps 802.11g or 11Mbps 802.11b devices. In every mode, your wireless connection can be protected so your data stays secure.

1.2. Main Features

- Supports 300Mbps transmission rates
- ► Complies with IEEE 802.11b, 802.11g and 802.11n standards for 2.4GHz Wireless LAN
- ► USB 2.0
- ► Meets 64/128-bit WEP, WPA, and WPA2 security standards
- ► Compatible with Windows 2000/XP/Vista/7
- ► Low power consumption
- ► Easy to install and configure
- ► WPS enabled

1.3. Standards

- ► 802.11b/g/n
- ► 802.11i

1.4. Working Environment

Temperature:

- 0° to 40° C (operating)
- -20° to 70° C (storage)

Humidity:

- ► 10% to 90 % non-condensing (operating)
- ► 5% to 95% non-condensing (storage)

1.5. System Requirements

- ► Available USB 1.1 or USB 2.0 slot
- ► 300 MHz processor and 32 MB of memory
- ► CD-ROM drive
- An 802.11b/g/n access point (for Infrastructure Mode) or another 802.11b/g/n wireless adapter
- ► Microsoft® Windows® 7, VistaTM, XP, 2000 SP4

2. Hardware and Driver Installation

2.1. Insert the Adapter

Plug the USB Wireless Adapter into an available USB port on your computer, and the Found New Hardware Wizard (windows 7) screen will appear; Close the wizard, then clicks the following steps to install;

2.2. Driver and Software Installation

Turn on the computer and insert the included CD in the CD-ROM drive. Click the Start button and choose Run and enter D:\drivers\windows\setup.exe (if 'D' is your CD-ROM drive);

You can also access the optical disk D:\drivers\windows directory (if 'D' is your CD-ROM drive), double-click "setup. exe " for installation;



The following is the step-by-step instructions in Windows 7. The steps and screens are similar for the other Windows operating systems

> Select "I accept the terms of the license agreement" and then click Next;

alink Wireless LAN - InstallSh	ield Wizard	×
License Agreement Please read the following licen:	e agreement carefully.	
Ralink	End-User License Agreement PALINK Software for Windows XP/Vista/Win7 Copyright (C) FALINK TECHNOLOGY CORP. All Rights Reserved. Thank you for purchasing and/or using RALINK product. Please read this End-User License Agreement ("Agreement") carefully and agree to comply with the terms of this Agreement before downloading, installing, copying or using the software in whole or in part, you agree to be bound by the terms of this Agreement. SOFTWARE LICENSE It he rights and interests of the Software belong to Ralink. The Software is protected by applicable copyright laws and international copyright treates, as well as other intellectual property laws and international copyright treates, not sold. 1. BRANT OF LICENSE. This Agreement grants you the following rights: (1) Installation and Use: You may install and use an unlimited number of copies of the Software: provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy, including or provided that each copy shall be a true and complete copy. I genept the terms of the license agreement Print <th></th>	
nstallShield	K Back Next > Cancel	

Select "Install driver and Ralink WLAN Utility" and Click Next;



Select "Ralink Configuration Tool" and Click Install;



➢ Click "Install";



Click "Finish" to finish the driver installation;

alink Wireless LAN - InstallShie	eld Wizard
	InstallShield Wizard Complete
	The InstallShield Wizard has successfully installed Ralink Wireless LAN. Click Finish to exit the wizard.
Ralink	
InstallShield	< Back Finish Cancel

3. System configuration

The USB Wireless Adapter provides two modes: Station mode and Access Point mode, the default is Station mode. You can select remote wireless AP to connect to Internet in station mode. But in the AP mode, the wireless USB adapter act as a wireless access point which wireless client can connect to share an Internet connection with others.

Use the Ralink WLAN Utility to check the link information, search for available wireless networks, or create profiles that hold different configuration settings. You can double-click the icon on your desktop to run it. Another way to start the Configuration Utility is to click Start> All Programs> Ralink Wireless> Ralink Wireless Utility. If the utility is not selected to install, then you may use the utility your computer has (e.g. windows zero config)

3.1. General

The General tab displays current Wireless statistics.



General Information

- SSID: The unique name of the wireless network.
- > Rate: The data transfer rate of the current connection
- > IP Address: The IP Address of the Adapter
- Mask: The Subnet Mask of the Adapter
- Channel: The channel of the current connection

3.2. Profile

3.2.1. Quick Connect

If you want your wireless computers to communicate with other computers on your wired network via a wireless access point.



Select Available Network tab and click Refresh button to refresh current available wireless network, you can double click it after highlighting a wireless network you want to connect, If it is encrypted, you need to enter Network Key and confirm it and it will be OK.(Note: profile will detect the Authentication and Encryption of current wireless network, you don"t need to change it.)

							^
AP_Test	1	b	11	69	0 47	100%	~
dd-wrt		3	6	69	0	78%	
Freeunix		\$	1	69	0	100%	
🧭 Mini_AP		3	1	69	0	73%	
RT305x_4	AP	ø	6	69	0	100%	
							<
AP Informatio	'n				-		*
AP Informatio	n						

Authentication	WPA2-PSK	-
Encryption	AES	-

Click \blacksquare to enter the encryption code.

• •	- 29	
WPA Preshared Key	******	

Click **c** to connect the wireless network.

3.2.2. Add to profile

Select a wireless network and click the "red" button to create this profile (the following picture).

AP_Test		Ø	11	09	0 6	100%	~
dd-wrt		3	6	69	Ô	78%	
Freeunix		\$	1	69	0	100%	
Mini_AP		3	1	69	0	73%	
RT305x_/	4P	0	6	69	0	100%	
-AP Informatic	n						~
- AP Informatic SSID	on AP_Test		Authe	ntication	Open	(()	~

Input the profile name and select Network Type, you should select "Infrastructure-connection to AP", then click **>**.

Profile Name	PROF1
SSID	AP Test
	,
Network Type	Infrastructure - Connect to AP

If it is encrypted, you need to enter Network Key to confirm it and then click next.(Note: profile will detect the Authentication and Encryption of current wireless network, you don"t need to change it .)

Authentication	WPA2-PSK	-
Encryption	AES	
Encryption	IALS	

. + +	Profile Settings	×
WPA Preshared Key	*****	

You can select "Use Pre-logon Connection" and click **P**.



The wireless network connection be added to the profile list.

+ - 🎽	😰 😰 😧	TOTALS LISC	
PROF1	AP_Test		Ø
Profile Inform	ation		
Profile Inform Profile Name	ation PROF1	Authentication C	Open (())

3.2.3. Profile Management

Select a profile and you can delete, edit and export to computer as a Wireless profile file.

+ - 2	Pi	rofile List		
PROF1	AP_Test		_	Ŗ
Profile Inform	ation			
Profile Name	PROF1	Authentication	Open	(())
	AD Tech	Franchise	Mana	

Also you can click the "Red" button to display the Profile list.



Select a profile and click the "red" button to save the current profile as a profile to your computer.

1000000000	1000		
PROF1	AP_Test		6
Profile Inform	ation		
Profile Inform Profile Name	ation PROF1	Authentication Open	((_))

Give the saved profile file a name and click save.

Save As				? 🛛
Save in: My Recent Documents Desktop My Documents My Computer	My Documen	nts	← 🗈 📸 ⊞•	
My Network Places	File <u>n</u> ame: Save as <u>t</u> ype:	Ralink Wireless Profile	 •	<u>S</u> ave Cancel

3.2.4. Wi-Fi protect setup

Wi-Fi Protect Setup (WPS) function can let you create a safety network easily. You can through PIN Input Config (PIN) "or "Push Button (PBC)" to encrypt your network. You only need to push the WPS button in the router which support WPS function and click the functions in this adapter, then the router will be encrypted to WPA2-AES mode automatically.

Note:

- > The status of WPS in the router must be enabled
- If you have configured encryption mode in your router, then when you use this WPS function, please configure encryption mode to NONE, then it will be encrypted to WPA2-AES mode automatically. If you don"t want to change your encryption mode, then when you use this function, the router will be encrypted to the mode that you have configured Click the "Red" button to add a WPS Profile in profile list;

ceshi-03routi	er	l	Ø
ation			1.0
	ceshi-03routi	ceshi-03router	ceshi-03router

Method 1: PBC

Select "Push-Button" in WPS Method then click next.

WPS Method	Push-Button	
	C PIN	WPS Version
		2.0

Click "Start PBC" and click the WPS button of your wireless router at the same time, Please wait a moment, the connection between the adapter and the router will be established automatically.

	10 %
PBC -Scannin	n AP
J. De Beannin	- OL

Method 2: PIN

Select "PIN" in WPS Method then click next.

	Profile Settings	×
WPS Method C	Push-Button	WPS Version 2.0
WPS AP List	AP_Test	-

Select the appropriate configuration mode, and you will get a number in PIN Code, then click next.

+ +	Profile Settings	
PIN Entry Method	Type PIN in AP	WP5 Profile
Pin Code	38730832	Renew 8 digit
		Renew 4 digit

Click "Start PIN" button, then Input the PIN code of the adapter's WPS page into the router's WPS configure page, then click "connect", please wait a moment, the connection between the adapter and the router will be established automatically.

= + +	Profile Settings	×
	0%	
WPS status	is not used	
	Start PIN	
/PS PIN Settings		
	Wireless Host PIN Code 35229155	
	Connect	

3.2.5. Available Network

The Available Network tab, displays a list of infrastructure and ad-hoc networks available for connection.

AD Toot		DN.	44.5			100%	
dd-wrt		N.	6	B Q		78%	î
Ereeupiy		is	1	a a	n %	100%	
Mini AP		ě	1	ā ğ	n .	73%	
RT305x_4	ΔP	ě	6	69	Ō	100%	
							*
AP Informatic	0						
AP Informatic	AP Test		Auth	entication	Onen	"	2)

The section of the window displays the Available Networks. Double-click the network to which you wish to connect.

3.3. Link Information

Click the "Red" button to show the link information.

2	Ralink	6)(i) ? ×
" 1 "	> SSID	AP_Test		
6	Rate	300.0 Mbps	IP Address	10.10.10.100
ull	Channel	11 (2462 MHz)	Mask	255,255,255,0

The Status tab displays the detailed information of current device and wireless connection.

Status AP_Test <> 00- Extra Info Link is Up [Tx Pow Authentication Open Encryption None)C-43-30-52-C1
Status AP_Test <> 00- Extra Info Link is Up [Tx Pow Authentication Open Encryption None	DC-43-30-52-C1
Extra Info Link is Up [Tx Pow Authentication Open Encryption None	
Authentication Open Encryption None	/er:100%]
Encryption None	
Network Type Infrastructure	
Central Channel 11	

.ink Quality 5ignal Strength 1 5ignal Strength 2	=		100 % -35 dBm -35 dBm
Transmit Link Speed	300.0 Mbps	Receive Link Speed	243.0 Mbps
			A. A.A. (1
atill 📀	1.120 Kbps Link Inf	ormation	34.348 KDps
Throughput	1.120 Kbps Link Inf	ormation	34.348 Kbps
Throughput	1.120 Kbps Link Inf C Receive essfully	ormation =	34.348 Kbps
Throughput	1.120 Kbps Link Inf C Receive essfully cccessfully	ormation =	34.348 Kbps

3.4. Advanced

Click "Red" button to change the advanced configuration.



Here you can change "Wireless Mode" and select your country's region code. (Country Code Selection feature is disabled by firmware - device marketed in the US is firmware limited to channel $1 \sim 11$)

Select Your Country's Region Code 2.4GHz 0: CH1-11	Wireless Mode	2.4 GHz 💌	
2.4GHz 0: CH1-11	Select Your Cour	ntry's Region Code	
	2.4GHz	0: CH1-11 💌	

Here you can install certificate, including "User certificate" and "Issuer certificate". Click button to

select certificate file, and click button to install.

Install Certificate		- 6
Issuer certificate		
	- <u>-</u> ,	
		Ū
Certificate Details		
Issuer	Version	

4. Troubleshooting

This chapter provides solutions to problems that may occur during the installation and operation of the USB Wireless Adapter. Read the descriptions below to solve your problems.

1. The USB Wireless Adapter does not work properly?

Reinsert the USB Wireless Adapter into your PC's USB slot. Right click My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find the Adapter if it is installed successfully. If you see the yellow exclamation mark, the resources are conflicting. You will see the status of the Adapter. If there is a yellow question mark, please check the following:

Make sure that your PC has a free IRQ (Interrupt ReQuest, a hardware interrupt on a PC.)

Make sure that you have inserted the right adapter and installed the proper driver. If the Adapter does not function after attempting the above steps, remove the adapter and do the following:

Uninstall the driver software from your PC.

Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure Configuration?

Make sure that the PC to which the Adapter is associated is powered on.

Make sure that your Adapter is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with the Adapter installed is unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection. Check that the LED indicators on the wireless router are functioning properly. If not, check that The AC power and Ethernet cables are firmly connected. Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network. In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points. In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it. Check that the Network Connection for the wireless client is configured properly. If Security is enabled, make sure that the correct encryption keys are entered on both the Adapter and the access point.