# TP-LINK®

## **User Guide**

## TL-WN8200ND

## 300Mbps High Power Wireless USB Adapter



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http://www.tp-link.com

## **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.

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

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

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

## FCC RF Radiation Exposure Statement

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

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas 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."

## **TP-LINK** TP-LINK TECHNOLOGIES CO., LTD

## **CE Mark Warning**

## €€1588

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 3 dBi. Antennas not included in this list or having a gain greater than 3 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

## **Canadian Compliance Statement**

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1)This device may not cause interference, and

(2)This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux norms CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

(1)cet appareil ne doit pas provoquer d'interférences et

(2)cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

## **Industry Canada Statement**

Complies with the Canadian ICES-003 Class B specifications.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## **Korea Warning Statements**

당해 무선설비는 운용중 전파혼신 가능성이 있음.

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## **Safety Information**

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

This product can be used in the following countries:

AT	BG	BY	CA	CZ	DE	DK	EE
ES	FI	FR	GB	GR	HU	IE	IT
LT	LV	MT	NL	NO	PL	PT	RO
RU	SE	SK	TR	UA			

#### **DECLARATION OF CONFORMITY**

For the following equipment:

Product Description: 300Mbps High Power Wireless USB Adapter

Model No.: TL-WN8200ND

Trademark: TP-LINK

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directives 1999/5/EC, Directives 2006/95/EC, Directives 1999/519/EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents: ETSI EN 300 328 V1.7.1: 2006 ETSI EN 301 489-1 V1.9.2:2011 & ETSI EN 301 489-17 V2.1.1:2009 EN 60950-1:2006+A11: 2009+A1:2010+A12:2011

EN 62311:2008

The product carries the CE Mark:



Person who is responsible for marking this declaration:

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Date of issue: 2012

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## **Package Contents**

Please verify that all the package contents below are available.

- > One TL-WN8200ND 300Mbps High Power Wireless USB Adapter
- > Quick Installation Guide
- > One USB extension cable
- > One Resource CD for TL-WN8200ND, including:
  - TP-LINK Wireless Configuration Utility (TWCU) and Drivers
  - User Guide
  - Other helpful information

Make sure that the above items are contained in the package. If any of the above items are damaged or missing, please contact your distributor.

#### P Note:

The 'adapter' mentioned in this User Guide stands for TL-WN8200ND 300Mbps High Power Wireless USB Adapter without any explanation.

## **Chapter 1 Product Overview**

#### 1.1 Introduction

The adapter is a 802.11n client device designed to deliver a high-speed and unrivaled wireless performance for your desktop. With a faster wireless connection, you can get a better Internet experience, such as downloading, gaming, video streaming.

With high transmission power, the TL-WN8200ND delivers up to 10 times the range of normal power USB adapter. Moreover, it is featured with its incredible and strong penetrability, making that you don't have to be physically tethered to the walls or floors to access the Internet. It features its high receive sensitivity, which could let you move further away from the access point while still maintaining the same wireless signal. In this case, using TL-WN8200ND means that you don't have to move the laptop like a divining rod, and you can easily pick up the network with its strong sensitivity.

The TL-WN8200ND's auto-sensing capability allows high packet transfer rate of up to 300Mbps for maximum throughput. It has good capability on anti-jamming, and it can also interoperate with other wireless (802.11b) products. The adapter supports WEP, WPA and WPA2 encryption to prevent outside intrusion and protect your personal information from being exposed.

The adapter is easy to install and manage with the Quick Setup Wizard guiding you step-by-step through the installation process and the TP-LINK Wireless Configuration Utility instructing you to quickly set up a wireless connection.

With unmatched wireless performance, reception, and security protection, the TL-WN8200ND is the best choice for easily adding or upgrading wireless connectivity to your desktop.

#### 1.2 Features

- Complies with IEEE 802.11n, IEEE 802.11g, IEEE 802.11b standards
- Supports WPA/WPA2 data security, IEEE802.1x authentication, TKIP/AES encryption, WEP encryption
- Supports high rate of up to 300Mbps for maximum throughput, supports automatically adjust to lower speeds due to distance or other operating limitations
- Provides USB interface
- > Supports Ad Hoc and Infrastructure modes
- Good capability on anti-jamming
- > Supports roaming between access points when configured under Infrastructure mode
- > Easy to configure and provides monitoring information
- Supports Windows XP, Windows Vista and Windows 7
- > 2\*5dBi high gain detachable omnidirectional antennas make the performance enhanced.

#### **1.3 Hardware Overview**

LED status:

Status	Working Status
Off	The driver has not been installed; The adapter's radio has been disabled.
Flashing Slowly	The driver has been installed but no data is being transmitted or received.
Flashing Quickly	Data is being transmitted or received.

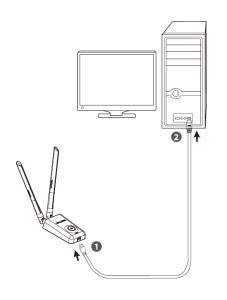
#### Note:

When the card failed to connect to a wireless network, the LED may be off. Please choose your network and try to connect again.

## **Chapter 2 Installation**

#### 2.1 Hardware Installation

- 1. Connect one end of the USB cable to the Adapter.
- 2. Connect the other end of the USB cable to the USB port on your computer. Because the Adapter gets its power from the host, there is no external power supply. The LED should light up when the Adapter is plugged in and the PC is on.



#### P Note:

The Found New Hardware Wizard screen will pop up when the adapter is installed correctly. Click **Cancel**.

#### 2.2 Software Installation

The adapter's Setup Wizard will guide you through the installation procedures for Windows 7, Windows Vista, and Windows XP. The procedures in different systems are quite similar, therefore here takes the procedures in Windows 7 for example.

 Insert the Resource CD into your CD-ROM drive, and the window below will appear. Select model TL-WN8200ND. There will be a menu including: Install Driver&Utility and User Guide. Click Install Driver&Utility to begin. TL-WN8200ND 300Mbps High Power Wireless USB Adapter



Figure 2-1

2. The InstallShield Wizard window will appear. Click Next to continue.

TP-LINK Wireless Configuratio	TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard			
	Welcome to the InstallShield Wizard for TP-LINK Wireless Configuration Utility and Driver			
	The InstallShield Wizard will install TP-LINK Wireless Configuration Utility and Driver on your computer. To continue, click Next.			
	< Back Next > Canc	el		

Figure 2-2

3. Choose a setup type. It is recommended to select **Install TP-LINK Wireless Configuration Utility and Driver**. Selecting **Install Driver Only** will only install driver. Click **Next** to continue.

TP-LINK Wireless Configuration Utility and Driver - Insta	IIShield Wizard
Setup Type Select the setup type that best suits your needs.	TP-LINK
Click the type of setup you prefer. Install Driver Only Install TP-LINK Wireless Configuration Utility and Driver	Description Choose this option to install TP-LINK Wireless Configuration Utility and driver. This is the recommended option.
InstallShield	k Next > Cancel

Figure 2-3

4. Click **Change...** to specify the destination location for the software or you can leave it default. Click **Next** in the screen below to continue.

TP-LINK Wi	reless Configuration Utility and Driver - InstallShield Wiza	rd 💌
Select th	e folder where setup will install files.	TP-LINK*
	Install TP-LINK Wireless Configuration Utility and Driver to:	
	C:\\TP-LINK Wireless Configuration Utility	Change
InstallShield -		
nnstaii0niiciu -	< <u>B</u> ack	t > Cancel

Figure 2-4

5. Click **Install** to continue the setup.

TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard	<b>X</b>
Ready to Install the Program	
The wizard is ready to begin installation.	INK
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click Can the wizard.	cel to exit
InstallShield	
< <u>B</u> ack Install	Cancel

Figure 2-5

6. The utility and drivers will install. This may take 1~2 minutes.

TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard
Setup Status
The InstallShield Wizard is installing TP-LINK Wireless Configuration Utility and Driver
InstallShieldCancel

Figure 2-6

7. After all the steps above, you will see the screen below. Click **Finish** to complete the setup.

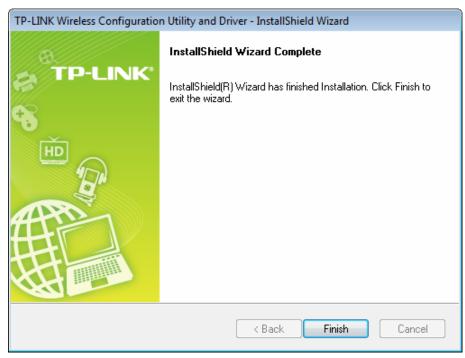


Figure 2-7

8. After installation, the utility configuration page will automatically pop up as shown in the following figure and the icon 📓 will appear in your system tray. To connect to a network, please refer to <u>Chapter 3 Connect to a Wireless Network</u>.

Th	P-LIN e Reliable Choice	ĸ				F	×
	Status	WPS	Network	Profile	Advanced		
	Network Nam	ne(SSID) 👻	Secur	ity 👻	Channel 👻	Signal 🤜	
	TP-LINK_7DE	BC8B	None		2 (2.4G)		^
	TP-LINK_Net	work1	WPA2-	Personal	13 (2.4G)	I	
	TP-LINK_130	969	None		6 (2.4G)	-01	=
	TP-LINK_012	345	None		10 (2.4G)		
	TP-LINK_130	919	None		7 (2.4G)		
	TP-LINK_104	3C2	WPA/V	VPA2-Personal	11 (2.4G)		
	TPLINK_DAT	A_TRANS	WPA-P	ersonal	11 (2.4G)		
	ChinaNet-gvZ	Z	WPA2-	Personal	1 (2.4G)		-
						Rescar	1

Figure 2-8

## **Chapter 3** Connect to a Wireless Network

With both the hardware and software successfully installed into your computer, you can quickly connect to a wireless network using one of the following methods.

Method One:

#### To connect using TWCU (TP-LINK Wireless Configuration Utility)

TL-WN8200ND uses the TP-LINK Wireless Configuration Utility as the management software. The utility provides you an easy interface to connect to a network and to change any settings related to the wireless adapter.

Method Two:

#### To connect using WPS

By this method, you can connect to your network quickly on the condition that your router or access point supports WPS as is called by some other brands.

Method Three:

#### To connect using Windows built-in wireless utility

Windows users may use the built-in wireless utility to connect to a wireless network. For specific operations, please go to <u>To connect using Windows built-in wireless utility</u>.

#### 3.1 To connect using TWCU

1. After installation, the utility configuration page will automatically pop up on the screen. If the utility page does not pop up, you can also launch the utility by double-clicking on the screen icon on your desktop or the screen icon in your system tray.

	<					×
Status	WPS	Network	Profile	Advanced		
Network Name	(SSID) 👻	Secur	ity 👻	Channel 👻	Signal 🤜	
TP-LINK_7CA9	926	None		4 (2.4G)		^
TP-LINK_Netw	ork1	WPA2-	Personal	13 (2.4G)	100	
TP-LINK_1309	69	None		6 (2.4G)	-10-	=
TP-LINK_BF13	34C	🔒 WPA/M	VPA2-Enterprise	4 (2.4G)	-10	
TP-LINK_1309	19	None		7 (2.4G)	100-	
TP-LINK_1043	C2	WPA/W	VPA2-Personal	11 (2.4G)	100-	
TPLINK_DATA	TRANS	WPA-P	ersonal	11 (2.4G)	100-	
TP-LINK_D94F	73	🔒 WEP		7 (2.4G)	-01	-
					Rescan	



2. The **Network** page will display all wireless networks that are available in your area. To connect to a network, simply highlight the wireless network name (SSID) and click

**Connect**. If you tick **Connect automatically**, the adapter will automatically connect to your target network next time.

	WPS			200	
Status	WPS	Network	Profile	Advanced	
Network Nam	e(SSID) 🔻	Secur	ity 👻	Channel 👻	Signal 🤻
TP-LINK_7CA	926	None		4 (2.4G)	l
TP-LINK_Net	work1	WPA2-	Personal	9 (2.4G)	att
		Connect	automatically	Connec	ot
TP-LINK_130	969	None		6 (2.4G)	.at
TP-LINK_BF1	34C	🔒 WPA/V	VPA2-Enterprise	4 (2.4G)	l
TP-LINK_130	919	None		7 (2.4G)	
TP-LINK_104	3C2	WPA/V	VPA2-Personal	11 (2.4G)	
TPLINK_DAT	A TRANS	🔒 WPA-F	ersonal	11 (2.4G)	100

Figure 3-2

- 3. You will be prompted different windows when you choose wireless network of different security types.
- 1) Wireless network of WPA/WPA2-Personal

If you selected a wireless network of the security type WPA/WPA2-Personal, you will be prompted to enter the password in the security key field, as shown in Figure 3-3. Or you can push the **WPS** button on your Router (if it features the WPS function) to quickly build a connection without entering the security key (password).

Please input the pa	ssward:
Security Key:	*****
	Show characters
E	You can also connect by pushing the button on the router.
	OK Cancel

Figure 3-3

#### Note:

The security key (password) can be found on the configuration page of your Router or Access Point.

#### 2) Wireless network of WPA/WPA2-Enterprise

If you selected a wireless network of the security type WPA/WPA2-Enterprise, you will be prompted to choose a type of authentication, either **certificate** or **password**. With **Certificate** as your authentication, you need to select one specific certificate from the drop-down list, as shown in Figure 3-4. With **Password** as your authentication, you should enter the right user name and password in the corresponding field, as shown in Figure 3-5.

Authentication:	Certificate
Certificate:	wifi-user WiFi-Intermediate-CA- 🗸
	OK Cancel
	Figure 3-4
	Figure 3-4
Authentication:	Figure 3-4 Password
Authentication: User Name:	
	Password
User Name:	Password 🗸

Figure 3-5

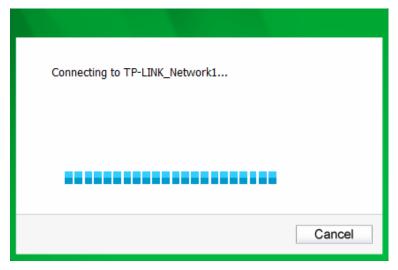
3) Wireless network of None

If you selected a wireless network of **None** (that is, no security is set.), you can get directly connected to this network without any further configuration.

OK

Cancel

4. Please wait a few minutes for the connection process.





5. You have now successfully connected to your network. Click **Close** to enjoy the Internet.

Connected to TP-LINK_Network1	
	Close
	Close

Figure 3-7

6. To view more information about the network currently connected, click **Status** in the tools section and the page will display information such as the network type, link quality and wireless mode.

TL-WN8200ND 300Mbps High Power Wireless USB Adapter

Status       Image: Network       Image: Network       Image: Network       Image: Network         Profile Name:       TP-LINK_Network1       Image: Network Name(SSID):       TP-LINK_Network1         Network Name(SSID):       TP-LINK_Network1       Image: Network Type:       Infrastructure       Rate:       300Mbps         Network Type:       Infrastructure       Rate:       300Mbps         Channel:       1 (2.4G)       Encryption Type: AES         AP MAC:       94-0C-6D-2F-3C-BE       Wireless Mode:       802.11n         IP Address:       192.168.1.103       Image: Note Note Note Note Note Note Note Note	P-LINK e Reliable Choice	C				
Profile Name:       TP-LINK_Network1         Network Name(SSID):       TP-LINK_Network1         Network Type:       Infrastructure       Rate:       300Mbps         Channel:       1 (2.4G)       Encryption Type: AES         AP MAC:       94-0C-6D-2F-3C-BE       Wireless Mode:       802.11n         IP Address:       192.168.1.103		WPS				
Network Name(SSID):       TP-LINK_Network1         Network Type:       Infrastructure       Rate:       300Mbps         Channel:       1 (2.4G)       Encryption Type:       AES         AP MAC:       94-0C-6D-2F-3C-BE       Wireless Mode:       802.11n         IP Address:       192.168.1.103	Status	WPS	Network	Profile	Advanced	
Network Type:InfrastructureRate:300MbpsChannel:1 (2.4G)Encryption Type:AESAP MAC:94-0C-6D-2F-3C-BEWireless Mode:802.11nIP Address:192.168.1.103	Profile Name	:	TP-LINK_Network1			
Channel:1 (2.4G)Encryption Type: AESAP MAC:94-0C-6D-2F-3C-BEWireless Mode: 802.11nIP Address:192.168.1.103	Network Nan	ne(SSID):	TP-LINK_Network1			
AP MAC: 94-0C-6D-2F-3C-BE Wireless Mode: 802.11n IP Address: 192.168.1.103	Network Typ	e:	Infrastructure	Rate:	300Mbps	
IP Address: 192.168.1.103	Channel:		1 (2.4G)	Encrypti	on Type: AES	
	AP MAC:		94-0C-6D-2F-3C-BE	Wireless	Mode: 802.11n	
Signal Strength: 100% Excellent	IP Address:		192.168.1.103			
	Signal Stren	gth: 💼			100%	Excellent

Figure 3-8

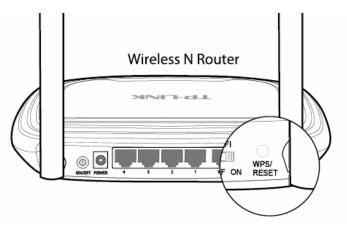
#### 3.2 To connect using WPS

WPS (Wi-Fi Protected Setup) function allows you to add a new wireless device to an existing network quickly.

If the wireless router supports Wi-Fi Protected Setup (WPS), you can establish a wireless connection between wireless card and router using either Push Button Configuration (PBC) method or PIN method.

#### 3.2.1 PBC (Push Button Configuration) method

1. Press the **WPS/RESET** button for 2~3 seconds on the back panel of the router. Here takes router TL-WR841ND for example.



- 2. Press the WPS button on the adapter. There are two ways:
- Method One:

Press and hold the WPS button on the adapter directly for 2~3 seconds until Figure 3-11 appears.



Figure 3-9

Method Two:

Open TWCU and click **WPS** tab. Select **Push the button on my access point or wireless router** and then click **Connect**.

Image: Status       Image: Network       Image: Profile       Image: Advanced         Image: Status       WPS       Network       Profile       Advanced         Image: Status       This application will guide you through configuring your wireless network.       Rease choose a method to join a wireless network:         Image: Push the button on my access point or wireless router.       Rease the PIN of my access point or wireless router.         Image: Enter the PIN of this device into my access point or wireless router.       Rease router.		К				- x
This application will guide you through configuring your wireless network. Please choose a method to join a wireless network: Please choose a method to join a wireless network: The push the button on my access point or wireless router. The plot of my access point or wireless router.		WPS		0	-	
<ul> <li>((WPS)))</li> <li>Please choose a method to join a wireless network:</li> <li> Push the button on my access point or wireless router. </li> <li> Enter the PIN of my access point or wireless router. </li> </ul>	Status	WPS	Network	Profile	Advanced	
Connect	Please cho Please the Push the Center the	pose a method to j e button on my ac e PIN of my acces	oin a wireless netw cess point or wirele s point or wireless	vork: ess router. router.		



3. The adapter will be connecting to the target network.

Configuring the wireless network.	
<b>(((WPS)))</b>	
Connecting to the network	
	Cancel

Figure 3-11

4. When the following window appears, you have successfully connected to the network.

Configuring the wireless network.
<b>(((WPS)))</b>
Successfully connected to the network by WPS !
ОК

Figure 3-12

#### 3.2.2 PIN method

There are two ways to configure the WPS by PIN method:

- 1) Enter the PIN from your AP device.
- 2) Enter a PIN into your AP device.

Following are detailed configuration procedures of each way.

#### 3.2.2.1. Enter the PIN from your AP device

 Open TWCU and click WPS tab. Select Enter the PIN of my access point or wireless router. In the empty field beside PIN, enter the PIN labeled on the bottom of the router (here takes 13492564 for example). If you have generated a new PIN code for your router, please enter the new one instead. Click Connect to continue. TL-WN8200ND 300Mbps High Power Wireless USB Adapter

	к				- *
	WPS			1	
Status	WPS	Network	Profile	Advanced	
<ul> <li>○ Push the</li> <li>● Enter the</li> <li>PIN: 1349</li> </ul>	bose a method to a button on my ar e PIN of my acce 12564	tion will guide you th join a wireless netw ccess point or wirele rss point or wireless ce into my access p	rork: ess router. router.	g your wireless network outer	Connect

#### Figure 3-13

2. The adapter will be connecting to the target network.

Configuring the wireless network.
<b>(((WPS)))</b>
Searching for an available network Current PIN:13492564
Cancel



3. When Figure 3-12 appears, you have successfully connected to the network.

#### 3.2.2.2. Enter a PIN into your AP device

1. Open TWCU and click **WPS** tab. Select **Enter the PIN of this device into my access point or wireless router**. In the field beside PIN, you will see the PIN value of the adapter which is randomly generated. Click **Connect** to continue. TL-WN8200ND 300Mbps High Power Wireless USB Adapter

TP-LIN	к				- x
Status	WPS	Network	Profile	Advanced	
Status	WF5	Network	Frome	Advanced	
((WPS)	This applicat	ion will guide you th	nrough configuring	) your wireless networ	k.
Please cho	ose a method to	join a wireless netw	ork:		
		cess point or wirele			
,	-	ss point or wireless		outer.	
	2306				
					Connect
		Figure	9-15		

2. Open your router's Web-based Utility and click WPS link on the left of the main menu. Then click **Add device** and the following figure will appear. Enter the PIN value of the adapter in the empty field beside PIN and then click **Connect**.

Add A New Device
<ul> <li>Enter the new device's PIN.</li> <li>PIN: 19342306</li> <li>Press the button of the new device in two minutes.</li> </ul>
Back Connect
Back Connect

- Figure 3-16
- 3. When **Connect successfully** appears on the screen, the WPS configuration is complete. Or you can view the adapter's utility page to see whether the connection has been successful as shown in Figure 3-18.

Add A New Device
<ul> <li>Enter the new device's PIN.</li> <li>PIN: 19342306</li> <li>Press the button of the new device in two minutes.</li> </ul>
Connect successfully!
Back Connect

Figure 3-17

	((WPS))
Successfully	connected to the network by WPS !

Figure 3-18

#### 3.3 To connect using Windows built-in wireless utility

#### 3.3.1 In Windows 7

Windows 7 users may use the built-in wireless utility. Follow the steps below.

1. Left-click the wireless icon *in your system tray* (lower-right corner). The utility will display any available wireless networks in your area. Highlight the wireless network (displayed using the SSID) to be connected and then click **Connect**.

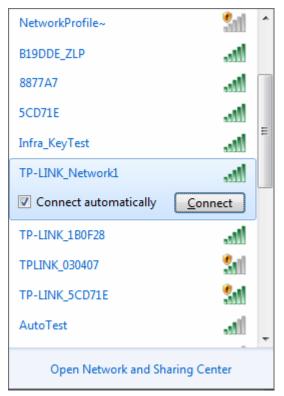


Figure 3-19

2. If the network you would like to connect is security-enabled, enter the same security key or passphrase that is on your router. Or push the WPS button on the router or access point (You will be prompted to push the button on the window if WPS function is supported as shown in the figure below). If the network to be connected is not secure, the connection will be built without entering a key.

😨 Connect to a Networ	rk	×
Type the network	security key	
Security key:	•••••	
	Hide characters	
	'ou can also connect by pushing the utton on the router.	
	ОК	Cancel

Figure 3-20

3. You have now successfully connected to the network.

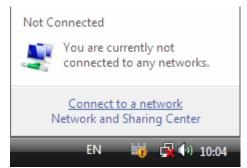


Figure 3-21

#### 3.3.2 In Windows Vista

Windows Vista users may use the built-in wireless utility. Follow the steps below.

1. Open the wireless utility by right-clicking on the wireless computer icon in your system tray as shown in the figure below. Select **Connect to a network**.





2. The utility will display any available wireless networks in your area. Highlight the wireless network you would like to connect and then click **Connect**.

🅞 👰 Connect to a network		
Select a network to connect to		
Show All		* 7
Dial-up and VPN	· · · · · · · · · · · · · · · · · · ·	<u>^</u>
Wireless Network Connection 6	<b>^</b>	=
TP-LINK_Network1 Security-	enabled network	
TP-LINK_1B0F28 Security-	enabled network	
Infra_KeyTest Security-	enabled network	-
Set up a connection or network		
Open Network and Sharing Center		
	Connect Can	cel

Figure 3-23

3. If the network you would like to connect is security-enabled, enter the same security key or passphrase that is on your router. If the network to be connected is not secure, the connection will be built without entering a key.

Connect to a network
Type the network security key or passphrase for TP-LINK_Network1 The person who setup the network can give you the key or passphrase.
Security key or passphrase:
If you have a <u>USB flash drive</u> with network settings for TP-LINK_Network1, insert it now.
Connect Cancel

Figure 3-24

4. You have now successfully connected to the network.

Connect to a network	- • 🔀
Successfully connected to TP-LINK_Network1	
✓ Save this network ✓ Start this connection automatically	
	Close

Figure 3-25

#### 3.3.3 In Windows XP

Windows XP users may use the built-in wireless utility. Follow the steps below.

1. Right-click on the utility icon in your system tray (lower-right corner). Select **Switch to Windows wireless configuration tool**.

Open		
Radio OFF		
Switch to Windows wireless configuration tool		
Switch to SoftAP mode		
About		
Exit		-5
	11 <b>- X</b> V	2



Or double-click the utility icon to load the utility configuration page. Click **Advanced** in the tools section and then select **Use Windows wireless configuration tool** in the figure shown below. Click **OK** when Figure 3-28 appears to continue.

TL-WN8200ND

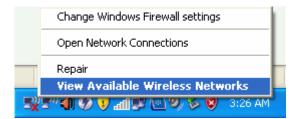
	к				<b>-</b> x
	WPS			200	
Status	WPS	Network	Profile	Advanced	
⊙ Use TP Wireless ne	etwork adapter sv noose a wireless	onfiguration Utility		ws wireless configu < Connection TL-W	
O ON Power Save		⊙ OFF			
ON		⊙ OFF			

Figure 3-27





2. Right-click on the wireless computer icon in your system tray (lower-right corner). Select **View Available Wireless Networks**.





3. The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

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<sup>(i†))</sup> Wireless Network Connect	ion 32			×
Network Tasks	Choose	e a wireless network		
nefresh network list	Click an iten information	n in the list below to connect to a $\underline{w}$ ireless network in range or to get ,	more	
Set up a wireless network for a home or small office	((ဓူ))	TP-LINK_254350	-0	^
	U	😚 Security-enabled wireless network (WPA2)		
Related Tasks	((Q))	TP-LINK_CB3A52		
Learn about wireless		😚 Security-enabled wireless network (WPA2)	0000	
* networking	((O))	TP-LINK_Network1		
Change the order of preferred networks		🔓 Security-enabled wireless network (WPA2)	aaall	≡
Change advanced settings		To connect to this network, click Connect. You might need to enter additional information.		
	((ဓူ))	WR541		
	U	😚 Security-enabled wireless network		
	((ဓူ))	SOHO_AT	-0	~
			⊆onnect	:

Figure 3-30

4. If the network is security-enabled, you will be prompted to enter the key as shown below. If not, you will connect to the network directly without entering a key.

Wireless Network Conne	ction 🔀
	rk1' requires a network key (also called a WEP key or WPA event unknown intruders from connecting to this network.
Type the key, and then click (	Connect.
Network <u>k</u> ey:	•••••
Confirm network key:	•••••
	<u>Connect</u> Cancel

Figure 3-31

## **Chapter 4 Management**

This section will show you how to configure your TL-WN8200ND adapter using the TP-LINK Wireless Configuration Utility (TWCU).

The TL-WN8200ND adapter uses the TP-LINK Wireless Configuration Utility as the management software. The utility provides users with an easy interface to change any settings related to the adapter. Double-clicking on the *solar* icon on your desktop will start the utility.

#### 4.1 Profile

Your wireless networks may vary in different places like home, office or coffee shop. With **Profile** management, you can easily save and manage various networks to be connected, saving you the trouble of having to repeat the same configurations. Click **Profile** in the tools section, the following page will appear.

<b>FP-LINK</b> The Reliable Choice	C				
Status	WPS	Network	Profile	Advanced	
Profile Name	SSID		Network Type	Security	Connected

Figure 4-1

#### 4.1.1 Add a profile

To add a profile, click the **Add** button on the bottom of the screen. Then the configuration window will appear.

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Profile Name:	Home	
SSID:	TP-LINK_Network1	~
Network Type:	<ul> <li>Infrastructure</li> </ul>	🔘 ad hoc
Security Type:	WPA-PSKWPA2-PSK	*
Encryption Type:	TKIP/AES	*
Security Key:	*****	Show characters
🔲 Start this connec	tion automatically.	
		Save Cancel
	Figure 4-	2

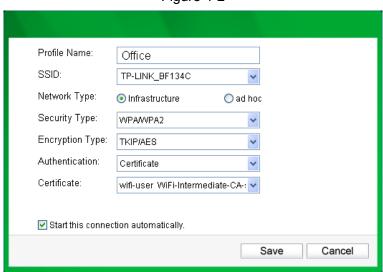


Figure 4-3

The following items can be found on the screen.

- Profile Name: Enter a name for your profile (e.g. Home, Office, CoffeeShop). The same name is not allowed. Please also note that no space is allowed between words.
- > **SSID:** Select the target network from the drop-down list.
- Network Type: Select the network type. If you are connecting to a wireless router or access point, select Infrastructure. If you are connecting to another wireless client such as an adapter, select ad-hoc.
- Security Type: Select the security type from the list. Three options are available: WPA-PSK/WPA2-PSK, WEP and None. The security type should be the same as on your router or access point, otherwise, you will not be able to build a successful connection.

**WPA-PSK/WPA2-PSK** uses a passphrase or key to authenticate your wireless connection. The key must be the exact same key entered on your wireless router or access point. None stands for no security. It is recommended to enable WPA-PSK/WPA2-PSK on your wireless router or access point before configuring your wireless adapter.

#### P Note:

You will see Figure 4-2 if you selected the security type **WPA-PSK/WPA2-PSK**; while, if you selected the security type **WPA/WPA2** (-Enterprise), Figure 4-3 will be displayed.

- Encryption Type: From the drop-down menu, select the encryption type that is the same as on your router or access point.
- Security Key: Enter the passphrase exactly as it is on your wireless router or access point. Click the Show characters box to see the passphrase. Unchecking it will hide it.
- Start this connection automatically: check this box to automatically connect to this network next time.
- > **Save:** Click **Save** to save your settings.

Having completed the above settings, the Profile page should look like the following figure. To connect to a desired network, just highlight the network you would like to connect to and click the **Connect** button on the bottom of the window.

TP-LINK The Reliable Choice					- x
Status	WPS	Network	Profile	Advanced	
Profile Name	SSID		Network Type	Security	Connected
Home	TP-LINK	_Network1	Infrastructure	WPA-PSK/WPA	No
Office	TP-LINK_	BF134C	Infrastructure	WPA/WPA2	No
CoffeeShop	TP-LINK_	CB3A52	Infrastructure	None	No
		Add	Modify	Remove	Connect

Figure 4-4

#### 4.1.2 Modify a profile

You may edit an existing profile by clicking the **Modify** button from the Profile page. For instance, you may like to change the profile name from Home to Home1 or you may want to specify another SSID for profile Home. After all the changes, click **Save** to make the changes take effect.

Profile Name:	Home
SSID:	TP-LINK_Network1 -
Network Type:	
Security Type:	None
Encryption Type:	None 👻
Start this connect	tion automatically.
	Save Cancel

Figure 4-5

#### 4.1.3 Delete a profile

To delete an existing profile, highlight the profile name and click **Remove** on the bottom of the screen or press the Delete button on your keyboard. When the following figure appears, click **OK** to continue.

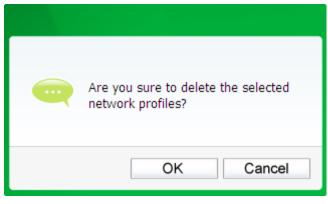


Figure 4-6

#### 4.2 Advanced

The following configurations can be made on the **Advanced** page:

1) To select wireless configuration tool.

Here you can decide which tool to use, either the TP-LINK Configuration Utility or the Windows wireless configuration tool. (This option is available only in Windows XP.)

 To switch to another wireless network adapter. Here you can switch to another adapter installed in your computer. The adapters successfully installed in your computer will be listed in the drop-down menu if the adapters are supported by this utility.

- To switch to SoftAP mode.
   Once enabled, the adapter will be able to work as an AP.
- 4) To change the power save mode.

TL-WN8200ND 300Mbps High Power Wireless USB Adapter

TP-LIN	ĸ				-
Status	WPS	Network	Profile	Advanced	
⊙ Use TP- Wireless ne	LINK Wireless C twork adapter sv oose a wireless	n tool onfiguration Utility vitch network adapter :	_	ws wireless configu : Connection TL-Wi	
O ON Power Save	mada	⊙ OFF			
O ON		⊙ OFF			

Figure 4-7

#### 4.3 About

The About screen gives you information about the Driver and Utility versions of the adapter. Right-click on the adapter icon in your system tray and select **About** from the list.

	Open	
	Radio OFF	
	Switch to SoftAP mode	
	About	
	Exit	
ail T	🕡 🐮 📶 🕪 6/12/2012	

Figure 4-8

TP-LINK Wireless Configuration Utility				
UI version:	1.4.9 en.008			
WFF version:	1.3.1.1			
Driver version:	1015.7.702.2012			
Copyright (C) 2011 TP-LINK TECHNOLOGIES CO., LTD. All rights reserved.				
	ОК			

Figure 4-9

## Chapter 5 AP Mode

In Soft AP mode, the adapter will work as an AP.

Suppose that only one computer in your house can access the Internet for various reasons like only one WLAN port is available on your wired broadband router, however, other wireless-capable devices also want to share the Internet. Then the adapter can be configured as an AP under the Soft AP mode, saving you the trouble of having to get a separate access point or a router.

With this feature, a computer can use a single physical wireless adapter to connect as a client to a hardware access point while at the same time acting as a software AP allowing other wireless-capable devices to connect to it.

To switch to this mode, right-click on the utility icon in your system tray and select **Switch to SoftAP mode**.

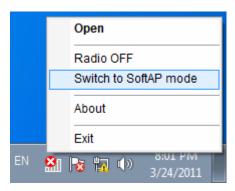


Figure 5-1

Or from the **Advanced** page of the utility, tick **ON** under the SoftAP mode as shown in the following figure. Click **OK** when prompted to confirm the setting.

	WPS				
Status	WPS	Network	Profile	Advanced	
) Use T Wireless I	network adapter s	Configuration Utili	Are y mode	/ou sure to turn on the 3?	9 SoftAP
SoftAP m	ode			OK	Cancel
	ode	© OFF		ОК	Cancel
SoftAP m		OFF		ОК	Cancel

Figure 5-2

The **Soft AP** icon should then appear beside **Advanced** icon in the utility.

	K				- x
Status	WPS	Network	Profile	Advanced	Soft AP
Status	WP5	Network	Profile	Advanced	SOIL AP
SoftAP mo	de:	ON	OFF		
Internet Co	nnecting Share(ICS)	_	a Connection	•	
SSID:		SoftAP			
Security Ty	pe:	WPA2-PS	ŝK	•	
Encryption	Туре:	AES		•	
Security Ke	ey:	12345678		Show c	haracters
IP Address	:	192.168.12	23.1		
					Apply

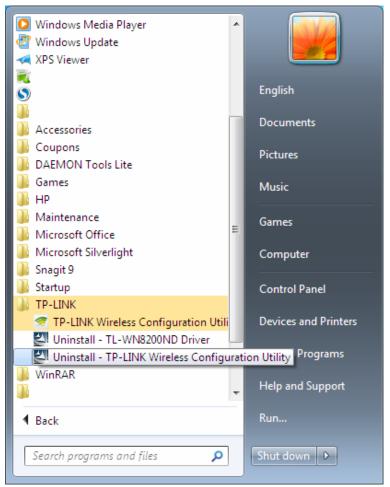


- > **SoftAP mode:** Select to enable or disable the function.
- Internet Connecting Share(ICS): Specify a connection through which devices connected to your AP can access the Internet.
- SSID: Enter the name for your soft AP (for example, Jone) so that others can know which AP is yours when trying to connect to it. The default name (SSID) is "tp-link".
- Security Type: The security type here is set to be WPA2-PSK which is based on 802.11i and uses Advanced Encryption Standard instead of TKIP. It was designed to improve the security features of WEP. WPA2-PSK uses a passphrase or key to authenticate your wireless connection. You needn't make any configuration here.
- > **Encryption Type:** The encryption type here is set to be AES.
- Security Key: Enter the Key in the field to make your AP security enabled. It is recommended that you specify another key instead of the default key 12345678. Only by entering the corresponding key can other computers establish a successful connection with your AP.
- > **IP Address:** Here displays the IP address of the SoftAP.

## Chapter 6 Uninstall Software

#### 6.1 Uninstall the utility software from your PC

1. On the Windows taskbar, click the **Start** button, click **All programs**→**TP-LINK**, and then click **UninstalI-TP-LINK Wireless Configuration Utility**.



#### Figure 6-1 Uninstall Utility

2. Follow the Install Shield Wizard to uninstall the utility software from your PC.

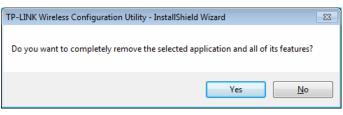


Figure 6-2

3. Click Finish when the figure below appears.

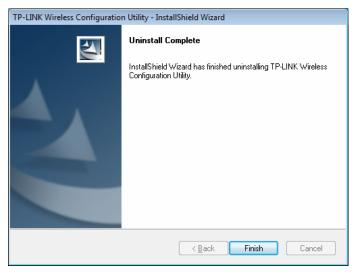
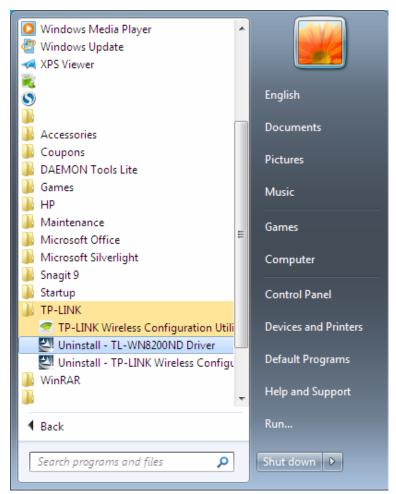


Figure 6-3

#### 6.2 Uninstall the driver software from your PC

1. On the Windows taskbar, click the **Start** button, click **All programs→TP-LINK**, and then click **Uninstall-TL-WN8200ND Driver**.





2. Following the steps, then the system will uninstall the driver software of the adapter from your PC.

## **Appendix A: Specifications**

Normal		
Interface	USB 2.0 Interface	
Standards	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b	
Button	Wi-fi Protected Setup (WPS) Button	
Operating System	Windows XP, Windows Vista, Windows 7	
Throughput	Tx: 150Mbps	
	Rx: 300Mbps	
	11b: 1/2/5.5/11Mbps	
Radio Data Rate	11g: 6/9/12/18/24/36/48/54Mbps	
	11n: Up to 300Mbps	
	11b:CCK,QPSK,BPSK	
Modulation	11g:OFDM	
	11n: QPSK, BPSK, 16-QAM, 64-QAM	
Media Access Protocol	CSMA/CA with ACK	
Data Security	WEP; WPA/WPA2; WPA-PSK/WPA2-PSK	
Frequency*	2.4 ~ 2.4835GHz	
Spread Spectrum	Direct Sequence Spread Spectrum (DSSS)	
Safety & Emissions	FCC, CE	

Environmental and Physical		
Working Temperature	0°C~40°C (32°F~104°F)	
Storage Temperature	-40℃~70℃(-40°F~158°F)	
Working Humidity	10% ~ 90% RH, Non-condensing	
Storage Humidity	5% ~ 90% RH, Non-condensing	

## **Appendix B: Glossary**

- 802.11b The 802.11b standard specifies a wireless product networking at 11 Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHz, and WEP encryption for security. 802.11b networks are also referred to as Wi-Fi networks.
- 802.11g specification for wireless networking at 54 Mbps using direct-sequence spread-spectrum (DSSS) technology, using OFDM modulation and operating in the unlicensed radio spectrum at 2.4GHz, and backward compatibility with IEEE 802.11b devices, and WEP encryption for security.
- 802.11n 802.11n builds upon previous 802.11 standards by adding MIMO (multiple-input multiple-output). MIMO uses multiple transmitter and receiver antennas to allow for increased data throughput via spatial multiplexing and increased range by exploiting the spatial diversity, perhaps through coding schemes like Alamouti coding. The Enhanced Wireless Consortium (EWC) was formed to help accelerate the IEEE 802.11n development process and promote a technology specification for interoperability of next-generation wireless local area networking (WLAN) products.
- Ad hoc Network An ad hoc network is a group of computers, each with a Wireless Adapter, connected as an independent 802.11 wireless LAN. Ad hoc wireless computers operate on a peer-to-peer basis, communicating directly with each other without the use of an access point. Ad hoc mode is also referred to as an Independent Basic Service Set (IBSS) or as peer-to-peer mode, and is useful at a departmental scale or SOHO operation.
- DSSS (Direct-Sequence Spread Spectrum) DSSS generates a redundant bit pattern for all data transmitted. This bit pattern is called a chip (or chipping code). Even if one or more bits in the chip are damaged during transmission, statistical techniques embedded in the receiver can recover the original data without the need of retransmission. To an unintended receiver, DSSS appears as low power wideband noise and is rejected (ignored) by most narrowband receivers. However, to an intended receiver (i.e. another wireless LAN endpoint), the DSSS signal is recognized as the only valid signal, and interference is inherently rejected (ignored).
- FHSS (Frequency Hopping Spread Spectrum) FHSS continuously changes (hops) the carrier frequency of a conventional carrier several times per second according to a pseudo-random set of channels. Because a fixed frequency is not used, and only the transmitter and receiver know the hop patterns, interception of FHSS is extremely difficult.
- Infrastructure Network An infrastructure network is a group of computers or other devices, each with a Wireless Adapter, connected as an 802.11 wireless LAN. In infrastructure mode, the wireless devices communicate with each other and to a wired network by first going through an access point. An infrastructure wireless network connected to a wired network is referred to as a Basic Service Set (BSS). A set of two or more BSS in a single network is referred to as an Extended Service Set (ESS). Infrastructure mode is useful at a corporation scale, or when it is necessary to connect the wired and wireless networks.

- Spread Spectrum Spread Spectrum technology is a wideband radio frequency technique developed by the military for use in reliable, secure, mission-critical communications systems. It is designed to trade off bandwidth efficiency for reliability, integrity, and security. In other words, more bandwidth is consumed than in the case of narrowband transmission, but the trade off produces a signal that is, in effect, louder and thus easier to detect, provided that the receiver knows the parameters of the spread-spectrum signal being broadcast. If a receiver is not tuned to the right frequency, a spread-spectrum signal looks like background noise. There are two main alternatives, Direct Sequence Spread Spectrum (DSSS) and Frequency Hopping Spread Spectrum (FHSS).
- SSID A Service Set Identification is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name. See also Wireless Network Name and ESSID.
- WEP (Wired Equivalent Privacy) A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard. To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.
- Wi-Fi A trade name for the 802.11b wireless networking standard, given by the Wireless Ethernet Compatibility Alliance (WECA, see http://www.wi-fi.net), an industry standards group promoting interoperability among 802.11b devices.
- WLAN (Wireless Local Area Network) A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.
- WPA (Wi-Fi Protected Access) A wireless security protocol uses TKIP (Temporal Key Integrity Protocol) encryption, which can be used in conjunction with a RADIUS server.