

# User Guide

[www.tenda.cn](http://www.tenda.cn)



W541U 54M Wireless USB Adapter

## Copyright Statement

**Tenda** is the registered trademark of Shenzhen Tenda Technology Co., Ltd. All the products and product names mentioned herein are the trademarks or registered trademarks of their respective holders. Copyright of the whole product as integration, including its accessories and software, belongs to Shenzhen Tenda Technology Co., Ltd. Without the permission of Shenzhen Tenda Technology Co., Ltd, any individual or party is not allowed to copy, plagiarize, imitate or translate it into other languages.

All the photos and product specifications mentioned in this guide are for references only. As the upgrade of software and hardware, there will be changes. And if there are changes, Tenda is not responsible for informing in advance. If you want to know more about our product information, please visit our website at [www.tenda.cn](http://www.tenda.cn).

## Table of Content

Chapter 1 Introduction .....	1
1.1 Product Feature .....	2
1.2 Product Deployment .....	3
1.3 Indicator Description .....	4
1.4 Package Contents .....	4
Chapter 2 Installation Guide.....	5
3.1 Station Mode.....	11
3.1.1 Station Mode Topology.....	11
3.1.2 Status .....	12
3.1.3 Site Survey .....	13
3.1.4 Profile Management.....	14
3.1.5 Statistics.....	16
3.1.6 WPS Setting.....	17
3.2 AP Mode .....	19
3.2.1 AP Mode Topology .....	19
3.2.2 Basic Setting .....	20
3.2.3 Security Setting .....	21
3.2.4 Access Control .....	22
3.2.5 About .....	24
Appendix One: Acronyms and Terms .....	25
Appendix Two: Product Specification .....	28
Appendix Three: How to connect with PSP.....	29
Caution : .....	33

## Chapter 1 Introduction

W541U Wireless USB Adapter complies with IEEE 802.11g and IEEE 802.11b standards, providing up to 54Mbps wireless transmission rate which is 5 times the common 802.11b products. It supports 64/128-bit WEP, WPA/WPA-PSK, WPA2/WPA2-PSK encryption and 802.1x security authentication standard to protect your network security. Besides, built-in omnidirectional smart antenna frees you from wired cables, which allow you to share the Internet access anywhere, files and fun, easily and securely.

In addition, W541U supports Soft AP, PSP, WII and NDS for Internet and XLink Kai connections. PBC and PIN code (two WPS encryption methods) can free you from remembering the long passwords. Moreover, complete WMM support makes your voice and video more smooth.

## 1.1 Product Feature

- Supports IEEE 802.11g and IEEE 802.11b standards
- Provides two work modes: Ad Hoc Mode and Infrastructure Mode
- Provides up to 54Mbps transmission rate and up to 300 meters transmission distance
- Auto-detects the wireless network and changes the wireless transmission rate
- Supports Soft AP, PSP, Wii and NDS for Internet and XLink Kai connections
- PBC and PIN code (two WPS encryption methods) free you from remembering the long passwords
- Provides easy configuration utility and monitor program
- Supports Wireless Roaming function
- WMM support to smooth your voice and video
- Easy-to-use, plug and play

## 1.2 Product Deployment

- 54Mbps wireless USB Adapter offers fast, reliable and cost-effective solution for wireless access. Deployment as follows;
- For staff who requires higher mobility in the office, they want to have access to traditional wired or wireless network in any place of the company;
- Enterprise or individual who requires often changes in lay out of network cables;
- Companies or places which are not suitable for LAN cable laying out because of budget or objective building, including places of great interests, rent places or places for short-term usage;
- Company or individual who avoids using expensive cables, renting cables or renting rights for access.

### **1.3 Indicator Description**

In the front panel of W541U, there is a LED indicator blinking when data communication is going on.

### **1.4 Package Contents**

Unpack the packets, and please find the following items:

- One 54M Wireless USB Adapter
- One CD-ROM

## Chapter 2 Installation Guide

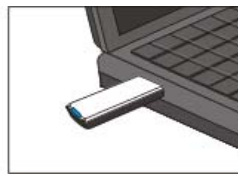
This chapter is to assist you how to use included the CD-ROM which comprises the Setup Wizard and the Client Utility Interface.

The following steps on Setup Wizard are taken the Windows XP as example.

1. Please insert the Wireless USB Adapter into the USB port of your computer.



Or



2. "Found New Hardware" system dialogue appears, and selects "Cancel" to use the included Setup Wizard for fast installation; of course, you also can select "Next" to install by manual.





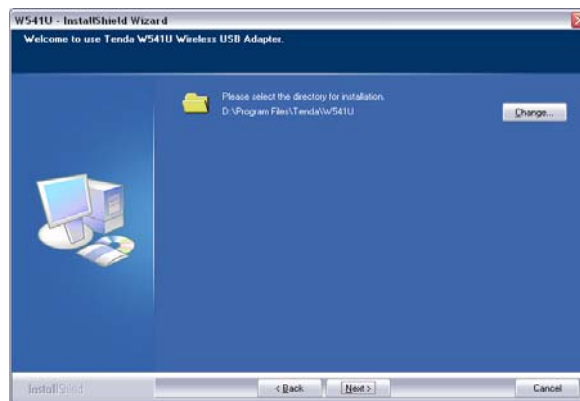
3. Insert the included CD-ROM into the CD-ROM drive of your computer, and the Welcome screen appears. (If not appear, double click the "Setup.exe" icon.)



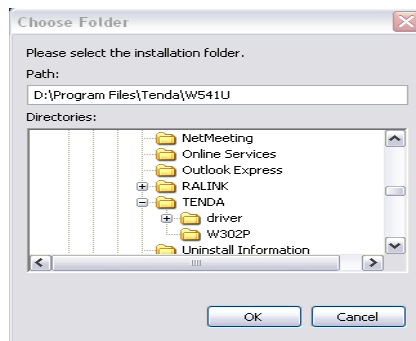
4. Click "Enter".



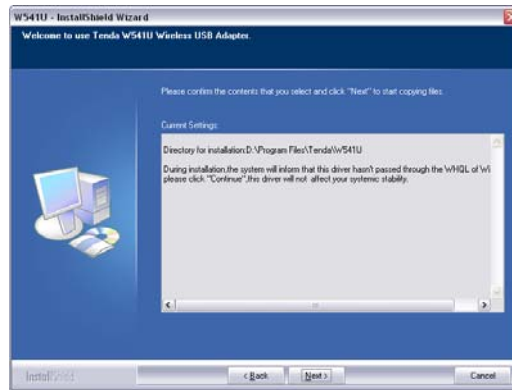
5. Click "Next" to start installing.



6. Click "Change..." to select the directory path, or click "Next".



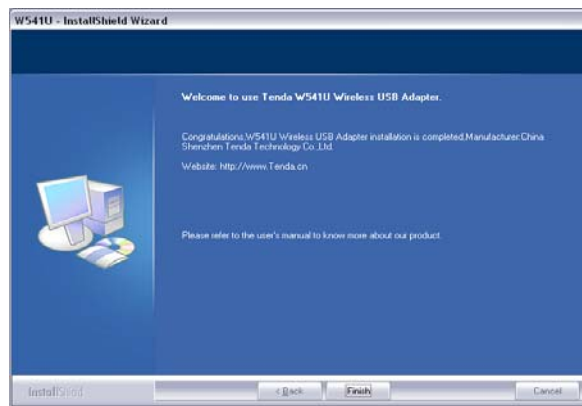
7. Select "OK" and "Next" in the following window.



8. During the installation, the following dialogue maybe appears. Click the “Continue Anyway” to continue. There is no security threat to your computer.



9. Click “Finish” to complete the installation.



## Chapter 3 Client Utility Interface

This software is for the W541U Wireless USB Adapter management. If it does not appear, select “Start”—“All Programs”—“TENDA”—“W541U”, or click the shortcut on your PC’s desktop.

 **Note:**

In the Windows XP, you can select the included W541U Client Utility Interface or the Windows XP internal wireless application to configure the device.

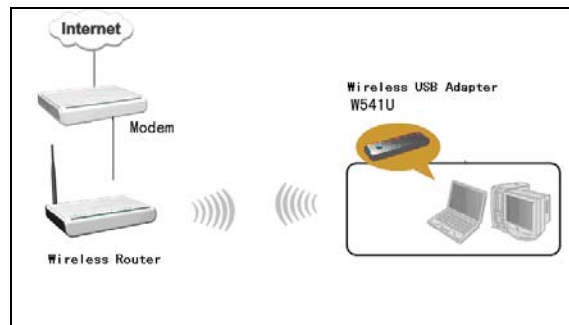
There are two client utility applications in W541U: Station Mode and AP Mode.

 **Note:**

In this utility interface, Station Mode (Client Mode) is the default access way.

### 3.1 Station Mode

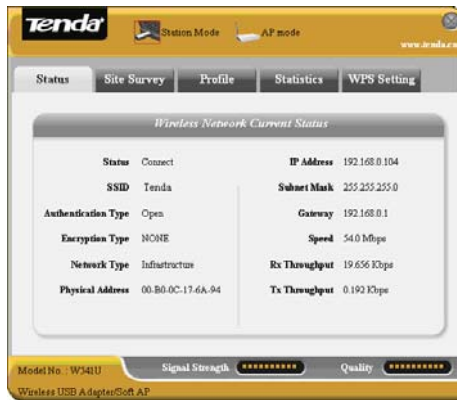
#### 3.1.1 Station Mode Topology



In this mode, W541U serves as a client to receive the wireless signals to access the Internet.

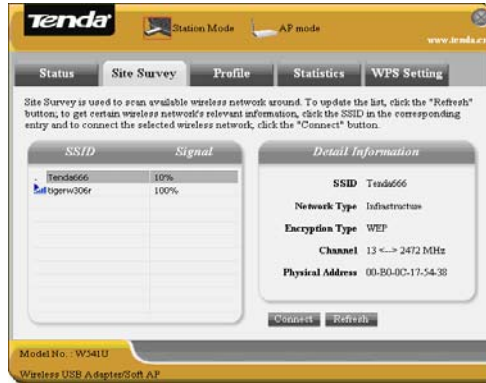
### 3.1.2 Status

In the Network Status window, it displays something on wireless adapter and wireless network status, including SSID, Authentication type, Encryption Type, IP address, subnet mask and gateway and so on.



### 3.1.3 Site Survey

The Site Survey is used to scan the available wireless network around, showing the wireless network's signal strength and other information which provides basis for you to access which wireless network.



**Connect:** select one entry in the wireless network list and click the button to connect the device with the selected network.

**Refresh:** rescan the wireless network around.



### 3.1.4 Profile Management

This window saves the general wireless parameters for different profiles, which is used to fast connect the wireless network you need.



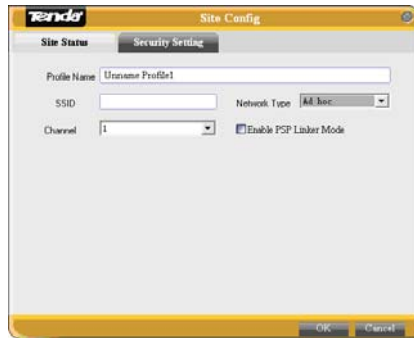
**UP/DOWN:** To change the profile's sequence in the list.

**Connect:** To activate one profile.

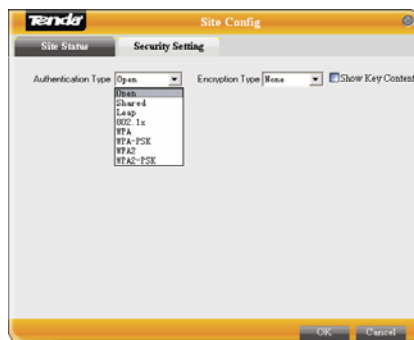
**New:** To create a new profile and configure the site status and security setting.

**Modify:** To modify one existing profile.

**Delete:** To delete one existing profile.



(Site Status)



(Security Setting)

### 3.1.5 Statistics

Statistics is used to summarize Rx and Tx data packets, including the success and error packet amount.



**Clear:** click this button to renew the statistics.

### 3.1.6 WPS Setting

WPS setting is enabled only on WPS-compliant devices.



**PIN:** Enter the Pin code and click the “PIN” to automatically connect the wireless adapter with wireless devices around.

**PBC:** Click the “PBC” to complete auto-check and connections between wireless adapter and other wireless device.

**Refresh:** to update the Pin code.

**Rescan:** to rescan the WPS-compliant wireless

network around.

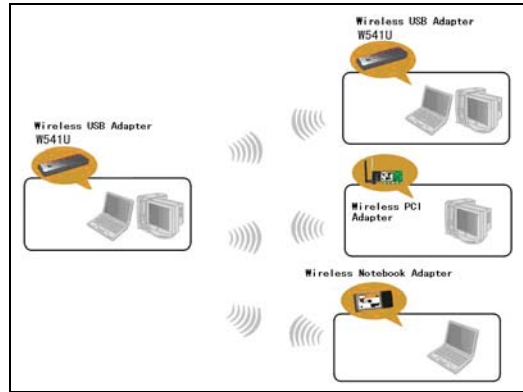
**Connect:** click this button to connect the WPS wireless network.

**Disconnect:** to disconnect the connected wireless network.

## 3.2 AP Mode

### 3.2.1 AP Mode Topology

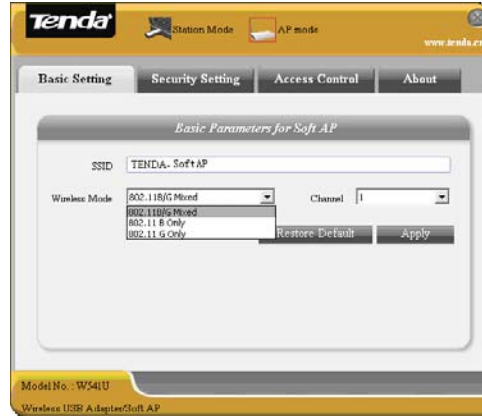
The device also can serve as an access point to transmit wireless signals and create wireless network, allowing other wireless clients to access the network.



Click the AP Mode icon to enter the AP Mode interface.

### 3.2.2 Basic Setting

This window is used to configure the AP's basic parameters, including SSID, Wireless Mode and Channel.



**SSID:** Wireless network's ID name scanned by wireless adapter.

**Wireless Mode:** 802.11b/802.11g/802.11b/g mixed.

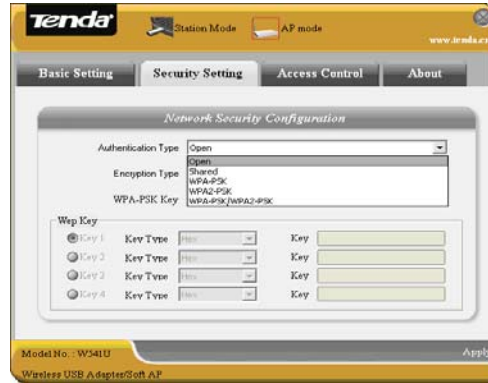
**Channel:** 1~11 channels provided.

**Restore Default:** to restore the set parameters to default factory default settings.

**Apply:** to make the changes made take effect.

### 3.2.3 Security Setting

This window is used to configure the wireless network's security authentication, providing WEP, WPA-PSK, WPA2-PSK, and WPA-PSK/WPA2-PSK encryption methods.



**WEP:** 10/26 bits Hex or 5/13 ASCII support.

**WPA-PSK:** 8~32 bits ASCII support.

**WPA2-PSK:** 8~32 bits ASCII support.

**WPA-PSK/WPA2-PSK:** 8~32 bits ASCII support.

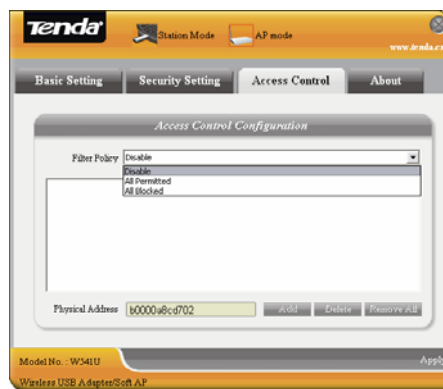


 **Note:**

1. The Hex characters include 0~9 numbers and a~f letters.
2. ASCII characters include any numbers/letters and characters.

### 3.2.4 Access Control

Access Control is based on the MAC address to decide that the specified client connects to the wireless network, or disables it to access the wireless network.



**Filter Policy:**

**Disabled:** to disable the filter function.

**All Permitted:** to permit all clients in the list to access the wireless network.

**All Blocked:** to refuse all clients in the list to access the wireless network.

**MAC Address:** to input the client's MAC address to implement the corresponding filter policy. For example: b0000a8cd702.

**Add:** to add the entered MAC address into the list.

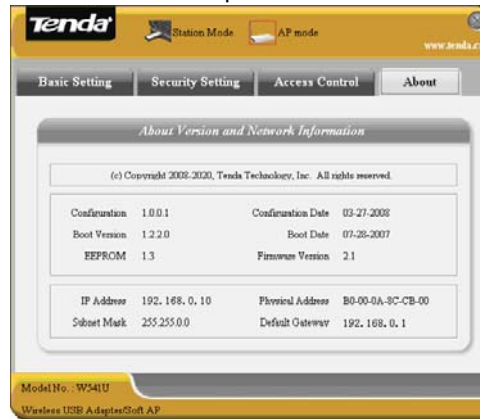
**Delete:** to delete one existing MAC address in the list.

**Remove All:** to delete all clients' MAC address in the list.

**Apply:** to make the changes made take effect.

### 3.2.5 About

This window displays something about software version and wireless adapter.



## **Appendix One: Acronyms and Terms**

<b>WLAN</b>	Wireless Local Area Network
<b>802.11</b>	A family of specifications developed by the IEEE for WLAN technology.
<b>802.11a</b>	An extension to 802.11 WLAN standard that provides up to 54 Mbps transmission in the 5 GHz UNI radio band.
<b>802.11b</b>	An extension to 802.11 WLAN standard that provides up to 11 Mbps transmission in the 2.4 GHz ISM radio band. 802.11b uses DSSS modulation.
<b>802.11g</b>	An extension to 802.11 WLAN standard that provides up to 54 Mbps transmission in the 2.4 GHz ISM radio band. 802.11g uses OFDM modulation and is backwards compatible with 802.11b.
<b>Ad-Hoc</b>	A group of computers each with wireless adapters, connected as an independent WLAN.
<b>AES</b>	Advanced Encryption Standard

<b>BSSID</b>	Basic Service Set ID
<b>DHCP</b>	Dynamic Host Configuration Protocol
<b>DSSS</b>	Direct Sequence Spread Spectrum. DSSS is one of two types of spread spectrum radio. The other is frequency-hopping spread spectrum (FHSS).
<b>QoS</b>	Quality of Service
<b>OFDM</b>	Orthogonal Frequency Division Multiplexing
<b>RADIUS</b>	Remote Authentication Dial In User Service
<b>RTS</b>	Request to Send
<b>SSID</b>	Service Set Identifier. A 32-character unique identifier attached to the header of packets sent over a WLAN that acts as a password when a mobile device tries to connect to the BSS.
<b>TCP/IP</b>	Transmission Control Protocol/Internet Protocol
<b>TKIP</b>	Temporal Key Integrity Protocol
<b>WDS</b>	Wireless Distribution System

- WEP** Wired Equivalent Privacy. A security protocol for WLANs defined in the IEEE 802.11 standard.
- WPA** Wi-Fi Protected Access
- WPA2** Wi-Fi Protected Access 2. The next generation of Wi-Fi security, based on the 802.11i standard.
- WPA2-PSK** Wi-Fi Protected Access 2-Pre-shared Keys
- WPA-PSK** Wi-Fi Protected Access-Pre-shared Keys

**Appendix Two: Product Specification**

<b>Standard</b>	IEEE802.11g, IEEE802.11b, IEEE802.11e (QoS)
<b>Port</b>	USB1.1,USB2.0
<b>Frequency Range</b>	2.4~2.4835GHz
<b>Transmission Rate</b>	54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps; 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps
<b>Antenna Gain</b>	2dBi
<b>Transmission Power</b>	Max. 20dbm
<b>Modulation Method</b>	OFDM, CCK
<b>Working Temperature</b>	0°C~55°C
<b>Storage Temperature</b>	-20°C~65°C
<b>Working Humidity</b>	10%~90%RH non-condensing

## Appendix Three: How to connect with PSP

### 1. To configure PSP with Ad-Hoc mode

Select Network Settings

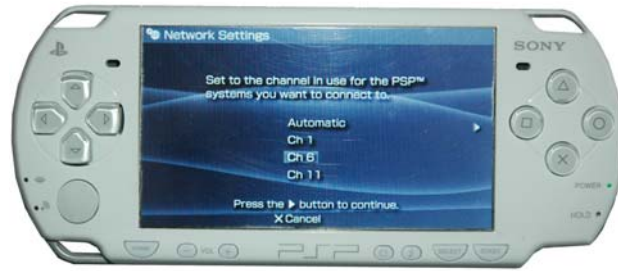


Select Ad-Hoc mode

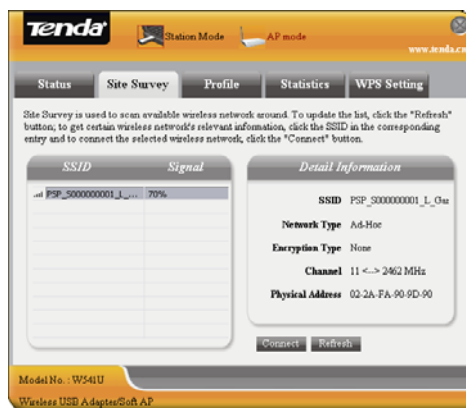




## Select Channel



2. In W541U Utility Interface scan PSP and double-click to connect the wireless network.

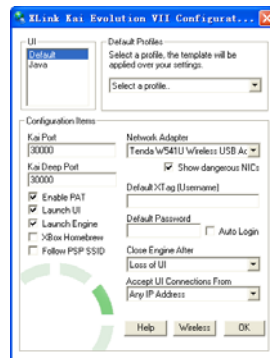


3. In Site Survey check “enable PSP connection mode” box.



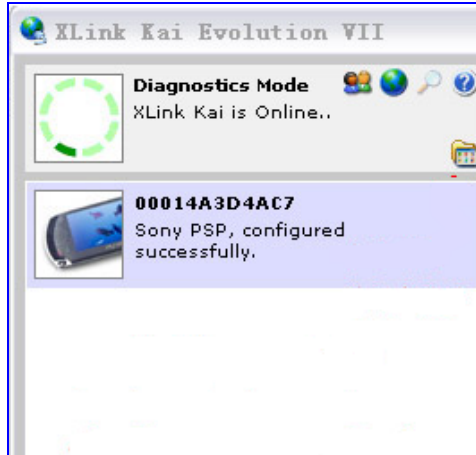
4. To configure Xlink Kai

Select “Start” → “All programmers” → “Xlink Kai Evolution VII” → “Start Kai Config” to configure the user name, password and other parameters as follows.



## 5. Login Xlink Kai

Select "Start" → "All programmers" → "Xlink Kai Evolution VII" → "Start Kai". PSP will connect with Xlink Kai automatically. The following window will indicate the connection is established well now.



Caution :

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

In order to comply with the FCC RF safety limits, please maintain at least 20cm distance between themselves and this transmitter and/or its antenna at all times during operation.

**Note:**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.