Motorola 802.11n USB Adapter

TER-NUSB1-N1
User Guide

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Chapter 1

Introduction

This Chapter provides an overview of the Motorola 802.11n USB Adapter's features and capabilities.

Congratulations on the purchase of your new Motorola 802.11n USB Adapter. The Motorola 802.11n USB Adapter provides a wireless network interface for your Notebook or PC.

Package Contents

The following items should be included:

- The Motorola 802.11n USB Adapter Unit

If any of the above items are damaged or missing, please contact your dealer immediately.

Features

- Compatible with Draft IEEE 802.11n, 802.11a, 802.11b and 802.11g 2.4GHz
- Data transmission rate is up to 300Mbps
- Supports Turbo Mode which can enhance the data transmission rate within the specific wireless network
- Supports 64/128-bit WEP, WPA (TKIP with IEEE802.1x) and WPA2 (AES with IEEE 802.1x) functions for high level security
- Automatic fallback which increases the data security and reliability
- Supports USB 2.0 interface

LED

USB Wireless Adapter

The USB Wireless Adapter has a single Link/Activity LED.

LED	LED1 : Link (blue)
	LED2: Active(blue)
	LED3: WPS(blue/amber)

Operation

You should insert the USB Wireless Adapter into your pc to install the supplied software automatically.

If you have any form of the wireless utility beforehand, please uninstall it.

Chapter 2

Initial Installation

This Chapter covers the software installation of the USB Wireless Adapter.

Requirements

- Windows 2000/XP/Vista/7.
- Available USB port.
- IEEE802.11a, IEEE802.11b, IEEE802.11g or IEEE802.11n wireless LAN.

Procedure

You should insert the Motorola 802.11n USB Adapter first.

1. Insert the Motorola 802.11n USB Adapter firmly into USB port of the PC.
2. The installation program should start automatically. If it does not, run the Setup.exe program.

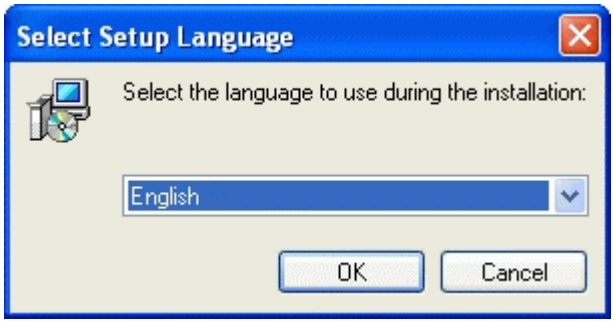

Figure 1: Select Language

3. On the *Select Setup Language* screen, choose the desired language from the list. Click *OK*.
4. Click *Yes* on the following screen.

Figure 2: Setup Screen

5. On the following screen, click *OK*.

Figure 3: Setup Screen

6. Click *Next*.

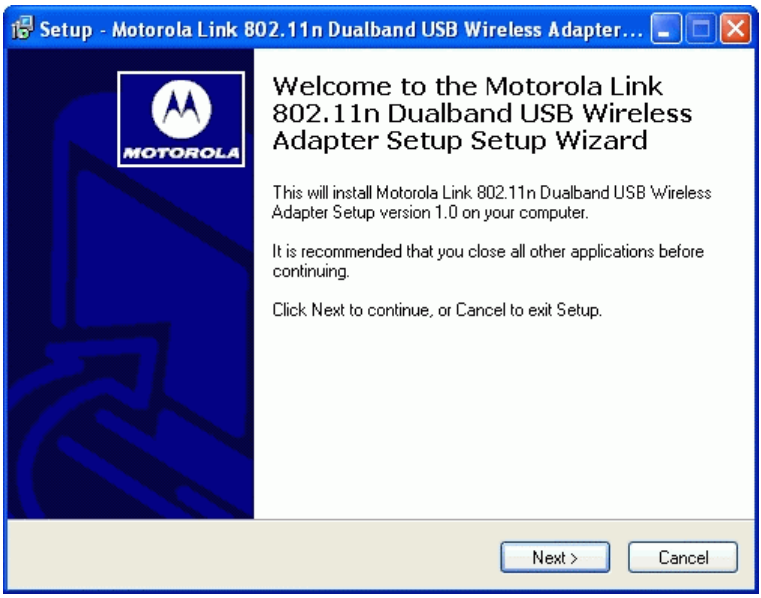

Figure 4: Wizard Screen

7. Click *Install*.

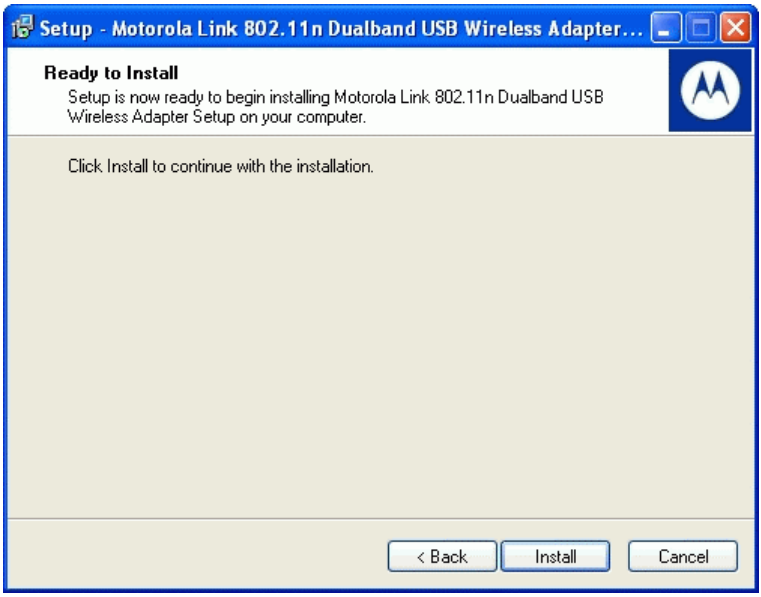

Figure 5: Install Screen

8. Click *Finish* to exit the Wizard.
9. If the USB Wireless Adapter was installed properly, you will now have a new icon in your system tray, as shown below.

Figure 6: System Tray Icon

USB Wireless Adapter Icon Table

	Connection to the USB Wireless Adapter is established.
	No connection to the USB Wireless Adapter.

10. You can double- click this icon to configure the Wireless interface. See the following chapter for details.

Chapter 3

Using the Windows Utility

This Chapter provides Setup details for the AP mode of the USB Wireless Adapter.

Overview

If using Windows, you can use the supplied utility to configure the Wireless interface.

To Use the supplied Windows utility for Configuration

- Double-click the *Wireless Utility* icon in the desktop.
- Click *Start - Programs - Motorola Wireless - Motorola WPS Manager*

This Chapter assumes you are using the supplied Wireless utility.

System Tray Icon

If the Wireless Utility program is running, you can double-click the icon in the System Tray or right-click the icon and select "Open" to open the application.

Status Information

The menu options available from the System Tray icon are:

- **Open** - This will display the main screen of the Utility.
- **Exit** - Terminate the connection to the USB Wireless Adapter.

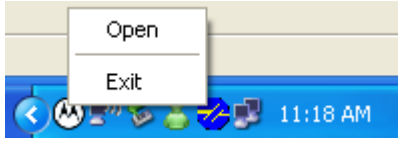

Figure 7: USB Wireless Adapter menu

WPS Manager Screen

WPS (Wi-Fi Protected Setup) can simplify the process of connecting any device to the wireless network by using the push button configuration (PBC) on the Wireless Access Point, or entering a PIN code.

You will use the WPS screen when you try to connect the wireless network with the WPS function.

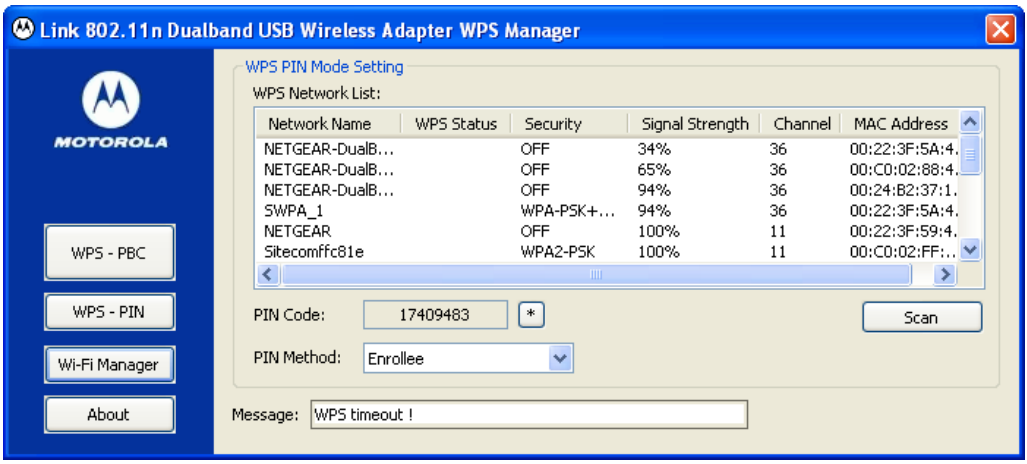

Figure 8: WPS Manager Screen

Data - WPS Manager Screen

WPS	
WPS Network List	It displays the information of surrounding APs with WPS IE from last scan result. List information includes SSID, WPS Status, Security, Signal Strength, Channel and MAC Address.
Scan	Click this button to update information on surrounding wireless network.
PIN Code	Enter the PIN code displayed in the following field to the WPS screen of the access point. When STA is Enrollee, you can use "*" button to re-generate new PIN Code.
Pin Method	Our station role-playing as an *Enrollee* or an external *Registrar*.
Message	Information about Security and Key in the credential.
WPS-PBC	Start to add to AP using PBC configuration method.
WPS-PIN	Start to add to Registrar using PIN configuration method. If STA Registrar, remember that enter PIN Code read from your Enrollee before starting PIN.
WPS-Stop	Click this to stop WPS action and disconnect this active link. The driver will select any non-security AP.
Wi-Fi Manager	Click this to view the Wireless Network Connection sub-screen. Please refer to the following section for more details.
About	Click this to see the information of the current version.

Wireless Network Connection Screen

You will see the following screen by clicking the *Wi-Fi Manager* button in the WPS screen. Wireless Zero Configuration (WZC), is a service of Microsoft Windows which dynamically selects a wireless network to connect.

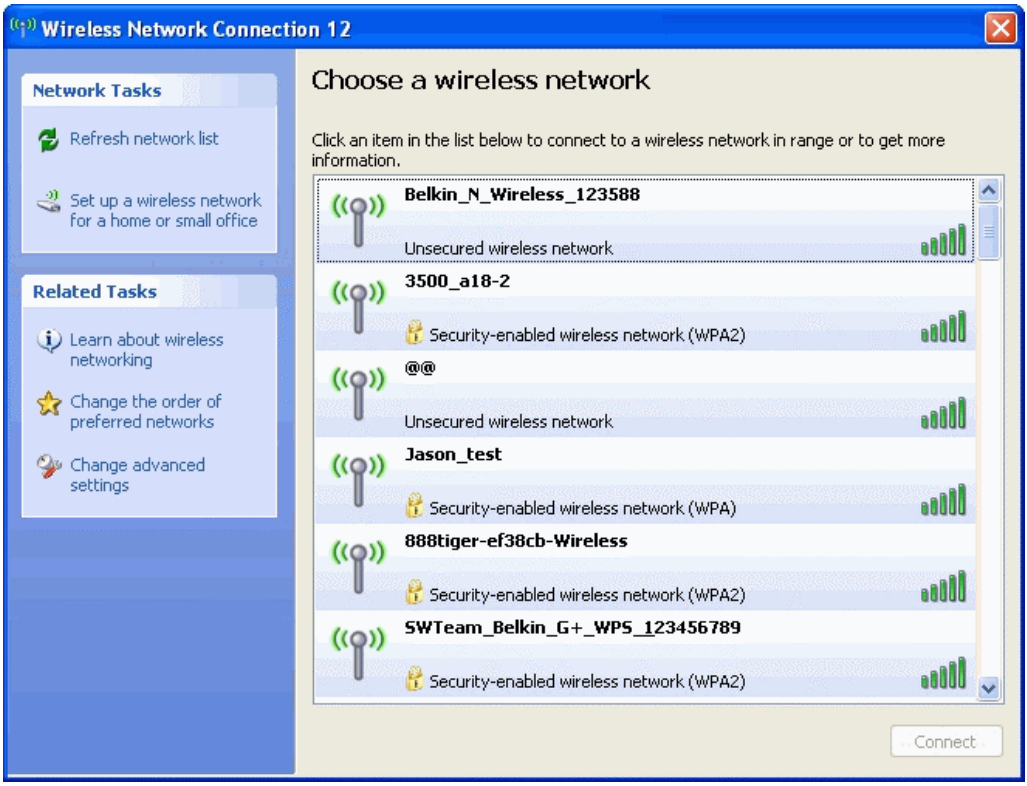

Figure 9: Wireless Network Connection Screen

About Screen

This screen displays the version of the current USB Wireless Adapter.

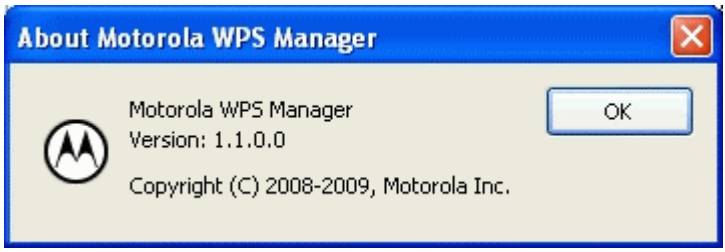

Figure 10: About Screen

Appendix A

Specifications

USB Wireless Adapter

Model:	TER-NUSB1
Standards:	IEEE802.11a, IEEE 802.11b, IEEE 802.11g, Draft 802.11n compliant
Computer Slot Type:	USB
Chipset:	Ralink RT2770(MAC/BB), RT2750(RF)
Tx:	1
Rx:	2
Operating Frequency:	2.4 ~ 2.4835 GHz ; 5.15~5.25GHz; 5.725~5.825GHz
Modulation Technique:	
Draft 802.11n:	BPSK, QPSK, 16-QAM, 64-QAM
802.11a/g:	OFDM
802.11b:	CCK,QPSK,BPSK
Media Access Protocol:	CSMA/CA
Operating Voltage:	5V +/- 5%
Transmit Power:	802.11n: 13.5 +/- 1 dBm 802.11a/g: 13.5 +/- 1 dBm 802.11b: 17 +/- 1 dBm
Security:	WPA/WPA2; 128-bit TKIP/AES encryption, 40/64-, 128-bit WEP shared-key encryption 802.1x, and EAP-TLS, and PEAP authentication
OS Requirements:	Windows Vista/XP/2000/7

Federal Communications Commission Notice

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. 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 and correct the interference by one or more of the following measures:
*Reorient or relocate the receiving antenna.
* Increase the distance between the equipment and the receiver.
* Connect the equipment to 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.

IMPORTANT NOTE
To comply with RF exposure limits, user must not simultaneously operate wireless products in adjacent USB-ports or cardbus slots.

RF EXPOSURE WARNING
This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. SAR has been evaluated for use in laptops (notebooks).
The maximum SAR value reported is 0.241W/kg (Body).

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.