Clipper User Manual

High Power Wireless USB Adaptor

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1. Product Information

1.1 Introduction

The IEEE 802.11b/g wireless USB adaptor enables users to surf the wireless network at 54Mbps in the 2.4GHz radio frequency. This adaptor is also downward compatible to IEEE 802.11b wireless devices at a maximum 11Mbps data rate. Someone may configure this adaptor either with ad-hoc mode to connect with alternative 2.4GHz wireless computers or with infrastructure mode to connect to a wireless AP or router for the internet access. This adaptor includes a convenient utility for scanning available networks and saving preferred networks that users usually connected with. Security encryption is configured via this utility as well.

1.2 Product Features

Thank you for purchasing this high-speed wireless network adaptor! This wireless network adaptor supports the IEEE 802.11b/g wireless standards. With easy-to-install USB 2.0 interface - a very common expansion port of computers – plug this wireless network adaptor into any empty USB port of your computer, just that simple!

- Main features
- 1. Complies with wireless IEEE 802.11b/g standards
- 2. High speed transfer rate up to 54Mbps
- 3. Supports USB 2.0/1.1/1.0 interface
- 4. Supports 64/128-bit WEP, WPA (TKIP with 802.1x), WPA2 (AES with IEEE 802.1x) for high security level
- 5. Operating system supports: Windows 98se/ME/2000/XP/Vista/Linux/MacOS

*Maximum performance may vary depending on network conditions and environmental factors.

1.3 System Requirements

- 1. CPU: Pentium III 1G above or similar
- 2. Memory size: 256MB RAM
- 3. One CD-ROM drive
- 4. Hard disk: more than 100MB available space
- 5. One available USB 2.0 port (USB 1.0 port will largely degrade the performance)
- 6. Operating system: Windows 98se/ME/2000/XP/Vista/Linux/MacOS

1.4 Package Contents

- 1. Clipper 802.11b/g USB adaptor x 1
- 2. USB Y-cable x 1
- 3. CD-ROM x 1 (driver and user manual)
- 4. Antenna x 1

2. Driver Installation and Configuration

2.1 Network Adaptor Installation

Please follow these instructions to install your new wireless network card:

Insert the USB cable into an empty USB 2.0 port of your computer after the computer is switched on. Never use force to insert the cable. If there is difficulty inserting the cable, flip it over and try again.

This autorun wizard can be run in Windows 2000/XP/Vista. The procedures shown are for a Windows XP installation. You can install the Wireless Adapter using the Setup Wizard on the CD-ROM included in the package. The wizard is an easy and quick configuration tool for internet connection with step-by-step process.

When you start the Setup Wizard, you will get the following welcome screen. Please choose the language to start the configuration. The wizard will guide you to finish your network connection. We will not provide any instruction for the Setup Wizard here.



1. Select the desired installation language in the auto-run menu window, and the programs will appear. Please select the desired language and click 'OK'.

| Wireless LAN - InstallShield Wizard | |
|--|----------------------|
| 選擇安裝語言 從下列選項中選擇安裝語言。 | |
| 西班牙語 克羅維語 新聞 (加拿大) 法語(都準) 芬蘭語 保加利亞文 俄語 | |
| 大語 兼語 遠之記語 荷蘭語 斯 悠 | ▲ 上一步(B) 下一步(N) > 取消 |

2. The welcome window pops up. Click the 'Next' button to proceed.

| REALTEK RTL8187 Wireles | s LAN Driver and Utility | × |
|-------------------------|---|---|
| | Welcome to the InstallShield Wizard for REALTEK RTL8187 Wireless LAN Driver and The InstallShield® Wizard will install REALTEK RTL8187 Wireless LAN Driver and Utility on your computer. To continue, click Next. | |
| | < Back Next > Cancel | |

3. Please wait while installation.



4. The Windows Logo testing warning may pop up during installation. Please click the 'Continue Anaway' to continue.

| Softwar | e Installation |
|---------|--|
| 1 | The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why</u> this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing. |
| | Continue Anyway |

- 5. If you are using Windows 98se or Windows ME, the system may ask for the driver CD. Please click the Browse button. Select your CD-ROM Drive, then select 'USB Driver Win98 (or WinME)' to browse the driver. If not, please skip this step.
- 6. Click the 'Finish' button to complete driver and utility installation.

| REALTEK RTL8187 Wireles | s LAN Driver and Utility |
|-------------------------|---|
| | InstallShield Wizard Complete Setup has finished installing REALTEK RTL8187 Wireless LAN Driver and Utility on your computer. |
| | < Back Finish Cancel |

2.2 Manage A Basic Network Connection

Before You Start

1.

In the following instruction for making a network connection, we use the utility we provided to configure your wireless network settings.



Double click the Double click the utility.

2. Make sure the 'Windows Zero Config' checkbox is unchecked.

The setup utility (RaUI) will launch, and begin to scan for all wireless access points automatically.

Ad-Hoc Mode

1.

An Ad-Hoc mode wireless network connects two computers directly without the use of a router or AP. It is also know as a peer-to-peer network. For example, we can install this wireless adapter to two computers respectively. The communication between the two computers is an Ad-Hoc mode network.



Ad-Hoc Mode

To use this adaptor in Ad-Hoc mode



Double click the icon on your desktop.

2. Click the 'Available Network' button to scan available wireless network adaptors. Double click on the network adaptor that you are going to connect to.

| | Chan | | Encry | /pt | Network | Authenticati |
|-----------|------|----|-------|-----|---------|--------------|
| | i | 1 | None | | Unknown | h |
| i default | r - | 11 | None | | Unknown | Ť |
| | | | | | | |
| | | | | | | |
| < | | | | | | |
| ٢ | UUI | | | | | |
| < | 80 | | | | | |

3. Click the OK button to confirm that you are connecting to an open wireless network.

| Unsecu | red network |
|--------|---|
| Ų, | You are connecting to the unsecured network " Jeff ". Information sent over this network is not encrypted and might be visible to other people. |
| | |

4. Click 'OK' to add this network into the profile list.

Note: This example is an open wireless network. If you are going to connect to a Wireless adapter with security protection, you will have to configure the encryption settings in this profile to be corresponding to the other wireless adapter. Please click on the "Network Authentication" drop list to select an authentication method, and then select a "Data encryption" type. Fill in each required blanks and click "OK".

| ofile Name: Jeff's Lapt | ор | | | |
|--------------------------|---------------------------|---------------|------|---|
| etwork Name(SSID): | ff | | | |
| This is a computer-to- | computer(ad hoc) network; | wireless | | |
| access points are not | used. Channel 1 (24 | 12MHz) 🔽 | | |
| Wireless network securil | У | 802.1× config | jure | |
| This network requires a | key for the following: | EAP TYPE : | MDS | ~ |
| Network Authentication | Open System | Tunnel : | | ~ |
| Data encryption: | Disabled | Username : | - | |
| ASCII Passpł | rase | Identity : | | |
| Key Length: | 54 Bits 💌 | Password : | | |
| Network key: | | Certificate : | | |
| Confirm network key: | | | | |
| Key index (advanced): | | | | |
| | | | | |

Infrastructure Mode

An Infrastructure Mode network contains at least one wireless client and one wireless AP or router. This client connects to Internet or intranet by communicating with this wireless AP.



Infrastructure Mode

To use this adaptor in Infrastructure Mode

An Infrastructure Mode network contains at least one wireless client and one wireless AP or router. This client connects to Internet or intranet by communicating with this wireless AP.



2. Click the "Available Network" button to scan available access points. Double click on the AP that you are going to connect to.

| ۹γ | ailable Network(s) | | | |
|----|--------------------|------|---------|----------------------|
| | SSID | Chan | Encrypt | Network Authenticati |
| | 👗 WLAN-11b-GW | 1 | None | Unknown |
| | 🕻 default 📐 | 11 | None | Unknown |
| | 42 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | < | | J | > |

3. Click the OK button to confirm that you are connecting to an open wireless network.



4. Click the OK to add this network into the profile list.

| Wireless network properties | | | | |
|--|---------------|-------|--|--|
| Profile Name: default | | | | |
| Network Name(SSID): default | | | | |
| This is a computer-to-computer(ad hoc) network; wireless | | | | |
| access points are not used. Channel 11 (2462MHz) | | | | |
| Wireless network security | 602.1x config | igure | | |
| This network requires a key for the following: | EAP TYPE : | MD5 | | |
| Network Authentication: Open System | Tunnel : | ✓ | | |
| Data encryption: Disabled | Username : | | | |
| ASCII Passphrase | Identity : | | | |
| Key Length: 64 Bits 🔍 | Password : | | | |
| Network key: | Certificate : | | | |
| Confirm network key: | | | | |
| Key index (advanced): | | | | |
| OK Cancel | | | | |
| | | | | |

Note: This example is an open wireless network. If you are going to connect to an AP with security protection, you will have to configure the encryption settings in this profile to be corresponding to your AP. Please click on the "Network Authentication" drop list to select an authentication method, and then select a "Data encryption" type. Fill in each required blanks and click "OK".

Tip: Windows XP and Windows 2000 users is also allowed to connect to your wireless network with the "RT-Set" setup wizard. Please refer to "Appendix" for more information.

2.2 Introduction to the Wireless LAN Utility

Starting the Wireless LAN Utility

Double click the shortcut on your desktop. The Wireless LAN Utility pops up. You may click on the tabs above to configure this adapter. The checkboxes below provide the following functions:

| Item Name | Description |
|------------------------|---|
| Show Tray Icon | Check this checkbox to show the utility icon on your system tray, which is in the notification area at the lower-right corner of the windows desktop. You may also uncheck it to remove the utility icon from system tray. |
| Windows Zero Config | Uncheck this checkbox to use native Windows XP wireless support (Wireless Zero Configuration Service) instead of using this utility to configure your wireless network. |
| Radio Off | Check this checkbox to prevent this adapter form transmitting or receiving signals. Uncheck it to communicate. |
| Disable Adaptor | Check this checkbox to disable this wireless adapter. Uncheck it to enable this adapter again. |

General

After starting the utility, the general page pops up This **General** tab provides the information of your current wireless network connection. You may click the **Renew** button to refresh those listed information.

| 🧟 REALTEK Wireless LAN Uitily | | | |
|-------------------------------|----------------------|------------------------|----------------------|
| Refresh RT-Set Mode(M) Vie | w(V) About (A) | | |
| 🖃 🛄 My Computer | General Profile Avai | lable Network Advanced | Status Statistics |
| | Status: | Associated | Throughput: |
| | Speed: | 54 Mbps | |
| | Type: | Infrastructure | |
| | Encryption: | None | Tx:0.00%,Total:0.00% |
| | SSID: | wireless | |
| | Signal Strength: | | 86% |
| | | | |
| | - Network Addres | s | |
| | Mac Address: | 00:E0:4C:81:87:01 | |
| | IP Address: | 10.10.66.38 | |
| | Subnet Mask: | 255.255.255.0 | |
| | Gateway: | 10.10.66.254 | |
| | | RENEW | |
| < | | | |
| Show Tray Icon 🔲 Wind | lows Zero Config | Radio Off | sable Adapter Close |
| Ready | | | NUM ,;; |

| Status | Check if the device associated to target network. | |
|-----------------|---|--|
| Speed | The current connection speed. | |
| Туре | Infrastructure mode or Ad-Hoc mode. | |
| Encryption | The performing encryption mode for connecting to current network profile. | |
| SSID | The SSID (network name) of the connected wireless network. | |
| Signal Strength | Indicates the signal strength detected by this adapter. | |
| Network Address | Shows the current IP addresses settings for this adapter. | |
| | | |

Profile

The **Profile** tab lists the preferred connections. You can click the buttons beside to do configure each connection.

| REALTEK Wireless L | AN Uitily |
|---|--|
| Refresh RT-Set Mode(<u>M</u> |) View(Y) About (<u>A</u>) |
| Gomputer My Computer Realtek RTL81; | General Profile Available Network Advanced Status Statistics |
| | Profile Name SSID Add Image: RTL8186-GW Remove Edit Image: Duplicate Set Default |
| < | |
| Show Tray Icon | Windows Zero Config Radio Off Disable Adapter Close |
| Ready | NUM |

| Add | Click this button to add a connection profile for this adapter. | |
|-------------|---|--|
| Remove | To remove a connection profile, click this profile on the profile list and click this button to delete it. | |
| Edit | To modify the configurations for a profile, click this profile on the profile list and click this button to edit. | |
| Duplicate | To make a copy of a profile, click the profile that going to be copied, and click this button to copy it. | |
| Set Default | To select a profile as your default wireless connection, click this profile on the list and click this button. You may also double click on each profile to select it as your default wireless connection. | |

Available Network

This available tab lists the reachable wireless network of this adaptor.

| REALTEK Wireless LAN Uitily | | | |
|--|--|--|--|
| Refresh RT-Set Mode(<u>M</u>) | View(V) About (A) | | |
| | General Profile Available Network Advanced Status Statistics Available Network(s) SSID Chan Encrypt Network Authenticati i wireless 1 None Unknown i 11 None Unknown i RTL8186-GW 11 None Unknown i RTL8186-GW 11 None Unknown | | |
| | Refresh Add to Profile Note: Double click on item to join/create profile. | | |
| < | | | |
| ✓ Show Tray Icon 🗌 Windows Zero Config 📄 Radio Off 🔹 Disable Adapter Close | | | |
| Ready | NUM .; | | |

RefreshClick this button to rescan available networks around the
adapter.Add to ProfileTo add an available Network to your profile list, select an
available network.

Advanced

This Advanced tab provides advanced configurations to this adapter. Every modification in this tab will be performed after clicking the 'Apply' button. To restore the default settings of the advanced tab, click the 'Set defaults' button to perform restoring.

| 🧟 REALTEK Wireless LAN Uitily | | |
|--|--|---|
| Refresh RT-Set Mode(M) View(V) About (A) | | |
| ■ Image: Book of the second secon | General Profile Available Network Power Save None OFF OMin Max AUTO Wireless Mode: 802.11g/b | Advanced Status Statistics Fragment Threshold: 2432 256 2432 RTS Threshold: 2432 0 2432 |
| | Auto Region Domain: FCC Standard | Set Defaults Apply |
| Ready | | |
| Ready | | NUM; |

Status

This tab shows the current connection status of this adaptor.

| REALTEK Wireless L | AN Uitily | |
|---------------------------------|---|-------|
| Refresh RT-Set Mode(<u>M</u>) |) View(<u>V</u>) About (<u>A</u>) | |
| 🖃 🛄 My Computer | General Profile Available Network Advanced Status Statistics | ^ |
| | Manufacturer= RealtekNDIS Driver Version= 5.105.0.1Short Radio Header= NoEncryption= DisabledAuthenticate= OpenChannel Set= FCCMAC Address= 00:E0:4C:81:96:77Data Rate (AUTO)= 5.5 MbpsChannel (Frequency)= 11 (2462 MHz)Status= AssociatedSSID= RTL8186-GWNetwork Type= InfrastructurePower Save Mode= NoneAssociated AP MAC= 00:E0:4C:81:86:21Up Time (hh:mm:ss)= 0:26:43 | |
| < >> | < | |
| Show Tray Icon 🗌 | Windows Zero Config 🗌 Radio Off 📃 Disable Adapter 🗌 | Close |
| Ready | 1 | NUM |

Statistics

See this tab to show the transmission activity record. Clicking the "Reset" button recounts the values from zero.

| 🕱 REALTEK Wireless LAN Uitily | | | |
|--|--|----------|--|
| Refresh RT-Set Mode(M) View(V) About (A) | | | |
| My Computer My Realtek RTL8 | General Profile Available Network Advanced Status Statistics | | |
| | Counter Name Value | | |
| | Tx OK 2094 | ł | |
| | Tx Error C |) | |
| | Tx Retry C |) | |
| | Tx Beacon OK C | J | |
| | Tx Beacon Error C | J | |
| | RX UK 1880 | <u>)</u> | |
| | Rx (BC Error(0-500) | <u>,</u> | |
| | Rx CRC Error(500-1000) | , j | |
| | Rx CRC Error(>1000) |) | |
| | Rx ICV Error C |) | |
| | | | |
| | | | |
| | | _ | |
| | | _ | |
| | Reset | | |
| | | | |
| < | | | |
| Show Tray Icon | Windows Zero Config 🛛 Radio Off 🔹 🗍 Disable Adapter | Close | |
| Ready | | NUM | |

2.3 AP Mode Management Guide

General

After configuring the adapter in AP mode, this "General" page shows up, which shows the general information of this AP.

| 🙈 REALTEK Wireless LAN U | Jitily | |
|----------------------------|------------------------------------|--------|
| Refresh RT-Set Mode(M) Vie | w(V) About (A) | |
| My Computer | General Advanced Statistics SoftAP | |
| | SSID: user-29fea547f0_AP | |
| | BSSID: 00:E0:4C:81:96:77 | |
| | Association Table | Config |
| | AID Mac Address Life Time | |
| | 1 00:11:09:0D:DA:4F 9:22 | |
| Show Tray Icon | Radio Off Disable Adapter | Close |
| Ready | | NUM |

SSID The SSID (network name) of the wireless network constructed by this AP.

BSSID The MAC address of this AP

Config Click this button to change configurations to this AP

Association Table Shows the information of those devices that associated with this AP including their MAC addresses and the time that they connected with this device.

Advanced

| 🚨 REALTEK Wireless L | AN Uitily | |
|------------------------|------------------------------------|-------|
| Refresh RT-Set Mode(M) | I) View(V) About (A) | |
| 🖃 🛄 My Computer | General Advanced Statistics SoftAP | ^ |
| Realter R I L 81; | General: | |
| | Beacon Interval: 100 | |
| | | |
| | DTIM Period: 3 | |
| | Preamble Mode: | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | Set Defaults Apply | ~ |
| | | |
| Show Tray Icon | Radio Off Disable Adapter | Close |
| Ready | NU | JM |

| Beacon Interval | Define the interval between beacons from 20~1000 |
|--------------------|--|
| DTIM Period | Set the DTIM period between 1~255 |
| Preamble Mode | Click the drop list to select the preamble to be long, short or auto |
| Set Defaults | Click this button to restore the settings above to default |
| Apply | Click this button to execute changes. |

Statistics

See this tab to show the transmission activity record. Clicking the "Reset" button recounts the values from zero.

| 🎗 REALTEK Wireless LAN Uitily | | | |
|--|------------------------------------|-----------------------|--|
| Refresh RT-Set Mode(M) View(V) About (A) | | | |
| 🖃 🖳 My Computer | General Advanced Statistics SoftAP | | |
| Realtek RTL8 | | | |
| | Counter Name | Value | |
| | Tx OK | 2213 | |
| | Tx Error | 0 | |
| | Tx Retry | 0 | |
| | Tx Beacon OK | 0 | |
| | TX Beacon Error | 1996 | |
| | Rx Betry | 0 | |
| | Rx CRC Error(0-500) | 0 | |
| | Rx CRC Error (500-1000) | 0 | |
| | Rx CRC Error(>1000) | 0 | |
| | Rx ICV Error | 0 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | Reset | |
| | | | |
| < | | | |
| Show Tray Icon | Radio Off | Disable Adapter Close | |
| Ready | | NUM | |

Soft AP

This page allows users to select the adapter for connect to public network. Please click on the device that are used for connecting to public network and click the "Select" button, and then click the "Apply" button to execute.

| 👶 REALTEK Wireless L | AN Uitily | |
|--|---|----------|
| Refresh RT-Set Mode(<u>M</u> |) View(<u>V</u>) About (<u>A</u>) | |
| Gomputer Generative Realtek RTL81: | General Advanced Statistics SoftAP Soft AP | <u> </u> |
| | ConnName Device Name | NIC |
| | Select | |
| | Public network Local Area Connection Realtek RTL8139 Family | PCI Fa |
| | Apply | ~ |
| < | < | |
| Show Tray Icon | 🗌 Radio Off 🛛 Disable Adapter 🗌 | Close |
| Ready | N | UM I .:: |

3. Specification

- Standards: IEEE 802.11b/g
- Interface: USB 2.0 (USB 1.1/1.0 Compatible)
- Frequency Band: 2.4000~2.4835GHz (ISM Band)
- Data Rate:
 - 11b: 1 / 2 / 5.5 / 11Mbps

11g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps

- Securities: WEP 64/128, WPA, WPA2
- Antenna: External dipole antenna
- Driver: Windows 98se/ME/2000/XP/2003/Vista/Linux/MacOS
- Temperature: 0~70°C
- Transmit Power: 27dbm @ 11Mbps; 24dbm @ 54Mbps
- Sensitivity: -92dBm @11Mbps; -76dBm @54Mbps
- LED Indicator: Link / ACT (Green)