

User's Guide



# 150Mbps Mini Wireless N USB Adapter

TEW-648UB

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## Product Overview



**TEW-648UB**

## Package Contents

The package includes:

- TEW-648UB Wireless N Adapter
- Quick Installation Guide
- CD-ROM (Utility, Drivers and User's Guide)

If any package contents are missing or damaged, please contact the retail store, online retailer, or reseller/distributor that the item was purchased.

## Features

The 150Mbps Mini Wireless N USB Adapter connects a laptop or desktop computer to a wireless n network at up to 6x the speed and 3x the coverage of a wireless g connection.

Enjoy proven wireless n speed and reliability in an ultra compact design that is slightly larger than a US penny.

Setup is a breeze with one-touch Wi-Fi Protected Setup (WPS) technology. Advanced wireless encryption protects your valuable data. Wi-Fi Multimedia (WMM) Quality of Service (QoS) prioritizes important video, audio and gaming traffic. Seamlessly stream video, download files, play games and talk online with this ultra compact wireless n adapter.

- Ultra compact high speed wireless n adapter
- Upgrade your laptop or desktop to wireless n
- 6x the speed and 3x the coverage of wireless g technology\*
- One-touch setup with Wi-Fi Protected Setup (WPS)

\*Maximum wireless signal rates are referenced from IEEE 802.11 theoretical specifications. Actual data throughput and coverage will vary depending on interference, network traffic, building materials and other conditions.

## Product Hardware Features

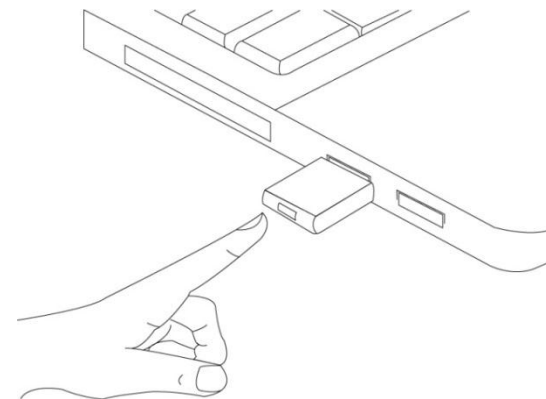


### LED

LED Status	Description
Slow Blink (1 blink/second)	When the LED is blinking, the wireless adapter is transmitting or receiving data.
Fast Blink (3 blinks/second)	After pressing the WPS button, the LED will flash 3 blinks / second. Once the connection is successfully established between the AP and the adapter, the LED will remain solid for 5 seconds to tell the users that the connection has been established. After 5 seconds, the LED will turn off to indicate that the AP is ready for a new WPS connection and the adapter is associated with the AP.
Off	User inserts the card into the NB without driver installed, and without connection.

### WPS Button

Press the WPS button start the WPS pairing, the LED will begins to blinking for 3 blinks/second, once the connection is successfully established between the AP and the adapter, the LED will remain in solid for 5 seconds to tell the users that the connection has been established. After 5 second, the LED will light off to indicate user that the Access Point or Wireless Router is ready for a new WPS connection and the adapter is associated with the Access Point or Wireless Router.



**Application Diagram****Wireless Performance Considerations**

There are a number of factors that can impact the range of wireless devices.

1. Adjust your wireless devices so that the signal is traveling in a straight path, rather than at an angle. The more material the signal has to pass through the more signal you will lose.
2. Keep the number of obstructions to a minimum. Each obstruction can reduce the range of a wireless device. Position the wireless devices in a manner that will minimize the amount of obstructions between them.
3. Building materials can have a large impact on your wireless signal. In an indoor environment, try to position the wireless devices so that the signal passes through less dense material such as dry wall. Dense materials like metal, solid wood, glass or even furniture may block or degrade the signal.
4. Antenna orientation can also have a large impact on your wireless signal. Use the wireless adapter's site survey tool to determine the best antenna orientation for your wireless devices.
5. Interference from devices that produce RF (radio frequency) noise can also impact your signal. Position your wireless devices away from anything that generates RF noise, such as microwaves, radios and baby monitors.
6. Any device operating on the 2.4GHz frequency will cause interference. Devices such as 2.4GHz cordless phones or other wireless remotes operating on the 2.4GHz frequency can potentially drop the wireless signal. Although the phone may not be in use, the base can still transmit wireless signal. Move the phone's base station as far away as possible from your wireless devices.

If you are still experiencing low or no signal consider repositioning the wireless devices or installing additional access points. The use of higher gain antennas may also provide the necessary coverage depending on the environment.

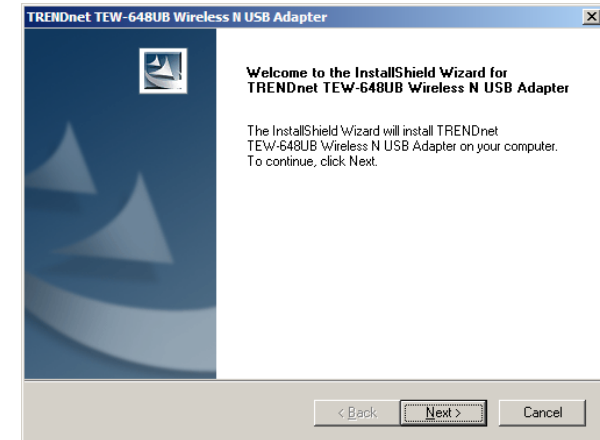
## Software Installation and Configurations

### Windows Utility Installation

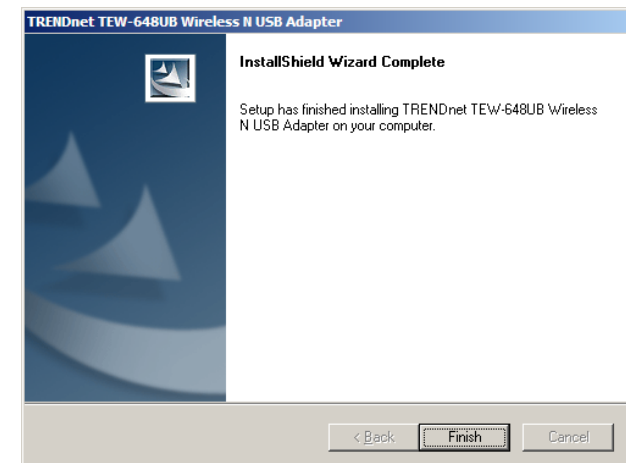
1. Insert the Utility and Driver CD-ROM into your computer's CD-ROM drive and then click **Install Utility**.



2. Follow the InstallShield Wizard Instructions.



3. Click Finish to restart the computer.



4. After the computer is rebooted, plug the Wireless N USB Adapter into an available USB slot on your computer.

## Windows Utility Configurations

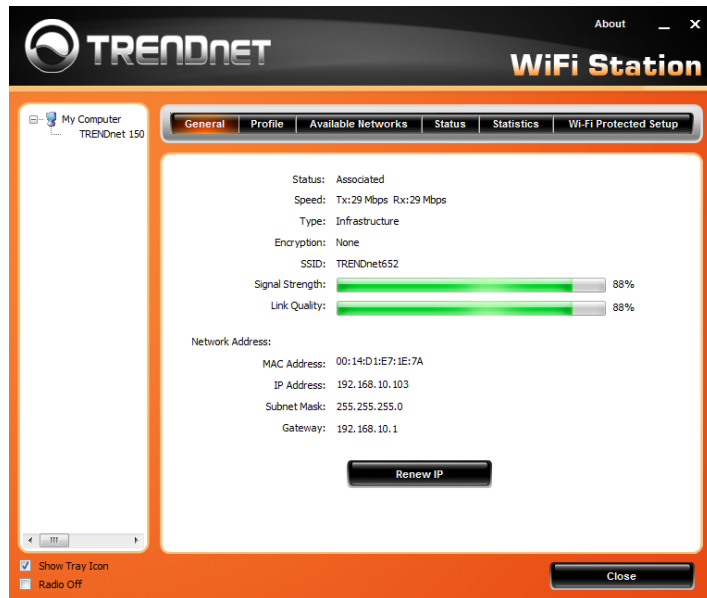
The user can configure the wireless settings using the Wireless Adapter Configuration Utility. Double-click the utility icon that appears in the taskbar.



The Wireless Adapter Configuration Utility is divided into six sections: General, Profile, Available Networks, Status, Statistics and WPS.

### General

This screen shows the general information of the wireless adapter.



**Status:** Shows connection status.

**Speed:** Shows the transmission and the reception data rate.

**Type:** Shows the connection type, Infrastructure or Ad-Hoc mode.

**Encryption:** Shows the current encryption type used.

**SSID:** Shows the current SSID, which must be the same as your wireless access point or router in order to establish the connection correctly.

**Wireless Mode:** Shows the current wireless mode used.

**Signal Strength:** Shows the wireless signal strength of the connection between the adapter and the Access Point or router.

**Link Quality:** Shows the statistics of data transfer, and the calculation is based on the number of packets transmitted and received.

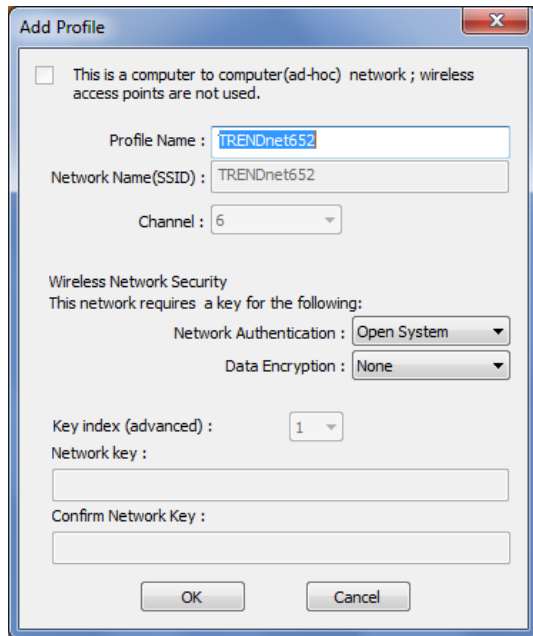
**Network Address:** Shows the MAC address and IP address of the adapter.

### Profile

The user can create and manage the created profiles for home, work or public areas. By double-clicking on one of the created profile, the setting will adjust to the specific setting such as SSID, channel, and encryption as saved by that particular profile.



**Add:** Adds a profile. The following screen will appear. The user can enter the necessary information required for accessing the particular Access Point or Wireless Router. Or you can search the desire wireless router or AP under **Available Networks** section and click on **Add Profile** button to add the Profile.



**Remove:** Deletes the selected profile

**Edit:** Edit an exist profile. The screen will back to profile. Edit the SSID and select the Wireless Mode, Authentication and Encryption then click **Apply** to save the profile. When the Profile name was changed, a new profile will be added in the list.

**Duplicate:** Duplicate the selected Profile.

**Set Default:** Set the selected Profile as default connection.

**Wireless Network Security:** The following options are available: Open System, Shared Key, WPA-PSK, WPA2-PSK, WPA EAP-TLS, WPA2 EPA-TLS . Select Open System, Shared Key for WEP data encryption feature.

**Open or Shared Key**

**Open System** and **Shared Key** require the user to set a WEP key to exchange data with other wireless clients that have the same WEP key. WEP is considered basic level of wireless encryption, if you would like higher security connection, WPA2 encryption is recommended.

- Default Key: select one of the 4 keys to use.
- Network Key: choose the encryption way, either in HEX or ASCII formats, and enter the password in the blank space.
- Key Length: select 64 or 128 bits as the length of the keys  
Key Format: HEX or ASCII

Key Length	Hex	ASCII
Type	characters 0-9, A-F, a-f	alphanumeric format
64-bit	10 characters	5 characters
128-bit	26 characters	13 characters

**WPA-PSK / WPA2-PSK**

If using the **WPA-PSK/WPA2-PSK** authentication method, please select the **Encryption** type for TKIP or AES then enter the Passphrase key. The minimum length is 8 characters.

**WPA EAP-TLS**

If using the **WPA/WPA2 EAP-TLS** authentication method, please select the **Encryption** type for TKIP or AES then select the **WPA/WPA2 Certificate** from drop down list.



## Available Networks

This screen allows the user to scan for available wireless network. It also allows the user to establish wireless communications with a target device.



**Available Networks** – displays the wireless networks (wireless clients, access points or routers) that are within range.

Select any one of the wireless networks and connect to it by **double-clicking**.

Click the **“Refresh”** button to rescan for available networks.

## Status

Display the information of the adapter including manufacturer, driver version, utility version, encryption, encryption type, region, adapter's MAC address, current connection data rate, channel, connection status, the associated router or Access Point's SSID, network type, associated device's MAC address, and Up time.



**SSID:** Service Set Identifier, which is a unique name shared among all wireless clients in a wireless network. The SSID must match the wireless access point or router's SSID that you are connecting to.

## Network Type:

- **Infrastructure** – to establish wireless communication with the LAN and other wireless clients through the use of Access Points or Wireless Router. This is most common type of connection.
- **Ad-Hoc** – to establish point-to-point wireless communication directly with other wireless client devices.

## Statistics

This section displays the statistics of the adapter connection. TX means transmission and RX means Reception.

Counter Name	Value
Tx OK	114
Tx Error	0
Rx OK	75
Rx Packet Count	75
Rx ICV error	0

Reset

## WPS

Wi-Fi Protected Setup (WPS) is an optional certification program from the Wi-Fi Alliance that is designed to ease the task of setting up and configuring security on a wireless network. There are two methods used in the WPS as below instruction.

### Push Button

Using the WPS configuration with the **Push Button** method, the configuration steps as below:

Wi-Fi Protected Setup (WPS)

An easy and secure setup solution to Wi-Fi network

Pin Input Config (PIN)  
After pushing the PIN button, Please enter the PIN code into your AP.

**PIN: 46492999**

Pin Input Config (PIN)

Push Button  
After pushing the PBC button, Please push the physical button on your AP or visible button on the WPS config page.

Push Button Config (PBC)

Show Tray Icon  Radio Off

Close

- 1) Click on the "Push Button Config (PBC)" button.

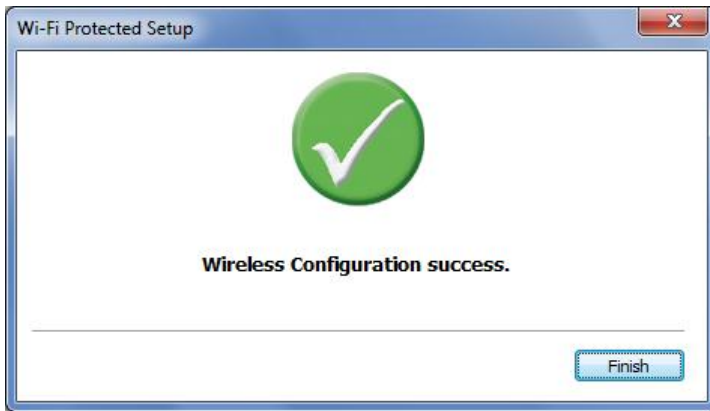
Wi-Fi Protected Setup - PBC method

If there are more than one AP on the PBC mode, there will be [Session overlap]. Please use PIN method or wait for a while to push the button again.

Scanning AP...

Cancel

- 2) Push the WPS button on your wireless access point or router.
- 3) Click the **Next** button start the WPS configuration.
- 4) If the WPS configuration was successful, the follow window will show on.



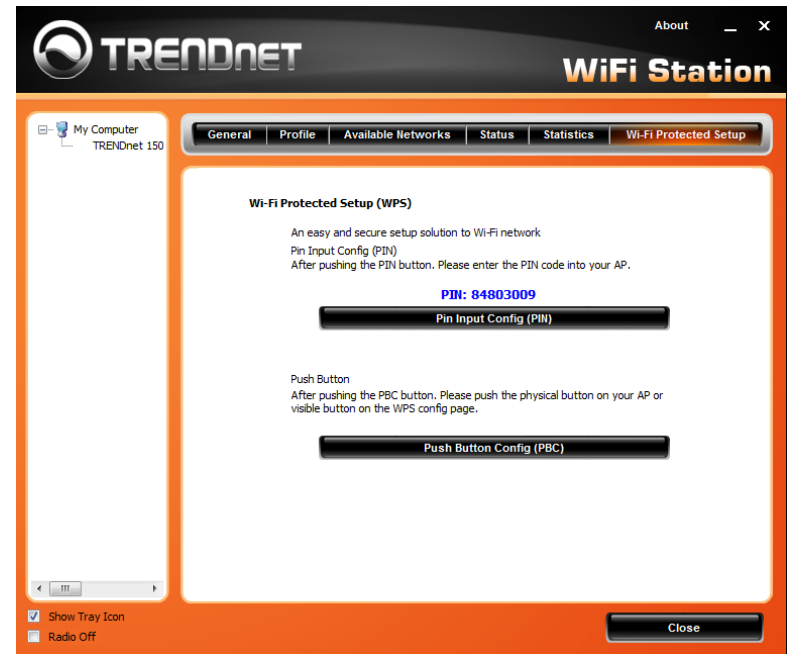
- 5) If the WPS configuration was failed, the follow window will show on.



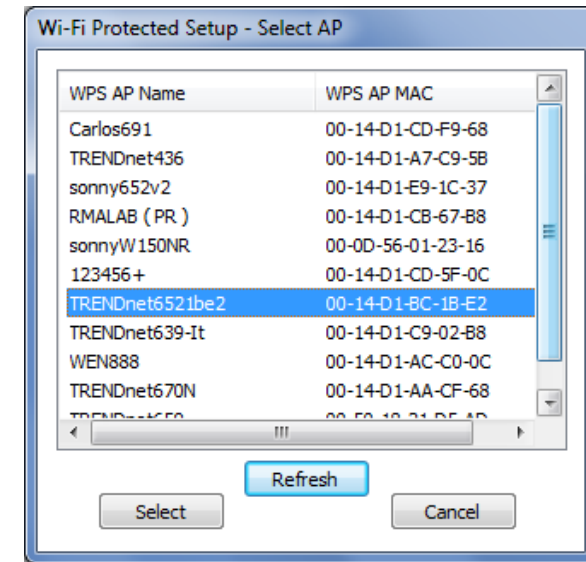
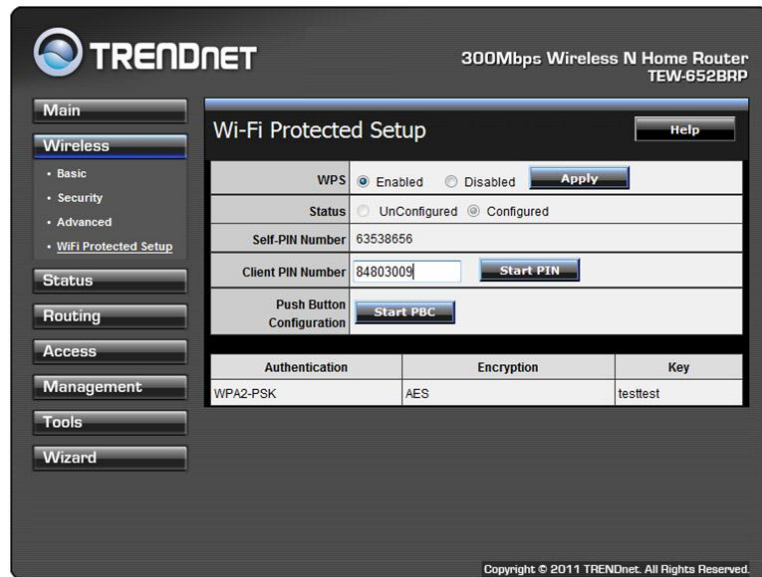
### Enter a PIN

Using the WPS configuration with the **PIN Input** method, the configuration steps as below:

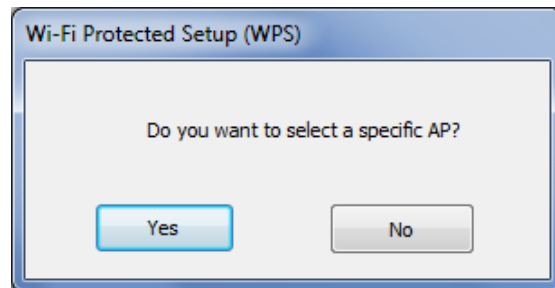
- 1) Click on the **Pin Input Config (PIN)** button, the PIN is shown on the button of the windows.



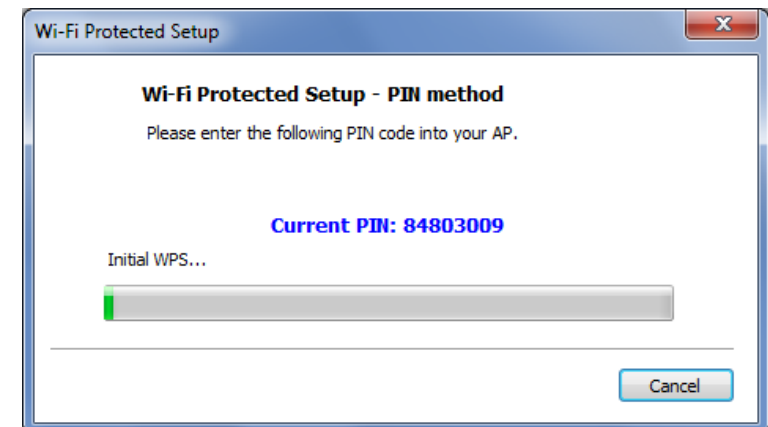
- 2) Enter the PIN code into the WPS "Client PIN number" of you wireless access point or router (in example, TRENDnet TEW-652BRP Wireless N Router) then click the **Start PIN** button, the wireless access point or router will start the WPS configuration process.



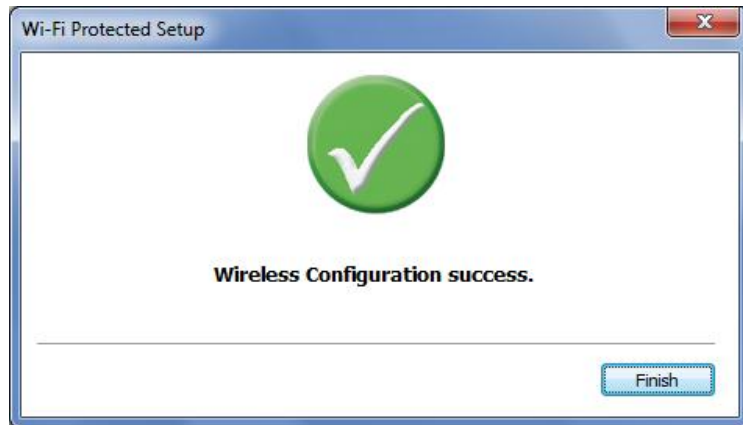
- 3) Choose to select the specific AP/Router or a WPS enabled device with client PIN entered.



- 4) Select a wireless access point or router then click the **Select** button start the WPS configuration.



- 5) If the WPS configuration was successful, the follow window will show on.



- 6) If the WPS configuration was failed, the follow window will show on.  
Try to repeat the steps again if this screen appears.



## Mac Utility Installation

Note: Do not install the TEW-648UB / TEW-649UB until instructed to do so.

1. Go to the Mac folder on the Utility and Driver CD-ROM, For Mac OS 10.7, go to Mac OS 10.7 folder and skip to step 4. For Mac OS 10.8, go to Mac OS 10.8 folder and skip to step 4.
2. For Mac OS 10.4~10.6, double click on the TEW-648UB\_649UB\_Mac\_OS\_X.dmg file.



TEW-648\_649UB\_Mac  
\_OS\_X.dmg

3. Select the file for your operating system



TEW-648\_649UB\_(Intel)  
MacOS10.4...I\_1.7.8.dmg



TEW-648\_649UB\_(Intel)  
MacOS10.5...I\_1.7.8.dmg



TEW-648\_649UB\_(Intel)  
MacOS10.6...I\_1.7.8.dmg



TEW-648\_649UB\_  
(PowerPC)M...I\_1.7.8.dmg



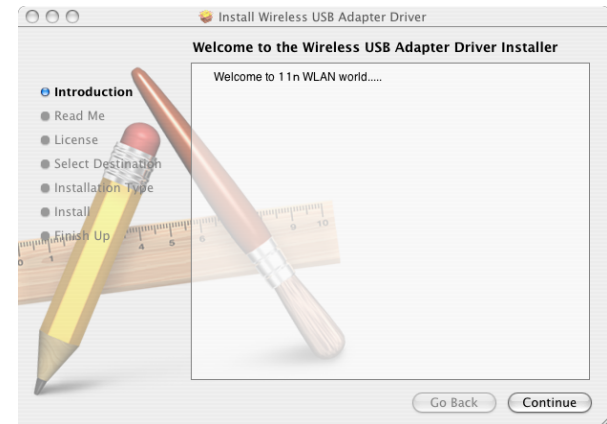
TEW-648\_649UB\_  
(PowerPC)M...I\_1.7.8.dmg

4. Double click the installer.pkg file



installer.pkg

5. Click Continue and follow the screen to install the driver.



6. Click **Agree**



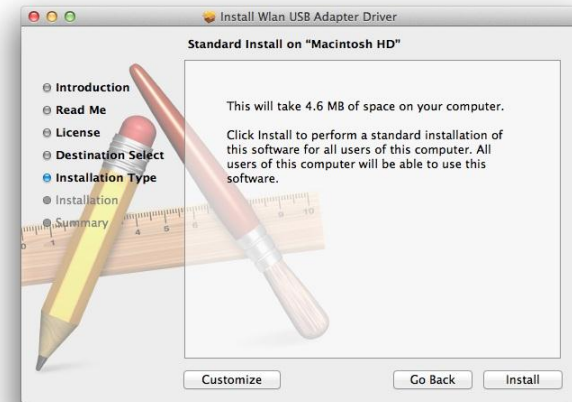
7. Select Destination folder then click **Continue**.



For OS X 10.7, select **Install for all users of this computer** and then click **Continue**.



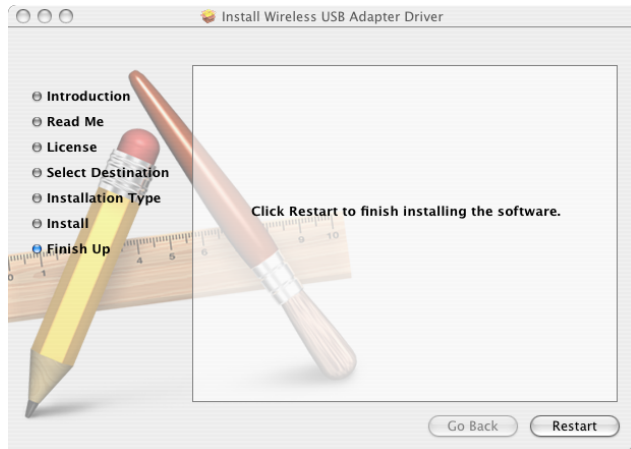
For OS X 10.8, click **Install**.



8. When the Authenticate screen appears, enter the **Name** and **Password** for your computer and then click **OK**; then click on **Continue Installation**.



9. Click **Restart** and when the computer is booted up; connect the wireless adapter to an available USB port.



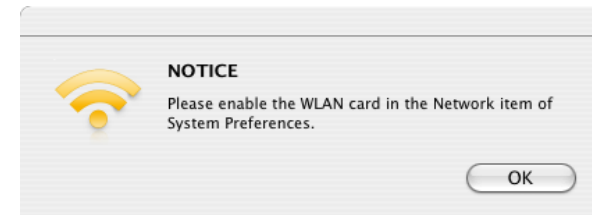
Mac 10.8 window, click Restart.



## Mac Utility Configuration

For Mac OS 10.8 Utility Configuration, please skip to page 16.

1. Click OK when prompted this message



2. Double click on the System Preferences icon on the Dock



3. Double click on the Network icon

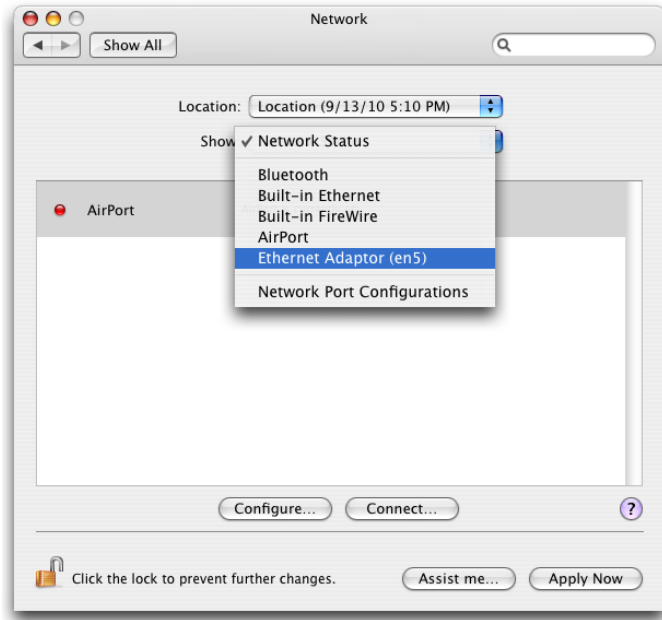


4. Click OK





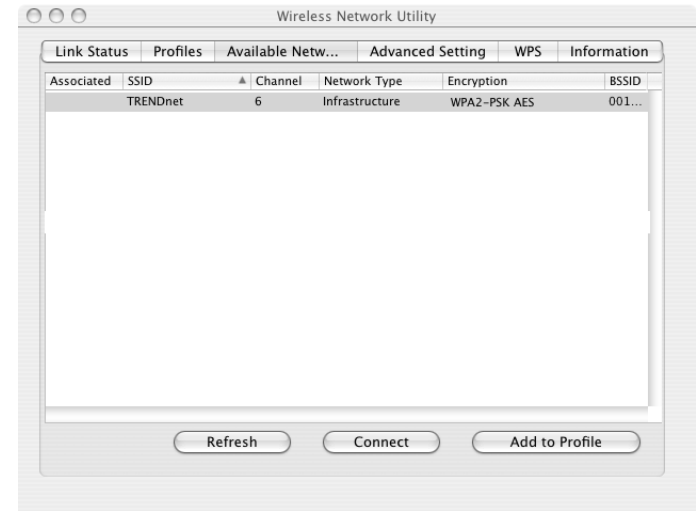
5. Select the adapter from the dropdown list and click Apply Now



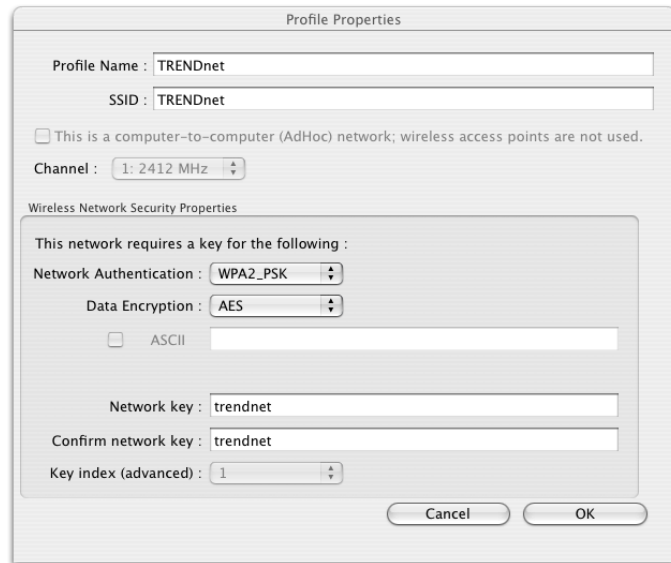
6. Double click on the Wireless Utility icon on the Dock



7. Click **Available Network**, select the **SSID** (Wireless Network Name) and then click Add to Profile



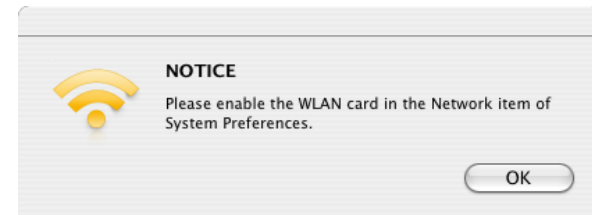
8. If encryption is enabled on your wireless network (e.g. access point or wireless router), select the type of **Network Authentication** and **Data Encryption**, enter the network encryption, confirm the network key and then click OK



9. Configuration is complete

## Mac OS 10.8 Utility Configuration

1. Click OK when prompted this message



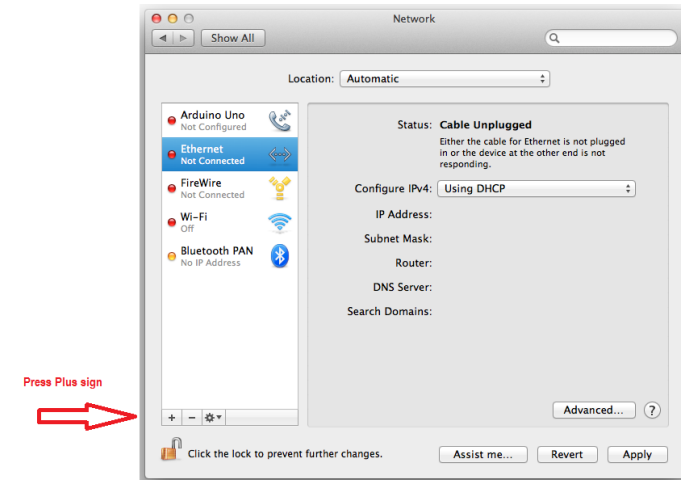
2. System Preferences window will appear automatically



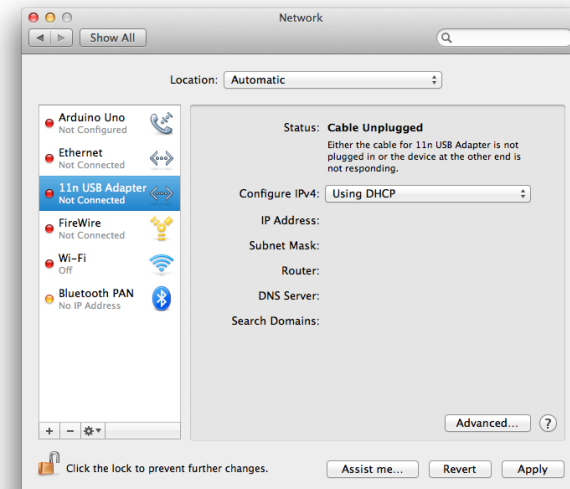
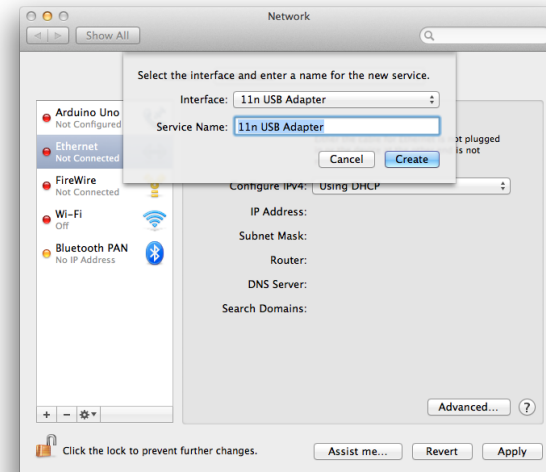
3. Double click on the Network icon



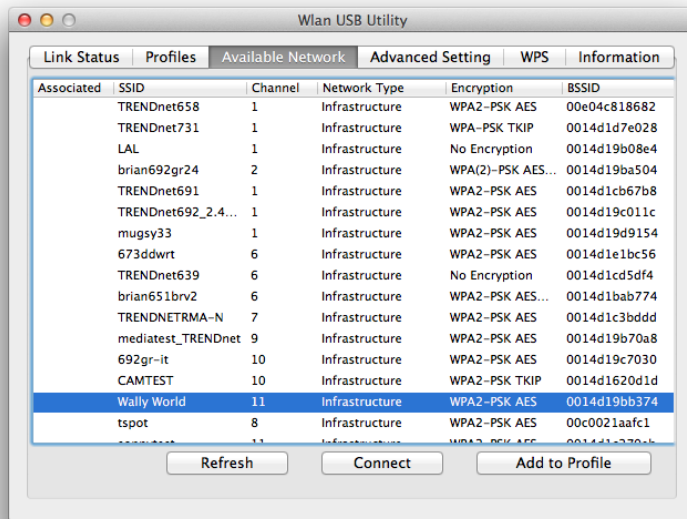
4. Click the plus sign to add the adapter



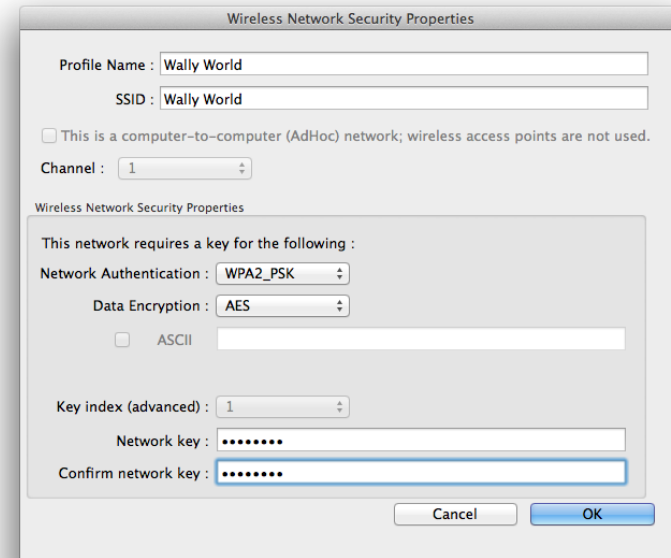
5. Select 11n USB Adapter from the dropdown list and click **Create**. The adapter name will appear on the left panel. Select the adapter and click the Apply button.



6. Click **Available Network**, select the **SSID** (Wireless Network Name) and then click Add to Profile



7. If encryption is enabled on your wireless network (e.g. access point or wireless router), select the type of **Network Authentication** and **Data Encryption**, enter the network encryption, confirm the network key and then click OK



8. Configuration is complete

## Technical Specifications

Hardware	
<b>Standards</b>	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n USB 2.0
<b>WPS Button</b>	Enables Wi-Fi Protected Setup (WPS) function
<b>LED Indicators</b>	Activity, WPS
<b>Power Consumption</b>	Receive mode: 220mA (max) Transmit mode: 300mA (max)
<b>Supported OS</b>	Windows 8 (32/64bit), 7 (32/64-bit)/ Vista (32/64-bit)/ XP(32/64-bit)/ 2000 Mac OS X (10.4~10.8)
<b>Dimensions (L x W x H)</b>	33.9 x 17 x 7mm (1.3 x 0.7 x 0.3in)
<b>Weight</b>	3 g (0.1 oz)
<b>Temperature</b>	Operating: 0° ~ 40°C (32° ~ 104°F) Storage: -10°C ~ 70°C (-14° ~ 158°F)
<b>Humidity</b>	10% ~ 95% max (non-condensing)
<b>Certifications</b>	CE, FCC
Wireless	
<b>Frequency</b>	2.412 ~ 2.484 GHz ISM band
<b>Modulation</b>	OFDM, DSSS
<b>Antenna</b>	Built-in on board antenna
<b>Data Rate</b>	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 150Mbps
<b>Output Power</b>	802.11b: 16dBm (typical) @ 11Mbps 802.11g: 13dBm (typical) @ 54Mbps

	802.11n: 11dBm (typical) @ 150Mbps
<b>Receiving Sensitivity</b>	802.11b: -84dBm (typical) @ 11Mbps 802.11g: -68dBm (typical) @ 54Mbps 802.11n: -65dBm (typical) @ 150Mbps
<b>Encryption</b>	64/128-bit WEP (HEX/ASCII), WPA /WPA2-PSK, WPA/WPA2-RADIUS
<b>Channels</b>	1-11 (FCC), 1-13 (ETSI)

### ***Federal Communication Commission Interference 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 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.

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

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.

### **IMPORTANT NOTE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

SAR compliance has been established in typical laptop computer(s) with USB slot, and product could be used in typical laptop computer with USB slot. Other application like handheld PC or similar device has not been verified and may not compliance with related RF exposure rule and such use shall be prohibited.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

#### **For Taiwan 警語:**

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

### Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

**EN60950-1: 2006**

Safety of Information Technology Equipment

**EN 62311: 2008**

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300GHz)

**EN 300 328 V1.7.1 (2006-10)**

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

**EN 301 489-1 V1.8.1 (2008-04)**

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

**EN 301 489-17 V1.3.2 (2008-04)**










Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment









This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.



 Český [Czech]	TRENDnet tímto prohlašuje, že tento TEW-648UB je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
 Dansk [Danish]	Undertegnede TRENDnet erklærer herved, at følgende udstyr TEW-648UB overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
 Deutsch [German]	Hiermit erklärt TRENDnet, dass sich das Gerät TEW-648UB in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
 Eesti [Estonian]	Käesolevaga kinnitab TRENDnet seadme TEW-648UB vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
 English [English]	Hereby, TRENDnet, declares that this TEW-648UB is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
 Español [Spanish]	Por medio de la presente TRENDnet declara que el TEW-648UB cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
 Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΤΡΕΝΔnet ΔΗΛΩΝΕΙ ΟΤΙ ΤΕW-648UB ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
 Français [French]	Par la présente TRENDnet déclare que l'appareil TEW-648UB est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
 Italiano [Italian]	Con la presente TRENDnet dichiara che questo TEW-648UB è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo TRENDnet deklarē, ka TEW-648UB atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem

	noteikumiem.
Lietuvių [Lithuanian]	Šiuo TRENDnet deklaruoja, kad šis TEW-648UB atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
 Nederlands [Dutch]	Hierbij verklaart TRENDnet dat het toestel TEW-648UB in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
 Malti [Maltese]	Hawnhekk, TRENDnet, jiddikjara li dan TEW-648UB jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.
 Magyar [Hungarian]	Alulírott, TRENDnet nyilatkozom, hogy a TEW-648UB megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
 Polski [Polish]	Niniejszym TRENDnet oświadcza, że TEW-648UB jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
 Português [Portuguese]	TRENDnet declara que este TEW-648UB está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
 Slovensko [Slovenian]	TRENDnet izjavlja, da je ta TEW-648UB v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	TRENDnet týmto vyhlasuje, že TEW-648UB spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
 Suomi [Finnish]	TRENDnet vakuuttaa täten että TEW-648UB tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
 Svenska [Swedish]	Härmed intygar TRENDnet att denna TEW-648UB står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.



## Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

### TEW-648UB – 3 Years Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

If a product does not operate as warranted during the applicable warranty period, TRENDnet shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original date of purchase. All products that are replaced become the property of TRENDnet. Replacement products may be new or reconditioned. TRENDnet does not issue refunds or credit. Please contact the point-of-purchase for their return policies.

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