User Guide

www.tenda.cn

11N Wireless Broadband Router

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Contents

Chapter 1 Product Introduction

Thank you for purchasing the Tenda Wireless N Broadband Router!

This easy-to-use router provides simple configuration interface which enables you to configure it with ease. It is based on the latest IEEE802.11n standard, and is backward compatible with devices of IEEE802.11b/g standards.

The Tenda wireless router，including router, wireless AP, four-port switch and firewall in one，provides powerful online monitor function and supports URL filter and MAC filter. With WDS function, it can repeat and amplify wireless signals so as to enlarge network coverage area. It truly supports UPnP and WMM to make your audio and video smoother. With QoS function, it can efficiently distribute the downloading rate for the clients. With super compatibility, the router can break the access limits in some areas so that multiple computers can share the Internet access. Additionally, it supports WISP function to access to the ISP's wireless hotspots.

1.1 Package Contents

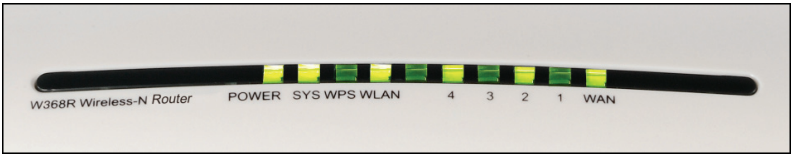
Please verify the following items after you open the package:

- One Wireless N Broadband Router
- One Quick Installation Guide
- One Power Adapter
- One Software CD

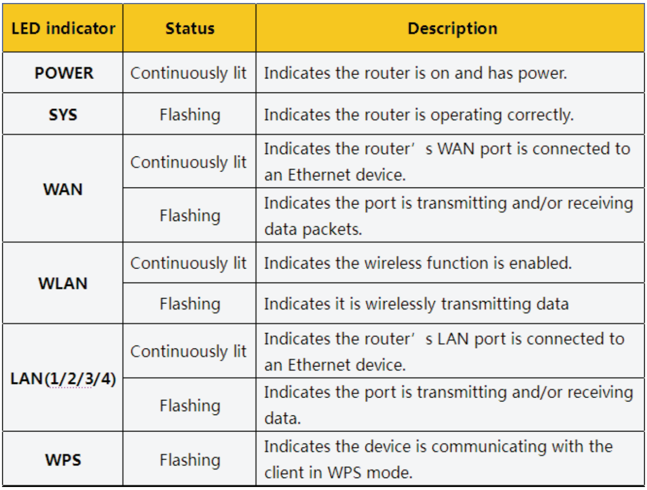
If any of the listed items are missing or damaged, please contact the Tenda reseller for immediate replacement.

1.2 LED Indicators and Port Description

Panel and LED indicators show:

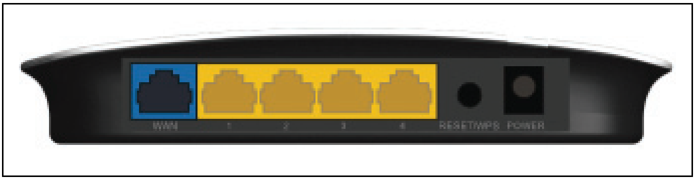


LED indicator description on the front panel

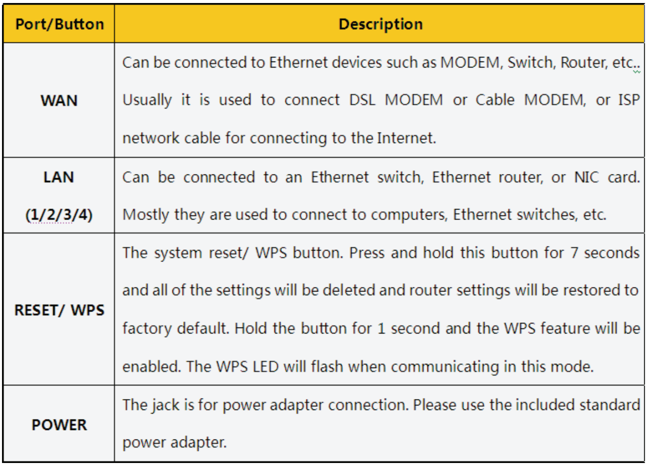


LED indicator	Status	Description
POWER	Continuously lit	Indicates the router is on and has power.
SYS	Flashing	Indicates the router is operating correctly.
WAN	Continuously lit	Indicates the router’ s WAN port is connected to an Ethernet device.
	Flashing	Indicates the port is transmitting and/or receiving data packets.
WLAN	Continuously lit	Indicates the wireless function is enabled.
	Flashing	Indicates it is wirelessly transmitting data
LAN(1/2/3/4)	Continuously lit	Indicates the router’ s LAN port is connected to an Ethernet device.
	Flashing	Indicates the port is transmitting and/or receiving data.
WPS	Flashing	Indicates the device is communicating with the client in WPS mode.

Back panel port show



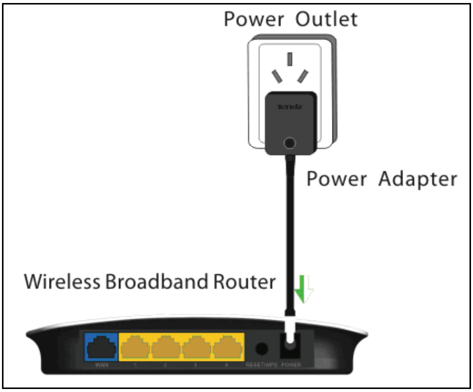
Back panel port description



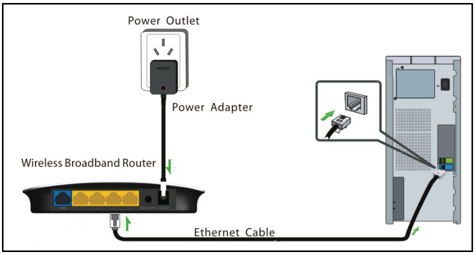
Port/Button	Description
WAN	Can be connected to Ethernet devices such as MODEM, Switch, Router, etc.. Usually it is used to connect DSL MODEM or Cable MODEM, or ISP network cable for connecting to the Internet.
LAN (1/2/3/4)	Can be connected to an Ethernet switch, Ethernet router, or NIC card. Mostly they are used to connect to computers, Ethernet switches, etc.
RESET/ WPS	The system reset/ WPS button. Press and hold this button for 7 seconds and all of the settings will be deleted and router settings will be restored to factory default. Hold the button for 1 second and the WPS feature will be enabled. The WPS LED will flash when communicating in this mode.
POWER	The jack is for power adapter connection. Please use the included standard power adapter.

Chapter 2 Product Installation

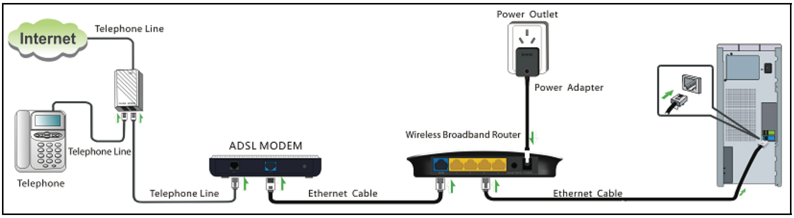
1. Please use only the included power adapter to power your router. (**NOTE**: Use of an unmatched power adapter could cause damage to this product).



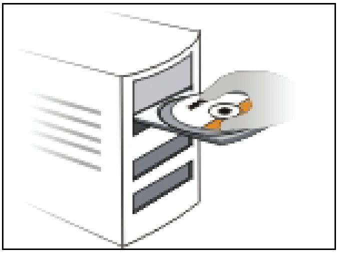
2. Please connect the router's LAN port to your computer with an Ethernet cable as shown below.



3. Please connect your broadband line provided by your ISP to the router's WAN port.



4. Insert the included software CD into the CD drive of your computer. After the software automatically initiates, double click the "Setup" icon and follow the instructions to complete the installation. You can also enter the router's Web-based Utility to complete the configuration.

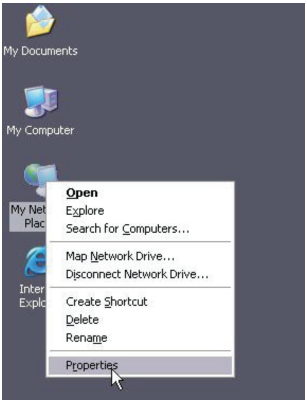


Chapter 3 How to configure to access the Internet

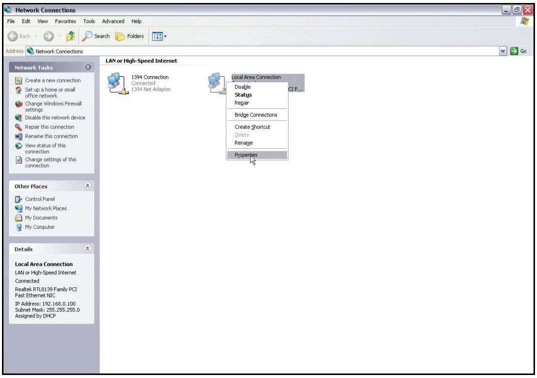
3.1 How to Set the Network Configurations

Network Configurations under windows XP

1. Right click “**My Network Places**” on your computer desktop and select “**Properties**”.

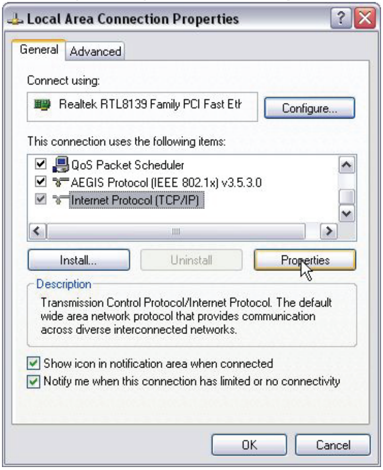


2. Right click “**Local Area Connection**” and select “**Properties**”.



Local Area Connection
LAN or High-Speed Internet
Connected
Realtek RTL8139 Family PCI Fast Ethernet NIC
IP Address: 192.168.0.100
Subnet Mask: 255.255.255.0
Assigned by DHCP

3. Select "**Internet Protocol (TCP/IP)**" and click "**Properties**".



Connect using:

Realtek RTL8139 Family PCI Fast Eth

This connection uses the following items:

☑ QoS Packet Scheduler
☑ AEGIS Protocol (IEEE 802.1x) v3.5.3.0
☑ Internet Protocol (TCP/IP)

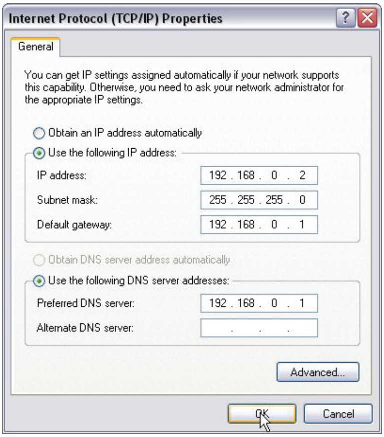
Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☑ Show icon in notification area when connected
☑ Notify me when this connection has limited or no connectivity

4. Select "**Use the following IP address**" and enter the IP address, Subnet mask, Default gateway as follows:

- **IP Address:** 192.168.0.XXX: (XXX is a number from 2~254)
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.0.1
- **DNS server:** You should input the DNS server address provided by your ISP. Otherwise, you can enter 192.168.0.1. Click "**OK**" to save the configurations.



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:

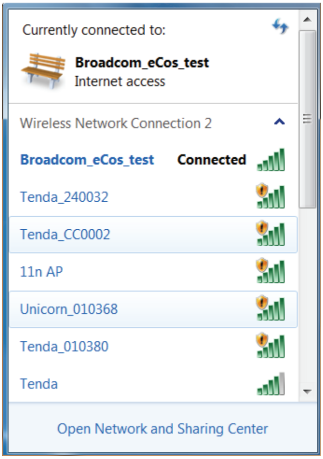
IP address: 192 . 168 . 0 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 0 . 1

○ Obtain DNS server address automatically
● Use the following DNS server addresses:

Preferred DNS server: 192 . 168 . 0 . 1
Alternate DNS server: . . .

Network Configurations under windows 7

1. Click the network icon on the lower right corner of your computer desktop, and then click” **Open Network and Sharing Center**”.



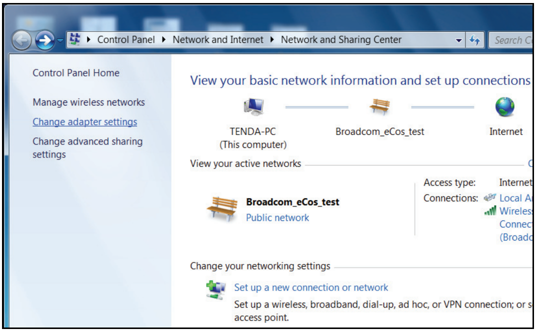
Currently connected to:

Broadcom_eCos_test
Internet access

Wireless Network Connection 2

Broadcom_eCos_test	**Connected**
Tenda_240032	
Tenda_CC0002	
11n AP	
Unicorn_010368	
Tenda_010380	
Tenda	

2. Click “**Change adapter settings**” on the left side of the window.



Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Search C
Control Panel Home
Manage wireless networks
Change adapter settings
Change advanced sharing settings

View your basic network information and set up connections

TENDA-PC (This computer) — Broadcom_eCos_test — Internet

View your active networks

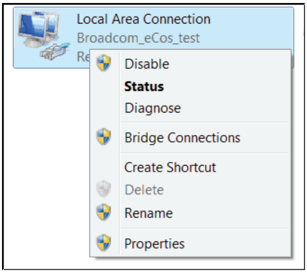
Broadcom_eCos_test
Public network

Access type: Internet
Connections: Local A
Wireles
Connec
(Broadc

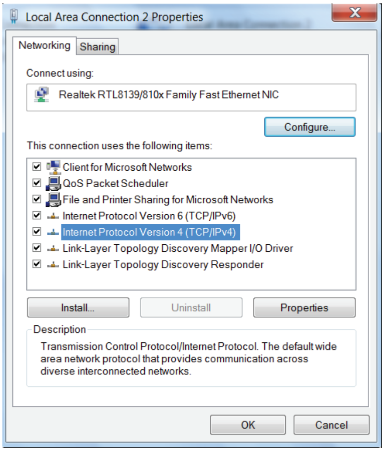
Change your networking settings

Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or s
access point.

3. Right click “**Local Area Connection**” and select “**Properties**”.



4. Double click” **Internet Protocol Version 4(TCP/IPv4)**".



Connect using:

Realtek RTL8139/810x Family Fast Ethernet NIC

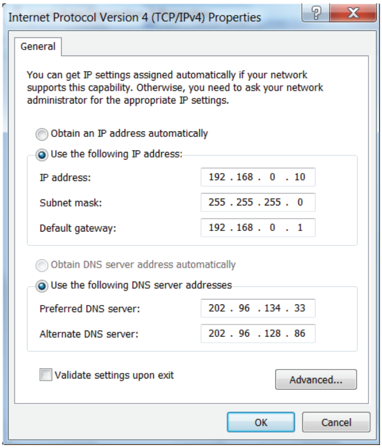
This connection uses the following items:

- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

5. Select “**Use the following IP address**” and enter the IP address, Subnet mask, Default gateway as follows:


Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically

● Use the following IP address:

IP address: 192 . 168 . 0 . 10

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 0 . 1

○ Obtain DNS server address automatically

● Use the following DNS server addresses

Preferred DNS server: 202 . 96 . 134 . 33

Alternate DNS server: 202 . 96 . 128 . 86

□ Validate settings upon exit

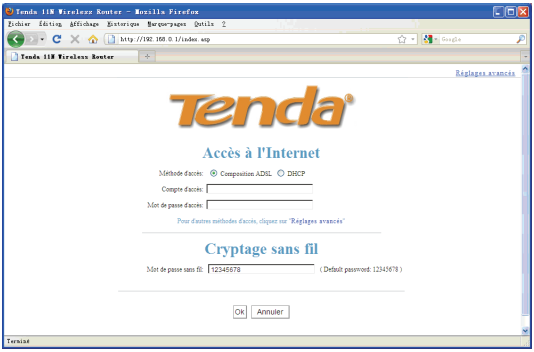
- **IP Address:** 192.168.0.XXX: (XXX is a number from 2~254)
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.0.1
- **DNS server:** You should input the DNS server address provided by your ISP. Otherwise, you can enter 192.168.0.1. Click “**OK**” to save the configurations.

3.2 Log in to the Router

1. To access the Router’s Web-based Utility, launch a web browser such as Internet Explorer or Firefox and enter http://192.168.0.1. Press “Enter”.

http://192.168.0.1/

2. The system will automatically choose the corresponding web language in accordance with the Browser’s language. For example, if your Browser’s language is French, the router’s web language will display as French.


Tenda 11N Wireless Router - Mozilla Firefox
Fichier Édition Affichage Historique Marque-pages Outils ?
http://192.168.0.1/index.asp
Google
Tenda 11N Wireless Router
Réglages avancés
Tenda®
Ok
Annuler
Terminé

Accès à l'Internet

Méthode d'accès: ● Composition ADSL ○ DHCP

Compte d'accès:

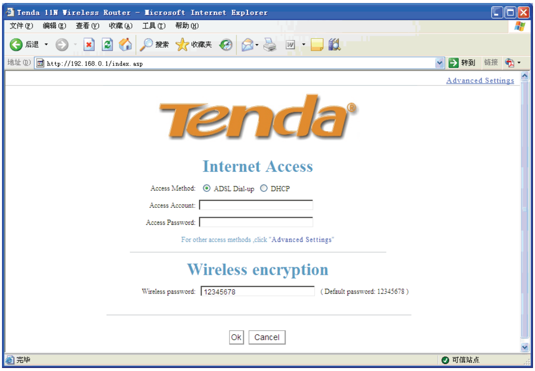
Mot de passe d'accès:

Pour d'autres méthodes d'accès, cliquez sur "Réglages avancés"

Cryptage sans fil

Mot de passe sans fil: 12345678 (Default password: 12345678)

3. If your Browser language is English or beyond the 9 languages (Arabic, French, German, Italian, Polish, Portuguese, Russian, Spanish, Turkish), the router's web language will be English.


Tenda 11N Wireless Router - Microsoft Internet Explorer
文件(F) 编辑(E) 查看(V) 收藏(A) 工具(T) 帮助(H)
后退
搜索
收藏夹
地址(D) http://192.168.0.1/index.asp
转到
链接
Advanced Settings
Tenda®
Ok
Cancel
完毕
可信站点

Internet Access

Access Method: ● ADSL Dial-up ○ DHCP

Access Account:

Access Password:

For other access methods ,click "Advanced Settings"

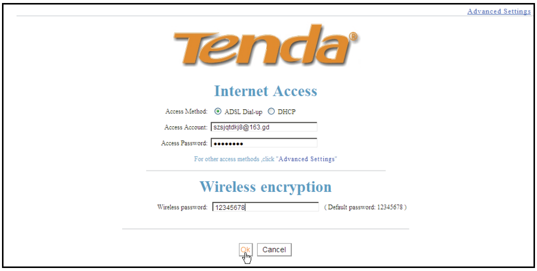
Wireless encryption

Wireless password: 12345678 (Default password: 12345678)

3.3 Fast Internet Access

Two kinds of fast access methods are provided on the router's web-based utility: ADSL dial-up and DHCP.

If you select ADSL dial-up, you only need to enter the access account and access password as well as the wireless password, and then click "Ok" to complete the settings.



Advanced Settings

Internet Access

Access Method: ● ADSL Dial-up ○ DHCP

Access Account: szsjqtdkj8@163.gd

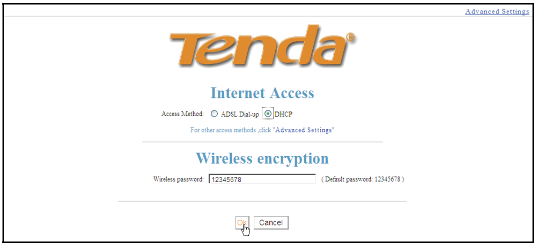
Access Password: ••••••••

For other access methods ,click "Advanced Settings"

Wireless encryption

Wireless password: 12345678 (Default password: 12345678)

If you select DHCP, you only need to enter the wireless password and click “Ok” to complete the settings.



Advanced Settings

Internet Access

Access Method: ○ ADSL Dial-up ● DHCP

For other access methods ,click "Advanced Settings"

Wireless encryption

Wireless password: 12345678 (Default password: 12345678)

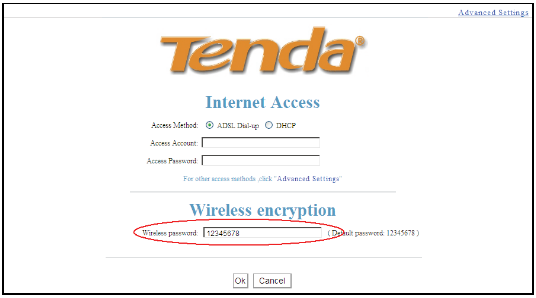
The default access method is ADSL dial-up and the access account and access password are the same as the ADSL dial-up account and password, which you can inquire your broadband ISP. For other access methods, please refer to WAN settings in chapter 4.The wireless password can only consist of 8 characters, the default is 12345678 and you can modify it when necessary.

3.4 Fast Encryption

The router provides two encryption setting screens, one is simple and easy, the other is advanced (For advanced setting, please refer to chapter 5.2).

Simple and easy screen:

Log on to the router’s web-based utility and you may set encryption for the router. The default adopts WPA-PSK mode and AES Algorithm. The default password is 12345678, as shown below.



Internet Access

Access Method: ● ADSL Dial-up ○ DHCP

Access Account:

Access Password:

For other access methods ,click "Advanced Settings"

Wireless encryption

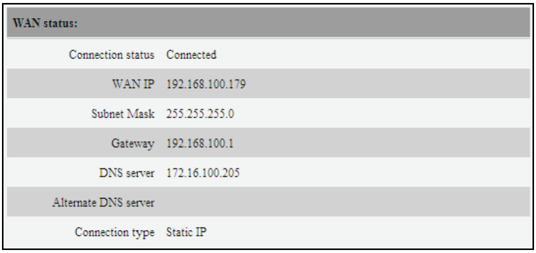
Wireless password: 12345678 (Default password: 12345678)

⚠**NOTE: The wireless password can only be 8 characters in length and the default is 12345678, you can modify it when necessary.**

Chapter 4 Advanced Settings

4.1 System Status

System status screen allows you to view the router's WAN port status and system status.



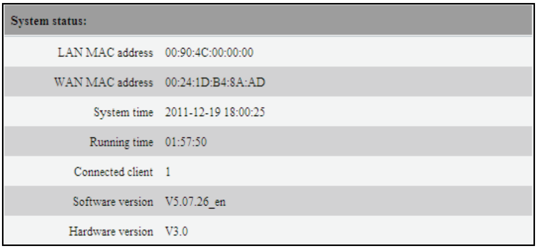
WAN status:	
Connection status	Connected
WAN IP	192.168.100.179
Subnet Mask	255.255.255.0
Gateway	192.168.100.1
DNS server	172.16.100.205
Alternate DNS server	
Connection type	Static IP

- **Connection status:** It displays the router's WAN connection status.

  Disconnected: It indicates the router's WAN port hasn't been connected with the network cable.

  Connecting: It indicates the router's WAN port is obtaining IP address.

  Connected: It indicates the Router is well connected with the ISP.
- **WAN IP:** IP address obtained from ISP.
- **Subnet mask:** Obtained from ISP.
- **Gateway:** Obtained from ISP.
- **DNS server:** Obtained from ISP.
- **Alternate DNS server:** Obtained from ISP.
- **Connection type:** It displays your current access method.



System status:	
LAN MAC address	00:90:4C:00:00:00
WAN MAC address	00:24:1D:B4:8A:AD
System time	2011-12-19 18:00:25
Running time	01:57:50
Connected client	1
Software version	V5.07.26_en
Hardware version	V3.0

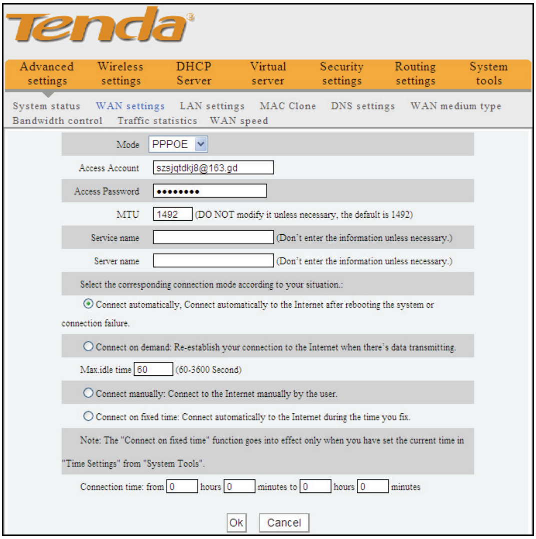
- **LAN MAC address：** It displays the Router's LAN MAC address.
- **WAN MAC address：** It displays the Router's WAN MAC Address.
- **System time：** It displays the system's updated time
- **Connected client：** It displays the number of the connected computers(normally it

displays the number of clients whose IP addresses obtained via DHCP server)

- **Software version：** It displays the Router's software version；
- **Hardware versio**n： It displays the Router's hardware version.

4.2 WAN Settings

Virtual Dial-up (PPPoE)



Mode PPPOE

Access Account szsjqtdkj8@163.gd

Access Password ••••••••

MTU 1492 (DO NOT modify it unless necessary, the default is 1492)

Service name (Don't enter the information unless necessary.)

Server name (Don't enter the information unless necessary.)

Select the corresponding connection mode according to your situation.:

● Connect automatically, Connect automatically to the Internet after rebooting the system or connection failure.

○ Connect on demand: Re-establish your connection to the Internet when there's data transmitting.

Max.idle time 60 (60-3600 Second)

○ Connect manually: Connect to the Internet manually by the user.

○ Connect on fixed time: Connect automatically to the Internet during the time you fix.

Note: The "Connect on fixed time" function goes into effect only when you have set the current time in "Time Settings" from "System Tools".

Connection time: from 0 hours 0 minutes to 0 hours 0 minutes

- **Mode:** Show your current connection mode.
- **Access Account:** Enter the account provided by your ISP.
- **Access Password:** Enter the password provided by your ISP.
- **MTU:** Maximum Transmission Unit. It is the size of the largest data packet that can be sent over the network. The default value is 1492. Do NOT modify it unless necessary, but if a specific website or web application software cannot open or be enabled, you can try to change the MTU value to 1450, 1400, etc.
- **Service Name:** The connection name for current PPPOE, enter it if necessary，otherwise, leave it blank.
- **AC Name:** The service name, enter it if necessary，otherwise, leave it blank.
- **Connect Automatically:** Connect automatically to the Internet after rebooting the system or connection failure.
- **Connect on Demand:** Re-establish your connection to the Internet after the specific

time (Max Idle Time). Zero means you are connected to the Internet all times. Otherwise, enter the minutes to be elapsed before you are disconnected from the Internet.

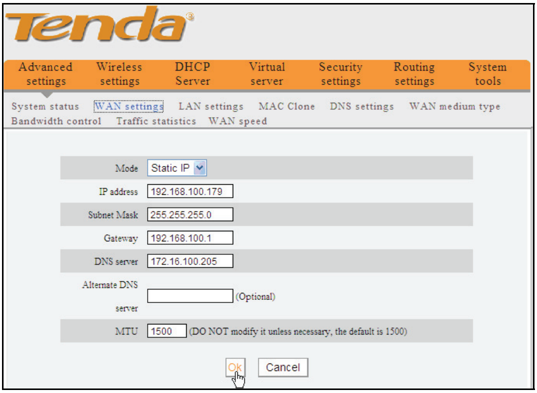
- **Connect Manually:** Connect to the Internet by users manually.
- **Connect on Fixed Time:** Connect to the Internet during the time you fix automatically.

⚠**NOTE:**

The "Connect on Fixed Time" goes into effect only when you have set the current time in "Time settings" from "System tools".

Static IP

If your ISP provides you the static IP, please choose static IP, and you need to enter the IP address, subnet mask, gateway, DNS server and alternate DNS server provided by your ISP or network administrator。

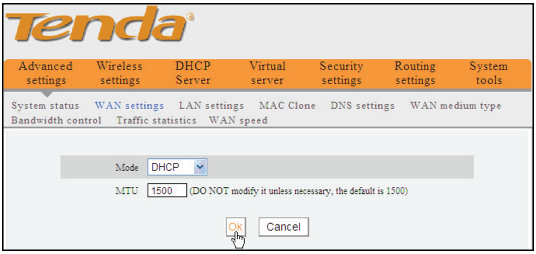


Mode: Static IP
IP address: 192.168.100.179
Subnet Mask: 255.255.255.0
Gateway: 192.168.100.1
DNS server: 172.16.100.205
Alternate DNS server: (Optional)
MTU: 1500 (DO NOT modify it unless necessary, the default is 1500)

- **Mode:** Show your current connection mode.
- **IP address:** Enter the WAN IP address provided by your ISP. If you are not clear, please inquire your local ISP.
- **Subnet mask:** Enter the WAN Subnet Mask provided by your ISP. Generally it is 255.255.255.0 。
- **Gateway:** Enter the Gateway provided by your ISP. If you are not clear, please inquire your local ISP.
- **DNS server:** Enter the necessary DNS server provided by your ISP.
- **Alternate DNS server:** Enter the second DNS address if your ISP provides, which is optional.

Dynamic IP (Via DHCP)

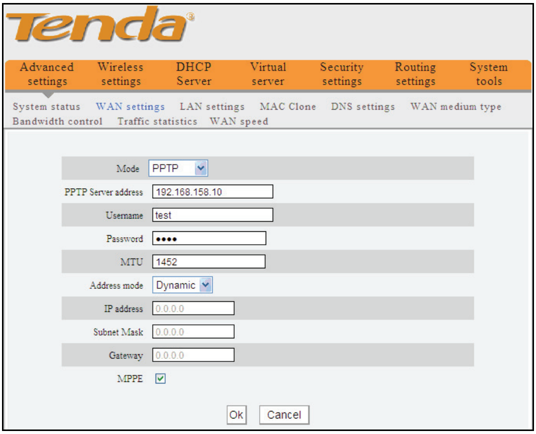
If your connection mode is Dynamic IP, it means every time you access the Internet, you will get a different IP. You don't need to enter any parameters in this mode, just Click "**Ok**" to finish the settings.



Mode DHCP

MTU 1500 (DO NOT modify it unless necessary, the default is 1500)

PPTP



Mode PPTP

PPTP Server address 192.168.158.10

Username test

Password ●●●●

MTU 1452

Address mode Dynamic

IP address 0.0.0.0

Subnet Mask 0.0.0.0

Gateway 0.0.0.0

MPPE ☑

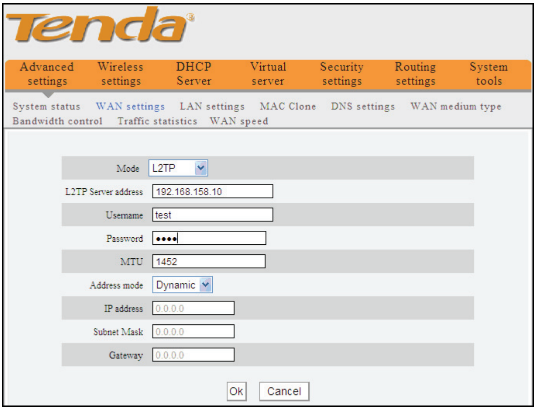
- **Mode:** Show your current connection mode.
- **PPTP server address:** The IP address or domain name of the destination server and it is used to specify the destination address which needs for PPTP connection.
- **Username/Password:** Used to validate identity when connecting to the PPTP server.
- **Address mode:** Set the router's IP address mode, you can select either "Dynamic" or "Static". If your ISP doesn't provide the IP address, please select "Dynamic".
- **IP address:** Please enter the IP address provided by your ISP, inquire your local ISP

if you are not clear.

- **Subnet mask:** Please enter the subnet mask provided by your ISP ,generally its 255.255.255.0
- **Gateway:** Please enter the gateway provided by your ISP, inquire your local ISP if you are not clear.

All the above parameters are provided by ISP.

L2TP



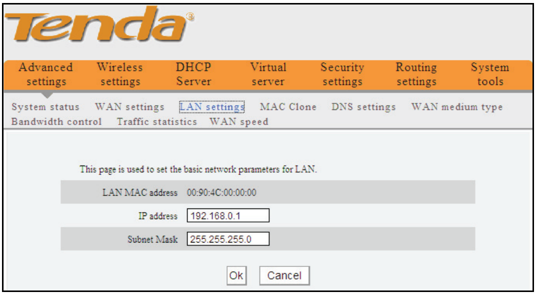
Mode	L2TP
L2TP Server address	192.168.158.10
Username	test
Password	••••
MTU	1452
Address mode	Dynamic
IP address	0.0.0.0
Subnet Mask	0.0.0.0
Gateway	0.0.0.0

- **Mode:** Show your current connection mode.
- **L2TP server address:** The IP address or domain name of the destination server and it is used to specify the destination address which needs for L2TP connection.
- **Username/Password:** Used to validate identity when connecting to the L2TP server.
- **Address mode:** Set the router's IP address mode, you can select either "Dynamic" or "Static". If your ISP doesn't provide the IP address, please select "Dynamic".
- **IP address:** Please enter the IP address provided by your ISP, inquire your local ISP if you are not clear.
- **Subnet mask:** Please enter the subnet mask provided by your ISP ,generally its 255.255.255.0
- **Gateway:** Please enter the gateway provided by your ISP, inquire your local ISP if you are not clear.

All the above parameters are provided by ISP.

4.3 LAN Settings

Click “Advanced settings” –LAN settings to enter the following screen.



This page is used to set the basic network parameters for LAN.

LAN MAC address 00:90:4C:00:00:00

IP address 192.168.0.1

Subnet Mask 255.255.255.0

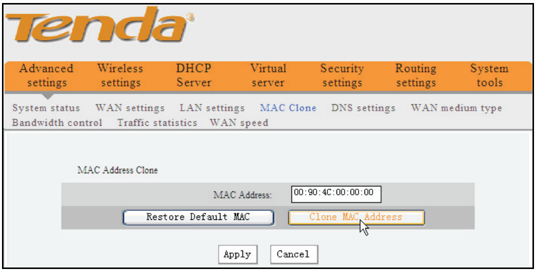
- **LAN MAC address:** The Router’s LAN MAC address, which is unchangeable.
- **IP address:** The Router’s LAN IP address (not your PC’s IP address).The default value is 192.168.0.1; you can change it when necessary.
- **Subnet mask:** The Router’s LAN subnet mask. The default value is 255.255.255.0

⚠**NOTE:**

Once you modify the IP address, you need to remember it for next time you log in to the web-based utility.

4.4 MAC Clone

This section allows you to configure router’s WAN MAC address.



MAC Address Clone

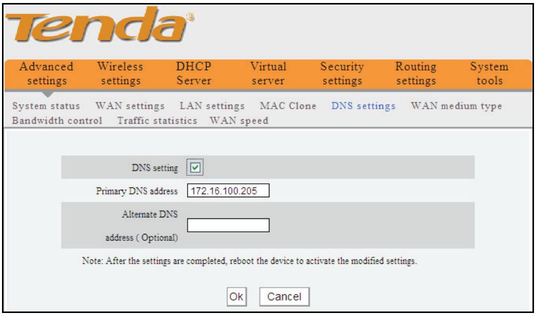
MAC Address: 00:90:4C:00:00:00

- **MAC Address:** Configure router’s WAN MAC address.
- **Clone MAC Address:** Clicking this button changes router’s WAN MAC address from default to the MAC address of the PC you are currently on. Don’t use this button unless your PC’s MAC address is the one bound by your ISP.

- **Restore Default MAC:** Restores router's WAN MAC to default settings.

4.5 DNS Settings

DNS stands for Domain Name System (or Service).



DNS setting ☑

Primary DNS address 172.16.100.205

Alternate DNS address (Optional)

Note: After the settings are completed, reboot the device to activate the modified settings.

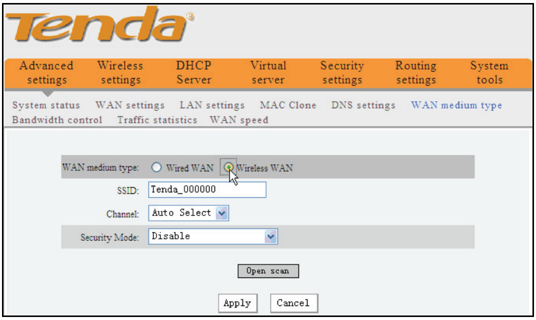
- **DNS setting:** Select to enable the DNS server.
- **Primary DNS address:** Enter the necessary address provided by your ISP.
- **Alternate DNS address:** Enter the second DNS address if your ISP provides, which is optional.

⚠**NOTE:**

After the settings are completed, reboot the device to activate the modified settings.

4.6 WAN Medium Type

Wired WAN and wireless WAN



WAN medium type: ○ Wired WAN ● Wireless WAN

SSID: Tenda_000000

Channel: Auto Select

Security Mode: Disable

- **Wired WAN:** In this mode, the cable is directly connected to the WAN port. Wired WAN is the default mode.
- **Wireless WAN:** Enable this mode if your ISP provides you wireless connection service or you want to use it to amplify wireless signals.
- **SSID:** SSID (Service Set Identifier) is the identity of the wireless device. You can only access to the ISP' network by entering the correct SSID, namely the SSID of the ISP's wireless device. You can click the "**Open scan**" button to let the router automatically search the ISP's available SSID. The SSID can also be the SSID of the superior wireless device when using wireless bridge.
- **MAC:** To connect to the ISP's wireless device, you need to know the device's MAC address. You can click the "**Open scan**" button to let the router automatically search the wireless device's MAC or superior wireless device's MAC.
- **Channel:** The wireless device's communication channel. You must select the same channel as the ISP's wireless device to enable their communications. It can also be scanned by clicking the "**Open scan**" button.

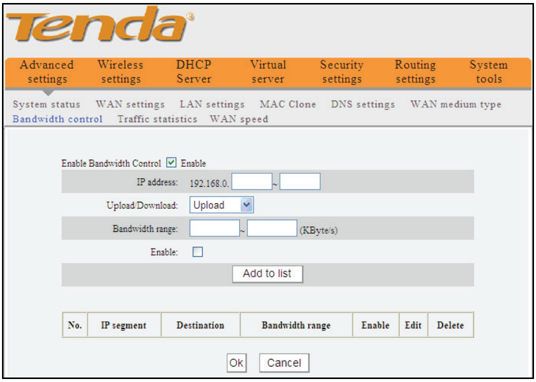
Security mode: When the ISP wireless device is secured, the access device should set the same security mode, encryption mode and key as the ISP' wireless device.

For example

If your ISP wireless device's SSID is "Wireless", then just enter the ISP's SSID, wireless MAC address, and channel respectively into the corresponding fields of the above picture. If the ISP device is secured, please set your router's encryption type the same as the ISP device's .Or you can click the "Open scan" button to let the router automatically fill in the SSID, Channel and wireless MAC. After saving, come back to the WAN Setting screen to select the corresponding WAN connection type to complete the settings (For example, if your ISP wireless device's connection type is dynamic IP, just select DHCP).

4.7 Bandwidth Control

Bandwidth control is used to limit the communication traffic of LAN computers when accessing the Internet. It can simultaneously control maximum of 254 PCs' traffic. In addition, IP address range configuration is supported.



Enable Bandwidth Control ☑ Enable

IP address: 192.168.0. ____ ~ ____

Upload/Download: Upload

Bandwidth range: ____ ~ ____ (KByte/s)

Enable: □

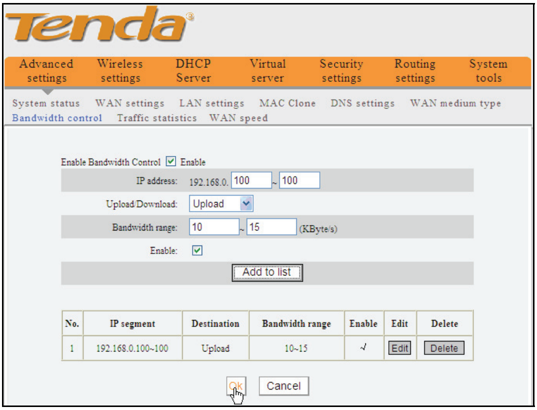
No.	IP segment	Destination	Bandwidth range	Enable	Edit	Delete

- **Enable Bandwidth Control:** To enable or disable the internal IP bandwidth control. The default is disabled.
- **IP Address:** The IP address range of the hosts whose traffic has been controlled. It can be a single IP address or IP address range.
- **Upload/Download:** To specify the traffic heading way for the selected IP addresses: upload or download.
- **Bandwidth Range:** The maximum and minimum upload/download data traffic of the hosts in specified IP range. The unit is KByte/s. The uplink of upload and download can not exceed the WAN port bandwidth limitation range.
- **Enable:** To enable the current edited rule. Otherwise, the rule will not go into effect.
- **Add to list:** After you edit the rule, click the "**add to list**" button to add the current rule to the rule list.

Here we take 2Mbps bandwidth as an example. Theoretically, the biggest downloading rate for 2Mbps bandwidth is 2Mbps=256KByte/s, and the biggest uploading rate is 512kbps=64KByte/s

Example 1

If you want to set the download rate of the computer at the IP address of 192.168.0.100 as 80-90KByte/s, upload rate as 10-15KByte/s, first add one upload rule as shown in the picture below:



Enable Bandwidth Control ☑ Enable

IP address: 192.168.0. 100 ~ 100

Upload/Download: Upload

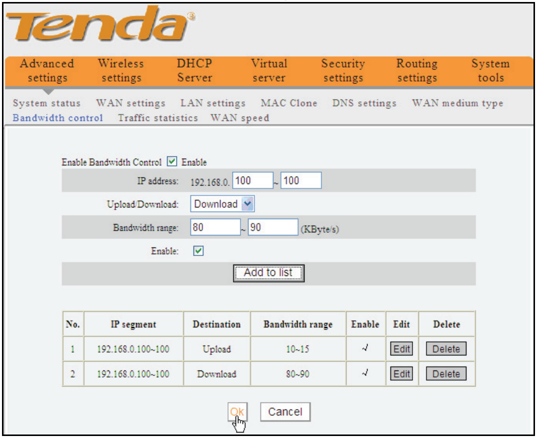
Bandwidth range: 10 ~ 15 (KByte/s)

Enable: ☑

No.	IP segment	Destination	Bandwidth range	Enable	Edit	Delete
1	192.168.0.100~100	Upload	10~15	✓	Edit	Delete

1. Enter 192.168.0.100 in the IP address field
2. Select upload in the Upload/Download field.
3. Enter 10-15 in the bandwidth range field
4. Select "Enable"
5. Click "Add to list"
6. Click "Ok" to finish the upload rule settings.

And then add a download rule as shown in the picture below.



Enable Bandwidth Control ☑ Enable

IP address: 192.168.0. 100 ~ 100

Upload/Download: Download

Bandwidth range: 80 ~ 90 (KByte/s)

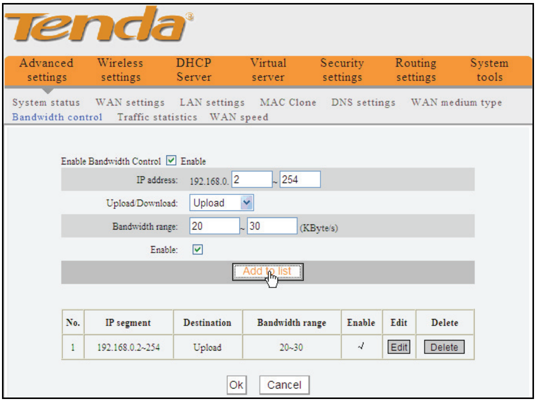
Enable: ☑

No.	IP segment	Destination	Bandwidth range	Enable	Edit	Delete
1	192.168.0.100~100	Upload	10~15	✓	Edit	Delete
2	192.168.0.100~100	Download	80~90	✓	Edit	Delete

The setting method is the same as the above.

Example 2

Set the download rate of all computers within the range of 192.168.0.2--192.168.0.254 as 100-120KByte/s, and the upload rate as 20-30KByte/s, as shown in the picture below.



Enable Bandwidth Control ☑ Enable

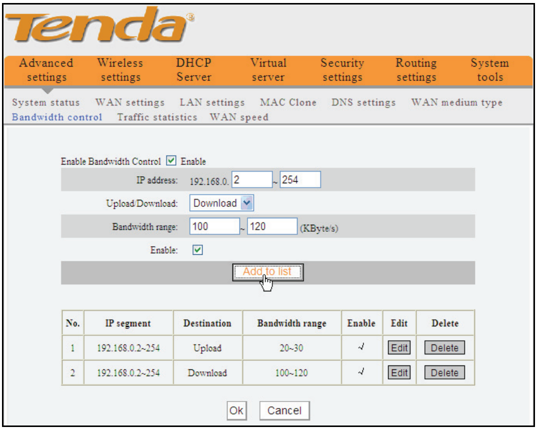
IP address: 192.168.0. 2 ~ 254

Upload/Download: Upload

Bandwidth range: 20 ~ 30 (KByte/s)

Enable: ☑

No.	IP segment	Destination	Bandwidth range	Enable	Edit	Delete
1	192.168.0.2~254	Upload	20~30	√	Edit	Delete



Enable Bandwidth Control ☑ Enable

IP address: 192.168.0. 2 ~ 254

Upload/Download: Download

Bandwidth range: 100 ~ 120 (KByte/s)

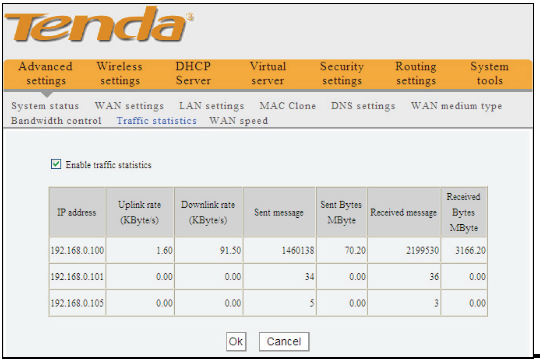
Enable: ☑

No.	IP segment	Destination	Bandwidth range	Enable	Edit	Delete
1	192.168.0.2~254	Upload	20~30	√	Edit	Delete
2	192.168.0.2~254	Download	100~120	√	Edit	Delete

The setting method is the same as **Example 1.**

4.8 Traffic Statistics

Traffic statistics is used to display the bandwidth that LAN PC used.



☑ Enable traffic statistics

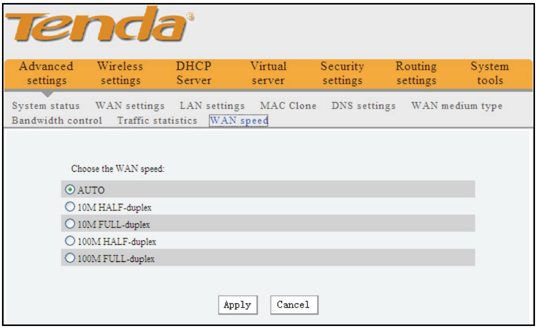
IP address	Uplink rate (KByte/s)	Downlink rate (KByte/s)	Sent message	Sent Bytes MByte	Received message	Received Bytes MByte
192.168.0.100	1.60	91.50	1460138	70.20	2199530	3166.20
192.168.0.101	0.00	0.00	34	0.00	36	0.00
192.168.0.105	0.00	0.00	5	0.00	3	0.00

Enable Traffic statistics: It is used to calculate the traffic used by the LAN computers. You can enable it to calculate the traffic for you. Usually, disable it to improve the router's data packet processing ability, and the default is disabled. When this function is enabled, the webpage will refresh automatically every five minutes, meanwhile, each computer's traffic value will refresh automatically.

- **IP address:** the IP address of the computer whose traffic is being calculated.
- **Uplink rate:** the data sending speed per second, the unit is KByte/s.
- **Downlink rate:** the data receiving speed per second, the unit is KByte/s.
- **Sent message:** the number of the calculated computer's data packets that are sent out through the router.
- **Sent Bytes:** the volume of the calculated computer's statistics that is sent out through the router
- **Received message:** the number of the calculated computer's the data packets that are received through the router.
- **Received Bytes:** the volume of the calculated computer's statistics that is received through the router.

4.9 WAN Speed

This section allows you to configure WAN speed. Default settings are recommended to be kept.



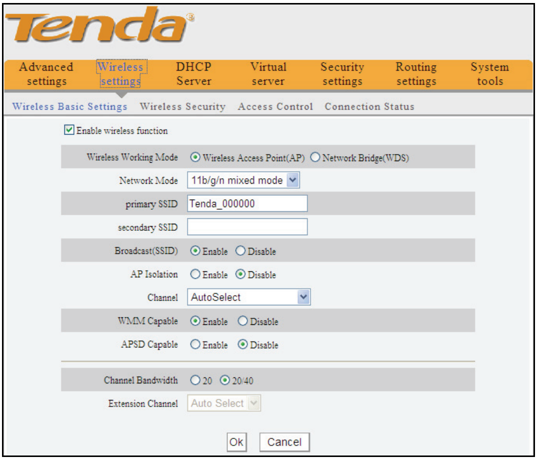
Choose the WAN speed:

● AUTO
○ 10M HALF-duplex
○ 10M FULL-duplex
○ 100M HALF-duplex
○ 100M FULL-duplex

- **AUTO:** Use this default value unless you are connecting an excessively long cable, which may degrade drive capability, to your router's WAN port.
- **10M HALF-duplex:** Select this value if your router's WAN port does not function properly when connected to an Ethernet cable; it may be caused by degraded drive capacity due to the cable's excessive length.
- **10M FULL-duplex:** Select this value to improve WAN port drive capacity.
- **100M HALF-duplex:** Select it to set router's WAN port to work at 100Mbps in half duplex mode.
- **100M FULL-duplex:** Select it to set router's WAN port to work at 100Mbps in full duplex mode.

Chapter 5 WLAN Settings

5.1 Wireless Basic Settings



☑ Enable wireless function

Wireless Working Mode	● Wireless Access Point(AP) ○ Network Bridge(WDS)
Network Mode	11b/g/n mixed mode
primary SSID	Tenda_000000
secondary SSID	
Broadcast(SSID)	● Enable ○ Disable
AP Isolation	○ Enable ● Disable
Channel	AutoSelect
WMM Capable	● Enable ○ Disable
APSD Capable	○ Enable ● Disable
Channel Bandwidth	○ 20 ● 20/40
Extension Channel	Auto Select

- **Enable wireless function:** Select to enable the Router’s wireless features; deselect to disable it and all functions related with wireless are disabled.
- **Wireless working mode:** This router provides two kinds of working modes: Wireless Access Point(AP) and Network Bridge (WDS)

Wireless Access Point (AP)

- **Network Mode:** Select one mode from the drop-down list.

  11b mode： Select it if you have only Wireless-B clients in your network.

  11g mode： Select it if you have only Wireless-G clients in your network.

  11b/g mixed mode: Select it if you have only Wireless-B and Wireless-G clients in your network.

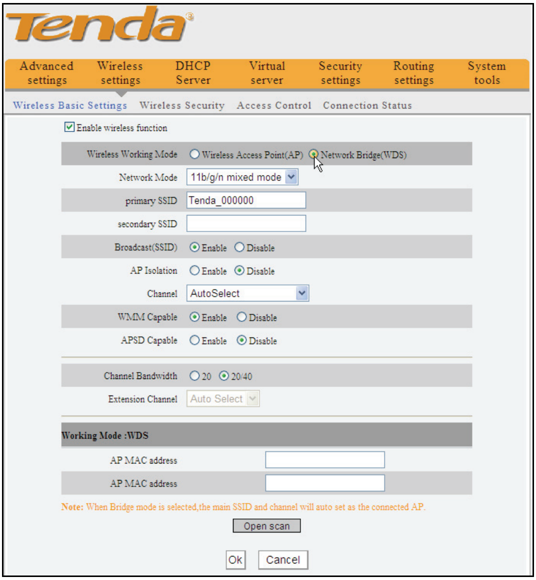
  11b/g/n mixed mode: Select it if you have Wireless-B, Wireless-G and Wireless-N clients in your network.
- **Primary SSID:** It is the unique name of the wireless network and can be modified. The Priermary SSID must be entered.
- **Secondary SSID:** It is the unique name of the wireless network and can be modified. The Secondary Secendry SSID is optional.
- **Broadcast (SSID):** Select “**Enable**” to enable the router’ SSID to be scannable by

wireless devices. The default is enabled. If you disable it, the wireless devices must know the SSID for communication.

- **AP Isolation:** By default this option is disabled, and you are recommended to keep it unchanged. Once enabled, wireless clients connected to primary SSID and wireless clients connected to secondary SSID cannot communicate with each other.
- **Channel:** The currently used channel by the router. Select an effective channel (from 1 to 11\Auto) of the wireless network.
- **WMM Capable:** Enable it to enhance the transfer performance of the wirelessly transferred multimedia data (such as video or online playing).We recommend enabling this option if you are not familiar with WMM.
- **APSD Capable:** It is used for auto power-saved service for WMM. The default is disabled.
- **Channel bandwidth:** Select an appropriate channel bandwidth to enhance the wireless performance. Select 20/40M when the network has 11b/g and 11n wireless clients. Select 20M when the network has only non-11n wireless clients. Select 20/40M to promote its throughput when the wireless network is in 11n mode.
- **Extension Channel:** To confirm the network's frequency range in 11n mode.

Network Bridge (WDS) Settings

WDS (Wireless Distribution System) is used to expand wireless coverage area.



☑ Enable wireless function

Wireless Working Mode ○ Wireless Access Point(AP) ● Network Bridge(WDS)

Network Mode 11b/g/n mixed mode

primary SSID Tenda_000000

secondary SSID

Broadcast(SSID) ● Enable ○ Disable

AP Isolation ○ Enable ● Disable

Channel AutoSelect

WMM Capable ● Enable ○ Disable

APSD Capable ○ Enable ● Disable

Channel Bandwidth ○ 20 ● 20/40

Extension Channel Auto Select

Working Mode :WDS

AP MAC address

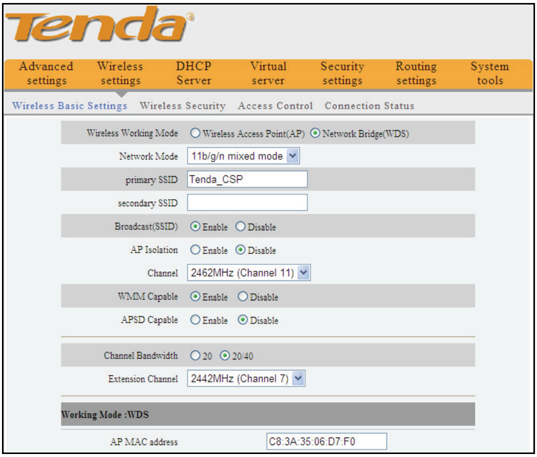
AP MAC address

Note: When Bridge mode is selected,the main SSID and channel will auto set as the connected AP.

- **AP MAC address:** Input the MAC address of another (opposing) wireless router you want to connect.

Example: This example is to bridge two W368R routers.

1. If you know the connecting router’s MAC address, please enter it into the AP MAC address field and click “Ok”.



Wireless Working Mode ○ Wireless Access Point(AP) ● Network Bridge(WDS)

Network Mode: 11b/g/n mixed mode

primary SSID: Tenda_CSP

secondary SSID:

Broadcast(SSID) ● Enable ○ Disable

AP Isolation ○ Enable ● Disable

Channel: 2462MHz (Channel 11)

WMM Capable ● Enable ○ Disable

APSD Capable ○ Enable ● Disable

Channel Bandwidth ○ 20 ● 20/40

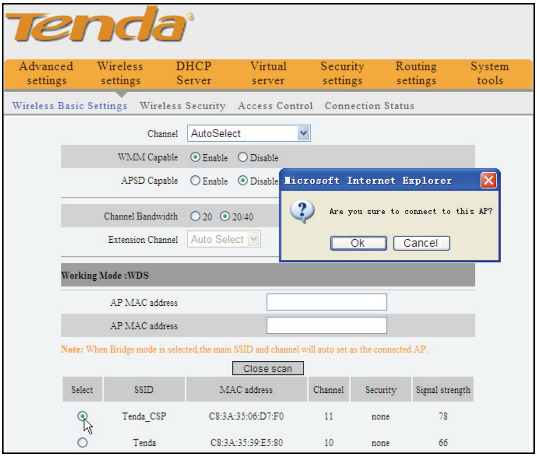
Extension Channel: 2442MHz (Channel 7)

Working Mode :WDS

AP MAC address: C8:3A:35:06:D7:F0

2. You can also search for the wireless router's signal by scanning.

a) Click "Open scan" and click the scanned signal and click the "Ok" button on the dialog box and the corresponding wireless MAC address will be added to the AP MAC address field automatically.



Channel: AutoSelect

WMM Capable ● Enable ○ Disable

APSD Capable ○ Enable ● Disable

Channel Bandwidth ○ 20 ● 20/40

Extension Channel: Auto Select

Working Mode :WDS

AP MAC address:

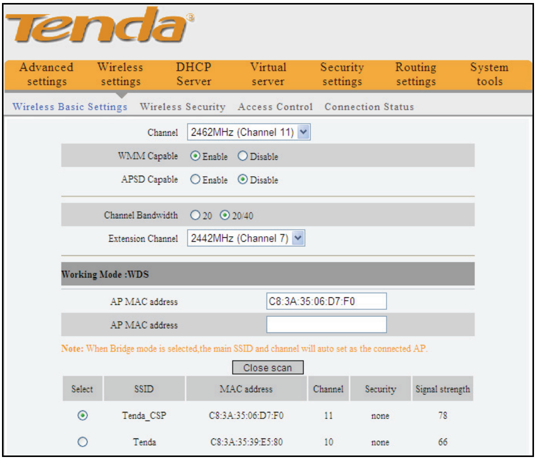
AP MAC address:

Note: When Bridge mode is selected,the main SSID and channel will auto set as the connected AP.

Are you sure to connect to this AP?

Select	SSID	MAC address	Channel	Security	Signal strength
●	Tenda_CSP	C8:3A:35:06:D7:F0	11	none	78
○	Tenda	C8:3A:35:39:E5:80	10	none	66

b) Click "Ok" after the MAC address is added.



Channel 2462MHz (Channel 11)

WMM Capable ● Enable ○ Disable

APSD Capable ○ Enable ● Disable

Channel Bandwidth ○ 20 ● 20/40

Extension Channel 2442MHz (Channel 7)

Working Mode :WDS

AP MAC address C8:3A:35:06:D7:F0

AP MAC address

Note: When Bridge mode is selected,the main SSID and channel will auto set as the connected AP.

Select	SSID	MAC address	Channel	Security	Signal strength
●	Tenda_CSP	C8:3A:35:06:D7:F0	11	none	78
○	Tenda	C8:3A:35:39:E5:80	10	none	66

After finishing the above steps, you need to set the other W368R router in the same way.

⚠NOTE:

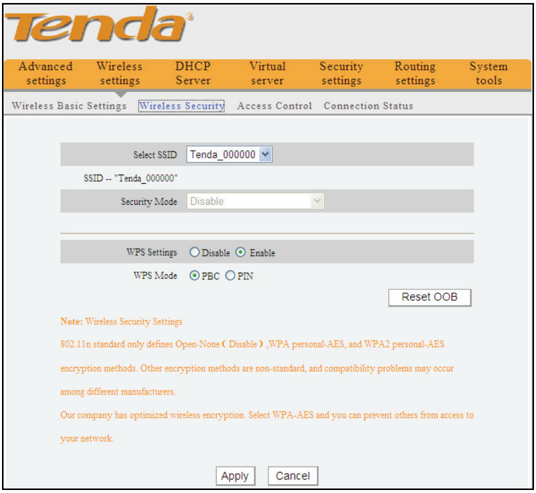
WDS feature requires both routers support this function and the SSID, channel, encryption method and password are the same as those of the connecting router.

5.2 Wireless Security Settings

With the wireless security function, you can prevent others from connecting to your wireless network and using the network resources without your consent. Meanwhile, you can also block illegal users from intercepting or intruding your wireless network.

5.2.1 WPS Settings

WPS (Wi-Fi Protected Setting) makes it quick and easy to establish a secure connection between the wireless clients and the router. The users only need to enter a PIN code or press WPS button on the back panel to configure it without manually selecting an encryption method or set a key.



Select SSID: Tenda_000000

SSID -- "Tenda_000000"

Security Mode: Disable

WPS Settings: ○ Disable ● Enable

WPS Mode: ● PBC ○ PIN

Note: Wireless Security Settings

802.11n standard only defines Open-None（Disable）,WPA personal-AES, and WPA2 personal-AES encryption methods. Other encryption methods are non-standard, and compatibility problems may occur among different manufacturers.

Our company has optimized wireless encryption. Select WPA-AES and you can prevent others from access to your network.

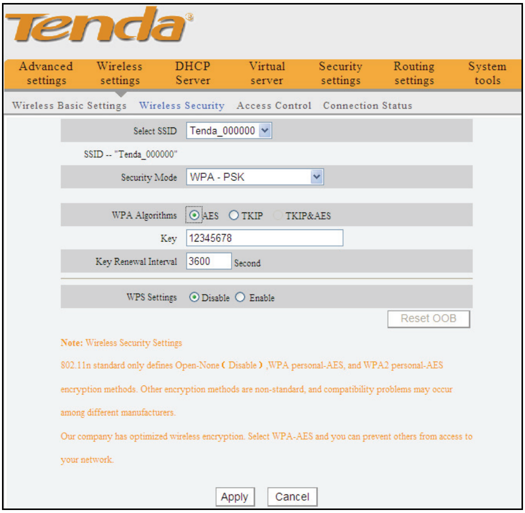
- **WPS settings**: To enable or disable WPS function. The default is "**Enable".**
- **WPS mode:** Provide two ways: PBC (Push-Button Configuration) and PIN code.
- **PBC:** Select the PBC and click **Ok,** or press and hold the WPS button on the back panel of the device for about one second. The WPS LED indicator will be flashing for 2 minutes, which means the WPS is enabled. During this time (flashing WPS LED), you can enable the wireless client to implement the WPS/PBC negotiation between them. When the WPS connection is completed, the LED indicator will be continuously lit. To add more clients, repeat the above steps.)
- **PIN:** If this option is enabled, you need to enter a wireless client's PIN code in the field and keep the same code in the WPS client.
- **Reset OOB:** Press this button, the WPS client will be in an idle state, and the WPS indicator will turn off. AP will not respond to the WPS client's connection request and will set the security mode as Open-None (Disable) mode.

⚠**NOTE**:

The use of WPS function requires the wireless adapter to support this function.

5.2.2 WPA- PSK

WPA guarantees to protect WLAN users' data and only the authorized network users can have access to WLAN.



Select SSID: Tenda_000000

SSID -- "Tenda_000000"

Security Mode: WPA - PSK

WPA Algorithms: ● AES ○ TKIP ○ TKIP&AES

Key: 12345678

Key Renewal Interval: 3600 Second

WPS Settings: ● Disable ○ Enable

Note: Wireless Security Settings

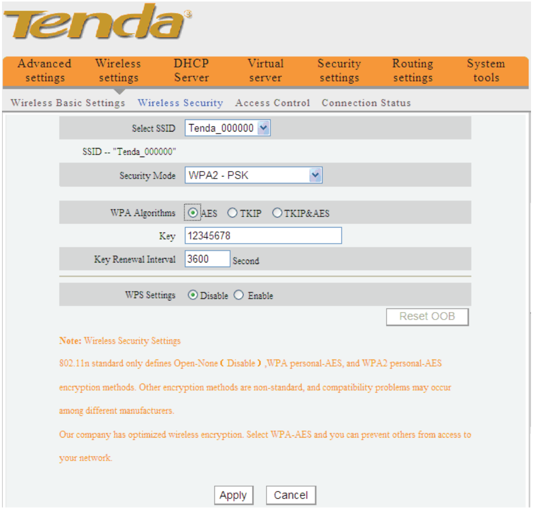
802.11n standard only defines Open-None（Disable）,WPA personal-AES, and WPA2 personal-AES encryption methods. Other encryption methods are non-standard, and compatibility problems may occur among different manufacturers.

Our company has optimized wireless encryption. Select WPA-AES and you can prevent others from access to your network.

- **Security Mode:** Select a proper security mode from the drop-down menu.
- **WPA Algorithms:** Provides TKIP [Temporal Key Integrity Protocol] or AES [Advanced Encryption Standard].
- **Key:** Enter the pass phrase that consists of 8-63 ASCII characters.
- **Key Renewal Interval:** Set the key's renewal period, which tells the device how often it should change the dynamic keys.

5.2.3 WPA2- PSK

WPA2 (Wi-Fi Protected Access version 2) provides higher security than and WPA (Wi-Fi Protected Access).



Select SSID: Tenda_000000

SSID -- "Tenda_000000"

Security Mode: WPA2 - PSK

WPA Algorithms: ● AES ○ TKIP ○ TKIP&AES

Key: 12345678

Key Renewal Interval: 3600 Second

WPS Settings: ● Disable ○ Enable

Note: Wireless Security Settings

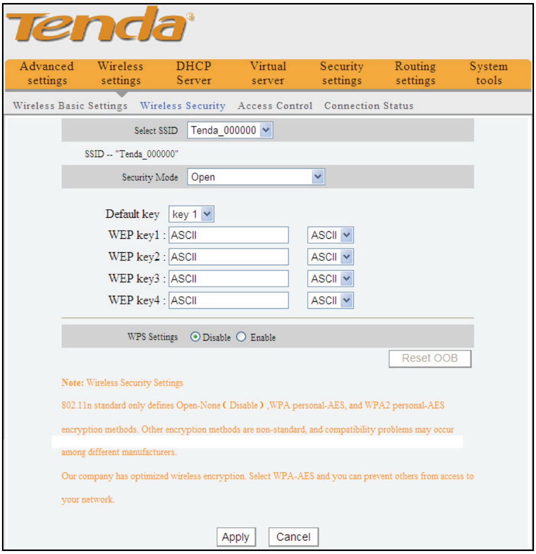
802.11n standard only defines Open-None (Disable) ,WPA personal-AES, and WPA2 personal-AES encryption methods. Other encryption methods are non-standard, and compatibility problems may occur among different manufacturers.

Our company has optimized wireless encryption. Select WPA-AES and you can prevent others from access to your network.

- **WPA Algorithms:** Provides TKIP [Temporal Key Integrity Protocol], AES [Advanced Encryption Standard] and TKIP&AES.
- **Key:** Enter the pass phrase that consists of 8-63 ASCII characters.
- **Key Renewal Interval:** Set the key's renewal period, which tells the device how often it should change the dynamic keys.

5.2.4 WEP

WEP (Wired Equivalent Privacy) is an encryption method which encrypts the data wirelessly transferred between two devices to prevent unauthorized users from intercepting or invading the wireless network. WEP security, based on RC4 data encryption technology, provides data confidentiality, integrity, and authentication for wireless communication.



Select SSID Tenda_000000

SSID -- "Tenda_000000"

Security Mode Open

Default key key 1

WEP key1 : ASCII ASCII

WEP key2 : ASCII ASCII

WEP key3 : ASCII ASCII

WEP key4 : ASCII ASCII

WPS Settings ● Disable ○ Enable

Note: Wireless Security Settings

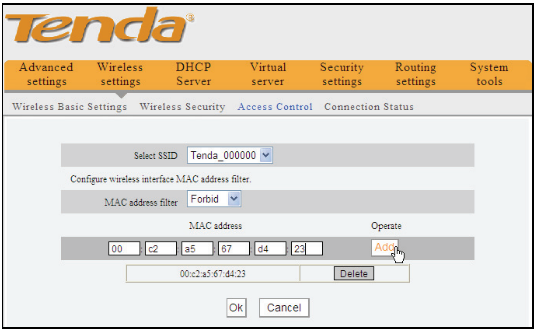
802.11n standard only defines Open-None（Disable）,WPA personal-AES, and WPA2 personal-AES encryption methods. Other encryption methods are non-standard, and compatibility problems may occur among different manufacturers.

Our company has optimized wireless encryption. Select WPA-AES and you can prevent others from access to your network.

- **Security Mode:** Select the corresponding security mode from the drop-down menu. Open and Shared are 2 modes of WEP encryption.
- **WEP Key1~4:** Set the WEP key with the format of ASCII and Hex. You can enter ASCII code (5 or 13 ASCII characters. Illegal characters such as “/” is not allowed). Or 10/26 hex characters.
- **Default Key:** Select one key from the four preset keys as the current effective one.

5.3 Wireless Access Control

Wireless access control is actually based on the MAC address to permit or forbid specific clients to access the wireless network.



Select SSID: Tenda_000000

Configure wireless interface MAC address filter.

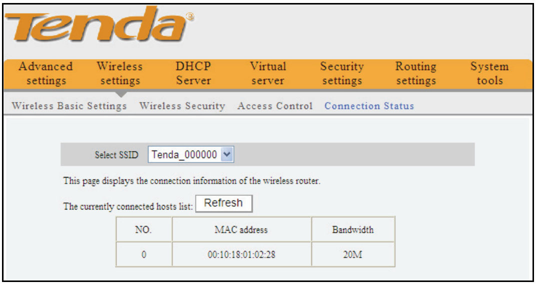
MAC address filter: Forbid

MAC address	Operate
00 : c2 : a5 : 67 : d4 : 23	Add
00:c2:a5:67:d4:23	Delete

- **MAC address filter:** "**Permit**" indicates to allow the clients in the list to access the wireless network, "**Forbid**" indicates to prevent the clients in the list from accessing the wireless network.
- **Configure MAC address:** Input the MAC addresses of the wireless clients to implement the filter policy. Click "**Add**" to finish the MAC add operation.
- **MAC Address list:** Show the added MAC addresses. You can add or delete them.

5.4 Connection Status

This screen shows wireless client's connection status, including MAC address, Channel bandwidth.



Select SSID: Tenda_000000

This page displays the connection information of the wireless router.

The currently connected hosts list: Refresh

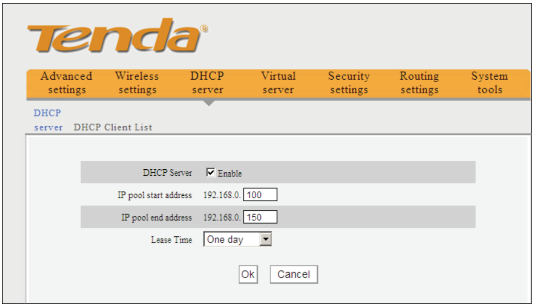
NO.	MAC address	Bandwidth
0	00:10:18:01:02:28	20M

- **MAC address:** Shows the MAC addresses of the hosts connected to the Router.
- **Bandwidth:** Shows the channel bandwidth of the current connected hosts (wireless clients).

Chapter 6 DHCP Server

6.1 DHCP Server

DHCP (Dynamic Host Control Protocol) is used to assign an IP address to the computers on the LAN/private network. When you enable the DHCP Server, the DHCP Server will allocate automatically an unused IP address from the IP address pool to the requesting computer in premise of activating "Obtain an IP Address Automatically". So specifying the start and end address of the IP Address pool is needed.



DHCP Server ☑ Enable

IP pool start address 192.168.0. 100

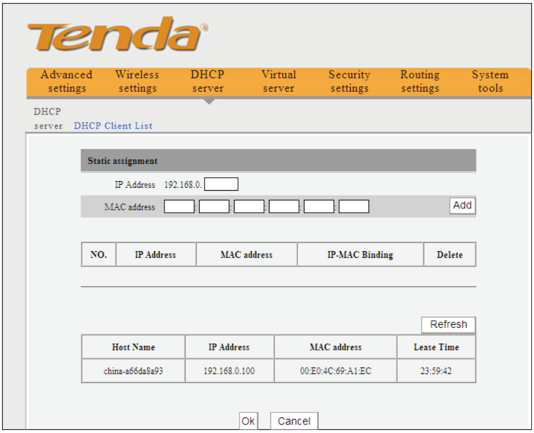
IP pool end address 192.168.0. 150

Lease Time One day

- **DHCP server:** Check the **Enable** box to enable DHCP server.
- **IP pool start/end address:** Enter the range of IP addresses for DHCP server distribution.
- **Lease time:** It indicates the valid time of the dynamic IP address which is distributed to the DHCP client's host computer by DHCP server. During this time, the server will not distribute the IP address to any other host computer.

6.2 DHCP Client List

DHCP client list displays user computer' IP address, MAC address, host name and other information which are assigned by the DHCP server. You can manually enter the IP and MAC address and convert them to static assignment.



Static assignment

IP Address 192.168.0.

MAC address

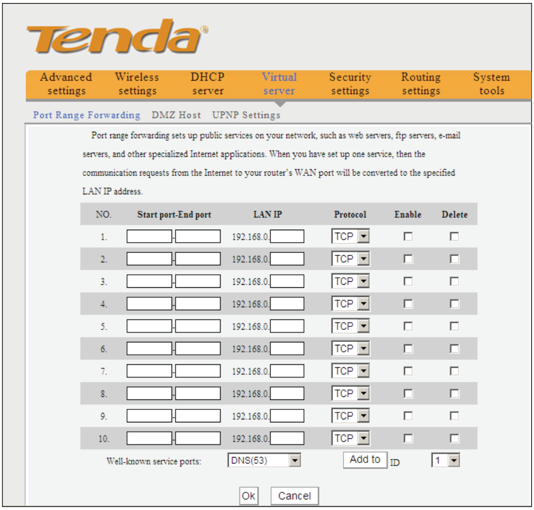
NO.	IP Address	MAC address	IP-MAC Binding	Delete

Host Name	IP Address	MAC address	Lease Time
china-a66da8a93	192.168.0.100	00:E0:4C:69:A1:EC	23:59:42

- **Host name:** It displays the name of the computer whose IP is allocated by the DHCP server.
- **IP address:** Enter the IP address which needs static binding.
- **MAC address:** Enter the MAC address of the computer you want to bind. Click "**Add**" to add the entry in the list.
- **Lease time:** The remaining time length of the corresponding IP address lease.

Chapter 7 Virtual Server

7.1 Port Range Forwarding



Port range forwarding sets up public services on your network, such as web servers, ftp servers, e-mail servers, and other specialized Internet applications. When you have set up one service, then the communication requests from the Internet to your router's WAN port will be converted to the specified LAN IP address.

NO.	Start port-End port	LAN IP	Protocol	Enable	Delete
1.	-	192.168.0.	TCP	□	□
2.	-	192.168.0.	TCP	□	□
3.	-	192.168.0.	TCP	□	□
4.	-	192.168.0.	TCP	□	□
5.	-	192.168.0.	TCP	□	□
6.	-	192.168.0.	TCP	□	□
7.	-	192.168.0.	TCP	□	□
8.	-	192.168.0.	TCP	□	□
9.	-	192.168.0.	TCP	□	□
10.	-	192.168.0.	TCP	□	□

Well-known service ports: DNS(53) Add to ID 1

- **Start/End port:** Enter the start/end port number which ranges the External ports used to set the server or Internet applications.
- **LAN IP:** Enter the IP address of the PC which you want to set as the server.
- **Protocol:** Select the protocol (TCP/UDP/Both) for the application. If you are not clear about the protocol you are using, you can select "Both".
- **Enable:** Click the **Enable** checkbox to bring the set rule into effect.
- **Delete:** Clear all settings of this item.
- **Well-known service port:** The well-known protocol ports are listed in the drop-down list. Select one and select a sequence number in the ID drop-down list and then click "Add", this port will be added automatically to the ID list. For other well known service ports that are not listed, you can manually add them to the list.
- **Add to:** Add the selected well-known port to the policy ID.

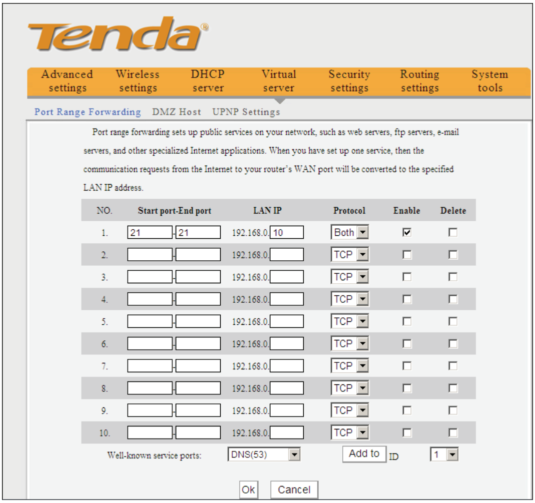
For Example: You want to share some large files with your friends outside of your local area network, however, they are too big, and it's not convenient to transfer them. Then, you can build a FTP server on your computer and set the router's port range forwarding to enable your friends to access to these files on your computer. Suppose that your FTP server or your computer's static IP address is 192.168.0.10, and you wish your friends can access the server through the default port 21 and adopts TCP protocol.

Please follow the steps below to configure.

1.Enter 21 in both start port and end port fields, or you can also select FTP from the well-known service port and its port 21 will be added to the corresponding field automatically.

2. Enter 192.168.0.10 in the LAN IP column, and then select “Both” as the protocol and select “Enable”.

3. As the picture shown below.



Port range forwarding sets up public services on your network, such as web servers, ftp servers, e-mail servers, and other specialized Internet applications. When you have set up one service, then the communication requests from the Internet to your router’s WAN port will be converted to the specified LAN IP address.

NO.	Start port-End port	LAN IP	Protocol	Enable	Delete
1.	21 - 21	192.168.0.10	Both	☑	□
2.	-	192.168.0.	TCP	□	□
3.	-	192.168.0.	TCP	□	□
4.	-	192.168.0.	TCP	□	□
5.	-	192.168.0.	TCP	□	□
6.	-	192.168.0.	TCP	□	□
7.	-	192.168.0.	TCP	□	□
8.	-	192.168.0.	TCP	□	□
9.	-	192.168.0.	TCP	□	□
10.	-	192.168.0.	TCP	□	□

Well-known service ports: DNS(53) Add to ID 1

Ok Cancel

4. Click the “Ok” button to save the settings.

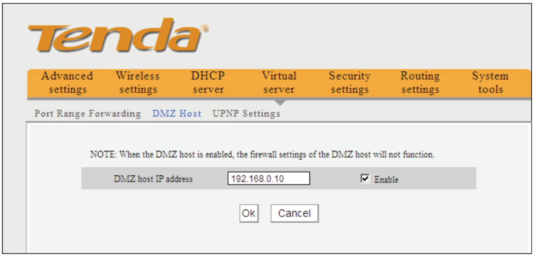
And now, when your friends want to visit the FTP server, they only need to enter ftp://xxx.xxx.xxx.xxx:21 in the address field. Here, xxx.xxx.xxx.xxx means the router’s WAN IP address. For example, when your router’s WAN IP address is 172.16.102.89; your friends need to enter ftp://172.16.102.89:21 in the address field.

⚠NOTE:

If you set the service port of the virtual server as 80, you must set the Web management port on Remote Web Management screen to be any value except 80 such as 8080. Otherwise, there will be a conflict to disable the virtual server.

7.2 DMZ Settings

The DMZ Settings screen allows one local computer to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing. DMZ hosting forwards all the ports at the same time to one PC.



NOTE: When the DMZ host is enabled, the firewall settings of the DMZ host will not function.

DMZ host IP address 192.168.0.10 ☑ Enable

- **DMZ Host IP Address:** The IP address of the LAN computer you want to set as DMZ host.
- **Enable:** Check to enable the DMZ host.

For example:

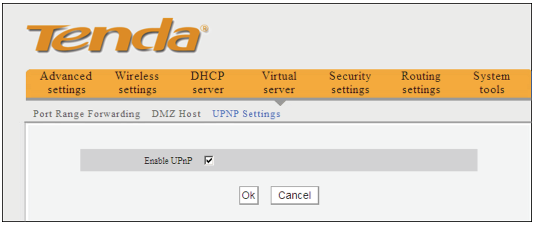
Set the computer at the IP address of 192.168.0.10 as DMZ host to connect another host on the Internet for intercommunication.

⚠**NOTE:**

When the DMZ host is enabled, the firewall settings of the DMZ host will not function.

7.3 UPNP Settings

UPnP (Universal Plug and Play).With the UPnP function, the internal host can request the router to process some special port switching so as to enable the external host to visit the resources of the internal host.



Enable UPnP ☑

- **Enable UPnP:** Click the checkbox to enable the UPnP.

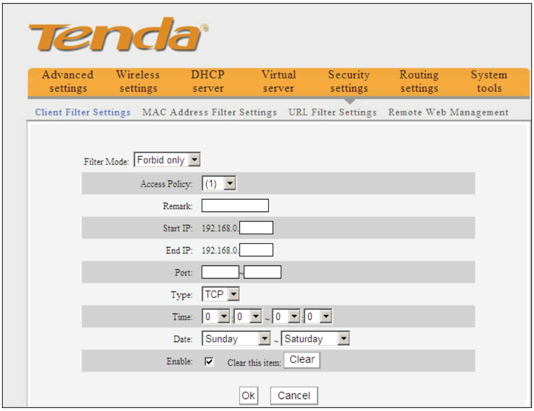
⚠**NOTE**:

This function goes into effect under Windows XP or Windows ME (NOTE: the system should integrate or have installed the Directx 9.0) or this function would go into effect if you have installed software that supports UPnP.

Chapter 8 Security Settings

8.1 Client Filter Settings

You can enable client filter to control LAN computers' access to some ports of the Internet。



Filter Mode: Forbid only

Access Policy: (1)

Remark:

Start IP: 192.168.0.

End IP: 192.168.0.

Port: ~

Type: TCP

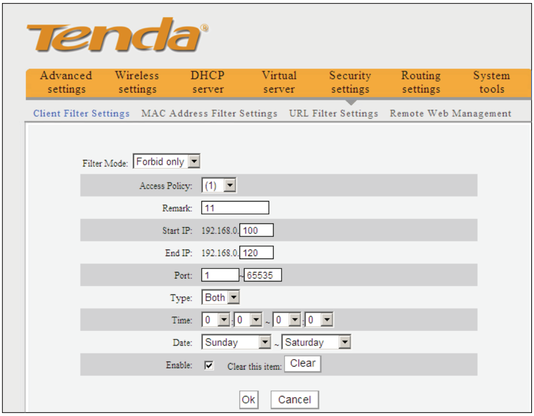
Time: 0 : 0 ~ 0 : 0

Date: Sunday ~ Saturday

Enable: ☑ Clear this item:

- **Filter Mode:** You can select either "Permit only" or "Forbid only".
- **Access Policy:** Select one number from the drop-down list.
- **Remark:** A simple description of the configured file. You can also leave it blank.
- **Start/End IP:** Enter the start/end IP address.
- **Port:** Enter the controlled TCP/UDP protocol port. You can specify a port or port range.
- **Type:** Select one protocol (TCP/UDP/Both) from the drop-down list.
- **Time:** Select the time range of client filter.
- **Date:** Select the day(s) to run the access policy.
- **Enable:** To enable/disable the access policy (forbid/permit the packets matched with the access policy to pass through the router.

Example1 Forbid LAN computers at the IP addresses of 192.168.0.100--192.168.0.120 to access the Internet.



Filter Mode: Forbid only

Access Policy: (1)

Remark: 11

Start IP: 192.168.0.100

End IP: 192.168.0.120

Port: 1 ~ 65535

Type: Both

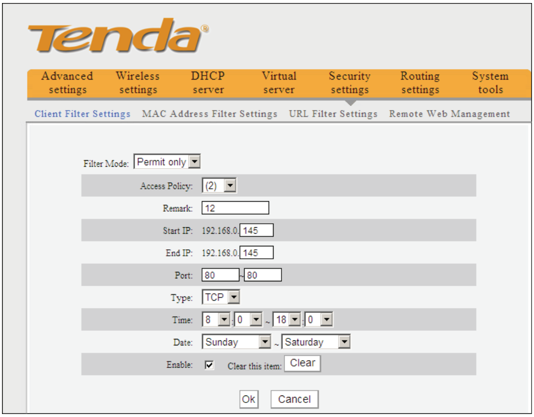
Time: 0 : 0 ~ 0 : 0

Date: Sunday ~ Saturday

Enable: ☑ Clear this item: Clear

Ok Cancel

Example 2 Permit LAN computer with the IP address of 192.168.0.145 to access websites during 8:00 to 18:00 from Sunday to Saturday.



Filter Mode: Permit only

Access Policy: (2)

Remark: 12

Start IP: 192.168.0.145

End IP: 192.168.0.145

Port: 80 ~ 80

Type: TCP

Time: 8 : 0 ~ 18 : 0

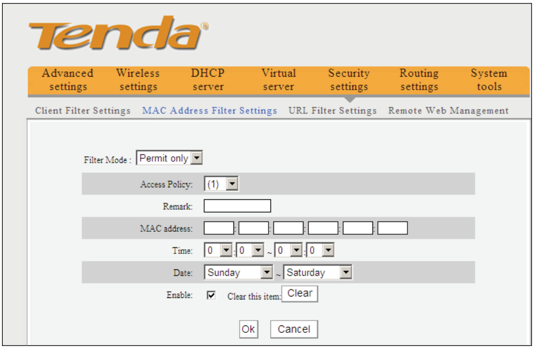
Date: Sunday ~ Saturday

Enable: ☑ Clear this item: Clear

Ok Cancel

8.2 MAC Address Filter

You can limit the computer's access to Internet by MAC Address Filter.



Filter Mode : Permit only

Access Policy: (1)

Remark:

MAC address: : : : : :

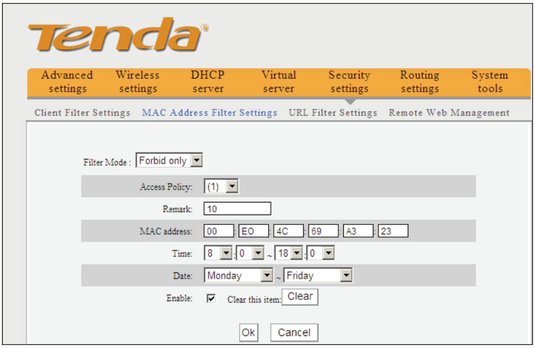
Time: 0 : 0 ~ 0 : 0

Date: Sunday ~ Saturday

Enable: ☑ Clear this item:

- **Filter mode:** You can select either “Permit only” or “Forbid only”.
- **Access Policy:** Select one number from the drop-down list.
- **Remark:** A simple description of the configured file. You can also leave it blank.
- **MAC Address:** Enter the MAC address you want to run the access policy.
- **Time:** Select the time range of MAC address filter.
- **Date:** Select the day(s) to run the access policy.
- **Enable:** To enable/disable the access policy (forbid/permit the packets matched with the access policy to pass through the router).

Example 1 Forbid the computer with the MAC address of 00:E0:4C:69:A3:23 to access Internet during 8:00 to 18:00 from Monday to Friday.



Filter Mode : Forbid only

Access Policy: (1)

Remark: 10

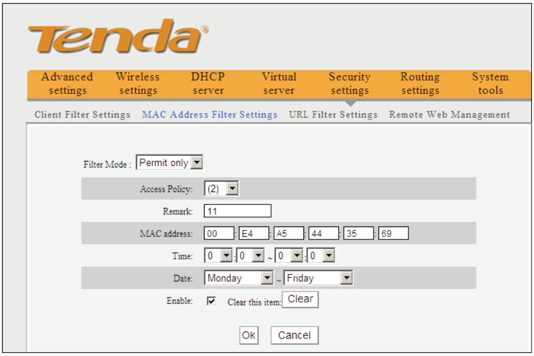
MAC address: 00 : EO : 4C : 69 : A3 : 23

Time: 8 : 0 ~ 18 : 0

Date: Monday ~ Friday

Enable: ☑ Clear this item:

Example 2 Permit the computer with the MAC address of 00:E4:A5:44:35:69 to access Internet from Monday to Friday.



Filter Mode : Permit only

Access Policy: (2)

Remark: 11

MAC address: 00 : E4 : A5 : 44 : 35 : 69

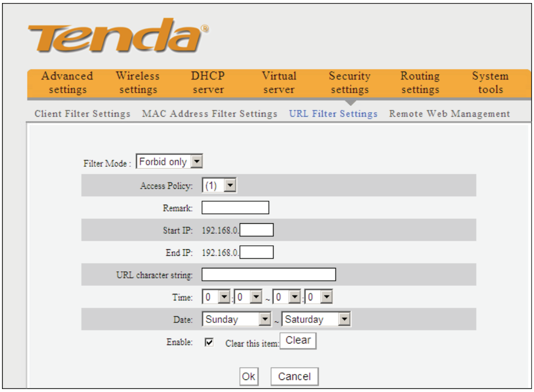
Time: 0 : 0 ~ 0 : 0

Date: Monday ~ Friday

Enable: ☑ Clear this item:

8.3 URL Filter Settings

You can use URL filtering to forbid their access to certain websites at a specified time.



Filter Mode : Forbid only

Access Policy: (1)

Remark:

Start IP: 192.168.0.

End IP: 192.168.0.

URL character string:

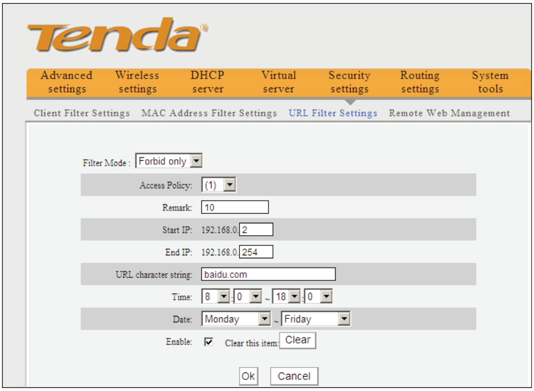
Time: 0 : 0 ~ 0 : 0

Date: Sunday ~ Saturday

Enable: ☑ Clear this item:

- **Filter Mode:** You can select either "Disable" or "Forbid only".
- **Access Policy:** Select one number from the drop-down list.
- **Remark:** A simple description of the configured file. You can also leave it blank.
- **Start/End IP:** Enter the start/end IP address.
- **URL character string:** Specify the text strings or keywords needed to be filtered.
- **Time:** Select the time range of URL filter.
- **Date:** Select the day(s) to run the access policy.
- **Enable:** To enable/disable the access policy (forbid the packets matched with the access policy to pass through the router).

Example1 Forbid all computers on LAN to access baidu.com during 8:00 to 18:00 from Monday to Friday.



Filter Mode : Forbid only

Access Policy: (1)

Remark: 10

Start IP: 192.168.0.2

End IP: 192.168.0.254

URL character string: baidu.com

Time: 8 : 0 ~ 18 : 0

Date: Monday ~ Friday

Enable: ☑ Clear this item: Clear

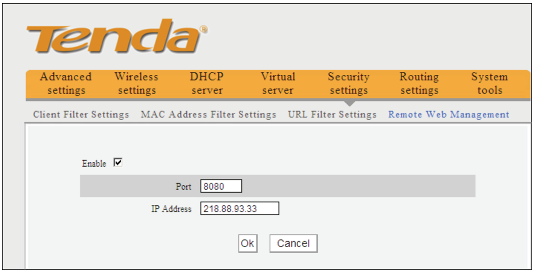
Ok Cancel

NOTE:

Enter only one domain name for each access policy for one access policy can only filter one domain name. So, if you want to filter multiple domain names, you need to set multiple access policies

8.4 Remote Web Management

This section instructs how to allow the network administrator to manage the Router remotely. If you want to access the Router from outside of the local network, please click the checkbox after "Enable".



Enable ☑

Port 8080

IP Address 218.88.93.33

Ok Cancel

- **Enable:** Check to enable remote web management.
- **Port:** The management port open to outside access. The default value is 80.

- **IP Address:** Specify the range of the IP addresses of the computers on the Internet for remote management.

⚠**NOTE:**

1. If you want to log in the device's Web-based Utility via port 8080, you need to use the format of WAN IP address: port (for example http：//220.135.211.56:8080) to implement remote login.

2. If your WAN IP address starts and ends with 0.0.0.0, it means all hosts on the Internet can implement remote Web management. If you change the Internet IP address as 218.88.93.33-218.88.93.35, then only the computers at the IP addresses of 218.88.93.33, 218.88.93.34 and 218.88.93.35 can access the Router to implement remote web management.

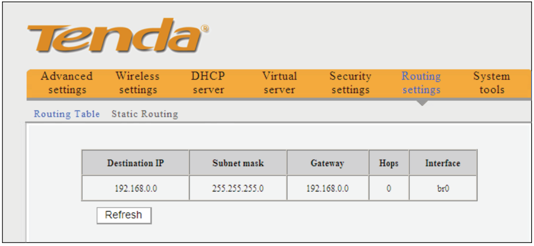
For example:

If you want to configure the computer at the IP address of 218.88.93.33 to access the router's web-based utility via port 8080, please set the parameters as above.

Chapter 9 Routing Settings

9.1 Routing Table

This page shows the router's core routing table.



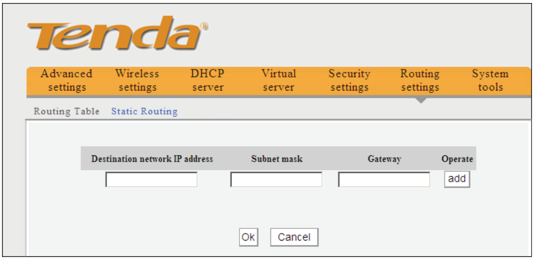
Destination IP	Subnet mask	Gateway	Hops	Interface
192.168.0.0	255.255.255.0	192.168.0.0	0	br0

The main duty for a router is to look for a best path for every data packet, and transfer this data packet to a destination station. In order to fulfill this function, many transferring paths, i.e. routing table, are saved in the router, for choosing when needed.

9.2 Static Routing

This screen is used to set the router's static routing.

A static route is a pre-determined pathway that network information must travel to reach a specific host or network.



Destination network IP address	Subnet mask	Gateway	Operate
			add

- **Destination network IP address:** The destination host or IP segment you visit.
- **Subnet mask:** Enter the subnet mask, generally it is 255.255.255.0
- **Gateway:** The entry IP address of the next router.

⚠**NOTE:**

1. The gateway must be at the same net segment with the router's LAN IP.

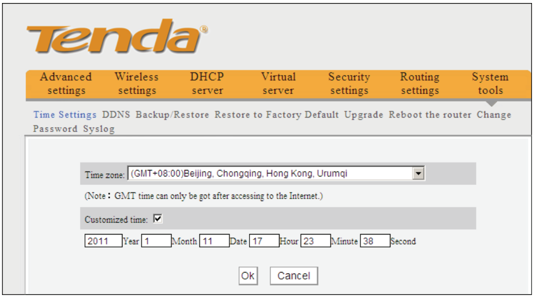
2. If the destination IP address is one host' address, then the subnet mask must be 255.255.255.255.

3. If the destination IP address is an IP segment, then it must match with the subnet mask. For example, if the destination IP is 10.0.0.0 then the subnet mask must be 255.0.0.0

Chapter 10 System Tools

10.1 Time Settings

This section is to configure the router's system time. You can set it manually or obtain the GMT time from the Internet.



Time zone: (GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi

(Note：GMT time can only be got after accessing to the Internet.)

Customized time: ☑

2011 Year 1 Month 11 Date 17 Hour 23 Minute 38 Second

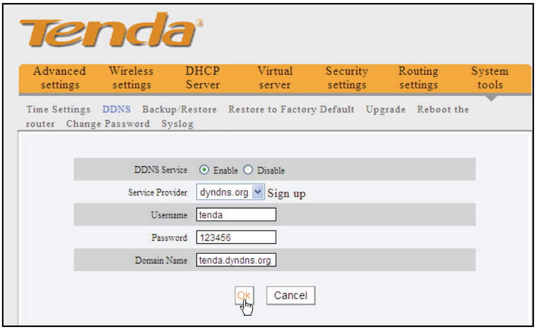
- ➢ **Time zone:** Select the time zone where you are operating the Router from the drop-down list.
- ➢ **Customized time:** Enter the time you wish to configure.

⚠**NOTE:**

When the Router is powered off, the time settings will be lost. The router will obtain the GMT time automatically when you next time access the Internet. Only when you connect to the Internet and obtain the GMT time or set the time on this screen, can the time settings in other functions (e.g. security settings) take effect.

10.2 DDNS

The DDNS (Dynamic Domain Name System) is supported in this Router. It is used to assign a fixed host and domain name to a dynamic Internet IP address. Every time you access the Internet, the dynamic domain name software installed on your host will tell the ISP'S host server its dynamic IP address by sending messages. And the server software is responsible for providing DNS service and implementing dynamic domain name resolution.



DDNS Service ● Enable ○ Disable

Service Provider dyndns.org

Username tenda

Password 123456

Domain Name tenda.dyndns.org

- **Main features:**

  1. Mostly, your ISP provides a dynamic IP address and the DDNS is used to capture the changeable IP address and match to the fixed domain. Then users can have access to the Internet to communicate with others outside the network.

  2. DDNS can help you to establish a virtual host in your home or company.

- **DDNS:** Click the radio button to enable or disable the DDNS service.
- **Service provider:** Select one from the drop-down list and click "**Sign up**" for registration.
- **Username:** Enter the username that you use to register from the DDNS provider
- **Password:** Enter the password that you use to register from the DDNS provider
- **Domain name:** Enter the effective registered domain name

For example:

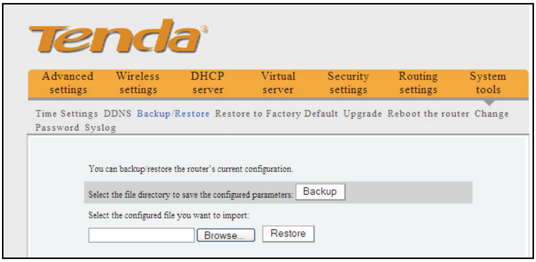
Establish a Web server in the local host 192.168.0.10 and register in dyn.net as follows:

Username	tenda
Password	123456
Domain Name	tenda.dyndns.org

After mapping the port in the virtual server, and setting account information in DDNS server, you can then access the web page by entering http://tenda.dyndns.org in the address field.

10.3 Backup/Restore

On this screen, you can back up the router's current settings or restore previous settings.



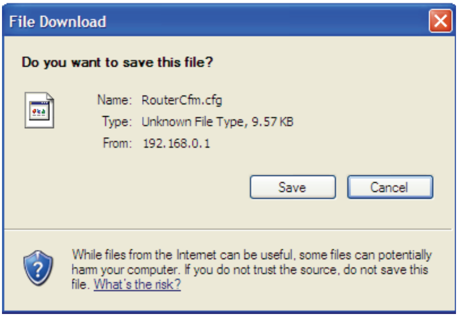
You can backup/restore the router's current configuration.

Select the file directory to save the configured parameters:

Select the configured file you want to import:

- **Backup Setting:**

  Click the **Backup** button to back up the Router's settings and select a path to save them.



Do you want to save this file?

Name: RouterCfm.cfg

Type: Unknown File Type, 9.57 KB

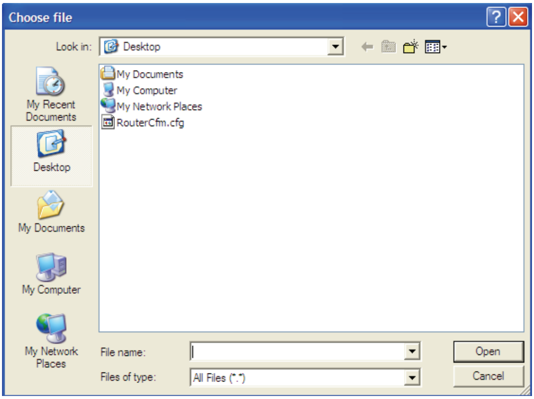
From: 192.168.0.1

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not save this file. What's the risk?

Click the "**Save"** button to save the configuration files.

- **Restore Setting:**

  Click the "**Browse"** button to select the backup files.



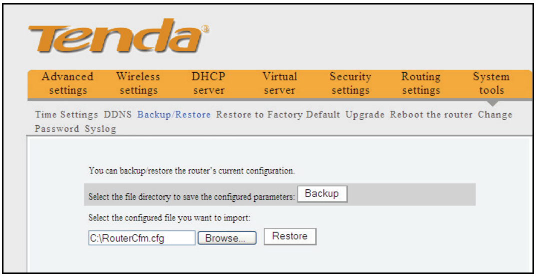
Look in: Desktop

My Documents
My Computer
My Network Places
RouterCfm.cfg

File name:

Files of type: All Files (*.*)

Click the "**Restore"** button to restore previous settings.



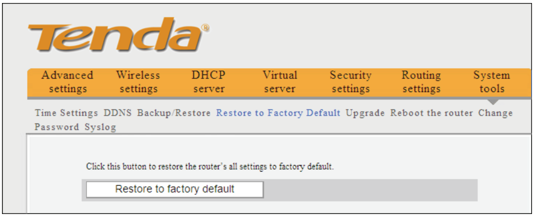
You can backup/restore the router's current configuration.

Select the file directory to save the configured parameters:

Select the configured file you want to import: C:\RouterCfm.cfg

10.4 Restore to Factory Default

This screen allows you to restore all settings to the factory default values.


Advanced settings
Wireless settings
DHCP server
Virtual server
Security settings
Routing settings
System tools
Time Settings DDNS Backup/Restore Restore to Factory Default Upgrade Reboot the router Change Password Syslog
Restore to factory default

Click this button to restore the router's all settings to factory default.

- **Restore:** Click this button to restore to default settings.
- **Factory default settings:**

  Password: NULL(the default password displays as null)

  IP address: 192.168.0.1

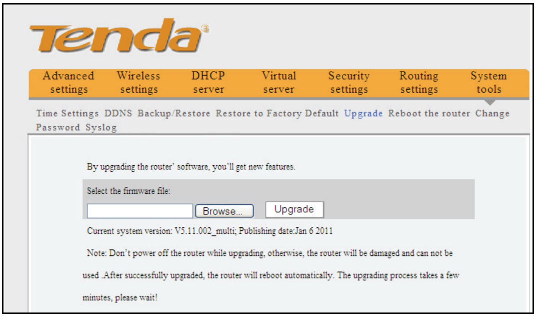
  Subnet mask: 255.255.255.0

⚠**NOTE:**

After restoring to default settings, please restart the router to make the default settings effective.

10.5 Upgrade

By upgrading the router's software, you'll get better software version and appreciated routing function. Before upgrading, download the Router's software upgrade file from our website, www.tenda.cn.



By upgrading the router' software, you'll get new features.

Select the firmware file:

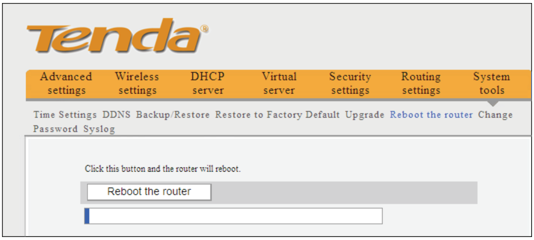
Current system version: V5.11.002_multi; Publishing date:Jan 6 2011

Note: Don't power off the router while upgrading, otherwise, the router will be damaged and can not be used .After successfully upgraded, the router will reboot automatically. The upgrading process takes a few minutes, please wait!

- **Browse:** Click this button to select the upgrade file.
- **Upgrade:** Click this button to start the upgrading process. After the upgrade is completed, the router will reboot automatically.

10.6 Reboot the Router

Reboot the router to make the configuration effective. The router will cut its WAN connection automatically after rebooting.

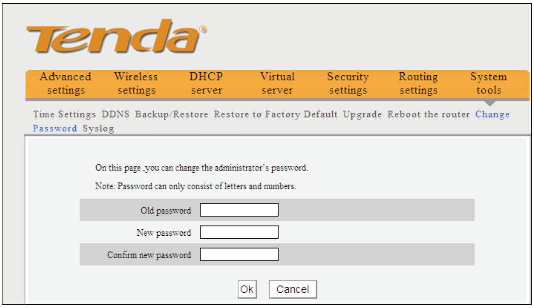


Click this button and the router will reboot.

- **Reboot the router:** Click this button to reboot the router.

10.7 Password Change

This section is to set a new password to better secure your router and network.



On this page ,you can change the administrator's password.

Note: Password can only consist of letters and numbers.

Old password

New password

Confirm new password

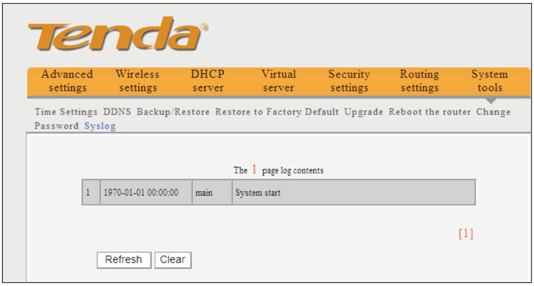
- **Old password:** Enter the old password.
- **New password:** Enter a new password.
- **Confirm new password:** Re-enter to confirm the new password.

⚠NOTE:

The default password displays as null, users can log on the web-based utility without any authentication. To secure the router and your network, it is highly recommended that you change the initial password.

10.8 Syslog

The section is to view the system log. You can view various conditions appearing after system start, and also check whether there's an attack on the network. The log can record at most 150 entries.



The 1 page log contents

```
1   1970-01-01 00:00:00   main   System start
```

- **Refresh:** Click this button to update the log.
- **Clear:** Click this button to clear the current shown log.

Appendix 1 Glossary

Channel:

An instance of medium use for the purpose of passing protocol data units (PDUs) that may be used simultaneously, in the same volume of space, with other instances of medium use(on other channels) by other instances of the same physical layer (PHY),with an acceptably low frame error ratio(FER) due to mutual interference.

SSID:

SSID (Service Set Identifier) is the network name shared by all devices in a wireless network. Your network's SSID should be unique to your network and identical for all devices within the network. It is case-sensitive and must not exceed 20 characters (use any of the characters on the keyboard).Make sure this setting is the same for all devices in your wireless network.

WPA/WPA2 Encryption:

A security protocol for wireless networks that builds on the basic foundations of WEP. It secures wireless data transmission by using a key similar to WEP, but the added strength of WPA is that the key changes dynamically. The changing key makes it much more difficult for a hacker to learn the key and gain access to the network.WPA2 is the second generation of WPA security and provides a stronger encryption mechanism through Advanced Encryption Standard (AES), which is a requirement for some government users.

802,1x authentication

Static WEP key is difficult to manage for when you change the key, you will have to inform all others, and if the key is disclosed in one of the places, the key can no longer provide security. Besides, there's severe security loophole about static WEP encryption. The WEP key can be decrypted after one person receives a specific amount of data via wireless intercepting. 802,1x is initially used for wired Ethernet authentication access to prevent illegal users from accessing the network. Later, it is found that 802.1x can better solve the wireless network security problem. EAP-TLS of the 802.1x successfully achieves the two-way authentication between users and networks, i.e. can prevent illegal users from accessing the network and can also prevent users from accessing the illegal AP. 802.1x utilizes dynamic WEP encryption to protect the WEP key from being decrypted. To solve the publishing problem for digital certification, people make some changes to TLS authentication and TTLS and EAP come into exist, which enable you to access the network by using the traditional way of authentication: username and password.

Appendix 2 Product Features

- ✧ Supports IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE 802.3 and IEEE 802.3u standards.
- ✧ High gain omni-directional antenna, with strong signals and long transmission distance.
- ✧ Wireless transmission rate up to 150Mbps or 300 Mbps
- ✧ Provides one 10/100Mbps auto-negotiation Ethernet WAN port to connect to the Wide Area Network
- ✧ Provides four 10/100Mbps auto-negotiation Ethernet LAN ports to connect to the Local Area Network
- ✧ Supports Auto MDI/MDIX
- ✧ Supports xDSL/Cable MODEM, static and dynamic IP in community broadband networking
- ✧ Includes router, wireless access point, four-port switch and firewall all in one
- ✧ SupportsWPA-PSK,WPA2-PSK,andWPA-PSK&WPA2-PSK mixed security modes
- ✧ Supports WPS button
- ✧ Supports hidden SSID function and MAC address-based access control
- ✧ Supports WMM to make your audio and video smoother
- ✧ Supports SNTP
- ✧ Supports UPnP and DDNS
- ✧ Supports WDS to extend wireless network
- ✧ Supports wireless WAN and allows access to ISP’s wireless hotspots to share Internet access with multiple computers.
- ✧ Supports virtual server, DMZ host
- ✧ Provides syslog to record the running status of the router

Appendix 3 FAQ

This section provides some solutions to the problems which may occur during the router's installation or usage. The instructions below may help you deal with the problems. If your problem is not in the list, please log into our website www.tenda.cn or send an E-mail to support@tenda.cn, and we will reply to you at the earliest time.

1. Can not log in to the Web-based Utility of the router after you enter the IP address in the address field?

Step 1: Check if the router is working correctly, after the device is powered on for a few seconds, the SYS indicator on the front panel should light up. If it is not, please contact us.
Step 2: Check the network cables are connected correctly and the corresponding LED indicator lights up. Sometimes, the indicator lights up, but it does not mean it is functioning.
Step 3: Run "Ping" command and check if it can ping the Router's LAN IP address 192.168.0.1 (open "Command Prompt" and type "Ping 192.168.0.1" and then enter). If it is OK, please make sure your browser does not access the Internet by proxy server. If the ping fails, you can press the "RESET" button for 7 seconds to restore to default settings. And then repeat the ping operation. If it still does not work, please contact us.

2. Forgot the login password and cannot enter the Web-based Utility. What can I do?

Press the "RESET" button for 7 seconds to restore the Router to default settings.

3. The computer connected with the Router shows IP address conflict. What can do?

Check if there are other DHCP servers in the LAN and if there are then disable them. The default IP address of the router is 192.168.0.1 please maker sure the address is not being used by any other device. If there are two computers with the same IP address, please change one of them.

4. I cannot use E-mail and access the Internet. What can I do?

Sometimes happens with ADSL connection and Dynamic IP users. You may need to modify the default MTU value (1492). Please open the "WAN Setting" and modify the MTU value with the recommended value as 1450 or 1400.

5.How to share my computer's resource with other users in Internet？

If you want Internet users to access the internal server via the router such as: e-mail server, Web, FTP. You can configure the "**Virtual Server**".

Step 1: create your internal server, make sure the LAN users can access these servers and know related service port. For example, Web server's port is 80; FTP is 21; SMTP is 25 and POP3 is 110.

Step 2: In the router's web click "**Virtual Server**" and select "**Port Range Forwarding**".

Step 3: Input the service port provided by the router (i.e. the external port) for mapping the internal and external network, for example, 80-80.

Step 4: input the internal Web service port, for example, 80-80.

Step 5: Input the internal server's IP address. For example, if your Web server's IP address is 192.168.0.10, please input it.

Step 6: select the communication protocol used by your internal host: TCP, UDP, Both.

Step 7: click "**Ok**" to activate the settings.

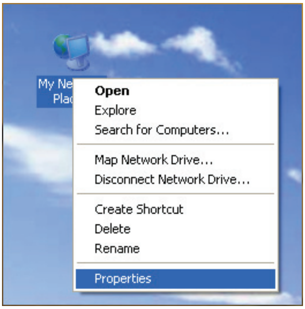
The following table lists some well-known applications and their respective service ports:

Server	Protocol	Service Port
WEB Server	TCP	80
FTP Server	TCP	21
Telnet	TCP	23
NetMeeting	TCP	1503 、 1720
MSN Messenger	TCP/UDP	File Send:6891-6900(TCP) Voice:1863 、 6901(TCP) Voice:1863 、 5190(UDP)
PPTP VPN	TCP	1723
Iphone5.0	TCP	22555
SMTP	TCP	25
POP3	TCP	110

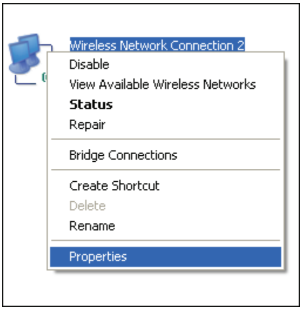
Appendix 4 Clear Wireless Configuration

Clear Wireless configuration file under windows XP

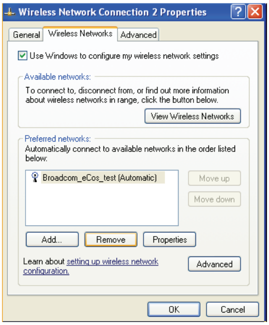
1. Right click “**My Network Places**” on your computer desktop and select “**Properties**”.



2. Right click “Wireless Network Connections” and select “Properties”.



3. Click “Wireless Network Configuration” and clear the corresponding wireless configuration file as shown below.



☑ Use Windows to configure my wireless network settings

Available networks:

To connect to, disconnect from, or find out more information about wireless networks in range, click the button below.

Preferred networks:

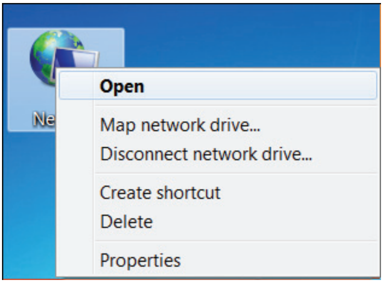
Automatically connect to available networks in the order listed below:

Broadcom_eCos_test (Automatic)

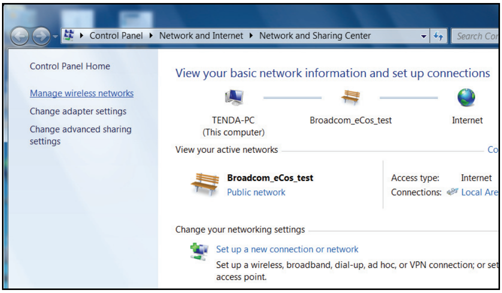
Learn about setting up wireless network configuration.

Clear Wireless configuration file under windows 7

1. Right click “Network” and click “Properties”.



2. Click “Manage wireless networks” on the left side of the window.



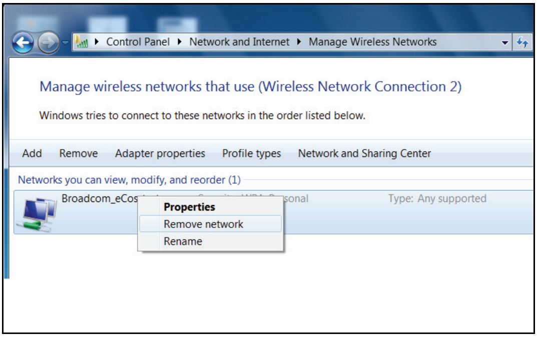
View your basic network information and set up connections

View your active networks

Change your networking settings

Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set access point.

3. Delete the corresponding configured file in the “Manage wireless networks”.



Manage wireless networks that use (Wireless Network Connection 2)

Windows tries to connect to these networks in the order listed below.

Networks you can view, modify, and reorder (1)

Appendix 5 Regulatory Information

EU Declaration or Declaration of Conformity

Hereby, SHENZHEN TENDA TECHNOLOGY CO.,LTD, declares that this Wireless Broadband Router is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

"The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with the minimum distance of 20 cm. 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.

Caution!

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