

# **User Guide**

# www.tendacn.com



Wireless N450 Gigabit Router F452

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# **Chapter 1 Product Overview**

## **1** Package Contents

Please verify that the package contains the following items:

- Wireless Router
- Power Adapter
- Installation Guide
- Ethernet Cable
- Resource CD

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

## 2 Getting to Know Your Router

#### **Front LED Overview**



LED	Status	Description
Power	Solid	Indicates a proper connection to power supply
	Off	Indicates an improper connection to power supply
SYS	Blinking	Indicates the system is functioning correctly
313	Solid/Off	Indicates the system is functioning incorrectly
WPS	Blinking	Device is performing WPS authentication on a client device
	Off	WPS is disabled or WPS authentication finished
	Solid	WiFi is enabled
WiFi	Blinking	Transmitting data
	Off	WiFi is disabled
	Solid	LAN port connected correctly
LAN ( 3/2/1 )	Blinking	LAN port is transmitting data
	Off	LAN port connected incorrectly
LAN 1	Solid	IPTV port is correctly connected
/IPTV	Blinking	IPTV port is transmitting data
	Off	IPTV port is incorrectly connected
WAN	Solid	WAN port connected correctly
WAN	Blinking	WAN port is transmitting data
	Off	WAN port connected incorrectly
	Solid	Indicates the USB port is correctly connected
USB	Off	Indicates the USB port is incorrectly connected

## Back Panel



- 1. **WPS/Reset:** WPS button/Reset button: Pressing it for about 3 second enables WPS encryption with a blinking WPS LED while pressing it for about 7 seconds restores the router to its factory default setting.
- 2. USB: USB port for connection to a USB device such as a USB printer or data storage device.
- 3. **WAN:** Internet port (RJ-45) for connection to an Internet-enabled DSL Modem/Cable Modem or existing Ethernet.
- 4. LAN/1/2/3: 3 LAN ports (RJ-45) for connection to PC's NIC or uplink to a hub, switch or wireless AP.

**LAN 1/IPTV :** IPTV port for connection to a network set-top box. However, this port can also function as a LAN port if the IPTV STB option is not enabled.

- 5. **PWR:** The power adapter is connected and you can use the provided adapter to supply power.
- 6. WiFi: WiFi button, pressing it disables wireless. WiFi is enabled by default.

#### Label

	Tenda	MADE IN CHINA www.tendacn.com
	Wireless N450 Giga	abit Router
1 2 3	Model: F452 IP Address: 192.168.0.1 Password: admin Power: 12V1.5A	
4	мас	
5——	Wireless Network Name(SSID)	
	Serial No.	

You can acquire the following information from Label:

- 1. Model: Displays the product model.
- 2. IP Address: The default IP is 192.168.0.1
- 3. Password: The default password is admin.
- 4. MAC Address: Displays the device's default MAC address.
- 5. SSID: Displays the device's default SSID name.

## **3** Position Your Router

For best performance, please place your router:

- Near the center of the area where your computers and other devices operate, and preferably within line of sight to your wireless devices.
- Accessible to an AC power outlet and near Ethernet cables for wired computers.
- In an elevated location such as a high shelf, keeping the number of walls and ceilings between the router and your other devices to a minimum.
- Away from electrical devices that are potential sources of interference, such as ceiling fans, home security systems, microwaves, PCs, the base of a cordless phone, or a 2.4-GHz cordless phone.
- Away from any large metal surfaces, such as a solid metal door or aluminum studs. Large expanses of other materials such as glass, insulated walls, fish tanks, mirrors, brick, and concrete can also affect your wireless signal.

# **Chapter 2 Installation and Quick Setup Guide**

## **1** Preparation

Before connecting Ethernet cables, please verify the following items:

Item	Description
Wireless Router	Used with the provided power supply
PC	Installed with IE8 or other better web browsers.
Ethernet Cable	Used for linking the PC to the router
Broadband	Provided by ISP
Service	
Internet Connection Type	<ul> <li>If you connect to the Internet using a broadband connection that requires a username and a password provided by your ISP, please select PPPoE;</li> <li>If you can access Internet as soon as your computer directly connects to an Internet-enabled ADSL/Cable modem, please select Dynamic IP.</li> </ul>

## 2 Hardware Installation

1. Connect one end of the included power adapter to the router and plug the other end into a surge protected power strip. (Using a power adapter with a different voltage rating than the one included with the router will cause damage to the router.)





2. Connect one of the LAN ports on the router to the RJ45 (NIC) port on your PC using an Ethernet cable.



3. Connect the Ethernet cable from the incoming Internet side to the WAN port on the router.



## **3 Internet Connection Setup**

## **Configure PC**

Configure your PC obtain IP address automatically. If you are not clear about this, please refer to Appendix 1

#### Configure PC.

#### **Configure Router**

#### Login to Web Utility

1. Launch a web browser, such as IE Web browser;



2. In the address bar, input 192.168.0.1 and press Enter;



3. Enter a password in the corresponding field as shown in the window below (the default is set to "admin").

F Series Wireless Router					
Password	Login	Cancel	(Default:admin)		

# **∧**<sub>Note</sub>

For security purpose, please change the default password after you have logged in to the web utility.

#### **Internet Connection Setup**

Common Internet connection types are available on the home page: PPPoE and Dynamic IP.

Tenda	1906	Version Product Name	VI 0.0.0,0,17192) F Series Wireless Romer
Interliet Connection Setup			
Internet Connection Type	PPPoE      Oynamic IP		
	For other connection types, click "Advanced"		
Wireless Security Setup			
2.4G WiFi			
	(Default: 12345678)		
	Save Cancel		

#### PPPoE

Select PPPoE (Point to Point Protocol over Ethernet) if you used to connect to the Internet using a broadband connection that requires a username and a password. Enter the user name and password provided by your ISP; configure a security key to secure your wireless network and then click OK.

Tenda		Version Product Name	V1 6:0,6_an (7102) F Senes Wirelese Konter
Internet Connection Setup Internet Connection Type ISP Username ISP Password	PPPoE O Dynamic IP Please enter ISP Username Please enter ISP Password For other connection types, click "Advanced"		
Wireless Security Setup 2.4G WiFi			
	(Default: 12345678)		
	Save Cancel		

#### **Dynamic IP**

Select DHCP (Dynamic IP) if you can access Internet as soon as your computer directly connects to an Internet-enabled ADSL/Cable modem; configure a security key (8-63 characters) to secure your wireless network and then click OK.

Tenda		Version VI (100-02en (7102) Product Name (7 Series Wireleas Rout
Internet Connection Setup Internet Connection Type Wireless Security Setup	© PPPoE Dynamic IP For other connection types, click " <u>Advanced</u> "	
2,4G WiFi	(Default: 12345678)	
	Save Cancel	

## **∆**<sub>Note</sub>

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1. DHCP is the default Internet connection type;

2. If you are not sure about your PPPoE username and password, contact your Internet service provider (ISP) for help. For other Internet connection types, please go to section <u>2.2: WAN</u>.

## **4 Verify Internet Connection Settings**

System automatically skips to the status page when you finish all needed settings on the home page. Here you can see the system status and WAN connection status of the device.

1. If you find **Connected** and a WAN IP address displayed there (as shown below), you have got a wired internet access now.

Tenda	1	6				Versia Produ
ſ	Home	Status	Network	Wireless	Advanced	US8
System Status	_	VAN Status				
WAN Status		WAN Medium Typ	e Wired WAN			
LAN Status		Connection Typ	e Dynamic IP			
Wireless Status		Connection Statu	connected			
Connection Status		MAC Addres	s 00:90:4C:	0F:F1:1F		
		IP Addres	is 10.0.1.1			
		Subnet Mas	k 255.0.0.0			
		Gatewa	iy 10.0.0.25	4		
		Primary DNS Serve	er 10.0.0.25	4		
		Secondary DNS Serve	er 8.8.8.8			
		Up Tim	e 0Day(s)00	:13:58		
			Rel	ease Refre	sh	

2. If connection status displays **Cable improperly connected** and there is no WAN IP address displayed (as seen below), connection between the Internet-enabled modem and your device may have failed. Please double check or re-connect all involved devices and cables properly and then refresh the page. If nothing is

#### wrong, Connecting or Connected will be displayed.

Tenda	3					Versit Produ
	Home	Status	Network	Wireless	Advanced	US8
System Status		VAN Status				*
WAN Status		WAN Medium Ty	pe Wired WAN	0		
LAN Status		Connection Ty	pe Dynamic IP			
Wireless Status		Connection Sta	tus Cable impr	operly connected!		
Connection Status		MAC Addr	ess 00:90:4C:0	DF:F1:1F		
		IP Addr	ess 0.0.0.0			
		Subnet Ma	ask 0.0.0.0			
		Gatev	vay 0.0.0.0			
		Primary DNS Ser	ver 0.0.0.0			
		Secondary DNS Ser	ver 0.0.0.0			
		Up Ti	me 0Day(s)00:	00:00		
		Up Ti	me 0Day(s)00:	00:00		

3. If **Connecting** is displayed and no WAN IP address is seen, try refreshing the page five times. And if it still displays **Connecting** try steps below:

- 1). Contact your ISP for assistance.
- 2). Read the connection diagnostic info on WAN status.

# **∆**<sub>Note</sub>

The following diagnostic info will be displayed on particular occasions for your reference:

1). You have connected to Internet successfully.

2). You might have entered a wrong user name and/or a wrong password. Please contact your ISP for the correct user name and password and enter them again.

3). Ethernet cable is not connected or not properly connected to the WAN port on the device. Please reconnect it properly.

4). No response is received from your ISP. Please verify that you can access Internet when you directly connect your PC to an Internet-enabled modem. If not, contact your local ISP for help.

## **5** Connect to Device Wirelessly

Having finished above settings, you can search the device's wireless network (SSID) from your wireless devices (notebook, iPad, iPhone, etc) and enter a security key to connect to it wirelessly. Desktop computers should be equipped with wireless network cards.

## WIN7 OS

1. Click on the icon data the bottom of the right corner on your desktop;





2. Select the network you wish to connect, such as Tenda-000090;



3. When the following dialog box appears, it indicates connecting to the network;

Connect to a Network		
Getting information from Tenda_000090		
	_	
	Can	icel
4. Enter your security key and click <b>OK</b> ;		
Connect to a Network		
Type the network security key		

Security key:	
	I Hide characters

5. When displaying Connected, you have connected to network successfully.



#### Windows XP OS

1. Click on My Network Places and select Properties;



2. Click Local Area Connection and select View Available Wireless Networks;

Disable
<b>View Available Wireless Networks</b>
Status
Repair
Bridge Connections
Create Shortcut
Lielere
Rename
Properties
<b>L</b>
Local

3. Select the SSID you wish to connect, such as Tenda\_home, click **Connect**, enter the security key and then click **OK**;





4. You can access Internet via the device when **Connected** appears next to the wireless network name you selected.



# **Chapter 3 Configurations**

This chapter describes the Web based configurations for easier management of your router. During the configuration operation, if you are not clear about a certain feature, simply read the related helpful info below.

#### 1 Status

#### 1.1 System Status

Here you can see at a glance of the operating status of the device.

Tenda	<ul> <li>V1.0.0.0.en (7102)</li> <li>Name - Flasses Wordess Kones</li> </ul>								
	Home	Status	Network	Wireless	Advanced	USB	Security	Tools	
	5	ystem Status					Helpful Hir	115	
WAN Status		CPU Utilization 2%						This section displays	
LAN Status		Memory Utiliza	ition 36%				router's currer	it system info.	
Wireless Status		System T	ime 2013-07-	18 11:15:23					
Connection Status		Run T	ime Oday(s)00	:35:32					
		Client C	ount 1						
		Firmware Ver	sion V1.0.0.0_	en (7192)					
		Hardware Ver	sion 1.0.0.0	1 A I					

#### 1.2 WAN Status

This section allows you to view the router's WAN information as noted below:

Home Status	Quick Setup	Network	Wireless	Advanced	Prod USB
System Status	WAN Status				
WAN Status	Connection Typ	e Dynamic IP	0		
LAN Status	Connection Statu	s Cable impi	roperly connected!		
Wireless Status	MAC Addres	s 00:90:4C:	0F:F1:1F		
Connection Status	IP Addres	s 0.0.0.0			
	Subnet Mas	k 0.0.0.0			
	Gatewa	y 0.0.0.0			
	Primary DNS Serve	r 0.0.0.0			
	Secondary DNS Serve	r 0.0.0.0			
	Up Tim	e 0Day(s)00	:00:00		
		Rele	ease Refres	h	

- Connection Type: Displays the current Internet connection type.
- Connection Status: Displays the WAN connection status: Disconnected, Connecting, or Connected.
- MAC Address: Displays the WAN MAC address.
- IP Address: Displays the WAN IP address.
- Subnet Mask: Displays the WAN subnet mask.
- Gateway: Displays the WAN gateway address.

- Primary DNS Server: Displays the primary WAN DNS address.
- Secondary DNS Server: Displays the secondary WAN DNS address (if any).
- Up Time: Displays the time duration indicating how long the router has been connected to the ISP.

## 1.3 LAN Status

This section allows you to view the router's MAC, IP, and subnet mask information.

Ten	da					Version Product	
Home	Status	Quick Setup	Network	Wireless	Advanced	USB	
System Status		LAN Status					
WAN Status		MAC Addr	ress 00:90;4C:	07:A0:10			
LAN Status		IP Address 192.168.0.1					
Wireless Status		Subnet M					
Connection Status	8						

- MAC Address: Displays the router's LAN MAC address.
- IP Address : Displays the current LAN IP address.
- Subnet Mask: Displays the current LAN subnet mask.

#### **1.4 Wireless Status**

This section allows you to view the wireless information of 2.4Ghz band.

Tenda					Fraduct
Home Status	Quick Setup	Network	Wireless	Advanced	USB
System Status	Wireless Status				
WAN Status	2.4GHz Wireless				
LAN Status	Wireless Radio	Enabled			
Wireless Status	Wireless MAC Address	s 00:90:4C:	07:A0:1E		
Connection Status	SSIC	) Tenda_07	AOTE		
	802.11 Mode	e 11b/g/n.n	nixed		
	Countr	y USA			
	Channe	Channel 1	1		
	Security Mode	e None			

- Wireless Radio: Displays whether wireless is enabled or not.
- Wireless MAC address: Displays the MAC address of the router's wireless interface.
- SSID: Displays the current SSID.
- 802.11 Mode: Displays the currently active network mode.
- Country: Displays the current country selection.
- Channel: Displays the current channel.
- Security Mode: Displays the current security Mode.



#### **1.5 Connection Status**

This section displays the info of currently connected clients (if any) including IP and MAC addresses, etc.

Tend	a					Version Product					
	Home	Status	Network	Wireless	Advanced	USB					
System Status		onnection St	atus								
WAN Status	т	This section displays client info and connection status, etc.									
LAN Status	1	P Address	MAC Addr	ess	Medium Type(Wired/	Wireless)					
Wireless Status		92.168.0.25	C8:9C:DC:	54:90:77	Wired						
Connection Status											

## 2 Network

**Network** menu includes the following nine submenus. Clicking any of them enters the corresponding interface for configuration. Details are explained below:

LAN
WAN
Port Mode
MAC Clone
DHCP Server
DHCP Clients
Static Assignment
DHCP – Guest Network
Client List - Guest Network

#### 2.1 LAN

This section allows you to configure your router's LAN IP settings.



Tenda						Versie Produ
	Home	Status	Network	Wireless	Advanced	USB
LAN		AN Settings				
WAN		se this section to co	nfigure your route	er's LAN IP setting:	5.	
Port Mode		MAC Addre	ess 00:90:4C:	OF:FO:1E		
MAC Clone		IP Addre	ess 192.168.0	.1		
DHCP Server		Subnet Ma	ask 255.255.2	55.0		
DHCP Clients			Sa	ve Cance	1	
Static Assignment			04	ve ourie		
DHCP - Guest Network						
Client List - Guest Network	c					

- IP Address: The router's LAN IP. The default is 192.168.0.1 and you can change it according to your needs.
- Subnet Mask: Router's LAN subnet mask. The default is 255.255.255.0.

# **∆**<sub>Note</sub>

If you change the LAN IP address, you must use the new one to log on to the web utility.

#### 2.2 WAN

There are three types of Internet connection: Dynamic IP (DHCP), Static IP, and PPPoE(including dual access).

#### **Dynamic IP**

Select Dynamic IP (DHCP) to obtain IP Address information automatically from your ISP. Select this option if your ISP does not provide you with any IP information.

Tenda							Versian Product 1
	Home	Status	Network	Wire	eless	Advanced	US8
LAN	w	AN Settings					
WAN		Connection Typ	oe Dynamic	IP		÷	
Port Mode		МТ	U 1450	_	(Default:	1450)	
MAC Clone			1100	_	(Deraun.		
DHCP Server			s	ave	Cancel		
DHCP Clients							
Static Assignment							
DHCP - Guest Network							
Client List - Guest Network	c.						

- Connection Type: Displays a list of available Internet connection types.
- MTU: Maximum Transmission Unit. The default value is1450.

Tenda

#### Static IP

Select Static IP Address if your ISP provides all the connection information. You will need to enter the provided IP address, subnet mask, gateway address, and DNS address(es) in the corresponding fields.

Tenda						Version V1/2002en(77.92) Product Name Fidenes Wineless Roo		
Н	ome Status	Network	Wireless	Advanced	USB	Security	Tools	
LAN	WAN Settings					Helpful Hin	ts	
	Connection Type	Static IP		*		Dynamic IP:S		
Port Mode	IP Address	0.0.0.0				obtain IP settin automatically fo	or Internet	
MAC Clone	Subnet Mask	0.0.0.0				connection if yo not give you an		
DHCP Server	Subnet Mask					account info.		
DHCP Clients	Gateway	0.0.0.0				Static IP Selec	a second a constraint	
Static Assignment	Primary DNS Server	0.0.0.0				provides you w Enter IP addres	s, subnet	
DHCP - Guest Network	Secondary DNS Server	0.0.0.0				mask, Primary secondary DNS		
Client List - Guest Network	MTU	1450	(Default	: 1450)		provided by yo corresponding		
		Sav	e Cance	21		PPPuE:Select i using a PPPoE	and found the first of	

- Connection Type: Displays a list of available Internet connection types.
- IP Address: Enter the IP address provided by your ISP. Consult your local ISP if you are not clear.
- Subnet mask: Enter the subnet mask provided by your ISP. Consult your ISP if you are not clear.
- Gateway: Enter the gateway address provided by your ISP. Consult your local ISP if you are not clear.
- Primary/Secondary DNS Server: Enter the Primary and Secondary DNS Server Addresses. Consult your local ISP if you are not clear.
- MTU: Maximum Transmission Unit. The factory default is 1450.

#### PPPoE

Select PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection and provides you with a PPPoE user name and a PPPoE password. Simply enter them in corresponding fields.

						Product Name   Fishie, Wireless Ros			
Home	Status N	etwork	Wireless	Adva	nced	USB	Security	Tools	
w	AN Settings						Helpful Hin	LS	
	Connection Type	PPPoE		•					
	ISP Username								
	ISP Password				Displa	ү Кеу	account info.		
	MPPE							Contraction of the second second	
	Enable Dual Access								
	MTU	1450	(Default	1450)					
rk		Sav	e Cance	1					
	W	Home Status N WAN Settings Connection Type ISP Username ISP Password MPPE Enable Dual Access MTU	Home Status Network WAN Settings Connection Type PPPoE ISP Username ISP Password MPPE Enable Dual Access MTU 1450	Home Status Network Wireless WAN Settings Connection Type PPPoE ISP Username ISP Password MPPE Enable Dual Access MTU 1450 (Default	Home     Status     Network     Wireless     Adva       WAN Settings	Home     Status     Network     Wireless     Advanced       WAN Settings	Home Status Network Wireless Advanced USB	Home       Status       Network       Wireless       Advanced       USB       Security         WAN Settings	

- Connection Type: Displays a list of available Internet connection types.
- ISP User Name: Enter the PPPoE User Name provided by your ISP. Consult your ISP if you are not clear.
- ISP Password: Enter the PPPoE Password provided by your ISP. Consult your ISP if you are not clear.
- MPPE: Select whether to enable the MPPE authentication method.
- Enable Dual Access: Select whether to enable Dual Access.
- MTU: Maximum Transmission Unit. The factory default is 1450.



LAN	Port Mode		
WAN	WAN setting	Auto	
Part Mode		Auto 10M Full-Duplex	
MAC Clone		10M Half-Duplex 100M Full-Duplex 100M Half-Duplex	
DHCP Server		1000M Full-Duplex	
DHCP Clients			

## 2.4 MAC Clone

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

Tenda				Version Produc	r VI 0.000-a s Name i Filmes Wo	
н	ome Status Networ	rk Wireless	Advanced	US8	Security	Tools
LAN	MAC Address Clone				Helpful Hin	its
WAN	MAC Address 00:9	0:4C:0F:F1:1F			WAN MAC Ad	
Port Mode	Besteve to 5	actory Default MAC	Clone MAC		device's WAN M seen from the	
MAC Clone	Restore to F	actory Default MAC	CIUTE MAC		by your ISP.	
DHCP Server		Save Canc	el		Normally you d change its defa	
DHCP Clients					However, some require a boun	
Static Assignment					address (not re	outer's default
DHCP - Guest Network					WAN MAC) for connection aut	
Client List - Guest Network					and shall give MAC. In this ca	

- MAC Address: Configure the router's WAN MAC address.
- Restore to Factory Default MAC: Reset the router's WAN MAC to factory default.
- Clone MAC: Clicking this button copies the MAC address of your PC to the MAC Address field in the router.

# ▲<sub>Note</sub>

1. Normally you don't need to change the default WAN MAC value. However, some ISP's may require the client PC's MAC address for Internet connection authentication. In this case, simply enter the MAC address in the WAN MAC Address field or click the **Clone MAC** button. Note that the WAN MAC address in the **Status** interface will be updated accordingly once you have changed it.

2. Remember to reboot the router to activate the new WAN MAC. DO NOT use the **Clone MAC** feature unless required by your ISP.

3. Only the MAC addresses of the PCs on the LAN can be cloned to the router.



#### 2.5 DHCP Server

The Dynamic Host Configuration Protocol (DHCP) is an automatic configuration protocol used on IP networks. If you enable the built-in DHCP server on this device, it will automatically configure the TCP/IP protocol settings for all PC's in the LAN, including IP address, subnet mask, gateway, and DNS.

Tenda	Tenda					Version V1.0.0.0_en (7192) Product Name F Series Wireless Ro		
	Home	Status	Network	Wireless	Advanced	USB	Security	Tools
LAN WAN Port Mode MAC Clone DHCP Server DHCP Clients Static Assignment	Tł	HCP Server The Dynamic Host Configure 1 Ide on IP networks. If y Itomatically configure 1 Idress, subnet mask, g DHCP Server Start IP Address End IP Address	ou         enable the           TCP and IP program         gateway and IP           gateway and IP         Disable           Image: I	built-in DHCP s procol settings fo DNS etc e  Enable D.100 D.200	erver on this router, i	t will	Helpful Hin The Dynamic I Configuration (DHCP) is an a configuration p on IP networks the built-in DF this router, it v automatically of TCP/IP protoc all PCs in LAN, address, subr	Host Protocol uutomatic orotocol used 5. If you enable 4CP server on will configure ol settings for including IP
DHCP - Guest Network		Primary DNS Server	192.168.0	J.1			gateway and [	ONS etc
Client List - Guest Network		Secondary DNS Server					Start/End IP Specify a IP ac	
		Lease Time		ive Can	-		for DHCP assignmentering a state address.	gnment by

- DHCP Server: Select whether to enable or disable the router's DHCP server feature.
- Start IP Address: Enter the starting IP address for the DHCP server's IP assignment.
- End IP Address: Enter the ending IP address for the DHCP server's IP assignment.
- Lease Time: The length of time for the IP address lease.

Tips -----Tips -----The device has enabled the DHCP server by default and it is not advisable to disable it unless necessary.
To apply the DHCP server settings to all PC's on your LAN, you must set all PC's to "Obtain an IP address

automatically" and "Obtain DNS server address automatically".

## **2.6 DHCP Clients**

This list displays the DHCP dynamic client list, which includes host name, IP address, MAC address, and lease time information.

Tenda						Versie Produc	t VI000.e	
	Home	Status	Network	Wireless	Advance	d USB	Security	Tools
LAN		HCP Client Lis	st.				Helpful Hin	ts
WAN							The DHCP clier	
Port Mode	2	Host	IP Address	MAC	Address	Lease Time	IP addresses a the built-in DH	
MAC Clone	-	zhouya-PC	192.168.0.1	83 C8:90	DC:54:90:77	23:14:01	MAC addresses and etc of conr	s, host name
DHCP Server							Refresh the list	
DHCP Clients							client info.	
Static Assignment				Barris				
DHCP - Guest Network				Refresh				
Client List - Guest Network	c							

- Host: Displays clients' host names.
- IP Address: Displays IP addresses that clients obtained from the DHCP server.
- MAC Address: Displays the MAC address of a given host.
- Lease Time: Remaining time for a corresponding IP address lease.

## 2.7 Static Assignment

If you would like some devices on your network to always have fixed IP addresses, you can use this feature and manually add a static DHCP assignment entry for each device.

For example: To have a PC at the MAC address of 00:15:58:c0:d4:3f always receive the same IP address of 192.168.0.150, simply enter the IP and MAC addresses in the corresponding fields and click **Add** and then the **Save** button to complete.

Tenda					LY .	Version Product	V1.0.0.0_e Name F Series Wi	
Но	me	Status	Network	Wireless	Advanced	USB	Security	Tools
LAN WAN Port Mode MAC Clone	Sta	<b>tic Assignme</b> IP Addre MAC Addre	255			Add	Helpful Hir If you would lii devices on you always receive addresses, yo	ke some ir network to fixed IP u can
DHCP Server	ID	IP Address	MAC Ac	ldress	Action		manually add assignment en such device. A	try for each
DHCP Clients	1	192.168.0.150	0 00:15:5	8:C0:D4:3F	Edit Del	ete	whenever each a registered M	n such host at
Static Assignment DHCP – Guest Network Client List – Guest Network			Sa	ve Cance	el		requests a IP a the DHCP serv always be assi same IP addre you specified o section )	er, it will gned with the ss (the one

- IP Address: Enter the IP address for static DHCP assignment.
- MAC Address: Enter the MAC address of a computer to always receive the same IP address you specify.
- Add: Click it to add a new IP-MAC static assignment entry to list.
- Edit: Click it to change an existing entry.
- Delete: Click to remove an existing entry.

#### 2.8 DHCP-Guest Network

If you enable the built-in DHCP server for the Guest Network on the router it will automatically configure the TCP/IP protocol settings for all PC's on the Guest Network, including IP address, subnet mask, gateway, and DNS.

Tenda			$\sim$	AP3	Version Product	V1.0.0.0_e Name F Series Wi	
Hom	e Status I	Network	Wireless	Advanced	USB	Security	Tools
LAN WAN Port Mode MAC Clone DHCP Server DHCP Clients Static Assignment DHCP - Guest Network	DHCP Server – Gue The Dynamic Host Config used on IP networks. If y automatically configure T address, subnet mask, g DHCP Server Start IP Address End IP Address Primary DNS Server	guration Protoc rou enable the FCP and IP pro gateway and D O Disable 192.168.2	col (DHCP) is an au built-in DHCP sen tocol settings for a INS etc e  Enable	ver on this router, it	: will	Helpful Hin The Dynamic H Configuration f (DHCP) is an a configuration p on IP networks the built-in DH the device, it v automatically o TCP/IP protoco all PCs on Gue including IP ad mask, gateway	lost Protocol utomatic rotocol used . If you enable ICP server on rill onfigure ol settings for st Network, dress, subnet
Client List - Guest Network	Secondary DNS Server					Start IP Add	ess:Enter the
	Lease Time	1 day Sa	ve Cance	<b>v</b>		starting IP add DHCP server's assignment. End IP Addre	IP

- DHCP Server: Select whether to enable or disable the router's DHCP server feature.
- Start IP Address: Enter the starting IP address for the DHCP server's IP assignment.

*<i>Y*Tips

• End IP Address: Enter the ending IP address for the DHCP server's IP assignment.

• Lease Time: The length of time for the IP address lease.

The IP address configured in DHCP-guest network should not be in the same network segment as that of DHCP server's.

\_\_\_\_\_

## **2.9 Client List-Guest Network**

This list displays the DHCP dynamic client list, which includes host name, IP address, MAC address, and lease time information.

Tenda							Version Produc	n N1.0,0,0_e t Name: ESeries Wil	
	Home	Status	Network	Wireless	Advan	ced	USB	Security	Tools
LAN. WAN			<b>st – Guest Net</b> of Guest Network d		fresh" buttor	L.		Helpful Hin This section di	
Port Mode		Host	IP Addres	s MAC	Address	Lease 7	Fime	the Guest Netw that are curren to your router.	tly connected
MAC Clone DHCP Server								info, click the " button.	
DHCP Clients									
Static Assignment				Refresh					
DHCP - Guest Network									
Client List - Guest Network	k								

Tenda

## **3** Wireless

The **Wireless** tab includes 8 submenus: Basic, Guest Network, Security, Advanced, Wireless Access Control, Wireless Extender, WPS, and Connection Status. Clicking any of them enters the corresponding interface for configuration. Details are explained below:

Basic	
Guest Network	
Security	
Advanced	
Wireless Access Control	
Wireless Extender	
WPS	
Connection Status	

#### 3.1 Basic

This section allows you to manage your wireless network. You can select your country, configure the wireless network name (SSID), network mode, and channel settings, etc.

Ho	ome Status I	Wetwork Wireless	Advanced	USB
Basic	Basic Settings			
Guest Network	Use this section to configu	ure wireless basic settings.		
Security	2.4GHz Wireless	😨 Enable		
Advanced	Country	USA.	•	
Wireless Access Control	SSID Broadcast	💿 Enable 🔘 Disable		
Wireless Extender	Primary SSID	Tenda_07A01E		
WPS	Secondary SSID	Tenda_Guest_07A010		
Connection Status	802.11 Mode	11b/g/n mixed	•	
	Channel	2442MHz (Channel 7)	•	
	Channel Bandwidth	20      20/40		
	Extension Channel	2422MHz (Channel 3)	-	

- 2.4GHz Wireless Network: Check/uncheck to enable/disable the 2.4GHz wireless feature. If disabled, all 2.4GHz-based features will be disabled accordingly.
- Country: Select your country from the drop-down list. There are 12 options available.
- SSID Broadcast: Select Enable/Disable to make your wireless network visible/ invisible to any wireless

clients within coverage when they perform a scan to available networks. By default, it is enabled. When disabled, wireless clients will have to first know this SSID and manually enter it on their devices if they want to connect to the SSID.

- SSID : Service Set Identifier, is the unique name of a wireless network.
- 802.11 Mode: Select a correct mode according to your wireless clients. The default mode is 11b/g/n mixed.
- Channel: For optimal wireless performance, you may select the least used channel. It is advisable that you select an unused channel from the drop down list, or "Auto" to let the router detect and select the best possible channel for your wireless network to operate on.
- Channel Bandwidth: Select a proper channel bandwidth to enhance wireless performance. When there only 11n or a mix of 11b/g/n wireless clients, please select the 802.11n mode of 20/40M frequency band, but when there are only non-11n wireless clients, select the 20M frequency band mode
- Extension Channel : Available only in 11b/g/n mixed mode.

## 3.2 Guest Network

The Guest Network feature allows guests to access the Internet and other users on the guest network, while disallowing them to access the router's web manager, users on the master network, and clients connected to the LAN ports and secures your wireless master network.

Tenda	1					Versian Produc
	Home	Status	Network	Wireless	Advanced	USB
Basic	6	uest Network				
Guest Network		Guest Netwo	k 🔽 Enable			
Security		SSID Broadca	st 🔽 Enable	6		
Advanced		AP Isolatio	n Enable			
Wireless Access Control		Guest Network SS	D Tenda_G	uest_07A01F		
Wireless Extender						
WPS			Sa	ive Cano	el	
Connection Status						

- Guest Network: Select to enable/disable the guest network feature.
- SSID Broadcast: Check to enable/disable the SSID feature, making your wireless network visible/ invisible to any wireless clients within coverage when they perform a scan to available networks. By default, it is enabled, but when disabled, wireless clients will have to first know this SSID and manually enter it on their devices if they want to connect to the SSID.
- AP Isolation: If enabled, clients connecting to the guest network will be mutually inaccessible.
- Guest Network SSID : Service Set Identifier, is the configured unique name of the guest network.

# ▲<sub>Note</sub>

AP Isolation is disabled by default. If enabled, clients connecting to the guest network will be mutually inaccessible.

#### 3.3 Security

This section allows you to encrypt your wireless network to block unauthorized accesses and malicious packet sniffing.



Tenda	Home	Status	Network	Wireless	Advanced	USB
Basic	5	ecurity Settings				
Guest Network	Fo	or security purpose, v	ve recommend	you to encrypt you	ar wireless network us	ing WPA2-
Security	PS	SK AES.				
Advanced		SS	ID Tenda_0	7A01E		
Wireless Access Control		Security Mod	le			
Wireless Extender			None			
WPS		e	WEP			
Connection Status		0	WPA-PSK/	WPA2-PSK		
				ave Cance		

Three security modes are available: None, WEP, and WPA-PSK/WPA2-PSK.

#### WEP

WEP is intended to provide data confidentiality comparable to that of a traditional wired network. Two methods of authentication can be used with WEP: Open System authentication and Shared Key authentication.

Security Mo	de	
(	None	
	WEP	
Authentication Type	Open 💌	
WEP Key Format	ASCII	
Key Select	Key Content	Key Length
Key 1 🔘		64-bit
Key 2 🔘		None 💌
Key 3 🔘		None 💌
Key 4 🔘		None 💌
	🔲 Display Key	
	64-bit Key: 5 ASCII or 10 hex characters; 128-bit Key: 13 ASCII or 26 hex characters.	
(	WPA-PSK/WPA2-PSK	
	Save Cancel	

- Authentication Type: Select Open or Shared from the drop-down list.
- WEP Key Format: Select Hex or ASCII from the drop-down list.
- Key Select: Select a key from the preset keys 1-4 for current use.

#### WPA-PSK

The WPA protocol implements the majority of the IEEE 802.11i standard. It enhances data encryption through the Temporal Key Integrity Protocol (TKIP) which is a 128-bit per-packet key, meaning that it dynamically generates a new key for each packet. WPA also includes a message integrity check feature to prevent data packets from being tampered with. Only authorized network users can access the wireless network. WPA adopts enhanced encryption algorithm over WEP.



~	
Authentication Type	WPA-PSK
Cipher Type	AES
Security Key	•••••• Display Key
	(8-63 ASCII or 64 hex characters)
Key Renewal Interval	3600
	Down to 60 seconds. 0 indicates no renewal.
	Save Cancel

- Cipher Type: Select AES (advanced encryption standard) or TKIP (temporary key integrity protocol) &AES.
- Security Key: Enter a security key, which must be between 8-63 ASCII characters long.
- Key Renewal Interval: Enter a valid time period for the key to be changed.

#### WPA2-PSK

WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP. It is more secured than WPA and WEP.

Authentication Type	WPA2-PSK
Cipher Type	AES
Security Key	•••••• Display Key
	(8-63 ASCII or 64 hex characters)
Key Renewal Interval	3600
	Down to 60 seconds. 0 indicates no renewal.
	Save Cancel

- Cipher Type: Select AES (advanced encryption standard) or TKIP (temporary key integrity protocol) &AES.
- Security Key: Enter a security key, which must be between 8-63 ASCII characters long.
- Key Renewal Interval: Enter a valid time period for the key to be changed.

## 3.4 Advanced

This section allows you to configure advanced settings, including AP Isolation, Beacon interval, Fragment threshold, RTS threshold, and DTIM interval, etc.

Tenda						Versie Produ
	Home	Status	Network	Wireless	Advanced	USB
Basic	_	dvanced-Wirel	255			
Guest Network		AP Isolati	on 🔲			
Security		Beacon Inter	val 100	ms (Range	e: 20 - 999; Default:	100)
Advanced		Fragment Thresho	old 2346	(Range; 2	56 – 2346; Default: 2	346)
Wireless Access Control		RTS Thresho	old 2347	(Range: 1	- 2347; Default: 234	7)
Wireless Extender		DTIM Inter	val 1	(Range: )	- 255; Default: 1)	
WPS Connection Status		Transmitting Pow		<ul> <li>Low</li> <li>Disable</li> </ul>		
		WMM Capai	ole 💿 Enable	👩 Disable		
		APSD Capal	ole 🔘 Enable	Disable		
			Sa	ve Cance	d)	

- AP Isolation: Isolates clients connecting to the master SSID.
- Beacon Interval: A time interval between any two consecutive Beacon packets sent by an Access Point to synchronize a wireless network. DO NOT change the default value of 100 unless necessary.
- Fragment Threshold: Specify a Fragment Threshold value. Any wireless packet exceeding the preset value will be divided into several fragments before transmission. DO NOT change the default value of 2346 unless necessary.
- RTS Threshold: If a packet exceeds such set value, RTS/CTS scheme will be used to reduce collisions. Set it to a smaller value provided that there are distant clients and interference. For normal SOHO, it is recommended to keep the default value unchanged, otherwise, the router performance may be degraded.
- DTIM Interval: A DTIM (Delivery Traffic Indication Message) Interval is a countdown informing clients of the next window for listening to broadcast and multicast messages. When such packets arrive in the router's buffer, the router will send DTIM (delivery traffic indication message) and DTIM interval to alert clients of the receiving packets.
- WMM-Capable: WMM is QoS for your wireless network. Enabling this option may better stream wireless multimedia data (such as video or audio).
- ASPD Capable : Select to enable/disable the auto power saving mode.

## **3.5 Wireless Access Control**

The MAC-based Wireless Access Control feature can be used to allow or disallow clients to connect to your wireless network.



Tenda	1					Version Product
ſ	Home	Status	Network	Wireless	Advanced	USB
Basic		fireless Access	Control			
Guest Network		Access Cont	rol Enabled	Disable		
Security		Filter Mo	6F -	Access to Wireless		
Advanced			Allow A	Access to Wireless	Network	
Wireless Access Control	1	D MAC Address	Stat	tus Descrip	tion Edit	
Wireless Extender						
WPS				Page1		
Connection Status			Add	Save	Clear	

#### • Filter Mode:

Deny Access to Wireless Network: Blocks only devices at specified MAC addresses from connecting to your wireless network.

Allow Access to Wireless Network: Allow only devices at specified MAC addresses to connect to your wireless network.

Click Add and the screen below will open:

Tenda						Versio Produ
	Home	Status	Network	Wireless	Advanced	USB
Basic	w	ireless Access	Control			
Guest Network	Us	se the Wireless Acce	ss Control featur	e to manage clien	t's access to your wire	less
Security	ne	etwork.				
Advanced		Select Clie	ent Faste	r Client Select		
Wireless Access Control		MAC Addre	255		6	
Wireless Extender		Descripti	ion			
WPS		Stat	tus Enable			
Connection Status			S	ave Back		

- MAC Address: Enter the MAC address of a wireless client.
- Description: Briefly describe the new entry.
- Status: Select Enable/Disable to enable/disable a corresponding entry.

#### **3.6 Wireless Extender**

Here you can set the Bridge mode (Universal Repeater, WISP, WDS) to extend wireless coverage.



Status	Network	Wireless	Advanced	USB
Sec. Com				
Wireless Extende	de Disable Disable Universal WISP Mod	ie		
		Mode Disable Disable Universal WISP Mod	Mode Disable	Mode Disable Disable Universal Repeater WISP Mode

#### WDS

WDS (Wireless Distribution System), this feature can be used to extend your existing 2.4Ghz network coverage. The details below outline how to configure this feature in the 2.4GHz band.



#### For example:

As seen in the figure above, PC1 and PC2 access Internet via a wireless connection to Router 1. While PC3 and PC4 are too far to directly connect to Router 1 for Internet access. Now you can use the WDS bridge feature to let PC3 and PC4 access Internet.



#### Before you get started:

1. View and note down the wireless security settings: security mode, cipher type, security key, etc. on Router 1; Click **Status**>LAN Status and check the IP address.

Tenda	1					Versi Produ
	Home	Status	Network	Wireless	Advanced	USB
System Status	-	AN Status				
WAN Status		MAC Add	ress 00:90:4C:0	07:A0:10		
LAN Status		IP Add	ress 192.168.0	LT.		
Wireless Status		Subnet M	lask 255.255.2	55.0		
Connection Status						
Click <b>Wireless&gt;Ba</b>	<b>isic</b> to che	eck the basi	c settings of	Router 1.		
Tenda	Home	Channe	Namurali	Wireless	Advanced	Ver: Proc
	nume	Status	Network	WITCHESS	Advanced	USB
Basic	В	asic Settings				
Guest Network	Us	se this section to c	onfigure wireless b	oasic settings.		
Security		2.4GHz Wire	eless 👿 Enable			
Advanced		Coi	untry USA			
Wireless Access Control		SSID Broad	lcast 🎯 Enable	e 🔘 Disable		
Wireless Extender		Primary	SSID Tenda_07	7A01E		
WPS		Secondary	SSID Tenda_G	uest_07A010		
Connection Status		802.11 N	lode 11b/g/n n	nixed		
		Cha	nnel 2442MHz	(Channel 7)		
		Channel Bandv	vidth 🔘 20 🙆	20/40		
		Extension Cha	nnel 2422MHz	(Channel 3)		
			Sa	ive Cance	el	

3. Click Wireless>Security to check wireless security settings of Router 1.



Tenda							Ve Fro
	Home	Status	Network	Wireless	Adva	nced	USB
Basic	5	ecurity Setting	IS				
Guest Network		or security purpose SK AES.	, we recommend	you to encrypt you	ur wireless	network using	g WPA2-
iecump	г.						
Advanced		2	SSID Tenda_0	7A01E	•		
Wireless Access Control		Security M	ode				
Wireless Extender			None				
WPS			O WEP				
Connection Status			WPA-PSK/	WPA2-PSK			
		Authentication T	ype WPA-PS	<			
		Cipher T	ype AES		•		
		Security	Key			📄 Display	Key
			(8-63 ASC	II or 64 hex chara	icters)		
		Key Renewal Inte	rval 3600				
erify that DHCP s	erver is	enabled on F	Router 1: Cl	ick <b>Network</b>	<>DHCP	Server.	
Tenda							Ver Pro
	lome	Status	Network	Wireless	Adva	nced	USB
	1						
AN	D	HCP Server					
NAN		he Dynamic Host Co					
Port Mode		sed on IP networks. utomatically configu					
MAC Clone	ad	ddress, subnet mas	k, gateway and D	NS etc			

-Save Cancel 5. Set the LAN IP address of Router 2 to a different address yet on the same net segment as Router 1. As shown below:

🕤 Disable 💿 Enable

192.168.0.100

192.168.0.200

192.168.0.1

1 day

DHCP Server

Start IP Address

End IP Address

Lease Time

Primary DNS Server

Secondary DNS Server

Router 1: LAN IP: 192.168.0.1; Subnet Mask: 255.255.255.0; Router 2:

**DHCP** Clients

Static Assignment

DHCP - Guest Network

Client List - Guest Network
LAN IP : 192.168.0.10;

Subnet Mask: 255.255.255.0;

#### Then do as follows:

- 1. Configure Router 2:
- 1) Wireless Working Mode: Select WDS Bridge Mode.
- 2) Click **Open Scan** to search for Router 1.

Tenda						Version Product
	Home	Status	Network	Wireless	Advanced	USB
Basic	w	ireless Extend	er			
Guest Network		Mo	de WDS Moo	de		
Security		WDS Mo	de Wireless	Bridge	•	
Advanced		Remote SS	ID Tenda_07	7A01E		
Wireless Access Control		Chan	nel 2442MHz	(Channel 7)		
Wireless Extender			C. 1	(ondimer r)		
WPS		emote MAC Addere				
Connection Status	R	emote MAC Addere	55			
		Security Mo	de None		•	
				Open Scan		
			Sa	ive Cance	el	

3) Select the wireless network to connect and click **OK**.

4) Verify that the SSID, channel, and AP MAC address on the page match those of the added wireless network. If not, manually correct them.

5) Close Scan and click Save to save your settings.

6) Go to Wireless Security page and set the wireless security settings exactly as they are on the link partner (Router 1).

7) Go to **DHCP Server** to disable the DHCP on Router 2. Now you have finished all settings on Router 2 required for WDS.

### 2. Configure Router 1:

**1.** Go to wireless section on Router 1 and specify **WDS** (or **WDS Bridge**) as its wireless working mode.



Tenda	1					Versia Produc
ſ	Home	Status	Network	Wireless	Advanced	USB
Basic		vireless Extend	er			
Guest Network		Мо		le		
Security		WDS Mo	de Wireless	AP		
Advanced		Remote SS	D Tenda_07	A01E		
Wireless Access Control		Chan	nel 2442MHz	(Channel 7)		
Wireless Extender		Remote MAC Addere		(enamer r)		
WPS						
Connection Status		Remote MAC Addere	:55			
		Security Mo	de None			
				Open Scan		
			Sa	ve Cance		

2. Manually enter Router 2's MAC address (Also, you can use the **Open Scan** option as mentioned above) and click **Save** to finish your settings.



Mode	WDS Mode		•				
WDS Mode	Wireless AP	Wireless AP					
Remote SSID	Tenda_000090						
Channel	2442MHz (Channe	17)	•				
Remote MAC Adderess	C8:3A:35:00:00:90						
Remote MAC Adderess	C8:3A:35:00:00:90						
Security Mode	WPA-PSK/WPA2-P	SK	•				
Authentication Type	WPA2-PSK						
Cipher Type	AES		•				
Security Key	•••••			Displa	ay Key		
	(8-63 ASCII or 64 h	iex cha	racters)				
	Close	Scan					
Se SSID	MAC Address	Ch	Channel Bandwidth	Security 1	Signal Intensity		
Tenda_000090 0	C8:3A:35:00:00:90	7	40 MHz	WPA2	-74 dBm		



After the above configurations, you can verify the connection by pinging Router 2's IP. Steps are as follows (Take Windows XP OS for example):

#### 1) Click Start >Run;



3) Input ping 192.168.0.10 in the screen and press Enter. If the following screen appears, it indicates you have finished the configuration successfully.

C:\WINDOWS\system32\cmd.exe	- 🗆 🗙
Microsoft Windows [Version 5.2.3790] (C) Copyright 1985-2003 Microsoft Corp.	<b>^</b>
C:\Documents and Settings\Administrator>ping 192.168.0.10	
Pinging 192.168.0.10 with 32 bytes of data:	
Reply from 192.168.0.10: bytes=32 time=1ms TTL=128 Reply from 192.168.0.10: bytes=32 time=1ms TTL=128 Reply from 192.168.0.10: bytes=32 time<1ms TTL=128 Reply from 192.168.0.10: bytes=32 time<1ms TTL=128	
Ping statistics for 192.168.0.10: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms	
C:\Documents and Settings\Administrator>_	

## ∧ Note

1. WDS feature can only be implemented between 2 WDS-capable wireless devices. Additionally, the SSID, channel, security settings, and security key must be exactly the same on both such devices.

2. Note that the two devices involved must have different IP addresses on the same IP net segment. In addition, it is advisable to disable the DHCP server on either device.

#### WISP Mode

If your router acquires Internet access from a wireless Access Point, please select WISP mode. Specific steps are as follows:

1. Click Wireless>Wireless Extender, select WISP mode and click Open Scan.

Tenda						Vers Prod
	Home	Status	Network	Wireless	Advanced	USB
Basic		/ireless Extend	er			
Guest Network		Mc	de WISP Mo	de	•	
Security		Remote 5	SID Tenda_88	8888		
Advanced		Chan	nel 2442MHz	(Channel 7)	*	
Wireless Access Control						
Wireless Extender		Remote MAC Adder	ess 00:90:4C:	88:88:88		
WPS		Security Mo	ode None			
Connection Status				Open Scan		
			Sa	ve Canc	el	

- 2. Click **Open Scan**, select the AP you wish to connect and click **OK**.
- 3. View and note down the wireless security settings: security mode, cipher type, security key.



	Home	Status	Network	Wireless	Advance	d USB
Basic		vireless Extend	er			
Guest Network		Mo	de WISP Mod	le	•	
Security		Remote S	SID Tenda_00	006E		
Advanced		Chan	nel 2437MHz	(Channel 6)	*	
Wireless Access Control		Remote MAC Addere	A8:AA:35:0	0:00:6E		
Wireless Extender		Security Mo				
WPS		Security MD	de WPA-PSK	WPA2-PSK		
Connection Status		Authentication Ty	pe WPA-PSK			
		Cipher Ty	pe AES		•	
		Security K	ey	0		Display Key

- 4. Click **Close Scan** and **Save**.
- 5. Save the settings and the router will reboot automatically.
- 6. Internet Connection Setup: Click **Network>WAN**, select Connection Setup, such as DHCP, and click **Save**.

Tenda	1					Versier Produc
	Home	Status	letwork	Wireless	Advanced	USB
LAN		AN Settings				
WAN		Connection Type	Dynamic	P		
Port Mode		MTU	1450	(Default		
MAC Clone						
DHCP Server			Sav	ve Cance	I	
DHCP Clients						

7. Click **Status>WAN Status** and the connection status displays **Connected**.



Tenda		Version Produc				
	Home	Status	Network	Wireless	Advanced	USB
System Status		AN Status				
WAN Status		WAN Medium Ty	be Wired WAN			
LAN Status		Connection Typ	pe Dynamic IP			
Wireless Status		Connection Stat	us Connected	1		
Connection Status		MAC Addre	ss 00:90:4C:0	DF:F1:1F		
		IP Addre	ss 10.0.1.1			
		Subnet Ma	sk 255.0.0.0			
		Gatew	ay 10.0.0.254	ŧ		
		Primary DNS Serv	er 10.0.0.254	ŧ		
		Secondary DNS Serv	er 8.8.8.8			
		Up Tim	ne ODay(s)00:	00:48		
			Rele	ase Refre	sh	

### A Note

1. When the settings finished, remember to enter **Connection Setup** to set up Internet connection.

2. Verify that the SSID, channel, and security mode on the page match those of the added wireless network. If not, manually correct them.

3. For the normal wireless connection between two routers, do not change this router's SSID settings, including SSID, channel, security mode and security key.

#### **Universal Repeater**

In this mode, the router will relay data to an associated root AP and AP function is enabled meanwhile. The wireless repeater relays signal between its stations and the root AP for greater wireless range. Steps are shown as below:

1. Click Wireless>Wireless Extender, select Universal Repeater in the extender mode and click Open Scan.



Tenda						Versie Produ
Ho	me	Status	Network	Wireless	Advanced	USB
Basic	W	ireless Extend	er			
Guest Network		Mo	ode Universal	Repeater		
Security		Remote 5	SID			
Advanced		Char	nel 2442ML	(Channel 7)	-	
Wireless Access Control				(oname) / j		
Wireless Extender	F	Remote MAC Adder	ess			
WPS		Security Mo	ode None		•	
Connection Status	-			Open Scan		
			Sa	ve Cance	1	

2. Click **Open Scan**, select the AP you wish to connect and click **OK**.

3. View and note down the wireless security settings: security mode, cipher type, security key, etc., which should be in accordance with the upper device.

Tenda	(					Versio Produ
	Home	Status	Network	Wireless	Advanced	USB
Basic	W	/ireless Extend	ler			
Guest Network		M	ode WISP Mo	de	•	
Security		Remote S	SID Tenda_00	0006E	1	
Advanced		Char	inel 2437MHz	(Channel 6)	+	
Wireless Access Control						
Wireless Extender		Remote MAC Adder	ess A8.AA.30.	00.00.6E	_	
WPS		Security Mo	wPA-PS	KWPA2-PSK		
Connection Status		Authentication T	ype WPA-PSH	<		
		Cipher T	ype AES			
		Security	Key		📄 Disp	olay Key
			(8-63 ASC	Cll or 64 hex chara	cters)	

4. Click Close Scan and OK.

5. Save the settings and the router will restart automatically.

## 3.7 WPS

Wi-Fi Protected Setup makes it easy for home users who know little of wireless security to establish a secure wireless home network, as well as to add new devices to an existing network without entering long passphrases or configuring complicated settings. Simply enter a PIN code or press the software PBC button or hardware WPS button (if equipped) and a secure wireless connection can be established.



Tenda	7					Version Product
	Home	Status	Network	Wireless	Advanced	USB
Basic	WP	5				
Guest Network		SSI	D Tenda_07A	01E		
Security		Device Pl	N 51988708			
Advanced		Enable WP	5 🔘 Disable	Enable		
Wireless Access Control		WPS Mod	e 💿 PBC 🕥	PIN		
Wireless Extender			Reset OC	91evit F		
Connection Status			Say	/e Cance	el	

- Enable WPS: Select to enable/disable the WPS encryption.
- WPS Mode: Select PBC (Push-Button Configuration) or PIN.
- Reset OOB: When selected, the WPS LED turns off and the WPS function will be disabled automatically. The WPS server on the router enters idle mode and will not respond to any client's WPS connection request.

#### **Operation Instructions:**

PBC: The WPS LED will blink for 2 minutes after you press the hardware WPS button on the router for 1 second, and means that the PBC encryption method is successfully enabled. An authentication routine will be performed between your router and the WPS/PBC enabled wireless client device during this time, if it succeeds, the wireless client device will connect to your router and the WPS LED will turn off. Repeat the steps above if you want to add more wireless client devices to the router.

PIN: To use this option, you must know the PIN code from the wireless client and enter it in the corresponding field on your router while using the same PIN code on the client side for this connection.

## **∆**<sub>Note</sub>

To use the WPS encryption, the wireless adapter must be WPS-capable.



## **3.8 Connection Status**

This section displays wireless clients information (if any).

Tenda						Version Product
	Home	Status	Network	Wireless	Advanced	USB
Basic		onnection St	tatus			
Guest Network			uys wireless client info.			
Security						
Advanced	16	SSID	MAC Address	IP Addres	ss Duration	Speed
Wireless Access Control				Refresh		
Wireless Extender				1.00.000		
WPS						
Connection Status						

## **4 Advanced Applications**

The **Advanced** tab includes the following 8 submenus: Bandwidth Control, DDNS, Virtual Server, DMZ Host, UPnP, IPTV, Routing Table, and Static Routing. Clicking any of them enters the corresponding interface for configuration. Details are explained below:

Bandwidth Control	
DDNS	
Virtual Server	
DMZ Host	
UPnP	
IPTV	
Routing Table	
Static Routing	

### 4.1 Bandwidth Control

To better manage bandwidth allocation and optimize network performance, use the Bandwidth Control feature.



Ho	ome Status	Network	Wireless	Advanced	USB
landwidth Control	Custom Bandwid	dth Control			
DDNS	Here you can see a lis	st of bandwidth con	trol rules		
Virtual Server					
DMZ Host	En IP Range	Uplink/D Limit(KBp	ownlink Descr is)	iption Actio	n
JPnP					
IPTV	Ad	d Bandwidth Con	trol Rule	Delete All Rule	ŧ
Routing Table					
Static Routing					
Tenda	Control Rule and th	e screen bele Network	ow will ope Wireless	en. Advanced	Versi Prod USB
Tenda H	ome Status	Network		1	Prod
Tenda Ho Bandwidth Control		Network		1	Prod
Tenda Ho Bandwidth Control	ome Status Custom Bandwic Here you can see a lis	Network	Wireless	1	Prod
Tenda Ho Bandwidth Control DDNS	ome Status Custom Bandwic Here you can see a lis	Network	Wireless	1	Prod
	ome Status Custom Bandwic Here you can see a lis	Network	Wireless	1	Prod
Tenda He Bandwidth Control DDNS Virtual Server	ome Status Custom Bandwic Here you can see a lis	Network	Wireless	1	Prod
Tenda Ho Bandwidth Control DDNS Virtual Server DMZ Host	ome Status Custom Bandwic Here you can see a lis IP Ran	Network	Wireless	1	Prod
Tenda Ho Bandwidth Control DDNS Virtual Server DMZ Host UPnP	ome Status Custom Bandwic Here you can see a lis IP Ran Bandwidth Ran	Network	Wireless	Advanced	Prod
Tenda Ho Bandwidth Control DDNS Virtual Server DMZ Host UPnP IPTV	ome Status Custom Bandwic Here you can see a lis IP Ran Bandwidth Ran Uplink Bandwic	Network	Wireless	Advanced	Prod

- Enable: Check/uncheck to enable/disable current entry. When disabled, corresponding entry will not take effect.
- IP Range: Enter a single IP or an IP range.
- Uplink Bandwidth: Max uplink traffic.
- Downlink Bandwidth : Max downlink traffic.
- Description: Briefly describe the current entry.

## **4.2 DDNS**

Dynamic DNS or DDNS is a term used for the updating in real time of Internet Domain Name System (DNS) name servers. We use a numeric IP address allocated by Internet Service Provider (ISP) to connect to Internet. The address may either be stable ("static"), or may change from one session on the Internet to the next ("dynamic"). However, a numeric address is inconvenient to remember and an address which changes unpredictably makes connection impossible. The DDNS provider allocates a static host name to the user. Whenever the user is allocated a new IP address it is communicated to the DDNS provider by software

running on a computer or network device at that address. The provider distributes the association between the host name and the address to the Internet's DNS servers so that they may resolve DNS queries. The result is uninterrupted access to devices and services whose numeric IP address may change is maintained.

Tenda	3				a state	Versi Prod
	Home	Status	Network	Wireless	Advanced	US8
Bandwidth Control		IDNS				
DDNS		DDNS Servi	ce 💿 Enable	🕤 Disable		
Virtual Server		Service Provid	er dyndns		Register	
DMZ Host		User Nar	ne			
UPnP		Passwo	rd			
IPTV						
Routing Table		Domain Nar	ne			
Static Routing		Connection Stat	us Disconnect	red		
			Sa	ve Cance	1	

- Service Provider: Select your DDNS service provider from the drop-down menu.
- User Name: Enter the DDNS user name registered with your DDNS service provider.
- Password: Enter the DDNS Password registered with your DDNS service provider.
- Domain Name: Enter the DDNS domain name with your DDNS service provider.
- Connection Status: Displays current status of connection with the DDNS server.

Click **Save** to save your settings.

#### 4.3 Virtual Server

The Virtual Server feature grants Internet users access to services on your LAN. It is useful for hosting online services such as FTP, Web, or game servers. For each Virtual Server, you define a WAN port on your router for redirection to an internal LAN IP Address.

	Home	Status	Network	Wireless	Advanced	U	Prod SB
	- 16				Desserves		
Bandwidth Control	Vir	tual Server					
					area and a start		
DDNS					ail servers, gaming ar ion requests from Int		
Virtual Server					d LAN IP address. Be	sure to	
DMZ Host	stat	tically assign the ho	ost's IP for this fun	ction to be consis	itent.		
UPnP	ID	Ext Port-Int Po	rt Intern	al IP	Protocol		
PTV	1	f f			Both		
Routing Table	2	H			Both		
Static Routing	3	H			Both		
	4	H			Both		
	5	H			Both		
	6	H			Both		
	7	H			Both		
	8	H			Both		
	8	H			Both		

- Ext Port Int Port: External Port Internal Port, enter the WAN/LAN service ports.
- Internal IP: The IP address of a computer used as a server in LAN.
- Protocol: Includes TCP, UDP, and Both. Select "Both" if you are not sure about which protocol to use
- Enable: The corresponding entry takes effect only if you checked this option.
- Delete: Remove a corresponding entry
- Well-known Service Port: The well-known Service Port lists widely used protocol ports. Simply select a port, an entry ID, and click the "Add to" button to transfer the selected port to the corresponding fields of the selected entry. In case you cannot find the port you will need to enter it manually.

**Example:** You want to share some large files with your friends who are not in your LAN, however, it is not convenient to transfer such large files across the network. You can set up your own PC as a FTP server and use the Virtual Server feature to let your friends access these files. Assuming that the static IP address of the FTP server (Namely, your PC) is 192.168.0.110, you will want your friends to access this FTP server on the default port of 21 using the TCP protocol, details are explained below:

1. Enter 21 in both Ext Port and Int Port fields or select FTP from **Well-known Service Port** and an entry ID 21 will be automatically transferred to the corresponding fields of the selected entry.

2. Enter 192.168.0.110 for the IP Address, select TCP and then select **Enable**.



eci ur	ial Internet applications. router's WAN port will b	b servers, ftp servers, e-m When enabled, communica e forwarded to the specifie for this function to be consi	ation requests from Inte ed LAN IP address. Be s	rnet to
D	Ext Port-Int Port	Internal IP	Protocol	E. D.
	21 - 21	192.168.0.110	Both	
	_		Both	
	-		Both	
			Both	

#### 3. Click **Save** to save your settings.

Now, your friends only need to enter ftp://xxx.xxx.xxx.21 in their browsers to access your FTP server. xxx.xxx.xxx. Assuming the router's WAN IP address is 172.16.102.89, then your friends need to enter "ftp://172.16.102.89: 21" in their browsers.

## **∧**<sub>Note</sub>

If you include port 80 in this section, you must set the port for remote (web-based) management to a different number other than 80, such as 8080, otherwise the virtual server feature may not take effect.

### 4.4 DMZ Host

In some cases, a computer may need to be completely exposed to the Internet for implementation of a 2-way communication. To do so, we will set it as a DMZ host.