

3 Wireless Settings

3.1 Wireless-Basic

Here you can configure the basic wireless settings of the router.



Tip -----

1. Primary SSID is Tenda_XXXXXX by default, where XXXXXX is the last six characters in the device's MAC address. You can find this MAC address on the label attached on the bottom of the device.
 2. If you are not an advanced user, it is advisable to only change the SSID (name of the network) and channel and leave other items unchanged.
-

The screenshot shows the Tenda router's web interface. At the top, there's a navigation bar with tabs: Home, Status, Network, **Wireless**, Advanced, Security, and Tools. The 'Wireless' tab is active. On the left, a sidebar lists various settings: Basic, Guest Network, Security, Advanced, Wireless Access Control, Wireless Extender, WPS, and Wireless Connection Status. The 'Basic' setting is selected. The main content area is titled 'Basic Settings' and includes the following fields:

- Band: 2.4GHz
- 2.4GHz Wireless: Enable
- Country: ALL
- SSID Broadcast: Enable Disable
- SSID: Tenda_01703D
- 802.11 Mode: 11b/g/n mixed
- Channel: Auto
- Channel Bandwidth: 20 20/40
- Extension Channel: Auto

At the bottom of the form are 'Save' and 'Cancel' buttons. On the right side, there is a 'Helpful Hints' section with the following text:

Helpful Hints

This section allows you to config basic wireless settings. It is advisable that you only config the SSID and channel settings and leave other items unchanged from defaults.

SSID: Service Set Identifier, the unique name of a wireless network. You can change it from default to secure your wireless network.

Channel: For an optimal wireless performance, you may select the least interferential channel or "Auto Select" to let the device select the best possible channel for your wireless network to operate on.

Broadcast SSID: When it is enabled, your wireless network is visible to any

Configuration Procedures:

- ① **Band:** Select 2.4GHz or 5GHz.
- ② **Primary SSID:** This is the public name of your wireless network.
- ③ **Channel:** Select a channel or select Auto to let system automatically select one for your wireless network to operate on if you are unsure. The best selection is a channel that is the least used by neighboring networks.

- ④ Click **Save** to save your settings.



Knowledge Center -----

1. **802.11 Mode (Network Mode):** Select a correct mode according to your wireless clients.

- **11b:** This network mode delivers wireless speed up to 11Mbps and is only compatible with 11b wireless clients.
- **11g:** This network mode delivers wireless speed up to 54Mbps and is only compatible with 11g wireless clients.
- **11b/g mixed:** This network mode delivers wireless speed up to 54Mbps and is compatible with 11b/g wireless clients.
- **11b/g/n mixed:** This network mode delivers wireless speed up to 300Mbps and is compatible with 11b/g/n wireless clients.
- **11ac :** This network mode delivers wireless speed up to 867Mbps.

2. **SSID Broadcast:** This option allows you to have your network names (SSIDs) publicly broadcast or if you choose to disable it, the SSIDs will be hidden.

3. **Channel Bandwidth:** Select a proper channel bandwidth to enhance wireless performance. This option is available only in 802.11b/g/n. Wireless speed in the channel bandwidth of 20/40 is 2 times in 20.

4. **Extension Channel:** This is used to ensure N speeds for 802.11n devices on the network. This option is available only in 11b/g/n mixed mode with channel bandwidth of 20/40.

3.2 Guest Network

Click **Wireless -> Guest Network** to enter the Guest Network screen. The Guest Network feature allows guests to access Internet and other users on the guest network while disallowing them to access Device web manager, users on master network and clients behind the LAN ports. Thus the wireless master network is secured.

Configuration Procedures:

- ① **Band:** Select 2.4GHz or 5GHz.

② **Guest Network:** Select whether to enable or disable the Guest Network feature. It is disabled by default.

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

The screenshot shows the Tenda web interface for configuring the Guest Network. The top navigation bar includes 'Home', 'Status', 'Network', 'Wireless', 'Advanced', 'Security', and 'Tools'. The left sidebar lists various configuration categories, with 'Guest Network' selected. The main content area is titled 'Guest Network' and contains the following settings:

- Band: 2.4GHz (dropdown menu)
- Guest Network: Enable
- SSID Broadcast: Enable
- AP Isolation: Enable
- Guest Network SSID: Tenda_Guest_01703E (text input)

At the bottom of the settings are 'Save' and 'Cancel' buttons. To the right, a 'Helpful Hints' section provides additional information:

- Enable Guest Network:** The Guest Network feature allows guests to access Internet and other users on the guest network while disallowing them to access device web manager, clients and services on primary network.
- Broadcast SSID:** When it is enabled, your wireless network is visible to any wireless clients within coverage when they scan for a wireless network; when disabled, your guest wireless network is invisible and thus secure.
- AP Isolation:** If enabled, clients connecting to the guest network will be mutually inaccessible.
- Guest Network SSID:** Service Set Identifier, the unique name of a wireless

3.3 Security

Click **Wireless** -> **Security** to enter the **Security** screen. Here you can define a security key to secure your wireless network against unauthorized accesses.

The screenshot shows the Tenda web interface for wireless security settings. The top navigation bar includes 'Home', 'Status', 'Network', 'Wireless', 'Advanced', 'Security', and 'Tools'. The 'Wireless' section is active, and the 'Security' sub-section is selected. The main content area is titled 'Security Settings' and contains the following fields:

- Band:** 2.4GHz
- SSID:** Tenda_01703D
- Security Mode:** WPA-PSK/WPA2-PSK (selected)
- Authentication Type:** WPA-PSK
- Cipher Type:** AES
- Security Key:** [Masked] (8-63 ASCII or 64 hex characters)
- Key Renewal Interval:** 3600 (Down to 60 seconds. 0 indicates no renewal.)

On the right side, there is a 'Helpful Hints' section with the following text:

- None:** Disable wireless security feature.
- WEP:** Wired equivalent privacy.
- Authentication Type:** Select either "Open" or "Shared".
- Key Format:** Select either "ASCII" or "Hex".
- Key Select:** Select a WEP key from below.
- Key Content:** Enter a WEP key. Note that the key format and length must match what is specified hereon.
- Key Length:** Select either 64-bit or 128-bit. Selecting "None" deactivates corresponding WEP Key.

At the bottom, there are 'Save' and 'Cancel' buttons.

To secure your wireless network

- ① Select a band, for example, 2.4GHz.
- ② Select the wireless network (SSID) you wish to encrypt.
- ③ Select a security mode, cipher type configure a security key.
- ④ Click **Save** to save your settings.



Tip -----
 For better security, compatibility and wireless speed, we recommend the WPA-PSK and AES.



1. **WEP** : Wireless speed can reach up to 54Mbps if WEP - Open is selected.
2. **Key Select**: Select a key to be effective for the current WEP encryption. For example, if you select Key 1, wireless clients must join your wireless network using this Key 1.
4. **WPA-PSK** : WPA personal, support AES and TKIP+AES cipher types.
5. **WPA2-PSK** : WPA2 personal, support AES and TKIP+AES cipher types.
6. **WPA/WPA2-PSK mixed**: If selected, both WPA-PSK and WPA2-PSK secured wireless clients can join your wireless network.
7. **AES**: If selected, wireless speed can reach up to 300Mbps.
8. **TKIP**: If selected, wireless speed can reach up to 54Mbps.
9. **TKIP+AES**: If selected, both AES and TKIP secured wireless clients can join your wireless network.

3.4 Advanced

Click **Wireless -> Advanced** to configure the advanced wireless settings. This section allows you to config advanced settings, including AP Isolation, Beacon interval, Fragment threshold, RTS threshold and DTIM interval, etc, for your wireless networks. Normally, the default settings will work. If not, change them according to the suggestions given by your ISP or Tenda technical staff.

The screenshot shows the Tenda web interface for configuring wireless settings. The 'Advanced-Wireless' section is active, displaying several configuration options:

- Band:** 2.4GHz
- AP Isolation:**
- Beacon Interval:** 100 ms (Range: 20 - 999; Default: 100)
- Fragment Threshold:** 2346 (Range: 256 - 2346; Default: 2346)
- RTS Threshold:** 2347 (Range: 1 - 2347; Default: 2347)
- DTIM Interval:** 1 (Range: 1 - 255; Default: 1)
- TX Power:** High Medium Low
- Short GI:** Enable Disable
- WMM Capable:** Enable Disable
- APSD Capable:** Enable Disable

Buttons for 'Save' and 'Cancel' are located at the bottom of the configuration area. On the right side, there is a 'Helpful Hints' section with the following text:

Helpful Hints

This section allows you to config advanced wireless settings. It is advisable to leave the options unchanged from defaults if you are not clear about how to config them.

Beacon Interval: A time interval between any 2 consecutive Beacon packets sent by device. Available values are between 20 and 999. Do NOT change the default value of 100 unless necessary.

Fragment Threshold: Max size of a packet to transmit. Enter a Fragment Threshold (256-2346). Any wireless packet exceeding such set value will be divided into several fragments. DO NOT change the default value of 2346 unless necessary.



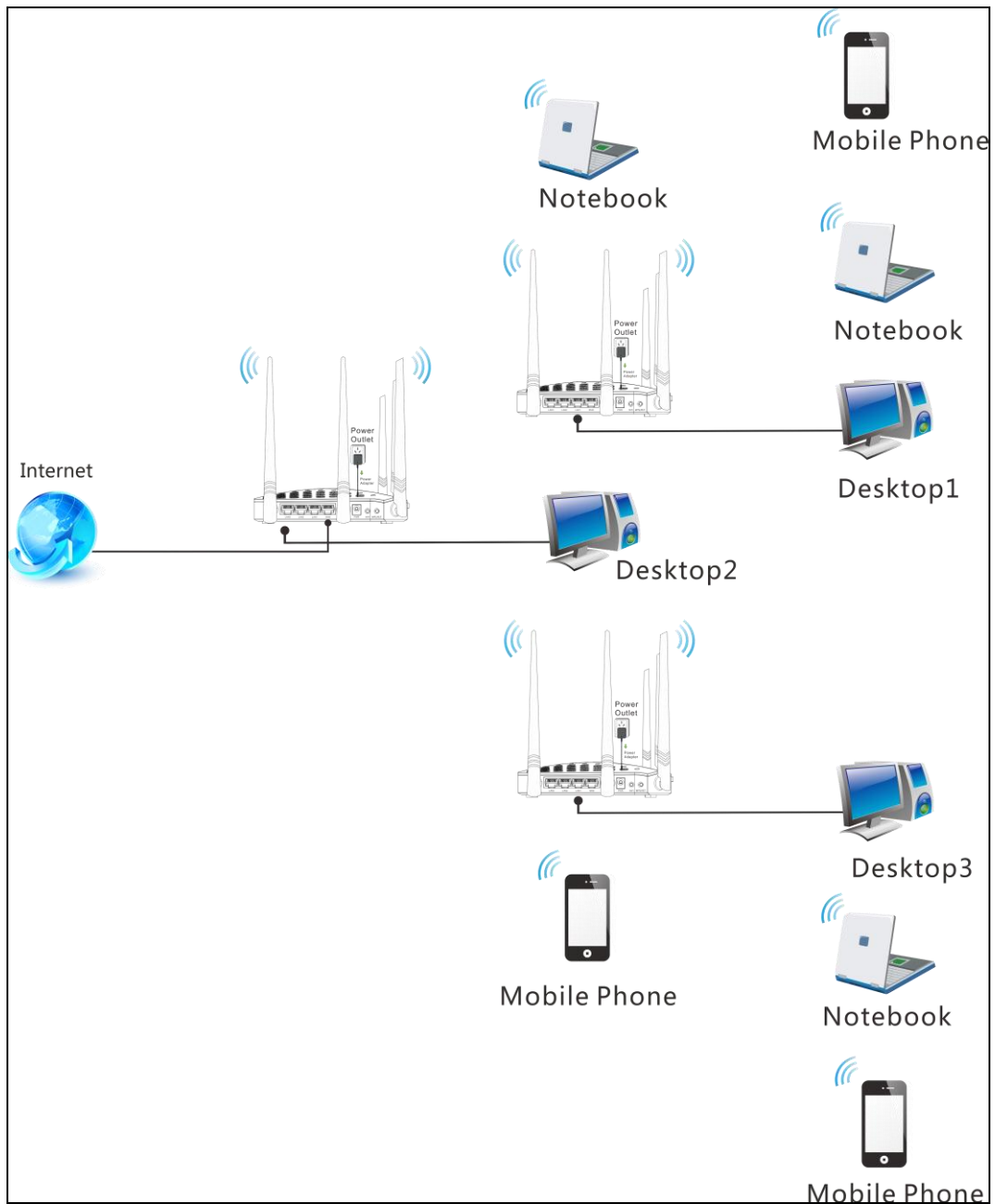
Knowledge Center -----

- 1 AP Isolation:** Isolates clients connecting to the primary SSID.
- 2 Beacon Interval:** A time interval between any 2 consecutive Beacon packets sent by an Access Point to synchronize a wireless network. Do NOT change the default value of 100 unless necessary.
- 3 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.
- 4 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, device performance may be degraded.
- 5 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 the 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.

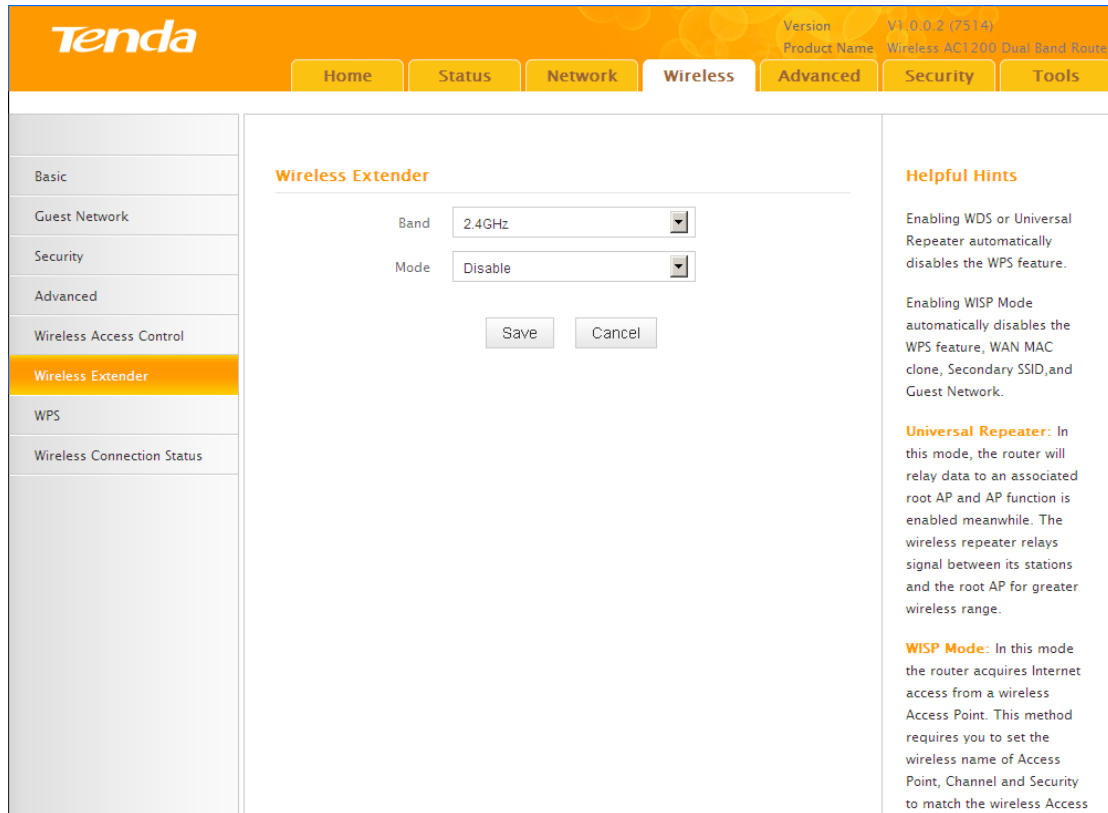
6 TX Power: This option lets you adjust your wireless TX power.

3.6 Wireless Extender

Use this wireless extender feature to extend your existing wireless network.



Click **Wireless** -> **Wireless Extender** to enter the following screen.



This device provides three modes to extend your wireless network:

- To extend your wireless network using the universal repeater feature, see **Universal Repeater**.
- To extend your wireless network using the WISP client router (wireless WAN) feature, see **WISP Mode**.
- To establish Wireless Distribution System and extend your wireless network, see WDS.

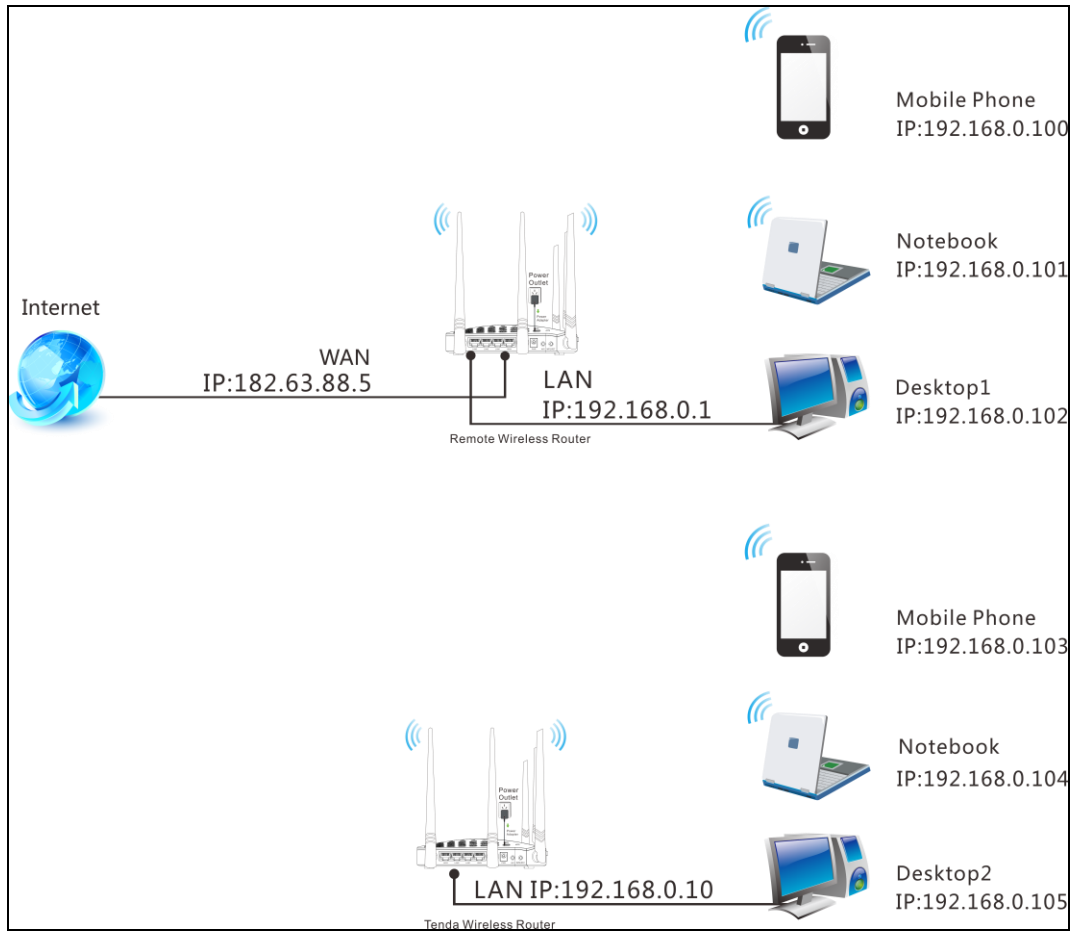


Tip -----

If "**Disable**" is selected, the wireless extender feature will be deactivated.

Universal Repeater Mode

Universal Repeater: Use this universal repeater mode to extend your existing wireless network. The application scenario is shown in the figure below:



In this mode, you only need to configure the following settings on the Tenda wireless router:

- Configure LAN IP: Specify an IP address that is in the same subnet as yet different from the remote wireless router for this Tenda wireless router.
- Universal Repeater: Configure this router to bridge the remote wireless router for extended network coverage.



Tip -----

Before you start, **make sure you have the following information:**

1. Remote router's SSID, security mode, cipher type and security key.
 2. Remote router's LAN IP address.
 3. No Ethernet cable is connected to the Tenda wireless router's WAN port.
-

Universal Repeater Application Example:

Assuming the remote wireless router has the following information:

SSID : Tenda_0FF02D

Security Mode: WPA-PSK

Cipher Type: AES

Security Key: 12345678

LAN IP Address: 192.168.0.1

Configuration Procedures:

- 1 Click **Network** -> **LAN** to configure an IP address that is in the same subnet as yet different from the remote wireless router for this Tenda wireless router.

The screenshot shows the Tenda router's web interface. The top navigation bar includes 'Home', 'Status', 'Network', 'Wireless', 'Advanced', 'Security', and 'Tools'. The 'Network' tab is selected, and the 'LAN' sub-tab is active. The 'LAN Settings' section is displayed, with the following fields:

- MAC Address: 00:90:4C:01:60:3D
- IP Address: 192.168.0.1
- Subnet Mask: 255.255.255.0

Below the fields are 'Save' and 'Cancel' buttons. To the right, the 'Helpful Hints' section contains the following text:

IP Address: Router's LAN IP address. All LAN PC's default gateway must be set to this address.

Subnet Mask: Router's LAN subnet mask, commonly, 255.255.255.0. All LAN PC's subnet mask must be set to this value.

Note: 1. If you change the LAN IP address, you must use the new one to log on to the web utility.
2. If the new LAN IP is not on the same net segment with the old one, DHCP server will automatically update its IP settings accordingly while old virtual server and DMZ settings will become inoperative; to re-activate such, you must renew the IP settings thereof.

- 2 Click **OK** in the appearing screen.
- 3 Select **Universal Repeater** and click **Open Scan**.

Version: V1.0.0.2 (7514)
Product Name: Wireless AC1200 Dual Band Router

Home Status Network **Wireless** Advanced Security Tools

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

Wireless Extender

Band: 2.4GHz
Mode: Universal Repeater
Remote SSID:
Channel: Auto
Remote MAC Address:
Security Mode: None

Open Scan

Save Cancel

Helpful Hints

Enabling WDS or Universal Repeater automatically disables the WPS feature.

Enabling WISP Mode automatically disables the WPS feature, WAN MAC clone, Secondary SSID, and Guest Network.

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.

WISP Mode: In this mode the router acquires Internet access from a wireless Access Point. This method requires you to set the wireless name of Access Point, Channel and Security to match the wireless Access

④ Select the remote router's wireless network (SSID) and click **Close Scan**.

Version: V1.0.0.2 (7514)
Product Name: Wireless AC1200 Dual Band Router

Home Status Network **Wireless** Advanced Security Tools

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

Wireless Extender

Band: 2.4GHz
Mode: Universal Repeater
Remote SSID:
Channel: Auto
Remote MAC Address:
Security Mode: None

Close Scan

Sel...	SSID	MAC Address	Ch...	Channel	Security	Signal Intensity
<input type="checkbox"/>	Tenda_OFF02D	C8:3A:35:00:02:94	11	40 MHz	WPA	-82 dBm

Helpful Hints

Enabling WDS or Universal Repeater automatically disables the WPS feature.

Enabling WISP Mode automatically disables the WPS feature, WAN MAC clone, Secondary SSID, and Guest Network.

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.

⑤ The SSID, channel, MAC address, security mode and cipher type of the remote router will be added automatically on this page. You only need to enter the security key and click **Save**.

The screenshot shows the 'Wireless Extender' configuration page in the Tenda web interface. The top navigation bar includes 'Home', 'Status', 'Network', 'Wireless', 'Advanced', 'Security', and 'Tools'. The left sidebar lists various configuration categories, with 'Wireless Extender' selected. The main content area contains the following settings:

- Band:** 2.4GHz
- Mode:** Universal Repeater
- Remote SSID:** Tenda_OFF02D
- Channel:** 2462MHz (Channel 11)
- Remote MAC Address:** C8:3A:35:00:02:94
- Security Mode:** WPA-PSK/WPA2-PSK
- Authentication Type:** WPA-PSK
- Cipher Type:** AES
- Security Key:** A field with 8 dots, followed by a 'Display Key' checkbox.

Below the Security Key field, it specifies '(8-63 ASCII or 64 hex characters)'. There are 'Open Scan', 'Save', and 'Cancel' buttons at the bottom. On the right side, there is a 'Helpful Hints' section with text explaining the 'Universal Repeater' and 'WISP Mode' features.

Note

1. This router's primary SSID will automatically change to match that of the remote router when the Universal Repeater feature is configured successfully. Please do not change this SSID. Changing this SSID may interrupt the wireless bridge link.
2. When the Universal Repeater is configured successfully, wireless clients need to join this Tenda wireless router's SSID for Internet access.

Verify Bridge Connectivity:

- ① Connect your PC to this Tenda wireless router via a wired or wireless connection and set it to "Obtain an IP address automatically". If you are not clear, see [Appendix 1 Configure PC TCP/IP Settings](#).
- ② Wait until your PC successfully obtains an IP address.

The screenshot shows the 'Local Status' dialog box with the 'Support' tab selected. Under 'Connection status', the following information is displayed:

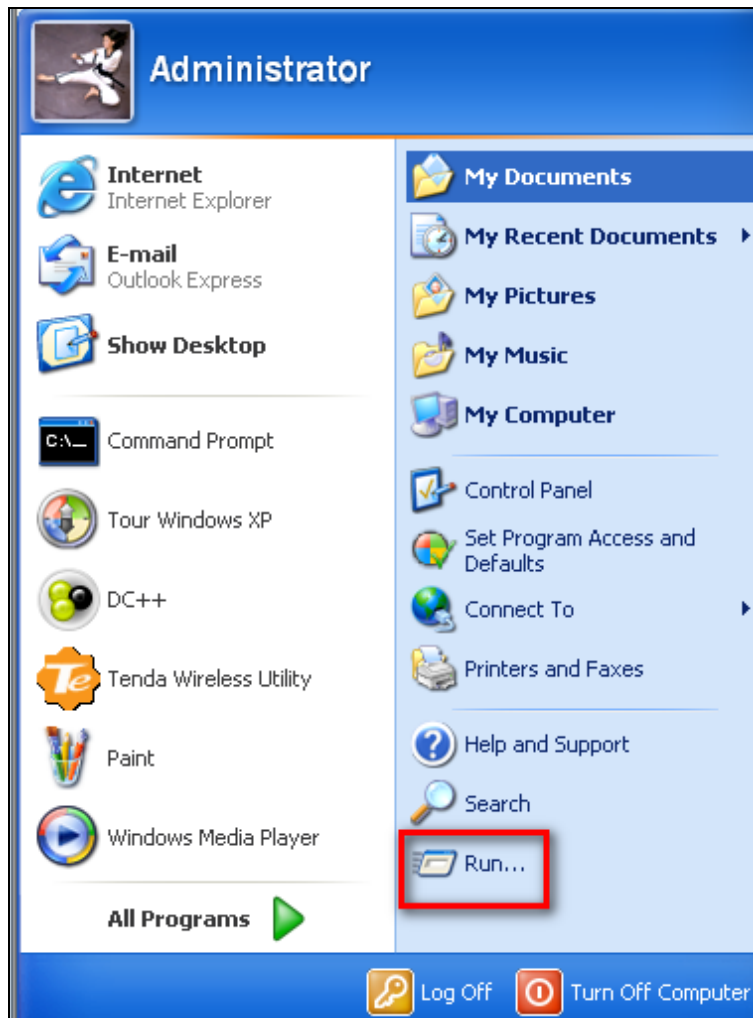
Address Type:	Assigned by DHCP
IP Address:	192.168.0.103
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.0.1

Callout 1 (pointing to the IP Address): Last number differs from that of the remote wireless router's LAN IP address.

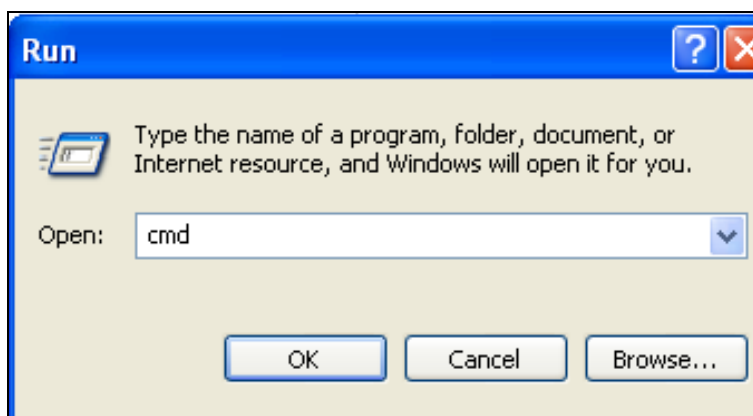
Callout 2 (pointing to the Default Gateway): This is the remote router's LAN IP address.

At the bottom of the dialog, there is a 'Repair' button and a 'Close' button. A message states: 'Windows did not detect problems with this connection. If you cannot connect, click Repair.'

- ③ Click **Start -> R u n** .



- ④ Enter **cmd** and click **OK**.



- ⑤ Enter "ping default gateway IP address". Here in this example, enter "ping 192.168.0.1" and press Enter. If you see a similar screen (highlighted area), the bridge is established successfully.

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\user>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

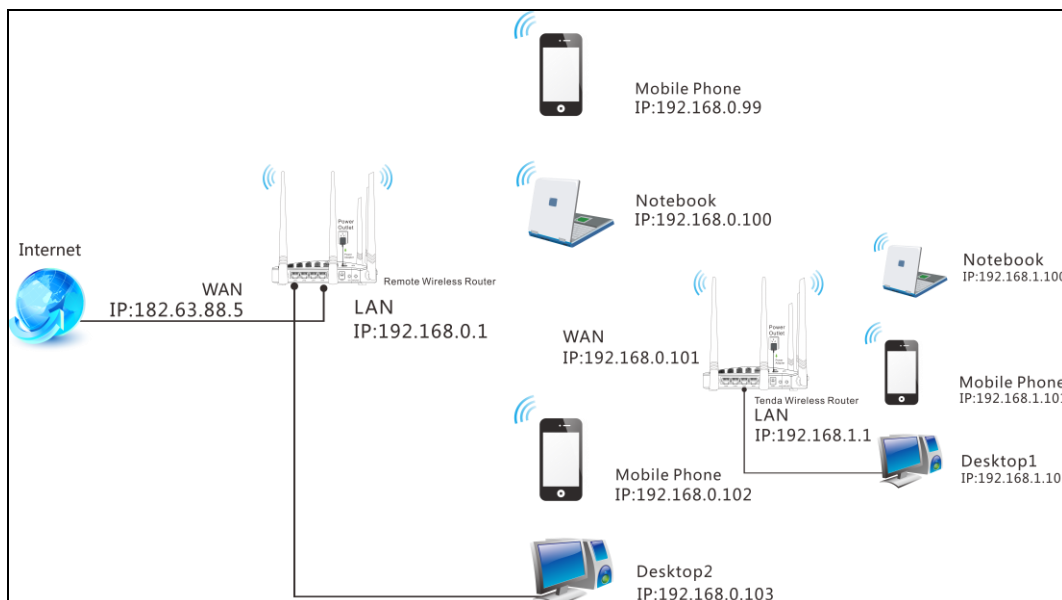
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\user>
  
```

WISP Client Router Mode

WISP Mode: This is the WISP (Wireless Internet Service Provider) Client Router Mode. In this mode the router acquires Internet access from your WISP AP or a wireless Access Point on an existing network. Below shows the typical topology:



In this mode, you only need to configure the following settings on the Tenda wireless router:

- WISP Mode Setup: This mode establishes a wireless connection between

the wireless LAN interface of the remote wireless router and the wireless WAN interface of your Tenda wireless router.

- Internet Setup: Configure this Tenda router to access Internet.



Tip-----

Before you start, make sure you have the following information:

1. Remote router's SSID, security mode, cipher type and security key.
 2. Internet connection information provided by the remote wireless router.
 3. No Ethernet cable is connected to the Tenda wireless router's WAN port.
-

WISP mode (Wireless WAN feature) Application Example:

Assuming the remote wireless router provides the following information:

SSID: Tenda_home

Security Mode: WPA-PSK

Cipher Type: AES

Security Key: 12345678

Internet Connection Type (for client): DHCP (dynamic IP)

Configuration Procedures:

① Click **Network** -> **WAN** to configure the Internet connection.

Tenda Version V1.0.0.2 (7514)
Product Name Wireless AC1200 Dual Band Router

Home Status **Network** Wireless Advanced Security Tools

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

WAN Settings

Connection Type:

MTU: (Default: 1450)

Helpful Hints

Dynamic IP: Select it to obtain IP settings automatically for Internet connection if your ISP does not give you any IP or account info.

Static IP: Select it if your ISP provides you with IP info. Enter IP address, subnet mask, Primary DNS and secondary DNS info, etc provided by your ISP in corresponding fields.

PPPoE: Select it if your ISP is using a PPPoE connection and enter PPPoE user name and password info provided by your ISP.

MTU: Maximum Transmission Unit. The default value varies according to different Internet connection types. DO NOT change it unless necessary.

- ② Click **Wireless -> Wireless Extender**, select **WISP Mode** and click **Open Scan**.

The screenshot shows the Tenda web interface for configuring a wireless extender. The 'Wireless Extender' section is active, showing settings for Band (2.4GHz), Mode (WISP Mode), Remote SSID, Channel (2462MHz/Channel 11), Remote MAC Address, and Security Mode (None). An 'Open Scan' button is present below the settings. A 'Helpful Hints' sidebar on the right provides information about WDS, WISP Mode, and WISP Mode.

- ③ Select the remote router's wireless network (SSID) and click **Close Scan**.

The screenshot shows the same configuration page as above, but with the 'Close Scan' button visible. Below the settings, a table displays the results of the scan, listing detected wireless networks with their SSIDs, MAC addresses, channels, bandwidths, security types, and signal intensities.

Sel...	SSID	MAC Address	Ch...	Channel Bandwidth	Security	Signal Intensity
<input type="checkbox"/>	Tenda_130518	C8:3A:35:13:05:18	6	40 MHz	WPA2	-69 dBm
<input type="checkbox"/>	Tenda_07A050	C8:3A:35:07:A0:50	7	40 MHz	none	-74 dBm

- ④ The SSID, channel, MAC address, security mode and cipher type of the remote AP will be added automatically on this page. You only need to enter the security key and click **Save**.

The screenshot shows the 'Wireless Extender' configuration page in the Tenda web interface. The page has a navigation bar with tabs: Home, Status, Network, **Wireless**, Advanced, Security, and Tools. The left sidebar contains menu items: Basic, Guest Network, Security, Advanced, Wireless Access Control, **Wireless Extender**, WPS, and Wireless Connection Status. The main content area is titled 'Wireless Extender' and contains the following fields:

- Band: 2.4GHz
- Mode: WISP Mode
- Remote SSID: Tenda_130518
- Channel: 2437MHz (Channel 6)
- Remote MAC Address: C8:3A:35:13:05:18
- Security Mode: WPA-PSK/WPA2-PSK
- Authentication Type: WPA2-PSK
- Cipher Type: AES
- Security Key: •••••••• (with a 'Display Key' checkbox)

Below the fields is a 'Re-scan' button (highlighted with a red box), and at the bottom are 'Save' and 'Cancel' buttons. On the right side, there are 'Helpful Hints' explaining WDS, WISP Mode, and Universal Repeater.

- ⑤ Click **Reboot** on the appearing screen to reboot the router.

The screenshot shows the confirmation screen after saving the settings. The page title is 'Hints' and the main text reads: 'To activate new settings, you must reboot the device.' Below the text are two buttons: 'Continue' and 'Reboot' (highlighted with a red box). The right sidebar still contains the 'Helpful Hints' section.

⑥ System automatically enters the home page (Quick Internet Setup screen) after reboot. Click the **Advanced** button there.

The screenshot shows the Tenda router's configuration interface. At the top, the Tenda logo is on the left, and the version (V1.0.0.2 (7514)) and product name (Wireless AC1200 Dual Band Router) are on the right. The main content area is divided into two sections:

- Internet Connection Setup:** This section has a title and two radio buttons for "Internet Connection Type": "PPPoE" (unselected) and "Dynamic IP" (selected). Below this, it says "For other connection types, click 'Advanced'" and "Current Mode is WISP."
- Wireless Security Setup:** This section has a dropdown menu set to "2.4G Security" and a password input field containing seven dots. Below the password field, it says "(Default: 12345678)". There are also three radio buttons for "TX Power": "High" (selected), "Medium" (unselected), and "Low" (unselected). At the bottom of this section are "Save" and "Cancel" buttons.

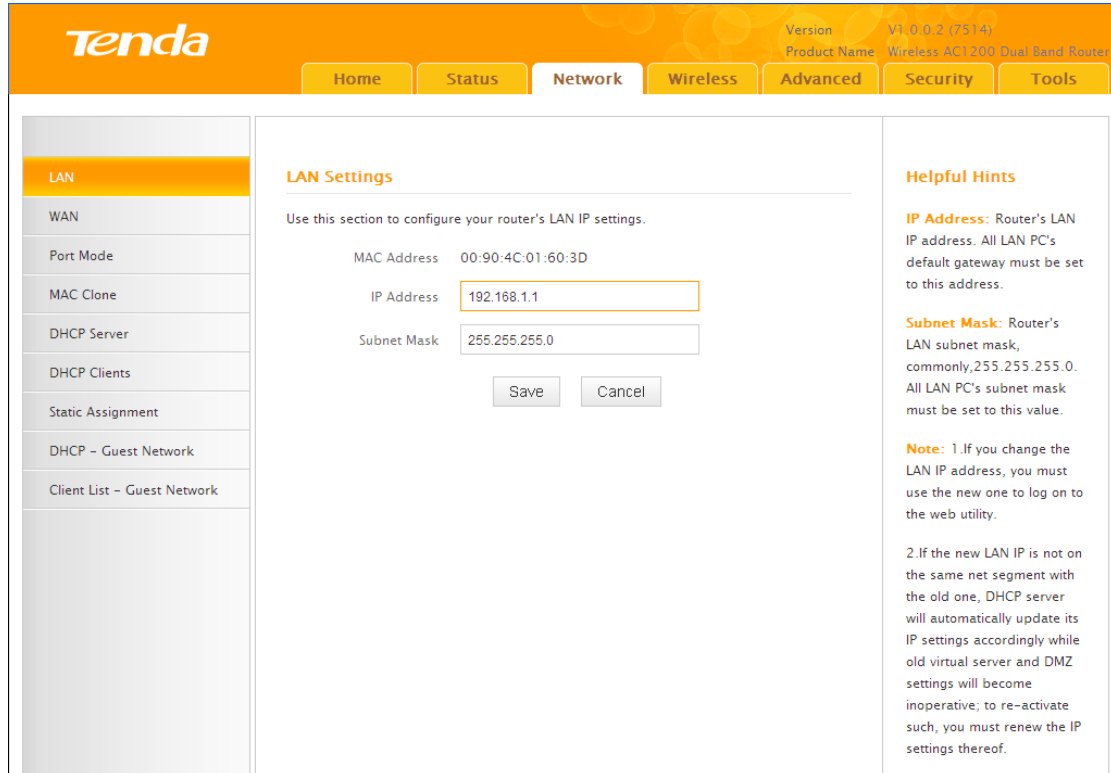
⑦ Click **Status** -> **WAN Status** to check the WAN status.

The screenshot shows the Tenda router's "Status" page. At the top, the Tenda logo is on the left, and the version (V1.0.0.2 (7514)) and product name (Wireless AC1200 Dual Band Router) are on the right. Below the header is a navigation bar with buttons for "Home", "Status", "Network", "Wireless", "Advanced", "Security", and "Tools". The "Status" button is highlighted. On the left side, there is a sidebar menu with options: "System Status", "WAN Status" (highlighted), "LAN Status", "Wireless Status", and "Connection Status". The main content area is titled "WAN Status" and displays the following information:

- WAN Medium Type: 2.4GHz WISP
- Connection Type: Dynamic IP
- Connection Status: Connecting...
- MAC Address: 00:90:4C:01:70:3D
- IP Address: 192.168.30.176
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.30.1
- Primary DNS Server: 192.168.30.1
- Secondary DNS Server: 0.0.0.0
- Connection Duration: 0Day(s)01:30:27

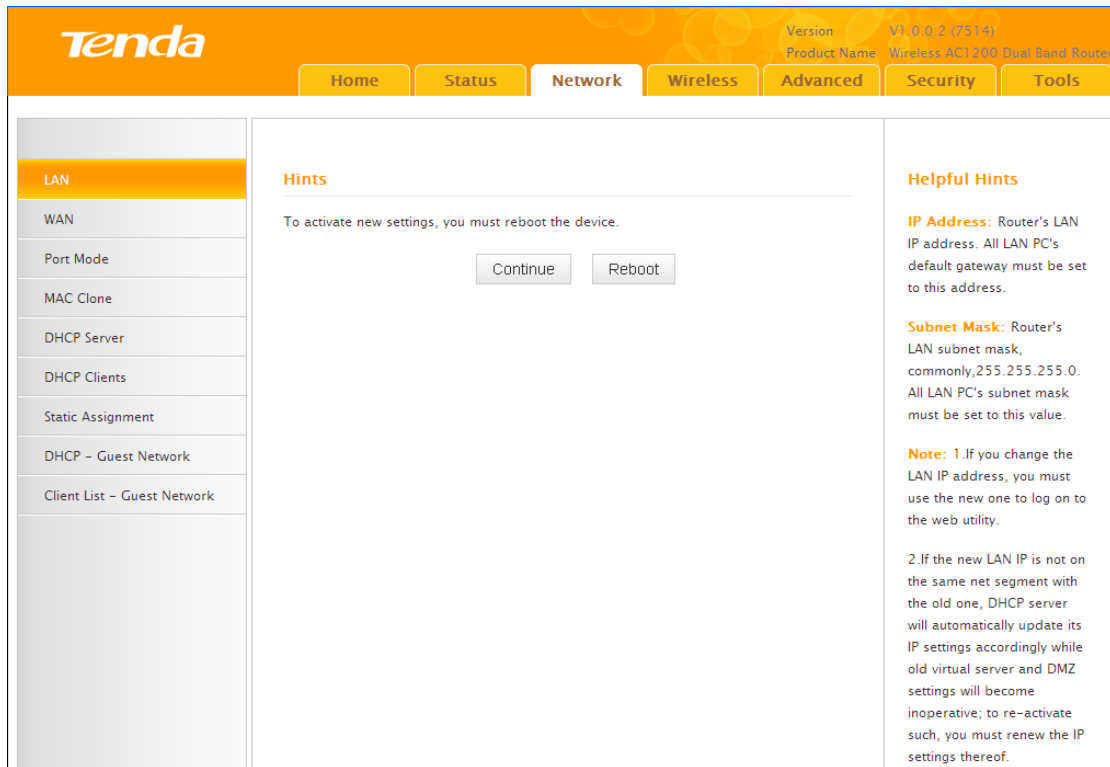
At the bottom of the WAN Status section are "Release" and "Refresh" buttons. On the right side of the page, there is a "Helpful Hints" section with the text: "This section displays WAN port status."

- ⑧ If the WAN Connection Status keeps displaying "Connecting...", change the LAN IP address of this router to a different subnet from the remote router's LAN IP address.

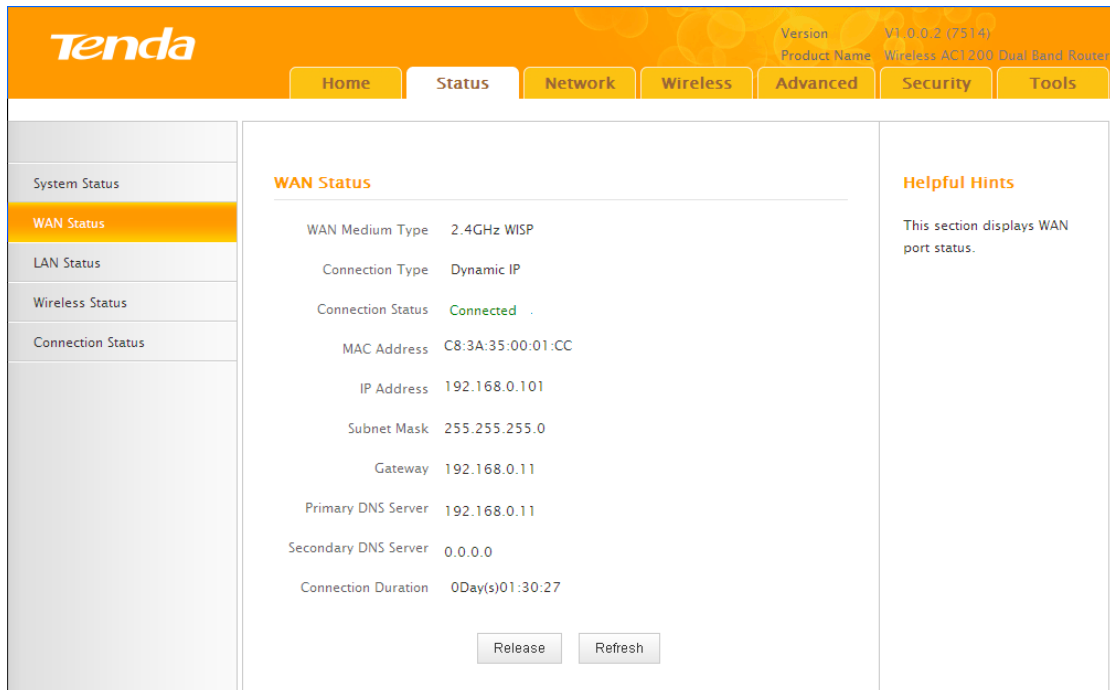


- ⑨ Click **OK** on the appearing screen to reboot the router.

- ⑩ Click **Reboot** on the appearing screen to reboot the router.



System automatically enters the Status screen after reboot. Check the WAN Connection Status, if it displays "Connected", you have successfully connected to Internet.

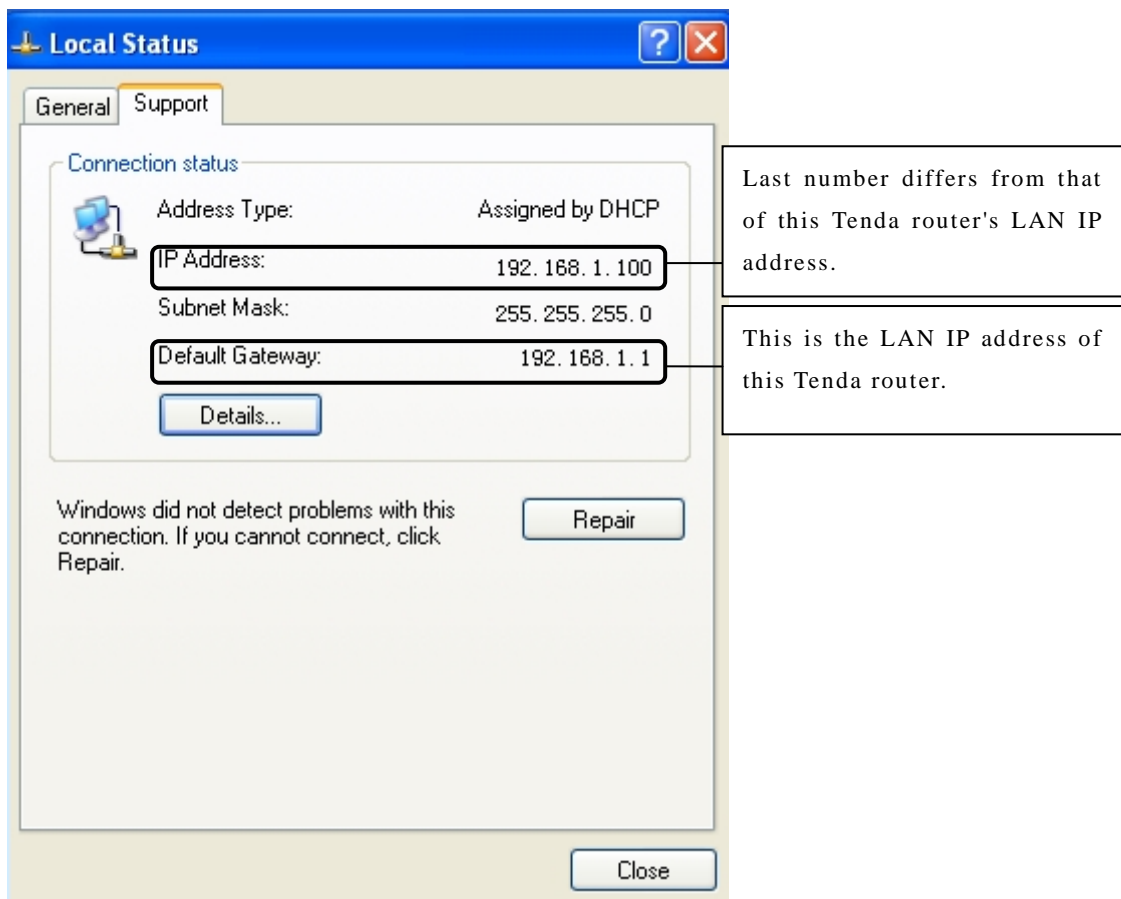


⚠ Note

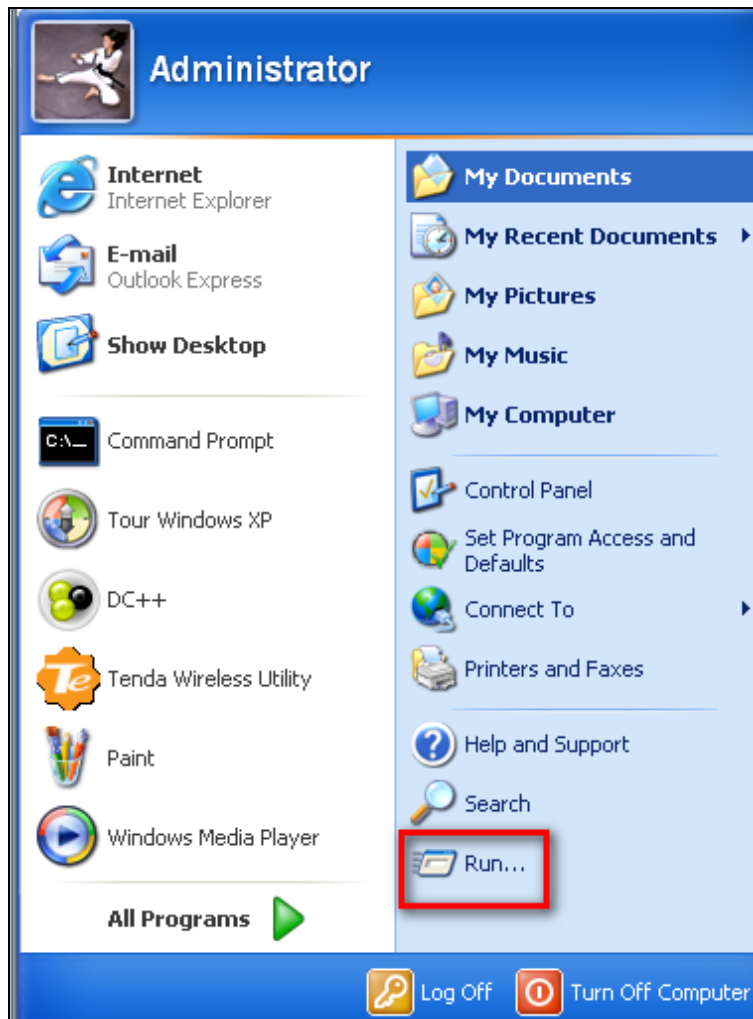
1. This router's primary SSID will automatically change to match that of the remote router when the WISP (client router) mode feature is configured successfully. Please do not change this SSID. Changing this SSID may interrupt the wireless link.
2. When the WISP (client router) mode is configured successfully, wireless clients need to join this Tenda wireless router's SSID for Internet access.

Verify Bridge Connectivity:

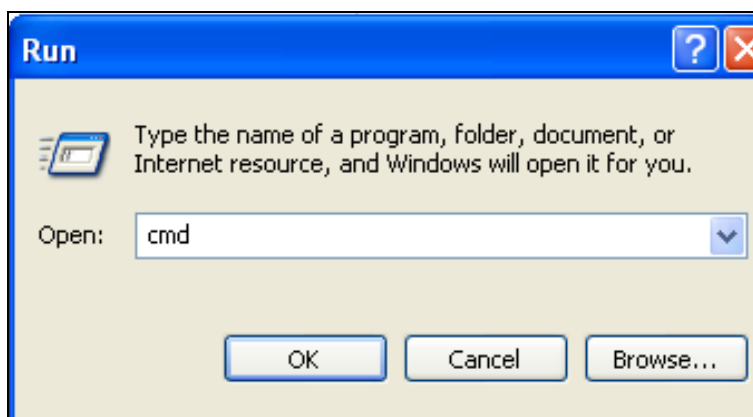
- ① Connect your PC to this Tenda wireless router via a wired or wireless connection and set it to "Obtain an IP address automatically". If you are not clear, see [Appendix 1 Configure PC TCP/IP Settings](#).
- ② Wait until your PC successfully obtains an IP address.



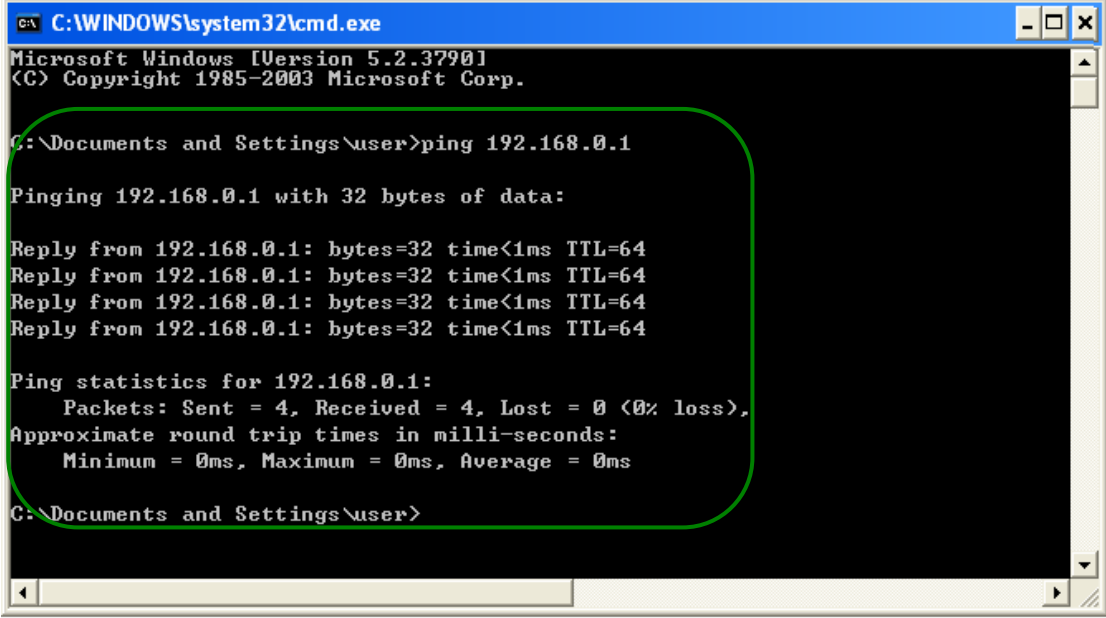
- ③ Click **Start ->Run**



- ④ Enter **cmd** and click **OK**.



- ⑤ Enter "ping Tenda router's gateway IP address" . Here in this example, enter "ping 192.168.0.1" and press **Enter**. If you see a similar screen (highlighted area), the bridge is established successfully.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\user>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\user>
```

WDS Mode

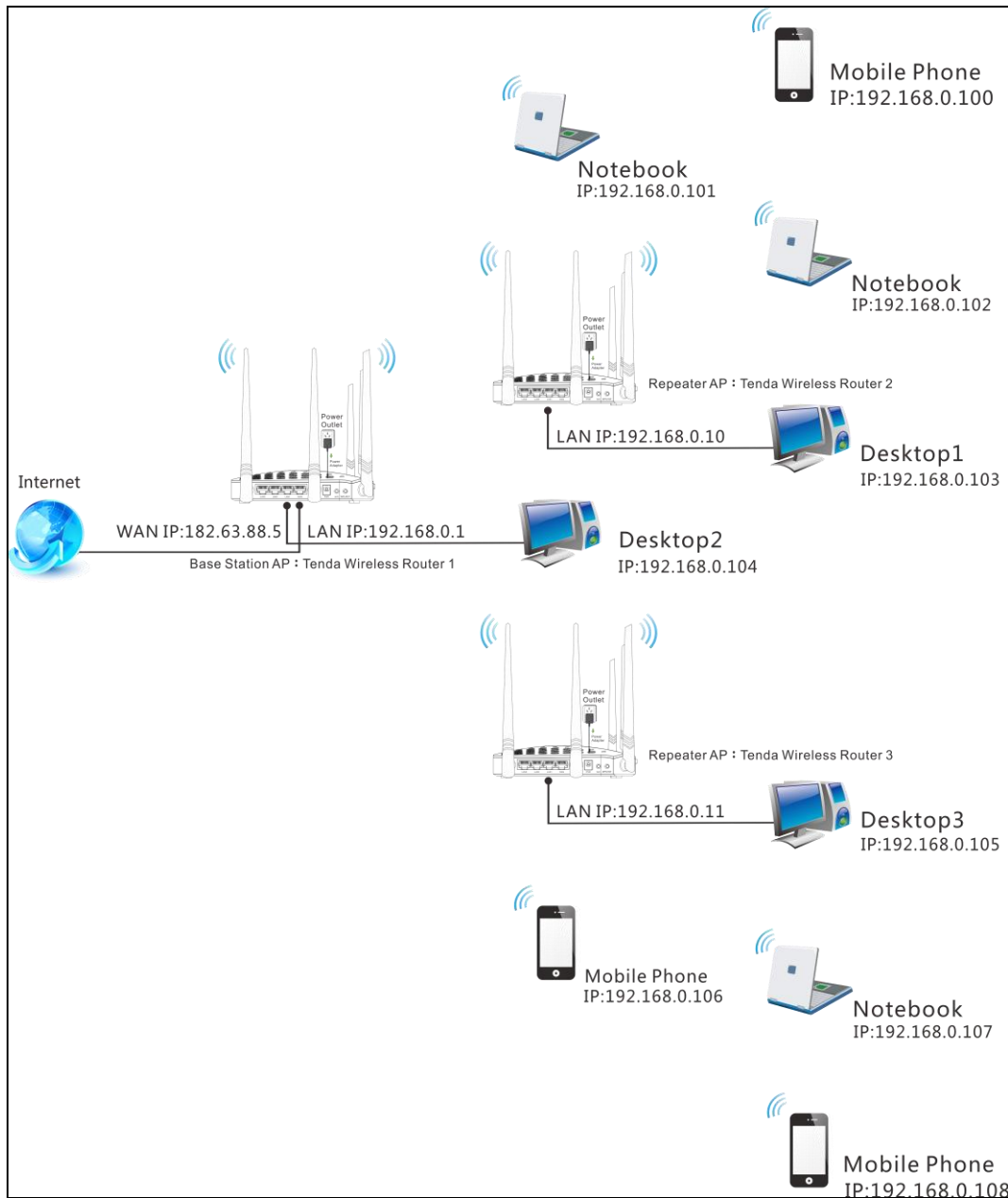
WDS (Wireless Distribution System) includes Wireless Bridge and Wireless AP.

The differences are described as below:

Operating in Wireless AP mode, clients can access Internet by connecting to the router via an Ethernet cable or wirelessly. Operating in Wireless Bridge mode, clients can access Internet by connecting to the router via an Ethernet cable or wirelessly joining the router's secondary SSID (wireless network) or guest network.

WDS: Wireless distribution system (WDS) is a system enabling the wireless interconnection of access points in an IEEE 802.11 network. It allows a wireless network to be expanded using multiple access points without the traditional requirement for a wired backbone to link them. The Tenda wireless router can function as a base station AP to create a wireless network or as a repeater AP to repeat and extend the base station AP's wireless network to a farther and wider

range. The following figure shows an application scenario.



In this mode, you must set up both the base station AP, and the repeater AP.



Tip-----

Before you start, **verify the following:**

1. Tenda wireless router 1 that functions as a base station AP has successfully connected to Internet.
2. No Ethernet cables are connected to the WAN ports of the repeater APs: Tenda wireless routers 2 and 3.

WDS Application Example (as shown in the application scenario above):

Step 1: Configure Base Station AP (Tenda Wireless Router 1)

- ① **Mode:** Select **WDS Mode**.
- ② **WDS Mode:** Select **Wireless AP**.
- ③ **SSID:** Customize a SSID, for example, Tenda_home.
- ④ **Channel:** Specify a channel for the base station AP to operate on, for example, 2437MHz (Channel 6).
- ⑤ **Remote MAC Address:** Manually enter the MAC addresses of the two remote repeater APs (You can click **Open Scan** to view the MAC addresses).
- ⑥ **Security Mode:** Specify security mode/authentication type, cipher type and security key for the base station AP.
- ⑦ Click **Save** to save your settings.

The screenshot displays the Tenda web interface for configuring a Wireless Extender. The top navigation bar includes 'Home', 'Status', 'Network', 'Wireless', 'Advanced', 'Security', and 'Tools'. The left sidebar lists configuration categories: Basic, Guest Network, Security, Advanced, Wireless Access Control, **Wireless Extender**, WPS, and Wireless Connection Status. The main content area is titled 'Wireless Extender' and contains the following settings:

- Band: 2.4GHz
- Mode: WDS Mode
- WDS Mode: Wireless AP
- Remote SSID: Tenda_home
- Channel: 2437MHz (Channel 6)
- Remote MAC Address: C8:3A:35:00:01:C8
- Remote MAC Address: C8:3A:35:13:05:18
- Security Mode: WPA-PSK/WPA2-PSK
- Authentication Type: WPA-PSK
- Cipher Type: AES
- Security Key: [Masked] Display Key

Below the Security Key field, it specifies '(8-63 ASCII or 64 hex characters)'. An 'Open Scan' button is located at the bottom of the settings area. On the right side, there is a 'Helpful Hints' section with the following text:

Helpful Hints

Enabling WDS or Universal Repeater automatically disables the WPS feature.

Enabling WISP Mode automatically disables the WPS feature, WAN MAC clone, Secondary SSID, and Guest Network.

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.

WISP Mode: In this mode the router acquires Internet access from a wireless Access Point. This method requires you to set the wireless name of Access Point, Channel and Security to match the wireless Access Point.

- ⑧ Click **Network -> DHCP Server** on the base AP's configuration interface to enable the DHCP server.

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 router, it will automatically configure TCP and IP protocol settings for all PCs in LAN, including IP address, subnet mask, gateway and DNS etc..

DHCP Server Disable Enable

Start IP Address: 192.168.0.100

End IP Address: 192.168.0.200

Primary DNS Server: 192.168.0.1

Secondary DNS Server:

Lease Time: 1 day

Save Cancel

Helpful Hints

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 router, it will automatically configure TCP/IP protocol settings for all PCs in LAN, including IP address, subnet mask, gateway and DNS etc..

Start/End IP Address: Specify a IP address range for DHCP assignment by entering a starting/ending IP address.

Note: To activate this feature, you must reboot the router and set all LAN PC's TCP/IP settings to 'Obtain an IP address automatically'.

Step 2: Configure Repeater AP (Tenda Wireless Router 2)

- ① Click **Network** -> **LAN** to specify a LAN IP address that is in the same subnet as yet different from the base station AP.

LAN Settings

Use this section to configure your router's LAN IP settings.

MAC Address: 00:90:4C:01:60:3D

IP Address: 192.168.0.10

Subnet Mask: 255.255.255.0

Save Cancel

Helpful Hints

IP Address: Router's LAN IP address. All LAN PC's default gateway must be set to this address.

Subnet Mask: Router's LAN subnet mask, commonly, 255.255.255.0. All LAN PC's subnet mask must be set to this value.

Note: 1.If you change the LAN IP address, you must use the new one to log on to the web utility.
2.If the new LAN IP is not on the same net segment with the old one, DHCP server will automatically update its IP settings accordingly while old virtual server and DMZ settings will become inoperative; to re-activate such, you must renew the IP settings thereof.

Click **OK** in the appearing screen.

- ② Click **Wireless** -> **Wireless Extender**, select **WDS Mode** from the **Mode** drop-down

list, select **Wireless AP** from the **WDS Mode** drop-down list and then click **Open Scan**.

The screenshot shows the Tenda web interface for the Wireless Extender configuration. The 'Wireless Extender' tab is selected in the left sidebar. The main configuration area has the following settings:

- Band: 2.4GHz
- Mode: WDS Mode
- WDS Mode: **Wireless AP** (highlighted)
- Remote SSID: (empty)
- Channel: 2437MHz (Channel 6)
- Remote MAC Address: (empty)
- Remote MAC Address: (empty)
- Security Mode: None

Buttons for 'Open Scan', 'Save', and 'Cancel' are visible. On the right, there are 'Helpful Hints' explaining WDS and WISP modes.

③ Search for and select the base station AP's SSID and then click **Close Scan**.

This screenshot shows the same configuration page as above, but with the 'Open Scan' button replaced by a 'Close Scan' button. Below the configuration fields, a table displays the results of the scan:

Sel...	SSID	MAC Address	Ch...	Channel Bandwidth	Security	Signal Intensity
<input type="checkbox"/>	Tenda_home	C8-3A-35-0F-F0-2D	6	40 MHz	WPA	-82 dBm

The 'Close Scan' button is located below the table. The 'Helpful Hints' section on the right remains the same.

- ④ The SSID, channel, MAC address, security settings except security key of the base station AP will be automatically added to the corresponding fields. You only need to enter the security key of the base station AP and click **Save**.

Tenda Version: V1.0.0.2 (7514)
Product Name: Wireless AC1200 Dual Band Router

Home Status Network **Wireless** Advanced Security Tools

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

Wireless Extender

Band: 2.4GHz

Mode: WDS Mode

WDS Mode: Wireless AP

Remote SSID: Tenda_home

Channel: 2437MHz (Channel 6)

Remote MAC Address: C8:3A:35:0F:F0:2D

Remote MAC Address:

Security Mode: WPA-PSK/WPA2-PSK

Authentication Type: WPA-PSK

Cipher Type: AES

Security Key: Display Key
(8-63 ASCII or 64 hex characters)

Re-scan

Helpful Hints

Enabling WDS or Universal Repeater automatically disables the WPS feature.

Enabling WISP Mode automatically disables the WPS feature, WAN MAC clone, Secondary SSID, and Guest Network.

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.

WISP Mode: In this mode the router acquires Internet access from a wireless Access Point. This method requires you to set the wireless name of Access Point, Channel and Security to match the wireless Access Point.

5 Click **Network** -> **DHCP Server**, disable the DHCP server there and then click **Save**.

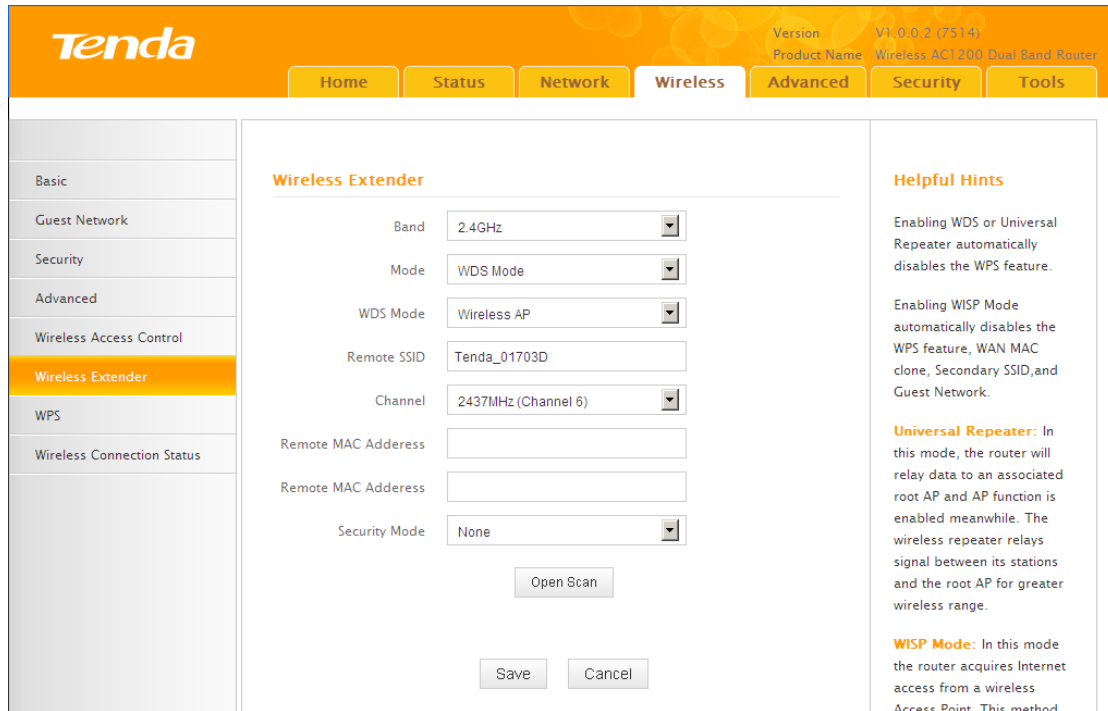
The screenshot shows the Tenda web interface with the 'Network' tab selected. The 'DHCP Server' configuration page is displayed. The DHCP Server is currently set to 'Disable'. The Start IP Address is 192.168.0.100, End IP Address is 192.168.0.200, Primary DNS Server is 192.168.0.1, and Lease Time is 1 day. There are 'Save' and 'Cancel' buttons at the bottom. A 'Helpful Hints' section on the right explains the DHCP protocol and provides instructions on how to specify IP address ranges and activate the feature.

Step 3: Configure Repeater AP (Tenda Wireless Router 3)

1 Click **Network** -> **LAN** to specify a LAN IP address that is in the same subnet as yet different from the base AP and the other remote AP.

The screenshot shows the Tenda web interface with the 'Network' tab selected. The 'LAN Settings' configuration page is displayed. The IP Address is 192.168.0.11 and the Subnet Mask is 255.255.255.0. There are 'Save' and 'Cancel' buttons at the bottom. A 'Helpful Hints' section on the right explains the IP Address and Subnet Mask settings and provides instructions on how to change the LAN IP address and renew the IP settings thereof.

- ② Click **OK** in the appearing screen.
- ③ Click **Wireless -> Wireless Extender**, select **WDS Mode** from the **Mode** drop-down list, select **Wireless AP** from the **WDS Mode** drop-down list and then click **Open Scan**.



- ④ Search for and select the base station AP's SSID and then click **Close Scan**.

The screenshot shows the Tenda web interface for configuring a wireless extender. The 'Wireless Extender' tab is selected. The settings are as follows:

- Band: 2.4GHz
- Mode: WDS Mode
- WDS Mode: Wireless AP
- Remote SSID: (empty)
- Channel: 2437MHz (Channel 6)
- Remote MAC Address: (empty)
- Security Mode: None

Below the settings is a 'Close Scan' button and a table of detected wireless networks:

Sel...	SSID	MAC Address	Ch...	Channel Bandwidth	Security	Signal Intensity
<input type="checkbox"/>	Tenda_home	C8:3A:35:0F:F0:2D	6	40 MHz	WPA	-82 dBm

Helpful Hints on the right side include:

- 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.
- WISP Mode:** In this mode the router acquires Internet access from a wireless

- ⑤ The SSID, channel, MAC address, security settings except security key of the base station AP will be automatically added to the corresponding fields. You only need to enter the security key of the base station AP and click **Save**.

The screenshot shows the same Tenda web interface, but with the security settings filled out:

- Remote SSID: Tenda_home
- Remote MAC Address: C8:3A:35:0F:F0:2D
- Security Mode: WPA-PSK/WPA2-PSK
- Authentication Type: WPA-PSK
- Cipher Type: AES
- Security Key: (masked with dots)

There is a 'Display Key' checkbox and a 'Re-scan' button at the bottom.

Helpful Hints on the right side include:

- 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.
- WISP Mode:** In this mode the router acquires Internet access from a wireless Access Point. This method requires you to set the wireless name of Access Point, Channel and Security to match the wireless Access Point.

- ⑥ Click **Network -> DHCP Server**, disable the DHCP server there and then click **Save**.

The screenshot shows the Tenda router's web interface. The top navigation bar includes 'Home', 'Status', 'Network', 'Wireless', 'Advanced', 'Security', and 'Tools'. The 'Network' tab is selected, and the 'DHCP Server' sub-tab is active. The main content area displays the DHCP Server configuration. The 'DHCP Server' checkbox is checked for 'Disable'. The 'Start IP Address' is 192.168.0.100, 'End IP Address' is 192.168.0.200, 'Primary DNS Server' is 192.168.0.1, and 'Lease Time' is set to 1 day. A 'Save' button and a 'Cancel' button are at the bottom. On the right, a 'Helpful Hints' section explains the DHCP protocol and provides instructions on how to activate the feature.

 **Note** -----

- 1 . To set up a wireless network with WDS, both access points must be WDS capable.
 - 2 . This router's primary SSID will automatically change to match that of the remote router when the WDS feature is configured successfully. Please do not change this SSID. Changing this SSID may interrupt the wireless bridge link.
 - 3 . When the WDS is configured successfully; wireless clients need to join this Tenda wireless router's SSID for Internet access.
-

Verify Bridge Connectivity:

- ① Connect your PC to this Tenda wireless router via a wired or wireless connection and set it to "Obtain an IP address automatically". If you are not clear, see [Appendix 1 Configure PC TCP/IP Setting](#).
- ② Wait until your PC successfully obtains an IP address.

The screenshot shows the 'Local Status' window with the 'Support' tab selected. Under 'Connection status', the following information is displayed:

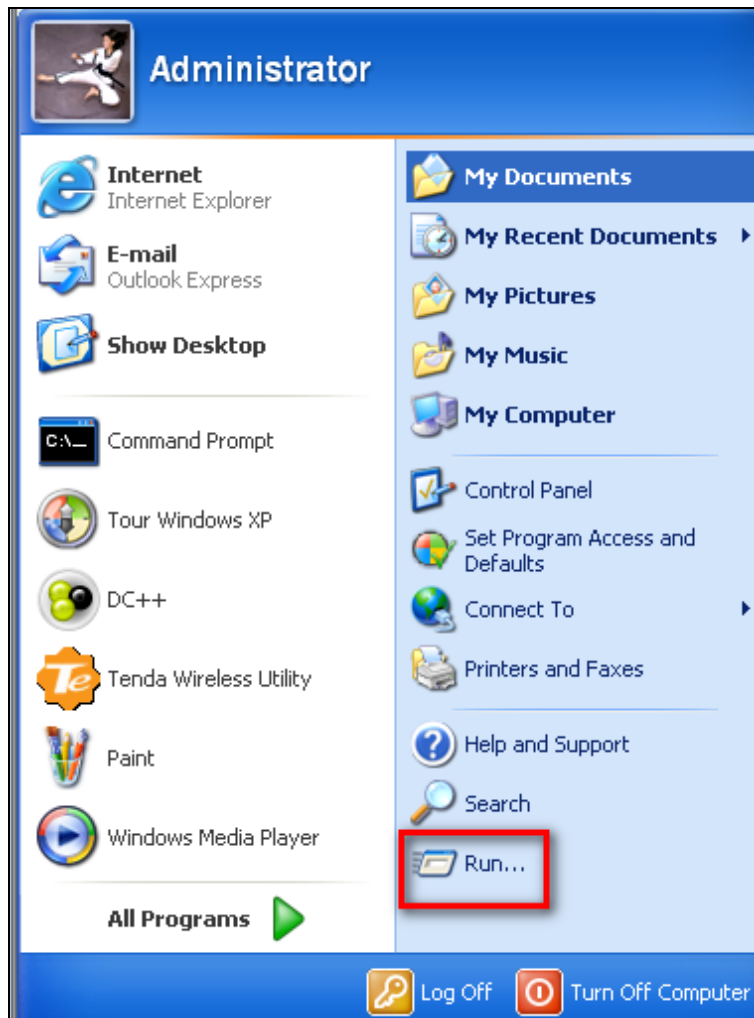
Address Type:	Assigned by DHCP
IP Address:	192.168.0.105
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.0.1

Callout 1 (pointing to IP Address): Last number differs from that of the remote wireless router's LAN IP address.

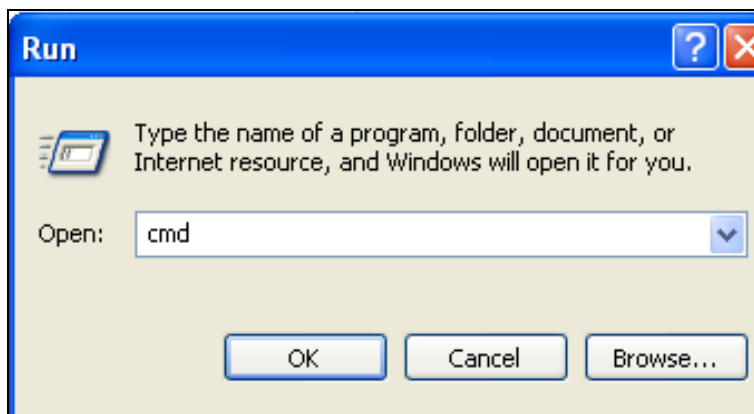
Callout 2 (pointing to Default Gateway): This is the remote router's LAN IP address.

Additional UI elements include a 'Details...' button, a 'Repair' button, and a 'Close' button. A message at the bottom states: 'Windows did not detect problems with this connection. If you cannot connect, click Repair.'

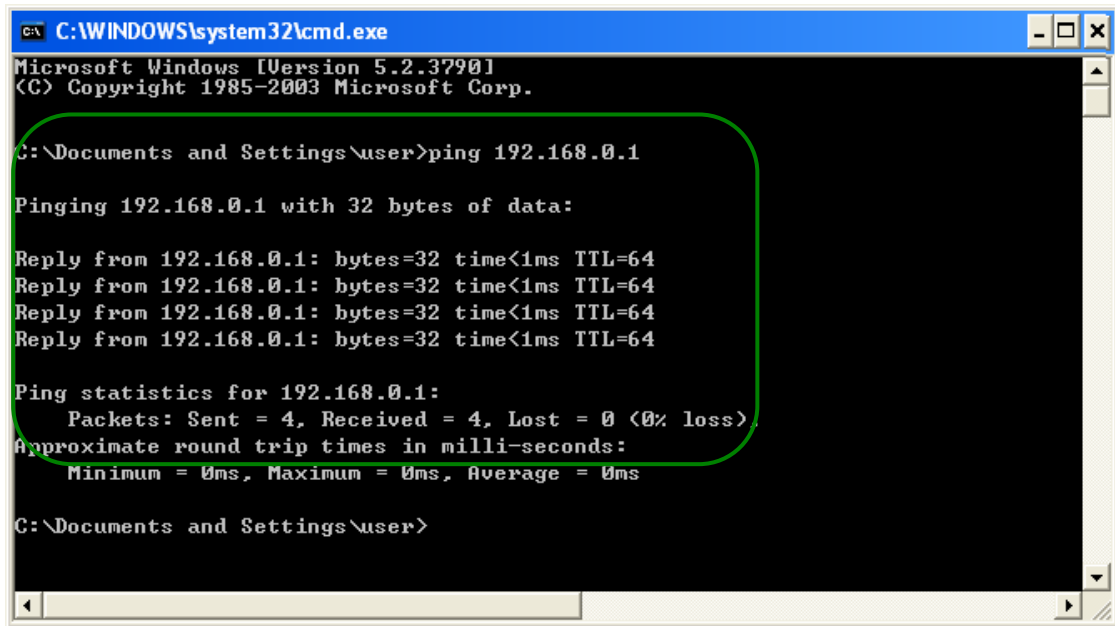
- ③ Click **Start ->Run** .



- ④ Enter **cmd** and click **OK**.



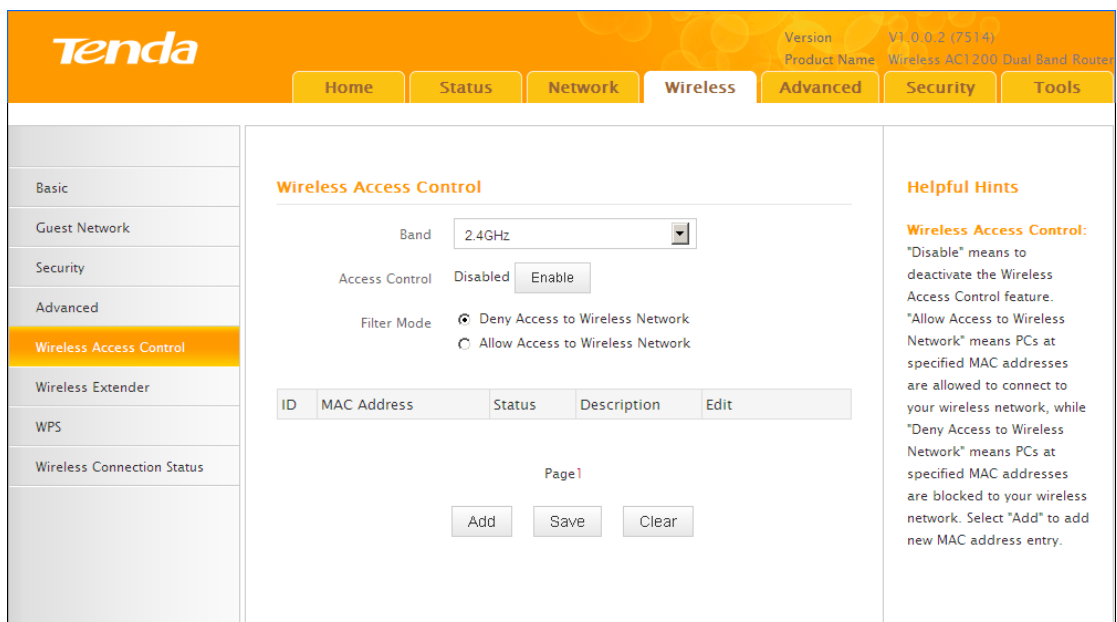
- ⑤ Enter "ping default gateway IP address" . Here in this example, enter "ping 192.168.0.1" and press Enter. If you see a similar screen (highlighted area), the bridge is established successfully.



3.5 Access Control

Specify a list of devices to "Permit" or "Forbid" a connection to your wireless network via the devices' MAC Addresses. Click **Wireless -> Wireless Access Control** to enter the configuration screen.

There are three options available: Disable, Deny Access to Wireless Network and Allow Access to Wireless Network.



A. If you want to allow all wireless clients to join your wireless network, select **Disable**.

B. If you want to allow **ONLY** the specified wireless clients to join your wireless network, select **Allow Access to Wireless Network**.

C. If you want to disallow **ONLY** the specified wireless clients to join your wireless network, select **Deny Access to Wireless Network**.

Wireless Access Control Application Example:

To only allow your own notebook at the MAC address of C8:3A:35:C2:CA:E7 to join your wireless network (SSID : Tenda_home)

Configuration Procedures:

- ① Select the wireless band you wish to use, for example 2.4GHz.
- ② Click **Enable**.
- ③ Select **Allow Access to Wireless Network**.

The screenshot shows the Tenda router's web interface for configuring Wireless Access Control. The top navigation bar includes Home, Status, Network, Wireless, Advanced, Security, and Tools. The left sidebar lists various settings, with 'Wireless Access Control' selected. The main content area is titled 'Wireless Access Control' and contains the following settings:

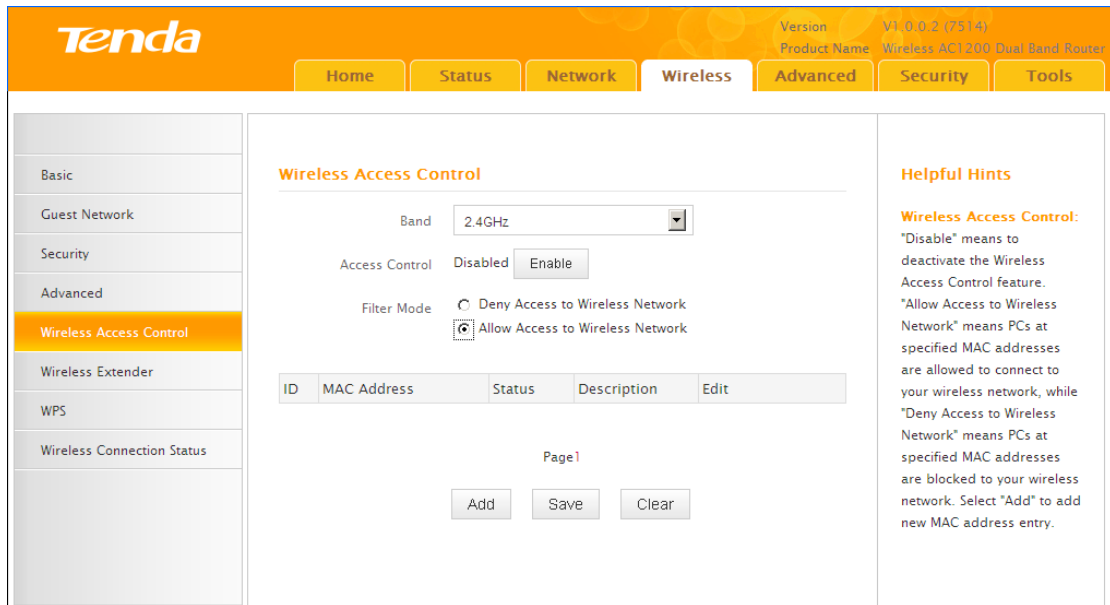
- Band: 2.4GHz (dropdown menu)
- Access Control: Disabled (radio button) / **Enable** (radio button)
- Filter Mode: Deny Access to Wireless Network / **Allow Access to Wireless Network**

Below the settings is a table with the following columns: ID, MAC Address, Status, Description, and Edit. The table is currently empty. Below the table are 'Add', 'Save', and 'Clear' buttons. A 'Page 1' indicator is also present.

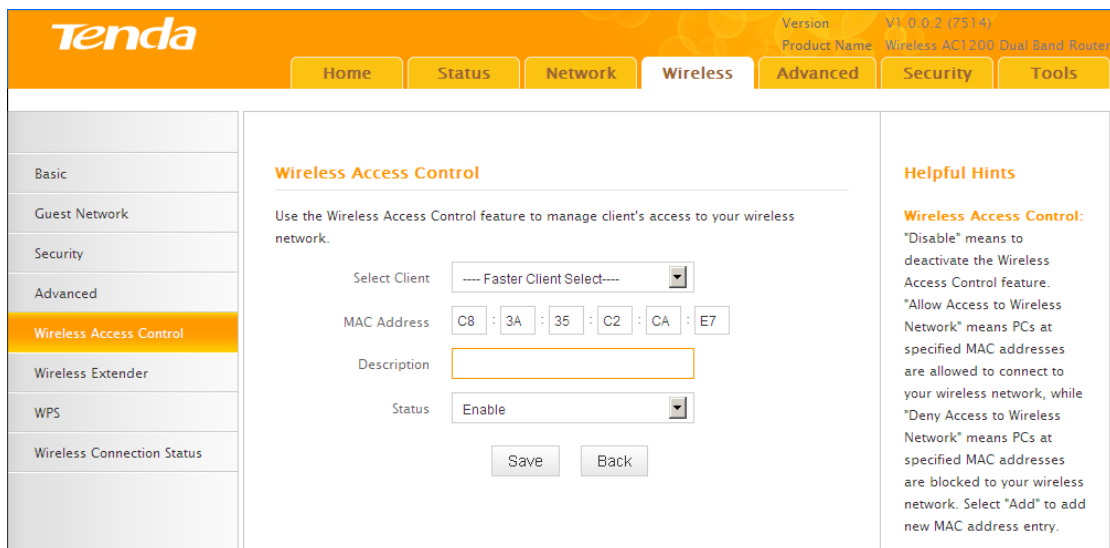
On the right side, there is a 'Helpful Hints' section with the following text:

Wireless Access Control:
"Disable" means to deactivate the Wireless Access Control feature.
"Allow Access to Wireless Network" means PCs at specified MAC addresses are allowed to connect to your wireless network, while
"Deny Access to Wireless Network" means PCs at specified MAC addresses are blocked to your wireless network. Select "Add" to add new MAC address entry.

- ④ Click **Add**.



⑤ Select or enter your wireless MAC address and click **Save**.



⑥ Below screen will then appear.

Tenda
Version V1.0.0.2 (7514)
Product Name Wireless AC1200 Dual Band Router

Home
Status
Network
Wireless
Advanced
Security
Tools

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

Wireless Access Control

Band: 2.4GHz

Access Control: Disabled Enable

Filter Mode: Deny Access to Wireless Network
 Allow Access to Wireless Network

ID	MAC Address	Status	Description	Edit
1	C8:3A:35:C2:CA:E7	Enable		Edit Delete

Page 1

Add
Save
Clear

Helpful Hints

Wireless Access Control:
 "Disable" means to deactivate the Wireless Access Control feature.
 "Allow Access to Wireless Network" means PCs at specified MAC addresses are allowed to connect to your wireless network, while
 "Deny Access to Wireless Network" means PCs at specified MAC addresses are blocked to your wireless network. Select "Add" to add new MAC address entry.



Tip -----

1. Up to 16 wireless MAC addresses can be configured.
 2. If you don't want to configure the complex wireless security settings and want to disallow others to join your wireless network, you can configure a wireless access control rule to allow only your own wireless device.
-