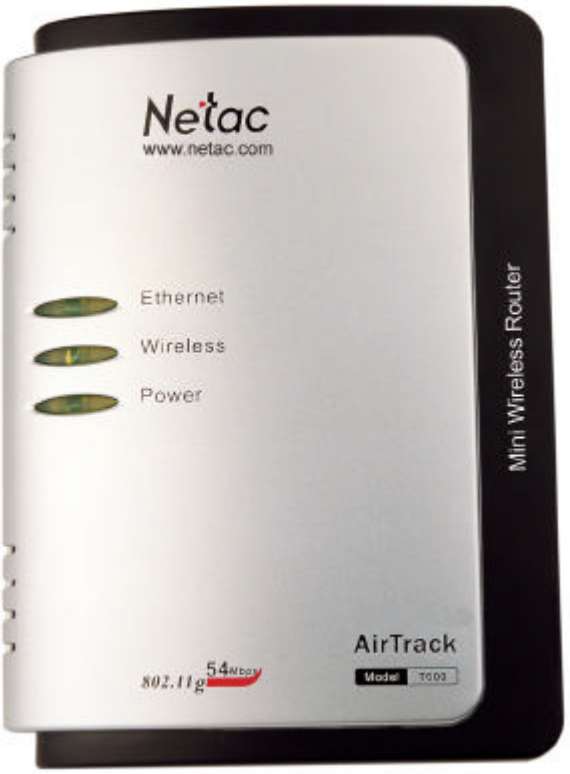
Netac

Netac AirTrack T600

Mini Wireless Router

User's Manual



Netac Technology Co., Ltd. http://www.netac.com

REMARKS

Netac fulfill the repair service during warranty period in promised support range. This product is not guaranteed for its compatibility with all kinds of computers and Operating System. Netac Technology Co., Ltd. is not responsible for any loss arising out of using this product. The governing laws for this product are laws of the People's Republic of China.

Netac reserves the rights to update user's manual based on the application upgrade without prior notice. All changes will be put into the new edition manual. Please visit website http://www.netac.com to download the latest user's manual.

Radio Frequency Interference Remarks

This equipment has passed the test, and affirmed that it compatible to constrain B type digital equipment in section 15 of FCC. This constraint is mainly used to protect the home-keeping equipment, avoid to be interfered banefully. This equipment can produce, use, and radiate radio frequency energy. If you don't install and use according to the descriptive manual, the equipment may interfere the wireless communication banefully.

If this equipment interfere the wireless communication and TV receiving device banefully (can tested by turning on/off the equipment's power), users can try to correct interference referring to the following method:

1 Adjust or resettle receive antenna.
2 Enlarge the distance between equipment and receiver.
3 Connect the equipment to the outlet different to the receiver.
4 Consult dealer or experienced wireless/TV technology engineer.

The radiant output power is lower than the exposed constraint of FCC wireless radio frequency brings. Nevertheless, it should notice that reduce the latent radiance to human body when you use equipment. Please keep more than 20cm space between equipment and human body when you use and install it.

Under some cases or environments, the use of this equipment may be bounded, if there is no clear designation to allow to use Wireless Local Area Internet equipment, please ask whether it can be used or not. Such as:

1 On the airplane.
2 The environment easy to burn and burst.
3 At some particular situation (such as airport, hospital, chemical/petrol/gas industrial place, private house, and so on).

Table of Contents

1 Introduction

1.1 Welcome

Thank you for purchasing Netac AirTrack T600 Mini Wireless Router. Netac AirTrack T600 Mini Wireless Router is a wireless network product for SOHO and family, it is developed successfully based on the environment of wirelessly broadband access technology oncoming and wired network extend to wirelessly network. This product can be used easily, provide all-round network solution scheme, economized on saving the cost of the network usage availably.

1.2 Checklist

- Netac AirTrack T600 Mini Wireless Router
- Original-packaged Power Adapter
- Installation CD (contain User's Manual)
- Quick User Guide
- Certificate of inspection
- Warranty

1.3 Product function

- Support multi-mode
- AP Router Mode
  - ✓ Support wireless operating mode selection
  - ✓ Support SSID settings
  - ✓ Channel selection
  - ✓ Security settings
  - ✓ Protection Mode settings
  - ✓ Transmit Rate (options: Auto, 1, 2, 5.5, 11, 24, 36, 48, 54Mbps)
  - ✓ MAC Filtering
  - ✓ DHCP Server
  - ✓ Support IP address conversion
- Repeater Mode
  - ✓ Support Parent/Child MAC addresses settings
  - ✓ Support wireless operating mode selection
  - ✓ Channel selection
  - ✓ Security settings
  - ✓ Protection Mode settings

- ✓ Transmit Rate (options: Auto, 1, 2, 5.5, 11, 24, 36, 48, 54Mbps)
- ✓ MAC Filtering

- Point-to-Point Mode (P2P Mode)
  - ✓ Remote wireless bridge device's MAC address settings
  - ✓ Support wireless operating mode selection
  - ✓ Channel selection
  - ✓ Security settings
  - ✓ Protection Mode settings
  - ✓ Transmit Rat e (options: Auto, 1, 2, 5.5, 11, 24, 36, 48, 54Mbps)
- Point-to-Multipoint (PMP) Mode
  - ✓ Remote wireless bridge device's MAC address settings
  - ✓ Support wireless operating mode selection
  - ✓ Channel selection
  - ✓ Security settings
  - ✓ Protection Mode settings
  - ✓ Transmit Rat e (options: Auto, 1, 2, 5.5, 11 , 24, 36, 48, 54Mbps)
- Client Mode
  - ✓ Support wireless operating mode selection
  - ✓ Support Cloning MAC address
  - ✓ Support SSID settings
  - ✓ Operation Mode selection (Infrastructure or Ad -Hoc)
  - ✓ Channel selection
  - ✓ Security settings

1.4 Appearance

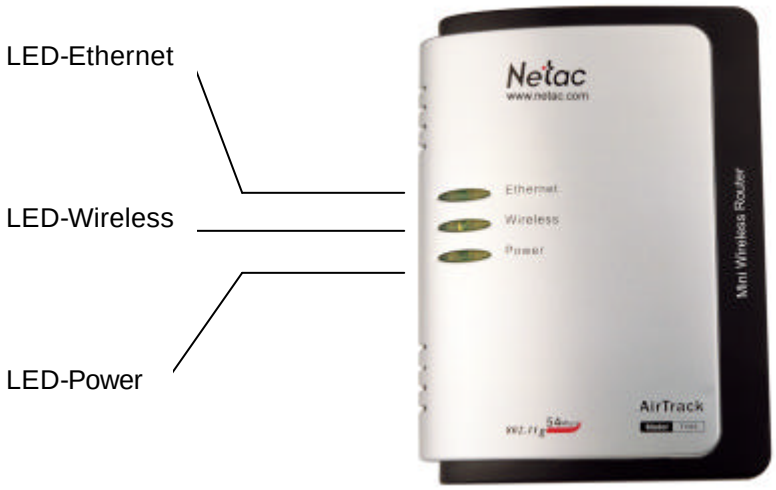
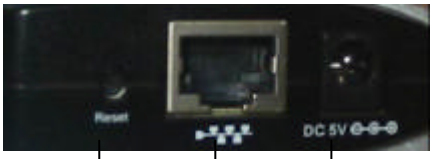


Figure 1.1 Appearances

LED-Ethernet light indicates the connection status of Internet by Ethernet interface. The light is twinkling when transfer data.

LED-Wireless light indicates the connection status of Internet wirelessly. The light is twinkling when transfer data.

LED-Power light indicates the power-supplied status. The light is on when power-on normally.



Reset Ethernet Port Power Port

Figure1.2 Upside

2 Quick Start

The Netac AirTrack T600 Mini Wireless Router (abbreviated to: T600) is configured through a website protected by password. Table 2.1 lists the default IP address, user name, and password for T600 configuration website.

Table 2.1 Default Values

Parameter	Default Value
IP Address	192.168.1.1
User name	admin
Password	password

The following steps set up T600 for immediate use:

1. Connect T600 with the computer through an Ethernet cable.
2. Plug in the 5V power supply.
3. Please ensure the IP address of your computer is on the 192.168.1.x subnet, such as 192.168.1.100.
4. Open a web browser and input "**192.168.1.1**", then press **Enter**.
5. Type "**admin**" for the user name field and "**password**" for the password.
6. The default operating mode is AP Router Mode. To switch to Repeater, P2P, PMP or Client Mode, go to the Mode Selection page and select the desired mode, click **Apply**. T600 will reboot and enter the selected mode.
7. After T600 reboots, go to the Mode Selection page and click **Setup**. Configure the applicable properties for that mode, such as security, SSID, channel, and click **Apply** to take effect.
8. T600 is now ready to use.

2.1 Default Factory Settings

Restore the default factory settings by holding the "Reset" button for at least 10 seconds with T600 powered on.

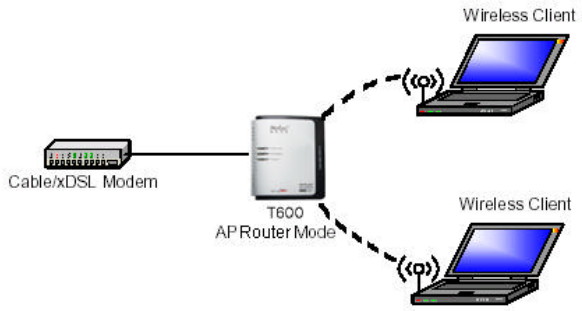
3 Operating Mode Overview

This section provides an overview of T600 operating modes.

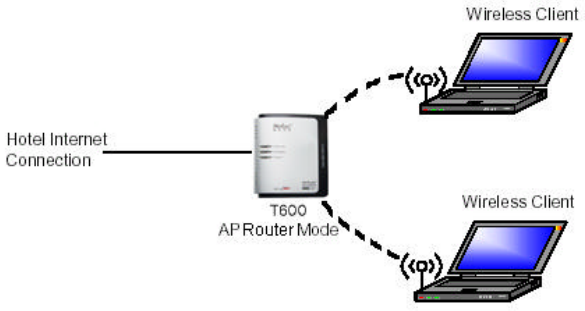
NOTE: The AirTrack T610 Wireless Broadband Router in the following pictures is router product of Netac. You can choose the product of the same kind from the other companies to build net.

3.1 AP Router Mode

The default operating mode is AP Router Mode. When the system is restored to the default factory settings, the operating mode also reverts to AP Router Mode. In AP Router Mode, T600 works as a standard AP, where wireless clients connected to the AP can then connect to other wireless clients or to the wired network. For example, when traveling to a hotel that has high-speed Internet access, or at home, the user can connect to the Internet through the AP, which is connected to an Ethernet cable in the room (Figure 3.1).



Family's AP Router Mode



Traveler's AP Router Mode

Figure 3.1 AP Router Mode

T600 AP can act as a DHCP server, support IP address conversion.

Section 5.1 "AP Router Mode Setup Page" describes the configuration details for this mode.

3.2 Repeater Mode

Repeater Mode extends the range of a wireless network. Repeater nodes retransmit the signal of an AP or wireless router to extend the range of the AP/wireless router. Wireless clients can associate with the repeater. Up to two repeaters can be connected to a T600 in AP Router Mode. Each repeater can be connected to another repeater using a Parent/Child MAC address scheme.

To configure T600 as a Repeater, ensure the following:

1. Enter the MAC address of the Parent AP/wireless router in the Parent MAC Address field of T600 Repeater (on the Repeater Mode setup page; Figure 5.7)
2. Please refer to the Parent AP/wireless router's user manual for the repeater configuration of Parent AP/wireless router.
3. To connect additional repeaters, enter the MAC address of the additional Repeater in the Child MAC Address field of T600 Repeater (on the Repeater Mode setup page; Figure 5.7). This Child repeater can become the Parent for the next repeater to be linked in turn.

Section 5.2 "Repeater Mode Setup Page" describes the configuration details for this mode.

Figure 3.2 shows the network with T600 Repeaters connected to an AP, with each Repeater allowing wireless clients to associate.

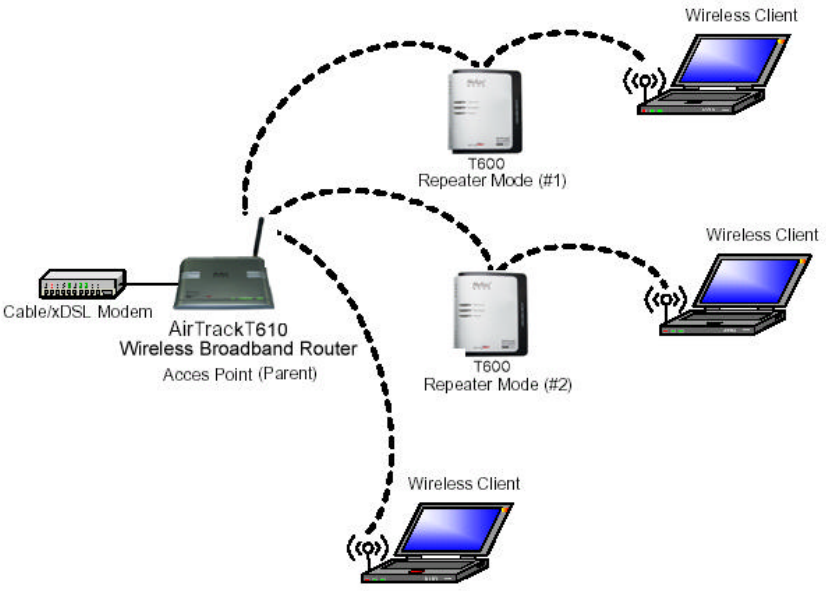
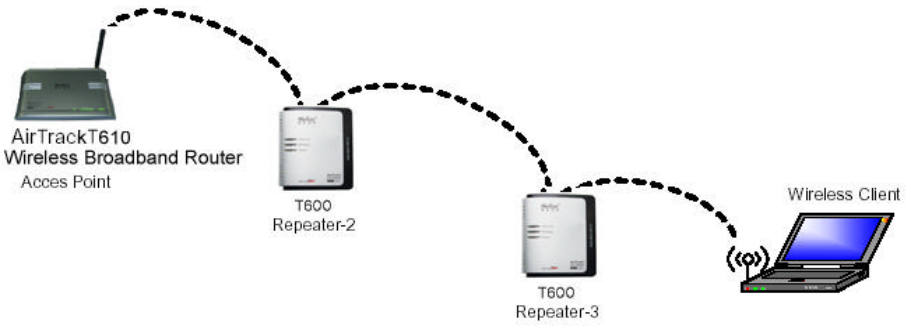


Figure 3.2 Repeater Mode

Figure 3.3 shows the network with T600 Repeaters as Parents and Children for other Repeaters.



Access Point: Child = Repeater-2

Repeater-2: Parent = Access Point; Child = Repeater-3

Repeater-3: Parent = Repeater-2; No Child

Figure 3.3 Repeater Mode (Parent/Child MAC Addresses)

3.3 Point-to-Point (P2P) Mode

Two T600 devices, each in Point-to-Point (P2P) Mode, establish a wireless connection between two wired networks, as shown in Figure 3.4. The two T600 devices operating in P2P Mode do not allow client connecting to it directly.

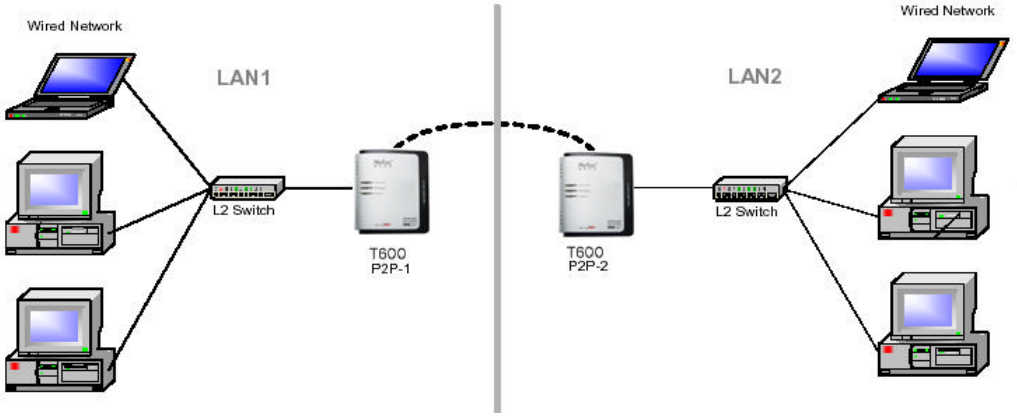


Figure 3.4 P2P Mode (Wireless Bridge)

To configure T600 devices to establish a P2P wireless bridge, ensure the following:

1. Enter the MAC address of T600 P2P-2 device in the P2P MAC address field in T600 P2P-1 device (on the P2P Mode Setup page, Figure 5.8).
2. Enter the MAC address of T600 P2P-1 device in the P2P MAC address field in T600 P2P-2 device (on the P2P Mode Setup page, Figure 5.8).

Section 5.3 "P2P Mode Setup Page" describes the configuration details for this mode.

3.4 Point-to-Multipoint (PMP) Mode

A T600 device operating in Point-to-Multipoint (PMP) Mode wirelessly connects two or more wired networks, as shown in Figure 3.5. The root T600 device (LAN 1) operates in PMP Mode, and the other T600 devices (LAN 2, LAN3) must operate in P2P Mode.

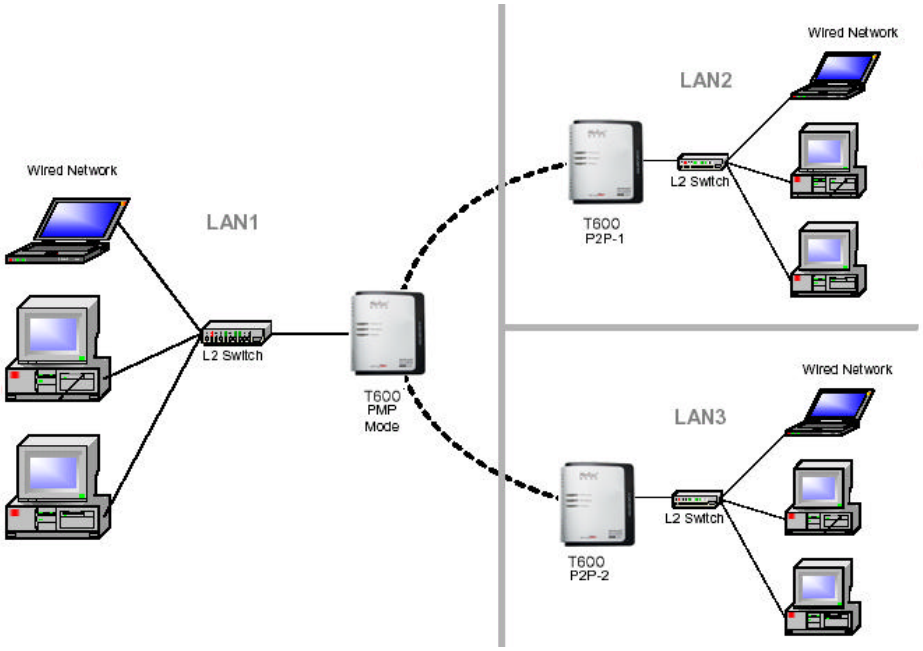


Figure 3.5 PMP Mode (Wireless Bridge)

When operating in PMP Mode, T600 device does not allow client connecting to it directly.

To configure T600 devices to establish a PMP wireless bridge, ensure the following:

1. Enter the MAC address of T600 P2P-1 device and T600 P2P-2 device in the Remote Bridge MAC address field in T600 PMP device (on the PMP Mode Setup page, Figure 5.11).
2. Enter the MAC address of T600 PMP device in the Remote Bridge MAC address field in T600 P2P-1 device and T600 P2P-2 device (on the P2P Mode Setup page, Figure 5.8).

Section 5.4 "PMP Mode Setup Page" describes the configuration details for this mode.

3.5 Client Mode

When T600 operate in Client Mode, T600 device associates to an AP within its range in infrastructure mode, as shown in Figure 3.6, or joins with another Client Mode T600 device in an Ad-Hoc network, as shown in Figure 3.7. In Client Mode, T600 operates as a normal wireless client.

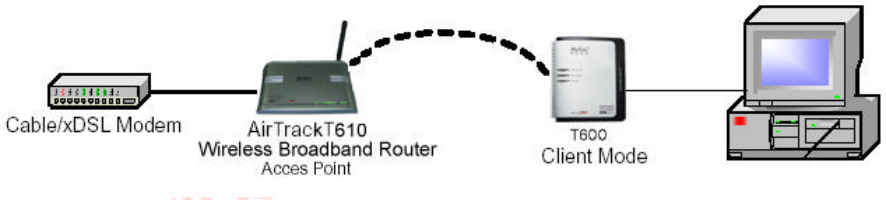


Figure 3.6 Client in Infrastructure Mode

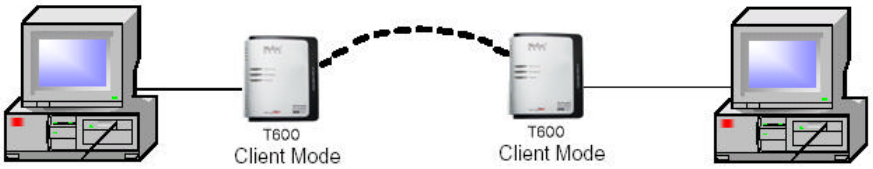


Figure 3.7 Client in Ad-Hoc Mode

Section 5.5 "Client Mode Setup Page" describes the configuration details for this mode.

4 Wireless Security Support

T600 supports WEP and WPA-PSK encryption as shown in Table 4.1.

Table 4.1 Wireless Securities

Mode	WEP	WPA-PSK	Comments
AP Router	Yes	Yes	In AP Router Mode, T600 supports WEP and WPA-PSK.
Repeater	Yes	Yes	In Repeater Mode, T600 supports WEP and WPA-PSK.
Point-to-Point (P2P)	Yes	No	The connection between T600 devices in P2P Mode supports only WEP.
Point-to-Multipoint (PMP)	Yes	No	The connection between T600 devices in PMP Mode supports only WEP.
Client	Yes	Yes (Infrastructure Mode)	In Client Mode, T600 operates as a wireless client, so it supports WEP and WPA-PSK when connecting with an AP in infrastructure mode and only WEP when connecting to an Ad-Hoc network.
		No (Ad-Hoc Mode)	

5 Mode Selection Page

The first step in using T600 is selecting the operating mode. The default operating mode is AP Router Mode.

To view the web page for the device, open a web browser and enter "**192.168.1.1**" (default IP address of the device) on the address bar. The default username is "**admin**" and the default password is "**password**". Figure 5.1 shows the page displayed after logged on.

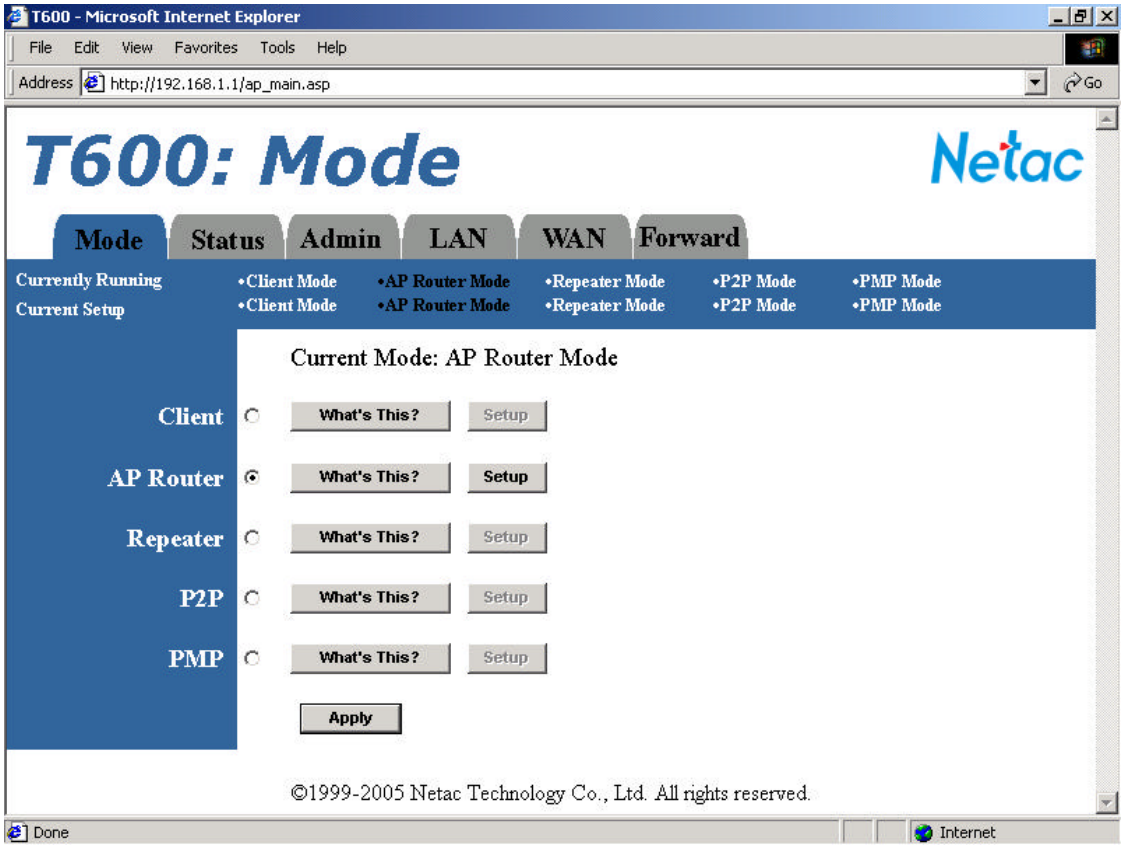


Figure 5.1 Mode Selection Page

To select a mode, click the Mode tab. Click the radio button next to the desired mode and click the **Apply** button. The device will reboot in the selected mode. After rebooted, click the **Setup** button to begin configuring the device.

The **What's This?** button opens a popup window with a brief description for each mode.

5.1 AP Router Mode Setup Page

To configure T600 in AP Router Mode, select AP Router in the Mode Selection Page (Figure 5.1), click **Apply**

to reboot T600, and then click the **AP Router: Setup** button. Figure 5.2 and Table 5.1 describe the basic AP Router Mode setup options. Click the **Apply** button to apply the settings, and a status page will appear. Click the **Cancel** button to return to the Mode Selection page.

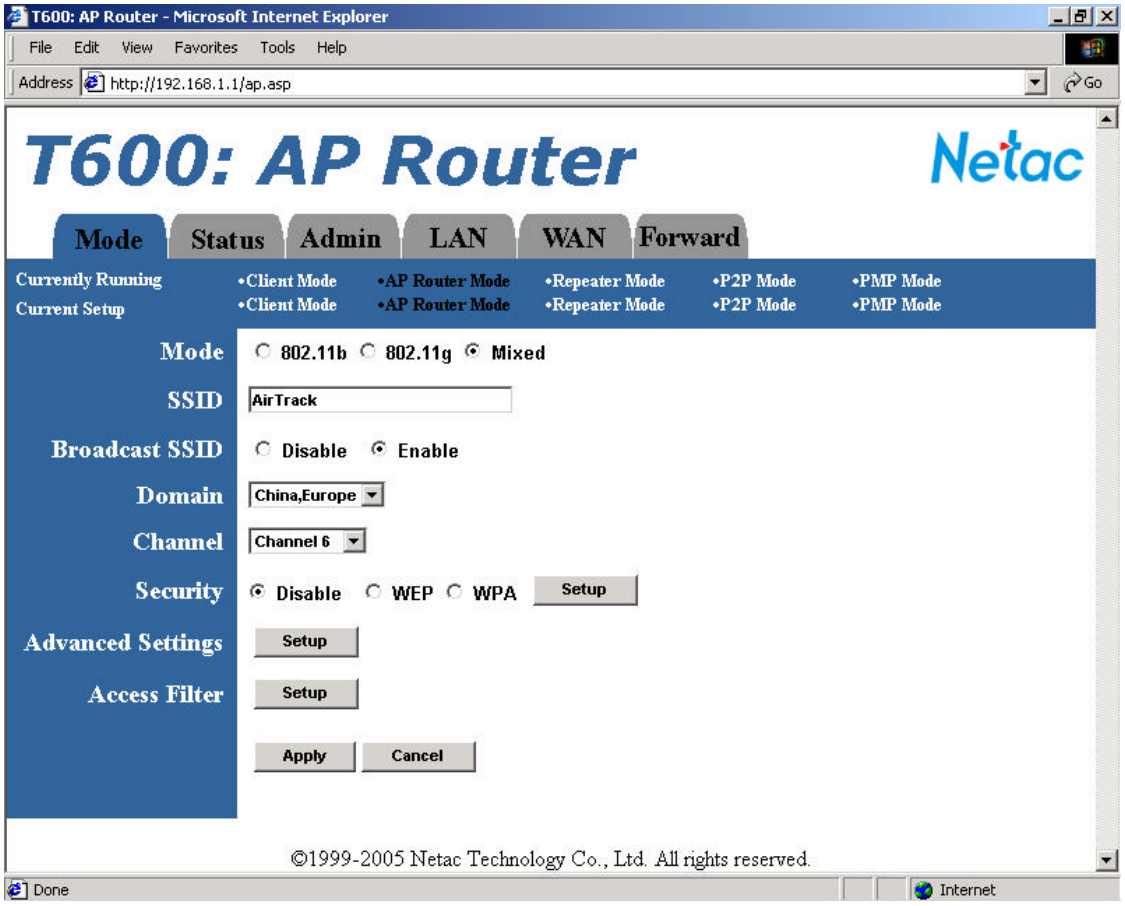


Figure 5.2 AP Router Mode Setup Page

Table 5.1 AP Router Mode Setup Options

Field	Description
Mode	Select 802.11b, 802.11gor Mixed mode.
SSID	Wireless Network Name.
Broadcast SSID	Disable/enable the SSID broadcast feature.
Domain	Select domain. Different domain use different channel.
Channel	Select the RF channel. Default: Channel 6.
Security	Select Disable (Default), WEP or WPA. Select one, and click the **Setup** button to enter the WEP configuration page (Figure 5.3) or WPA (Figure 5.4).
Advanced Settings	Click **Setup** to configure Advanced Settings. Figure 5.5.
Access Filter	Click **Setup** to configure the MAC Filter List. Figure 5.6.

5.1.1 AP Router Mode - Security Configuration

To enable security, select the desired security mode (WEP or WPA) in the AP Router Mode setup page (Figure 5.2) and click the **Setup** button to enter the configuration page.

5.1.1.1 WEP Configuration Page

Figure 5.3 and Table 5.2 detail the WEP configuration page for AP Router Mode.

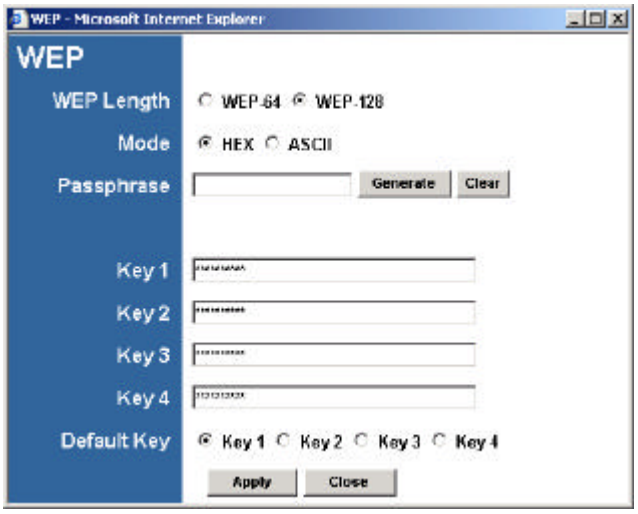


Figure 5.3 AP Router Mode - WEP Configuration Page

Table 5.2 AP Router Mode - WEP Configuration

Field	Description
WEP Length	Select WEP key length: 64 bits or 128 bits.
Mode	Select WEP key format: Hexadecimal or ASCII.
Passphrase	Passphrase is used to generate the WEP keys. Click the **Generate** button to generate the keys. Click the **Clear** button to clear the Passphrase field.
Key 1-4	WEP keys. The format of the keys are specified by the WEP Length and Mode.
Default key	Select default WEP key from Keys1-4.

5.1.1.2 WPA Configuration Page

Figure 5.4 and Table 5.3 detail the WPA configuration for AP Router Mode.

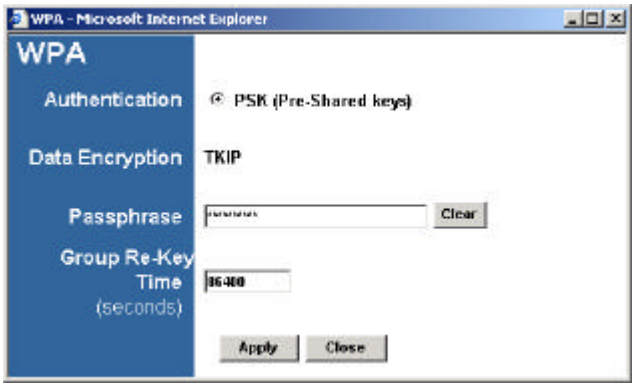


Figure 5.4 AP Router Mode - WPA Configuration Page

Table 5.3 AP Router Mode - WPA Configuration

Field	Description
Authentication	Use PSK (Pre-Shared Keys) authentication only.
Data Encryption	TKIP data encryption.
Passphrase	WPA key provided by the user. Click the **Clear** button to clear the Passphrase field.
Group Re-Key Time	Group Re-Key interval (seconds). Default: 86400.

5.1.2 AP Router Mode - Advanced Settings

Access the Advanced Settings page by clicking the **Advanced Settings: Setup** button in the AP Router Mode setup page (Figure 5.2). The Advanced Settings page allows the user to configure advanced Radio settings and extend the wireless cover range of T600 in AP Router Mode by connecting it to up to two repeaters. Figure 5.5 and Table 5.4 details the Advanced Settings for AP Router Mode.

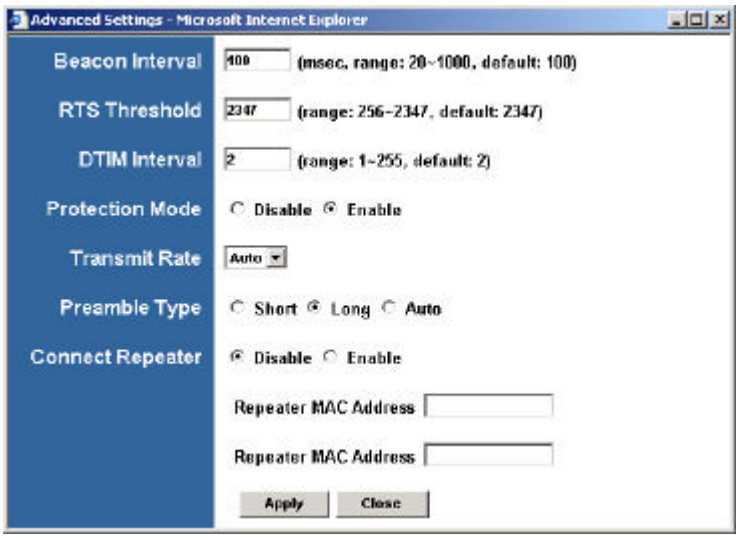


Figure 5.5 AP Router Mode - Advanced Settings Page

Table 5.4 AP Router Mode - Advanced Settings

Field	Description
Beacon Interval	Beacon interval (milliseconds).
RTS Threshold	RTS threshold.
DTIM Interval	DTIM interval.
Protection Mode	Allows user to force 802.11g Protection (RTS/CTS) mode off.
Transmit Rate	Select transmit rate: Auto (Default) or a fixed rate.
Preamble Type	Select: Short preamble, Long preamble or Auto.
Connect Repeater	Disable/Enable the use of a Repeater.
Repeater MAC Address	MAC address for each Repeater. Up to two Repeaters can be connected.

5.1.2.1 Connect Repeater

Up to two Repeaters can be connected. If a Repeater is used along with the Access Point, the settings steps are the following:

1. Go to the Advanced Settings Page.
2. Select **Enable** for the **Connect Repeater** field.
3. Enter the MAC address for each Repeater in the **Repeater MAC Address** field.

5.1.3 AP Router Mode - Access Filter (MAC Filter List) Setup

Click the **Access Filter: Setup** button in the AP Router Mode setup page (Figure 5.2) to access the Access Filter page. The Access Filter page allows the user to configure T600 to allow or deny association to itself based on the MAC address of the client. Up to 32 MAC addresses can be added to the list. Figure 5.6 and Table 5.5 detail the options.

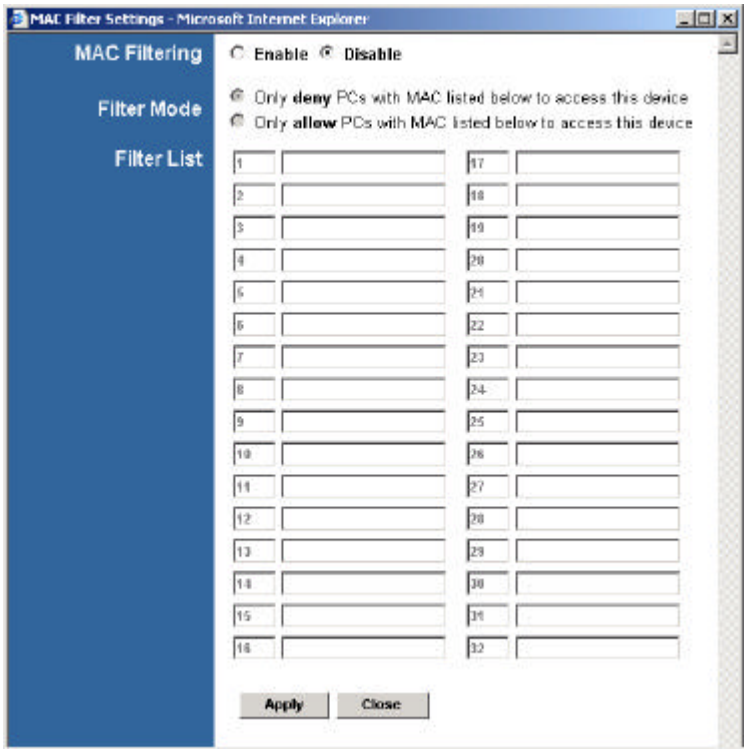


Figure 5.6 AP Router Mode - Access Filter Page

Table 5.5 AP Router Mode - Access Filter Settings

Field	Description
MAC Filtering	Enable/Disable MAC filtering mode.
Filter Mode	Allow or deny clients listed in MAC addresses to access T600.
Filter List	Up to 32 MAC addresses can be listed.
MAC addresses	List of MAC addresses to filter.

5.2 Repeater Mode Setup Page

To configure T600 in Repeater Mode, select Repeater in the Mode Selection page (Figure 5.1), click **Apply** to reboot T600, and then click the **Repeater: Setup** button. Figure 5.7 and Table 5.6 describe the Repeater Mode setup options.

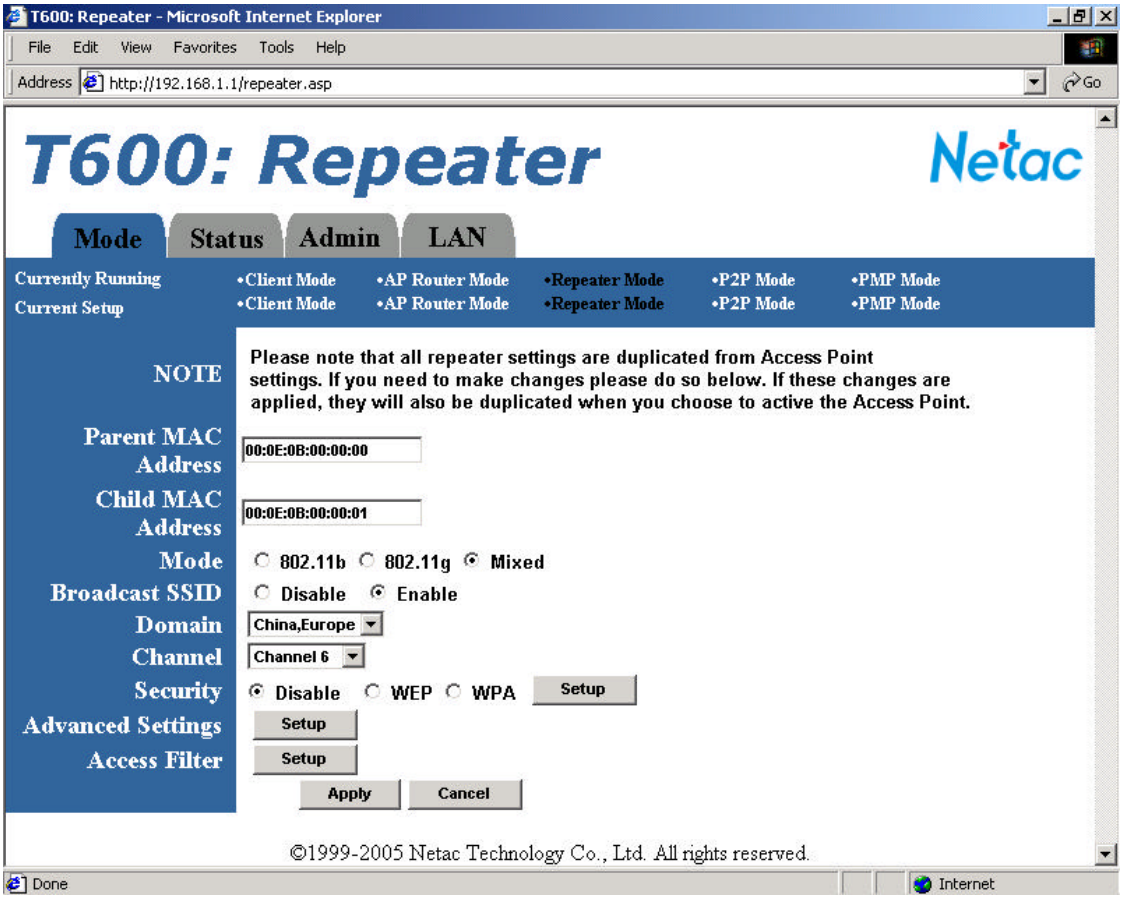


Figure 5.7 Repeater Mode Setup Page

Table 5.6 Repeater Mode Setup Options

Field	Description
Parent MAC Address	MAC address of Parent AP/Router/Repeater to which this Repeater is connected.
Child MAC Address	MAC address of the Child Repeater connected to this Repeater.
Mode	Select 802.11b, 802.11g or Mixed mode.
Broadcast SSID	Disable/Enable the SSID broadcast feature.
Domain	Select domain. Different domain use different channel.
Channel	Select the RF channel. Default: Channel 6.
Security	Select Disable (Default), WEP or WPA. Select one, and click the **Setup** button to enter the WEP configuration page (Figure 5.3) or WPA (Figure 5.4).
Advanced Settings	Click **Setup** to configure Advanced Settings (Figure 5.8).
Access Filter	Click **Setup** to configure the Access Filter (Figure 5.6).

***NOTE**: Under Repeater Mode, you must make sure the related configuration (such as Security, Channel, etc.) of Parent AP and Child AP/Router are consistent with T600 in order to communicate with each other.*

- To set up the Repeater, the user must enter the MAC address of the Parent AP/Router/Repeater which this Repeater is connected in the Parent MAC Address field.
- To link an additional repeater, the user must enter the MAC address of the additional repeater in the Child MAC Address field.

5.2.1 Repeater Mode - Security Configuration

To enable security, select the desired security mode (WEP or WPA) in the Repeater Mode setup page (Figure 5.7) and click the **Setup** button to enter the configuration page. Under Repeater Mode, you must make sure the security configuration of AP and Network Card are consistent with Repeater in order to communicate with each other.

5.2.1.1 WEP Configuration Page

The Repeater Mode WEP Configuration page is identical to the one for AP Router Mode. Refer to Figure 5.3, "AP Router Mode - WEP Configuration Page" for the details.

Table 5.7 details the WEP configuration.

Table 5.7 Repeater Mode - WEP Configuration

Field	Description
WEP Length	Select WEP key length: 64 bits or 128 bits.
Mode	Select WEP key format: Hexadecimal or ASCII.
Passphrase	Passphrase is used to generate the WEP keys. Click the **Generate** button to generate the keys. Click the **Clear** button to clear the Passphrase field.
Key 1-4	WEP keys.
Default key	Select default WEP key from Keys1-4.

5.2.1.2 WPA Configuration Page

The Repeater Mode WPA Configuration page is identical to the one for AP Router Mode. Refer to Figure 5.4, "AP Router Mode - WPA Configuration Page" for the details.

Table 5.8 details WPA configuration.

Table 5.8 Repeater Mode - WPA Configuration

Field	Description
Authentication	Use PSK (Pre-Shared Keys) authentication only.

Data Encryption	TKIP data encryption.
Passphrase	WPA key.
Group Re-Key Time	Group Re-Key interval (seconds).

5.2.2 Repeater Mode - Advanced Settings

Access the Advanced Settings page by clicking the **Advance Settings: Setup** button in the Repeater Mode setup page (Figure 5.7). The Advanced Settings page allows the user to configure advanced Radio settings for the Repeater. Figure 5.8 and Table 5.9 detail the options.

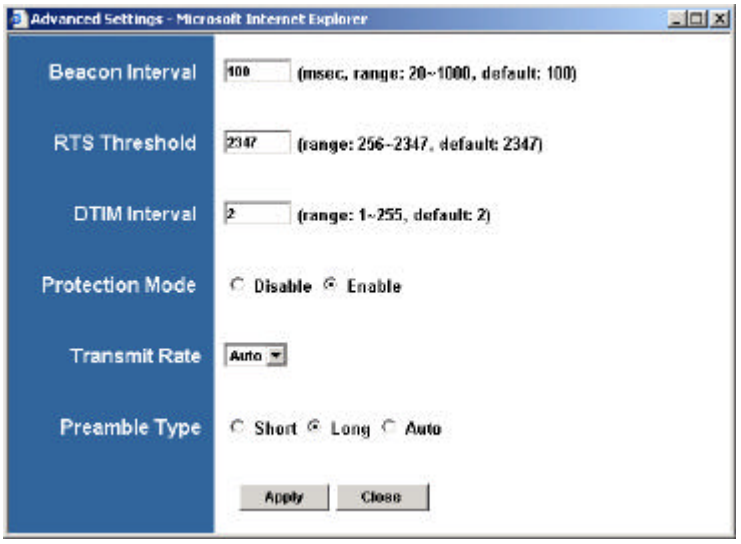


Figure 5.8 Repeater Mode - Advanced Settings Page

Table 5.9 Repeater Mode - Advanced Settings

Field	Description
Beacon Interval	Beacon interval (milliseconds).
RTS Threshold	RTS threshold.
DTIM Interval	DTIM interval.
Protection Mode	Allows user to force 802.11g Protection (RTS/CTS) mode off.
Transmit Rate	Select transmit rate: Auto (Default) or a fixed rate.
Preamble Type	Select: Short preamble, Long preamble or Auto.

5.2.3 Repeater Mode - Access Filter (MAC Filter List) Setup

Click The **Access Filter: Setup** button in the Repeater Mode setup page (Figure 5.7) to access the Access Filter page. The Access Filter page allows the user to configure the Repeater to allow or deny association to itself based on the client's MAC address. Up to 32 MAC addresses can be added to the list.

The Repeater Mode Access Filter page is identical to the one for AP Router Mode. Refer to Figure 5.6, "AP Router Mode - Access Filter Page" for the details. Table 5.10 details the options.

Table 5.10 Repeater Mode - Access Filter Settings

Field	Description
MAC Filtering	Enable/Disable MAC filtering mode.
Filter Mode	Allow or deny clients listed in MAC address to access repeater.
Filter List	Up to 32 MAC addresses can be listed.
MAC address	List of MAC addresses to filter.

5.3 P2P Mode Setup Page

To configure T600 in P2P Mode, select P2P in the Mode Selection page (Figure 5.1), click **Apply** to reboot T600, and then click the **P2P: Setup** button. Figure 5.9 and Table 5.11 describe the P2P Mode setup options.

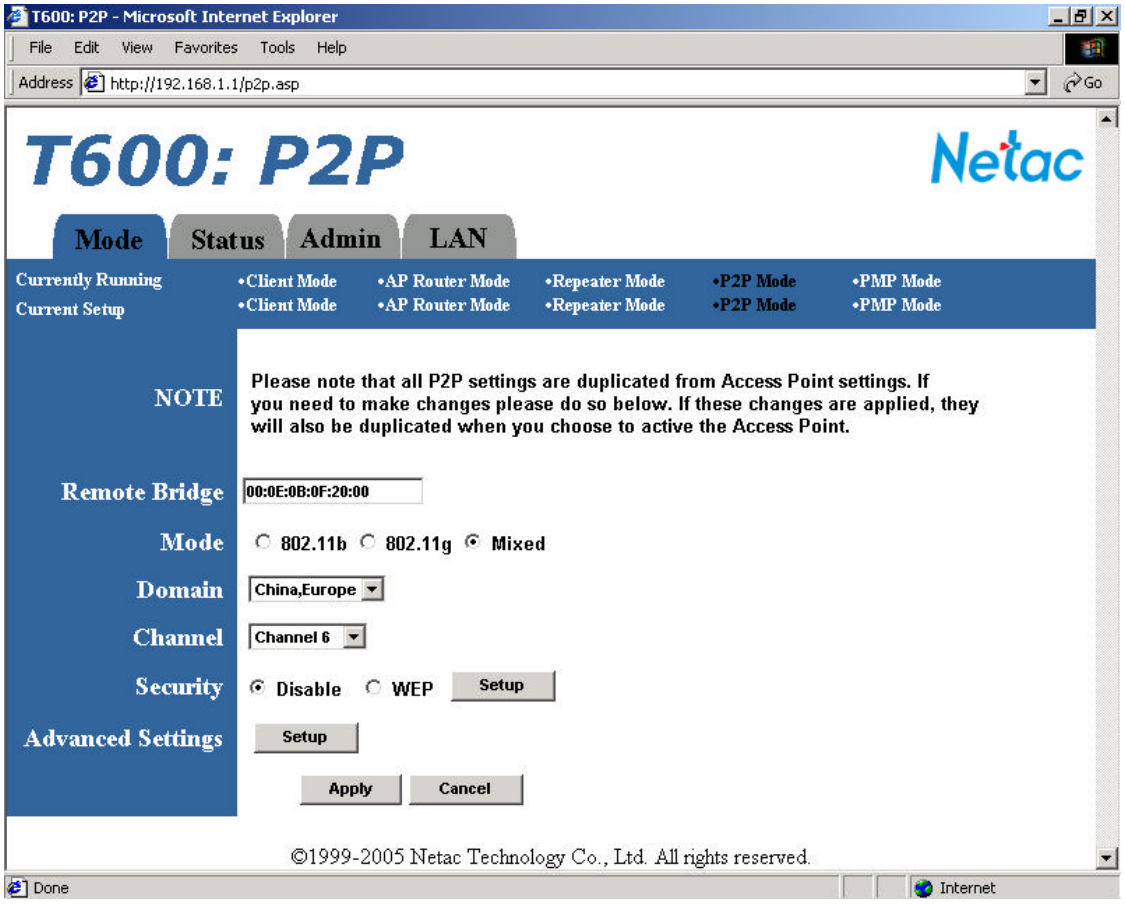


Figure 5.9 P2P Mode Setup Page

Table 5.11 P2P Mode Setup Options

Field	Description
Remote Bridge	MAC address of the remote bridge to which this bridge is connected.
Mode	Select 802.11b, 802.11g or Mixed mode.
Domain	Select domain. Different domain use different channel.
Channel	Select the RF channel. Default: Channel 6.
Security	Select Disable (Default) or WEP. Select WEP, and click the **Setup** button to enter the WEP configuration page (Figure 5.3).
Advanced Settings	Click **Setup** to configure Advanced Settings (Figure 5.10).

***NOTE**: Under P2P Mode, you must make sure the related configuration (such as Security, Channel, etc.) of Remote Bridge is consistent with T600 in order to communicate with each other.*

5.3.1 P2P Mode - Security Configuration

To enable security, select WEP in the P2P Mode setup page (Figure 5.9) and click the **Setup** button to enter the configuration page.

5.3.1.1 WEP Configuration Page

The P2P Mode WEP Configuration page is identical to the one of AP Router Mode. Refer to Figure 5.3, "AP Router Mode - WEP Configuration Page" for the details.

Table 5.12 details the options.

Table 5.12 P2P Mode - WEP Configuration

Field	Description
WEP Length	Select WEP key length: 64 bits or 128 bits.
Mode	Select WEP key format: Hexadecimal or ASCII.
Passphrase	Passphrase is used to generate the WEP keys. Click the **Generate** button to generate the leys. Click the **Clear** button to clear the Passphrase field.
Key 1-4	WEP keys.
Default key	Select default WEP key from Keys1-4.

5.3.2 P2P Mode - Advanced Settings

Access the Advanced Settings page by clicking the **Advanced Settings: Setup** button in the P2P Mode setup page (Figure 5.9). The Advanced Settings page allows the user to configure advanced Radio settings. Figure 5.10 and Table 5.13 detail the options.

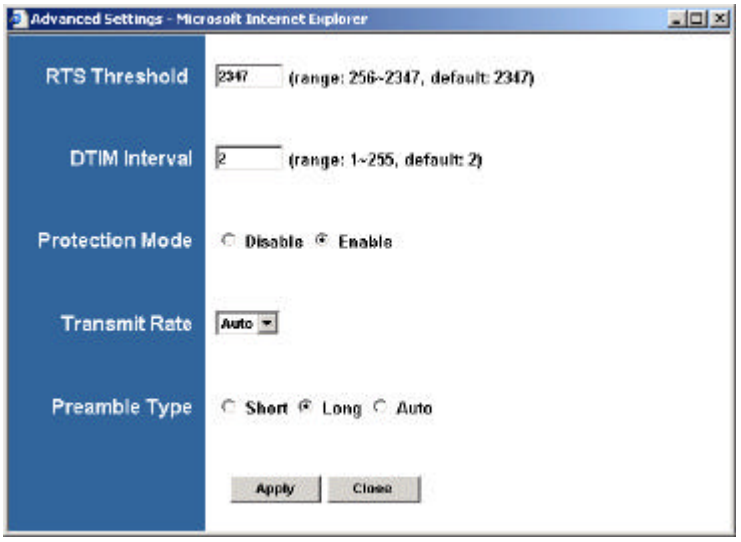


Figure 5.10 P2P Mode - Advanced Settings Page

Table 5.13 P2P Mode - Advanced Settings

Field	Description
RTS Threshold	RTS threshold.
DTIM Interval	DTIM interval.
Protection Mode	Allows user to force 802.11g Protection (RTS/CTS) mode off.
Transmit Rate	Select transmit rate: Auto or a fixed rate.
Preamble Type	Select: Short preamble, Long preamble or Auto.

5.4 PMP Mode Setup Page

To configure T600 in PMP Mode, select PMP in the Mode Selection page (Figure 5.1), click **Apply** to reboot T600, and then click the **PMP: Setup** button. Figure 5.11 and Table 5.14 describe the PMP Mode setup options.

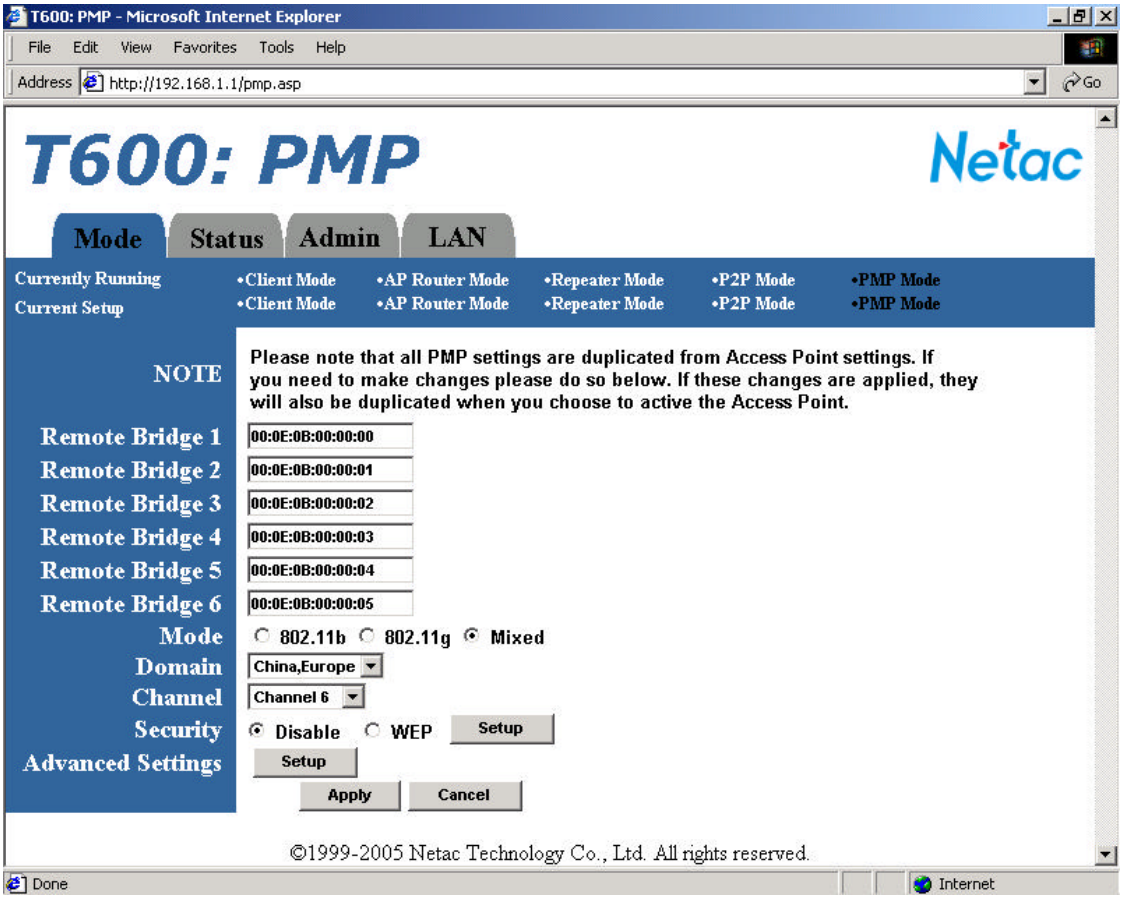


Figure 5.11 PMP Mode Setup Page

Table 5.14 PMP Mode Setup Options

Field	Description
Remote Bridge 1-6	MAC address of the remote bridge to which this bridge is connected.
Mode	Select 802.11b, 802.11g or Mixed mode.
Domain	Select domain. Different domain use different channel.
Channel	Select RF channel. Default: Channel 6.
Security	Select Disable (Default) or WEP. Select WEP, and click the **Setup** button to enter the WEP configuration page (Figure 5.3).
Advanced Settings	Click **Setup** to configure Advanced Settings (Figure 5.12).

***NOTE**: Under PMP Mode, you must make sure the related configuration (such as Security, Channel, etc.) of Remote Bridge is consistent with T600 in order to communicate with each other.*

5.4.1 PMP Mode - Security Configuration

To enable security, select WEP in the PMP Mode setup page (Figure 5.11) and click the **Setup** button to enter the configuration page.

5.4.1.1 WEP Configuration Page

The PMP Mode WEP Configuration page is identical to the one for AP Router Mode. Refer to Figure 5.3, "AP Router Mode - WEP Configuration Page" for the details.

Table 5.15 details the options.

Table 5.15 PMP Mode - WEP Configuration

Field	Description
WEP Length	Select WEP key length: 64 bits or 128 bits.
Mode	Select WEP key format: Hexadecimal or ASCII.
Passphrase	Passphrase is used to generate the WEP keys. Click the **Generate** button to generate the leys. Click the **Clear** button to clear the Passphrase field.
Key 1-4	WEP keys.
Default key	Select default WEP key from Keys1-4.

5.4.2 PMP Mode - Advanced Settings

Access the Advanced Settings page by clicking the **Advanced Settings: Setup** button in the PMP Mode setup page (Figure 5.11). The Advanced Settings page allows the user to configure advanced Radio settings. Figure 5.12 and Table 5.16 detail the options.

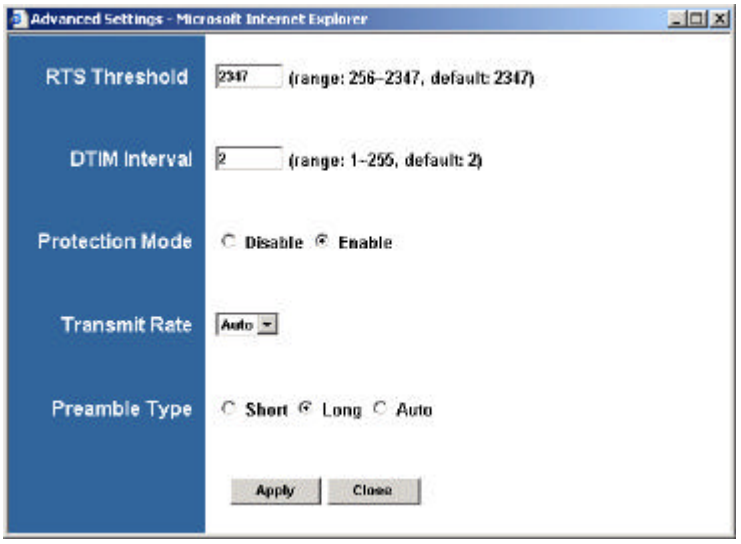


Figure 5.12 PMP Mode - Advanced Settings Page

Table 5.16 PMP Mode - Advanced Settings

Field	Description
RTS Threshold	RTS threshold.
DTIM Interval	DTIM interval.
Protection Mode	Allows user to force 802.11g Protection (RTS/CTS) mode off.
Transmit Rate	Select transmit rate: Auto or a fixed rate.
Preamble Type	Select: Short preamble, Long preamble or Auto.

5.5 Client Mode Setup Page

To configure T600 in Client Mode, select Client in the Mode Selection page (Figure 5.1), click **Apply** to reboot T600, and then click the **Client: Setup** button. Figure 5.13 and Table 5.17 describe the Client Mode setup options.

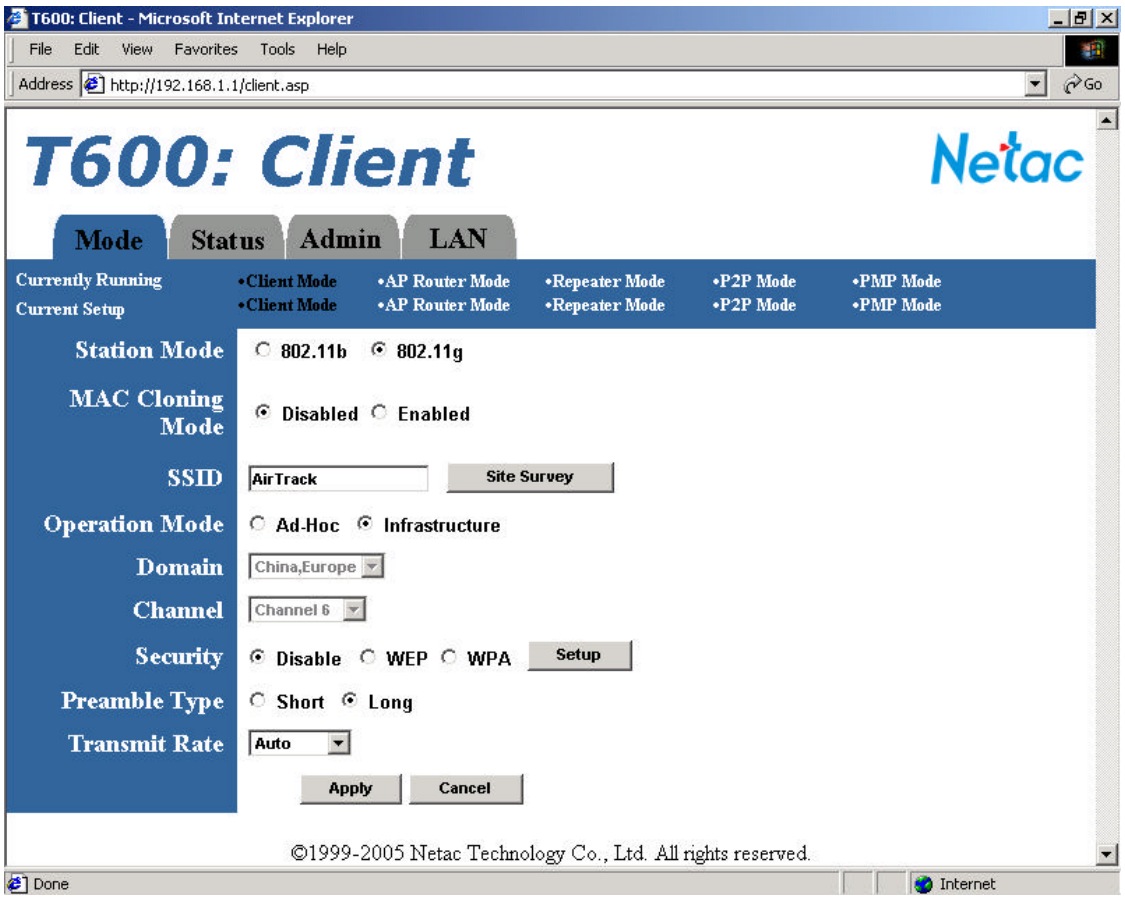


Figure 5.13 Client Mode Setup Page

Table 5.17 Client Mode Setup Options

Field	Description
Station Mode	Select 802.11b or 802.11g mode.

MAC Cloning Mode	Enable MAC Cloning Mode. Clones all the MAC addresses of devices connected to the Ethernet (wired) port to a single MAC address sent out wirelessly to an AP or Repeater.
SSID	Wireless Network Name. You can enter it directly in this field or click the **Site Survey** button to select one from a list of available networks. (Figure 5.14).
Operation Mode	Select Ad-Hoc or Infrastructure mode.
Domain	Select domain (Ad-Hoc network only). Different domain use different channel.
Channel	Select channel (Ad-Hoc network only). Default: Channel 6.
Security	Select Disable (Default), WEP or WPA. Select one, and click the **Setup** button to enter the WEP configure page (Figure 5.3) or WPA (Figure 5.4).
Preamble Type	Select Short or Long preamble.
Transmit Rate	Select transmit rate: fixed rate or Auto.

5.5.1 Client Mode - Site Survey

Clicking the **Site Survey** button brings up the Site Survey page, which displays the available Access Points and Ad-Hoc networks in the neighborhood. The user can select the AP or Ad-Hoc network to join. Figure 5.14 and Table 5.18 describe the options.

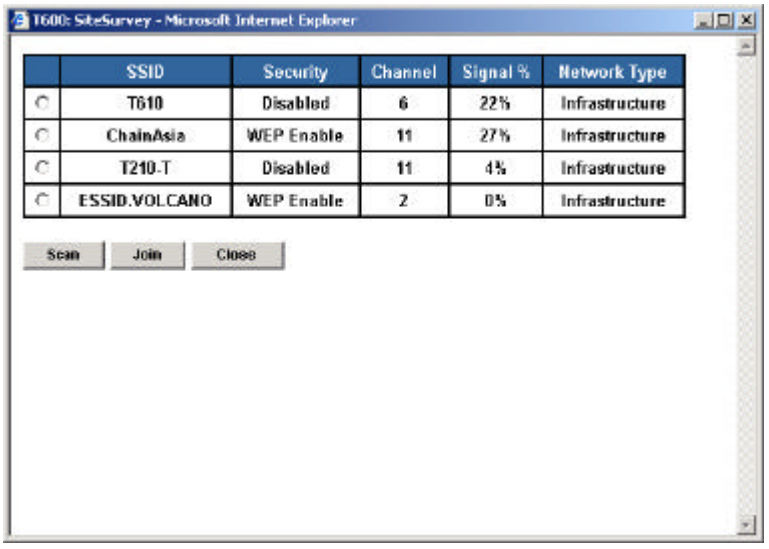


Figure 5.14 Client Mode - Site Survey Page

Table 5.18 Client Mode - Site Survey

Field	Description
Site Survey table	List the available Access Points and Ad-Hoc networks. To select a wireless network to join, click its radio button.
Scan	Start the Site Survey Scan process.

Join	Select a wireless network, and then click the **Join** button to connect the client bridge with the selected AP/node or Ad-Hoc network.
Close	Close the Site Survey page.

5.5.2 Client Mode - Security Configuration

To enable security, select the desired security mode (WEP or WPA) in the Client Mode setup page (Figure 5.13) and click the **Setup** button to enter the configure page.

5.5.2.1 WEP Configuration Page

Figure 5.15 and Table 5.19 detail the WEP configuration page for Client Mode.

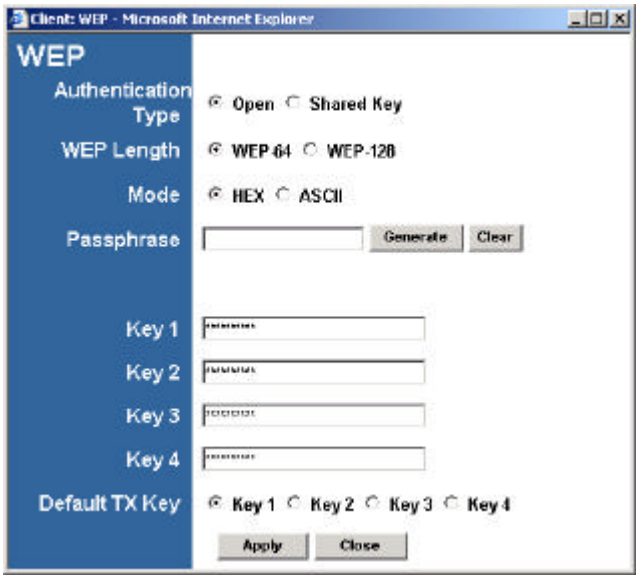


Figure 5.15 Client Mode - WEP Configuration Page

Table 5.19 Client Mode - WEP Configuration

Field	Description
Authentication Type	Select Open or Shared Key.
WEP Length	Select WEP key length: 64 bits or 128 bits.
Mode	Select WEP key format: Hexadecimal or ASCII.
Passphrase	Passphrase is used to generate the WEP keys. Click the **Generate** button to generate the keys. Click the **Clear** button to clear the Passphrase field.
Key 1-4	WEP keys.
Default TX key	Select default WEP key from Key1-4.

5.5.2.2 WPA Configuration Page

Figure 5.16 and Table 5.20 detail the WPA configuration for Client Mode.

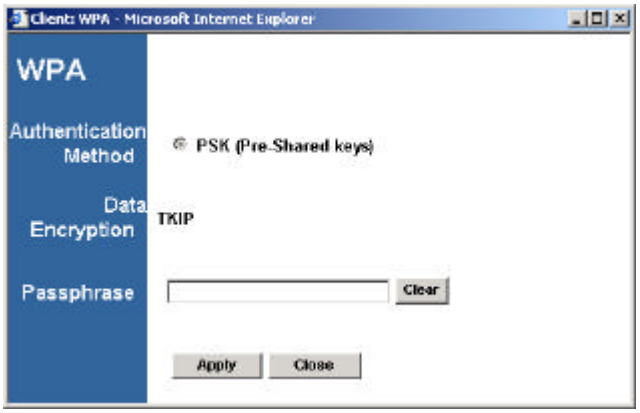


Figure 5.16 Client Mode - WPA Configuration Page

Table 5.20 Client Mode - WPA Configuration

Field	Description
Authentication Method	Use PSK (Pre-Shared Keys) authentication only.
Data Encryption	TKIP data encryption.
Passphrase	The user provides WPA key. Click the **Clear** button to clear the Passphrase field.

6 Status Page

The Status page reports relevant status information for the device for both Ethernet and wireless interfaces.

Figure 6.1 shows the Status page for AP Router Mode, and Figure 6.2 shows the Status page for Repeater Mode. Figure 6.3 shows the Status page for P2P Mode. The Status page for PMP Mode display the mode of T600 in the **Currently Running** status bar but is otherwise identical to the P2P Mode Status page. Figure 6.4 shows the Status page for Client Mode.

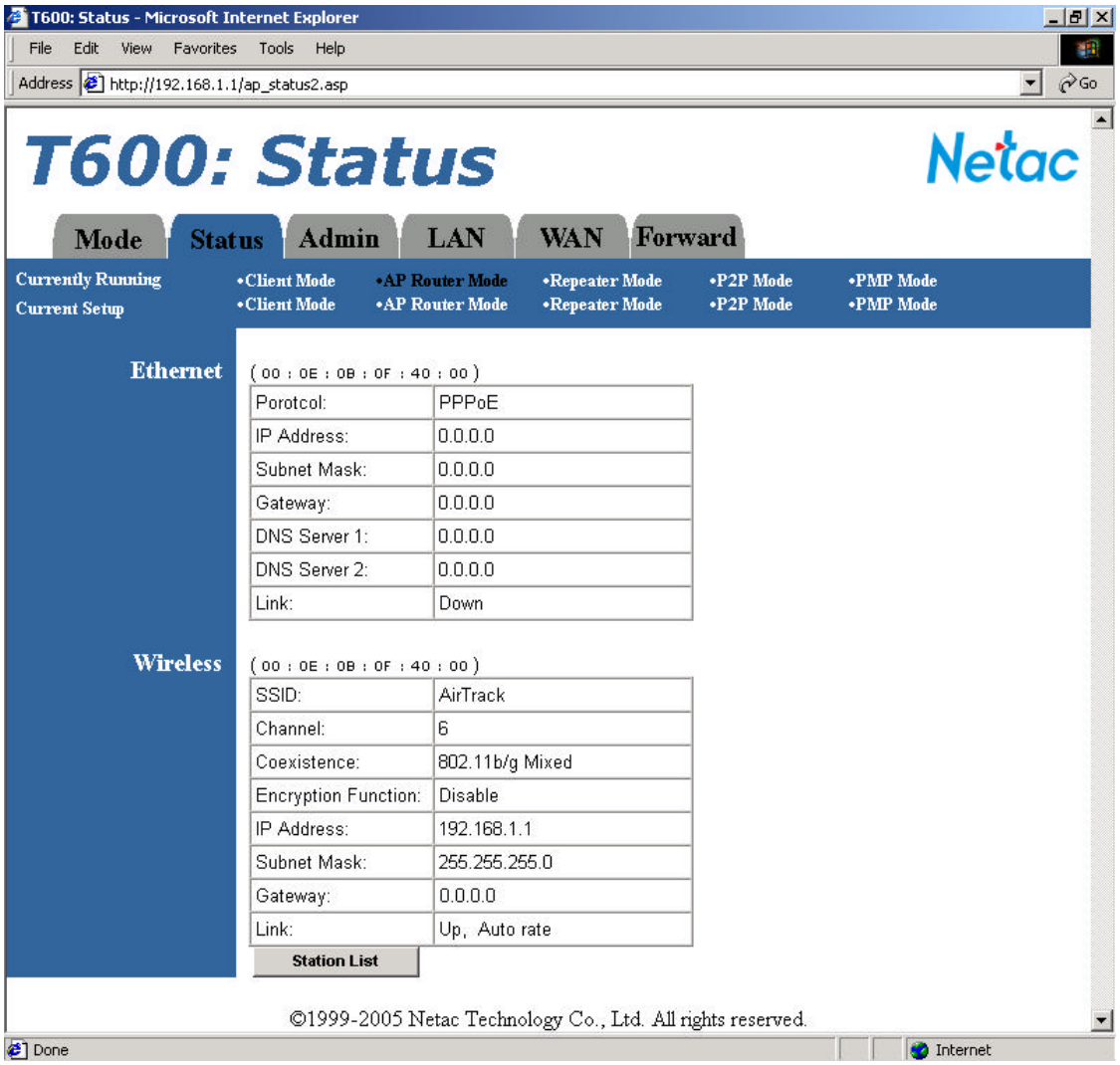


Figure 6.1 AP Router Mode - Status Page

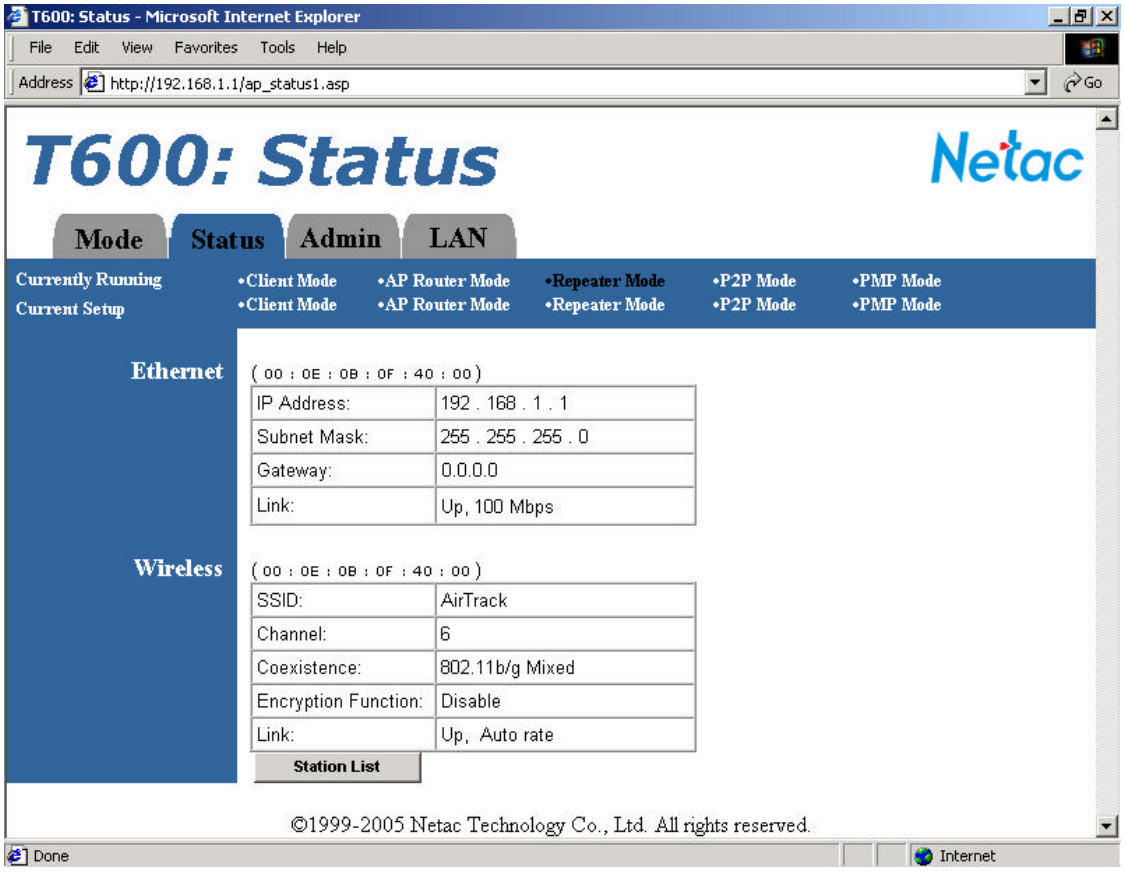


Figure 6.2 Repeater Mode - Status Page

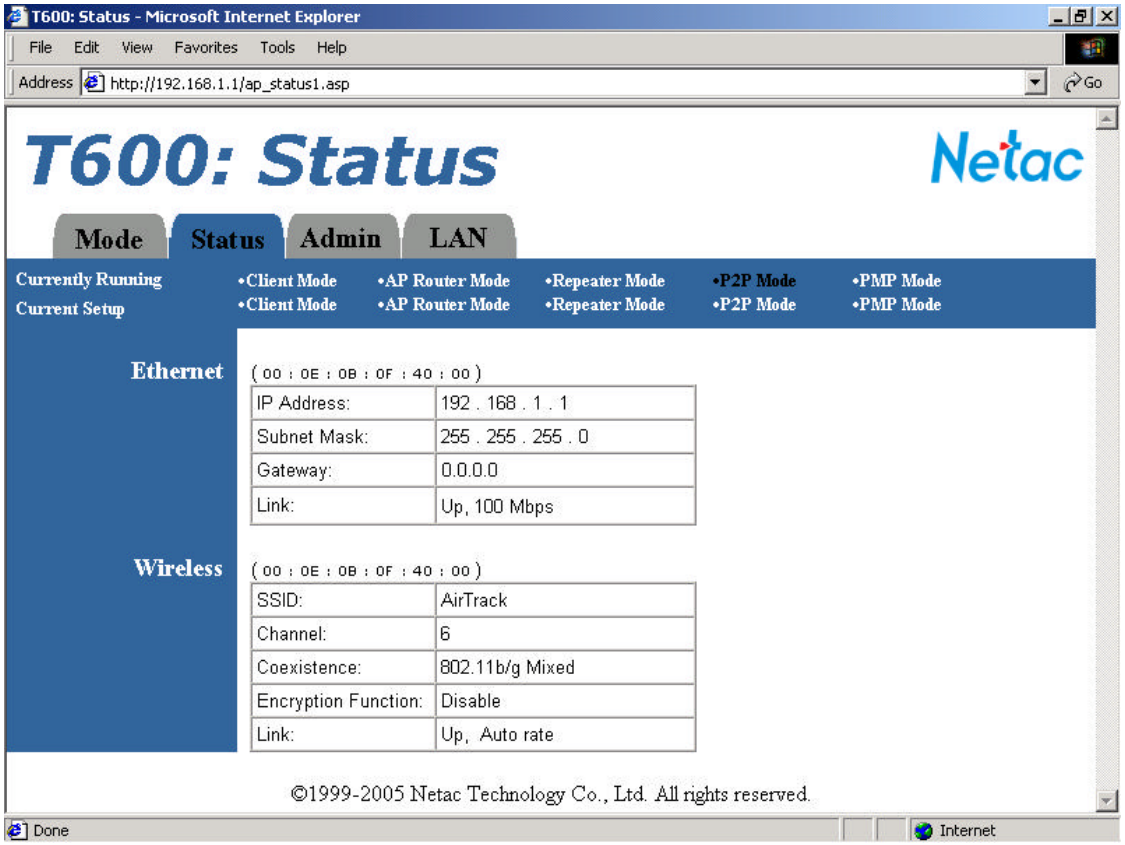


Figure 6.3 P2P Mode - Status Page

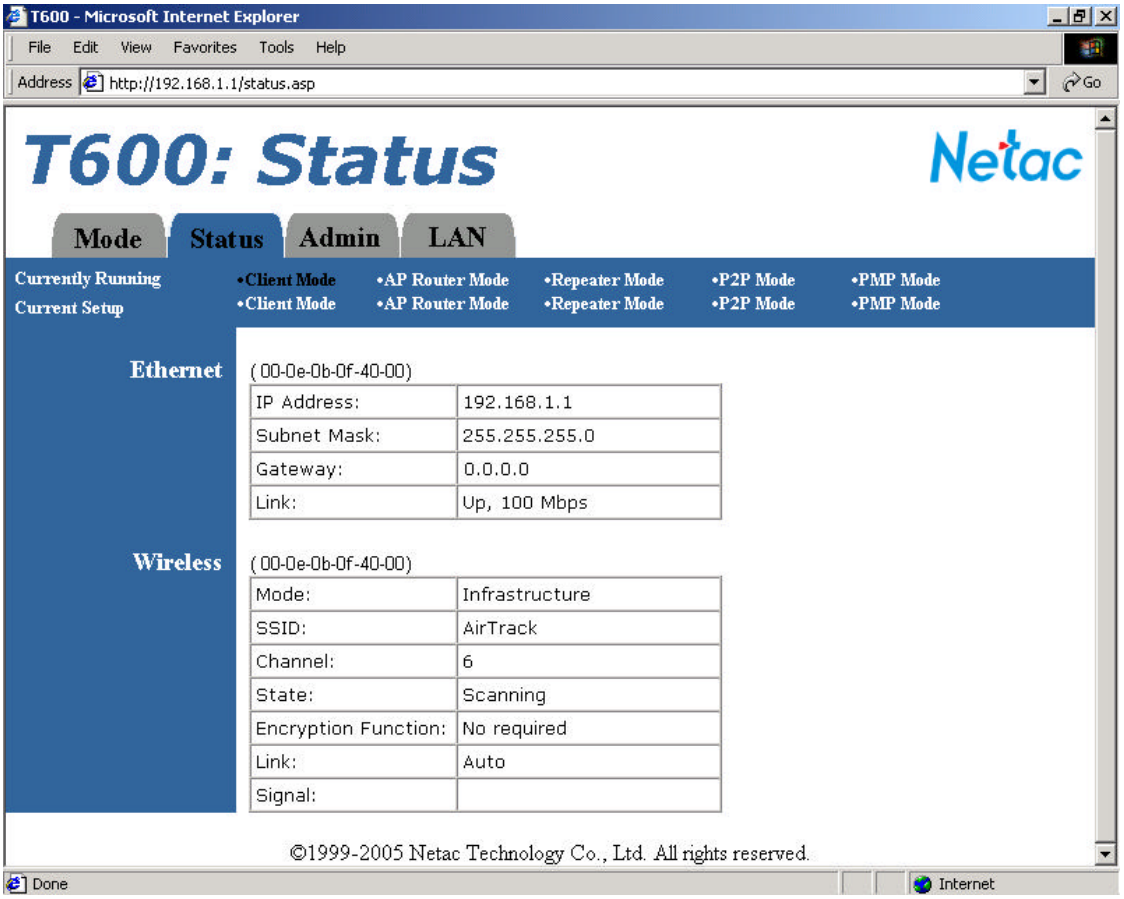


Figure 6.4 Client Mode - Status Page

7 Admin Page

Figure 7.1 shows the Admin page for AP Router Mode. Figure 7.2 shows the Admin page for Repeater Mode. The Admin page for P2P Mode, PMP Mode and Client Mode displays the mode of T600 in the **Currently Running** status bar but are otherwise identical to the Admin page for Repeater Mode.

The Admin page allows the user to upgrade the Firmware of T600 or modify the password.

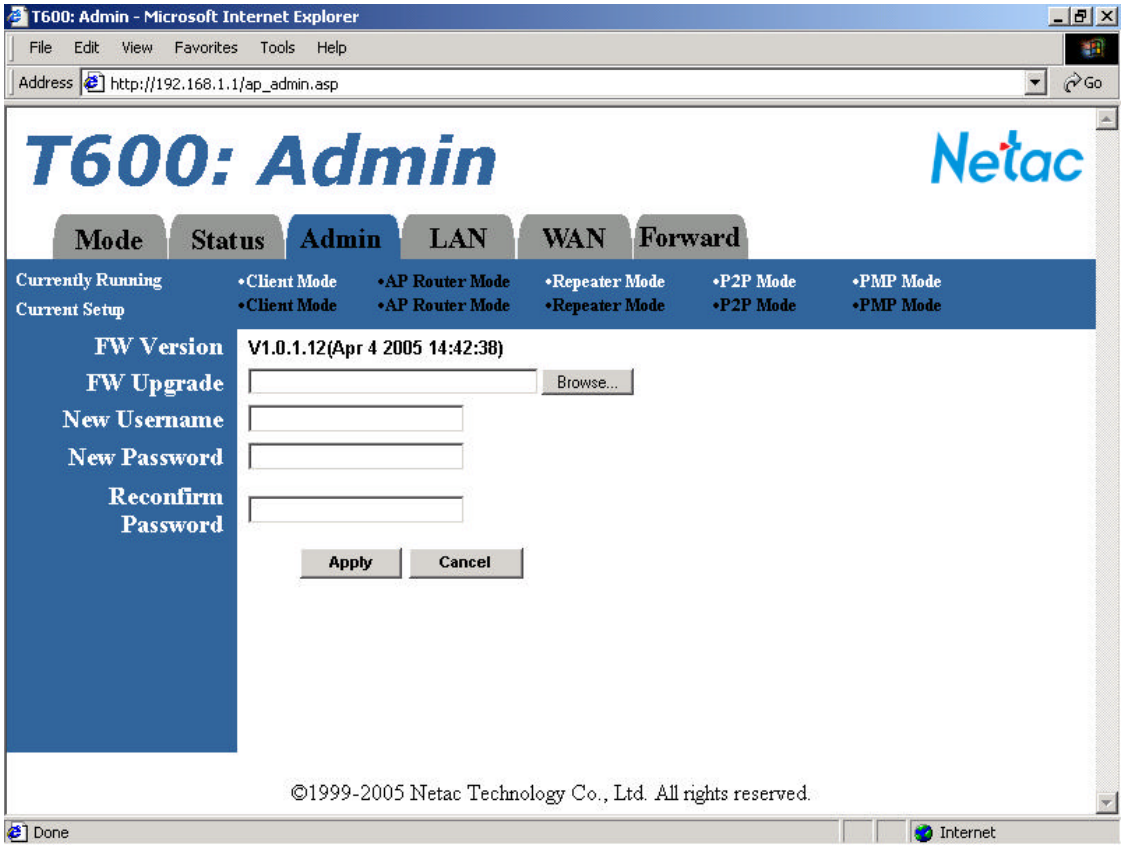


Figure 7.1 AP Router Mode - Admin Page

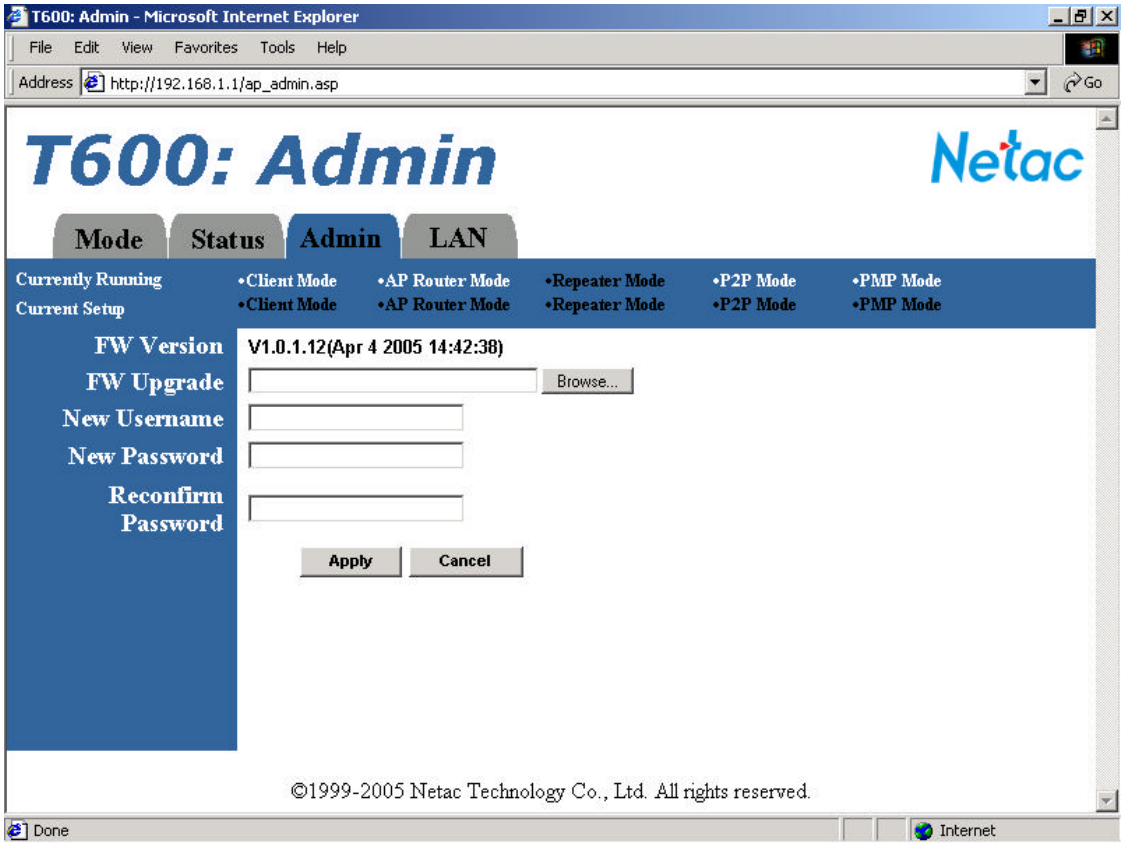


Figure 7.2 Repeater Mode - Admin Page

Table 7.1 Admin Page

Field	Description
FW Version	Displays the firmware version and the build date.
FW Upgrade	To upgrade the firmware, click the **Browse** button and select the image file. Click **Apply** to upgrade.
New Username	To modify the username, enter the new username in the **New Username** field and click **Apply**.
Password	To modify the password, enter the new password in the **New Password** and **Reconfirm Password** fields and click **Apply**.

8 LAN Page

The AP Router Mode's LAN page, shown in Figure 8.1, allows the user to set the IP address of T600.

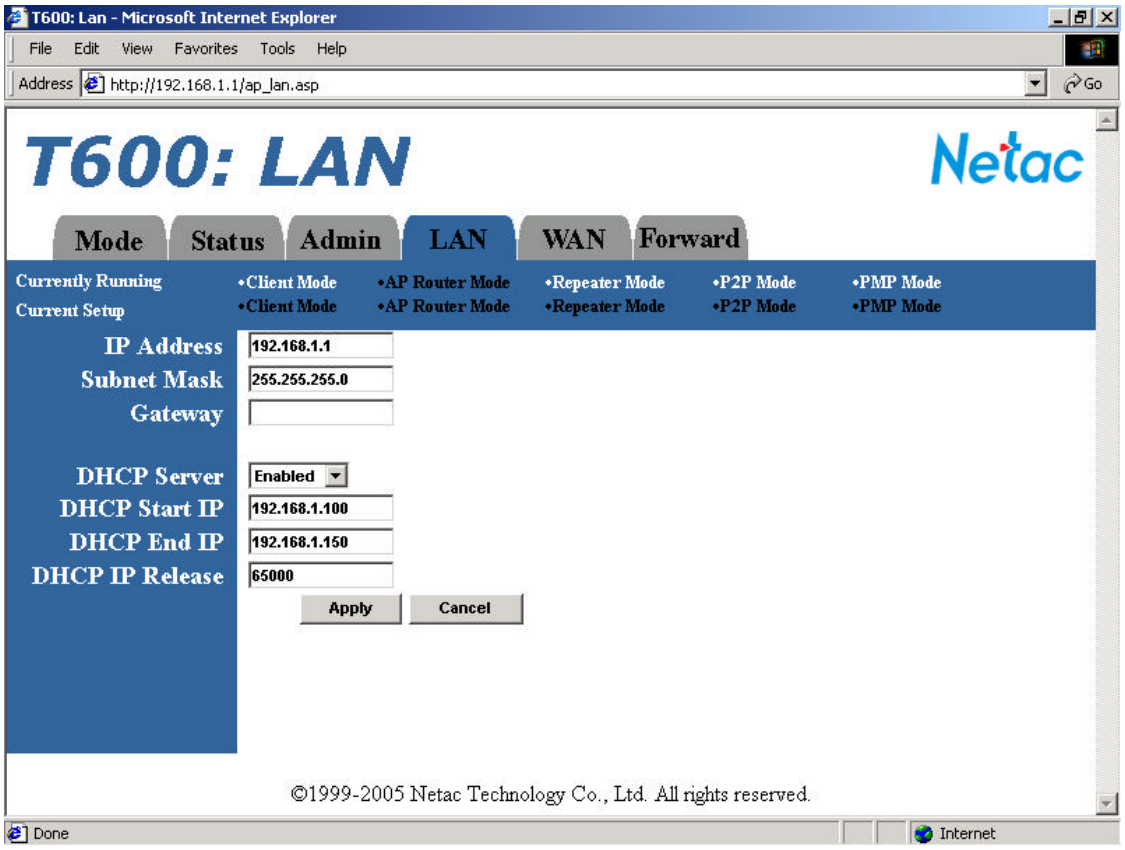


Figure 8.1 AP Router Mode - LAN Page

Table 8.1 AP Router Mode - LAN Page Options

Field	Description
IP Address	Set the IP address of T600. ***NOTE**: To configure T600, the user must access T600 from a PC that is on the same subnet.*
Subnet Mask	Allow the user to specify a subnet mask. Default: 255.255.255.0.
DHCP Service	Disable/Enable DHCP server.
DHCP Start IP	Set the starting IP address of DHCP server's IP address. Default: 192.168.1.100.
DHCP End IP	Set the ending IP address of DHCP server's IP address. Default: 192.168.1.150.
DHCP IP Release	Set the effective time of the IP address assigned by DHCP server.

Figure 8.2 shows the LAN page for Repeater Mode.

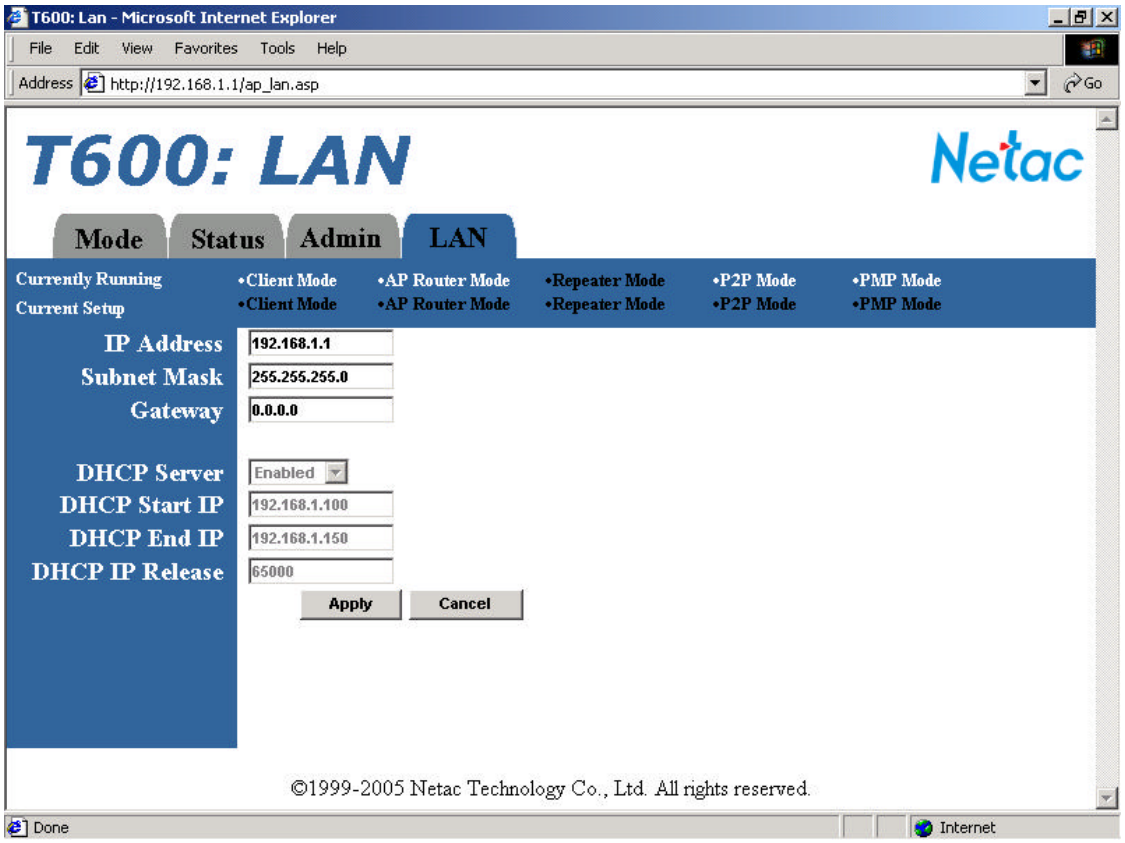


Figure 8.2 Repeater Mode - LAN Page

The LAN page for P2P Mode and PMP Mode displays the mode of T600 in the **Currently Running** status bar but are otherwise identical to the Admin page for Repeater Mode. The LAN page configurations for Repeater Mode, P2P Mode and PMP Mode are identical to AP Router Mode; please refer to see Table 8.1 "AP Router Mode - LAN page Options" for the details.

Figure 8.3 shows the LAN page for Client Mode. Which allows user to configure T600 with automatic IP address (DHCP) or fixed IP address (default: **192.168.1.1**).

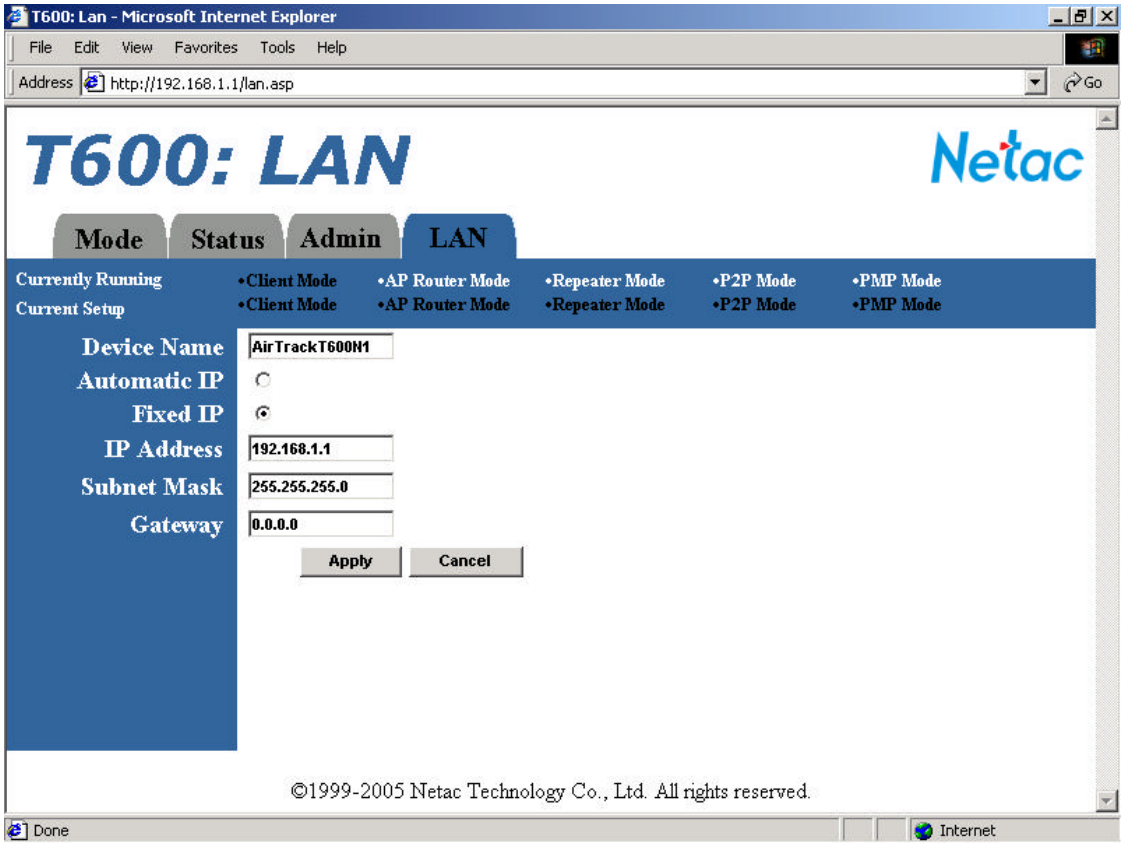


Figure 8.3 Client Mode - LAN Page

***CAUTION**: Selecting the Automatic IP option is not advised unless the user has direct access to the device that provides the IP address. Be sure to know how to distinguish the IP address of T600 from that of a connected device before selecting this option. This is important regardless of T600 operating mode.*

Table 8.2 Client Mode - LAN Page Options

Field	Description
Device Name	Allows the user to assign a friendly device name to access T600. For example in Figure 8.3, both http://AirTrackT600N1 and http://192.168.1.1 can be used to open the configuration webpages of the device. ***NOTE**: To configure T600, the user must access T600 from a PC that is on the same subnet.*
Automatic IP	Configure the device to use an automatic (DHCP) IP address. ***NOTE**: Selecting the Automatic IP option is not advised unless the user has direct access to the device that provides the IP address.*
Fixed IP	Default option. Values of the IP Address, Subnet Mask, and Gateway fields must be specified.
IP Address	Set the IP address of T600.

	NOTE: *To configure T600, the user must access T600 from a PC that is on the same subnet.*
Subnet Mask	Allow the user to specify a subnet mask. Default: 255.255.255.0.
Gateway	Allow the user to specify a gateway. Default: 0.0.0.0.

9 Other Page

9.1 WAN Page

Only AP Router Mode has WAN page, shown in Figure 9.1. The WAN page allows user to set Protocol, IP address, and so on.

Table 9.1 details the options.

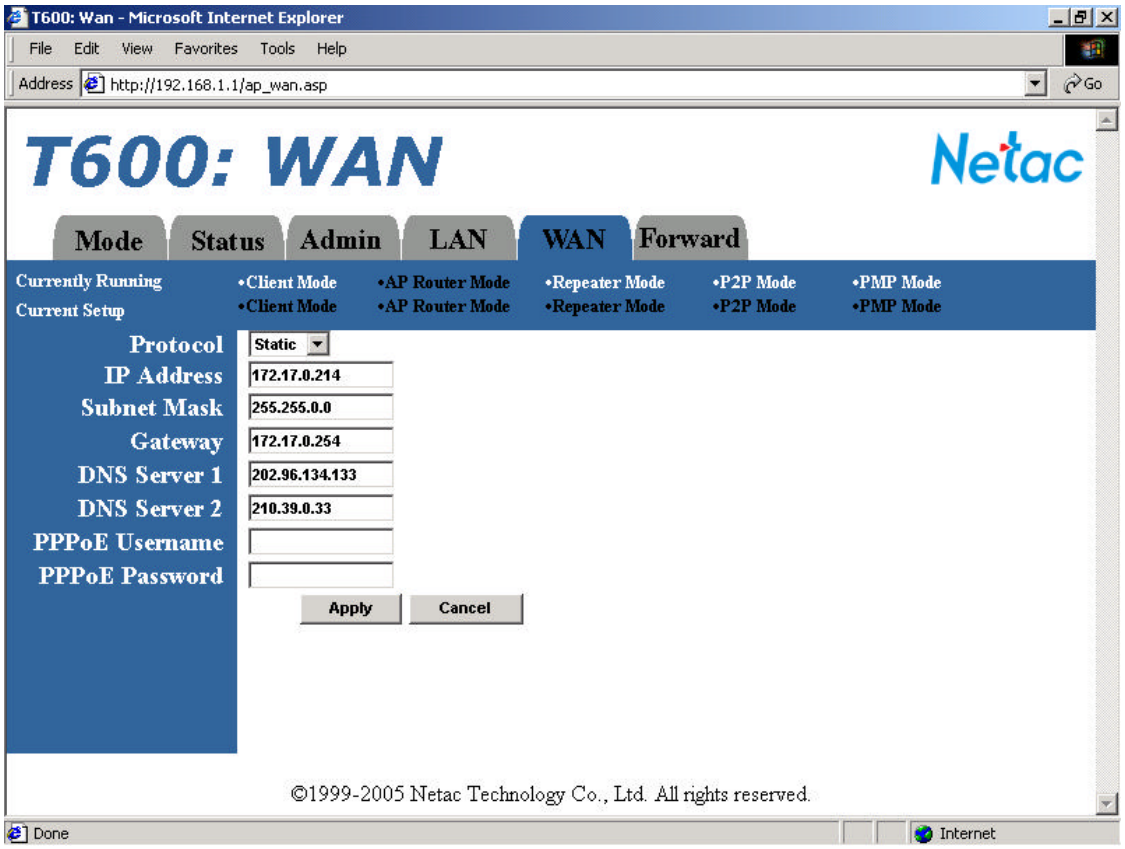


Figure 9.1 AP Router Mode - WAN Page

Table 9.1 AP Router Mode - WAN Page Options

Field	Description
Protocol	Setting the method to obtain IP address for WAN connection. Select DHCP, Static or PPPoE.
IP Address	Set the IP address of T600. ***NOTE**: To configure T600, the user must access T600 from a PC that is on the same subnet.*
Subnet Mask	Allow the user to specify a subnet mask.
Gateway	Allow the user to specify a gateway.

DNS Server 1-2	The address of DNS server.
PPPoE Username, Password	Set dialup's username and password of PPPoE. Network Operator supplies the username and password.

9.2 Forward Page

Only AP Router Mode has Forward page, shown in Figure 9.2.

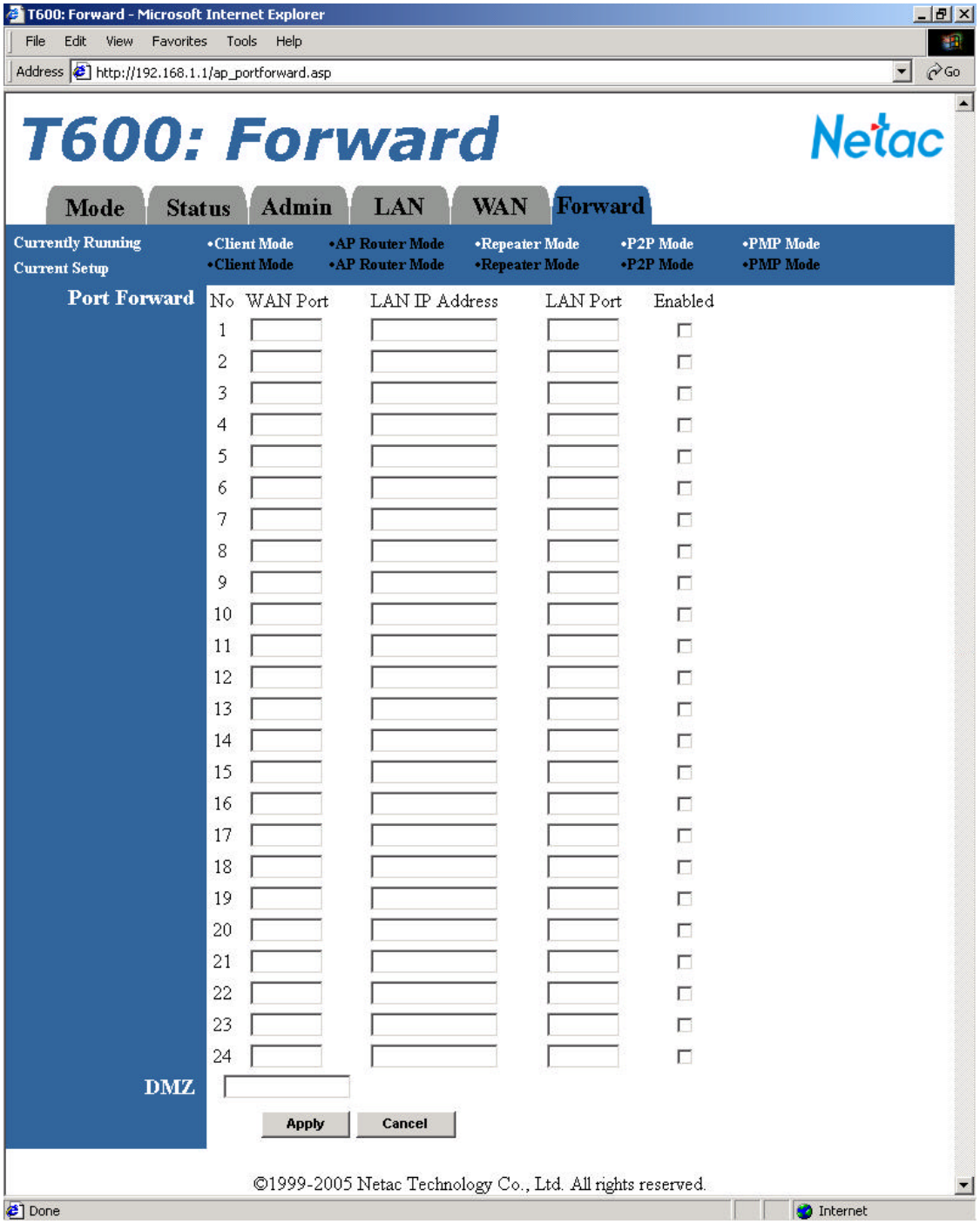


Figure 9.2 AP Router Mode - Forward Page

Table 9.2 AP Router Mode - Forward Page Options

Field	Description
Port Forward	Forward the data package sent from WAN port to T600 to the specified port of the computer with specified IP address.
DMZ	Forward all data package sent from WAN port to T600 to the specified IP address.

10 Specifications

Table 10.1 Specifications

Item	Description
Compatible Standard	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX 802.11b/g
Network Interface	One 10/100Mbps up-link interface (RJ45 type) 802.11b/g wireless LAN interface
LED	Power, Wireless, Ethernet
Antenna	One built-in circular polarized antenna
Maximal Launch Power	23±2dBm
Wireless Frequency Range	2.4000～2.4835 GHz
Wireless Modulation Mode	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g: OFDM
Wireless Transferring Rate	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54Mbps (modulated automatically)
Wireless Transmission Distance	100～150m indoors, 300～350m outdoors
Protocol	TCP/IP, Bridging, TCP, UDP, WEB, HTTP, FTP, SNMP and so on
Administration Mode	User interface administration based on WEB
Operating Temperature *	0℃~+45℃
Storage Temperature *	-20℃~+80℃
Relative Humidity under Operating *	10% ~ 85%
Relative Humidity under Storage *	5% ~ 90%
Power Supply	5VDC, 1.5A
Dimensions (L x W x H)	69mm x 94mm x 24mm
Weight	72g

* For Reference only. Netac reserves the rights to make changes on any specification without prior notice.

Appendix A: FAQ

1. Why the wireless network card used AES encryption cannot be connected when I use WPA-PSK security mode ?

Answer: T600 support TKIP encryption only and cannot support AES encryption When use WPA-PSK security mode.

2. When I upgrade T600 firmware through wireless network card, T600 has no response, what shall I do?

Answer: It is suggested that you upgrade the firmware through wire network.

3. I cannot log on to T600's web page when I modify password as null, why?

Answer: The password of T600 cannot be set as null.

4. Why AP still can access to T600 after T600 filter the AP address in Repeater Mode?

Answer: In Repeater Mode, T600 filter child's MAC address only, it cannot filter parent node's MAC address.

5. Why I cannot configure for Client Mode? How can I configure the parameters of Client Mode?

Answer: When T600 running in AP Router Mode, Repeater Mode, P2P Mode and PMP Mode, you cannot configure Client Mode, you can configure the parameters of Client Mode just When T600 running in Client Mode. To configure T600 in Client Mode, select Client in the Mode Selection page (Figure 5.1), click **Apply** to reboot T600, and then click the **Client: Setup** button.

6. My question is not included in "FAQ", what shall I do?

Answer: Please E-mail to support@netac.com, Netac customer service engineer will reply you in time.

Appendix B: Contact Netac

Netac Technology Co., Ltd.
6F, Incubator Building,
China Academy or Science & Tech Development,
No.1 High-tech South St,
Shenzhen, China 518057
Tel: +86-755-26727800, 26727449 (English)
Fax: +86-755-26727610, 26727620
Website: http://www.netac.com
Email: sales@netac.com overseas@netac.com (Sales)
support@netac.com (Technical Support)

Appendix C: Glossary

802.11

A family of specifications developed by the IEEE for WLAN technology.

802.11b

An extension to 802.11 that applies to WLANS and provides 11 Mbps transmission rate in the 2.4GHz band. 802.11b use only DSSS.

802.11g

An extension to 802.11 that applies to WLANS and provides 54 Mbps transmission rate in the 2.4 GHz band. 802.11g use OFDM and is backward compatible with 802.11b.

Ad-hoc

Under this mode, any two wireless stations can communicate with each other directly, each station contention public wireless channel. The advantage is build network conveniently, lower charge, and stabilization. The disadvantage is that when user's station is too many, it will bring down the capability of Internet because each station contention public wireless channel. At the same time, each station need to be connected directly, the layout of Internet will be bounded sometimes. Furthermore, it can't access Internet. So this configuration only can be used when the users are less.

AP

Access Point, A communication hub for wireless device users to connect to a wired LAN.

BBP

Baseband Processor，The processor that handles the original band of frequencies of a signal before it is modulated for transmission at a higher frequency.

Bridging

Bridging, provide path between two or more net section or subnet, these subnet have the same address and topological structural. The device which bring off bridging called bridge, some station can use bridge to broadcast message to other station, so bridge is a device which can connect net section's two port or more port. And bridge also can divide the busy net into two section, reduce the traffic of each section to improve capability. It can filter net broadcasting message, only allow the communication message get to another net by bridge.

CCK

Complementary Code Keying.

CTS/RTS

Clear to Send/Request to Send. They are two special administrant data frame, a protecting mechanism to avoid the conflict in WLAN.

DHCP

Dynamic Host Configuration Protocol.

DSSS

Direct Sequence Spread Spectrum. DSSS is one of two types of spread spectrum radio.

DTIM

Delivery Traffic Indication Message.

FCC

Federal Communications Commission.

HTTP

Hypertext Transfer Protocol.

IEEE

Institute for Electrical and Electronic Engineers.

Infrastructure Mode

Infrastructure Mode, use AP to control the accessing to net by the user in the net. Because AP can control it, when the user stations in the net are increased, the handle capability of the net can be controlled in a range. And the bound of user station's layout is smaller, building net is more active, it fit for commixing net configuration of wired net and wireless net. If you want to connect to the Internet, you can choose Infrastructure Mode.

IP

Internet Protocol.

ISM band

Industrial Scientific Medical Band.

LAN

Local Area Network.

MAC

Media Access Control.

Mbps

Megabits Per Second.

OFDM

Orthogonal Frequency Division Multiplexing.

OSI

Open System Interconnect.

P2P

Point-to-Point.

PMP

Point-to-Multipoint.

QoS

Quality of Service.

RF

Radio Frequency.

RJ-45

Ethernet Interface of A type.

WAN

Wide Area Network.

WEP

Wired Equivalent Privacy. A security protocol for WLANs defined in the IEEE 802.11 standard.

Wi-Fi

Wireless Fidelity (IEEE 802.11) .

WLAN

Wireless Local Area Network.

WPA

Wi-Fi Protected Access