

Trident - T600N

Wireless Dual Band Gigabit Router

**User Manual** 

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# **Safety Warning**

- Place connecting cables carefully so that no one will step on them or stumble over them.
- Always disconnect all cables from this device before servicing or disassembling.
- Use ONLY an appropriate power adaptor or cord for your device.
- Connect the power adaptor or cord to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe).
- Do not allow anything to rest on the power adaptor or cord and do not place the product where anyone can walk on the power adaptor or cord.
- Do not use the device if the power adaptor or cord is damaged as it might cause electrocution.
- If the power adaptor or cord is damaged, remove it from the power outlet.
- Do not attempt to repair the power adaptor or cord. Contact your local vendor to order a new one.
- Do not use the device outside, and make sure all the connections are indoors.
- Do not obstruct the device ventilation slots, as insufficient airflow may harm your device.
- Do not use this product near water, eg, in wet basement, or near a swimming pool.
- Do not expose your device to dampness, dust or corrosive liquids.
- Do not install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning.
- Connect ONLY suitable accessories to the device.
- Do not open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks.

  ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information.
- Make sure to connect the cables to the correct ports.
- If you wall mount your device, make sure that no electrical lines, gas or water pipes will be damaged.

Your product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electronics and Electrical Equipment. It means that used electrical and electronic products should not be mixed with general waste. Used electrical and electronic equipment should be treated separately.



# INTRODUCTION

Thank you for purchasing this Rosewill Networking product. At Rosewill we believe that excellence is a standard. Our customers deserve nothing less than the best. By purchasing a Rosewill product you are choosing exceptional value, unrivaled customer service and top quality hardware. If you have any questions please feel free to contact us. We'd love to hear from you and thank you for your support!

Support: techsupport@rosewill.com

Call Center: (800) 575-9885

FAX: (626) 271-9504

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# PRO

### **PRODUCT OVERVIEW**

# **Package Content:**

- T600N Wireless Dual Band Gigabit Router
- Power Adapter for T600N
- Optimal Designed 5dBi 2.4GHz High Gain Antenna
- Quick Installation Guide
- Resource CD: User Manual, Quick Installation Guide
- RJ45 Cables

# Note:

- Please make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact with your distributor.
- Using a power supply with a different voltage rating than the one included with the T600N may cause damage and void the warranty for this product.



#### **PRODUCT OVERVIEW**

#### **LED Indicator**



#### (From Left to Right)

- WPS Button: Push and hold for 3 seconds to enable WPS push button configuration.
- WPS: Wi-Fi Protected Setup activity. When the WPS mode is activated the WPS LFD blinks as it awaits a connection.
- Power: Indicates when the Router is powered on. The LED will remain on.
- **2.4 GHz:** Blinks rapidly when the wireless data traffic is transmitted or received over the **2.4GHz** wireless network.
- 5GHz: Blinks rapidly when wireless data traffic is transmitted or received over the 5GHz wireless network.
- Modem: Indicates when modem is connected to the modem port on the back of the Router. The LED blinks rapidly when data is transmitted or received.
- LAN: Indicates when a networking device is connected to a wired port on the back of the Router. The LED blinks rapidly when wired data traffic is transmitted or received.

# PRODUCT OVERVIEW

#### **Back Panel Indicator**



#### (From Left to Right)

- DC-IN: Power Adapter port. Output: 12V 1.25A, Input: 100-240v
- LAN: RJ-45 ports for connecting to wired computers or other network devices. (LAN 4~1 from left to right)
- Modem: RJ-45 port for connecting to your Broadband Modem
- **RESET:** Push once to reboot the Router. Hold down for 5-10 seconds to reset the Router back to factory settings.

# **Connecting Guide**



#### 1. Disconnect and Unplug your Existing Router

• Disconnect the RJ45 Cable in your existing router from your computer, broadband modem, and the power adapter from the power outlet.



#### 2. Power Off your Modem and Remove the Backup Battery if any

 Remove the power adapter to power off your modem. Remove the modem's backup battery if your modem has one.



#### 3. Connecting the T600N Wireless Router to your modem

- Plugs one end of your Ethernet Cable to the modem and the other end to your T600N's "modem" port.
- Since T600N supports Gigabit Network so it is recommended to use a Cat 5 RJ45 Cable to fully utilize your T600N.



# **Connecting Guide**



#### 4. Power on the Modem

- Insert the backup battery back to your modem, and plug back your modem's power adapter.
- Please wait 1~2 minutes the modem's initialization to complete.



#### 5. Power on your T600N Wireless Router and connect to your Computer

- Connects one end of the Ethernet Cable to your T600N's LAN port Republicant Language Republicant Language Republicant Language Republicant Republica
- Connects the other end of the Ethernet Cable to your Computer or Note book.
- Plug in the power adapter of your T600N and power on your computer if it haven't turn on.



#### 6. Open your Web Browser and type in "192.168.0.1" in the address bar

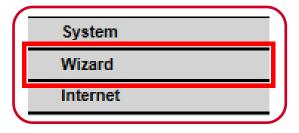
• When prompted, Enter the User Name and Password

User Name: admin

Password: admin

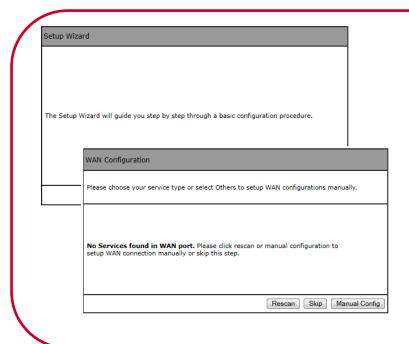


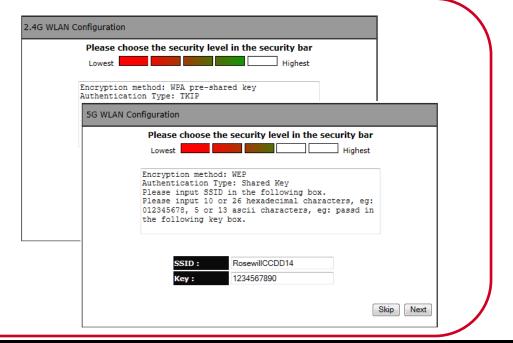
# Wizard Setup Guide – Modem to LAN Setup



#### 7. Setup Wizard

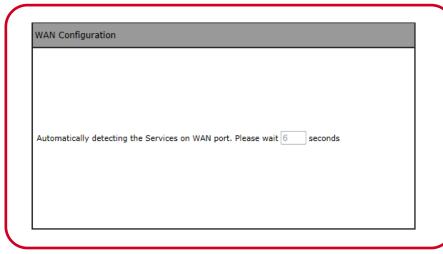
- Click on **Wizard** on the menu on the left side of the screen.
- Select "Next" twice to continue, T600N will Auto-Detect your Network and guide you
  through a step by step in both WAN to LAN and Wireless setting. Please see following page
  for Wizard details. (If your connection was not detected here, you will need to manually
  complete the setup.)







# Wizard Setup Guide – Modem to LAN Setup

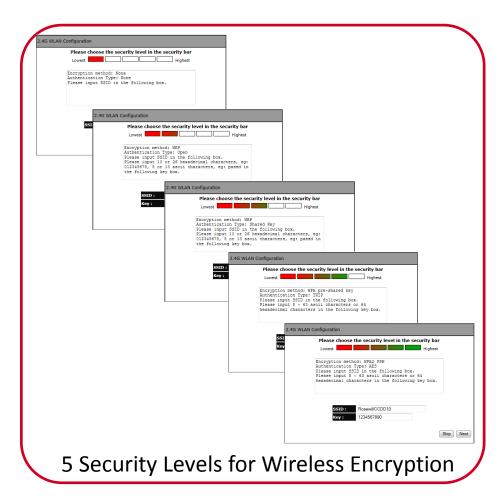




#### 8. Setup Wizard

- 1. After click twice on "**Next**" confirming to start on the Wizard setup process, T600N will automatically detect your Connection from the ISP. You will need to provide T600N the following information once the connecting method was detected.
- 2. T600N is able to detect Static IP, Dynamic IP, PPP over Ethernet, PPTP, and L2TP connection methods.
  - PPPoE: PPPoE requires you having the User Name and Password provided by your ISP. Normally happens when using DSL connection.
  - Dynamic IP (DHCP): DHCP does not require entering anything.
     Usually happens when getting connection from an existing internet Connection.
  - Static IP (Fixed): Fixed requires you entering a set IP address, Subnet Mask, Gateway IP Address, Primary DNS, and/or Secondary DNS. These information will provided by your ISP and normally happens when using Cable connection.
  - Manually Configuration: If no WAN Connection was detected, you will need to manually enter the necessary information to connect to your ISP. You may want to check the cable connection and Rescan.

# Wizard Setup Guide – Wireless Setup

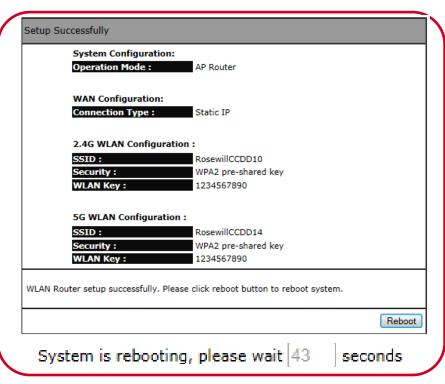


#### 9. Setup Wizard Guide

- 1. Once the setup for Modem to LAN complete, you will continue to set up the Wireless configuration.
- 2. The Wizard will start with 2.4G WLAN Configuration, then 5G WLAN Configuration:
  - 2.4G WLAN Configuration:
    - There are 5 levels of Wireless Encryption you can set.
       From the lowest security level to the highest level's
       WPA2 PSK. Please follow the instruction in the window to set you SSID and password Key.
  - 5G WLAN Configuration:
    - There are 5 levels of Wireless Encryption you can set.
       From the lowest security level to the highest level's
       WPA2 PSK. Please follow the instruction in the window to set you SSID and password Key.



# Wizard Setup Guide – Setup Successfully



#### 10. Setup Wizard

- Once the setup complete, you will see a summary window show up tells you to **Reboot** the Router's System to make all changes effective.
- 2. The Reboot process will take 45 seconds.
- 3. After the Reboot process, the Status window of the T600N will popup.

#### 11. Admin Password Changes

- When you finish the Wizard setup, please click on "Tools" on the left hand side's menu to change the default Password for login into your T600N from "admin" to your desired Password.
- 2. Please write down this password somewhere and keep it for your future use.
- 3. This is very important because the default password may be an easy access for people who wants to hack into your network.

Congratulations, T600N is now successfully configured, and your settings are now saved. You may now connect other devices directly to the 4 wired ports on the back panel or connect wirelessly to T600N. If you have question, Please feel free to contact us:

Support: techsupport@rosewill.com

Call Center: (800) 575-9885

# **Web Management Guide**

System
Wizard
Internet
Wireless 2.4G
Wireless 5G
Firewall
Advanced
Tools

For Details on how to manage each function, please see each Correspondence Section.

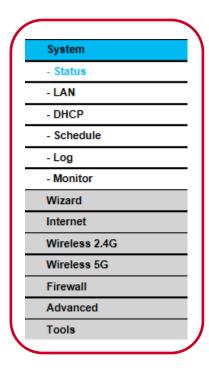
Web Management Detail: There are 8 main functions on the left of the Web-based utility.

- System: System includes the Status details, LAN setting, DHCP setup, Schedule, Log, and Monitor on T600N
- Wizard: A step by step setup Wizard on the basic connection for T600N
- Internet: Internet allows you to manually configure the connection to the Modem
   (Connecting to the Internet). You can configure the connection between Dynamic IP, Static

   IP, PPPoE, PPTP, and L2TP depending on how your ISP provides the service to you.
- Wireless 2.4G: You can configure the 2.4GHz Wireless signals here. The adjustable
   Functions are Basic Setup, Advanced Setup, Security, Filter, WPS, Client List, and Policy.
- Wireless 5G: You can configure the 5GHz Wireless signals here. The adjustable Functions are Basic Setup, Advanced Setup, Security, Filter, WPS, Client List, and Policy.
- **Firewall:** Firewall allows you to protect your internet from outside attack with the function of DMZ, Denial of Service (DoS), MAC Filter, IP Filter, and URL Filter.
- Advanced: The Advance Feature allows you to configure T600N based on your usage. You
  can configure NAT/Hardware Accelerator, Port Mapping, Port Forwarding, Port Triggering,
  ALG, UPnP, QoS, and Routing.
- Tools: T600N's administration related function setup



# **System**



**System:** You can review the device information and manage the basic WIRED connection here:

- Status: Display the summary of the current system status.
- LAN: Configure the wired network
- DHCP: Configure dynamically allocated IP addresses
- Schedule: Setting the Activation time for certain functions, ex: Firewall.
- Log: Viewing system operations records and network activity events
- Monitor: Viewing the current network traffic bandwidth usage



# System – Status – 1

#### System

Model Band Router

Mode AP Router

Uptime 19 min 22 sec

Current Date/Time 2011/01/01 00:19:25

Hardware version 1.0.0

Serial Number 000000001

Application version 1.0.1

#### WAN Settings

Attain IP Protocol Dynamic IP Address

IP address ---

Subnet Mask ---

Default Gateway ---

MAC address 00:AA:BB:CC:DD:11

Primary DNS ---Secondary DNS --- **Status:** In the Status section, you can review the System, WAN Settings, LAN Settings, and WLAN Settings information here:

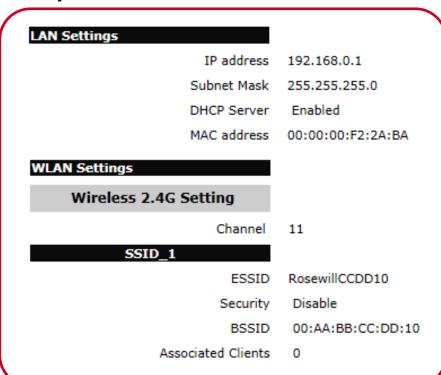
#### System:

- Model: The model name of this product.
- Mode: The router's operating mode: Default as AP Router.
- Uptime: The amount of time that this device has been active.
- Current Date/Time: The current system date and time.
- Hardware Version: The hardware version number of T600N.
- Serial Number: The serial number of the T600N. The serial number is required for customer service or support.
- **Application Version:** The firmware version number of the T600N.

#### · WAN Settings:

- Attain IP Protocol: Displays the IP protocol in use for the T600N. It can be a dynamic or static IP address.
- IP Address: The router's IP address as designated by an ISP provider.
- Subnet Mask: The router's WAN subnet mask as designated by an ISP provider.
- **Default Gateway:** The router's gateway address as designated by an ISP provider.
- MAC Address: The router's WAN MAC address. The router's MAC address is located on the label on the back side of the router.
- **Primary DNS:** The primary DNS of an ISP provider.
- Secondary DNS: The secondary DNS of an ISP provider

#### System – Status – 2

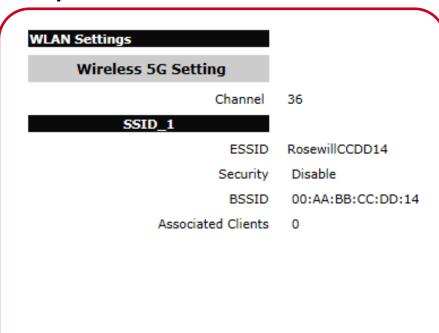


**Status:** In the Status section, you can review the System, WAN Settings, LAN Settings, and WLAN Settings information here:

- LAN Settings:
  - IP Address: T600N's local IP address. The default LAN IP address is 192.168.0.1.
  - Subnet Mask: T600N's local subnet mask.
  - DHCP Server: The DHCP setting status (Default: Enabled).
  - MAC Address: T600N's LAN MAC address.
- WLAN Settings:
  - Wireless 2.4G Setting:
    - **Channel:** The communications channel used by all stations, or computing devices, on the network.
    - **ESSID:** The ID value of a set of one or more interconnected basic service sets (BSSs).
    - **Security:** The security setting status (Default: **Disabled**).
    - **BSSID:** The unique ID of the BSS using the above channel value in this router. The ID is the MAC address of the BSSs access point.
    - Associated Clients The number of clients associated with this SSID.
  - Wireless 5G Setting:



### System – Status – 3



**Status:** In the Status section, you can review the System, WAN Settings, LAN Settings, and WLAN Settings information here:

- Wireless 5G Setting:
  - **Channel:** The communications channel used by all stations, or computing devices, on the network.
  - **ESSID:** The ID value of a set of one or more interconnected basic service sets (BSSs).
  - Security: The security setting status (Default: Disabled).
  - **BSSID:** The unique ID of the BSS using the above channel value in this router. The ID is the MAC address of the BSSs access point.
  - Associated Clients The number of clients associated with this SSID.

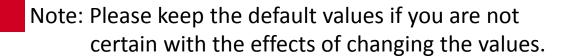


#### System – LAN – 1

You can enable the broadband router's DHCP server to dynamically allocate IP address to your LAN clients. The broadband router must have any IP Address for the Local Area Network. LAN IP IP address: 192.168.0.1 255.255.255.0 IP Subnet Mask: 802.1d Spanning Tree : Disabled ▼ DHCP Server DHCP Server: Enabled -Lease time : Forever 192.168.0.100 Start IP: End IP: 192.168.0.200 T600N Domain name : **DNS Servers** First DNS Server: ▼ 192.168.0.1 Second DNS Server: None 0.0.0.0 Cancel

**LAN:** Configure the wired network settings in the LAN section. The router's IP is defined in the **IP Address** field. The default setting of the DHCP server is set to enabled so that network clients can be automatically assigned a virtual IP addresses.

Advanced users may configure DNS server settings to meet specific requirements. Changing the settings in this section are not necessary for most situations.



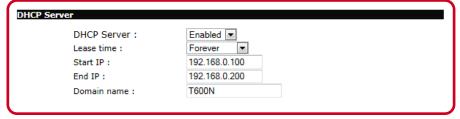


### System – LAN – 2



#### LAN IP:

- IP address: Configure the router's LAN IP address
- IP Subnet Mask: Configure the router's LAN Subnet Mask
- 802.11d Spanning Tree: The 802.1d Spanning Tree settings is disabled by default. When enabled, the spanning tree protocol is applied to prevent network loops (transmissions won't pass the same node twice to reach the destination).

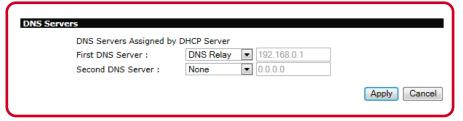


**DHCP Server:** The DHCP server assigns IP addresses to the devices on the LAN.

- **DHCP Server:** Enable or disable the DHCP server (Default: Enabled).
- Lease Time: Configure the amount of time each allocated IP address can by used by a client.
- Start IP: The first IP address in the range of addresses assigned by the router.
- End IP: The last IP address in the range of addresses assigned by the router.
- **Domain Name:** The domain name of the router.



### System - LAN - 3



**DNS Server:** The domain name system (DNS) server translates a domain or website name into a uniform resource locator (URL), or Internet address. There are four options to choose from:

- 1. From ISP: Select From ISP to retrieve the DNS address value from the ISP
- **2. User-Defined:** Select User-Defined to assign a custom DNS server address
- **3. DNS Relay:** Select DNS Relay to forward all queries to a relay, which in turn sends them to an ISP's DNS server
- 4. None: Select None to assign no server
- First DNS Server: Configure the first, or primary, DNS server. (Default as DNS Relay)
- Second DNS Server: Configure the second, or secondary, DNS server. (Default as None)
- Click **Apply** to Save settings

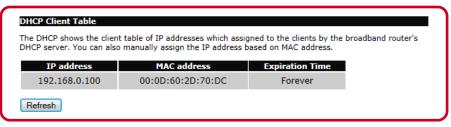


### System – DHCP – 1



**DHCP:** The DHCP here shows the client table of IP addresses which assigned to the clients. You can manually assigned the clients to certain IP addresses based on their MAC addresses.

Note: Please keep the default values if you are not certain with the effects of changing the values.

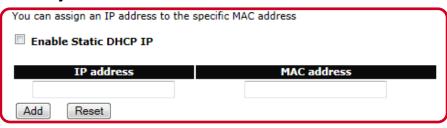


**DHCP Client Table:** Displays the connected DHCP clients whose IP addresses are assigned by the DHCP server on the LAN.

Click Refresh to update the table.

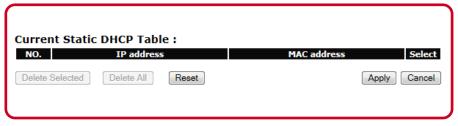


### System – DHCP – 2



**Enable Static DHCP IP:** Click **Enable Static DHCP IP** to add more static DHCP IP addresses. Click **Add** to add after entered the IP address and MAC address. Click **Reset** to return the table to its previous state.

- IP address: Please enter the IP address range within 192.168.x.1 ~
   192.168.x.254 (x should be the same as the LAN IP's IP address, for example it should 0 here)
- MAC address: MAC address should be your desired client's MAC address. The format should be without ":". You can reference this on the DHCP Client Table above.



**Current Static DHCP Table:** Active static DHCP addresses are listed along with the associated MAC addresses.

- Delete Selected: Click to remove a selected address.
- Delete All: Click to remove all addresses from the table.
- **Reset:** Click to return the table to its previous state.
- Apply: Click to save the settings.

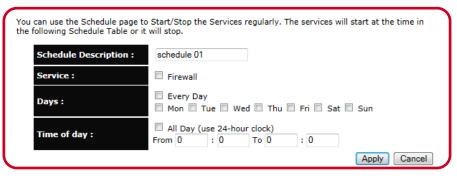


# System – Schedule



**Schedule:** You can use this function to start or stop Firewall service. Click **Enabled Schedule Table (up to 8)** to enable schedule function. Click **Add** to add more schedule task. Click **Edit** to modify the tasks.

Note: Please keep the default values if you are not certain with the effects of changing the values.

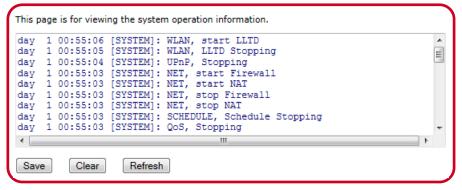


**Add Schedule Task:** To manage each Schedule Task on description, Service type, Days, and time.

- Schedule Description: You can name the task here.
- Service: You can click to select the service. Currently you can only select **Firewall**
- Days: You can select either everyday or any day of the week.
- Time of Day: You can select All Day or entering any time.
- Apply: Click to save the settings.



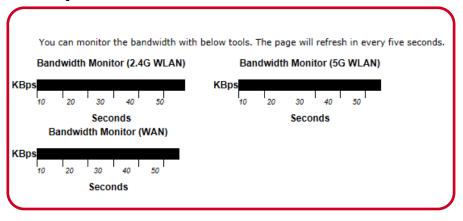
# System – Log



**Log:** The logging service records and displays important system information and activity on the network. The events will be store in the memory buffer which older data will overwrite when the buffer is full.

- Save: Click to store data to a log file.
- Clear: Click to empty the log file.
- Refresh: Click to empty the log file and begin updating it with new data.

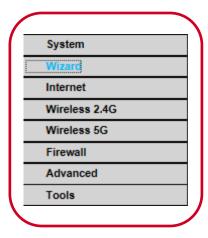
# System – Monitor



**Monitor:** View the display bandwidth usage for LAN and WLAN traffic.



### Wizard

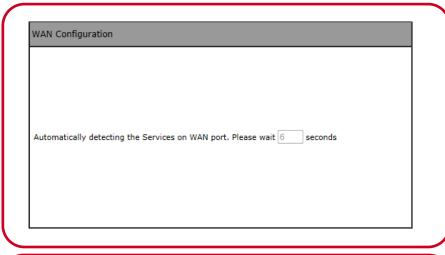


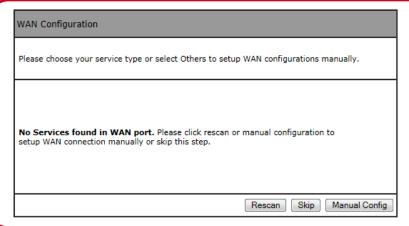
Wizard: The Setup Wizard helps T600N in automatically detecting the connection to your ISP.

Please follow this steps in the Wizard to complete your Setting.



# Wizard – Modem to LAN Setup

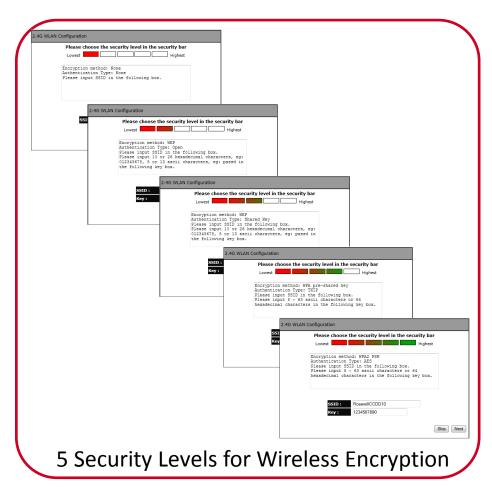




#### **Setup Wizard**

- 1. After click twice on "**Next**" confirming to start on the Wizard setup process, T600N will automatically detect your Connection from the ISP. You will need to provide T600N the following information once the connecting method was detected.
- 2. T600N is able to detect Static IP, Dynamic IP, PPP over Ethernet, PPTP, and L2TP connection methods.
  - PPPoE: PPPoE requires you having the User Name and Password provided by your ISP. Normally happens when using DSL connection.
  - Dynamic IP (DHCP): DHCP does not require entering anything.
     Usually happens when getting connection from an existing internet Connection.
  - Static IP (Fixed): Fixed requires you entering a set IP address, Subnet Mask, Gateway IP Address, Primary DNS, and/or Secondary DNS. These information will provided by your ISP and normally happens when using Cable connection.
  - Manually Configuration: If no WAN Connection was detected, you will need to manually enter the necessary information to connect to your ISP. You may want to check the cable connection and Rescan.

# Wizard – Wireless Setup

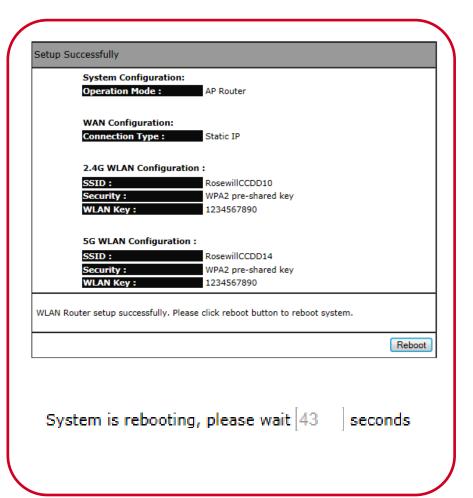


#### **Setup Wizard Guide**

- 1. Once the setup for Modem to LAN complete, you will continue to set up the Wireless configuration.
- 2. The Wizard will start with **2.4G WLAN Configuration**, then **5G WLAN**Configuration:
  - 2.4G WLAN Configuration:
    - There are 5 levels of Wireless Encryption you can set.
       From the lowest security level to the highest level's
       WPA2 PSK. Please follow the instruction in the window to set you SSID and password Key.
  - 5G WLAN Configuration:
    - There are 5 levels of Wireless Encryption you can set.
       From the lowest security level to the highest level's
       WPA2 PSK. Please follow the instruction in the window to set you SSID and password Key.



# Wizard – Setup Successfully



#### **Setup Wizard**

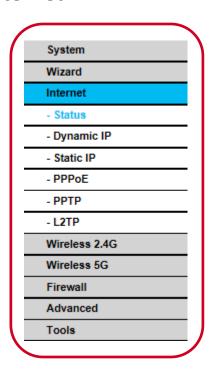
- Once the setup complete, you will see a summary window show up tells you to **Reboot** the Router's System to make all changes effective.
- 2. The Reboot process will take 45 seconds.
- 3. After the Reboot process , the Status window of the T600N will popup.

#### **Admin Password Changes**

- When you finish the Wizard setup, please click on "Tools" on the left hand side's menu to change the default Password for login into your T600N from "admin" to your desired Password.
- 2. Please write down this password somewhere and keep it for your future use.
- 3. This is very important because the default password may be an easy access for people who wants to hack into your network.



#### Internet

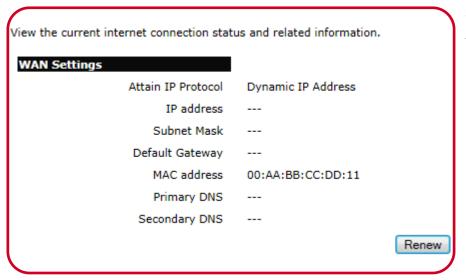


**Internet:** You can review the device information and manage the basic WIRED connection here:

- Status: Display the summary of the Internet status and type of connection.
- **Dynamic IP:** Setup a dynamic IP connection to an Internet service provider (ISP). (Used mostly for Dorm or Office connection)
- Static IP: Setup a static IP connection to an ISP. (Used mostly for Cable connection)
- PPPoE: Setup a PPPoE connection to an ISP. (Used mostly for DSL connection)
- **PPTP:** Setup a PPTP connection to an ISP. (Used mostly for VPN connection)
- L2TP: Setup an L2TP connection to an ISP. (Used mostly for VPN connection)



#### Internet – Status

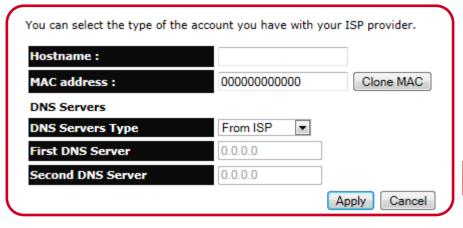


**Status:** It shows a summary of the current Internet connection information In this Internet Status:

- WAN Settings:
  - Attain IP Protocol: Display the IP Protocol type used for the T600N (Dynamic IP Address or Static IP Address).
  - IP Address: The router's WAN IP address.
  - Subnet Mask: The router's WAN subnet mask.
  - **Default Gateway:** The ISP's gateway IP address.
  - MAC Address: The router's WAN MAC address. The router's MAC address is located on the label on the back side of the router.
  - Primary DNS: The primary DNS address of an ISP provider.
  - Secondary DNS: The secondary DNS address of an ISP provider.



### Internet – Dynamic IP



**Dynamic IP:** Dynamic IP addressing assigns a different IP address each time a device connects to an ISP service provider. The service is most commonly used by ISP cable providers.

- Host name: Assign a name for the internet connection type. This field can be blank.
- MAC address: Enter the MAC address of the devices' network interface card (NIC) in the MAC address field and click Clone MAC.

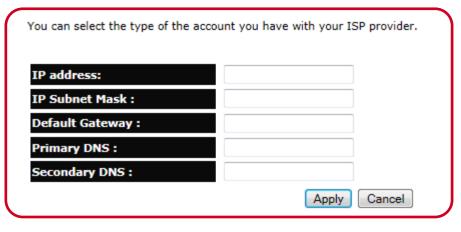
**Note:** Some ISP providers require registering the MAC address of the network interface card (NIC) connected directly to the cable or DSL modem. Clone MAC masks the router's MAC address with the MAC address of the device's NIC.

**DNS Server:** The DNS server translates a domain or website name into a uniform resource locator (URL), or Internet address. There are two options to choose from: From ISP or User-Defined. Select From ISP to retrieve the DNS address value from the ISP; select User-Defined to assign a custom DNS server address.

Click **Apply** to save the settings or **Cancel** to discard the changes.



#### Internet - Static IP



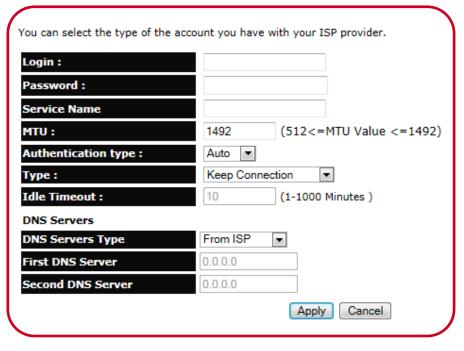
**Static IP:** Setting a static IP address allows an administrator to set a specific IP address for the router and guarantees that it can not be assigned a different address.

- IP Address: This section is to enter the IP address provided to the router by ISP.
- **IP Subnet Mask:** This section is to enter the IP Subnet Mask provided to the router by ISP.
- **Default Gateway:** This section is to enter the Default Gateway provided to the router by ISP.
- Primary DNS: This section is to enter the Primary DNS provided to the router by ISP.
- **Secondary DNS:** This section is to enter the Secondary DNS provided to the router by ISP, if any.

Click **Apply** to save the settings or **Cancel** to discard the changes.



#### Internet – PPPoE



**PPPoE:** Point-to-Point Protocol over Ethernet (PPPoE) is used mainly by ISPs that provide DSL modems to connect to the Internet.

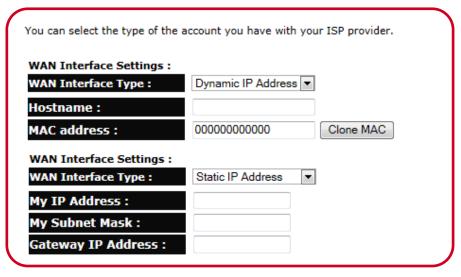
- Login: Enter the username assigned by an ISP.
- Password: Enter the password assigned by an ISP.
- Service Name: Enter the service name of an ISP (optional).
- MTU: Enter the maximum transmission unit (MTU). The MTU specifies the largest packet size permitted for an internet transmission (PPPoE default: 1492). The MTU size can be set between 512 and 1492.
- Authentication Type: Select the type of authentication provided by the ISP:
   Auto, PAP, or CHAP. If unsure of the best setting, select Auto.
- Type: Configure the connection type between the router and the ISP. Choose between Keep Connection, Automatic Connection or Manual Connection.
- **Idle Timeout:** Configure the maximum idle time (1 to 1,000 minutes) allowed for an inactive connection.

**DNS Server:** The DNS server translates a domain or website name into a uniform resource locator (URL), or Internet address. There are two options to choose from: From ISP or User-Defined. Select From ISP to retrieve the DNS address value from the ISP; select User-Defined to assign a custom DNS server address.

Click **Apply** to save the settings or **Cancel** to discard the changes.



#### Internet – PPTP – 1

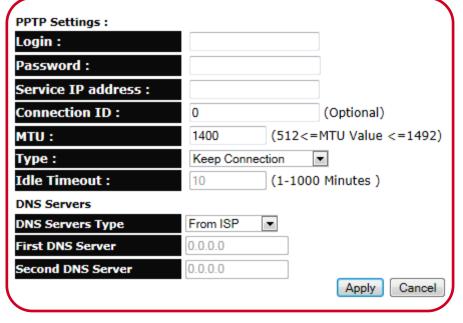


**PPTP:** The point-to-point tunneling protocol (PPTP) is used in association with virtual private networks (VPNs). There a two parts to a PPTP connection: the WAN interface settings and the PPTP settings.

- WAN Interface Settings Dynamic IP Address:
  - WAN Interface Type: Select Dynamic IP Address to assign an IP address provided by an ISP.
  - Hostname: Enter the service name of an ISP (optional).
  - MAC address: Enter the MAC address of the devices' network interface card (NIC) in the MAC address field and click Clone MAC.
- WAN Interface Settings Static IP Address:
  - **WAN Interface Type:** Select Static IP Address to assign a specific IP address for the router.
  - My IP Address: Enter the custom IP address. Normally provided by the ISP.
  - **My Subnet Mask:** Enter the custom Subnet Mask. Normally provided by the ISP.
  - **Gateway IP Address:** Enter the custom gateway IP address. Normally provided by the ISP.



#### Internet – PPTP – 2



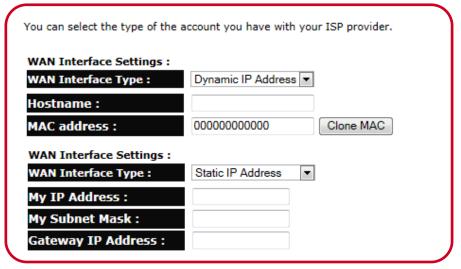
#### **PPTP Settings:**

- User Name: Enter the username assigned by your ISP.
- Password: Enter the password assigned by your ISP.
- Service IP Address: Enter the PPTP server IP address provided by your ISP.
- Connection ID: Enter the connection ID provided by your ISP (optional).
- MTU: Enter the maximum transmission unit (MTU). The MTU specifies the largest packet size (Default: 1462) permitted for an internet transmission. The MTU size can be set between 512 and 1492.
- Type: Configure the connection type between the router and the ISP. Choose between Keep Connection, Automatic Connection or Manual Connection.
- Idle Timeout: Configure the maximum amount of time, in minutes, allowed for inactive Internet connection. The Internet connection will be dropped when the maximum idle time is reached. Valid values are between one and one thousand.

**DNS Server:** The DNS server translates a domain or website name into a uniform resource locator (URL), or Internet address. There are two options to choose from: From ISP or User-Defined. Select From ISP to retrieve the DNS address value from the ISP; select User-Defined to assign a custom DNS server address.



#### Internet – L2TP – 1

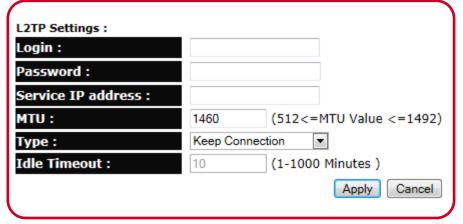


**L2TP:** The layer 2 tunneling protocol (L2TP) is used in association with virtual private networks (VPNs). There a two parts to a L2TP connection: the WAN interface settings and the L2TP settings.

- WAN Interface Settings Dynamic IP Address:
  - WAN Interface Type: Select Dynamic IP Address to assign an IP address provided by an ISP.
  - Hostname: Enter the service name of an ISP (optional).
  - MAC address: Enter the MAC address of the devices' network interface card (NIC) in the MAC address field and click Clone MAC.
- WAN Interface Settings Static IP Address:
  - WAN Interface Type: Select Static IP Address to assign a specific IP address for the router.
  - My IP Address: Enter the custom IP address. Normally provided by the ISP.
  - My Subnet Mask: Enter the custom Subnet Mask. Normally provided by the ISP.
  - Gateway IP Address: Enter the custom gateway IP address. Normally provided by the ISP.



#### Internet – L2TP – 2

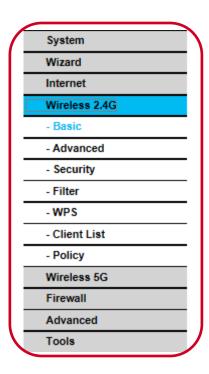


#### **L2TP Settings:**

- Login: Enter the username assigned by your ISP.
- Password: Enter the password assigned by your ISP.
- Service IP Address: Enter the L2TP server IP address provided by your ISP.
- MTU: Enter the maximum transmission unit (MTU). The MTU specifies the largest packet size (Default: 1462) permitted for an internet transmission. The MTU size can be set between 512 and 1492.
- **Type:** Configure the connection type between the router and the ISP. Choose between Keep Connection, Automatic Connection or Manual Connection.
- Idle Timeout: Configure the maximum amount of time, in minutes, allowed for inactive Internet connection. The Internet connection will be dropped when the maximum idle time is reached. Valid values are between one and one thousand.



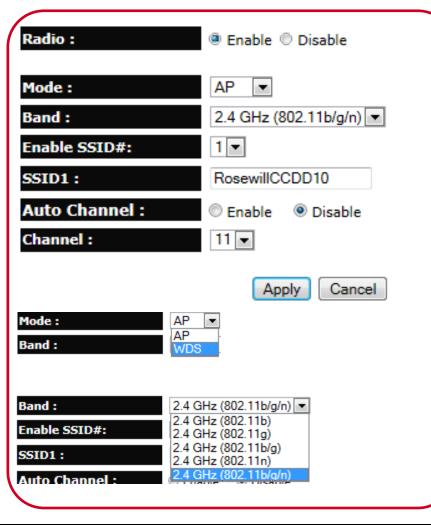
#### Wireless 2.4G



Wireless 2.4G: View and edit settings for 2.4G wireless network connectivity:

- Basic: Configure the minimum settings required to setup a wireless network connection.
- Advanced: Configure the advanced network settings.
- Security: Configure the wireless network security settings.
- Filter: Configure a list of clients that are allowed to wirelessly connect to the network.
- WPS: Automate the connection between the a wireless device and the router using an 8-digit
   PIN.
- Client: List View the 2.4G wireless devices currently connected to the network.

#### Wireless 2.4G – Basic – 1 – AP

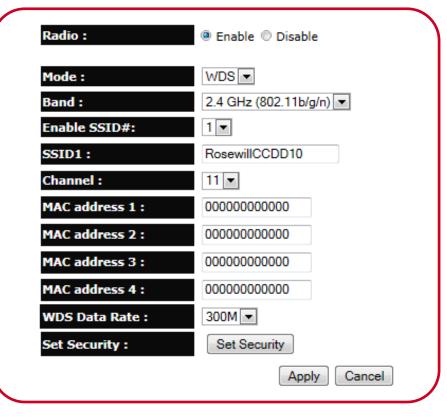


**Basic:** You can manage the basic Wireless 2.4GHz functions here.

- **Radio:** Enable or disable the wireless radio. If the wireless radio is disabled, there will not be any wireless signal.
- Mode: Select the wireless operating mode for the router. Two modes are available: Access Point (AP) or Wireless Distribution System (WDS) mode.
  - AP: Provides a wireless connection access point for wireless devices.
    - Band: Select a wireless standard for the network from the following options:
       2.4 GHz (B), 2.4 GHz (G), 2.4 GHz (N), 2.4 GHz (B+G), 2.4 GHz (B+G+N)
    - **Enable SSID#:** Select the number of wireless groups, you can enable up to 4 SSID groups.
    - **SSID[#]:** Enter the name of the wireless network(s).
    - Auto Channel: Enable or disable having the router automatically select a channel for the wireless network. Auto channel is enabled by default. Select disable to manually assign a specific channel. (Default = Disable)
    - Check Channel Time: When auto channel is enabled, select time period that the system checks the appropriate channel for the router.
    - Channel When auto channel is disabled, select a channel to assign to the wireless network. Valid value are from one to eleven in the US.



#### Wireless 2.4G - Basic - 2 - WDS



**WDS:** Allows the wireless network to be expanded using multiple access points without wired connections.

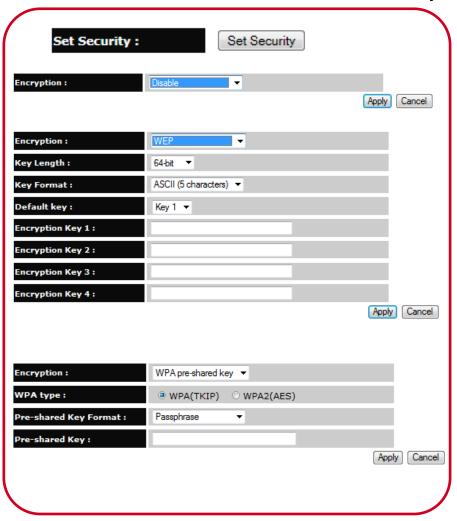
- **Radio:** Enable or disable the wireless radio. If the wireless radio is disabled, there will not be any wireless signal.
- Mode:
  - **WDS:** Allows the wireless network to be expanded using multiple access points without wired connections.
  - Channel Select a channel to assign to the wireless network. Valid
    value are from one to eleven in the US and one to thirteen in the EU.
  - MAC Address [#] Enter the MAC address (es) for the wireless access
    point(s) that you want to connect to here. (you will also need to enter
    T600N's MAC address into the wireless access point(s) you want to
    connect with)
  - WDS Data Rate Select the data rate for the WDS.
  - **Set Security** Click Set Security to display the WDS security settings screen. For security configuration settings, refer to "WDS Security Settings Screen" on next page.

**Note:** In order for WDS to work, there are some basic requirements:

- 1. Both AP need to be able support WDS function.
- 2. Both AP need to have same SSID, and same Channel.
- 3. When set to WDS, both AP's MAC addresses will be needed.
- 4. Both AP's WDS encryption and password has to be the same.



## Wireless 2.4G – Basic – 3 – WDS Security



**WDS:** Allows the wireless network to be expanded using multiple access points without wired connections.

- **Set Security:** You should see a popup window when click on **Set Security**. Please enter the same Encryption method and password of the device that you want to connect to.
  - **WDS**: Allows the wireless network to be expanded using multiple access points without wired connections.
  - Channel Select a channel to assign to the wireless network. Valid value are from one to eleven in the US and one to thirteen in the EU.
  - MAC Address [#] Enter the MAC address(es) for the wireless access point(s) that are part of the WDS.
  - WDS Data Rate Select the data rate for the WDS.
  - **Set Security** Click Set Security to display the WDS security settings screen. For security configuration settings, refer to "WDS Security Settings Screen" on next page.



#### Wireless 2.4G – Advance – 1

		for more advanced users. These settings should not be changes will have on your broadband router.
Fragment Threshold :	2346	(256-2346)
RTS Threshold :	2347	(1-2347)
Beacon Interval :	100	(20-1000 ms)
DTIM Period :	1	(1-255)
N Data rate :	Auto 💌	
Channel Bandwidth :	Auto 20/40 MHZ 20 MHZ	
Preamble Type :	Cong Preamble Short Preamble	
CTS Protection :	Auto    Always    None	
Tx Power:	100 % 🔻	
		Apply Cancel

**Advance:** Advanced settings available for the router.

- Note: Incorrectly changing these settings may cause the device to stop function. Please make sure you know the effect before changing the settings
- Fragment Threshold: Enter the maximum size of a packet during data transmission. A value too low could lead to low performance.
- RTS Threshold: Enter the RTS threshold. If the packet size is smaller than the RTS threshold, the T600N does not use RTS/CTS to send the data packet.
- **Beacon Interval:** Enter the beacon interval. This is the amount of time that the T600N sets to synchronize the network.
- Delivery Traffic Indication Message (DTIM) Period: Enter the DTIM period.
   The DTIM is a countdown period informing clients of the next point of broadcast and multicast of messages over the network. Valid values are between 1 and 255.



#### Wireless 2.4G – Advance – 2

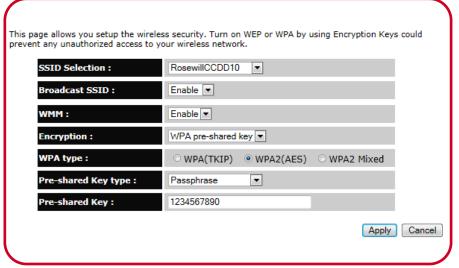
These Wireless LAN settings are suggested for more advanced users. These settings should not be changed unless you know what effect the changes will have on your broadband router. 2346 Fragment Threshold: (256-2346)RTS Threshold: 2347 (1-2347)100 (20-1000 ms) Beacon Interval: DTIM Period : (1-255)Auto N Data rate: Channel Bandwidth: Auto 20/40 MHZ
© 20 MHZ Preamble Type: Cong Preamble Short Preamble CTS Protection: Auto Always None 100 % ▼ Tx Power: Cancel

**Advance:** Advanced settings available for the router.

- **Note:** Incorrectly changing these settings may cause the device to stop function. Please make sure you know the effect before changing the settings
- N Data Rate: Select the N data rate. This is the rate in which the T600N will transmit data packets to wireless N compatible devices.
- Channel Bandwidth: Select the channel bandwidth. The factory default is
   Auto 20/40MHz. The default setting provides the best performance by auto selecting channel bandwidth.
- Preamble Type: Select the preamble type. Long Preamble provides better
   LAN compatibility and Short Preamble provides better wireless performance.
- CTS Protection: Select the type of CTS protection. Using CTS Protection can lower the data collisions between Wireless B and Wireless G devices and lower data throughput.
- Tx Power: Select the wireless signal strength level. Valid values are between 10% and 100%.



## Wireless 2.4G – Security – 1

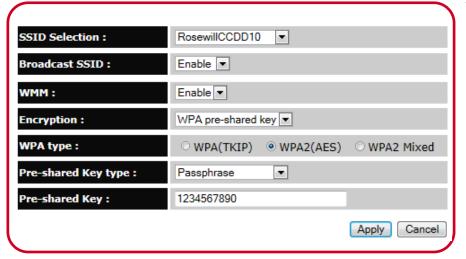


**Security:** Enable security options on the wireless network to prevent unwanted connection to the wireless network.

- SSID Selection: Select the wireless network group to change the wireless security settings for..
- Broadcast SSID: Enable or disable broadcast SSID. Choose whether or not the wireless group is visible to other members.
- Wi-Fi Multimedia (WMM): Enable or disable Multimedia quality of server
   (QoS) to optimize the streaming for bandwidth sensitive data such as HDTV
   video streaming, online gaming, VoIP, videoconferencing, and etc.
- Encryption: Select the encrypt type for the router. You can select between WEP, WPA (WPA TKIP/ WPA2 AES / WPA2 Mix), Pre-Shared Key, WPA Radius. Please see next page for details on Encryption.



## Wireless 2.4G – Security – 2 – WEP

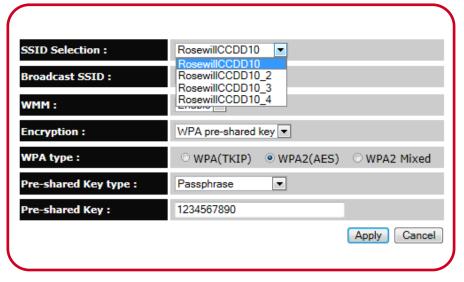


#### WEP (Wired Equivalent Privacy):

- SSID Selection: Select the wireless network group to change the wireless security settings for.
- Authentication Type: Select the type of authentication.
  - Open System: Wireless stations can associate with the T600N without WEP encryption
  - **Shared Key:** Devices must provide the corresponding WEP key(s) when connecting to the T600N.
  - Auto
- Key Length: Select between 64-bit and 128-encryption.
- Key Type: Select the type of characters used for the WEP Key: ASCII (5 characters) or Hexadecimal (10 characters).
- **Encryption Key [#]:** Enter the encryption key(s) used to encrypt the data packets during data transmission.



## Wireless 2.4G – Security – 3 – WPA

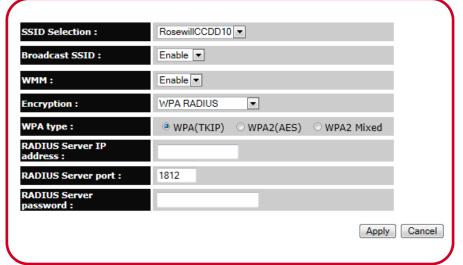


#### WPA (Wi-Fi Protected Access):

- WPA Type: Select the type of WPA.
  - WPA Temporal Key Integrity Protocol (TKIP): Generates a 128-bit key for each packet.
  - WPA2 Advanced Encryption Standard (AES): Government standard packet encryption which is stronger than TKIP.
  - **WPA2 Mixed:** Mixed mode allows device to try WPA2 first, and if that fails selects WPA type.
- Pre-Shared Key Type: Select the type of pre-shared key as Passphrase (ASCII) or Hexadecimal.
- Pre-Shared Key: Enter the pre-shared Key value.



# Wireless 2.4G – Security – 4 – WPA Radius

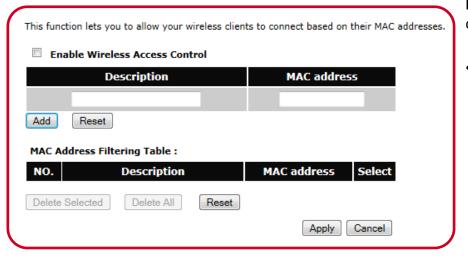


**WPA Radius (Wi-Fi Protected Access):** This encryption use a RADIUS server to authenticate wireless stations and provide a session key to encrypt data during communications. Most of the information should be provided by the Network administrator.

- WPA Type: Select the type of WPA.
  - WPA Temporal Key Integrity Protocol (TKIP): Generates a 128-bit key for each packet.
  - WPA2 Advanced Encryption Standard (AES): Government standard packet encryption which is stronger than TKIP.
  - **WPA2 Mixed:** Mixed mode allows device to try WPA2 first, and if that fails selects WPA type.
- RADIUS Server IP Address: For entering the IP address of the server.
- RADIUS Server Port: For entering the port number of the server.
- RADIUS Server Password: For entering the password of the server.



#### Wireless 2.4G – Filter



**Filter:** The filter function will allow you to control your wireless clients' connection based on their MAC addresses.

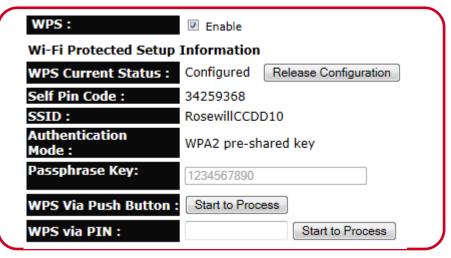
- Enable Wireless Access Control: When "Enable Wireless Access Control" is selected, only wireless clients with MAC addresses listed in the table are allowed to connect to the wireless network. If you enable without adding any client's MAC address here, then T600N can only be access via wire cable.
  - Description: Enter a description of the device allowed to connect to the network.
  - MAC address: Enter the MAC address of the wireless device.

Click **Add** to add new device in the table or **Reset** to discard the changes.

- MAC Address Filtering Table: Showing the information on the Clients that has MAC address recorded.
  - No.: The sequence number of the device.
  - **Description:** The description of the device.
  - MAC Address: The MAC address of the device.
  - **Select:** Indicates the device(s) that can have actions performed on them.



#### Wireless 2.4G – WPS



**WPS**: Wi-Fi protected setup (WPS) is an easy way to allow wireless clients to connect to the T600N. Automate the connection between the device and the T600N using a button or a PIN #.

- WPS: Enable or disable WPS.
- **WPS Current Status:** A notification of whether or not wireless security is configured.
- **Self Pin Code:** An 8-digit PIN which is required when configuring the router for the first time in Windows 7 or Vista.
- SSID: Showing the name of the wireless network.
- Authentication Mode: The current security settings for the corresponding SSID.
- Passphrase Key: A randomly generated key created by the T600N during WPS.
- WPS via Push Button: Click Start to Process to activate WPS.
- WPS via PIN: Enter the PIN of a wireless device click Start to Process to activate WPS.



#### Wireless 2.4G – Client List



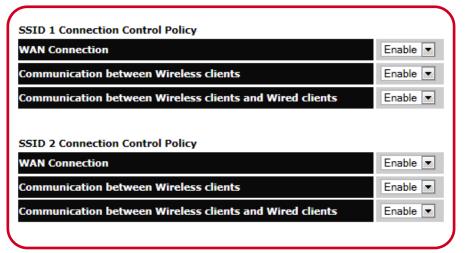
Client List: Here you can view the wireless client connects wirelessly to T600N.

- Interface: The type of network connected to the device.
- MAC Address: The MAC address of device connected to network.
- **Signal:** The signal strength of the device connected to the network.
- Idle Time: The amount of time the connected device has not been active on the network.

Click **Refresh** to update the information appear.



# Wireless 2.4G – Policy

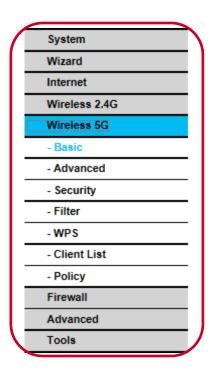


**Policy:** The policy here allows you to manage each SSID's control feature. If you enable 4 SSIDs, you can manage all 4 SSIDs here.

- WAN Connection: Enable to allow the SSID to connect to the internet. Disable will turn the connection off.
- Communication between Wireless clients: Enable to allow the Wireless
   Clients to communicate with each other, share files and folders. Disable will
   turn the Communication off.
- Communication between Wireless clients and Wired clients: Enable to allow the Wireless Clients and Wired clients to communicate with each other, share files and folders. Disable will turn the Communication off.



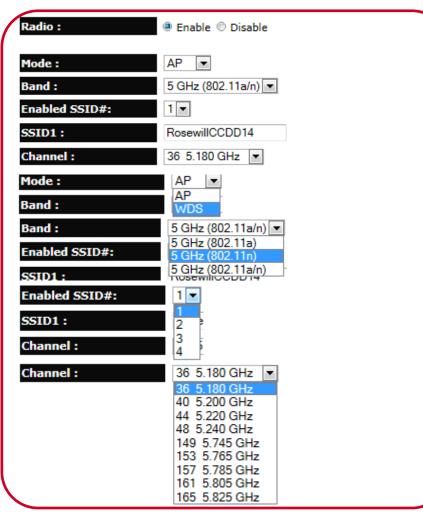
#### Wireless 5G



Wireless 5G: View and edit settings for 5G wireless network connectivity:

- Basic: Configure the minimum settings required to setup a wireless network connection.
- Advanced: Configure the advanced network settings.
- Security: Configure the wireless network security settings.
- Filter: Configure a list of clients that are allowed to wirelessly connect to the network.
- WPS: Automate the connection between the a wireless device and the router using an 8-digit
   PIN.
- Client: List View the 5G wireless devices currently connected to the network.

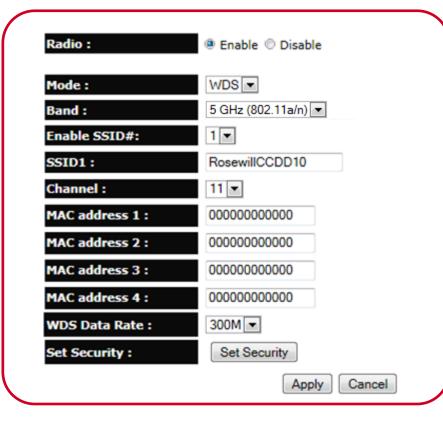
#### Wireless 5G – Basic – 1 – AP



Basic: You can manage the basic Wireless 5GHz functions here.

- **Radio:** Enable or disable the wireless radio. If the wireless radio is disabled, there will not be any wireless signal.
- Mode: Select the wireless operating mode for the router. Two modes are available: Access Point (AP) or Wireless Distribution System (WDS) mode.
  - AP: Provides a wireless connection access point for wireless devices.
    - **Band:** Select a wireless standard for the network from the following options:
      - 5 GHz (802.11a), 5 GHz (802.11n), 5 GHz (802.11a/n)
    - **Enable SSID#:** Select the number of wireless groups, you can enable up to 4 SSID groups.
    - **SSID[#]:** Enter the name of the wireless network(s).
    - Auto Channel: Enable or disable having the router automatically select a channel for the wireless network. Auto channel is enabled by default. Select disable to manually assign a specific channel. (Default = Disable)
    - Check Channel Time: When auto channel is enabled, select time period that the system checks the appropriate channel for the router.
    - **Channel** When auto channel is disabled, select a channel to assign to the wireless network.

#### Wireless 5G - Basic - 2 - WDS



**WDS:** Allows the wireless network to be expanded using multiple access points without wired connections.

- **Radio:** Enable or disable the wireless radio. If the wireless radio is disabled, there will not be any wireless signal.
- **Mode:** Select the wireless operating mode for the router. Two modes are available: Access Point (AP) or Wireless Distribution System (WDS) mode.
  - **WDS:** Allows the wireless network to be expanded using multiple access points without wired connections.
  - Channel Select a channel to assign to the wireless network. Valid
    value are from one to eleven in the US and one to thirteen in the EU.
  - MAC Address [#] Enter the MAC address(es) for the wireless access point(s) that are part of the WDS.
  - WDS Data Rate Select the data rate for the WDS.
  - **Set Security** Click Set Security to display the WDS security settings screen. For security configuration settings, refer to "WDS Security Settings Screen" on next page.

**Note:** In order for WDS to work, there are some basic requirement:

- 1. Both AP needs to support WDS.
- 2. Both AP needs to have same SSID
- 3. Both AP needs to use same Channel.
- 4. When both AP set to WDS, they need to set each other's MAC addresses.
- 5. Both AP's WDS encryption and password should be set the same.

# Wireless 5G – Basic – 3 – WDS Security



**WDS:** Allows the wireless network to be expanded using multiple access points without wired connections.

- **Set Security:** You should see a popup window when click on **Set Security**. Please enter the same Encryption method and password of the device that you want to connect to.
  - **WDS**: Allows the wireless network to be expanded using multiple access points without wired connections.
  - Channel Select a channel to assign to the wireless network. Valid value are from one to eleven in the US and one to thirteen in the EU.
  - MAC Address [#] Enter the MAC address(es) for the wireless access point(s) that are part of the WDS.
  - WDS Data Rate Select the data rate for the WDS.
  - **Set Security** Click Set Security to display the WDS security settings screen. For security configuration settings, refer to "WDS Security Settings Screen" on next page.



#### Wireless 5G - Advance - 1

These Wireless LAN settings are suggested for more advanced users. These settings should not be changed unless you know what effect the changes will have on your broadband router. 2346 Fragment Threshold: (256-2346)RTS Threshold: 2347 (1-2347)100 (20-1000 ms) Beacon Interval: DTIM Period : (1-255)Auto N Data rate: Channel Bandwidth: Auto 20/40 MHZ
© 20 MHZ Preamble Type: Cong Preamble Short Preamble CTS Protection: Auto Always None 100 % ▼ Tx Power: Cancel

**Advance:** Advanced settings available for the router.

- Note: Incorrectly changing these settings may cause the device to stop function. Please make sure you know the effect before changing the settings
- Fragment Threshold: Enter the maximum size of a packet during data transmission. A value too low could lead to low performance.
- RTS Threshold: Enter the RTS threshold. If the packet size is smaller than the RTS threshold, the T600N does not use RTS/CTS to send the data packet.
- **Beacon Interval:** Enter the beacon interval. This is the amount of time that the T600N sets to synchronize the network.
- Delivery Traffic Indication Message (DTIM) Period: Enter the DTIM period.
   The DTIM is a countdown period informing clients of the next point of broadcast and multicast of messages over the network. Valid values are between 1 and 255.



#### Wireless 5G – Advance – 2

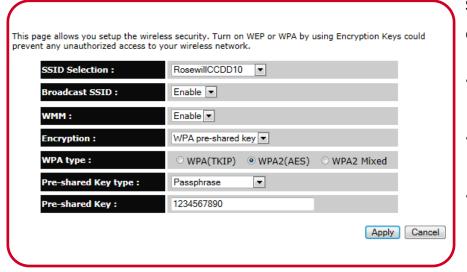
These Wireless LAN settings are suggested for more advanced users. These settings should not be changed unless you know what effect the changes will have on your broadband router. 2346 Fragment Threshold: (256-2346)RTS Threshold: 2347 (1-2347)100 (20-1000 ms) Beacon Interval: DTIM Period : (1-255)Auto N Data rate : Channel Bandwidth: Auto 20/40 MHZ
© 20 MHZ Preamble Type: Cong Preamble Short Preamble CTS Protection: Auto Always None 100 % ▼ Tx Power: Cancel

**Advance:** Advanced settings available for the router.

- Note: Incorrectly changing these settings may cause the device to stop function. Please make sure you know the effect before changing the settings
- N Data Rate: Select the N data rate. This is the rate in which the T600N will transmit data packets to wireless N compatible devices.
- Channel Bandwidth: Select the channel bandwidth. The factory default is
   Auto 20/40MHz. The default setting provides the best performance by auto selecting channel bandwidth.
- Preamble Type: Select the preamble type. Long Preamble provides better
   LAN compatibility and Short Preamble provides better wireless performance.
- CTS Protection: Select the type of CTS protection. Using CTS Protection can lower the data collisions between Wireless B and Wireless G devices and lower data throughput.
- Tx Power: Select the wireless signal strength level. Valid values are between 10% and 100%.



## Wireless 5G – Security – 1

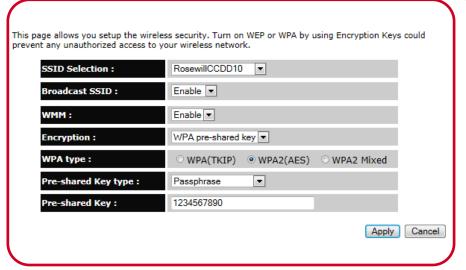


**Security:** Enable security options on the wireless network to prevent unwanted connection to the wireless network.

- SSID Selection: Select the wireless network group to change the wireless security settings for..
- **Broadcast SSID:** Enable or disable broadcast SSID. Choose whether or not the wireless group is visible to other members.
- Wi-Fi Multimedia (WMM): Enable or disable Multimedia quality of server
   (QoS) to optimize the streaming for bandwidth sensitive data such as HDTV
   video streaming, online gaming, VoIP, videoconferencing, and etc.
- Encryption: Select the encrypt type for the router. You can select between
   WEP, WPA (WPA TKIP/ WPA2 AES / WPA2 Mix), Pre-Shared Key, WPA Radius.
   Please see next page for details on Encryption.



# Wireless 5G – Security – 2 – WEP

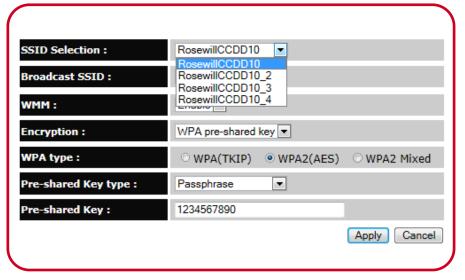


#### WEP (Wired Equivalent Privacy):

- SSID Selection: Select the wireless network group to change the wireless security settings for.
- Authentication Type: Select the type of authentication.
  - Open System: Wireless stations can associate with the T600N without WEP encryption
  - **Shared Key:** Devices must provide the corresponding WEP key(s) when connecting to the T600N.
  - Auto
- Key Length: Select between 64-bit and 128-encryption.
- **Key Type:** Select the type of characters used for the WEP Key: ASCII (5 characters) or Hexadecimal (10 characters).
- **Encryption Key [#]:** Enter the encryption key(s) used to encrypt the data packets during data transmission.



# Wireless 5G – Security – 3 – WPA

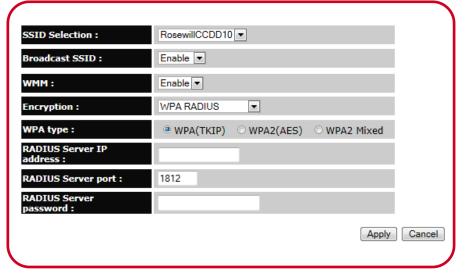


#### WPA (Wi-Fi Protected Access):

- WPA Type: Select the type of WPA.
  - WPA Temporal Key Integrity Protocol (TKIP): Generates a 128-bit key for each packet.
  - WPA2 Advanced Encryption Standard (AES): Government standard packet encryption which is stronger than TKIP.
  - **WPA2 Mixed:** Mixed mode allows device to try WPA2 first, and if that fails selects WPA type.
- Pre-Shared Key Type: Select the type of pre-shared key as Passphrase (ASCII)
  or Hexadecimal.
- Pre-Shared Key: Enter the pre-shared Key value.



# Wireless 5G – Security – 4 – WPA Radius

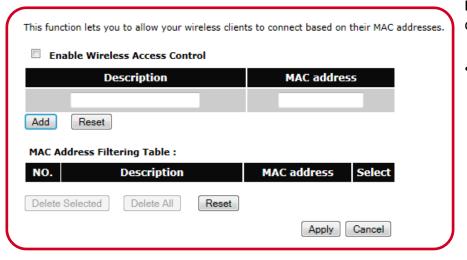


**WPA Radius (Wi-Fi Protected Access):** This encryption use a RADIUS server to authenticate wireless stations and provide a session key to encrypt data during communications. Most of the information should be provided by the Network administrator.

- WPA Type: Select the type of WPA.
  - WPA Temporal Key Integrity Protocol (TKIP): Generates a 128-bit key for each packet.
  - WPA2 Advanced Encryption Standard (AES): Government standard packet encryption which is stronger than TKIP.
  - **WPA2 Mixed:** Mixed mode allows device to try WPA2 first, and if that fails selects WPA type.
- RADIUS Server IP Address: For entering the IP address of the server.
- **RADIUS Server Port:** For entering the port number of the server.
- RADIUS Server Password: For entering the password of the server.



#### Wireless 5G – Filter



**Filter:** The filter function will allow you to control your wireless clients' connection based on their MAC addresses.

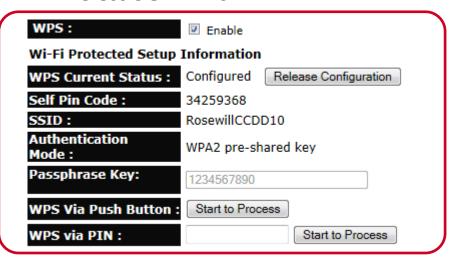
- Enable Wireless Access Control: When "Enable Wireless Access Control" is selected, only wireless clients with MAC addresses listed in the table are allowed to connect to the wireless network. If you enable without adding any client's MAC address here, then T600N can only be access via wire cable.
  - Description: Enter a description of the device allowed to connect to the network.
  - MAC address: Enter the MAC address of the wireless device.

Click **Add** to add new device in the table or **Reset** to discard the changes.

- MAC Address Filtering Table: Showing the information on the Clients that has MAC address recorded.
  - No.: The sequence number of the device.
  - **Description:** The description of the device.
  - MAC Address: The MAC address of the device.
  - **Select:** Indicates the device(s) that can have actions performed on them.



#### Wireless 5G – WPS

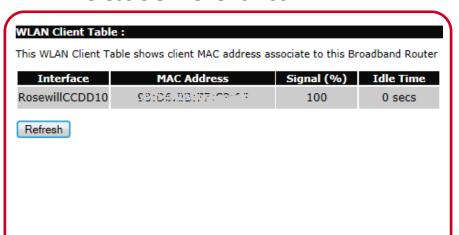


**WPS**: Wi-Fi protected setup (WPS) is an easy way to allow wireless clients to connect to the T600N. Automate the connection between the device and the T600N using a button or a PIN #.

- WPS: Enable or disable WPS.
- **WPS Current Status:** A notification of whether or not wireless security is configured.
- **Self Pin Code:** An 8-digit PIN which is required when configuring the router for the first time in Windows 7 or Vista.
- **SSID:** Showing the name of the wireless network.
- Authentication Mode: The current security settings for the corresponding SSID.
- Passphrase Key: A randomly generated key created by the T600N during WPS.
- WPS via Push Button: Click Start to Process to activate WPS.
- WPS via PIN: Enter the PIN of a wireless device click Start to Process to activate WPS.



#### Wireless 5G – Client List



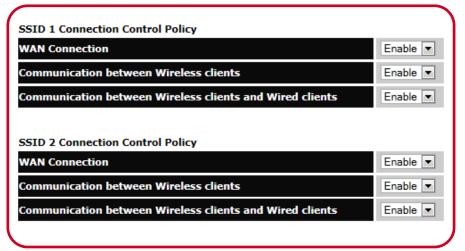
Client List: Here you can view the wireless client connects wirelessly to T600N.

- Interface: The type of network connected to the device.
- MAC Address: The MAC address of device connected to network.
- **Signal:** The signal strength of the device connected to the network.
- **Idle Time:** The amount of time the connected device has not been active on the network.

Click **Refresh** to update the information appear.



# Wireless 5G – Policy

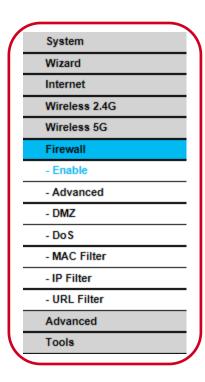


**Policy:** The policy here allows you to manage each SSID's control feature. If you enable 4 SSIDs, you can manage all 4 SSIDs here.

- WAN Connection: Enable to allow the SSID to connect to the internet. Disable
  will turn the connection off.
- Communication between Wireless clients: Enable to allow the Wireless
   Clients to communicate with each other, share files and folders. Disable will turn the Communication off.
- Communication between Wireless clients and Wired clients: Enable to allow the Wireless Clients and Wired clients to communicate with each other, share files and folders. Disable will turn the Communication off.



#### **Firewall**



Firewall: View and configure settings for firewall rule sets.

- Status: Display the summary of the current system status.
- Enable: Enable or disable the network firewall. (Default Enable)
- Advanced: Configure virtual private network (VPN) packets.
- **DMZ:** Redirect packets from the WAN port IP address to a particular IP address on the LAN.
- DoS: Enable or disable blocking of denial of service (DoS) attacks.
- MAC Filter: Uses to allow or deny the LAN clients from accessing the internet by MAC Address.
- IP Filter: Uses to allow or deny the LAN clients from accessing the internet by IP Address.
- URL Filter: Filtering the website visit by entering the key words and full URL addresses.



#### Firewall – Enable & Advanced



Apply



Description	Select
VPN L2TP Pass-Through	<b>V</b>
VPN PPTP Pass-Through	<b>V</b>
VPN IPSec Pass-Through	<b>V</b>
IPv6 Pass-Through	<b>V</b>
PPPoE Pass-Through	
	Apply Cancel

**Firewall:** The firewall function automatically detects and blocks Denial of Service (DoS) attacks. URL blocking, packet filtering and stateful packet inspection (SPI) are also supported. The details of the attack and the timestamp are recorded in the security log.

• Firewall: Enable or disable the firewall of the T600N.

**Advanced:** The router supports VPN pass-through which allows virtual private networking (VPN) packets to pass through the firewall.

- VPN Pass-through: Select to allow VPN packets to pass through the firewall.
- VPN L2TP Pass-through: Select to allow L2TP connection method over a VPN.
- VPN PPTP Pass-through: Select to allow PPTP connection method over a VPN.
- VPN IPSec Pass-through: Select to allow IPSec connection method over a VPN.
- IPv6 Pass-through: Select to allow IPv6 packets to pass through the Router.
- **PPPoE Pass-through:** Select to allow clients to directly connect to internet via PPPoE.



#### Firewall – DMZ



**DMZ:** Configuring a device on the LAN as a demilitarized zone (DMZ) host allows unrestricted two-way Internet access for Internet applications, such as online video games, to run from behind the NAT firewall. The DMZ function allows the router to redirect all packets going to the WAN port IP address to a particular IP address on the LAN. The difference between the virtual server and the DMZ function is that a virtual server redirects a particular service or Internet application, such as FTP, to a particular LAN client or server, whereas a DMZ redirects all packets, regardless of the service, going to the WAN IP address to a particular LAN client or server. A DMZ host allows a computer to have all its connections and ports completely open during data transmission.

- **Note:** The PC defined as a DMZ host is not protected by the firewall and is vulnerable to malicious network attacks. Do not store or manage sensitive information on the DMZ host.
- Enable DMZ: Click Enable DMZ to activate the DMZ function.
- Local IP Address: Enter the IP Address of the device on the LAN. (This is best to co-work with Static DHCP IP on page 22).



#### Firewall - DoS

The Firewall can detect and block DoS (Denial of Service) attacks. DoS attacks flood your internet connection with invalid packets and connection requests which makes Internet access becomes unavailable.

Block DoS: 

Enable 
Disable

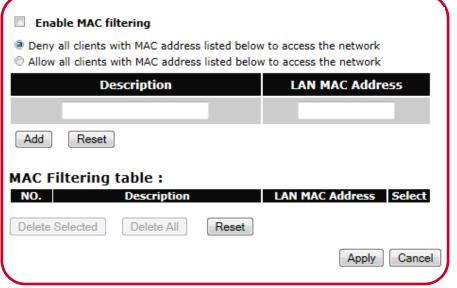
Apply Cancel

**DoS**: To enable blocking of denial of service (DoS) attacks, select the DoS option in the Firewall section. DoS attacks can flood the internet connection with the continuous transmission of data. Blocking these attacks ensures that the internet connection is always available.

• Block DoS: Click Enable to activate the block DoS Attack.



#### Firewall – MAC Filter



MAC Filter: Mac Filter is to control the LAN computer's internet access ability.

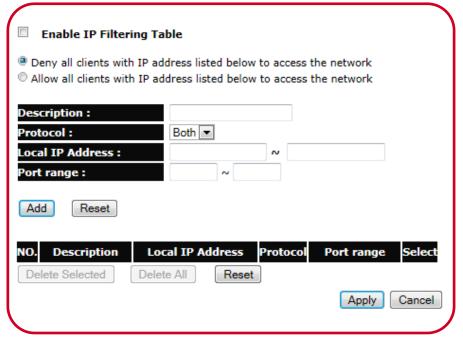
- Enable MAC filtering: Click Enable to activate the MAC filter function
  - Deny all clients with MAC address listed below to access the network:
     Enable this will deny any device's MAC address listed here from connecting to Internet.
  - Allow all clients with MAC address listed below to access the network:
     Enable this will allow only the device's MAC address listed here from connecting to Internet.
  - Description: Enter a description of the device that you want to record to the MAC Filtering table.
  - LAN MAC Address: Enter the MAC address associate to the devices that you want to record to the MAC Filtering table.

Click **Add** to save the settings to the table or **Reset** to discard the changes.

MAC Filtering Table: This table records the LAN devices you want to filter.
 Click Apply to save the settings or Cancel to discard the changes.



#### Firewall – IP Filter – 1



**IP Filter:** IP Filter is use to control the LAN computer's internet access ability.

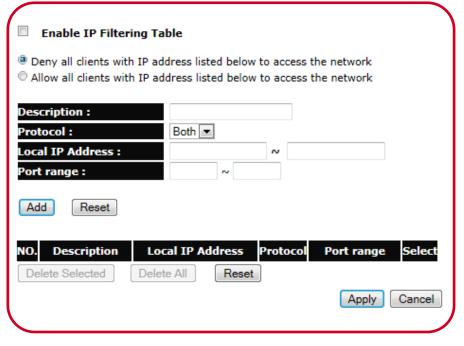
- Enable IP Filtering Table: Click to activate the IP Filter function
  - Deny all clients with IP address listed below to access the network:
     Enable this will deny any device's IP address listed here from connecting to Internet.
  - Allow all clients with MAC address listed below to access the network:
     Enable this will allow only the device's MAC address listed here from connecting to Internet.
  - **Description:** Enter a description of the device that you want to record to the MAC Filtering table.
  - Protocol: You can select Both, TCP, UDP here. They are internet packet transmit methods, TCP are mainly for protocol that requires more detail such as Email, while UDP are protocols that require less checkup such as multimedia streaming.

Click **Add** to save the settings to the table or **Reset** to discard the changes.

Note: Incorrectly changing these settings may cause the device to stop function. Please make sure you know the effect before changing the settings



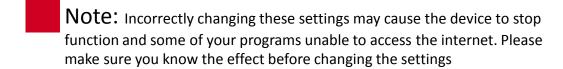
#### Firewall – IP Filter – 2



**IP Filter:** IP Filter is use to control the LAN computer's internet access ability.

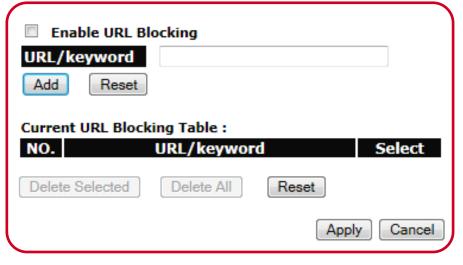
- **Enable IP Filtering Table:** Click to activate the IP Filter function
  - Local IP Address: You can enter a range of IP address here.
  - Port Range: Port Range is the internet socket port numbers used by protocol in range from 0 to 1023. They are used by system processes that provide widely used types of network services. Also port number range from 1024 to 49151 are registered ports which are signed Internet Assigned Numbers Authority (IANA) for specific service upon application by a requesting entity. For example, Adobe Flash uses TCP protocol and port number 843. Xbox LIVE uses TCP and UDP protocol and port number 3074. If you want to add a rule to control some users from accessing FTP, you can set Local IP Address: 192.168.0.100 ~ 192.168.0.200 and Port range: 21.

Click **Add** to save the settings to the table or **Reset** to discard the changes.





#### Firewall – URL Filter

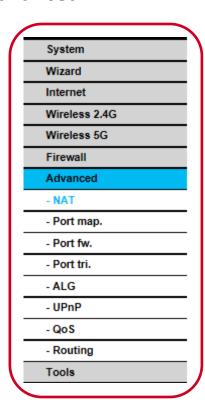


**URL Filter:** URL Filter is use to block certain Website or keyword from the devices to access.

- Enable URL Blocking: Click to activate the URL Blocking function.
  - URL/keyword: Enter a complete website address or certain keyword.
     Then press Add to add into the URL Blocking Table.

Click **Add** to save the settings to the table or **Reset** to discard the changes.

#### **Advanced**



**Advanced:** View and configure advanced system and network settings:

- NAT: Enable or disable Network Address Translation (NAT); You can also enable or disable the
   Hardware accelerator here for optimal network performance.
- Port Mapping: Re-direct a range of service port numbers to a specified LAN IP address.
- Port Forwarding: Configure server applications to send and receive data from specific ports on the network.
- Port Triggering: Configure applications that require multiple connections and different inbound and outbound connections.
- ALG: Configure the application layer gateway (ALG).
- UPnP: Enable or disable Universal Plug and Play (UPnP) functionality.
- QoS: Configure the network quality of service (QoS) setting by prioritizing the uplink and downlink bandwidth.
- Routing: Configure static routing.



#### Advanced – NAT & Hardware Accelerator

NAT(Network Address Translation) involves re-writing the source and/or destination addresses of IP packets as they pass though a Router or firewall, NAT enable multiple hosts on a private network to access the Internet using a single public IP address.

NAT: Disable Disable

Hardware Accelerator boosts network performance (note: to achieve optimal result, QoS and bandwidth control features will be disabled).

Hardware Accelerator: © Enable @ Disable

Apply

**NAT:** Network address translation (NAT) allows users on the LAN to access the Internet through a single Public IP Address or multiple Public IP Addresses. NAT provides firewall protection from hacker attacks and allows for mapping LAN IP addresses to WAN IP addresses with key services such as websites, FTP, video game servers, etc.

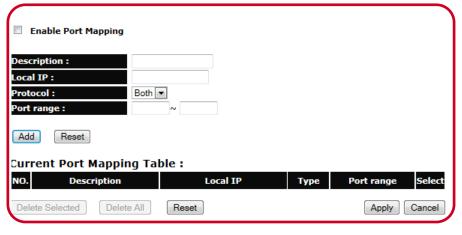
• NAT: Click Enable to activate the function.

**Hardware Accelerator:** Hardware Accelerator will boost the network performance, but QoS and bandwidth control will be disable.

Hardware Accelerator: Click Enable to activate the function.



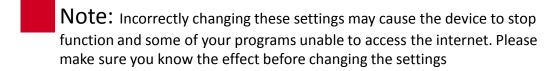
## **Advanced – Port Mapping**



**Port Mapping:** Port Mapping allows you to redirect a particular range of service port numbers from the WAN to a particular LAN IP address.

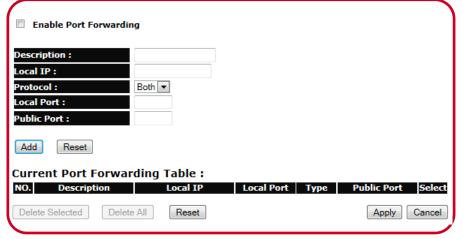
- **Enable Port Mapping:** Click to activate this function.
  - **Description:** Enter a description of the device that you want to record to the MAC Filtering table.
  - Local IP: Enter the local IP address of the server behind the NAT firewall
  - Protocol: You can select Both, TCP, UDP here. They are internet packet transmit methods, TCP are mainly for protocol that requires more detail such as Email, while UDP are protocols that require less checkup such as multimedia streaming.
  - Port Range: Enter the range of ports to be forwarded.

Click **Add** to save the settings to the table or **Reset** to discard the changes.





## **Advanced – Port Forwarding**



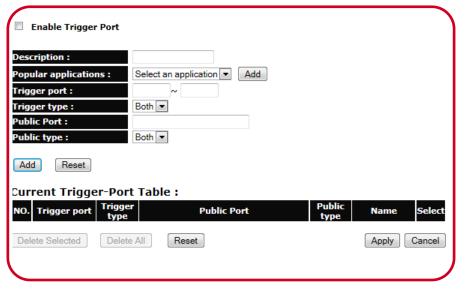
**Port Forwarding:** Port forwarding enables multiple server applications on a LAN to serve clients on a WAN over a single WAN IP address. The router accepts incoming client packets, filters them based on the destination WAN, or public, port and protocol and forwards the packets to the appropriate LAN, or local, port. Unlike the DMZ feature, port forwarding protects LAN devices behind the firewall.

- Enable Port Forwarding: Click Enable Port Forwarding to active port forwarding.
- **Description:** Enter notes or details about the forwarded port configuration.
- Local IP: Enter the local IP address of the server behind the NAT firewall.
- Protocol: Select the protocol to use for mapping from the following: TCP, UDP or Both.
- Local Port: Enter the LAN port number that WAN client packets will be forward to.
- **Public Port:** Enter the WAN port number that clients will send their packets to.

Click **Add** to save the settings to the table or **Reset** to discard the changes.



## **Advanced – Port Triggering**

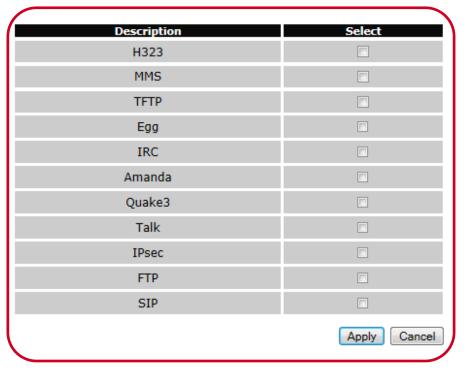


Port Triggering: Some applications, such as online games, videoconferencing and VoIP telephony, require multiple ports for inbound and outbound traffic. If an application requires both an incoming and an outgoing port simultaneously, it is possible to configure static port forwarding to handle the packets. That is not an optimal solution because a static IP address must be configured for each device. With port triggering an application, local port or range of ports and a communication protocol can be mapped to a specific public port. Sending packets out over the local port triggers the router to open an incoming local port that is mapped to the same public port and application as the outgoing local port(s). The local application can communicate over the incoming and outgoing ports without the need for creating a fixed address.

- Enable Port Triggering: Click to activate the function.
  - **Description** Enter notes or details about the port triggered configuration.
  - **Popular Applications** Select a default application or add a new one.
  - **Trigger Port** Enter the application's outbound port number(s).
  - **Trigger Type** Select the protocol to use for port triggering from the following: TCP, UDP or Both.
  - **Public Port** Enter the inbound port(s) for the application in the following format: 2300-2400 or 47624.
  - **Public Type** Select the protocol to use for the inbound port from the following: TCP, UDP or Both.



#### Advanced – ALG.



**ALG:** The ALG (Application Layer Gateway) serves as a window between correspondent application processes so that they may exchange information on an open environment.

 ALG Table: Select the listed applications that need ALG support and then the router will authorize them to pass through the NAT gateway.



#### Advanced – UPnP

- Enable the Universal Plug and Play (UPnP) Feature
- Allow users to make port forwarding changes through UPnP

Apply

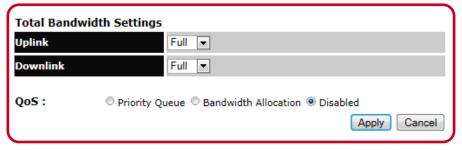
**UPnP:** UPnP helps internet devices, such as gaming and videoconferencing, to access the network and connect to other registered UPnP devices..

- Enable the Universal Plug and Play (UPnP) Feature: Click to activate the UPnP function.
- Allow users to make port forwarding changes through UPnP: With this
  function activate, the users can use port forwarding changes in their devices.

Click **Apply** to apply the settings.



### Advanced – QoS – 1

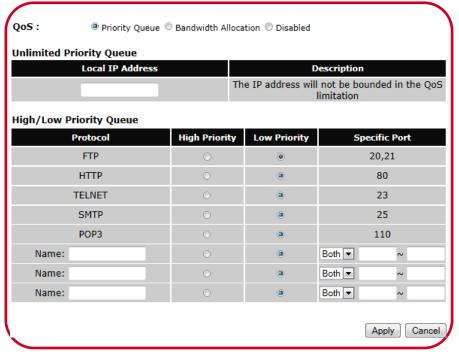


**QoS:** QoS can prioritize bandwidth use such as video streaming, online gaming, VoIP telephony and videoconferencing to ensure stable and efficient network performance.

- Total Bandwidth Settings:.
  - **Uplink:** Select the maximum bandwidth speed for outbound traffic.
  - **Downlink:** Select the maximum bandwidth speed for inbound traffic
  - Click **Disabled** if you do not want to prioritize any data or protocol.



#### Advanced – QoS – 2

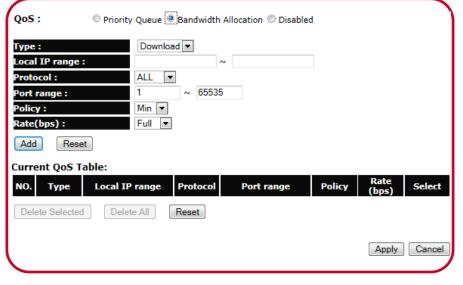


**QoS - Priority Queue:** Set network resource usage based on specific protocols or port ranges. Incoming packets are processed based on the protocols' position within the queue.

- Unlimited Priority Queue:
  - Local IP: Address Enter the local IP address of a device on the network.
     This device's activity is not restricted by the QoS feature.
- **High/Low Priority Queue:** Specify the priority for different protocols. Additional protocols and port ranges can be added.



#### Advanced – QoS – 3



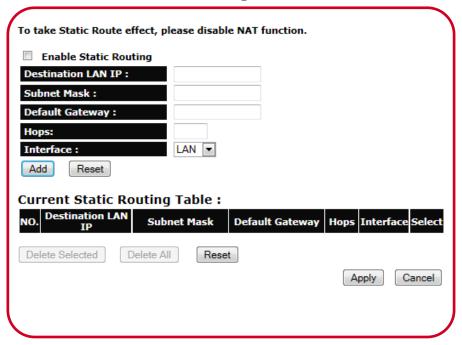
**QoS – Bandwidth Allocation:** Set network resource usage, for inbound and outbound traffic, based on local IP and port ranges.

- Type: Select Download or Upload to specific the direction of packet traffic.
- Local IP Range: Enter the local IP range of the current configuration.
- **Protocol:** Select the protocol to manage for the current configuration.
- Port Range: Enter the local port range of the current configuration.
- **Policy:** Select Min or Max to specify the type of configuration policy.
- Rate (bps): Select the bandwidth rate, in bits per second (bps), of the current configuration.

Click **Add** to save the settings to the table or **Reset** to discard the changes.



## Advanced – Routing



**Routing:** Typically static routing does not need to be setup because the T600N has adequate routing information after it has been configured for Internet access. Static routing is only necessary if the router is connected to network under a different subnets.

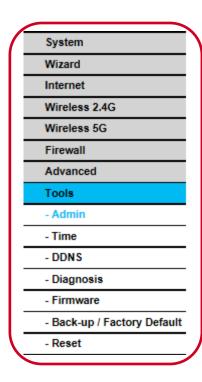
N

**Note:** To enable routing, you will first need to disable NAT.

- NAT Disabled:
  - Enable Static Routing: Click Enable Static Routing to activate the feature.
    - Destination LAN IP: Enter the LAN IP address of the destination device.
    - Subnet Mask: Enter the Subnet Mask of the destination device.
    - Default Gateway: Enter the default gateway IP address for the destination device.
    - **Hops:** Enter the maximum number of hops within the static routing that a packet is allowed to travel.
    - Interface: You can select LAN or WAN here.



#### **Tools**

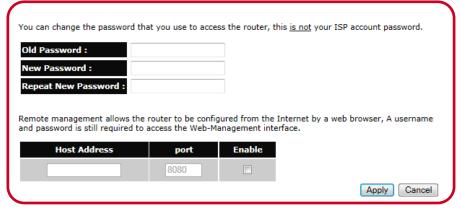


**Tools:** You can view and configure system and network tools settings:

- Admin: Configure the administrator password used to login to the router.
- **Time:** Configure the system time on the router.
- **DDNS:** Map a static domain name to a dynamic IP address.
- **Diagnosis:** Check if a specific computer is connected to the LAN.
- Firmware: Update the router's firmware.
- Backup / Factory Default: Load or save configuration settings from a backup file or restore the factory default settings.
- Reset: Manually reset the router.



#### Tools – Admin

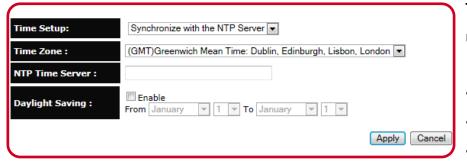


**Admin:** Change the router's system password as well as setup a device to remotely configure the settings.

- Password Setting: Here you can change the login password for T600N. (Default is: Login: admin; pass: admin)
  - Old Password: Enter the existing administrator password.
  - **New Password:** Enter the new administrator password.
  - Repeat New Password: Re-type the new administrator password.
- Remote Management:
  - Host Address: Enter the designated host IP Address.
  - Port: Enter the port number (Default: 8080) for remote accessing
    management web interface. (Unless behind a corporate firewall that
    blocks some ports. Ports 80 and 443 are not typically blocked are for HTTP
    and HTTPS outbound traffic.)
  - Enable: Select to enable the Remote Management function.
  - **Note:** To access the settings of the T600N remotely, enter the router's WAN IP address and port number. E.g., if your external IP is 114.127.3.123 and you use port 8080, enter "http://114.127.3.123:8080" You will still need to enter Login name and password to enter the router's management page.



#### Tools – Time

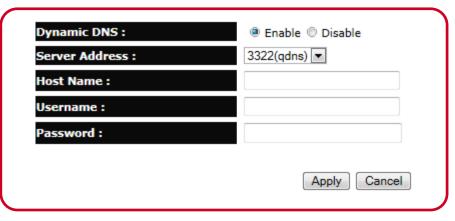


**Time:** Change the system time of the T600N and setup automatic updates through a network time protocol server (NTP).

- Time Setup: Select how the router obtains the current time.
- **Time Zone:** Select the time zone for the router.
- NTP Time Server: Enter the domain name or IP address of an NTP server.
- Enable Daylight Saving: Click to enable or disable daylight savings time.
  - Start Time: Select the date and time when daylights savings time starts.
  - **End Time:** Select the date and time when daylights savings time ends.



#### Tools – DDNS



**DDNS:** Dynamic domain name service (DDNS) allows the administrator to map a static domain name to a dynamic IP address. A DDNS service provider, such as DynDNS, ZoneEdit or CyberGate, must provide an account, password, and static domain name to use this feature. DDNS particularly benefits end users that have their own websites or FTP sites.

- Dynamic DNS: Enable or Disable DDNS.
- Server Address: Select the DDNS Server Address.
- **Host Name:** Enter the DDNS provider static domain name.
- Username: Enter the username given by the DDNS provider.
- Password: Enter the password given by the DDNS provider.



## Tools – Diagnosis



**Diagnosis:** The diagnosis feature allow the administrator to verify that another device is available on the network and is accepting request packets. If the ping result returns alive, it means a device is on line. This feature does not work if the target device is behind a firewall or has security software installed.

- Address to Ping: Enter IP address of the device to ping.
- **Ping Result:** View the result message from the ping test.



#### **Tools – Firmware**

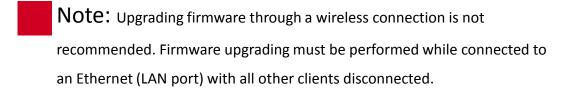
You can upgrade the firmware of the router here. The firmware you want to upgrade to will need to locate in your local hard drive. Click on Browse to select and locate the firmware for your update.

Browse...

Apply Cancel

**Firmware:** Firmware is system software that operates and allows the administrator to interact with the router.

- To update the firmware version, follow these steps:
  - 1. Download the appropriate firmware for T600N from Rosewill's website.
  - 2. Click Browse....
  - 3. Browse the computer and select the firmware file.
  - 4. Click Apply.





## Tools – Backup / Factory Default

Use BACKUP to save the routers current configuration to a file named config.dlf. You can use RESTORE to restore the saved configuration. Alternatively, you can use RESTORE TO FACTORY DEFAULT to force the router to restore the factory default :

Restore to factory default :

Backup Settings :

Save

Restore Settings :

Upload

**Backup / Factory Default :** Store multiple settings by saving the settings to a configuration file on the device.

- Restore to factory default: Click Reset to restore the T600N to factory defaults.
- Backup Settings: Click Save to save the current configuration on the T600N to a
   \*.dlf file.
- Restore Settings: To restore saved settings, do the following:
  - 1. Click Browse....
  - 2. Browse the file system for location of the settings file (\*.dlf).
  - 3. Click Upload.



#### Tools – Reset

In the event the system stops responding correctly or stops functioning, you can perform a reset. Your settings will not be changed. To perform the reset, click on the APPLY button.

Apply Cancel

**Reset:** This feature allows the administrator to reboot the router in the event of a system hang up.

# **PHYSICAL SPECIFICATION**

General			
Standards	IEEE 802.3i/u/ab IEEE 802.11a/b/g/n		
Protocols	UDP, TCP/IP, PPPoE, DHCP, ICMP, NAT, SNTP, ARP, ALG		
Ports	1x 10/100/1000M WAN port 4x 10/100/1000M LAN ports		
LEDs	PWR, 2.4GHz WLAN, WPS, WAN (Modem), 4x LAN, WPS, 5GHz WLAN		
Safety & Emissions	FCC, CE		





# **PHYSICAL SPECIFICATION**

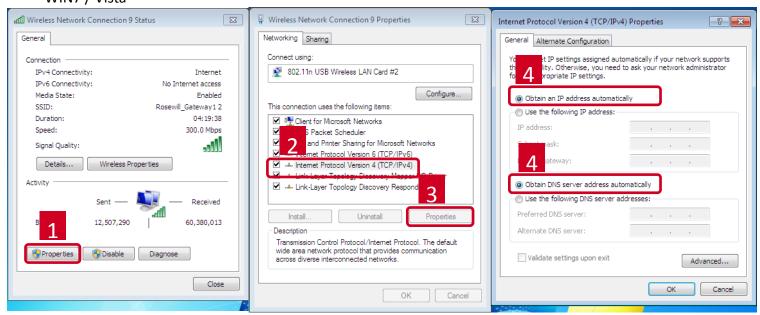
Wireless			
Frequency Band	2.4GHz / 5GHz		
Radio Data Rate	2.4GHz – 300mbps and 5GHz – 300 mbps		
Optimal Transmit Power	20 dBm		
Modulation	Support 256/64/16/8-QAM, QPSK, BPSK, MCS0 ~ MCS15		
Security	WEP, WPA (TKIP), WPA2 (AES), WPA Radius wireless encryption, 802.1x Authentication, and WPS		
Antenna Gain	2x 5dBi R-SMA 2.4GHz External Antennas (SMA Connectors); 2x 3.5dB Internal 5GHz Internal Antenna		
Environmental and Physical			
Temperature.	Operating: $0^{\circ}$ C ~40 $^{\circ}$ C (32 $^{\circ}$ F~104 $^{\circ}$ F)		
	Storage: -40° C ~70° C (-40° F ~158° F)		
Humidity	Operating: 10% - 90% RH, Non-condensing		
	Storage: 5% - 90% RH, Non-condensing		
Weight & Dimension	6.69 x 4.33 x 0.98 in (17 x 11 x 2.5 cm) + 1.5 lbs (700g)		

# TROUBLESHOOTING

Problem. I follow the steps, but I am not able to open router's web management page after type in 192.168.1.1 on my web browser.

**Solutions.** 1. Check if your computer connected to T600N has being set as a "Fixed IP". You may want to change to "DHCP" setting.

WIN7 / Vista



- 2. Check if your computer is connecting to any wireless / wired network other than T600N's.
- 3. You may have a IP conflict on your modem and the router. Please go to LAN Interface Setup and change the **IP Address** to 192.168.x.1 (x can be any number from 2 to 255), then click **Apply**.



#### TROUBLESHOOTING

Problem. My DSL connection is working, but I can not access the internet with T600N.

• **Solutions.** Your Internet Service Provider (ISP) may require the entering of Login and password. To enter, please click **PPPoE** under **Internet.** Then enter the connection information provided by your ISP.

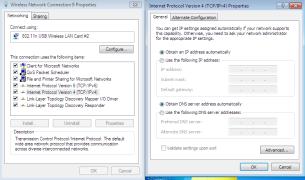
Problem. The Setup Wizard does not detect or configure my network.

- Solutions. 1. Reset your modem, and power off your T600N by unplug the power adapter then plug back in.
  - 2. Allow the wizard to detect your Internet connection one more time. Then follow the Wizard's instruction to complete.
  - 3. Or you can check with your ISP for the following connection methods under **Internet**:
    - **DSL Connection (Mostly as PPPoE Connection):** Your internet connection needs login information. Please check with ISP if you do not have on hand.
    - Cable Modem Connection (Mostly as Dynamic IP or Static IP Connection): Cable modem connection may require you to clone MAC address.
      - Click **Dynamic IP** under **Internet**, then under **MAC Address** select **Clone MAC** or manually enter the MAC address.
      - Click Static IP under Internet, then enter the IP address and other connecting information from the ISP.

Problem. My IP address show up as 169.254.x.x and my computer tells me that I have "Limited or no Connectivity"

• Solutions. Check if T600N's LAN under System and see if you enable the DHCP Server, also check if your computer is set as DHCP setting. (DHCP should look like below). Restart you computer and try again. If same thing occur, please try using another computer or the wireless

connection.



Problem. I am not getting maximum signal strength when right next to my router.

• **Solutions.** The client may be too close to the router. You may want to step 5 ~ 10 feet away from the router. You can also change the wireless channel to avoid wireless interference. Recommended channels use are 1, 6, and 11.



## **Safety Statement**



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

#### **FCC RF Radiation Exposure Statement**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. "To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

## CE Mark Warning ( E



This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

#### National restrictions

This device is intended for home and office use in all EU countries (and other countries following the EU directive 1999/5/EC) without any limitation except for the countries mentioned below:

Country	Restriction	Reason/remark
Bulgaria	None	General authorization required for outdoor use and public service
France	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current
		relaxed regulation. Full implementation planned 2012
Italy	None	If used outside of own premises, general authorization is required
Luxembourg	None	General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation	None	Only for indoor applications