



WR600NSI
Portable Wireless-N Repeater

WR600NSI
DUAL BAND WALL PLUGGED
300Mbps WIRELESS-N REPEATER

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About the Repeater

The Diamond WR600NSI is a dual band Wall-plugged 300Mbps Wireless-N Repeater, which supports wireless 802.11b/g/n, and one 10/100 Base-T Ethernet port.

Repeat and Extend the WiFi Network

WR600NSI supports robust 802.11n technology with up to 300Mbps data transfer rate. The Repeater can take an existing 802.11n wireless signal, repeat and extend it to a longer range. It eliminates the cable wires while providing the same reliable network connection. It can repeat and extend the wireless signal from virtually any 802.11n wireless Router or access point that is launched on the market. It is backwards compatible with 802.11b/g Routers or access points.

MIMO Technology

The device is designed with MIMO technology, which successfully reduces areas with weak wireless network coverage within a home or in the building.

Advanced Security

WR600NSI features with 64/128-bit WEP encryption and WIFI Protected Access (WPA), WPA2 to ensure the network security and prevent unauthorized access to you network.

Portable without the Need of External Power Supply

The device is easy to setup. It is portable with no need of any external power adaptor. It comes with the embedded power supply and power plug, so that users can just plug the device into a power socket.

Minimum System Requirements

Your computer must meet the following minimum requirements.

- Any operating system can be used
- Web Browser
- 233MHz processor (or higher)
- Ethernet network adapter
- Or Wireless network adapter
- Wireless router or AP

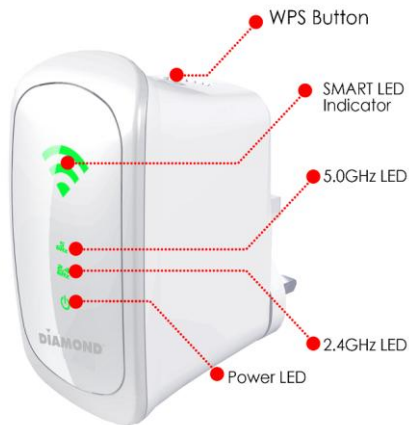
Package Contents

Package contents are listed below. For any missing items, please contact your dealer immediately. Product contents vary for different models.

- WR600NSI
- Ethernet cable
- Easy Start Guide
- Resource CD

Note: You may also download the Easy Start Guide and the User Manual by visiting this link: www.diamondmm.com

Device Design

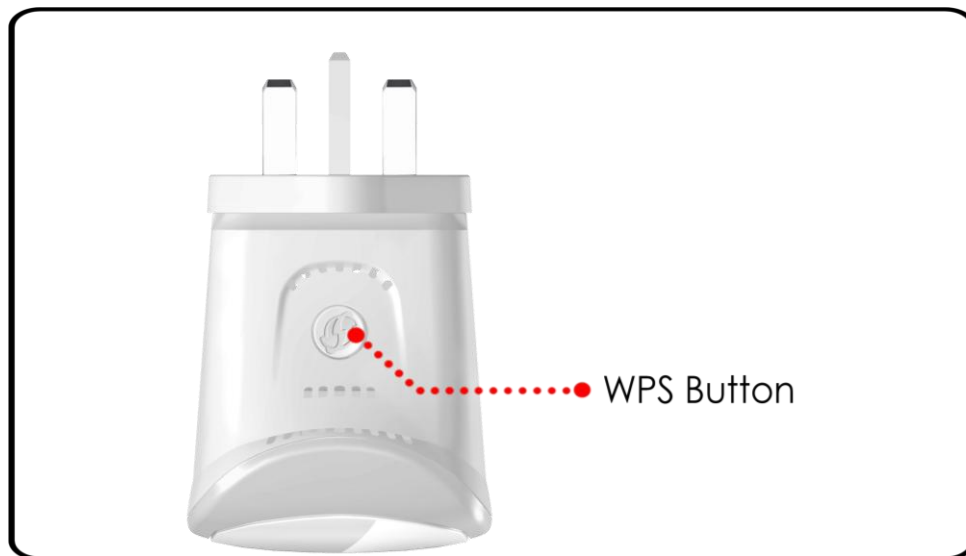


Front Panel

LABEL	STATE	DESCRIPTION
SMART LED Indicator		
3 BARS	Connected	95% and above (Excellent)
2 BARS	Connected	55-94% (Recommended)
1 BAR	Connected	10-54% (Weak)

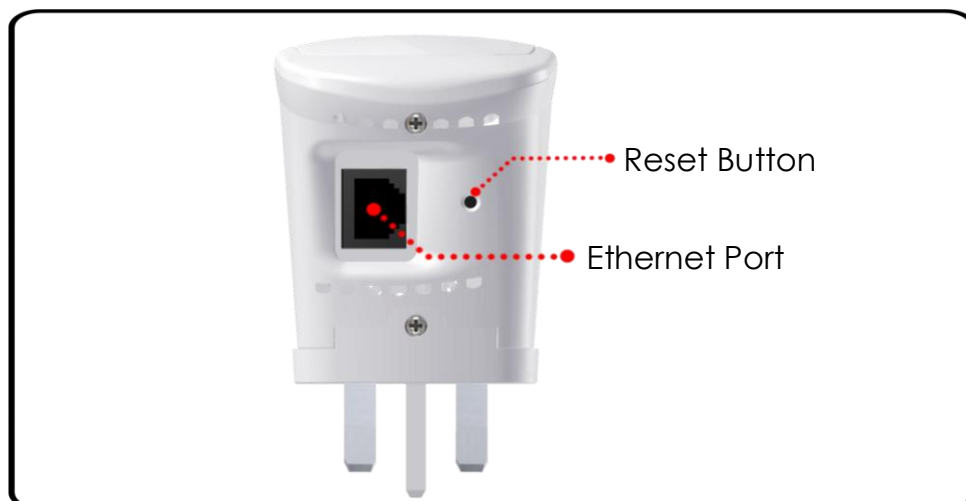
LABEL	STATE	DESCRIPTION
2.4GHz	OFF	No Wireless Device is connected.
	Blinking	A Wireless Device is connected and is actively transmitting / receiving data
5.0GHz	OFF	No Wireless Device is connected.
	Blinking	A Wireless Device is connected and is actively transmitting / receiving data
Power LED	ON	WR600NSI is Plugged to a working Power Outlet

Top Panel



LABEL	DESCRIPTION
WPS Button	Press this button for 2 seconds to connect the WR600NSI to any WPS capable devices (Wireless Device)
	Press this button for 5 seconds to connect the WR600NSI to any WPS capable devices (Wireless Repeater)

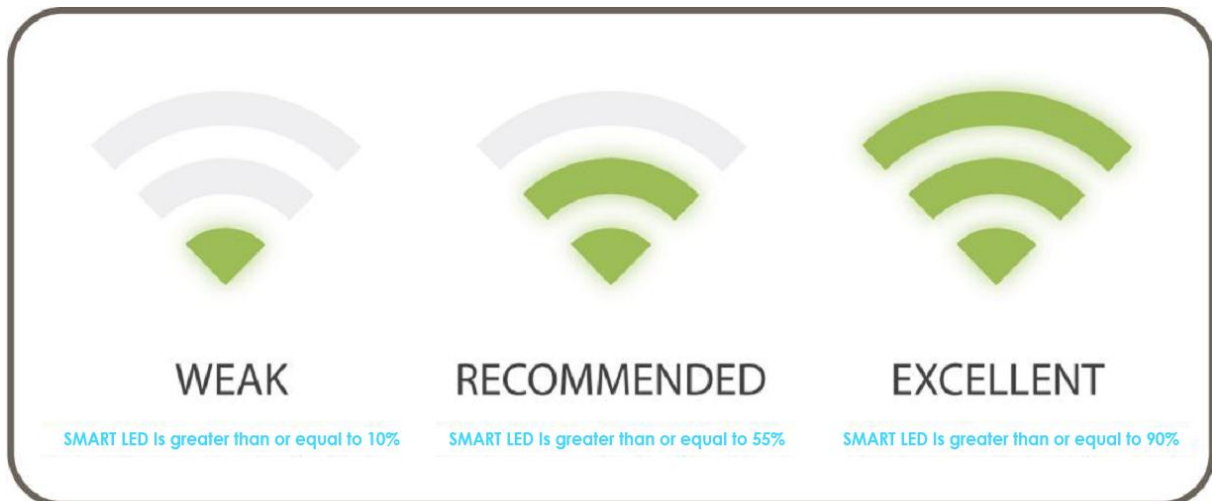
Bottom Panel



LABEL	DESCRIPTION
RESET	Press the Reset button for 5 seconds to restore the device to default factory settings
ETHERNET PORT	Connect to computers/Ethernet devices

SMART LED Indicator

Your WR600NSI is equipped with a SMART LED indicator which determines the signal strength from your wireless Repeater as seen below:



NOTE: Wireless reception and throughput may vary according to the number of Wireless Devices that are in use, and at the same time, other nearby wireless devices, structure types, building materials, and other interferences present.

The Web User Interface

The Web User Interface of your WR600NSI allows you to configure the various features of your WR600NSI. This will serve as your main tool in monitoring and configuring all of your WR600NSI's main features.

Accessing the Web User Interface

NOTE: To avoid any conflicts in accessing the Web User Interface, it is strongly advised to do the following:

- Simply access the Web User interface through an Ethernet connection. This is achieved by connecting your Computer and your WR600NSI through an Ethernet cable.
- If present, kindly turn off the wireless adapter of your computer. You may enable the wireless adapter after completing the setup. This is to avoid IP address conflict which might block you from accessing the Web user interface.
- Remove temporary Internet files.

To access the Web User Interface through an Ethernet connection:

1. Connect your computer to the WR600NSI device using an Ethernet cable.

NOTE: before proceeding to step 2, please check the SMART LED of the device; the LED should be in GREEN WEAK status and BLINKING.

2. Launch any web browser. You would automatically be redirected to your WR600NSI's web user interface.
3. If in any case it does not, type **10.0.10.254** on the address bar and press Enter. You will then be redirected to the Home page of your WR600NSI's web user interface. (For multiple devices you will need to change the default 10.0.10.254 address to a different IP address. Example the second unit can be changed to 10.0.10.253 and so on for the third.

4. Upon redirecting, a window showing the wireless networks within range would appear. You may close this mini window or choose to connect to your preferred wireless network immediately.

If you wish to connect to a wireless network immediately you may do the following steps:


1. Click the connect button that corresponds to the network you want to connect to.



2. Enter the correct Wireless Password of the preferred network then click the Apply button.

DIAMOND
MULTIMEDIA

WR600NSI


Reboot 

Firmware version: 305.14.1-002 Fri Jan 17, 2014 11:45:01 AM



Connected to 2.4GHz Access Point

Wireless Clients are Connected

Home 

Setup for WR600NSI

2.4 GHz

5.0 GHz

SSID:

WGR7000

MAC Address:

00:26:75:62:fc:b6

Broadcast SSID:

ENABLED

DISABLED

Security Mode:

WPA2 PSK

WPA Passphrase:

Mask

WPA Encryption:

TKIP

AES

Channel:

2437MHz (Channel 6)

✓ Apply

3. Kindly wait for the repeater to finish initializing its connection. Your WR600NSI would reboot upon successful connection displaying the status depending on the frequency band (2.4GHz or 5.0GHz) of the wireless network you connected to:

For 2.4GHz wireless networks



For 5.0GHz wireless networks



NOTE: To know if you have successfully connected to your device, you may also check the LEDs of your WR600NSI; the SMART LED Indicator would be in STABLE GREEN light.

Web User Interface Menu

The web user interface is for users to easily access and to control the WR600NSI's main features. It is mainly comprised of the following menus:



Quick Connect

The Quick Connect menu allows you to scan for the available wireless networks within range and connect to your preferred wireless network as well.

Available Wireless Networks									Refresh
Channel	GHz	SSID	MAC Address	Security	Signal	Mode	Type	WPS	Connect
1	2.4	SINGTEL-1715	00:26:75:88:17:16	WPA1/WPA2		11b/g/n	Infrastructure	NO	
1	2.4	linksys	00:1c:10:49:78:17	NONE		11b/g	Infrastructure	NO	
1	2.4	TPV	44:ad:d9:bb:84:d0	WEP		11b/g	Infrastructure	NO	
36	5.0	ASUS(5.0Ghz)(R)	00:26:75:55:96:00	WPA2		11a/n	Infrastructure	YES	

To connect to a Wireless Network, simply do the following:

1. Click the **Quick Connect** menu icon and wait for the search initialization to finish.
2. Determine your preferred wireless network then click its corresponding **Connect** button. You will then be redirected to the Wireless Setup page of your WR600NSI as seen below:

Setup for WR600NSI

2.4 GHz 5.0 GHz

SSID: WGR7000

MAC Address: 00:26:75:62:fc:b6

Broadcast SSID: **ENABLED** DISABLED

Security Mode: WPA2 PSK ▼

WPA Passphrase: ☐ Mask

WPA Encryption: TKIP **AES**

Channel: 2437MHz (Channel 6) ▼

Apply

3. Input the Wireless network's passphrase on the **WPA Passphrase** (Wireless Password) text box then click **Apply**. Kindly wait for the repeater to finish initializing the connection. Your repeater would reboot upon successful connection.

NOTE: To know if you have successfully connected to your device, check the LEDs of your WR600NSI; it would be in STABLE GREEN light.

- **Channel.** You may opt to change your wireless channel when you are getting poor reception. You may choose the least channel used in your area for better wireless performance.
- **Channel Bandwidth.** Here you can set your Channel Bandwidth to 20MHz and 20/40MHz. It is strongly suggested to leave this in Auto to achieve the best efficiency.
- **HT Data Rate and HT Guard Interval.** These options are recommended to be set to Auto for maximum efficiency.

Wireless Security Settings

The Wireless Security Settings page allows you to change the Security Mode, enable or disable the WPS feature of your WR600NSI, and add a WPS enabled device by entering the needed PIN.

Wireless Security Settings

2.4 GHz 5.0 GHz

Security Mode: WPA2 PSK

WPA Encryption: TKIP AES TKIP+AES

WPA Passphrase: password Mask

WPS: ENABLED DISABLED

Apply

Enrollee PIN: 46043948

Registrar PIN:

Apply

- **Security Mode.** Select the type of encryption you want for your wireless network.
- **WPS.** Allows you to enable or disable the WPS feature of your WR600NSI.
- **Enrollee PIN.** Enter this PIN on the Wireless Device that will be connecting to WR600NSI repeater to automatically configure the wireless device.
- **Registrar PIN.** Here you can enter the WPS-PIN of the Wireless Devices and click apply for the WR600NSI to allow access and configure your wireless device automatically

Note: WPS will work only for WPA-PSK, WPA2-PSK and WPA/WPA2 encryption. Wireless Devices should also support the WPS feature to use this option.

MAC Filter Settings

The MAC Filter page will provide additional protection to your wireless network. It allows or denies Wireless Devices from accessing the WR600NSI with the use of the MAC address which is unique for every network device.

S.No.	MAC Address	Rule	Remove
1	09:00:07:A9:B2:EB	Disable	

To add a MAC Filter:

1. Specify your preferred Policy.

- **Disable.** Disables the application of a MAC Filter to a specific device or to all the MAC Addresses specified in the list.
- **Allow.** Allows the specified MAC Addresses to connect to the Wireless network.
- **Deny.** Denies the specified MAC Addresses connection to the Wireless network.

NOTE: By clicking the Apply button without specifying a MAC Address, you would be applying the selected policy to all MAC addresses on the list.

2. Enter the MAC Address of the device where the selected Policy would apply.

To know the MAC Address of your computer, you may simply do the following:

- a. On the Start menu click **Run**.
- b. On the input box of the Run window, type in: **cmd** to open the command prompt.


- c. On the command prompt key in **ipconfig/all**.
 - d. Locate the **Ethernet Adapter Ethernet** or **Ethernet Adapter Local Area Network** section and find the 'Physical Address ¶(MAC Address).
3. Click the button located beside the MAC Address text box to apply changes.

To remove a MAC Filter:

1. Click the button that corresponds to the MAC address that you wish to remove from the list.

System Settings

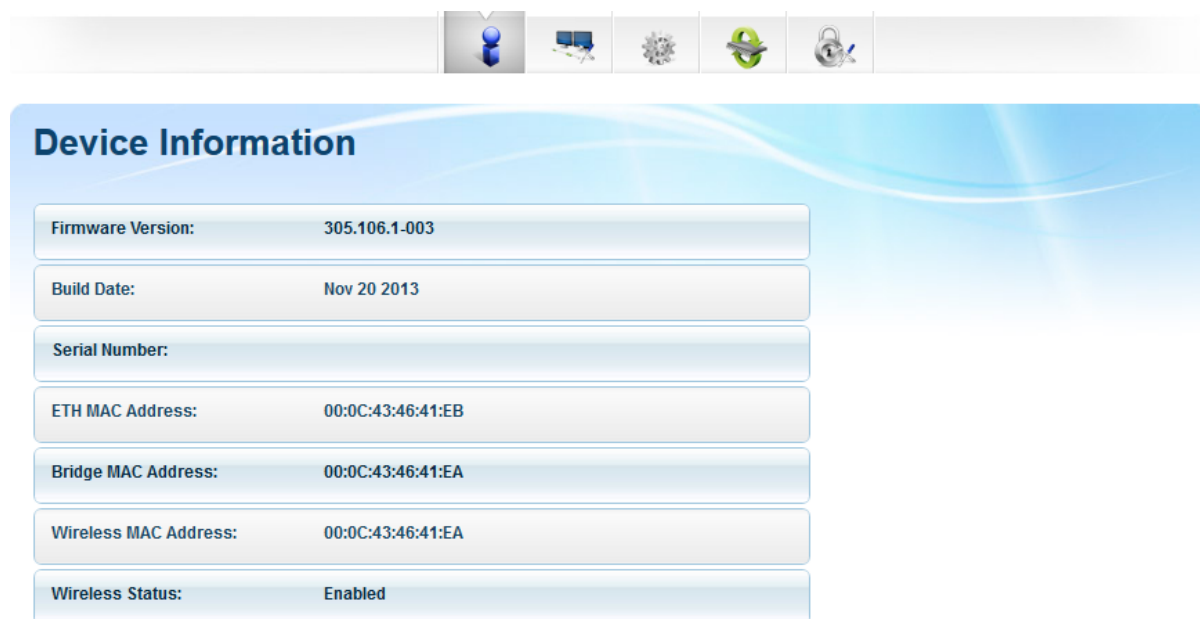
The System page allows you to configure various system oriented settings such as changing the devices IP Address, backing up the current configuration settings, upgrading the device's firmware, restoring the device from a previously saved configuration file, resetting the device to its factory default, and defining a user password for the Web UI.

The System  page has the following submenus:

- Device Info
- Local Network
- Configuration Settings
- Firmware upgrade
- System Password

Device Information

Allows you to view basic device information regarding your WR600NSI such as the firmware version and its build date, the device's serial number, MAC addresses of various interfaces, and view the Wireless status as well.



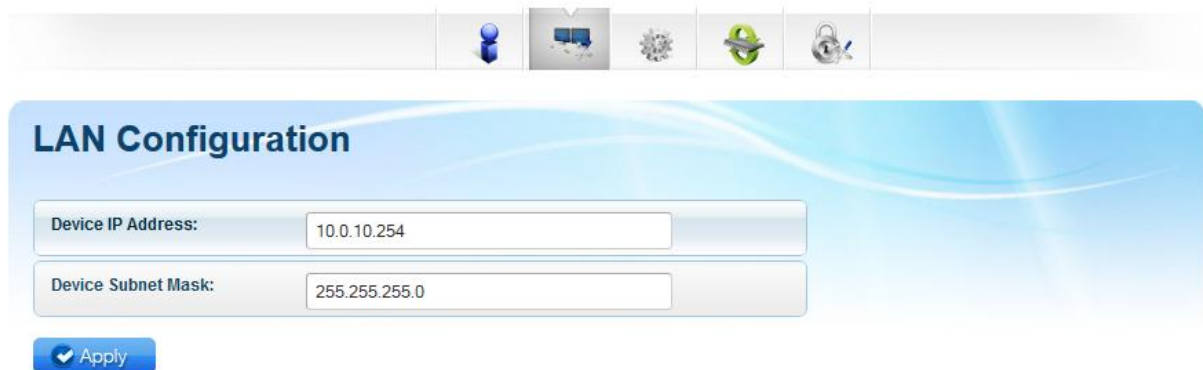
Firmware Version:	305.106.1-003
Build Date:	Nov 20 2013
Serial Number:	
ETH MAC Address:	00:0C:43:46:41:EB
Bridge MAC Address:	00:0C:43:46:41:EA
Wireless MAC Address:	00:0C:43:46:41:EA
Wireless Status:	Enabled

- **Firmware Version.** Shows the current firmware version of the device
- **Build Date.** Shows the date the firmware was created.
- **Serial Number.** Shows the device's serial number.
- **ETH/Bridge and Wireless MAC address.** Shows the MAC address of the different Interfaces.
- **Wireless Status.** Shows the wireless device's wireless status.

LAN Configuration

The LAN Configuration page allows you to specify a device IP address and Device subnet mask your WR600NSI will use.

Note: Change this IP address if you are using two WR600NSI on the same network to avoid the occurrence of IP address conflict within your network.



LAN Configuration

Device IP Address: 10.0.10.254

Device Subnet Mask: 255.255.255.0

✓ Apply

Configuration Settings

The configuration settings page allows you to back up your WR600NSI's current settings, do a firmware upgrade, and restore an existing configuration by using the backed up file.



Configuration Settings

Backup Update Restore

Backup Settings

Backup your Repeater(WL580E) configurations. You may save your repeater(WL580E) configurations to a file on your PC.

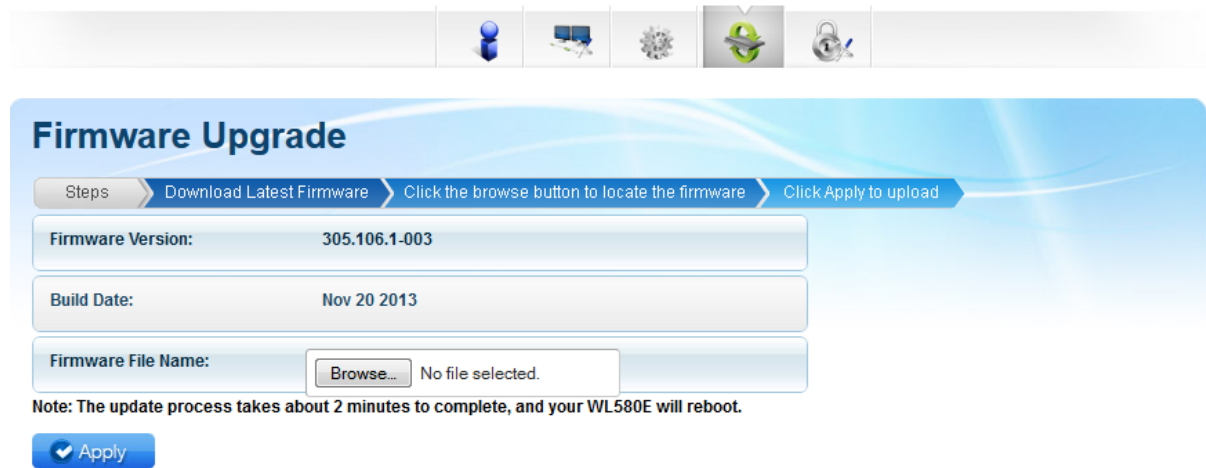
✓ Apply

- **Backup.** Allows you to save the current configuration of WR600NSI. Default file name for the backup file will be "**RT2880_Settings.dat**". Click **Apply** to start saving your configuration.

- **Update.** Here you can load the saved configuration of your WR600NSI. Click browse and load the saved settings then click the Apply button.
- **Restore.** Click on the apply button to reset the unit back to its default factory settings.

Firmware Upgrade

The Firmware Upgrade page allows you to update the firmware of your device for future changes and or improvements. However, it is strongly suggested to only upgrade your device firmware if it was advised by a Diamond support technician. You may download the latest firmware for your device at www.diamondmm.com



The screenshot shows a web interface for a 'Firmware Upgrade'. At the top, there is a navigation bar with icons for user, system, settings, firmware, and security. Below this, the 'Firmware Upgrade' section has a progress bar with four steps: 'Steps', 'Download Latest Firmware', 'Click the browse button to locate the firmware', and 'Click Apply to upload'. The 'Click the browse button to locate the firmware' step is currently active. Below the progress bar, there are three input fields: 'Firmware Version:' with the value '305.106.1-003', 'Build Date:' with the value 'Nov 20 2013', and 'Firmware File Name:' with a 'Browse...' button and the text 'No file selected.'. Below these fields, a note states: 'Note: The update process takes about 2 minutes to complete, and your WL580E will reboot.' At the bottom of the form is a blue 'Apply' button with a checkmark icon.

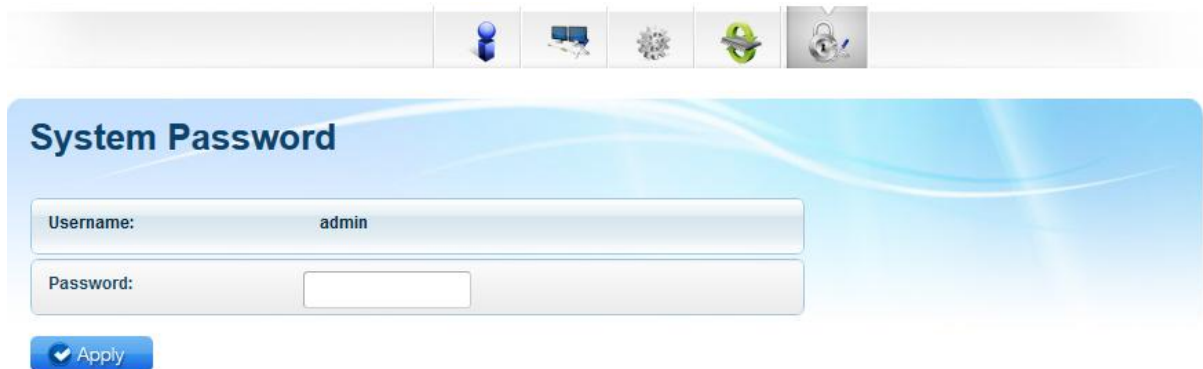
To upgrade the firmware:

1. From the System page, click the Firmware Upgrade button.
2. Click on the **Browse** button and locate and open the firmware for your WR600NSI (single.img).
3. Click **Apply** to start the update. Wait for the firmware upgrade to finish and for the device to reboot. You will be redirected to the Homepage of your WR600NSI.

Note: It is strongly recommended to only use firmware officially released by Diamond. Using third party firmware will void the warranty of the device.

System Password

Set a password on the web user interface to prevent other users from getting access to the web UI and avoid unwanted changes from your settings. To add a system password, simply type in your preferred password and click on apply to activate this feature. To disable the password, simply remove the password and click apply to save your settings.



The screenshot shows a web interface for setting a system password. At the top, there is a navigation bar with several icons: a blue sphere, a computer monitor, a gear, a green checkmark, and a padlock. Below this, the main content area has a light blue background with a wavy pattern. The title "System Password" is displayed in a dark blue font. Below the title, there are two input fields: "Username:" with the value "admin" and "Password:" with an empty text box. At the bottom left of the form, there is a blue button with a white checkmark and the text "Apply".

Note: Forgotten passwords cannot be recovered. Reset the device to its factory default by pressing the reset button found beside the Ethernet port of WR600NSI for 5 seconds.

Device Status

The device status page shows the current status of the AP, and also the wireless devices that are currently connected wirelessly to your WR600NSI.

The screenshot displays the 'Device Status' page with a light blue background and white text. The title 'Device Status' is in bold. Below it, the section 'AP Client Connection Status' is shown. This section contains two rows of information: 'Connection Status: Connected' and 'Extension Access Point: WGR7000'. Below this, the 'Client List' section is shown, which contains a single row stating 'No Device connected to WR600NSI'.

Device Status	
AP Client Connection Status	
Connection Status:	Connected
Extension Access Point:	WGR7000
Client List	
No Device connected to WR600NSI	

WPS

WPS or Wifi Protected Setup makes it easier for you to connect your WR600NSI to your wireless Repeater and the WR600NSI to your wireless devices with a simple push of a button.



To connect the WR600NSI to a Wireless Repeater via WPS:

1. Press the WPS button of WR600NSI for 5 seconds.
2. Press the WPS button on your Repeater for 2 seconds.

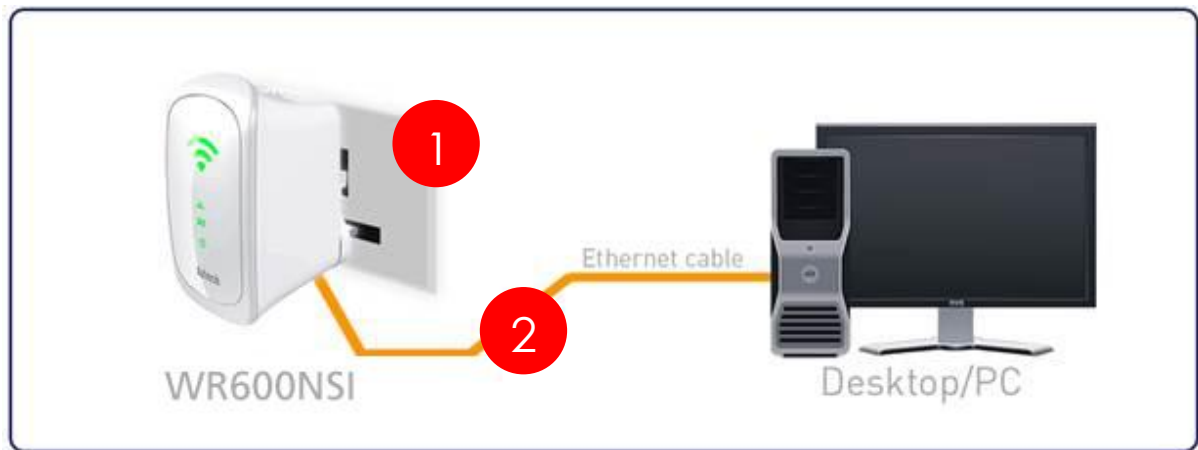
To connect the WR600NSI to a Wireless Device via WPS:

1. Press the WPS button of WR600NSI for 2 seconds.
2. Press the WPS button on the Wireless Device for 2 seconds.

NOTE: To accomplish a successful connection through WPS, simply accomplish the process correctly within two minutes. It is also important to ensure that the WPS feature of the device is enabled and must also be supported on the wireless Repeater and even the wireless devices that will be connected to your WR600NSI.

Setup the Device

In setting up your device kindly follow the instructions provided below. A diagram has also been provided for additional reference.



1. Plug your WR600NSI to a power outlet.
2. Connect your WR600NSI to the computer using an Ethernet cable through their respective Ethernet ports.
3. Launch a web browser and you will automatically be redirected to the Web User Interface of your WR600NSI. If in any case it does not open, kindly type **10.0.10.254** on the address bar and hit enter.

Available Wireless Networks									
Channel	GHz	SSID	MAC Address	Security	Signal	Mode	Type	WPS	Connect
1	2.4	SINGTEL-1715	00:26:75:88:17:16	WPA1/WPA2		11b/g/n	Infrastructure	NO	
1	2.4	linksys	00:1c:10:49:78:17	NONE		11b/g	Infrastructure	NO	
1	2.4	TPV	44:ad:d9:bb:84:d0	WEP		11b/g	Infrastructure	NO	
36	5.0	ASUS(5.0Ghz)(R)	00:26:75:55:96:00	WPA2		11a/n	Infrastructure	YES	

4. Select your SSID (wireless network/wifi name) from the list and click the Connect button.
5. Type the password for the wireless network of your Repeater and click apply. The WR600NSI will reboot and will redirect to the user interface

with the status dependent on the frequency band of your wireless Repeater:

For 2.4GHz wireless networks



For 5.0GHz wireless networks



6. Disconnect the Ethernet cable from WR600NSI and computer then place the device at the location where it can get sufficient reception from your wireless Repeater.

Technical Support

Diamond Technical Support staff is here to help resolve any issues that you may be experiencing. Prior to contacting technical support please make sure you have the following information available.

1. Model #: (Printed on the bar code, located on the box)
2. Installation CD Version: (printed on the CD label)
3. The version of Windows that your system is running.
4. The manufacturer and model # of your computer.
5. CPU type and speed (example: Intel Pentium4 2.4GHZ)
6. A complete description of the problem that you are experiencing including any steps that you performed to try to resolve the issue.

Technical Support Options

Free Telephone Support

818-357-5165