DIAMOND

MULTIMEDIA

WR300NSI
Portable Wireless-N Repeater

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About the Device

Diamond Multimedia WR300NSI is a 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

WR300NSI supports robust 802.11n technology with up to 300Mbps data transfer rate. The extender can take an existing 802.11n wireless signal, repeat and extend it to a longer range where it is too far away for the router or access point to reach. 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 the
802.11b/g router or access point.

Make Wired Network WiFi Ready

The extender is equipped with 1 x 10/100M Auto MDI/MDIX LAN port that can be used to connect to an existing wired network to serve as a wireless interface. It can also be used to configure the extender via its web-based GUI, or upgrade the firmware.

MIMO Technology

The device is designed with MIMO technology, which successfully reduces "dead spot", and extends network coverage within a home or in the building.

Advanced Security

WR300NSI 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
- Ethernet network adapter
- Or Wireless network adapter

Package Contents

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

- WR300NSI
- Ethernet cable
- Easy Start Guide
- Resource CD

Device Overview

Front Panel

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

Top Panel

LABEL	DESCRIPTION
WPS BUTTON	Connect WR300NSI to any WPS capable devices

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

Accessing the User Interface

To access the User Interface open a Web browser (Ex: Internet Explorer, Firefox or G.chrome) and type *http://10.0.10.254* in the address bar and press enter.

Quick Connect

Press *Quick Connect* icon to scan for available wireless within the area.

Setup

Mode of Operation

Repeater
Configure your device as a wireless repeater to extend the wireless coverage of your wireless router.

Access Point
Configure your device as an access point to provide wireless network accessibility to a non wireless network

Bridge
Configure your device as a Bridge to act as wireless client to your network device. In this mode you can convert wireless signal to wired Ethernet for devices not supporting wireless connections.

SSID
Here you can set the name of your wireless network. Select the option Disable on Broadcast SSID allow you to hide the wireless network name.

Security Mode
Select from different encryption type on the list to be used to provide security to your wireless network from unauthorized users. Select

WEP
HEX
64bit – uses 10 characters length of password from A-F and numbers from 0-9
128bit- uses 26 characters length of password from A-F and numbers from 0-9

ASCII
64bit – uses 5 characters alpha numeric password (A-Z and 0-9)
128bit – uses 13 characters length of password from (A-Z and 0-9)

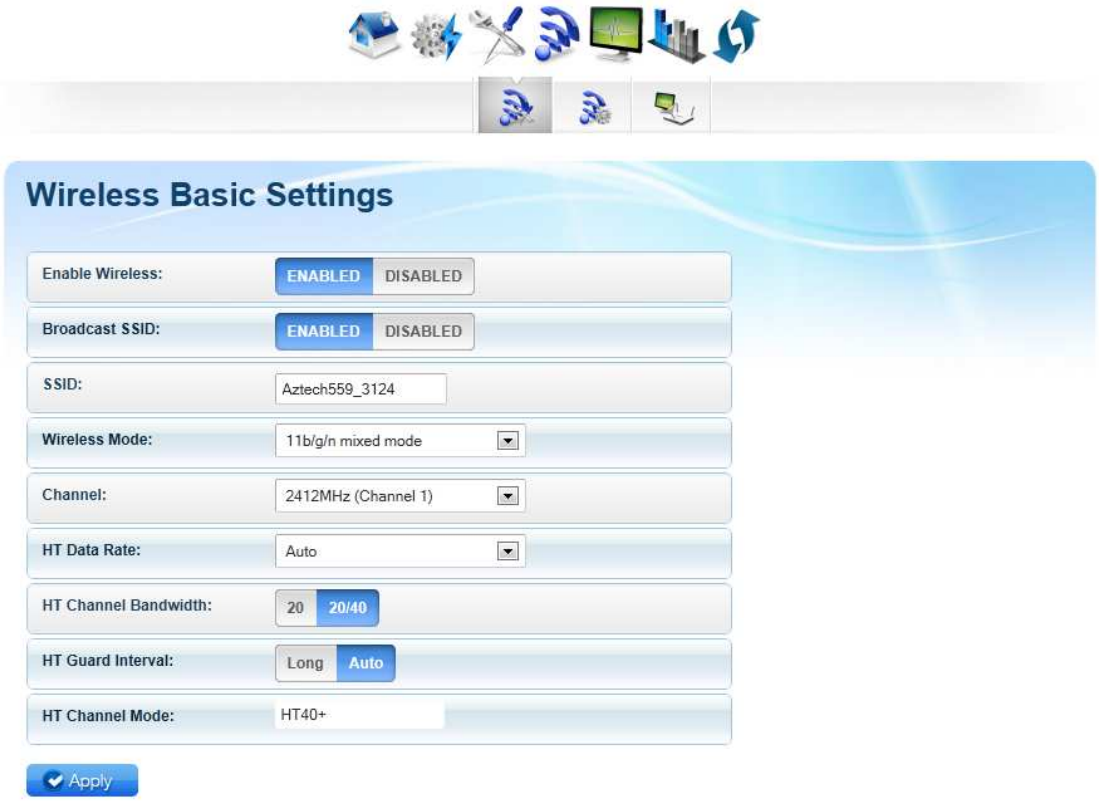
WPA
Uses strong encryption, some legacy devices may not be able to associate with this type of encryption

WPA2
Use this encryption for best security, some legacy device may not associate with this type of encryption

WPA/WPA2 PSK
Use a balance of strong security and best compatibility for new and legacy devices.

Wireless

Wireless Basic Settings



Enable Wireless
Enable or Disable wireless capability

Broadcast SSID
Set option to disable to hide your wireless network (Enable by default)

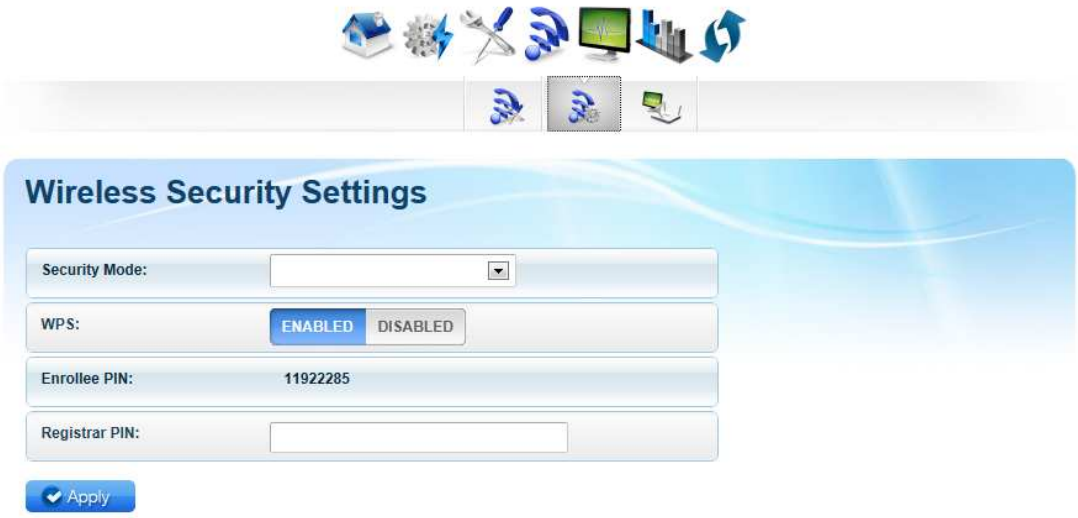
SSID
Here you can enter the name of your wifi network

Wireless Mode
This option allows you to select the type of wireless standard you want to allow to connect to your wireless network.

Channel
Change your wireless channel when you are getting poor reception. Choose the least channel used in your area for better performance (Only applicable for AP mode)

Channel Bandwidth
Here you can set your Channel Bandwidth to 20MHz and 20/40MHz(Auto)
HT Data Rate and HT Guard Interval
These options are recommended to be set to Auto for maximum efficiency.

Wireless Security Settings



Security Mode
Select the type of encryption you want for your wireless network

WPS
Set this option to enable or disable WPS (Wifi Protected Setup) feature on this device

Enrollee PIN
Enter this PIN to wireless client that will be connecting to WR300NSI repeater to automatically configure the wireless device.

Registrar PIN

Here you can enter the WPS-PIN of wireless clients and click apply for the WR300NSI to allow access and configure your wireless client device automatically

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

MAC Filter Settings

This feature will provide additional protection to your wireless network. It allows or denies wireless clients from accessing through the WR300NSI with the use of the MAC address which is unique for every network devices.

Policy

Disable
Use this option to disable or disregard the list of MAC address from blocking or allowing access to the wireless network.

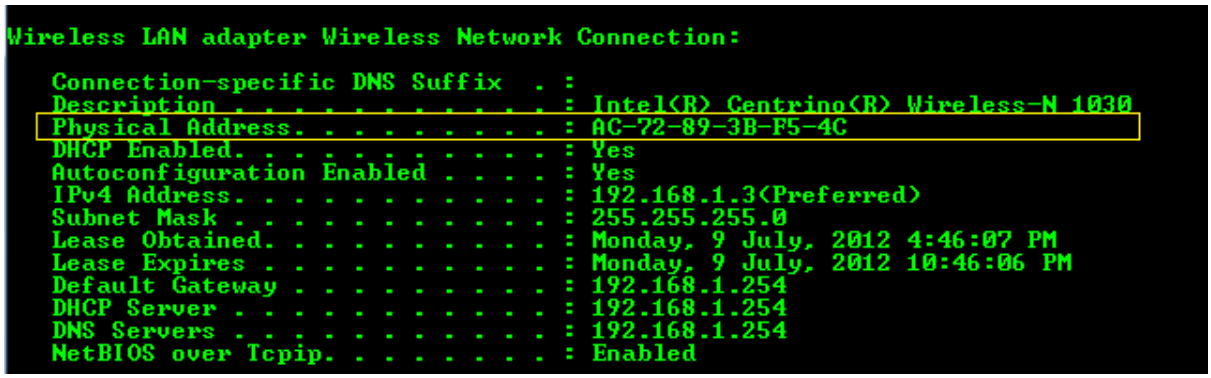
Allow
Allow the list of MAC address from accessing the wireless network

Deny
Deny the list of MAC address form accessing the wireless network

MAC Address
Type the MAC address of the wireless client here and press to add on the list.

Removing MAC address from the list
Press this icon to remove the MAC address from the list

Where can I find the MAC address of my wireless client?
On the Command Prompt type *ipconfig/all* to show all the network adapter(s) that are available.



System

Device Information

Firmware Version
Shows the current firmware version of the device

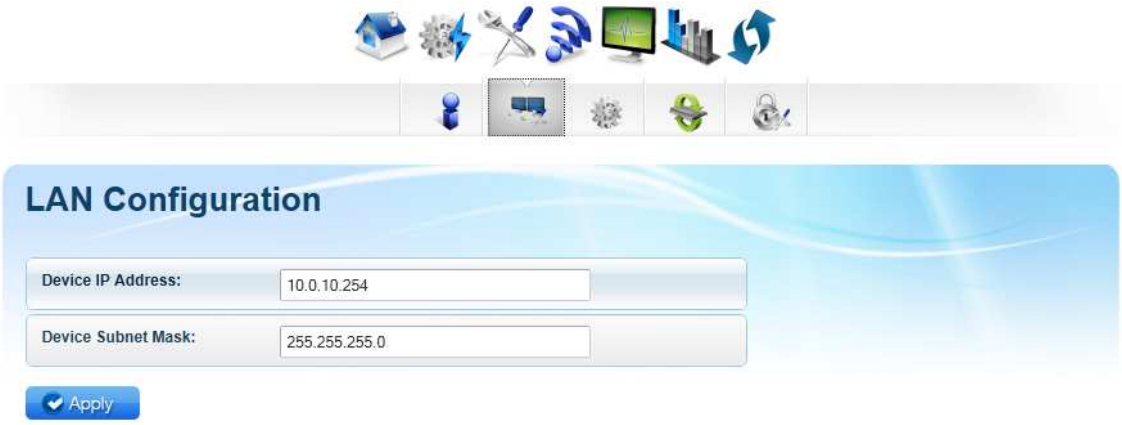
Build Date
Shows the date when firmware is created

Serial Number
Shows the device's serial no

ETH/Bridge and Wireless MAC address
Shows the MAC address of the different Interface

Wireless Status
Shows the wireless device's wireless status

LAN Configuration



Device IP address
Shows the device's current IP address

Note: Change this IP address if you are using two WR300NSI on the same network to avoid IP address conflict within your network. You may configure the 2nd unit with IP address ex: 10.0.10.253

Configuration Settings

Backup Settings
Allow you to save the current configuration of WR300NSI. 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 WR300NSI. Click browse and load the saved settings by clicking on the apply button.

Restore
Click on the apply button to reset the unit back to its factory settings. Unsaved information will be lost.

Firmware Upgrade

This option allows you to update the firmware of your device for future changes and enhancement.

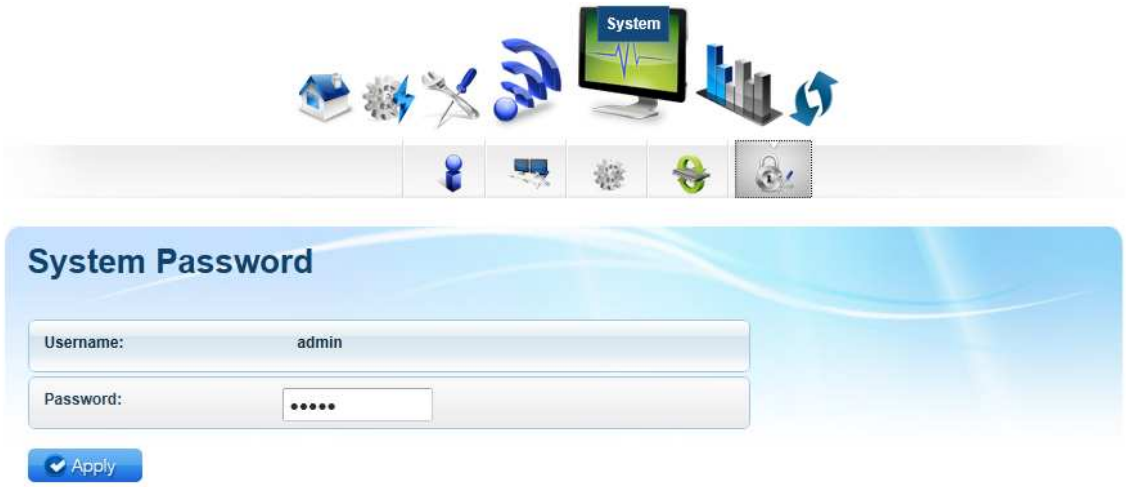
Updating the firmware

a. Connect an Ethernet cable between WR300NSI and computer
b. Open web browser and type http://10.0.10.254 to access the user interface
c. Click on Setup and select firmware under the sub menu
d. Click on the **Browse** button and locate and open the firmware for WR300NSI and click **Apply** to start the update.

Note: It is recommended to only use firmware which is officially release by Diamond Multimedia, Using third party firmware will void the warranty of the device.

System Password

Set a password on web user interface to prevent other users from getting access to the web UI and avoid unwanted changes from your settings.



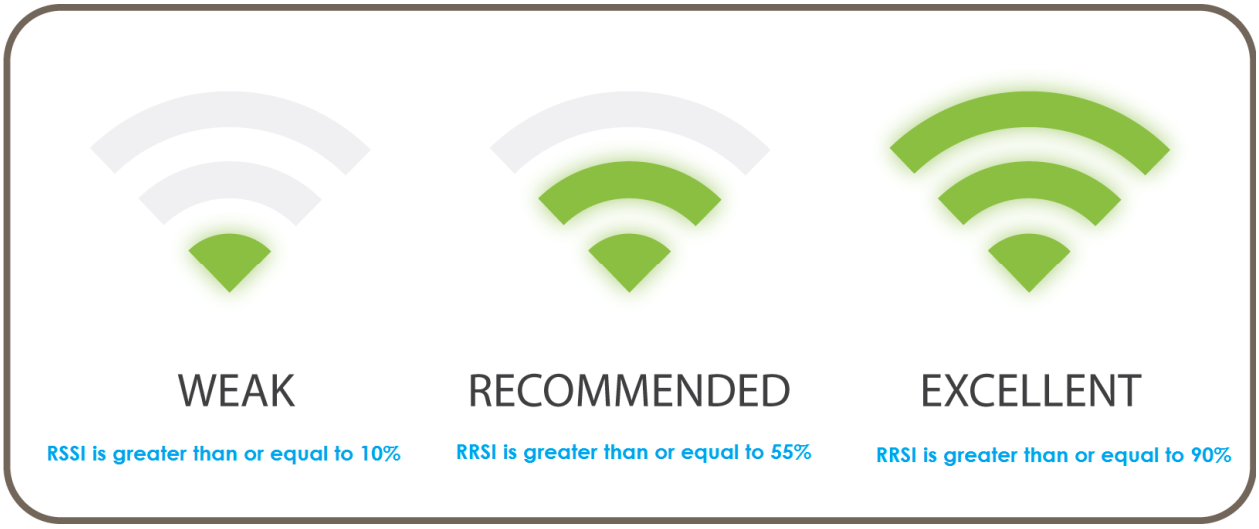
System Password

Type your password and click on apply to activate this feature. To disable, simply remove the password and click apply to save your settings.

Note: forgotten password will not be recovered. Reset the device pressing the reset button found beside the Ethernet port of WR300NSI.

Configuring the Device

Placement of the Wireless Repeater is crucial to get the best possible results for extending your existing wireless signal. It is ideal for the wireless repeater to be placed in a location where it can receive good wireless signal from the wireless router/AP so as to avoid disconnection and packet loss.

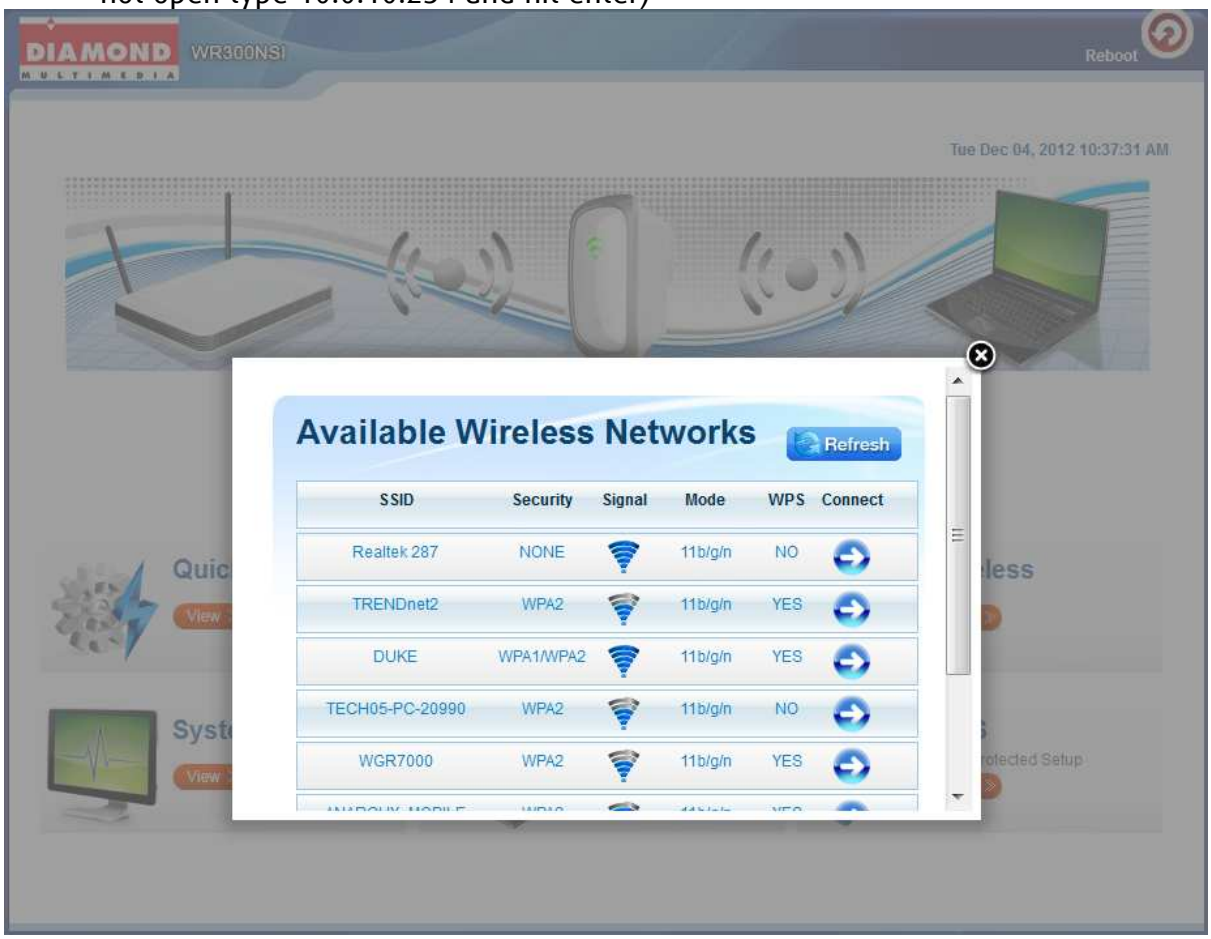


LED smart indicator determines the signal strength from your wireless router.

Wireless reception and throughput may vary according to the number of wireless clients that are in use at the same time, other nearby wireless devices, structure type, building materials and other interference present.

Wireless Repeater

a. Plug your WR300NSI to a power outlet, switch it ON and connect the Ethernet cable between your WR300NSI and Computer
b. Launch web browser and you will be directed to the User Interface (In case it does not open type 10.0.10.254 and hit enter)



c. Select your SSID (wireless network/wifi name) from the list and click connect

d. Type the password for the wireless network of your router and click apply. The WR300NSI will reboot and will redirect to the user interface with the following status.

e. Disconnect the Ethernet cable from WR300NSI and computer then place the device at the location, where it can get sufficient reception from your wireless router.

SETUP DIAGRAM (REPEATER)

Wireless Access Point

Setup your WR300NSI as an access point to provide wireless network to router that doesn't have wireless feature.

a. Plug your WR300NSI to a power outlet
b. Connect an Ethernet cable between the WR300NSI and Computer
c. Launch web browser and you will be directed to the User Interface

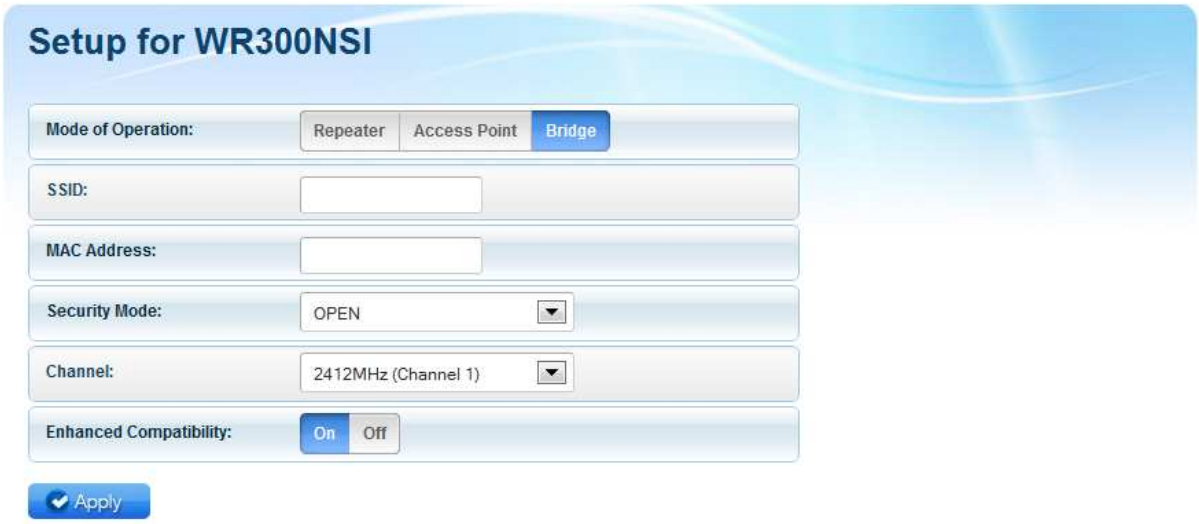
d. Go to Setup, set Mode of Operation to Access Point
. Type the name of your wireless network under SSID
f. Type the password of the wireless network and click apply
g. Connect the WR300NSI to router's LAN port after the settings have been saved.

SETUP DIAGRAM (AP)

Wireless Bridge

Connect wired devices to your wireless network by connecting an Ethernet cable from a wired device, such as a Desktop PC, Game Console or Internet-ready LCD TV, to the Ethernet port of the WL556E.

a. Plug in and turn ON your WR300NSI
b. Connect the Ethernet cable between your computer and WR300NSI
c. Launch a web browser. You will be directed to the user interface



d. Click on **Setup** and set Mode of Operation to **Bridge**
e. Type the name of your wireless network for the **SSID**
f. Enter the channel and password of your wireless network and click apply

Note: SSID, Security mode, password/passphrase and wireless channel must match to router's wireless settings.

SETUP DIAGRAM (BRIDGE)

WPS

WPS or Wifi Protected Setup makes it easier for you to connect your WR300NSI to your wireless router and WR300NSI to your wireless devices with a push of a button. (WPS

feature must be enabled and must be supported on the wireless router and wireless devices that will be connected to WR300NSI)

Configure WR300NSI to Wireless Router via WPS

a. Press the WPS button of WR300NSI for 5 seconds
b. Press the WPS button on your router for 2 seconds within 2 minutes time

Safety Precautions

- Do not open, service, or change any component.
- Only qualified technical specialists are allowed to service the equipment.
- Observe safety precautions to avoid electric shock
- Check voltage before connecting to the power supply. Connecting to the wrong voltage will damage the equipment.

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 have taken to try to resolve the issue.

Technical Support Options
Free Telephone Support

818-357-5165
(long distance rates may apply)
Mon - Fri, 8 - 4:30 PST
http://www.diamondmm.com

SHIPPING

Starting June 1st 2009 Diamond Multimedia will pay for shipping cost from Diamond back to US and Canadian customers provided the product is indeed under warranty and there is no damage caused by improper installation or modification of the merchandise. Customers located outside of the United States and Canada or using military addresses (APO,etc) will be required to pay for return shipping. Average shipping times range from 5 to 10 days, depending on actual shipment destination. Shipments made outside the US may take longer to deliver.

Diamond Multimedia reserves the right to claim for shipping fees along with service charges for any product that is returned incomplete or not under warranty. Return Authorization (RMA) is required for all warranty return products.

ONE YEAR LIMITED WARRANTY

The warranty described below is extended only to the original buyer and is not transferable.
Diamond warrants to the original purchaser of the hardware product, that the product is free from defects in materials or workmanship under normal use and service for a period of one (1) year from the date of purchase. All cables and accessories provided with a Diamond product are warranted to be free from defects in materials or workmanship under normal use and service for a period of for (90) ninety days from date of purchase.

Diamond's sole obligation under this warranty shall be, at Diamond's option, to: (I) repair the defective product or parts; (II) deliver to customer an equivalent product or part to replace the defective product. When a product or part is replaced or exchanged, that item becomes the customer's property and the replaced or exchanged item becomes Diamond's property. When a refund or replacement product is given, the defective product becomes Diamond's property. Replacement parts or products may be new or include serviceable used parts with at least the same functional equivalence to the original product. If, at the time of repair, a product is "out of warranty" or within the last ninety (90) days of the warranty period, Diamond warrants any repair for ninety (90) days. All software provided is subject to the terms of the associated software end-user license agreement.

WARRANTY EXCLUSIONS AND LIMITATIONS
TO BE ELIGIBLE FOR THIS WARRANTY, YOU NEED TO PROVIDE THE ORIGINAL SALES RECEIPT SHOWING THE DATE OF PURCHASE OF THE PRODUCT. DIAMOND MAY REQUEST THE ORIGINAL SALES RECEIPT OR A COPY AS PROOF OF THE DATE OF PURCHASE.

Diamond does not warrant third party products which Diamond distributes "AS IS" unless otherwise specified. Third party products may be warranted by the third party.

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OBTAINING WARRANTY SERVICE: Please review the "help" resources referred to in your products accompanying documentation before seeking warranty service. If the product is still not functioning properly after making use of these resources, please access the support page at http://www.diamondmm.com/support.php for warranty instructions and services. Some additional charges may apply for phone support.

FCC Notice

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 or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Diamond Multimedia could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules.

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

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

Exposure Information to Radio Frequency Energy

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

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