

Wireless Extender&Router

WS-WN523

Quick Installation Guide(Q.I.G.)

REV.1.0

Introduction:

The Wireless Extender&Router is a combined wired/wireless network connection device designed specifically for small business, office, and home office networking requirements. It complies with the IEEE 802.11n (Draft 2.0) standard. It adopts MIMO as well as SST technologies. It also works well with other 11b/g and 11n protocol wireless products. Create instant WiFi hotspots at any location where you have Internet connection .

Main Features

- Complies with IEEE 802.11n, IEEE 802.11g, IEEE 802.11b standards
- Supports Router, Client, Bridge, Repeater, AP mode
- QoS function assures the quality of VoIP and multimedia streaming
- Wireless N speed up to 300Mbps and Backward compatible with 802.11b/g products
- Compact and portable, powerful wireless signal as well
- Travel size design, ideal for home or travel use
- Supports WEP, WPA/WPA2, WPA-PSK/WPA2-PSK encryptions

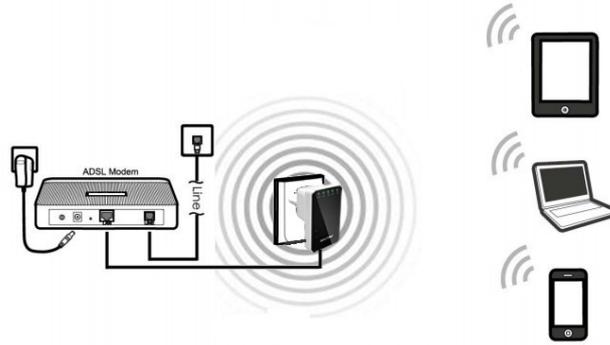
Package Contents

Before you starting to use this router, please check if there's anything missing in the package, and contact your dealer of purchase to claim for missing items:

- 1 x Wireless N Mini Router
- 1 x Quick Installation Guide
- 1 x RJ-45 Networking Cable

Getting Started

Setting up a Wireless Infrastructure Network



For a typical wireless setup at home (as shown above),
Please do the following:

1. You will need broadband Internet access (a ADSL, Cable Modem line into your home or office).
2. Consult with your ADSL or Cable Modem provider for proper installation of the modem.
3. Connect the ADSL or Cable modem to the Wireless N Mini Router. Plug the power plug of the Router in electrical wall socket.
4. Adding computers to the Wireless N Mini Router.

IMPORTANT NOTE

You can reset your Wireless-N Router to default setting by press the 'RESET' button on the back side of the Router.

You can use this solution if you forget your password.

Adding computers to the Wireless N Mini Router Router

1. Log on to the computer.
2. Open Connect to a Network by right-clicking the network icon  or  in the notification area.
3. Choose the wireless network “**Wireless-N**” from the list that appears, and then click **Connect**.
4. Type the network security key or passphrase if you are asked to do so, and then click **OK**.

You'll see a confirmation message when you are connected to the network.

5. To confirm that you added the computer, do the following:

Open Network by clicking the **Start** button , and then clicking **Control Panel**. In the search box, type **network**, and then, under Network and Sharing Center, click **View network computers and devices**.

You should see icons for the computer you added and for the other computers and devices that are part of the network.

Note : If you don't see icons in the Network folder, then network discovery and file sharing might be turned off.

For more information:

<http://windows.microsoft.com/en-US/windows7/Add-a-device-or-computer-to-a-network>

<http://windows.microsoft.com/en-US/windows7/Setting-up-a-wireless-network>

<http://windows.microsoft.com/en-US/windows-vista/Setting-up-a-wireless-network>

Configuring via Web Browser

Open web browser and type <http://192.168.10.253> in the browser's address box. This number is the default IP address for this device.



The login screen below will appear. Enter the "User Name" and "Password" and click "OK" to login.

The default User name is "admin" and the Password is "admin".



Setup Wizard

After a successfully login, you can click the Quick Setup menu to quickly configure your Router.

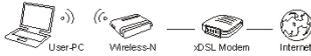
Choose the Operation Mode you need, and then click **Next**.

Wizard

Operation Mode

AP : Access Point mode

Router : Wireless router mode



In this mode, the wired interface as the WAN port to use, computers can only connect to the router via wireless. This mode, the DHCP server enabled by default, recommended that computer's IP address and DNS address set to automatically obtain.

Repeater : Repeater mode

Bridge : Bridge Mode

Client : Client Mode

Next

AP Mode:

Wizard--Access Point mode

Access Point mode

SSID: Wireless-N

Channel: Auto

Security Mode: Disable

Back Save

Set the wireless parameter. It's recommended that you rename an **SSID**, choose a **Security Mode** and enter a **Key**. Click **Save&Reboot** to reboot the Router and make the settings take effect.

Router Mode:

Wizard -- Wireless router mode

Wireless router mode

Automatically from the network service provider to obtain an IP address (dynamic IP)

ADSL Dial-up (PPPoE)

SSID:

Channel:

Security Mode:

Set the wireless parameter. It's recommended that you rename an **SSID**, choose a **Security Mode** and enter a **Key**.

Choose your WAN Connection Type.

If **Dynamic IP** is selected, the Router gets the IP address automatically from the DHCP server or the ISP. No configuration should be set and you can go on with the wireless configuration.

If **PPPoE** is selected, please enter the **User Name** and **Password** given by your ISP, These fields are case-sensitive.

Wizard -- Wireless router mode

Wireless router mode

Automatically from the network service provider to obtain an IP address (dynamic IP)

ADSL Dial-up (PPPoE)

User Name:

Password:

Service Name:

SSID:

Channel:

Security Mode:

Click **Save&Reboot** to reboot the Router and make the settings take effect.

Repeater Mode:

Wizard -- Repeater mode

Repeater mode

Refresh

SSID	BSSID	Channel	Encrypt	Signal	Select
Wireless-N1q	00:13:13:00:08:f3	11 B+G+N	NO	100%	Select
GS	00:a1:b0:aa:bb:cc	3 B+G	WPA2- PSK	100%	Select
Repeater	80:3f:5d:90:e7:e4	1 B+G+N	NO	100%	Select
123	00:13:13:00:06:e0	6 B+G+N	NO	80%	Select
Wireless-N252	00:0a:07:52:09:40	6 B+G	WPA2- PSK	65%	Select
ChinaNet-5005	08:18:1a:d6:ca:b9	11 B+G	WPA2- PSK	60%	Select
Showing_room	00:0d:09:81:09:04	8 B+G+N	WPA2- PSK	55%	Select
Wireless-N	00:13:13:00:06:17	11 B+G+N	NO	45%	Select

Select the **SSID** of the target network and click **Select**.

Wizard -- Repeater mode

Repeater mode

Refresh

SSID:

Key:

Unmask

Back Save

The target network's SSID will be automatically filled into the wireless setting figure. Select the Password. Then click **Save&Reboot** to reboot the Router and make the settings take effect.

Bridge Mode:

Wizard -- Bridge Mode

Bridge Mode

SSID: Wireless-N
Security Mode: Disable

Refresh

SSID	BSSID	Channel	Encrypt	Signal	Select
Wireless-N1q	00:13:13:00:08:f3	11 B+G+N	NO	100%	Select
GS	00:a1:b0:aa:bb:cc	3 B+G	WPA2-PSK	100%	Select
Repeater	80:3f:5d:90:e8:92	1 B+G+N	NO	100%	Select
123	00:13:13:00:06:e0	6 B+G+N	NO	80%	Select
Wireless-N252	00:0a:07:52:09:40	6 B+G	WPA2-PSK	60%	Select
ChinaNet-5005	08:18:1a:d6:ca:b9	11 B+G	WPA2-PSK	45%	Select

Select the **SSID** of the Access Point you want to access and click **Select**.

Wizard -- Bridge Mode

Bridge Mode

SSID: Wireless-N
Security Mode: Disable

Refresh

SSID: Wireless-N252
Key: Unmask

Back Save

The target network's SSID will be automatically filled into the wireless setting figure. Select the Password. Then click **Save&Reboot** to reboot the Router and make the settings take effect.

Client Mode:

Wizard -- Client Mode

Client Mode

Refresh

SSID	BSSID	Channel	Encrypt	Signal	Select
Wireless-N1q	00:13:13:00:08:f3	11 B+G+N	NO	100%	Select
Repeater	00:23:13:16:1c:32	5 B+G+N	NO	100%	Select
GS	00:a1:b0:aa:bb:cc	3 B+G	WPA2- PSK	100%	Select
123	00:13:13:00:06:e0	6 B+G+N	NO	80%	Select
Wireless-N252	00:0a:07:52:09:40	6 B+G	WPA2- PSK	65%	Select
ChinaNet-5005	08:18:1a:d6:ca:b9	11 B+G	WPA2- PSK	60%	Select

Select the **SSID** of the Access Point you want to access and click **Select**.

Wizard -- Client Mode

Client Mode

Refresh

SSID

Key Unmask

Back Save

The target network's SSID will be automatically filled into the wireless setting figure. Select the Password. Then click **Save&Reboot** to reboot the Router and make the settings take effect.

LAN Settings

Please click "**Network**→**LAN Settings**" located at the web management interface, the following message will be displayed on your web browser:

The screenshot shows the LAN configuration interface for a Wireless-N Mini Router. The page title is "WIRELESS-N MINI ROUTER 802.11 B/G/N". The left sidebar contains navigation options: Wizard, Network, LAN Settings, WAN Settings, Wireless, Firewall, Advanced, Management, and Status. The main content area is titled "LAN" and contains the following settings:

- IP Address: 192.168.10.253
- Sub Net: 255.255.255.0
- Default Gateway: 0.0.0.0
- DHCP: Server
- DHCP Client Range: 192.168.10.10 - 192.168.10.20 (with a "Show Client" button)
- DHCP Lease Time: 480 (1 ~ 10080 minutes)
- Static DHCP: Set Static DHCP
- Domain Name: Wireless-N
- 802.1d Spanning Tree: Disabled
- Clone MAC Address: 000000000000

Buttons for "Apply Settings" and "Reset" are located at the bottom of the form. A language dropdown menu is visible in the bottom left corner, set to "English".

IP Address: Enter the IP address of your Router or reset it in dotted-decimal notation Wireless-N Router (factory default: **192.168.10.253**).

Subnet Mask: An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.

DHCP Type:	Server, Client or Disable
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Note:

- 1) If you change the IP Address of LAN, you must use the new IP Address to login the Router.
- 2) If the new LAN IP Address you set is not in the same subnet, the IP Address pool of the DHCP server will change accordingly at the same time, while the Virtual Server and DMZ Host will not take effect until they are re-configured.

Connect to Internet

Please click "**Network**→**WAN Settings**" located at the web management interface, Following example is for "**PPPoE**" WAN setting.



The screenshot displays the WAN Settings interface for a Wireless-N Mini Router (802.11 B/G/N). The left sidebar contains navigation options: Wizard, Network, LAN Settings, WAN Settings (selected), Wireless, Firewall, Advanced, Management, and Status. Below the sidebar is a Refresh button and a language dropdown set to English. The main content area is titled 'WAN' and contains the 'WAN Basic Setting' section. The 'WAN Access Type' is set to 'PPPoE'. The 'User Name' and 'Password' fields are empty. The 'Service Name(AC)' field is also empty. The 'Connection Type' is set to 'Continuous'. There are 'Connect' and 'Disconnect' buttons. The 'Idle Time' is set to 5 minutes (range 1-1000). The 'MTU Size' is set to 1452 bytes (range 1360-1492). There are two radio buttons for DNS: 'Attain DNS Automatically' (unselected) and 'Set DNS Manual' (selected). Below these are input fields for 'DNS 1' and 'DNS 2', both of which are empty.

Enter the "**PPPoE Username**" and "**PPPoE Password**" that ISP provided and leave the others. (The "**Service Name**" can be blank)

Click "**Apply Settings**" button to save the settings then reboot the router. After reboot, your router is now ready for Internet connection.

If your ISP provides a static or fixed IP Address, Subnet Mask, Gateway and DNS setting, select '**Static IP**'. Enter the **IP address / Subnet Mask / Default Gateway / MTU / Primary / Secondary DNS** in dotted-decimalnotation provided by your ISP.

The screenshot shows the WAN Basic Setting page for a Wireless-N Mini Router. The WAN Access Type is set to 'Static IP'. The IP Address is 172.1.1.1, Subnet Mask is 255.255.255.0, and Default Gateway is 172.1.1.254. The MTU Size is 1500 bytes. There are three empty input fields for DNS 1, DNS 2, and DNS 3.

Field	Value
WAN Access Type	Static IP
IP Address	172.1.1.1
Subnet Mask	255.255.255.0
Default Gateway	172.1.1.254
MTU Size	1500 (1400-1500 bytes)
DNS 1	
DNS 2	
DNS 3	

If your ISP provides the DHCP service, please choose '**DHCP Client**', and the Router will automatically get IP parameters from your ISP. This page displays the WAN IP parameters assigned dynamically by your ISP, including IP address, Subnet Mask, Default Gateway, etc.

The screenshot shows the WAN Basic Setting page for a Wireless-N Mini Router. The WAN Access Type is set to 'DHCP Client'. The Host Name is 'Wireless-N' and the MTU Size is 1492 bytes. The 'Set DNS Manual' radio button is selected, and there are three empty input fields for DNS 1, DNS 2, and DNS 3.

Field	Value
WAN Access Type	DHCP Client
Host Name	Wireless-N
MTU Size	1492 (1400-1492 bytes)
Attain DNS Automatically	<input type="radio"/>
Set DNS Manual	<input checked="" type="radio"/>
DNS 1	
DNS 2	
DNS 3	

Wireless Base Configuration

Please click "**Wireless -> Basic Settings**" located at the web management interface, the following message will be displayed on your web browser:

You could configure the minimum number of Wireless settings for communication, such as Network Name (**SSID**) and Channel. The Access Point can be set simply with only the minimum setting items.



Disable Wireless

Band:

Broadcast SSID:

Channel Number

Wireless On/Off

Supports 11B/11G/11N mixed modes.

SSID: Main Service Set Identifier. It's the "**name**" of your wireless network.

Select "**Enable**" to enable the device's SSID to be visible by wireless clients

This field determines which operating frequency will be used. The default channel is set to Auto, so the AP will choose the best channel automatically. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

Wireless Security Configuration

Please click "**Wireless-> Wireless Security**" located at the web management interface, the following message will be displayed on your web browser:

Setup the wireless security and encryption to prevent from unauthorized access and monitoring. Supports 64/128-bit WEP, WPA, WPA2 encryption methods.



When you finish, click '**Apply Settings**'.

Please click "**Wireless-> WPS**" located at the web management interface, the following message will be displayed on your web browser:

you can establish a wireless connection between wireless adapter and Router using either Push Button Configuration (PBC) method or PIN method.



Disable WPS: Enable / Disable

Self-PIN Number: If the new device supports Wi-Fi Protected Setup and the PIN method, you can add it to the network by PIN Number.

PBC method: If the wireless adapter supports Wi-Fi Protected Setup and the Push Button Configuration (PBC)

Step 1: Press the **WPS** button of the Router directly for 2 - 3seconds or [Click web management interface 'Start PBC'](#).

Step 2: Press the WPS button of the Adapter directly for 3 seconds.

Step 3: Wait for a while until the next screen appears.
Click Finish to complete the WPS configuration.

Router Administrator Setup

Factory Default and Settings Backup , Restore

You can backup all Setting of this router to a file, so you can make several copied of router configuration for security reason.

To backup or restore router setting, please follow the following instructions:
Please click click '**Management-> Backup&Reset**' located at the web management interface, then the following message will be displayed on your web browser:



Save Settings	Press ' Save... ' button, and you'll be prompted to download the configuration as a file, you can please save it as another filename for different versions, and keep it in a safe place.
Load Settings	Press ' Browse... ' to pick a previously-saved configuration file from your computer, and then click ' Upload ' to transfer the configuration file to router. After the configuration is uploaded, the router's configuration will be replaced by the file you just uploaded.
Reset Settings	Click this ' Reset Setting to Default ' button to remove all settings you made, and restore the configuration of this router back to factory default settings.

Firmware Upgrade

The system software used by this router is called as 'firmware', just like any applications on your computer, when you replace the old application with a new one, your computer will be equipped with new function. You can also use this firmware upgrade function to add new functions to your router, even fix the bugs of this router.

Please click '**Management-> Firmware Upgrade**' located at the web management interface, then the following message will be displayed on your web browser:

Click '**Browse...**' button first, you'll be prompted to provide the filename of firmware upgrade file. Please download the latest firmware file from our website, and use it to upgrade your router.



After a firmware upgrade file is selected, click '**Upgrade**' button, and the router will start firmware upgrade procedure automatically. The procedure may take several minutes, please be patient.

NOTE: Never interrupt the upgrade procedure by closing the web browser or physically disconnect your computer from router. If the firmware you uploaded is corrupt, the firmware upgrade will fail, and you may have to return this router to the dealer of purchase to ask for help. (Warranty voids if you interrupted the upgrade procedure).

Change management password

Default password of Wireless Router is “**admin**”, and it's displayed on the login prompt when accessed from web browser. There's a security risk if you don't change the default password, since everyone can see it. This is very important when you have wireless function enabled.

To change password, please follow the following instructions:
Please click '**Management**' -> '**Management**' menu on the web management interface, the following message will be displayed on your web browser:



The screenshot shows the web management interface for a 'WIRELESS-N MINI ROUTER 802.11 B/G/N'. The interface has a sidebar menu on the left with options: Wizard, Network, Wireless, Firewall, Advanced, Management, Management, Time Zone, Log, Firmware Upgrade, Backup&Reset, and Status. The 'Management' menu item is highlighted. The main content area is titled 'Router Management' and contains a 'Router Password' section with three input fields: 'Router Username:', 'New Password:', and 'Re-enter to confirm:'. Below the input fields are two buttons: 'Apply Settings' and 'Reset'.

When you finish, click '**Apply Settings**'; If you want to keep original password unchanged, click '**Reset**'.

FCC Statement:

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.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: 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.

FCC Radiation Exposure Statement

A distance of 20 cm shall be maintained between the antenna and users, and the transmitter may not be co-located with any other transmitter or antenna. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.