

FX20 WiFi 6 Router

FX20 WIFI 6 ROUTER USER MANUAL

JEXtream AX1800

Franklin Wireless Corp

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Introduction

The following topics describe the basics of using this guide and your WiFi router.

Before You Begin

Thank you for purchasing your new JEXtream WiFi 6 router!

The following topics explain how best to use this guide to get the most out of your mobile broadband device.

Other Notations

In the user guide, the JEXtream WiFi 6 router may be referred to either as "WiFi 6 device", "JEXtream WiFi", "device," or "WiFi router."

Router Setup

The following topics give you all the information you need to set up your router for the first time.

Parts and Functions

The FX20 WiFi 6 Router delivers better performance by ensuring more available bandwidth with less congestion for all connected devices on network. With FX20's WiFi 6 capacity, it allows more users and devices to connect to the network at the same time without impacting speed or reliability.

The router provides fast central storage, backup, and streaming to every device in your home with the Giga Ethernet port. Sharing content across your network is easy, whether it's accessing stored photos and music or wirelessly printing.

This chapter contains the following sections:

- This Box Contains
- Router Overview
- Attach Stand
- Turn on the Device with Adapter
- LED Indicators

For more information about the topics covered in this manual, visit the support website at <https://www.jextream.net/support>.

This Box Contains

Your package contains the following items:



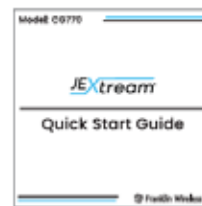
FX20 Device



Stand(or Wall Bracket)



Power Adapter



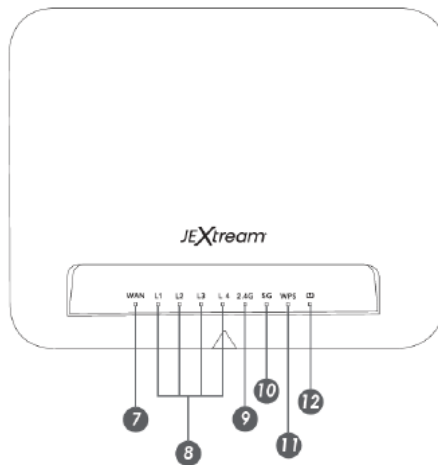
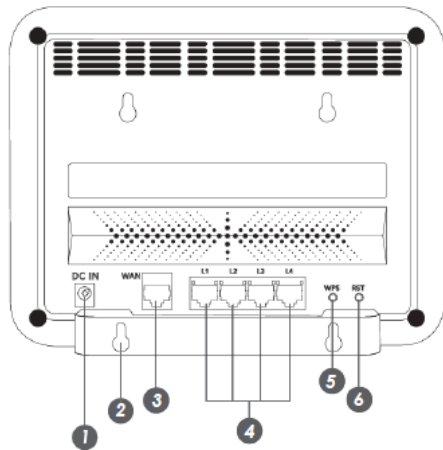
Get Started Guide



RJ-45 Cable

Router Overview

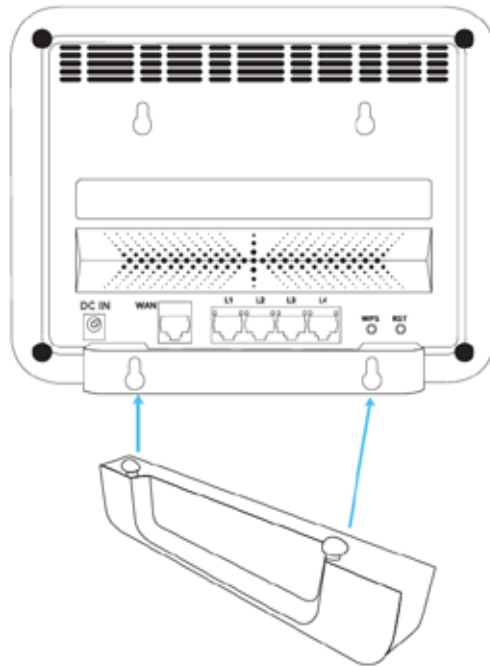
The following numbers on Front and Rear panels indicate interface detail:



1. Power Adapter Port
2. Wall Mount Hole
3. RJ45 (WAN Port)
4. RJ45 (LAN Port)
5. WPS Button
6. Reset Button
7. WAN Indicator
8. LAN 1-4 Indicator
9. 2.4G Indicator
10. 5G Indicator
11. WPS Indicator
12. Power Indicator

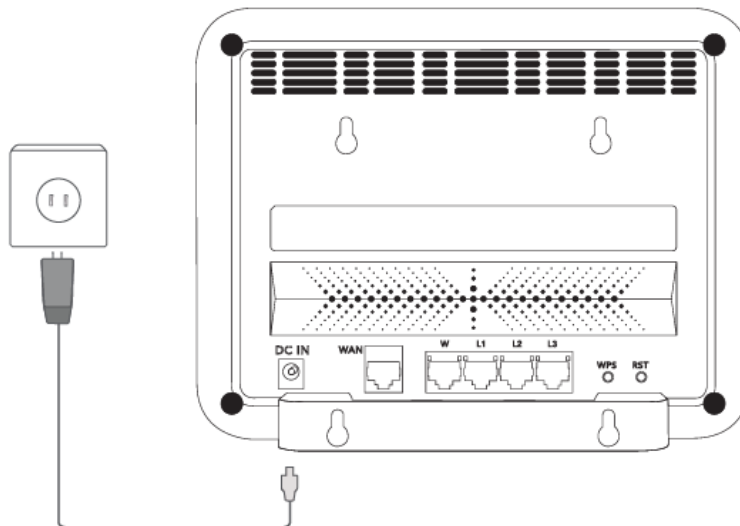
Attach Stand

Attach the stand to the router by lining up and inserting the stand's bolts to the bottom bolt holes of the device. Then push up to lock:



Turn on the Device

Plug DC Adapter to device, then connect to wall. The device should automatically turn on.



Front Panel LED

The following table describes the LED indicators that is located on the router front view and bottom.

: Router Bottom and Front View



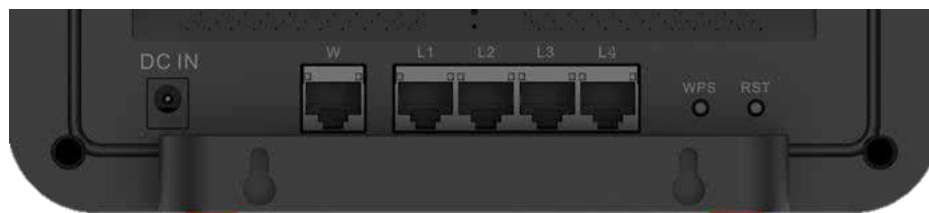
LED	Description
WAN	<ul style="list-style-type: none"> • Solid amber – The router detected an Ethernet cable connection to the modem. • Blinking amber – The router is sending or receiving the internet traffic. • Off – Power is not supplied to the router.
L1 (LAN 1) to L4 (LAN4)	<ul style="list-style-type: none"> • Solid amber – The LAN port detected an Ethernet cable connection from an external device. • Blinking amber – The LAN port is sending or receiving traffic. • Off – No device is connected to this Ethernet port.
WiFi 2.4G	<ul style="list-style-type: none"> • Solid amber – The 2.4GHz WiFi radio is running. • Blinking amber – The router is sending or receiving WiFi traffic. • Off – The 2.4GHz WiFi radio is turned off.
WiFi 5G	<ul style="list-style-type: none"> • Solid amber – The 5GHz WiFi radio is running. • Blinking amber – The router is sending or receiving WiFi traffic. • Off – The 5GHz WiFi radio is turned off.

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LED	Description
	<p>The WPS LED indicates both WPS and WiFi Mesh status.</p> <p><WPS Status></p> <ul style="list-style-type: none">• Blinking amber – Pressing the WPS button on the Rear side for a few seconds, this LED is blinking during this process, and let your device can join this WiFi network without typing the WiFi password.• Solid amber – WPS process fail.
WPS	<ul style="list-style-type: none">• Off – No WPS action, WPS process is done or timeout. <p><WiFi Mesh Status></p> <ul style="list-style-type: none">• Blinking amber – Attempting to sync with the Mesh extender once pressing the WPS button on the backside for 3 seconds. The process time will take up to 5 minutes for syncing your FX10 WiFi Mesh extender.• Off – No WiFi Mesh action, WiFi Mesh process is done or timeout.
Power	<ul style="list-style-type: none">• Solid amber – The router is starting.• Off – Power is not supplied to the router.

Rear Panel Button and Connector

: Router Bottom and Rear View



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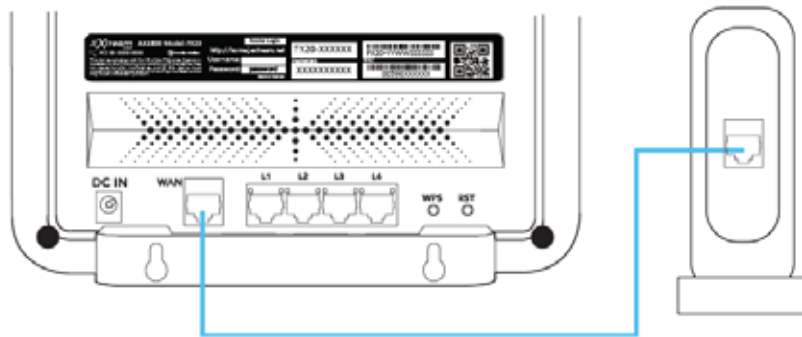
Button	Description
DC-IN	Power Connector
W(WAN)	Internet WAN Port
L1 ~ L4	Ethernet LAN Ports 1 - 4
WPS	Pressing the WPS button for few seconds, this LED is blinking during this process, and let your device can join this WiFi network without typing the WiFi password.
RST (RESET)	Pressing the RST button for 5 seconds, your device will restart.
	Pressing the RST button at least 10 seconds, your device will restore the factory settings.

Basic Connection

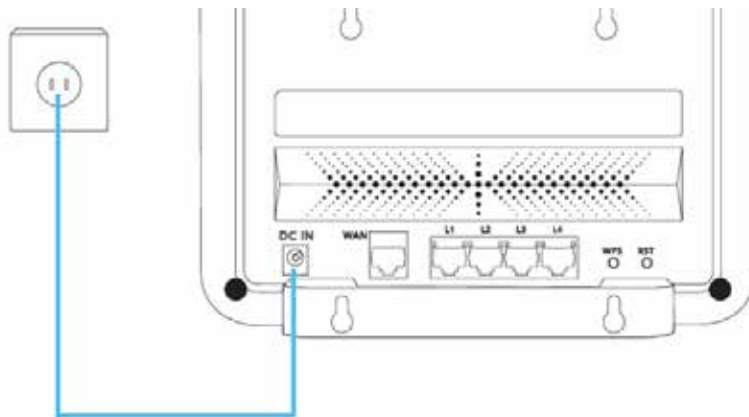
The following topics give you all the information you need to set up your device and wireless service for the first time.

Connect to ISP Modem

Connect the router to your modem with RJ-45 cable to WAN port:



1. Unplug your ISP(Internet Service Provider) modem's power, leaving the modem connected to the wall jack for your internet service. If your modem uses a battery backup, remove the battery.
2. Plug in and turn on your modem. If your modem uses a battery backup, insert the battery.
3. Connect your modem to the Internet WAN port of your device using the Ethernet Cable.
4. Plug DC Charger to your router, then plug the power adapter into an outlet. The device will automatically turn on.



5. Configure with your ISP modem
 - a. To connect to an ISP, you need a modem and an active account.
 - b. Make certain the ISP modem had already provided DSL Broadband Service (PPPoE).
 - c. Login to Web Admin page, go to Internet > IP Settings.
 - d. Change the WAN Connection Type to PPPoE and enter your PPPoE username and password provided by ISP.

Connect to Ethernet Cable

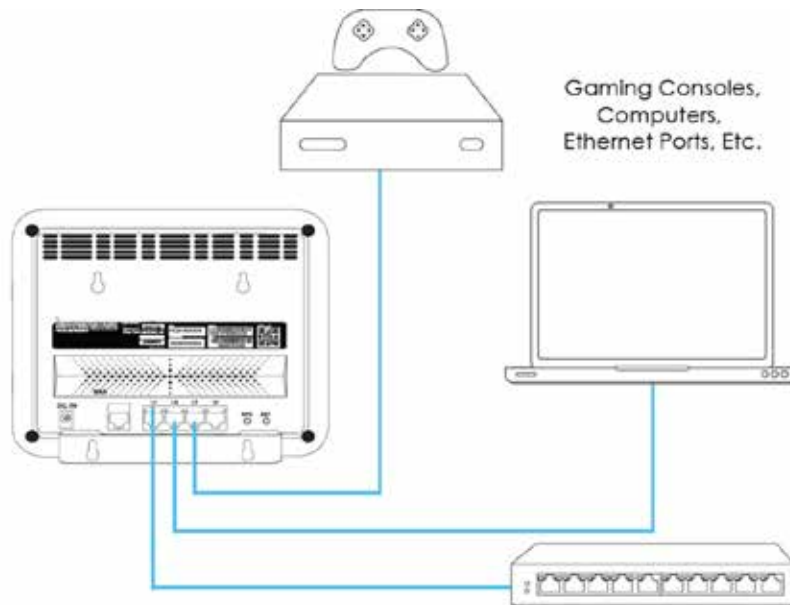
For the best performance, we recommend using CAT6 ethernet cable:

Router Placement

The distance or range of your wireless connection can vary significantly depending on the physical placement of your router. Moving your router won't make your Internet connection faster, but it should make it more reliable and stable which can be important when it comes to video streaming or online gaming.

Below are simple steps to help improve your wireless Internet signal:

1. Place your router near the center of the area where your computers and other devices operate, and within line of sight to your wireless devices.
2. Make sure that the router is within reach of an AC power outlet and near Ethernet cables for wired computers.



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3. Place the router in an elevated location, minimizing the number walls and ceilings between the router and your other devices.
4. Place the router away from electrical devices or large metal and glass surfaces such as these:
 - a. Kitchen
 - b. Microwaves
 - c. Computers
 - d. Solid metal door
 - e. Aluminum studs
 - f. Walls
 - g. Brick
 - h. Concrete
 - i. Mirrors and fish tanks

Connect Device

The following topics give you all the information you need to set up your device and wireless service for the first time.

Connect the Device via LAN

You can connect your computer to the router using an Ethernet cable and join the router's local area network (LAN).

To connect your computer to the router with an Ethernet cable:

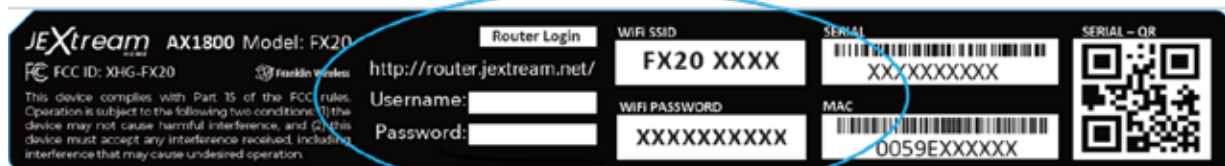
1. Connect an Ethernet cable to an Ethernet port on your computer.
2. Connect the other end of the Ethernet cable to one of the numbered Ethernet ports (L1, L2, L3, L4).

Once your computer connects to the router's local area network, and you might be notified a message might on your computer screen regarding an Ethernet cable is connected.

Connect the Device via WiFi

You can find and select the router's WiFi network on your computer or mobile device.

1. WiFi SSID and password information can be found on the back of the device label.
2. Join the WiFi network and enter the WiFi password.
3. Your device connects to the WiFi network.



Router Login

To login to the router:

1. Launch an internet browser from a computer or wireless device that is connected to the network.
2. Type <http://router.jextream.net> or <http://192.168.10.1>. A login window opens.
3. Enter the router password. The default password can be found on the back of the device label. The password is case-sensitive.

Settings

The following topics provide an overview of items you can change using the device's **setting** menu accessed through the router's Web UI.

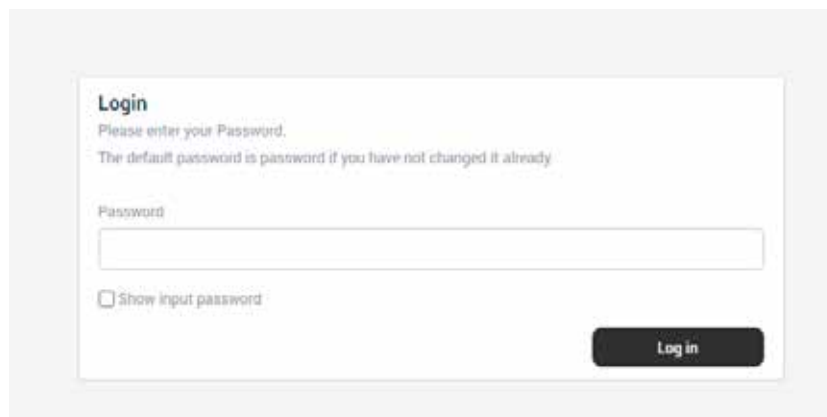
Web UI Overview

Once you log in to your router, and you can use the router's Web UI in a browser to check or change the basic settings.

Admin Login

Launch an internet browser from a computer or mobile device that is connected to the network. Accessing other menus requires admin log in.

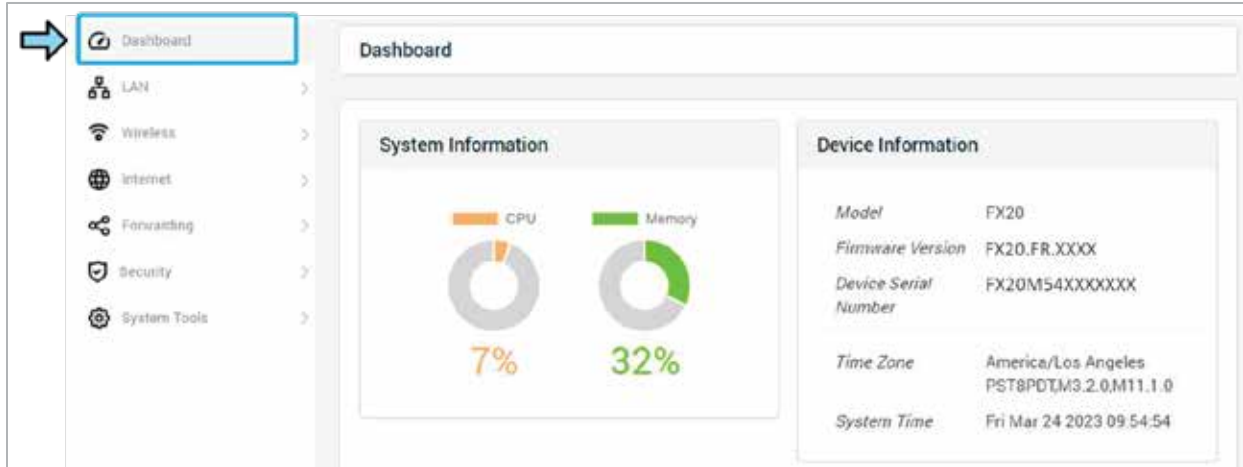
1. Type <http://router.jextream.net> or <http://192.168.10.1>.
2. Login window open and enter password. The default password can be found on the back of the device label. The password is case-sensitive.
3. Enter the password and click "Log in" button.



Note: The default password is "**password**." It's recommended to change the password for your security.

Dashboard

Select the Dashboard icon on the top left corner, you can check the status of device information, system information, and WAN/LAN/Wireless network connection.



LAN

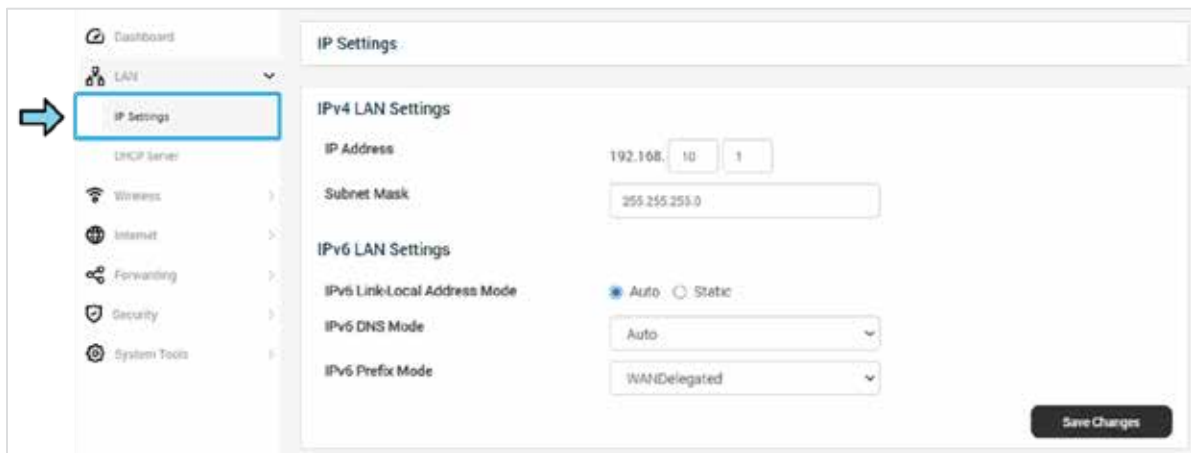
Configure IP Setting and DHCP Server.

IP Settings

By default, the router sets on a DHCP(Dynamic Host Configuration Protocol) server, and the router assigns IPv4 address, IPv6 address, and default gateway addresses to the device which is connected through the LAN. The assigned default gateway address is the LAN address.

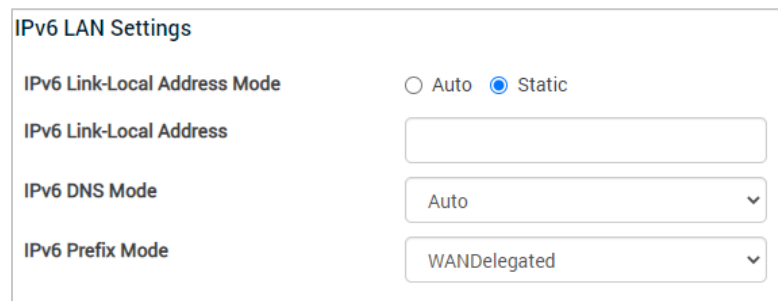
Set the IP Settings for your device.

- From the Web UI, click **LAN > IP Settings** to display the LAN information shown in the following figure.



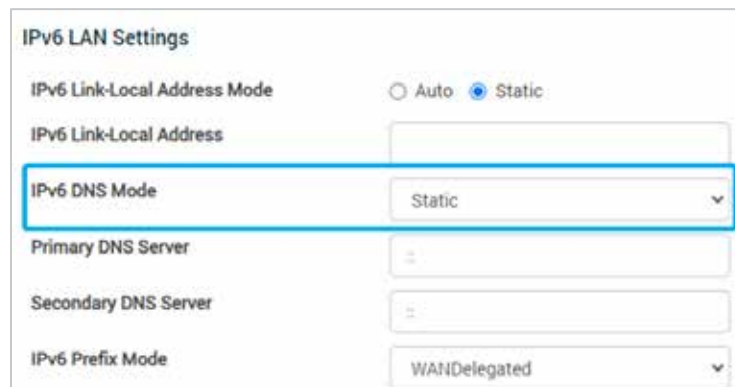
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1. To set up an IPv4 address on LAN
 - **IP Address:** The LAN IP address of your router.
 - **Subnet Mask:** The subnet mask associated with the LAN IP address. Subnet Mask is usually 255.255.255.0.
2. To set up an IPv6 address on LAN
 - **Link-Local Address Mode**
 - **Auto:** It is the default setting. Assign IPv6 addresses to the computers in your LAN.
 - **Static:** If your network environment is unusual or if you are a network expert, you can change following settings.



The screenshot shows the 'IPv6 LAN Settings' configuration page. The 'IPv6 Link-Local Address Mode' is set to 'Static' (indicated by a blue dot). The 'IPv6 Link-Local Address' field is empty. The 'IPv6 DNS Mode' is set to 'Auto' and the 'IPv6 Prefix Mode' is set to 'WANDelegated'.

- **Link-Local Address:** Enter the IPv6 address in your LAN
- **IPv6 DNS Mode:** Configure the DNS Server mode in your LAN
 - **Auto:** This is the default setting.
 - **WAN Connection:** Use the DNS server addresses that are configured for the IPv6 internet connection automatically.
 - **Static:** Configure another DNS IPv6 address provided by your ISP. If your ISP gives you one or two DNS IPv6 addresses, enter IPv6 Primary and Secondary DNS server address manually.



This screenshot is similar to the previous one but highlights the 'IPv6 DNS Mode' dropdown menu, which is now set to 'Static'. Below this dropdown, there are two empty text input fields for 'Primary DNS Server' and 'Secondary DNS Server'. The 'IPv6 Link-Local Address Mode' remains 'Static' and 'IPv6 Prefix Mode' remains 'WANDelegated'.

- **IPv6 Prefix Mode:** IPv6 address prefix of subnet hosts.
 - **WAN Delegated:** Use the IPv6 address prefix from the ISP automatically, and the router will delegate it to the LAN.
 - **Static:** Configure the Prefix Address and Prefix Length manually. You may need to connect your ISP to get more information before you configure them.

The screenshot shows the 'IPv6 LAN Settings' configuration page. The 'IPv6 Link-Local Address Mode' is set to 'Static'. The 'IPv6 DNS Mode' is set to 'Static'. The 'IPv6 Prefix Mode' dropdown menu is highlighted with a blue box and is set to 'Static'. Below it, there are input fields for 'Prefix Address' and 'Prefix Len' (set to 6).

- **Prefix Address:** Enter the IPv6 address in your LAN
- **Prefix Length:** Enter the length of IPv6 address prefix in your LAN

DHCP Server

By default, the router sets on a DHCP (Dynamic Host Configuration Protocol) server, and the router assigns IP, DNS server, and default gateway addresses to the device which is connected through the LAN. The assigned default gateway address is the LAN address.

Set the DHCP Server for your device.

- From the Web UI, click **LAN > DHCP Server** to display the preset parameters.

The screenshot shows the 'DHCP Server' configuration page. The 'DHCP Server' is set to 'ON'. The 'IP Pool Starting Address' is 192.168.10.2, the 'IP Pool Ending Address' is 192.168.10.254, the 'Lease Time (SEC)' is 3600, and the 'Default Gateway' is 192.168.10.1. A blue arrow points to the 'DHCP Server' option in the left sidebar.

1. **DHCP Server:** OFF or ON of DHCP Server function.
2. **IP Pool Starting/Ending Address:** Allocate start and end IP address for IP Range.
3. **Lease Time (SEC):** Define how long the leased IP address will be in use before expiration. The new IP address will be assigned.
4. **Default Gateway:** IP address of the default gateway.
5. Click **Save Changes** to save your settings.

Wireless

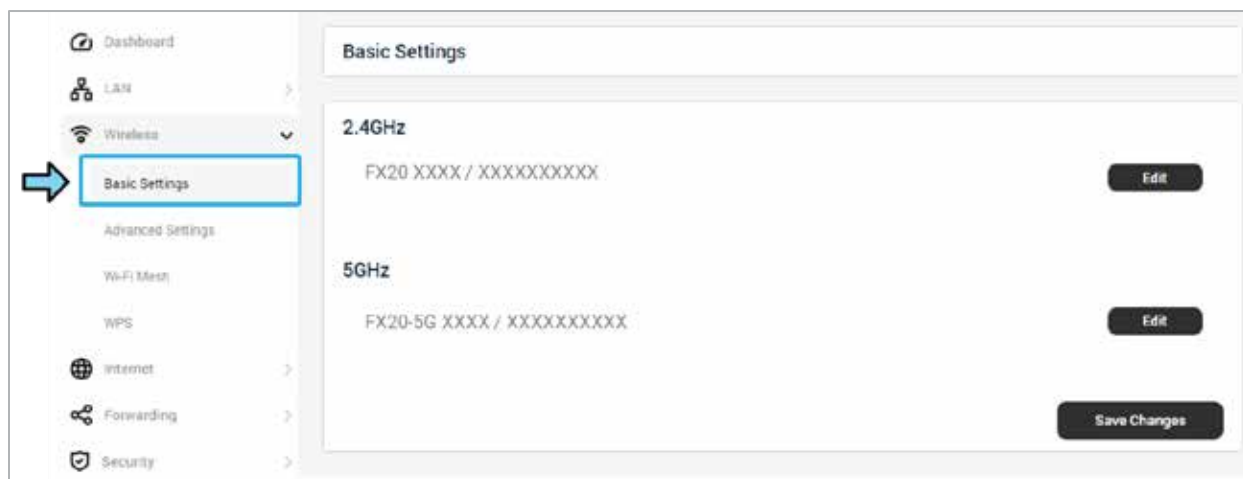
Configure Basic and Advanced Wireless Setting, WiFi Mesh, and WPS.

Basic Settings

The router comes with preset security. This means that the WiFi network name (SSID), network key (password), and security option (authentication and cipher suit) are preset in the factory for each wireless network: 2.4GHz and 5GHz. You can add a guest SSID to each wireless network to two SSIDs.

Set the Basic Settings for your device.

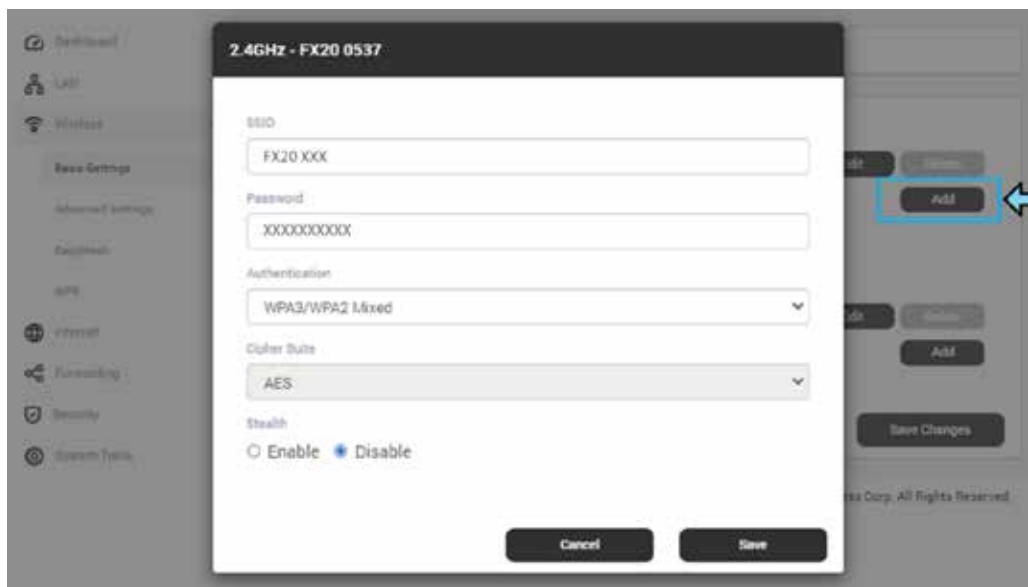
- From the Web UI, click **Wireless > Basic Settings** to display the basic wireless network parameters.



Note: The preset SSID and password are uniquely generated for every device to protect and maximize your wireless security.

If you use a wireless computer to change the SSID or other wireless security settings, your devices will be disconnected when you click the “**Save Changes**” button.

- From the Basic Settings, click **Edit or Add** button to change the basic wireless network parameters.



- SSID Name:** Service Set Identifier (SSID). To change it, enter a string less than 32 characters as the name for your wireless local area network (WLAN).
- Password:** To change, enter the new WiFi password. The password needs to be at least 8 characters long.
- Authentication Method:** Use this setting to select the desired type of WiFi security used to encrypt the wireless network.

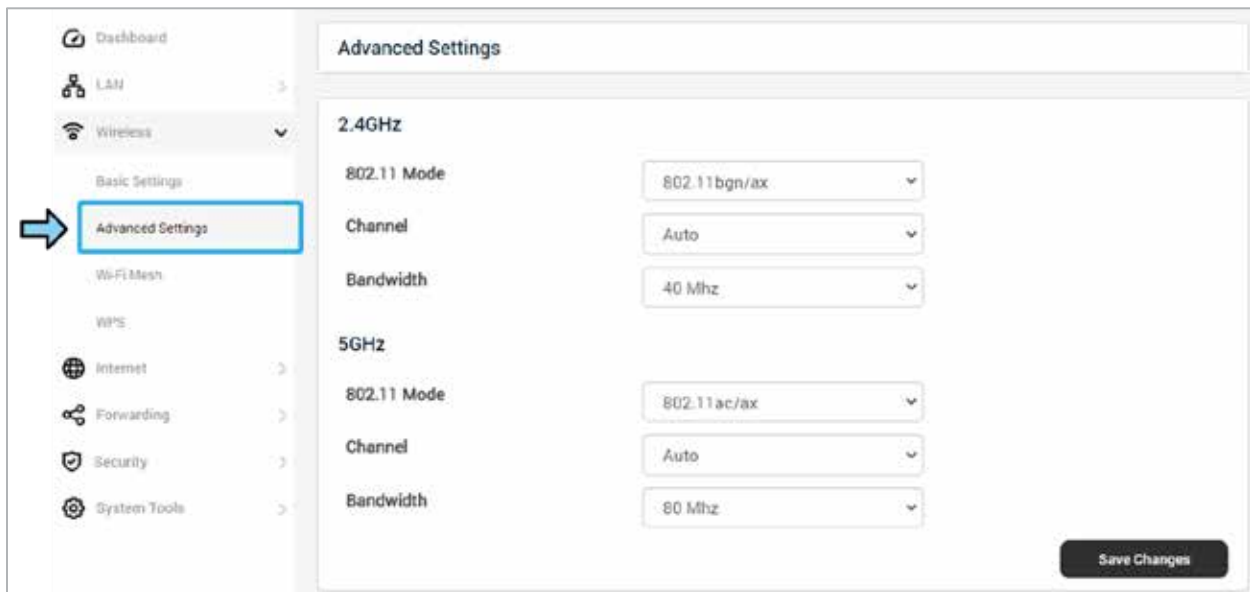
Mode	Description
WPA3	WPA3 is the latest, updated implementation of WPA2
WPA3/WPA2 Mixed	Apply both the WPA2 and WPA3 scheme.
WPA2	WPA-PSK is the securer version of WPA with implementation of the 802.11i standard.
WPA2/WPA Mixed	Apply both the WPA-PSK and WPA2-PSK scheme
OPEN	Authentication and encryption won't be performed. There are risks that private info will be intercepted or network will be used by unauthorized individuals

4. **Encryption Method:** Advanced Encryption Standard (AES) is the latest and most secure option for your wireless network, so it's set on by default according to a selected Authentication Method.
5. **SSID Stealth:** If Enable is selected, the WiFi name will not appear in the list of available networks. You need to manually enter WiFi name and connect.
6. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Advanced Settings

Set the Basic Settings for your device.

- From the Web UI, click **Wireless > Advanced Settings** to display the advance wireless network parameters.



1. **802.11 Mode:** Use this setting to change the WiFi mode. The router supports 802.11b, 802.11g, 802.11n, and 802.11ax modes in the 2.4GHz band and supports three mixed modes. 5GHz band supports 802.11n mode, 802.11ac, and 802.11ax mode respectively.
2. **WiFi Channel:** Use this setting to change the WiFi channel of 2.4GHz band or 5GHz band. This field determines which operating frequency will be used. The default channel is set to Auto. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

3. **WiFi Bandwidth:** Use this setting to change the WiFi Bandwidth of 2.4GHz band or 5GHz band. It is not necessary to change the wireless bandwidth unless you notice interference problems with another nearby access point. If you select Auto, then AP will choose the best bandwidth automatically.
4. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

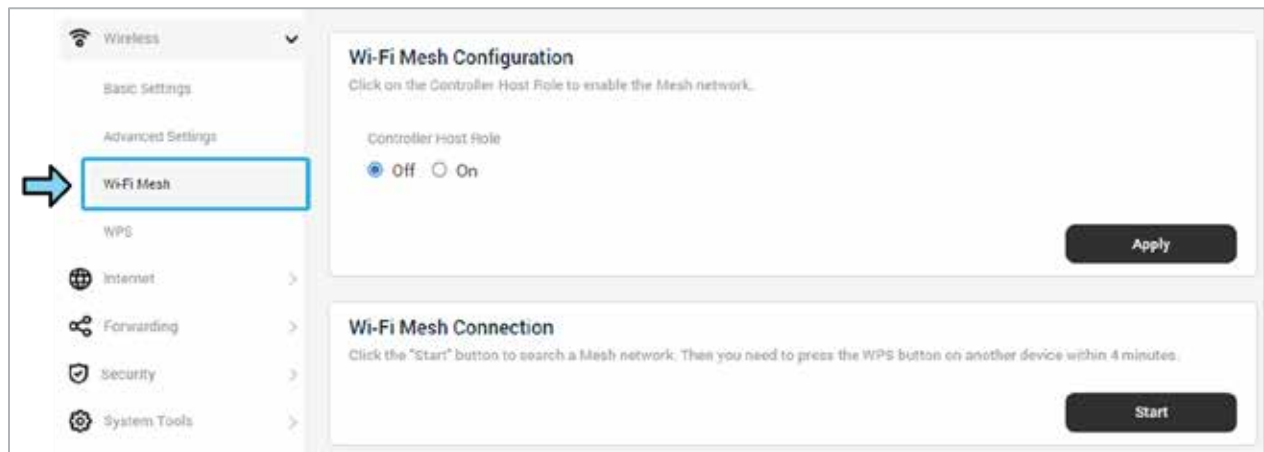
Mesh Controller

The router supports the WiFi Mesh Controller as a Host Role. By default, the WiFi Mesh feature is turned ON.

WiFi Mesh is a coordinated network of wireless access points for extending your wireless network coverage that is “easy to install, use and is self-adapting”.

Set the WiFi Mesh for your device.

- From the Web UI, click **Wireless > WiFi Mesh** to enable the WiFi Mesh controller.

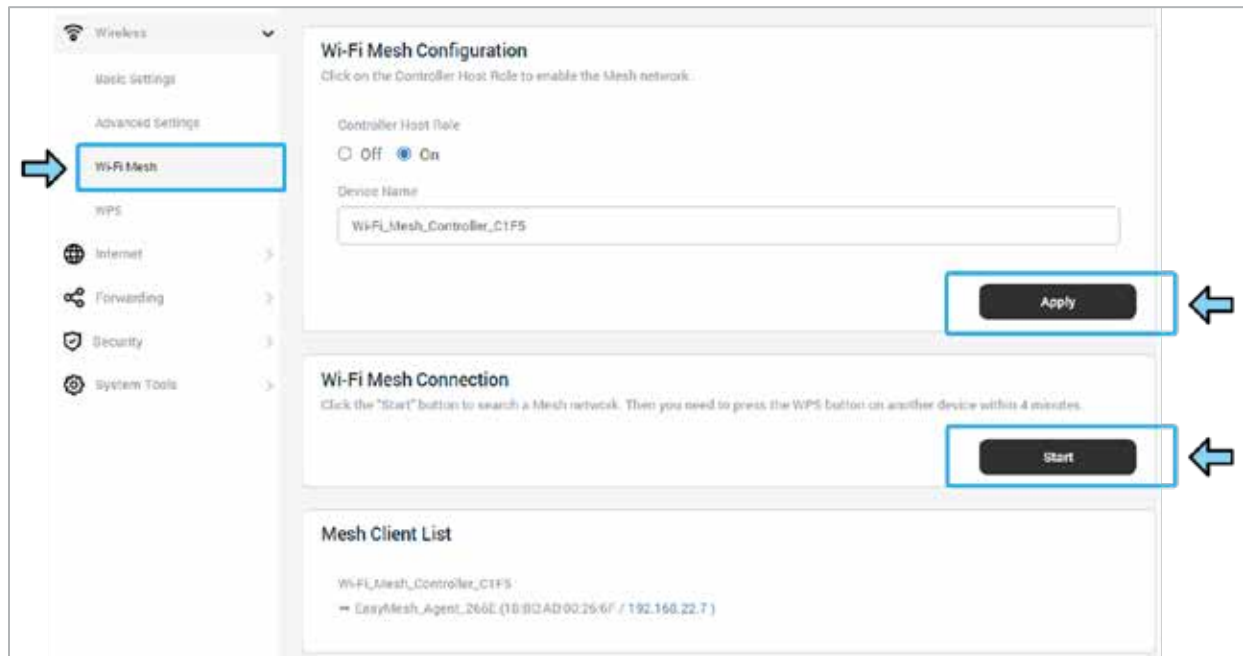


Before you begin:

- Your FX20 WiFi 6 router should connect to your ISP modem.
- Turning on the Controller Host Role under the WiFi Mesh Configuration, it will allow joining your FX10 WiFi Mesh extender (Refer to the FX10 WiFi Mesh User Guide).
- Once the Controller Host Role is turned off, all connected Child node will be disconnected automatically, you will no longer be able to add Child Nodes.

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Note: Make sure your router has the latest firmware which supports WiFi Mesh. To check the firmware version, go to System Tools > Firmware Upgrade and click on “Check” button in the Check for New Firmware.



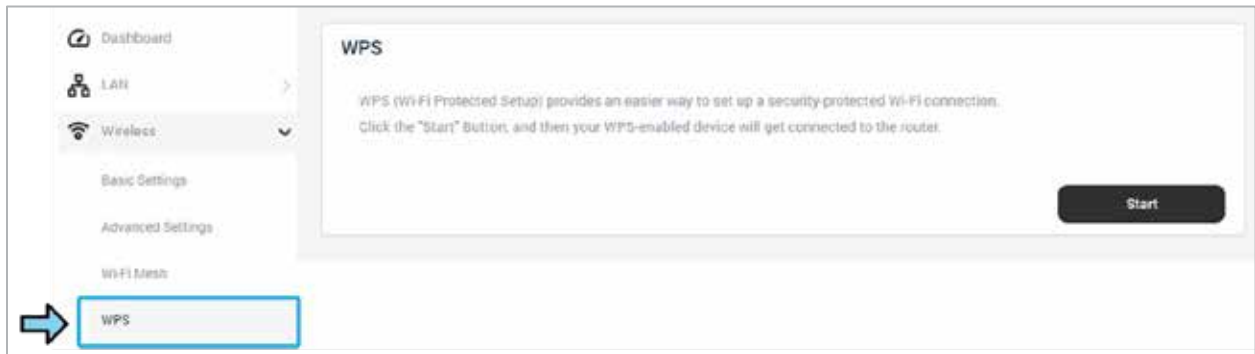
1. WiFi Mesh Configuration: Click on the Controller Host Role to Enable the Mesh network
 - a. **Controller Host Role:** WiFi Mesh Controller Activation on/off.
 - b. **Device Name:** Set an arbitrary device name for the controller which will be used to represent this device at the Mesh Client List tab.
 - c. **Apply:** Apply Changes.
2. WiFi Mesh Connection: Click the “Start” button to search a Mesh network. Then you need to press the WPS Button on another device within two minutes.
 - a. **Start:** User can choose either to press the physical WPS push button or use “Start” button on the Web-UI.
3. MeshClient List: Displays the Connected Mesh client status. Under the listed Agent, it will display the Agent’s MAC address and IP address.

WPS Settings

WPS (WiFi Protected Setup) provides an easier way to set up a security-protected WiFi connection without typing the WiFi password.

Set the WPS settings for your device.

- From the Web UI, click **Wireless > WPS** to display the advance wireless network parameters.



1. Click the "Start" Button, and then your WPS-enabled device will get connected to the router. This activity will be completed in two minutes.
2. Once your WPS-enabled device connects, the WPS page displays a pop-up confirmation message.
3. Click the Apply button to save it.

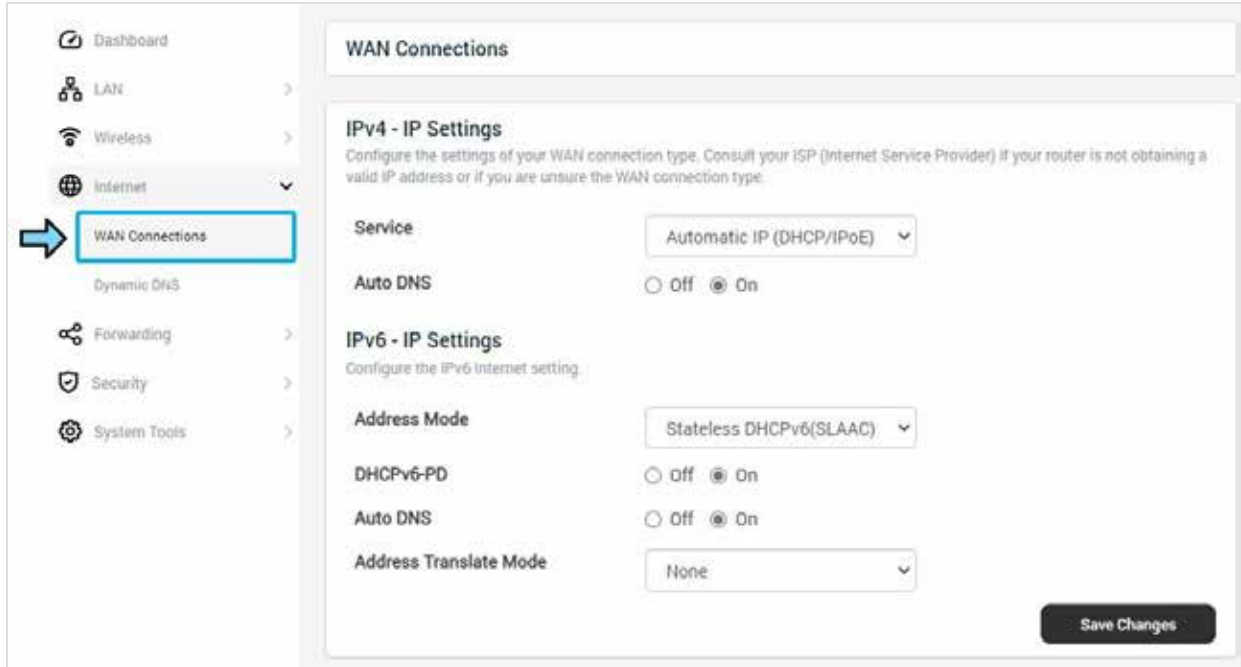
Internet

Configure Internet Settings. To set up the router, use your internet connection to detect when you first access the router with an Internet browser. You can also customize or specify your Internet settings.

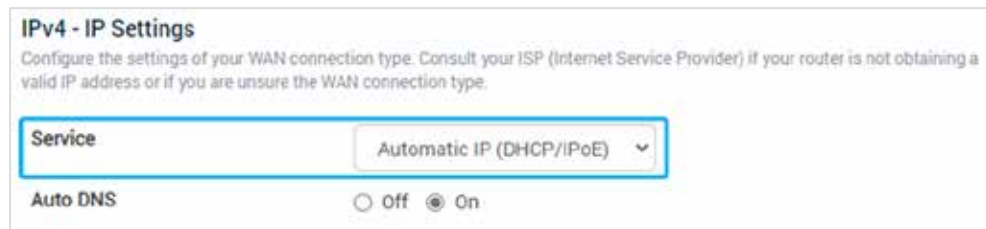
WAN Connections

Set the WAN Connections for the router's internet connection settings.

- From the Web UI, click **Internet > WAN Connections** to display the IPv4 and IPv6 parameters to the internet connection.



1. IPv4 – IP Settings: If your network environment is unusual or if you are network expert, you can change following settings.
 - a. **Service Type** - Automatic(DHCP/IPoE): It is the default setting. If your ISP provides the DHCP service, the router will automatically get IP parameters from your ISP.



i. **Auto DNS**

1. **Off:** Set IPv4 address of DNS server manually. If your ISP gives you one or two DNS addresses, enter the primary and secondary addresses into the correct fields.
 2. **On:** Use default DNS server that is automatically set from your ISP.
- b. **Service Type:** Select “**Static IP address**” service type If your ISP provides a static or fixed IP address, subnet mask, default gateway and DNS setting.

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IPv4 - IP Settings
Configure the settings of your WAN connection type. Consult your ISP (Internet Service Provider) if your router is not obtaining a valid IP address or if you are unsure the WAN connection type.

Service	Static IP Address
IP Address	<input type="text"/>
Subnet Mask	<input type="text"/>
Default Gateway	<input type="text"/>
Primary DNS Server	<input type="text"/>
Secondary DNS Server	<input type="text"/>

- i. **IP Address:** Enter the IP address in dotted-decimal notation provided by your ISP.
 - ii. **Subnet Mask:** Enter the subnet mask in dotted-decimal notation provided by your ISP. Normally 255.255.255.0 is used as the subnet mask.
 - iii. **Default Gateway:** Enter the gateway IP address in dotted-decimal notation provided by your ISP.
 - iv. **Primary/Secondary DNS Server:** Enter one or two DNS addresses in dotted-decimal notation provided by your ISP.
- c. **Service Type - PPPoE:** Select the “**PPPoE**” service type.

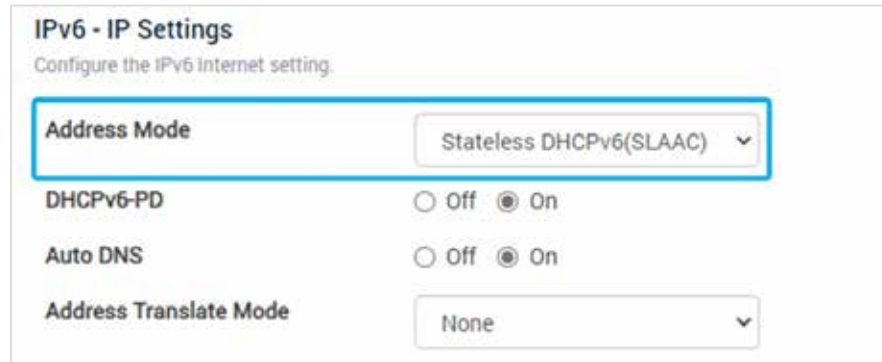
IPv4 - IP Settings
Configure the settings of your WAN connection type. Consult your ISP (Internet Service Provider) if your router is not obtaining a valid IP address or if you are unsure the WAN connection type.

Service	PPPoE
Username	<input type="text"/>
Password	<input type="text"/>

- i. **Username:** Enter the username and password provided by your ISP. These fields are case-sensitive.
 - ii. **Password:** Enter the Password provided by your ISP to ensure the password you entered is correct.
2. **IPv6 – IP Settings:** If your network environment is unusual or if you are network expert, you can change following settings.

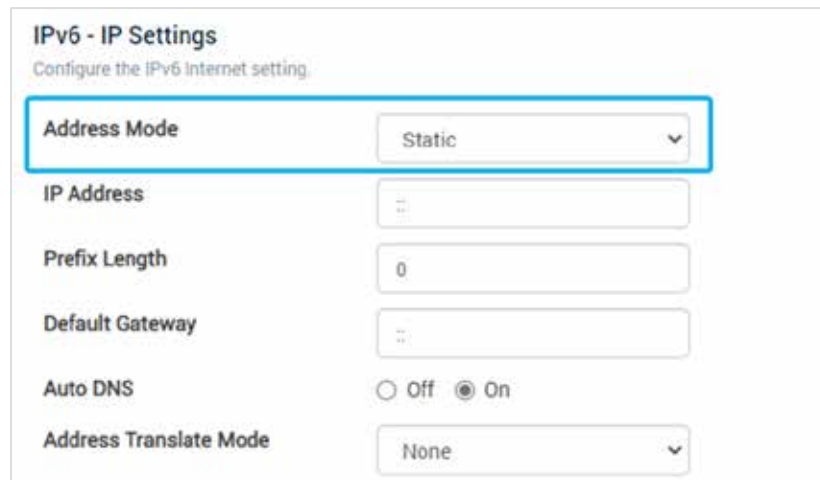
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- a. **Address Mode – Stateless DHCPv6(SLAAC):** This is the default setting. Selecting “SLAAC(Stateless address auto-configuration)” address mode will assign an IPv6 address from your ISP.



The screenshot shows the 'IPv6 - IP Settings' configuration page. The 'Address Mode' dropdown menu is highlighted with a blue box and is set to 'Stateless DHCPv6(SLAAC)'. Below it, the 'DHCPv6-PD' and 'Auto DNS' options are both set to 'On' with radio buttons. The 'Address Translate Mode' dropdown is set to 'None'.

- b. **Address Mode – Static:** Select “Static” address mode if your ISP provides a static or fixed IPv6 address, default gateway and DNS setting.



The screenshot shows the 'IPv6 - IP Settings' configuration page with 'Address Mode' set to 'Static'. The 'IP Address' field contains '::', 'Prefix Length' is '0', and 'Default Gateway' is '::'. 'Auto DNS' is set to 'On' and 'Address Translate Mode' is 'None'.

- i. **IP Address:** Enter the IPv6 address provided by your ISP.
 - ii. **Prefix Length:** Enter the length of IPv6 address prefix.
 - iii. **Default Gateway:** Enter the default gateway provided by your ISP.
- c. **Address Mode – Stateful DHCPv6:** Select “Stateful” address mode which provides IPv6 addresses to hosts. It is also similar in functionalities to DHCP protocol in IPv4.
- d. **Address Mode – Auto Detect Mode:** Select “Auto Detect” address mode.

3. **DHCPv6-PD:**

- a. **On:** Select ON to enable the DHCPv6(Dynamic Host Configuration Protocol for IPv6) Prefix Delegation to automate the delegation of the IPv6 prefixes. This method passes more information to LAN devices, but some IPv6 systems might not support the DHCPv6 client function.
- b. **Off:** Select OFF to disable the DHCPv6 Prefix Delegation.

4. **Auto DNS:**

- a. **On:** Select ON to enable the automate IPv6 DNS server address from your ISP.
- b. **Off:** Select OFF to enter the IP address of the primary IPv6 DNS server and secondary IPv6 DNS server manually.

5. **Address Translation Mode:**

- a. **None:** No IPv6 Translation Mode
- b. **NAT66:** Provides a mechanism to translate an inside IPv6 address to an outside IPv6 address in IPv6 packet header and vice-versa.
- c. **NPTv6:** Provides a mechanism to stateless translate an inside IPv6 source address prefix to an outside IPv6 source address prefix in IPv6 packet header and vice-versa.

- 6. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Dynamic DNS

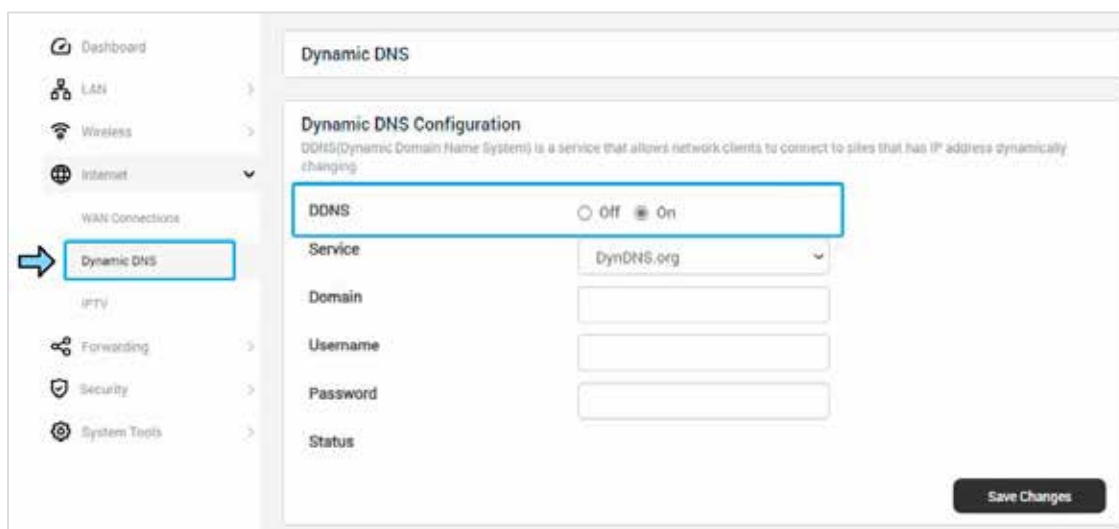
Dynamic DNS(DDNS) is a service that provides a mapping between a hostname, such as jextream.net, and a specific IP address. It means that you can access a website or server from anywhere in the world without worrying about changes to your IP address.

To use the DDNS service, you can get a free account with a Dynamic DNS service provider that lets you use a domain name to access your home network. To use this account, you must set up the router to use Dynamic DNS. Then the router notifies the Dynamic DNS service provider whenever its IP address changes. When you access your Dynamic DNS account, the service finds the current IP address of your home network and automatically connects you.

If your ISP assigns a private WAN IP address (such as 192.168.x.x or 10.x.x.x), the Dynamic DNS service does not work because private addresses are not routed on the Internet.

Set the DDNS service for the router's internet connection settings.

- From the Web UI, click **Internet > Dynamic DNS**. Select the ON radio button to display the DDNS parameters



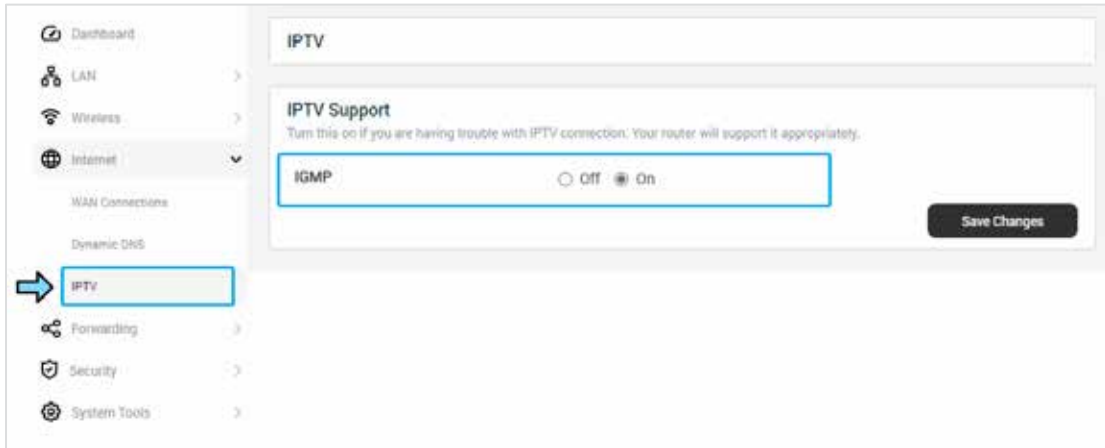
1. OFF or ON of DDNS service. Select the ON radio button to enable it.
2. **Service:** In the Service field. Select the DNS service provider in the list, such as DynDNS.org, tzo.com, and noip.com.
3. **Domain:** Type the domain name that you want to use for your URL. Your free URL includes the domain name that you specify. For example, specify mydomain.com.
4. **Username:** Type a username for your account.
5. **Password:** Type the password for your account.
6. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

IPTV

If the router may connect with an IPTV service provider such as using a “Set Top Box”, the IPTV programs will transmit in multicast traffic. Once the router will receive multicast traffic, it needs to flood the traffic to the local network. To enable the multicast stream, the IGMP (Internet Group Management Protocol) configuration needs to be Enabled to forward the traffic.

Enable the IGMP.

- From the Web UI, click **Internet > IPTV**. Select the ON radio button to turn it on.



1. OFF or ON of IGMP service. Select the ON radio button to enable it.
2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Forwarding

Configure Forwarding Settings: The router can forward incoming traffic with specific protocols to computers on your local network. You can specify the servers for applications and you can also specify a default DMZ server to which the router forwards all other incoming protocols, UPNP, and VPN Passthrough.

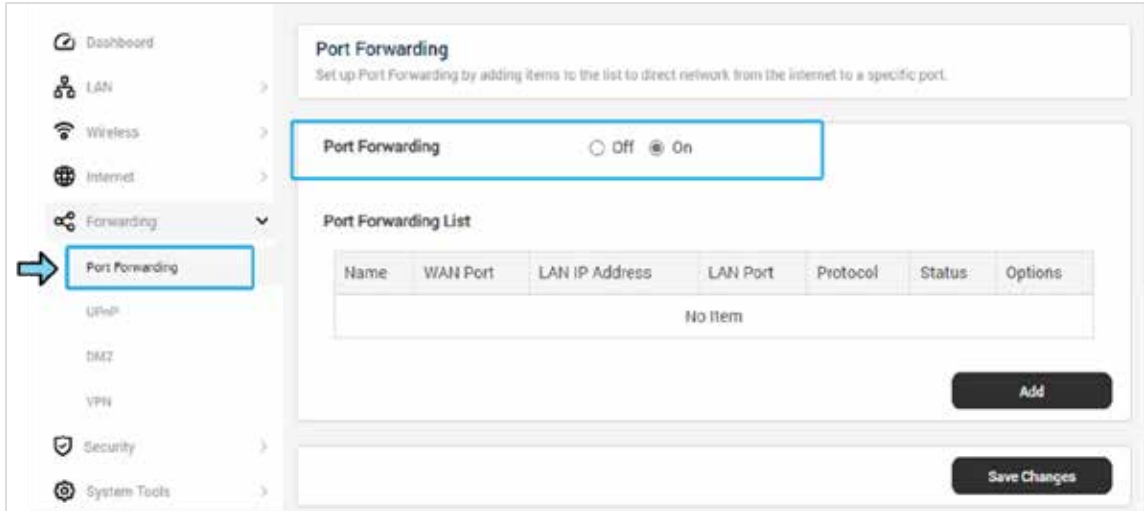
For example, if your home network includes a server, you can allow certain types of incoming traffic to reach the server. You might want to make a local web server, FTP server, or game server visible and available to the Internet.

Port Forwarding

Set the Port Forwarding in order to forward a specific incoming protocol.

- From the Web UI, click **Forwarding > Port Forwarding** to display the parameters.

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1. OFF or ON of Port Forwarding service. Select the ON radio button to enable it.
2. **Add:** Click “Add” button to create a Port Forwarding rule with a custom service or application.
 - a. **Name:** Enter a rule name
 - b. **WAN Port:** Enter WAN Port Number
 - c. **LAN IP Address:** Enter LAN IP Address
 - d. **LAN Port:** Enter LAN Port Number
 - e. **Protocol:** Select the Protocol (TCP, UDP, TCP+UDP).
 - f. **Status:** Turn on rule.
 - g. **Options:** Click OK / Cancel / Delete a rule to manage.
3. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

UPnP

Set the Universal Plug and Play (UPnP). UPnP is a network protocol that allows compliant devices to automatically set port forwarding rules for themselves. UPnP devices can automatically discover the services from other registered UPnP devices on the network.

The UPnP devices can be personal computers, printers, security cameras, game consoles or mobile devices that communicate with each other and share data over your network.

- From the Web UI, click **Forwarding > UPnP** to display the parameters.



1. OFF or ON of UPnP function. Select the ON radio button to enable it.

If the UPnP is turned Off by default, the router does not allow any device to automatically control router resources, such as port forwarding. When you turn on UPnP, this is commonly referred to as opening a port.

2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

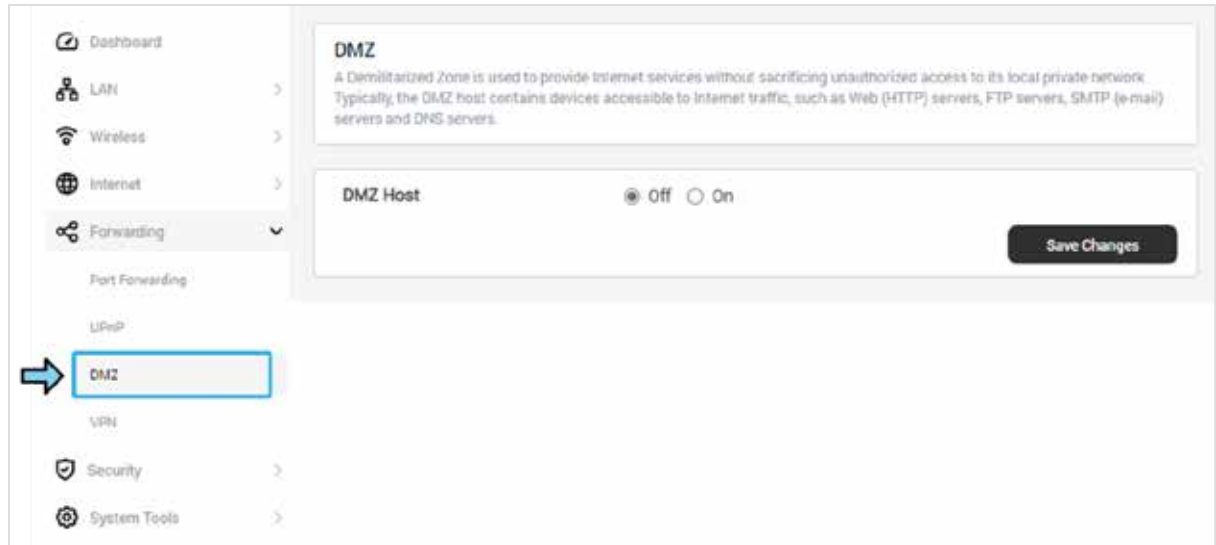
DMZ

Set the De-Militarized Zone (DMZ): This feature forwards all inbound traffic to a specified IP address on your local network. Unlike port forwarding or UPnP, setting up a DMZ removes all of your router's firewall protection for a device.

The DMZ in computer networks also sometimes known as a perimeter network or a screened subnetwork, is a physical or logical subnet that separates an internal local area network (LAN) from other untrusted networks, usually the internet.

- From the Web UI, click **Forwarding > DMZ** to display the parameters.

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1. OFF or ON of DMZ function. Select the ON radio button to enable it.

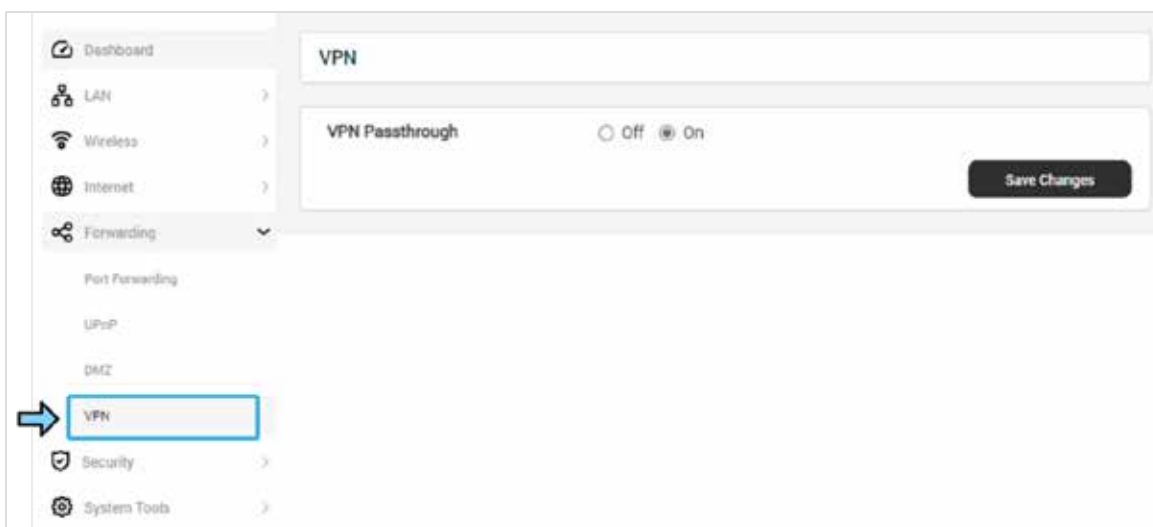
DMZ Host	<input type="radio"/> Off <input checked="" type="radio"/> On
DMZ Host IP Address	<input type="text" value="0.0.0.0"/>

- a. **DMZ Host IP Address:** Type the IP address to enable a default DMZ server. The router can forward the traffic to the DMZ server on your network.
2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

VPN

Set the Virtual Private Network (VPN) passthrough: The VPN Passthrough helps the system behind the firewall of the router to access a remote network. A VPN Passthrough is a way to connect two secured networks over the Internet. When VPN passthrough is enabled on the network, it allows the VPN traffic that is initiated from VPN client to pass through to the Internet and allows the VPN connection to succeed.

- From the Web UI, click **Forwarding > VPN** to display the parameters.



1. OFF or ON of VPN function. Select the ON radio button to enable it.
2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

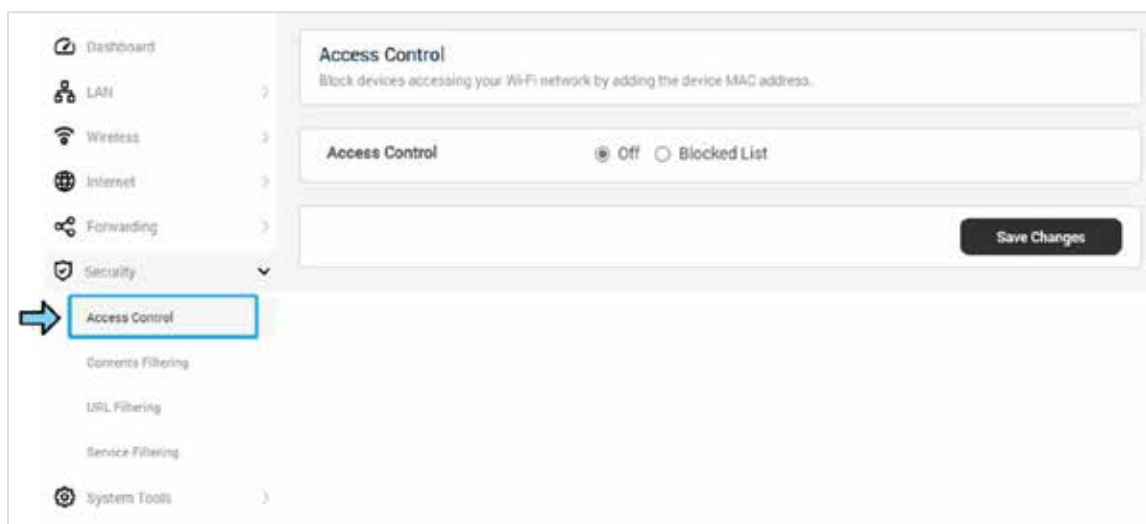
Security

Configure Security: The router can help protect your home network from unwanted intrusions from the internet.

Access Control

The Access Control blocks access to your network by adding the device's MAC address.

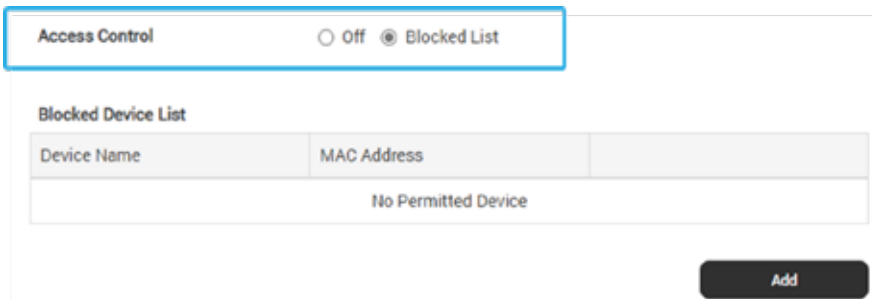
- From the Web UI, click **Security > Access Control** to display the parameters.



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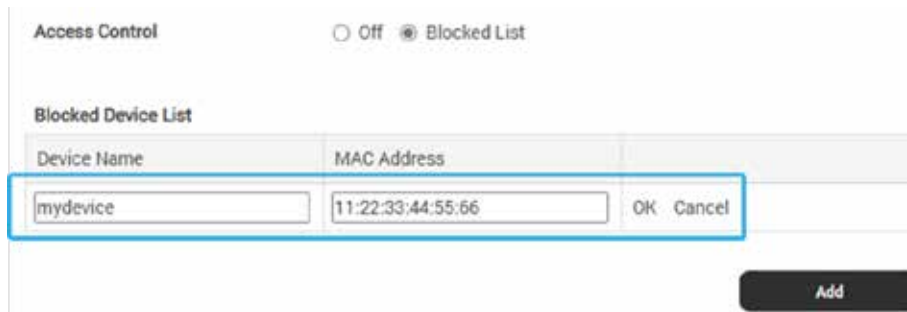
1. OFF or Blocked List of Access Control function. Select the Blocked List radio button to enable it.

Select the Blocked List that you want to block a specific device. With this setting, you must enter a device's MAC address which is coming from an Ethernet connection or WiFi connection.



The screenshot shows the 'Access Control' section with two radio buttons: 'Off' and 'Blocked List'. The 'Blocked List' radio button is selected. Below this is a table titled 'Blocked Device List' with two columns: 'Device Name' and 'MAC Address'. The table is currently empty, displaying 'No Permitted Device'. An 'Add' button is located at the bottom right of the table.

- a. **Add:** Click the Add button, and you can see the edit field to enter a Device Name and MAC address, and then. Click the OK button to save it. Click the Cancel button to discard the saved item.



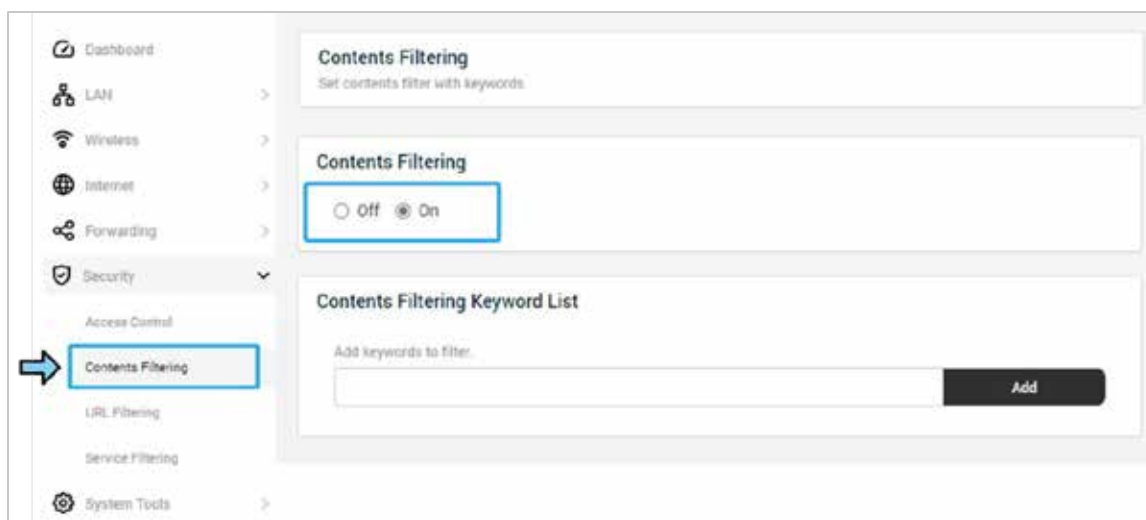
The screenshot shows the 'Access Control' section with two radio buttons: 'Off' and 'Blocked List'. The 'Blocked List' radio button is selected. Below this is a table titled 'Blocked Device List' with two columns: 'Device Name' and 'MAC Address'. The table now contains one entry: 'mydevice' in the 'Device Name' column and '11:22:33:44:55:66' in the 'MAC Address' column. There are 'OK' and 'Cancel' buttons next to the entry. An 'Add' button is located at the bottom right of the table.

2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Contents Filtering

Contents Filtering can block certain Internet sites from your network using a specific keyword that you want to block.

- From the Web UI, click **Security > Contents Filtering** to display the parameters.



1. OFF or ON of Content Filtering function. Select the ON radio button to enable it.
 - a. **Add:** Click the Add button and you can enter a keyword to the Contents Filtering Keyword List. The keyword list supports up to 8 entries.

Type a keyword that you want to block. For example:

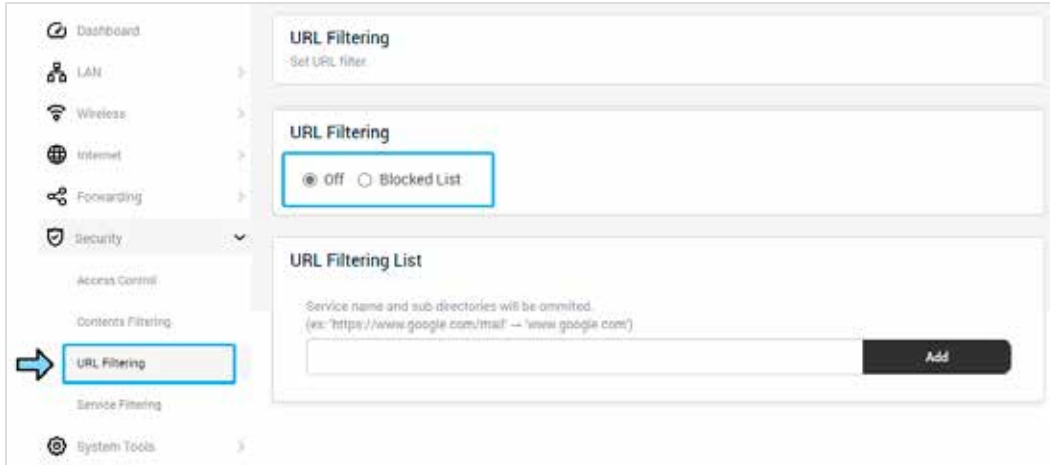
Specify a keyword to block **XXXXX** (e.g, guns or weapons)

2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

URL Filtering

The URL Filtering can block certain Internet sites from your network.

- From the Web UI, click **Security > URL Filtering** to display the parameters.



1. OFF or ON of Blocked List function. Select the Blocked List radio button to enable it.
 - a. **Add:** Click the Add button, and you can enter a URL to the URL Filtering List. The keyword list supports up to 8 entries.

 Type a domain name that you want to block. For example:

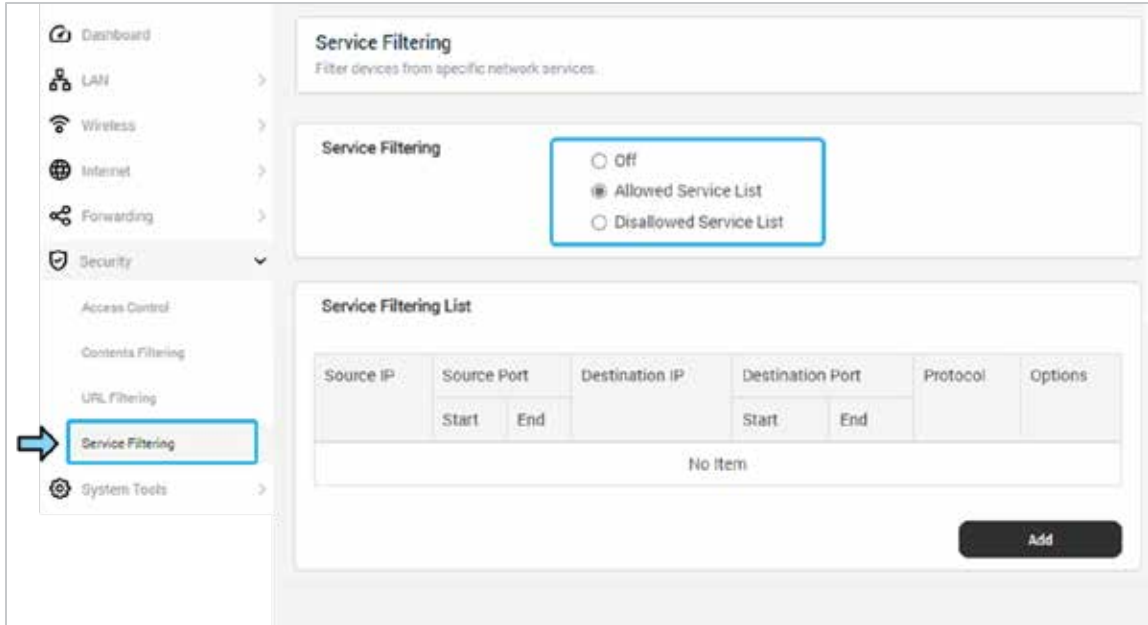
 Specify a site URL to block [XXX.com \(e.g. guns.com\)](#)

 For example, specify XXX.com if you want to block a specific site with domain suffixes such as .edu or .gov.
2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Service Filtering

The Service Filtering can block Internet services on your network based on the type of service. It can be used to prevent certain users from accessing a specific service.

- From the Web UI, click **Security > Service Filtering** to display the parameters.



1. **Service Filtering:** This setting can be changed to block your normal internet.
 Select "OFF" to disable service filtering
 Select the "Allowed Service List" item to allow a specific service.
 Select the "Disallowed Service List" item to disallow a specific service.
2. **Add:** Click "Add" button to add new service rule.
3. **Source IP:** Enter Source IP Address
4. **Source Port:** Enter Source Port Number
5. **Destination IP:** Enter Destination IP Address
6. **Destination Port:** Enter Destination Port Number
7. **Protocol:** Enter Protocol type (TCP, UDP, TPC+UDP)
8. **Options:** OK / CANCEL / DELETE a rule which you edit.
9. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

System Tools

Configure System Tools.

Account Settings

You can change the factory default password. It is strongly recommended that you change the default password of the router

- From the Web UI, click **System Tools > Account Settings** to display the parameters.

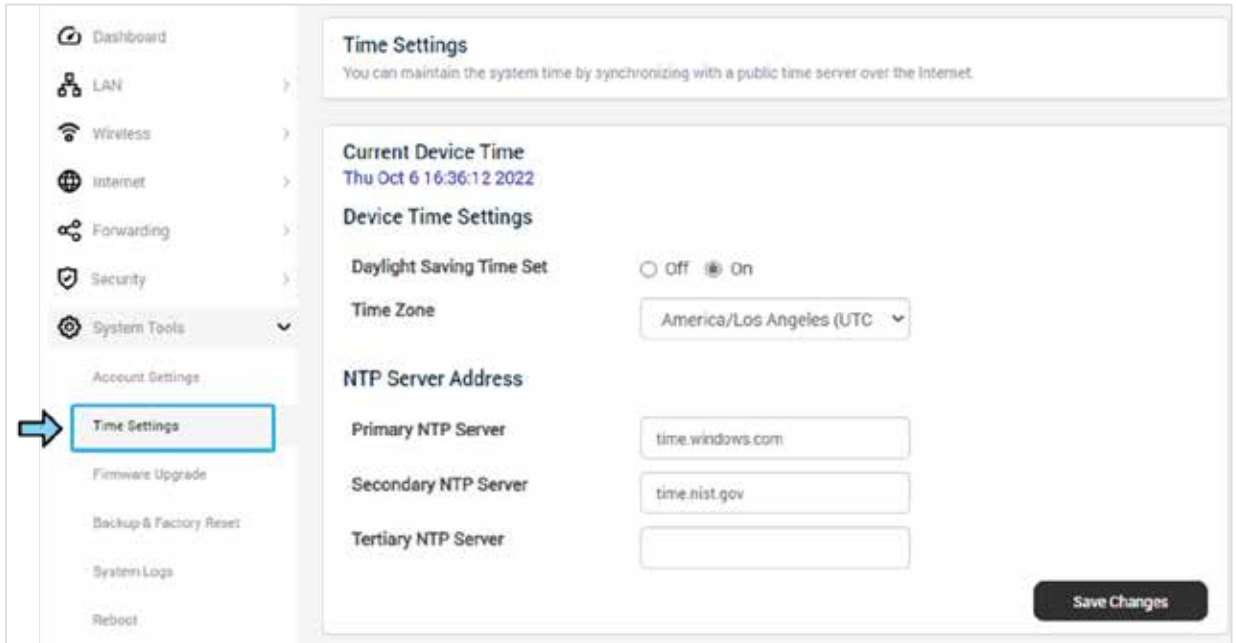
The screenshot shows the 'Account Settings' page in the router's web UI. The left sidebar has 'System Tools' expanded, and 'Account Settings' is highlighted with a blue box and an arrow. The main content area is titled 'Account Settings' and contains a 'Change Account Password' section. It includes three input fields: 'Current Password', 'New Password', and 'Confirm New Password'. There are also instructions for password security and a 'Show input password' checkbox.

1. **Current Password:** Enter current account password.
2. **New/Confirm Password:** Enter new/confirm account password.
3. **Show Input Password:** Click Show Input Password check button, and you can see invisible account password which you enter.
4. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Time Settings

You can maintain the system time by synchronizing with a public time server over the Internet.

- From the Web UI, click **System Tools > Time Settings** to display the parameters.

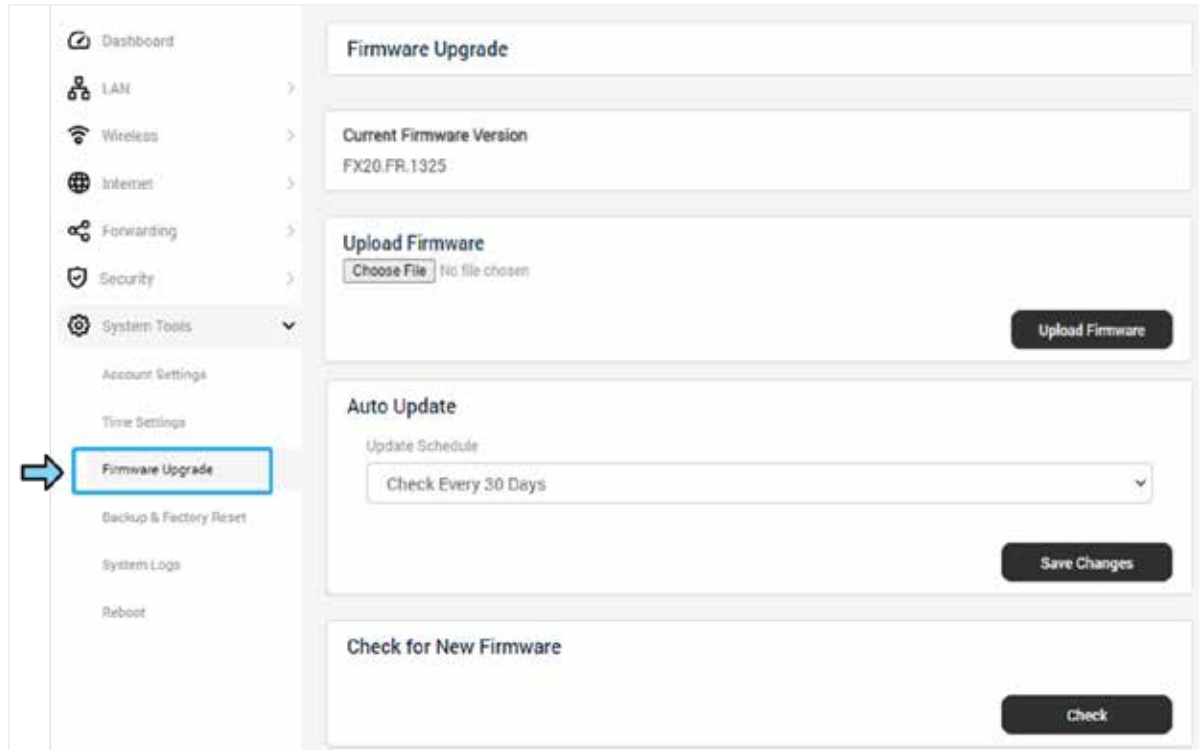


1. **Daylight Saving Time Set:** Select Daylight Saving Time.
2. **Time Zone:** Select your local time zone.
3. **NTP Server Address:** Enter the address or domain name of the Primary NTP (Network Time Protocol) server or Secondary NTP server.
4. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Firmware Upgrade

Upgrade your router with the latest firmware. You can download the latest firmware from JEXstream web site (<https://www.jextream.net/support/fx20-support>) or click the “Check” button to get the latest firmware file automatically.

- From the Web UI, click **System Tools > Firmware Upgrade** to display the parameters.



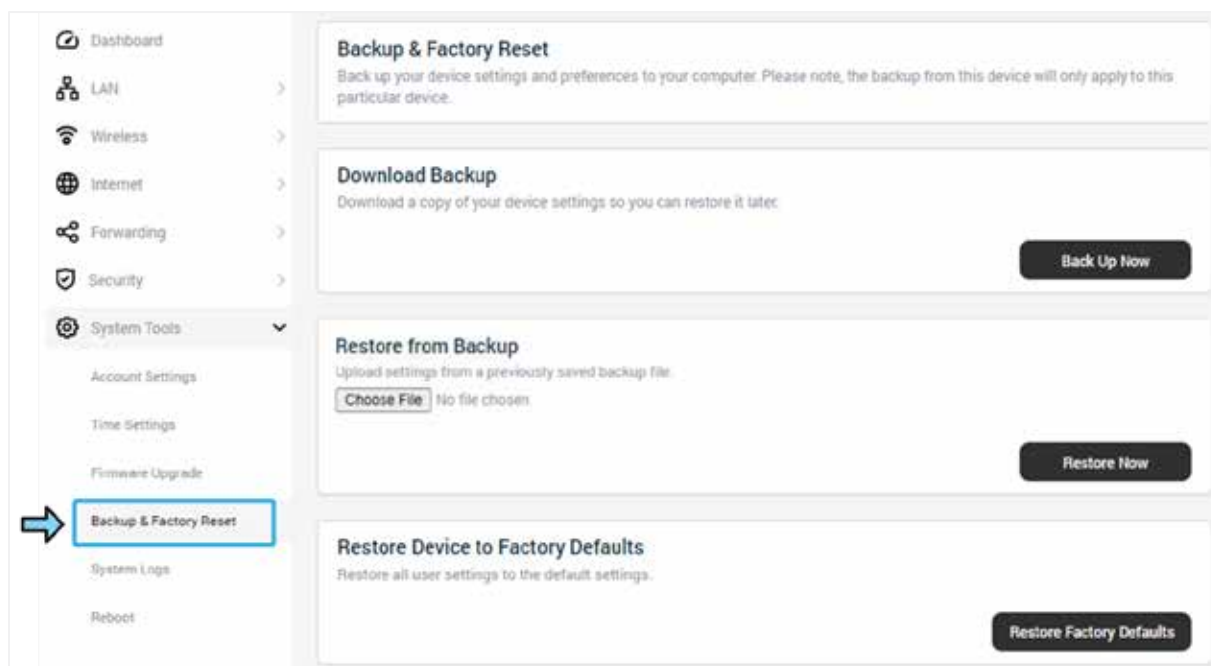
1. **Current Firmware Version:** Display the current firmware information.
2. **Upload Firmware:** Click the “Upload Firmware” button to select a specific located firmware file.
3. **Auto Update:** Schedule to upgrade a new firmware. If the “Check Every 30 Days” item is selected, your router will check the new firmware every 30 days and upgrade the firmware to the latest version.
4. **Check for New Firmware:** Click the “Check” button to get the latest firmware file. If there is a new one, your router will download at once and upgrade the firmware to the latest version.
5. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

Backup & Factory Reset

Backup and restore your router settings: Restore all user settings to default router settings. You can back up the configuration file in your computer for future use and restore the router to the previous settings from the backup file when needed.

- From the Web UI, click **System Tools > Backup & Factory Reset** to display the parameters.

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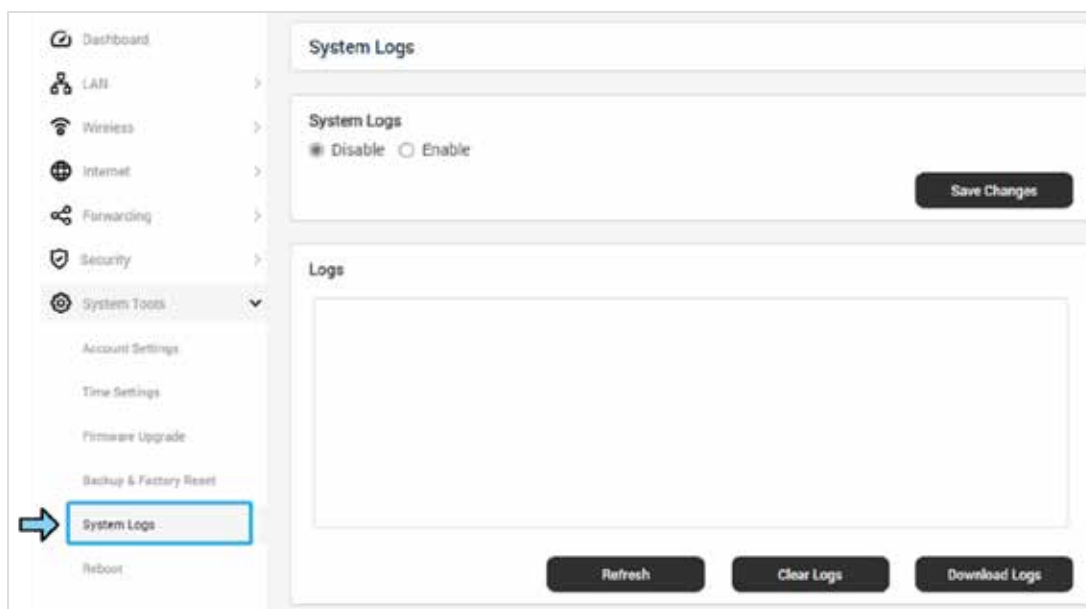


1. **Download Backup:** Download backup file to restore your router setting.
2. **Restore from Backup:** Restore your router setting from backup file.
3. **Restore Device to Factory Defaults:** Restore all user settings to default router settings.
4. **Save Changes:** Make sure to click Save Changes after you set your desired settings.

System Log

- From the Web UI, click **System Tools > System Log** to display the parameters.

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1. **System Log Enable/Disable:** Enable/Disable the system log of your router.
2. **Save Changes:** Make sure to click Save Changes after you set your desired settings.
3. **Refresh:** Refresh the page to show the latest system log.
4. **Clear Logs:** All the logs will be deleted from the router permanently.
5. **Download Logs:** Download the system log of your router.

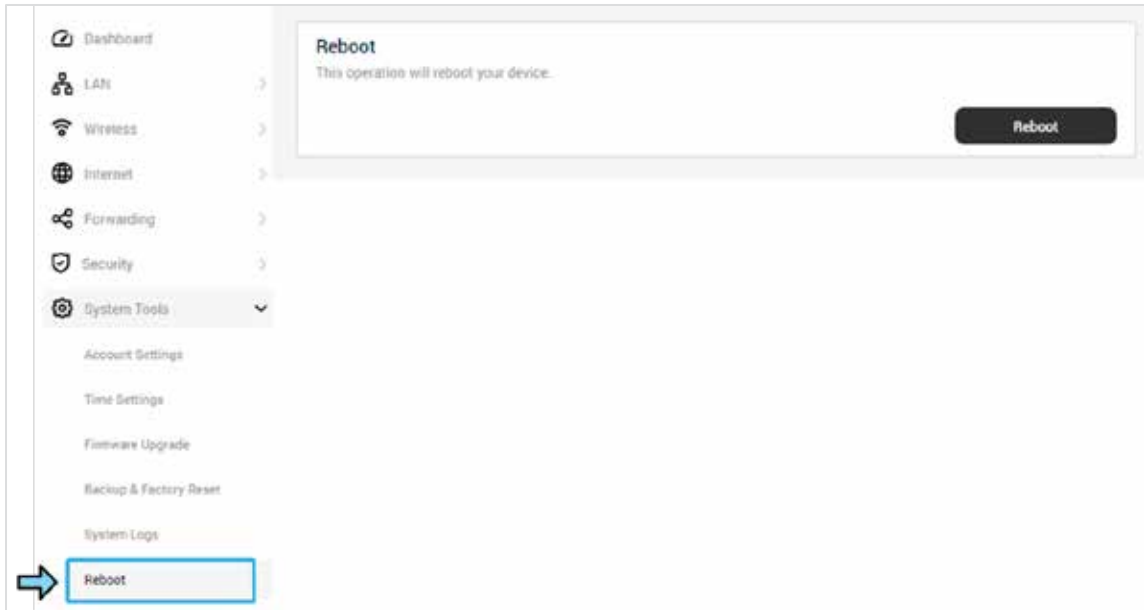
Reboot

From the Web UI, click **System Tools** > **Reboot** to display the parameters.

Some settings of the router will take effect only after rebooting as follows:

- Change the LAN IP address
- Change the DHCP Settings
- Upgrade the firmware of the router
- Update the configuration with a backup file

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1. **Reboot:** Click the “Reboot” button, and wait a few minutes for the router to rebooting.

Logout

From the Web UI, click **Logout** at the top right of the main menu, and you will log out of the Web UI and return to the login window.

Appendix

The following topics cover items such as troubleshooting, device specifications, applicable warranty and service information, customer service contacts, and applicable trademark and copyright notices.

Troubleshooting

Check below for troubleshooting solutions for common device issues.

Check here first

Issue: Ethernet Cable Connection

Solution 1: Check the Ethernet cables are securely plugged in.

Solution 2: The WAN LED on the router is lit. If the Ethernet cable connecting the router and if the modem is plugged in securely.

Solution 2: Check that the WAN LED on the router is lit. If the WAN Ethernet cable from your ISP modem is plugged into the router securely, the WAN LED should be on.

Solution 3: If one or more powered-on computers are connected to the router by an Ethernet cable, the corresponding numbered router LAN port LED (L1, L2, L3, L4) lights. See the Router Setup user guide for more information.

Issue: Cannot access the internet

Check to see if the router can obtain an IP address from your Internet service provider (ISP). Unless your ISP provides a fixed IP address, your router requests an IP address from the ISP. You can determine whether the request was successful using the Router Status page.

To check the WAN IP address:

1. Open your browser and enter <http://router.jextream.net> URL.
2. Enter login password, the default password is “**password**”.
3. Click the Dashboard icon and check that an IP address is shown for the Internet port in the WAN information.

If the IP address field is shown for Empty, your router did not obtain an IP address from your ISP. You might need to force your cable or DSL modem to recognize your new router by restarting your ISP modem. See the Basic Connection user guide for more information.

If your router obtained an IP address, but your computer does not load any web pages from the Internet, your computer might not recognize any DNS (Domain Name System) addresses which will be a host on the Internet that translates Internet names to IP addresses.

- You can configure your computer manually with DNS addresses, as explained in your operating system documentation. If your computer obtains its information from the router, reboot your computer, and verify the IP address.

Issue: Troubleshooting Internet Connection using PPPoE

If you are using PPPoE, try troubleshooting your Internet connection.

To check a PPPoE connection:

1. Open your browser and enter <http://router.jextream.net> URL.
2. Enter login password, the default password is “**password**”. The password is case-sensitive.
3. In the INTERNET, click the WAN Connections.
4. Check the Service type to PPPoE, and enter the Username and password.
5. Click the Save Changes button, and then, the router continues to attempt to connect indefinitely.

If you cannot connect after several minutes, the router might be set up with an incorrect service name, username, or password, or your ISP might be experiencing a provisioning problem. The router does not authenticate using PPPoE until data is transmitted to the network. Ask your ISP whether they require PPP over Ethernet (PPPoE) or some other type of login.

Issue: Not showing the router’s WiFi SSID

Solution 1: Check the WiFi 2.4G and Wi-F 5G LEDs on the front of the router. If it is off, restart the router.

Solution 2: Check the WiFi Stealth function in the Wireless menu, if it is enabled, the router’s SSID will not broadcast, then your wireless network is hidden and does not display in your wireless client’s scanning list. (By default, The WiFi Stealth function is enabled.

To check the Wi-F Stealth function:

1. Open your browser and enter <http://router.jextream.net> URL.
2. Enter login password, the default password is “**password**”.
3. In the Wireless, click the Basic Settings and click the Edit button in the 2.4GHz and 5GHz section, and then, check the Stealth mode to Disable.

Solution 3: Check the wireless signal although your wireless device finds your network, but the signal strength is weak, check these conditions:

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- Is your router too far from your computer or too close? Place your computer near the router but at least 6 feet (1.8 meters) away and see whether the signal strength improves.
- Are objects between the router and your computer blocking the wireless signal?

Specifications

The following tables list the specifications for the mobile broadband device, the AC charger, and the materials.

Default Settings

Item		Default behavior
Login	Login URL	http://router.jextream.net
	Login Password	password
Internet	IPv4 – IP Setting	Automatic IP(DHCP/IPoE)
	IPv4 – Auto DNS	ON
	IPv6 – IP Settings	Stateless DHCPv6(SLAAC)
	Dynamic DNS	OFF
LAN	IPv4 – LAN Settings - IP Address	192.168.10.1
	IPv6 – LAN Settings – LL Address mode	Auto
	DHCP Server – Starting Address	2
	DHCP Server – Ending Address	254
	DHCP Server – Lease Time	86400 sec
	DHCP Server – Default Gateway	192.168.10.1
Wireless	Basic Settings – 2.4GHz/5GHz SSID	See router label
	Basic Settings – 2.4GHz/5GHz Password	See router label
	Basic Settings – 2.4GHz/5GHz Security	WPA3/WPA2 Mixed
	Basic Settings – 2.4GHz/5GHz Stealth	OFF
Forwarding	DMZ	OFF
	UPNP	OFF
	VPN Passthrough	ON

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Item	Default behavior	
	Port Forwarding	OFF
Security	Access Control	OFF
	Contents Filtering	OFF
	URL Filtering	OFF
	Service Filtering	OFF

Router Specifications

Item	Description
Model name	FX20 WiFi 6 Router
Dimensions¹	W 210 x L 164 x 62 T mm
Weight	451g
Operating Temperature	-10°C ~ + 50°C
Operating Humidity	~ 95%
Electromagnetic emissions	FCC Part 15 Class B
LAN	10BASE-T or 100BASE-TX or 1000BASE-T, RJ-45
WAN	10BASE-T or 100BASE-TX or 1000BASE-T, RJ-45
Wireless Standard	Maximum wireless signal rate complies with the IEEE 802.11 b/g/n/ac/ax standard.
Operating frequency range	2.4 GHz - 2.412-2.462 GHz (US) 5 GHz - 5.18-5.24 + 5.745-5.825 GHz (US)
802.11 security	WPA-PSK, WPA2-PSK, WPA2/WPA Mixed, WPA3-PSK and WPA3/WPA2 Mixed

¹ Approximate values

AC Adapter Specifications

Item	Description
Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz +/- 3Hz
Nominal dc output voltage	+5.0V (±5%)
Rating load current	2.0A

Materials Specifications

Parts	Materials/Finishing
A cover	PC(Black),SF coating
B cover	PC(Black)
Battery cover	PC(Black),SF coating
A deco	PC(Black),UV(Gloss 80%)
Rubber feet	Silicon(Black)

Warranty and Service

The following topics outline your device's warranty and service information.

Warranty

Your device purchase includes Warranty.

- Confirm shop name and purchase date.
- Read contents of Warranty and keep it in a safe place.
- Check warranty period in the Warranty.

Services

Before submitting your device for repairs, contact Service Provider's Customer Service or General Information; be prepared to describe the problem in detail.

- During the warranty period, repairs will be made under the terms and conditions described in the Warranty.
- After the warranty period, repairs will be upon request; if said repairs can be made, you will be charged for them.

Customer Service

For mobile broadband device or service information, call general information. For repairs, call your Service Provider's customer assistance.

Trademarks and Copyright Information

The names of companies, products, and services used in this guide are registered trademarks or trademarks of the respective companies.

JEXtream logo is trademarks or registered trademarks of Franklin Wireless Corporation in US.
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FCC Compliance

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.

Note: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.