verizon

User Guide

Verizon 5G Internet Gateway

Revision History

Date (yyyy/mm/dd)	Ver.	Revised Sections	Descriptions
2022/05/11	0.1	Preliminary draft	Preliminary release

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1. Inside the box

Once you open the product package, you should find the following items inside:

Verizon Internet Gateway

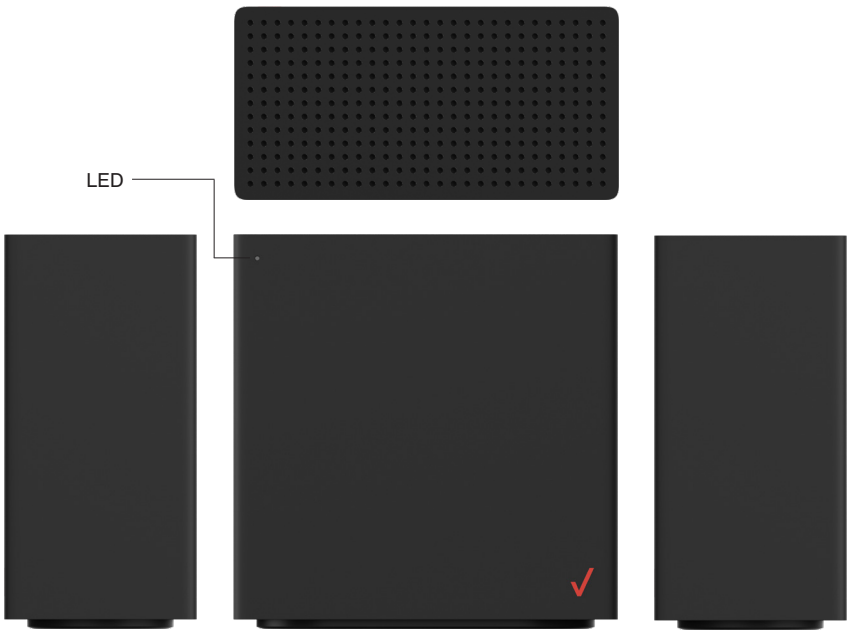
Power Adapter

Ethernet Cable

2. Introducing Your Verizon Internet Gateway

Your Verizon Internet Gateway supports multi-connectivity of 5G NR, 4G LTE, and Wi-Fi 6 to provide users with fast wireless networks, and offers connectivity up to 128 devices (64 devices for 2.4 GHz and 5.0 GHz each) within the range. This feature-rich router is also designed with various functions including band-steering, security, routing, and service improvements.

Take a quick tour of your device.



WAN
WPS Button
LAN 1 - 4 Ports
DC IN
DC
WAN
LAN 1
LAN 2
LAN 3
LAN 4
Wi Fi 6
CERTIFIED

Reset Pin Hole
SIM Card Slot Door
(Flip Type)
verizon
Internet Gateway
Label
Screw for Bracket

2.1 Parts and Functions

Parts	Description
LED	Indicate the status of power and connectivity, as well as WPS connectivity.
LAN 1 - 4 ports	Four RJ-45 GbE LAN ports for connections with external devices through Ethernet cable(s).
WAN	The WAN port connects the 5G Internet Router to a 5G CPE (customer premise equipment).
DC IN	DC Power In - The DC power jack that connects the 5G Internet Router to a power outlet.
WPS button	Push this button to enable WPS (Wi-Fi Protected Setup). Use WPS to add supported Wi-Fi devices to your network. Remember to enable WPS on the Wi-Fi devices you wish to add.
SIM card slot door	Flip the door cover to locate the SIM card slot and insert/remove Nano SIM card.
Reset pin hole	Press the reset pin hole with pin to force a cold reset of your router. Your router will return to factory default setting. Only use the Reset when you experience issues with the router or have to revert all the settings you have configured for the router.
Label	The label provides default URL and password for you to connect to wireless network at the first time you set up this device. The label also provides information about the product's ID and regulatory standards.

2.2 LED Status and Indications (TBD)

LED Mode	Status	LED Pattern
Bootup	System Off	Off
	System Booting	Soft Blink White
	Firmware Update (FOTA)	Fast Blink White
Cellular signal (or after single-clicking the pair button)	Passing Signal	Solid White
	No Signal, Cold SIM	Solid Red
	No SIM Card	Hard Blink Red
Regular usage	Setup Complete	50% Bright White
	WiFi Disabled by User	Solid Green
Paring	WPS Pairing	Hard Blink Blue
Other	Factory Reset	Fast Blink Yellow
	FW Error	Soft Blink Red

2.3 Ethernet Port LED Mode

Ethernet Port LED Mode	Status	Left LED	Right LED
Wired LAN connection	Ethernet > 100M* Link	Off	Solid White
	Ethernet > 100M* Activity	Off	Blinking White
	Ethernet < 100M* Link	Solid Yellow	Off
	Ethernet < 100M* Activity	Blinking Yellow	Off
	No Ethernet Connection	Off	Off

Note about *: Threshold level can be determined based on port capability.

3. Setting Up Your Verizon Internet Gateway

Your Verizon Internet Gateway comes with a pre-installed SIM card and the following sections will help you connect and configure your device to the network.

3.1 Positioning Your Router

Before setting up the router, it is recommened to take the following into considerations for optimal signal strength:

- Near a window where the signal is mostly uninterrupted
- On a flat surface
- In an open space with as few blocking objects or obstructions as possible
- Some height above the floor, for instance, 6 feet
- Keep the router away from 802.11g or 20MHz only Wi-Fi devices, 2.4GHz computer peripherals, Bluetooth devices, cordless phones, heavy-duty motors, fluorescent lights, and some industrial equipments that may generate signal interferences with your router.
- Avoid positioning it
  - next to a wall that may obstruct the signal
  - near heavy-duty appliances
  - close to metal fixtures, enclosures, cabinets, or thick concrete.
  - in a basement

Note: Try not to reposition the router if the signal is good. If the position of the installation changes, the signal strength may be affected.

3.2 Setup Requirements

To configure wireless network with a PC, your computer shall meet the following requirements:

- For Wired Connection --> Ethernet RJ 45 (LAN) port (10Base T/100Base TX/1000BaseTX)
- For Wi-Fi Connection --> IEEE 802.11a/b/g/n/ac /ax wireless capability
- TCP/IP protocol support
- Web browser such as Microsoft Edge , Firefox, Safari, or Google Chrome

3.3 Setting Up

1. Connect the included Power Adapter to the DC IN power port of the router.
2. Plug the Power Adapter to a grounded electrical outlet.
3. Wait for a short moment for the router to power up and connect to 4G LTE/5G NR network.
4. The LED shall display ON (White) after powering up.
5. Your Internet device shall be able to connect to the Wi-Fi network of your router named **Verizon_<your network>**. You may connect to the LAN port of the router through an Ethernet cable.
6. The router can connect can connect to other devices via Ethernet connections. Use the supplied Ethernet cable and plug one end into one of the LAN ports of the router (as shown below), and plug another end of the cable into an available LAN port of the other device.

   For information about the default name and password of the router's Wi-Fi network, check the product lable on the bottom side of your router.

Plug in the power adapter into an electrical outlet

Connect other devices via Ethernet cable

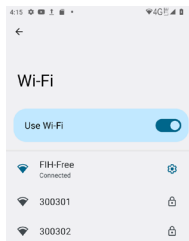
4. Log in Your Verizon Internet Gateway

Once you have connected your device to your router, you can log in to your router's Web User Interface (Web UI) to access network information such as connected devices and data usage, and to confgure the setting and functions, such as Wi-Fi security. You may log to the Web UI through a computer or a mobile device.

The following sections will describe how to access the Web UI and perform your configurations.

4.1 Connect and Log in by Mobile Device

1. You can automatically connect your device by scanning the QR code on the product label. To connect manually, move to step 2.
2. Scan available Wi Fi networks with your mobile device (the image below is a sample screenshot from a mobile phone).



3. Select the WiFi network named **Verizon_<your network>** (check your router's product label on the bottom side for your unique Wi Fi network name).
4. Enter your Wi Fi password , which can also be found on your router 's product label on the bottom side.
5. Open a web browser and enter the router's default address **http://192.168.0.1** in the address bar.

6. Log in using the default password (the default address and password are displayed on the product label on the bottom side of the router, labeled **Network Settings : URL and Password**).

4.2 Connect and Log in by PC

1. Scan available Wi Fi networks with your computer.
2. Select WiFi network named **Verizon_<your network>** (check your router's product label on the bottom side for your unique Wi Fi network name).
3. Enter your Wi Fi password, which can also be found on your router's product label on the bottom side.

If preferred, you can use an Ethernet cable to connect your computer to the router 's LAN port for configuration (instead of Wi Fi). Simply connect the two devices' LAN ports by using an Ethernet cable.

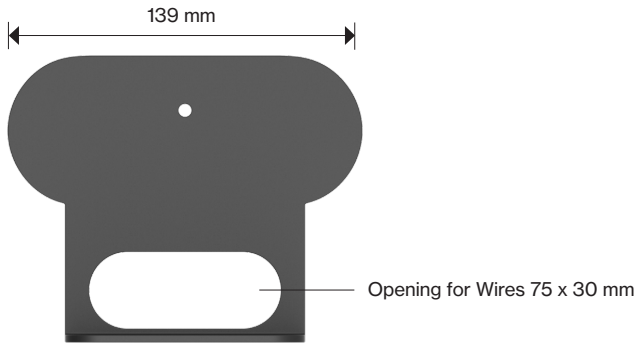
4. Open a web browser and enter the router 's default address **http://192 168.0.1** in the address bar.
5. Log in default password (the default address and password are displayed on the product label on the bottom side of the router, labeled **Network Settings : URL and Password**).

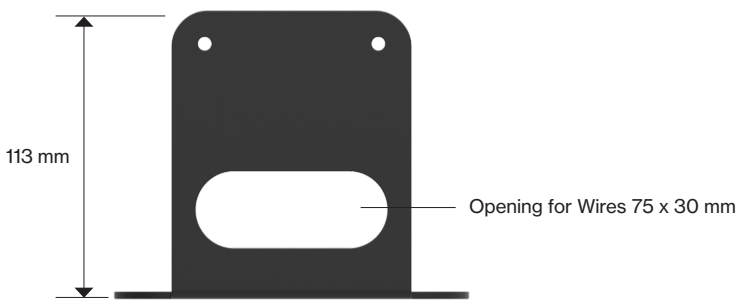
5. Troubleshooting

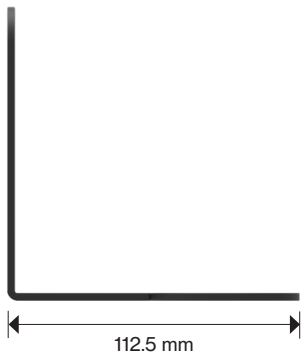
If you are experiencing some issues in using the router, try here first for some quick fixes to common problems.

Dropped Wi-Fi connection	Wi-Fi connections can occasionally drop for any number of reasons, such as interference or system updates. Try to ensure the space between your router and Wi-Fi devices is as clear as possible and make sure you're not moving too far away from your router. Check that your router has a good cellular connection and that your Wi-Fi device isn't trying to connect to any other saved Wi-Fi networks.
Can't connect to Wi-Fi	If your router's Wi-Fi doesn't appear when scanning available networks on your device, or if you can't make a connection, try switching both your router and Wi-Fi device off and back on again, and move closer to your router. If your router has a good cellular connection and you still can't establish a Wi-Fi connection, try a factory reset. To perform a factory reset and return the Verizon Internet Gateway to default settings, use a pin to insert the Reset Hole for a few seconds.
Can't login to the Web UI	If you can't access the Web UI, it might be an issue with your device or computer's proxy or IP address settings. Make sure that proxy settings are disabled and that your device or computer can be allocated an IP address on the network by the router's DHCP server. You'll need to check the support for your device or computer's operating system e.g. Windows or Mac OS, for detailed instructions how to do this.
Where can I get more help?	Visit http://support.ver izon.com/router to find your nearest Verizon store or to reach 24/7 help with live chat and device specific support.

6. Mounting Your Gateway onto the Wall (TBD)






112.5 mm

Technical Specifications

Frequency bands	5G NR: n2, n5, n48, n66, n77 4G LTE: B2, B5, B13, B48, B66
Processor	Qualcomm SDX62 + Maple (IPQ5018)
Memory	RAM: 1GB ROM: 8GB
Wi-Fi	Wi-Fi 6 (802.11 a/b/g/n/ac/ax) Support simultaneous 2.4Hz (2x2 MIMO) and 5GHz (4x4 MIMO), 4x SSID w/ band-steering (Single SSID on both 2.4/5GHz) WiFi coverage supports 64 simultaneous clients Downlink CA of LTE B5 with 4X4 MIMO and LTE B13 with 4X4 MIMO
LED	Front-facing dimmable tri-color LED x 1
WPS	WPS button x 1
Max. connected devices	Up to 128 devices (64 devices for 2.4 GHz and 5 GHz each)
LAN	RJ-45 Gigabit LAN ports x 4
WAN	WAN port x 1
Reset	Reset pin hole x 1
Power	DC power jack x 1
SIM	SIM card slot door x 1
Dimensions	164 x 160 x 80 mm
Weight	970g
Accessories	12V/3A AC Adapter Ethernet cable Optional Wall/Ceiling Mounting Brackets
OS	Linux
Built-in features	WebUI, TR-69, REST API, OMA-DM, IP Pass-through

Note: the values in this table are subject to change due to software or OS updates.

FCC Declaration of Conformance

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user‘s authority to operate the 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.

Operations in the 5.850-5.895GHz band are restricted to indoor usage only.

FCC RF Radiation Exposure Statement (SAR)

This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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

Safety Warnings

Adapter

- Do not use any other power adaptor except the one that accompanies this unit or a power adaptor identified in the list below.
- Use of another adapter could result in damage to the unit.
- The following power adaptor is qualified for use with this Verizon 5G Internet Gateway: (specified the adapter specifications, brand, make, type and other restrictions)

Caution

Ensure to connect the power cord of power adapter to a socket-outlet with grounding connection.

Safety and Compliance

Read before Use

We recommend you read the following sections thoroughly before use. Verizon is not liable for malfunctions or damages resulted from misuse of the handset.

Safety Precaution

Pay full attention to the following safety precautions.

- Use the chargers, cables or accessories approved by the device manufacturer.
- Do NOT disassemble or modify the device. Doing so voids the warranty.
- Prevent wetness from penetrating internal parts. Using the device in wet or damp environment may result in malfunctions.
- Do NOT use this device near source of heat or fire, such as oven, microwave, stove, or heater.
- Keep your device away from cooking appliances.
- Do NOT place the device in places with heated atmosphere (dryer, sauna, hot water).
- Do NOT use the device and disconnect all cables at places with fire or explosion risks.
- Avoid strong physical impact (heavy objects or excessive force).
- Keep your device away from liquid or conductive materials.
- Do NOT charge the device when either the device, the adapter, or the cable is wet. It may cause short-circuit.
- Power off the device when near medical equipment or high-precision control systems to avoid potential interference.
- Charge with specified voltage only.
- Do NOT charge device in a wet environment (bathtub, sauna).
- Place the device on a flat, stable surface for optimal use.
- Keep the device and adapter away from children and pets.
- The device must be disposed of in accordance with the locally applicable. environmental regulations.
- Keep the device away from magnetic items such as magnetic strip cards or items that generate strong electronic or magnetic fields, such as a microwave.
- Do NOT store the device in a wet or overheated environment.
- Do NOT use the device when it is overheated.
- Disconnect all the the cable connections when the device is not in use.
- Place the device in places with good signal strength.
- Make sure the adapter you use with the device meets the approved standards and specifications.

Disposal and Recycling

Do not dispose of the phone in a household garbage bin.
Products with this label must be taken to specific collection points at the end of their life.

You can learn more about how to recycle your mobile device by visiting the CTIA website at www.ctia.org/news/how-to-recycle-your-mobile-device

Maintenance & Care

- Avoid extreme temperature or direct sunlight
- Clean handset with soft, dry cloth. Do NOT use alcohol solvent (color may fade)
- Warranty does not cover malfunctions caused by misuse.
- Stop all the applications and shut down the device before cleaning it.
- Keep the device and its accessories dry at all times.
- If anomaly occurs, contact Verizon service or authorized retail immediately.
- When storing the device, do NOT store it in a container with dampness or under extended heat.
- Avoid dropping the device or strong physical impact at all times.

Warranty

Verizon warrants that this product is free from any defect in workmanship and material, under normal use and condition, for a period of one (1) year from the original date of purchase shown on your original invoice or receipt. If any such defects are found in this product within the applicable warranty period, Verizon shall, at its option during the applicable warranty period, carry out repair or replacement for the defected product or part. Such repair or replacement is subject to verification of the defect or malfunction and proof of purchase shall be confirmed by showing the model number on receipt of invoice with the original date of purchase.

The warranty does not apply if any of the following circumstances occurs:

- The warranty period has expired.
- Proof of purchase is absent.
- Normal wear or tear of the product due to natural ambient conditions or force majeure, such as humidity, oxidization, corrosion, penetration of liquids, and extreme temperatures.
- Damage caused by connection with accessories, equipment, or peripherals that are not specified by the manufacturer or not compatible with this product.
- Damage caused by disassembly, modification or repair performed by unauthorized technician or individual.
- Damage caused by non-compliance with the recommended device use instructed in the User's Manual.
- The IMEI label on this product has been modified, altered or removed.

The purchaser or user will be responsible for any cost regarding replacement of parts, reinstallation, transportation, and any other cost that may be incurred for the repair or replacement if any of the circumstances mentioned above is determined.

This warranty statement constitutes the entirely expressed warranty granted by Verizon. No other party, whether dealer, service center or agent, or employee(s) of such, is authorized to extend or transfer this warranty on behalf of Verizon. By law, Verizon disclaims any and all liability for direct or indirect damages or losses, or for any incidental or consequential damages of any nature whatsoever, including but not limiting to loss of commercial profit or data resulting from a defect in this product.

To the extend the law permits, the repair or replacement of this product does not, under any circumstances, extend the original warranty period. However, the repaired or the replaced parts are warranted in the same manner.

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Changes

The functions of the product and associated peripherals or accessories are described in this document are based on the current hardware, software and/or local network conditions at the time of writing, and thus may vary due to conditions set by local network service providers or carriers. Therefore, all information described herein is subject to change without prior notice.