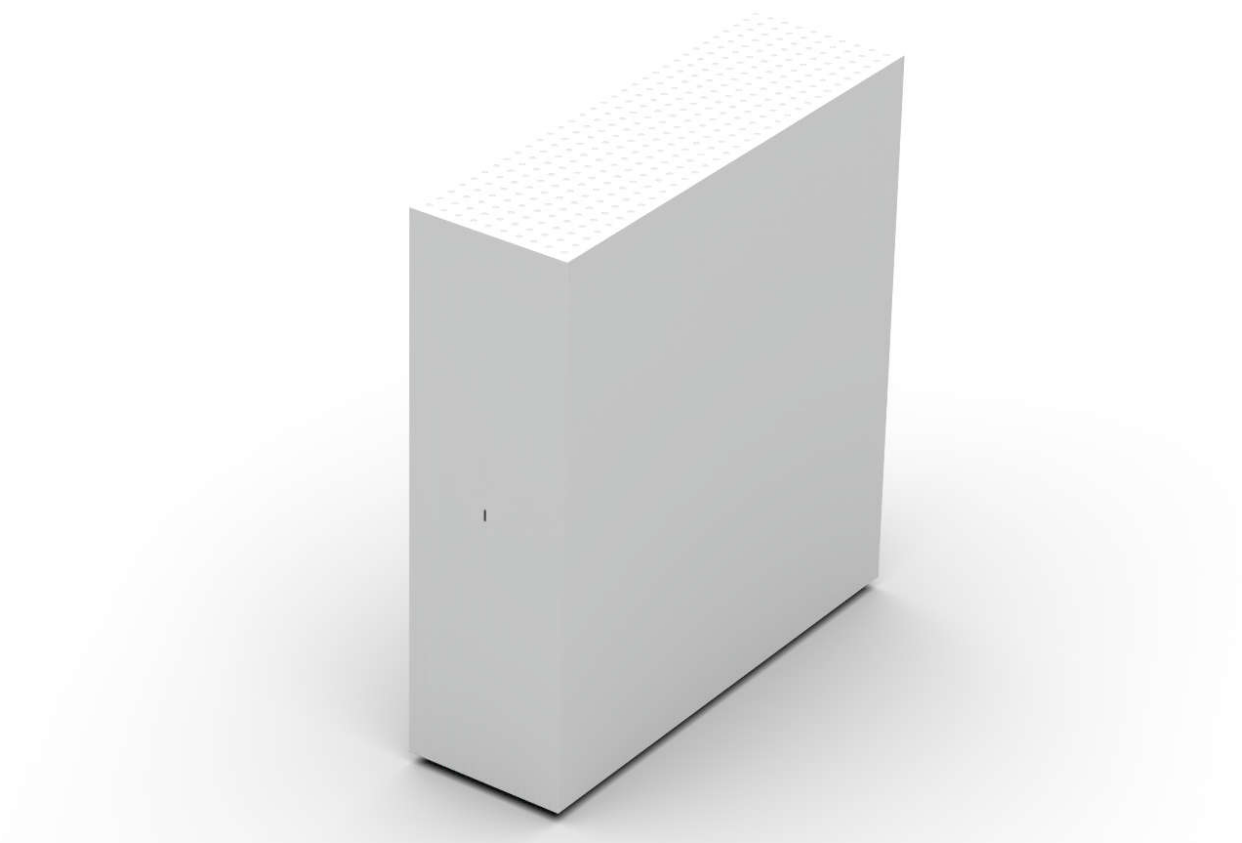


# **XER5 / Model- EWM231**

## **SETUP AND USER GUIDE**



XER5 - EWM231BPLT1

# SAFETY INSTRUCTIONS AND REGULATORY NOTICES

**Before you start installation or use of this product, carefully read these instructions!**



When using this product, always follow the basic safety precautions to reduce the risk of fire, electric shock and injury to persons, including the following:

- Always install the product as described in the documentation that is included with your product.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use this product to report a gas leak in the vicinity of the leak.

#### Warranty Information

Unless express and prior approval by Vantiva in writing, you may not:

- Disassemble, de-compile, reverse engineer, trace or otherwise analyze the equipment, its content, operation, or functionality, or otherwise attempt to derive source code (or the underlying ideas, algorithms, structure or organization) from the equipment, or from any other information provided by Vantiva, except to the extent that this restriction is expressly prohibited by local law;
- Copy, rent, loan, re-sell, sub-license, or otherwise transfer or distribute the equipment to others;
- Modify, adapt or create a derivative work of the equipment;
- Remove from any copies of the equipment any product identification, copyright or other notices;
- Disseminate performance information or analysis (including, without limitation, benchmarks) from any source relating to the equipment.

Such acts not expressly approved by Vantiva will result in the loss of product warranty and may invalidate the user's authority to operate this equipment in accordance with FCC Rules.

Vantiva disclaims all responsibility in the event of use that does not comply with the present instructions.

#### Safety instructions

##### Climatic conditions

This product:

Is intended for in-house stationary desktop use; the maximum ambient temperature may not exceed 40°C (104°F).

Must not be mounted in a location exposed to direct or excessive solar and/or heat radiation.

Must not be exposed to heat trap conditions and must not be subjected to water or condensation. Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

Must be installed in a Pollution Degree 2 environment (Environment where there is no pollution or only dry, nonconductive pollution).

##### Cleaning

Unplug this product from the wall socket and computer before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

##### Water and moisture

Do not use this product near water, for example near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool. Transition of the product from a cold environment to a hot one may cause condensation on some of its internal parts. Allow it to dry by itself before re-starting the product.

##### Secure handling and disposal of used batteries

NOTE: Only use the battery qualified for this equipment. Remember to dispose batteries properly according to local regulation, i.e., at a battery collection point. Batteries may not be disposed with domestic waste. Interface classifications

The external interfaces of the product are classified as follows:

- Phone: TNV circuit, not subjected to over voltages (TNV-2)
- Cable, MoCA, RF: TNV circuit subject to over voltages (TNV-1)
- All other interface ports (e.g., Ethernet, USB, etc.), including the low voltage power input from the AC mains power supply: SELV circuits.

##### Electrical powering

The powering of the product must adhere to the power specifications indicated on the marking labels.

##### USB

The device is to be connected to an identified USB port complying with the

power socket outlet you plug the power cord into is easily accessible and located as close to the equipment as possible.

##### Overloading

Do not overload main supply socket outlets and extension cords as this increases the risk of fire or electric shock.

##### Servicing

To reduce the risk of electric shock, do not disassemble this product. None of its internal parts are user-replaceable; therefore, there is no reason to access the interior. Opening or removing covers may expose you to dangerous voltages. Incorrect reassembly could cause electric shock if the appliance is subsequently used.

If service or repair work is required, please contact a qualified service representative.

##### Damage requiring service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply or its plug are damaged.
- When the attached cords are damaged or frayed.
- If liquid has been spilled into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally.
- If the product has been dropped or damaged in any way.
- There are noticeable signs of overheating.
- If the product exhibits a distinct change in performance.

Immediately disconnect the product if you notice it giving off a smell of burning or smoke. Under no circumstances must you open the equipment yourself; you run the risk of electrocution.

##### Regulatory information

You must install and use this device in strict accordance with the manufacturer's instructions as described in the user documentation included with your product.

Before you start installation or use of this product, carefully read the contents of this document for device specific constraints or rules that may apply in the country in which you want to use this product.

In some situations, or environments, the use of wireless devices may be restricted by the proprietor of the building or responsible representatives of the organization.

If you are uncertain of the policy that applies on the use of wireless equipment in a specific organization or environment (e.g., airports), you are encouraged to ask for authorization to use this device prior to turning on the equipment.

Vantiva is not responsible for any radio or television interference caused by unauthorized modification of the device, or the substitution or attachment of connecting cables and equipment other than specified by Vantiva. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user. Vantiva and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from failing to comply with these guidelines.

##### North America - United States of America

##### Important safety instructions

- The cable distribution system should be grounded (earthed) in accordance with ANSI/ NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, Grounding of outer Conductive Shield of a Coaxial Cable.
- Leave 5 to 8 cm (2 to 3 inches) around the product to ensure proper ventilation to it.
- Never push objects through the openings in this product.

##### Federal Communications Commission (FCC) radio frequency interference statement

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:

requirements of a Limited Power Source.

##### Accessibility

The plug on the power supply cord serves as disconnect device. Be sure that the

- 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.



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.

#### **RF-exposure statement**

When the product is equipped with a wireless interface, then it becomes a mobile or fixed mounted modular transmitter and must have a separation distance of at least 27 cm (11 inches) between the antenna and the body of the user or nearby persons. In practice, this means that the user or nearby persons must have a distance of at least 27 cm (11 inches) from the modem and must not lean on the modem in case it is wall mounted. With a separation distance of 27 cm (11 inches) or more, the Maximum Permissible Exposure limits are well above the potential this module is capable to produce. For operation within 5.15 ~ 5.25GHz frequency range, it is restricted to indoor environment. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

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

#### **Restricted frequency band**

This product is equipped with an IEEE802.11b /IEEE802.11g/ IEEE802.11n wireless transceiver and may only use channels 1 to 11 (2412 to 2462 MHz) on U.S.A. territory.

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## Document Information

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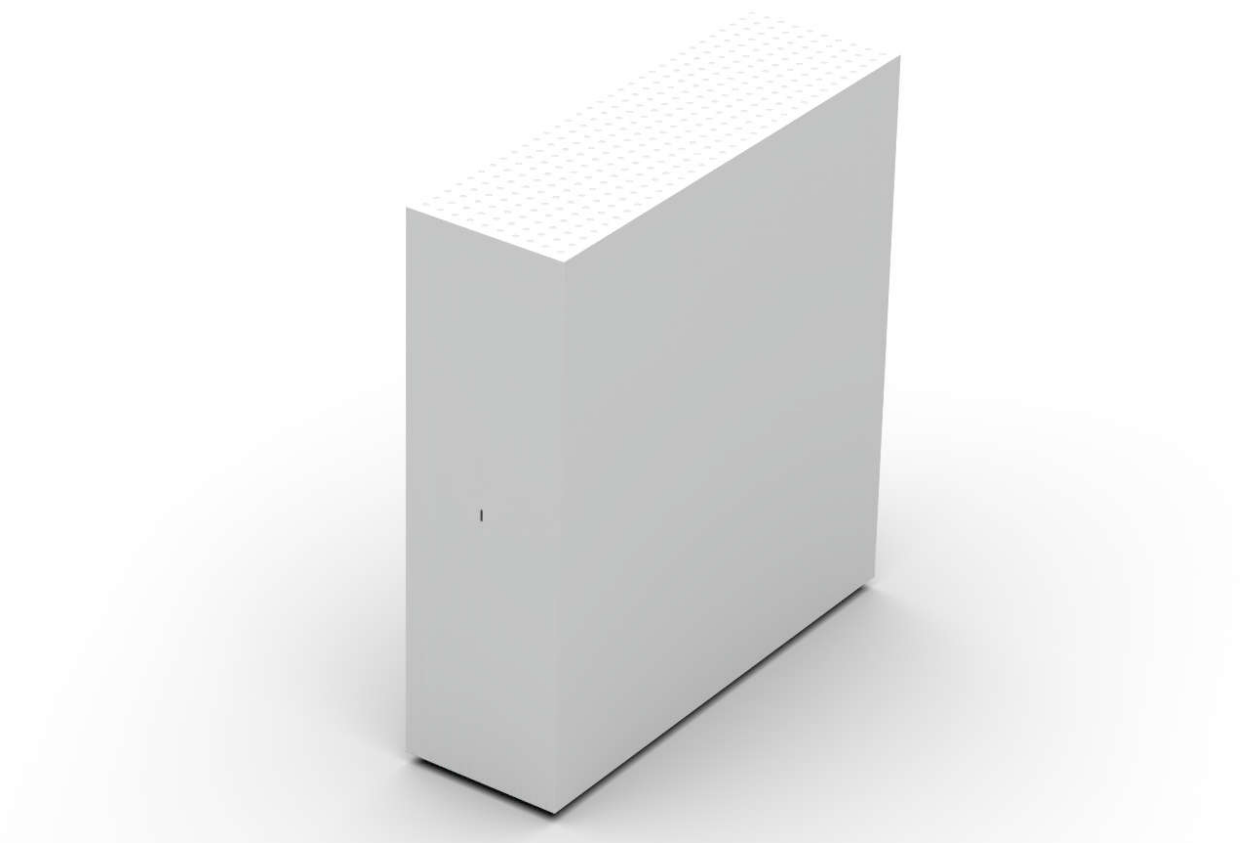
Reference: XER5 EWM231BPLT1 Data Sheet

COMCAST Title: Setup and User Guide XER5

EWM231BPLT1

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# About this Setup and User Guide

## In this Setup and User Guide

The goal of this Setup and User Guide is to:

- Set up your Gateway and local network
- Configure and use the main features of your Gateway.

For more advanced scenarios and features visit the documentation pages on [www.Vantiva.com](http://www.Vantiva.com).

## Used symbols



The danger symbol indicates that there may be a possibility of physical injury.



The warning symbol indicates that there may be a possibility of equipment damage.



The caution symbol indicates that there may be a possibility of service interruption.



The note symbol indicates that the text provides additional information about a topic.

## Terminology

Generally, the XER5 EWM231BPLT1 will be referred to as Gateway in this Setup and User Guide.

## Typographical convention

Following typographical convention is used throughout this manual:

- This sample text indicates a hyperlink to a Web site.  
Example: For more information, visit us at [www.Vantiva.com](http://www.Vantiva.com).
- This sample text indicates an internal link.  
Example: If you want to know more about the guide, see “About this Setup and User Guide”.
- This sample text indicates an important content-related word.  
Example: To enter the network, you must authenticate yourself.
- This sample text indicates a GUI element (commands on menus and buttons, dialog box elements, file names, paths and folders).  
Example: On the File menu, click Open to open a file.

# 1. Getting Started

## Introduction

This chapter provides a brief overview of the main features and components of the Gateway. After this chapter, we will start with the installation.



Do not connect any cables to the Gateway until instructed to do so.

## 1.1 Features at a glance

### Introduction

The XER5 is a 5Gb, Wi-Fi 7 Dual-Band Ethernet Gateway targeted for residential deployment behind high-bandwidth DOCSIS® modem or Fiber ONT.

This section provides a brief overview of the main features of your gateway.

- 5Gbps Throughput
- 5Gbps WAN port with /MACsec
- 5Gbps LAN port plus 3x 1Gbps LAN ports
- Dual Band Concurrent 802.11be (Wi-Fi 7) High Power Radios
- 4x4 MIMO on both 2.4G & 5G Radios
- RDK-B Software Stack

## Technical Specifications

### Hardware Specifications

- WAN Interface:
  - 1 port autosensing 5Gb/2.5Gb/1Gb/100Mbps Ethernet with MACsec
- LAN interface:
  - 3 ports autosensing 1Gb/100b/10Mbps Ethernet
  - 1 port autosensing 5Gb/2.5Gb/1Gb/100Mbps
- High Performance ARM process (>20K DMIPS)
- RAM 2GB
- Flash: 8GB eMMC
- Buttons & indicators:
  - 1 Indicator (Front) Reset Button (Rear)
  - Status LED's on the ethernet ports
- AC Voltage 100 - 130 VAC, 60 Hz with 12VDC output
- Power Supply Rating: 36W
- Typical High Activity Power Consumption < 20W
- Typical Idle Power consumption < 12W

### Wi-Fi Specifications

- DBC Wi-Fi 802.11be Radios
- 2.4GHz: 4x4 MIMO, High Power, Flat Power (30 dBm conducted)
- 5GHz: 4x4 MIMO, High Power (30 dBm conducted)
- DFS Certified
- 20/40/80/160MHz BW on 5GHz

### Wi-Fi certifications

- Wi-Fi Alliance WPA-3
- Wi-Fi Alliance Wi-Fi 6
- Wi-Fi Alliance Wi-Fi 7

### Environmental

- Operating temperature 0 - 40 °C (32 - 104 °F)
- Operating humidity 5 - 95 % RH non-condensing
- Storage temperature -20 - 70 °C (-4 - 158 °F)

### IPv6 networking

- IPv4 / IPv6 dual IP stack

### Mechanical

- Size: 194.8 x 58.0 x 179.5 (H/W/D mm). Includes 4mm foot
- Optimized for vertical orientation
- Color: White

# Getting to know the Gateway

This section introduces you to the different components of the Gateway:

## Front Surface

The front surface contains a single LED status indicator located in the center of the front panel (blue circle).

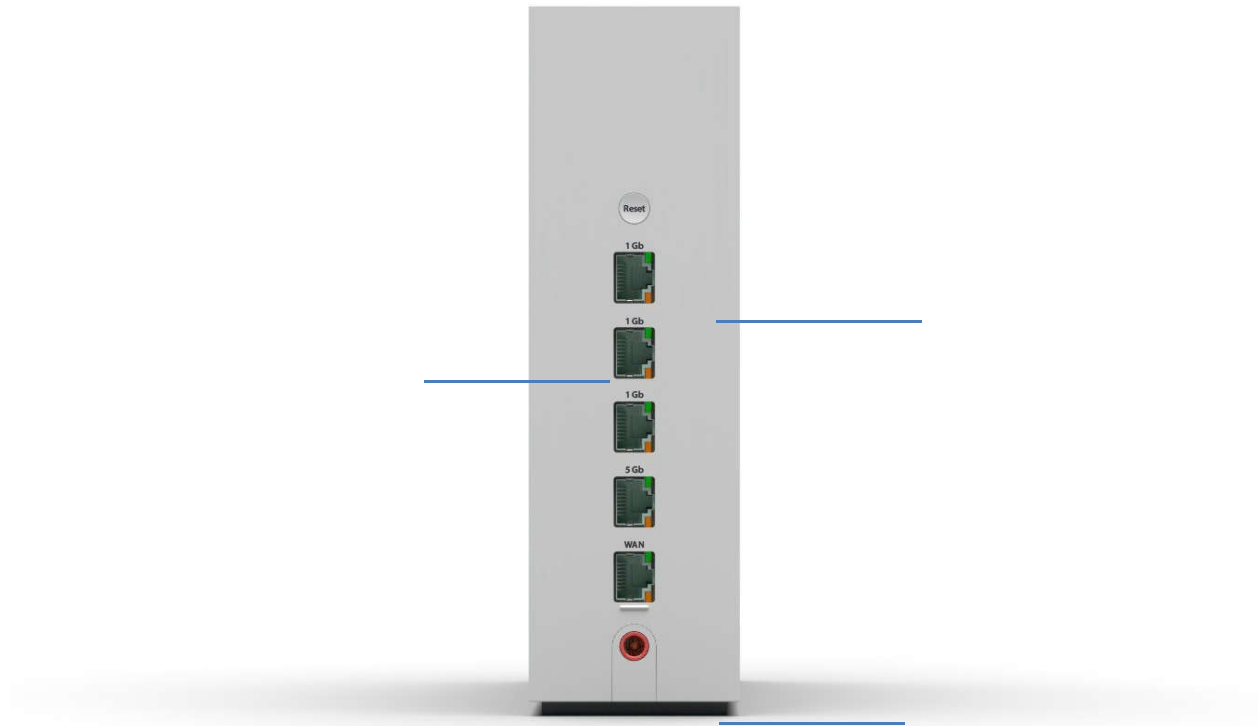


**LED Indicator Table**

| Color                      | State*   | Description                               |
|----------------------------|----------|-------------------------------------------|
| White                      | Solid on | Device is online and functioning          |
| Orange                     | Solid on | Initial Power Up & Boot                   |
| Orange                     | Blinking | Downstream during Registration            |
| Green                      | Solid on | Upstream during Registration              |
| Alternate Orange and green | Blinking | Firmware Download in progress             |
| Blue                       | Blinking | WPS Mode (Times out after 2 minutes)      |
| Red                        | Solid on | No internet connectivity (has block sync) |

- Solid On – Signifies steady state or no action required
- Blinking – Signifies activity in progress or action required

Back panel



Ethernet Ports

The RJ-45 Ethernet ports (  ) support up to four Ethernet connections (for example, a computer) to your local network.

The top three Ethernet ports (LAN ports) on the Gateway support 1 Gigabit Ethernet and have a maximum speed of 1 Gbps (Gigabits per second). The fourth Ethernet port (LAN port) from the top supports 5 Gbps.

The fifth Ethernet port (WAN port) supports 5 Gbps Ethernet ports, has a maximum speed of 5 Gbps and is used to connect your gateway to cable modem or fiber ONU (access device).

Each Ethernet port has two LEDs with the following functionality.

Ethernet ports 1 and 2

| LED                  | LED Status           | Description                                  |
|----------------------|----------------------|----------------------------------------------|
| Left LED<br>(Green)  | Solid on             | 10 Gbps Link                                 |
|                      | Blinking (1X/second) | 10 Gbps Link – Activity in progress          |
|                      | Off                  | No Link                                      |
| Right LED<br>(Amber) | Solid on             | 10/100/1000 Mbps Link                        |
|                      | Blinking (1X/second) | 10/100/1000 Mbps Link – Activity in progress |
|                      | Off                  | No Link                                      |

Ethernet ports 3 and 4

| LED                  | LED Status           | Description                            |
|----------------------|----------------------|----------------------------------------|
| Left LED<br>(Green)  | Solid on             | 1000Mbps Link                          |
|                      | Blinking (1X/second) | 1000Mbps Link – Activity in progress   |
|                      | Off                  | No Link                                |
| Right LED<br>(Amber) | Solid on             | 10/100Mbps Link                        |
|                      | Blinking (1X/second) | 10/100Mbps Link – Activity in progress |
|                      | Off                  | No Link                                |

#### Power inlet

The power inlet (**Power**) allows you to connect 12V DC Power from the power brick. Only the EPS-3 supplied with the unit may be used with this product.

Bottom panel & Product label



Product label

The label on the bottom of the Gateway contains key manufacturing information, such as the part number, serial number, CM MAC address, MTA MAC address and WAN MAC address.

## 2 Installation Notes

### Local connection requirements

#### **Wireless connection for Wi-Fi**

If you want to connect your computer or wireless accessory using a wireless connection, your device must be equipped with a Wi-Fi Certified wireless client adapter.

#### **Wired connection via Ethernet**

If you want to connect a computer or wireless accessory using a wired connection, your device must be equipped with an Ethernet Network Interface Card (NIC).

### 2.1 Power to the Gateway

#### **Procedure**

Proceed as follows:

1. Use the EPS-3 power brick that is included with your Gateway.
2. Connect the barrel connector, or small end, of the power cord on the power brick to the red Power Inlet on the rear of the Gateway.
3. Plug the power brick into the electrical outlet.
4. Wait at least two minutes to allow the Gateway to complete the startup phase.

### 2.2 Connect your wired device(s)

#### **Requirements**

- Both your network device (for example, a computer.) and Gateway must have a free Ethernet port.
- Your network device must be configured to obtain an IP address automatically. This is the default setting.

The first three Ethernet ports on the Gateway are 1 Gigabit Ethernet ports and have a maximum speed of 1 Gbps (One Gigabit per second). The fourth Ethernet port is a 5 Gbps port and has a maximum speed of 5 Gbps (five Gigabits per second).

#### **Procedure**

Proceed as follows:

1. It is recommended to use Category 5e or Category 6 Ethernet cables with the Gateway
2. Plug one end of the Ethernet cable into one of the RJ-45 Ethernet ports on the back of the Gateway:
3. Plug the other end of the Ethernet cable into the Ethernet port of your network device.
4. Your network device is now connected to your network. Use the same procedure to connect other Ethernet devices (computers, network printers and so on).

### 2.3 Connect your Wi-Fi device(s)

#### **Introduction**

The Gateway supports two Wi-Fi bands that allow you to connect wireless devices to your network:

- The 5 GHz IEEE 802.11be band offers superior transfer rates, is less sensitive to

interference and allows you to connect IEEE 802.11a/n/ac/ax/be wireless clients.

- The 2.4 GHz IEEE 802.11be access point allows you to connect IEEE 802.11b/g/n/ax/be wireless clients. Use this access point for wireless clients that do not support 5 GHz.



If you want to connect your wireless client to the 2.4 GHz or 5 GHz access point, make sure that your wireless client supports these connections.

**Requirements**

- Your network device must be equipped with a WiFi Certified wireless client.
- Your network device must be configured to obtain an IP address automatically. This is the default setting.

**Procedure**

- If you want to connect a computer using the wireless network, configure the wireless client on your computer with the wireless settings printed on the Gateway's product label located on the bottom of the Gateway.