

1. Product Overview

The Nokia WiFi Beacon 3.1 extends the whole home Wi-Fi experience for broadband subscribers. This premium class Beacon supports Wi-Fi 6 and Wi-Fi EasyMesh™, to create a whole home coverage mesh network backhauled by wired Ethernet or Wi-Fi. This coverage can be expanded at any time by installing additional Wi-Fi EasyMesh™ -capable beacons to ensure seamless roaming throughout the home. New value-add services (like cybersecurity) can be installed on Beacon 3.1.

Nokia WiFi Beacon 3.1 can be managed by the Nokia WiFi Mobile App; it provides end-users with an intuitive and simplified interface for trouble-free management of their home network and Wi-Fi.



Figure 1:Nokia WiFi Beacon 3.1 front view



Figure 2:Nokia WiFi Beacon 3.1 back view

A. Technical Specifications

Height: 168 mm (6.6 in)
Diameter: 100 mm (3.9 in)
Weight: 0.34 kg (0.75 lb)

Desktop or wall-mount using an external bracket.

Power consumption:

- Standby mode: 5.5 W
- Typical mode: 6.6 W

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B. Manufacturer Information

For Products Purchased in EU/EAA Countries

The products are manufactured and imported by Nokia Solutions and Networks Oy, Karakaari 7, 02160 Espoo, Finland.

Nokia is a registered trademark of Nokia Corporation.

For Products Purchased in the United States

The products are imported by Nokia of America Corporation.

- Offices: <https://www.nokia.com/contact-us/worldwide-offices/north-america>
- Support: <https://www.nokia.com/support/>
- Other contacts: <https://www.nokia.com/contact-us/>

Please contact your Internet Services Provider in case of questions on the product.

2. Safety Guidelines

ALWAYS READ THE PRODUCT GUIDE BEFORE SET UP OR USE OF THE PRODUCT. IT IS YOUR RESPONSIBILITY TO FAMILIARIZE YOURSELF WITH THE PRODUCT GUIDE AND WARNINGS, AND TO USE A PRODUCT PROPERLY. CONTACT YOUR INTERNET SERVICES PROVIDER FOR FURTHER QUESTIONS.

Warning - Risk of electric shock or fire

Connect the Product power adaptor or cord to the right supply voltage (for example, 230V in Europe, Australia, South Africa and 120V in US).

The socket-outlet shall be easily accessible.

Pay attention to the power load of the electrical outlet and possible extension cord. An overburdened power outlet or damaged cords and plugs may cause electric shock or fire. Check the power cords regularly. If you find any damage, replace the cord immediately.

Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.

Leave adequate space for heat dissipation to avoid any damage caused by overheating the Product. Do not cover the Product or its ventilation holes. Blocking the ventilation holes may cause fire.

Use the power adapter provided with your Product and do not fasten the power cable to building surfaces. Ensure the cable can move freely. Do not place heavy objects on the cable.

Do not use the Product outside, and make sure all the connections are indoors.

Do not install, use, or service this Product during a thunderstorm. There is a remote risk of electric shock from lightning.

Caution - Potential equipment damage

Follow these recommendations to protect yourself and the Product from harm:

- Do not insert any sharp object into the openings of a Product.
- Do not put the Product near a heat source. Avoid placing the Product in direct sunlight.
- Do not put the Product in damp or wet locations, for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool. Do not spill any liquid on the Product.
- Do not touch the Product or its power adapter or cord with wet hands.
- Do not place the Product on an unstable surface or support.
- Do not place heavy objects on top of the Products.
- Do not use liquid or aerosol cleaners; unplug the Product and use a soft, dry cloth for cleaning.
- When connecting a PC or other electronic device to a Product, make sure you use the right cables and connect the device to the right port of the Product. Incorrect connections may damage the device and/or the Product.
- Do not open or try to open the Product. Opening or removing covers can expose you to dangerous high voltage points or other risks.

It is recommended that users and other individuals maintain a distance of at least 10 cm between themselves and the Product to avoid exposure. The Product contains components that emit an electromagnetic field and could interfere with pacemakers or other electronic medical devices. If you have a pacemaker or other implantable or personal medical device, please consult your physician or manufacturer about the required minimum safe distance between the Product and your medical device.

Keep your product and accessories out of reach of pets. They could damage it and cause injury or electrocution.

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Nokia WiFi Beacon 3.1 Quick Reference Guide

If the Product malfunctions or fails to perform as expected, stop using it immediately.

The product is expected to operate at a temperature of -5 to 45 degrees Celsius for a relative humidity between 5% and 95%.

3. Install the Beacon

The Beacon can be installed by a professional installer or by end users.

1. Download the Nokia WiFi app to set up your Beacon or follow the steps below.
2. Plug in the power adapter to the wall socket.
3. Connect the power cable to your Beacon and power on your Beacon.
4. Plug in the Ethernet cable into the blue WAN port on your Beacon.
5. Plug in the Ethernet cable into the LAN port on your Beacon.
6. Beacon's LED turns green when it is ready.
7. Use the Nokia WiFi app to add additional Beacons to your network.

4. LED description

The following table describes the LED behavior of the device:

LED color	LED behavior	Router mode	Bridge mode	Configuration mode	LED behavior description
Off	Off	✓	✓	✓	Power off.
Blue-Green	Solid	✓			Uplink to the Internet is good.
Blue-Green	Solid		✓		Backhaul connection is successful. The link quality to the root node is good.
Yellow	Solid		✓		Backhaul connection is successful. The link quality to the root node is poor.
Yellow	Slow pulsing			✓	Configuration mode, the unit is waiting to be configured.
Red	Solid	✓			No connection to the Internet.
Red	Solid		✓		Backhaul connection is unsuccessful.
Red	Fast pulsing	✓	✓	✓	Factory reset.
Red	Slow pulsing				Connecting to the Internet.
White	Solid	✓	✓	✓	Booting up in progress.
White	Slow pulsing			✓	Mesh backhaul establishing and switching work mode to Router or Bridge.
White	Slow pulsing	✓	✓		WPS enabled.
White	3 sec quick pulse	✓	✓		WPS successful or Mesh Backhaul established.

5. Connecting devices

The Beacon supports the following connections:

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- WiFi for wireless devices
- Ethernet for wired devices

Connecting Ethernet

The product has two 1G LAN Ethernet ports (RJ-45 connectors) and one 1G WAN Ethernet port (RJ-45 connectors) as is visible in Figure 2: Nokia WiFi Beacon 3.1 back view. You make Ethernet connections to the product by connecting the Ethernet cable(s) to the appropriate Ethernet port(s) of the product.

Connecting WiFi

Connect WiFi devices by selecting the Wi-Fi network (SSID) and entering the Wi-Fi key printed on the label of the product from setup screen of the device. If you are connecting WiFi devices that support WPS, press the WPS button as visible in Figure 2: Nokia WiFi Beacon 3.1 back view on the product to start the WiFi protected setup process.

6. Accessing the webGUI

The product supports a WebGUI, which can be used for configuration, maintenance, and troubleshooting. You can collect device status through the WebGUI for information on network connectivity. You can configure the product using the WebGUI available on a device such as PC, tablet, or laptop. The device must have an Ethernet LAN connection or a WiFi connection with the product. The WebGUI also displays useful information about the product.

To access WebGUI, you need to do the following:

- Establish a connection between your device (such as PC, tablet, or laptop) from which you will access the WebGUI on the product.
- Log into WebGUI when needed to view and configure parameters; you will need to enter the username and password that are provided on the product label on the back of product to log into WebGUI.

Establishing a connection and logging in to the webGUI

1. Ensure the Local Area Connection setting on your device is configured as "obtain an IP address automatically".
Note: The device must be powered up.
2. Do one of the following as described in Connecting devices:
 - a. Connect your device to the product through one of the Ethernet ports
 - b. Establish a WiFi connection between your device and the product
3. On your device, open a web browser, and enter the IP address that is provided on the product label at the back of the product, for example: <http://192.168.1.254> (default) or <https://192.168.1.254>

Once the connection is established between your device and the product, the left side of your device's screen provides the WebGUI main menu, and the right side provides overview information.

4. To log in, click Sign in or click on any of the menu items on the left side of the screen. The log in window appears and you are prompted to log in. Type the username and password in the respective fields and then click Login. The username and password are provided on the product label on the back of the product.
Note: After predefined consecutive unsuccessful login attempts, you will be locked out for a specific amount of time.

You should now see the Overview screen which provides information about the product.

To improve security, it is recommended that you change the default password. You can do this by going to the Maintenance/Change screen.

7. WebGUI Overview screen

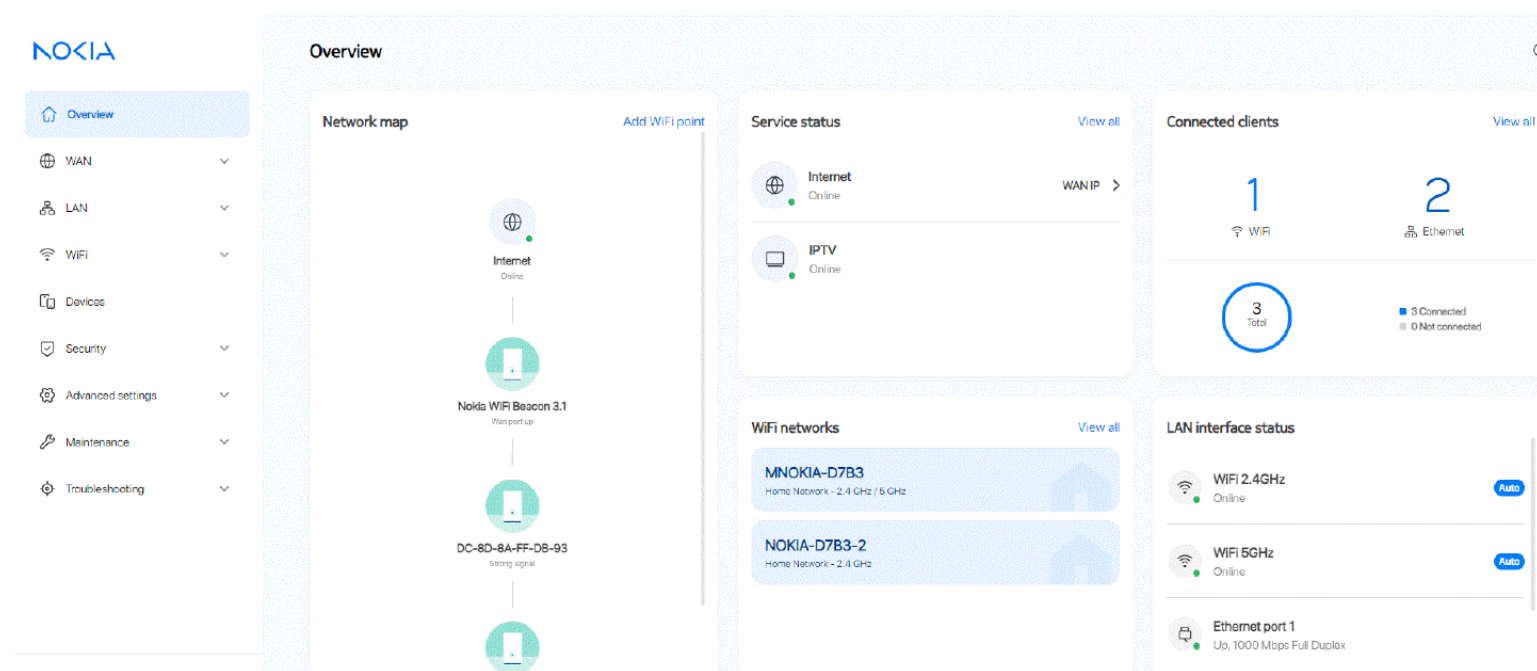


Figure 3: WebGUI Overview Screen

Network map

Displays information about the topology and status of the Beacon mesh network, and status to the Internet. The status of connections is indicated by color – green indicates good connection, and amber indicates slow connection, and red indicates no connection.

Service status

Displays the active status of the configured services.

- Internet: shows the status of the internet service (online/offline)
- IPTV: Shows the status of the IPTV service if configured by the service provider (online/offline)

WiFi networks

Displays the active WiFi networks, regardless of whether a device is wirelessly connected to the product. You may view WiFi connectivity information such as the network connection name.

- Click on the WiFi network to change its configuration.
- Click View all to view the available WiFi networks.

Connected clients

The connected devices field of the Overview screen shows the following:

- WiFi: the number of devices connected to the WiFi network.
- Ethernet: the number of devices connected via Ethernet.
- Total: provides an overview of the total number of connected devices.

Click View all to view available clients.

LAN interface status

The LAN interface status field of the Overview screen shows the following:

- WiFi 2.4 GHz: Indicates whether 2.4 GHz band is enabled or disabled and displays broadcast Channel and Channel bandwidth. (Auto represents that an available channel is automatically selected)

Nokia WiFi Beacon 3.1 Quick Reference Guide

- WiFi 5 GHz: indicates whether 5 GHz band is enabled or disabled and displays broadcast Channel and Channel bandwidth. (Auto represents that an available channel is automatically selected)
- Ethernet port: indicates whether a device is connected through an Ethernet connection, along with the transfer speed and duplex mode

8. EU Declaration of Conformity

Hereby, Nokia Solutions and Networks Oy declares that the Product is in compliance with Radio Equipment Directive 2014/53/EU; Low Voltage Directive 2014/35/EU; EMC Directive 2014/30/EU, Directive RoHS 2011/65/EU and 2015/863/EU, Directive Eco-design 2009/125/EC and European Accessibility Act Directive 2019/882/EU. The full text of the EU declaration of conformity, as well as additional compliance information, is available at www.nokia.com/notices/declaration-of-conformity/.

Products are for indoor use only.

In accordance with Article 10.8(a) and 10.8(b) of the RED, the following tables provide information on the frequency bands used and the maximum radio frequency transmit power of the Products for sale in the EU and other countries of sale:

Radio Frequency	EIRP
2.4 GHz	100 mw
5 GHz	1000 mw

Specific precautions for EMC Warning

The Products are compliant with Class B of EN 55032. In a residential environment, this equipment may cause radio interference. The Products are tested to the requirements of EN 55032 (Emissions) and EN 55024 (immunity). There are no specific precautions which must be taken in order to comply with the requirements of Directive 2014/30/EU Essential Requirements in Section 1 of Annex I. In addition, the Products are further tested to ensure spurious emissions are within the specified limits, as well as meeting the requirements for adaptivity, which mitigates against problems caused by co-location with other wireless products. The Products are not subject to the requirements in Section 2 of Annex I of Directive 2014/30/EU for fixed installations.

End of Life Collection and Treatment



In the European Union and European Economic Area, this label indicates that this product should not be disposed of with household waste. It should be deposited in an appropriate facility to enable recovery and recycling.

The Product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electronics and Electrical Equipment. Electronic products bearing or referencing the WEEE mark shown above, when put on the market within the European Union (EU) and European Economic Area (EEA), shall be collected and treated at the end of their useful life, in compliance with applicable EU and local legislation. They shall not be disposed of as part of unsorted municipal waste. Due to materials that may be contained in the Product, such as heavy metals or batteries, the environment and human health may be negatively impacted as a result of inappropriate disposal.

At the end of their life, the Products are subject to the applicable local legislations that implement the European Directive 2012/19/EU on WEEE. There can be different requirements for collection and treatment in different member states of the European Union.

In compliance with legal requirements and contractual agreements, where applicable, Nokia will offer to provide for the collection and treatment of Products bearing the logo above at the end of their useful life, or Products displaced by Nokia equipment offers. The equipment can be disposed at electronic waste collection points or to stores that sell electronics.



For information regarding take-back of equipment by Nokia, or for more information regarding the requirements for recycling/disposal of the Product, contact your service provider. Regulatory compliance information, including EU Declaration of Conformity, can be found at www.nokia.com/notices/declaration-of-conformity/.

9. FCC Declaration of Conformity



This device complies with part 15 of the U.S. FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation.

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.

No Unauthorized Modifications:

Do not make any changes or modifications to the Product without the prior express written approval of Nokia. Any changes or modifications made without express written approval could void the user's authority to operate the device.

FCC Guidelines for Human Exposure

The Product complies with FCC radiation exposure limits set forth for an uncontrolled environment. The Product should be installed and operated with minimum distance of 32cm between the radiator and your body.

FCC Information to User

The Product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals.

The Product and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter.

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