FRITZ!

FRITZ!Box 6825 4G

Manual

Table of Contents

General information on the FRITZ!Box

Safety instructions

Before connecting the FRITZ!Box 6825 4G, observe the following security instructions in order to protect yourself, the surroundings, and the FRITZ!Box from harm.

General security information

- Do not install the FRITZ!Box during an electrical storm.
- When using an external antenna connected outside the building, if possible, disconnect the FRITZ!Box from power and from the antenna during storms.
- Only use the FRITZ!Box indoors.
- Protect the FRITZ!Box from vapours and moisture.
- Never let liquids get inside the FRITZ!Box.
- Connect the power adapter of the FRITZ!Box to an power socket that is easy to reach, so that you can unplug the power adapter at any time.
- Do not place the FRITZ!Box near any heat sources.
- Provide for sufficient air circulation around the FRITZ!Box.
- Make sure that the ventilation slots on the FRITZ!Box housing are always unobstructed.
- Do not cover the FRITZ!Box.
- Do not place the FRITZ!Box on heat-sensitive surfaces.
- The FRITZ!Box should not be placed on carpets or upholstery.
- Avoid using power strips and extension cords if at all possible.
- Do not connect multiple extension cords or power strips to each other.
- Do not attach any other objects to the FRITZ!Box.

Improper cleaning

Improper cleaning with strong detergents, solvents or wet cloths can cause damage to the FRITZ!Box.

- Please refer to the information about how to clean your FRITZ!Box; see page 13.

Improper opening and repairs

The device contains hazardous components and should only be opened by authorized repair technicians.

- Do not open the FRITZ!Box housing.
- If the FRITZ!Box needs to be repaired, please take it to a specialized vendor.

Internet security

Information on protecting your FRITZ!Box and your home network from external attacks is presented in the internet at:

fritz.com/en/guide

Radio and electromagnetic interference

Radio interference can be generated by every device that emits electromagnetic signals. With so many devices transmitting and receiving radio waves, interference can occur when radio waves overlap.

- Do not use the FRITZ!Box in places where the use of radio devices is prohibited.
- Follow any instructions to turn off radio devices – especially in hospitals, outpatient treatment centres, medical practices, and other medical facilities – in order to prevent interference with sensitive medical equipment.
- Consult your doctor and the manufacturer of your medical device (pacemaker, hearing aid, electronically controlled implant, etc.) to find out whether it could be affected by interference from your FRITZ!Box.

- If applicable, maintain the minimum distance of 20 cm recommended by the manufacturers of medical devices in order to prevent malfunctions of your medical device (e.g. pacemaker).

Potentially explosive environments

Under unfavourable conditions, radio waves in the vicinity of explosive environments can cause fires or explosions.

- Do not install and operate your FRITZ!Box in the vicinity of explosive environments, flammable gases, areas where the air contains chemicals or particles like grain, dust or metal powder, or in the vicinity of detonation grounds.
- In locations with potentially explosive atmospheres, and in the vicinity of detonation grounds, follow the instructions to switch off electronic devices in order to prevent interference with detonation and ignition systems.

About this manual

FRITZ!OS version

This manual refers to the version FRITZ!OS 8.2 or later.

Symbols used

The following symbols are used in this manual:

Symbol	Meaning
	Important message that should be complied with in order to prevent material damage, errors or malfunctions.
	Useful tip for configuring and operating the FRITZ!Box.

Package contents

Package contents

No.	Supplied part	Details
1	FRITZ!Box 6825 4G	
1	Power adapter	white
1	LAN cable	• Network cable • white • 1.5 m
1	Quick guide	Connecting FRITZ!Box
1	FRITZ! Notes	Service card with FRITZ!Box settings upon delivery

Instructions and help

Instructions and help

Use the comprehensive customer documentation to connect, configure, and operate your FRITZ!Box. The latest information on products and updates is presented in the newsletter (available only in German) and on social media.

Medium	Contents	City
Manual	Connecting, configuration, and operation	fritz.com/service/manuals
Quick guide	Connecting and configuration	Printed, included with delivery
Service card	Meaning of the LEDs and important settings upon delivery	Printed, included with delivery
Online help	Configuration and operation	User interface http://fritz.box
Knowledge Base	Solutions for problems during connection, configuration, and operation	fritz.com/service
Social media	The latest about the FRITZ!Box	YouTube
		Instagram
		Facebook
		Telegram

Information on cleaning

Please note

- Remove the FRITZ!Box from the mains before cleaning.
- Wipe the FRITZ!Box with a slightly moist, lint-free cloth or an anti-static cloth.
- Do not use any strong detergents or solvents for cleaning.
- Do not use any wet cloths for cleaning.

Functions and structure

Functions

Internet router

The FRITZ!Box 6825 4G is an internet router for mobile networks.

Using a SIM card the internet connection can be established via a mobile network. The following mobile communication networks are supported:

- 4G (LTE)
- 3G (UMTS)

Wi-Fi

The FRITZ!Box supports Wi-Fi 6 (Wireless AX) on the 2.4 GHz band.

Hub in the home network

The FRITZ!Box is the hub in the home network. The FRITZ!Box media server transmits music, pictures, and videos to playback devices in the home network and FRITZ!NAS allows easy access to files in the local network.

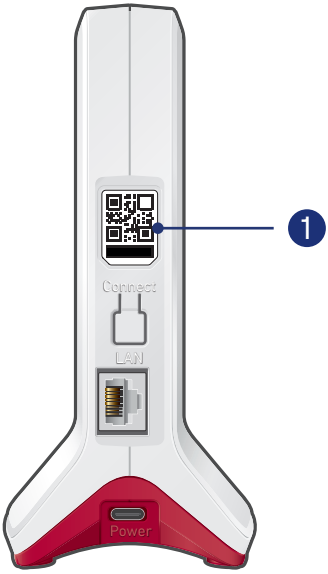
Device data on the type label

Important device data for the FRITZ!Box are presented on the type label on the housing.

Device data on the type label

No.	Meaning
1	Product name
2	Name of Wi-Fi network (SSID)
3	Network key (Wi-Fi password)
4	FRITZ!Box password
5	Serial number
6	Power adapter specification
7	Article number

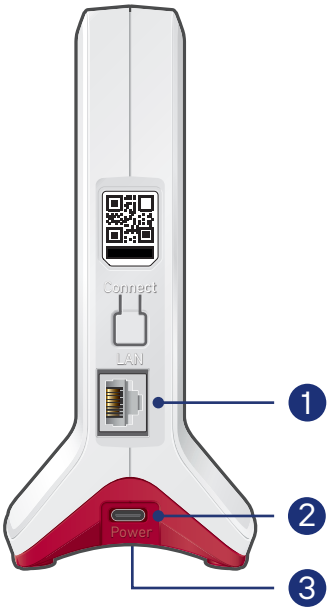
QR code for Wi-Fi



No.	Name	Meaning / Function
1	Wi-Fi access	QR code for Wi-Fi access with the preconfigured Wi-Fi access information

Connection sockets

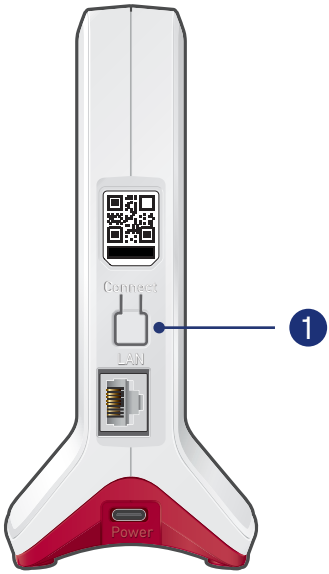
Connector panel



No.	Name	Function
1	LAN	Port for connecting computers and other network-compatible devices like hubs and game consoles
2	Power	Socket for plugging in the power adapter
3	SIM	Slot for the nano-SIM card

Button

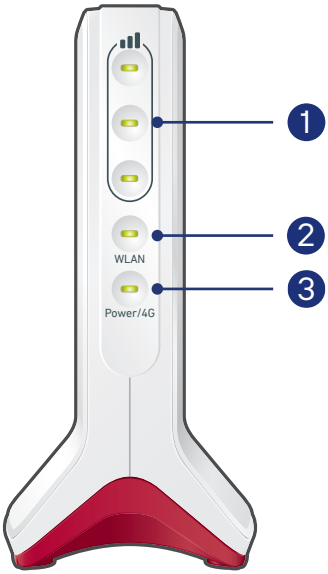
Button functions



No.	Button	Function
1	Connect	• Register wireless devices with the FRITZ! Box via WPS; see page 32 • Enabling Mesh for FRITZ!Repeaters and FRITZ!Powerline; see page 43

LEDs

Meaning of the LEDs



No.	LED	Condition	Meaning
1	Signal Strength		Quality of the mobile network connection and others; see Signal Strength LEDs, page 21.
2	WLAN	on	Wi-Fi is enabled.
		flashing	• Switching Wi-Fi function on or off. • Applying changes to the Wi-Fi settings. • WPS in progress: Registration of a wireless device in progress.
		flashing fast	WPS aborted: more than 1 device is performing WPS with the FRITZ!Box. Repeat the WPS procedure.

No.	LED	Condition	Meaning
3	Power/4 G	on	Connected to power adapter, connected to mobile network. The FRITZ!Box is ready for operation.
		flashing	Connected to power adapter; the mobile network connection is being established or is interrupted.
All		flashing green	The FRITZ!Box is using an existing Wi-Fi network as the internet connection and the Wi-Fi connection to the internet router has been interrupted.

Signal Strength LEDs

LED	Colour	Meaning
	3 green	mobile network or Wi-Fi connection: high signal strength
	2 green	Medium signal strength
	1 green	Low signal strength
	1 red	important message on **http://fritz.box**
	1 flashing green	FRITZ!OS update or modem update

LED	Colour	Meaning
	1 flashing red	unsuitable power adapter Use the power adapter included with delivery. For information on power adapter, see type label on outside of FRITZ!Box housing.

Connecting

Connecting FRITZ!Box: Steps

Connect the FRITZ!Box by performing the following steps:

	Instructions
	Place the FRITZ!Box in a suitable location.
	For internet access via the mobile network: Insert the SIM card into the SIM card slot.
	Connect the FRITZ!Box to the power adapter.
	Connect a computer to the FRITZ!Box via LAN cable, or connect a computer, smartphone or tablet to the FRITZ!Box via Wi-Fi.

Placing

Rules for setting up the FRITZ!Box

- Only use the FRITZ!Box indoors.
- Connect the FRITZ!Box to a power socket that is easy to reach, so that you can unplug the FRITZ!Box at any time.
- Position the FRITZ!Box in a dry location that is free of dust.
- Do not place the FRITZ!Box on heat-sensitive surfaces like furniture with sensitive paintwork.
- To avoid heat accumulation, the FRITZ!Box should not be placed on carpets or upholstered furniture.
- Provide for sufficient air circulation around the FRITZ!Box. Do not cover the FRITZ!Box. The ventilation slits must never be obstructed.

Rules for optimum mobile reception

- Use the alignment aid of the FRITZ!Box to determine the best possible position of the FRITZ!Box for mobile network reception.

  The alignment aid is located in the FRITZ!Box user interface (see page 36) under **Internet** > **LTE Information** > **Reception**.

Rules for optimum Wi-Fi reception

- Place the FRITZ!Box in a central location. A raised location like a shelf is ideal.
- The fewer walls and ceilings between the FRITZ!Box and your wireless devices, the better.
- Do not place the FRITZ!Box in, behind, or under a cabinet.
- Do not place the FRITZ!Box near metallic objects or objects containing water, like radiators, a refrigerator, or a houseplant.
- Make sure there is enough distance from potential sources of interference like microwaves, wireless speakers, and Bluetooth devices.

Instructions: FRITZ!Box placement

1. In compliance with the rules mentioned above, select a suitable location for the FRITZ!Box.
2. Place the FRITZ!Box in this location.

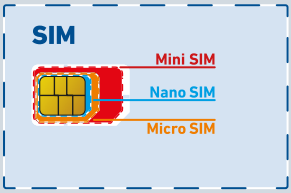
Connecting to the internet: Mobile network

The FRITZ!Box 6825 4G establishes the internet connection via the mobile network. For a mobile network connection a SIM card is required.

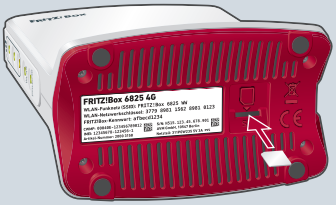
The FRITZ!Box can also share the internet connection of another router. This can be a router, or a smartphone configured as a hotspot. The FRITZ!Box establishes the connection to the device via Wi-Fi; see page 38.

Instructions: Insert the Nano-SIM Card

1. Break the nano-SIM card out of the SIM card.



2. Hold the FRITZ!Box such that the LEDS are on the left and the SIM slot is facing you.
3. Insert the nano SIM card into the slot of the FRITZ!Box with the contacts facing downwards. The slanted edge of the card will be on the left.



4. Push the SIM card gently into the slot until the SIM card clicks into place.

The SIM card is inserted correctly when it is firmly in the slot and just a few millimetres stick out. Pressing the SIM card again releases it from the slot.

Connecting to electric power

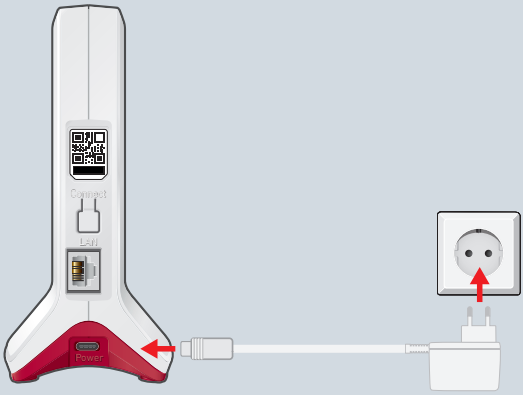
Connect the FRITZ!Box to the power adapter.

Please note

- If at all possible, do not use any power strips or extension cords.
- If it is not possible to avoid using a socket strip or an extension cord, then do not connect multiple extension cords or socket strips to each other.
- Use only the power adapter included with delivery.

Instructions: Plugging in to electrical power

1. Plug the power adapter into a power socket.
2. Connect the power adapter to the socket on the FRITZ!Box labelled **Power**.



Connecting computers and other devices using a LAN cable

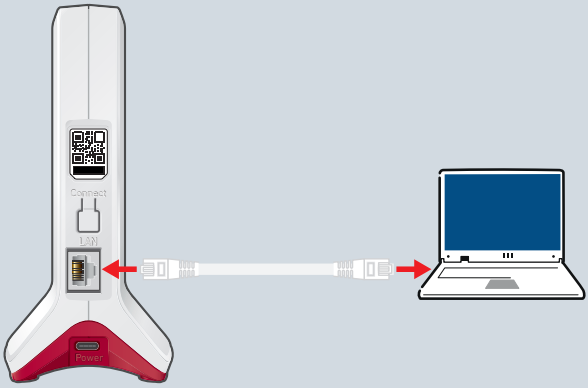
You can connect laptops, PCs, and other network devices with the FRITZ!Box using a LAN cable.

Please note

- The LAN cable used must not be longer than 100 m.

Instructions: Connecting a computer with a LAN cable

1. Insert the LAN cable into the LAN port of the computer.
2. Insert the free end of the cable into a LAN port on the FRITZ!Box.



Instructions: Connecting a network hub or network switch

1. Insert the LAN cable included in the package into the uplink port of the network hub or network switch.
2. Insert the free end of the cable into a LAN port on the FRITZ!Box.

Connecting wireless devices with the FRITZ!Box

You can connect computers, smartphones, tablets, and other network devices wirelessly with the FRITZ!Box via Wi-Fi.

Wi-Fi connections can be established using a QR code, the Wi-Fi network key of the FRITZ!Box, or via WPS.

Requirements

- For Wi-Fi connections via WPS: Your wireless device supports WPS at the touch of a button (WPS Push Button).

Many Windows computers support WPS. Apple devices (macOS, iOS) do not support WPS.

Finding the Wi-Fi QR code of the FRITZ!Box

The QR code with the preconfigured Wi-Fi access information of the FRITZ!Box is found on the FRITZ! Notes and on a sticker on the outside of the FRITZ!Box housing.

If you changed the Wi-Fi settings, use the QR code from the FRITZ!Box user interface. There the QR code is found in the **Wi-Fi** > **Wi-Fi Network** menu.

Instructions: Establishing a Wi-Fi connection with the QR code

1. Open an app on your smartphone or tablet for scanning QR codes.

   Many mobile devices and tablets can scan QR codes using the camera app.
2. Scan the Wi-Fi code of the FRITZ!Box.

The mobile device detects the QR code automatically and offers way to establish the Wi-Fi connection.

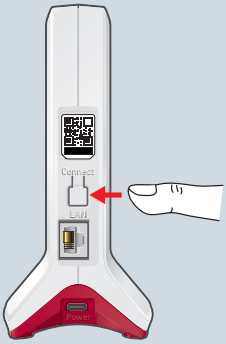
Instructions: Establishing a Wi-Fi connection using a network key

1. On the wireless device, select the Wi-Fi network of the FRITZ!Box.
   The preconfigured name of the Wi-Fi network (SSID) is printed on the type label attached to the FRITZ!Box housing.
2. Start the connection procedure.
3. Enter the network key of the FRITZ!Box.
   This is printed on the type label on the outside of the FRITZ!Box housing.

Instructions: Establishing a Wi-Fi connection using WPS

WPS is a method for establishing secure Wi-Fi connections at the touch of a button.

1. Select the Wi-Fi network of the FRITZ!Box.
   The preconfigured name of the Wi-Fi network (SSID) is printed on the type label attached to the FRITZ!Box housing.
2. Start the connection procedure with WPS; see the documentation of the wireless device.
3. On the FRITZ!Box: Press the **Connect** button briefly.



The **WLAN** LED flashes while the Wi-Fi connection is being established.

Configuring

Configuring the FRITZ!Box: Steps

Configure the FRITZ!Box by performing the following steps:

	Instructions
	Set up the internet connection in the FRITZ!Box.

Using the initial configuration wizard

The first time the user interface is opened, the wizard for the initial configuration of the FRITZ!Box starts. The wizard assists you in configuring your internet connection.

You need

For initial configuration with the wizard, you need the following:

- The preconfigured FRITZ!Box password.

  The FRITZ!Box password is printed on the FRITZ! Notes and on the type label on the outside of the FRITZ!Box housing.

Opening the FRITZ!Box User interface

The FRITZ!Box has a user interface you can open in a browser on your computer, tablet or smartphone. Configure the FRITZ!Box in the user interface.

Requirements

- Your computer, smartphone or tablet is connected with the FRITZ!Box via Wi-Fi or network cable.
- The connection is **not** via the Wi-Fi guest access of the FRITZ!Box.

Instructions: Opening the FRITZ!Box user interface

1. Start a web browser on your computer or mobile device.
2. Enter the address **http://fritz.box**.

   You can also use the following addresses:
   - **http://169.254.1.1** (fallback IP address)
   - local IP address of the FRITZ!Box (default: **http://192.168.178.1**)
3. Log in with the FRITZ!Box password or with the login data of a FRITZ!Box user.
   The preconfigured FRITZ!Box password is printed on the type label on the outside of the housing and on the FRITZ! Notes service card.

The first time the user interface is opened, the wizard for the initial configuration of the FRITZ!Box starts. The next time it is opened, the **Overview** page appears.

Configuring the internet connection via the mobile network

The internet connection for the mobile phone network has to be set up once in the FRITZ!Box. The first time you open the FRITZ!Box user interface, you will automatically be prompted to configure the internet connection.

Requirements

- A SIM card from a mobile network provider has been inserted into the SIM card slot of the FRITZ!Box.

You need

- The PIN you received along with the SIM card.

Instructions: Configuring the internet connection

1. Open the user interface; see page 36.
2. If the wizard does not start automatically, click on **Wizards** in the menu.
3. Click on **Configure the Internet Connection**.
4. Follow the wizard's instructions.

Option: Configuring internet access via Wi-Fi

The FRITZ!Box can share the internet connection of another device via a Wi-Fi connection. This can be a router, or a smartphone configured as a hotspot.

Operating mode of the FRITZ!Box

The following apply when the FRITZ!Box has this kind of internet connection:

- In the default setting, the FRITZ!Box receives an IP address from the other router via DHCP.
- The FRITZ!Box works as a router and generates its own IP network.
- The firewall of the FRITZ!Box is enabled.
- The Wi-Fi network of the FRITZ!Box with its own security settings can be used in addition to the Wi-Fi network of the other router.

Requirements

- The Wi-Fi network of the other device transmits in the 2.4-GHz frequency band.
- The Wi-Fi uses WPA or WPA3 encryption.
- The Wi-Fi network allows the FRITZ!Box to set up a Wi-Fi connection.

Instructions: Configuring internet access via Wi-Fi

1. Open the user interface; see page 36.
2. Click in the menu on **Internet** > **Account Information**.
3. Select the Wi-Fi network you want to connect the FRITZ!Box with.
4. Enter the network key of the Wi-Fi network in the **Network key** field in the **Security** area.

5. Save your settings by clicking on **Apply**.

The FRITZ!Box is configured as a router and the network range is changed automatically. The FRITZ!Box, along with the connected network devices, forms its own self-contained network.

Expanding a Wi-Fi network with Mesh

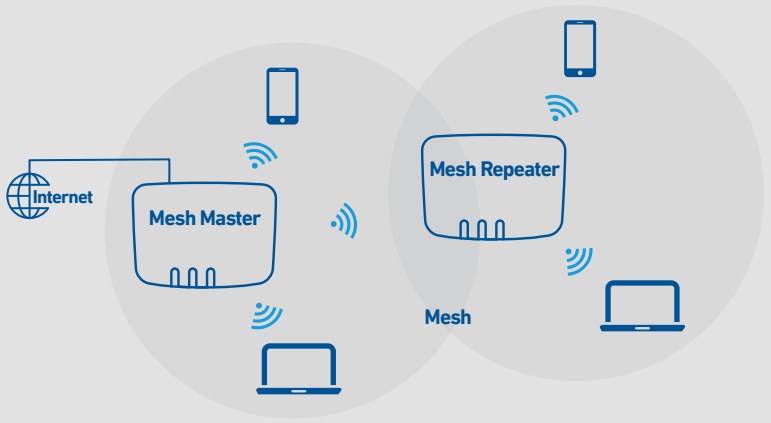
Mesh with FRITZ!

If the Wi-Fi network of the FRITZ!Box does not reach all of your rooms, then you can extend it with various FRITZ! devices.

Mesh combines the individual Wi-Fi networks of the FRITZ! devices into one large Wi-Fi network which has just one Wi-Fi network name and one network key.

The FRITZ!Box is the hub of the Mesh, the Mesh Master. Other FRITZ! devices in the Mesh are Mesh Repeaters.

Example configuration



FRITZ! devices with Mesh

The following FRITZ! products can be used as **Mesh Repeaters** to expand the Wi-Fi network of the FRITZ!Box:

FRITZ! device	Details
FRITZ!Repeater	Connection to the FRITZ!Box via Wi-Fi; for FRITZ!Repeater devices with a LAN port, also option to connect via LAN cable
FRITZ!Powerline	Connection to the FRITZ!Box over electrical wiring

FRITZ! device	Details
Second FRITZ!Box	The second FRITZ!Box must support the **Mesh Repeater** and **IP client mode** functions. Connection to the Mesh Master via LAN cable; many FRITZ!Box devices can also be connected via Wi-Fi

Enabling Mesh for FRITZ!Repeaters and FRITZ!Powerline

In order to benefit from the advantages of Mesh, enable Mesh for all FRITZ!Repeater and FRITZ!Powerline devices located in the home network of your FRITZ!Box.

Requirements

- FRITZ!Repeater / FRITZ!Powerline with FRITZ!OS 7 or later

Instructions: Enabling Mesh for FRITZ!Repeaters

1. Open the FRITZ!Box user interface; see page 36.
2. Click on **Home Network** > **Mesh** in the menu.
3. The FRITZ!Box is displayed in the overview with the **Mesh enabled** symbol.
   If the symbol is also displayed on the FRITZ!Repeater, then Mesh is already enabled for the FRITZ!Repeater.
   If the symbol is not displayed on the FRITZ!Repeater, continue with the next step.
4. Press the button on the FRITZ!Repeater.
   After the button is released, the **WLAN** or **Connect** LED on the FRITZ!Repeater flashes rapidly.
5. Within 2 minutes, start WPS on the FRITZ!Box. Do this by pressing the **Connect** button.

Mesh is enabled and FRITZ!Repeater is displayed in the overview marked with the **Mesh enabled** symbol.

Instructions: Enabling Mesh for FRITZ!Powerlines

1. Open the FRITZ!Box user interface; see page 36.
2. Click on **Home Network** > **Mesh** in the menu.
3. The FRITZ!Box is displayed in the overview with the **Mesh enabled** symbol.

If the symbol is also displayed on the FRITZ!Powerline device, then Mesh is alreadv enabled for the FRITZ!Powerline.
If the symbol is not displayed on the FRITZ!Powerline device, continue with the next step.

4. Press the button on FRITZ!Powerline to establish a connection:

FRITZ!Powerline model	Connection button
1260E	Connect
1240E, 546E, 540E	WLAN/WPS

After the button is released, all of the LEDs on FRITZ!Powerline flash.

5. Within 2 minutes, start WPS on the FRITZ!Box. Do this by pressing the **Connect** button.

Mesh is enabled and FRITZ!Powerline is displayed in the overview marked with the **Mesh enabled** symbol.

User interface: Internet menu

Using FRITZ! services (AVM services)

Various FRITZ! services (AVM services) help keep the FRITZ!OS up to date and improve the operation and security of the FRITZ!Box 6825 4G.

FRITZ! services

The following FRITZ! services are provided by your FRITZ!Box:

FRITZ! service	Explanation
Search for updates	Your FRITZ!Box connects to the FRITZ! update server regularly to search for and install new versions of FRITZ!OS.
Diagnostics data for error analysis	Upon suspicion of misuse by third parties, your FRITZ!Box transmits error reports or technical diagnostics data to FRITZ! for analysis.
Diagnostics data for system maintenance	Your FRITZ!Box transmits device-specific data to FRITZ! for the development of security updates and to further develop FRITZ!OS.

Data privacy

The diagnostics data and the device-specific data transmitted by your FRITZ!Box to FRITZ! do not contain any personalized data. The data transmitted serve the exclusive purpose of technical adaptations and optimizations of your FRITZ!Box. Also, FRITZ! does not pass these data on to third parties. The exact wording of the data privacy statement is presented under **Legal Notice** > **Data Privacy Statement** in the online help.

Instructions: Configuring FRITZ! services (AVM services)

1. Open the user interface; see page 36.
2. Click in the menu on **Internet** > **Account Information** and on the **FRITZ! Services** tab.

3. For instructions, open the online help ?.

Configuring parental controls

With parental controls you can control the internet use of devices in the home network. You can limit online time, restrict access to only certain websites, or block certain websites.

Rules for restricting internet use are saved in access profiles. Each access profile can be assigned to one or multiple devices in the home network; see page 51.

The following functions are also available:

- With the device block you can block the internet use of a device in the home network without using a special access profile; see page 49
- You can distribute tickets with which users in the home network can extend online time for individual devices; see page 50.
- For devices with restricted online time, the remaining online time permitted can be queried; see page 50.

Instructions: Configuring parental controls for a device in the home network

1. Open the user interface; see page 36.
2. Click on **Internet** > **Filter** in the menu and then on the **Access Profiles** tab.
3. If there is no access profile with the settings you want, then create a new access profile.

   For instructions, open the online help ?.
4. Click on **Internet** > **Filter** in the menu and then on the **Parental Controls** tab.
5. Click on **Change Access Profiles** and assign the desired access profile to the device in the home network.
6. Save with **Refresh**.

Instructions: Blocking a device

1. Open the user interface; see page 36.
2. Click on **Internet** > **Filter** in the menu and then on the **Parental Controls** tab.
3. Click in the table on **Block** next to the device to be blocked from internet access.

The device no longer has access to the internet.

Instructions: Distributing a ticket for extended use time

One ticket extends the online time for 45 minutes. The ticket can be redeemed before the online time runs out to allow internet use to be prolonged without a break.

1. Open the user interface; see page 36.
2. Click on **Internet** > **Filter** in the menu and then on the **Access Profiles** tab.

   Ten tickets for additional online time will be displayed.
3. If you want to distribute multiple tickets, print them out and distribute the tickets to users of devices in the home network.

   If you want to distribute only one single ticket, click on **Share Ticket**. A single ticket is saved to the clipboard and can be sent to the user of the device in the home network however you like.

Instructions: Querying the remaining online time on a device in the home network

Devices in the home network that have their online time restricted can query how much online time they have left.

1. In the browser on the device, enter the address **fritz.box**.

   The remaining online time is displayed in the **Parental Controls** window. If the user has a ticket to extend online time, it can be redeemed here.

Creating and assigning access profiles

In an access profile you can restrict online time for devices in the home network, block websites, or permit access only to certain websites.

You can create different access profiles and assign each access profile to one or multiple devices in the home network.

Function of an access profile

An access profile specifies what is allowed during internet use. An access profile takes into consideration three aspects of internet use:

Aspect	Description
Time limit	You can define when and for how long internet use is permitted each day.
Filters for websites	With the filter lists you can specify which websites are allowed to be accessed and which are blocked.
Blocked network applications	With the list of blocked network applications you specify which network applications are allowed to communicate over the internet. This list can contain, for instance, file sharing programs or chat software.

Example

You have two children and would like to control internet use for each child individually:

- Create an access profile for each child.
- Specify in each access profile the restrictions to internet use intended for the given child.

Preconfigured access profiles

Name	Properties
Standard	• Default access profile for devices registering in the home network for the first time • Internet use not restricted • Can be changed
Guest	• Access profile possible for devices that register with the guest network • Can be changed
Unrestricted	• Internet use not restricted • Cannot be changed

Instructions: Creating and assigning an access profile

1. Open the user interface; see page 36.
2. Click on **Internet** > **Filter** in the menu and then on the **Access Profiles** tab.
3. For instructions, open the online help ?.

Editing filter lists

For devices in the home network whose internet use is not to be restricted by parental controls, you can block websites.

You do this using filter lists, which either allow only certain websites, or block certain websites. These lists can then be used as filters in the access profiles.

Filter lists

The following filter lists can be enabled in access profiles. The access profiles can be assigned to devices in the home network via the parental controls.

Filter list	Function and use
Permitted Websites	Use this list if most websites are to be blocked and only a few websites are to be permitted.
Blocked Websites	Use this list if access to most websites is to be permitted and only a few websites are to be blocked.
Permitted IP Addresses	When you enable a filter list in an access profile, opening IP addresses in the internet directly is blocked for this access profile. You can release individual IP addresses for access in the **Permitted IP Addresses** list. The FRITZ!Box automatically adds IP addresses entered in the browsers to the list. The IP addresses remain blocked until they are released.
IP Block List	With this list you can block incoming connections from specific IP addresses. IP addresses entered in the list cannot establish connections to the FRITZ!Box.

Instructions: Editing filter lists

1. Open the user interface; see page 36.

2. Click on **Internet** > **Filter** in the menu and then on the **Lists** tab.
3. For instructions, open the online help ?.

Prioritizing internet access for devices and applications

In the FRITZ!Box, you can specify devices and applications in the home network that are to be prioritized when the internet connection is working to capacity.

Prioritization categories

Three categories can be selected for prioritization:

Real-Time Applications: intended for applications with high demands on transmission speed and reaction times, for example, IPTV, or video on demand. When a real-time application is using the internet connection to full capacity, no other data will be transmitted.

Prioritized Applications: intended for applications that require fast reaction times, for example, company access, terminal applications, games. These applications will be granted higher priority. When a prioritized application uses the full capacity of the internet connection, the data of other applications will be transferred with lower priority.

Background Applications: for applications that run in the background, which are treated with low priority when the internet connection is running at capacity, for instance, automatic updates or peer-to-peer services.

Instructions: Configuring prioritization rules for a device or application

1. Open the user interface; see page 36.
2. Click on **Internet** > **Filter** in the menu and then on the **Prioritization** tab.
3. For instructions, open the online help ?.

Configuring port sharing

The firewall of the FRITZ!Box protects all of the devices in the home network from incoming connections and unwanted data from the internet.

With port sharing you can make applications in the home network accessible for other internet users, for instance, online games or file-sharing programs. With port sharing you can also allow internet users to access server services in the home network, for instance, an HTTP, FTP, VPN, terminal, or remote maintenance server.

Port sharing grants other internet users controlled access to devices and applications in the home network.

Port sharing on protocols

Port sharing in the FRITZ!Box is possible on the following protocols:

Protocol	Internet protocol	Explanation
PING	IPv6	The FRITZ!Box responds to pings from the internet addressed to the IPv6 address of the FRITZ!Box. In addition, you can set ping6 sharing for each individual computer in the home network. Every computer has its own globally valid IPv6 address.
TCP UDP	IPv4	Within IPv4 networks you can open the FRITZ!Box firewall for the TCP and UDP protocols when entering the port range. One port can be opened for exactly one computer.
	IPv6	Within IPv6 networks you can open the FRITZ!Box firewall for the TCP and UDP protocols when entering the port range. One port can be opened for each computer in the network.

Protocol	Internet protocol	Explanation
ESP GRE	IPv4	Within IPv4 networks you can open the firewall for the two protocols ESP and GRE, which do not use ports.

Instructions: Configuring port sharing

1. Open the user interface; see page 36.
2. Click on **Internet** > **Permit Access** in the menu and then on the **Port Sharing** tab.
3. For instructions, open the online help ?.

Enabling dynamic DNS

With dynamic DNS, the FRITZ!Box can be reached in the internet under a fixed name. This way you can access a NAS system in the home network, for instance, or perform remote maintenance on a computer.

The domain name does not change even if the FRITZ!Box receives a new public IP address after the internet connection is interrupted.

In order to use dynamic DNS, you must be registered with a dynamic DNS provider and have configured a domain name.

The alternative: MyFRITZ!

With the free FRITZ! service MyFRITZ!, too, you can access your FRITZ!Box and the home network at any time over the internet; see page 118.

Instructions: Enabling dynamic DNS

1. Open the user interface; see page 36.
2. Click on **Internet** > **Permit Access** in the menu and then on the **DynDNS** tab.
3. For instructions, open the online help ?.

Accessing the FRITZ!Box from the internet

You can also access the FRITZ!Box user interface via the internet from on the go.

For access via the internet, enable the HTTPS protocol in the FRITZ!Box.

HTTPS

Protocol	Function
HTTPS (Hypertext Transfer Protocol Secure)	Internet protocol for secure communication between the web server and the browser in the internet Enable HTTPS in order to access the FRITZ!Box from the internet.

Requirements

- In the FRITZ!Box at least one user has been configured with access rights from the internet.
- To change FRITZ!Box settings that require additional confirmation (two-factor authentication): You configured an authenticator app for the user with access rights from the internet. Instructions are presented in the online help of the FRITZ!Box user interface.

Instructions: Enabling HTTPS in FRITZ!Box

1. Open the user interface; see page 36.
2. Click on **Internet** > **Permit Access** in the menu and then on the **FRITZ!Box Services** tab.
3. For instructions, open the online help ?.

Configuring VPN

A VPN (Virtual Private Network) allows bug-proof encrypted connections over the internet. Via VPN you can:

- Establish connections to your FRITZ!Box and to devices in the home network on a smartphone, tablet, or computer.
- Connect two or more FRITZ! home networks at different locations with each other via VPN (LAN-LAN linkup).
- Connect your FRITZ! home network with the VPN server at your company (via IPSec).

Additional information on VPN with FRITZ! is presented at fritz.com/service/vpn.

Requirements

- The FRITZ!Box is **not** configured as an IP client.

VPN with MyFRITZ!App for Android

You can establish MyFRITZ!App IPSec VPN connections to the FRITZ!Box on smartphones and tablets with Android.

Install the MyFRITZ!App on your mobile device and register with the FRITZ!Box. Then configure the VPN connection in the settings of the MyFRITZ!App.

When you now establish a VPN connection to your FRITZ!Box in the MyFRITZ!App, all your Android device's internet communication takes place over VPN.

IPv4 and IPv6 network traffic over VPN

The FRITZ!Box can establish VPN connections over IPv4 and over IPv6. This means that VPN connections can also be established if the FRITZ!Box is operated on an internet connection with Dual-Stack Lite (DS-Lite).

Only IPv4 data are transmitted within the VPN tunnel. It is not possible to access internet services or devices in the remote network over the VPN connection if they are only available via IPv6.

Maximum number of concurrent VPN connections

The maximum number of VPN connections that can be used at the same time depends on the speed and current utilization of the internet connection, the VPN technologies used, and the utilization of the FRITZ!Box. We recommend using no more than 10 to 20 VPN connections at any given time.

IPSec connections can be configured for up to 20 users.

Instructions: Configuring VPN in the FRITZ!Box

1. Open the user interface; see page 36.
2. Click on **Internet** > **Permit Access** in the menu.
3. If you would like to configure a VPN connection with IPSec, click on **VPN (IPSec)**.
   If you would like to configure a VPN connection with WireGuard, click on **VPN (WireGuard)**.
4. For instructions, open the online help ?.

Configuring IPv6

The FRITZ!Box supports IPv6 and can establish IPv6 connections.

Services that support IPv6

Services in the home network that support IPv6:

- Access to the user interface with HTTP or HTTPS over IPv6
- The DNS resolver of the FRITZ!Box supports queries for IPv6 addresses (AAAA records) and can query the upstream DNS resolver of the internet service provider over IPv6
- The globally valid prefix is distributed via router advertisement
- For guest access to the Wi-Fi network, the home network and Wi-Fi guests are separated by IPv6 subnetworks

IPv6-capable services on the internet:

- Completely closed firewall to protect against unsolicited data from the internet (Stateful Inspection Firewall)
- Voice over IPv6
- Automatic provisioning (TR-069)
- Time synchronization over NTP (Network Time Protocol)
- Remote access via HTTPS
- Dynamic DNS via dyndns.org or namemaster.de

Instructions: Configuring IPv6 in the FRITZ!Box

1. Open the user interface; see page 36.
2. Click in the menu on **Internet** > **Account Information** and on the **IPv6** tab.
3. For instructions, open the online help ?.

User interface: Home Network menu

Overview of the devices in the home network (Mesh Overview)

The Mesh Overview in the FRITZ!Box user interface displays all active devices in the home network and the guest network.

For FRITZ! devices with their own user interface, the user interface can be opened via a link.

You can perform updates for FRITZ! devices and enable Mesh for FRITZ! devices that support Wi-Fi.

You can also rename devices, select symbols that match the device type for devices from other manufacturers, and see at a glance which devices currently have internet access blocked by parental controls.

Blocked devices

The symbol **Device block enabled** identifies devices in the home network for which internet access is currently blocked by parental controls.

The **Mesh Overview** does not show any blocked devices that are currently switched off or in use outside the home network. All blocked devices are displayed in the user interface under **Internet** > **Filter** on the **Parental Controls** tab. There you can also block and unblock devices by mouse click.

Enabling Mesh for FRITZ! devices

The symbol **Mesh enabled** identifies the FRITZ! devices for which Mesh is enabled. If a FRITZ!Box, a FRITZ!Repeater, or a FRITZ!Powerline device with Wi-Fi functionality is displayed without the Mesh symbol, enable Mesh for this device; see page 43.

Instructions: Performing updates for FRITZ! devices

1. Open the user interface; see page 36.

2. Click on **Home Network** > **Mesh** in the menu and then on the **Mesh Overview** tab.
3. Scroll to the end of the page and click on **Search for updates**.

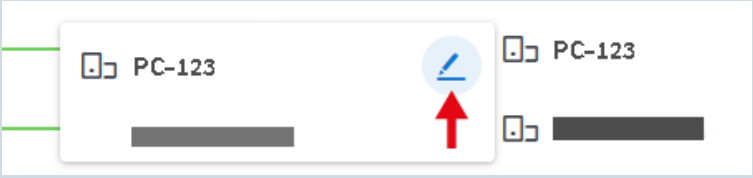
   If an update is available, then **Update available** is displayed in the **Update** column of the **This FRITZ!Box** row.
4. Click on **Refresh**.

   The display switches to **System** > **Update** and to the **FRITZ!OS version** tab.
5. Click on **Install New FRITZ!OS**.

   The update will be started. After the update process begins, you will be redirected to the **Mesh Overview** page. The progress of the update is visible in the activity bar there.

Instructions: Renaming device and changing symbol

1. Open the user interface; see page 36.
2. Click on **Home Network** > **Mesh** in the menu and then on the **Mesh Overview** tab.
3. Move the mouse in the overview over the device you would like to rename and click on the **Edit** button.



4. Enter a new device name for the device.
5. FRITZ! devices are automatically assigned the symbol for their device type. You can select an appropriate symbol for devices from other manufacturers: Click on the symbol with a blue background next to the device name, select a symbol, and click on **Apply**.
6. Save your settings by clicking on **Apply**.

Managing network devices

Under **Home Network** > **Network** > **Network Connections** in the FRITZ!Box user interface there is a table with all network connections of the FRITZ!Box. You can edit the properties of connections and add or remove devices.

Network connections

The Network Connections table contains:

- Devices in the home network that are connected with the FRITZ!Box by LAN cable or via Wi-Fi
- VPN connections to the home network

To find devices quickly, you can sort the table columns:

- ▲▼ to sort in alphabetical order
- ▲▼ to sort in reverse alphabetical order

Adding a device

You can include in the table even network devices that are not yet physically connected with the FRITZ!Box.

As soon as an entry for a device is included in the table, you can configure various properties, for instance, port sharing.

The type of connection will not be listed in the table until the device is physically connected with the FRITZ!Box.

Removing devices

Devices with unused connections can be removed from the network connections table.

You can remove an individual device using the delete symbol: 🗑

With the **Remove All Connections** button you can remove all unused connections for which no settings have been configured.

Connections with individual settings, for instance port sharing, parental controls, or fixed IP addresses, remain intact.

Changing the IPv4 settings of the FRITZ!Box

Two IPv4 networks are preconfigured in the FRITZ!Box: the home network and the guest network. You can change the IPv4 settings for the home network. The IPv4 settings for the guest network cannot be changed.

Preconfigured IPv4 values

IPv4 setting	Preconfigured values
IPv4 address of the FRITZ!Box in the home network	192.168.178.1
Subnet mask	255.255.255.0
IPv4 network address	192.168.178.0
DHCP server	enabled
Validity of IPv4 addresses assigned by DHCP server	10 days
Address range of the DHCP server	192.168.178.20 - 192.168.178.200
Local DNS server	192.168.178.1 You can enter the IP address of a different DNS server.

The preconfigured values yield the following addresses and address ranges:

Address / Address range	Preconfigured values	Use
Address range for the network devices:	192.168.178.2 - 192.168.178.254	
Addresses below the DHCP address range	192.168.178.2 - 192.168.178.19	The addresses can be assigned as fixed IPv4 addresses.

Address / Address range	Preconfigured values	Use
Addresses above the DHCP address range	192.168.178.201 - 192.168.178.254	The addresses can be assigned as fixed IPv4 addresses and are used when VPN users are configured.
Broadcast address	192.168.178.255	The address will be used to send messages within the network.

Preconfigured IPv4 values for the guest network

You cannot change these values.

IPv4 setting	Preconfigured values
IPv4 address of the FRITZ!Box in the guest network.	192.168.179.1
Subnet mask	255.255.255.0
IPv4 network address	192.168.179.0
Address range available for network devices	192.168.179.2 - 192.168.179.254
DHCP server	enabled
Validity of IPv4 addresses assigned by DHCP server	6 hours

Fallback IPv4 address

With this additional IPv4 address, which cannot be changed, the FRITZ!Box can always be reached: **169.254.1.1**

Application cases

In the following cases it may be necessary to change the IPv4 address of the FRITZ!Box:

- VPN connection: The network of the FRITZ!Box is connected with another FRITZ!Box network (LAN-LAN linkup). The IPv4 settings of the two networks must not be identical.
- The FRITZ!Box is integrated in an existing FRITZ!Box or FRITZ!Repeater network and both FRITZ! devices are used as routers. The IPv4 settings of the two networks must not be identical.
- You want to integrate network devices into your home network that have fixed IP addresses specified by the manufacturer, for example TVs, speakers.

Instructions: Changing the IPv4 settings

1. Open the user interface; see page 36.
2. Click on **Home Network** > **Network** in the menu and then on the **Network Settings** tab.
3. For instructions, open the online help ?.

Distributing IPv4 addresses

Every network device in the IPv4 home network of the FRITZ!Box has an address from the IPv4 address range of the FRITZ!Box. Either a network device receives its IPv4 address automatically from the DHCP server of the FRITZ!Box, or you enter the IP address manually in the network settings of the network device.

IPv4 DHCP server

DHCP stands for Dynamic Host Configuration Protocol. A DHCP server in the IPv4 network assigns IPv4 addresses to the network devices automatically. Assigning the IP addresses via the DHCP server ensures that all of the network devices connected with the FRITZ!Box are located in the same IP network.

The DHCP server of the FRITZ!Box is enabled upon delivery.

One part of the IPv4 address range of the FRITZ!Box is reserved for the DHCP server. The DHCP server assigns IP addresses from this range to the network devices.

IPv4 addresses reserved for the DHCP server upon delivery
192.168.178.20 - 192.168.178.200

You can change the address range for the DHCP server if needed:

Kind of change	Requirement
Enlarge	If there are many network devices in the network, many IP addresses will be needed. In this case the address range of the DHCP server can be enlarged. Example for a larger range: 192.168.178.20 - 192.168.178.220
Reduce	If there are fewer network devices, the address range can be reduced. Example for a smaller range: 192.168.178.20 - 192.168.178.120

Kind of change	Requirement
Move	If you permanently assign the IPv4 addresses 192.168.178.2 - 192.168.178.49 to network devices, but want to maintain a DHCP address range of the same size, then you can shift the DHCP address range, for instance to the range 192.168.178.50 - 192.168.178.230

Please note

- Only one DHCP server may be active in a network.

Preparing network devices for DHCP

For the IP address to be assigned by the DHCP server, the **Obtain an IP address automatically** option must be enabled in the IPv4 settings of the network devices; see page 76.

When a network device registers with the FRITZ!Box, it receives an IPv4 address from the DHCP server. Every time the network device is restarted, the DHCP server assigns it an IP address again.

Always assign the same IPv4 address

You can specify that the DHCP server always assign the same IPv4 address to network devices. This option can be enabled under **Home Network** > **Network** > **Network Connections** in the detailed settings of the network devices.

Disabling the DHCP server

You can disable the DHCP server of the FRITZ!Box.

In the following cases it is necessary to disable the DHCP server of the FRITZ!Box:

- You use a different DHCP server in your home network.
- You would like to assign addresses to all of the network devices in the home network manually.

Changing IPv6 settings

The FRITZ!Box has preconfigured IPv6 settings upon delivery. You can change these settings.

Requirements

- The **IPv6 support enabled** setting is enabled under **Internet** > **Account Information** > **IPv6** in the FRITZ!Box user interface.

Factory settings

The following IPv6 settings are configured in the FRITZ!Box upon delivery:

IPv6 property	Setting	Meaning
Router advertisement enabled in the LAN	enabled	Router advertisement is a procedure with which a router offers services and information in the local network. The FRITZ!Box offers IPv6 prefixes and IPv6 information in the home network and the guest network through router advertisements.
Assign unique local addresses (ULAs)	enabled	As long as there is no IPv6 internet connection, the FRITZ!Box assigns unique local addresses to the network devices so that they can communicate with each other.
This FRITZ!Box provides the standard internet connection	enabled	This FRITZ!Box provides the default IPv6 connection. Other IPv6 routers are disregarded.

IPv6 property	Setting	Meaning
Also announce DNSv6 server via router advertisement (RFC 5006)	enabled	
Enable DHCPv6 server in the FRITZ!Box for the home network	enabled	The DHCPv6 server is enabled.
Only assign DNS server	enabled	Only the DNS server is announced via DHCPv6.

You can change the settings. For more information on this subject, see the online help of the FRITZ!Box.

Instructions: Changing the IPv6 settings

1. Open the user interface; see page 36.
2. Click on **Home Network** > **Network** in the menu and then on the **Network Settings** tab.
3. For instructions, open the online help ?.

Configuring a static IP route

You can configure a static IP route in the FRITZ!Box and assign a fixed IP address as the gateway.

In a network with multiple IP networks (subnets), a static IP route allows all devices to access the internet via the FRITZ!Box.

Instructions: Configuring a static IPv4 route

1. Open the user interface; see page 36.
2. Click on **Home Network** > **Network** in the menu and then on the **Network Settings** tab.
3. In the **Table for Static Routes** area, click on **IPv4 Routes**.
4. For instructions, open the online help ?.

Instructions: Configuring a static IPv6 route

1. Open the user interface; see page 36.
2. Click on **Home Network** > **Network** in the menu and then on the **Network Settings** tab.
3. Click on **Additional Settings**.
4. Click under **Table for Static Routes** on **IPv6 Routes**.
5. For instructions, open the online help ?.

Obtaining an IP address automatically

Network devices that are to obtain their IP address automatically by DHCP must be configured accordingly. This configuration is performed on the operating system level in the IP settings of the network devices.

Obtaining an IP address automatically in Windows

1. Click on **Start** in Windows 11 and Windows 10.
2. Enter **ncpa.cpl** in the search field and press Enter.
3. Click with the right mouse button on the network connection between the computer and the FRITZ!Box and select **Properties**.
4. Under **This connection uses the following items**, select **Internet Protocol Version 4 (TCP/IPv4)**.
5. Click on the **Properties** button.
6. On the 'General' tab, enable the options **Obtain an IP address automatically** and **Obtain DNS server address automatically**.
7. Save with **OK**.
8. Enable the options **Obtain an IP address automatically** and **Obtain DNS server address automatically** for the internet protocol version 6 (TCP/IPv6) as well.

The network device receives an IP address from the FRITZ!Box.

Obtaining an IP address automatically in macOS

1. Click on **System Settings** in the **Apple** menu.
2. In the **System Preferences** window, click on **Network**.
3. In the **Network** window, click on **Ethernet (integrated)** in the **Show:** menu.
4. Switch to the **TCP/IP** tab and click on **DHCP** in the **Configure IPv4** menu.
5. Click on **OK**.

The network device now automatically receives an IP address from the FRITZ!Box.

Obtaining an IP address automatically in Linux

For comprehensive information and tips on network settings in Linux, see, for example:

www.tldp.org/HOWTO/NET3-4-HOWTO-5.html

Configuring Wake on LAN

Wake on LAN is a function that allows a computer to be started from the internet via network adapter. Wake on LAN can be used with remote maintenance software, to eliminate the need to keep the computer switched on permanently. The FRITZ!Box supports Wake on LAN both for IPv4 and for IPv6 connections.

Requirements

- The network adapter of the computer supports Wake on LAN.
- Your computer is connected with the FRITZ!Box in one of the following ways:
  - by network cable
- For access from the internet, the computer must be in standby operation.

Instructions: Configuring Wake on LAN

1. Open the user interface; see page 36.
2. Click on **Home Network** > **Network** in the menu and then on the **Network Connections** tab.
3. Select the network devices in the list and click on **Edit**.
4. For instructions, open the online help.

Assigning a FRITZ!Box name

You can assign an individual name for your FRITZ!Box in the FRITZ!Box user interface. This name is then adopted as the name of the Wi-Fi network (SSID).

Changing the name may make it necessary to reconfigure your Wi-Fi connections and network links.

Consequences of assigning a name

The name is adopted in the following areas of your home network:

- name of the Wi-Fi network (SSID)
- name of the guest Wi-Fi network (SSID)
- push service sender name
- name of your FRITZ!Box in the device overview in MyFRITZ!

Instructions: Assigning a FRITZ!Box name

1. Open the user interface; see page 36.
2. Click on **Home Network** > **FRITZ!Box Name** in the menu.
3. For instructions, open the online help ?.

User interface: Wi-Fi menu

Switching the Wi-Fi network on and off

When no one is using it, you can switch off the Wi-Fi network. This way you reduce both power consumption and Wi-Fi radiation.

You can switch the Wi-Fi network on and off manually, and set up a schedule for times when the Wi-Fi network is switched on and off automatically.

Switching the Wi-Fi network on and off manually

You can switch the Wi-Fi network on and off in the following ways:

- In the MyFRITZ!App in the **Convenience Features** > **Wi-Fi** menu

Instructions: Switching the Wi-Fi network on and off by schedule

1. Open the user interface; see page 36.
2. Click on **Wi-Fi** > **Schedule** in the menu.
3. For instructions, open the online help ?.

Selecting the Wi-Fi channel

In the default setting **Set Wi-Fi channel settings automatically**, the FRITZ!Box automatically searches for the ideal channel. The FRITZ!Box takes into consideration adjacent Wi-Fi networks and other sources of interference like baby monitors or microwave ovens.

Should problems with interference in the Wi-Fi network persist, try to find the source of interference and eliminate it.

In some cases it may be necessary to adjust the Wi-Fi channel settings.

Instructions: Adjusting the Wi-Fi channel settings

1. Open the user interface; see page 36.
2. Click on **Wi-Fi** > **Wi-Fi Channel** in the menu.
3. For instructions, open the online help ?.

Configuring Wi-Fi guest access

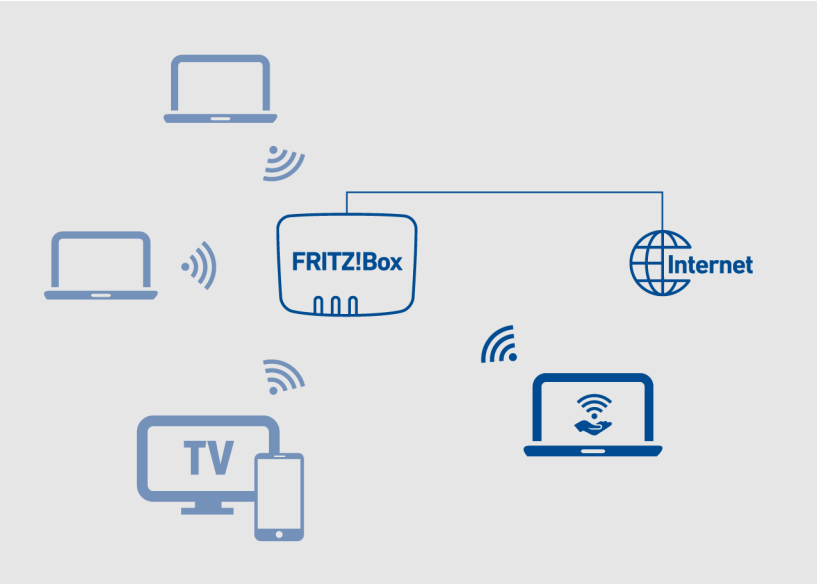
With the Wi-Fi guest access you can make an internet connection available to guests which is separate from your home network. Guests cannot access shared files or printers in the FRITZ!Box home network.

You can configure a private Wi-Fi guest access or a public Wi-Fi hotspot. The private Wi-Fi guest access can only be used with a password and data transmission is encrypted. The private Wi-Fi guest access is suitable for friends and acquaintances who want access to the internet when visiting you at home.

The public Wi-Fi hotspot can be used without a password (open Wi-Fi), making it suitable for the public spaces in shops, cafés, or doctor's offices.

Your guests can connect to the Wi-Fi guest access quickly by scanning a QR code.

Example configuration



Functions for the security and monitoring of the Wi-Fi guest access

Various functions are available for the security and monitoring of the Wi-Fi guest access.

- In the default setting, wireless devices in the guest network cannot communicate with each other.
- You can enable a **captive portal** for the guest access so that the user must confirm the provider's terms of use. Every time the FRITZ!Box is restarted, all users must log back in and consent to the terms of use.
- If you enable the push service for the guest access, you will receive email messages about registrations with and deregistrations from the guest network.
- You can restrict internet applications to surfing and email.

- Wireless devices in the guest network receive the **Guest** access profile in the parental controls. For this access profile you can restrict internet use to certain periods and block certain websites. When **Germany** is selected in the FRITZ!Box user interface as the country under **System** > **Region and Language**, all websites included in the index of the Federal Agency for Child and Youth Protection in the Media (German BPjM module) will be blocked.

Instructions: Configuring Wi-Fi guest access

1. Open the user interface; see page 36.
2. Click on **Wi-Fi** > **Guest Access** in the menu.
3. For instructions, open the online help ?.

User interface: Diagnostics menu

Starting function diagnostics

With the function diagnostics you can get an overview of the functional status of your FRITZ!Box and its internet connection, and of your home network as well. In the event of an error, the diagnostics results can help you localize and remedy any problems.

Function diagnostics checkpoints

Aspect	Checkpoint/Status
FRITZ!Box 6825 4G	• Name of the FRITZ!Box • FRITZ!Box version • FRITZ!OS up to date
Registration	Configured login method to the FRITZ!Box user interface
LAN	• Allocation of LAN ports • Power settings on LAN ports
Wi-Fi	• Wi-Fi frequency band enabled/disabled with wireless function • Number of wireless devices connected • Security settings
Mobile connection	• Status of the mobile network connection • Download and upload rate
Internet connection	• IPv4 connection active since/not active • IPv6 connection active since/not active • Current IP address
MyFRITZ!	• Status of MyFRITZ! activation • MyFRITZ! account email address
Home network	• Number of network devices connected with the FRITZ!Box at present or at an earlier point in time • Number of network devices online

Aspect	Checkpoint/Status
Wi-Fi environment	Wi-Fi frequency band with number of wireless networks on the same or an adjacent channel

Instructions: Starting function diagnostics

1. Open the user interface; see page 36.
2. Click on **Diagnostics** > **Function** in the menu.
3. For instructions, open the online help ?.

Starting security diagnostics

By means of the security diagnostics you get an overview of all security-relevant settings of your FRITZ!Box. At a glance you can see whether the latest FRITZ!OS is installed, which ports are open, which users are logged in or off the FRITZ!Box, which wireless devices with which properties are connected to the FRITZ!Box, and much more.

Security diagnostics checkpoints

Aspect	Checkpoint/Status
FRITZ!OS	• FRITZ!Box version • FRITZ!OS up to date
Registration	Configured login method to the FRITZ!Box user interface
Internet connection	• Ports opened on the FRITZ!Box • Protocols used on these ports • Port sharing for home network devices to the internet • Filters for internet access
MyFRITZ!	• Status of MyFRITZ! activation • MyFRITZ! account email address • Registration link for MyFRITZ! • Overview of MyFRITZ! sharing for access from the internet
Outgoing filters	Overview of active filters for access from the internet
Wi-Fi	• Properties and security-relevant settings for access to the Wi-Fi network and Wi-Fi guest access • Names of registered and known wireless devices

Aspect	Checkpoint/Status
FRITZ!Box users	• All FRITZ!Box users and their rights to access FRITZ!Box contents, for the FRITZ!Box home network and for access from the internet • Time of the last login to the FRITZ!Box and the IP address used to do so

Instructions: Starting security diagnostics

1. Open the user interface; see page 36.
2. Click on **Diagnostics** > **Security** in the menu.
3. For instructions, open the online help ?.

User interface: System menu

Saving power with the FRITZ!Box

The FRITZ!Box offers various settings for energy-saving operation.

Displaying information on power consumption

Information on the current power consumption of the entire FRITZ!Box system is displayed on the **Overview** page in the FRITZ!Box user interface.

Information on the power consumption of the individual areas, and on the average power consumption over the last 24 hours, is presented in the FRITZ!Box user interface under **System** > **Energy Monitor** > **Power Consumption**.

Setting the mode for using energy-saving functions

In the preset, the FRITZ!Box uses a balanced mode for using the energy-saving functions. The most important energy-saving functions are already enabled.

If you would like to further reduce the energy consumption, you can enable the **energy-saving mode**.

Comparison of balanced and energy-saving modes

Function	Balanced mode	Energy-saving mode
Maximum data rate for LAN connections	1 Gbit/s (Power Mode).	100 Mbit/s (Green Mode)
LED brightness	Bright	Weak

Configuring energy-saving functions of the FRITZ!Box

You can configure various energy saving functions in the FRITZ!Box.

Wi-Fi

- You can configure a switching schedule for Wi-Fi; see page 81.
- You can reduce the maximum transmission power The setting is available in the FRITZ!Box user interface, in the **Wi-Fi** > **Wi-Fi Channel** menu, if you enable the **Adjust Wi-Fi Settings** option there.

LAN

- You can use the LAN port in energy-saving (green) mode This setting is found in the FRITZ!Box user interface in the **Home Network** > **Network** menu, on the **Network Settings** tab.

Configuring push services

The FRITZ!Box makes various push services available. Push services are service email messages with information on the activities of your FRITZ!Box. With the push services you can have email sent to you at regular intervals informing you about the latest connections, usage, and configuration of your FRITZ!Box. Push services also support you in restoring your passwords and backing up the FRITZ!Box settings.

Available push services

The following push services are available in your FRITZ!Box:

Push service	Function
FRITZ!Box info	Sends you regular emails with data on FRITZ!Box usage and connections.
Wireless guest access	Sends you a message whenever devices register with or deregister from the Wi-Fi guest access.
SMS reception	Forwards texts that arrive at the FRITZ!Box via the mobile network by email.
New FRITZ!OS	Notifies you whenever a new FRITZ!OS version is available for your FRITZ!Box.
Forgot password	Sends you an access link to the specified email address if you have forgotten your password.
Save settings	Saves the settings of the FRITZ!Box to a backup file before each update and every time the factory settings are restored, and forwards this file by email, protected with a password.
Change notice	Sends you an email every time changes are made to a FRITZ!Box setting or when potentially security-relevant events occur.

Push service	Function
Current IP address	Sends the IP address assigned by the internet provider every time the internet connection is established.

Steps

Configure the push service emails by performing the following steps:

	Instructions
↓	Set an email address as the sender of push service mail.
↓	Enable the desired push services and make any other necessary settings.

Instructions: Configuring and testing an email address for sending push service mail

1. Open the user interface; see page 36.
2. Click on **System** > **Push Service** in the menu and then on the **Sender** tab.
3. For instructions, open the online help ?.

Instructions: Configuring and enabling push services

1. Open the user interface; see page 36.
2. Click on **System** > **Push Service** in the menu and then on the **Push Services** tab.
3. For instructions, open the online help ?.

FRITZ!Box password

For the first login to the FRITZ!Box user interface, a FRITZ!Box password is preconfigured that can be used without a username.

The FRITZ!Box password is printed on the FRITZ! Notes service card and on the type label on the outside of the FRITZ!Box housing.

Please note

- Login using the FRITZ!Box password is possible only within the FRITZ!Box home network.
- With the FRITZ!Box password you have access to the FRITZ!Box settings.
- You can change the preconfigured FRITZ!Box password.
- The FRITZ!Box automatically creates a FRITZ!Box user for the FRITZ!Box password. The username consists of **fritz** and four numerals, for example **fritz1234**.

  Do not change this username; otherwise you will always have to enter the username for the FRITZ!Box password when logging in to the FRITZ!Box.
- The preconfigured FRITZ!Box password is restored if you restore the factory settings to the FRITZ!Box.

Instructions: Changing the FRITZ!Box password

1. Open the user interface; see page 36.
2. Log in with your FRITZ!Box password.
3. Click on the menu with the three dots in the header of the FRITZ!Box user interface.
4. Click on **Change Password** in the menu.
5. Enter a new password.
   Remember to comply with the rules for passwords; see page 99.

Push service for a forgotten password

After changing the FRITZ!Box password, configure the Forgot Password push service. If you forget your password, the FRITZ!Box sends you an email with a link which you can use to assign a new password.

If you lose your FRITZ!Box password and did not configure the Forgot Password push service, you will have to restore the factory settings to the FRITZ!Box and then reconfigure it.

The **Forgot Password** push service is configured in the **System** > **Push Service** menu on the **Push Services** tab.

FRITZ!Box users

A FRITZ!Box user is a user account for accessing the functions and settings of the FRITZ!Box.

Every FRITZ!Box user receives a username and password for logging in to the FRITZ!Box.

You can configure up to 18 FRITZ!Box users and assign different rights to different users. Users with the corresponding rights can also access the FRITZ!Box from the internet.

Rights for FRITZ!Box users

You can assign different rights to FRITZ!Box users to control access to the FRITZ!Box. The following rights are available:

- Access the FRITZ!Box from the internet
- View and edit FRITZ!Box settings
- Establish a VPN connection to the FRITZ!Box

Rules for usernames and passwords

- For FRITZ!Box users, select a username that begins with a letter from a to z in upper or lower case and has a maximum of 32 characters; see page 100.
- Select a password with at least twelve characters, which includes capitals and lower-case letters as well as numerals and special characters; see page 100.
- Configure the **Forgot Password** push service. If you forget your password, the FRITZ!Box sends you an email with a link which you can use to assign a new password.

  If you lose your FRITZ!Box password and did not configure the Forgot Password push service, you will have to restore the factory settings to the FRITZ!Box and then reconfigure it.

Characters allowed for passwords and usernames

Characters	In usernames	In passwords
Latin letters from a to z in lower case and upper case	allowed	allowed
Numerals 0 to 9	allowed	allowed
Spaces	allowed	allowed
Umlauts in upper case and lower case (for example, ä, ö, ü)	not allowed	not allowed
The letter ß in lower case and upper case	not allowed	not allowed
Currency symbols: €	not allowed	not allowed
Special characters: - _ .	allowed	allowed
Special characters: ! ' # $ % & ' (*) + / : ; , < = > ? @ [\ ] ^ ' { | } ~	not allowed	allowed
Special characters: § ´	not allowed	not allowed

Instructions: Configuring FRITZ!Box users

1. Open the user interface; see page 36.
2. Click on **System** > **FRITZ!Box Users** in the menu and then on the **Users** tab.
3. For instructions, open the online help ?.

Switching off the LED display

By means of the LEDs, your FRITZ!Box notifies you about the current connection status and signals events in the home network. In the **System / Buttons and LEDs / LED Display** menu you can switch off the LEDs. Error conditions will still be signalled, and it is also possible to switch them on briefly without permanently changing the LED display settings.

Example

Your FRITZ!Box is located in the bedroom and you find the light from the LEDs too bright or irritating.

Instructions: Switching off the LED display

1. Open the user interface; see page 36.
2. Click on **System** > **Buttons and LEDs** in the menu and then on the **LED Display** tab.
3. For instructions, open the online help ?.

Locking and unlocking buttons

You can lock the buttons on the FRITZ!Box. Locking the buttons prevents the settings of your FRITZ!Box or for your home network from being changed unintentionally or without authorization.

Instructions: Locking or unlocking the buttons of the FRITZ!Box

1. Open the user interface; see page 36.
2. Click on **System** > **Buttons and LEDs** in the menu and then on the **Button Lock** tab.
3. Enable or disable **Button Lock**.
4. Click on **Apply**.

Setting the user interface language

You can change the language of the user interface. You can choose between Dutch, English, French, German, Italian, Polish, and Spanish.

Instructions: Setting the user interface language

1. Open the user interface; see page 36.
2. Click on **System** > **Region and Language** in the menu and then on the **Language** tab.
3. Select the desired language from the drop-down list.
4. Click on **Apply**.

The FRITZ!Box restarts. After restarting, the user interface is in the desired language.

Changing regional options

Use the Region page to specify the country in which your FRITZ!Box is deployed. The country setting optimizes the connection settings of the FRITZ!Box for that country and automatically sets the right time zone.

Instructions: Changing regional options

1. Open the user interface; see page 36.
2. Click on **System** > **Region and Language** in the menu and then on the **Region** tab.
3. For instructions, open the online help ?.

Adjusting the time zone

By default, the FRITZ!Box automatically sets the time zone when it connects to the internet. However, you can also set the time zone where you use the FRITZ!Box manually.

If you are using the FRITZ!Box in a country with daylight saving time, you can enable the option to adjust to daylight time automatically.

For all features of the FRITZ!Box to work smoothly, the FRITZ!Box must always be set to the local time zone where it is located.

Instructions: Adjusting the time zone

1. Open the user interface; see page 36.
2. Click on **System** > **Region and Language** in the menu and then on the **Time Zone** tab.
3. For instructions, open the online help ?.

Saving settings

You can save all of the settings made in your FRITZ!Box to a backup file.

- You can restore the settings saved in your current FRITZ!Box.
- You can load the saved settings into a FRITZ!Box of the same model.
- You can load the saved settings into a FRITZ!Box of another model.

Instructions: Saving settings manually

1. Open the user interface; see page 36.
2. Click on **System** > **Backup** in the menu and then on the **Save** tab.
3. For instructions, open the online help ?.

Instructions: Saving settings automatically

With the **Save Settings** email service you can have an automatically generated file of your FRITZ!Box settings sent to you before an update or before restoring the factory settings to the FRITZ!Box. With this backup file you can restore your personal settings.

1. Open the user interface; see page 36.
2. Click on **System** > **Push Service** in the menu and then on the **Push Services** tab.
3. For instructions, open the online help ?.

Loading settings

FRITZ!Box settings you have previously saved can be restored.

- You can restore settings saved in your current FRITZ!Box.
- You can load the saved settings into a FRITZ!Box of the same model.
- You can load the saved settings into another FRITZ!Box of a different model.

When restoring your FRITZ!Box settings, you can choose whether to restore all settings, or only certain selected ones.

Instructions: Loading settings

1. Open the user interface; see page 36.
2. Click on **System** > **Backup** in the menu and then on the **Restore** tab.
3. For instructions, open the online help ?.

Restarting the FRITZ!Box

A restart of your FRITZ!Box may be necessary if the FRITZ!Box no longer reacts correctly, or if internet connections can no longer be established for no apparent reason. You can perform a restart directly on the FRITZ!Box or via the FRITZ!Box user interface.

Consequences of restarting

- The FRITZ!Box is reinitialized.
- Events in the **System** > **Event Log** menu are deleted.
- Settings you made in the FRITZ!Box remain intact.

Instructions: Restarting the FRITZ!Box

1. Unplug the FRITZ!Box from the power socket.
2. Wait 5 seconds.
3. Insert the plug back into the socket.

Restarting the FRITZ!Box takes about 2 minutes.

Instructions: Restarting the FRITZ!Box from the user interface

1. Open the user interface; see page 36.
2. Click on **System** > **Backup** in the menu and then on the **Restart** tab.
3. For instructions, open the online help ?.

Restoring factory settings to the FRITZ!Box

You can restore the factory settings to the FRITZ!Box.

Application example

- You forgot the login information for the FRITZ!Box user interface and can no longer access the user interface.
- The FRITZ!Box no longer works properly (for instance, due to improper settings).
- The FRITZ!Box is to be passed on to an outside party for repair.
- The FRITZ!Box is to be resold to another user.
- The FRITZ!Box is to be disposed of.

Consequences of resetting

- All of the settings you made in the FRITZ!Box are deleted.
- The Wi-Fi network key from the factory settings will be reactivated.
- The name of the Wi-Fi network (SSID) is reset.
- The IP configuration of the factory settings is restored.

Preparations

If you would like to restart operation of the FRITZ!Box after restoring factory settings, make the following preparations:

- Save your FRITZ!Box settings; see page 106.

Instructions: Restoring factory settings

When the factory settings are restored, all of the settings you made in the FRITZ!Box are deleted.

1. Open the user interface; see page 36.

2. Click on **System** > **Backup** in the menu and then on the **Factory Settings** tab.
3. Click on **Load Factory Settings**.

The FRITZ!Box is reset to its factory settings. All data are deleted.

Configuring automatic FRITZ!OS updates

FRITZ! regularly makes new versions of FRITZ!OS available for your FRITZ!Box, free of charge. FRITZ!OS updates include new functions and provide for more security.

Available auto update settings

With the **Auto Update** feature you can specify whether and which updates are installed automatically. You will always be informed about new FRITZ!OS updates in the overview of the FRITZ!Box user interface.

Auto update setting	Function
Level I: Notify me about new FRITZ!OS versions	You start installation of the updates yourself; see page 115.
Level II: Install necessary (security) updates automatically	Updates that FRITZ! has identified as necessary for continued secure and reliable operation will be installed automatically.
Level III: Install new versions automatically (recommended)	All new FRITZ!OS updates will be installed automatically.

In the default setting, the FRITZ!Box generally installs automatic updates at night. This interrupts the internet connection briefly. If you require an uninterrupted internet connection at night (for instance for working on servers), select a suitable time period in the **System** > **Update** > **Auto Update** menu of the FRITZ!Box user interface.

Instructions: Configuring automatic updates

1. Open the user interface; see page 36.
2. Click on **System** > **Update** in the menu and then on the **Auto Update** tab.
3. For instructions, open the online help ?.

Performing a FRITZ!OS update manually

FRITZ! regularly makes new versions of FRITZ!OS available for your FRITZ!Box, free of charge. Updates include new functions and provide for more security.

If there is no other way to perform an update, you can perform a manual update with a FRITZ!OS file. For this the FRITZ!Box does not need an internet connection.

Instructions: Updating FRITZ!OS without an internet connection

1. On a computer with an internet connection, enter in the browser the address: download.avm.de
2. Navigate through the following folders: **fritzbox** > **your FRITZ!Box model** > **deutschland** > **fritz.os**.
   The complete model name of your FRITZ!Box is shown in the user interface and on the type label on the outside of the housing.
3. Download the file with the file extension **.image**. Save the file on a storage medium which you can access from the FRITZ!Box user interface.
4. Open the FRITZ!Box user interface; see page 36
5. Click on **System** > **Update** in the menu and then on the **FRITZ!OS File** tab.
6. Click on the Browse button and select the downloaded file.
7. Click on **Start Update**.

Important

Do not clear the connection between the FRITZ!Box and the computer during a FRITZ!OS update, and do not unplug any power cords.

User interface: Wizards menu

Using the wizards

Wizards guide you step by step through the most important FRITZ!Box functions.

Wizards

The following wizards are available in the FRITZ!Box:

Wizard	Function
Configuring the Internet Connection	For configuring and checking access via the mobile network.
Check the Status of the FRITZ!Box	For checking the functions and settings of the FRITZ!Box. You can save the results.
Transfer Your Settings to a New FRITZ!Box	For transferring all FRITZ!Box settings for internet, Wi-Fi, and MyFRITZ! to a new FRITZ!Box.
Safety	For displaying settings that control access to the FRITZ!Box from the internet or home network, with indications of potentially insecure settings.
Save and Restore Settings	For saving and restoring FRITZ!Box settings.
Update	For checking whether a new FRITZ!OS version is available.
Configure Push Service	Push services send you emails on a regular basis or when certain events occur: for instance with the connection and usage data.

Instructions: Starting a wizard

1. Open the user interface; see page 36.
2. Click on **Wizards** in the menu.
3. Click on the desired wizard.

Performing a FRITZ!OS update with the wizard

FRITZ! regularly makes new versions of FRITZ!OS available for your FRITZ!Box, free of charge. Updates include new functions and provide for more security.

The **Update** wizard checks whether a new version of FRITZ!OS is available and guides you step by step through installation.

Instructions: Performing an FRITZ!OS update with the wizard

Do not clear the connection between the FRITZ!Box and the computer during a FRITZ!OS update, and do not unplug the power cord. Interrupting a FRITZ!OS update could damage your FRITZ!Box.

1. Open the user interface; see page 36.
2. Click on **Wizards** in the menu.
3. Click on **Update**.

   The wizard checks whether a FRITZ!OS update is available for your FRITZ!Box.
4. If an update is available: Click on **Start Update** and follow the wizard's instructions.

   The FRITZ!OS update begins and the LEDs that display signal strength start flashing. The FRITZ!OS update is complete when the LEDs stop flashing.

Using the wizard to switch FRITZ!Boxes

The **Transferring settings to a new FRITZ!Box** wizard for switching FRITZ!Boxes assists you if you are using a FRITZ!Box and want to replace it with a new FRITZ!Box.

With the wizard you can adopt all settings for the internet, Wi-Fi, telephony, MyFRITZ!, and the smart home. Devices in the home network such as FRITZ!Repeaters, cordless phones, and radiator controls can be connected with the new FRITZ!Box for immediate use.

Example 1

You are switching to a different internet connection and using a FRITZ!Box with a different internet technology.

Example 2

You want to replace your old FRITZ!Box with a newer FRITZ!Box.

Requirements

- FRITZ!OS 7.51 or later is installed both on the old FRITZ!Box and the new FRITZ!Box.
- The new FRITZ!Box has the factory settings configured and is not plugged in.
- The latest version of FRITZ!OS is installed on all FRITZ! devices connected with the old FRITZ!Box.

Please note

- The wizard for easy switching to a different FRITZ!Box is available only when you access the FRITZ!Box user interface from within the home network. This wizard is not available with remote access.
- It is not possible to use the wizard if your old FRITZ!Box is used as a Mesh Repeater or operated in IP client mode.

- Older FRITZ! devices in the home network may not be automatically adopted by the new FRITZ!Box during the switch. These FRITZ! devices can be connected with the new FRITZ!Box manually at a later point in time.

Instructions: Starting a switch to a new FRITZ!Box

Start the process of switching FRITZ!Boxes on the old FRITZ!Box:

1. Open the user interface; see page 36.
2. Click on **Wizards** in the menu.
3. Click on **Transfer Your Settings to a New FRITZ!Box**.
4. Follow the wizard's instructions.

MyFRITZ!

What is MyFRITZ!?

With MyFRITZ! you can access your FRITZ!Box from anywhere over the internet.

MyFRITZ! account and MyFRITZ!Net

If you configure a MyFRITZ! account (see page 121), you can access your FRITZ!Box from the internet at any time via myfritz.net:

- You can open the call list of the FRITZ!Box and check for messages on the answering machine.
- You can change settings in the FRITZ!Box user interface.

You also receive regular information on updates and the status of the FRITZ! devices in your home network at the email address of your MyFRITZ! account.

FRITZ!Box web address

Upon registration with the MyFRITZ! account, the FRITZ!Box receives a unique MyFRITZ! address with the domain ending **.myfritz.net**. The FRITZ!Box is then available at this address even when the public IP address of the FRITZ!Box changes.

With the FRITZ!Box web address you can access your home network from the internet:

- This allows you to open the FRITZ!Box user interface in a web browser.
- You can establish VPN connections to your FRITZ!Box.
- You can access server services and network devices in the home network for which you configured port sharing in the FRITZ!Box.

MyFRITZ!App

With MyFRITZ!App you have secure access to your FRITZ!Box and your home network at home and on the go.

Downloading MyFRITZ!App

The MyFRITZ!App is available free of charge for Android and iOS:

Google Play Store (Android)	App Store (iOS)

Configuring a MyFRITZ! account

Create a MyFRITZ! account with an email address and a password.

Please note

- When the MyFRITZ! account is created, the FRITZ!Box from which the account is created is registered with the MyFRITZ! account.
- The MyFRITZ! account exists no matter which FRITZ!Box was used to create it. You can register multiple FRITZ!Box devices with one MyFRITZ! account.
- If you switch to a new FRITZ!Box, you can then register the new model with your existing MyFRITZ! account and delete any old FRITZ!Box models no longer in use.

Instructions: Creating a new MyFRITZ! account or using an existing MyFRITZ! account

1. Open the user interface; see page 36.
2. Click on **Internet** > **MyFRITZ! Account** in the menu.
3. For instructions, open the online help ?.

FRITZ!Apps

MyFRITZ!App

The MyFRITZ!App offers fast access to your FRITZ!Box and your home network, even over the internet when you're on the go.

- Change FRITZ!Box settings and view information
- Switch Wi-Fi and Wi-Fi guest access on and off
- Share the Wi-Fi using a QR code

Downloading MyFRITZ!App

The MyFRITZ!App is available free of charge for Android and iOS:

Google Play Store (Android)	App Store (iOS)
	

FRITZ!App Wi-Fi

FRITZ!App Wi-Fi informs you about your Wi-Fi connection and the FRITZ! devices in the home network:

- Monitor Wi-Fi connections
- Mesh: find the ideal position for the repeater relative to the FRITZ!Box
- Share Wi-Fi with friends (Android)

Downloading FRITZ!App Wi-Fi

The FRITZ!App Wi-Fi is available free of charge for Android and iOS:

Google Play Store	App Store (iOS)

Malfunctions

Troubleshooting procedures

Where can I find help?

The following table offers recommendations about what do when problems arise:

Problem	Help
• LEDs not on • No access to the user interface • Wi-Fi connection cannot be established or is interrupted	Troubleshooting chart; see page 127
Problem with: • Connecting • Configuration • Internet • Wi-Fi • etc.	Knowledge Base; see page 131
Troubleshooting chart and Knowledge Base do not offer a solution	Support, see page 132

Troubleshooting chart

If malfunctions occur, for instance, such that you can no longer access the user interface of the FRITZ!Box, first try to solve the problems using the following tables.

Troubleshooting chart

Problem	Cause	Solution
LEDs not on	Power supply interrupted	• Make sure the power adapter is connected properly. • Try plugging in a different device to make sure that the power socket is active.
Cannot establish a Wi-Fi connection	Wi-Fi switched off on the computer	Enable Wi-Fi on your computer. For details, consult the manual of your computer.
	Wi-Fi network of the FRITZ!Box switched off	If the **WLAN** LED is off, enable Wi-Fi under **Wi-Fi** > **Wi-Fi Channel** > **Adjust Wi-Fi Settings** in the FRITZ!Box user interface.
	Incorrect network key	Enter the correct Wi-Fi network key (**Wi-Fi** > **Security**).

Problem	Cause	Solution
User interface does not open	Address not correct	Enter the complete address in the browser: **http://fritz.box** If the user interface does not open, see Opening the user interface with the fallback IP address, page 130.
	Restart required FRITZ!Box has crashed	Disconnect the FRITZ!Box from electrical power and restart the FRITZ!Box again after about five seconds.
	Cache is full	Empty the cache of your web browser. For more information on this, see the help of your web browser.
	Proxy configuration does not allow the FRITZ!Box address	If a proxy server is enabled in your web browser, the address of the FRITZ!Box must be entered as an exception. Check your web browser settings. For more information on this, see the help of your web browser.
	Computer is not configured to obtain IP address automatically	On your computer, enable the setting **Obtain an IP address automatically** for the network adapter used to connect to the FRITZ!Box. For more information, see the documentation by the manufacturer of your operating system.
	Forgot FRITZ!Box password	Restore factory settings to the FRITZ!Box (see page 109).

Problem	Cause	Solution
Wi-Fi connection interrupted	Wi-Fi connection between FRITZ!Box and wireless device interrupted	• Do not set up the FRITZ!Box in the corner of a room. • Do not set up the FRITZ!Box directly next to or beneath an obstacle or a metal object (like a cabinet or radiator). • Position the FRITZ!Box and the wireless devices so that there are as few obstacles between them as possible.
	Wi-Fi channel with heavy interference	Enable automatic configuration of the Wi-Fi channel settings under **Wi-Fi** > **Wi-Fi Channel** in the user interface. Then the FRITZ!Box automatically selects a Wi-Fi channel with as little interference as possible.

Opening the user interface with the fallback IP address

There is a 'fallback IP address' at which the FRITZ!Box user interface can always be reached.

Fallback IP address

The fallback IP address is **169.254.1.1** and cannot be changed.

Instructions: Opening the user interface with the fallback IP address

1. Enter the fallback address **169.254.1.1** in the browser.
2. If the FRITZ!Box user interface is not opened, make sure that there is no Wi-Fi connection between your computer and the FRITZ!Box.
3. Connect your computer to the **LAN** socket of the FRITZ!Box using a LAN cable.
4. Restart your computer.
5. Enter the fallback address **169.254.1.1** in the browser.
6. Log in to the FRITZ!Box user interface.

Knowledge Base

Help for resolving problems with FRITZ!Box is provided in our Knowledge Base. This resource presents answers to the questions asked most frequently of our Support team.

If the problem cannot be resolved using the Knowledge Base, then contact FRITZ! Support; see page 132.

Available 24/7

Our Knowledge Base is available online at:

fritz.com/service

Support

Our FRITZ! Support assists you in resolving any problems with your FRITZ! devices.

Preparations

Keep the following information handy for a support request:

- FRITZ!Box model
- Article number, see page 16
- FRITZ!OS version
- Internet service provider
- Error messages, if any

Instructions: Contacting FRITZ! Support

1. Keep your information handy (see **Preparations**).
2. Open the **fritz.com** website.
3. Click on **Service** and on **Support**.
4. Select Your FRITZ! product.
5. Scroll down and click on **Contact Support**.
6. Contact our FRITZ! Support via email form, fax, or chat.

Tip

Our email and chat support are not always available in all languages. Select another language for the FRITZ! website if needed.

Taking out of service and disposal

Taking out of service

Deleting private data

As the final user of a FRITZ! product, you are responsible for deleting your own personalized data on devices to be disposed of.

Delete your personal settings and personalized data from your FRITZ!Box device before taking it out of service and disposing of the device. To do this, restore the factory settings to the FRITZ!Box; see page 109.

Removing the SIM card

If you want to take the FRITZ!Box out of service, remove the SIM card from the slot. To do this, press the SIM card briefly.

Disposal

Disposal of electronic devices and electronic components

In accordance with European regulations and the Waste of Electrical and Electronic Equipment Directive (in Germany), the FRITZ! device, and all devices and electronic components contained in the package, may not be disposed with household waste, residual waste, or the yellow recycling bin.

Bring your FRITZ! device and all electronic components included with delivery to a collection point in your local community for the disposal of electronic appliances where it can be disposed of properly. According to the criteria stipulated in § 17 par. 1 and par. 2 of the Waste of Electrical and Electronic Equipment Directive (for Germany), distributors of electronic devices are also obligated to accept returns of their products free of charge.

The crossed out bin on the type label or on the housing of your FRITZ! device means that you are required by law to dispose of the electronic device separately from household waste.

Technical specifications

Technical specifications

Device properties

Property	Value
Dimensions (W x H x D)	circa 65 x 135 x 98 mm
Supply voltage	230 V / 50 Hz

Ambient conditions

Property	Value
Operating temperature	0°C – +40°C
Storage temperature	-20°C – +70°C
Relative humidity (operation)	10% – 90%
Relative humidity (storage)	5% – 95%

Active power (energy consumption)

Property	Value
Maximum active power (energy consumption)	7,5 W
Average active power (energy consumption)	4,1 W

Ports and interfaces

Connected via	Interface
Mobile network	LTE modem compliant with 3GPP standard, rel. 10
LAN	1 LAN port via RJ45 socket, gigabit LAN (10/100/1000 Base-T)
2.4-GHz Wi-Fi	• Wi-Fi 6 (IEEE 802.11ax), transmission rates of up to 600 Mbit/s • Compatible with IEEE 802.11g and n

UMTS radio frequencies

Band	Downlink frequency range (MHz)	Uplink frequency range (MHz)	Maximum transmitter power (mW) Uplink
1	2110 - 2170	1920 - 1980	250
5	869 - 894	824 - 849	250
8	925 - 960	880 - 915	250

Wi-Fi frequencies

Frequency	Frequency range	Max. transmission power
2.4 GHz	2400 - 2483 MHz	100 mW

Mobile networks: Bands and radio frequencies

Band	Downlink frequency range (MHz)	Uplink frequency range (MHz)	Max. uplink transmission power (mW)
1	2110 - 2170	1920 - 1980	200
3	1805 - 1880	1710 - 1785	200
5	869 - 894	824 - 849	200
7	2620 - 2690	2500 - 2570	200
8	925 - 960	880 - 915	200
20	791 - 821	832 - 862	200
28	758 - 803	703 - 748	200
32	1452 - 1496	not available	data reception only, no transmission
38	2570 - 2620	2570 - 2620	200
40	2300 - 2400	2300 - 2400	200
41	2496 - 2690	2496 - 2690	200

Mobile network: Carrier aggregation

Band combinations supported for simultaneous LTE connections to 2 cells:

Supported band combinations									
1A +1A								40A +40A	41A +41A
1A +3A	3A +3A								
1A +20A	3A +20A		7A +20A						
1A + 28A	3A +28A		7A +28A						
1A +32A	3A +32A		7A +32A	8A +32A	20A +32A	28A +32A			
1A +38A	3A +38A	5A +38A		8A +38A	20A +38A	28A +38A			
1A +40A	3A +40A	5A +40A		8A +40A	20A +40A	28A +40A			
1A +41A	3A +41A	5A +41A		8A +41A		28A +41A			
1A +5A	3A +5A	5A +5							
1A +7A	3A +7A	5A +7A	7A +7A						
1A +8A	3A +8A		7A +8A						
		5B	7B	8B					
1C	3C		7C				38C	40C	41C

Electromagnetic fields

The FRITZ!Box receives and transmits radio waves during operation.

- The FRITZ!Box was designed and constructed to comply with the threshold values for the exposition of radio waves recommended by the International Commission on Non-ionizing Radiation Protection (ICNIRP).
- This directive was formulated by independent scientific organizations after regular and careful evaluation of scientific studies. It includes a wide safety margin in order to ensure the safety of all persons, regardless of their age and health.
- For devices mounted in a fixed position that have their own power connection, like the FRITZ!Box, compliance with the minimum distance of 20 cm defined in the ICNIRP guideline has been certified. The measurements were conducted in accordance with the European EN 50385 standard.

Interfaces and protocols used with the FRITZ!Box

Information on interfaces and protocols from the FRITZ! product development can be found on the following FRITZ! web page (in German):

fritz.com/service/schnittstellen

Legal

Legal notice

Manufacturer's warranty

We, FRITZ! GmbH, Alt-Moabit 95, 10559 Berlin, as manufacturer of this original product 5 Jahre warranty for defects to the product which are demonstrably due to faults in materials or manufacturing. Your legal rights in the case of defects for which claims can be made free of charge are not restricted by this warranty.

The warranty period begins with the date of purchase by the first end user. Compliance with the warranty period must be proven by submission of the original invoice of the first end consumer or comparable documents as well as the return of the product in question. In order to return your product, our Support team will send you a link to an "RMA form". After filling out this form you will receive an RMA number authorizing you to return the product to us. This RMA number must be clearly visible and easy to read on the outside of the package, and sufficient postage must be attached (insured shipping is recommended). The product must be dispatched within 14 days after the RMA number has been issued. The package is to be returned without the original box and accessories, packed carefully and secured for transportation. FRITZ! accepts no liability for any damage during transport. Returns without an RMA number, packages sent freight collect or without sufficient postage, and packages without an invoice will not be processed and sent back to the sender; in such cases we reserve the right to charge a processing fee of up to 35 €.

Within the warranty period, we will remove reported defects to the product hardware which are demonstrably due to faults in materials or manufacturing. Our warranty does not cover defects which occur due to incorrect installation, improper use, non-observance of instructions in the user manual, normal wear and tear, or defects in the environment of the system (third-party hardware or software). In this case we reserve the right to return such devices without processing and will charge you a processing fee of 35 €. We may, at our discretion, repair or replace the defective product. FRITZ! bears the costs for returning the repaired or exchanged product. Claims other than

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FRITZ! Website: fritz.com

Declaration of CE conformity

FRITZ! GmbH declares herewith that the device is compliant with directive 2014/53/EU.

The full text of the declaration of EU conformity is available at fritz.com/service/declarations.

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