



# **FRITZ!Box 6490 Cable**

## **FRITZ!OS Version: 07.57**

### **Release Note**

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Product: **FRITZ!Box 6490 Cable**

Version: FRITZ!OS 7.57

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FRITZ!OS 7.56 - with over 150 new functions and useful improvements

Mesh Wi-Fi now with dynamic smart repeating for better performance in the home network

More convenient telephony: New FRITZ!Fon "Voice" ringtone and block for unknown callers

New energy-saving mode can be switched on upon request

Simplified replacement of a FRITZ!Box with new wizard

Many interesting new Smart home options: Scenes, routines, and lighting sequences

The user interface was fine-tuned and rounded out with comprehensive "Help and Info"

Many new functions for the MyFRITZ!App and FRITZ!App Smart Home (iOS/Android)

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With each FRITZ!OS update, AVM also updates **its security functions**. Therefore we recommend performing the update for all devices.

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## Additional improvements in FRITZ!OS 7.57

FRITZ!OS 7.57 includes very little changes compared to FRITZ!OS 7.56. Only the following point has been addressed with this update:

## System:

- **Fixed** Stability and security increased

## New functions of FRITZ!OS 7.56

### Mesh:

- NEW In Mesh Repeater operating mode, connections to the Mesh Repeater with multiple Wi-Fi bands are now possible <for more on this, see [3]>

### Telephony:

- NEW Call handling allows call blocks and call diversion (e.g. to answering machine) for callers "not in the telephone book" (telephone book as positive list)
- NEW On a SIP DDI line for corporate customers, call diversion settings can be configured so that the caller number is displayed at the destination (partial rerouting)

### DECT/FRITZ!Fon:

- NEW The new, optional "Voice" ringtone announces the name in the telephone book that matches the caller number, or the location and the telephone number. For an alarm or appointment, the ringtone announces the reason for the reminder <for more on this, see [1]>
- NEW The new FRITZ!Fon convenience function "Appointment Calendar" rings to remind about appointments
- NEW Handset can display WiFi password, also QR Code for convenience, Can be protected by PIN code

### Smart Home:

- NEW Configure and apply scenes to generate the mood for any occasion <for more on this, see [5]>
- NEW Create and enable or disable routines (if-then combinations) for automatic interactions in the Smart Home <for more on this, see [5]>
- \*\*NEW Templates for the comfort functions switch Wi-Fi access, switch Wi-Fi guest access, start telephone call, switch answering machine, send email (push service), and open web service (URL)

- NEW Selection of an additional display of the temperature and humidity profile on the FRITZ!DECT 440
- NEW Natural lighting sequences for device groups and templates with FRITZ!DECT 500
- NEW Support for compatible external window sensors for the radiator controls' open window detection

#### USB:

- NEW Support for storage media formatted in exFAT

#### System:

- NEW "Help and Info" in the user interface: A completely overhauled help function with many instructions based on user scenarios and a strong search engine
- NEW In the new energy-saving mode, Wi-Fi, LAN and USB use even less power for slightly reduced performance
- NEW New wizard transfers all important Internet, telephony, and WLAN settings as well as connections to mesh, telephony, and smart home devices to a new FRITZ!Box <for more, see [7]>

#### FRITZ!Apps:

- NEW MyFRITZ!App offers the option to enable prioritization for internet access on each home network device
- NEW MyFRITZ!App allows home network devices to be renamed
- NEW MyFRITZ!App allows a MyFRITZ! account to be created for MyFRITZ! internet access to the user interface of the FRITZ!Box (for iOS)
- NEW FRITZ!App Smart Home supports scenes and the enabling and disabling of routines <for more on this, see [5]>
- NEW FRITZ!App TV allows the TV function (DVB-C) and station search to be enabled for FRITZ!Box Cable devices

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## Further Improvements of FRITZ!OS 7.56

#### Internet:

- IMPROVED When the DNS server of the internet provider (or the listed DNS server) is interrupted, automatic switch to the public DNS server
- IMPROVED Failure detection via DNS validation added for "Expanded failover protection"
- IMPROVED FRITZ!Box services (SMT, FTP, IGD and TR-064) offered via Bonjour or mDNS
- IMPROVED Unwanted queries from certain IP addresses to FRITZ!Box services can be blocked with the new IP block list
- IMPROVED "QUIC" added to the internet protocols supported by parental controls
- IMPROVED When internet access to storage media via FTP/FTPS is enabled, the randomly preselected port number is displayed
- IMPROVED Support for VPN user dial-in for Android mobile telephones and tablets with IKEv2 IPSec (preshared key)
- IMPROVED Optimized upload and download speeds by adjusting the TCP segment size (MSS clamping), now also for IPv6-based connections
- IMPROVED IPv4 VPN connections (IPSec) can be tunneled via IPv6, for instance to reach FRITZ!Box devices on DS Lite connections (IP6 tunnel for IPv4, IPv4-inIPv6)

- IMPROVED In the user interface, an image now illustrates the different types of VPN connections
- IMPROVED No publication of IPv4 address to MyFRITZ!Net on dual-stack connections with carrier-grade NAT; MyFRITZ! address always resolved here into the IPv6 address
- IMPROVED After a restart, the FRITZ!Box refreshes its IP address with MyFRITZ!Net immediately (DynDNS update)
- IMPROVED A FRITZ!Box in "Mesh Repeater" mode is automatically registered with the MyFRITZ! account of the Mesh Master
- IMPROVED IPv6 on the FRITZ!Box enabled by default for all internet connections
- IMPROVED FRITZ!Box can be operated on IPv6-only connections
- IMPROVED Support for IPv6 during prioritization of network applications and prioritization of a home network device
- IMPROVED The IPv6 Interface Identifier used on the WAN port is chosen at random
- IMPROVED Improved tips and error messages on sharing ports on DSL Lite connections with PCP support
- IMPROVED Data traffic from Wi-Fi calling (VoWifi) with smartphones prioritized over the FRITZ!Box internet connection
- IMPROVED Internet service provider "Vodafone" can be selected in configuration wizard
- CHANGE Predefined selection of DynDNS providers replaced by a general settings option
- CHANGE The "IPv6" tab is displayed for IPv6-only connections
- CHANGE Support for the User Service Platform specification (USP, Broadband Forum TR-369) and configuration on the "Provider Services" tab
- CHANGE The NetBIOS filter can be displayed and configured
- CHANGE When a new port sharing setting is created, the outdated "eMule" application is no longer listed
- CHANGE Outdated entries removed from the provider list for internet access
- FIXED Notifications for Android apps (including for WhatsApp) occasionally arrived in the Wi-Fi network with a delay
- FIXED The ICMP identifier for pings was set to 0 by the FRITZ!Box in some rare cases
- FIXED The FRITZ!Box could send an invalid Phase1 ID for VPN user dial-in via IPSec
- FIXED The entry field for the IPv6 LAN prefix was too small
- FIXED The IPv6 address could not be entered manually for IPv6 port sharing
- FIXED Devices in the guest network with a captive portal were not connected to the internet via IPv6
- FIXED IPv6: When SLAAC was used and the DHCPv6 server was disabled in the FRITZ!Box, after a restart IPv6 could not longer be used in the home network
- FIXED In individual cases, deletion of a port sharing setting deleted additional port sharing settings of the same device
- FIXED VPN connections (IPSec) to StrongSWAN via IPv6 failed under some circumstance
- FIXED VPN connections (LAN-LAN) could not be saved without a name
- FIXED In some scenarios the FRITZ!Box's NTP server did not work after re-establishing the internet connection
- FIXED Under certain circumstances, not all DNS servers made available by the provider were used

#### Wi-Fi:

- IMPROVED When a radar event is detected, the system attempts to hold the channel with reduced bandwidth
- IMPROVED When encryption on the Mesh Master is changed to "non-encrypted", activation of the 5-GHz Wi-Fi network is ensured and wireless devices are correctly deregistered if necessary
- IMPROVED Data rates increased when exchanging data with certain wireless devices
- IMPROVED The legend below the "Allocation of Wi-Fi Channels" diagram on the "Wi-Fi / Wi-Fi Channels" page is now displayed in a single line
- IMPROVED Optimized automatic channel selection when checking for prioritized use in the 5-GHz Wi-Fi network

- IMPROVED The adjustment of radio channel settings in the 5-GHz frequency band now allows all channel numbers to be selected
- CHANGE New message under "System / Event Log" when a new session key was negotiated (encrypted connections compliant with the WPA3/SAE standard)
- CHANGE Restructuring of the "Wi-Fi > Wi-Fi Network", "Wi-Fi > Security", and "Wi-Fi > Wi-Fi Channel" pages
- CHANGE MAC address filters are limited to a maximum of 128 entries
- FIXED On the user interface for the "Wi-Fi Guest Access", starting the WPS quick connection was linked with the "Wi-Fi / Security / WPS" page
- FIXED Incorrect information when Wi-Fi disabled when "Internet connection via Wi-Fi" is selected
- FIXED The period for displaying the load on the Wi-Fi channel could not be changed in the user interface when the 2.4-GHz Wi-Fi network was disabled
- FIXED Sorting of "Other Wi-Fi Networks in Your Vicinity" table by name did not always work reliably ("Wi-Fi / Wi-Fi Channel" page)
- FIXED Preset name for Wi-Fi guest access linked to the language selection
- FIXED When a WPS quick connection was started during the check for higher-priority users (e.g. radar), an incorrect message could be displayed under "System / Events"
- FIXED Mesh Repeater operating mode: The "Select Wi-Fi Network" list did not display invalid Wi-Fi network names (SSID)

#### Mesh:

- IMPROVED Higher data throughputs in the Mesh Wi-Fi possible thanks to dynamic smart repeating
- IMPROVED Display of home network connections on the "Mesh" page of the user interface responds more quickly to changes
- IMPROVED Home network devices (e.g. printers or NAS) displayed in the "Mesh Overview" can be opened directly by link
- IMPROVED Changed country and language settings of the Mesh Master are automatically transmitted to the Mesh Repeater
- IMPROVED New message in "System / Event Log" when FRITZ!OS removes a network loop
- IMPROVED "Mesh Overview" now shows network switches that use the LLDP protocol
- IMPROVED "Mesh Overview" now shows deployed network switches or access points in sequence
- IMPROVED Indication on the start page of the user interface when there are FRITZ! devices in the home network that are not yet enabled for Mesh
- IMPROVED Region and language settings of the FRITZ!Box are adopted by FRITZ!Repeater(s)
- FIXED After changing the connection of a repeater, the connection display on the "Home Network > Mesh" page of the user interface was wrong
- FIXED When using certain powerline adapters together with a network switch, the connection display on the "Home Network > Mesh" page of the user interface was wrong

#### Telephony:

- IMPROVED Online contacts from web.de, gmx.de, and 1&1 converted to CardDAV
- IMPROVED Revised display of table of configured call diversions
- IMPROVED Encrypted telephony more robust against lost connections
- IMPROVED Optimization for integration of a telephone book into Mesh
- IMPROVED Designation of a caller's telephone number in the call list, even when a telephone number specified by the caller was also transmitted
- IMPROVED Optimization of automatic configuration of telephone numbers by the internet provider
- IMPROVED Reworked texts for push services on fax function and answering machines on fax function and answering machine
- IMPROVED Support for more call scenarios with voice data transmission before call acceptance (P-Early-Media)
- IMPROVED Wizard for telephony devices enables configuration of internal fax function without enabling fax reception



- IMPROVED Display of certain table columns in the "Telephone Numbers" can be switched on or off
- IMPROVED CAPI over TCP can be disabled if desired via "Diagnostics / Security"
- IMPROVED Prioritization of telephony data adjusted to comply with the Deutsche Telekom specification 1TR112 V14
- IMPROVED FRITZ!Box takes note of the last 20 destination telephone numbers for call diversion and offers these when new call diversion settings are configured
- IMPROVED For messages on the answering machine, the name that matches the caller's number in the telephone book, or the location and telephone number, can be announced while listening to messages
- IMPROVED Call diversion settings and call blocks for incoming calls can be restricted to a single telephone number in the home network
- IMPROVED Supports groups for online contacts from Apple
- IMPROVED Support for photos for online contacts from Apple, Telekom, and CardDAV providers
- IMPROVED Robuster handling of inconsistent data in Apple telephone contacts
- IMPROVED Support for using up to 10 individual telephone numbers (MSNs) with the "Telekom CompanyFlex" rate
- CHANGE Different designations in the user interface for telephones on the "FON 1" and "FON 2" jacks
- CHANGE Outdated entries removed from the list of telephone providers
- FIXED If the internal fax machine was used with the "only send" setting, incoming calls were not logged in the call list
- FIXED Newly created telephone numbers could not always be edited retroactively
- FIXED Root number was not displayed when the settings of the SIP DDI line were edited
- FIXED Umlauts in the names of telephony devices were sometimes converted into special characters
- FIXED Under certain rare conditions, the initiator of a three-party conference was not able to hear the two other parties

#### DECT:

- IMPROVED Support for DECT headsets from the Sennheiser EPOS series for outgoing calls and picking up calls via the headset button

#### DECT/FRITZ!Fon:

- IMPROVED Higher resolution of images from Google online contacts
- IMPROVED Convenient control of DECT headsets that are GAP or CAT-iq 2.x-compliant
- IMPROVED Quick dial for number keys 2 to 9 can be set up directly on the FRITZ!Fon by pressing and holding the numbers
- IMPROVED More convenient use of DECT handsets
- IMPROVED Three new ringtones with bird sounds available for FRITZ!Fon ("Whistling", "In the Woods" and "Yardbirds") (configured under "MENU / Settings / Audio / Ringtone / Own ringtone")
- CHANGE Missed calls older than 28 days are no longer signaled by a message key blinking red on the FRITZ!Fon

#### Home Network:

- IMPROVED Reworked details pages for network devices
- IMPROVED FRITZ!Powerline devices can be restarted in the "Device Details" of the FRITZ!Box user interface under "Home Network / Network" or registered by clicking a button
- IMPROVED Own network device highlighted in the overviews of the user interface
- IMPROVED More flexibility when assigning your own names for a network device in the home network for display in the user interface: Spaces and special characters are allowed
- IMPROVED The symbol in the user interface for prioritized network devices was updated
- IMPROVED Reworked user guidance through changing of the FRITZ!Box name

- FIXED Display for search for updates for devices in the Mesh was not suitable in certain cases

#### Smart Home:

- IMPROVED Template for radiator controls expanded with addition of comfort temperature and cool-down temperature as well as antifreeze and boost functions
- IMPROVED Sunrise/sunset schedule with more settings options independent of sunrise and sunset
- IMPROVED The "Adaptive heating start" function can be disabled for radiator controls
- CHANGE "Smart Home" menu subdivided into "Devices & Groups", "Automation" and "Operation"

#### USB:

- IMPROVED Media data are read in completely with "Refresh index"
- IMPROVED A list of FRITZ!Box users with the right to access NAS contents is displayed under "Home Network Sharing"
- IMPROVED A message appears indicating when the maximum number of sharing links is exceeded
- IMPROVED After completion of fax configuration, a USB folder for storing faxes can be selected under "Settings for the Fax Function"
- CHANGE When uploading files to fritz.nas, the creation date of the respective file is now displayed
- CHANGE MagentaCloud removed as a media source in the internet because API is no longer compatible
- CHANGE After indexing, the ".start\_indexation.mp3" file is no longer displayed via SMT/FTP
- FIXED Added radio stations were displayed only after manual indexing
- FIXED After starting operation of "FRITZ!Box as Mesh Repeater", the network drive function (SMB) was not always available
- FIXED Accessing a sharing link allowed the creation of additional sharing settings
- FIXED During the slide show of FRITZ!NAS images, the control for the duration of the display was not displayed correctly
- FIXED Folders in the uppermost level of the directory structure were not displayed in the selection dialog for moving files
- FIXED No network drive function (SMB) could be established to Rclone
- FIXED WebDAV online storage could not be used when the country was set to "Spain"

#### System:

- IMPROVED New display of Wi-Fi connections between FRITZ! devices
- IMPROVED Summary of information areas on the "Overview" page for better orientation
- IMPROVED New design and improved operation concept for logging in to the FRITZ!Box user interface <for more on this, see [4]>
- IMPROVED Revised layout of the FRITZ!Box user interface <for more on this, see [4]>
- IMPROVED Changed operating concept for changing settings in the user interface <for more on this, see [4]>
- IMPROVED Under "System / FRITZ!Box Users / Apps", the FRITZ!Box user from which each app has been configured is displayed for each app
- IMPROVED The "Forgot Password" push service email now contains information on the device that requested this mail
- IMPROVED If desired, the selection list of FRITZ!Box users can be hidden during login to the user interface from the home network
- CHANGE Simplified flashing behavior of the FRITZ!Box LEDs when connection is triggered by the "Connect" button
- CHANGE The hyperlinks for Contents, Manual, Tips & Tricks, en.avm.de, and Legal Notice are now located under "Help and Info"
- CHANGE New contents under "Help and Info / Get to Know the Functions"
- CHANGE Additional confirmation for configuring certain settings can no longer be switched off <for more on this, see [6]>

- CHANGE The push service for the Wi-Fi guest access sends registration and deregistration events of the guest devices from the Mesh Repeater or Mesh Master with which the devices are registered
- FIXED The display of several "Exposed Hosts" for two different devices under "Diagnostics / Security" was sometimes misleading
- FIXED Repeater events were occasionally listed twice in the Event Log

#### Mobile network:

- IMPROVED Expanded failover protection supports smartphones and mobile network dongles with tethering function
- IMPROVED Failure detection via DNS validation added for expanded failover protection
- IMPROVED Internet connection with username/password supported for Alcatel IK41VE1 IoT/M2M 4G (MBIM) mobile network dongle
- CHANGE Simple failover protection removed - existing configurations are converted to expanded failover protection
- FIXED Page at "Internet / Mobile Network" was empty when a mobile broadband dongle was inserted

#### Security:

- IMPROVED Use of a random SIP port possible under "Telephony / Telephone Numbers / Line Settings / Security"
- IMPROVED All a user's rights listed under "System / FRITZ!Box Users"
- IMPROVED Information about security methods currently used on SIP remote sites under "Diagnostics / Security / Telephony"
- IMPROVED Display of the last ACS connections under "Diagnostics / Security / Provider Services (TR069)"
- IMPROVED While login is blocked due to an incorrect password entry, the password entry field can be edited for the next login attempt
- IMPROVED SIP port can be reached from the internet only by the set protocol (IPv4 or IPv6)
- IMPROVED Protection from frequent login attempts with incorrect password via the SMB protocol FRITZ!Apps:
- IMPROVED FRITZ!Apps support with explanation of where the preset FRITZ!Box password is found on the FRITZ!Box
- IMPROVED MyFRITZ!App shows when internet access is blocked for each home network device
- IMPROVED MyFRITZ!App with additional connection information for the home network devices
- IMPROVED When MyFRITZ!App is registered with a FRITZ!Box that has not yet been configured, MyFRITZ!App indicates this and offers to open the browser for configuration
- IMPROVED MyFRITZ!App displays Wi-Fi dual-band connections for "Your Mesh" in the overview diagram
- IMPROVED MyFRITZ!App reliably displays Mesh connection paths graphically, even for more complex constellations
- IMPROVED MyFRITZ!App indicates when Mesh functions have not been enabled in the Mesh Repeater
- IMPROVED MyFRITZ!App sets the name of the smartphone or tablet as the name of the network device in the home network of the FRITZ!Box if no name was assigned yet (for Android)
- IMPROVED MyFRITZ!App supports the convenience function of call diversion for callers "not in the telephone book"
- IMPROVED FRITZ!App WLAN displays the channel bandwidth of the Wi-Fi connection
- IMPROVED FRITZ!App Smart Home displays the adaptive heating (preheating phase) of radiator controls
- IMPROVED FRITZ!App Smart Home displays open window detection with a window sensor on the radiator control
- IMPROVED FRITZ!App Smart Home supports the creation of templates for the current light setting

- IMPROVED FRITZ!App Smart Home displays a message when applying templates

## Additional Changes in 07.56

### Internet:

- NEW Support for USP (Broadband Forum TR-369) for remote management of the FRITZ!Box
- IMPROVED Mobile network parameters added to USP
- IMPROVED Mobile network parameters can be opened via USP
- IMPROVED On DS Lite connections with PCP (Port Control Protocol), the public (PCP) IPv4 address is displayed in the email notification ("push mail") on the web address
- IMPROVED On PCP connections, ports for FRITZ!Box services are selected from the PCP port range
- IMPROVED For updates via TR-069, the first check is to step whether a file is available at the update URL
- IMPROVED PCP: Improved treatment of ANNOUNCE and "Epoch change", fewer PCP-MAP requests upon connecting
- IMPROVED PCP: The public (PCP) IPv4 address is displayed in email notifications ("push mail")
- IMPROVED APN and user/password can be read and set via TR-069
- IMPROVED Prioritization of VoWiFi traffic (Wi-Fi or Wi-Fi calling) can be switched by TR-069
- IMPROVED QoS adaptations to the 1TR112v14 specification
- IMPROVED Stability under IPv6 increased for DHCPv6 responses with "Preferred" and "Valid Lifetime = 0" to the FRITZ!Box
- IMPROVED TR-064: Entry of PIN/PUK for mobile network SIM
- IMPROVED TR-069: Additional protection (2FA) on the FRITZ!Box can be suspended for the temporary user created via TR-069
- IMPROVED TWAMP support under IPv6
- IMPROVED Additional IPv4 subnets can be defined via TR-069
- Change A user created via TR-069 is automatically disabled after two hours
- CHANGE MIC entry field can be used "in one piece" via copy and paste (VF)
- CHANGE The "Provider Services" tab is displayed when USP (TR-369) or TR-069 to service provider is enabled
- CHANGE USP: Number of subscriptions that can be created by a USP controller limited to 32
- FIXED Double entries removed from Wi-Fi environment data (upload via TR-069)

- FIXED External access to the user interface not possible from the IPv6 ULA address
- FIXED TR-069: X\_AVM-DE\_EthPort.n.Powermode constantly returned "auto" regardless of the Ethernet port setting
- FIXED Time stamp in TWAMP was not correct when overflow occurred
- FIXED When "Display list of usernames upon login in home network" was disabled, it was not possible to reset the password via TR-069
- FIXED All characters after an equals sign were cut off in the TR-069 session cookie
- FIXED After a successful TR-069 discover and the switch to DSL operation, the WAN port was not set to EEE (Energy Efficient Ethernet)
- FIXED RTP voice data were prioritized by SIP clients in the home network only for IPv4, but not for IPv6
- FIXED Wi-Fi channels over 149 could not be set via ACS
- FIXED Password could not be reset via TR-069
- FIXED VoIP audio was only one-way because sent RTP audio data did not use the VoIP interface

#### Wi-Fi:

- NEW Channel width per wireless device can be read via TR-064

#### Telephony:

- IMPROVED Support for P-Early-Media
- IMPROVED VoIP profiles: Values set by ACS have priority (even if they were defined otherwise in the description file)

#### System:

- IMPROVED When no file is found under the given update URL for a TR-069 update, the update is not started

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## Notations

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### [1] Talking caller ID - FRITZ!Fon learns to speak: New features for FRITZ!Fon

#### New "Voice" Ringtone

The new "Voice" ringtone announces the name of the caller, if available, or the location the call is coming from along with the telephone number of the caller. The feature is available for incoming calls, but a voice announcement can also be selected for alarms and appointments.

When you get a call, instead of a ringtone the caller's name is announced if their telephone number is in your contacts.

If there is no telephone book entry, the location from which the call is coming is announced, depending on the country, along with the telephone number of the caller.

You'll need to have an active MyFRITZ! account.

This feature can be enabled under "Telephony / Telephony Devices" in the user interface.

Select the FRITZ!Fon handset you want to edit, assign one or more telephone numbers for incoming calls, and then switch to "Ringtones".

Select there the "Voice" ringtone for the corresponding telephone number at the end of the list.

You can configure additional settings under "Voice Ringtone".

For alarms and the appointment calendar you can select the "Voice" ringtone directly on the FRITZ!Fon.

#### Appointment Calendar

With the new calendar, you can now set up appointments in FRITZ!Fon and create a reminder for them.

You can also be reminded of the appointment with the new "Voice" ringtone.

Note: The new features are available for FRITZ!Fon M2, C4, C5 and C6 with the latest handset firmware.

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### [3] Mesh Wi-Fi - More Performance for FRITZ!Box as Mesh Repeater

FRITZ!Box devices that support "Mesh Repeater" operating mode could previously be connected to other FRITZ!Boxes or FRITZ!Repeaters only with one Wi-Fi band (2.4 or 5 GHz) at a time.

With the new FRITZ!OS, it's now also possible to use more than one Wi-Fi band for the Wi-Fi uplink. This enables higher data throughputs and stability in the Mesh. When updating a Mesh network that's already been set up with an older FRITZ!OS, which consists of one or more FRITZ!Box devices in Mesh Repeater mode, the previously unused Wi-Fi band is connected automatically.

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### [4] More Operating Convenience in the FRITZ!Box User Interface

The FRITZ!Box user interface has been visually refreshed with the new version.

Particularly noticeable here is the separation of the menu from the left edge of the screen and the width of the displayed pages have been trimmed for better readability.

This has a positive effect on tables and texts, especially when displayed on particularly large screens (resolutions), and at the same time improves the display on smartphones and tablets.

The redesign is based on a new style guide that facilitates the integration of innovative operating concepts.

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## [5] Automation

### Scenes - Create the Perfect Mood for Every Occasion

With scenes you can simultaneously perform different actions in the Smart Home.

For example, with the "Coming Home" scene, all radiator controls can be set to the comfort temperature at the touch of a button, and your LED lights and smart plugs, the Wi-Fi and/or guest Wi-Fi, and the answering machine can all be switched on at the same time.

The preconfigured two scenes "Coming Home" and "Leaving Home" and can be applied directly. They consist of automatically generated templates that can be subsequently turned on and off as required.

With a scene you create yourself, multiple devices can be combined and controlled.

Templates that have already been created can be added and deleted on an individual basis.

Furthermore, individual templates can be created as a simple scene. Settings for devices and/or device groups can be saved and reused with templates.

Scenes can be used via the FRITZ!Box, a FRITZ!Fon, FRITZ!App Smart Home or the FRITZ!DECT 440.

### Routines - for Customizable Automations in the Smart Home

Routines enable devices, scenes and templates to be automatically controlled or enabled by an if-then link.

The shortcut consists of a trigger and a condition that must be met for an action to be performed.

In the Configuration Wizard, you can define a device as a trigger, then specify the change in state or an event (condition). Finally, a previously created scene or template (action) is selected, which is activated when the condition is met.

For example, if the humidity measured by the FRITZ!DECT 440 reaches a certain level, the previously configured scene "Ventilation" with a FRITZ!DECT 200 smart plug with a connected humidifier is applied.

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## [6] Additional Confirmation

After this update, additional confirmation for certain settings and functions can no longer be disabled.

However, if additional confirmation was disabled before the update, this condition remains intact after the update.

AVM recommends always using additional confirmation for reasons of security.

To allow changes to protected settings from on the go, the TOTP standard with one-time passwords can be also used for additional confirmation.

A freely available password manager or a separate app like the Google Authenticator can be used for this.

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[7] New wizard transfers all important settings for the internet, telephony, and Wi-Fi network, and connections to Mesh, telephony and Smart Home devices to a new FRITZ!Box.

Please take note of the following tips and requirements:

The Wizard provided in this FRITZ!OS offers assistance if you are using a FRITZ!Box that you would like to replace with another new FRITZ!Box. Any other FRITZ! products connected with your currently used FRITZ!Box, including FRITZ!Repeaters, FRITZ!Fons, FRITZ!DECT Smart Home products, and FRITZ!Apps will also be connected to the new FRITZ!Box.

This new switching function makes it easier to exchange your old FRITZ!Box with another FRITZ!Box, so that

- the Wi-Fi and home network and all of the connected home network devices will work the same after the switch
- no settings have to be changed on the devices connected with the FRITZ!Box because of the switch
- the internet connection and telephony can continue to be used in the same way
- all important settings on the currently used FRITZ!Box are transferred to the new FRITZ!Box (for instance, for telephony, Smart Home, and MyFRITZ!)

1. Two steps must be taken to prepare the other, new FRITZ!Box:

- a current FRITZ!OS version 7.56 or newer. During the course of the wizard you will be prompted to update your new FRITZ!Box if necessary.
- Set your new FRITZ!Box back to its factory settings, if it was used at all before, and then disconnect it from electrical power.

2. The currently used FRITZ!Box provides the internet connection on your line and has the latest FRITZ!OS version 7.56 or newer.

3. If you use any FRITZ!Repeaters: Update their FRITZ!OS.

4. If you use FRITZ!Fons or FRITZ!DECT Smart Home products, check whether a software update is available and, if so, install it.

5. If you use FRITZ!Apps for the previously used FRITZ!Box, have your smartphone ready.



6. You must have physical access to the FRITZ!Box you are currently using, so that you can insert its network cable and press the buttons. The other, new FRITZ!Box should be close at hand. You will also need to connect to electrical power and the internet for the switching procedure.

7. If you are not only changing the FRITZ!Box model, but also the type of connection (for instance, from DSL to fiber optic), then the other, new connection must be ready for operation.

8. You must be connected with the home network of the currently used FRITZ!Box with a notebook or computer (recommended) or by smartphone. Under "Wizards" in the <http://fritz.box> user interface there is a "Transfer Your Settings to a New FRITZ!Box" link to click. Read the instructions presented there and follow them carefully. The process usually takes around 10 to 30 minutes, depending on the complexity of the home network.

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## Previous Versions (History)

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### Additional improvements in FRITZ!OS 7.29

#### Internet:

- IMPROVED List of trusted certification authorities updated
- IMPROVED When internet access to storage media via FTP/FTPS is enabled, the randomly preselected port number is displayed

#### System:

- IMPROVED Stability

#### Telephony:

- FIXED Restricted availability by telephone when using telephony via IPv6
- IMPROVED Encrypted telephony more robust against lost connections
- IMPROVED Enhanced interoperability for use of encrypted telephony

#### USB:

- FIXED Improved compatibility with MacOS 12.0 "Monterey"
  - FIXED Improved compatibility with several older devices (printers, scanners)
- 

### Additional improvements in FRITZ!OS 7.28

#### System:

- IMPROVED Increased stability

#### Telephony:

- CHANGE Necessary adaptation to changed demands for authentication with Google (Google telephone book and calendar)
- IMPROVED Better interoperability for CardDAV-based online telephone contacts

**Wi-Fi:**

- IMPROVED Better stability
- FIXED In Mesh-Repeater mode, Wi-Fi clients connected to the guest access of the repeater sometimes did not get an IP-address

**USB:**

- FIXED No network drive connection (SMB) was possible with macOS Big Sur Version 11.3
- 

## Further Improvements of FRITZ!OS 7.27

**Wi-Fi:**

- IMPROVED Better stability
- FIXED The legend under the "Allocation of Wi-Fi Channels" diagram was not rendered in a single line ("Wi-Fi /Wi-Fi Channels" page)
- FIXED Possible problems while registering repeaters after changing Wi-Fi encryption from "WPA2+WPA3" to "non-encrypted"
- FIXED Vulnerabilities in the processing of incoming fragmented frames and aggregated MPDUs (AMPDU) fixed ("Fragatttack")
- FIXED WPS for the Wi-Fi Guest Access did not work reliably with non-encrypted Wi-Fi

**Telephony:**

- CHANGE Necessary change for use of a Google online telephone book in the future
- FIXED After editing CompanyFlex Cloud PBX telephone numbers, these numbers were no longer registered
- FIXED No display of call blocks if these included an entry without a telephone number
- FIXED Searches in the telephone book could be performed using a name, but not a telephone number
- FIXED Configuration of internal fax function not possible when a telephone book contained an entry without a telephone number
- FIXED Occasionally, three-party conferences did not work on analog telephones

**DECT:**

- FIXED After long operation times, certain functions were sometimes no longer available (e.g. media player, search for updates...)

**System:**

- CHANGE Push Service: Various corrections to content of "Change notice" email
- FIXED The code of the Google Authenticator could not always be entered on the user interface

**DVB-C:**

- **\*\*Improvement\*\*** Automatically start channel scan when DVB-C function is activated
- 

## New functions of FRITZ!OS 7.25

**Internet:**

- NEW Prioritization of a home network device can now be enabled on the FRITZ!Box user interface

**Telephony:**

- NEW Fax function: Log for received and sent faxes
- NEW Support for the "Telekom CompanyFlex" business telephony platform (SIP trunk and cloud PBX)

**DECT/FRITZ!Fon:**

- NEW New start screen with current weather information

**Smarthome:**

- NEW FRITZ!DECT 440 measures humidity and allows its display with FRITZ!App Smart Home and FRITZ!Fon
- NEW FRITZ!DECT 440 displays the QR code for simple connection with the Wi-Fi guest access
- NEW Smart Home: Lightsequence "Wakeup/Sleep" for FRITZ!DECT 500 and compatible DECT LEDs
- NEW Guest Access or answering machine can be switched on and off at the touch of a button on the FRITZ!DECT 440
- NEW Roller shutter control via FRITZ!DECT 440, FRITZ!Fon, and the FRITZ!Box user interface
- NEW At the touch of a button on FRITZ!DECT 440 or 400, an internal phone rings and displays a message

## Further Improvements of FRITZ!OS 7.25

**Internet:**

- IMPROVED Assignment to devices added to the access profile settings in the parental controls
- IMPROVED Device status (active/not active) is displayed in the selection of devices for port sharing
- IMPROVED Clearer display of port sharing overview on mobile devices
- IMPROVED Independent port sharing settings for a device are now permitted when the request was made over IPv6 for the IPv4 address of the device - and vice versa
- IMPROVED Event message when port 80 temporarily released for sharing in order to issue certificate for letsencrypt.org
- IMPROVED DNS over TLS (DoT) more robust
- FIXED In certain scenarios, IP client operating mode could not be configured correctly via LAN with DHCP
- FIXED Formatting errors occurred in the configuration of IPv6 routes
- FIXED Display corrected in the port sharing overview
- FIXED After activating DNS over TLS (DoT) and longer run times, certain websites could no longer be resolved
- FIXED After update of FRITZ!OS 7.03 or older, the IP address was not refreshed on MyFRITZ!Net (DynDNS)
- FIXED Repeated dropping and reestablishment of VPN connections after automatic disconnection
- FIXED IPv6: After the home network prefix was refreshed, invalid IPv6 addresses for guest access were not deleted
- FIXED Changes to access profiles were sometimes rejected groundlessly with the error message "The list of blocked network applications with this ID already exists."
- FIXED "PTR" type DNS queries were not always resolved correctly
- FIXED IPv6: In IPv6 route advertisement (RA) with option 25 (Recursive DNS Server), sometimes bits from the "Reserved" field were set
- FIXED After restoring factory settings, the first VPN connection configured no longer worked
- FIXED After importing a configuration with an alternative LAN IPv4 network, the local DNS server remained in the old network after settings were adopted
- FIXED The TR-064 parameter WANAccess was sometimes incorrect ("granted") when no WAN was available upon restart

- FIXED "PTR" type DNS resolutions were not always possible
- FIXED Sending of advanced support data did not trigger a push mail
- FIXED When a saved configuration was adopted selectively, not all of the push mails originally configured were adopted
- FIXED VPN connections via L2TP (e.g. in Windows 10) were unexpectedly slow
- FIXED Device block had no effect in certain scenarios
- FIXED When a FRITZ!Box was operated behind certain cable modems, brief interruptions of the internet connection occurred every 12 hours
- FIXED In factory settings the first VPN connection could not be enabled for a single instance
- FIXED Online Monitor for mobile communications did not always show data when "Advanced failover protection" was enabled

#### Wi-Fi:

- IMPROVED Reworked "Wi-Fi / Wi-Fi Channel" page
- IMPROVED Improved auto channel function after detection of interference sources (5-GHz band)
- IMPROVED Improved messages on Wi-Fi under "System / Event Log"
- IMPROVED Detection of multiple parallel WPS activations improved
- IMPROVED New message under "System / Event Log" when the maximum number of wireless repeaters is exceeded
- IMPROVED Naming of Wi-Fi guest access (SSID, preassigned) depends on selected language
- CHANGE In "Mesh Repeater" operating mode, only Wi-Fi networks with visible names are shown for selection of the Mesh Master
- FIXED Erroneous display of bandwidth in connections with HUAWEI P30 corrected
- FIXED After radar detection with reduced power mode (Green AP), initialization problems occurred in combination with 160 MHz bandwidth (VHT160)
- FIXED After a FRITZ!OS update, the "Wi-Fi / Wi-Fi Channel" page did not show any Wi-Fi channels, and in some circumstances, no Wi-Fi networks in the environment
- FIXED Activation of WPS immediately after the Mesh Master was started frequently led to non-DBDC uplinks to Mesh Repeater
- FIXED Incorrect message under "System / Event Log" for WPS during DFS wait time

#### Mesh:

- IMPROVED Improved indications about adoption of settings enabled for a FRITZ!Box as Mesh Repeater
- FIXED Incorrect formatting in the mobile view of the "Mesh Settings" page on a FRITZ!Box in "Mesh Repeater" mode
- FIXED Settings for Wi-Fi schedule could not be changed under some circumstances, if the setting "FRITZ!Box as a Mesh Repeater" was used
- FIXED For a FRITZ!Box configured as Mesh Master, but not as router (DHCP server), name and IP address of the router could not be changed
- FIXED Display of Wi-Fi channel bandwidth in the user interface on the Mesh Master was sometimes different on the Mesh Repeater

#### Smarthome:

- IMPROVED Smart Home: Improved - Template for fast changes to color settings and brightness on FRITZ!DECT 500

#### Telephony:

- IMPROVED Completely reworked settings pages for call diversion and call blocks
- IMPROVED First Configuration wizard offers configuration of a telephone
- IMPROVED Call diversions offer option to divert selected calls to a certain telephone on the FRITZ!Box
- IMPROVED Setting for using internal fax machine added to "Send faxes only"
- IMPROVED The "Email" and "RSS" tabs are hidden in the "Telephony / Telephony Devices" menu when DECT is switched off

- IMPROVED Display and management of entries in telephone books completely reworked (among others, photo visible in overview, columns can be selected for display, and selection of multiple entries added as well as copying and moving entries between telephone books)
- IMPROVED Settings for sending and receiving faxes combined under "Telephony / Telephony Devices"
- IMPROVED After all new received fax documents in the fax log have been opened, the "Info" LED stops flashing
- IMPROVED Integration of multiple CardDAV telephone books supported
- IMPROVED Better compatibility of the FRITZ!Box's SIP registrar to the SIP client LinPhone
- IMPROVED Better compatibility to telephone providers Easybell and VoIPfoneUK
- IMPROVED Enhanced compatibility for encrypted telephony
- IMPROVED For country setting "Germany" and telephone number configured automatically by provider, the area code included in the number is detected automatically and adopted in the line settings
- IMPROVED Voice quality better for telephone calls in mobile networks and for international calls
- IMPROVED Forwarding of calls accepted on Snom IP telephones supported without query
- IMPROVED Stability
- CHANGE Adjustment to the changed behavior of the T-Net-Box when calls are rejected, for instance due to call blocks
- FIXED Web address of the CardDAV server could not be changed in online telephone books after entry
- FIXED On a FRITZ!Box used as a Mesh Repeater for telephony, it was possible to edit the telephony numbers adopted from the Mesh Master and also to create new telephony numbers
- FIXED Telekom SIP trunking account could not be disabled
- FIXED In integrated iCloud contacts (Apple), first and last names were sometimes displayed in inconsistent order
- FIXED During synchronization of entries in online contacts (CardDAV), in certain constellations all email addresses were deleted
- FIXED Certain telephone numbers were temporarily not registered (among them Sipgate, EnviaTel, Teledate)
- FIXED Connections dropped after about 30 seconds for telephony connections secured by TLSonly (among others, KPN)
- FIXED In certain constellations, only one-way voice transmission was possible during telephony via IPv6
- FIXED Unsuitable presettings for telephony provider Vodafone Italy
- FIXED Registration of telephone numbers was not possible with telephony profile for provider Vodafone Italia
- FIXED Sporadic errors when faxing via T.38 connections
- FIXED No hold announcement after resetting to factory settings
- FIXED Pickup on IP telephones was possible for no longer than 4 seconds
- FIXED After a fax was sent, the name of a recipient selected via the telephone book was not displayed in the call list
- FIXED Editing of door intercom stations sometimes led to loss of email notification for door intercom stations
- FIXED After importing answering machine settings including saved messages into another FRITZ!Box model, sometimes the imported messages could no longer be played back
- FIXED Ring sequences incorrect for the country setting "Australia"
- FIXED Sporadic loss of schedule settings for the answering machine after updating FRITZ!OS

#### Home Network:

- IMPROVED Faster display of network connections in very large networks
- IMPROVED When leaving the device details a message concerning changed device names is displayed only if the name was actually changed
- CHANGE When an individual name is set for the FRITZ!Box, the name of the working group for home network sharing ("USB/Storage") remains unchanged

- FIXED The section for blocking devices was displayed in the device details of guest devices even though this function is reserved for home network devices
- FIXED Changed IP settings of the FRITZ!Box were not offered for printing
- FIXED Time synchronization (NTP) was instable in certain scenarios

#### USB:

- IMPROVED In fritz.nas, multiple files can be selected using the shift key
- FIXED Home network sharing of a network drive (SMB) was not visible under Network in Windows Explorer
- FIXED Data transmission via network drive function (SMB) failed with the Windows error message "STATUS\_NO\_MEMORY"

#### System:

- IMPROVED Configuration wizard can be interrupted and resumed
- IMPROVED Various usability improvements in the First Configuration wizard
- IMPROVED Status overview page within the first configuration
- IMPROVED Security query when leaving a page without saving changed settings
- IMPROVED Saving and restoring settings now includes telephony data from the internal storage of the FRITZ!Box (ring tones, telephone book pictures, voice messages)
- IMPROVED After support data have been sent to AVM, a second dispatch can be started immediately without any wait time
- IMPROVED A password can be made visible during entry (eye icon) in the user interface
- IMPROVED Corrected details in the "Diagnostics / Function" for Mesh and USB
- CHANGE Offer to switch to "Level III: Notify me about new versions of FRITZ!OS and install new versions automatically (recommended)" is now offered after updating only when "Level II: Notify me about new versions of FRITZ!OS and install necessary updates automatically" was previously configured
- CHANGE The option to log in to a FRITZ!Box (user interface) without a password, which was not recommended, is no longer supported \*1
- CHANGE If "only with the FRITZ!Box password" was set up for logging in to the user interface, a FRITZ!Box user with the name "fritz" and a random four-digit number together with the FRITZ!Box password will be created automatically. To log in to the user interface in the home network, entering the FRITZ!Box password is still sufficient. \*2
- FIXED FRITZ!Box users could not be sorted in the overview
- FIXED Access profiles with blocked applications in parental controls were not available when settings were restored
- FIXED Number of messages in "System / Event Log" was too restricted in some areas
- FIXED Display of installation date for the last update was incorrect in certain scenarios

#### Mobile Communications:

- IMPROVED New "Compatibility mode for mobile broadband dongles" option for generic integration of variants of known mobile broadband dongles
- IMPROVED Country-specific list of mobile network providers when FRITZ!Box used with a USB mobile network dongle
- IMPROVED Optimized details for "Advanced failover protection" setting
- IMPROVED Mobile network provider "Magenta Mobil" added for Austria
- IMPROVED Support for Huawei E3372h-320 USB mobile network dongle

\*1. The home network login mode without a password, which is not recommended, is no longer supported. For the initial access to the user interface after the FRITZ!OS update, the user needs to assign a FRITZ!Box password (additional confirmation required)

\*2. Automatic generation of a user according to the naming structure fritz and a random four-digit number if login before the update took place only with the FRITZ!Box password. Important

information for developers of apps that would like to register with FRITZ!Box can be found at [avm.de/service/schnittstellen](http://avm.de/service/schnittstellen)

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## New functions of FRITZ!OS 07.20

### Internet:

- NEW With parental controls enabled, settings and ticket entry for the device to be accessed are displayed when the user interface is opened
- NEW Support for encrypted resolution from domain names to IP addresses (DNS over TLS)
- NEW Simplified configuration of internet connection on 1&1 lines (zero-touch)

### ## DOCSIS:

- NEW In Mesh-Repeater-Mode or Internet access via LAN, the internal Cable modem is switched off
- NEW Reworked Cable Information pages

### Wi-Fi:

- NEW Encryption according to the new WPA3 standard (including Wi-Fi guest access, connections to Mesh Repeaters and internet access via Wi-Fi with SAE)
- NEW An open Wi-Fi network can be offered at the Wi-Fi guest access, in which only data are transmitted in encrypted form (Enhanced Open/Opportunistic Wireless Encryption, OWE)

### Mesh:

- NEW Mesh auto-channel: Accounts for the wireless environment of the Mesh Repeater in selecting the best Wi-Fi channel for the entire Mesh

### Telephony:

- NEW Support for online contacts from Apple (iCloud), Telekom Mail, and CardDAV providers
- NEW Support for encrypted telephony (TLS and SRTP) for Deutsche Telekom, Easybell and dus.net

### DECT/FRITZ!Fon:

- NEW Nine new ring tones to choose from
- NEW Smart telephone book displays matching suggestions even during number entry
- NEW Sound settings for playing back web radio stations and to improve the speech quality of telephone calls
- NEW Start screen to display the temperature of a compatible Smart Home device in the home network (for instance, FRITZ!DECT 200, FRITZ!DECT 30x, FRITZ!DECT 440)

### Home Network:

- NEW Network passwords for the powerline network can now be changed on FRITZ!Powerline devices connected directly (via LAN)

### Smart Home:

- NEW Smart Home: NEW - Reworked Smart Home pages on the FRITZ!Box user interface
- NEW Smart Home: NEW - Synchronization of the temperature setting, the boost mode and open window detection within a group of radiator controls
- NEW Smart Home: NEW - Display of total consumption (kWh) of the past two years for the smart plugs FRITZ!DECT 200 and 210

- NEW Smart Home: NEW - The "Adaptive Heating" feature of the FRITZ!DECT 301 makes the configured temperature available at the desired time
- NEW Smart Home: NEW - Supports the FRITZ!DECT 500 LED light
- NEW Smart Home: NEW - Supports the four-button switch FRITZ!DECT 440
- NEW Smart Home: NEW - Supports the DECT ULE/HAN FUN roller blinds profile

#### USB:

- NEW The SMBv3/v2 protocol of the Windows network drive function is supported by default; optionally, SMBv1 can still be supported
- NEW Media contents like images, music and videos are indexed automatically with "Refresh index automatically" and made available to the home network

#### System:

- NEW Time period for automatic updates can be defined
- NEW NEW - Users supported in becoming acquainted with FRITZ!Box functions with welcome page
- NEW Display of the user interface in English, French, German, Italian, Polish or Spanish
- NEW Setting of language, country and time zone for FRITZ!Box operation

#### ## Repeater:

- NEW Support for encryption according to the WPA3 standard (SAE)
- NEW Optimization of repeater connection with a FRITZ!Box with support for Wi-Fi channels 160 MHz wide

## Further Improvements of FRITZ!OS

#### Internet:

- IMPROVED Message upon failed ticket entry (parental controls)
- IMPROVED Display and modification of the IPv6 Interface ID under "Home Network / Network / Network Connections"
- IMPROVED Any domain name can be used to address a VPN remote peer, not just MyFRITZ! domain names
- IMPROVED NetBIOS permission can be configured individually for a single VPN connection
- IMPROVED Ticket for parental controls can be entered before start of online block, so that usage time can be extended without interruption
- IMPROVED Additional links from the user interface in the online help for IPv4 and IPv6 routes under "Network Connections"
- IMPROVED IPv6 prefix delegations and IPv6 subnets are displayed under "Home Network / Network / Network Settings"
- IMPROVED IP address range for guest network increased to up to 253 devices
- IMPROVED Incorrect configuration by using the same network address on both sides of a LAN-LAN linkup for VPN prevented
- IMPROVED Access to the myfritz.net domain for a downstream FRITZ!Box registered with MyFRITZ! allowed from the home network
- IMPROVED Greatly improved performance for VPN
- IMPROVED In the context of encrypted name resolution (DNS over TLS, DoT), SNI (Server Name Indication) is supported
- IMPROVED Support for multiple DNS queries over a single TCP connection
- CHANGE Unnecessary settings option for connection speed removed from "IP Client" mode
- CHANGE Button for changing the access profiles under the Parental Controls Overview in the user interface
- CHANGE "Emule" protocol removed from selection for port sharing



- CHANGE IP compression (data compression) is no longer supported in VPN connections
- FIXED "Diagnostics / Function" showed wrong error message for MyFRITZ! registration for FRITZ!Boxes in IP client mode
- FIXED Defective links behind "MyFRITZ!" under "Diagnostics / Security"
- FIXED VPN connection name was not displayed in network connections and Mesh Overview
- FIXED In the VPN overview table "local network" was missing and "remote network" left empty
- FIXED Devices that are connected to a downstream router via IPv6 prefix delegation received no IPv6 internet connection when parental controls were enabled
- FIXED Devices that are connected to a downstream router via IPv4 static routes received no IPv4 internet connection when parental controls were enabled
- FIXED Port sharing for different devices with the same name could not be created
- FIXED Occasional restarts of FRITZ!Box during many parallel FTP transmissions over WAN
- FIXED Problems with umlauts in the parental control filter lists
- FIXED Guest network lock in the parental controls did not lock reliably
- FIXED No automatic Wake on LAN (WoL) via VPN
- FIXED Prioritization settings for devices with the "Everything except surfing and mail" access profile were no longer applied after rebooting

#### Wi-Fi:

- IMPROVED Redesigned the print output of information on the wireless guest access
- IMPROVED "WPA3" option added to the encryption of the FRITZ!Box in "Mesh Repeater" operating mode
- CHANGE Reworked information page (for instance, after changes to Wi-Fi configuration)
- CHANGE WPS/PIN method removed
- CHANGE Outdated WPA/TKIP encryption removed
- FIXED "Wireless / Guest access": Duration for disabling automatically could not be changed
- FIXED Sorting by MAC addresses in "Wi-Fi / Wi-Fi Network / Security" did not work
- FIXED "Delete" button for devices was displayed even if the device could not actually be deleted
- FIXED PMF option no longer offered for "WPA/TKIP" encryption selection
- FIXED Detection of interference did not work under certain rare circumstances
- FIXED Time stamp "Wireless LAN channels used" corrected (5-GHz band)
- FIXED Incorrect entry no longer appears in the "Event Log" when individual wireless bands were enabled or disabled manually on a FRITZ!Repeater 3000

#### Mesh:

- IMPROVED Rendering of DHCP host name, media server name and SMB name on Mesh Repeaters improved
- IMPROVED Improved text for configuration of a FRITZ!Box as a Mesh Repeater
- IMPROVED Better detection of terminal devices that cannot be rerouted via Mesh steering
- IMPROVED Notification in FRITZ!Box log when a network loop is created (for instance, simultaneous LAN and wireless connection to the same device)
- IMPROVED Notification in FRITZ!Box log when a network loop is created (for instance, simultaneous LAN and wireless connection to the same device)
- CHANGE On a FRITZ!Box configured as a Mesh Repeater, the option for adopting the settings in the Mesh is offered only after Mesh was enabled on this FRITZ!Box
- FIXED Display of FRITZ!Powerline 520/530E in the Mesh connection diagram was not correct
- FIXED In certain cases a FRITZ!Repeater was displayed twice in the "Mesh Overview" of the FRITZ!Box
- FIXED When telephony in the Mesh is used, telephony registration of a FRITZ!Box used as a Mesh Repeater was sometimes prevented by the Mesh Master
- FIXED For wireless guest access the steering characteristics (11k/v) of wireless devices were not taken into account correctly (Google Pixel 2 and SAMSUNG S10)

#### Telephony:

- IMPROVED Calls from door intercoms (including images) added to "Calls" push mail

- IMPROVED "Always register via an internet connection" option added for SIP trunk providers
- IMPROVED More detailed messages for security-relevant changes to settings
- IMPROVED New telephony providers added for the country setting "Italy": TIM, Fastweb, Vodafone and others
- IMPROVED Telephony providers 02, PYUR and multiple SIP trunk providers added
- IMPROVED Telephone numbers can be assigned to multiple answering machines, so that up to ten different greetings can be scheduled to play on one telephone number
- IMPROVED For operation of ISDN devices, advanced settings are offered under "Telephony Device" in the user interface
- IMPROVED The call list in the user interface offers a separate view for rejected calls
- IMPROVED For company lines (SIP trunk and SIP DDI lines), a settings offered to support setting any telephone numbers desired (CLIP no screening)
- IMPROVED Integrated fax function supports sending up to ten pages of text
- IMPROVED If a storage location is set in the fax function of the FRITZ!Box, sent faxes will be stored there along with received faxes
- IMPROVED New methods for call diversion to external destinations supported for certain telephony providers (302 - Moved temporarily)
- IMPROVED Automatic configuration of telephone numbers for provider Telekom adapted to the latest network demands
- IMPROVED Increased robustness of telephony against partial failure of network infrastructures when TCP internet protocol in use
- IMPROVED Better interoperability with Swiss provider sipcall
- IMPROVED Maximum length for hold announcement of answering machine increased from 8 to 30 seconds
- IMPROVED Transfer/Forwarding of calls supported (without a query) on IP telephones to other telephones connected with the FRITZ!Box
- CHANGE New missed calls are no longer displayed with a flashing "Info" LED on the FRITZ!Box
- CHANGE New fax and email messages for answering machine services (like the Telekom SprachBox) are no longer displayed with a flashing "Fon" LED on the FRITZ!Box
- FIXED Under the "SIP trunking" selection, telephone numbers could not be created for providers that could be selected for another telephony provider using the same registrar
- FIXED Under the "Other Provider" selection, telephone numbers could not be created for providers that could be selected for another telephony provider using the same registrar
- FIXED Automatic fax recognition for the telephone numbers of the analog landline could not be set up
- FIXED Changes to the settings for the proxy server and STUN server were not adapted in the telephone numbers
- FIXED When the fax function was started in the user interface, only an empty page was displayed if there was an entry without a telephone number in the telephone book
- FIXED Telephone numbers set to "Only via IPv6" could not be switched to use IPv4 without an IPv6 internet connection
- FIXED When preparing a fax in the integrated fax machine for sending, the contents in the "To" field were deleted after selecting a telephone book entry and switching to another input field
- FIXED For IP door intercom systems with multiple doorbells, sometime the desired ring tone was not used
- FIXED When listening to messages on the integrated answering machine with an ISDN telephone, the key shortcut for callback did not work
- FIXED No internet connection with LTE mobile communications dongles from Huawei when using a rate without LTE support

#### DECT/FRITZ!Fon:

- IMPROVED Telephone book display for FRITZ!Fon C4, C5 and C6 now faster
- IMPROVED Setting up call blocking in the handset is now easier
- IMPROVED Display of FRITZ!Box events with "OK" button in the "FRITZ!Box" start screen
- IMPROVED Pictures can also be browsed with up/down rocker

## Home Network:

- IMPROVED "Mesh" added to properties in the network connection overview
- IMPROVED Mesh icon shifted in the Mesh table from the "Connections" column to the "Properties" column
- IMPROVED Reliable display of new AVM Powerline products in the FRITZ!Box home network
- IMPROVED More reliable indication of low powerline data rates in the FRITZ!Box home network
- CHANGE "Smart Home" menu moved to top menu level and "DECT" menu moved to the telephony menu

## Smart Home:

- CHANGE Smart Home: Change - Display of low battery level on Smart Home devices now only on the FRITZ!Box user interface, by push service, and on connected FRITZ!Fon devices
- FIXED Smart Home: Fixed - Wrong target temperature when accessing the FRITZ!Box via MyFRITZ!
- FIXED Smart Home: Fixed - Template for radiator control did not work if heating was off during 01/01 until 31/12

## USB:

- IMPROVED When creating new release links on fritz.nas, the user is informed if the FRITZ!Box is not accessible from the internet
- IMPROVED The "USB Devices" and "Storage (NAS)" pages on the user interface were integrated into "USB/Storage" and simplified
- CHANGE "USB Devices" and "Storage (NAS)" menus combined under "Home Network / USB/Storage"
- FIXED A folder released for sharing was not rendered legibly under "Sharing"
- FIXED When uploading a file to fritz.nas by Drag & Drop, each file was uploaded twice
- FIXED The time information "Changed On" was given incorrectly on fritz.nas if the language was not set to German in the FRITZ!Box

## System:

- IMPROVED Device name displayed the same everywhere in the Mesh
- IMPROVED "FRITZ!Box Info" push service now includes an option for information on the "Home network"
- IMPROVED New menu icons for "Overview" and "Smart Home"
- IMPROVED "Reset" function in details of network devices for deleting all settings for this device
- IMPROVED Diagnostics check expanded to include "Mesh", "Internet", "DECT" and "Wi-Fi"
- IMPROVED FRITZ!Box support page now includes option to send support data directly to AVM
- IMPROVED Separate restoration of settings for the Smart Home and Telephony areas
- IMPROVED Modernized display of "LEDs" and other symbols throughout the user interface
- IMPROVED Upon the first restart after the update, activation of automatic updates is offered (auto-update level III)
- IMPROVED Warning on the FRITZ!Box Overview on selected settings that are not recommended
- IMPROVED Page structure simplified in many areas of the user interface to improve usability
- IMPROVED Reworked concept for navigation in the wizard for first configuration
- IMPROVED Overview of authorized apps in the "System / FRITZ!Box Users" area now also includes rights and time of last login
- IMPROVED Update information is included in event log (visible only with the next update)
- IMPROVED Update process optimized for automatic updates (silent update, task 60018)
- CHANGE WAN port can be switched as 5th LAN interface if this is not needed as a WAN connection to the internet provider
- CHANGE In the factory settings, the WAN port always works as a WAN interface (an existing setting as 5th LAN interface for this connection is not changed by the update)
- CHANGE Update setting upon delivery is now auto update level III (updates are installed automatically)
- CHANGE User with the name "ftpuser-internet" is deleted

Mobile Communications:

- FIXED Detail corrections to settings and status information when using mobile dongles
- FIXED Not all of the settings for the SMS message push service could be changed
- FIXED Received SMS messages were sometimes rendered with only partial text or with an incorrect time stamp in the push service and in "System / Event Log"

Security:

- IMPROVED More detailed message about security-relevant changes under "System / Event Log"
  - IMPROVED Display of the ports that can be reached from the home network under "Diagnostics / Security"
  - CHANGE Waiting for the additional confirmation of a change is indicated by the flashing of all LEDs
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