



FRITZ!Box 6591 Cable

FRITZ!OS Version: 08.01

Release Note

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FRITZ!OS is the software of the FRITZ!Box. Use the online update function to easily download the newest FRITZ!OS version into your FRITZ!Box. Information on updates for devices you received from your cable provider will be supplied by your cable provider. In this case, updates will be performed by your cable provider.

Product: FRITZ!Box 6591 Cable

Version: FRITZ!OS 8.01

Language: English, French, German, Italian, Polish, Spanish

Release date: 16/12/2024

Top Features

- User interface: Diagram showing the connections in the overview (homepage)
- New Online Monitor informs about the load on the internet connection and the load by individual network devices.
- Internet: Now IPv6 data can also be transmitted via a WireGuard® VPN tunnel
- Mesh: Redesigned diagram of all devices connected with the FRITZ!Box with additional functions
- DECT: The number of DECT telephone calls possible concurrently was increased from three to five
- Push service: Reworked design and more convenience

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

Below you find a complete list and descriptions of the new functions in the latest FRITZ!OS, along with a list of further improvements in this version.

Improvements in FRITZ!OS 8.01

Internet:

- **Fixed** Changes to the device name of a device in the home network were not transmitted to MyFRITZ!Net
- **Fixed** During operation of the FRITZ!Box on an external modem or router, limitations of the internet connection occurred
- **Fixed** No internet connection after update to FRITZ!OS 8.00 when no password included in account information
- **Fixed** Sometimes IPSec VPN connections with the option to route all data traffic via this connection did not work
- **Fixed** Sometimes emails about push service or MyFRITZ!Net were sent with empty login information
- **Fixed** The preferred user for default login with the FRITZ!Box during MyFRITZ! access from the internet was not transmitted to MyFRITZ!Net
- **Improved** EDNS0 expansions for local domains (fritz,box) to improve interoperability with Linux system (systemd-resolved) during use of DNS-SEC

System:

- **Fixed** Although the push service worked, sending the test email to the provider GMX failed when the sender name contained umlauts
- **Fixed** Push service on Mesh Repeaters that adopted settings could not send email
- **Fixed** Restart of FRITZ!Box via user interface sometimes failed
- **Fixed** The status of port sharing was always inactive in the "FRITZ!Box Info" push service mail
- **Fixed** When accessing the FRITZ!Box interface via the internet (https), individual elements or pages were sporadically missing

Changes for Providers in FRITZ!OS 8.01

Internet:

- **Fixed** Although the ACS server can be reached via the TR-069 interface, the FRITZ!Box sometimes switched to the internet interface after updating
- **Fixed** For internet access with PCP, the line in the Online Monitor for port sharing with the externally available port range was not always displayed
- **Fixed** USP: Length of CONNECT packet was limited to 256 bytes and was expanded to 1024
- **Improved** USP: The MQTT client can be configured for USP controllers via TR-069 and TR-064

System:

- **Fixed** In rare instances, PNM data was not deleted again
- **Fixed** on the FRITZ!Box Cable start page, update links with no function were displayed

New features and improvements in FRITZ!OS 8.00

DOCSIS:

- **NEW** Information on use of the cable connection included in the push service email
- **NEW** Reworked diagram on the overview page of the cable connection
- **Improved** Reworked wizard for configuring internet access on cable connections

Internet:

- **NEW** IPv6 data now can also be transferred via a WireGuard® VPN tunnel (new WireGuard® connection required, no forwarding of IPv6 data to the internet)
- **NEW** New Online Monitor diagram with expanded information on the load on the internet connection by individual network devices
- **NEW** Extend online time restricted through parental controls by 45 minutes directly in the detailed settings of the network device
- **NEW** Simplified configuration for connection to a fiber optic modem (ONT)
- **NEW** The speed of the Ethernet connection between LAN 1/WAN and the upstream device (e.g., fiber optic modem) is displayed on the overview page
- **Improved** When sharing internet access to FRITZ!Box services, an additional IP block list from AVM can be used
- **Improved** For VPN network couplings via WireGuard®, the "fritz.box" domain is resolved in the entire coupled network
- **Improved** For VPN network couplings via WireGuard®, the domain of the remote site can be specified for DNS resolution
- **Improved** More precise explanations of errors during the configuration of WireGuard® connections
- **Improved** Added notification about potential risk of sharing port 80 or 443
- **Improved** Preselection of easiest configuration method for the internet providers Telekom, Vodafone, and EWE for initial configuration on a fiber optic connection
- **Improved** Improved details during the initial configuration behind a fiber optic modem (ONT)
- **Improved** The FRITZ!Box user interface can also be opened in the home network by entering "fritzbox.internal" and "fritzbox.home.arpa"

Wi-Fi:

- **NEW** Visualization of Wi-Fi usage in the home network for the last 7 days added on "Wi-Fi > Wi-Fi Channel"

Mesh:

- **NEW** Definition of a name and an icon for network devices directly in the Mesh Overview diagram (tooltip)
- **Improved** Details about the LAN connections between FRITZ! devices given in the Mesh Overview diagram (tooltip)

Telephony:

- **Improved** Recordings on the answering machine now with higher voice quality (HD audio)
- **Improved** The "Enable encrypted telephony" option is offered for the provider "Drillisch GmbH"
- **Improved** Order of telephone numbers in telephone book entries can be changed more easily
- **Improved** The call list shows the country, or for domestic calls, the location, where the call originated

DECT/FRITZ!Fon:

- **Improved** Display of Wi-Fi account information can now be switched on or off for each FRITZ!Fon
- **Improved** Easier deletion of multiple emails via the "delete multiple" option
- **Improved** "Weather" start screen now available in all countries

Home Network:

- **NEW** Names can now also be assigned to devices that use the guest access
- **NEW** Improved overview through individual icons for network devices
- **Improved** Detailed settings of a device on the "Home Network > Network Connections" page redesigned
- **Improved** Random calculation of the Unique Local Address (ULA, IPv6) in accordance with RFC 4193)

Smart Home:

- **NEW** On the device page of FRITZ!DECT 350 window sensor in the FRITZ!Box user interface, window open detection can be configured for the selected radiator controls
- **NEW** The templates also allow the user to set the target temperature for radiator controls; the brightness, saturation, and color for lights, and the position for roller shutters in percentage steps
- **NEW** The temperature settings for the radiator control can be restricted to a lowest and highest temperature (from software version 5.20 for FRITZ!DECT 301 and FRITZ!DECT 302)
- **NEW** Routines can also be triggered by a preset time or a time relative to sunrise/sunset
- **Improved** Reworked registration of Smart Home devices via the FRITZ!Box user interface

System:

- **NEW** New diagram of the FRITZ!Box connection status in the overview (homepage)
- **Improved** File name for saved settings now includes name of individual FRITZ!Box
- **Improved** A personal subject line can be specified for push service
- **Improved** Reworked configuration of push service
- **Improved** Communication to all AVM services for the FRITZ!Box (update, etc.) preferentially via IPv6 with fallback to IPv4
- **Improved** Link to reset the password more prominent in the "Forgot password" email
- **Improved** With "Diagnostics > Function" the services for the Network Time Protocol are checked and relevant information displayed about any errors found
- **Improved** Simplified address changes in push service through the new default recipient, which can be specified independently of the sender
- **Improved** Changes to sender information for email from push service require additional confirmation
- **Improved** Shorter interval for sending push service emails with notifications on user logins with the FRITZ!Box
- **Improved** "Transfer Your Settings to a New FRITZ!Box" wizard improved for a smoother switch from DSL to fiber optic or cable
- **Improved** More reliable detection of FRITZ!Box updates already performed through use of the "Transfer Your Settings to a New FRITZ!Box" function

USB/Media Server:

- **Improved** Energy-saving function now also works with USB storage devices in Green Mode (USB 2.0)
- **Improved** Data packets downloaded from fritz.nas now include the name of the given FRITZ!Box model and a time stamp in the file name to ease identification

Powerline:

- **NEW** Password for all devices in the powerline network can be changed with a single click

Additional Improvements in FRITZ!OS 8.00

Internet:

- **Changed:** The AES-192 encryption algorithm is no longer supported in Phase 2 SAs of VPN connections
- **Changed** The hash algorithm MD5 and the 3DES encryption algorithm are no longer used on VPN connections over IPSec for reasons of security
- **Changed** The IPv6 option "Assign unique local addresses (ULA) as long as no IPv6 internet connection exists (recommended)" is no longer offered
- **Changed** In PPPoE passthrough operation of the FRITZ!Box, DNS root queries are no longer filtered via UDP
- **Fixed** Under some circumstances the network traffic of a connected telephone system was not routed via a specially configured VoIP interface
- **Fixed** Under certain circumstances, OpenWrt devices operated behind a FRITZ!Box did not receive an IPv6 connection to the internet
- **Fixed** Independent port sharing (UPnP) for the same port with various home network devices did not work under certain circumstances
- **Fixed** In some circumstances active WireGuard® connections were interrupted when adding or deleting WireGuard® connections
- **Fixed** VPN connections via WireGuard® to an endpoint given as multiple (comma separated) domains could not be established

Wi-Fi:

- **Changed** For improved compatibility with older wireless devices, security settings can be adjusted on the "Wi-Fi > Security" page
- **Changed** Text reference to selection of "WPA2 + WPA3" Wi-Fi encryption removed
- **Fixed** Display of Wi-Fi properties of a registered wireless device was in rare cases incorrect
- **Fixed** When 5-GHz channels were checked for radar (DFS), no wait cursor was displayed under these channels in the user interface
- **Fixed** Repeaters that were logged into the guest network were not marked as "Wi-Fi guests"

Home Network:

- **Changed** Recommendation to enable the automatic update search at the bottom of the Mesh Overview page

System:

- **Changed** The link generated by "Forgot Password" push service in the email is valid for 20 minutes
- **Fixed** After results of functional diagnostics were sent, an event message about changed FRITZ!Box settings was displayed
- **Fixed** The "Live TV" button for Magenta TV streaming was missing in the user interface when displayed on smartphones and tablets

USB/Media Server:

- **Fixed** Files in a folder on the highest level of a file tree could not be moved, copied, or deleted via FTP
- **Fixed** In certain constellations, access to NAS contents via download link was not possible

Changes for Providers in FRITZ!OS 8.00

DOCSIS:

- **Changed** Provider profiles "PYUR/Primacom" and "PYUR/Tele Columbus" combined to "PYUR"

Internet:

- **NEW** Support for MAP-T, MAP-E, Lw4o6, DS Lite
- **Improved** For TR-064, the topics MQTTControllerTopic (string) and MQTTResponseTopic (string) were added to the action "AddUSPController"
- **Improved** MTU and IPv6 mode can be set for IPv6 by TR-069; see documentation
- **Improved** Serial number added to the TR-098 data model under: InternetGatewayDevice.DeviceInfo.X_AVM-DE_ProdSerialNumber (r, string)
- **Improved** USP: BulkData ForceCollection() for requesting the immediate transfer of bulk data (outside the schedule) implemented by the USP controller
- **Improved** Support for USP v1.3
- **Improved** When the time cannot be determined via a separate connection with the Network Time Protocol does not work, time determination is attempted via the normal internet connection
- **Changed** During TR-069 setting IGD.UserInterfaceX_AVM-DE_AutoUpdate to '0: disabled' is no longer supported; 'IGD.ManagementServer.UpdatesManaged' can be used instead
- **Changed** TR-069 parameter for enabling of Ingress shaping enables the function for monitoring the automatic fair distribution of the bitrate on the internet connection in the home network
- **Changed** USP: When MQTT is used, USP messages with defective or missing content type are no longer discarded for reasons of compatibility

Telephony:

- **Improved** Support for RFC 6228 "Session Initiation Protocol (SIP) Response Code for Indication of Terminated Dialog"
- **Improved** Optimized 503 Retry After behavior
- **Changed** In the factory settings, an entry for the German inland information, "11833", will no longer be created in the telephone book because the directory assistance offered through this number shall be discontinued

- **Fixed** Mandatory parameters for TLS are missing in REGISTER and INVITE for CompanyFlex DDI trunk

System:

- **Fixed** In rare cases, when using the "Transfer Your Settings to a New FRITZ!Box" wizard the ACS settings were not transferred to the new FRITZ!Box

- **Changed** Display of certain provider names for telephone numbers changed

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 adressed with this update:

System:

- **Fixed** Stability and security increased

New Features in FRITZ!OS 7.56

System:

- **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]>

Additional improvements in FRITZ!OS 07.56

Internet:

- **Improved** Clarified wording when configuring WireGuard VPN connections
- **Improved** NTP interoperability improved through better estimation of the hardware clock's deviation
- **Improved** Optimization of bandwidth reservation in the home network through adjustment to transmitted downstream rate
- **Improved** Optimized switching from public DSN servers to provider-side DNS servers
- **Improved** The setting to send all IPv4 data traffic of the FRITZ!Box via the WireGuard VPN connection to (!) a single device is no longer supported
- **Fixed** "Reserve bandwidth in the home network" did not work with IPv6
- **Fixed** Accessing websites in the Wi-Fi guest network failed occasionally
- **Fixed** After returning from a fallback connection, IPv6 is no longer connected (FRITZ!Box Cable only)
- **Fixed** During preparation of the first WireGuard connection via remote dial-in the FRITZ!Box ended up in permanent wait mode
- **Fixed** In certain scenarios, switching the type of internet connection led to the WAN interface being switched to LAN

- **Fixed** Interoperability of IPSec VPN connections to LANCOM remote sites including usage of VNC and RDP with active packet acceleration not available
- **Fixed** MyFRITZ! access permission (device sharing) could sometimes only be terminated via IPv4
- **Fixed** Occasionally an IPv6 prefix sharing of a previous "outdated" prefix for a downstream router was not deleted

- **Fixed** On DS Lite connections, switching off IPv6 manually (incorrect configuration) could result in repeated dial-in attempts by the FRITZ!Box
- **Fixed** On TIM connections (Telecom Italia), configuration of a WireGuard connection led to repeated clearing of the internet connection
- **Fixed** Parental controls: Tickets for devices with the standard profile could not be redeemed
- **Fixed** Problems with functionality and/or display of the parental controls in certain application scenarios
- **Fixed** Repeaters sometimes used external NTP servers for initial time determination even if the upstreamFRITZ!Box offered an NTP server
- **Fixed** Under certain circumstances a switch to public DNS servers occurred although the current DNS server could be reached
- **Fixed** Under certain circumstances a switch to public DNS servers took place too early
- **Fixed** VPN: When configuring an IPSec-LAN-LAN connection, the address of the FRITZ!Box was not proposed
- **Fixed** When all IPv4 data traffic was routed over a WireGuard VPN connection, incoming calls were not always signaled
- **Fixed** When packet acceleration was enabled during longer LAN-LAN linkups to CISCO remote sites via IPSec, occasional connection losses occurred
- **Fixed** Sporadic failure to establish connection on certain o2 cable connections
- **Fixed** UGS Service Flow not used

Wi-Fi:

- **Fixed** Mesh Repeater operating mode: The "Select Wi-Fi Network" list did not display invalid Wi-Fi network names (SSID)

Mesh:

- **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** 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** Outdated entries removed from the list of telephone providers
- **Improved** Sporadic poor voice quality

DECT:

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

Home Network:

- **Fixed** Devices with a dot in their name could no longer be renamed
- **Fixed** Display for search for updates for devices in the Mesh was not suitable in certain cases
- **Fixed** Possibly lacking rendering of IP addresses could cause subsequent defects

System:

- **Fixed** "Change notice" push service sent too often information on supposedly new port sharing
- **Fixed** Repeater events were occasionally listed twice in the Event Log
- **Fixed** There were too many events on changed settings in the Event Log

Mobile Network:

- **Improved** Internet connection with username/password supported for Alcatel IK41VE1 IoT/M2M 4G (MBIM) mobile network dongle

USB:

- **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"

New Features in FRITZ!OS 7.50

Internet:

****NEW**** Automatic prioritization provides for fairly distributed data rates throughout the entire FRITZ!Box network (home network and guest network)

****NEW**** VPN with WireGuard for simple setup of fast, secure VPN connections <for more, see [2]>

****NEW**** The MyFRITZ! direct connection allows you to receive information on the FRITZ!Box in real time on MyFRITZ!Net.

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

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

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

Additional improvements in FRITZ!OS 07.50

DOCSIS:

- **Improved** Maxlinear SDK 7.3.1.9 GA integrated
- **Improved** Extended user interface information for DOCSIS 3.1 (OFDM modulation and MER)
- **Improved** Adjustments and interoperability improvements for DOCSIS connection
- **Fixed** Incorrect OFDM(A) channel ID displayed under Internet/Cable Information/Channels
- **Fixed** MER StdDev too high if two OFDM channels are used
- **Fixed** MAC US and MAC DS in KPI-Counter Test are out of range
- **Fixed** CPE-HB6-22 Incorrect DS, US Frequency Values representation in GUI
- **Fixed** sysDescr without build-number

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** "QUICK" 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
- **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**** 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**** 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

- ****Fixed**** Randomly one of the two 500MB UDP downstreams reduced to 11 MB/s

- ****Fixed**** VPN L2TP: UDP upstream and TCP downstream in IPv6 stopped after a view minutes

- ****Fixed**** eRouter DHCPv6 parameters are not set completely for IPv6 only / DS-lite / Dual Stack

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

****Improved**** The overlay with message on the "Load on the Current Wi-Fi Channel" diagram is now also shown when VHT160 mode is enabled

****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"

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)

****Change**** Registration of new Mesh Repeaters with the "Connect" button supports the "Wi-Fi 6 Device Provisioning Protocol (DPP)"

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
 - **Improvement**** Sporadically unregistered phone numbers
 - **Change**** Different designations in the user interface for telephones on the "FON 1" and "FON 2" jacks
 - **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/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

DVB-C:

- ****Fixed**** When using DVBCViewer or Dreambox no channels are found when using the channel scan

- ****Fixed**** Sporadic crash of the stream

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

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**** User Interface reachable via LAN Guest network 192.168.100.1

- ****Fixed**** TR069 Attributes not editable if value has been set via GUI

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

****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

[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.

[2] WireGuard Support for Simple Setup of VPN Connections

WireGuard(R) is a modern, easy to understand, fast, and simple VPN solution.

For most operating systems, there are apps or programs from WireGuard for connecting single devices to a network via WireGuard VPN.

WireGuard is a registered trademark of Jason A. Donenfeld (<https://www.wireguard.com>).

WireGuard is not compatible with other VPN protocols. Therefore it cannot connect to IPSec, OpenVPN and similar peers.

WireGuard itself does not contain any mechanisms for key distribution. Both parties therefore require the public keys of the respective remote site.

The concept for the FRITZ!Box is that both key pairs can be generated on the FRITZ!Box to set up a connection, and all the necessary dial-in data can be imported on the client side via a file or QR code, e.g. in the WireGuard App.

For your FRITZ!Box to be accessible via WireGuard VPN, you need a MyFRITZ! address your (you'll need to register your FRITZ!Box with MyFRITZ!Net) – or a third-party DynDNS address for your FRITZ!Box.

Please note that the connection configuration – QR code or configuration file - is not permanently stored on the FRITZ!Box (for security reasons). Do not let the QR code or configuration file fall into the hands of unauthorized persons.

[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.

[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.

[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.

[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.

[7] New Assistant transfers all important settings for Internet, telephony and WLAN as well as connections to mesh, telephony and Smart Home devices to a new FRITZ!Box.

Please note the following instructions and requirements:

The wizard provided in this FRITZ!OS supports you if you are using a FRITZ!Box and want to replace it with another, new FRITZ!Box. It takes into account other FRITZ! products if they are connected to the previous FRITZ! box: e.g. FRITZ! Repeater, FRITZ! Fon, Smart Home products of the FRITZ! DECT series or FRITZ! Apps.

This new switch function simplifies the exchange of the previously used FRITZ!Box for another one, by

- after the change, the WLAN and home network and all connected home network devices work as before
- no settings are required on the devices connected to the FRITZ!Box due to the changeover
- the Internet access and the telephony can be used as before
- all important settings of the previously used FRITZ!Box are transferred to the new FRITZ!Box (e.g. for telephony, Smart Home or MyFRITZ!)

1. the other, new FRITZ!Box needs two preparations:

- a current FRITZ!OS version 7.55 or higher. You will be prompted during the wizard to update your new FRITZ!Box if necessary.

- Reset your new FRITZ!Box to factory settings if it has been used before, and then disconnect it from the power supply. 2.

2. the previously used FRITZ!Box establishes the internet connection at your connection and has the current FRITZ!OS version 7.55.

3. if you use FRITZ!Repeater: Update their FRITZ!IOS.

If you are using FRITZ!Fon or Smart Home products of the FRITZ!DECT series, check if there is a software update available and perform it if necessary.

5. if you are using FRITZ!Apps for your previous FRITZ!Box, have your smartphone ready.

6. you must have physical access to the previously used FRITZ!Box and be able to plug in its network cable and press buttons. The other, new FRITZ!Box should be nearby. It will also need power and Internet connection in the process.

7. if you change not only the FRITZ!Box model but also the connection type (e.g. from DSL to fiber), then the other, new connection must be operational

8. you must be connected with a notebook or computer (recommended) or smartphone to the home network of the FRITZ!Box used so far. In the user interface <http://fritz.box>, under "Wizards", the link "Transfer settings to a new FRITZ!Box" is ready to be called. Read and follow the instructions there carefully. The process usually takes about 10 to 30 minutes, depending on the size of the home network.

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