

AVM GmbH
Alt-Moabit 95
D-10559 Berlin
Germany



Phone: +49 (30) 399 76-240
Fax: +49 (30) 399 76-255
e-mail: info@avm.de
Internet: www.avm.de/en

FRITZ!Box 6430 Cable

FRITZ!OS Version: 07.29

Release Note

Confidential information for . No disclosure to third parties without permission from AVM
Date of printing: 17.01.2022
File: Release Note FRITZ!Box 6430 Cable FRITZ!OS 07.29-Release AVM.pdf

Contents

1 Legal Notice

2 Documentation

2.1 Updated Documents

2.2 FRITZ!OS - Definition and Notation

2.3 FRITZ!OS - Firmware Image Explanation

3 Release Notes

3.1 General Information

3.1.1 New Features

3.1.2 Firmware Improvements

Appendix A: Supported TR-069 Parameters

Appendix B: IPv6 Compatibility

Supports IPv6 RFCs

Drafts

Appendix C: MIB and Special Features

Appendix D: TCP/UDP Ports and Related Services

Appendix E: Diagnostics Options

Supportdata

Options for Packet Tracing

Appendix F: Customer Support and Contacts

1 Legal Notice

This documentation and the software it describes are protected by copyright. AVM grants the non-exclusive right to use the software, which is supplied exclusively in object code format. The licensee may create only one copy of the software, which may be used exclusively for backup use.

AVM reserves all rights that are not expressly granted to the licensee. Without previous approval in writing, and except for in cases permitted by law, it is particularly prohibited to

- copy, propagate or in any other manner make this documentation or this software publicly accessible, or
- process, disassemble, reverse engineer, translate, decompile or in any other manner open the software and subsequently copy, propagate or make the software publicly accessible in any other manner.

This documentation and software have been produced with all due care and checked for correctness in accordance with the best available technology. AVM GmbH disclaims all liability and warranties, whether express or implied, relating to the AVM product's quality, performance or suitability for any given purpose which deviates from the performance specifications contained in the product description. The licensee bears all risk in regard to hazards and impairments of quality which may arise in connection with the use of this product. AVM will not be liable for damages arising directly or indirectly from the use of the manual or the software, nor for incidental or consequential damages, except in case of intent or gross negligence. AVM expressly disclaims all liability for the loss of or damage to hardware or software or data as a result of direct or indirect errors or destruction and for any costs (including connection charges) related to the documentation and the software and due to incorrect installations not performed by AVM itself. The information in this documentation and the software are subject to change without notice for the purpose of technical improvement.

© AVM GmbH 2021. All rights reserved.

AVM Audiovisuelles Marketing
und Computersysteme GmbH
Alt-Moabit 95
D-10559 Berlin
Germany

AVM Computersysteme Vertriebs GmbH
Alt-Moabit 95
10559 Berlin
Germany
AVM in the web: www.avm.de/en

Marks: Marks like AVM, FRITZ! and FRITZ!Box (product names and logos) are protected marks owned by AVM GmbH. Microsoft, Windows and the Windows logo are trademarks owned by Microsoft Corporation in the USA and/or other countries. Apple, App Store, iPhone, iPod and iPad are marks owned by Apple Inc. in the USA and/or other countries. IOS is a mark owned by Cisco Technology Inc. in den USA and/or other countries. Google and Android are marks owned by Google Inc. in the USA and/or other countries. All other marks (like product names, logos, commercial names) are owned by their respective holders.

2 Documentation

2.1 Documentation

Changes were made to the following documents:

Document	As Of	Update
Firmware Release Notes	2022-01-18	x
Appendix A: Supported TR-069 Parameters	2022-01-18	-
Appendix B: IPv6 Compatibility	2012-03-16	-
Appendix C: MIB and Specials	16.03.2012	-
Appendix D: TCP/UDP Ports and Related Services	2013-08-30	-
Appendix E: Diagnostics Options	2013-06-11	-
Appendix F: Customer Support and Contacts	2018-05-01	-

2.2 FRITZ!OS - Definition and Notation

FRITZ!OS is the name of the operating system of FRITZ!Box. FRITZ!OS provides a common set of functionality across different FRITZ!Box Models

FRITZ!Os is provided as firmware load for every specific FRITZ!box model, such as e.g. FRITZ!Box 6490 Cable. To identify the firmware for different model types, the firmware version is notated as zzz.xx.yy where zzz identifies the model type and xx.yy shows the FRITZ!OS version. The terms FRITZ!OS and firmware are sometimes used in an interchangeable manner.

2.3 Firmware Image: Explanation

AVM provides three different types of firmware images, which are designed for different applications scenarios:

XX.XX.XX.image

Firmware image for a remotely updating the FRITZ!Box via TR-069

XX.XX.XX.CVC

Firmware image for remotely updating the FRITZ!Box via DOCSIS config file or SNMP

XX.XX.XX.recover-image.exe

Recover image for locally updating the FRITZ!Box from a computer connected with the FRITZ!Box via LAN cable. This enables a fast FRITZ!Box update without any network infrastructure needed.

3 Release Notes

3.1 General Information on FRITZ!OS 07.29

FRITZ!OS version: **159.07.29**

Type: **Release**

Release date: **2022-01-18**

Firmware file names:

- **FRITZ.Box_6430_Cable-07.29.image**
- **6430.07.29.081308002018-d30-2.cvc**

3.1.1 New Features of FRITZ!OS 07.29

List of changes (New Features of) in FRITZ!OS **07.29** since FRITZ!OS **07.12** from **2019-08-10**:

INTERNET

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	INTERNET	Blocking devices made easier	n/a	n/a	NEW - Device block: Easy to switch internet access on and off for individual devices
2	INTERNET	Support for DNS over TLS	n/a	n/a	NEW - Support for encrypted resolution from domain names to IP addresses (DNS over TLS)
3	INTERNET	IP-Client Mode	n/a	n/a	"NEW - ""IP Client"" operating mode now can be selected for the FRITZ!Box Cable models as well under ""Internet / Account Information"" "
4	INTERNET	Parental Controls: Ticket Entry	n/a	n/a	NEW - With parental controls enabled, settings and ticket entry for the device to be accessed are displayed when the user interface is opened
5	INTERNET	Prioritization	n/a	n/a	NEW - Prioritization of a home network device can now be enabled directly on the FRITZ!Box user interface

MESH

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	MESH	MESH Steering	n/a	n/a	NEW - Performance Mesh Steering and Mesh auto-channel
2	MESH	MESH Auto channel	n/a	n/a	NEW - Mesh auto-channel: Accounts for the wireless environment of the Mesh Repeater in selecting the best Wi-Fi channel for the entire Mesh

SYSTEM

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	SYSTEM	Powerline Network	n/a	n/a	NEW - Network passwords for the powerline

		Password			network can now be changed on FRITZ!Powerline devices connected directly (via LAN)
2	SYSTEM	Mesh Repeater for FRITZ!Box Cable	n/a	n/a	"NEW - Mesh Repeater function now can be selected as an ""IP Client"" for the FRITZ!Box Cable models as well under ""Home Network / Mesh / Mesh Settings"""
3	SYSTEM	Smarthome Group Sync	n/a	n/a	NEW - Synchronization of the temperature setting, the boost mode and open window detection within a group of radiator controls
4	SYSTEM	Power Consumption Statistics	n/a	n/a	NEW - Display of total consumption (kWh) of the past two years for the smart plugs FRITZ!DECT 200 and 210
5	SYSTEM	Adaptive Heating for Smart Home	n/a	n/a	"NEW - The ""Adaptive Heating"" feature of the FRITZ!DECT 301 makes the configured temperature available at the desired time"
6	SYSTEM	FRITZ!DECT 500 Support	n/a	n/a	NEW - Supports the FRITZ!DECT 500 LED light
7	SYSTEM	FRITZ!DECT 440 Support	n/a	n/a	NEW - Supports the four-button switch FRITZ!DECT 440
8	SYSTEM	Support for Roller blinds Profile	n/a	n/a	NEW - Supports the DECT ULE/HAN FUN roller blinds profile
9	SYSTEM	Smarthome Pages reworked	n/a	n/a	NEW - Reworked Smart Home pages on the FRITZ!Box user interface
10	SYSTEM	Multi Language Support	n/a	n/a	NEW - Multi-language user interface
11	SYSTEM	New Features via Welcome Page	n/a	n/a	NEW - NEW - Users supported in becoming acquainted with FRITZ!Box functions with welcome page
12	SYSTEM	Supported Languages	n/a	n/a	NEW - Display of the user interface in English, French, German, Italian, Polish or Spanish
13	SYSTEM	Country and Timezone Settings	n/a	n/a	NEW - Setting of country and time zone for FRITZ!Box operation

WLAN

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	WLAN	WPA3 Support	n/a	n/a	NEW - Support for encryption according to the WPA3 standard (SAE)
2	WLAN	OWE Support for Hotspots	n/a	n/a	NEW - Encrypted data transfer in a public hotspot (OWE)
3	WLAN	WPA3	n/a	n/a	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)
4	WLAN	Wi-Fi guest access	n/a	n/a	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) (not 7530 AX)

TELEPHONY

No.Track-ID	Module	Title	Impact	Occurrence	Description
-------------	--------	-------	--------	------------	-------------

1	TELE-PHONY	Support for Encrypted Telephony	n/a	n/a	NEW - Support for encrypted telephony
2	TELE-PHONY	Support for Cloud Address Books enhanced	n/a	n/a	NEW - Support for online contacts from other providers like Apple (iCloud), Telekom Mail, and providers with CardDAV services
3	TELE-PHONY	SIP TLS and SRTP	n/a	n/a	NEW - Support for encrypted telephony (TLS and SRTP) for Deutsche Telekom, Easybell and dus.net
4	TELE-PHONY	Support for CardDAV Providers	n/a	n/a	NEW - Support for online contacts from Apple (iCloud), Telekom Mail, and CardDAV providers
5	TELE-PHONY	Fax Log	n/a	n/a	NEW - Fax function: Log for received and sent faxes
6	TELE-PHONY	T Business VoIP	n/a	n/a	"NEW - Support for the ""Telekom Company-Flex"" business telephony platform (SIP trunk and cloud PBX) "
7	TELE-PHONY	FRITZ!Fon Startscreen	n/a	n/a	NEW - New start screen with current weather information

USB

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	USB	SMB3 Support	n/a	n/a	NEW - Support for current SMB versions (SMBv2/v3)
2	USB	Media Index automated	n/a	n/a	"NEW - Media contents like images, music and videos are indexed automatically with ""Refresh index automatically"" and made available to the home network"

DECT

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	DECT	Phone Book number matching	n/a	n/a	NEW - FRITZ!Fon: Smart telephone book displays matching suggestions even during number entry
2	DECT	Temperature Screen for FRITZ!Fon	n/a	n/a	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)
3	DECT	FRITZ!Fon Ring Tones	n/a	n/a	NEW - Nine new ring tones to choose from
4	DECT	Equalizer for FRITZ!Fon	n/a	n/a	NEW - Sound settings for playing back web radio stations and to improve the speech quality of telephone calls

3.1.2 Firmware Improvements of FRITZ!OS 07.29

List of changes (Firmware Improvements of) in FRITZ!OS **07.29** since FRITZ!OS **07.12** from **2019-08-10**:

DOCSIS

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	DOCSIS	Cable Information redesigned	n/a	n/a	"IMPROVED - Optimized display of the ""Cable Information"" in the user interface"

2	DOCSIS	DOCSIS Modem in LAN1 scenarios disabled	n/a	n/a	IMPROVED - Integrated cable modem is disabled whenever internet access via LAN 1 is set
---	--------	---	-----	-----	---

INTERNET

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	INTERNET	IMPROVED - Certification authorities	n/a	n/a	List of trusted certification authorities updated
2	INTERNET	IMPROVED - Internet sharing options	operational	systematic	Processing of internet sharing from FTP/FTPS harmonized with processing for internet sharing via HTTPS
3	INTERNET	IMPROVED - PCP support	operational	systematic	On PCP connections, ports for FRITZ!Box services are selected from the PCP port range
4	INTERNET	Message for failed Ticket Entries	n/a	n/a	IMPROVED - Message upon failed ticket entry (parental controls)
5	INTERNET	IPv6 Interface ID	n/a	n/a	"IMPROVED - Display and modification of the IPv6 Interface ID under ""Home Network / Network / Network Connections""
6	INTERNET	DNS Names for VPN	n/a	n/a	IMPROVED - Any domain name can be used to address a VPN remote peer, not just MyFRITZ! domain names
7	INTERNET	NETBIOS over VPN	n/a	n/a	IMPROVED - NetBIOS permission can be configured individually for a single VPN connection
8	INTERNET	Parental Controls: Ticket entry on Start	n/a	n/a	IMPROVED - Ticket for parental controls can be entered before start of online block, so that usage time can be extended without interruption
9	INTERNET	Online Help optimized	n/a	n/a	"IMPROVED - Additional links from the user interface in the online help for IPv4 and IPv6 routes under ""Network Connections""
10	INTERNET	Reworked Cable Information	n/a	n/a	IMPROVED - Optimized display of the Cable information in the user interface
11	INTERNET	IPv6 Prefix Delegation	n/a	n/a	"IMPROVED - IPv6 prefix delegations and IPv6 subnets are displayed under ""Home Network / Network / Network Settings""
12	INTERNET	Guest Network Size increased	n/a	n/a	IMPROVED - IP address range for guest network increased to up to 253 devices
13	INTERNET	VPN Configuration Robustness	n/a	n/a	IMPROVED - Incorrect configuration by using the same network address on both sides of a LAN-LAN linkup for VPN prevented
14	INTERNET	MyFRITZ! Address with LAN1 connected devices	n/a	n/a	IMPROVED - Access to the myfritz.net domain for a downstream FRITZ!Box registered with MyFRITZ! allowed from the home network
15	INTERNET	VPN Performance	n/a	n/a	IMPROVED - Greatly improved performance for VPN
16	INTERNET	DNS over TLS with SNI Support	n/a	n/a	IMPROVED - In the context of encrypted name resolution (DNS over TLS, DoT), SNI (Server Name Indication) is supported

17	INTERNET	Cable Modem Switch off for LAN1	n/a	n/a	"IMPROVED - When ""Internet connection via LAN 1"" is selected, the integrated cable modem is disabled to optimize power consumption"
18	INTERNET	DNS over TCP	n/a	n/a	IMPROVED - Support for multiple DNS queries over a single TCP connection
19	INTERNET	IP-Client Mode	n/a	n/a	"CHANGED - Unnecessary settings option for connection speed removed from ""IP Client"" mode"
20	INTERNET	Parental Controls: Access Profiles	n/a	n/a	CHANGED - Button for changing the access profiles under the Parental Controls Overview in the user interface
21	INTERNET	Pre-Defined Ports for Forwarding: Clean up	n/a	n/a	"CHANGED - ""Emule"" protocol removed from selection for port sharing"
22	INTERNET	VPN without data compression	n/a	n/a	CHANGED - IP compression (data compression) is no longer supported in VPN connections
23	INTERNET	Diagnostics: MyFRITZ!	n/a	n/a	"BUG FIX - ""Diagnostics / Function"" showed wrong error message for My-FRITZ! registration for FRITZ!Boxes in IP client mode"
24	INTERNET	Removed defective Links in MyFRITZ! Diagnostics	n/a	n/a	"BUG FIX - Defective links behind ""My-FRITZ!"" under ""Diagnostics / Security"""
25	INTERNET	VPN Connection Name in Mesh Overview	n/a	n/a	BUG FIX - VPN connection name was not displayed in network connections and Mesh Overview
26	INTERNET	VPN Overview now with remote Network entry	n/a	n/a	"BUG FIX - In the VPN overview table ""local network"" was missing and ""remote network"" left empty"
27	INTERNET	IPv6 Handling with 2nd Router	n/a	n/a	BUG FIX - Devices that are connected to a downstream router via IPv6 prefix delegation received no IPv6 internet connection when parental controls were enabled
28	INTERNET	IPv4 Handling with 2nd Router	n/a	n/a	BUG FIX - Devices that are connected to a downstream router via IPv4 static routes received no IPv4 internet connection when parental controls were enabled
29	INTERNET	Port Forwarding optimized	n/a	n/a	BUG FIX - Port sharing for different devices with the same name could not be created
30	INTERNET	Improved Stability for FTP transfers	n/a	n/a	BUG FIX - Occasional restarts of FRITZ!Box during many parallel FTP transmissions over WAN
31	INTERNET	Parental Controls can now handle Umlauts	n/a	n/a	BUG FIX - Problems with umlauts in the parental control filter lists
32	INTERNET	Guest Network Parental Control Integration	n/a	n/a	BUG FIX - Guest network lock in the parental controls did not lock reliably
33	INTERNET	WoL via VPN	n/a	n/a	BUG FIX - No automatic Wake on LAN (WoL) via VPN
34	INTERNET	Prioritization for Access Profiles stabilized	n/a	n/a	"BUG FIX - Prioritization settings for devices with the ""Everything except surfing and mail"" access profile were no longer applied after rebooting"

35	INTERNET	Parental Controls	n/a	n/a	IMPROVED - Assignment to devices added to the access profile settings in the parental controls
36	INTERNET	Device Status	n/a	n/a	IMPROVED - Device status (active/not active) is displayed in the selection of devices for port sharing
37	INTERNET	Portsharing Overview	n/a	n/a	IMPROVED - Clearer display of port sharing overview on mobile devices
38	INTERNET	Portsharing Settings	n/a	n/a	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
39	INTERNET	Event Message Letsencrypt	n/a	n/a	IMPROVED - Event message when port 80 temporarily released for sharing in order to issue certificate for letsencrypt.org
40	INTERNET	DNS over TLS	n/a	sporadic	IMPROVED - DNS over TLS (DoT) more robust
41	INTERNET	IP Client Mode	cosmetic	sporadic	BUG FIX - In certain scenarios, IP client operating mode could not be configured correctly via LAN with DHCP
42	INTERNET	IPv6 Routes Formatting	cosmetic	sporadic	BUG FIX - Formatting errors occurred in the configuration of IPv6 routes
43	INTERNET	Port Sharing Overview	cosmetic	n/a	BUG FIX - Display corrected in the port sharing overview
44	INTERNET	DNS over TLS Disable	operational	sporadic	BUG FIX - After activating DNS over TLS (DoT) and longer run times, certain websites could no longer be resolved
45	INTERNET	MyFRITZ!Address after Update	n/a	sporadic	BUG FIX - After update of FRITZ!OS 7.03 or older, the IP address was not refreshed on MyFRITZ!Net (DynDNS)
46	INTERNET	IPv6 Guest Access	operational	sporadic	BUG FIX - IPv6: After the home network prefix was refreshed, invalid IPv6 addresses for guest access were not deleted
47	INTERNET	Access Profile Changes	operational	n/a	BUG FIX - Changes to access profiles were sometimes rejected groundlessly with the error message 'The list of blocked network applications with this ID already exists.'
48	INTERNET	DNS Stability	operational	sporadic	BUG FIX - 'PTR' type DNS queries were not always resolved correctly
49	INTERNET	VPN Connection Import	n/a	systematic	BUG FIX - After restoring factory settings, the first VPN connection configured no longer worked
50	INTERNET	Import LAN Settings	operational	systematic	BUG FIX - After importing a configuration with an alternative LAN IPv4 network, the local DNS server remained in the old network after settings were adopted
51	INTERNET	TR064 Parameter Corrected	cosmetic	sporadic	BUG FIX - The TR-064 parameter WANAccess was sometimes incorrect ('granted') when no WAN was available upon restart
52	INTERNET	DNS Stability	operational	sporadic	BUG FIX - 'PTR' type DNS resolutions were not always possible
53	INTERNET	SupportData Export	cosmetic	sporadic	BUG FIX - Sending of advanced support

			metic		data did not trigger a push mail
54	INTERNET	Push Mail Setup after Imoort	cos-metic	n/a	BUG FIX - When a saved configuration was adopted selectively, not all of the push mails originally configured were adopted
55	INTERNET	VPN L2TP	n/a	n/a	BUG FIX - VPN connections via L2TP (e.g. in Windows 10) were unexpectedly slow
56	INTERNET	Device Blocking corrected	n/a	sporadical	BUG FIX - Device block had no effect in certain scenarios

MESH

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	MESH	Mesh Repeater Setup	n/a	n/a	IMPROVED - Improved indications about adoption of settings enabled for a FRITZ!Box as Mesh Repeater
2	MESH	Formatting Mesh Settings	cos-metic	n/a	BUG FIX - Incorrect formatting in the mobile view of the 'Mesh Settings' page on a FRITZ!Box in 'Mesh Repeater' mode
3	MESH	Wi-Fi Schedule	n/a	n/a	BUG FIX - Settings for Wi-Fi schedule could not be changed under some circumstances, if the setting 'FRITZ!Box as a Mesh Repeater' was used
4	MESH	Mesh Repeater Mode	n/a	n/a	BUG FIX - 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
5	MESH	Bandwith Status Repeater	cos-metic	n/a	BUG FIX - Display of Wi-Fi channel bandwidth in the user interface on the Mesh Master was sometimes different on the Mesh Repeater
6	MESH	Name Rendering for Overviews	n/a	n/a	IMPROVED - Rendering of DHCP host name, media server name and SMB name on Mesh Repeaters improved
7	MESH	Text optimization for MESHed Setups	n/a	n/a	IMPROVED - Improved text for configuration of a FRITZ!Box as a Mesh Repeater
8	MESH	Improved MESH Routing	n/a	n/a	IMPROVED - Better detection of terminal devices that cannot be rerouted via Mesh steering
9	MESH	Loop Notification	n/a	n/a	IMPROVED - Notification in FRITZ!Box log when a network loop is created (for instance, simultaneous LAN and wireless connection to the same device)
10	MESH	MEHS Settings	n/a	n/a	CHANGED - 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
11	MESH	Display of Powerline in MESH	n/a	n/a	BUG FIX - Display of FRITZ!Powerline 520/530E in the Mesh connection diagram was not correct
12	MESH	Display of Repeaters in MESH Overview	n/a	n/a	"BUG FIX - In certain cases a FRITZ!Repeater was displayed twice in the ""Mesh Overview"" of the FRITZ!Box"
13	MESH	MESH Telephony optimized	n/a	n/a	BUG FIX - 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

14	MESH	Wi-Fi Steering for Guest Networks	n/a	n/a	BUG FIX - For wireless guest access the steering characteristics (11k/v) of wireless devices were not taken into account correctly (Google Pixel 2 and SAMSUNG S10)
----	------	-----------------------------------	-----	-----	---

SYSTEM

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	SYSTEM	Setup Wizard Resume	n/a	n/a	IMPROVED - Configuration wizard can be interrupted and resumed
2	SYSTEM	Setup Wizard	n/a	n/a	IMPROVED - Various usability improvements in the First Configuration wizard
3	SYSTEM	Overview	n/a	n/a	IMPROVED - Status overview page within the first configuration
4	SYSTEM	Security Query	n/a	n/a	IMPROVED - Security query when leaving a page without saving changed settings
5	SYSTEM	Export Settings	n/a	n/a	IMPROVED - Saving and restoring settings now includes telephony data from the internal storage of the FRITZ!Box (ring tones, telephone book pictures, voice messages)
6	SYSTEM	Support Data Send	n/a	n/a	IMPROVED - After support data have been sent to AVM, a second dispatch can be started immediately without any wait time
7	SYSTEM	Passwords Entry	n/a	n/a	IMPROVED - A password can be made visible during entry (eye icon) in the user interface
8	SYSTEM	Diagnostics	n/a	n/a	IMPROVED - Corrected details in the 'Diagnostics / Function' for Mesh and USB
9	SYSTEM	Password Mandatory	n/a	n/a	CHANGED - The option to log in to a FRITZ!Box (user interface) without a password, which was not recommended, is no longer supported
10	SYSTEM	Default User Name Change	n/a	n/a	CHANGED - 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.
11	SYSTEM	User Sorting	cosmetic	systematical	BUG FIX - FRITZ!Box users could not be sorted in the overview
12	SYSTEM	Access Profile	n/a	n/a	BUG FIX - Access profiles with blocked applications in parental controls were not available when settings were restored
13	SYSTEM	Event Log Messages	cosmetic	n/a	BUG FIX - Number of messages in 'System / Event Log' was too restricted in some areas
14	SYSTEM	Display of Last Update	cos-	n/a	BUG FIX - Display of installation date for

			metic		the last update was incorrect in certain scenarios
15	SYSTEM	Mesh Menue	n/a	n/a	"IMPROVED - ""Mesh"" added to properties in the network connection overview"
16	SYSTEM	Mesh Icon in Overview	n/a	n/a	"IMPROVED - Mesh icon shifted in the Mesh table from the ""Connections"" column to the ""Properties"" column"
17	SYSTEM	Powerline Network Integration	n/a	n/a	IMPROVED - Reliable display of new AVM Powerline products in the FRITZ!Box home network
18	SYSTEM	Powerline Data Rates	n/a	n/a	IMPROVED - More reliable indication of low powerline data rates in the FRITZ!Box home network
19	SYSTEM	Smathome Menue moved up	n/a	n/a	"CHANGED - ""Smart Home"" menu moved to top menu level and ""DECT"" menu moved to the telephony menu"
20	SYSTEM	Smarthime Battery Level	n/a	n/a	CHANGED - 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
21	SYSTEM	Target Temperature Reporting	n/a	n/a	BUG FIX - Wrong target temperature when accessing the FRITZ!Box via MyFRITZ!
22	SYSTEM	Radiator Control	n/a	n/a	BUG FIX - Template for radiator control did not work if heating was off during 01/01 until 31/12
23	SYSTEM	Device Name	n/a	n/a	IMPROVED - Device name displayed the same everywhere in the Mesh
24	SYSTEM	Push Service	n/a	n/a	"IMPROVED - ""FRITZ!Box Info"" push service now includes an option for information on the ""Home network"""
25	SYSTEM	Newly designed menu Icons	n/a	n/a	"IMPROVED - New menu icons for ""Overview"" and ""Smart Home"""
26	SYSTEM	Reset feature for network device details	n/a	n/a	"IMPROVED - ""Reset"" function in details of network devices for deleting all settings for this device"
27	SYSTEM	New Items for Diagnostics	n/a	n/a	"IMPROVED - Diagnostics check expanded to include ""Mesh"", ""Internet"", ""DECT"" and ""Wi-Fi"""
28	SYSTEM	FRITZ!Support Data direct delivery	n/a	n/a	IMPROVED - FRITZ!Box support page now includes option to send support data directly to AVM
29	SYSTEM	Settings import	n/a	n/a	IMPROVED - Separate restoration of settings for the Smart Home and Telephony areas
30	SYSTEM	Display of LEDs in GUI reworked	n/a	n/a	"IMPROVED - Modernized display of ""LEDs"" and other symbols throughout the user interface"
31	SYSTEM	Warnings in GUI reworked	n/a	n/a	IMPROVED - Warning on the FRITZ!Box Overview on selected settings that are not recommended
32	SYSTEM	GUI Structure optimized	n/a	n/a	IMPROVED - Page structure simplified in many areas of the user interface to improve usability

33	SYSTEM	New Wizards	n/a	n/a	IMPROVED - Reworked concept for navigation in the wizard for first configuration
34	SYSTEM	Authorized Apps Overview	n/a	n/a	"IMPROVED - Overview of authorized apps in the ""System / FRITZ!Box Users"" area now also includes rights and time of last login"
35	SYSTEM	Event Log includes Updates	n/a	n/a	IMPROVED - Update information is included in event log (visible only with the next update)
36	SYSTEM	Default user removed	n/a	n/a	"CHANGED - User with the name ""ftpu-ser-internet"" is deleted"
37 JZ93745	SYSTEM	CHANGE - Packet trace options	n/a	n/a	Packet trace options for voip+tr09, wan0, mta0, Routing removed
38 JZ89759	SYSTEM	IMPROVED - Stability	operational	sporadic	Device sporadically not responding anymore in rare situations

WLAN

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	WLAN	Wi-Fi Channel Page	n/a	n/a	IMPROVED - Reworked 'Wi-Fi / Wi-Fi Channel' page
2	WLAN	Auto Channel	n/a	sporadical	IMPROVED - Improved auto channel function after detection of interference sources (5-GHz band)
3	WLAN	Wi-Fi Messages Event Log	n/a	systematical	IMPROVED - Improved messages on Wi-Fi under 'System / Event Log'
4	WLAN	WPS	n/a	n/a	IMPROVED - Detection of multiple parallel WPS activations improved
5	WLAN	Event Messages Repeaters	n/a	n/a	IMPROVED - New message under 'System / Event Log' when the maximum number of wireless repeaters is exceeded
6	WLAN	Default Guest SSID	n/a	n/a	IMPROVED - Naming of Wi-Fi guest access (SSID, preassigned) depends on selected language
7	WLAN	CHANGED - WiFi Selection Mesh Master	n/a	n/a	CHANGED - In 'Mesh Repeater' operating mode, only Wi-Fi networks with visible names are shown for selection of the Mesh Master
8	WLAN	Bandwith Status corrected	cos-metic	sporadical	BUG FIX - Erroneous display of bandwidth in connections with HUAWEIÉP30 corrected
9	WLAN	Wi-Fi Channel Display	cos-metic	sporadical	BUG FIX - 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
10	WLAN	WPS Connection	n/a	n/a	BUG FIX - Activation of WPS immediately after the Mesh Master was started frequently led to non-DBDC uplinks to Mesh Repeaters
11	WLAN	Event Log	cos-metic	n/a	BUG FIX - Incorrect message under 'System / Event Log' for WPS during DFS wait time
12	WLAN	Redesigned Guest Access Sheet	n/a	n/a	IMPROVED - Redesigned the print output of information on the wireless guest

					access
13	WLAN	Mesh Repeating with WPA3	n/a	n/a	"IMPROVED - ""WPA3"" option added to the encryption of the FRITZ!Box in ""Mesh Repeater"" operating mode"
14	WLAN	Reworked Information Pages	n/a	n/a	CHANGED - Reworked information page (for instance, after changes to Wi-Fi configuration)
15	WLAN	WPS PIN	n/a	n/a	CHANGED - WPS/PIN method removed
16	WLAN	WPA/TKIP	n/a	n/a	CHANGED - Outdated WPA/TKIP encryption removed
17	WLAN	Wireless Guest Access Duration	n/a	n/a	"BUG FIX - ""Wireless / Guest access"": Duration for disabling automatically could not be changed"
18	WLAN	Sorting MAC addresses	n/a	n/a	"BUG FIX - Sorting by MAC addresses in ""Wi-Fi / Wi-Fi Network / Security"" did not work"
19	WLAN	Delete Button removed for non-deletable Devices	n/a	n/a	"BUG FIX - ""Delete"" button for devices was displayed even if the device could not actually be deleted"
20	WLAN	PMF Options slimmed	n/a	n/a	"BUG FIX - PMF option no longer offered for ""WPA/TKIP"" encryption selection"
21	WLAN	Interface Detection	n/a	n/a	BUG FIX - Detection of interference did not work under certain rare circumstances
22	WLAN	Wireless Channels Time Stamps	n/a	n/a	"BUG FIX - Time stamp ""Wireless LAN channels used"" corrected (5-GHz band)"
23	WLAN	Event Log corrected	n/a	n/a	"BUG FIX - Incorrect entry no longer appears in the ""Event Log"" when individual wireless bands were enabled or disabled manually on a FRITZ!Repeater 3000"

TELEPHONY

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	TELE-PHONY	Integrated Door Intercom Calls in Push Mail	n/a	n/a	"IMPROVED - Calls from door intercoms (including images) added to ""Calls"" push mail"
2	TELE-PHONY	SIP Trunk over Internet	n/a	n/a	"IMPROVED - ""Always register via an internet connection"" option added for SIP trunk providers"
3	TELE-PHONY	Enhanced Security Related GUI Items	n/a	n/a	IMPROVED - More detailed messages for security-relevant changes to settings
4	TELE-PHONY	Reworked Telephony Provider Lists	n/a	n/a	"IMPROVED - New telephony providers added for the country setting ""Italy"": TIM, Fastweb, Vodafone and others"
5	TELE-PHONY	SIP Trunk Providers added	n/a	n/a	IMPROVED - Telephony providers O2, PYUR and multiple SIP trunk providers added
6	TELE-PHONY	Same number for more than one Answering Machine	n/a	n/a	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
7	TELE-	ISDN Settings added	n/a	n/a	"IMPROVED - For operation of ISDN de-

PHONY

vices, advanced settings are offered under ""Telephony Device"" in the user interface"

8	TELE-PHONY	Reworked Call List	n/a	n/a	IMPROVED - The call list in the user interface offers a separate view for rejected calls
9	TELE-PHONY	ClipNoScreening	n/a	n/a	IMPROVED - For company lines (SIP trunk and SIP DDI lines), a settings offered to support setting any telephone numbers desired (CLIP no screening)
10	TELE-PHONY	internal Fax Machine now supports 10 Pages	n/a	n/a	IMPROVED - Integrated fax function supports sending up to ten pages of text
11	TELE-PHONY	Sent Faxes Storage	n/a	n/a	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
12	TELE-PHONY	Call Diversion improved	n/a	n/a	IMPROVED - New methods for call diversion to external destinations supported for certain telephony providers (302 - Moved temporarily)
13	TELE-PHONY	Increased Robustness	n/a	n/a	IMPROVED - Increased robustness of telephony against partial failure of network infrastructures when TCP internet protocol in use
14	TELE-PHONY	Interop to SIPCall enhanced	n/a	n/a	IMPROVED - Better interoperability with Swiss provider sipcall
15	TELE-PHONY	Answering Machine Hold Message	n/a	n/a	IMPROVED - Maximum length for hold announcement of answering machine increased from 8 to 30 seconds
16	TELE-PHONY	IP Phone Call Transfer supported	n/a	n/a	IMPROVED - Transfer/Forwarding of calls supported (without a query) on IP telephones to other telephones connected with the FRITZ!Box
17	TELE-PHONY	Missed Calls	n/a	n/a	"CHANGED - New missed calls are no longer displayed with a flashing ""Info"" LED on the FRITZ!Box"
18	TELE-PHONY	Fax/Email Messages	n/a	n/a	"CHANGED - 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"
19	TELE-PHONY	SIP Trunk Setup corrected	n/a	n/a	"BUG FIX - 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"
20	TELE-PHONY	SIP Provider Setup	n/a	n/a	"BUG FIX - 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"
21	TELE-PHONY	Proxy and STUN Setups	n/a	n/a	BUG FIX - Changes to the settings for the proxy server and STUN server were not

adapted in the telephone numbers

22	TELE-PHONY	Fax Function - Empty Page	n/a	n/a	BUG FIX - 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
23	TELE-PHONY	IPv6 only Setting	n/a	n/a	"BUG FIX - Telephone numbers set to ""Only via IPv6"" could not be switched to use IPv4 without an IPv6 internet connection"
24	TELE-PHONY	Fax Sending	n/a	n/a	"BUG FIX - 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"
25	TELE-PHONY	Vodafone Telephony Accounts	n/a	n/a	BUG FIX - For telephony provider Vodafone, telephone numbers were sporadically configured incorrectly
26	TELE-PHONY	Door Intercom Ringtones	n/a	n/a	BUG FIX - For IP door intercom systems with multiple doorbells, sometime the desired ring tone was not used
27	TELE-PHONY	Answering Machine via ISDN	n/a	n/a	BUG FIX - When listening to messages on the integrated answering machine with an ISDN telephone, the key shortcut for callback did not work
28	TELE-PHONY	FIXED - IPv6	operational	systematic	Restricted availability by telephone when using telephony via IPv6
29	TELE-PHONY	IMPROVED - Encrypted telephony	operational	sporadic	Encrypted telephony more robust against lost connections
30	TELE-PHONY	IMPROVED - Encrypted telephony	operational	systematic	Enhanced interoperability for use of encrypted telephony
31	TELE-PHONY	Call Diversion Settings	n/a	n/a	IMPROVED - Completely reworked settings pages for call diversion and call blocks
32	TELE-PHONY	Initial Wizard	n/a	n/a	IMPROVED - First Configuration wizard offers configuration of a telephone
33	TELE-PHONY	Call Diversion Options	n/a	n/a	IMPROVED - Call diversions offer option to divert selected calls to a certain telephone on the FRITZ!Box
34	TELE-PHONY	Send-only-Fax	n/a	n/a	IMPROVED - Setting for using internal fax machine added to 'Send faxes only'
35	TELE-PHONY	DECT Options	n/a	n/a	IMPROVED - The 'Email' and 'RSS' tabs are hidden in the 'Telephony / Telephony Devices' menu when DECT is switched off
36	TELE-PHONY	Phone Books	n/a	n/a	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)
37	TELE-PHONY	Fax Settings	n/a	n/a	IMPROVED - Settings for sending and receiving faxes combined under 'Telephony / Telephony Devices'

38	TELE-PHONY	Fax Reception	n/a	n/a	IMPROVED - After all new received fax documents in the fax log have been opened, the 'Info' LED stops flashing
39	TELE-PHONY	Cardav Phone Books	n/a	n/a	IMPROVED - Integration of multiple CardDAV telephone books supported
40	TELE-PHONY	SIP Registrar	n/a	n/a	IMPROVED - Better compatibility of the FRITZ!Box's SIP registrar to the SIP client LinPhone
41	TELE-PHONY	VoIP Providers	n/a	n/a	IMPROVED - Better compatibility to telephone providers Easybell and VoIPfoneUK
42	TELE-PHONY	Encryption	n/a	n/a	IMPROVED - Enhanced compatibility for encrypted telephony
43	TELE-PHONY	Area Codes	n/a	n/a	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
44	TELE-PHONY	Voice Quality	n/a	n/a	IMPROVED - Voice quality better for telephone calls in mobile networks and for international calls
45	TELE-PHONY	Call Forwarding	n/a	n/a	IMPROVED - Forwarding of calls accepted on Snom IP telephones supported without query
46	TELE-PHONY	Stability	n/a	n/a	IMPROVED - Stability
47	TELE-PHONY	CarDav usability	n/a	sporadical	BUG FIX - Web address of the CardDAV server could not be changed in online telephone books after entry
48	TELE-PHONY	SIP Accounts on Mesh Repeaters	n/a	systematical	BUG FIX - 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
49	TELE-PHONY	Disable Telekom SIP Trunk	n/a	n/a	BUG FIX - Telekom SIP trunking account could not be disabled
50	TELE-PHONY	iCloud Contacts	cosmetic	n/a	BUG FIX - In integrated iCloud contacts (Apple), first and last names were sometimes displayed in inconsistent order
51	TELE-PHONY	CarDav Sync	n/a	n/a	BUG FIX - During synchronization of entries in online contacts (CardDAV), in certain constellations all email addresses were deleted
52	TELE-PHONY	SIP Account Registration	operational	sporadical	BUG FIX - Certain telephone numbers were temporarily not registered (among them Sipgate, EnviaTel, Teledate)
53	TELE-PHONY	SIP on TLSonly	operational	sporadical	BUG FIX - Connections dropped after about 30 seconds for telephony connections secured by TLSonly (among others, KPN)
54	TELE-PHONY	One Way Audio	operational	sporadical	BUG FIX - In certain constellations, only one-way voice transmission was possible during telephony via IPv6
55	TELE-PHONY	Vodafone Italy SIP	operational	systematical	BUG FIX - Unsuitable presettings for telephony provider Vodafone Italy

56	TELE-PHONY	T.38	operational	systematical	BUG FIX - Sporadic errors when faxing via T.38 connections
57	TELE-PHONY	Hold Announcement	cosmetic	systematical	BUG FIX - No hold announcement after resetting to factory settings
58	TELE-PHONY	Pick Up Time reduced	n/a	n/a	BUG FIX - Pickup on IP telephones was possible for no longer than 4 seconds
59	TELE-PHONY	Fax Call List	cosmetic	n/a	BUG FIX - After a fax was sent, the name of a recipient selected via the telephone book was not displayed in the call list
60	TELE-PHONY	Email Notification	n/a	sporadical	BUG FIX - Editing of door intercom stations sometimes led to loss of email notification for door intercom stations
61	TELE-PHONY	Import Settings TAM	n/a	n/a	BUG FIX - After importing answering machine settings including saved messages into another FRITZ!Box model, sometimes the imported messages could no longer be played back
62	TELE-PHONY	Ring Sequence Australia	operational	sporadical	BUG FIX - Ring sequences incorrect for the country setting 'Australia'
63	TELE-PHONY	Schedule Settings TAM	n/a	n/a	BUG FIX - Sporadic loss of schedule settings for the answering machine after updating FRITZ!OS

SECURITY

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	SECURITY	Security Related Messages reworked	n/a	n/a	"IMPROVED - More detailed message about security-relevant changes under ""System / Event Log""
2	SECURITY	Display of Open Ports	n/a	n/a	"IMPROVED - Display of the ports that can be reached from the home network under ""Diagnostics / Security""
3	SECURITY	2FA signalled via LEDs additionally	n/a	n/a	CHANGED - Waiting for the additional confirmation of a change is indicated by the flashing of all LEDs
4	SECURITY	CHANGE - openssl	n/a	n/a	Updated to openssl version 1.1.1l

USB

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	USB	FRITZ!NAS usability	n/a	n/a	IMPROVED - When creating new release links on fritz.nas, the user is informed if the FRITZ!Box is not accessible from the internet
2	USB	USB Information Pages	n/a	n/a	"IMPROVED - The ""USB Devices"" and ""Storage (NAS)"" pages on the user interface were integrated into ""USB/Storage"" and simplified"
3	USB	USB Menue Pages	n/a	n/a	"CHANGED - ""USB Devices"" and ""Storage (NAS)"" menus combined under ""Home Network / USB/Storage""
4	USB	shared Folder visibility	n/a	n/a	"BUG FIX - A folder released for sharing was not rendered legibly under ""Sharing""
5	USB	FRITZ!NAS File Upload	n/a	n/a	BUG FIX - When uploading a file to fritz.nas by Drag & Drop, each file was

					uploaded twice
6	USB	Time Stamps	n/a	n/a	"BUG FIX - The time information ""Changed On"" was given incorrectly on fritz.nas if the language was not set to German in the FRITZ!Box"
7	USB	FIXED - Compatibility	operational	systematic	"Improved compatibility with MacOS 12.0 ""Monterey"" beta"
8	USB	FIXED - Compatibility	operational	x	Improved compatibility with several older devices (printers, scanners)
9	USB	NAS File Selection	n/a	n/a	IMPROVED - In fritz.nas, multiple files can be selected using the shift key
10	USB	SMB Shares in Windows	cosmetic	n/a	BUG FIX - Home network sharing of a network drive (SMB) was not visible under Network in Windows Explorer
11	USB	SMB Data Transmission	n/a	n/a	BUG FIX - Data transmission via network drive function (SMB) failed with the Windows error message 'STATUS_NO_MEMORY'

DECT

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	DECT	Faster Phonebook Display	n/a	n/a	IMPROVED - Telephone book display for FRITZ!Fon C4, C5 and C6 now faster
2	DECT	Call Block via FRITZ!Fon	n/a	n/a	IMPROVED - Setting up call blocking in the handset is now easier
3	DECT	FRITZ!Box Events	n/a	n/a	"IMPROVED - Display of FRITZ!Box events with ""OK"" button in the ""FRITZ!Box"" start screen"
4	DECT	FRITZ!Fon Picture Browsing	n/a	n/a	IMPROVED - Pictures can also be browsed with up/down rocker

3.2 General Information on FRITZ!OS 07.12

FRITZ!OS version: **159.07.12**

Type: **Release**

Release date: **2019-10-10**

Firmware file names:

- **FRITZ.Box_6430_Cable-07.12.image**
- **6430.07.12.081308002018-d30-2.cvc**

3.2.1 Firmware Improvements of FRITZ!OS 07.12

List of changes (Firmware Improvements of) in FRITZ!OS **07.12** since FRITZ!OS **07.10** from **2019-06-11**:

MESH

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	MESH	Stability Mesh	n/a	sporadic	Improved: Stability
2	MESH	Steering	n/a	sporadic	Bug-fix: Mesh WiFi steering for devices on the wireless guest access improved

SYSTEM

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	SYSTEM	Stability	n/a	sporadic	Improved: Stability
2	SYSTEM	Browser Optimized	n/a	systematic	Improved: Browser compatibility optimized for saving table renderings locally
3	SYSTEM	Push Service always on	n/a	sporadic	Bug-fix: Sometimes Push Service could not be disabled
4	SYSTEM	Push Service Rest	n/a	sporadic	Bug-fix: Push Service for saving settings deleted the sender settings
5	SYSTEM	VPN GUI	n/a	sporadic	Bug-fix: During assignment of VPN rights for the current user, under certain circumstances this user's other rights were removed
6	SYSTEM	Repeater Update	cos-metic	systematic	"Bug-fix: Update in progress on FRITZ!Repeaters was displayed for too long in the ""Mesh Overview"""
7	SYSTEM	Powerline Info	cos-metic	sporadic	"Bug-fix: Powerline information of a FRITZ!Powerline device connected with the FRITZ!Box via LAN were missing in the ""Device Details"" area"
8	JZ-63288	SYSTEM	IPTV	operational	Bug-fix: Multicast IPTV streams optimized

WLAN

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	WLAN	5GHz Wait Time	cos-metic	sporadic	Bug-fix: Time display for scan of wireless environment (5-GHz band) corrected

TELEPHONY

No.Track-ID	Module	Title	Impact	Occurrence	Description
-------------	--------	-------	--------	------------	-------------

1	TELE-PHONY	Playback Voice Mail	n/a	sporadical	Bug-fix: Playback of voice messages on myfritz.box failed in iOS and macOS
2	TELE-PHONY	Call Diversion Instability	n/a	sporadical	Bug-fix: Possible crash during use of call diversions
3	TELE-PHONY	ISDN Data	n/a	systematic	Bug-fix: ISDN data calls no longer worked with FRITZ!OS 7.10/7.11

DECT

No.Track-ID	Module	Title	Impact	Occurrence	Description
1	DECT	DECT PIN Always on	n/a	systematic	Bug-fix: PIN query came despite disabled PIN

Appendix A: Supported TR-069 Parameters

This release note includes four files with information on the TR-069 protocol family:

tr069-uebersicht_status.pdf

TR-069: Overview of Techniques and Parameters supported by FRITZ!Box, 02.06.2014

tr069-wlan_uebersicht.pdf

WLAN: Overview of Objects and Parameters supported by FRITZ!Box, 08.10.2009: Profile according to TR-098: Wi-FiLAN:2

tr140-uebersicht_status_storage_service.pdf

TR-140: Overview of Techniques and Parameter supported by FRITZ!Box, 14.11.2012

Supported profiles according TR-098A2: StorageService:1.0[1](Baseline:1, FTPServer:1, HTTPServer:1, NetServer:1, UserAccess:1, VolumeConfig:1)

tr104-uebersicht_status.pdf

TR-104: Overview of Objects and Parameters by FRITZ!Box, 02.06.2014

AVM FRITZ!Box: supported TR-104 Profiles: Endpoint-Profile, SIPEndpoint-Profile, TAEndpoint-Profile

Additional local and public interface of the FRITZ!Box are documented here:

<http://www.avm.de/schnittstellen>

Appendix B: IPv6 Compatibility

Supported IPv6 RFCs

- RFC 1981 - Path MTU Discovery for IPv6
- RFC 2375 - IPv6 Multicast Address Assignments
- RFC 2428 - FTP Extensions for IPv6 and NATs
- RFC 2460 - Internet Protocol IPv6 Specification
- RFC 2462 - IPv6 Stateless Address Autoconfiguration
- RFC 2463 - Internet Control Message Protocol (ICMPv6) for the Internet Ver. 6
- RFC 2464 - Transmission of IPv6 over Ethernet Networks
- RFC 2472 - IP Version 6 over PPP
- RFC 2473 - Generic Packet Tunneling in IPv6 Specification
- RFC 3056 - Connection of IPv6 Domains via IPv4 Clouds
- RFC 3068 - An Anycast Prefix for 6to4 Relay Routers
- RFC 3315 - Dynamic Host Configuration Protocol for IPv6 (DHCPv6)
- RFC 3587 - IPv6 Global Unicast Address Format
- RFC 3596 - DNS Extensions to Support IP Version 6
- RFC 3633 - IPv6 Prefix Options for DHCP Version 6
- RFC 3646 - DNS Configuration options for DHCP for IPv6
- RFC 3736 - Stateless DHCP Service for IPv6
- RFC 3769 - Requirements for IPv6 Prefix Delegation
- RFC 4191 - Default Router Preferences and More-Specific Routes
- RFC 4193 - Unique Local IPv6 Unicast Addresses
- RFC 4241 - Model of IPv4/IPv6 Dual Stack Internet Access Service
- RFC 4242 - Information Refresh Time Option for DHCPv6
- RFC 4291 - IPv6 Addressing Architecture (obsolete RFC 3513)
- RFC 4294 - IPv6 Node Requirements
- RFC 4339 - IPv6 Host Configuration of DNS Server Information Approaches
- RFC 4361 - Node-specific Client Identifiers for Dynamic Host, Configuration Protocol Version Four (DHCPv4), -> Client Identifier, contains DUID according to RFC 3315
- RFC 4429 - Optimistic Duplicate Address Detection (DAD) for IPv6
- RFC 4443 - ICMPv6 for the IPv6 Specification
- RFC 4472 - Operational Considerations and Issues with IPv6 DNS
- RFC 4795 - Link-Local Multicast Name Resolution (LLMNR)
- RFC 4861 - Neighbor Discovery for IPv6
- RFC 4862 - IPv6 Stateless Address Autoconfiguration
- RFC 4941 - Privacy Extensions for Stateless Address Autoconfiguration in IPv6
- RFC 4942 - IPv6 Transition-Coexistence Security Considerations
- RFC 5006 - IPv6 Router Advertisement Option for DNS Configuration
- RFC 5175 - IPv6 Router Advertisement Flags Options
- RFC 5569 - IPv6 Rapid Deployment on IPv4 Infrastructures (6rd)
- RFC 5908 - Network Time Protocol (NTP) Server Option for DHCPv6
- RFC 5969 - IPv6 Rapid Deployment on IPv4 Infrastructures (6rd) - Protocol Specification
- RFC 6092 - Simple Security in IPv6 Gateway CPE
- RFC 6204 - Basic Requirements for IPv6 Customer Edge Routers
- RFC 6334 - Dynamic Host Configuration Protocol for IPv6 (DHCPv6) Option for Dual-Stack Lite

Drafts

- Basic Requirements for IPv6 Customer Edge Routers draft-ietf-v6ops-ipv6-cpe-router-09
- draft-ietf-softwire-ds-lite-tunnel-option

Appendix C: MIB and Special Features

-- Currently no special features --

Appendix D: TCP/UDP Ports and Related Services

Cable Modem Interface:

- UDP-161-SNMP IPv4+IPv6
- UDP-162-SNMP-Trap IPv4+IPv6
- UDP-37-Time IPv4+IPv6
- UDP-68-DHCPv4
- UDP-546-DHCPv6

General:

- TCP-53-Domain Name Service (DNS)
- TCP-80-Hypertext Transfer Protocol (HTTP)
- TCP-139-NetBIOS Session Service
- TCP-445-Microsoft Active Directory, Windows shares
- TCP-2066-AURA (AVM USB Remote Architecture)
- TCP-4711-IPerf Speedtest (AVM IPerf Server)
- TCP-5031-CAPI over TCP (AVM CAPI over TCP)
- TCP-8181-Parental Control -- AVM Content-Filter
- TCP-8182-Parental Control
- TCP-49000-UPnP/TR-064/UPnP AV
- TCP-49200-AVM Media Server HTTP
- TCP-49300-1&1 Medienserver HTTP
- TCP-49400-Telekom Medienserver HTTP
- TCP-49443-TR-064 over SSL/TLS
- TCP-51111-DTrace (AVM DTrace, DECT Trace for DLC, Network and MAC-Layer)
- TCP-51112-DTrace (AVM Dtrace, Rerouting of DECT Stub output supported)
- UDP-37-Time Protocol
- UDP-53-Domain Name Service (DNS)
- UDP-67-DHCP-Server
- UDP-68-DHCP-Client
- UDP-123-Network Time Protocol (NTP)
- UDP-137-Microsoft NetBIOS Name Service
- UDP-138-Microsoft NetBIOS Datagram Service
- UDP-500-IKE
- UDP-547-DHCPv6-Server
- UDP-1900-UPnP SSDP
- UDP-4500-IPSec NAT-T
- UDP-4711-IPerf Speedtest (AVM IPerf Server)
- UDP-4712-IPerf Speedtest (AVM IPerf Server)
- UDP-5031-CAPI over TCP (AVM CAPI over TCP)
- UDP-5351-Port Control Protocol (PCP)
- UDP-5353-Multicast DNS (mDNS)
- UDP-5355-Link Local Multicast Name Resolution (LLMNR)
- UDP-5060-Session Initiation Protocol (SIP)
- UDP-7077-Voice over IP (RTP,RTCP)

Optional-WAN only:

- TCP-21-File Transfer Protocol (FTP)
- TCP-4711-IPerf Speedtest (AVM IPerf Server)
- TCP-4712-IPerf Speedtest (AVM IPerf Server)
- TCP-5060-Session Initiation Protocol (SIP)

Randomised-Optional-WAN only:

- TCP-443 (or 40000-49999) Hypertext Transfer Protocol over SSL/TLS (HTTPS)
- TCP-7547, 8089, 46000-47000, 46000-56000 TR-069 Connection Request Port

Appendix E: Diagnostics Options

The FRITZ!Box offers a plethora of diagnostics options. The following section presents various descriptions and explanations of the available tools:

Access to the User Interface

`http://fritz.box`

`http://192.168.178.1`

`http://169.254.1.1`

Support Data

Support information can assist the AVM Support Desk in analyzing your problem more precisely. If they are required, AVM staff will request that you compile support data and send them to AVM Support. Such support data contain all of the settings of your FRITZ!Box, excluding user names and passwords.

The support information on the FRITZ!Box Support Data page are available at:

`http://fritz.box/html/support.html`

DOCSIS Diagnostics Data

The DOCSIS diagnostics data are not available in firmware versions that have been released.

When the firmware is still beta or lab, you can use the diagnostics data to conduct a more detailed analysis of problems with the connection. If they are required, AVM staff will request that you compile DOCSIS diagnostic data and send them to AVM Support. DOCSIS diagnostic data contain additional information on the status of your cable connection, but no user names or passwords.

The DOCSIS diagnostics data can be accessed on the Support Data page of the FRITZ!Box under:

`http://fritz.box/html/support.html`

Options for Packet Tracing

Packet traces are extremely detailed protocols that allow AVM Support to perform a deep analysis of certain error situations. If they are required, AVM Support staff will request that you create a packet trace and send it to Support.

For the purpose of diagnostics, FRITZ!Box can record all data packets in Wireshark format when the FRITZ!Box is configured as a router. Multiple traces can be started at the same time. They assist AVM Support in a precise analysis of complex problems with the Internet connection. Keep in mind that traces may contain your confidential passwords.

1. Start the packet trace by clicking the corresponding "Start" button and save the file to the hard disk.
2. End the trace by clicking "Stop" or the "Stop All Traces" button.

Important: If you want to end the trace, do not interrupt the saving of the file on the hard drive in the browser. Click the corresponding "Stop" button instead!

3. Click the "Refresh" button if the buttons to stop the trace are not displayed.

The packet tracing page is accessible from the Support Data page of the FRITZ!Box or directly at:

<http://fritz.box/html/capture.html>

Part 1)

The "Standard tracing" of Internet connection 1 records the FRITZ!Box's Internet connection. This is the only place where any PPPoE frames and PPP dialin events are visible.

If there is an extra PVC for VoIP, then multiple Internet connections are available:

- Trace of Internet connection 1 contains **only** VoIP traffic
- Trace of Internet Connection 2 contains the actual data of the Internet connection.

WAN trace of only Internet, without PPP and PPPoE in the router of the FRITZ!Box

WAN trace of only TR069 communication, without PPP and PPPoE in the router of the FRITZ!Box

WAN trace of everything, without PPP and PPPoE in the router of the FRITZ!Box

Part 2)

- eth0 is the Ethernet interface (the LAN ports) of the FRITZ!Box.
- eth0 is part of the logical interface "lan".
- eth0 should be used if you would like to trace directly on the LAN port.

"lan" is a logical interface that combines all of the bridged local network interfaces. It generally contains the IP traffic on the LAN ports and the network traffic arriving from the WLAN.

Additional Tracing Options

Part 3)

Available WLAN interfaces on which traces can be recorded are dynamically displayed depending on the access points that are enabled and available.

WLAN abbreviations:

HW == hardware (close to WLAN chip)

AP == AP mode (logical WLAN mode "access point")

HW2 == hardware 2.4 GHz

HW == hardware 5 GHz

AP2 == Logical AP ath1

AP == Logical AP ath0

ath0 == 2.4 GHz

ath1 == 5 GHz

wifi0 == hardware (close to WLAN chip) trace point 5GHz

wifi1 == hardware (close to WLAN chip) trace point 2.4GHz

Interface 0 == trace point close to HW

Interface 1 == trace point on network stack (only available in logical WLAN mode)

- wifi0 bzw wifi1

This trace records as close to the hardware as possible. The trace covers all frames that are transferred to and from the WLAN chip. There is one trace point for each WLAN hardware. At present these are 'wifi0' and 'wifi1'.

- Tracing on the Logical Layer

Although there is usually only one WLAN hardware, multiple logical WLAN modi can exist in parallel. These are called AP, WDS and STA. There are two trace points for each mode present in the given product. One of these (interface 0) - as for tracing on 'wifix' - is close to the hardware, while the second (interface 1) is oriented toward the network stack.

Appendix F: Customer Support and Contacts

For technical support, FAQs, manuals, tools and additional information, please visit:

<http://www.avm.de/de/Service/index.html>

The AVM Knowledge Database offers additional support information:

<http://service.avm.de/support/de/SKB>

Please contact the following persons for direct support:

Task Area	Contact
Sales	Ralf Süs +49-69-66 98 26-13 r.sues@avm.de
	Olav Fritz +49-30-39976-277 o.fritz@avm.de
Project Management	Heiko Götze +49-30-39976-632 h.goetze@avm.de
	Jan Wendt +49-30-39976-619 j.wendt@avm.de
Product Management	Tim Kroll +49-30-39976-192 t.kroll@avm.de
	Henning Kroll +49-30-39976-201 h.kroll@avm.de
OEM Support Hotline	+49-30-39004-529 oemsupport@avm.de