

# FRITZ!

## FRITZ!Box 6850 5G v2



### The FRITZ!Box for high-speed internet via 5G mobile network

FRITZ!Box 6850 5G v2 brings fast 5G mobile Internet with up to 1 Gbit/s to the wireless home network. As a fixed wireless access solution, it supports 5G (NSA, SA), 4G (Category 20) and 3G. With powerful Mesh and Wi-Fi 5, it distributes data wirelessly throughout the house at up to 1266 Mbit/s. The highest security standards (WPA3/WPA2) ensure increased protection.

The practical alignment aid in the user interface makes ideal positioning of the FRITZ!Box 6850 5G v2 relative to the mobile network child's play. The FRITZ!Box 6850 5G v2 is also perfectly suited as a failover device on another FRITZ!Box with an integrated DSL, cable, or fiber optic modem.

A DECT base station for telephony and smart home applications rounds off the versatile range of services. Telephony is carried out via the mobile number of the SIM card using VoLTE/VoNR or alternatively via VoIP/SIP incl. encryption.

The FRITZ!OS, our router operating system, makes it easy to integrate and control these devices.

### Product highlights



**For every 5G or 4G mobile network: High-speed Internet access with up to 1 Gbit/s**



**Fast Wi-Fi 5 + Mesh WiFi: Wi-Fi with up to 866 Mbit/s (5 GHz) + 400 Mbit/s (2,4 GHz)**



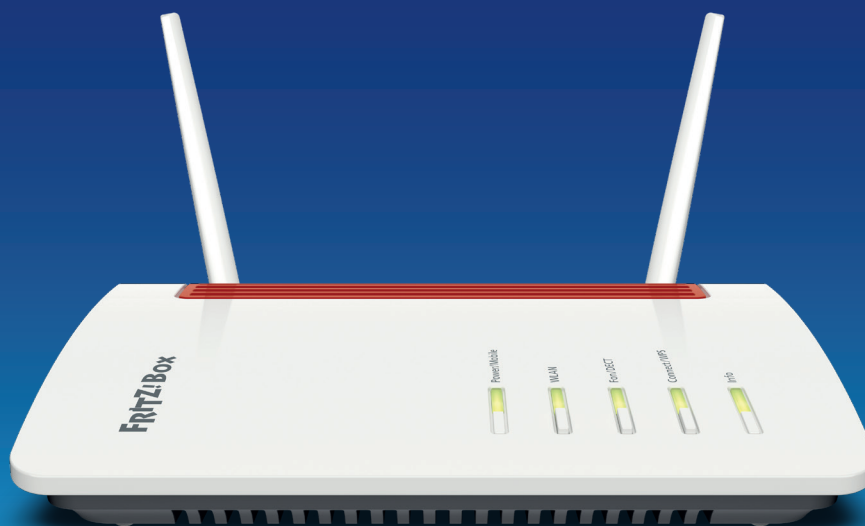
**Integrated DECT Basis for telephony via VoLTE/VoNR and SIP and for Smart Home devices**



**Ideal as fallback protection device on another FRITZ!Box with fixed network access**



**FRITZ!OS: MyFRITZ! and auto update**



## Technical specifications

### Interfaces

- Wireless router with integrated 5G/4G/3G modem
- Internet access alternatively possible via WiFi hotspots
- LAN: 4x 1 gigabit Ethernet, 10/100/1000 BASE-T
- 1x Mini-SIM slot
- Stateful Packet Inspection Firewall with port sharing
- Parental controls with time budget, youth protection module, blacklist and whitelist
- Complete support for IPv6 in the internet, home network and for telephony
- Secure remote access over the internet with VPN using IPSec or Wireguard
- Security wizard with diagnostic tool and auto updates

### Mobile Communications

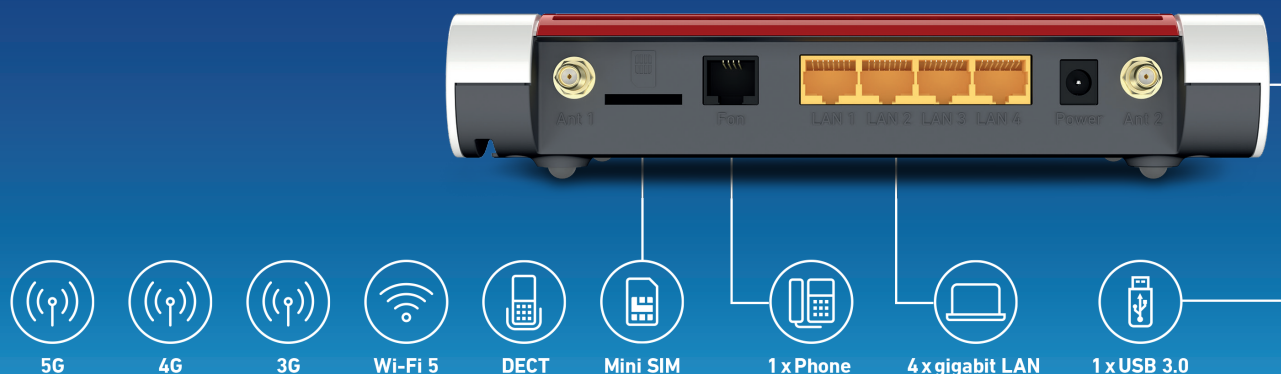
- Mobile Internet access over 5G or 4G with up to 1 GBit/s
- Support for 5G Stand Alone and Non Stand Alone (Rel. 16)
- Dualcarrier convergence (2CC NR CA) within 200 MHz frequency bandwidth
- Carrier Aggregation for 5G-SA with up to 5CC NR
- 5G-NSA with up to 7CC (incl. up to 3CC NR or 6CC 4G)
- Carrier Aggregation for LTE with up to 6CC 4G
- 5G bands: n1, 3, 5, 7, 8, 20, 26, 28, 38, 40, 41, 75, 76, 78
- 4G / LTE Advanced Pro according 3GPP Category 20
- 4G bands: b1, 3, 5, 7, 8, 20, 26, 28, 32, 38, 40, 41, 42, 43
- 4x4 MIMO support for all 5G and 4G bands > 1 GHz
- Support for Dynamic Spectrum Sharing (DSS)
- 3G support (UMTS/HSPA+) via bands: B1, 5, 8
- Practical alignment aid

### Wi-Fi

- 2 x 2 Wi-Fi access point with Wi-Fi 5 up to 866 Mbit/s (5 GHz) and 400 Mbit/s (2.4 GHz)
- Extend the home network with Mesh Wi-Fi – simply combine several wireless access points into one intelligent system
- Compatible with IEEE 802.11a/g/n/ac
- Wi-Fi network encryption with WPA3/WPA2
- Wi-Fi can be turned on and off via button, schedule or telephones
- Wi-Fi guest access – secure surfing for guests

### Telephony / DECT / Smart Home

- Telephony via VoLTE/VoNR and SIP in accordance with RFC 3261 (incl. SIP TLS and SRTP support)
- Telephone system with DECT base station for up to 6 cordless telephones, 10 FRITZ!DECT 200/210 smart plugs, 10 FRITZ!DECT 440 switches, 12 FRITZ!DECT 300/301 radiator controls, 10 smart home devices from third-party manufacturers with HAN FUN
- 5 integrated answering machines and integrated fax featuring voice/fax-to-mail
- Comprehensive telecommunication functions such as call diversion, internal calls, three-party conferences, call transfer, call blocking, alarm, baby monitor, VIP calls, Do Not Disturb, and caller ID display
- Registration of up to 10 IP telephones (SIP-compliant)
- Door intercoms can be connected via DECT or IP/SIP
- Telephony app for Apple iPhone and Google Android integrates iPhone and Android smartphones via Wi-Fi



## Network

- TR-069 (TR-069/104/140) support including documentation of the data model in accordance with the Broadband Forum TR-106
- TR-369 support (USP) for real-time monitoring with multi-controller support including rights management
- Speed test via iPerf and TR-471 (depending on the platform)
- SPI firewall, DoS protection
- IPv6 and IPv4 dual stack including DS-Lite with PCP support
- 802.1Q support for WAN connections
- Multiservice (e.g. HSI, TR-069, IPTV) WAN connection type with PPPoE, DHCP, static IP, bridging encapsulation
- Public subnet configuration (up to /28) for addressing clients publicly in the LAN
- Exposed host / port forwarding
- VPN support (IPSec and WireGuard), VPN passthrough
- No vendor lock-in. Platform and data remain with ISP (internet service provider)
- ACS URL via DHCP Option 43, or PPPoE (Zero Touch Deployment)
- IGMP proxy (v3 and below)
- DNSSEC and eDNSO support

## FRITZ!OS

- FRITZ!Box: a clear, browser-based user interface that's easy to use
- User interface protected by device-unique preconfigured password
- Sensitive user settings protected by 2FA including support for authenticator apps
- Multilingual user interface
- Secure remote access to your FRITZ!Box with MyFRITZ!
- Convenient features like parental controls, push service
- Wake on LAN over the internet
- Wi-Fi calls in the home network with iPhones and Android smartphones
- FRITZ!Box interface specially designed for smartphones and tablets
- Home network overview, help functions with full-text search, and much more
- Free updates add new features:  
<https://fritz.com/en/pages/fritz-os>
- Free FRITZ!Apps for telephony, smart home, access to the FRITZ!Box from on the go, and optimizing the Wi-Fi connection

## Device Properties

Dimensions in mm (W x H x D):

200 x 45 x 152 mm

Average power consumption: 6.0 W

Maximum power consumption: 18.0W

# FRITZ!

## Why?



**Direct contacts in Sales, PreSales, and Engineering**



**Training sessions with FRITZ! staff for engineering and support**



**Technical support (also on site) and sales consultation**



**In-house hardware and software development in Berlin**



**Real-time monitoring with the open TR-069 & TR-369 standards**



**Regular updates with security as top priority**

## FRITZ!OS

FRITZ!OS is the genius of the FRITZ! family. With this smart operating system, the FRITZ! team opens up a broad spectrum of possibilities in your customers' home networks. Your FRITZ!Box uses the most advanced technologies while providing for the right balance between exciting features and simple operation.

## Software updates

FRITZ!OS, our router operating system, is updated regularly to implement new features and to guarantee long product life cycles. And all updates are offered to our customers free of charge.

## Device management

The FRITZ!Box supports not only OMCI management but also offers comprehensive support for TR-069 and USP (TR-369), right out of the box. The use of open standards puts a broad palette of ISP-relevant management parameters at your disposal, no matter which technology you use.

## Eco design

FRITZ! products are characterized by low power consumption and configurable energy-saving modes. Production in Europe means short transport routes, secure labor conditions, and the use of environmentally sustainable materials.

Many years of software updates with expanded functions, bug fixes, and security updates ensure long life cycles.

## Product quality

Developed and produced in Germany and Europe, our FRITZ!Box fulfills its market promise to its end customers, by ensuring proven reliability with success in the field. Before being launched on the market, the products run through extensive lab phases which offer customers the opportunity to evaluate new features in advance.

## An all-in-one device

A FRITZ!Box is a joint router, installed directly at the internet connection. This saves power, while ensuring convenient operation and simplifying device management. Internet, Wi-Fi, streaming, telephony, smart home, and much more – combined in a single device.

**fritz.com**

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