

## Optimal positioning of Wi-Fi repeaters increases Wi-Fi performance

Aachen, Germany, 9 October 2024 – Wi-Fi repeaters are a good option for expanding a residential wireless network if the connection leaves something to be desired. To get the best results, however, a few factors should be taken into account. We summarise the most important facts and tips for positioning a Wi-Fi repeater optimally.

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- **How does a repeater actually work?**
- **Selecting the correct distance**
- **Unexpected interference factors**
- **Finding the right position**
- **The alternative for long distances**
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### How does a repeater actually work?

How a Wi-Fi repeater works can be explained quickly. First, the repeater receives the Wi-Fi being emitted from the router. This wireless signal is then sent back out by the repeater after being *amplified*. This is why repeaters are also frequently called Wi-Fi boosters. A critical factor for the speed and wireless stability of this "Wi-Fi extension" is the quality of the connection between the router and repeater. That means the best possible positioning is truly important for optimally expanding the router Wi-Fi with a repeater.

### Selecting the correct distance

When choosing a position for the repeater you should keep the following in mind: The closest location is not automatically the best. What does this mean? Imagine a home in which the home office is far away from the router and therefore has an inadequate Wi-Fi connection. It's easy to think that you should install the repeater in the home office. The problem: If a Wi-Fi repeater receives a weak signal, it can only forward a weak signal. In this example the repeater would have hardly any effect.

Instead the rule of thumb is this: A repeater should be positioned about halfway between the router and the devices which will use the Wi-Fi. This means that it usually receives a sufficiently strong signal, which it is able to *extend*. In addition, the repeater should be positioned centrally if possible and not be hidden, for example, in a corner of a room. Walls and furniture decrease the transmission capacity and thereby weaken the Wi-Fi signal.

## Unexpected interference factors

The fact that walls and ceilings slow down the Wi-Fi connection probably comes as no surprise to most people. But it often is a surprise to learn which other everyday objects are also among the natural enemies of stable Wi-Fi connections. Microwaves, wireless computer accessories and baby monitors are a few examples of what can interfere with the Wi-Fi due to radio waves. Even water slows down signals – and it doesn't have to be water in a large aquarium in the home. Water lines, in-floor heating and even flower vases and clotheshorses with wet clothing prevent downstream rooms from getting good Wi-Fi reception.

## Finding the right position

Due to such external factors, your search for the ideal location for the repeater can take some time. It is generally advisable to try out different locations and assess the connection quality, for example, by taking speed test measurements. State-of-the-art repeaters such as those from German manufacturer devolo offer quite a lot of convenience in this regard. On the front of the devices there is an LED indicator that indicates the quality of the received signal, so you can see directly how strong the connection is. Technologically adept users who want to know this exactly can also search the Internet and find various software solutions for generating Wi-Fi heatmaps. These are installed, for example, on a laptop to check the signal quality at various areas in the home – and to mark wireless gaps on a floor plan.

## The alternative for long distances

When positioned correctly, repeaters improve the range of the residential Wi-Fi over the long term and ensure significantly stabler and faster Wi-Fi coverage. But even these can reach their limits – particularly if the Wi-Fi is needed on multiple storeys. In these cases, we recommend you use Powerline technology, which devolo offers with its Magic product series. These adapters are also operated very conveniently in power sockets. The difference from a repeater is that these adapters use the power line as a data cable to communicate with each other. This way the network signal can go from one storey to the next without being slowed down by ceilings or water lines. Then at the destination you can connect end devices as needed using either a cable or Wi-Fi.

This is how repeaters or Powerline adapters with a Wi-Fi function create the perfect customised home network.

## Strong Wi-Fi "Engineered in Germany"

devolo, a German company based in Aachen, has been developing powerful technology for smart networking for 20 years. Customers receive everything they need for a reliable online connection in their own four walls from a single source. The current product portfolio includes flexible solutions for customised expansion of the home network using repeaters or Powerline adapters – which can be conveniently controlled via an app for smartphones and tablets.

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This text and current product images can also be found at [www.devolo.de](http://www.devolo.de) in the media section of the devolo website.

## About devolo

devolo develops intelligent home networking solutions that send high-speed Internet into every corner of your house or flat. The main product for household customers is devolo Magic, a technology that makes it possible to establish smart networks over existing electrical wiring. The product portfolio is rounded off with innovative mesh Wi-Fi systems and solutions for fibre-optic connections.

In the professional sector, devolo is a reliable partner of international telecommunications providers, global industrial corporations, leading medium-sized companies and the fast-growing energy industry. Anywhere secure, high-performance data communication is needed, partners rely on devolo.

With over 50 million products sold, devolo belongs to the world's market leaders. More than 950 international top-product test reviews and distinctions underscore our leadership in innovation. devolo was founded in 2002 in Aachen, Germany, and is represented in more than 10 countries.