



If you're looking to make your home smarter, safer, and more comfortable, and you want to interconnect various devices, you'll find yourself navigating through a veritable jungle of countless smart home systems, automation systems, and diverse options. But don't panic, we will guide you through the world of smart homes, shedding light on various systems as well as their pros and cons.

## TECHNICAL REPORT

# WHICH SMART HOME SYSTEM IS THE PERFECT ONE FOR ME?

## Retrofit or build new?

The question of which smart home system suits you cannot be answered universally, as much depends on your individual living situation and needs. So, the initial question should be: Do you want to retrofit or upgrade an existing property, or build a new one?

Existing buildings can be easily and cost-effectively retrofitted with voice control systems or wireless solutions, allowing individual devices such as heating thermostats to be operated smartly. However, it's important to note that costs can quickly escalate when using various individual solutions that may have limited communication with each other. Wire-



less systems use technologies like Wi-Fi or Bluetooth, or protocols like ZigBee or Z-Wave, to connect different areas or devices within the home.

Retrofitting an existing property to a bus-based standard like KNX can become a complex project involving wall modifications and cable laying, but it offers various advantages that we will explore in more detail later. Alternatively, for older buildings, KNX-RF is an option – a wireless variant of the KNX bus system where the control of smart devices occurs wirelessly via the 868 MHz frequency band, without the need for structural changes.

Before embarking on a retrofitting project, it is essential to find out if there are any regulatory restric-



tions, such as heritage protection requirements, or if landlords need to be consulted for approvals in rental properties.

When planning a new build, it may be worthwhile to lay bus-system-ready cables from the outset. This allows for extensive networking to facilitate intelligent communication between devices. Typically, these cables are installed during the construction of the building, eliminating the need for wall modifications later on.

**ATTENTION!** The installation of cables and the set-up is to be carried out by a system integrator with the necessary expertise.



For further information, please read our article KNX or wireless system for the smart home?...

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