

# SMART HOME

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The purpose of this paper is to study the function of smart homes.

Home automation or domotics is building automation for a home, called a smart home or smart house. A home automation system will control lighting, climate, entertainment systems, and appliances.

In 1975, the first general purpose home automation network technology, X10, was developed. According to Li et al. (2016) there are three generations of home automation:

1. First generation: wireless technology with proxy server, e.g. Zigbee automation;
2. Second generation: artificial intelligence controls electrical devices, e.g. Amazon Echo;
3. Third generation: robot buddy who interacts with humans, e.g. Robot Rovi, Roomba.

Applications and technologies:

1. Heating, ventilation and air conditioning (HVAC)
2. Lighting control system
3. Occupancy-aware control system
4. Appliance control and integration with the smart grid and a smart meter
5. Security
6. Leak detection, smoke and CO detectors
7. Indoor positioning systems
8. Home automation for the elderly and disabled
9. Pet Care, for example tracking the pets movements and controlling access rights.

Risks of Smart Homes

While the smart home brings with it convenience and cost savings, security risks and bugs have been challenges faced by the technology. Adept hackers, for example, can get access to a smart home's internet-enabled appliances.

In conclusion, smart home is a convenient home setup where appliances and devices can be automatically controlled remotely from anywhere in the world using a mobile or other networked device. Smart homes aren't for everyone, but they can help bring down your electricity bills, simplify your daily tasks.

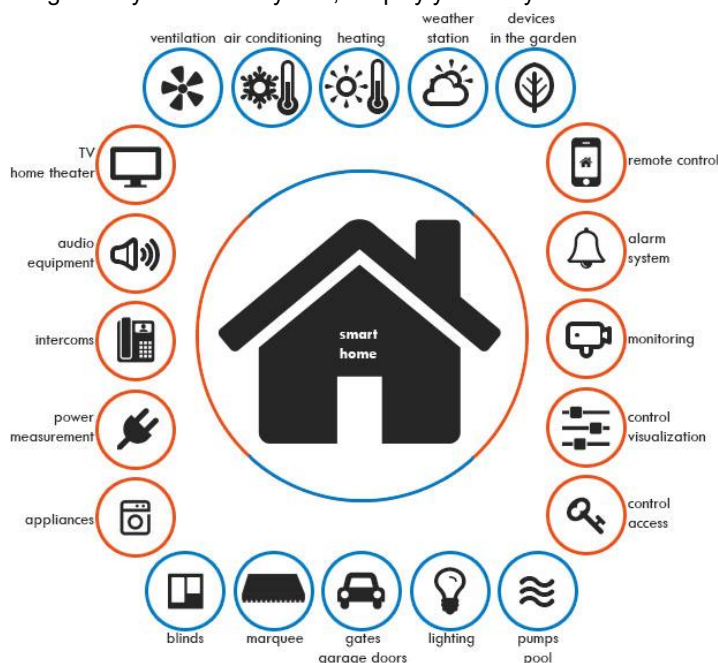


Figure 1. Applications and technologies of a smart home

References:

1. [https://en.wikipedia.org/wiki/Home\\_automation](https://en.wikipedia.org/wiki/Home_automation)
2. <https://www.investopedia.com/terms/s/smart-home.asp>
3. <http://citech.pl/en/offer/intelligent-building/what-opportunities-does-a-smart-home/>