Nick Vandome

Create Your Smart Home to Stay Safe and Save Money

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Elements of a Smart Home

Smart homes, where a range of electronic devices are controlled via voice controls, apps, or accessed remotely, are becoming a realistic and affordable option for more and more people who want to take advantage of the technology that is available to automate an increasing range of functions within the home. For a smart home to work to its full potential there are certain elements that can be in place:

- Smart home devices.
- Smart speakers, or hubs.
- Apps on smartphones and tablets, and online access.

Smart home technology spans a wide range of devices (and this is increasing rapidly) as manufacturers realize the commercial importance of smart homes. Some of the current devices are:

- Smart lighting.
- Smart heating.
- Smart security systems.
- Smart locks.
- Smart cameras, for monitoring inside and outside the home.
- Smart plugs and sockets.
- Labor saving devices, such as robotic lawnmowers and robotic vacuum cleaners.
- Smart entertainment.
- Devices around the home, including smart kettles, fridges, and air conditioning.

Planning Your Smart Home

Before anyone starts creating a smart home it is important to do a bit of initial planning, to make the process as smooth and efficient as possible. The first thing to do is to look at some of the reasons for embracing the idea of a smart home:

- **Convenience**. Using gadgets in the home should make our lives easier, and smart home technology is ideal for this. Whether it is turning lights on or off from the comfort of an armchair, or using your smart heating to adapt to the ambient temperature, smart home devices can help simplify everyday tasks in a range of ways.

- **Time saving**. Several smart home devices are ideal for saving time so that you can get on with other things: a robotic lawnmower can save you hours in the garden, as can a robotic vacuum cleaner in the home.

- **Security**. Using smart home security devices can create a safer home environment, from home security cameras to smart smoke and carbon monoxide alarms.

- **Fun**. Smart home devices are not only efficient and secure, they can also be great fun. The selection of smart lighting effects that can be created is entertaining for adults and children alike, as are the questions that can be answered by a smart speaker.

Having looked at the advantages of a smart home, you can then start to plan which elements you want to use in your home. All of the items in Tip 1 could be considered, but they do not all have to be used at the same time. Instead, look at how to build up your smart home:

- Start with a relatively simple element that can still have an impressive impact, such as smart lighting.

- Build up the range of elements, by making sure you are comfortable with one item before you add any more.

Wi-Fi and the Smart Home

Smart home devices on their own are not particularly smart: most need another device with which to communicate in order to work effectively. This could be a smart speaker, a smart home hub, or an app on a smartphone or a tablet. The smart home device and the linked device communicate with each other using a variety of wireless communication methods.

The most common form of communication for smart home devices is Wi-Fi. This is a well-known method of wireless communication, due mainly to its role in connecting computing devices wirelessly to the internet. However, it is increasingly being used to connect smart home devices. This can be done with a "bridge" that connects to your home Wi-Fi router, or directly with the device. The smart home device's app, hub, or digital voice assistant can then communicate with the device via the bridge that is connected to the Wi-Fi router. It is therefore essential that you have a secure Wi-Fi system that has enough speed to operate all of your smart home devices, and also the other Wi-Fi requirements in your home. (See Tip 97 for details about general Wi-Fi security).

In addition to Wi-Fi, there are other methods of wireless communication for smart home devices (each method should be noted in the device's specifications):

- **Bluetooth**. A well-established method of wireless communication over short distances, Bluetooth can be used to connect a range of peripherals to computing devices, including smart home devices.

- **Z-Wave**. Developed in 2001, specifically for use with smart home devices, it enables Z-Wave devices to communicate directly with an app, hub, or smart speaker, without the need for a bridge connected to a Wi-Fi router.

- **Zigbee**. Similar to Bluetooth communication, this operates by allowing apps, hubs, and smart speakers to connect wirelessly to Zigbee-enabled devices.

Selecting Devices

Smart home technology is undoubtedly a growth industry, and there are an increasing number of options for each area of smart home devices. When choosing devices, areas to look at include:

- **Cost**. This can often be a determining factor for any purchase, but look for the most cost-effective option in terms of balancing price, quality, and functionality.

- **Functionality**. Work out what you want a smart home device to do, and then look for one that matches these requirements, rather than buying a device and trying to make the most of the available options.

- **Reviews**. Look at the online reviews for items in which you are interested. However, do not base your choice just on this, and make sure that you look at a range of reviews, preferably on different sites.

There are also some specific considerations that should be looked at:

- If you are using smart lighting, ensure that you buy bulbs with the correct fittings for your home lights – i.e. a screw fitting or a bayonet fitting.

- If you are using a smart thermostat to control your heating, ensure that it is compatible with the type of boiler that you have. Smart thermostats are now being designed to work with a wide range of models of boilers on the market, but it is always best to check, particularly if you have an older model of boiler.