

greenhse Technologies

SMART HOMES MADE SIMPLE - What you need to know:

To make your home SMART or SMART Ready, you only need 2 things:

1. A good WiFi system.
2. Neutral wires to your switches. There are solutions for homes without Neutral wires, although with Neutral wires, the costs are lower, switches are more stable and options are simpler.

WHAT IS A GOOD WIFI SYSTEM?

A good WiFi system is one which will give you good WiFi coverage throughout your entire home and even outside areas where Smart products may be needed.
It also needs to be quick and allow sufficient devices to be connected. This will prevent the slow functioning of Smart devices and, even more importantly, prevent them from disconnecting and not functioning at all.

A standard home Router is NOT designed to manage a Smart Home. The signal will not be strong, and generally the maximum number of 2.4GHz devices it can connect to will be 12. In addition, it does not manage the signal optimally between devices but will divide the bandwidth 12 times and be extremely slow.

There are many devices available, I can only recommend what works the best from experience, and this is the UBIQUITI range. UBIQUITI U6-LR is a single device that can control a complete home. I use one carefully positioned device to control a double-storey home inside and outside. However, a second Ubiquiti or even a simple WiFi booster can assist in ensuring stronger signals for larger homes or areas further from the Extender.

These devices are designed to be positioned under the ceiling, centrally in a home, and connect to the Router with a data cable using POE (power over ethernet). This data cable must be allowed for when building a new home, or multiple data points for larger or double-storey homes.
When installing a WiFi Extender, it is important to select separate 2.4Ghz and 5GHz networks and passwords that can be remembered correctly. If you choose the same name and password as your original Router, once the WiFi Extender is connected to the data cable, disable the WiFi on the original Router. All your devices will continue to work without resetting them and will work better.

SELECTING THE SMART PLATFORM:

Many suppliers will propose various systems with exorbitant costs and, even worse, discontinued or outdated systems that will not be supported in the future. In fact, it's quite simple and not expensive. There are several proprietary systems on the market, even from good companies, but this does not necessarily make them the best solution. The three leading platforms are Amazon, Alexa, Google Home, and Apple Home Kit. These integrate with most Smart products; however, Tuya has become the leader and will completely dominate the Smart market moving forward.

The factory App, “Tuya” or “Smart Life,” is free. What makes this the most extensive Smart system in the world is that Tuya manufactures the Smart chips in bulk and supplies these to any manufacturing company with the IP and instructions. This ensures the best Smart system in the world and the most competitive. Other companies cannot compete and will likely close, resulting in discontinued systems and no ongoing support. Many companies will be selling Tuya under their own name and all of these will work together on one App.

Once you decide to use the Tuya or Smart Life System -

SELECTING THE PRODUCT:

Buying Tuya products, however, does not guarantee that the product quality is good. It is just as important to purchase good quality products from reputable companies with good warranties and backup which comply with all Australian Electrical certification standards. Many products that use Tuya Chips and promise Smart functions, need to be compared as there will be important distinctions.

Smart Systems use either WiFi, Bluetooth, or Zigbee

1. **WiFi** is the cheapest and will connect directly to your home or office Router.
2. **Bluetooth** is the quickest and most stable, working directly with your device, but it requires a Gateway to link it to the Router.
3. **Zigbee** is the most expensive and uses the least power consumption, making it suitable for small devices running from batteries.

Tuya works with all three systems, all can be linked and work together to create the most optimal solution with the widest range of products. Most **Greenhse products** will have a combination of WiFi and Bluetooth to assist with stability and ease of installation.



POPULAR SMART PRODUCTS

SMART LIGHTING: The most useful Smart product for a home, in my opinion, would be lighting.
Smart lights have many advantages:

- The light can turn on and off by voice or App and even be set to a schedule.
- The brightness level can be selected from 1-100%, ensuring comfortable and practical lighting levels as well as energy saving when lower levels are selected.
- Full-colour options are also available, with blue light settings suitable in Home theatres, colour-changing with music to enliven any home function or to appeal to teenagers’ individuality.



SMART SWITCHES:

•Although Smart lights can be turned on and off with the App, there is always a possibility that the wall switch gets turned off.

•Smart switches can work well with normal and Smart lighting, enabling them to be turned on and off from anywhere in the world and for schedules to be set.

•Smart switches can save a lot of construction costs since complicated communication wiring is no longer required to be planned and placed while building a home. Smart switches can be linked together in numerous combinations such as 2-way, 3-way or more.

- Smart switches can be added with no load wires as 2-way or 3-way switches as mentioned above, as well as to connect to remote Smart receivers, strip lighting, garden lights, or Smart plugs connected to table lamps, various devices and even the Christmas tree.
- Multiple timers and schedules can be set for any required switch, making the connected item Smart.
- Motion Sensors, IP Cameras, Contact Sensors, Temperature Sensors and more can all be connected to a Smart switch. When someone visits your home your Smart doorbell camera can turn on the porch lights, garden lights and even an inside table light.
- When you leave your home, all switches can automatically turn off, with one or two specific lights remaining on if required.
- When arriving home, specific lights can automatically switch on and be set to the required level (if Smart).

SMART SOCKETS:

- Two Smart WiFi sockets can be placed next to each other on a double GPO and, if required, Smart modules can even be built into a GPO during construction.
- Smart plugs can be turned on and off with the App or a linked Smart switch.
- Multiple timers and schedules can be set.
- They can be turned on or off by Smart products such as a Smart Switch, IP Cameras, PIR sensors, contact sensors, smoke alarms and more.
- With 2.5 Amps and optional relay switches, hot water systems, aircon, heat pumps, pool pumps, bore pumps and numerous devices can be controlled.
- When set to function during day-time hours while Solar production provides no-cost electricity, this can lead to very large energy cost savings.

REMOTE OR IN-CEILING SMART MODULES:

- Any standard lighting system with single wired switches can be converted to Smart.
- Most old homes have single wired switches with no neutral wires. This prevents stable Smart switches from being used, which require a neutral feed. The remote devices get connected to the ceiling or at the device source where neutral wires exist.
- Smart modules will enable remote switching, dimming and scheduling.
- They can also have wireless Kinetic switches linked to them and placed conveniently where required.

KINETIC SWITCHES:



- Kinectic Switches require no connected wires or even batteries.
- They connect directly to Modules or Smart Modules placed near the lights or device to be controlled.
- Available in 1, 2 & 3 gangs; they are attractive, strong, neat, and completely waterproof, IP67.
- These switches can connect to various different control modules;

    i. 1000W Receiver
    ii. Dual 1200W Receiver (600W x 2)
    iii. Dimmer 100W Receiver
    iv. Smart 600W Receiver
    v. Smart Dimmer 100W Receiver

- Depending on the receiver Module selected, Kinetic switches can turn devices on and off, do dimming and even Smart control.
- With no wiring required, huge construction cost savings are possible, but more importantly, you have complete flexibility and no limitations. Switches can be added as and where required
- 2-way and 3-way switching works well with this system. Multiple switches can link to one Perfect for bed-side tables and island benches
- Suitable for outdoor areas
- Even suitable for wheelchairs and special requirements.

ZIGBEE - SMART DEVICES:

Zigbee devices use the lowest power consumption of WiFi, Bluetooth and Zigbee, making them suitable for batteries, with running times up to 2 years on a small button battery. Devices with batteries make installation very easy and extremely flexible.

Before installing Zigbee devices, a Zigbee Gateway needs to be installed. This will act as a bridge between your WiFi system and all Zigbee devices. The Zigbee Gateway must be connected to the Router with a data cable and connected using the App and 2.4GHz network. Once the Gateway is connected, select the Gateway on the App and push “Add device.” The devices must be put in pairing mode as indicated on the App and then added.

- Contact sensors - are very small, attractive, and can be placed on doors, windows or any opening system as security, or as a device to activate lights and other Smart products.
- PIR sensors - can be easily and conveniently placed inconspicuously in rooms, hallways and areas requiring automated lighting. Two or more sensors can also be added to switch the same lights ensuring stable and reliable functioning.

- **Temperature sensors** - can be useful for sending warnings and turning on fans or other devices. Placed in a fridge, warnings can be sent if temperatures exceed 6° or in rooms to set air conditioning levels. Even in a fish tank to monitor water temperatures remotely.
- **Smoke alarms** - not only will they emit loud warning signals but timely messages to your phone, and even the option to turn off devices. N.B. These do not replace the standard home smoke alarm but can be used in ancillary areas such as garages, sheds etc.
- **Water sensors** - any over-level or water spillage can be activate alarms and messages.





• WIFI CAMERAS & DOORBELLS:

WiFi Cameras are very easy to install, as they only require USB power supply, or can be connected to mini solar panels if outdoors and/or run on batteries.

WiFi Cameras are extremely useful for recording visitors coming to your home as pictures are saved to the App message centre. Notifications can also be sent to your Smartphone, as well as an option for Smart functions such as turning on lights or an alarm.

WiFi Cameras and doorbells have 2-way voice options, and some have

human detection and adjustable sensor areas, ensuring only required pictures and notifications are received.
The Doorbell cameras also have linked chimes, which are placed inside and will ring on your mobile device. These can turn on the front wall or porch, or garden lights if motion is detected.

WiFi GARAGE DOOR OPENER:
The device is extremely useful as it notifies you if your garage door is left open by mistake. Often we leave our homes and are unsure whether we have closed the door or, even worse, if the door has hit an obstruction and opened up without our knowledge.
The door can be opened and closed remotely, allowing you to open it if you are not at home. It is combined with a WiFi Camera, giving you great options and peace of mind.

WIFI SENSOR & SENSOR LIGHTS:
A WiFi sensor can adjust various controls and settings on a Smart device. The Smart WiFi sensor combined with lights has the additional option of controlling the brightness of the lights and even the colour temperature.

WiFi sensors give all the advantages of a good quality sensor with up to 19 meters range and 90° coverage and cost-saving options such as connecting to other Smart devices without any additional wiring. (Only live and neutral power feeds are required).

When paired with a Smart switch or even a Smart plug, a number of useful functions are available, such as on and off switching, scheduling, and notifications.

WIFI WATER SWITCHES:
These can be easily & reliably set to ensure correct watering days and times. Soil and temperature sensor also monitors and will times and days where required to ensure ideal watering without waste.





