Smart Home Devices Bring Independence

Smart devices and smart homes are revolutionizing our way of life. They are universally designed for all users and possess assistive technology (AT) and accessibility features that may be beneficial if you have a disability.

Smart devices are electronic gadgets such as phones and watches that can connect, share, and interact with you and other smart devices. Smart homes are dwellings that are equipped with smart devices for the home (i.e., smart home devices) such as appliances, lighting, entertainment systems, and security cameras that you can automate and/or control remotely from any room in the house or location in the world via phone or Internet.

Smart home devices may be helpful if you have a disability. You can use them to automate tasks or perform tasks that you usually cannot or have difficulty doing. If you are blind, you can operate them by voice control. If you have a mobility disability, you can operate them with your fingers without having to move. If you are deaf, they have visual cues to help you operate them. This guide will highlight some smart home devices and the apps you use to control them from other smart devices such as phones or tablets. These devices may help increase your independence and enable you to gain greater control over your home.

Thermostats

Like other thermostats, smart thermostats automatically respond to temperature changes by activating your home's heating or cooling system to maintain the desired temperature in your house. However, they differ in that they allow you to control your home's temperature using an app. Using one of these thermostats may make it easier to manage your home's temperature if it is difficult or impossible for you to reach or operate a traditional thermostat's controls or view its interface to read its settings.

There are many smart thermostats on the market. One model is the Honeywell Wi-Fi 7-Day Programmable Thermostat (Model RTH6580WF). You use the Total Connect Comfort app to control it. Key features allow you to:

- Find out what the indoor and outdoor temperatures and humidity levels are;
- Adjust the temperature remotely;
- Receive alerts (e.g., when the temperature or humidity is too high or too low) and reminders (e.g., when it is time to change the furnace filter);
- Use preprogrammed voice commands to make thermostat adjustments—say "Hello thermostat" into your smartphone, and your thermostat will be ready to start taking your voice commands; and
- Schedule what you want the temperature to be and for how long you want that temperature to be maintained throughout the day.

Another smart thermostat with more bells and whistles is the Nest Learning Thermostat. This thermostat, which is powered by your heating and cooling system and features a built-in rechargeable battery, learns your preferences and studies the inner workings of your house within a few days and then programs itself to respond accordingly. You use the Nest app to control it. If you are blind or visually impaired, you can use your smartphone's built-in screen reader (i.e., iPhone's VoiceOver or Android's TalkBack) to hear what the temperature is and make adjustments independently. Key features enable you to:

Nest Learning Thermostat

- Get automated, preferred temperature settings. For example, if you make a habit of turning the temperature down before going to bed and turning it back up in the morning, Nest will take note of that and program itself to do it for you automatically.
- Save energy. The Nest Thermostat uses its activity sensors (which have a 150-degree wide-angle view) and your phone's location to check if you've left the house. If so, Nest will automatically set itself to the Eco Temperature (the predetermined temperature you set to help you save energy).
- Manage your humidifier or dehumidifier.
- Receive safety alerts. If your AC breaks or your furnace starts acting up, Nest will notify you right away. It will also remind you to change your filters regularly to prevent clogging.

Smoke and Carbon Monoxide Alarms

A smoke alarm warns you of potential fires, and a carbon monoxide (CO) alarm alerts you when it detects traces of this odorless and colorless, but highly toxic, gas. Since typically most of these alarms alert you with shrill, piercing rings, you may not find traditional smoke and CO alarms

helpful if you are deaf or hard of hearing. Smart alarms, on the other hand, not only alert you to the presence of smoke and/or CO, but they do so through audible and visual cues.

Halo+

One such example is Halo+, a smart smoke and CO alarm that lets you know exactly what and where the danger is located in your home. If Halo+ detects CO or a fast- or slow-burning fire, a voice alert will instantly tell you what's wrong (e.g., "Danger, smoke detected in the bedroom")—a helpful feature if you are blind or visually impaired. Halo+ will also illuminate a ring of light and send you the same alert message via your smartphone, a helpful feature if you are deaf or hard of hearing. You use the Halo+ app to control it. Key features allow you to:

- Get alerts. Know if smoke or CO has been detected, even when you are not at home.
- Run alarm tests so you can ensure the alarm is functioning properly.
- Receive notifications for extreme weather conditions. As an added emergency preparedness feature, the device informs you of impending tornadoes, floods, and hurricanes.

Halo+ is AC-powered and has a 10-year backup lithium ion battery. It is also equipped with six different sensors—photoelectric, ionization, CO, temperature, humidity, and barometric pressure—to reduce the likelihood of false alarms.

Another option is the Nest Protect (Wired 120V), a multi-sensor smoke and CO alarm. This device alerts you with audible alarms and verbal cues (helpful indicators if you are blind or visually impaired) and with color-coded lights (helpful signals if you are deaf or hard of hearing). You use the Nest app to control it. With this device, you can:

- Get notifications on your smartphone when the alarm goes off or the batteries run low; and
- Get verbal indicators when there's smoke or CO and where the problem is so you know what to do.

Nest Protect not only specifies what it is detecting and the severity of the situation, but it also pinpoints which room in the house it is detecting the danger from. For example, let's say you accidentally burned your toast in the kitchen. Nest Protect will sense a little smoke, glow yellow, and relay the situation to you in a calm voice so that you can go and check it out: "Heads-up. There's smoke in the kitchen." Once you have dealt with the situation and made sure that everything is as it should be, you may silence the alarm directly from the Nest app.

Door Locks

If you have limited hand dexterity or strength, maneuvering a key to unlock your door may be a difficult, cumbersome task. But what if there was a way to unlock your door without using a traditional key? Smart door locks make this possible by taking the traditional key out of the equation and replacing it with a smartphone.

One example of a smart door lock is the Yale Real Living® Assure Lock® with Bluetooth® (YRD446). This keyless door lock features a touchscreen keypad with backlit numbers. Mount the Yale Assure Lock on your door with the provided screws in place of your existing deadbolt. You use the Yale Assure app to control it. Key features enable you to:

- Lock and unlock your home with a twist of your smartphone. Rotate your smartphone 90 degrees to wake up the Yale Assure Lock. Then tap the checkmark that appears on the keypad to unlock the lock. This Twist & Go technology is designed to prevent unwarranted or unintended access.
- Customize lock settings and pin codes. If you stepped out without your smartphone, you can enter in your unique 4- to 8-digit pin code on the touchscreen keypad and the Yale Assure Lock will unlock for you.
- Share digital keys with family and friends. Grant your family and friends access to your home by giving them a uniquely created pin code. The lock can store up to 12 different pin codes that can be created and removed via the Yale Assure app.
- View access history. See who had access to your home and when through the Yale Assure app.

The August Smart Lock is another option. This smart lock turns your smartphone into a smart key by allowing you to unlock your front door keylessly and codelessly. You use the August Home app to control it. This may be a very useful tool if you have no use of your hands or limited manual dexterity or strength because it does not require you to operate any small, handheld objects such as keys. Installing the August Smart Lock will replace the interior portion of your deadbolt, not your door's exterior hardware, so if you need to you can still use your traditional key to lock/unlock your door.

August Smart Lock

When you approach your front door, the August Smart Lock will detect your smartphone and automatically unlock for a hands-free entry. It will auto-lock once you shut the door behind you. Other key features allow you to:

- Create virtual keys for guests. You can instantly create and send a virtual key to anyone from anywhere, and you will have complete control over when and for how long he or she has the virtual key.
- Receive notifications whenever a guest enters or leaves your house.
- Keep track of who entered and exited your home and when through the app's 24/7 activity log.

Doorbells

Similar to traditional doorbells, smart doorbells let you know when someone is at the door. But unlike traditional doorbells, smart doorbells allow you to see who the visitor is and talk to him/her remotely using apps. If you have a mobility disability or have difficulty getting up from your chair, seeing and speaking with whoever is at the door before venturing toward it may be a helpful advantage.

One example of a smart doorbell is the Zmodo Greet Wi-Fi Video Doorbell. You use the Zmodo app to control it. Key features enable you to:

- See and speak to visitors directly from your smartphone;
- Receive an alert and a recorded video clip whenever motion is detected by the doorbell's motion sensor;
- Play a personalized recorded voice message for visitors whenever you are not at home and/or do not want to communicate directly with them; and
- Access a 720 pixel-resolution high-definition (HD) live video feed at any time from your smartphone (possible through the camera's built-in night vision).

Zmodo Greet Wi-Fi Video Doorbell

Another option is the Ring Video Doorbell Pro. You use the Ring app to control it. You can:

- Get video on demand with live view. See who's at your door at any time with Ring's 1,080 pixel-resolution HD video, which has a 160-degree field of view.
- Receive instant alerts whenever a visitor presses your doorbell.
- Block out background noise. Its two-way audio with noise cancellation blocks out background noise (e.g., traffic) for clearer sound.
- Automatically record footage (even in dim lighting through infrared night vision) and receive alerts whenever the built-in motion sensors are triggered.

Light Bulbs

Smart light bulbs allow you to control and adjust your lights through an app. This may be particularly helpful if you have a mobility disability and find it difficult to move toward the light

switch or limited range of motion in your arms and/or shoulders or an upper- and/or lower-extremity disability that make it difficult or prevents you from reaching the light switch. Here are a few smart light bulbs that might help you light up your home.

The ilumi A19 Standard LED Smart Light Bulb is one such bulb. This smart bulb can be screwed into any standard socket like a regular light bulb, but that is where the similarities end. You use the ilumi app to control it. Key features allow you to:

ilumi A19 Standard LED Smart Light Bulb

- Turn your lights on or off. You can schedule your lights to turn on and off when and how you want.
- Set your preferred light color and brightness. Select from 16 million different colors or 65,000 shades of warm to cool white light. ilumi will remember your selections so you do not have to program them in each time you turn your lights on.
- Turn your lights on and off hands-free as you move from room to room. When the ilumi light bulb detects that your device (e.g., your smartphone) is in range, it will turn on automatically and remain on until you leave the room/designated area. To access this feature, you first need to turn on the app's "Torch" setting and have multiple ilumi light bulbs dispersed throughout your home.
- Pulse your light to the beat of the music. Sync ilumi to one of the downloaded playlists on your device and select how bright you want the ilumi smart bulbs to pulse while the music is playing.
- Discourage unwanted visitors with lighting that changes while you are away. To access this feature, you must first turn on "Vacation Mode" in the app.
- Control up to 50 light bulbs at a time (in groups or individually) from as far as 150 feet away.

Another option is the LIFX Color 1000, a Wi-Fi-enabled LED light bulb that allows you to control your lights and select your preferred shade and brightness. You use the LIFX app to control it. With this product, you can:

- Control your lights remotely. If you have an Internet connection, you have the ability to turn your lights on or off.
- Customize the room's lighting to reflect your mood or match the room's decor. Select from 16 million different colors and 1,000 shades of warm to cool white light. Tap the "Colors" or "Whites" icon, select your preferred shade from the color wheel, and then

adjust the light's brightness using the dial located at the center of the wheel. You may also use this dial to turn the light on or off.

- Wake up with gradually increasing light that mimics the sun. Create and save a scene by selecting the color and brightness you want to wake up to. Then set the schedule by specifying the time you want the bulb to turn on (e.g., 6:30 am), the days you would like to repeat the schedule (e.g., Monday through Friday), and how long it takes for the light bulb to reach its set shade/brightness (e.g., 15 minutes). With these settings programmed in, you can wake up to gradually increasing light over a 15-minute interval every weekday. You may also set a recurring schedule for your lights to fade out naturally every night as well.

Smart Plugs

Belkin WeMo® Insight Smart Plug

Plugs have also been smartly revolutionized, allowing you to control any compatible device that has been plugged into the smart plug through an app. This grants you greater control and connectivity to a wider selection of products. By using a smart plug's app, you can turn products on or off from wherever you are, which may be particularly useful if you have a mobility disability.

The WeMo® Insight Smart Plug is one such example. To use, plug this smart plug into an electrical outlet and connect it to your home's Wi-Fi. You use the WeMo app to control devices plugged into it. Key features allow you to:

- Turn your devices on or off remotely. Wirelessly control/check on your devices through the app.
- Monitor your device energy consumption and costs. You can access real-time reports on how much energy the plugged-in device is consuming and how much that consumption is costing you.
- Put your devices on a schedule. WeMo lets you program your plugged-in device (e.g., lamp, fan, space heater) to turn on automatically at a set time.
- If you activate the app's "Away Mode," the smart plug will turn plugged-in lights on and off randomly to make it appear as if you are home when you are not.

The Zuli Smartplug is another smart plug. It uses Bluetooth technology instead of Wi-Fi. You use the Zuli app to control devices plugged into it. Its features are similar to the WeMo® Insight Smart Plug.

For More Information

Contact us at AbleData for information on these and other AT products to "smarten up" your home.

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