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# Home Automation for Smart Home Solutions

Peace of mind, energy savings, and simplified daily activities are great reasons for including automation and smart products in your home.

Like any system, home automation is available on a variety of levels—from the simple to the complex, the ready-to-install to the professionally configured, the inexpensive to the extravagant. The key to selecting the right approach to home automation is to understand what you want it to do, how it can be wired, and how much you can spend.

## Creating a Home Automation Plan

Designing and implementing a home automation system should follow the same steps as almost any home remodel. In order to meet home automation needs, a designer will need to know a little bit about the home and how family members live and function within it. The needs and lifestyles of the family members then drive the design and function of the system, just as they would with any new space. Take the time before you shop to assess your needs and priorities, what you must have, and what you can give up.



An automated home can create scenes that control lighting, security, path finding, thermostats, sprinklers, entertainment, and more.

## Safety and Security

Start with safety and security needs. Integrating a security system with the home's other features can make a home safer and more secure from fire or break-ins. Ken Fairbanks, Vice President of Sales and Business Development at SmartLabs, the company that oversees the production of INSTEON home-automation products, describes a fully automated scenario where the smoke detector does its job and sounds the alarm, the lighting system jumps to life and goes into a pre-set "fire" mode, and emergency lights illuminate a pathway from the home's bedrooms to the nearest escape point. "By tying the lighting system to the smoke alarm and creating a fire scene, homeowners enhance the safety and security of the home," Fairbanks says.

## Efficiency and Conservation

Also look at how home automation can lower the home's utility bills. As a first step, thermostats can be programmed to talk to motorized blinds and fans, initiating them as the interior temperature rises—a far less costly solution than running the air conditioning. "Gas and electric bills are increasing, and utilities are all heading north on the price side of things," says Mike Einstein, a spokesperson for the Z-Wave Alliance, a growing group of companies developing wirelessly controlled home-automation products and systems.

"Controls that conserve energy will be of greater and greater interest in the home," he says. Water conservation is foremost on the minds of homeowners living in drought-threatened areas of the country. Special automated wind and rain sensors can communicate with the sprinkler system, turning it off when it's not needed or when conditions are poor. "Most homeowners just don't know what is possible, and how easy it is to include these devices and systems in the home," Fairbanks says.

### **Convenience and Entertainment**

Home automation can also make life easier and more enjoyable. You can pre-set the "movie mode" on your remote to dim lights for movie watching or light focal areas for parties and gatherings. The setting of these scenes or "macros" is just one of the ways in which home automation makes our lives easier. Time-activated nighttime scenes can automatically adjust the thermostat, turn off interior or exterior lights, and set the security system.

As more companies look to manufacture products that can integrate with an automated home, the homeowner is given more control and options. X10, the leader in Power Line Carrier (PLC)-enabled home-automation products already has products in more than five million U.S. homes, spanning security, lighting, HVAC, entertainment, and media. "Our wireless extenders allow users to wirelessly connect their iPods or MP3 players to their home stereo system, and our Lola system allows them to wirelessly access all the songs on their PC through the home stereo system and TV," says David Rye, Senior Vice President at X10.

### **Automation Options for Every Home**

New construction options make home automation simple through structured, or bundled, wiring solutions that bring full media, entertainment, and home-control communication to every room of the house. Retrofitting an existing home to become automated can be as easy as plugging modules into outlets or replacing light switches with automated dimmers and switches. There are home automation devices—Powerline Carrier or PLC devices—that use the existing electrical wires in the home to communicate. Plug-in devices use wireless radio frequency (RF) technology to communicate and activate automated appliances.

From the professional installation to the DIY project, home automation can be brought into the home in a variety of ways, depending on budget and desired outcome. Whole-home structured wiring solutions sit on the high end of the price scale, but many companies sell plug-in starter kits for under \$100. These kits usually include a control device or remote and plug-in modules that connect lamps and lighting systems. "Homeowners can start small and take on one project at a time," Fairbanks says. "Maybe a desktop controller to turn on all the exterior lights when there's a noise outside, some sort of piece-of-mind application. From there the system can be added to and grown."

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