

guides

electronic
HOUSE

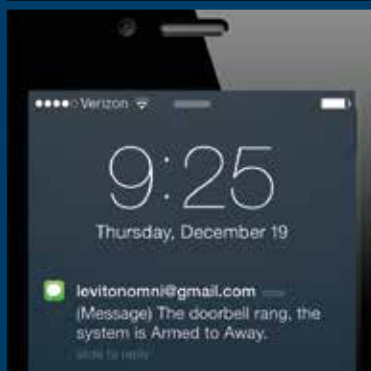
FOCUS SERIES

THE CUSTOM HOME AUTOMATION DIFFERENCE

UNDERSTAND HOW YOU CAN
MOVE BEYOND CONNECTED DEVICES
TO A CONNECTED HOME

- Top Reasons to Get a Home Automation System
- The Pros and Cons of Home Automation Apps
- Most Important Features of a Home Automation System
- Tips on How to Get Started
- Inside a Fully-Customized Home

Presented by **LEVITON**





Top Reasons for **CUSTOM HOME AUTOMATION**

AUTOMATION USED TO CONJURE thoughts of a house gone wild, where technology ruled the roost and the décor resembled a science lab. Fortunately, this stereotype has been shattered, thanks to improvements in the technology and consumers' growing affinity for home electronics. The bottom line is, automation can add real value to your home, and it's a fairly simple process to have a system installed.

Home automation is also no longer a frivolous luxury for people who simply like to show off their wealth. Smartly designed and installed home automation systems are an enhancement that any family can appreciate and come to depend on. Just as conveniences like central air or broadband were once rare, home automation too is now accessible and practical for many more people. In fact, some of the top reasons for home automation are far from the show-off extravagances some people envision. Investing in professional home automation is something every responsible homeowner should consider.

1 Automation Boosts Efficiency | A comprehensive automation and control system can enhance the efficiency not only of the electronic systems of your house, but of the members of your household, too. Because an automation system is able to control multiple devices, you can with one touch of a button set back the thermostats and turn off the lights, for example. You'll get out of the house faster and save electricity. You'll worry less that you may have left a window open, because you can check your system (on your smartphone) to confirm it. If you've left your pet alone in the house, you can view it with your networked cameras. If you need to be away while a service person pays a visit, you can remotely unlock the front door, saving you the hassle of skipping a day from work.

2 Automation is Convenient | You'll be able to monitor and manage all types of electronic devices (lights, thermostats, A/V equipment, motorized shades, security system, etc.) from the screen of a smartphone or tablet. The convenience alone is enough to inspire many people to automate.



3 Automation Delivers Comfort | Through its ability to actively monitor and manage various electronic elements, an automation system ensures maximum comfort. The entire environment—from the setting of the lights and thermostats, to the activation of music—is at your command.

4 Automation Provides Peace of Mind | A home automation system helps prevent potentially bad things from happening by enabling you to monitor parts of your house conveniently from tablets, smartphones, and other devices. You can check up on the house even when you're miles away. If a break-in attempt or water leak happens, you'll be alerted before it's too late.

5 Automation Saves Energy | A lot of a home's energy use is wasted because we don't take the time to make the small daily adjustments needed to maximize it. An automation system can automatically adjust the thermostat based on the time of day, where you are and what you're doing. It can also open and close shades to take advantage of daylight. It can adjust a home's lights to reduce electricity use while still providing necessary illumination. All of those benefits can be programmed into the system by the installer, so you don't have to worry about it.

AUTOMATION IS MORE THAN AN APP

THE RISE IN SMART HOME SYSTEMS and devices connected by the Internet of Things has been dramatic. A few products have helped spark interest in the category, in particular devices like the Nest thermostat and Dropcam security camera. These products have increased awareness in home automation. Their ability to integrate a good piece of hardware with an easy-to-use app has shown people that home automation is within everyone's reach. However, most of these devices, and the simple do-it-yourself systems that are also hitting the market these days, don't offer the complete integration that a true custom home automation system does.

Home automation is more than the ability to tap an app on a smartphone to turn on a light. That's a nice feature, to be sure, but it's only the beginning of what a real system can do. Most of the simple, off-the-shelf devices fall more into the category of cloud control than home automation.

The first thing to understand is that while many of the new smart devices are effective and fun to use, they're not an integrated system. A smart thermostat on its own is still just a thermostat. It may let you adjust the temperature from your iPhone, but it doesn't know that you left your window shades open or that the security system is disarmed.

Another issue that some consumers face when they start adding multiple Internet of Things devices to their homes is that pretty soon they've got a phone or tablet filled with individual apps, each one capable of interacting with only one device. That's the smartphone equivalent of having a basket full of remotes to run your home's audio/video system.

As appealing as it sounds to simply use an app to control the lights, another for the thermostat, and an app to operate the audio system, it's far from being a perfect solution. For starters, it can be rather inefficient and awkward, requiring a user to launch one app to control a certain device, back out of that app then launch another app to control something else, and so on. Also, because each app was designed by a different manufacturer, you'll be dealing with inconsistencies in the layout and look of the individual control menus and icons.



A fully programmed custom home automation system is integrated in several ways. First, all the electronic systems in your house (heating and air conditioning, security, lighting, music distribution) can all be connected and powered by one central processor. The automation system knows the status of your home and how each system fits into the whole. With very simple interaction, you can be assured that all your home's subsystems are performing their tasks and responding to each other. The thing that makes a

smart home smart isn't that you can turn on lights or operate your music through an app, it's that the home system is 100 percent integrated, personalized and intuitive.

Just as a well-designed home automation system is fully integrated, so is the control interface for that system. That interface—the devices you use to access the system—can be any combination of smartphone apps, keypads, touchpanels and handheld remotes. A fully thought-out system offers multiple ways to interact with it, not just one. For example, your smartphone may be the perfect device for shutting off all the house lights when you're settled down in bed, but when you walk into the kitchen it may be easier to tap a wall-mounted keypad or touchpanel rather than reach into your pocket for your phone. Good systems don't make you rely on only one form of control. They're tailored to your needs, rather than the other way around.

Further, an integrated system will use an integrated interface on your smartphone or tablet, so you're not opening and closing different apps to interact with your house. One main benefit of a consistent user interface is that all the controls look similar so you only have to learn one method and one set of menus.





The Most Important Features of a Home Automation System

THE MOST IMPORTANT ASPECTS of a home automation system is that it works, fits your budget and that you use it. There are many options in home automation these days, from systems designed to run large estates to entry-level systems appropriate for apartments or small condos. Some emphasize entertainment, some are better at lighting and some focus more on security.

With all that said, picking the one that's best for you may seem like a difficult task. With each system, there are differences in communication protocols, user interfaces, installation methods, costs, personalization, not to mention customer support networks. But whatever the system, there are several features you should look for:

1 Intuitive and Comprehensive Interface | Most custom home automation systems use a variety of devices or tools for operating them. The most common interface today is a smartphone or tablet (most systems use both iOS and Android). Insist on an interface that groups all the system's functions into one app, rather than a collection of separate apps. Further, you'll probably want alternate ways to interact with your system. Sometimes a keypad or permanently installed touchpanel is more convenient than an app, especially if you don't carry your iPad around with you at all times. The interface should also be intuitive so that once your integrator shows you how it works, you don't need to refer to a manual to operate it.

2 Reliable Operation | While this should go without saying, you want your system to be reliable. Many of the do-it-yourself systems rely on cloud servers and the Internet. If the Internet goes down, they stop working. Custom-designed home automation systems are more secure and reliable, which is something you and your family will depend on.

3 Scalable Design | Often people begin with a few rooms or a few subsystems, but may later decide to expand with more home automation. Select a system that's scalable to your needs now, and your anticipated needs in the future. What happens if you add a room to your home? Make sure the system can be expanded easily and with minimal downtime or disruption.

4 Secure from Hackers | If you're not an expert at network architecture or wireless security, then you might want to think carefully before you put your home's locks and surveillance cameras under the watchful eye of a distant cloud sever. That's what a lot of the off-the-shelf DIY systems do, and there have been several publicized instances of those systems being easily hacked. Having a pro install and program your system means that not only do you get the peace of mind from having technology that works, you know that it's secure.



Where Do You Start?



NOW THAT YOU'RE INTERESTED and thinking about the possibilities, where do you begin? Visiting or talking to a local CE pro is a great start. From a CE pro you can learn more about the specific options available and discuss what might be possible to achieve given your specific budget.

Think about the tasks you do around your house every day—managing your lights and thermostats, enjoying music and video, keeping track of your family, entertaining indoors and out—and imagine which tasks might be made more efficient with the help of a home automation system. Also think about how you would like to connect to the system—are you a smartphone or tablet junkie, or would you prefer to use an in-wall keypad or touchpanel that's in the same place every time you need it?

Have your integrator show you some options (some integrators use their own homes for client demonstrations, which is really useful to see how these systems actually function in a house) and

explain the process. Find out how the integrator can make your dream house come true.

Keep in mind that having a home automation system can be a little addictive. Once you get used to using it, you may wonder how you lived without it. Many people who begin with basic functionality end up expanding into more rooms or more sub-systems, and that's the beauty of home automation. It's there to make your life easier.



Here are a few examples of ways to get started with home automation:

One Room

If you take the one-room-at-a-time approach, the living room is usually the one you will want to start with. Here you can begin with the lighting system, motorized window shades, music and HVAC, so that the room you spend the most time in is also the room with the most convenience built in.

One or Two Systems

Another way to take small steps is to begin with one or two subsystems, and then add on as you get used to it. For example, it's very common for homeowners to start with a distributed audio system so they can enjoy music all over the house. Once they get accustomed to the smart interface and convenience of the system, they often decide to add more.

Some applications just seem to naturally go together. Here are a few common pairings and why they make sense:

Lighting and Window Shades. You probably knew that a home lighting system can be easily integrated, but did you know that motorized shades and blinds can be integrated too? This combination is perfect because it lets you get the most from your artificial lights as well as the natural light of the sun. Your installer can create different lighting scenes (such as morning, evening, dinner, party, etc.) that can adjust the lights and shades based on your lifestyle.

Lighting and Energy Management. Your home heating and air conditioning systems can work in tandem with your lighting (and window) system to maintain the perfect balance to maximize your home's energy use. Light and temperature settings can be easily programmed to adjust when you go to work, are on vacation or go to bed.

Energy Management and Security. Having your energy and security system synchronized is a smart choice because your security system always knows when you're home. When you set your security system to Away mode, it can automatically adjust your home's thermostat to save you money.





Home Automation Merges Security, Comfort and High-end Entertainment in Louisiana Home

Highlights of this achievable system include security cameras, distributed audio and a custom home theater.

THIS AWARD-WINNING HOME and hunting lodge, surrounded by acres of Louisiana wilderness, was designed by builder Blair Construction and the custom electronics (CE) professionals at Advanced Technologies, Baton Rouge, La.

“Blair Construction had planned to showcase this house in a local Parade of Homes event. And, as with most builders, the electronics budget was not very large,” says Advanced Technologies president Thomas Marino. As such, Marino was given the demanding task of making the moderately priced installation outperform some higher-priced alternatives.

The house-wide Leviton Security & Automation system includes some impressive features, like the ability to feed audio to surround-sound systems, and sensors that activate the lights and other devices.

As one of the most critical parts of a whole-house automation system and home theater, the main control room (this is where the audio/video components and automation processors are housed) of this hunting lodge is an exercise in meticulous attention to detail all the way down to the whole-house surge suppressors and heat conductive floor. All cables are color-coded, trimmed with color-matching Heatshrink, and grouped together with coordinated color-matching Velcro straps. "Future remediation work is made much easier because of this organization," says Marino.

There's also a custom home theater that never fails to wow visitors. A decorative column next to the exposed equipment rack is actually a door that allows Marino to get behind the equipment for upgrades and adjustments. "Building a door in the column actually saved us around \$500," he says. The entrance to the theater is at the rear of the room. Guests can walk in, go into the cove at the back of the room to mix a drink, and take a seat at the bar or in one of the comfortable reclining theater seats.

CONTROL CENTRAL

- OmniPro II controller
- Leviton Lighting Control (HLC) Light Switches
- (3) Omnistat2 Thermostats
- (2) Extended Range Temperature Sensors
- (2) OmniTouch 5.7 Touchscreens
- Custom Engraved House Status Switch
- Scene Switch with Remote
- Snap-Link
- Omni Console
- Leviton Powerline Interface Module
- 8-Relay Module
- (4) Speaker/Microphone Modules
- (2) 16 Zone Hardwire Expanders
- Expansion Enclosure
- Two-Way Voice Module
- (2) Temperature Sensors
- Network Digital Video Recorder



INTEGRATED:

- Motion Detection Video Surveillance
- OnQ Panels and Modules
- Cartel Driveway Probe
- Ocelot controller (IR lighting interface)
- Multi-Room Audio
- 880 Composite Switcher / 630 Audio Switchers
- Via 64 Touchscreen
- Doorbell stations with camera feeds
- Media Center
- Artscreen
- BTX Motorized Drapes
- Theater: Onkyo txsr901, InFocus 7210 Projector, JBL Speakers, Northridge e100, Jamo 626 rear in-ceiling speakers, Velodyne subwoofer.
- Ditec complete home surge protection
- Counterpoise (ring of copper cable connecting all ground rods and AC/pool equipment looped around the house)
- Flexco conductive data center flooring in control room

Because the home's Leviton security system is integrated with the garage home theater, audience members can also use the big screen to access a view of the outdoor area. A Nuvico "Deer Cam" can see 500 feet out into the woods and can be instructed to display the image on the theater screen. Should someone step onto the property, speakers in the theater and the rest of the house broadcast an announcement as notification.

The home theater is located above the garage "because no one is sleeping underneath it," says Marino. This is a good thing, considering the room is very loud, with large speakers and a powerful subwoofer hidden within the room. "We tuned this room precisely, with specs very close to THX standards," says Marino.

At the back of the space is a projector port, behind which sits a JVC DLA-RS40 projector—a model that Marino loves for its value.

"We were going to install a smaller screen, but by putting the projector in the back of the room, we were forced to get a bigger one, which turned out great," says Marino. He chose the massive Vutec Vu-Easy 145-inch projection screen for its high gain and high contrast. "Now, the video is perfectly balanced and looks great on or off," he adds.



Leviton Solutions

Interested in taking the next step towards a professionally installed home automation system? Whether you're looking for security, energy or entertainment systems for your home, Leviton offers these solutions and more.

[Click here to learn more about Leviton Security & Home Automation from their global network of qualified, knowledgeable installers and integrators for residential.](#)

