THE SWITCH E-BOOK

The Home Builder's Guide to Smart Homes

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THE SWITCH E-BOOK

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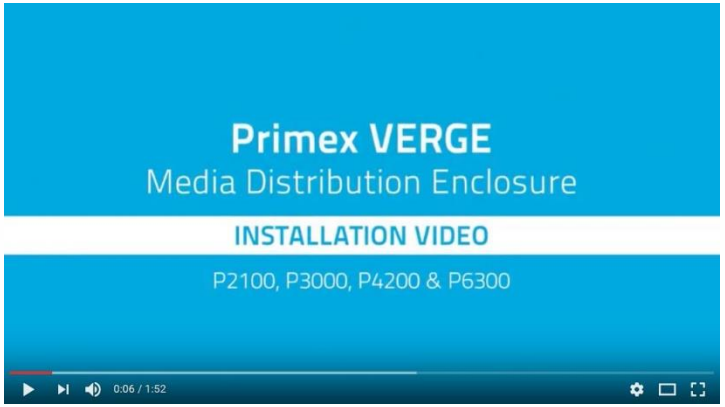

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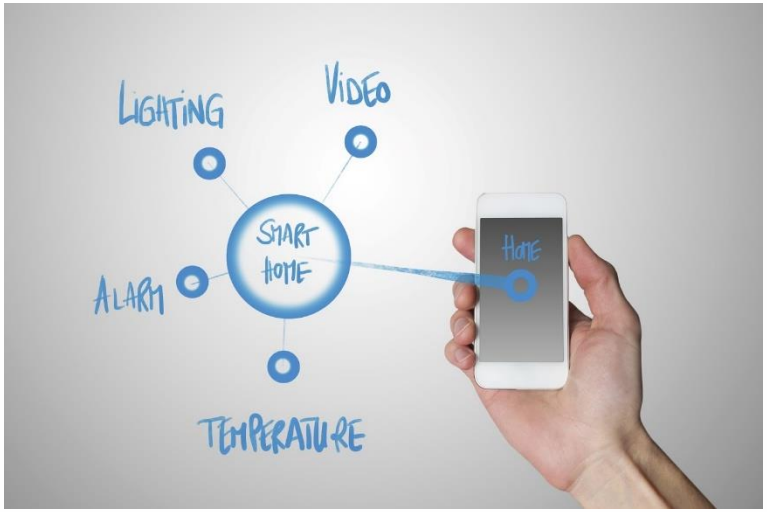
What Home Builders Need to Know About Smart Homes

The term “smart home” has been around for a while now. Initially, it described a residence that was wired throughout and connected to the internet. Now, the word “smart” in smart home implies some kind of remote control, most likely from – take a guess – a smart phone!



For home builders and installers, this is an opportunity to integrate this new feature using enclosures for high speed cabling. This will save you headaches down the road if your client, or homeowner, decides to add the latest smart device. So, keep in mind that all kinds of devices are being marketed with the ability to be controlled with a smart phone.

Lighting

People have used timers on their lights for years especially as a deterrent to burglars. Now, all aspects can be controlled remotely including brightness and even color. What's more, some lighting can detect the presence of occupants in the room reducing energy waste.

Garage door opener

A wireless garage door opener was one of the first remote control devices to enter our homes. Ever misplace the remote or have it in a different car? Not to worry, most of us carry our smart phones at all times and can use them to open garage doors.

HVAC

All aspects of an HVAC system – heating, air conditioning and de-humidifying – can be controlled from a learning smart thermostat. Even if you don't have a whole house air conditioning system, standalone air conditioners and dehumidifiers are now available in smart versions.

Security

Security systems were an early adopter of smart technology. Remote monitoring was a service originally offered over regular phone lines but now connection through high speed data lines has allowed security companies to branch out into all aspects of home security. Integrating door locks as well as fire, smoke and CO2 detectors has been added along with moisture monitoring to detect water leakage. They can even be adapted to include hot tub or swimming pool heating and water quality monitoring.

Kitchen

In its early stages, smart appliances and gadgets for the busiest room in a household are rolling out. Wouldn't it be useful to cook and defrost food remotely? One idea that is taking off is the smart crockpot. This can be left on for hours but a smart feature allows users to adjust the temperature as needed.

Wiring a smart home

Many of these devices can run with just Wi-Fi and a smart phone. The challenge, sometimes, is that there's a lack of consistent and optimal coverage throughout a house.

Hard wiring, along with a smart home hub, is the best option especially if you are dealing with a new build. In this scenario, you have a choice on where to locate the hub and what type of wiring to install. It makes sense while walls are open to put in as much wiring as possible in anticipation of connecting multiple devices in every room of the house, perhaps even the bathroom.

Which category cabling?

With this amount of wiring there is much debate as to what amount of future proofing makes sense. Some installers insist that with its lower price it makes sense to use Cat5e wiring as it can still handle gigabit speeds. It can be used for phones, data, television and media servers. There is also the option of Power Over Ethernet (POE), where the power needed to run something like a wireless access point or camera is supplied as well.

Others say it's worth paying the extra for Cat6, Cat7 and even fiber. One thing for certain is to consider future expansion and get a panel for your hub that is big enough and can handle enough capacity as more parts of the home become connected.

An optimal enclosure would be Wi-Fi transparent to allow the installation of a wireless router. This way it can manage both your wired and wireless networks from a central location. Your ISP modem would provide the internet connection and from there the data can be spread using distribution modules that allow easy access to connections.

Labelling cables at both ends will save time and frustration and general tidiness will make your smart home experience a delight.

How Smart Homes Increase Property Values

Today's home developers know the value of a high-speed broadband connection, and they are using that knowledge in their marketing strategies.

According to a recent study, the North American home seeker not only understands the value of high-speed internet, they are willing to pay for it. This represents a huge opportunity for network providers to work with building owners and operators to install high-speed internet and market its availability to potential buyers and renters.

Who is willing to pay more for broadband?

The study released by the FTTH (Fiber to the Home) Council Americas found that fiber optic network availability increases rental values by 8% and property purchase values by 2.8% in multiple dwelling units (MDUs). In fact, high-speed internet is the single most important amenity for MDU residents, more important than 24-hour security, a balcony, a washer-dryer or cable TV.

The study involved a random sample of 2000 Canadian and American MDU residents. MDU residents use more broadband than residents of single family dwellings. MDU residents are, on average, younger than the typical single family dwelling resident. They are less likely to have children at home, and they are more likely to use streaming services.

How do we know they are willing to pay more?

When asked to choose between identical properties of equal value, with only one offering high-speed broadband internet, the majority of respondents indicated that they would choose the option with high-speed internet.

Respondents were also asked what kind of discount they would require to buy or rent a property that had no high-speed internet. This was based on a condominium with a $300,000.00 purchase price or a $1000.00 monthly rental price. Buyers required an average discount of $8,628 and renters required an average discount of $80/month.

What about the variation in property types?

According to the study, respondents who live in luxury and high-rise buildings are more likely to value high-speed broadband. Residents in newer buildings are also more likely to rate high-speed internet as “very important.”

Fiber and the feel-good factor

Respondents with FTTH networks reported faster speeds, greater satisfaction with their housing and internet service and more likely to recommend their services to others.

This means fiber improves renter satisfaction, which reduces churn in rental properties. Churn is the rate at which customers leave. For the MDU, a reduction in churn means that tenants are not moving out frequently. This saves the building operator time and money.

For purchase properties, this feel-good factor improves the likelihood of word-of-mouth promotion, which has a positive impact on the final sale price.

Marketing FTTH

The study found that broadband availability is only marketed to house seekers about one-third of the time, even in cases where the property features FTTH broadband.

Does this mean building owners and operators are missing an opportunity for increased revenue? The numbers are not available on this yet, but the evidence certainly suggests it may be the case.

Home seekers are clearly including internet availability and quality in their selection process. Make their housing decisions easy by installing a FTTH network and ensuring that they know that the best network possible is available to them.

The aesthetics of the network needs to add value too, or at the very least the network setup should not detract from a building's value. For MDUs, consider using one of these outside plant fiber enclosures for your next installation.

Artificial Intelligence in the Smart Home

Many home owners are using some smart home features and connected entertainment systems housed in a high-quality network enclosure. They may also be among the millions of North Americans who have purchased an artificial intelligence (AI) assistant in the last couple of years. AI technology is in a phase of rapid development, particularly in the smart home sector.

AI, also referred to as machine intelligence, is any technology that attempts to build machines that behave like humans. In the context of the smart home, an AI device provides services based on intelligence gleaned from observing the environment, particularly the behaviors of the people in the home environment.

Most of the current home control systems require programming. The result may seem like machine intelligence, but in fact, it is the result of a user programming commands such as "when cell phone comes in range – set the household temperature to 72 degrees and play the relaxation playlist on the stereo."

In a smart home full of AI capabilities, the household operating system would learn associated behaviors and manage the environment accordingly. For example, imagine your customer has a habit of taking a sweater off a hook before programming a temperature increase. The AI system would learn these paired behaviors and adjust the temperature as your customer reaches for their sweater.

We aren't quite there yet, but the AI assistants on the market today such as Amazon's Alexa and Google's Home respond to voice commands, and they are getting smarter all the time. And with the explosion of these intelligent projects around the world, it's evident that sophisticated smart home AI will be available to your customers soon.

Mark Zuckerberg, the founder of Facebook, spent two years developing Jarvis, an AI assistant that plays music, controls lights and heat and uses facial recognition software to greet visitors at the door. In a post about Jarvis, Zuckerberg describes how the AI assistant selects music based on the person making the request and can respond to open-ended requests like "play me something light."

One AI offering to watch is Josh made by a startup called JSTAR. Josh responds to natural language and can adjust the temperature in the house, play music and movies on the home entertainment system and conduct online research.

Josh is a particularly exciting development since one of the challenges to smart home adoption is interoperability. Josh is programmed to communicate with any smart home device, effectively solving the problem. Josh is in beta testing right now, and JSTAR continues to develop the system with each new installation to ensure that Josh is compatible with all of the smart features already operating in the home

UK's AI Build is developing a small device with built-in cameras that will allow for a 360-degree view of the room. Using a combination of voice commands and gestures, users can teach the system how to help with household tasks. The company is in its infancy now, but the long-term goal is to sell AI Build to the construction industry to have the devices installed as part of the building control system.

Dyson, a British tech company has made an air purifier that connects to an app. The company is working on a system that uses facial and voice recognition to trigger temperature and lighting changes based on who is in the room.

How Smart Home-as-a-Service Acts Like a Digital Butler

As a home developer, you're in charge of installing a homeowner's most important broadband service – internet access. Next thing likely to top their must-have lists is Smart Home-as-a-Service (SHaaS). With SHaaS, the network cabling, connectors and enclosures provide the gateway to managing their lives, so they'll want the very best.

Why SHaaS?

Your customers want devices that operate independently; they want systems capable of using data to make decisions about how to best run the home. The way smart homes currently operate is simply not smart enough! The smart part isn't in the devices, it's in the decision-making, and the majority of smart home devices still rely on homeowners to make the decisions.

Homeowners are stuck managing devices and making decisions because many of the smart home options on the market use different standards. This means devices can't talk to one another. Each device has its own software that needs to be programmed with the homeowner's preferences.

What's frustrating is that all of the standards are doing pretty much the same thing - in pretty much the same way.

Is SHaaS the solution?

Using SHaaS, all household devices can be operated from a single source, most likely a tablet or phone. Homeowners can monitor and control their smart home from anywhere with cloud-based or installed software.

The SHaaS system is made up of these parts:

1. **Sensors like motion sensors, thermostats, cameras or wearables.**
2. **The data generated by these sensors.**
3. **The intelligence. This is software that makes decisions based on the data collected by the sensors.**
4. **Support. A service provider needs to be available to answer questions and assist homeowners.**

SHaaS adoption provides a single interface for managing devices, and it reduces the number of sensors and devices homeowners have to install. One sensor can monitor home security as well as air quality and lighting systems. That same sensor can be integrated with the home entertainment system, turning on your favorite music when you arrive home in the evening.

Where do Internet Service Providers fit in?

If you think about it, Internet Service Providers (ISPs) are in the ideal position to provide SHaaS. They already offer a service integral to SHaaS as well as the support that will be needed. They already employ or contract installers like you to set up the network required to run a smart home. It makes a lot of sense to extend that offering to include SHaaS.

Your customers will appreciate the convenience of SHaaS delivered along with network service. And for the telco, SHaaS is an opportunity for revenue.

ISPs and telcos all over the world are offering SHaaS. Telstra, an Australian telco launched a smart home platform this year. SKT in Korea launched a SHaaS offering last year. And early 2016 saw numerous announcements from telcos planning to offer smart home services of one type or another.

Closer to home is AT&T's Digital Life, which launched in 2015. Digital Life, like so many Smart Home platforms, is primarily a security platform, but customers can also choose camera packages, water detection options and energy control features. Earlier this year, UK telco firm O2 started selling Digital Life to their customers.

What does SHaaS mean for you?

Help your new home buyers by setting up a smart home router and testing the software as part of the overall installation. You will definitely need to provide fiber or fast copper cable that meets the demands of the SHaaS.

Remember, looks matter! Use a low-profile media distribution enclosure that will blend with your buyer's personal style.

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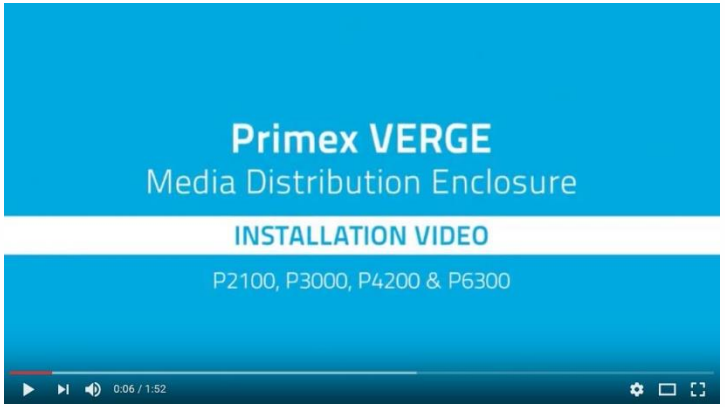

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