



SMART HOME

avakon

TODAY'S SMART HOME

What do consumers think about the Smart Home



MAJORITY OF CONSUMERS ARE ALREADY FAMILIAR WITH SMART HOME TECHNOLOGY



MAJORITY OF CONSUMERS ARE EXCITED ABOUT THE FUTURE OF SMART HOME



ONE IN FOUR US INTERNET USERS CURRENTLY OWN A SMART HOME DEVICE



CONSUMERS ARE WILLING TO SPEND ON ADDITIONAL SERVICES AFTER PURCHASING A SMART HOME DEVICE

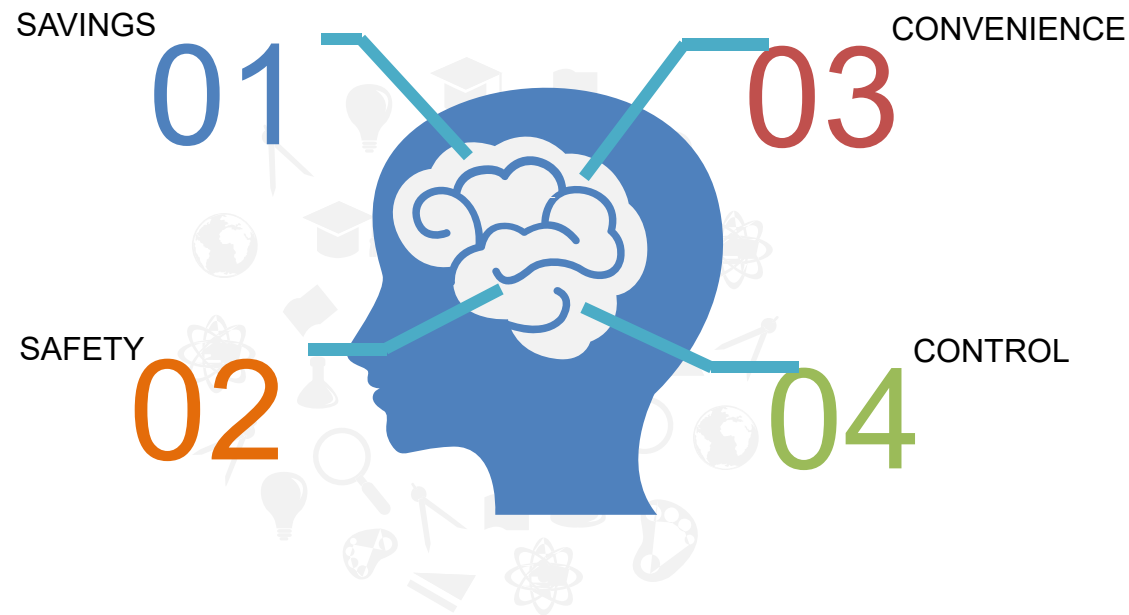
WHAT IS SMART HOME ANYWAY?

A smart home is a home that is equipped with network-connected products (i.e., "smart products," connected via wired or wireless protocols) for controlling, automating and optimizing functions such as temperature, lighting, security, safety or entertainment, either remotely by a phone, tablet, computer or a separate system within the home itself. It provides its home owners comfort, security, energy efficiency (low operating costs) and convenience at all times, regardless of whether anyone is home.



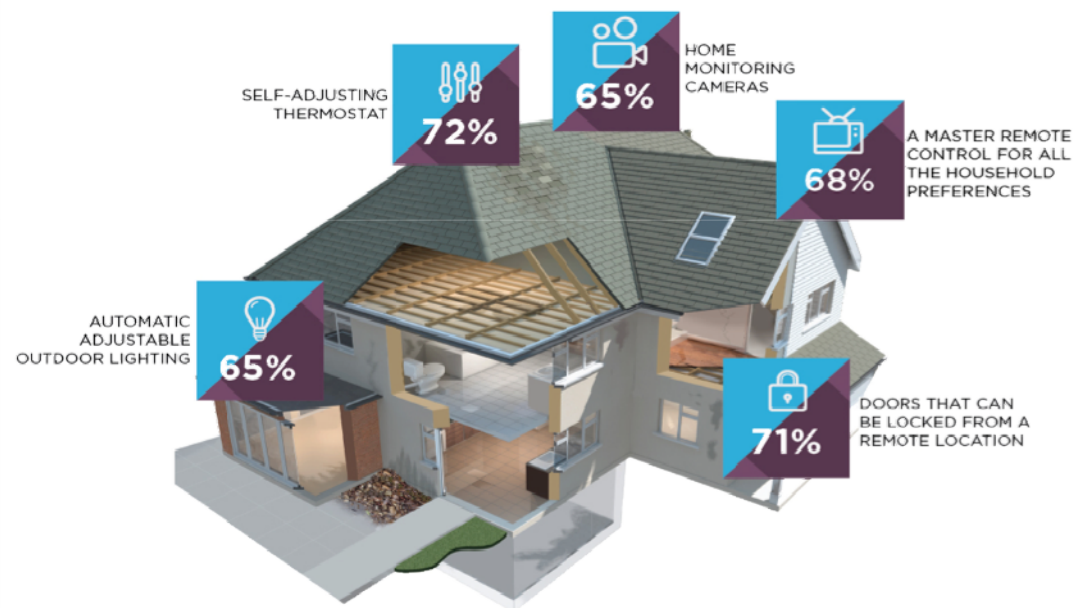
WHAT DO CONSUMERS WANT?

What motivates consumers to buy a smart device?



CONSUMERS CREATE MARKET DEMANDS

What consumers want to see from a Smart Home?

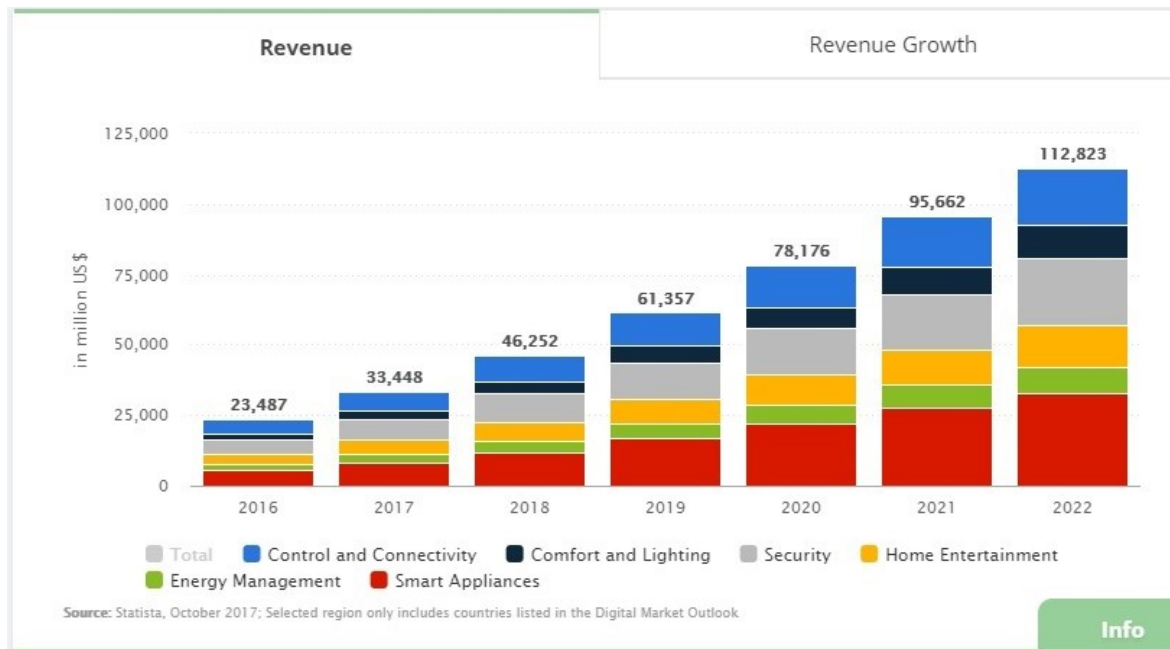


SMART HOME BENEFITS IN A NUTSHELL

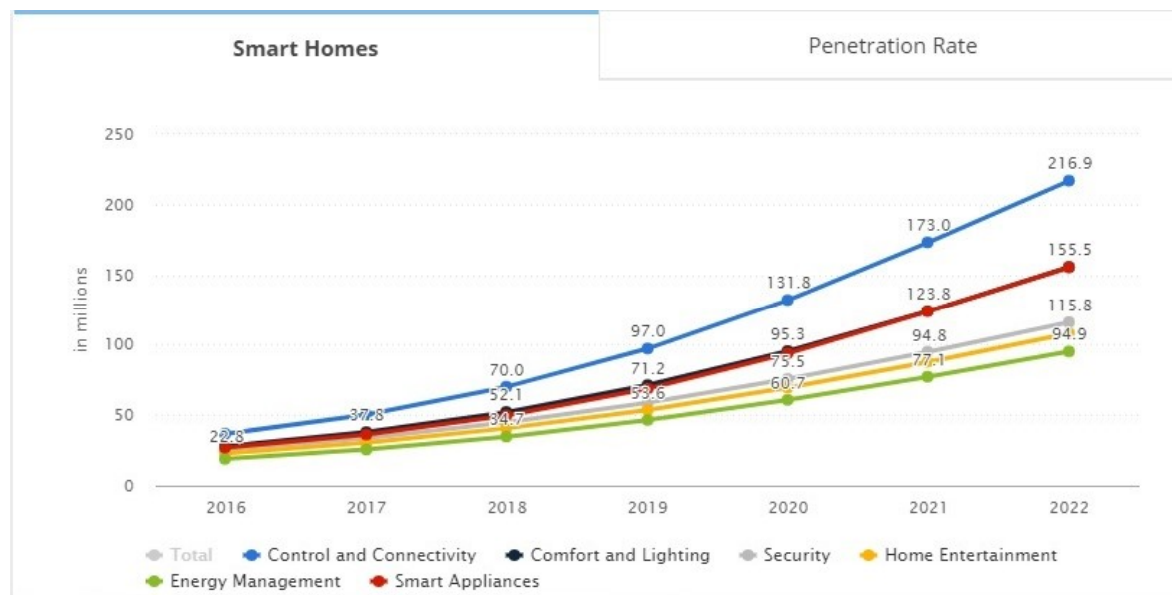


- Control at your fingertips
- Energy Efficiency
- Comfort
- Safety
- Resale
- Money Saving

STATISTICS SHOW THAT....



STATISTICS SHOW THAT....



HOW TO MEET THE MARKET DEMANDS AND ALWAYS BE 1 STEP AHEAD?

- Choosing a networking protocol
- Wired or wireless protocols
- Popular technologies include UPB, INSTEON, KNX, Z-Wave, ZigBee, EnOcean etc. protocols

WIRED VS. WIRELESS SMART HOME PROTOCOLS

WIRELESS	WIRED
Less invasive and easier to install (better suited for a remodel)	Invasive, inconvenience of running wire (specially in case of re-model)
Freedom to network anywhere	Difficult to wire (it can be difficult to physically access all areas of the home)
Interference, range and bandwidth issues (streaming one Netflix movie can max out a home's wireless network)	No interference, range and bandwidth issues
It can be installed by DIY enthusiast	Needs to be installed by a professional
Inexpensive (no hidden costs)	Costly (potentially also requiring drilling, drywall repair and painting)
Flexible (you can add more devices anytime)	Inflexible once it is installed
More prone to hacking	Less prone to hacking (although the wires can be cut)
Some elements in the home may block out the signal such as aluminum sheeting, plasterboard, and even insulation	More seamless signal
Limitations in range	No limitation in range (where the wire is installed)

WIRELESS TECHNOLOGIES THAT MAKE SMART HOME POSSIBLE

● **Z-Wave**

● **ZigBee**

● **Wi-Fi**

● **Bluetooth**

● **EnOcean**



Z-WAVE WIRELESS PROTOCOL

WIRELESS PROTOCOL - ISSUES	HOW DOES Z-WAVE SOLVE THEM?
Interference, range and bandwidth issues (streaming one Netflix movie can max out a home's wireless network)	No interference from Wi-Fi or other 2.4GHz wireless technologies in similar band
More prone to hacking	Using the same encryption as online banking
Limitations in range	Extends the usable range of home automation by making all devices double as repeaters, using mesh networks (the signal gets bumped via powered nodes to devices that would otherwise have been out of reach)



THE WINNER

Z-WAVE
TECHNOLOGY

Z-WAVE ESSENTIALS

Z-Wave is the leading wireless home control technology in the market today, with over 2,100 certified interoperable products worldwide. Represented by the Z-Wave Alliance, and supported by more than 600 companies around the world, the standard is a key enabler of smart living solutions for home safety and security, energy, hospitality, office and light commercial applications.

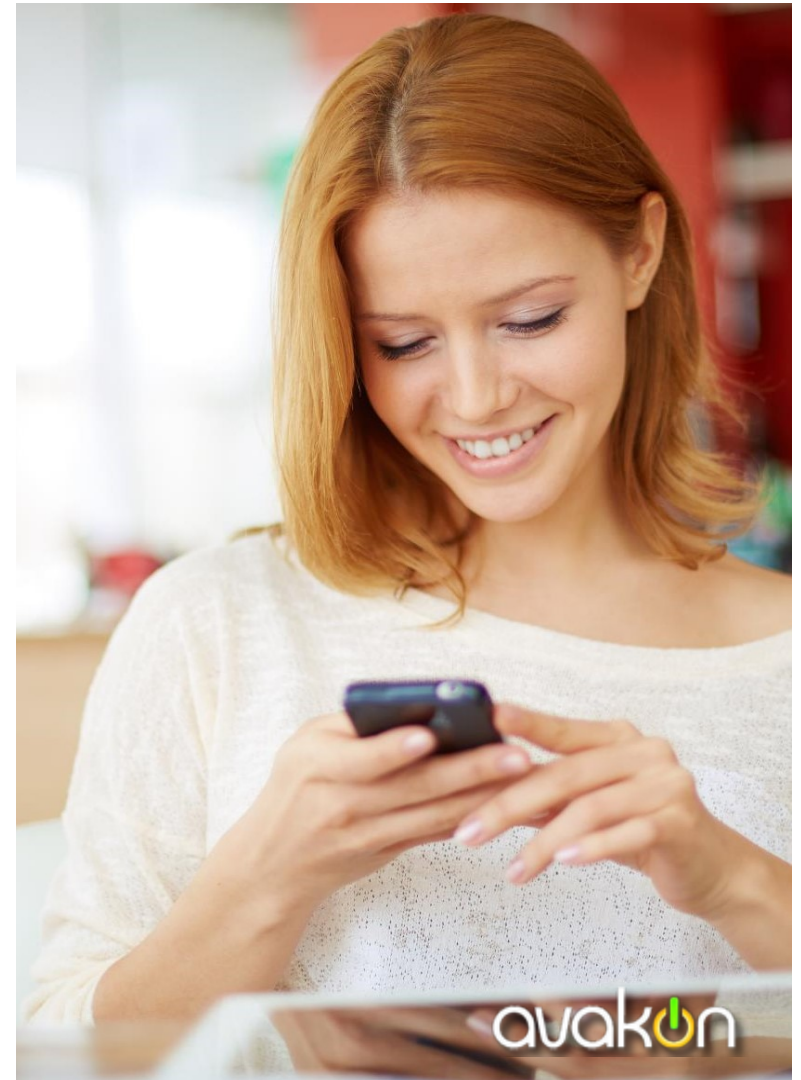
DESIGNED FOR SMART HOME

- Designed from the ground up for home control.
- Specifically optimized power, range and bandwidth.

Z-Wave's combination of technological agility, low cost, ease of integration, product-level interoperability, and mature mesh networking makes it ideal for control applications.



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8 REASONS

Why Z-Wave is the leading technology for Smart Home

- Easy to install – no rewiring
- Trusted – biggest brands use Z-Wave
- Experienced – 70 million products on the market
- Affordable – minimal investment
- Reliable – 10 years on the market
- Secured – same encryption as online banking
- Provides choices – over 2,100 different products
- Interopable – product are able to work together



Z-WAVE CAN BE USED TO CONTROL

- Lights
- Locks
- Thermostats
- Sensors
- Alarms/Sirens
- Fans
- Doors
- Energy management
- Plugs/outlets
- Shades
- Water management








SOME MORE TECH DETAILS

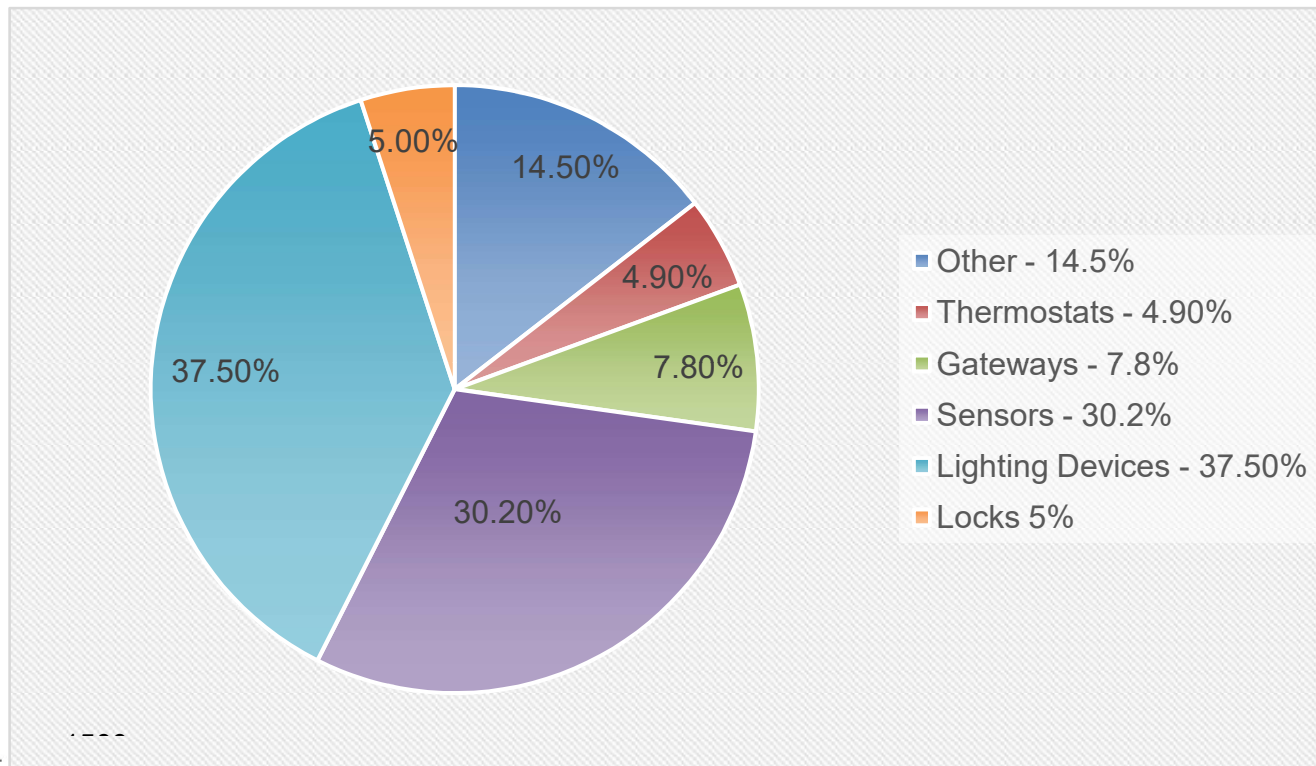
- Low Powered RF communications technology that supports full mesh networks without the need for a coordinator node
- No interference from Wi-Fi or other 2.4GHz wireless technologies in similar band.
- Standards based
- Interoperable eco-systems of products & partners
- S2 Security (best in class in IoT)
- Installation and Maintenance Application (IMA tool)
- UL and CE component recognition
- Certification



Z-WAVE MARKET FACTS

-  **Mature, proven and broadly deployed**
Z-Wave is by far the world market leader in wireless control, bringing affordable, reliable and easy-to-use 'smart' products to many millions of people in every aspect of daily life.
-  **Z-Wave Offers the most choices**
Over 2100 interoperable products available. 70 million Z-Wave products worldwide.
-  **Extensively used in residential systems**
throughout numerous business spectrums, including ADT, Alarm.com, AT&T, DSC, GE/Interlogics, Honeywell, Lowes, Verizon, Vivint, and other prominent service providers worldwide.
-  **Over 600 manufacturers**
Actively supported by over 600 manufacturers and service providers throughout the world..
-  **Found in thousands of hotels, cruise ships, and vacation rentals**
including 65,000 devices in the flagship Wynn Hotel in Las Vegas, NV.

GLOBAL TOTALS CERTIFIED PRODUCTS



GLOBAL TOTALS CERTIFIED PRODUCTS



North America – 49.60 %



Europe – 37.03 %



Asia – 9.63 %



ROW – 3.74 %

Z WAVE COMPETITIVE LANDSCAPE

Z-WAVE vs OTHER TECHNOLOGIES

How Does Z-Wave Compare with Other IoT Technologies?

	Z-Wave	WiFi	ZigBee	Bluetooth	Thread
Full Home Coverage	●		●		●
Long Battery Life For Sensors	●		●		
Jamming Detection for UL Security Sensors	●				
Interference avoidance + Low Interference Freq Band	●				
Guaranteed Application Level Interoperability	●	●			
Complete End to End Security System	●				
Low Power Secure Encryption for Battery Powered devices	●				
Installer Maintenance Tool Kit	●	●			●
Standardized Internet Communication	●				

Z-WAVE ADVANTAGES RECAP

- **Z-Wave Is Interoperable; Our Products Enjoy An Ecosystem.**
It's important that products be able to work together with all smart devices in the home, regardless of type, version or brand. There are 2100 certified products that are backwards- and forwards-compatible in the Z-Wave ecosystem and 70 million devices shipped in the market.
- **Z-Wave Works Best; It Was Designed For Smart Home Control**
Z-Wave was designed from the ground up for home control. Its power, range and bandwidth are optimized specifically for smart home applications. Z-Wave's combination of technological agility, low cost, ease of integration, product-level interoperability, and mature mesh networking makes it ideal for control applications.
- **Z-Wave Isn't Affected By Wireless Interference.**
Z-Wave uses a lower frequency than common household wireless products such as Wi-Fi, Bluetooth, ZigBee and other 2.4 GHz protocols. It is not subject to their interference and traffic jams, which makes Z-Wave more reliable for mission-critical tasks and status.
- **Z-Wave Is Securely Encrypted.**
Z-Wave uses industry-standard AES128 encryption, the same protocol used in online banking. The Z-Wave certification process ensures that Z-Wave smart devices are secure. The Z-Wave 6.7 SDK includes the Security 2 Framework, designed to eliminate risk of man-in-the-middle attacks and include industry-wide accepted secure key exchange using Elliptic Curve Diffie-Hellman. The S2 framework will be mandatory for all devices certified after April 2, 2017.

Z-WAVE ADVANTAGES RECAP

- **Z-Wave's Mesh Network Provides The Best Scalability.**
Because nodes in a Z-Wave network can act as a repeater, Z-Wave can provide enough range for even the largest homes, working around obstacles and wireless dead spots.
- **Z-Wave Offers Us And Our Customers The Most Choices.**
Z-Wave gives our company and our customers an ecosystem of 1700 products, encompassing virtually every category and application. There's always a choice of devices, for ourselves and our customers.
- **Z-Wave Is The Most Easily Available Smart Home Technology.**
Z-Wave products and services that are complementary to ours are available everywhere. Consumers can get Z-Wave from leading online retailers, home improvement stores, office technology retailers, security providers, triple-play providers, independent integrators and many other product and service resellers.
- **Z-Wave Is The Established Market Leader.**
Z-Wave has a 10+ track record of proven technology, with tens of millions of products deployed worldwide. We're in the business of offering smart products and services today, and with Z-Wave's commitment to backward compatibility, we know our Z-Wave products will work well tomorrow.
- **Z-Wave Is Driving A Standard**
Z-Wave has proven to be the most ubiquitous of the wireless communication standards; it is the only low-power, medium-bandwidth HAN/LAN technology with interoperability. Z-Wave is open, based on an International Standard MAC/Phy ITU-T G.9959., offering a single standard and a single stack. The stack is openly licensed; all that is required is certification to ensure interoperability.



ALWAYS STAY IN TOUCH WITH YOUR HOME

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