



# SMART HOME TECHNOLOGY

**A BASIC GUIDE TO HELP YOU UNDERSTAND**  
**WHAT A SMART HOME IS**  
**WHAT MAKES A SMART HOME**  
**WHAT ARE SMART DEVICES**  
**HOW DO SMART DEVICES WORK**  
**IS A SMART HOME FOR ME**

*“TECHNOLOGY IS GREAT...IF IT WORKS”*  
(BARRY STIEFEL CIRCA- AROUND THE TIME CLAP-ON CLAP-OFF WAS  
INTRODUCED)

## **WHAT MAKES A SMART HOME**

WHAT A SMART-HOME IS FOR EACH OF YOU DEPENDS ON WHAT YOU WANT TO GET OUT OF IT. AND FIGURING THAT OUT REQUIRES KNOWING WHAT THE DIFFERENT SMART DEVICES DO, WHAT THE POSSIBILITIES ARE, AND HOW MUCH YOU WANT TO SPEND.

## **BASIC ELEMENTS OF A SMART HOME**

THERE ARE TWO BASIC ELEMENTS TO A SMART HOME: ***AUTOMATED DEVICES AND AUTOMATED SYSTEMS OR HUBS.***

BEFORE WE GET INTO EXAMPLES OF THE VARIOUS DEVICES AND SERVICES AVAILABLE, LET'S DEFINE WHAT WE MEAN BY SMART DEVICES VERSUS SMART SYSTEMS OR HUBS.

**(1) DEVICES** ARE JUST WHAT THE NAME IMPLIES, AN INDIVUDAL PRODUCT THAT CONTROLS A FUNCTION (LIGHTS, TEMPATURE, DOOR LOCKS AND DOOR BELLS, VIDEO, APPLIANCES, SHADES, ETC). AT THE SAME TIME THE DEVICES THEMSELVES CAN BE REMOTLEY CONTROLLED FROM APPS ON YOUR PHONE, TABLET AND LAPTOP.

**(2) A SMART SYSTEM OR HUB** IS ESSENTIALLY A COMMAND CENTER THAT CAN TIE IN ALL OF YOUR DEVICES SO THAT THEY CAN BE CONTROLLED TOGETHER WITH SIMPLE VOICE COMMANDS OR ROUTINES.

YOU SPEAK A COMMAND WHEN YOU WANT SOMETHING TO HAPPEN. (*TURN OFF THE UPSTAIRS LIGHTS AND CLOSE THE SHADES*).

OR YOU CAN SET UP AN AUTMATED ROUTINE (*ALL FIRST FLOOR LIGHTS AUTOMATICALLY TURN ON AT SUNSET*).

YOU DON'T NEED A SMART SYSTEM OR HUB TO ENJOY THE USE OF AUTOMATED DEVICES ON THEIR OWN....BUT IF YOUR DEVICES ALL CONNECT WELL TOGETHER, WORK WELL, AND ARE EASY TO USE, YOUR SMART HOME EXPERIENCE WILL RUN MUCH MORE SMOOTHLY.

## **SMART DEVICES**

TO SIMPLIFY THE LEARNING EXPERIENCE WITHOUT A "TECHNOLOGY OVERLOAD" WE HAVE CHOSEN TO CONCENTRATE ON THREE DEVICE CATEGORIES; LIGHTS, SECURITY, AND THERMOSTATS.

WITHIN EACH CATEGORY WE WILL START WITH THE SIMPLEST DEVICES TO WORK WITH AND FROM THERE MOVE UP IN COMPLEXITY.

### **SMART LIGHTS**

A) WI FI BULBS THIS IS THE SIMPLEST AND EASIEST WAY TO GET STARTED IN THE SMART HOME "GAME". IF YOU ONLY WANT A SMALL HANDFUL OF SMART BULBS IN YOUR HOME, A POPULAR OPTION IS BUYING SMART BULBS THAT CONNECT DIRECTLY TO YOUR WI FI NETWORK.

#### **THE PROS**

THE BEST PART ABOUT THESE TYPES OF BULBS IS THAT THEY SET UP JUST LIKE ANY OTHER WI-FI-BASED PRODUCT AND THEY ARE RELATIVELY INEXPENSIVE.

YOU INSTALL THE BULB (JUST SCREW THEM IN TO THE LAMP SOCKET) FOLLOW SIMPLE INSTRUCTIONS TO DOWNLOAD AN APP AND THEN USE THE APP TO CONNECT THE BULBS TO YOUR WI-FI NETWORK. FROM THERE, IT'S READY TO GO.

## THE CONS

IF YOU PLAN ON HAVING MORE THAN A FEW BULBS IN THE HOUSE THE NEGATIVE IS THAT EACH BULB CONNECTS TO YOUR Wi Fi AS A SEPARATE DEVICE AND NUMEROUS BULBS (MORE THAN 6 TO 8) CAN CROWD AND SLOW YOUR SYSTEM. ALSO THESE CANNOT BE CONTROLLED TOGETHER

## THE PRODUCTS

- **EUFY LUMOS BULBS (\$13-20)**
- 
- **LIFX BULBS (\$20-48)**
- 
- **TP-LINK KASA SMART BULB (\$20)**

**B) HUB SYSTEM BULBS**- THESE BULBS ARE A STEP UP FROM Wi Fi (ONLY) BULBS AS THEY REQUIRE EITHER A PROPRIETARY HUB OR THIRD PARTY HUB TO FUNCTION.

SO INSTEAD OF CONNECTING THESE BULBS STRAIGHT TO YOUR Wi Fi LIKE THE SIMPLE Wi Fi BULB, THESE BULBS CONNECT TO A HUB THAT IS THEN CONNECTED TO YOUR Wi Fi.

THE PROPRIETARY SYSTEM BULBS ARE USED WITH THEIR OWN BRANDED HUB SO YOU PURCHASE THE BULBS IN A STARTER KIT THAT COMES WITH BULBS AND A SMALL HUB (AND YOU CAN ADD ON BULBS LATER).

WITH THIRD PARTY HUB SYSTEM BULBS YOU AREN'T TIED TO ONE BRANDED MANUFACTURERS HUB, YOU CHOOSE A THIRD PARTY HUB SYSTEM AND THEN PURCHASE BULBS THAT WORK WITH THAT SYSTEM

**WITH EITHER OF THESE SYSTEMS YOU SIMPLY PLUG THE HUB DIRECTLY TO YOUR ROUTER WITH AN INCLUDED ETHERNET CABLE. DOWNLOAD AN APP AND FOLLOW THE INSTRUCTIONS TO PUT IN THE BULBS**

### **THE PROS**

**UNLIKE WI FI (ONLY) BULBS YOU ARE NOT LIMITED IN THE NUMBER OF BULBS YOU CAN INSTALL. BUT THE MOST IMPORTANT DIFFERENCE IS THAT WITH THIS TYPE OF BULB SYSTEM ALL OF THE BULBS ARE TIED IN TOGETHER SO THEY CAN ALL BE CONTROLLED. ALLOWS YOU TO CONTROL ONE BULB IN ONE ROOM OR SEVERAL BULBS IN DIFFERENT ROOMS AND SET UP ROUTINES.**

### **THE CONS**

**THEY ARE A LITTLE MORE EXPENSIVE BECAUSE UP FRONT YOU MUST PURCHASE THE HUB THAT THE BULBS CONNECT TO. ALSO WHILE THESE BULBS ARE NOT THAT DIFFICULT TO PUT IN AND MOST PEOPLE CAN DO IT, THEY DO REQUIRE A LITTLE MORE WORK AND A BIT MORE TECHNICAL SKILL (ALTHOUGH NOT A LOT).**

### **THE PRODUCTS**

- **PHILLIPS HUE (\$80 BASIC BULB STARTER KIT TO \$200)**
- 
- **GE WINK (\$15 AND UP...HUB \$140 OR \*\*USE ALEXA)**
- 
- **IKEA TRADFRI BULBS (\$80 STARTER KIT)**
- 
- **GO CONTROL (\$17 WORKS WITH THIRD PARTY HUBS)**

**C) SMART PLUGS** SMART PLUGS ARE PLUGS THAT YOU CONNECT TO AN ELECTRICAL OUTLET. THEY ARE NOT TECHNICALLY IN THE LIGHT CATEGORY AS THEY BASICALLY CONTROL WHATEVER IS PLUGGED INTO THEM (LIGHTS, APPLIANCES, FLOOR FANS ETC).

WHAT MAKES THESE PLUGS GREAT IS THE SIMPLICITY OF BEING ABLE TO CREATE A SMART “TYPE” HOME BY JUST PLUGGING THIS DEVICE INTO AN OUTLET AND THEN CONTROLLING MULTIPLE THINGS.

AT THE SAME THESE PLUGS GENERALLY DON’T NEED A SEPARATE HUB TO WORK SO THEY ARE SIMPLE AND INEXPENSIVE.

### THE PROS

YOU SIMPLY PLUG THESE IN TO AN OUTLET, DOWNLOAD AND APP AND FOLLOW THE INSTRUCTIONS TO CONNECT THE PLUG TO YOUR INTERNET.

FROM THERE YOU SIMPLY PLUG IN A LAMP, APPLIANCE, FAN ETC AND CONTROL IT FROM AN APP ON YOUR PHONE/TABLET.

ALTHOUGH YOU DON’T NEED A HUB WITH THESE PLUGS, MOST OF THEM WORK WITH HUB SYSTEMS LIKE ALEXA TO EXPAND THEIR CAPABILITIES IF YOU WANT.

### THE CONS

WHILE INEXPENSIVE COST CAN ADD UP IF YOU START TO PUT THEM IN MULTIPLE OUTLETS AROUND THE HOUSE. ALSO THE NETWORK CONNECTION TO PLUGS CAN BE IFFY AT TIMES.

## THE PRODUCTS

- (\$15 +) THERE ARE SO MANY OF THESE PLUGS AVAILABLE THAT IT DOESN'T MAKE SENSE TO LIST INDIVIDUAL BRANDS.
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- THE RECOMMENDATION IS TO GO TO AMAZON AND ENTER "SMART PLUGS WITHOUT A HUB".
- 
- YOU WILL FIND NUMEROUS TYPES AND DESIGNS. LOOK FOR A DESCRIPTION THAT FITS YOUR NEEDS AND PRICE RANGE (INCLUDING WHAT HUB SYSTEMS THEY CAN BE CONNECTED TO)
- 
- AND LOOK AT THE REVIEWS FROM PEOPLE THAT MATCH YOUR SITUATION

D) **SMART SWITCHES** SMART SWITCHES ARE A STEP UP FROM BULBS AND PLUGS. AFTER YOU HAVE TESTED THE WATERS WITH BULBS AND/OR PLUGS YOU MIGHT BE READY FOR A LITTLE MORE ADVANCED SYSTEM, THAT IS STILL RELATIVELY EASY TO INSTALL.

THE SWITCHES TAKE THE PLACE OF YOUR EXISTING WALL SWITCHES SO YOU CAN STILL CONTROL THE LIGHTS FROM A WALL SWITCH LIKE YOU ALWAYS HAVE, BUT YOU'LL GET SOME ADDED BENEFITS.

## THE PROS

SMART SWITCHES WORK WITH EXISTING LIGHT FIXTURES THAT MAY NOT ACCOMMODATE A SMART BULB, ESPECIALLY CEILING LIGHTS. THEY CAN ALSO CONTROL CEILING FANS, MUSIC AND EVEN SHADES.

**BECAUSE THEY DON'T REQUIRE SPECIAL BULBS ONCE INSTALLED AFTER THE INITIAL COST OF THE SWITCH, REPLACEMENT BULB COSTS ARE MUCH CHEAPER.**

**THEY WORK AS INTENDED EVEN WHEN THE INTERNET GOES DOWN AND YOU HARDLY NOTICE THEM...WHICH BULBS AND PLUGS DON'T DO.**

**THEY CAN BE COMBINED WITH OTHER DEVICES ON A SYSTEM SO FOR EXAMPLE IF YOU HAVE A SMART DOORBELL WHEN IT RINGS, YOU CAN SET THE FRONT DOOR LIGHT TO GO ON AT THE SAME TIME.**

### **THE Cons**

**NO GETTING AROUND IT, THEY ARE A MORE MORE EXPENSIVE OPTION AS YOU CAN SPEND UPWARDS OF \$50 PER SWITCH.**

**INSTALLATION IS MUCH MORE HANDS-ON AND PERMANENT.**

**SOME SMART SWITCHES DO REQUIRE A PROPRIETARY HUB BUT OTHERS CAN CONNECT TO HUB SYSTEMS (ALEXA, ETC)**

### **THE PRODUCTS**

- **LUTRON CASETA**- (\$85 FOR STARTER KIT WITH HUB, \$50 PER ADDITIONAL SWITCHES) **MOST WELL KNOWN AND BEST INTEGRATED SYSTEM**
- 
- **WEMO DIMMER**- (\$40 TO \$60) **NO PROPRIETARY HUB REQUIRED CONNECTS TO HUB SYSTEMS (ALEXA ETC)**  
**MIDDLE OF THE ROAD SWITCH**
- 
- **TP LINK SMART WIFI SWITCH**- (\$35) **NO PROPRIETARY HUB CONNECTS TO HUB SYSTEMS LESS FEATURES AND INTEGRATION**
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- **SIMPLY HOME SWITCHMATE TOGGLE- (\$30)**  
**UNIQUE “SNAP OVER” SWITCH. GOES OVER EXISTING  
TOGGLE SWITCH SO INSTALLS IN SECONDS, NO TOOLS OR  
WIRING**

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## **SECURITY**

YOU CAN SPEND A LOT OF MONEY ON AN INTEGRATED SECURITY SYSTEM SOLD BY NUMEROUS DIFFERENT COMPANIES, BUT IF YOU CAN GET AWAY WITHOUT NEEDING TO HAVE 24/7 MONITORING, YOU CAN ALSO OBTAIN NEARLY THE SAME LEVEL OF PROTECTION BY “DOING IT YOURSELF”.

THE SECURITY CATEGORY CAN BE BROKEN DOWN INTO FRONT DOOR AND OUTSIDE PROTECTION; VIDEO DOOR BELLS, AUTOMATED LOCKS, VIDEO CAMERAS; INTERIOR VIDEO PROTECTION.

A) **VIDEO DOORBELLS**- A VIDEO DOORBELL IS REALLY A REGULAR DOORBELL WITH A BUILT-IN VIDEO CAMERA.

WHEN SOMEONE RINGS THE DOORBELL, YOU CAN JUST PICK UP YOUR PHONE (OR VIEW ON ALEXA OR GOOGLE DEVICES WITH SCREENS) TO SEE WHO'S THERE, FROM WHEREVER YOU HAPPEN TO BE IN THE HOUSE. THAT WAY, YOU CAN SEE IF YOU REALLY NEED TO ANSWER THE DOOR, OR IF IT'S JUST UPS WITH YOUR FIFTH AMAZON PACKAGE OF THE WEEK.

BUT WHERE VIDEO DOOR BELLS REALLY COME INTO PLAY IS WHEN YOU'RE AWAY FROM HOME. YOU GET NOTIFICATIONS AND SEE A LIVE VIEW WHEN SOMEONE RINGS THE DOORBELL.

YOU CAN EVEN DO PUSH-TO-TALK AND COMMUNICATE WITH THE PERSON ON THE OTHER SIDE THROUGH THE SPEAKER ON THE DOORBELL. SO IF THE UPS GUY COMES WHEN YOU'RE NOT HOME, YOU CAN TELL HIM TO JUST LEAVE THE PACKAGE AT

**THE DOOR OR TELL THE SERVICE PERSON WHO GAVE YOU A RIDICULOUS 8 HOUR TIME WINDOW THAT YOU'LL BE HOME SHORTLY.**

**THESE DOORBELLS CAN ALSO DOUBLE AS SECURITY CAMERAS AS THEY DETECT MOTION IN FRONT OF THE CAMERA AND WILL ALERT YOU EVEN IF NO ONE RINGS THE BELL. WITH A "LIVE VIEW" FEATURE YOU CAN SEE AND RECORD WHAT IT HAPPENING IN FRONT OF YOUR HOUSE.**

**THE DOORBELLS REPLACE YOUR CURRENT DOORBELL AND CAN RUN ON THE CURRENT FROM THE EXISTING WIRES OR ON A SELF CONTAINED BATTERY.**

### **THE PROS**

**THEY ARE CONVENIENT TO USE AND CAN PROVIDE A SENSE OF COMFORT WHEN YOU'RE AWAY FROM HOME SHOULD SOMEONE WITH BAD INTENTIONS WALK UP TO YOUR HOME UNINVITED. YOU WILL BE ALERTED WHEREVER YOU ARE IN THE WORLD, IF YOU JUST HAVE AN INTERNET OR CELLULAR CONNECTION.**

### **THE CONS**

**THE COST CAN BE ANYWHERE FROM \$100 TO \$300, NOT VERY EXPENSIVE, BUT NOT CHEAP. THERE IS INSTALLATION NECESSARY AND WHILE IT IS FAIRLY EASY, IT CAN BE TRICKY DEPENDING ON WHERE YOUR CURRENT DOORBELL IS PLACED.**

**CONNECTION IS USUALLY WITHOUT ISSUES BUT CAN BE IFFY DEPENDING ON WHERE YOUR ROUTER IS AND THE STRENGTH OF YOUR INTERNET CONNECTION.**

**WHEN IT COMES TO WHICH DOORBELL TO PURCHASE EACH AS THEIR OWN FEATURES SOME OF WHICH WORK BETTER THAN OTHERS. LOOK TO SEE WHAT SYSTEMS THEY INTEGRATE WITH AND READ REVIEWS.**

## THE PRODUCTS

- **RING VIDEO DOORBELL**- (\$100 TO \$300) THE MOST WELL KNOWN AND NOW OWNED BY AMAZON SO INTEGRATION WITH ALEXA IS SEAMLESS. WHEN SOMEONE RINGS OR MOTION IS DETECTED ALEXA ANNOUNCES IT AND IF YOU HAVE A UNIT WITH A SCREEN IT WILL BROADCAST WITHOUT USING YOUR PHONE.
- 
- **NEST DOORBELL**- (\$200 TO \$300) WORKS VERY MUCH THE SAME AS RING BUT IT DOES HAVE A FEATURE THAT CAN DISTINGUISH WHETHER THE MOTION AT THE DOOR IS A HUMAN OR JUST TRAFFIC OR WIND AND RECENTLY THEY ADDED FACE RECOGNITION. WORKS WITH ALEXA BUT ALSO GOOGLE HOME
- 
- **SKYBELL**- (\$200) ANOTHER DOORBELL ENTRY THAT DOES MUCH THE SAME AS RING AND NEST.

B) **OUTDOOR/ INDOOR VIDEO CAMERAS** IF THE IDEA OF A REPLACEMENT DOORBELL IS NOT SOMETHING YOU NEED OR WANT, BUT YOU DO HAVE A DESIRE FOR OUTSIDE VIDEO MONITORING FOR PROTECTION, A MORE INTEGRATED AND OVERALL BETTER SECURITY OPTION IS TO CONSIDER A SELF CONTAINED VIDEO CAMERA OR SYSTEM OF CAMERAS.

YOU CAN ALSO INTEGRATE OUTSIDE CAMERAS WITH INDOOR CAMERAS. BUT PERHAPS YOU DON'T FEEL THE NEED FOR OUTDOOR CAMERAS, BUT DO WANT VIDEO SURVEILLANCE INSIDE YOUR HOME, THEN GO WITH INDOOR CAMERAS ALONE.

## OUT DOOR CAMERAS

### THE PROS

THE LATEST OUTDOOR SECURITY CAMERAS COMBINE THE CONVENIENT FEATURES OF ANY SMART HOME DEVICE WITH ADVANCED CAMERA TECHNOLOGY SO YOU'LL ALWAYS HAVE AN EYE ON YOUR HOME. AND UNLIKE DOORBELLS THEY CAN BE PLACED ANYWHERE.

THEY WILL SEND ALERTS TO YOUR PHONE WHEN THEY DETECT MOTION, BE ABLE TO RECORD IN HD QUALITY EVEN AT NIGHT, AND ARE DESIGNED TO WITHSTAND ANY TYPE OF WEATHER. IN THAT REGARD STAND ALONE CAMERAS PROVIDE BETTER VIDEO QUALITY THAN DOORBELL CAMERAS.

### THE Cons

STAND ALONE OUTDOOR CAMERAS ARE BY AND LARGE MORE EXPENSIVE BUT THAT DEPENDS ON THE FEATURE YOU WANT. AND WHILE THE INSTALLATION OF DOORBELL CAMERAS IS FAIRLY STRAIGHTFORWARD, STAND- ALONE CAMERAS CAN REQUIRE MORE WORK AND TECHNICAL KNOW HOW.

### THE PRODUCTS

**BEFORE BUYING AN OUTDOOR CAMERA SOME CONSIDERATIONS TO TAKE INTO ACCOUNT. *HOW MANY CAMERAS DO YOU NEED TO COVER THE AREA YOU WANT PROTECTED-***

**HOW GOOD IS THE RESOLUTION? HOW GOOD IS THE NIGHT VISION? THIS IS A BIG CONSIDERATION BECAUSE THAT'S WHEN MOST PEOPLE WANT THE PROTECTION.**

**DOES THE CAMERA PAN, TILT AND ZOOM? WITH REMOTE CONTROL THESE FEATURE PROVIDE YOU WITH MORE COVERAGE AND BETTER VIEWING RANGE FOR LARGER AREAS.**

**MOBILE CONTROL?** WHAT APPS AND HUB SYSTEMS DO THE CAMERAS CONNECT TO.

**CONNECTION.** DOES THE CAMERA NEED TO BE HARD WIRED OR CAN IT BE CONNECTED TO YOUR Wi Fi NETWORK (AND HOW GOOD IS YOUR OUTDOOR WiFi CONNECTION. HOW IS IT POWERED BY BATTERY OR MUST IT BE PLUGGED INTO AN OUTLET?

**MONITORING.** SINCE THESE ARE DIY SYSTEMS AND NOT CONNECTED TO A SERVICE YOU NEED TO DETERMINE THE LEVEL OF PROTECTION YOU WANT TO CAMERA TO PROVIDE. DO YOU WANT 24/7 RECORDING, DO YOU WANT INSTANT NOTIFICATION ALERTS TO YOUR DEVICES, DO YOU WANT TO USE THE CAMERA MANUFACTURES MONITORING SYSTEM

- **NEST CAM IQ-** (\$350 PER UNIT) WiFi
- 
- **RING SPOT LIGHT CAMERA-** (\$170 PER UNIT) WiFi
- 
- **LOREX SECURITY CAMERA** (\$190 PER UNIT) WiFi
- 
- **ARLO PRO 2 (\$320)** WiFi
- 
- **SWAN BULLET CAMERA-** (\$50) WIRED

## INDOOR CAMERAS

THERE ARE MANY INDOOR CAMERAS AVAILABLE TODAY WITH AMAZING FEATURES THAT ONLY A FEW YEARS AGO WERE ONLY AVAILABLE THROUGH SECURITY COMPANIES. AND WITH MANY OF THE DIY CAMERAS TODAY YOU CAN ACTUALLY ADD MONITORING SERVICES.

**SOME CONSIDERATIONS WHEN EXPLORING INDOOR CAMERAS ARE:**

**IS THE CAMERA 100% WIRE FREE? THESE ARE THE CAMERAS THAT NOT ONLY CONNECT WIRELESSLY TO YOUR HOME NETWORK, BUT ALSO OPERATE VIA BATTERY POWER, THE ADVANTAGE THERE BEING YOU CAN PLACE THEM ANYWHERE BECAUSE THEY AREN'T TIED TO AN OUTLET.**

**DOES THE CAMERA RECORD AND STORE VIDEO OR JUST BROADCAST LIVE WHEN YOU ACCESS IT?**

**DOES IT HAVE TILT, ZOOM AND PAN FEATURES ALLOWING YOU TO CONTROL THE VIEW OF THE ROOM OR IS IT STATIC SHOWING ONLY THE VIEW BASED ON WHERE IT IS PLACED?**

**DOES THE CAMERA HAVE OTHER SECURITY FEATURES BESIDES VIDEO, THAT WILL MONITOR CONDITIONS IN THE HOME?**

**DO CAMERA FEATURES NEED TO BE ACTIVATED WITH SUBSCRIPTION SERVICES?**

## THE PRODUCTS

- **ARLO PRO** - (\$250) CAN ALSO BE USED OUTDOORS. 100% WIRELESS, NO NEED FOR POWER OUTLET. CLOUD STORAGE
- 
- **WYZE CAM PAN** - (UNDER \$40) ONE OF LEAST EXPENSIVE CAMERAS AVAILABLE. WILL PAN AND ACTUALLY TRACK MOTION IT SENSES.
- 
- **CANARY ALL-IN-ONE** - THIS IS A **FULL FEATURED** CAMERA AND HOME SECURITY SYSTEM. ASIDE FROM VIDEO RECORDING IT WILL ALERT WITH A SIREN IF IT DETECTS AN INTRUDER AND THEN LETS YOU ALERT THE POLICE. IT LEARNS YOUR MOVEMENT PATTERNS. ALSO OPERATES AS

**AN AIR QUALITY MONITOR AND MONITORS HUMIDITY CHANGES THAT CAN OCCUR IF THERE WAS A WATER LEAK**

- **AMCREST PROHD INDOOR- (UNDER \$100) HAS FREE STORAGE**
- 
- **AMAZON CLOUD CAM (\$113 PER UNIT) STATIC CAMERA BUT HAS NICE FEATURES IF YOU SUBSCIBE THE AMAZON SERVICES**

**C) *SMART DOOR LOCKS* WHAT DO YOU GET IF YOU ADD SOME SMARTS TO YOUR DOOR LOCK? A SMART LOCK THAT MAKES YOUR HOME MORE SECURE AND FLEXIBLE.**

**THEY CONNECT TO YOUR INTERNET AND NETWORK. THEY CAN OPERATE ON THEIR OWN WITH NO HUB, BUT THEY REALLY REACH THEIR FULL POTENTIAL WHEN INTEGRATED WITH A HUB SYSTEM WHERE YOU CAN THEN AUTOMATE FUNCTIONS AND USE VOICE COMMANDS TO LOCK OR UNLOCK**

### **THE PROS**

**YOU CAN SET THESE LOCKS TO AUTOMATICALLY LOCK WHEN YOU LEAVE THE HOUSE AND THEN UNLOCK WHEN YOU ARRIVE HOME WITHOUT DOING ANYTHING.**

**YOU CAN BE NOTIFIED WHEN PEOPLE GET HOME, LET PEOPLE IN WITHOUT A KEY, AND GENERALLY HAVE MORE CONTROL OVER WHO COMES AND GOES IN YOUR HOME.**

**YOU CAN EVEN INTEGRATE SOME LOCKS WITH VIDEO CAMERAS SO YOU CAN SEE WHO IS AT THE DOOR AND UNLOCK IT AT THE SAME TIME AND THEN UNLOCK THE DOOR WITH JUST A VOICE COMMAND.**

## THE CONS

COST RANGE IS AROUND \$200 TO \$300. THEY NEED TO BE INSTALLED, ALTHOUGH INSTALLATION IS RELATIVELY EASY ESPECIALLY WITH THE “CONVERSION” VERSIONS. YOU WILL NEED A FAIRLY GOOD INTERNET CONNECTION TO THE FRONT DOOR.

## THE PRODUCTS

BEFORE BUYING A SMART LOCK YOU NEED TO DECIDE WHETHER YOU WANT A *CONVERSION OR FULL LOCK REPLACEMENT*.

A FULL LOCK REPLACEMENT REPLACES THE ENTIRE LOCK FRONT AND BACK AS WELL AS THE DEADBOLT. MORE WORK IS INVOLVED AND IF YOU LIKE THE FRONT HARDWARE OF YOUR LOCK THAT WILL BE REPLACED.

ON THE POSITIVE SIDE THESE LOCKS GENERALLY HAVE TOUCH PAD FEATURES, WHICH ALLOW YOU TO SET A CODE FOR ENTRY.

A CONVERSION LOCK WORKS WITH THE EXISTING DEADBOLT AND FRONT HARDWARE SO YOU ARE ONLY REPLACING THE BACK OF THE LOCK ITSELF. MAKES FOR PRETTY SIMPLE REPLACEMENT.

- AUGUST SMART LOCK Pro (\$200) A CONVERSION LOCK SO WORKS WITH EXISTING DEADBOLT. WORKS BEST WITH ALEXA AND MOST OTHER HUB SYSTEMS AND HAS THE BEST LOCATION AUTOMATION.
- 
- KWIKSET 909 SMART CODE (\$75) INEXPENSIVE FULL LOCK REPLACEMENT WITH PIN CODE FRONT

- **SCHLAGE SENSE SMART DEADBOLT (\$300)** A FULL LOCK REPLACEMENT WITH A NICE FEATURED KEYPAD ON THE FRONT BUT ALSO CAN UNLOCK WITH A KEY. IT IS ALSO ONE OF THE FEW SMART LOCKS THAT INTEGRATES WITH APPLE HOME KIT MEANING YOU CAN USE SIRI TO LOCK AND UNLOCK EVEN WHILE AWAY FROM HOME

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## **SMART THERMOSTATS**

**“SMART” THERMOSTATS ACTUALLY CAN BE DIVIDED INTO 2 TYPES; PROGRAMMABLE AND AUTO-SENSING/ADJUSTABLE.**

**PROGRAMMABLE THERMOSTATS HAVE A LOT OF THE SAME BASIC FEATURES, LIKE CREATING CUSTOM SCHEDULES, VIEWING USAGE HISTORY, AND OF COURSE CONTROLLING THEM REMOTELY FROM YOUR SMARTPHONE.**

**AUTO-SENSING/ADJUSTABLE THERMOSTATS HAVE THOSE SAME FEATURES BUT GO BEYOND ADDING REMOTE THERMOSTAT UNITS FOR FLOORS OR ROOMS THAT CAN BALANCE THE TEMPERATURE SETTINGS.**

**THE MORE ADVANCED UNITS HAVE A SENSING ELEMENT THAT CAN DETECT WHEN SOMEONE IS IN THE AREA AND THEN ADJUST THE TEMPERATURE.**

**SOME CAN EVEN LEARN YOUR HABITS AND “PREDICT” WHEN TO MAKE A TEMPERATURE CHANGE.**

### **THE PROS**

**SMART THERMOSTATS CAN SAVE MONEY ON ENERGY COSTS. THEY CAN DISTRIBUTE AND BALANCE THE HEAT OR AIR**

CONDITIONING FROM ROOM TO ROOM AND FLOOR TO FLOOR.

THEY CAN BE CONTROLLED REMOTELY FROM ANYWHERE IN THE HOUSE (INCLUDING WITH VOICE COMMANDS) OR WHEN YOU'RE AWAY.

### THE CONS

ANY SAVINGS IN ENERGY COSTS SHOULD BE VIEWED IN TERMS OF THE UNIT COST BECAUSE BASED ON FEATURES THESE THERMOSTATS CAN BE EXPENSIVE.

SOME OF THE UNITS ARE SO ADVANCED YOU MIGHT NOT UNDERSTAND OR MAKE USE OF ITS FEATURES.

IN MAKING A DECISION TO PURCHASE A SMART THERMOSTAT THINK ABOUT WHETHER YOU WILL ACTUALLY USE ITS FEATURE SET.

### IMPORTANT CONSIDERATIONS

TWO THINGS TO BE AWARE OF IN DECIDING ON PUTTING IN A SMART THERMOSTAT:

**\*\*SMART THERMOSTATS ARE NOT UNIVERSAL...THIS IS A BIG CONSIDERATION.**  
**BEFORE YOU MAKE A DECISION YOU NEED TO MAKE SURE YOUR HEATING/AIR CONDITIONING SYSTEM IS COMPATIBLE WITH THE THERMOSTAT YOU ARE INTERESTED IN.**

**YOU CAN DO THIS BY GOING ONTO THE PRODUCT WEB SITE AND THEY WILL LIST SYSTEMS THEY CAN AND CANNOT WORK WITH.**

**\*\*YOU MAY ALREADY HAVE A SMART THERMOSTAT.** ALMOST ALL NEW HOMES BUILT IN THE LAST 5 YEARS WILL PROBABLY COME WITH A

**SMART THERMOSTAT AS PART OF THE HEATING/AIR CONDITIONING SYSTEM...BUT YOU MIGHT NOT KNOW THAT.**

**THE THERMOSTAT THAT YOUR NEW HOME HAS, PROBABLY IS PROGRAMMABLE, BUT LIKELY HAS OTHER FEATURES BEYOND THAT, LIKE REMOTE PROGRAMMING AND ABILITY TO USE REMOTE SENSORS IN OTHER ROOMS.**

**FOR EXAMPLE IN SCHELL HOMES DEPENDING ON WHEN YOU MOVED IN, YOUR SYSTEM THERMOSTAT MIGHT BE A *HONEYWELL COMFORT NET*.**

**WHAT YOU PROBABLY DON'T KNOW IS THAT THIS THERMOSTAT CAN BE GREATLY ENHANCED BY ATTACHING IT TO A HONEYWELL HUB, WHICH WILL CONNECT THE THERMOSTAT TO THE INTERNET AND ALLOW IT TO BE PROGRAMMED REMOTELY, WORK WITH REMOTE SENSORS AND INTEGRATE WITH ALEXA**

**SO ...BEFORE CONSIDERING A NEW THERMOSTAT PURCHASE MAKE SURE ABOUT WHAT YOU CURRENTLY HAVE AND IF IT CAN SIMPLY BE UPGRADED TO PROVIDE THE SAME FEATURES YOU WERE LOOKING AT IN A NEW THERMOSTAT.**

## **THE PRODUCTS**

**-NEST THERMOSTAT- (\$250) ONE OF THE BEST KNOWN AND POPULAR SMART THERMOSTATS. USER INTERFACE IN THE APP AND ON THE THERMOSTAT ITSELF MAKES IT REALLY EASY TO USE.**

**THE MOST UNIQUE FEATURE IS ITS ABILITY TO LEARN YOUR THERMOSTAT-ADJUSTING HABITS OVER TIME, SO THAT EVENTUALLY YOU WON'T EVEN HAVE TO WORRY ABOUT**

MANUALLY MAKING CHANGES THROUGHOUT THE DAY. ALSO HAS REMOTE SENSORS FOR OTHER ROOMS.

NEST ALSO MAKES A LESS EXPENSIVE MODEL THE NEST E WHICH IS \$170 AND HAS MANY OF THE SAME FEATURES BUT IT'S MADE OF PLASTIC AND HAD A LESSER DISPLAY.

**-ECOBEE 4- (\$250)** SIMILAR FEATURES TO THE NEST. HAS A TOUCH SCREEN DESIGN THAT IS EASY TO UNDERSTAND. BIG FEATURE IS THAT IS HAS ALEXA BUILT INTO IT. IT DOESN'T JUST WORK WITH ALEXA, IT IS AN ACTUAL ALEXA UNIT AND CAN DO THE SAME THINGS AS IF IT WAS AN ALEXA DOT. COMES WITH 2 REMOTE SENSORS

LIKE NEST, ECOBEE ALSO MAKES A LESS EXPENSIVE UNIT THE ECOBEE LITE WHICH IS \$170. AGAIN MANY OF THE SAME FEATURES AS THE MORE EXPENSIVE MODEL. DOES NOT INTEGRATE ALEXA AND DOES NOT COME WITH REMOTE SENSORS WHICH ARE \$70.

**-HONEYWELL LYRIC- (\$150)** A VERY GOOD BUDGET THERMOSTAT WITH ALL OF THE FEATURES OF THE MORE EXPENSIVE NEST AND ECOBEE MODELS, INCLUDING REMOTE PROGRAMMING AND SENSORS BUT DOESN'T HAVE A LEARNING CAPABILITY.

# **SMART HOME HUBS**

**AS MENTIONED AT THE BEGINNING OF THIS OVERVIEW A SMART HOME HUB IS ESSENTIALLY A COMMAND CENTER FOR ALL OF THE INDIVIDUAL SMART DEVICES IN YOUR HOME.**

**SIMPLY PUT, A HUB TIES ALL OF YOUR DEVICES TOGETHER SO THAT THEY CAN WORK WITH EACH OTHER AND BE CONTROLLED WITH SIMPLE VOICE COMMANDS OR ROUTINES.**

**WERE IT THAT SIMPLE HOWEVER....BUT IT ISN'T BECAUSE THERE IS NO ONE STANDARD HUB SYSTEM THAT WORKS WITH EVERYTHING...NOT YET!**

**SO TO EXPLAIN.....**

**THE TERM “HUB” IS GENERIC SO WHEN YOU SEE THE TERM MENTIONED WHEN LOOKING AT SMART DEVICE PRODUCTS, IT COULD APPLY TO A HUB NEEDED JUST FOR THAT PRODUCT WHICH IS A SMALL UNIT THAT PLUGS INTO YOUR ROUTER AND COMMUNICATES WITH THAT DEVICE.**

**OR IT COULD MEAN A UNIVERSAL HUB SYSTEM LIKE ALEXA WHICH JOINS DIFFERENT TYPES OF SMART PRODUCTS TO WORK TOGETHER.**

**SOMETIMES A HUB UNIT IS NECESSARY FOR A SMART DEVICE TO FUNCTION AND IF THAT'S THE CASE THE HUB UNIT WILL GENERALLY COME WITH THE DEVICE IN A PRODUCT “STARTER KIT”. THINK LUTRON SWITCHES WHICH WILL NOT FUNCTION CORRECTLY WITHOUT A LUTRON BRAND HUB.**

**WITH OTHER PRODUCTS THE HUB UNIT MAY BE “OPTIONAL”. THE PRODUCT ITSELF WILL WORK ON ITS OWN BUT IF YOU ADD THE OPTIONAL HUB IT WILL PROVIDE ADDITIONAL FEATURES NOT AVAILABLE WITHOUT IT**

THINK THE HONEYWELL COMFORT CARE THERMOSTAT WHICH HAS A NUMBER OF FUNCTIONS BUT NEEDS A HUB TO OPEN UP REMOTE CABILITIES.

READ THE INFORMATION ON A PRODUCT YOU'RE INTERESTED IN AND IT WILL TELL YOU IF THAT DEVICE NEEDS ITS OWN PRODUCT HUB OR IF IT CAN WORK WITHOUT ONE.

## UNIVERSAL HUB SYSTEMS

WHEN YOU LOOK AT A SMART DEVICE THE INFORMATION WILL TELL YOU IF IT IS COMPATABLE/WORKS WITH A UNIVERSAL HUB SYSTEM. SO YOU WILL SEE SOMETHING LIKE THIS: “*WORKS WITH ALEXA*” — ‘*WORKS WITH GOOGLE ASSISTANT*’ — “*WORKS WITH APPLE HOME KIT*” ETC.

MANY PRODUCT DEVICES WORK WITH MORE THAN ONE UNIVERSAL HUB AND AGAIN THEY WILL BE MENTIONED IN THE PRODUCT INFORMATION AND MOST TIMES RIGHT ON THE BOX.

**THIS IS A SHORT LIST OF THE MOST WIDELY USED UNIVERSAL HUBS**

### 1. AMAZON ALEXA

MOST OF YOU KNOW ALEXA AS JUST A UNIT TO PLAY MUSIC, ANSWER QUESTIONS, TELL YOU THE WEATHER, MAKE VIDEO CALLS, ETC.

ALEXA HOWEVER IS MUCH, MUCH MORE AS IT HAPPENS TO BE A VERY POWERFUL UNIVERSAL HUB JOINING TOGETHER MANY DIFFERENT TYPES OF SMART DEVICES BY DIFFERENT COMPANIES TO WORK WITH ONE ANOTHER.

WITH MORE THAN 20,000 THIRD-PARTY DEVICE INTEGRATIONS, ALEXA IS UNDOUBTEDLY ONE OF THE MOST COMPREHENSIVE SMART HOME ECOSYSTEMS AVAILABLE TODAY. ECOBEE4/HONEYWELL) AND TVs (I.E. FIRE TV).

**THE ALEXA SYSTEM IS EVEN BUILT INTO MANY DEVICES SO NO CONNECTION INSTRUCTIONS ARE EVEN NECESSARY.**

**ALEXA MAKES EVERY ASPECT OF YOUR SMART HOME EASY TO ACCESS AND CONTROL. YOU CAN USE ALEXA TO SPEAK TO APPS LIKE SPOTIFY JUST AS EASILY AS YOU CAN ASK HER TO TURN OFF THE LIGHTS.**

**YOU CAN CREATE ROUTINES LIKE HAVING CERTAIN LIGHTS TURN ON AT CERTAIN TIMES INCLUDING OPENING AND CLOSING SHADES ALONG WITH THE LIGHTS. ANNOUNCE SOMEONE IS AT YOUR DOOR. CHANGE CHANNELS ON YOUR TV AND LOWER THE LIGHTS IN THE ROOM IF IT'S A MOVIE**

**IT INTEGRATES SEAMLESSLY WITH PRODUCTS MADE BY PHILIPS, SAMSUNG, NEST, AND SCHLAGE – MEANING, ALEXA CAN NOW CLOSE YOUR GARAGE, LOCK YOUR DOORS, AND ADJUST YOUR HOME'S TEMPERATURE.**

**AS MENTIONED ABOVE TO KNOW IF ALEXA WILL WORK WITH A CERTAIN DEVICE, JUST LOOK FOR THE 'WORKS WITH AMAZON ALEXA' TAG.**

## **2. GOOGLE HOME ASSISTANT**

**IF THERE'S ANY TRUE RUNNER-UP TO ALEXA, IT'S GOOGLE ASSISTANT. EVEN THOUGH GOOGLE ASSISTANT HAS LESS THIRD-PARTY INTEGRATIONS, IT CAN OFTEN ANSWER QUESTIONS AND COMPLETE COMMANDS ALEXA CAN'T, THANKS TO GOOGLE'S MAJOR OWNERSHIP OF THE SEARCH ENGINE SPACE.**

**RESEARCH HAS SHOWN GOOGLE ASSISTANT WAS FIVE TIMES MORE LIKELY TO GIVE A CORRECT ANSWER THAN ALEXA. ULTIMATELY, ASSISTANT WINS WHEN IT COMES TO UNDERSTANDING HOW PEOPLE NATURALLY SPEAK.**

**AS WITH ALEXA GOOGLE ASSISTANT CAN ALSO INTEGRATE WITH PRODUCTS FROM MOST MAJOR BRANDS, INCLUDING PHILIPS, BELKIN, AUGUST, NEST, AND POPULAR APPS SUCH AS SPOTIFY AND UBER.**

## **2. APPLE HOME KIT (HOME POD)**

**IF YOU ARE AN APPLE IPHONE, IPAD, MAC OR APPLE TV USER APPLE'S HOME KIT IS A NICE HUB SYSTEM BECAUSE IT TIES IN VERY WELL WITH APPLE DEVICES.**

**ONE OF THE BEST THINGS ABOUT HOME KIT IS THAT THERE IS NO COST OR PURCHASE AS THERE IS WITH ALEXA OR GOOGLE. THE HOME KIT APP IS A STANDARD APP ON YOUR IPHONE OR IPAD.**

**YOU DO NEED AN APPLE TV AND THEN YOU CAN TIE IN YOUR DEVICES TO THE APP AND SET UP ROUTINES AND USE SIRI TO CONTROL THE DEVICES.**

**THE DOWNSIDE TO HOME KIT IS THAT IT HAS A SMALLER LIST OF THIRD PARTY DEVICES THAT IT WILL WORK WITH.**

**THE APPLE HOME POD IS APPLES ANSWER TO ALEXA AND ITS MENTIONED HERE BUT AT THIS POINT ITS NOT UP TO EITHER ALEXA OR GOOGLE. RATHER THAN SPEND THE MONEY, THE FREE HOME KIT APP WILL DO MUCH OF THE AUTOMATED STUFF THAT THE HOME POD CAN DO.**

### **3. ADDITIONAL HUBS FOR CONSIDERATION**

**IF YOU GROW YOUR SMART HOME TO ADD MORE DEVICES TO DO MORE THINGS, DOWN THE ROAD YOU MIGHT WANT TO CONSIDER THE CAPABILITIES OF OTHER HUB SYSTEMS.**

**THERE ARE A NUMBER OF ADDITIONAL HUB PRODUCTS AVAILABLE AND PROBABLY MANY MORE TO COME AND THEY OFFER DIFFERENT ADVANTAGES.**

**THE WINK 2 AND SAMSUNG SMART THINGS HUBS ARE TWO EXAMPLES OF HUBS THAT HAVE NO “BRAND LOYALTY” SO THEY WORK WITH A VERY LARGE NUMBER OF DEVICES FROM DIFFERENT COMPANIES AND THEY BOTH DO A GOOD JOB OF INTEGRATING THE DEVICES.**