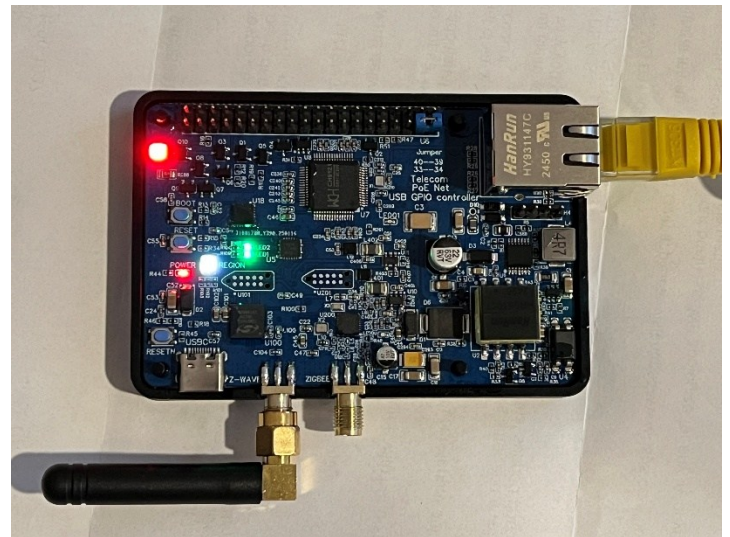


SMART HOME

(thewiseconn.com)



Company Profile (www.thewiseconn.com)

Wise Connect Technologies Corporation was established in 2012 and is a company specializing in the research and development of intelligent control technology. Its products include distributed large-scale intelligent systems capable of centralized control over an entire building, community, or even an entire city.

Introduction

A smart home system is an electronic system capable of intelligently controlling buildings and venues such as homes, office buildings, hospitals, and schools. An ideal smart home system should be able to understand and predict human needs and intentions and execute operations on relevant devices. Currently, the smart home system from Wise Connect Technologies Corporation can achieve partial intelligent control. Although there is still a considerable gap from the ideal system, it remains the most advanced system in the world.

Smart home systems have a history of over thirty years, evolving from the earliest X10 and UPB to Insteon, ZigBee, and Z-Wave. Smart home systems have also progressed from initial infrared remote control and power line carrier technologies to modern wireless communication and Ad-Hoc sensor network technologies. However, these networking technologies alone are insufficient. The reliability and security of the entire system, as well as the intelligence technology—which is the most critical aspect of a smart system—are the top priorities. This means the system should not require human intervention, automatically respond, and notify the owner of the results. Our system has made some beneficial explorations in intelligence, human-machine interaction, and media bandwidth adaptation.

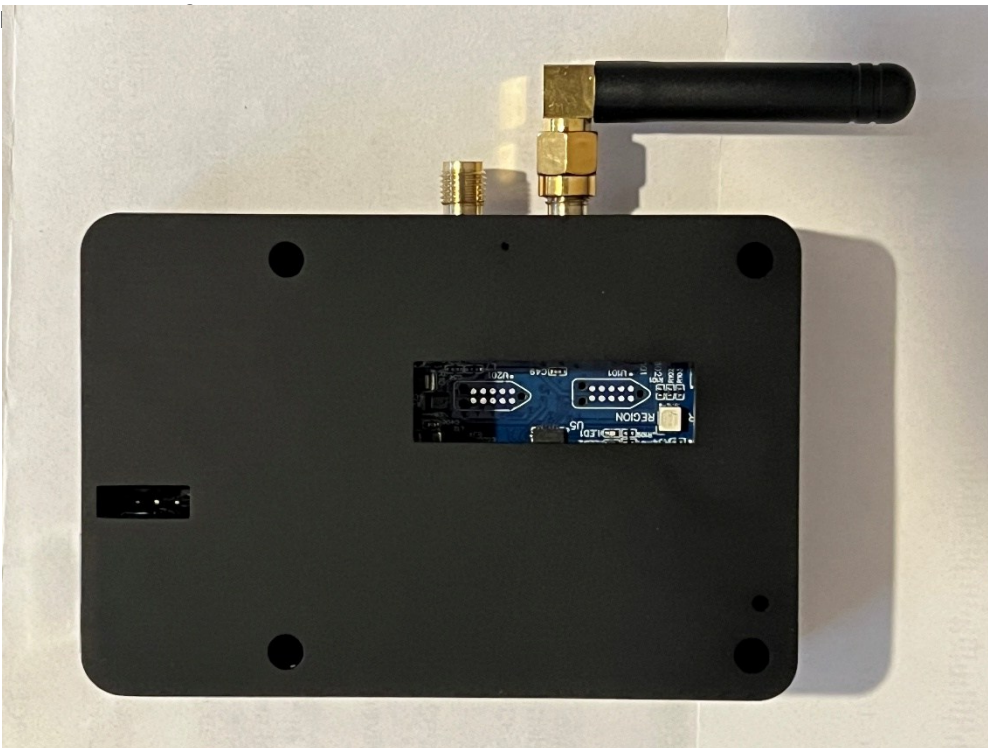


Hardware System

The hardware system consists of a control server, interface technology devices, and other components that form the control system. Our control server can be flexibly configured, ranging from low-cost, low-power Raspberry Pi units to large-scale servers in data centers, depending on the scale of the smart home system. This is a control server capable of managing hundreds of home devices. The control server can also function as a wireless router through its settings.



We also have the world's unique network interface technology device, which supports Z-Wave Plus, ZigBee, and other technologies, and enables mixed interactive control across various technologies. It can support remote interactive control from thousands of miles away. This is a Z-Wave Plus



HOMEVIEWTOOLSPUG-INS?

+ Z-Wave Networks and Options

Z-Wave Interfaces

Name: Sigma Z-Wave Plus

This is the MAIN interface for this Home ID of DC2BC005

Name:Sigma Z-Wave PlusInterface Model:Generic Serial ControllerSerial Port:/dev/ttyACM0

Actions:

ID: 980CD3A09A23

+ Controller Node Information:

Add Interface

Home | Device Status | Device Management | Events | Log | Setup | Global Elements | Control Panel | Manage Plug-ins | About

Installed Plug-ins

☐ Developer Mode

Plug-In	Instance	Enable	COM Port	Version	Update	License (click to change)	Plug-in Status
BOSESoundTouch			N/A	3.8.0.0	N/A	Trial with 30 days left. Register Online	OK
HSTouch Server			N/A	3.0.0.68	N/A	Included	OK
Sonos	See plug-in config		N/A	3.1.0.20	N/A	Included	OK
Z-Wave			N/A	3.0.1.124	N/A	Included	OK

Remote Plug-Ins

Getting 3rd party information...

Additional Interfaces

Update Listing

Home | Device Status | Device Management | Events | Log | Setup | Global Elements | Control Panel | Manage Plug-ins | About

For example, you can use a ZigBee sensor to trigger and control a Z-Wave device, or use a sensor in Beijing to trigger and control a device or a series of events in New York.

Sensors, Control Devices, and Audio-Visual Equipment

Currently, the market offers a wide variety of devices, including ZigBee, Z-Wave, Insteon, X10, and UPB, with Z-Wave devices being the most abundant. Let's first talk about audio. Our system conveniently controls devices such as Bose SoundTouch and Sonos. Bose SoundTouch



User Interfaces :

☐	On	BOSESoundTouch	BOSESoundTouch	SoundTouch Power 10.0.1.152	Today 5:06:27 PM	Off On
☐	Volume: 34	BOSESoundTouch	BOSESoundTouch	SoundTouch Volume 10.0.1.152	Today 5:06:36 PM	- +
☐	Off	BOSESoundTouch	BOSESoundTouch	SoundTouch Mute 10.0.1.152	Today 4:41:44 PM	Off On
☐	PANDORA	BOSESoundTouch	BOSESoundTouch	SoundTouch Source 10.0.1.152	Today 5:06:27 PM	AUX WKDM AM 1380 Maroon 5 Radio Today's Hits Radio Today's Adult Hits Radio Monster Cat Radio
☐	http://mediaserver-cont-dc6-1-v4v6.pandora.com/images/public/int/5/8/8/2/00602:	BOSESoundTouch	BOSESoundTouch	SoundTouch Source Art 10.0.1.152	Today 5:06:27 PM	
☐	Human	BOSESoundTouch	BOSESoundTouch	SoundTouch Track 10.0.1.152	Today 5:06:48 PM	Previous Next Shuffle Off Shuffle On Repeat Off Repeat One Repeat All
☐	Rag'n'Bone Man	BOSESoundTouch	BOSESoundTouch	SoundTouch Artist 10.0.1.152	Today 5:06:48 PM	
☐	Human (Deluxe)	BOSESoundTouch	BOSESoundTouch	SoundTouch Album 10.0.1.152	Today 5:06:48 PM	
☐	Today's Hits Radio	BOSESoundTouch	BOSESoundTouch	SoundTouch Station Name 10.0.1.152	Today 5:06:27 PM	
☐		BOSESoundTouch	BOSESoundTouch	SoundTouch Description 10.0.1.152	Today 4:41:44 PM	
☐		BOSESoundTouch	BOSESoundTouch	SoundTouch Station Location 10.0.1.152	Today 4:41:44 PM	
☐	IMAGE_PRESENT	BOSESoundTouch	BOSESoundTouch	SoundTouch Art Status 10.0.1.152	Today 5:06:49 PM	
☐	http://mediaserver-cont-sv5-3-v4v6.pandora.com/images/public/int/0/1/5/8/88644:	BOSESoundTouch	BOSESoundTouch	SoundTouch Art Url 10.0.1.152	Today 5:06:49 PM	



User Interface :

Device List

Display Filters: Floor Room Device Type Show All

Status	Floor	Room	Name	Last Change	Control
Alessia Cara KNOW-IT-ALL Playing Pandora - Sit Still, Look Pretty Radio Here Alessia Cara Know-It-All Sonos Living Room Player Today 5:04:09 PM Play Stop Pause Prev Next Shuffle Repeat Vol - Dn Vol - Up Mute Bal - Left Bal - Right Loudness					
Here Sonos Living Room Track Today 5:03:16 PM					
Most Girls Sonos Living Room Next Track Today 5:03:16 PM					
Alessia Cara Sonos Living Room Artist Today 5:03:16 PM					
Hailee Steinfeld Sonos Living Room Next Artist Today 5:03:16 PM					
Know-It-All Sonos Living Room Album Today 5:03:16 PM					
Most Girls (Single) Sonos Living Room Next Album Today 5:03:16 PM					
/images/Sonos/Artwork/CoverRINCON_B8E9E... Sonos Living Room Art Today 5:04:09 PM					
/images/Sonos/Artwork/NextCoverRINCON_B... Sonos Living Room Next Art Today 5:03:16 PM					
Playing Sonos Living Room State Today 4:36:59 PM Stop Play Pause Play-Pause					
Volume 44% Sonos Living Room Volume Today 4:37:05 PM Down Up					
Unmuted Sonos Living Room Mute Today 4:31:27 PM Off On Toggle					
Loudness Off Sonos Living Room Loudness Today 4:31:27 PM Off On Toggle					
Balance L (-100) <-> R (+100) : 0 Sonos Living Room Balance Today 4:31:27 PM Down Up					
00:03:19 Sonos Living Room Track Length Today 5:03:15 PM					
00:02:44 Sonos Living Room Track Position Today 5:04:36 PM Down Up					
Sit Still, Look Pretty Radio Sonos Living Room Radiostation Name Today 4:36:58 PM					

Door Locks :



☐	 No Status	First Floor	Living Room	Front Door Lock		
☐	 100%	First Floor	Living Room	Front Door Lock Battery	5/31/2017 4:33:23 PM	
☐	 Unlocked	First Floor	Living Room	Front Door Lock	Today 9:22:26 AM	Unlock Lock
☐	(Not Set)	First Floor	Living Room	Front Door Lock Logging		Get Latest Record
☐	Unlocked by Lever	First Floor	Living Room	Front Door Lock Notification	Today 9:22:26 AM	

Sensors:



User Interface :

☐	 No Status	Basement	Basement	Basement On/Off Sensor		
☐	 100%	Basement	Basement	Basement Motion Sensor Battery	5/20/2017 9:39:11 AM	
☐	 No Motion	Basement	Basement	Basement Motion Sensor	Today 12:13:51 AM	
☐	 66.2 F	Basement	Basement	Basement Temperature	Today 2:38:45 PM	
☐	 0 Lux	Basement	Basement	Basement Luminance	Today 1:38:44 PM	
☐	 47 %	Basement	Basement	Basement Relative Humidity	Today 2:08:44 PM	

Combustible Gas and Water Leak Sensors, as well as Valve Control, Water Meters, and Gas Meters:



Power Switch

:



☐	 No Status	Basement	Basement	Main Power Energy Switch		
☐	 115.169 kW Hours	Basement	Basement	Main Power kW Hours	Today 9:20:01 AM	Reset Accumulated Values
☐	 154.393 Watts	Basement	Basement	Main Power Watts	Today 9:19:50 AM	
☐	 242.053 Volts	Basement	Basement	Home Power Volts	Today 9:14:52 AM	
☐	 1.462 Amperes	Basement	Basement	Home Power Amperes	Today 9:19:13 AM	
☐	 85.1 F	Basement	Basement	Main Power Switch Temperature	Today 9:14:49 AM	
☐	 On	Basement	Basement	Main Power Switch	5/30/2017 3:03:23 PM	Off On

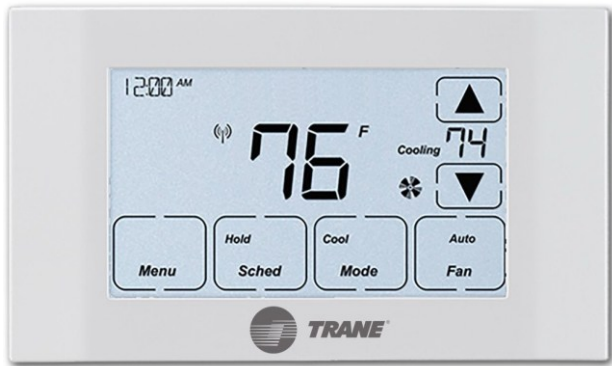
Indoor Sensor:



☐	 No Status	Basement	Basement	Basement On/Off Sensor		
☐	 100%	Basement	Basement	Basement Motion Sensor Battery	5/20/2017 9:39:11 AM	
☐	 No Motion	Basement	Basement	Basement Motion Sensor	Today 2:51:29 PM	
☐	 66 F	Basement	Basement	Basement Temperature	Today 3:38:46 PM	
☐	 1 Lux	Basement	Basement	Basement Luminance	Today 3:50:46 PM	
☐	 48 %	Basement	Basement	Basement Relative Humidity	Today 3:50:44 PM	

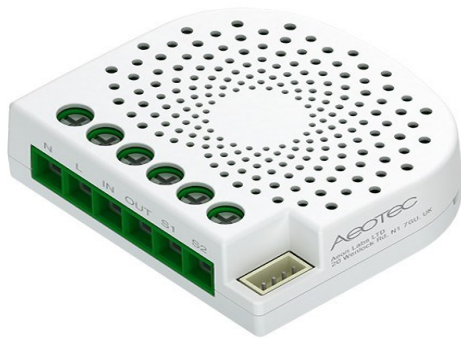
Central Air Conditioning and Heating Controller





☐		No Status	First Floor	Z-Wave	First Floor Thermostat		
☐		68 F	First Floor	Hallway	Temperature	Today 2:48:31 PM	
☐		On	First Floor	Hallway	Fan Mode	6/4/2017 1:04:29 AM	Auto On
☐		On	First Floor	Hallway	Fan State	5/20/2017 9:39:08 AM	
☐		Off	First Floor	Hallway	Mode	6/4/2017 8:45:32 AM	Off
☐		Idle	First Floor	Hallway	Operating State	5/30/2017 8:48:23 AM	
☐		70 F	First Floor	Hallway	Heating Setpoint	5/29/2017 3:17:57 PM	(value) F 70 Submit
☐		74 F	First Floor	Hallway	Cooling Setpoint	5/20/2017 9:58:13 AM	(value) F 74 Submit

Power Switch::



☐	No Status	First Floor	Family Room	Family Room Lights		
☐	0.964 kW Hours	First Floor	Family Room	kW Hours	Yesterday 11:41:49 PM	<button>Reset Accumulated Values</button>
☐	0 Watts	First Floor	Family Room	Family Room Lights Watts	Today 11:56:26 AM	
☐	123.187 Volts	First Floor	Family Room	Family Room Volts	Today 4:35:29 PM	
☐	0.005 Amperes	First Floor	Family Room	Family Room Lights Amperes	Today 4:32:13 PM	
☐	Off	First Floor	Family Room	Family Room Lights	Yesterday 11:34:38 PM	<button>Off</button> <button>On</button>

Lawn Irrigation System



☐	No Status	Basement	Basement	GoControl Irrigation Controller		
☐	No Event	Basement	Basement	Irrigation Notification		
☐	On	Basement	Basement	Irrigation System	Today 4:28:11 PM	<button>Off</button> <button>On</button>
☐	Valve 3 On for 10 min	Basement	Basement	Irrigation Valve	Today 7:50:00 PM	Valve 3 On for 10 min

Rice Cooker:



☐	 No Status	First Floor	Z-Wave	Rice Cooker Switch Binary		
☐	 1.949 kW Hours	First Floor	Z-Wave	kW Hours	Today 7:21:18 PM	Reset Accumulated Values
☐	 0 Watts	First Floor	Kitchen Room	Rice Cooker Watts	Today 7:17:18 PM	
☐	 0 W	First Floor	Z-Wave	Power	Today 7:17:18 PM	
☐	 Off	First Floor	Kitchen Room	Rice Cooker Switch	6/1/2017 9:41:47 PM	Off On

☐	 No Status	First Floor	Kitchen Room	Refrigerator Switch		
☐	 190.115 kW Hours	First Floor	Kitchen Room	kW Hours	6/1/2017 6:12:44 PM	Reset Accumulated Values
☐	 188.572 Watts	First Floor	Kitchen Room	Refrigerator Watts	Today 4:35:24 PM	
☐	 0	First Floor	Kitchen Room	Power		
☐	 On	First Floor	Kitchen Room	Refrigerator Switch	5/22/2017 3:30:02 PM	Off On

Electricity Meter Function:

☐	 No Status	Basement	Basement	House Multilevel Sensor		
☐	 33.658 kW Hours	Basement	Basement	kW Hours 2	Yesterday 11:16:25 AM	Reset Accumulated Values
☐	 660.990 Watts	Basement	Basement	Phase 2 Watts	Yesterday 11:17:07 AM	
☐	 100%	Basement	Basement	House Sensor Battery	5/31/2017 10:21:09 AM	
☐	 54.642 kW Hours	Basement	Basement	kW Hours 1	Yesterday 11:16:27 AM	Reset Accumulated Values
☐	 421.520 Watts	Basement	Basement	Phase 1 Watts	Yesterday 11:17:10 AM	
☐	 1090.43 W	Basement	Basement	House Power	Yesterday 11:17:08 AM	

Garage Control

☐	 No Status	First Floor	Living Room	Garage Control Switch		
☐	0	First Floor	Living Room	Meter Pulse		
☐	 No Notification	First Floor	Living Room	Notification		Reset Notifications
☐	 On-Open-Motion	First Floor	Living Room	Garage Remote	Today 4:05:26 PM	
☐	0	First Floor	Living Room	General Purpose		
☐	 Off	First Floor	Living Room	Garage Control Switch	Today 6:28:26 PM	Off On

Events:    

 **Event Name:**



Basement Dehumidifier

Type

Comfort



Group Reassign:

Basement Humidity



IF Basement Basement Basement Relative Humidity was set and has a value that is greater than 50 %

Then Set Device Basement Basement Dehumidifier Switch to On

 **Options >**

 **Event Name:**



Turn off Dehumidifier

Type

Comfort



Group Reassign:

Basement Humidity



IF Basement Basement Basement Relative Humidity was set and has a value that is less than 40 %

Then Set Device Basement Basement Dehumidifier Switch to Off

 **Options >**

0

Event Name:

Doo, Lock Code

Type

user c-ode

Group Reassign:

Home Security

8

£J--

IF The time is at 7:00 :00 AM

THEN



Z-Wave Actions



Network: C6B8F3*1F (Network C6BBF34F)



Set Security User Code



Release AD device:

THEN



Z-Wave Actions

Network: C6B8F34F (Network C6BBF34F)



Set Security User Code

Release AD device:

III en Set user code 1 on device First floor Living Room Front Door Lock to the 8 digit code provided. III

en Set user code 2 on device First Floor Living Room Front Door Lock to the 8 digit code provided. III en

Set user code 3 on device First Floor Living Room, Front Door Lock to the 8 digit code provided. III en Set

user code 4 on device First floor Living Room, Front Door Lock to the 8 digit code provided.



Event Name:

Nature Gas

Type

Dangerous

Group Reassign:

Home Security

E

£J--

IF First Floor Kitchen Room Natl.Ire Gas Sensor Status changes and becomes On-Open-Motion

111en Set Device First Floor Kitchen Room Kitchen Gas Valve to Off



EventName:

WaterLeak

Type

Dangerous

Group Reassign:

Home Security

£J--

IF Basement Basement Basement Water Sensor Binary changes and becomes On-Open-Motion

£J

OR IF Second Floor Second Bath room Bathroom Sensor Binary changes and becomes On-Open-Motion

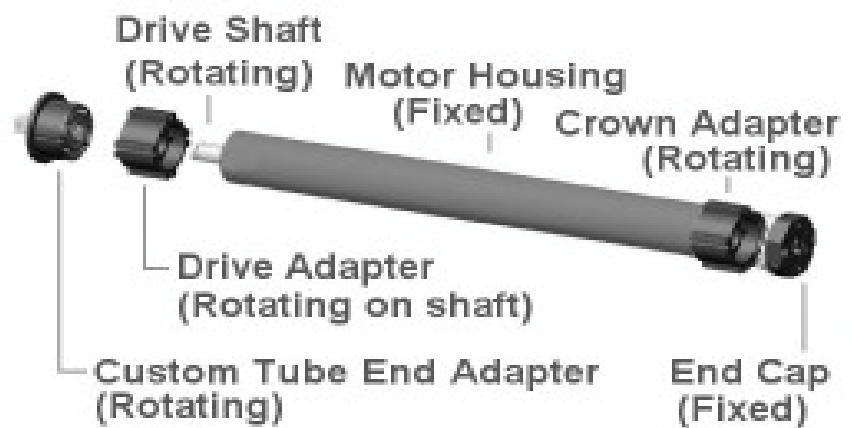
£J

Then Set Device Basement Basement Main Water Valve to Off

£J

Automated Windows



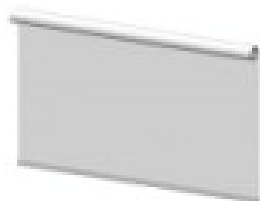


Precision Electronic Remote Control Motors

Subcategories

No image
available

[G Series](#)



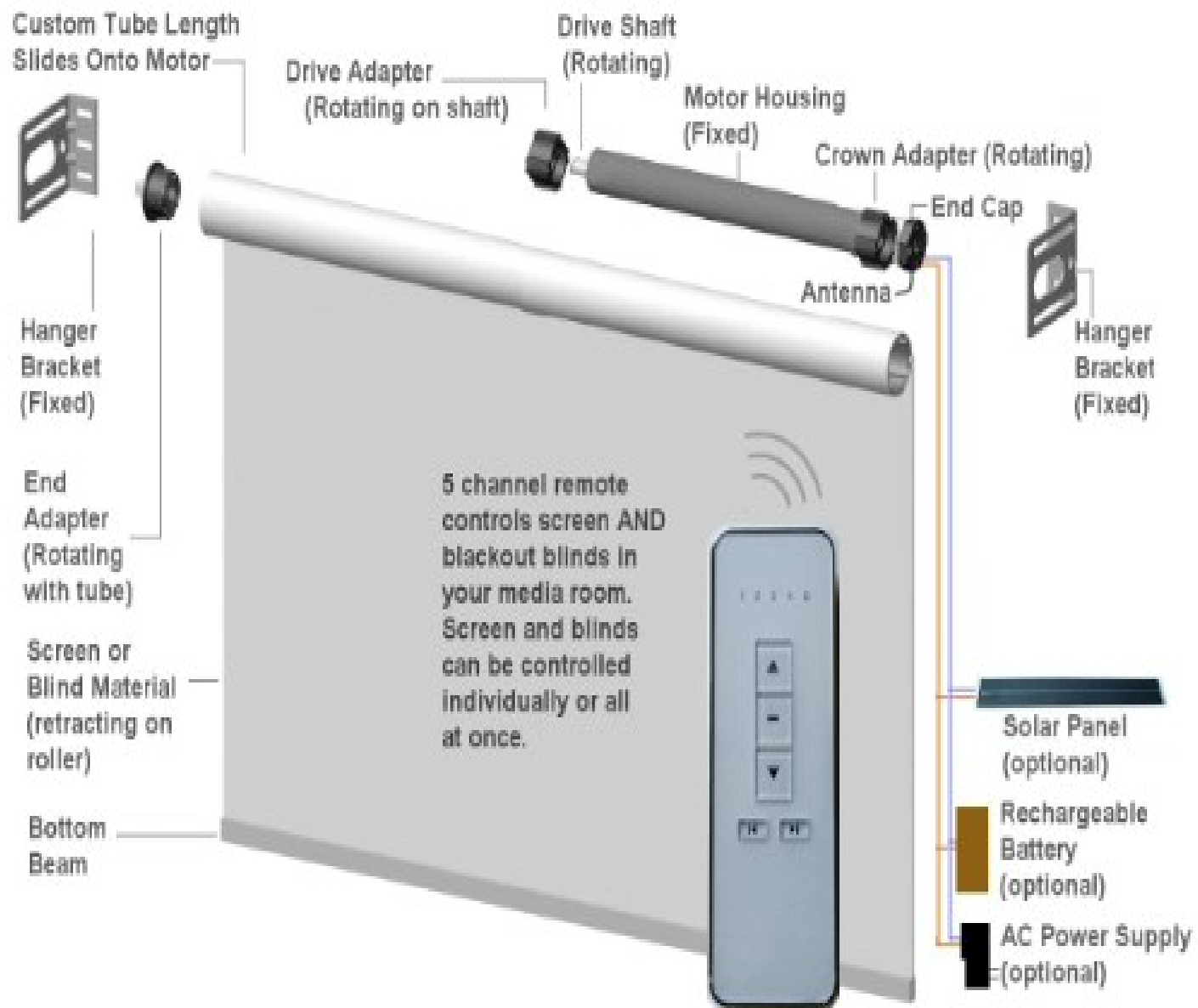
[DIY Starter Kits](#)

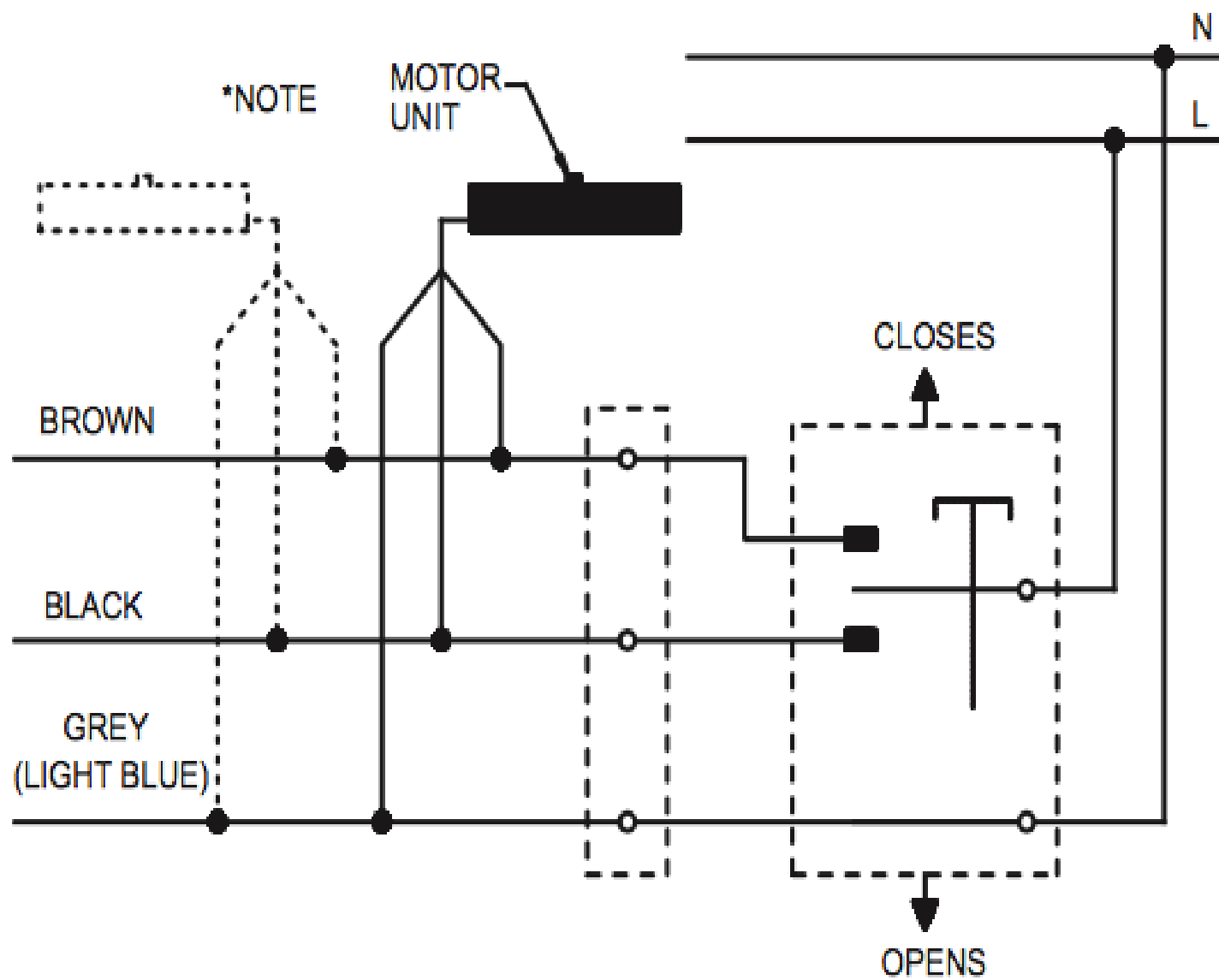


[Motor Control
Sensors](#)



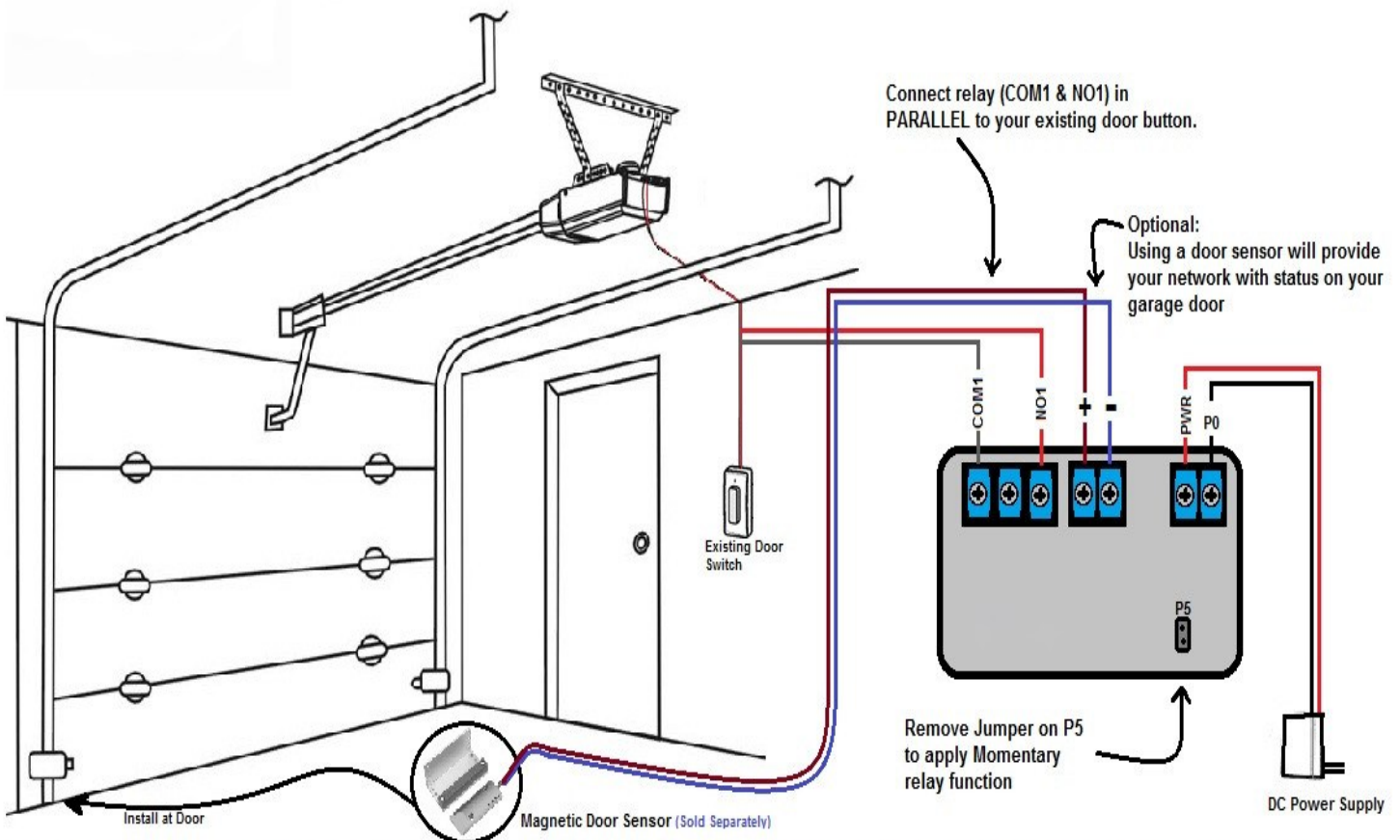
[R Series](#)





Garage Door Control

Wiring Diagram for Garage Door Control



WARNING: For this application, this device is recommended **ONLY** for use with garage doors / gates that comply with the latest government safety requirements (i.e. those with automatic reversing mechanisms and electronic photo eye sensors that detect obstructions). If your garage door / gate does not have these government-mandated safety features, replace or update your garage door opener **BEFORE** attempting this application installation.

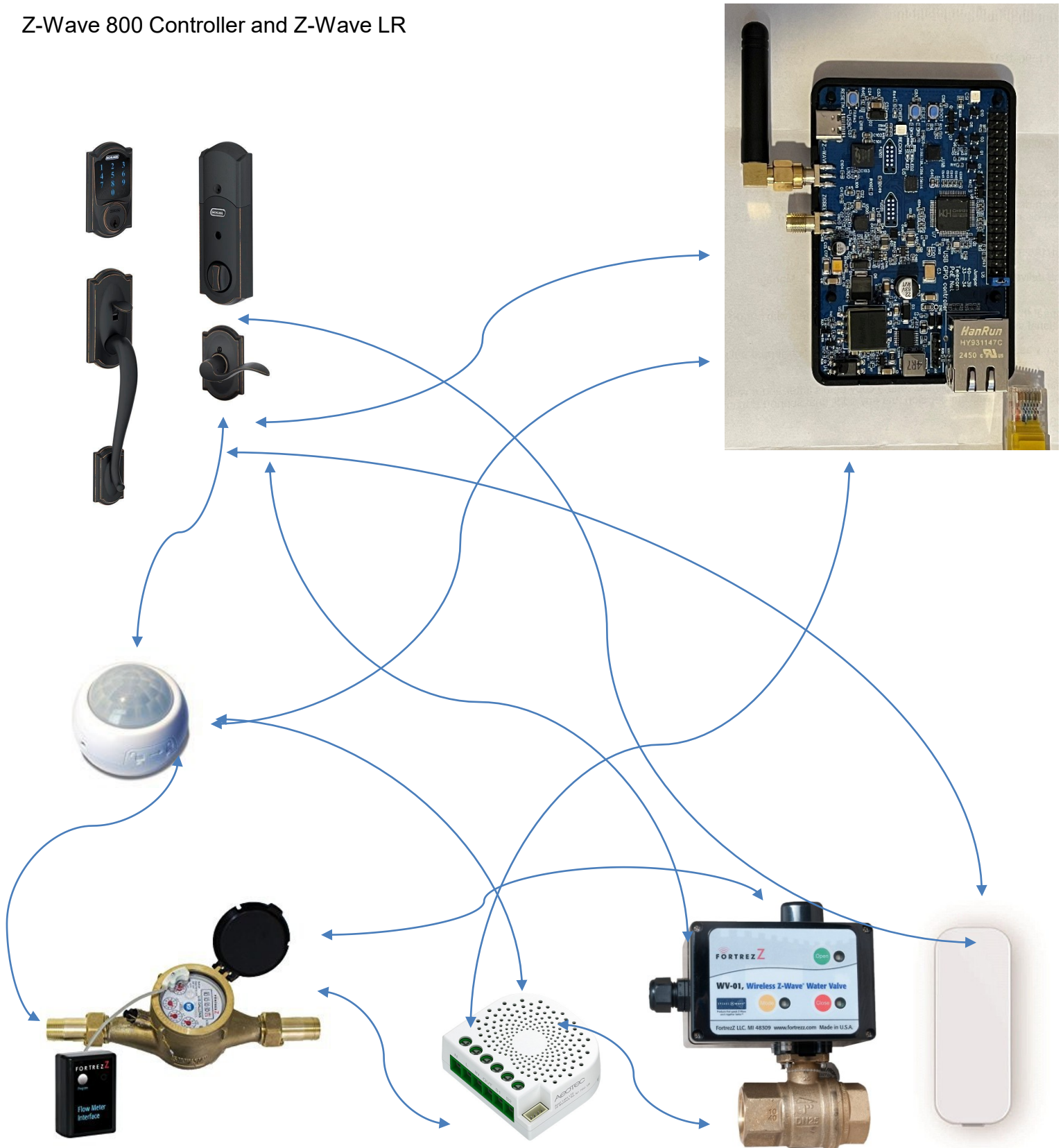
Note: Some municipalities and manufacturers recommend a Mini Sounder (Piezo) be connected that will provide audible warning prior to and during operations of the garage door / gate closer motor. FOR MORE INFORMATION PLEASE REFERENCE THE DOCUMENTATION PROVIDED BELOW.

<http://www.cpsc.gov/en/Newsroom/News-Releases/1993/Safety-Commission-Publishes-Final-Rules-For-Automatic-Garage-Door-Openers/>

<http://www.ul325.com/>

Products Released in 2024

Z-Wave 800 Controller and Z-Wave LR



Introduction to the Z-Wave 800

Z-Wave is one of the world's most popular wireless protocols for smart homes, and the latest version, the Z-Wave 800 platform solution, was released in 2021. To date, the global market has over 3,600 products designed based on various versions of the Z-Wave platform. Taking devices based on the Z-Wave 500 and Z-Wave 700 series as examples, each has an installed base exceeding 100 million units.

Z-Wave Protocol Overview Z-Wave is an open wireless network connectivity protocol used for control, monitoring, and status reading applications in smart homes, building automation, and multi-dwelling units (MDUs). Z-Wave is a mature, proven, and widely deployed wireless protocol that provides affordable, reliable, and easy-to-use smart connectivity products to millions of people worldwide. The Z-Wave solutions we provide are end-to-end complete solutions, including software, hardware, and security for controllers and end devices.

Regarding updates to the Z-Wave platform versions, the Z-Wave 500 series modules released in 2013 provided devices compatible with Z-Wave Plus. Compared to the previous-generation 400 series, they featured greater wireless range, higher data rates, larger memory capacity, and lower power consumption. The Z-Wave 700 series was released in 2019, and compared to the 500 series, the 700 series SoCs and modules have significant improvements, such as faster wireless speeds, longer battery life, and wireless ranges of up to 1 mile.

The latest Z-Wave 800 series, launched in 2021, is the most advanced version of Z-Wave to date. The Z-Wave 800 SoCs and modules achieve major performance leaps with extremely low power consumption, button battery life exceeding 10 years, wireless ranges over 1.5 miles, and robust security.

Quick Comparison	Z-Wave 500 vs. 800	Z-Wave 700 vs. 800
Wireless Range	600 m vs. 1.5+ miles	1 mile vs. 1.5+ miles
Battery Life	1.5 years vs. 10 years	Up to 10 years in both
Security	S2 only vs. S2 + Secure Vault™	S2 only vs. S2 + Secure Vault™
Memory	Flash (module): 128 kB vs. 512 kB	Flash (SoC): 256 kB vs. 512 kB
	RAM (module): 16 kB vs. 64 kB	RAM (SoC): 32 kB vs. 64 kB
Footprint	Module (mm): 8x8 vs. 6.5x6.5	Module (mm): 9x9 vs. 6.5x6.5
	No SoC in Z-Wave 500	SoC (mm): 5x5 in both

Extended Wireless Range

One of the most fundamental improvements in the Z-Wave 800 series is the expansion of wireless range. With the 800 series, device manufacturers can achieve product ranges of up to 1.5 miles (over 2,300 meters), compared to over 1 mile (1,500 meters) in the 700 series. In residential, MDU, and building automation applications, the extended range enables products to connect with fewer network nodes, operate farther from the gateway, and extend beyond the yard. The ZG23 SoC features a unique +20 dBm transmission (TX) power, combining high output power with low power consumption.

Longer Battery Life

Energy efficiency is critical for battery-powered IoT devices. The less power a product consumes, the more money end users save, while also reducing the hassle and waste associated with battery replacement. Both the Z-Wave 700 and 800 series offer button-cell battery life of up to 10 years. The ZG23 wireless SoC, based on the Z-Wave 800 platform, provides significant energy advantages over the Z-Wave 700 series, including a 30% reduction in transmission (TX) current and a 100% improvement in reception (RX) current efficiency.

Enhanced Security

Both the Z-Wave 800 and 700 series include the standard S2 security framework. However, the 800 series, along with the ZG23 and ZGM230S hardware, also supports a wide range of Secure Vault™ features, such as Secure Boot, secure key management, anti-tampering, differential power analysis (DPA) countermeasures, and secure debugging.

Compared to the Z-Wave 500 series, the Z-Wave 800 module (ZGM230S) offers several advantages for device manufacturers and developers. Key points include:

- The Z-Wave 800 series has a range of 1.5+ miles (2,300 meters), while the Z-Wave 500 series has a range of 600 meters.
- The Z-Wave 800 series improves TX current by 5 mA and RX sensitivity by 5 dBm, enabling a button-cell battery life of up to 10 years (compared to 1.5 years in the Z-Wave 500).
- The Z-Wave 800 module has a footprint of 6.5 x 6.5 mm, while the Z-Wave 500 module requires 8 x 8 mm—making the Z-Wave 800 module 25% smaller in size.



Future Trends

Redefine the protocol to complete a virtualized central control system. It will only require a lightweight control system—such as a Raspberry Pi—to control an entire city. The protocol will include storage for settings, control, and triggering—covering multiple sensors and multiple events triggering each device. Once the protocol matures, it will be implemented as a chip. The controller board will support frequencies for various countries, managed by software, and will include an external antenna.