

## EZMultiPli™

Z-Wave Wireless Plug-In Multi Sensor:

Motion Sensor  
Light Sensor  
Temperature Sensor  
Color Indicator/Night Light  
Wall Powered  
Z-Wave Range Extender

### Features

#### Motion Sensor

Passive Infrared Sensor (PIR)  
12' range  
90° coverage  
Programmable timeout  
Direct control of up to 4 associated devices

#### Temperature Sensor

20° - 150°F range  
0.2°F resolution

#### Light Sensor

Relative light level 0-100%

#### Color Indicator Night Light

Eight colors  
White, red, green, blue, aqua, yellow, pink, black

#### Wall Powered

110VAC 60Hz  
No wires - just plug it in  
Never needs batteries

#### Z-Wave® Wireless RF Communication

Advanced mesh-network protocol  
Range extender improving network for all nodes  
300' RF range line-of-sight  
100,000 bits/sec  
Up to 4 associated Z-Wave nodes  
Network wide inclusion  
Over the air firmware update  
Fifth generation radio technology  
Pushbutton to factory reset or join network

Designed and assembled in USA





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## Table of Contents

Introduction.....	3
Quick Start.....	4
Detailed Instructions.....	4
Mounting Instructions.....	4
Reset or Exclusion.....	4
Add or Inclusion.....	4
Motion Report.....	5
Light Report.....	5
Temperature Report.....	5
Associations.....	5
Motion Timeout.....	5
LED Color.....	6
Configuration Settings.....	6
Troubleshooting.....	7
Regulatory Information.....	7
Warranty Information.....	7
Technical Specification.....	8

## Introduction

EZMultiPli™ enables fully automated lighting that turns on the lights when you enter a room and turns them off shortly after you leave. Sophisticated lighting, Audio, Video and heating/cooling are enabled with the EZMultiPli™ three-sensors-in-one Z-Wave® device.

EZMultiPli is primarily intended as a motion sensor that will detect motion and send a command to up to 4 “Associated” Z-Wave devices. These other Z-Wave devices can directly control lights in a room or the motion indication can be sent to a computer for complex scene control of lighting, audio, video and heating/cooling. When motion is not detected within a pre-set amount of time, EZMultiPli will send an “off” command to the Z-Wave nodes to turn the lights off.

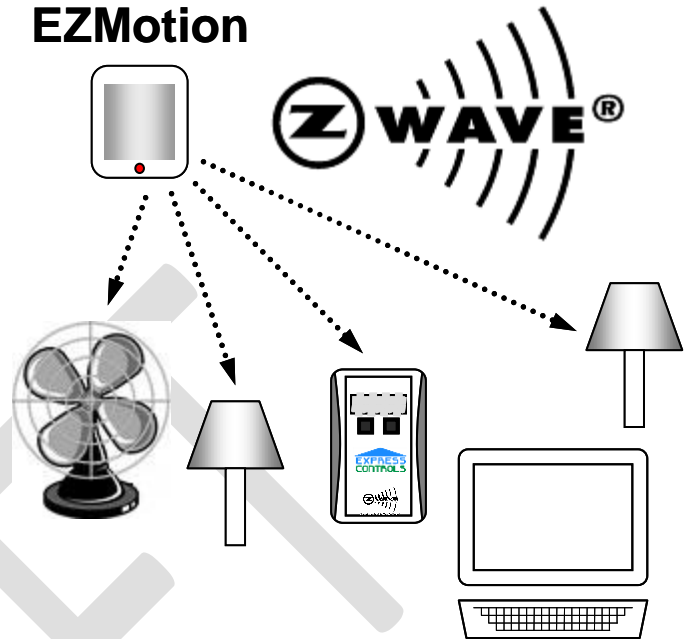
In addition to the motion sensor, EZMultiPli also senses the amount of light in the room as well as the current temperature. The color LED light within EZMultiPli is a convenient night light or can be used as an indicator light for example to let you know if the weather forecast is predicting rain, your garage doors are open or any other indicator supported by your home-control application.

EZMultiPli is wall powered and needs no wires to operate. Simply plug EZMultiPli into the wall and you’re ready to go.

Z-Wave is a wireless mesh-networking protocol for reliable, intelligent home control of all Z-Wave compatible devices. Z-Wave devices can act as repeaters to create a mesh-network to ensure reliable communication regardless of the manufacturer or type of device. This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from any other manufacturers. Z-Wave devices such as lamp modules, fan controllers, thermostats, dimmer switches and many other types of home control devices are available from a wide range of manufacturers. The Z-Wave Alliance ([www.z-wavealliance.com](http://www.z-wavealliance.com)) provides a list of manufacturers of Z-Wave compliant devices. Z-Wave was created by [Sigma Designs](http://www.sigmadesigns.com) (formerly [Zensys](http://www.zensys.com)).

Home-Control software developers should request the “EZMultiPli Software Developers Manual” for details of the Z-Wave commands supported.

## EZMotion



## Quick Start

1. Unpack the EZMultiPli
2. Reset the EZMultiPli:
  - a. Follow the instructions of your Z-Wave compatible Primary Controller to reset or *exclude* EZMultiPli from the Z-Wave network.
  - b. Press and release the push button on the side of the EZMultiPli
  - c. The Z-Wave Primary Controller should provide an indication that the EZMultiPli was properly reset.
  - d. EZMultiPli's LED will blink aqua indicating that it has been reset.
3. Add the EZMultiPli to the Z-Wave network:
  - a. Follow the instructions of your Z-Wave compatible Primary Controller to Add or *include* EZMultiPli.
  - b. Press and release the push button on the EZMultiPli.
  - c. The LED will blink blue indicating it is attempting to join the Z-Wave network.
  - d. The Primary Controller should provide the Z-Wave NodeID that was assigned to EZMultiPli.
4. Write down the NodeID for EZMultiPli
5. Typically you'll want to configure EZMultiPli and "Associate" certain NodeIDs and other parameters of EZMultiPli. See your Home Control software or Primary Controller user's manual for more details.
6. Each time you press the push button on EZMultiPli, it will remain awake for 5 minutes. During this time LED will illuminate when motion is detected.
7. Enjoy your new hands-free lighting controls!

## Detailed Instructions

### Mounting Instructions

Just plug it in to the wall.

### Reset or Exclusion

All Z-Wave devices should be reset before attempting to add them to your Z-Wave network. To reset or *exclude* the EZMultiPli, follow the procedure on the Z-Wave Primary Controller to begin the reset process. Once the Primary Controller is ready to receive the reset command, press and release the push button on the side of EZMultiPli. The Primary Controller should give an indication that the reset process has completed. EZMultiPli's LED will blink aqua when it is reset and ready to be added to a Z-Wave network.

**Always RESET a Z-Wave device before trying to add it to a Z-Wave network.**

### Factory Reset

If the reset process above is not working or for some reason the controller EZMultiPli was originally joined to is not available, the following process can be used to factory reset EZMultiPli without a controller.

Press and continue to hold the push button in for about 60 seconds. The LED will blink blue faster and faster and then shift to yellow and continue to blink faster and faster. Once the LED goes out, EZMultiPli is reset to the factory defaults and will blink aqua indicating it is ready to be added to a Z-Wave network.

### Add or Inclusion

Before attempting to add EZMultiPli to a Z-Wave network, be sure it is blinking the LED an aqua color. This indicates that it is not currently joined to a Z-Wave network. If it is not blinking aqua, follow the Reset instructions above.

Add or *include* EZMultiPli to a Z-Wave network by following the procedure of the Z-Wave Primary Controller and then pressing and releasing the push button on the side of EZMultiPli. Once EZMultiPli has been added to the Z-Wave network, the LED will stop blinking rapidly and instead will light each time it detects motion. EZMultiPli remains in this mode for 5 minutes. Once the 5 minutes has expired, EZMultiPli will enter normal operating mode. Pressing the push



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button will restart the 5 minute motion detector test mode. The Primary Controller will provide a Z-Wave NodeID which has been assigned to EZMultiPli. The NodeID is a unique identifier and is used by many software home-control applications to identify this particular EZMultiPli. Write down the NodeID and location for later entry into your home-control application.

## Motion Report

EZMultiPli is a Notification Class motion sensor and will send a report to the Z-Wave system controller when motion is detected. When motion has not been detected for the OnTime number of minutes, another report will be sent to the system controller informing it that there has not been any motion for that amount of time.

## Light Report

EZMultiPli sends a report of the relative amount of light currently in the room to the Z-Wave system controller. The value is from 0 to 100% and is relative to the maximum and minimum amount of light EZMultiPli has measured since the push reset button was last pressed. The reports are automatically sent every LiteMin number of minutes.

## Temperature Report

EZMultiPli sends a report of the current temperature in tenths of a degree Fahrenheit or Centigrade to the Z-Wave system controller every TempMin number of minutes.

## Associations

EZMultiPli has two association groups:

### Group 1: LIFELINE

This group is normally automatically assigned to the Z-Wave system controller when EZMultiPli is added to the Z-Wave network. All Notification reports (motion detection) are sent to the node assigned to this group. Advanced lighting control should be handled by a home-control application based on these reports.

### Group 2: BASIC

This group is used to directly turn lights on or off when motion is detected. Up to four (4) Z-Wave devices can be associated in this group. EZMultiPli will send a BASIC ON command to all devices that are associated in this group. Note that the Z-Wave devices in this group must be within direct range (about 30') of EZMultiPli. Control of nodes that are further away or blocked by metal or concrete walls should rely on the Z-Wave system controller and the home-control application for reliable operation.

Assigning associations to EZMultiPli depends on the Primary Controller capabilities or the home-control application. Refer to the documentation for these devices on how to assign associations to EZMultiPli.

## Motion Timeout

The OnTime parameter is the number of minutes the lights will be on from the last time motion was detected. OnTime is programmable from 1 minute to 127 minutes. Z-Wave Configuration Class commands are used to program the OnTime setting. See the home-control application documentation for the procedure for adjusting the OnTime parameter.

Setting OnTime to zero will cause EZMultiPli to not send a Z-Wave OFF command. An ON command will be sent each time motion is detected at a maximum rate of once every 60 seconds.

Note that EZMultiPli detects motion and not people. EZMultiPli cannot detect the presence of a person sitting still in a room reading, watching TV or working at a computer. EZMultiPli can only detect when the person moves. Set the OnTime to be one hour or more in applications where the person will be sitting still for a long time to prevent the lights from turning off while the person is still in the room. In hallways, where people are actively moving the OnTime can be set to a 2 minutes to turn the lights off as soon as they have left the hallway.

## LED Color

EZMultiPli has a color LED beneath the motion sensor dome. This LED is a convenient night light or an indicator light. The LED can be set to any of eight colors:

- 1) BLACK (off)
- 2) WHITE
- 3) RED
- 4) GREEN
- 5) BLUE
- 6) AQUA
- 7) PINK
- 8) YELLOW

## Configuration Settings

All configuration settings are set to their default when EZMultiPli is excluded (removed) from the Z-Wave network.

Parameter Number	Parameter Name	Default	Description	Valid Values
1	OnTime	10 Min	OnTime sets the number of minutes that the lights stay on when motion has <b>not</b> been detected. A value of 0 is a special mode where the lights are constantly sent a command to turn them on whenever motion is detected. EZMultiPli will <b>NOT</b> turn the lights off in this mode. <b>Recommended values:</b> 5 min for hallways 20 min for an office environment 60 min for a library, office or other room where someone may be sitting still for a long time	0, 1-127
2	OnLevel	-1	OnLevel is the value sent by the Z-Wave BASIC_SET command to all Group 2 nodes when motion is detected. A value of 0 will turn the lights off (not recommended). A value between 1 and 99 will set the dim level to between 1% and 99% (99% is full on). A value of -1 will turn the light “on” which depends on the device but most will set the dim level to the last dim setting.	0* 1-99, -1
3	LiteMin	60	A Luminance report is sent to the system controller every LiteMin minutes if the value has changed by more than 5% since the last reading. A value of zero turns this mode off. Luminance values can still be obtained at any time by the home-control application in this mode.	0-127
4	TempMin	60	A Temperature report is sent to the system controller every TempMin minutes if the value has changed by more than 0.5F since the last reading. A value of zero turns this mode off. Temperature values can still be obtained at any time by the home-control application in this mode.	0-127
5	TempAdj	0	TempAdj is a twos-complement number that is used to adjust the temperature reading to make it more accurate. The value is in tenths of degree Fahrenheit. The temperature reading can be adjusted up to +12.7F to -12.8F. A value of 1 will adjust the temperature reading by +0.1F. A value of -1 will adjust the temperature by -0.1F. A value of 123 will adjust the temperature by +12.3F.	-127 - +128

## Troubleshooting

Problem	Solution
Lights turn off when people are still in the room	Remember that EZMultiPli detects <b>motion</b> and cannot detect people. 1) Increase the OnTime so that the lights stay on long enough for someone to move before the lights turn off (>1 hour) 2) Move EZMultiPli closer to the people
Lights don't turn on when there is motion	EZMultiPli must be "Associated" with specific NodeIDs to control them. Associate EZMultiPli with the desired Z-Wave devices. Be certain the controller is associated in Group 1 so that the Notification events are sent to the controller.
The LED doesn't come on when there is motion	The LED illuminates when there is motion during the initial 5 minute period after pressing the push button. After this initial 5 minute testing period the LED goes off and stays off.
Can I use EZMultiPli outdoors?	EZMultiPli is not rated for outdoor use but if it is protected from rain/snow it is usable outdoors.
Other sources of technical help	There are a number of Z-Wave forums/blogs. Here are just a few: <a href="http://board.homeseer.com">board.homeseer.com</a> <a href="http://forum.micasaverde.com">http://forum.micasaverde.com</a> <a href="http://www.zwaveworld.com/forum">www.zwaveworld.com/forum</a> <a href="http://www.z-wavealliance.org">www.z-wavealliance.org</a> <a href="mailto:info@ExpressControls.com">info@ExpressControls.com</a>

## Regulatory Information

### Z-Wave Plus Certified

Certificate number: (PENDING)

Z-Wave is a registered trademark of Sigma Designs and/or its subsidiaries.



### Federal Communications Commission (FCC)

This device complies with part 15 of the FCC rules. Operation of this device is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna or device.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### WARNING!

Changes or modifications not expressly approved by Express Controls could void the user's authority to operate the equipment.

## Warranty Information

LIMITED 2 YEAR WARRANTY



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If within two (2) years from the date of purchase, this product fails due to a defect in material or workmanship, Express Controls LLC will repair or replace it, as its sole option, free of charge. This warranty is extended to the original household purchaser only and is not transferable. This warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (f) transit damage, initial installation costs, removal costs, or reinstallation costs.

EXPRESS CONTROLS LLC WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY MODIFIED TO EXIST ONLY AS CONTAINED IN THIS LIMITED WARRANTY, AND SHALL BE OF THE SAME DURATION AS THE WARRANTY PERIOD STATED ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON THE DURATIONS OF AN IMPLIED WARRANTY, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased, or (b) mailing the product, along with proof of purchase, postage prepaid to the authorized service center listed below. This warranty is made by: Express Controls – [www.ExpressControls.com](http://www.ExpressControls.com). Please, be sure to package the product securely to avoid shipping damages.

## Technical Specification

Operating Temperature Range: -40°C to 150°C  
RF Range: 150 feet minimum line of sight  
RF Data Rate: 9.6Kbps, 40Kbps, 100Kbps  
RF Frequency:  
    908/916MHz (US),  
RF Interface: ZW5202  
Power Supply: 110VAC 60Hz

Motion Sensor Range: 12ft  
Motion Sensor Coverage: 90°  
Temperature Accuracy: +/- 1.0C (-10C to 80C)  
Temperature Resolution: 0.0625C  
Light Sensor: 0-100% Relative  
LED: 8 colors  
Dimensions: 3.25"H x 1.9"W x 1.9"D  
Weight: 50g

### Z-Wave Command Class Support:

Routing Slave 232  
ZWavePlus  
Notification (Alarm command class version 3)  
Multilevel Sensor V6 (Luminance, Temperature)  
Color Control  
Manufacturer Specific  
Version  
Association Group Info  
Association  
Configuration  
Node Naming  
Device Reset Locally  
Firmware Update  
PowerLevel

### Ordering information:

EZMultiPI-US 908/916MHz for North America

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