Instructions

Next Gen Smart Lighting

We're excited to have you on this journey with us and we're here for you every step of the way. Not only are we smart home owners ourselves, but we build all of our products alongside 1,000's of passionate community members. To see how the project came to life and how everyone contributed, please see Page 44 or visit: inov.li/cribs. It's truly amazing working with people of all walks of life and even more humbling to see everyone's dedication to making some of the best smart home products.

Thank you so much for your trust in us and welcome to the next generation of smart lighting with Inovelli.

Eric H. - Founder/CEO
Eric M. - Founder/CTO

Table of Contents

For the most recent instructions visit:
inov.li/lzw45

DSK information can be found on Page 23

Navigating this Manual

We designed this manual as if we were installing the controller ourselves. We suggest reviewing the full manual before beginning the installation process. There are three areas this manual covers:

1. Getting to know your controller
2. Connecting to your hub/gateway
3. Configuring your controller (optimize the settings)

As we continue to work with hub manufacturers, and improve our products. It may be necessary to periodically update this manual. You can always find the latest version of this manual by visiting: inov.li/lzw45

Quick Setup & Inclusion.

Quick Setup Notes

We get it, you're ready to go. No need to flip through the manual, you want the abridged version. **This section assumes you have your LED Controller powered on and your LED's plugged in.**

It also assumes you know how to enter the Z-Wave pairing mode on your hub/gateway (and have a Z-Wave compatible hub/gateway).

To see which hubs are compatible, please visit: inov.li/lzw45hubs

While these instructions likely won't change, for the most up-to-date instructions, we recommend visiting: inov.li/lzw45QS

Including Your Controller

Pairing: The controller will start the inclusion process when the config button (A) is pressed three times consecutively. To indicate the controller is in inclusion mode, the LED strips will pulse blue. Once the controller is in inclusion mode, start the Z-Wave inclusion process on the hub at any time. If successful, the LED strips will turn green temporarily.

If the controller is unsuccessful during inclusion, you can exclude (reset) the controller by putting your gateway in exclusion mode and pressing the config button (A) three times. The LED strips will pulse blue and then flash green if successful or red if not. After exclusion, you can try inclusion again.

inovelli

Full wires not shown

Getting to Know Your Controller

Please use the next couple pages to get to know your smart controller.

A. Config / Favorites Button: Used to configure certain parameters of the controller. In addition, it can be used to activate scene control (multi-taps and holds) where up to 1 scene can be added*.

B. Light On / Increase Dim % Level: Tap 1x to turn on your light or hold to increase the brightness level (dim percentage). In addition, it can be used to activate scene control (multi-taps and holds) where up to 7 scenes can be added*.

C. Light Off / Decrease Dim % Level: Tap 1x to turn off your light or hold to decrease the brightness level (dim percentage).

In addition, it can be used to activate scene control (multi-taps and holds) where up to 7 scenes can be added*.

D. Digital Display: The display is used for several different functions during the operation of your lightstrip. It will display the config parameter you are adjusting, the % level your lightstrips are at and will show an effect.

E. DC Power Connector: This is where your plug-in the included 12V power supply.

Page intentionally left blank.

Hub/Gateway Setup

Hub/Gateway Setup Notes

As manufacturers update their hub/gateway platforms, the setup process may change. We recommend checking our website for the latest directions, by visiting the relevant short-links below.

If you don't see your hub, please go to: inov.li/lzw45OT

SmartThings	Home Asst. Z-Wave JS	Home Asst. Z-Wave JS UI	Hubitat
inov.li/ lzw45ST	inov.li/ lzw45ZWJS	inov.li/ lzw45ZWJSUI	inov.li/ lzw45HE

SmartThings Instructions

COMPATIBLE HUBS: Samsung SmartThings Hub V1, V2 and Samsung or Aeotec Hub V3 (NOTE: You will need to install an Edge Driver to ensure full functionality of the controller. For more info, please go to: inov.li/lzw45STprereqs).

First, tap the Config Button (A) 3x until the LED strips start to pulse blue, then proceed to the instructions below:

- Open the SmartThings app and click on the devices icon ⚏
- Tap on the (+) button and click, "Add Device"
- Click, "Scan nearby"
- If successful, the LED Strips will turn green and your app will show the new controller (feel free to rename it)
- SmartThings may ask you to scan the QR Code for a secure setup - if this is the case, then scan the QR Code on the controller

Home Assistant Instructions

COMPATIBILITY: We recommend either Z-Wave JS or Z-Wave JS UI (formerly Z-Wave JS2mqtt). NOTE: you will also need a compatible Z-Wave stick - a full list can be found here: Z-Wave JS = inov.li/lzw45ZWJSsticks or Z-Wave JS UI = inov.li/lzw45ZWJSUIsticks).

You didn't think we'd be able to fit the HA instructions in here, did you?! Please visit our website :)

Z-Wave JS Instructions	**Z-Wave JS UI Instructions**
inov.li/lzw45ZWJS	inov.li/lzw45ZWJSUI

Hubitat Instructions

COMPATIBLE HUBS: Hubitat C3, C4, C5 and C7 (NOTE: You may need to install a Device Driver to ensure full functionality of the controller. We recommend doing this prior to pairing. For more info, please go to: inov.li/lzw45HEPrereqs).

First, tap the Config Button (A) 3x until the LED strips start to pulse blue, then proceed to the instructions below:

- Login to your Hubitat portal and click on the devices tab ☼ Devices
- Tap on the (+) Add Device button and click, "Z-Wave" under, "Add device manually"
- Click, "Start Z-Wave Pairing" and press the Config button (A) three (3) times - the LED Strips should start pulsing blue
- If successful, the LED Strips will turn green and your app will show the new controller (feel free to rename it)

Page intentionally left blank.

Advanced Features

Advanced Features Notes

NOTE: The advanced features shown below are what is built into the controller firmware, and may or may not be supported by your hub/gateway. We've confirmed they're supported on SmartThings, Hubitat, and Home Assistant.

These controllers are packed with a ton of amazing features, which include scene control (multi-tap), animated notifications, energy monitoring, and approximately 20 different parameters to customize your controller.

The manual does not have enough room to list out and explain all the parameters and advanced features. However, the following pages will direct you to the proper URL's. An overview can be found at the following URL: inov.li/lzw45AF

Controller Parameters

There are approximately 20 different parameters on this controller, making it one of the most customizable controlleres out there.

They can be found on Page 27 in this manual or by visiting:
inov.li/lzw45parameters

If your hub does not support parameter changes, you can program a lot of these directly from the configuration button. Please visit:
inov.li/lzw45LC

Other Advanced Features

To setup some of the other advanced features, such as: Animated Notifications, Scene Control, and Z-Wave Associations, please see the URL's below as the instructions will be different depending on the hub you're using.

- **Animated Notifications:** inov.li/lzw45AN
- **Scene Control:** inov.li/lzw45SC
- **Z-Wave Associations:** inov.li/lzw45ZA

As noted on page 19, your controller has the ability to program parameters from the configuration button. To learn more, please visit: inov.li/lzw45LC

About Z-Wave & This Device

As mentioned in the beginning of the manual, we're all smart home owners ourselves and have an amazing community of people who are eager to help and share their setups.

If you ever run into any issues, please do not hesitate to submit a ticket, or post in the community. We'd love to hear from you.

Community Link: inov.li/community

Submit a Ticket: inov.li/support (or scan the QR Code below)

Thanks again for your support and we look forward to helping you get the most out of our smart home!

DSK Location

The DSK information required for some inclusion methods can be found either on the product (QR Code located at the bottom front-left of the controller), or on the back of the box at the bottom left (QR Code located at the bottom right). Please keep this in a safe space or write it down for your records.

Z-Wave Association Groups

Grouping Identifier	Max Nodes	Send Commands
Group 1	5	1. Central Scene Notification
		2. Basic Report
		3. Multilevel Report
		4. Protection Report
		5. Device Reset Locally
		6. Meter Report
Group 2	5	Basic Set
Group 3	5	Controller Multilevel Set
Group 4	5	Controller Multilevel Set

Group 1: Lifeline
Members of this group will receive unsolicited messages related to
the status of the controller

Group 2: Basic Set
Sends On & Off commands to associated devices
1. Single press on the up button sends BasicSet (0xFF)
2. Single press on the down button sends BasicSet (0x00)

Group 3: Controller Multilevel Set
Sends set level commands to associated devices when the up/down
buttons are pressed.
1. Hold & Release Up button sends SwitchMultiLevelSet
2. Hold & Release Down button sends SwitchMultiLevelSet

3. Single press Up button sends SwitchMultiLevelSet (0xFF)
4. Single press Down button sends SwitchMultiLevelSet (0x00)

Group 4: Controller Multilevel Start/Stop
Sends start / stop level change to associated devices
1. Hold Up button sends SW_MULTILEVEL_START_LEVEL_CHANGE
2. Hold Down button sends SW_MULTILEVEL_START_LEVEL_CHANGE3.
3. Release either button sends SW_MULTILEVEL_STOP_LEVEL_CHANGE

Z-Wave Parameters

As mentioned on page 45, there are over 20 parameters on this controller depending on the firmware version. An overview of the parameters can be found on pages 53 through 57, but the most up-to-date parameter documentation can be found on our website here: inov.li/lzw45parameters

#	Name	Range	Default	Size	FW Version
1	# of Pixels	0-130	0	1	1.20+
2	Dimming Speed	0-98	3	1	1.20+
3	Ramp Rate	0-99	99	1	1.20+

#	Name	Range	Default	Size	FW Version
4	Minimum Dim Level	1-45	1	1	1.20+
5	Maximum Dim Level	55-99	99	1	1.20+
6	Auto Off Timer	0-32767	0	2	1.20+
7	Default Level (Local)	0-99	0	1	1.20+
8	Default Level (Remote)	0-99	0	1	1.20+
9	Default Color	0-6500	0	4	1.20+

#	Name	Range	Default	Size	FW Version
10	Level After Power Restored	0-2	2	1	1.20+
17	Active Power Reports	0-100	10	1	1.20+
18	Periodic Power/ Energy Reports	0-32767	3600	2	1.20+
19	Active Power Reports	0-100	10	1	1.20+
21	Quick Strip Effect	0-2147483647	0	4	1.20+
22	Custom Effect - Parameter 1	0-2147483647	0	4	1.20+

#	Name	Range	Default	Size	FW Version
23	Custom Effect - Parameter 2	0-2147483647	0	4	1.20+
24	Custom Effect - Parameter 3	0-2147483647	0	4	1.20+
30	Custom Effect - Parameter 4	0-32768	0	4	1.20+
31	Pixel Effect	0-32767	0	2	1.20+
51	Lightstrip Delay	0-1	1	1	1.20+

Command Classes

Command Class	Ver
Z-Wave Plus Info	V2
Transport Service	V2
Security 0	V1
Security 2	V1
Supervision	V1
Application Status	V1
Switch Multilevel	V4
Configuration	V4
Association	V2
Association Group Info	V3

Command Class	Ver
Version	V3
Manufacturer Specific	V2
Device Reset Locally	V1
Powerlevel	V1
Switch Color	V3
Switch Binary	V1
Protection	V2
Firmware Update Meta Data	V5
Meter	V3
Central Scene	V3

Command Class	Ver
Basic	V2
Indicator	V3
Multi-Channel Association	V3
Multi-Channel	V4

Manufacturer Compatibility

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network. Each module is designed to act as a repeater, which will re-transmit a radio frequency (RF) signal by routing the signal around obstacles and readio dead spots to ensure that the signal is received at its intended destination. The Inovelli Red Series Lightstrip Controller is a security enabled Z-Wave Plus™ device. A security enabled Z-Wave Plus controller must be used in order to fully utilize the product.

Factory Reset / Exclusion Info

To factory reset your device, first, hold the Configuration / Favorites Button (A) for 20 seconds until the LED strips turns red and let go. The light strips should blink red a few times indicating it has been factory reset. You may also use a certified Z-Wave controller to remove the device from your network to factory default. Only use these procedures in the event that the primary controller is missing or otherwise inoperable.

Exclusion will reset your device as well and can be done directly from the hub. This is helpful if you're running into issues with inclusion. To exclude a device, start the exclusion process on your hub and press the Configuration / Favorites Button (A) 3x rapidly. The LED strips will start pulsing blue and if successful, they will flash green. If unsuccessful it will flash red.

Page intentionally left blank.

Product & Contact Info.

Product & Contact Info Notes

As mentioned in the beginning of the manual, we're all smart home owners ourselves and have an amazing community of people who are eager to help and share their setups.

If you ever run into any issues, please do not hesitate to submit a ticket, or post in the community. We'd love to hear from you.

Community Link: inov.li/community

Submit a Ticket: inov.li/support

Thanks again for your support and we look forward to helping you get the most out of our smart home!

FCC/IC Statements

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received 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

FCC/IC Statements (Cont.)

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, 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 or consult the dealer or an experienced radio/
TV technician for help. This equipment should be installed and

operated with minimum distance 8in (20cm) between the radiator and your body.

IC Caution: This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

DECLARATION DE CONFORMITE D'INDUSTRIE CANADA: Ce périphérique a été testé et reconnu conforme aux limites spécifiées dans RSS-210. Son utilisation est soumise aux deux conditions suivantes: (1) il ne doit pas provoquer d'interférences gênantes et (2) il doit tolérer les interférences, notamment celles susceptibles d'en perturber le fonctionnement.

Product Info

```
Name: Smart Dimmer Controller
SKU #: LZW45
Power: 120V AC, 60Hz
Signal (Frequency): 908.42 MHz
Operating Temperature Range: 32-95 °F (0-35 °C)
Pixel Type: WS2815
Lumens: 1600 (6ft) or 267 lm/foot
Not rated for inductive loads or fans.
Range: Up to 100 meters line of sight between the Wireless
Controller (HUB) and the closest Z-Wave Repeater.
Certifications: ETL Listed, FCC/IC & Z-Wave Plus Certified

For indoor use. Specifications subject to change without notice due
to continuing product improvement.
```

Company Info / Warranty

If you run into any issues, feel free to reach out to us at: contact@inovelli.com. We typically answer tickets within 24-48 hours and are staffed by actual smart home owners.

All Inovelli products come with a one (1) year warranty (defined as 365 days). This warranty protects you from breakdowns in the material or workmanship under normal use. This warranty is limited in a couple areas. Purchases must be made from Inovelli or an authorized reseller. The product should be used in the manner directed in the instructions. The product must only be used and/or installed in the United States or Canada.

For full warranty info, please visit: inov.li/warranty

Project Cribs

This is the second project that we have teamed up with the community on to help visualize, develop, and beta test it. Having a group of enthusiastic smart home users to guide this project to completion has been invaluable. They have been a true pleasure to work with and this product would not be nearly what it is without them. Thanks to the beta testers for all their hard work - we couldn't do it without you!

To see the project come to life, feel free to visit the project page: **inov.li/cribs**

Thank You.