

GUARDIAN™

BY ELEXA

Guardian Bridge

GBR1



User Manual

Preface

As this is the full User Manual, a working knowledge of Z-Wave automation terminology and concepts will be assumed. If you are a beginner user, please visit www.getguardian.com for instructions. This manual will provide in-depth technical information about the Guardian Bridge, especially in regards to its compliance to the Z-Wave standard (such as compatible Command Classes, Association Group capabilities, special features, and other information) that will help you maximize the utility of this product in your system.

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Specifications

Technical Specifications

Radio protocol	Z-Wave(500 series) LoRa
Power supply	5 VDC OR 12VDC
Working current	NA
Operating temperature	0 - 40 °C
Radio frequency	908.4 MHz US (Z-Wave) 915 MHz (LoRa)
Range	Up to 40m (Z-Wave) depending on environment Up to 500m (LoRa)
Dimensions (L x W)	Board: 119 x 60 mm
Update	OTA

Description

Guardian Bridge device was developed to provide the Guardian product line compatibility with Z-Wave Network protocol.

Inclusion & Exclusion

Inclusion (Add to System) for Z-Wave and LoRa

1. For proper inclusion, bring the Guardian Bridge to the final location where it will be used*.
2. Follow the instructions for your Z-Wave controller to enter on inclusion mode.
3. Supply power to the Guardian Bridge to begin inclusion mode. If the Guardian Bridge is already powered on, press the button 3 times quickly within 1,5 seconds.
4. The device will enter inclusion mode for 15 seconds.

Upon successful inclusion, the 1st LED will stop blinking and stay turned off.

Exclusion (Remove from System) for Z-Wave and LoRa

Follow the instructions for your Z-Wave Certified Controller to enter exclusion mode. When prompted by the controller:

1. Make sure the Guardian Bridge is powered on.
2. Press the Button 3 times quickly within 1,5 seconds.

Upon successful exclusion, the 1st LED will start blinking in 500ms.

NWI - Network Wide Inclusion

This Device supports NWI - Network Wide Inclusion.

1. Follow the instructions for your Z-Wave controller to enter on Inclusion/Exclusion mode.
2. Supply power to the Guardian Bridge to begin inclusion/exclusion mode. If the Guardian Bridge is already powered on, NWI will be activated automatically if Guardian Bridge is already out of a Z-Wave Network.
3. When Guardian Bridge is out a Z-Wave Network, and Controller enters in Exclusion mode, Guardian Bridge will be removed automatically through the NWI.

Upon successful in both cases, results is the same as Inclusion/Exclusion Default procedures.

*For non Z-Wave Plus networks, please consult the owner's manual for your primary controller to determine the best method/location for adding the Guardian Bridge to your Z-Wave network. A Security Enabled Z-Wave Controller must be used in order to fully utilize the product.

Reset to Factory Default

Resetting the Guardian Bridge

If needed, the Guardian Bridge can be reset locally by following these steps. Only do this if your Z-Wave controller is missing or otherwise unreachable. Beware that resetting your device will disconnect it from the system:

1. Make sure that your Guardian Bridge is powered on.
2. Press & Hold the button for 10 seconds.
3. The 1st LED will turn on and right after that, release the Button.

The Guardian Bridge memory will be erased to factory settings excluding all Associations. This procedure also sends a Device Reset Locally to AG01 - Lifeline notification.

4. The 1st LED will start blinking in 500ms.

Physical Installation

The Guardian Bridge can be plugged directly into a Micro USB power supply. Include the Guardian Bridge into your Z-Wave network and make sure it can communicate from the installation location before continuing further.

LEDs Behavior

LED	Behavior	This happens when...
First LED (Z-Wave)	1st LED Blinking in 500ms	Guardian Bridge isn't in a Z-Wave Network
	1st LED Turned Off	Guardian Bridge is included in a Z-Wave Network
	1st LED Flash	1st LED will flash every time that a Z-Wave transmission happens.
Second LED (Power)	LED is On	Guardian Bridge is Powered On
Third LED (Guardian RF)	LED Flashes	3rd LED will flash every time that a Guardian RF transmission happens.

Button Behavior

Action	Condition	Result
Push Button 3x within 1,5 seconds	Always	Guardian Bridge will enter in Learn Mode (Add/Remove from a Z-Wave Network)
Press and Hold for 10 seconds	Always	The Guardian Bridge memory will be erased to factory settings excluding all Associations. This procedure also sends a Device Reset Locally to AG01 - Lifeline notification.

Association Groups (AGs)

The Guardian Bridge supports up to 5 Node IDs on AGs. Please see below a description of all available Association Groups:

Association Group 01	Lifeline This AG sends Binary Report when happens a Valve Open/Close action. It also supports a Device Reset Locally. When any Guardian Leak Detector is wet, the Device will send a Leak Notification
Association Group 02	This AG supports a Open/Close Basic Report
Association Group 03	This AG supports a Sensor Multilevel Report contain- ing the Temperature information every 60 seconds

Compatible Command Classes

Command Class	Notes
COMMAND_CLASS_VERSION V2 (86)	Returned Value: 03 04 3D 01 01 01 00 Z-Wave Library Type: 03 (<i>Enhanced Slave</i>) Protocol Version: 04 3D Protocol Sub-Version: 01 01 Application Version: 01 Application Sub-Version: 00
COMMAND_CLASS_BASIC V1 (20)	-
COMMAND_CLASS_SWITCH_BINARY V1 (25)	Binary Switch commands will open/close the valve. Reports are used to communicate valve opening/closing Valve Open: FF Valve Closed: 00
COMMAND_CLASS_SENSOR_MULTILEVEL V11 (31)	The Multilevel CC is used to communicate the temperature recorded by the Valve Controller in the Guardian system. This is only reported to association group 3. Returned Value: 01 XX XX Sensor Type 01 (<i>Temperature</i>) Precision/Scale/Size (Celsius) 01 (<i>Precision = 000; Scale = 00; Size = 001</i>) Precision/Scale/Size (Fahrenheit) 01 (<i>Precision = 000; Scale = 00; Size = 001</i>) Sensor Data 00 ~ FF (-125 ~ 125 in Degrees Fahrenheit or Celsius)
COMMAND_CLASS_MULTI_CHANNEL V4 (60)	The Multi Channel Command Class is used to distinguish commands to/from the Valve Controller endpoint (endpoint 1) and the Leak Detector endpoint (endpoint 2).
COMMAND_CLASS_ASSOCIATION V2 (85)	Group 1 Group 1 is the "Lifeline" group, which can hold five devices.
COMMAND_CLASS_ASSOCIATION_GRP_INFO V3 (59)	-
COMMAND_CLASS_MANUFACTURER_SPECIFIC V2 (72)	Returned Value: 02 1F 01 02 03 04 Manufacturer ID: 02 1F Product Type: 01 02 Product ID: 03 04
COMMAND_CLASS_DEVICE_RESET_LOCALLY V1 (5A)	-
COMMAND_CLASS_POWERLEVEL V1 (73)	-
COMMAND_CLASS_SUPERVISION V1 (6C)	-
COMMAND_CLASS_FIRMWARE_UPDATE_MD V4 (7A)	-
COMMAND_CLASS_CONFIGURATION V1 (70)	See "Configuration" Command Class Parameters"

Command Class	Notes
COMMAND_CLASS_NOTIFICATION V8 (71)	<p>The Guardian Bridge sends a notification report to association group 1 when any Leak Detector in the system senses moisture.</p> <p>Returned Value: 00 00 00 FF 05 XX 00 00</p> <p>V1 Alarm Type 00 (Unsupported) V1 Alarm Level 00 (Unsupported) Notification Status FF (Unsolicited Reporting is Enabled) Notification Type 05 (Water Alarm) Leak Detected Event 02 (Water Leak Detected, Unknown Location) Leak Removed Event 00 (Event Inactive) Sequence/Reserved/Event Parameters Length 00 Notification Event Parameters 00 (No Event Parameters)</p>
COMMAND_CLASS_ZWAVE_PLUS INFO V2 (5E)	<p>Returned Value: 01 05 00 15 00 15 00</p> <p>Z-Wave Plus Version: 01 Role Type: 05 Node Type: 00 Installer Icon Type: 15 00 User Icon Type: 15 00</p>

“Configuration” Command Class Parameters

Configuration parameters are sent using a standard syntax to ensure interoperability between all manufacturers’ products. All values are represented using the hexadecimal number system.

Typical syntax is as shown below. Note that the value sent must be the exact size, in bytes, as accepted by the setting. The “extra” spaces should be filled with zeros (see the “value” column below.)

Example Configuration Parameter: **02 02 00 0A**

Param #	Size	Value
02 (Param #2)	02 (2 Bytes)	00 0A (10)

	Size	Name	Available Values	Default Value
01	This parameter sets the Temperature scale. Is possible to choose between Celsius and Farenheight.			
	01	Temperature Scale	00 - Farenheight 01- Celsius	00

Troubleshooting

A: Under Development

Warranty & Support

If you have questions, our trained Customer Service Department is happy to assist you 24 hours a day, 7 days a week. Contact Alexa Customer Service as follows: • In North America dial: 1-855-249-1754 • Email Alexa at support@getguardian.com

DO NOT RETURN THIS PRODUCT TO THE STORE OR WEBSITE FROM WHICH IT WAS PURCHASED

If you believe the product is defective, has a missing or broken part or are having difficulty with it please contact Alexa as listed above for a quick and efficient solution to the problem.

Legal Notices: 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 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 the 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.

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.

Elxa Consumer Products, Inc. ("ECP") warrants to the original retail purchaser ("Purchaser") that the Guardian Bridge (the "Product") will be free of defects in materials or workmanship under use for one (1) year from the date of purchase (the "Warranty period").

For the Purchaser only, if the Product fails to perform as specified during the Warranty Period due to defective parts or faulty workmanship, ECP will repair or replace the defective or damaged parts of the Product. Normal wear and tear is not covered nor is abnormal use, misuse, mishandling, faulty installation, improper shipping, damage caused by disasters such as fire, flood or earthquake, neglect, accident or tampering. This warranty covers only normal use in the United States or Canada.

To obtain warranty service during the Warranty Period, call Elxa Customer Service (1-855-249-1754) or email: support@getguardian.com for instructions on sending damaged parts and documentation for a Return Material

Authorization (RMA). Products returned to ECP for repair or replacement without authorization will be returned at the sender's expense. All warranty claims must be accompanied by a legible copy of the original receipt showing date and details of purchase. The RMA number must be clearly written on the side of the shipping container in which you return the Product or defective parts. Unless otherwise instructed by ECP, the Product must be sent freight pre-paid to the following address:

Elxa Consumer Products, c/o Promac,
1153 Timber Dr., Elgin, IL 60123

ECP will repair or replace the defective parts and return them at ECP's cost by a shipping method selected by ECP. When contacting ECP to obtain an RMA, Purchaser may request expedited return shipping at Purchaser's expense.

THIS WARRANTY IS NOT TRANSFERABLE, AND, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IS IN LIEU OF ALL OTHER WARRANTIES, REPRESENTATIONS AND CONDITIONS, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NO OTHER PERSON OR REPRESENTATIVE IS AUTHORIZED TO MAKE ANY OTHER WARRANTY ON BEHALF OF ECP OR ASSUME FOR ECP ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT. IN NO EVENT WILL ECP BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, INCLUDING DAMAGES DUE TO ECP'S NEGLIGENCE.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE AND COUNTRY TO COUNTRY.

This marking on the product, accessories or literature indicates that the product and its electronic accessories should not be disposed of with other household waste.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their government office, for details of where and how they can take these items for Environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other wastes for disposal.

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.