SILICON LABS ZGM130S Z Wave Module User Manual

Contents

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FEATURES & SPECIFICATIONS

Hardware Characteristics

Parameter	Value
Z-Wave Module	ZGM130S
Z-Wave Antenna Distance	40m (Indoor) /150m (Outdoor)
Input Voltage	3.6-6.0V from the lock
Working Current	RX: 9.8 mA TX: 13.3 mA
Standby Current	0.8μA

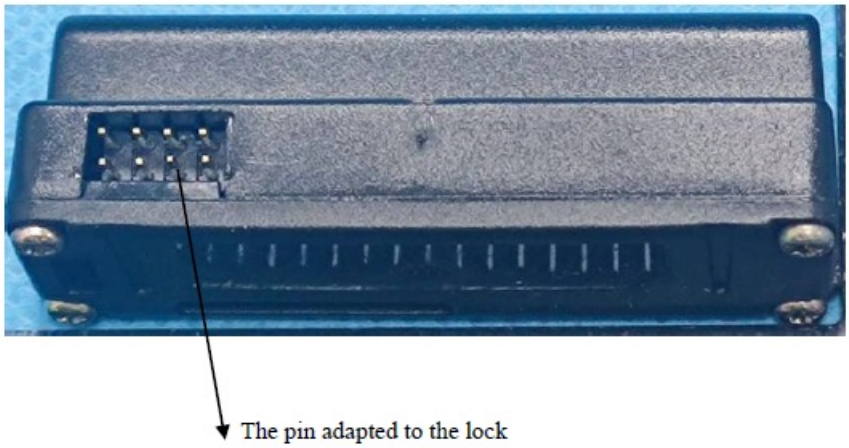
Software Characteristics

Parameter	Value
Wireless Technology	Z-Wave
Certification Type	Z-Wave Plus v2
Z-Wave SDK Version	7.16.3
Z-Wave Library Type	Enhanced 232 Slave
Z-Wave Role Type	ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_SLEEPING_LISTENING (0x07)
Generic Device Type	GENERIC_TYPE_ENTRY_CONTROL (0x40)
Specific Device Type	SPECIFIC_TYPE_DOOR_LOCK (0x01)
Security Class	S0, S2-ACCESS
Smart Start	Support. After powering on, Smart Start is auto active if it's out of the Z -Wave network.
Over The Air OTA	Support. Firmware can be updated via RF.
Multichannel Device	No

Association	Support. Refer to Section 3.2 Association Group Info.
Factory Reset	Support. Refer to Section 2.5 How to factory reset.
Power-down Memory	Support. All command settings will stay unchanged even power down.
Timed battery report	Support.
Low battery warning	Support.
Door State Report	Support. When door lock mode changed, send out a notification via Group 1.

Note: Z-Wave 700 Module cannot be used independently. It should be used with the lock (Yale).

The picture of the Z-Wave 700 Module is below



PRODUCT QUICK START

What is Z-Wave

- Z-Wave is the international wireless protocol for communication in the Smart Home.
- Z-Wave ensures reliable communication by reconfirming every message (two-way communication) and every mains-powered node can act as a repeater for other nodes (meshed network) in case the receiver is not in direct wireless range of the transmitter. This device and every other certified Z-Wave device can be used together with any other certified Z-Wave device regardless of brand and origin as long as both are suited for the same frequency range.

What is SmartStart

SmartStart-enabled products can be added to a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

How to add (pairing) the product into the Z-Wave network

1. Put the Z-Wave 700 Module into the lock and operate on the lock following the guide below:
    1. Enter Master Code-> ‘R’ -> ‘9’ -> ‘#’ -> ‘1’ -> ‘#’ (only can be activated in advanced mode)

How to remove the product from the Z-Wave network

1. Operate on the lock following the guide below:
    1. Enter Master Code-> ‘R’ -> ‘9’ -> ‘#’ -> ‘3’ -> ‘#’ -> Master Code -> ‘#’ (only can be activated in advanced mode)

How to factory reset for Z-Wave

Note: Please use this procedure only when the network primary controller is missing or otherwise inoperable.

1. Operate on the lock following the guide below:
    1. Press and hold the “factory reset” key after the lock body
    2. Power off the lock body for more than 5S, and plug in the battery again
    3. Plug in the battery again and wait for 5S to release the “factory reset” key

Z-Wave DSK Location
How to locate the DSK representation on the product
You can find the QR code when you open the battery box

How to access the DSK representation via the UI
You may also find the QR Code and DSK on individual packages of each product. Please do not remove or damage them.

SOFTWARE FUNCTION DEFINITION

Supported Command Classes

Command Class	Version	Required Security Class
Association	2	S0 or Access Control
Association Group Info	3	S0 or Access Control
Basic	2	S0 or Access Control
Battery	1	S0 or Access Control
Device Reset Locally	1	S0 or Access Control
Door Lock	4	S0 or Access Control
Firmware Update Meta Data	5	S0 or Access Control
Indicator	3	S0 or Access Control
Manufacturer Specific	2	S0 or Access Control

Multi-Channel Association	3	S0 or Access Control
Powerlevel	1	S0 or Access Control
Security 0	1	None
Security 2	1	None
Supervision	1	None
Transport Service	2	None
Version	3	S0 or Access Control
Application Status	1	None
Configuration	4	S0 or Access Control
Door Lock Logging	1	S0 or Access Control
Notification	8	S0 or Access Control
Schedule Entry Lock	3	S0 or Access Control
Time Parameter	1	S0 or Access Control
Time	2	None
User Code	2	S0 or Access Control
Z-Wave Plus Info	2	None

Indicator Command Class
The Receptacle supports the Indicator Command Class, version 3 and supports the Indicator ID 0x50 (Identify) and Properties ID 0x03, 0x04 and 0x05. However, the value of Properties ID 0x03 only is fixed number and only supports 0x0A. The value of Properties ID 0x05 only is a fixed number and only supports 0x05.

Basic Command Class mapping
Basic Command maps to Door Lock Command Class, as shown below.

Command	Value	Mapped	Value	Function
Basic Set	0x00	Door Lock Operation Set	Door Unsecured	Open the door
	0xFF		Door Secured	Close the door
Basic Report	0x00	Door Lock Operation Report	Door Unsecured	The door is opened
	0xFF		Door Secured	The door is closed
Basic Get		Door Lock Operation Get		

Z-Wave Plus Info
The Command is used to differentiate between Z-Wave Plus, Z-Wave for IP and Z-Wave devices. This command provides additional information about the Z-Wave Plus device in question.

Z-Wave Plus Version	2
Role Type	7
	(ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_SLEEPING_LISTENING)
	(APPLICATION_FREQ_LISTENING_MODE_1000ms)
Node Type	0 (ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE)
Installer Icon Type	0x0300 (ICON_TYPE_GENERIC_DOOR_LOCK_KEYPAD)
User Icon Type	0x0300 (ICON_TYPE_GENERIC_DOOR_LOCK_KEYPAD)

Version
The Command may be used to obtain the Z-Wave library type, the Z-Wave protocol version used by the application, the individual command class versions used by the application.

Parameter		Value
Z-Wave Protocol Library Type		0x03
Z-Wave Protocol Version		0x07
Z-Wave Protocol Sub Version		7.16.3
Firmware 0	Version	0x02
Firmware 0	Sub Version	0x26
Firmware 1 Version		0x0B
Firmware 1 Sub Version		0x0B
Hardware Version		0x02
Number of additional firmware targets		0x01

Association Group Info

The Command is used to manage associations to Node ID destinations.

ID	Name	Count	Profile	Function
1	Lifeline	5		**Device Reset Locally Notification (0x5A01)**
				Issued when Factory Reset is performed.
				Battery Report(0x8003)
				Issued periodically to report the current battery level;
			General: Lifeline	Issued when battery becomes low.
			(0x0001)	**Door Lock Operation Report (0x6203)**
				Issued when door lock mode changed.
				Indicator Report (0x8703)
				Triggered when green light changes state.
				Door Lock Configuration Report (0x6206)
				Triggered upon a change in door lock configuration. **User Code Report(0x6303):** Issued when user code set **Extended User Code Report(0x630D):** Issued when extended user code set **User Code Keypad Mode Report(0x630A):** Issued when supported keypad mode set **Master Code Report(0x6310):** Issued when master code set **Configuration Report(0x7006):** Issued when configuration set **Notification Report(0x7105):** Issued when notification event triggered

Grouping identifier Maximum number of devices that can be added to the group

Devices from Multiple Manufactures

This product can be operated in any Z-Wave network with other Z-Wave-certified devices from other manufacturers. All mains-operated nodes within the network will act as repeaters regardless of vendor to increase the reliability of the network.

Implemented Notification Types and Events
Types: 0x06 – Access Control

Implemented Events:

- 0x01 – Manual lock operation
- 0x02 – Manual unlock operation
- 0x03 – RF lock operation
- 0x04 – RF unlock operation
- 0x06 – Keypad unlock operation
- 0x09 – Auto lock locked operation
- 0x0B – Lock jammed
- 0x0C – All user codes deleted
- 0x0D – Single user code deleted
- 0x0E – New user code added
- 0x0F – New user code not added due to duplicate code
- 0x10 – Keypad temporarily disabled
- 0x12 – New program code entered: unique code for lock configuration
- 0x13 – Manually enter user access code exceeds code limit
- 0x16 – Window/door is open
- 0x17 – Window/door is closed

Types: 0x08 – Power Management

- Implemented Events
- 0x01 – Power has been applied
- 0x0A – Replace battery soon
- 0x0B – Replace battery now
- 0x0D – Battery is fully charged

Configuration Parameters Available in the Product
There is no configuration parameter supported in the product.

FCC compliance statement

This device complies with part 15 of the FCC Rule. Operation is to the following two conditions this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Information to the user.
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Documents / Resources

	SILICON LABS ZGM130S Z Wave Module [pdf] User Manual HCPZWLKR1SH, 2A8PS-HCPZWLKR1SH, 2A8PSHCPZWLKR1SH, ZGM130S Z Wave Module, Z Wave Module, Module, HCP Lshape ZW3 ANZ, HCP Lshape ZW3 EMEA, HCP Lshape ZW3 KR

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