ULTRALOQ Latch7 Z-Wave® Smart Lock

1. Overview

This device is a security enabled Z-Wave Plus® v2 product that is able to use encrypted Z-Wave Plus v2 messages to communicate to other security S2 enabled Z-Wave Plus v2 products. This device must be used in conjunction with a S2 security enabled Z-Wave controller in order to fully utilize all implemented functions. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility. 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 reliability of the network. SmartStart enabled products can be added into 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.

2. Interfaces

Terminology	*Description*
Keypad	Used to operate various functions of the door lock
Thumbturn	For manual lock / unlock operation
QR Code	2D barcode format that can contain large amounts of information in a small square of encoded blocks resembling a random checkerboard pattern. In Z-Wave, it is used to represent the S2 public part of the DSK on a device, as well as additional information needed for the inclusion process

3. Specifications

3.1 Structural Characteristics

Parameter	*Value*
Product Identifier	LATCH7-ZWAVE
Color	BLACK

Usage	Indoor & Outdoor
Operating Temperature	External Assembly: -4 °F ~ 149 °F (-20 °C ~ 65 °C) Internal Assembly: 14 °F ~ 131 °F (-10 °C ~ 55 °C)
Relative Humidity	30% - 95% Non condensing
Product ID	0x0003
Product Type ID:	0x0004

3.2 Hardware Characteristics

Parameter	***Value***
Z-Wave Model	EFR32ZG28A
Indicatoe Light Color	GREEN/BLUE/RED
Battery Info	AA alkaline battery x4

3.3 Software Characteristics

Parameter	***Value***
Wireless Technology	Z-Wave
Certification Type	Z-WavePlus v2
Z-Wave SDK Version	7.23.0
Z-Wave Library Type	Enhanced End Node 232
Z-Wave Role Type	Listening Sleeping End Node Role Type
Generic Device Type	GENERIC_TYPE_ENTRY_CONTROL (0x40)
Specific Device Type	SPECIFIC_TYPE_DOOR_LOCK (0x01)
Security Class	S0, S2
SmartStart	Support. After powering on, SmartStart 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 Association Command Classes.
Factory Reset	Support. Refer to Section How to factory reset.
Power-down Memory	Support. All command settings will stay unchanged even power down.
User code Report	Support. When user code changes, send out notification via Group 1.

4. Product Quick Start

4.1 Z-Wave DSK Location

1. You can find the QR code on the battery cover of your door lock.
2. You may also find the DSK in the user manual of each product.

   Note: Please do not remove or damage them.

4.2 How to add the product into Z-Wave network

1. Follow the user guide of hub to enter inclusion mode.
2. Operate on lock Enter "Include mode": Hold the "Enter" button for 3 seconds, hear 2 beeps and flashing blue light, internal LED Flashing Green light. The lock now enters setup mode.

4.2.2.1 Enter Button

3. Follow the prompts, scan the QR code located on the better cover, or enter the 5-digit PIN code.

   Note: Please complete the preparation within 30 seconds. If you miss, please press the ULTRALOQ button again to enter.

4.3 How to remove the product from the Z-Wave network

1. Follow the user guide of hub to enter exclusion mode.
2. Operate on lock Enter "Exclusion mode": Hold the "Enter" button for 3 seconds, hear 2 beeps and flashing blue light, internal LED Flashing Green light.

4.3.2.1 Enter Button

3. Remove from the hub.

4.4 How to factory reset

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

Please use a Reset Needle to push the Reset Button (ocated inside the battery compartment) for around 10 seconds until you hear one long beep and two short beeps.

4.4 How to use the Lock

1. Enter 4-8 digit code and press ULTRALOQ Button to unlock .

   Note: The default code is 3494. Once the device is added to the Z-Wave network, the user code can only be changed via Z-Wave commands.

2. Use your smart home system to unlock. Refer to your smart home system instructions for more information.

5. Supported Command Classes

Command Class	*Version*	*Not added*	*Nonsecur added*	*Securely 0 added*		*Securely 2 added*	
				Nonsecure CC	*Secure CC*	*Nonsecure CC*	*Secure CC*
Command Class Association	2				Support		Support
Command Class Association Group Info	3				Support		Support
Command Class Basic	2				Support		Support
Command Class Battery	1				Support		Support
Command Class Device Reset Locally	3				Support		Support
Multi Channel Association	3				Support		Support
Command Class Door Lock	4				Support		Support
Command Class Firmware Update Meta Data	5				Support		Support

Command Class Indicator	3				Support		Support
Command Class Manufacturer Specific	2				Support		Support
Command Class Powerlevel	1				Support		Support
Command Class Security 0	1	Suppo rt	Support	Support		Support	
Command Class Security 2	1	Suppo rt	Support	Support		Support	
Command Class Supervision	1	Suppo rt	Support	Support		Support	
Command Class Transport Service	2	Suppo rt	Support	Support		Support	
Command Class User Code	4				Support		Support
Command Class Version	2				Support		Support
Command Class Z-Wave Plus Info	2	Suppo rt	Support	Support		Support	

6. Association Command Classes

Group ID	***Maximum Nodes***	***Description***	***Function***
1	5	Lifeline	DEVICE_RESET_LOCALLY_NOTIFICATION DOOR_LOCK_OPERATION_REPORT BATTERY_REPORT INDICATOR_REPORT NOTIFICATION_REPORT DOOR_LOCK_CONFIGURATION_REPORT USER_CODE_REPORT

7. Basic Command Classes

Command Class	*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 lock is opened
	0xFF		Door Secured	The lock is closed
Basic Get		Door Lock Operation Get		

8. Notification Command Classes

Notification Type	Event	*Alarm Reports*	*Description*
0x06	0x01	Manual Lock	Manual lock operation
0x06	0x02	Manual Unlock	Manual unlock operation
0x06	0x03	RF Operate Lock	RF lock operation
0x06	0x04	RF Operate Unlock	RF unlock operation
0x06	0x05	Keypad Lock	Keypad lock operation
0x06	0x06	Keypad Unlock	Keypad unlock operation
0x06	0x09	Auto Lock Operate Locked	Auto lock locked operation
0x06	0x0B	Lock jammed	Lock jammed
0x06	0x0C	All User Deleted	All user codes deleted
0x06	0x0D	User Deleted	Single user code deleted
0x06	0x0E	User Added	New user code added
0x06	0x0F	Duplicate Pin-code error	New user code not added due to duplicate code

0x06	0x10	Tamper Alarm	Keypad temporary disabled

8.1 How to Trigger Notifications

Event	*Alarm Reports*	*Trigger Method*
0x01	Manual Lock	Rotate thumbturn to Locked
0x02	Manual Unlock	Rotate thumbturn to Unlock
0x03	RF Operate Lock	RF lock operation
0x04	RF Operate Unlock	RF unlock operation
0x05	Keypad Lock	Locked via "ULTRALOQ" button
0x06	Keypad Unlock	Unlock by entering user code via keyboard.
0x09	Auto Lock Operate Locked	Unlock first, and after waiting for 30 seconds, the device will Auto Lock.
0x0B	Lock jammed	In the unlocked state, press the Ultraloq relock button and manually hold the thumb turn to prevent it from rotating (simulating a jam). Once you hear two beeps, the jam has been triggered. At this point, a notification can be received.
0x0C	All User Deleted	Delete all user codes
0x0D	User Deleted	Delete single user code
0x0E	User Added	New user code added
0x0F	Duplicate Pin-code error	New user code not added due to duplicate code
0x10	Tamper Alarm	The password is entered incorrectly 5 consecutive times

9. Identity Function

Indicator ID		*Property ID*	
Node Identify	0x50	On Off Period	0x03
		On Off Cycles	0x04
		On time within an On/Off period	0x05