Z-Wave and Z-Wave Long Range 800 SDK 7.23.4 GA

Simplicity SDK Suite 2024.12.3

August 6, 2025

Z-Wave and Z-Wave Long Range 800 is designed to meet the demands of the future smart home, where increasing needs for more sensors and battery-operated devices require both long range and low power. Context-aware environments are the next evolution in the smart home market, and they require technologies that have been optimized specifically for these applications.

100% Interoperable: Every product in the Z-Wave ecosystem works with every other product, regardless of type, brand, manufacturer or version. No other smart home/IoT protocol can make this claim.

Best-In-Class Security: Z-Wave's Security 2 (S2) framework provides end-to-end encryption and the most advanced security for smart home devices and controllers. Homes with S2 Z-Wave devices are virtually un-hackable.

SmartStart Easy Installation: SmartStart radically simplifies the installation of smart devices by using QR code scans for uniform, trouble-free setup. Devices and systems can be pre-configured dramatically easing deployments.

Backwards-Compatible: Z-Wave certification mandates backward-compatibility. The first Z-Wave devices on the market, more than ten years old, still perform as intended in networks with the latest Z-Wave technologies.

Z-Wave

KEY FEATURES

- Z-Wave Long Range European frequency has shifted to align the implementation to the specification change.
- A firmware upgrade over-the-air issue is fixed. An end device is required to be included again after the OTA process.

For more information about the certification status of Z-Wave and Z-Wave Long Range 800 SDK v7.23.4.0 GA, see Product Life Cycle and Certification.

These release notes cover SDK version(s):

7.23.4 GA released August 6, 2025
7.23.2 GA released April 1, 2025
7.23.1 GA released February 5, 2025
7.23.0 GA released December 16, 2024

Compatibility and Use Notices

For more information about security updates and notices, see the Security chapter of the Platform Release notes installed with this SDK or on the Silicon Labs Release Notes page. Silicon Labs also strongly recommends that you subscribe to Security Advisories for up-to-date information. For instructions, or if you are new to the Z-Wave 800 SDK, see section 9 Using This Release.

Compatible Compilers:

GCC (The GNU Compiler Collection) version 12.2.1, provided with Simplicity Studio.

Contents

1 Supported Radio Boards

This section describes the radio boards supported by the certified and pre-certified applications for the 800 Series, respectively.

Table 1-1. Supported Radio Boards

Series	Radio Board	Description	Z-Wave Long Range	Tx Power	Secure Vault
800	BRD2603A	ZGM230SB: SiP	yes	14 dBm	High
800	BRD2705A	EFR32ZG28B: SoC	yes	14 dBm	High
800	BRD4204A	EFR32ZG23A: SoC	yes	14 dBm	Mid
800	BRD4204B	EFR32ZG23A: SoC	yes	14 dBm	Mid
800	BRD4204C	EFR32ZG23B: SoC	yes	14 dBm	High
800	BRD4204D	EFR32ZG23B: SoC	yes	14 dBm	High
800	BRD4205A	ZGM230SA: SiP	yes	14 dBm	Mid
800	BRD4205B	ZGM230SB: SiP	yes	14 dBm	High
800	BRD4210A	EFR32ZG23B: SoC	yes	20 dBm	High
800	BRD4400B	EFR32ZG28B: SoC	yes	14 dBm	High
800	BRD4400C	EFR32ZG28B: SoC	yes	14 dBm	High
800	BRD4401B	EFR32ZG28B: SoC	yes	20 dBm	High
800	BRD4401C	EFR32ZG28B: SoC	yes	20 dBm	High

ZW-LR indicates that the radio board supports both Z-Wave and Z-Wave Long Range. 14/20 dBm indicates the transmit power of the radio board. Secure Vault is an industry-leading suite of state-of-the-art security features that address escalating Internet of Things (IoT) threats.

Table 1-2. Radio Boards versus OPNs.

Series	Radio Board	OPN Description
800	BRD2603A	ZGM230SB27HGN3
800	BRD2705A	EFR32ZG28B312F1024IM48-A
800	BRD4204A	EFR32ZG23A010F512GM48
800	BRD4204B	EFR32ZG23A010F512GM48
800	BRD4204C	EFR32ZG23B010F512IM48
800	BRD4204D	EFR32ZG23B010F512IM48
800	BRD4205A	ZGM230SA27HNN0
800	BRD4205B	ZGM230SB27HGN2
800	BRD4210A	EFR32ZG23B020F512IM48
800	BRD2603A	ZGM230SB27HGN3
800	BRD4400C	EFR32ZG28B312F1024IM68-A
800	BRD4401B	EFR32ZG28B322F1024IM68-A
800	BRD4401C	EFR32ZG28B322F1024IM68-A

The table above shows the Radio Boards and OPN relation. This table can be used to clarify the compatibility of the prebuilt binaries offered in the Simplicity SDK. The prebuilt binaries are built targeting boards and not OPNs. More OPNs are available than the ones listed above. For those OPNs the prebuilt binaries will not work. The desired application must be built targeting the specific OPN instead.

2 Z-Wave Protocol

This release note is built upon the Z-Wave SDK 7.23.0 release note.

2.1 New Items

- The Z-Wave Long Range EU region is officially supported. To follow the Z-Wave Alliance specification change, the 7.23.1 SDK contains a shift of the frequency band used for the Z-Wave Long Range Europe region. It makes it incompatible with previous Z-Wave Long Range Europe implementations (7.23.0 and 7.22.x Alpha).
- Security S2V2 is introduced as an Alpha feature. S2V2 enables secure communication for network frames in a Z-Wave network. However, the Security 2 Command Class is reported as version 1 while the Security 2 Version 2 feature is in the Alpha stage.

2.2 Improvements

Improved in release 7.23.4 GA

ID #	Description
1380036	Improved the RX-TX 1 millisecond guard time accuracy.
1485259	Improved the Series 800 radio reception capability in environments crowded by wake-up beams.
1434641	Improved Clear Channel Assessment (CCA) reliability. Previously, only the latest measured RSSI value was used instead of the highest value in the RX window.

Improved in release 7.23.0 GA

ID #	Description
1361218	The TX power of the sample applications is now set to the maximum value supported by the development board by default.

2.3 Fixed Issues

Fixed in release 7.23.4 GA

ID #	Description
1439198	Fixed an issue preventing the configuration of a TX output power above +14 dBm in the Serial API controller application.
1486116	Fixed an issue preventing the configuration of the priority route speed with no repeater. The route speed would default to 100 kbit/s.

Fixed in release 7.23.2 GA

ID #	Description
1406772	7.23.0 and 7.23.1 SAPI controllers were missing Z-Wave version/format in NVM.
1409387	Fixed a condition where the stack would try to send an oversized packet over the air.
1397174	Fixed a behavior in the REMOVE_NODE_FROM_NETWORK SAPI command when excluding node from another network. The command would fail if the node ID targeted was shared in the remover's network.
1406741	Fixed a behavior where the controller would display false information after an NVM backup and before a soft reset.
1420433	When there was no Kex frame in the inclusion, the application layer was missing a status update around learn mode.

Fixed in release 7.23.1 GA

ID #	Description
1393469	After a firmware update over-the-air process, an end device would need to be reincluded in the network. The issue is fixed, and the inclusion step is no longer necessary.
1394158	After an end device with NLS enabled was removed from a network, it had an issue when removed and then added back to a network again. This has been fixed.
1396813	Some commands share the same ID as protocol command. They were mistaken as NLS-covered commands. This has been fixed.
1351248	A Z-Wave Long Range end device could exhibit reduced transmit power output after a soft-reset. This has been fixed.

Fixed in release 7.23.0 GA

ID #	Description
1363434	Fixed an issue where the Z-Wave stack is prevented from sending TX frames. The end device symptoms are a loss of packet transmission and no acknowledge emanating from the device. On the controller end, it materializes by a TX_COMPLETE_FAIL status answered back to the host.
1123427	Fixed an issue where a Never Listening device would unintentional wakeup.
1367428	Fixed an issue related to LBT mechanism, where the end device was unable to switch to a free channel and respond to incoming requests.

2.4 Known Issues in the Current Release

None.

2.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

2.6 Removed Items

Removed in release 7.23.0 GA

None.

3 Z-Wave Plus V2 Application Framework

The current version of the SDK is aligned with the Z-Wave Alliance 2024B-3 Intermediate Cert Program and the latest version of the Z-Wave XML from the Wave Alliance Open Source:

https://github.com/Z-Wave-Alliance/zwave_xml/releases/tag/draft%2F2024B-fix2.

3.1 New Items

Introduced a certifiable User Credential Command Class implementation which has been self-certified on the Door Lock Key Pad sample application with the 3.8.2 CTT version using Revision 16 Z-Wave Plus V2 Certification tests according to the 2024B-1 Z-Wave Certification Program.

Additionally, on the 7.23.1 SDK version, the User Credential Command Class implementation on the Door Lock Key Pad sample application has been validated with the 3.9.2 CTT version using Revision 17 Z-Wave Plus V2 Certification tests according to the 2024B-2 Z-Wave Certification Program.

3.2 Improvements

Improved in release 7.23.0 GA

The GPIO handling and configuration has been refactored and simplified by using *simple_led*, *simple_button* and *app_button_press* components. For remapping and assigning GPIO for button and LEDs, refer to the “Important changes.md”.

For a detailed description of application development using the Z-Wave Plus V2 Framework, refer to INS14259: Z-Wave Plus V2 Application Framework GSDK.

For a detailed description of the application related changes in the different SDK versions, refer to https://docs.silabs.com/z-wave/7.23.1/zwave-api/ or in the "Important_changes.md" document in the Simplicity SDK.

A porting guide is also available for customers who want to migrate to the 800 platform. The guide contains a detailed example of how to port a non-component/700-based Switch On/Off App (7.16.3) to a component/800-based Switch On/Off App (7.17.0). See *APL14836: Application Note for Porting Z-Wave Appl. SW from 700 to 800 hardware.*

3.3 Fixed Issues

Fixed in release 7.23.4 GA

ID #	Description
1448526	Fixed the number of indicator blinks from 5 to 6 to pass the CDR_ZWPv2IndicatorCCRequirements_Rev01 CTT test.
1426510	Fixed an issue when notifications were sometimes not sent out during an OTA firmware update.
1434625	Fixed an issue when the sleeping apps fell back to sleep during a long button press.
1473354	Slow refresh has been enabled by default in Central Scene V3, as mandated by the specification.

Fixed in release 7.23.1 GA

ID #	Description
1392141	Z-Wave OTW bootloader project for custom board now compiles without errors and displays a warning to pay attention to default UART configuration.

Fixed in release 7.23.0 GA

ID #	Description
1347089	Multilevel Sensor endpoints can be created using the Z-Wave Command Class Configurator.

3.4 Known Issues in the Current Release

Issues in bold were added since the previous release. If you have missed a release, recent release notes are available on the Silicon Labs Release Notes page.

ID #	Description	Workaround
369430	All S2 multicast frames are sent using verified delivery S2_TXOPTION_VERIFY_DELIVERY whether or not a response is expected.	Change source code depending on the frame sent.
1172849	On series 800, sleep will no longer take advantage of EM1P current savings.	Currently not available.
1257690	sl_storage_config.h does not handle custom OTA slot size.	Currently not available.

3.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

3.6 Removed Items

Removed in release 7.23.0. GA

Removed support for BRD8029A button and LED expansion board from the sample applications.

4 Sample Applications

The Door Lock Key Pad, Power Strip, Sensor PIR, Switch On/Off, Wall Controller, and Led Bulb sample applications are self-certified with the 3.8.2 CTT version and Revision 16 Z-Wave Plus V2 Certification tests according to the 2024B-1 Z-Wave Certification Program. The Multilevel Sensor sample application is not self-certified and has missing features for passing the certification tests.

The GPIO handling and configuration has been refactored and simplified by using *simple_led*, *simple_button* and *app_button_press* components. For remapping and assigning GPIO for button and LEDs, refer to the “Important changes.md”.

Along with the GPIO simplification and refactoring, the sample applications do not use the BRD8029A button and LED expansion board. The main button functionalities are remapped to the buttons of Wireless Starter Kit Mainboard/Wireless Pro Kit Mainboard. Because of the reduced number of LEDs and buttons, some functionalities are only available through the CLI. For more information, please refer to the README file of each example application.

In all applications, BTN1 is assigned to the inclusion, exclusion, and factory reset functionalities. BTN0 is assigned to specific sample application related functionalities.

The behavior is changed on Non-Listening (Sensor PIR, Multilevel Sensor) and Frequently Listening (Door Lock Keypad) applications in case the installed CLI component is installed. After pressing the reset button (or using commander reset), the device will wake up for 10 seconds. This allows the user to interact with the device and disable sleeping. The wakeup time is configurable through the zw_cli_sleeping component.

The number of demo variations for each application has been reduced to two variants: one with the default EU region, and one for testing OTA and OTW firmware updates. To set a different frequency region for the demo applications, please find more information in the *important_changes.md* and in the *Z-Wave Getting Started for End Devices* documents.

The Z-Wave Solution Studio projects are now signing the bootloader and application binaries with the same key as the one specified in the application post build configuration. The signing keys can be set in the SLPB files.

All examples are enabled for all Z-Wave boards. Previously, some example applications required an RGB LED or multiple buttons to access all of the features. Now, the CLI is enabled by default in all example applications, so every feature can be controlled using the CLI. The functionality of each application is described in the README file in each application's respective folder, along with the available commands.

4.1 Door Lock Key Pad

The two Door Lock Key Pad applications – the one with the User Credential Command Class support and the one without the User Credential Command Class support – have been merged into one. This Door Lock sample application supports a certifiable User Credential Command Class implementation, and it has been self-certified with the 3.8.2 CTT version using Revision 16 Z-Wave Plus V2 Certification tests according to the 2024B-1 Z-Wave Certification Program.

The User Credential Command Class is enabled by default on the boards with the EFR32ZG28 SoCs (BRD2705A, BRD4400C, BRD4401C). Support for this command class can be disabled if the User Code Command Class is sufficient, by disabling the *User Credential Command Class* component. To enable this command class on other SoCs or boards, please refer to the README file of the application.

Some of the User Credential Command Class CTT tests are failing due to known issues in the CTT tests. These have been confirmed with the CTT tool developers and will be fixed in the next CTT releases. Until then, to obtain Z-Wave certification using this User Credential Command Class implementation, please consult with the Test Houses regarding test failures.

4.1.1 New Items

Previously, this example required four buttons to control all the features. Now, the entered user code is no longer hard-coded, and the user can enter/modify the user code manually. The door handle is also accessible through the CLI.

Along with the GPIO simplification and refactoring, the sample application does not use the BRD8029A button and LED expansion board. For the new button and LED functionalities, please refer to README file in the application folder.

4.1.2 Improvements

Improved in release 7.23.0 GA

The default PIN code for this application was changed from 1234 to 3494 to comply with the rules recommended by the specification for the User Credential Command class.

4.1.3 Fixed Issues

Fixed in release 7.23.1 GA

ID #	Description
1381226	Fixed an issue when User Code Set/Get commands with multicast can freeze the application.
1396687	Fixed CCA_U3CReportUserData_Rev01 CTT test when replying to root device request sent only to multichannel end point.
1394750	Fixed UserCredentialCmdClassV1_Rev01 CTT test when first byte of password could not be modified.
1393820	Ignored inexact Credential Get requests. This has been fixed.
1393478	Fixed u3c_add_credential CLI command.
1392130	Kept the bolt state after reset. The default bolt state has been changed to unlocked.

Fixed in release 7.23.0 GA

ID #	Description
1297831	Fixed an issue when Credential Learn could not be triggered via BTN1. 2. This functionality can now be controlled via the CLI.
1347581	Fixed an issue when User and Credential report is incorrectly sent to an associated lower security class.
1346581	Default user pin code has been changed to comply with specification's recommendation to not allow consecutive digits.

4.1.4 Known Issues in the Current Release

ID #	Description	Workaround
1383233	Max number of user code IDs configuration value in User Code Command Class configuration is limited to 50. Higher configuration value may cause unsuccessful inclusion depending on the NVM operation speed.	Currently not available.

4.1.5 Deprecated Items

Deprecated in release 7.23.0. GA

None.

4.1.6 Removed Items

Removed in release 7.23.0. GA

None.

4.2 Power Strip

4.2.1 New Items

Along with the GPIO simplification and refactoring, the sample application does not use the BRD8029A button and LED expansion board. For the new button and LED functionalities, please refer to the README file in the application folder.

4.2.2 Improvements

Improved in release 7.23.0 GA

Previously, this example displayed the Multilevel Switch value on the RGB LED. Now, if an RGB LED is available, the brightness of that LED is controlled by the Multilevel Switch value. Otherwise, a monochrome LED is used to display this value.

4.2.3 Fixed Issues

Fixed in release 7.23.1 GA

ID #	Description
1384692	Fixed an issues for boards without RGB LED, when get_rgb_values CLI command gave invalid values.

Fixed in release 7.23.0 GA

None.

4.2.4 Known Issues in the Current Release

None.

4.2.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

4.2.6 Removed Items

Removed in release 7.23.0 GA

None.

4.3 Sensor PIR

4.3.1 New Items

Along with the GPIO simplification and refactoring, the sample application does not use the BRD8029A button and LED expansion board. For the new button and LED functionalities, please refer to README file in the application folder.

4.3.2 Improvements

Improved in release 7.23.0 GA

SensorPIR's behavior has been changed slightly. Now, if the button is pressed for medium time (check readme for exact duration), then the device will send a NOTIFICATION_EVENT_HOME_SECURITY_MOTION_DETECTION_UNKNOWN_LOCATION notification and start a timer with a 10 second timeout. If the timeout event occurs or the user sends the motion_detected deactivate command through the CLI, then the device will send a NOTIFICATION_EVENT_HOME_SECURITY_NO_EVENT notification.

4.3.3 Fixed Issues

Fixed in release 7.23.0 GA

ID #	Description
1322043	Fixed the missing first Lifeline report in SensorPIR, causing failure in CTT Test case CCM_AssociationCmdClass_Rev01 CTT.
1256505	Fixed an issue in the SensorPIR and MultilevelSensor sample applications where the apps were unable to wake up on button pressing on BRD4400C and BRD4401C radio boards by the elimination of the usage of BRD8029A expansion board and remapping the buttons to the motherboard buttons.

4.3.4 Known Issues in the Current Release

None.

4.3.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

4.3.6 Removed Items

Removed in release 7.23.0 GA

None.

4.4 Switch On/Off

4.4.1 New Items

Along with the GPIO simplification and refactoring, the sample application does not use the BRD8029A button and LED expansion board. For the new button and LED functionalities, please refer to README file in the application folder.

4.4.2 Improvements

Improved in release 7.23.0 GA

None.

4.4.3 Fixed Issues

Fixed in release 7.23.0 GA

None.

4.4.4 Known Issues in the Current Release

None.

4.4.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

4.4.6 Removed Items

Removed in release 7.23.0 GA

None.

4.5 Wall Controller

4.5.1 New Items

Along with the GPIO simplification and refactoring, the sample application does not use the BRD8029A button and LED expansion board. For the new button and LED functionalities please refer to README file in the application folder.

4.5.2 Improvements

Improved in release 7.23.0 GA

None.

4.5.3 Fixed Issues

Fixed in release 7.23.1 GA

ID #	Description
1384690	Fixed unavailable CLI for the following board and application combinations: - BRD2603A - Wall Controller - BRD2603A - Multilevel Sensor - BRD2705A - Wall Controller

Fixed in release 7.23.0 GA

None.

4.5.4 Known Issues in the Current Release

Issues in bold were added since the previous release. If you have missed a release, recent release notes are available on Silicon Labs Release Notes page.

None.

4.5.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

4.5.6 Removed Items

Removed in release 7.23.0 GA

None.

4.6 Multilevel Sensor

This application is not certifiable due to missing features for passing the certification tests.

4.6.1 New Items

None.

4.6.2 Improvements

Improved in release 7.23.0 GA

Multilevel sensor can now be assigned to an endpoint. Also, multiple multilevel sensors can be used in a single end device. The cc_config file has been changed to follow this format. Endpoint is now part of the "ID" of a given sensor. The sensor structure changed to include information about the assigned endpoint.

4.6.3 Fixed Issues

Fixed in release 7.23.1 GA

ID #	Description
1384690	Fixed unavailable CLI for the following board and application combinations: - BRD2603A - Wall Controller - BRD2603A - Multilevel Sensor - BRD2705A - Wall Controller

Fixed in release 7.23.0 GA

None.

4.6.4 Known Issues in the Current Release

Issues in bold were added since the previous release. If you have missed a release, recent release notes are available on Silicon Labs Release Notes page.

ID #	Description	Workaround
1383828	Sometimes the device does not wake up on button press using the BRD4400C, BRD2603A, BRD2705A boards. Too short button press can wake-up the DUT for 5 sec, but the interrupt callback is not invoked.	Press the buttons with longer period or press the button twice.

4.6.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

4.6.6 Removed Items

Removed in release 7.23.0 GA

None.

4.7 LED Bulb

4.7.1 New Items

Along with the GPIO simplification and refactoring, the sample application does not use the BRD8029A button and LED expansion board. For the new button and LED functionalities, please refer to README file in the application folder.

4.7.2 Improvements

Improved in release 7.23.0 GA

Previously, this example required an RGB LED to control the color of the LED. Now, the color can be read through the CLI. If the RGB LED is not available, then a monochrome LED is used to represent the overall brightness of the set color.

4.7.3 Fixed Issues

Fixed in release 7.23.0 GA

None.

4.7.4 Known Issues in the Current Release

None.

4.7.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

4.7.6 Removed Items

Removed in release 7.23.0 GA

None.

5 Serial API Applications

Beginning with version 7.16, when backing up and restoring a Serial API end node via the FUNC_ID_NVM_BACKUP_RESTORE, the Serial API end node will automatically upgrade the protocol non-volatile memory (NVM) to the latest version. Any backup made of a 7.16 or later Serial API end node can be restored to its original version or to a later version of the Serial API end node without any manual upgrade of the protocol NVM being necessary.

The serial interface is unchanged in version 8.

As of SDK version 7.18.x, Serial API end node is available as source code as well as binary. This opens the possibility for building customized versions of Serial API end node with different pin configuration or additional hardware utilization. A use case might be to use SPI instead of UART for serial communication.

No application using Serial API End Device is available in the Simplicity SDK.

5.1 Serial API Controller

5.1.1 New Items

- Added two new Serial API commands: Z-Wave API Setup Get Supported Regions Sub Command (0x15) and Z-Wave API Setup Regions Info (0x16).

5.1.2 Improvements

Improved in release 7.23.0 GA

None.

5.1.3 Fixed Issues

Fixed in release 7.23.1 GA

ID #	Description
1391107	SAPI GetSupportedCommands command was not returning command with ID above 232. This has been fixed.
1391124	Fixed broken application when the NCP Serial API Controller is built from the sample application project.

Fixed in release 7.23.0 GA

None.

5.1.4 Known Issues in the Current Release

None.

5.1.5 Deprecated Items

Deprecated in release 7.23.0 GA

- Removed handling of Serial API commands Replication Send Data (0x44) and Replication Command Complete (0x45).

5.1.6 Removed Items

Removed in release 7.23.0 GA

None.

6 Zniffer Applications

6.1 Zniffer PTI

6.1.1 New Items

None.

6.1.2 Improvements

Improved in release 7.23.0 GA

None.

6.1.3 Fixed Issues

Fixed in release 7.23.0 GA

None.

6.1.4 Known Issues in the Current Release

ID #	Description	Workaround
1067228	Zniffer on BRD4204D does not detect LR wakeup beams	Use different board for sniffing LR wakeup beams

6.1.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

6.1.6 Removed Items

Removed in release 7.23.0 GA

None.

6.2 Zniffer NCP

6.2.1 New Items

None.

6.2.2 Improvements

Improved in release 7.23.0 GA

None.

6.2.3 Fixed Issues

Fixed in release 7.23.0 GA

None.

6.2.4 Known Issues in the Current Release

ID #	Description	Workaround
1364307	The RSSI values showed in PC Zniffer using the Zniffer NCP are not valid.	Use Zniffer PTI for measuring valid RSSI values.

6.2.5 Deprecated Items

Deprecated in release 7.23.0 GA

None.

6.2.6 Removed Items

Removed in release 7.23.0 GA

None.

7 Important Changes

Starting in version 7.19, API-breaking changes have been documented in "Important_changes.md" available in the Simplicity SDK. Check it for a detailed description of changes introduced in the latest release.

In version 7.23.0, the “migration_guide.md” has been introduced to help migrating Z-Wave projects to the new SDK versions.

8 Open Source Software

Z-Wave is using FreeRTOS as the underlying OS, and it is based on FreeRTOS Kernel V10.4.3.

9 Using This Release

This release contains the following:

- Z-Wave Plus V2 Application Framework
- Z-Wave Certified Applications for a broad range of smart home applications
- Z-Wave Protocol and Serial API Applications

If you are a first-time user, Z-Wave documentation is installed with the SDK. See INS14280: Z-Wave Getting Started for End Devices and INS14281: Z-Wave Getting Started for Controller Devices for instructions.

This SDK depends on a Simplicity SDK Platform. The Simplicity SDK Platform code provides functionality that supports protocol plugins and APIs in the form of drivers and other lower layer features that interact directly with Silicon Labs chips and modules. Gecko Platform components include EMLIB, EMDRV, RAIL Library, NVM3, PSA, and mbedTLS. Gecko Platform release notes are available through Simplicity Studio's Launcher Perspective.

9.1 Installation and Use

Order a Z-Wave Wireless Starter kit. The kit offers the easiest and fastest way to start evaluation and development of your own Z-Wave mesh application. It provides a single world-wide development kit for both end devices and gateways with multiple radio boards, with which developers can create a mesh network and evaluate the Z-Wave module.

The Z-Wave and Z-Wave Long Range 800 SDK is provided as part of the Simplicity SDK, the suite of Silicon Labs SDKs. To quickly get started with the Simplicity SDK, install Simplicity Studio 5, which will set up your development environment and walk you through Simplicity SDK installation. Simplicity Studio 5 includes everything needed for IoT product development with Silicon Labs devices, including a resource and project launcher, software configuration tools, full IDE with GNU toolchain, and analysis tools. Installation instructions are provided in the online Simplicity Studio 5 User's Guide.

Alternatively, Simplicity SDK may be installed manually by downloading or cloning the latest from GitHub. See https://github.com/SiliconLabs/simplicity_sdk for more information.

Simplicity Studio installs the SDK by default in:

- (Windows): C:\Users\<NAME>\SimplicityStudio\SDKs\simplicity_sdk
- (MacOS): /Users/<NAME>/SimplicityStudio/SDKs/simplicity_sdk

To implement a specific application, Silicon Labs recommends starting with one of the existing self-certified apps with the desired Role Type.

9.2 Security Information

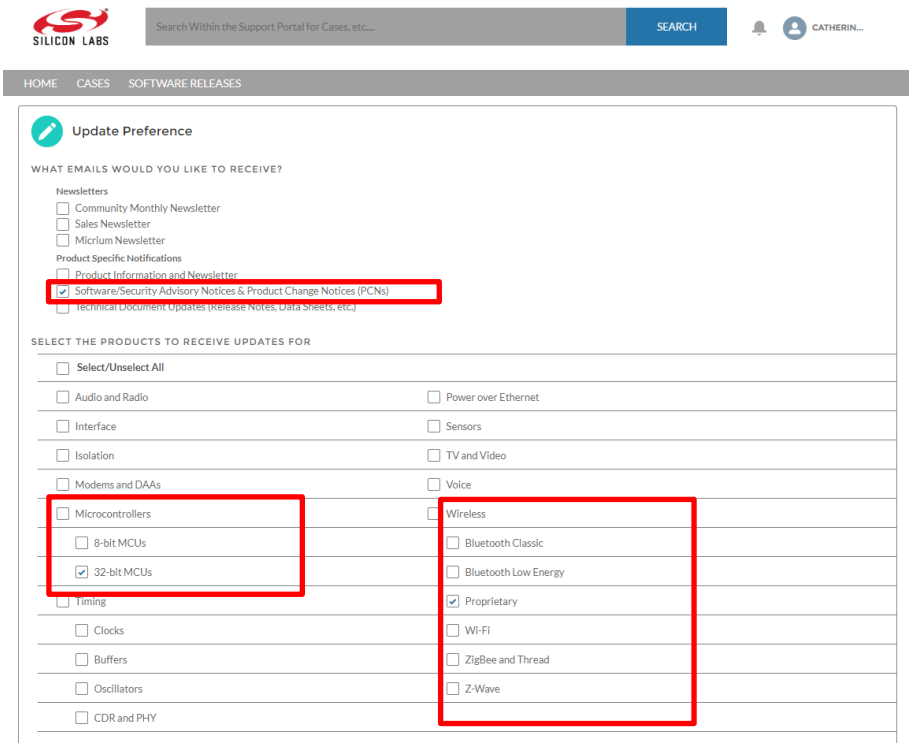
Secure Vault Integration

This version of the stack is using secure vault interface for key management of asymmetric keys (ECC Curve 25519) and Symmetric keys (AES).

Security Advisories

To subscribe to Security Advisories, log in to the Silicon Labs customer portal, then select **Account Home**. Click **HOME** to go to the portal home page and then click the **Manage Notifications** tile. Make sure that 'Software/Security Advisory Notices & Product

Change Notices (PCNs)' is checked, and that you are subscribed at minimum for your platform and protocol. Click **Save** to save any changes.



9.3 Support

Development Kit customers are eligible for training and technical support.

See support resources and contact Silicon Laboratories support at https://www.silabs.com/support.

9.4 SDK Release and Maintenance Policy

For details, see SDK Release and Maintenance Poilcy.

10 Product Life Cycle and Certification

Silicon Labs will add new features based on market requirements and continuously improve the Z-Wave Protocol to position the Z-Wave Ecosystem. The Z-Wave Protocol Life Cycle is a process to provide rapid innovation, new features and robust matured protocol release to Z-Wave Partners. The Z-Wave Protocol Life Cycle defines the maturation process of Z-Wave Protocol generations and consist of three phases divided in five Life Cycle stages. A change in the Z-Wave SDK utilized for a specific device does require recertification; however, the type of certification required, the amount of testing needed, and the associated fees depend on the scope of the change. Refer to Z-Wave Alliance home page https://z-wavealliance.org/ for details.

Table 10-1. Z-Wave SDK Release History

Series	SDK Version	Release Date [DD-MMM-YYYY]
800	7.22.0 GA	6-JUN-2024
700/800	7.21.0 GA	15-DEC-2023
700/800	7.20.2 GA	9-OCT-2023
700/800	7.20.1 GA	26-JUL-2023
700/800	7.20.0 Pre-Certified GA	07-JUN-2023
700/800	7.19.3 GA	03-MAY-2023
700/800	7.19.2 GA	08-MAR-2023
700/800	7.19.1 GA	01-FEB-2023
700/800	7.19.0 Pre-Certified GA	14-DEC-2022
700/800	7.18.8 GA	13-SEP-2023
700/800	7.18.6 GA	28-JUN-2023
700/800	7.18.4 GA	18-JAN-2023
700/800	7.18.3 GA	19-OCT-2022
700/800	7.18.2 GA	28-SEP-2022
700/800	7.18.1 GA	17-AUG-2022
700/800	7.18.0 Pre-Certified GA	08-JUN-2022
700/800	7.17.2 GA	09-MAR-2022
700/800	7.17.1 Pre-Certified GA	28-JAN-2022
700/800	7.17.0 Pre-Certified GA	08-DEC-2021
700	7.16.3 GA	13-OCT-2021
700	7.16.2 GA	08-SEP-2021
700	7.16.1 GA	21-JUL-2021
700	7.16.0 Pre-Certified GA	16-JUN-2021
700	7.15.4 GA	07-APR-2021
700	7.15.2 Pre-Certified GA	27-JAN-2021
700	7.15.1 Pre-Certified GA	09-DEC-2020
700	7.14.3 GA	14-OCT-2020
700	7.14.2 GA	09-SEP2020
700	7.14.1 GA	29-JUL-2020
700	7.14.0 Beta	24-JUN-2020
700	7.13.12 GA	21-SEP-2023
700	7.13.11 GA	02-NOV-2022
700	7.13.10 GA	18-AUG-2021

Series	SDK Version	Release Date [DD-MMM-YYYY]
700	7.13.9 GA	03-MAR-2021
700	7.12.2 GA	26-NOV-2019
700	7.12.1 GA	20-SEP-2019

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