



Z-Wave Module

Firmware Update Guide

ENGLISH

V1.6 EN 21-01-08



Prerequisites

To upgrade your Z-Wave module you need the following:

- 1. An ID Lock electronic door lock
- 2. An ID Lock Z-Wave module
- 3. ID Lock Z-Wave firmware file (hex-file)
- 4. Silicon Labs Simplicity Studio and Z-Wave PC Controller (registration required to download developer tool)
- 5. Z-Wave UZB controller (i.e. Aeontec Gen5 UZB)
- 6. A computer running Windows 10 with at least 1 USB port

To update the Z-Wave module it must be excluded from your existing Z-Wave network. Please refer to the Z-Wave manual on <u>idlock.no/kundesenter</u> and your Z-Wave controller guide for details on how to exclude a door lock from your network.

Before inclusion we recommend you replace your batteries with 8 new LR06 batteries to ensure nothing goes wrong during the OTA (Over The Air) upgrade.

The Z-Wave firmware hex-file is available on <u>idlock.no/kundesenter</u>. Look for them in the Z-Wave section on the right side.

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WARNING!

Updating the Z-Wave Module is at own risk and without any warranties. ID Lock is not responsible for any faults that may occur during the update process.



Access to software

The PC Controller software required for OTA can be accessed from the Silicon labs Simplicity studio. To download and use the software a Silicon Labs account is needed. To make it easier later we will start by making an silicon labs account.

Note that administrator access on the PC is required to install simplicity studio.

- 1. Go to Silicon Labs webpages <u>www.silabs.com</u>.
- 2. Select the "person"-symbol and "register account" as shown below. Follow the steps provided. (If you already have an silicon labs account log in instead)



3. To download the Simplicity Studio enter Silicon Labs webpages again, <u>www.silabs.com</u>. Select "Products" -> "Wireless" -> "Simplicity Studio & Other Software" (marked yellow)

	Wireless	MCU Timin	g Isolation More Products	
PRODUCTS			RESOURCES	FEATURED PRODUCT
8 Bluetooth	Wi-Fi		Technical Library Data Sheets, App Notes, & More	
(A) Multiprotocol	Xpress		Development Kits	-85]
Proprietary	C Z-Wave		Community 🛷 User Forums & Knowledge Base	
Thread	Zigbee		CAD/CAE Schematic Footprints & Symbols	Get Started with Bluetooth Low
All Wireless			Simplicity Studio & Other Software	Energy BGM220 Series 2 Modules
			Software Documentation	



4. Scroll down and select "Explore Studio"



5. Scroll down, select simplicity studio version 5 and press the Windows installer button to download Simplicity Studio 5. You need to login to Simplicity Studio to download the software.

	SIMPLICITY STUDIO VERSION 5	SIMPLICITY STUDIO VERSION 4		
	Simplicit	y Studio 5		
Simplicity Studio 5 is a major upgrade to experience is largely based on feedback f and competitive reviews. No matter your benefit from an optimized workflow that progression and device configuration. Sin the latest versions of Eclipse and C/C++ E adding robustness, improving performan to customize your experience using plug- Marketplace. Version 5 enables SecureVa the-art security features designed to help devices against escalating threats and reg also includes a new UI engine for modern interfaces.	the popular IDE. The rom customers, employees experience level, you'll produces quicker project pplicity Studio 5 also includes bevelopment Tooling (CDT), ce, and giving you the ability ins from the Eclipse ult, a new suite of state-of- future proof your IoT gulatory pressures. The IDE , responsive, web-like user	11 11 11 11 11 11 11 11 11 11 11 11 11	The second secon	iodern nent Suite splications
Download the Full Online Installer	Version of Simplicity Studio 5 Mac Installe	er >	Linux Installer	>



6. After downloading, open the file. A new window with the following should appear. Choose Setup and follow the installation procedure.

lame	Date modified	Туре	Size
🔊 0x0409	21.03.2016 20:04	Configuration sett	22 KB
autorun	09.12.2020 21:49	Setup Information	1 KE
ata1	09.12.2020 21:49	Cabinet File	870 KE
data1.hdr	09.12.2020 21:49	HDR File	760 KE
data2	09.12.2020 21:49	Cabinet File	473 285 KE
SSetup.dll	20.09.2018 13:15	Application exten	1 588 KE
layout	09.12.2020 21:49	BIN File	1 KE
setup	09.12.2020 21:47	BMP File	484 KE
] setup.dat	09.12.2020 21:49	DAT File	1 191 KE
👩 setup	09.12.2020 21:49	Application	179 KE
setup	09.12.2020 21:49	Configuration sett	3 KE
setup.inx	09.12.2020 21:49	INX File	270 KE

7. After installation, start Simplicity Studio. When started the following box should appear. Accept all and press done.





8. The following should then appear. Login with your silicon labs account.

S.	-	×
Welcome to Simplicity Studio		
Log in to Silicon Labs Password Password Cog in Show Log in Show Log in Show Show Log in	auncher.	
Terms and Conditions Create an Account Forgot password?		
Why log in?		

9. After login the program requires some time while downloading drivers and setting up.



10. Installation manager will then appear. Choose the "install by technology type" button.



11. Chose Z-Wave from the list and press next



ID Lock



12. Chose "Auto" and press next

~		Select Development Packages	• Review Licenses
Pac	kage Installation Options		
0	Auto Select this option to let Simplicity Studio install all the recommended	development packages based on the previously-selected product.	
0	Advanced Select this option to customize installed development packages base	d on your requirements.	
			Back

13. A warning for missing packages might appear.

It is important that you have access to the Z-Wave Developer pack. The "Z-Wave Homekit Bridge" pack is not required.

Press "next" if this is ok.

~			e 💿 Select Development Packages	•	Review	
Acc Some 1	ess to	Techn may require	ology Packages e login or kit registration			
	Request a	iccess to ad	ditional packages below (optional)			
	^		Development Packages (1) access granted			
	ſ		Z-Wave			
	^		1 package needs access			
	G		Z-Wave Homekit Bridge			
Car						Next



14. "Accept all agreements" and press next



15. The Z-Wave packages required will now be installed. Please wait. After the installation is done the program will restart.

Now installing	
Fetching installation units	
Resources	
Learn some tips and tricks to help you ramp up using Simplicity Studio	
Simplicity Studio User's Guide The official Simplicity Studio 5 User's Guide	
Training and Tutorials Our collection of Simplicity Studio training and tutorial videos	
• Tips and Tricks Useful tips and tricks to help you optimize your tools setup	
Silicon Labs Community Where users come together to learn, get help, and grow their skills	

16. After restart select "Tools" button in the bar above.

Solution Simplicity Studio™	
File Edit Navigate Search Project Run Window Help	
nt Welcome 🕐 Recent 🇰 Tools 📩 Install 🌣 Preferences	
👺 Debug Adapters 🛛 😵 🎉 ڬ 🖬 🖬 🖶 🖬 🖬 🖬 🖬 🖬	
	Welcome to Simplic Everything you need to develop, re
	Get Started Select a connected device or sear
	Connected Devices All Products
	Recent Projects
	Recent Projecta
	You haven't created a project yet Create New Project
	 Learn and Support
► My Products ► ★ 🗟 🖻 🕀 = 🖬	
Enter product name	



17. The following window should appear. Scroll down and select "Z-Wave PC Controller" and press "ok"

Si Tools Dialog	×	
Energy Profiler	^	
Flash Programmer		
Hardware Configurator		
Z-Wave PC Controller		
Z-Wave Zniffer		
· · · · · · · · · · · · · · · · · · ·		
Add/Remov	<u>e lools</u>	
OK Canc	el	

18. After installation you can eject/close the drive created when the Simplicity Studio installation file is opened. To do so, open This PC, select and right click the DVD drive for Simplicity Studio and select eject. This is not required to use Simplicity studio.

DVD Drive	(E:) SimplicityStudio-5		
0 bytes fro	Open		
	Open in new window		
	Pin to Quick access		
	Scan with Microsoft Defender		
	Give access to	\rightarrow	
	7-Zip	>	
	CRC SHA	>	
	Pin to Start		
	Eject		
	Сору		
	Create shortcut		
	Properties		

NOTE!

Silicon Labs Z-Wave PC Controller is a developer tool without any warranties. Please be advised of Silicon Labs requirements for downloading the file and how to use the software.



How to update your device:

Exclude the door lock from your controller (follow the instructions from your controller supplier)

Insert the Z-Wave UZB controller to a USB port on your computer

Start Silicon Labs PC Controller as shown above (from 16)

Click on Settings (the gear icon in the top right corner)



Check the recognized UZB controller on the list in the dialog window and click **OK**. If there's nothing there, click **DETECT** and then **REFRESH**. If the UZB controller still doesn't show up, you may need to install special drivers so please contact the manufacturer of the device for instructions.

=.	Settings	×
	Serial Port Data Sources: Socket Data S	Sources:
{···.	COM4 Sierra Wireless EM7455 Qualcomm Snapdragon X7 LTE-A DNType IP Addre	ss Port ed
Ē:	COM7 Stera Wireless EM7435 Qualcomm Shapdragon A7 LTE-A Ni COM7 Intel(R) Active Management Technology - SOL	
	COM8_Seriell USB-enhet	
n		F
≡,	=,	
•	+	
_		
Ð	\mathbf{O}	
	Z/IP Connecti	ion Args:
	Datast Defeat	
	Detect Kerresh	Add Clear All Discover
	Capture communication trace to	
	Capture Folder:	
	✓ Auto split by: Size, Mb: 10	Keep last files, count: 3
		OK Cancel

idlock.no/zwave



Click Network Management



Click ADD to enroll the UZB controller in inclusion mode, then activate inclusion mode on your door lock (please refer to the Z-Wave manual for how to do this)



178 CC	DM8 - Z-Wave PC Controller				-		×
A	COM8 - Network management	t			\$	\leq	\mathbf{O}
(6	Id Type IL QO IV • Controllers 1 node(s)					Floatin	g View
=,∕	1 [S2] Pc Controller ✓ ▼ Slaves 2 node(s)	≡+ Add	E_ Remove 0 🗘	≡+ NWI	≡_ N	WE	
{}	3 [S0] Secure Keypad Door I 4 [S0] Secure Keypad Door I	. ¹ NOP 0 ♀	≕ √ Is Failed	≓+ Replace Failed	₹ R	emove F	ailed
Ē:		Set as SIS	↔ ^{Neighbors} Update				
Y		🗞 Node Info	i Get Version	■● Basic Set ON	0 - B	asic Set (DFF
≡,		Wakeup 5 🗘	- Switch All ON	O - Switch All OFF	¢ ۲	tart Basic est	
± ⊙	4 - [S0] Secure Keypad Door Lock Capability: 0x53 Security: 0xDC	🔀 Reset SPAN	고 Next SPAN	= Security Scheme			
	 Properties1: 0x01 Basic Device Class: 0x04 - ROUTING_SLAVE Generic Device Class: 0x40 - ENTRY_CONT Specific Device Class: 0x03 - SECURE_KEYP 	Classic	F Learn Mode	Ξ × Reset		end Nod 1fo	e
	Command Classes:	Set Node Info	Shift	Gr Update	шм	ipan lab	e
	07:58:28.767 'Send Command' Completed						

After a successful inclusion, click **ARROW UP ICON** to get to the update screen.





Check the added [S0] Secure Keypad Door Lock and click the GET button

16 C	OM8 - Z-Wave PC Controller			_		×
A	COM8 - Firmware Update			\$	\leq	0
≗ ₹~ {} E: Y ₹	Id Type IL QO IV Controllers 1 node(s) 1 [S2] Pc Controller Slaves 2 node(s) 2 [S0] Secure Keypad Door 1 4 [S0] Secure Keypad Door 1 5 4 [S0] Secure Keypad Door 1 5 4 [S0] Secure Keypad Door 1 5 6 6 7 6 7 7	- Current Firmware Command Class Version: Manufacturer ID: Firmware ID: Firmware Version: Hardware Version: Checksum: Get - Firmware Update	2 03 73 03 01 1.06 F6 D5			
<u>↑</u>	 4 - [S0] Secure Keypad Door Lock Capability: 0x53 Security: 0xDC Properties1: 0x01 Basic Device Class: 0x04 - ROUTING_SLAVE Generic Device Class: 0x40 - ENTRY_CONT Specific Device Class: 0x03 - SECURE_KEYP Command Classes: Do SEC TRANSPIRE INFO 07:58:28.767 'Send Command' Completed 	File: Add padding to firmware upda StartAddress: 0x1800 Firmware Targets: Target: 0 - Firmware Id: 03 01	ite file (.ota and .he Firmware ID: Fragment Size: Checksum:	ex files only), 03 01 40 ♀ 42 B1		

Click on the FOLDER button to select the downloaded hex-file.

Click on the **UPDATE** button to start update.



COM8 - Z-Wave PC Controller			_		Х
✿ COM8 - Firmware Update			•	: 🗠	$\mathbf{\Theta}$
Id Type IL QO IV * Controllers 1 node(s) 1 [S2] Pc Controller ✓ * Slaves 2 node(s) 3 [S0] Secure Keypad Door I 4 [S0] Secure Keypad Door I * 4 * Sol Secure Keypad Door I * *	Firmware ID: Firmware Version: Hardware Version: Checksum: Get - Firmware Update C:\Users\brooyv\Desktop\wor File: \2019-05-07 - 150 v1.5 dl-fw \\DLock_Battery_OTA_ZM5202 - Add padding to firmware update	03 01 1.06 F6 D5 k\z-wave 150 v1.6 147 _EU_WD.hex to file (ota and he	x files only)		
 4 - [S0] Secure Keypad Door Lock Capability: 0x53 Security: 0xDC Properties1: 0x01 Basic Device Class: 0x04 - ROUTING_SLAVE Generic Device Class: 0x04 - ENTRY_CONT Specific Device Class: 0x03 - SECURE_KEYP Command Classes: 07:58:28.767 'Send Command' Completed 	StartAddress: 0x1800 Firmware Targets: Target: 0 - Firmware Id: 03 01	Firmware ID: Fragment Size: Checksum: Download	03 01 40 42 B1	×	B

An update process may take a while, up to 15 minutes is quite normal.

Verify the process status. If correct, the status should always show: Valid combination=0xFF

+9		 Add padding to firmware upda StartAddress: 0x1800 	te file (.ota and .he	ex files only),		
		Firmware Targets:				
		Target: 0 - Firmware Id: 03 01	Firmware ID:	03 01		
			Fragment Size:	40	\$	
	4 - [S0] Secure Keypad Door Lock		Checksum:	42 B1		
	Capability: 0x53	Undate Activate D	ownload			
	Security: 0xDC					
	Properties1: 0x01	Status: Valid combination=0xFF				
	Basic Device Class: 0x04 - ROUTING_SLAVE					
	Generic Device Class: 0x40 - ENTRY_CONT					
	Specific Device Class: 0x03 - SECURE_KEYP					
	 Command Classes: 					
	0x5E - ZWAVEPLUS_INFO					
	0x72 - MANUFACTURER_SPECIFIC					
	0x98 - SECURITY					
	0x5A - DEVICE_RESET_LOCALLY					
	0x73 - POWERLEVEL					
	0x70 - CONFIGURATION					
	Please wait until the OTA Firmware Update comple	eted				Ē
	packet# 54 of 2511 written					
	18:15:13.411 Kx SECURITY_NONCE_GET(98 40)			_		
					Abort	
						J



If the update process fails or is aborted the status shows: Unable to receive=0x01

\sim		\IDLock_Battery_OIA_ZM5202	_EU_WD.hex		
+ <u>9</u>		 Add padding to firmware upda StartAddress: 0x1800 	te file (.ota and .he	ex files only),	
		Firmware Targets:			
		Target: 0 - Firmware Id: 03 01	Firmware ID:	03 01	
			Fragment Size:	40 🗘	
			Checksum:	42 B1	
		Update Activate (Download		
	4 - [S0] Secure Keypad Door Lock				
	 Capability: 0x53 Security: 0xDC Properties 1: 0x01 Basic Device Class: 0x04 - ROUTING_SLAVE Generic Device Class: 0x40 - ENTRY_CONT Specific Device Class: 0x03 - SECURE_KEYP Command Classes: 0x5E - ZWAVEPLUS_INFO 0x72 - MANUFACTURER_SPECIFIC 0x98 - SECURITY 0x5A - DEVICE_RESET_LOCALLY 0x70 - CONFIGURATION Securely S0 Supported Command Classes: 	Status: unable to receive=0x01	J		
					E

NOTE!

After an update of the Z-Wave module it *may* be required to perform a Z-Wave local reset and a factory reset of your door lock before including it in a new Z-Wave network.



Copyright

The following applies to the ID Lock Z-Wave OTA firmware 1.0, 1.5 and 1.6.

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