C4 LINK2 PROGRAMMER



Document History

Date	Version	Summary of Changes
June 30, 2025	1.01	Reviewed the Software Loading Instructions section.
March 3, 2025	1.0	Initial Release

1	Overview	. 1
2	Required Tools for Software Programming	. 1
3	Application Download Instructions	2
4	Software Loading Instructions	3

Page intentionally left blank.

1 Overview

This document provides step-by-step instructions for downloading, installing, and using the Link2 Programmer with C4 controllers. It explains how to load software onto the C4 controller using the Link2 Programmer.

2 Required Tools for Software Programming

The following tools are required to program the software:

1. A laptop with a Windows-based operating system.



2. The Link2 Programmer.



3. Controller software: The original controller software is stored on a flash drive inside the white job binder. If the flash drive is missing or contains outdated prints and software, Smartrise can provide a weblink to access the latest software and prints.



3 Application Download Instructions

To load software onto the Smartrise controller, the programming application must be downloaded to the laptop. This application is available on the flash drive. Follow these steps to download the C4 Link2 Programmer application:

- 1. Open the flash drive.
- 2. Navigate to (5) Smartrise Programs and open the folder.

Name	Туре
(0) - General	File folder
📙 (1) - Controller Software	File folder
(2) - Drawings	File folder
📙 (3) - Supplemental Documents	File folder
(4) - Manuals	File folder
(5) - Smartrise Programs	File folder
💼 About These Folders.rtf	Rich Text Format
🔮 Open for internet access to latest S	Internet Shortcut

3. Locate and open the C4 Programmer folder.

Name	Туре	
C4 Programmer	File folder	

4. Download and run both applications on the laptop. Some laptops may have firewalls that prevent applications from downloading. For assistance, contact the system administrator.

Name	Туре
mcuexpresso	File folder
📧 C4 Link2 Programmer.exe	Application

5. Once completed, the two applications should appear on the desktop.

NOTE: MCUXpresso does not need to be opened, only installed on the laptop.



4 Software Loading Instructions

To ensure proper functionality, the controller software must be loaded onto the Smartrise controller using the Link2 Programmer. Follow the steps below to complete the process:

- 1. Connect the Link2 Programmer to the laptop via the USB port.
- 2. Open the C4 Link2 Programmer by double-clicking its icon. The application will automatically update to the latest version if connected to the internet. Ensure the application is up to date before proceeding.

Link2_Programmer 2.00.03			-		×
Link2_Programmer 2.00.03					\wedge
binaries_dir Car Folder	Browse	board_selection Selection board to program Select Option			~
		Cancel		Start	

3. Browse for the controller software:



Link2_Programmer 2.00.03			-		×
Link2_Programmer 2.00.03					\land
binaries_dir Car Folder	Browse	board_selection Selection board to program Select Option			~
		Cancel		Start	

i. Open (1) – Controller Software.

Name	Туре
(0) - General	File folder
(1) - Controller Software	File folder
(2) - Drawings	File folder
(3) - Supplemental Documents	File folder
(4) - Manuals	File folder
📙 (5) - Smartrise Programs	File folder
🖻 About These Folders.rtf	Rich Text Format
🔮 Open for internet access to latest S	Internet Shortcut

ii. Select the folder with the **job name**.

Name	~
JobName_V01	_02_65k0

iii. Choose the **Car** to load software for.

Name A	Date modified
늘 Car1	2/27/2025 5:14 PM
늘 Car2	2/27/2025 5:14 PM
config_all_JobName.h	2/27/2025 10:50 AM
config_all_JobName.info	2/27/2025 10:50 AM
missing_config_all.txt	2/27/2025 10:50 AM
parameter_warnings.txt	2/27/2025 10:50 AM
report.log	2/27/2025 10:50 AM
늘 SBF_JobNameV01_02_6510.zip	2/27/2025 10:50 AM

iv. Click **Select Folder** at the bottom of the window.

Name	Date modified	Туре
📒 binary	2/27/2025 5:14 PM	File
📒 sbf	2/27/2025 5:14 PM	File
srecord	2/27/2025 5:14 PM	File
Car1		
	Select Folder Cancel	

- 4. Select the processor to update using the dropdown menu. Processors can be updated in any order:
 - MR A: MR MCUA
 - MR B: MR MCUB
 - SRU A: CT and COP MCUA
 - SRU B: CT and COP MCUB
 - · Riser/Expansion: Riser/Expansion board

Link2_Programmer 2.00.03	:	×
Link2_Programmer 2.00.03		
binaries_dir Car Folder are\JobName_V01_02_65k0\Car1 Browse	board_selection Selection board to program	-
	Select Option MR A MR B SRU A SRU B C4 Brake Board DAD Shield XREG Control A XREG Control B XREG I/O 24 Input Board DDM A DDM B Riser/Expansion Riser/Expansion (4076) DAD Shield (4076) Battery Lowering Discrete Brake	
	Uiscrete Brake HallBoard CIB A CIB B	

Processor connections can be found on the board.



MR SRU Connection



CT/COP Connection

5. Start the software loading process by clicking the Start button.

Link2_Programmer 2.00.03			_		\times
Link2_Programmer 2.00.03					\land
binaries_dir Car Folder are\JobName_V01_02_65k0\Car1	Browse	board_selection Selection board to program MRA			~
		Cancel		Start	

Important: When programming the **MR SRU**, other cars in the group may be affected. To prevent this, disconnect the **group terminals** on the board.



6. A new window will appear, and the software download will begin. Once complete, a confirmation message will be displayed.



Link2_Programmer 2.00.03	—		\times
Finished All done! You may now safely close the program.			\land
Status			
Ps: (99) at 00066000: 4096 bytes - 421888/422912 Ps: (100) at 00067000: 4096 bytes - 425984/422912 Nt: Wrote sector 0-26 with 422912 bytes in 3878msec Nc: Closing flash driver LPC177x_8x_407x_8x_512.cfx Pb: (100) Finished writing Flash successfully. Nt: Flash Write Done Nt: Loaded 0x67400 bytes in 4203ms (about 100kB/s) Nt: Reset target (core) Nc: Starting execution using core reset download:stdout: None download:stdout: None download rc 0 None Download completed Programming completed Board programmed. Total time [00:00:17]			I
Edit		Close	

NOTE: If the software fails to download, try the following:

- i. Retry the process.
- ii. Use a different USB port.
- iii. Power cycle the controller.
- iv. Ensure the Link2 Programmer is properly connected.
- v. Restart the laptop.
- vi. Try a different Link2 Programmer.
- vii. Use a different laptop.
- viii. Contact Smartrise for assistance.
- 7. Click Edit to continue loading software for the remaining processors and follow the previous steps.
- 8. Once all software uploads are complete, reconnect the group terminals and power cycle the controller.
- 9. Verify the software version under Main Menu | About | Vers.
- 10. Scroll down to view all options and confirm the expected version is displayed.

JOB NAME SRU BOARD CAR LABEL JOB ID: ######## VERS. ##.##.## © 2023 SMARTRISE