This instruction sheet is for updating the firmware inside DMG DASH units to V1.0.16. The update will also upgrade the LumenRadio CRMX chip inside DMG DASH w/ CRMX fixtures to CRMX2.

The firmware update process involves 3 steps:

1. Installing The Firmware Drivers To A PC

2. Flashing The Motherboard Of The DMG DASH

3. Resetting The Motherboard And Performing CRMX Chip Upgrade

Installing The Firmware Drivers To A PC

To begin, **download the V1.0.16 DASH.zip firmware update** file to a PC (Windows 10 or higher) and then extract those files from the ZIP folder.
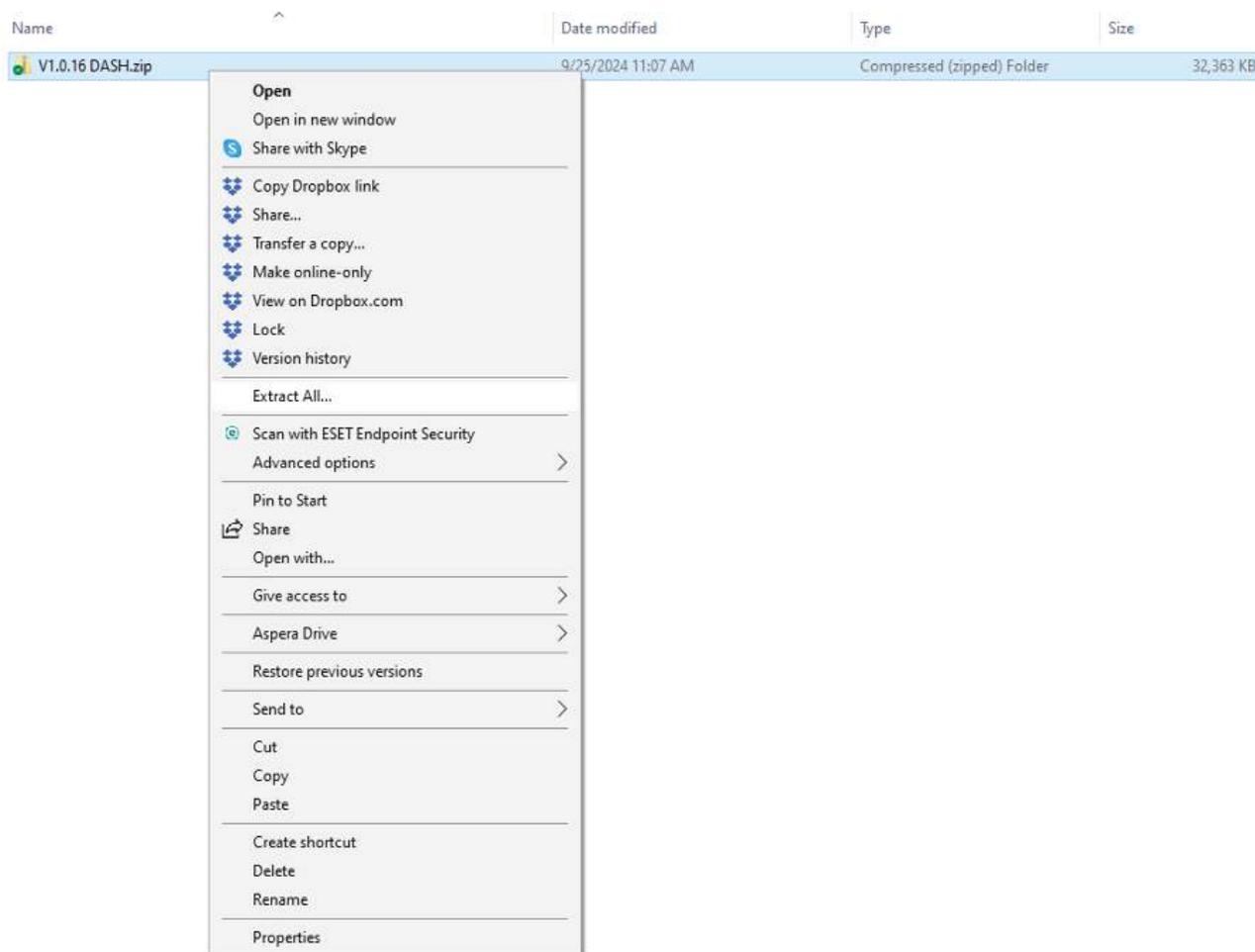
Next, locate the CP210x_Universal_Windows_Driver ZIP folder and extract those files.
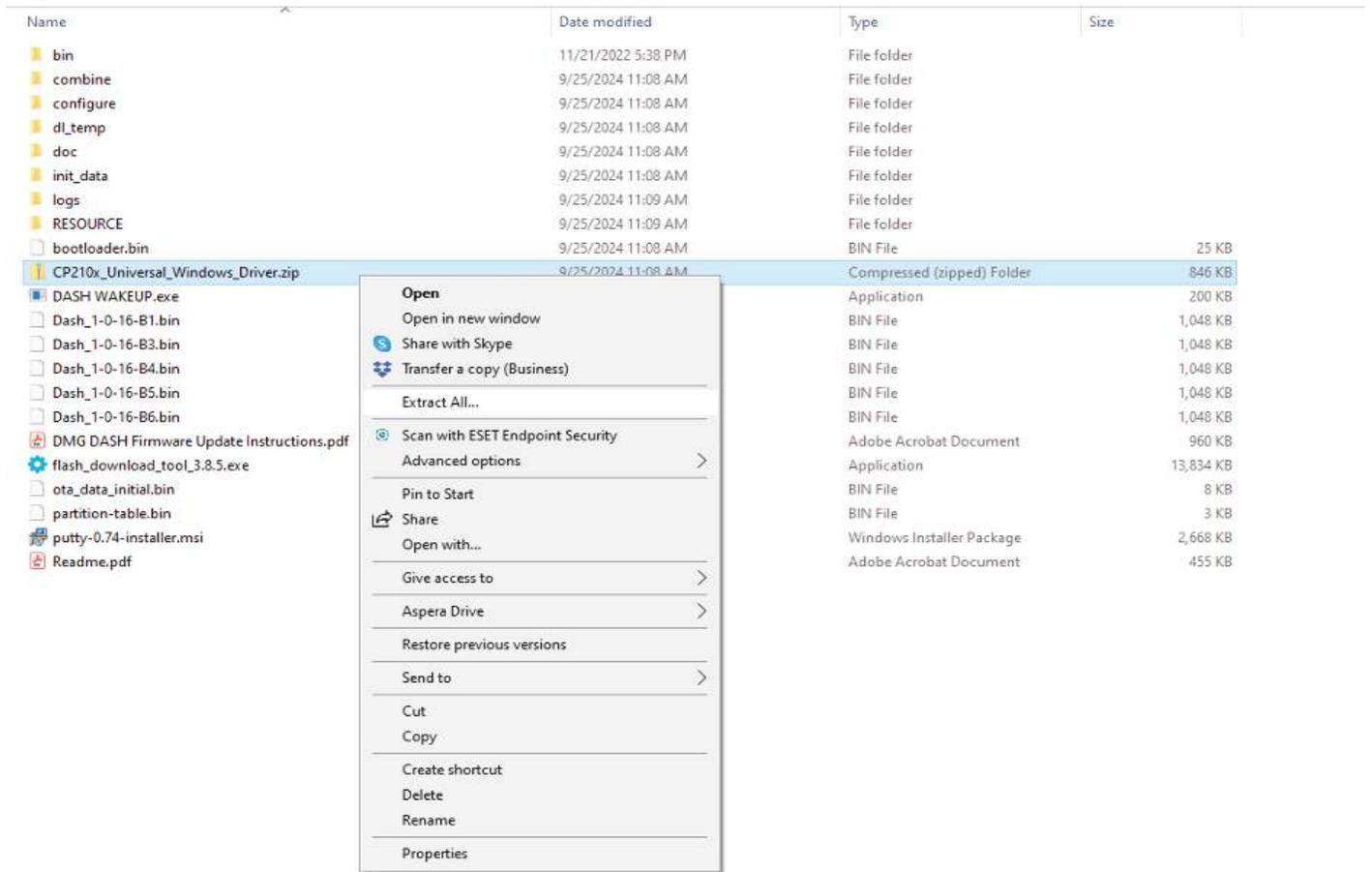
Once the software driver files have been extracted, double click one of the CP210xVCPInstaller EXE files and follow the onscreen prompts. The x64 version will work with most PCs. Use the x86 version if the x64 version isn't working. When you are done, you should see the "Ready To Use" screen below.

The Firmware Update drivers have now been successfully installed on the PC.

Flashing The Motherboard Of The DMG DASH

Connect the fixture to the PC using the DMG DASH USB Charging cable and power the unit on. Once the fixture is plugged into the PC, you need to determine the COM Port that it's plugged into. To do this, open the Device Manager on the PC – click the dropdown arrow next to the Ports (COM & LPT) option and note the COM Number associated with the Silicon Labs CP210x USB to UART Bridge option (COM4 in the example below). You will need this COM Number in a future step.
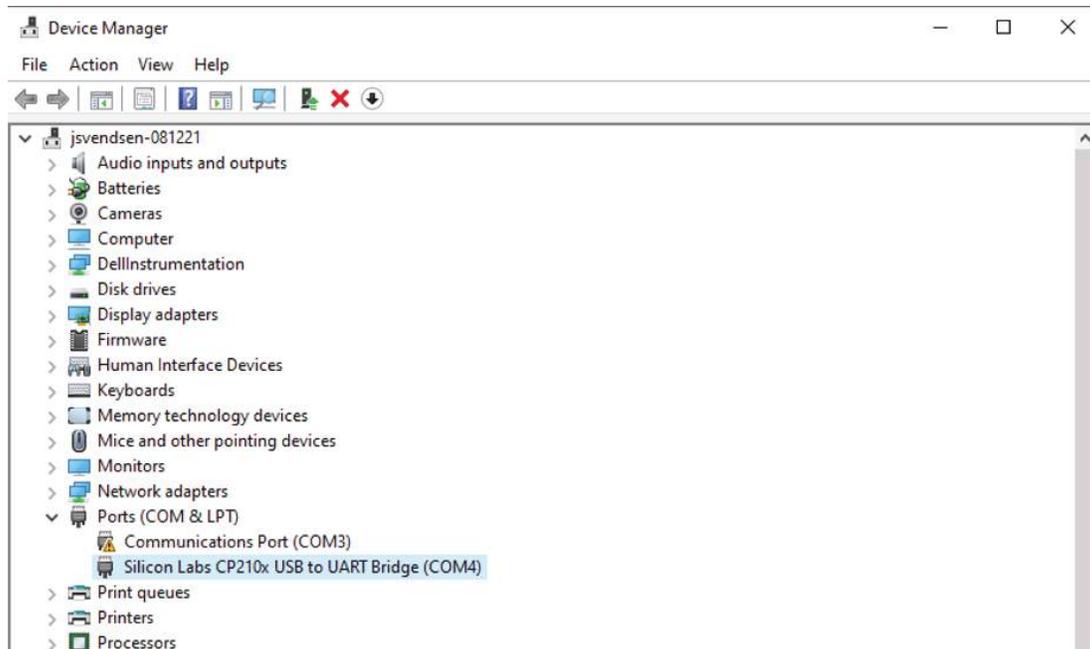
Before proceeding, you will also need to identify the Batch Number of your DMG DASH fixture. To locate your batch number, push the MENU BUTTON on the back of the fixture, then push the NAVIGATION BUTTON until SETTINGS is highlighted in the Display of the DMG DASH and press the red Dimming & Navigation wheel to enter the SETTINGS Menu.

The fixture's Batch Number is located right next to its Serial Number and is indicated by B:XX. The Batch Number in the example below is 4. This Batch Number is important because each production batch has its own dedicated firmware.

If no Batch Number is displayed, that means the fixture is running on the original firmware, which indicates that it is from Batch Number 1.

Now that you have the Firmware Update drivers installed on the PC and you have identified the COM Number the fixture is plugged into and the Batch Number of your DMG DASH, you will need to use the Flash Download Tool to flash the fixture's motherboard with the new firmware.

FIRMWARE UPGRADE PROCEDURE
FOR THE DMG DASH™

1. Double click on flash_download_tool_3.8.5.exe inside the Firmware Update file on the PC. A black screen will open on your display and after a few seconds you'll be prompted to click Developer Mode or Factory Mode.
2. Click **Developer Mode** and then click **ESP32 DownloadTool** in the subsequent menu. Some code will display on the black screen in the background, and then a new user access screen will pop up.
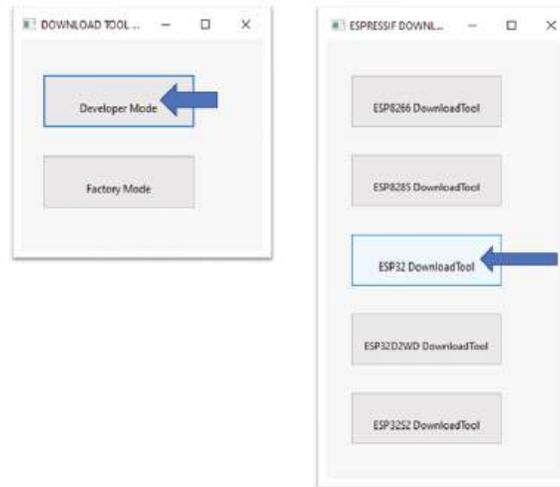
3. Make sure that the partition-table.bin, ota_data_initial.bin, and bootloader.bin files are all checked. Then, select the "dash-firmware" file that matches your Batch Number (and unselect any "dash-firmware" boxes that may be pre-checked). Our example Batch Number was 4, so we are selecting the B4.bin dash-firmware file in the example below.
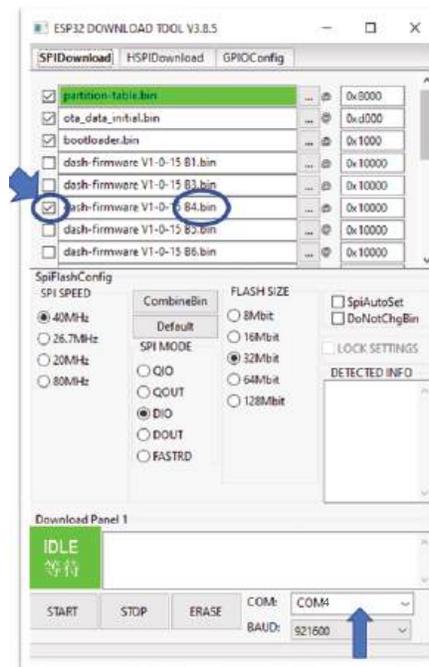
4. Click the drop-down arrow in the COM: menu and select the COM Number that you noted earlier.
5. Click START. A progress bar will appear. The Flashing process should only take a few seconds. The progress bar will turn green and display FINISH once the Flashing process has completed.

Resetting The Motherboard And Performing CRMX Chip Upgrade

Once the motherboard has been flashed, the DMG DASH will be locked until the motherboard gets reset.

Name	Date modified	Type	Size
bin	11/21/2022 5:38 PM	File folder	
combine	9/25/2024 11:08 AM	File folder	
configure	9/25/2024 11:08 AM	File folder	
dl_temp	9/25/2024 11:08 AM	File folder	
doc	9/25/2024 11:08 AM	File folder	
init_data	9/25/2024 11:08 AM	File folder	
logs	9/25/2024 11:09 AM	File folder	
RESOURCE	9/25/2024 11:09 AM	File folder	
bootloader.bin	9/25/2024 11:08 AM	BIN File	25 KB
CP210x_Universal_Windows_Driver.zip	9/25/2024 11:08 AM	Compressed (zipped) Folder	846 KB
DASH WAKEUP.exe	9/25/2024 11:08 AM	Application	200 KB
Dash_1-0-16-B1.bin	9/25/2024 11:08 AM	BIN File	1,048 KB
Dash_1-0-16-B3.bin	9/25/2024 11:08 AM	BIN File	1,048 KB
Dash_1-0-16-B4.bin	9/25/2024 11:08 AM	BIN File	1,048 KB
Dash_1-0-16-B5.bin	9/25/2024 11:08 AM	BIN File	1,048 KB
Dash_1-0-16-B6.bin	9/25/2024 11:08 AM	BIN File	1,048 KB
DMG DASH Firmware Update Instructions.pdf	9/25/2024 11:08 AM	Adobe Acrobat Document	960 KB
flash_download_tool_3.8.5.exe	9/25/2024 11:08 AM	Application	13,834 KB
ota_data_initial.bin	9/25/2024 11:08 AM	BIN File	8 KB
partition-table.bin	9/25/2024 11:08 AM	BIN File	3 KB
putty-0.74-installer.msi	9/25/2024 11:08 AM	Windows Installer Package	2,668 KB
Readme.pdf	9/25/2024 11:08 AM	Adobe Acrobat Document	455 KB

1. To reset the motherboard, first double click on DASH WAKEUP.exe inside the Firmware Update file on the PC. **
2. Select the same COM Number that you selected while using the ESP32 DownloadTool.
3. Click on the WakeUP button.
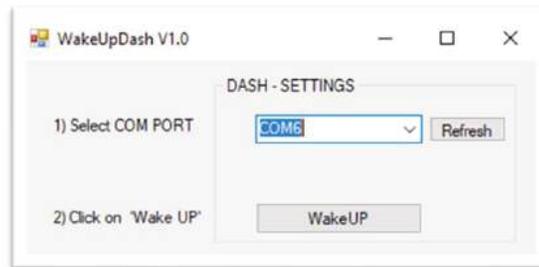
Note that once you click the WakeUP button, nothing will happen on the PC but the CRMX upgrade will automatically be launched.

** ALERT: The DASH WAKEUP tool may trigger the Microsoft Defender SmartScreen, which will prevent the application from running on your PC. If this should happen, please click the "More Info." text link first, then click on the "Run anyway" button.

Wait for it to be completed.
You should see the charging symbol on the display of your DASH. Power your DASH back on.

Congratulations, you have successfully updated the firmware inside your DMG DASH to v:1.0.16. To confirm that the firmware has been properly updated on your DMG DASH, use the instructions above to navigate back to the SETTINGS menu on the fixture. You should see v:1.0.16 displayed between the Serial Number (SN:XXX) and the Batch Number (B:XX) at the top of the display.

Settings		27ºC
SN:9999	v:1.0.16	B:04
	BLUETOOTH: ON	
	CRMX	
	RESET	▼