BEFORE YOU BEGIN

This document guides you on updating the scaler and/or scaler bridge firmware of Dough Spectrum model ES07DC9.

You can download the latest firmware updates from the Downloads section of our support page at https://www.dough.tech/pages/downloads. Special instructions may be included, so keep an eye out for **instructions.pdf**.

Firmware is a specific class of software that provides low-level control for the device's specific hardware. Unlike device drivers which are stored on your computer's system drive, firmware is stored on the chips in the device itself. Though it rarely needs to be updated, firmware updates can improve system security, performance, or stability, and can in some cases even add new functionality.

The documentation that comes with each firmware update lists the changes it enacts. We recommend to only install firmware updates if you are experiencing issues with the affected features or intend to use the new features it adds.

IMPORTANT: Because firmware updates are written to non-volatile storage inside the monitor, there is a certain risk involved when installing them. If the update is interrupted, (a part of) Spectrum may not function properly. Therefore, you should always make sure your monitor is connected to a reliable power source, and that you dedicate enough time to this process before you begin.

Installing firmware updates is always done at your own risk!

NOTE: In July of 2022, Eve was rebranded as Dough. This does not affect the function or support for our products. New Dough-branded products, updates, and services will be compatible with their existing Eve-branded counterparts, as long as the model number matches.

CHANGE LOG

VERSION 100

- Initial release version

INSTALL THE FIRMWARE UPDATE TOOL

1.   Install the latest version of the firmware update tool 'MStar ISP Tool' by locating and running the .exe file included in the download.

> *IMPORTANT: The software tool used to execute the update requires a computer running Windows 10 or Windows 11.*

2.   Windows may provide a warning about the publisher being unknown. In this case, click **More info**, then click **Run anyway**.

3.   Windows may provide a User Account Control notification, asking if you want to let this app make changes to your device. In this case, click **Yes**.

4.   Follow the on-screen instructions (**Next**, **Install**, **Finish**) to complete the installation process.
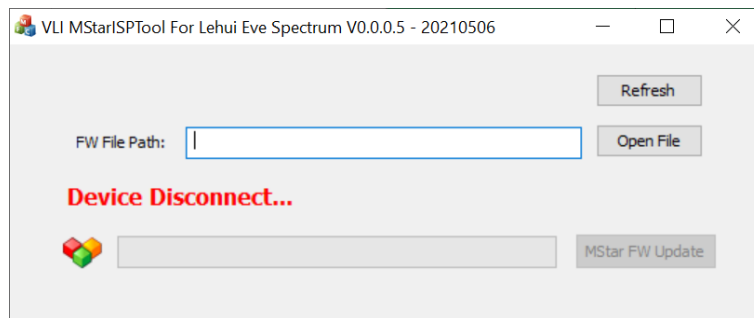
PREPARE SPECTRUM FOR THE UPDATE

1.   Connect Spectrum to the computer on which you installed the firmware update tool using a USB cable. You can use either the USB Type-B or USB Type-C inputs on the monitor.

2.   Using the joystick at the back of the monitor, navigate to the **Input / Output** menu of the on-screen display (OSD).

3.   Set **Select USB hub source** to either **USB Type-B** or **USB Type-C**, matching the port you used to connect Spectrum to your computer.
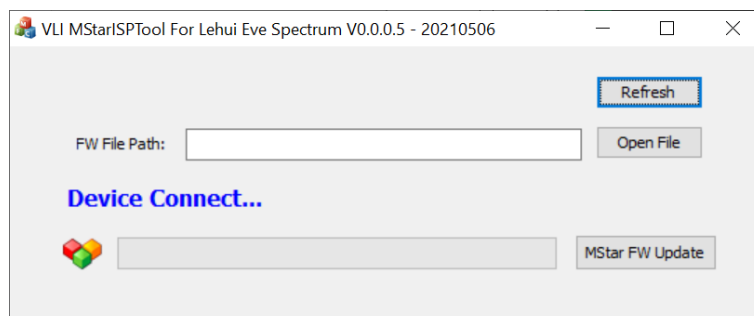
UPDATE THE FIRMWARE

1.   Open **VLIMStarISPTool**. The installer should have created a desktop icon or start menu entry.

2.   Close all other programs.

3.   If the program shows **Device Disconnect...** there is a problem connecting to the monitor.
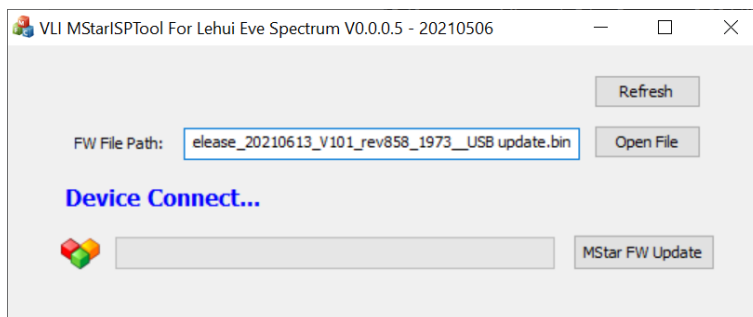
Make sure the USB cable is connected on both ends and that the monitor is properly set up as described in this document, then click **Refresh**.
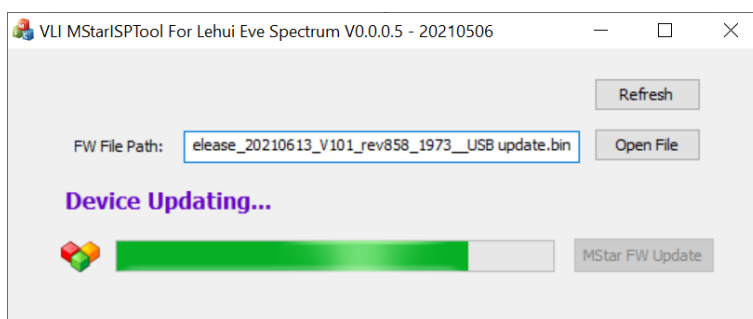

4.   The program should show **Device Connect...**

5.   Click **Open File**, and locate the firmware update (.bin) file.

> IMPORTANT: Take careful note of your monitor's model number, and only use firmware files that are intended for your exact model. Using firmware developed for a different model may cause (a part of) Spectrum to not function properly.
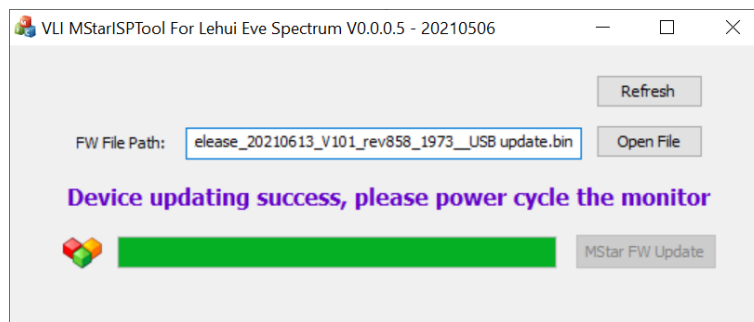>
> If you are uncertain about which firmware file is right for your monitor, please contact our support team at https://www.dough.tech/pages/support.

6.   Click **MStar FW Update**.

7.   Wait for the firmware update to complete.

> IMPORTANT: While the tool shows *Device Updating*, do not use the computer or make changes to the monitor.

8.   When the program shows **Device updating success, please power cycle the monitor**, the update is completed. You can now close the firmware update tool.
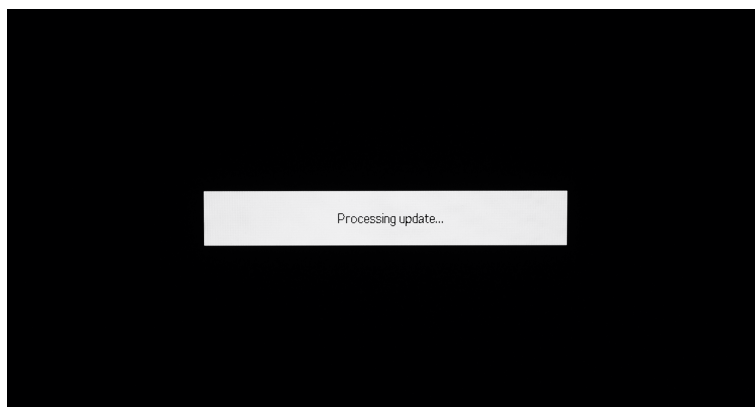

9.   Unplug the monitor's DC power connector, wait at least ten seconds, then plug in the power connector. (This is called a 'power cycle'.)

10a.   If the monitor does not display the message **Processing update...**, then this update only includes a new version of the scaler firmware.

The monitor starts up as normal, and the update process is complete.

10b.   If the monitor displays the message **Processing update...**, then this update includes new versions of both the scaler and scaler bridge firmware.

The indicator light on the monitor changes to indicate the current stage of the update:

- Dark blue: the existing firmware is being erased
- Green: the new firmware data is being written
- Light blue: the new firmware data is being verified
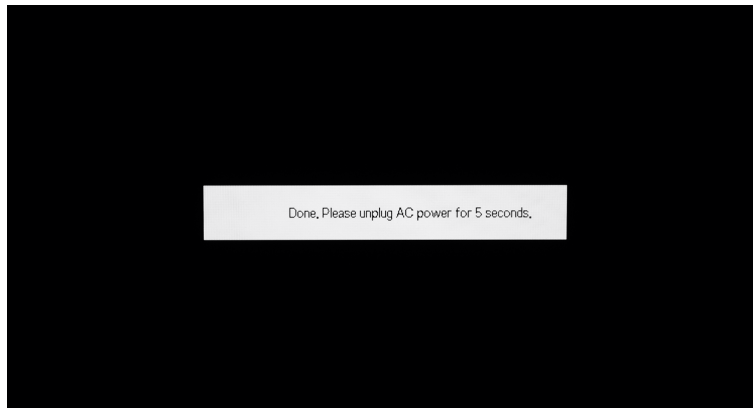- Purple: the new firmware is successfully installed

NOTE: The indicator light may briefly turn red before turning green.

NOTE: If the default indicator light has been changed in the OSD menu, this may affect its behavior during the firmware update.

*NOTE: In rare cases, the firmware update process may not proceed to the next step, or the screen may turn black. If the monitor does not appear to respond for more than 5 minutes, please unplug the monitor's DC power connector, wait at least **thirty seconds**, then plug in the power connector. Do not unplug the USB cable. Repeat the process from step 10b onwards.*

11.   When the monitor displays the message **Done. Please unplug AC power for 5 seconds.**, the update is completed.

Power cycle the monitor again by unplugging the monitor's DC power connector, waiting at least ten seconds, then plugging in the power connector.

12.   The monitor starts up as normal, and the update process is complete.

VERIFY THE UPDATE

1.   Using the joystick at the back of the monitor, navigate to the **Information** menu of the OSD and verify that **Firmware version** now displays the new version number. This indicates that the firmware update was installed successfully.