

AlazarTech Firmware Updater

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The *AlazarTech Firmware Updater* is a program for updating the firmware of various PCIe AlazarTech products. It comes in two forms: a graphical user interface (GUI), which is recommended for most users, and a command line interface (CLI) that is more appropriate for OEMs and advanced users.

This guide explains how to get started using the firmware updater on a system that has an AlazarTech digitizer installed.

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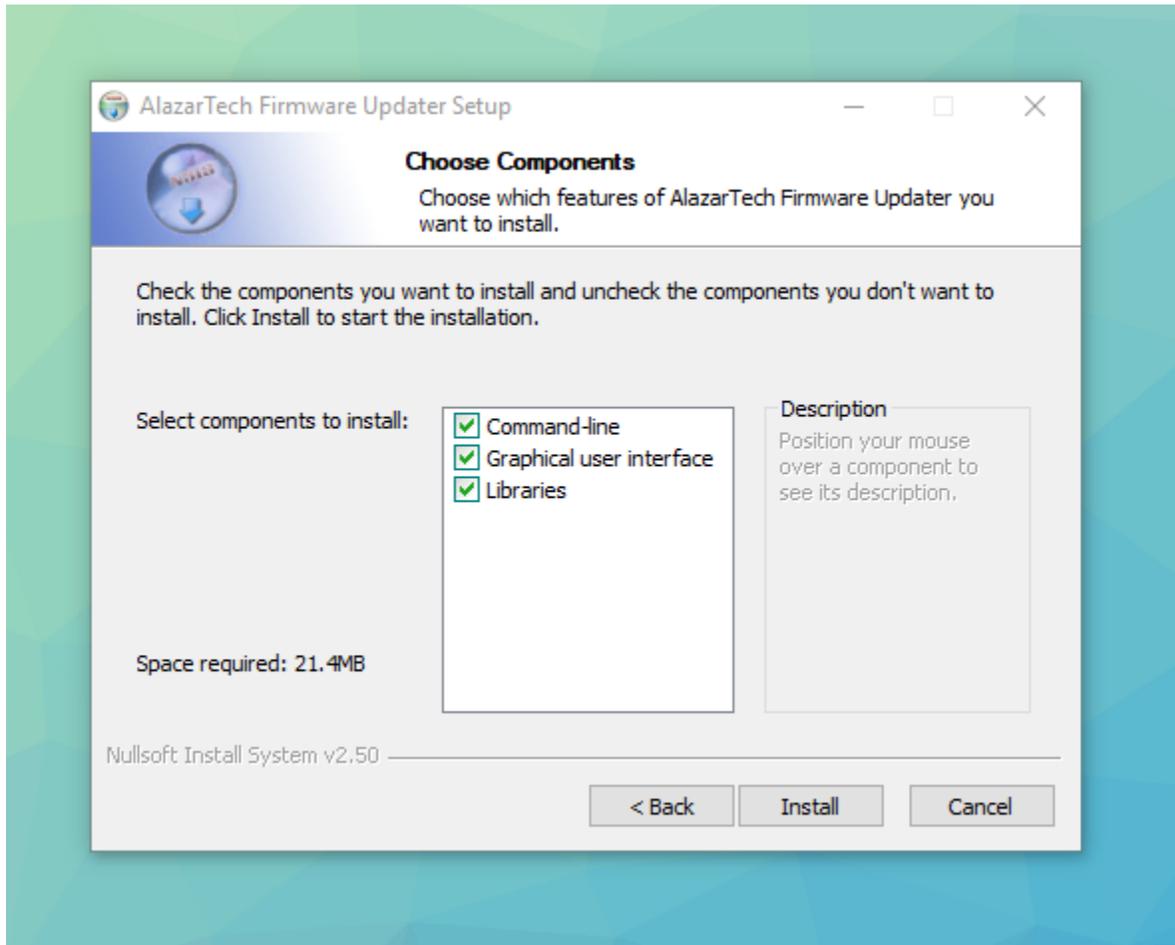
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2 Installation

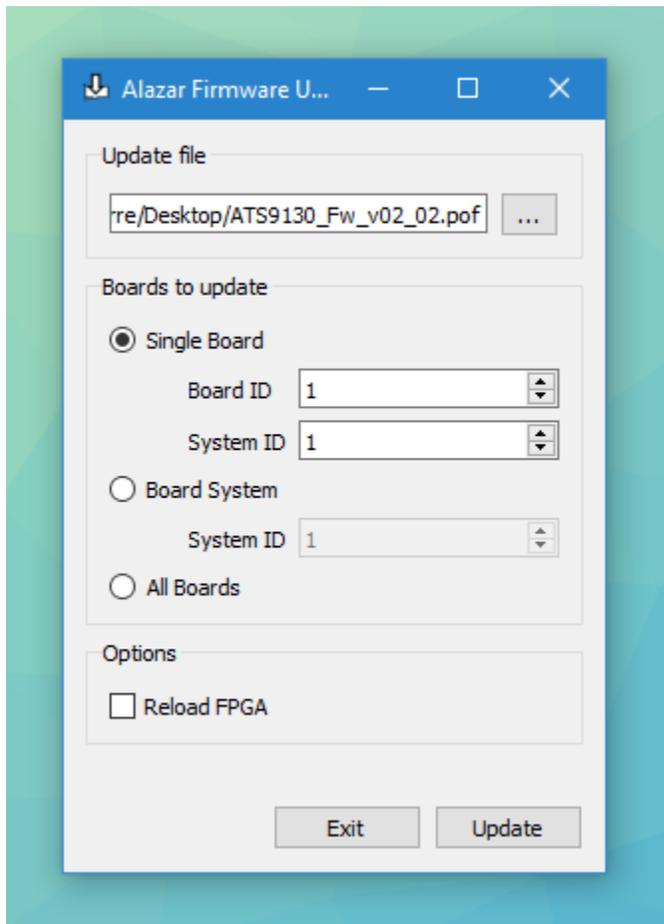
Under Windows, there is a common installation program for both forms of the firmware updater. To use the graphical user interface, simply run the installation program, and select both “Graphical user interface” and “Libraries” in the component selection page.



Once the firmware updater is installed, you can start it from the “AlazarTech Firmware Updater” start menu item, or by pressing the start button and typing “Firmware Updater”.

Under Linux, the firmware updater comes as two separate Debian or RPM packages, one for the CLI and another for the GUI. You may choose to have both installed on your system. The firmware updater GUI is added to the system’s path as fwupdater-gui.

3 Graphical User Interface Usage



To use the GUI form of the firmware updater, you should start the application and select the firmware file with which to update your board.

To select the firmware file, you may press the button labeled “...” on the interface, enter the path manually in the text box, or drag a file directly into the text box.

Alternatively, if there is only one file with the .pof extension present on your desktop when the firmware updater starts, it will be selected by default as the firmware with which to update your board.

Next, you should select the board(s) that you wish to update. If you have only one boards installed in the computer, you can leave the “Boards to update” section unmodified. The options available are:

Single Board Only updates one digitizer in the system. The digitizer to update is selected with the “Board ID” and “System ID” fields.

Boards System Updates all the boards in a system. The boards system is selected with the “System ID” field.

All Boards Updates all the boards in the computer

Lastly, you may select the “Reload FPGA” checkbox at the bottom of the window. This option attempts to directly reload the FPGA with the new firmware at the end of the update. Please note that this feature is not supported on all boards. You may need to power-cycle your computer to get the FPGA reloaded.

Once all the parameters are set properly, you can click the “Update” button to start the FPGA update. A window will appear to indicate the progress of this process.

Warning: Some versions of ATS9373 require advanced settings to be configured for the update to succeed. See the [Troubleshooting](#) section for more information.

After the update is complete, you should power cycle the computer except if you selected the “Reload FPGA” option. You can then confirm that the update worked by starting AlazarDSO, pressing F4 and looking at the “FPGA Version” indication on the window that appears.

Note: A full power cycle is required for the new firmware version to get loaded. A simple restart is not enough.

4 Command-Line Usage

The command-line interface aims at providing a simple but complete interface to using the firmware updater without a graphical user interface. The command-line usage manual is

```
Firmware Updater Utility.
```

```
Updates the boards local to this system with the firmware pointed to by  
<file>.
```

```
Usage:
```

```
fwupdater-cli update [options] <file>  
fwupdater-cli (-h | --help | --version)
```

```
Options:
```

```
--system=<sid> Limits update to boards of system <sid>. Passing 0  
updates all systems [default: 0]  
  
--board=<bid> Limits update to boards with ID <bid>. Passing 0  
updates all boards [default: 0]  
  
--quiet Prevents the firmware updater from writing to standard  
output.  
  
--page0 Forces page 0 update  
  
--page1 Forces page 1 update
```

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<code>--reload</code>	Attempts to reload the FPGA directly. This feature is only supported under Windows, and only works with certain boards. If the FPGA reconfiguration fails, you may need to reboot our computer to be able to use the digitizer again.
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5 Troubleshooting

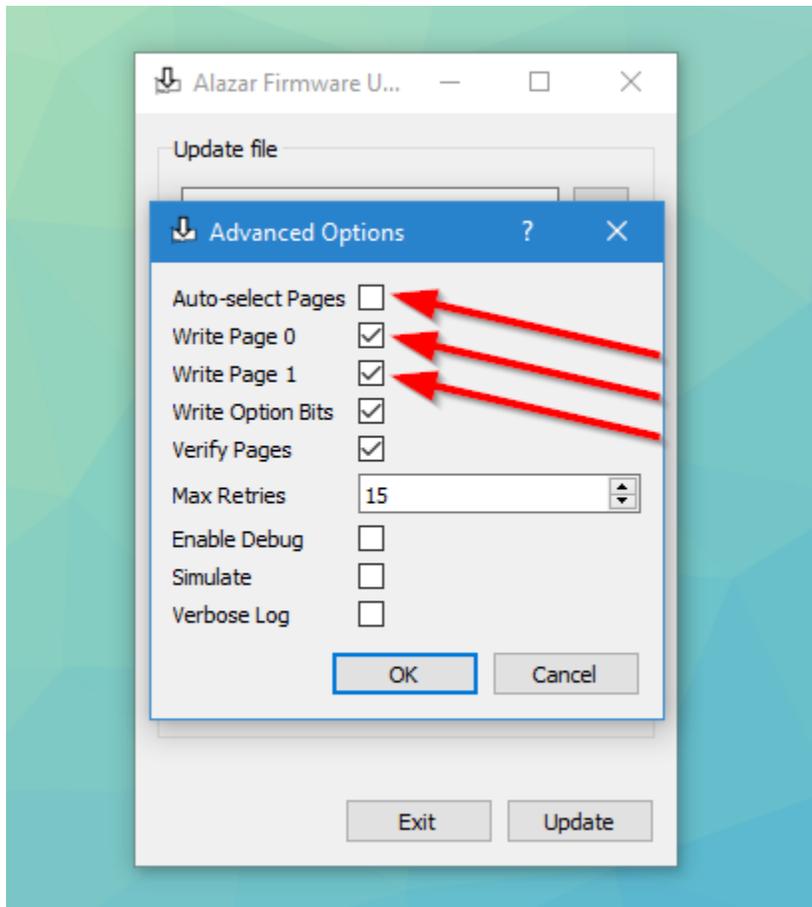
If the firmware version displayed by AlazarDSO's F4 screen does not change after running the firmware updater *and* after a full power cycle, it is likely because the flash memory page that is updated on your board is not the one that gets loaded when the computer starts. This is in particular sometimes the case on ATS9373 boards.

There are two pages of flash memory on the ATS9373. Usually, the board loads up from page 0. Page 1 is a fallback (factory default) image that is to be used if loading from page 0 fails.

In some computers, ATS9373 always loads from page 1, i.e. the attempted load from page 0 fails due to power sequencing issues. This may be the case on your computer.

To update the second flash page, please follow these instructions:

- Start the firmware updater
- Select all standard options as indicated in the [Graphical User Interface Usage](#) section
- Press <Ctrl + F5>
- On the "Advanced Options" page that appears, uncheck "Auto-select Pages", check "Write Page 0" and check "Write Page 1"



- Continue the update process