

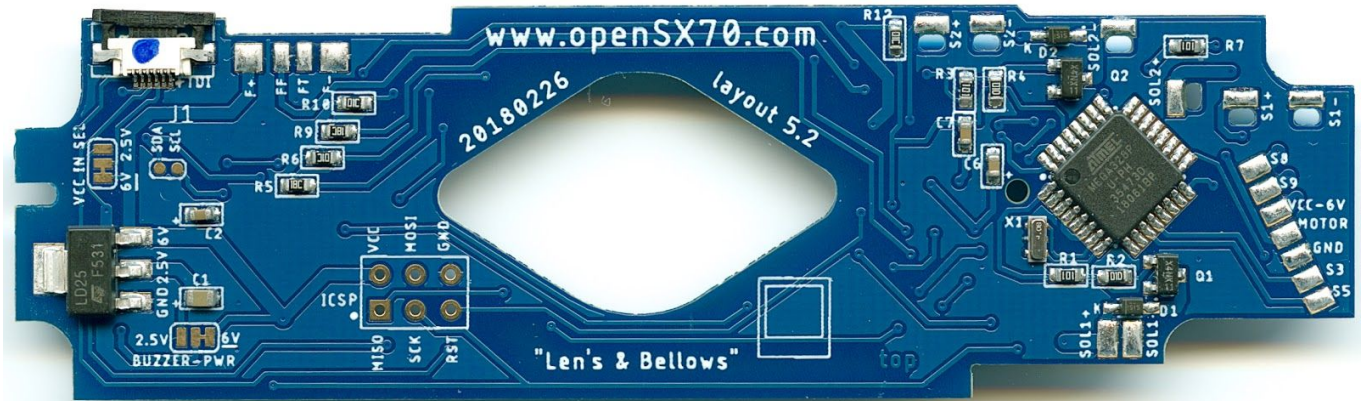
opensx70 software upgrading

Why do I have to program my camera?

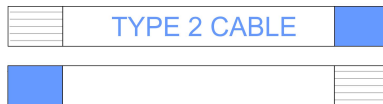
The quick answer is that you don't have to, but you probably want to upgrade to a more up-to-date version of the microcode running in your camera, specially now that the system is highly experimental.

What do I need?

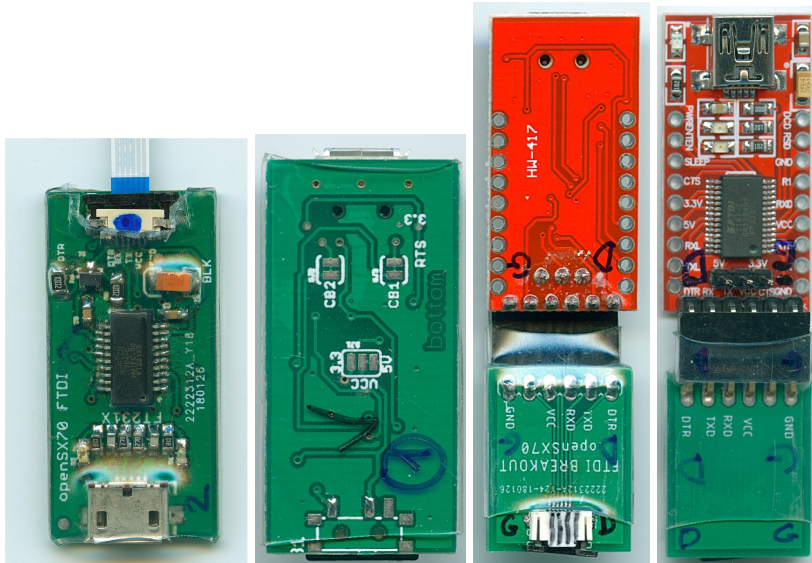
You need the openSX70 pcb, normally already mounted in the camera.



you need the cable, can be either type 1 or type 2:
FPC cables types



And of course the FTDI-USB adapter:



(type A)

(type B)

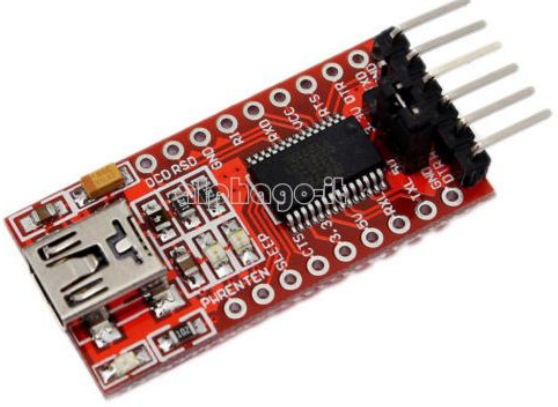
Type A is a custom build micro-usb adapter. You have connect the cable type you need. "As is". What I call Type B is a FPC breakout board connected with a board from eBay. Those are really cheap.

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FTDI FT232RL USB to TTL Serial Converter Adapter Module Mini Port 3.3V
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Price: **EUR 1.62**
Approximately US \$1.91

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Item location: 深圳, 广东省, China
 Ships to: Worldwide [See exclusions](#)

Delivery: Estimated between **Fri. Jun. 8 and Thu. Jul. 12**

How do I connect the FTDI USB adapter?

Please read the assembly instructions as how to connect and different options depending on the connectors installed in the adapter and the camera.

You do not have to leave a FPC cable connected, but I guess it is a good idea initially as to be able to test new sketches or firmware. You can also try different things that are very simple to change on the code.

In any case keep in mind that the pcb that I send has the bootloader and the latest openSX70 code. So it is usable "out of the box".



This is my recommended configuration as of now.

What about the software needed?

The software is not only compatible with both PC and Mac but also with Linux.

You need to install the “Development Enviroment”

<https://www.arduino.cc/en/Guide/HomePage>

<https://learn.sparkfun.com/tutorials/installing-arduino-ide>

Also the FTDI driver

<https://learn.sparkfun.com/tutorials/how-to-install-ftdi-drivers/all>

-installing the needed libraries

<https://www.arduino.cc/en/Guide/Libraries>

The libraries you need are in the main openSX70 arduino Github repository:

<https://github.com/openSX70/openSX70-Arduino-main/archive/master.zip>

The code (once unzipped) will be in the 1_openSX70_WORKING-EEPROM folder.

Setting all up

You need the camera with an empty cart, the FPC cable properly connected to both the camera and the USB adapter and the USB cable connected to the PC. The IDE must be running and the openSX70 should be opened.

In the IDE menu, *tools* you have to check the port. A new port should appear once it is connected and powered. This is good. You can also test the port on your PC by only connecting the adapter without FPC. The port should appear. If it does not check that you have the proper FTDI drivers.

Then also in the *tools* menu you select *board* and then “*Arduino Pro or Pro Mini*”

Next to that in *tools* is *processor*: choose the option “Atmega328P 3.3V 8 mhz”

(Note, you might know that we are running the board at 2.5V, that is alright)

Uploading a new sketch

Just like in a regular Arduino you have to press the right pointing arrow or simply CTRL-U. Of course, as mentioned, you need to have the sketch open in the ide.

Do I need to be a programmer?

Of course you don't, you just have to follow the steps outline before and you will easily upgrade your camera to the latest software.

But there are some things that you might want to test once the sketch is open in the IDE.

You can for example, easily change the shutter speed, or the time you have to keep the red button pressed for the timer delay or things like that.

But that I will explain in a different tutorial document.