

SIS3153

USB3.0/Ethernet VME Interface

Firmware Update Procedure

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Version: sis3153-M-usb-1-V101-fw_update.doc as of 03.8.2017

Revision Table:

Revision	Date	Modification
1.00	10.03.2016	Generation and first official release
1.01	03.08.2017	Add "FPGA Firmware Update, only"

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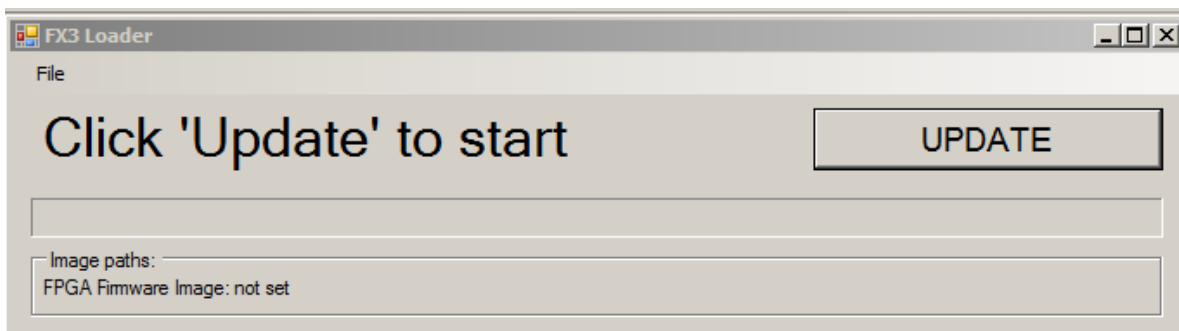
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1 FPGA Firmware update via USB

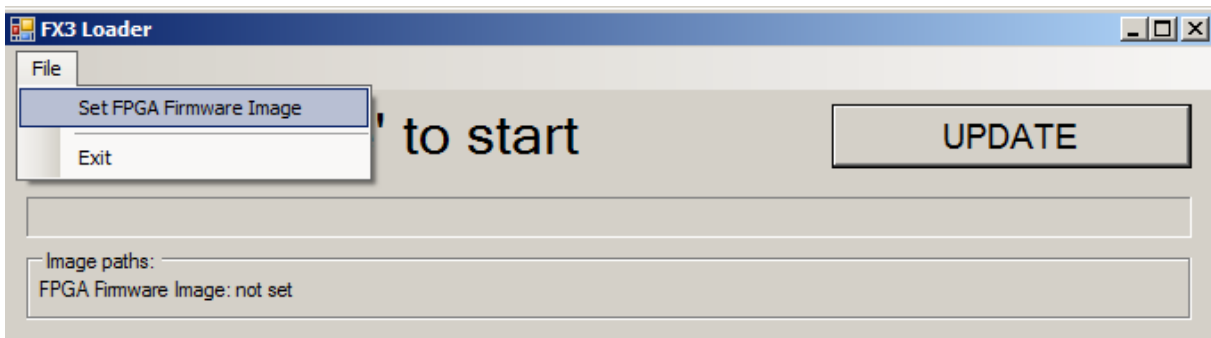
The SIS3153USB driver has to be installed.

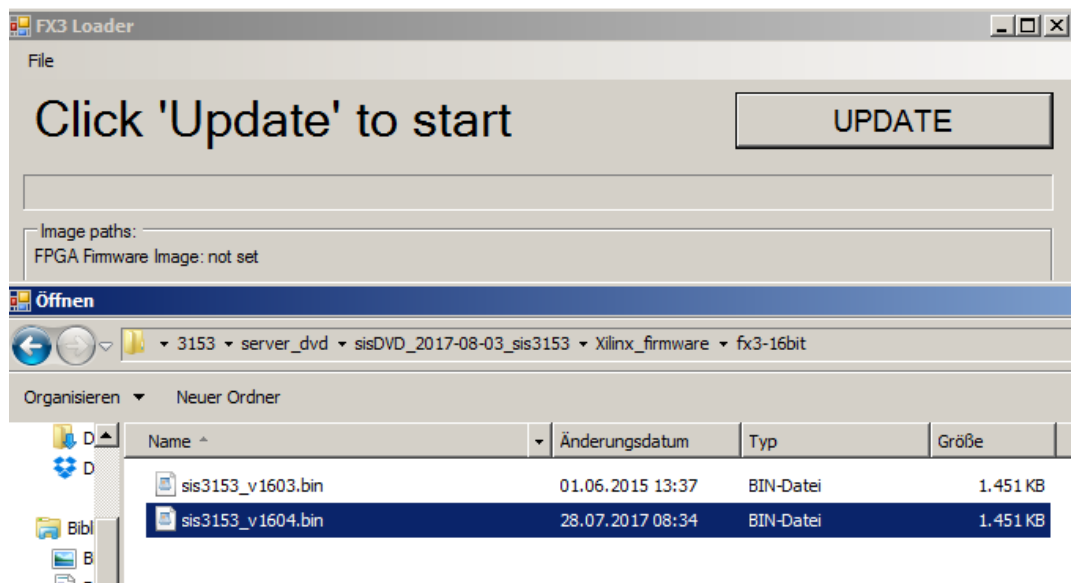
The update process will be done with the Struck "loaderGUI.exe". It can be found on the Struck DVD in the directory:

`\sisdvd\sis3153\sis3153usb3\Driver_Software\Windows32-64_XP_Vista_7_Win10\sis3153usb_win\sis3153w_1.2\application\vc12\loaderGui_fpga\loaderGui\bin\Release`

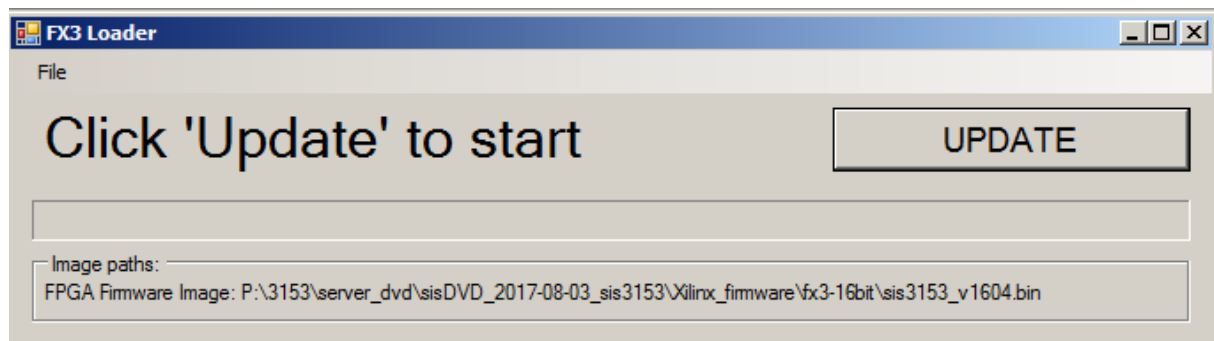


Open the File menu and assign a FPGA firmware bin file with “Set FPGA”.

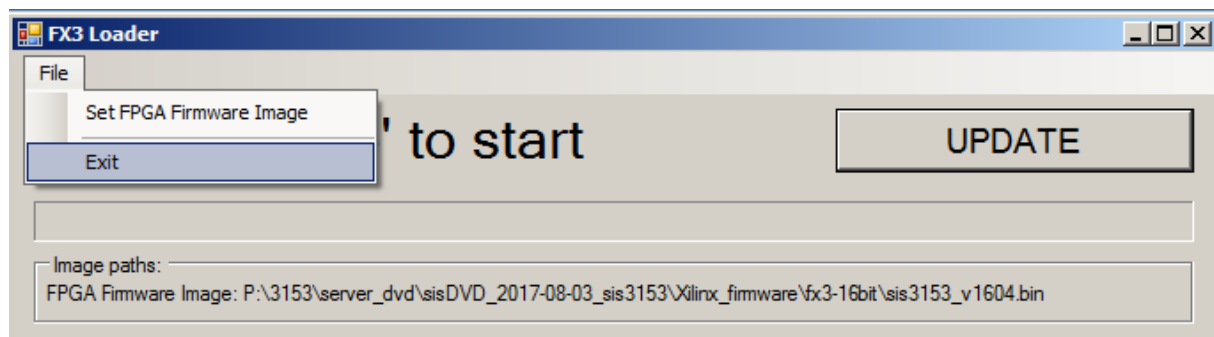




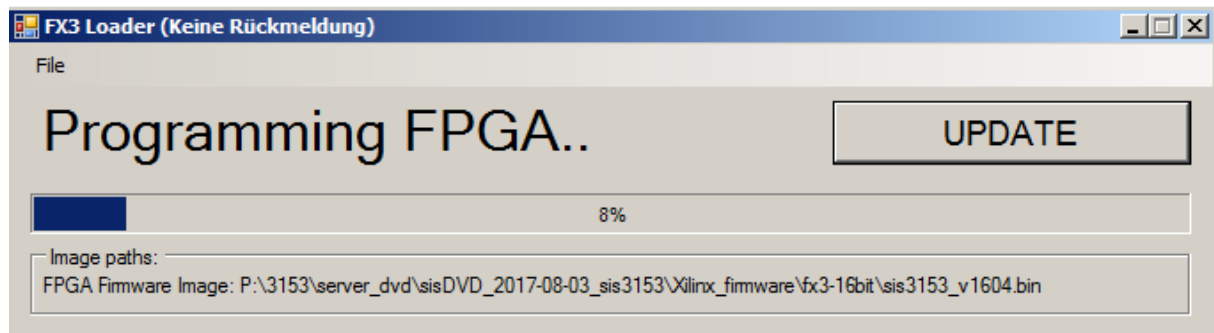
The selected file (Image paths) is displayed:



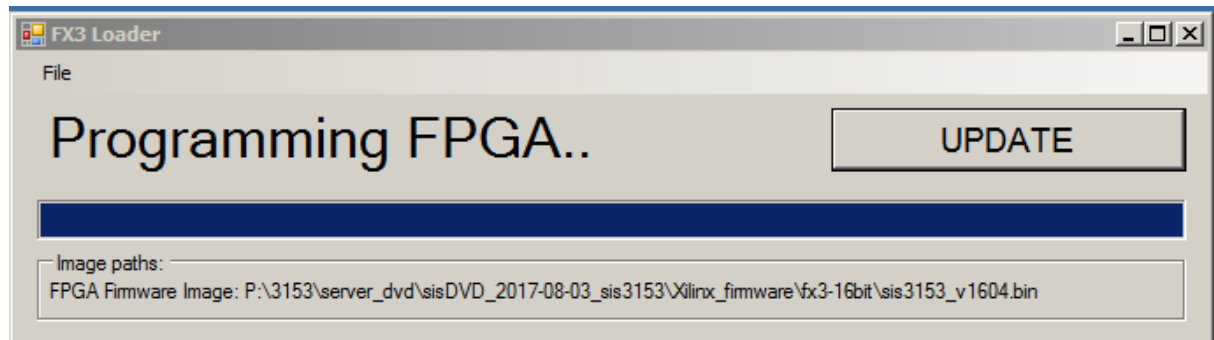
Important: The Loader GUI needs to be closed and restarted, now!
The image files won't be detected reliably otherwise.



After restart the program, press the Update button the FPGA firmware image will be written:

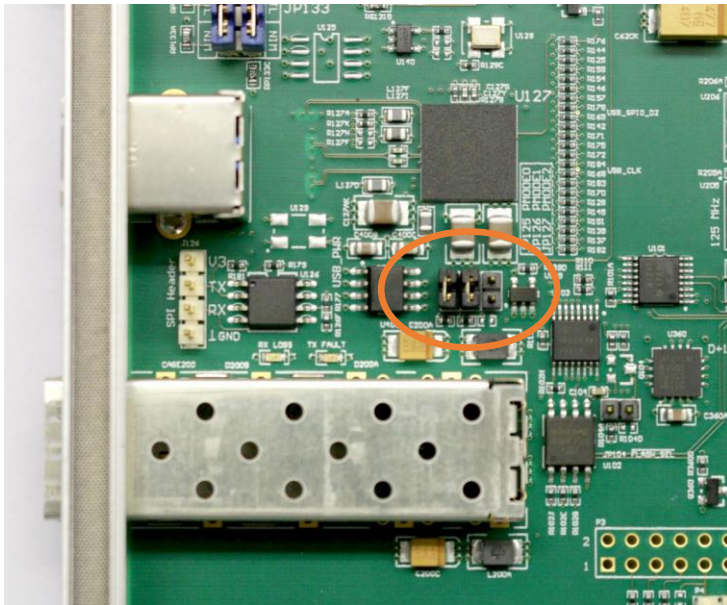


After successful programming the FPGA will be rebooted:

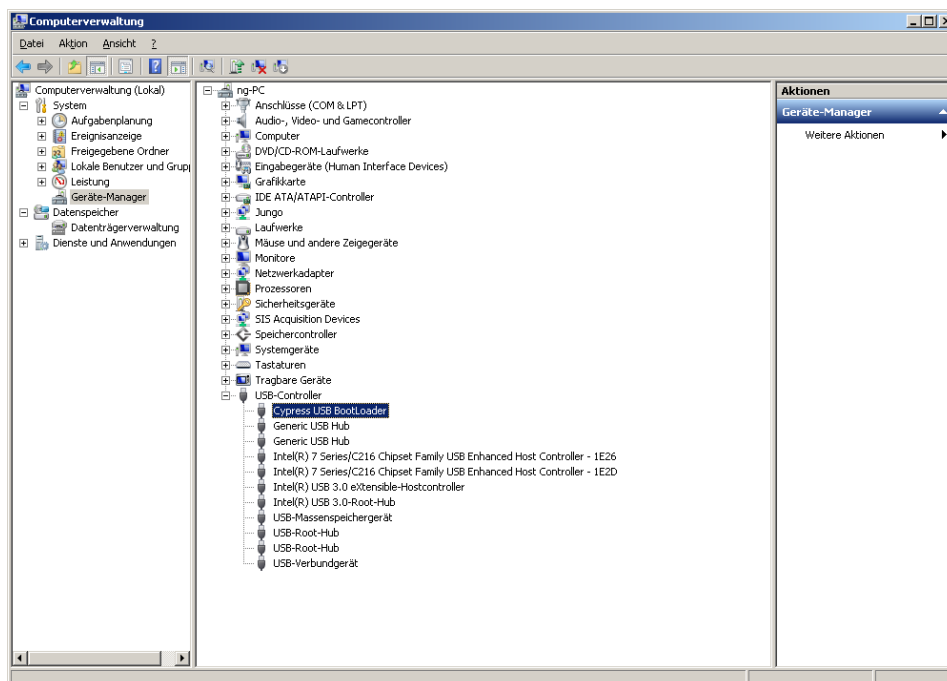


2 Cypress USB Controller Firmware and FPGA Firmware update via USB

The SIS3153 has to be started with the "Cypress default bootloader" for a firmware update via USB. The jumpers PMODE0 and PMODE1 on the PCB need to be closed at power up of the module.



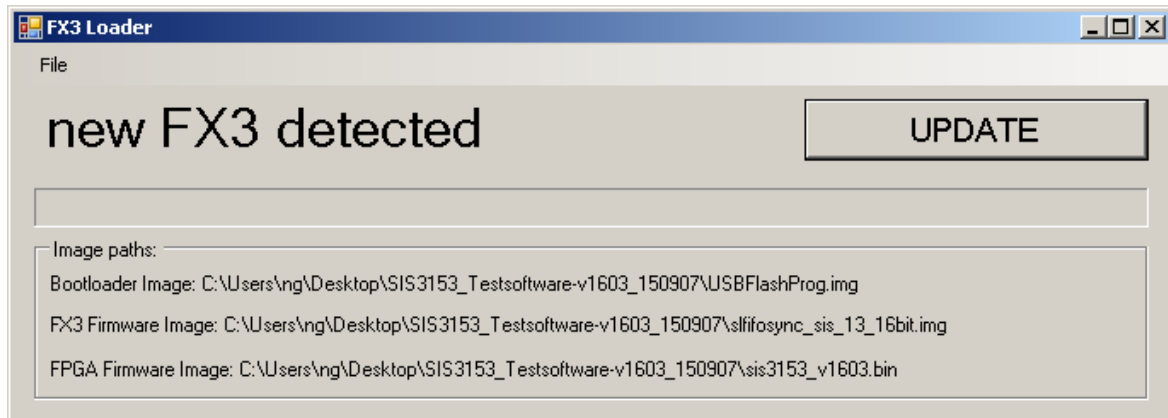
The Windows (XP, Win7 or Win8) operating system will detect a "Cypress USB Boot Loader". When not already installed, a driver will be required. It can be found on the Struck-DVD in the folder: `\sis3153\sis3153usb3\FX3_firmware\cypressDriver`.



The update process will be done with the Struck "loaderGUI.exe". It can be found on the Struck DVD in the directory:

\sisdvd\sis3153\sis3153usb3\Driver_Software\Windows32-64_XP_Vista_7_Win8\sis3153usb_win\sis3153w_1.2\application\vc12\loaderGui\loaderGui\bin\Release

The GUI will detect a new FX3 device upon program start.



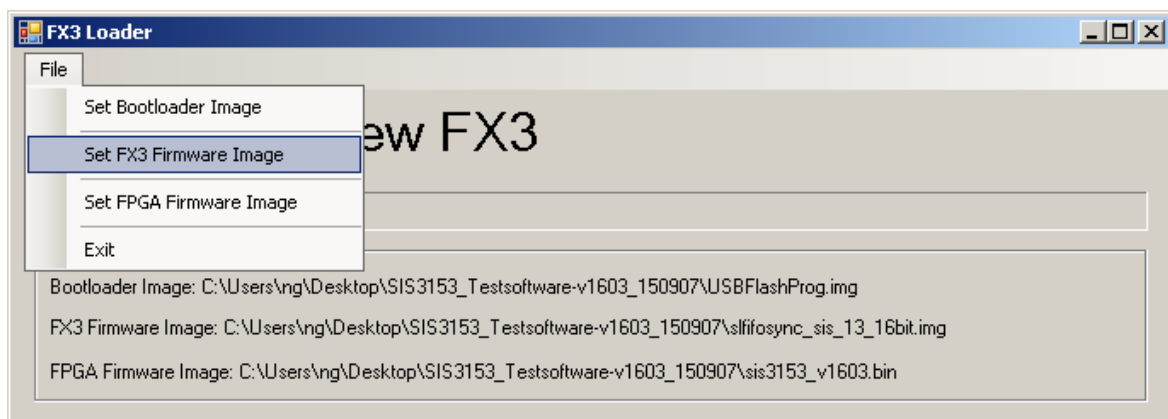
Open the File menu and assign the three image files from the Struck DVD to the corresponding entries.

bootloader: **\sisdvd\sis3153\sis3153usb3\FX3_firmware\ USBFlashProg.img**

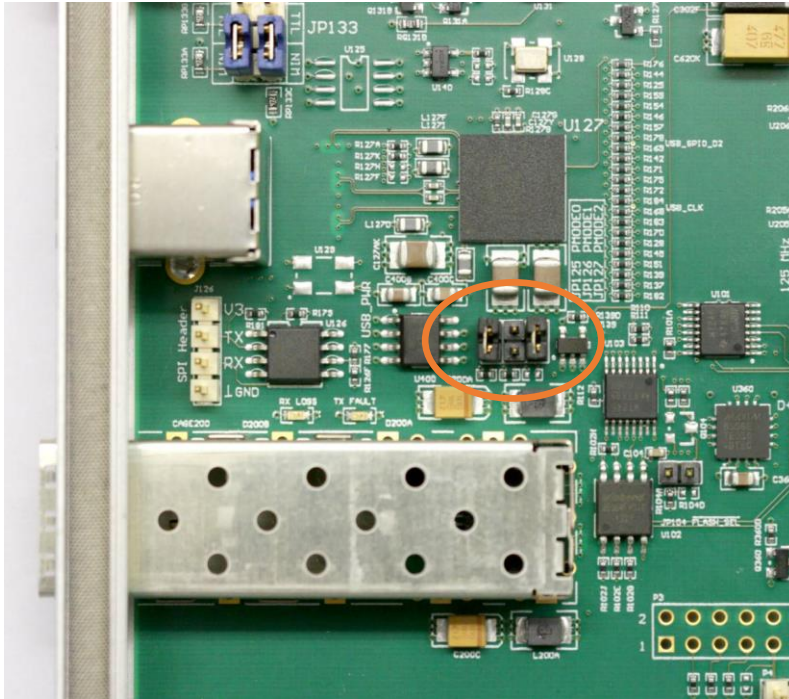
FX3 firmware: **\sisdvd\sis3153\sis3153usb3\FX3_firmware\fx3-16bit\slfifosync_sis_13_16bit.img**

FPGA firmware: **\sisdvd\sis3153\sis3153usb3\FX3_firmware\fx3-16bit\sis3153_v1603**

!Important. The FX3 Loader GUI needs to be closed and restarted now. The image files won't be detected reliably otherwise.

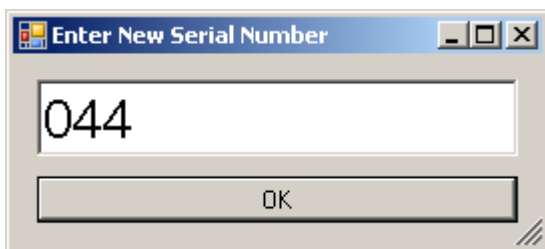


At this time it is required to change the boot mode jumpers of the FX3 controller to ensure the module will reboot with the Struck firmware during the programming process. PMODE0 and PMODE2 need to be closed.



Press the Update button and the bootloader image, the FX3 Firmware image and the FPGA firmware image will be written.

After successful programming the GUI will ask for the modules serial number.



Enter the board's serial number and reboot the SIS3153 device.

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