Firmware update with Nanoflash

Introduction

Nanoflash allows to flash the firmware of the following products:

- C5-01
- C5-E-x-09
- CL3-E-x-0F
- N5-x-1
- N5-x-2
- N5-x-3
- N5-x-4
- NP5-08
- NP5-20
- NP5-40
- PD2-Cx-E-01
- PD2-Cx-E-08
- PD4-Cx-E-01
- PD4-Cx-E-08
- PD6-Cx-E-09

It supports the following interfaces:

- USB (Mass Storage)
- Ethernet (TCP/IP)
- CAN (IXXAT adapters only)
- SPI over COM (Nanotec adapter)

For USB, you will need a ".bin" firmware file.

For all other interfaces, use a ".fw" firmware file.

For instance, to upgrade the firmware of the CL3, use:

- „CL3-E-x-0F-FIR-v1634-B357455**.bin**" if you flash using USB Mass Storage
- „CL3-E-x-0F-FIR-v1634-B357455**.fw**" if you flash using CAN

Prerequisites

USB

You will need:

- a USB cable

Since the controller uses the same USB protocol as USB sticks (e.g. mass storage), no drivers are required.
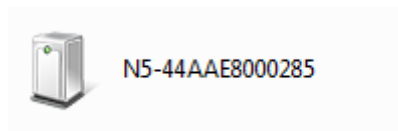
Ethernet

You will need:

- Ethernet and TCP/IP connectivity between the controller and the PC
- to know the IP address of the controller

Flashing with Ethernet is particular, because you need the IP address to communicate with the firmware, and the MAC address to communicate with the bootloader.

First, see if the controller appears in the Network area of the Windows explorer (only with the N5-x-1 and N5-x-2):

If it does, you will have directly the MAC address (44-AA-E8-00-02-85 in this example). You can also usually find the MAC address on the label on the controller.

If you double click on the device, your browser will open with the URL http://a.b.c.d

a.b.c.d is the current IP address of the firmware. Close the browser, you don't need it anymore.

For more information, please see the technical manual of the product, especially the chapter "Connect to controller".
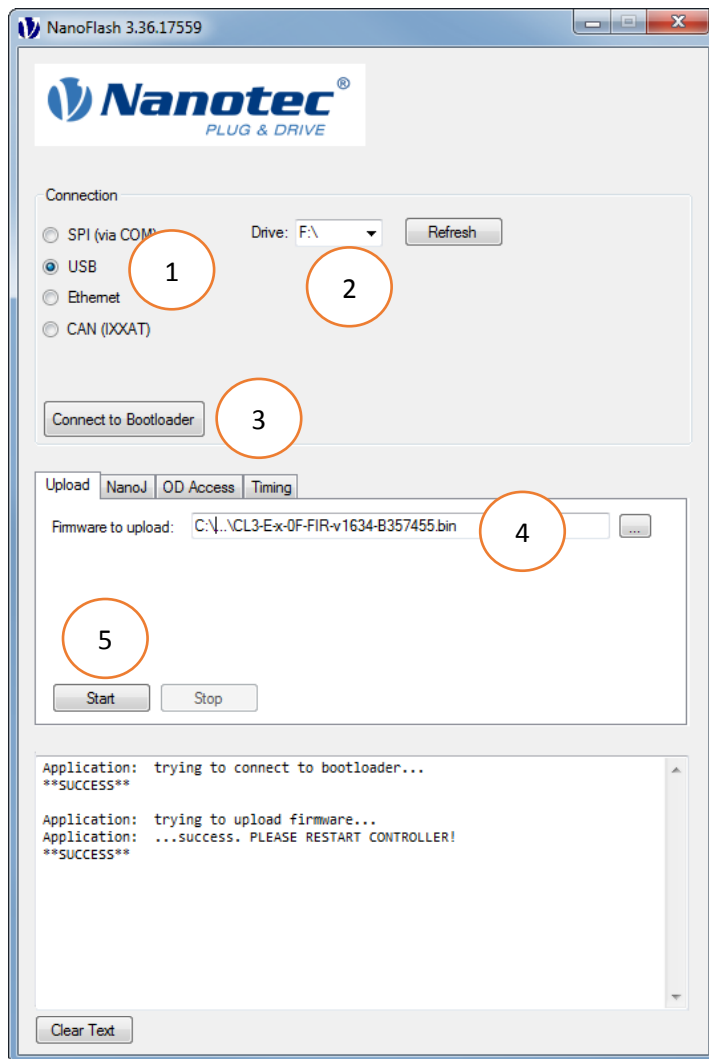
CAN

You will need:

- an IXXAT adapter, for instance the "USB-to-CAN V2"
- the IXXAT VCI **V3** Driver (**V4 is not supported yet**)
- the IXXAT VCI **V3** .NET API package
- a cable to connect the controller to the adapter. Please refer to the technical manual of the products for more information about the connectors and pins

The IXXAT drivers and API can be downloaded from the IXXAT web page:
http://www.ixxat.com/support/file-and-documents-download/drivers/vci-v3-driver-download

General flashing process

Make sure first then the controller is up and running. Then start Nanoflash, and:

1. Select the interface
2. Enter the communication parameter
3. Connect to the bootloader
   Check for the message "**SUCCESS**"
   The green LED will become steady.
4. Choose the firmware file (.bin for USB, .fw else)
5. Start the update
   Check for the message "**SUCCESS**"

You can then restart the controller.

Support

If you need support, please contact us at application@nanotec.de, or see
http://en.nanotec.com/contact/contact/ for more details.