



STUSB4531 NVM flasher

```
*****
*** Welcome to CMD_STUSB4531_flasher version 0.99 ***
*****

[INFO] usage: CMD_STUSB4531_flasher.com [-h] [-c CMD] [-i [I2C_ADDRESS]] [-v] [-f FILE] [-n]
STUSB4531 NVM command line flasher

options:
  -h, --help            show this help message and exit
  -c CMD, --cmd CMD      To select ST link COM port
  -i [I2C_ADDRESS], --i2c-address [I2C_ADDRESS]  I2C address (28 or 29)
  -v, --verbose          verbose output
  -f FILE, --file FILE   input file to load into NVM
  -n, --save             save read data into text file
```

Features

- Command-line utility
- Environment set-up:
 - NUCLEO-F072RB or NUCLEO-C071RB: STM32 Nucleo-64 development boards with STM32F072 / C071 respectively
 - STSW-STUSB020: STUSB4531 graphical user interface

Description

The **STSW-STUSB021** is a command-line tool dedicated to loading or reading the STUSB4531 configuration, which is stored into the IC non-volatile memory (NVM).

A graphical user interface (GUI) is used to manually configure STUSB4531 parameters (STSW-STUSB020). It can be used offline. Once the configuration is defined, the non-volatile memory settings can be dumped by the GUI into an output file (NVM_GUI_Data.nvm). This file is then used as an input by the flasher tool, in order to store the NVM configuration in the STUSB4531 IC using the I²C interface. Alternatively, the tool can be used to read an STUSB4531 NVM and store in an output file, which can be then imported into the GUI.

Maturity status link

[STSW-STUSB021](#)

Related products

STUSB4531	USB PD sink controller
EVAL-SCS006V1	Mini dongle
EVAL-SCS007V1	Evaluation board
STSW-STUSB020	GUI

1 NVM flasher utility

Figure 1. CMD_STUSB4531 flasher

```

C:\WINDOWS\system32\cmd. X + v
C:\Users\STSW-STUSB021 - STUSB4531> CMD_STUSB4531_flasher.com -c COM9 -f cfg/STUSB4531_custom_config.nvm -v

*****
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[INFO] Only I2C address 0x29 detected on COM9. Using -i 29 automatically.

=====
COMMUNICATION
=====
Communication OK with STUSB4531 on COM9 @0x29

=====
READ NVM OPERATION
=====
===== Read Process Start =====
Read All Sector Succeed= True
Data present in nvm_data_backup table are the followings:
nvm_data_backup[0]=['83', '04', '31', '45', '00', '00', '00', '00']
nvm_data_backup[1]=['10', '32', '11', 'F7', '87', '00', '00', '00']
nvm_data_backup[2]=['C0', '20', '00', '97', '03', '3C', '03', '00']
nvm_data_backup[3]=['A6', '3C', '00', '58', '00', 'C8', '5A', '1E']
===== Read Process Complete =====
===== Exit Mode Start =====
Exit mode op succeed= True
===== Exit Mode Complete =====
Read NVM complete with success

[INFO]: The following unique sectors have been written from the input file:
Sector0, Sector1, Sector2, Sector3
  
```

Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Oct-2025	1	Initial release.

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