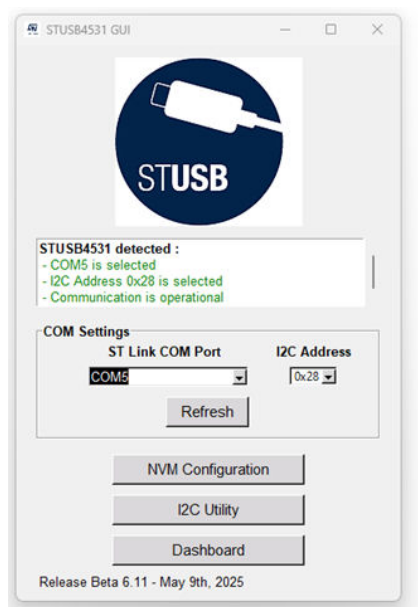


Graphical user interface for STUSB4531



Features

- STUSB4531 non-volatile memory configuration
- USB-C PD dashboard
- I²C utility
- Offline mode

Description

The [STSW-STUSB020](#) is a free graphical user interface (GUI) aimed at customizing the STUSB4531 IC seamlessly through direct access to the Non-volatile Memory (NVM).

The tool allows the user to read, configure and write to the NVM area without specific software skills, thanks to a graphical interface.

The GUI must be used in association with NUCLEO-C071RB or NUCLEO-F072RB boards connected to EVAL-SCS006V1 or EVAL-SCS007V1.

It can also be used in offline mode, i.e. without any connection to the STUSB4531.

Maturity status link

[STSW-STUSB020](#)

Related products

[STUSB4531](#)

[EVAL-SCS006V1](#)

[EVAL-SCS007V1](#)

[NUCLEO-C071RB](#)

[NUCLEO-F072RB](#)

1 Configuration

Figure 1. STUSB4531 device configuration

Dialog Box
 Connection Status : [OK] STUSB4531 is detected on [COM8]
 Message : Read device operation complete successfully

Power Profile | Algo and Vbus | Application Specific | Interrupt | Identification

Power Configuration
 DEVICE PDP (W) : 30
 NB FIXED PDO : 3
 VSEL VAR (V) : 12.0
 SINK FEATURE : FIXED+VARIABLE
 APDO FILL :
 SOURCE EXPECTED PDP (W) :
 VBUS MONITORING :
 Min Voltage (V) : 9.0
 Max Voltage (V) : 20.0
 Max Current (A) : 1.5
 Shift L : 0.95
 Shift H : 1.10

Voltage (V)
 FIX_PDO1 : 5.0
 FIX_PDO2 : 9.0
 FIX_PDO3 : 15.0

Clamped Current (A)
 3.0
 3.0
 5.0

SINK CAPABILITIES content

	Vmin (V)	Vtyp (V)	Vmax (V)	Iop (A)	UVLO (V)	OVLO (V)
PDO1 : FIXED		5.0		3.0	2.9	5.78
PDO2 : FIXED		9.0		3.0	6.93	10.4
PDO3 : FIXED		15.0		2.0	12.35	17.33
PDO4 : VARIABLE	9.0		20.0	1.5	6.93	23

NVM Configuration
 Import File
 Export File

STUSB4531 Access
 Read NVM
 Write NVM

Figure 2. STUSB4531 dashboard

Dialog Box
 Connection Status : [OK] STUSB4531 is detected on [COM5]

Source Configuration
 NB Source PDO : 5
 Source Power (W) : V_PDO5 x I_PDO5 = 65.0

CC Connection
 Source is attached
 Operating as sink

CC Operation
 CC2 is attached
 USB Power Delivery

Source Capabilities

	Vmin (V)	Vtyp (V)	Vmax (V)	Imax (A)
PDO1 : FIXED		5.0		3.0
PDO2 : FIXED		9.0		3.0
PDO3 : FIXED		12.0		5.0
PDO4 : FIXED		15.0		4.33
PDO5 : FIXED		20.0		3.25

Source Other Information
 Dual Role Power : Not Supported
 USB Suspend : Not Supported
 Unconstrained Power : Set
 USB Communication : Not Capable
 Dual Role Data : Capable
 Unchunked Extended Message : Not Supported
 EPR Mode : Not Capable

Sink Information
 Mismatch 5V : Not Set
 Above 5V : Not Set
 Mismatch PD : Not Set
 PD 0mA Mismatch : Set
 Power Path : Close

Sink RDO Request

	Vmin (V)	Vtyp (V)	Vmax (V)	Iop	Imax
PDO5 :		20.0		1.5	1.5

Sink Capabilities
 Sink PDP (W) : 30.0

	Vmin (V)	Vtyp (V)	Vmax (V)	Iop (A)
PDO1 : FIXED		5.0		3.0
PDO2 : FIXED		9.0		3.0
PDO3 : FIXED		15.0		2.0
PDO4 : VARIABLE	9.0		20.0	1.5

RDO Other Information
 Give Back Flag : Not Set
 Capacity Mismatch : Not Set
 USB Communication : Not Capable
 USB Suspend : Not Supported
 Unchunked Extended Message : Not Supported
 EPR Mode : Not Capable

Revision history

Table 1. Document revision history

Date	Revision	Changes
10-Oct-2025	1	Initial release.
24-Oct-2025	2	Updated related products on the cover page.

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