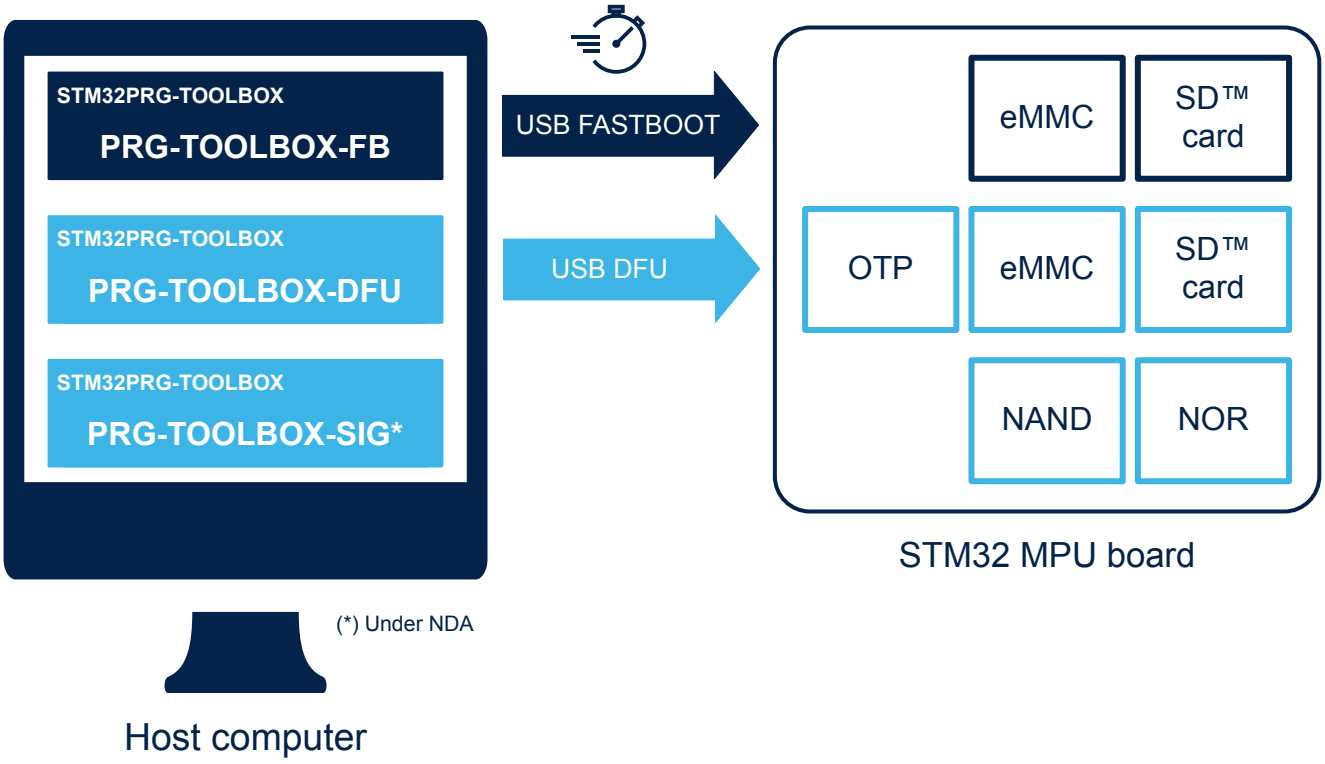
STM32PRG-TOOLBOX

Data brief

Programming toolbox in source code for STM32 microprocessors



Product status
STM32PRG-TOOLBOX

Features

PRG-TOOLBOX-DFU

- U-Boot installation with or without launching fastboot mode
- OTP fuse: read and write operations
- OTP management with the STM32PRGFW-UTIL firmware tool
- Supported target memory:
  - SD™ card, eMMC
  - NAND, NOR (bare-metal applications)
- Multi-OS support: Windows® and Linux®

PRG-TOOLBOX-FB

- Memory partition programming over the fastboot interface
- Programming performance boost (versus DFU mode)
- Supported target memory: SD™ card, eMMC
- Multi-OS support: Windows® and Linux®

PRG-TOOLBOX-SIG (available under NDA)

- Source code of key generation (*Keygen*) and signing (*Signing*) tools
- Generation of the ECC key pairs (*Keygen*)
- Signing of the binary images using ECC key pairs (*Signing*)
- Multi-OS support: Windows® and Linux®

Description

STM32PRG-TOOLBOX provides an open-source multi-OS software package to program and update the target flash memory of STM32 microprocessors through the USB fastboot interface.

STM32PRG-TOOLBOX is composed of several separate tools:

- PRG-TOOLBOX-DFU to install U-Boot, launch the fastboot mode, manage OTP, and also program memory partitions in the case of bare-metal applications
- PRG-TOOLBOX-FB to program memory partitions through the fastboot interface, and boost programming performance

Users can start from these preconfigured projects to configure their STM32 microprocessor devices and customize the boot/programming sequences according to their specific use cases. For more information about each project, see STM32PRG-TOOLBOX in the STM32 MPU wiki at wiki.st.com/stm32mpu and refer to:

- PRG-TOOLBOX-DFU release note
- PRG-TOOLBOX-FB release note

Additionally, STM32PRG-TOOLBOX provides a secure platform with the PRG-TOOLBOX-SIG tool, which generates ECC key pairs and supports the signing of binary images using these ECC keys. Contact STMicroelectronics sales offices to obtain the PRG-TOOLBOX-SIG tool under a non-disclosure agreement.

1 General information

1.1 Ordering information

Two STM32PRG-TOOLBOX projects are available for free download from GitHub at github.com/STMicroelectronics:

- PRG-TOOLBOX-DFU: github.com/STMicroelectronics/STM32PRG-TOOLBOX-DFU
- PRG-TOOLBOX-FB: github.com/STMicroelectronics/STM32PRG-TOOLBOX-FB

The PRG-TOOLBOX-SIG key generator and signing tool is available from STMicroelectronics sales offices under a non-disclosure agreement.

1.2 License

STM32PRG-TOOLBOX is delivered as a full open-source package for use with STM32 microprocessor devices based on the Arm® Cortex®-A processor.

Refer to PRG-TOOLBOX-DFU and PRG-TOOLBOX-FB on GitHub for their corresponding licenses.

The licensing conditions of PRG-TOOLBOX-SIG are available on demand from STMicroelectronics sales offices.

Note: Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.

Revision history

Table 1. **Document revision history**

Date	Revision	Changes
26-Apr-2024	1	Initial release.
26-May-2025	2	Extended the range of supported target memories for PRG-TOOLBOX-DFU and added the availability of the PRG-TOOLBOX-SIG key generator and signing tool under a non-disclosure agreement: • Updated the cover image • Updated Features • Updated Description • Updated Ordering information • Updated License