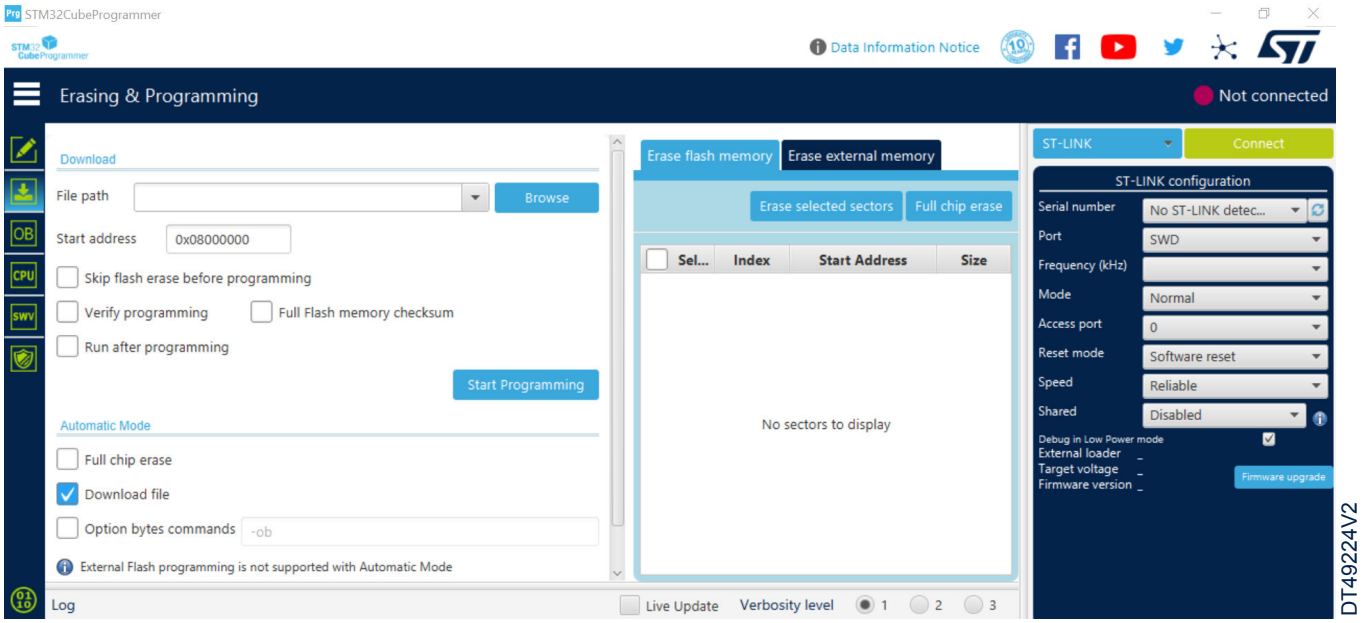
STM32CubeProg

Data brief

STM32CubeProgrammer all-in-one software tool



Product status link
STM32CubeProg

STM32 CubeProgrammer

STM32 Cube

Features

- Erases, programs, views, and verifies the content of the device flash memory
- Supports Motorola S19, Intel HEX, ELF, and binary formats
- Supports debug and bootloader interfaces:
  - ST-LINK debug probe (JTAG/SWD)
  - SEGGER J-Link debug probes and flash memory programmers (SWD)
  - UART and USB DFU, I^2C, SPI, and CAN bootloader interfaces
- Programs, erases, and verifies external memories, with examples of external flash memory loaders to help users to develop loaders for specific external memories
- Automates STM32 programming (erase, verify, programming, configuring option bytes)
- Allows OTP memory programming
- Supports the programming and configuring of option bytes
- Offers a command-line interface for automation through scripting
- ST-LINK firmware update
- Enables secure firmware creation using the STM32 Trusted Package Creator tool

- Supports STM32MPx series peripheral boot and flash memory programming
- Multi-OS support: Windows®, Linux®, macOS®

Description

STM32CubeProgrammer (STM32CubeProg) is an all-in-one multi-OS software tool for programming STM32 products.

It provides an easy-to-use and efficient environment for reading, writing, and verifying device memory through both the debug interface (JTAG and SWD) and the bootloader interface (UART and USB DFU, I^2C, SPI, and CAN).

STM32CubeProgrammer offers a wide range of features to program STM32 internal memories (such as flash, RAM, and OTP) as well as external memories.

STM32CubeProgrammer also allows option programming and upload, programming content verification, and programming automation through scripting.

STM32CubeProgrammer is delivered in GUI (graphical user interface) and CLI (command-line interface) versions.

1 General information

STM32CubeProg supports STM32 products based on the Arm® Cortex® processor.

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

arm

1.1 Ordering information

STM32CubeProg is available for free download from the *www.st.com* website.

1.2 What is STM32Cube?

STM32Cube is an STMicroelectronics original initiative to improve designer productivity significantly by reducing development effort, time, and cost. STM32Cube covers the whole STM32 portfolio.

STM32Cube includes:

- A set of user-friendly software development tools to cover project development from conception to realization, among which are:
  - STM32CubeMX, a graphical software configuration tool that allows the automatic generation of C initialization code using graphical wizards
  - STM32CubeIDE, an all-in-one development tool with peripheral configuration, code generation, code compilation, and debug features
  - STM32CubeCLT, an all-in-one command-line development toolset with code compilation, board programming, and debug features
  - STM32CubeProgrammer (STM32CubeProg), a programming tool available in graphical and command-line versions
  - STM32CubeMonitor (STM32CubeMonitor, STM32CubeMonPwr, STM32CubeMonRF, STM32CubeMonUCPD), powerful monitoring tools to fine-tune the behavior and performance of STM32 applications in real time
- STM32Cube MCU and MPU Packages, comprehensive embedded-software platforms specific to each microcontroller and microprocessor series (such as STM32CubeF4 for the STM32F4 series), which include:
  - STM32Cube hardware abstraction layer (HAL), ensuring maximized portability across the STM32 portfolio
  - STM32Cube low-layer APIs, ensuring the best performance and footprints with a high degree of user control over hardware
  - A consistent set of middleware components such as RTOS, USB, TCP/IP, graphics, and FAT file system
  - All embedded software utilities with full sets of peripheral and applicative examples
- STM32Cube Expansion Packages, which contain embedded software components that complement the functionalities of the STM32Cube MCU and MPU Packages with:
  - Middleware extensions and applicative layers
  - Examples running on some specific STMicroelectronics development boards

1.3 License

STM32CubeProg is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* software license agreement (SLA0048).

For more details about the license agreement of each component, refer to the release note (RN0109).

Revision history

Table 1. Document revision history

Date	Revision	Changes
14-Dec-2017	1	Initial release.
12-Apr-2018	2	Part number changed to STM32CubeProg.
19-Jul-2018	3	Updated section *License*.
25-Feb-2019	4	Tool support extended to the STM32MP1 series and STM32WB series: updated *Features* and *Description*. Added *General information*.
10-Jun-2024	5	Updated Features: • Added the support of the SEGGER J-Link probes and flash memory programmers • Extended the STM32 MPU support • Removed the support for STM32WB series OTA programming Updated the cover image and What is STM32Cube?