STM32CubeProgrammer release v1.4.0

Introduction

This release note is updated periodically to keep abreast of the STM32CubeProgrammer (STM32CubeProg) evolution, problems and limitations. Check the STMicroelectronics support website at www.st.com/stm32softwaretools for the latest version. For the latest release summary, refer to Table 1.

Table 1. STM32CubeProgrammer v1.4.0 release summary

Type	Summary
Major release	• Added STM32CubeProgrammer C++ API • Added support of secure firmware install on STM32L462CEU6F

Customer support

For more information or help concerning STM32CubeProgrammer, contact the nearest STMicroelectronics sales office. For a complete list of STMicroelectronics offices and distributors, refer to the *www.st.com* webpage.

Software updates

Software updates and all the latest documentation can be downloaded from the STMicroelectronics microcontroller support webpage at www.st.com/stm32softwaretools.

1 General Information

1.1 Overview

STM32CubeProgrammer is a tool that allows STM32 device programming through debug interfaces (JTAG and SWD) and bootloader interfaces (UART and USB).

The tool offers a wide range of features to program STM32 internal memories (Flash, RAM, OTP and others) and external memories, verify the programming content (checksum, verify during and after programming, compare with file), and automate STM32 programming.

The STM32CubeProgrammer package also offers the optional installation of the STM32 Trusted Package Creator tool, which is used to create secure firmware files for secure firmware install and update. For more information, refer to the *STM32 Trusted Package Creator tool software description* user manual (UM2238).

STM32CubeProgrammer supports STM32 32-bit microcontrollers based on the Arm® Cortex®-M processor.

arm

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

1.2 Host PC system requirements

Supported operating systems and architectures

- Windows® 7, 8, and 10: 32 bits (x86) and 64 bits (x64)
- Linux® (tested on Ubuntu®, 32 and 64 bits)
- macOS® (minimum version OS X® Yosemite)

Note: Ubuntu® is a registered trademark of Canonical Ltd.

macOS® is a trademark of Apple Inc. registered in the U.S. and other countries.

Software requirements

The Java™ SE Run Time Environment 1.8 (version 1.8.0_121 or newer) by Oracle® must be installed (it is available for download from the www.oracle.com website).

Note: Oracle® and Java® are registered trademarks of Oracle and/or its affiliates.

1.3 Setup procedure

Refer to the *STM32CubeProgrammer software description* user manual (UM2237) available at *www.st.com*.

1.4 Licensing

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

The software components used in the development of STM32CubeProgrammer and their licenses are listed in Table 2.

Table 2. List of software components licenses

Name	Version	License type	Details
Java™ SE	1.8	Oracle® Binary Code License Agreement	www.oracle.com(1)
Java™ Native Access	4.5.0	Apache® License, Version 2.0	mvnrepository.com(2)
Izpack	5.1.2		
QT framework	5.4	LGPLv3	www.qt.io(3)
LibUSB	1.0.20	LGPLv2	github.com/libusb/libusb(4)

1. *Search for Java SE 1.8.0_121 in the Oracle repository.*
2. *Search for the proper version of the component in the MVN repository.*
3. *Search for the proper version in the QT web site.*
4. *Search for the component in the Git repository.*

2 STM32CubeProgrammer v1.4.0 release information

2.1 New features

- Added STM32CubeProgrammer C++ API
- Added support of secure firmware install on STM32L462CEU6F

2.2 Fixed issues

Table 3. Main issues fixed in STM32CubeProgrammer v1.4.0

ID	Summary
55454	Programming a STM32F765NIH6 via USART1 can be done.
56817	Cannot program internal Flash of STM32F722ZE and STM32F730R8 via USB.

2.3 Known problems and limitations

- Read/write operations fail with the CAN interface.
- The use of the UART bootloader prevents from increasing the RDP level and programming the second bank of Option Bytes, or from enabling the two user secure areas simultaneously on STM32H7 microcontrollers.
- Programming over USB bootloader is not reliable with USB2.0 for some devices.
- External memory programming in only available with ST-LINK.
- Installing multiple instances of the same version of the tool in the same directory under Windows® leads to issues when uninstalling.
- The STLinkV3-I2C bridge may not work correctly with STM32F4 Series, STM32F7 Series, and STM32H7 Series.

3 Previous release information

3.1 STM32CubeProgrammer v1.3.0 release information

3.1.1 New features

- Added support of STM32G07x and STM32G08x microcontrollers
- Added support of STM32L010 microcontrollers
- Flash size displayed with debug interface
- Extended ST-LINK server interface support to Linux® and macOS®
- User interface enhancements
- Added contextual menu in main panel for programming, verification, and saving
- Added support of *.binary* files
- Added support of Unicode® file path
- New panel for external loaders; possibility to search and filter with the loader or board name

3.1.2 Fixed issues

Table 4. Main issues fixed in STM32CubeProgrammer v1.3.0

ID	Summary
54212	STM32CubeProg could not display complete MCU list.
54700	Issue with file path including Chinese characters (double-byte characters).
55156	Error with hex file programming with option "run after programming".

3.1.3 Known problems and limitations

- Read/write operations fail with the CAN interface.
- The use of the UART bootloader prevents from increasing the RDP level and programming the second bank of Option Bytes, or from enabling the two user secure areas simultaneously on STM32H7 microcontrollers.
- Programming over USB bootloader is not reliable with USB2.0 for some devices.
- External memory programming in only available with ST-LINK.
- Installing multiple instances of the same version of the tool in the same directory under Windows® leads to issues when uninstalling.
- The STLinkV3-I2C bridge may not work correctly with STM32F4 Series, STM32F7 Series, and STM32H7 Series.

3.2 STM32CubeProgrammer v1.2.1 release information

3.2.1 New features

- Full-chip erase enabled for STM32L0 Series and STM32L1 Series
- Enhanced connection to STM32L0 Series and STM32L1 with STLINK-V3
- Added support of Quad-SPI Flash loaders:
  - N25Q128A_STM32F7508-DISCO
  - MX25L512G_STM32F7308-DISCO
  - MT25TL01G_STM32H743I-EVAL
  - MT25TL01G_STM32H747-EVAL

3.2.2 Fixed issues

Table 5. **Main issues fixed in STM32CubeProgrammer v1.2.1**

ID	Summary
53000	[GUI-memory edition] UART memory editions do not work
53496	[Launcher-java10] The tool is not launched in Windows10 64 bits with Java10
54292	[USB] Connection time increases after every disconnect/connect with DFU interface

3.2.3 Known problems and limitations

- Read/write operations fail with the CAN interface.
- The use of the UART bootloader prevents from increasing the RDP level and from programming the second bank of Option Bytes, or from enabling the two user secure areas simultaneously on STM32H7 microcontrollers.
- Programming over USB bootloader is not reliable with USB2.0 for some devices.
- External memory programming in only available with ST-LINK.
- Installing multiple instances of the same version of the tool in the same directory under Windows® leads to issues when uninstalling.
- STLinkV3-I2C bridge may not work correctly with STM32F4 Series, STM32F7 Series, and STM32H7 Series.

3.3 STM32CubeProgrammer v1.2.0 release information

3.3.1 New features

- Add support of STLINK-V3
- Add support of STM32L41x microcontrollers
- Listing of the connected ST-LINK probes using the `--list` command
- Digitally signed USB DFU driver for STM32 bootloader
- Add support of ST-LINK server interface

3.3.2 Known problems and limitations

- Read/write operations fail with the CAN interface.
- The use of the UART bootloader prevents from increasing the RDP level and from programming the second bank of Option Bytes, or from enabling the two user secure areas simultaneously on STM32H7 microcontrollers.
- Programming over USB bootloader is not reliable with USB2.0 for some devices.
- External memory programming in only available with ST-LINK.
- Installing multiple instances of the same version of the tool in the same directory under Windows® leads to issues when uninstalling.
- STLinkV3-I2C bridge may not work correctly with STM32F4 Series, STM32F7 Series, and STM32H7 Series.

3.4 STM32CubeProgrammer v1.1.0 release information

3.4.1 New features

- Add support of STM32F7x0 Value line and STM32H750 Value line
- Add support of M29W128GL external Flash memory programming on STM32H743I-EVAL
- Dump device memory into an hex/srec/bin file
- Add Core debug commands in command-line interface
- Add support of data EEPROM programming on STM32L0 Series and STM32L1 Series

3.4.2 Known problems and limitations

- The use of the UART bootloader prevents from increasing the RDP level and from programming the second bank of option bytes, or from enabling the two user secure areas simultaneously on STM32H7 microcontrollers.
- Programming over USB bootloader is not reliable with USB2.0 for some devices.
- External memory programming in only available with ST-LINK.
- Installing multiple instances of the same version of the tool in the same directory under Windows® leads to issues when uninstalling.

3.5 STM32CubeProgrammer v1.0.0 release information

3.5.1 New features

- STM32 Flash programming and erasing over ST-LINK debug probe (JTAG/SWD) and over bootloader interfaces UART and USB DFU
- STM32 option bytes detailed display with description of each bit field
- Option bytes programming over ST-LINK debug probe (JTAG/SWD) and over bootloader interfaces UART and USB DFU
- External memories programming over ST-LINK debug probe (JTAG/SWD) for STM32 microcontroller evaluation and discovery boards
- Read, display and programming of binary files, ELF files, Intel hex files and Motorola Srecord files
- Read and display of STM32 microcontroller memory content
- Command line and graphical user interface
- Generation of secure firmware using the STM32 Trusted Package Creator tool

3.5.2 Known problems and limitations

- The use of the UART bootloader prevents from increasing the RDP level and from programming the second bank of option bytes, or from enabling the two user secure areas simultaneously on STM32H7 microcontrollers.
- Programming over USB bootloader is not reliable with USB2.0 for some devices.
- The erase command is not supported with data EEPROM on STM32L0 and STM32L1.
- External memory programming in only available with ST-LINK.
- Installing multiple instances of the same version of the tool in the same directory under Windows® leads to issues when uninstalling.

Revision history

Table 6. **Document revision history**

Date	Version	Changes
24-Nov-2017	1	Initial release.
12-Apr-2018	2	Part number changed to STM32CubeProg.
19-Jul-2018	3	Added information related to STM32CubeProg 1.1.0.
7-Sep-2018	4	Added information related to STM32CubeProg 1.2.0.
15-Oct-2018	5	Added information related to STM32CubeProg 1.2.1.
15-Nov-2018	6	Added information related to STM32CubeProg 1.3.0.
20-Dec-2018	7	Added information related to STM32CubeProg 1.4.0.

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