STM32CubeProgrammer release v2.8.0

Introduction

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

Table 1. STM32CubeProgrammer v2.8.0 release summary

Type	Summary
Major release	• Added the support for the STM32U575/585 microcontrollers • Added the support for SFI via the JTAG interface for the STM32U575/585 microcontrollers • Added the support for SFI via the bootloader interface (USB/UART/I^{2}C/SPI) for the STM32U5 Series • Added the new *FUS-Operator* support for the STM32WB1xxx microcontrollers • Added the anti-rollback support for the STM32WB1xxx and STM32WB5xxx microcontrollers • Added the support of FUS version display for the STM32WB1xxx and STM32WB5xxx microcontrollers • Added the support for the *Live Grid Update* feature • Added the support for the *Blank check* feature • Added the support for the *Memory/File* and *File/File* compare features • Added the support for the bootloader version display feature • Added the support for the *Fill memory* feature • Added the support for UART interface RTS/CTS signals • Added the support for *Connect while Watchdog enabled*

Customer support

For more information or help concerning STM32CubeProgrammer, contact the nearest STMicroelectronics sales office or use the ST community at community.st.com. 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 support webpage at www.st.com/stm32cubeprog.

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 and microprocessors based on the Arm® Cortex® processor.

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® 64 bits (tested on Ubuntu® 64 bits)
- macOS® (minimum version OS X® Yosemite)

Note: Linux® is a registered trademark of Linus Torvalds.

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

For STM32CubeProgrammer versions earlier than v2.6.0, the Java® SE Run Time Environment 1.8 (version 1.8.0_121 or newer) must be installed by Oracle® (Only Java® 8 is supported).

Since STM32CubeProgrammer version v2.6.0, the tool can be installed without pre-requisite JRE™ installation, because the STM32CubeProgrammer release package contains a JRE™ bundling.

Note: After Oracle® announcement related to the "End of Public Updates for Oracle JDK 8", access to OpenJDK is possible via adoptopenjdk.net.

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

All other trademarks are the property of their respective owners.

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	Copyright	License[1]	Details
commons-lang3	3.5	The Apache Software Foundation	Apache License 2.0	commons.apache.org/proper/commons-lang/
Apache Commons IO	2.5	The Apache Software Foundation	Apache License 2.0	commons.apache.org/proper/commons-io/
izpack	5.1.3	Julien Ponge, René Krell and the IzPack contributors	Apache License 2.0	izpack.org/
launch4j	3.12	Copyright © 2004-2017, Grzegorz Kowal	BSD-3-Clause	sourceforge.net/projects/launch4j/
org.jvnet.jaxb2.maven2:maven-jaxb2-plugin	0.14.0	Copyright © 2006-2014, Alexey Valikov	BSD-2-Clause	github.com/highsource/maven-jaxb2-plugin
QT framework	5.4	Copyright © 2017, The Qt Company Ltd.	LGPL-3.0-only	www.qt.io
LibUSB	1.0.20	Copyright © 2001, Johannes Erdfelt <johannes@erdfelt.com> Copyright © 2007-2009, Daniel Drake <dsd@gentoo.org> Copyright © 2010-2012, Peter Stuge <peter@stuge.se> Copyright © 2008-2016, Nathan Hjelm <hjelmn@users.sourceforge.net> Copyright © 2009-2013, Pete Batard <pete@akeo.ie> Copyright © 2009-2013, Ludovic Rousseau <ludovic.rousseau@gmail.com> Copyright © 2010-2012, Michael Plante <michael.plante@gmail.com> Copyright © 2011-2013, Hans de Goede <hdegoede@redhat.com> Copyright © 2012-2013, Martin Pieuchot <mpi@openbsd.org> Copyright © 2012-2013, Toby Gray <toby.gray@realvnc.com> Copyright © 2013-2018, Chris Dickens <christopher.a.dickens@gmail.com>	LGPL-2.0-only	github.com/libusb/libusb

1. *License identifier as defined by OSI (opensource.org/licenses) or SPDX (spdx.org/licenses).*

The software bundled with STM32CubeProgrammer and their licenses are listed in Table 3.

Table 3. List of software bundled with the tool

Name	Version	Copyright	License	Details
BellSoft Liberica OpenJDK and Java FX	1.8.0_265	Copyright © 1989, 1991, Free Software Foundation, Inc.	GPLv2+CE	Copyright © 1995, 2020, Oracle

2 STM32CubeProgrammer v2.8.0 release information

2.1 New features

- Added the support for the STM32U575/585 microcontrollers
- Added the support for SFI via the JTAG interface for the STM32U575/585 microcontrollers
- Added the support for SFI via the bootloader interface (USB/UART/I^{2}C/SPI) for the STM32U5 Series
- Added the new *FUS-Operator* support for the STM32WB1xxx microcontrollers
- Added the anti-rollback support for the STM32WB1xxx and STM32WB5xxx microcontrollers
- Added the support of FUS version display for the STM32WB1xxx and STM32WB5xxx microcontrollers
- Added the support for the *Live Grid Update* feature
- Added the support for the *Blank check* feature
- Added the support for the *Memory/File* and *File/File* compare features
- Added the support for the bootloader version display feature
- Added the support for the *Fill memory* feature
- Added the support for UART interface RTS/CTS signals
- Added the support for *Connect while Watchdog enabled*

2.2 Fixed issues

Table 4. Main issues fixed in STM32CubeProgrammer v2.8.0

ID	Summary
64267	Fix issues with FUS via USART boot mode.
72832	Fix issue with MCU ID for STM32L151VB and STM32L151CB.
74327	[STM32F7] Unable to read/write data when option byte WWDG_SW is unchecked.
76440	[STM32WB] Extra bytes are programmed.
81646	STM32G431RB WRP modification.
93987	[STM32G0][GUI] Remove NRST_MODE.
100150	Programming of option bytes list is not completed when SEC_SIZE option byte is programmed.
101017	[STM32H7] Completes data with 00 bytes at the end.
102103	[STM32G0] Bit field for BORR and BORF are swapped.
104089	[STM32G0] Only half of the Flash memory is shown under *"Erase & Programming"*, and missing DUAL_BANK and (n)SWAP_BANK option bytes for STM32G0[B-C][0-1]xE microcontrollers.
104320	[STM32WB] The stack *"Firmware delete"* button is greyed out when connected through USB DFU.
104707	[STM32U5] RDP regression is not possible when IWDG_SW/WWDG_SW option byte is set to 1.
104832	[STM32G0] NRST_MODE option byte has been removed for STM32G0x1xx microcontrollers.
105628	[STM32U5] HDP option byte is not visible.

2.3 Known problems and limitations

- STM32G030C6: extra option bytes displayed (PCROP1A_STRT, PCROP1A_END, PCROP1A_RDP, PCROP1B_STRT, PCROP1B_END, BOOT_LOCK, SEC_SIZE)
- STM32L151RD: wrong Flash memory size displayed (128 Kbytes instead of 384 Kbytes)
- STM32U575/585 microcontrollers:
  - Bootloader version is not displayed
  - SFI via SWD fails when a USB cable is connected (a workaround is to use a USB wall charger)
  - On macOS®, after setting RDP to 0x55 and TZEN to 0x1, a connection via SWD crashes the tool
  - Regression with PWD from L1 to L0.5 fails
- STM32 Trusted Package Creator tool: HSM cannot be detected on macOS®
- Frequency parameters are not respected
- Azure® RTOS USBX is not supported

3 Previous release information

3.1 STM32CubeProgrammer v2.7.0 release information

3.1.1 New features

- Added the support for the STM32WB15xx microcontrollers in the STM32WB Series
- Added the support for the microcontrollers with 64 Kbytes of Flash memory in the STM32G0 Series
- Added *HardFault Analyzer* support
- Added *Register viewer* support

3.1.2 Fixed issues

Table 5. Main issues fixed in STM32CubeProgrammer v2.7.0

ID	Summary
58716	Error when trying to mass erase STM32L0 128K devices from the CLI.
61638	DFU error with the STM32F746xx microcontrollers.
64229	Impossible to erase sector 128 and upper on STM32L476RG with STM32CubeProgrammer.
73928	[STM32CubeProgrammer] [CLI][STM32H7] STM32H745I-DISCO: Unable to read big data from the external Q-SPI Flash memory.
78496	STM32F756 DFU *Application Example* does not work with STM32CubeProgrammer.
80586	[STM32CubeProgrammer][STM32L0][CLI] Verification progress bar ends at 24%.
85736	Empty area in HEX file is not well detected by STM32CubeProgrammer.
85898	Option byte IRHEN must be deleted from STM32CubeProgrammer.
89140	[STM32CubeProgrammer v2.4.0][CLI]: Failure to recover when using the `rdu` option.
90060	[STM32L4] STM32L496: Cannot connect using DFU IAP.
91608	Programming issue using the NUCLEO-L053R8 board connected via the USB.
92200	[CLI] I^2C Host sends out 2 extra bytes in the `NoStretchErase` command.
92774	[UART] STM32CubeProgrammer cannot program STM32H7 microcontrollers between 0x0810 0040 and 0x0810 0800.
93858	STM32H757 bootloader UART – `.hex` download verify error on the Cortex®-M4.
93887	STM32F765xG (1 Mbyte): Not possible to program the Flash memory using STM32CubeProgrammer v2.5.0.
94636	[STM32CubeProgrammer-IAP] DFU programming failed.
96040	[GUI] When *"No STM32 target found"* STM32CubeProgrammer cannot be closed.
96295	STM32L471: Not able to successfully connect to or program using the UART.
96905	[Prg-DB] Wrong Flash memory size for STM32L151xx devices.
97365	USB DFU connection issue using the NUCLEO-L152RE board.
98346	STM32L073: STM32CubeProgrammer v2.6.0 is not able to successfully connect to STM32L073xx microcontrollers using DFU.
98682	Programming issues using STM32L471VET6.
99401	[STM32G4 128K][GUI] Wrong WRP1A/B_END and WRP1A/B_STRT values for 128 Kbytes.
99963	STM32CubeProgrammer_API document update for STM32MP1 microprocessors.

3.1.3 Known problems and limitations

- Installer: Insignificant message is returned during the installation when other instances are already installed.
- On some macOS® machines, the STM32CubeProgrammer GUI fails to launch (must be launched in CLI mode).
- STM32WB1xxx: Incorrect PCROP area management via SWD.
- STM32WB1xxx: STM32CubeProgrammer is closed when trying to apply FUS upgrade via the UART on macOS®. Only tty is supported.
- STM32WB5xxx: Making FUS upgrade via the SWD interface from recent to older version returns success message.
- Programming of option byte list is not completed when the SEC_SIZE option byte is programmed on some STM32 microcontroller or microprocessor series.
- STM32WB1xxx: STM32Key Provisioning/Double signature is not tested.

3.2 STM32CubeProgrammer v2.6.0 release information

3.2.1 New features

- Added the support for dual-core microcontrollers in the STM32WL Series
- Extended the support for the STM32G0 Series to the new STM32G0Bxxx and STM32G0Cxxx microcontrollers
- Added SFI support via JTAG/UART/SPI for STM32WL5xxx microcontrollers
- Added SFI support via I^2C/SPI for STM32L5 Series microcontrollers
- Added SFIx support via bootloader for STM32L5 Series microcontrollers
- Added Sigfox™ credential provisioning support for STM32WL5xxx microcontrollers
- Added multiple Flash loader support for STM32 microcontrollers
- Added the SWV feature update (color support)
- Added the support for the server client HSM feature
- Added DFU IAP using custom PID/VID support for all STM32 products
- Added installer JRE bundle (OpenJDK)

3.2.2 Fixed issues

Table 6. Main issues fixed in STM32CubeProgrammer v2.6.0

ID	Summary
57835	Connect under reset with hardware reset is not working with SensorTile in low-power mode.
58716	Error when trying to mass erase STM32L0 128-Kbyte devices from CLI.
62639	RDP regression is not functional via BootLoader interfaces for STM32F030R8.
64267	Issues with FUS via USART boot mode.
70556	[STM32CubeProgrammer] Bug with STM32F765IGT6 (1-Mbyte Flash memory).
76987	[STM32CubeProg-STM32L5] STM32Cubeprog crash when communicating with the DFU app.
80586	[STM32CubeProg-STM32L0][CLI] Verification progress bar ends at 24%.
81647	User DFU functionality with STM32CubeProgrammer.
85313	[STM32CubeProg-STM32G0][GUI] Remove the BOR level section.
85898	Option Byte IRHEN must be deleted from STM32CubeProgrammer.
85960	STM32G431: STM32CubeProgrammer automatic mode download issue.
86576	[PRG] Fail to write OTP with STM32G4.
90060	[STM32CubeProgrammer][STM32L4] STM32L496: cannot connect using DFU IAP.

ID	Summary
91608	Programming issue using the NUCLEO-L053R8 board connected via USB.
92038	STM32CubeProgrammer fails to open on macOS® Catalina v 10.15.6.
92280	[STM32CubeProg-STM32H7][GUI] *Erasing &Programming* panel hangs (white panel).
92477	[STM32CubeProg-STM32L1][GUI] Incorrect memory size displayed and cannot make the erase.
92641	[STM32CubeProgrammer-Option Bytes] Cannot set STM32H743 IO_HSLV, VDDIO_HSLV option bit.
92674	[STM32CubePrg][STM32L0][DIE417] Cannot connect to board under reset when low-power mode is activated.
92828	Seems no compatible OpenJFX version for Ubuntu® 20.04 for OpenSTLinux.
93013	[CubePRG] `CubeProgrammer_API.h` not up to date in last STM32CubeProgrammer: missing 100 bytes in `debugConnectParameters struct`.
93887	[CubePRG][0x451] Not possible to program STM32F765xG (Flash 1 Mbyte) using STM32CubeProgrammer v2.5.0.
93987	[STM32CubeProg-STM32G0][GUI] Remove NRST_MODE.
94517	[CubePRG] Cannot write 8 bytes in Flash memory using `-w64` STM32CubeProgrammer CLI command.

3.2.3 Known problems and limitations

- STM32MP1 mircoprocessor `get certificate` operation is not complete in the UART mode.
- Production programming issues occur when using multiple ST-LINK in parallel.
- Installer: Insignificant message is returned during the installation when other instances are already installed.
- On some macOS® machines, the STM32Cubeprogrammer GUI fails to launch (must be launched in CLI mode).
- The SFI operation via UART is not achieved and returns an error on macOS® machines.
- STM32WB55: When trying to upgrade more than one stack, the operation can be done only with a second try.
- SFIx operation for STM32L5: An exception appears while programming when the `-elbl` command is not the first one in the command line.

3.3 STM32CubeProgrammer v2.5.0 release information

3.3.1 New features

- Added the support for STM32G491xC and STM32G491xE microcontrollers
- Added the support for STM32H72xxx and STM32H73xxx microcontrollers
- Added SFI support for STM32H72xxx and STM32H73xxx microcontrollers
- Added SFIx support for STM32H72xxx and STM32H73xxx microcontrollers
- Added SFI support via UART for STM32L5 Series microcontrollers
- Added SFI support via USB for STM32L5 Series microcontrollers
- Added support of Serial Wire Viewer (SWV)
- Board automatic recognition
- Revision ID display

3.3.2 Fixed issues

Table 7. Main issues fixed in STM32CubeProgrammer v2.5.0

ID	Summary
59191	[STM32WB] Unable to remove or install the RF stack over UART bootloader + RSS.

ID	Summary
60618	Erase of EEPROM memory of STM32L051 using the *Erase selected sectors* option.
62173	Cannot connect to STM32F072 DFU system bootloader.
65682	[UART] Cannot update option bytes with the UART.
66596	[UART] STM32L010 can be programmed.
67646	CLI missing `-w64` command + OTP area not programmed via SWD.
68736	[STM32F7] Unable to erase multiple sectors for dual-bank Flash memory.
68990	[secure boot] Key generation not functional with `STM32MP_KeyGen_CLI` on Linux®.
70592	Start address box is activated after programming `.hex` file.
71108	[STM32H7] Flashing through SWD in SFI mode finishes with errors.
73495	[STM32F072] Cannot remove read protection through DFU bootloader.
79494	Fail to program STM32L0 MCUs
79912	[STM32F446] Flash memory size register reading with bootloader interface.
82752	[UART][CLI] Upload size is bigger than Flash memory size.
82867	*Firmware Upgrade Service* panel does not disappear on disconnect from compatible device.
83296	[STM32L5][SFI]: SFI fails if RDP is set to 0 or 1 in `.csv` file or if start SFI with `TZEN=1`.
83346	Get `Cubeprogrammer_API.lib` compiled with x64.
88504	Issues with programming 512-Kbyte memory with 362-Kbyte file.
89436	Failure to program binary to STM32L4 Nucleo board with the CAN interface using bootloader.

3.3.3 Known problems and limitations

- For the STM32L5 Series, the Option Byte programming GUI is not intuitive enough. Refer to the *STM32L552xx and STM32L562xx advanced Arm®-based 32-bit MCUs* reference manual (RM0438) for permitted accesses.
- For STM32L4Pxxx and STM32L4Qxxx devices, Option Byte programming via bootloader interfaces presents some limitations.
- For STM32H7Axxx and STM32H7Bxxx devices, Option Byte programming via bootloader interfaces (USB) presents some limitations.
- STM32L5 Series programming presents limitation in macOS® when `TZEN=1` and `RDP=0x55`.
- Display issues depending on the monitor used can occur with Linux®.
- SFI-HSM V2 *get certificate* fails with STM32L462xx devices.
- Parallel Flash programming fails in macOS® for microprocessors in the STM32MP1 Series.
- Issues can be reported with some specific `.elf` file in CRC calculation safety feature.
- STM32MP1 mircoprocessor programming via UART presents limitations to program the whole boot chain.
- STM32MP1 mircoprocessor `get certificate` operation is not completed via a UART connection.

3.4 STM32CubeProgrammer v2.4.0 release information

3.4.1 New features

- Added the support of the graphic user interface (GUI) for the firmware upgrade service (FUS) and stack upgrade for the entire STM32WB Series
- Support of HSM V2 on all STM32 microcontrollers and microprocessors supporting SFI/SSP

3.4.2 Fixed issues

Table 8. Main issues fixed in STM32CubeProgrammer v2.4.0

ID	Summary
77015	STM32CubeProgrammer cannot connect ST-LINK without the mass storage feature.
78350	STM32CubeProgrammer issue with STM32G0 when programming binary (size 18448 bytes).

3.4.3 Known problems and limitations

- For the STM32L5 Series, the connection via the ST-LINK protocol is allowed only when mode is set to *hotplug* with `TZEN=1`.
- For the STM32L5 Series, the Option Byte programming GUI is not intuitive enough. Refer to the *STM32L552xx and STM32L562xx advanced Arm®-based 32-bit MCUs* reference manual (RM0438) for permitted accesses.
- For STM32L4Pxxx and STM32L4Qxxx devices, Option Byte programming via bootloader interfaces presents some limitations.
- For STM32H7Axxx and STM32H7Bxxx devices, Option Byte programming via bootloader interfaces (USB) presents some limitations.
- STM32L5 series programming presents limitation in macOS® when `TZEN=1` and `RDP=0x55`.
- With some small-screen resolutions, the graphical interface of STM32CubeProgrammer presents anomalies such as inaccessible buttons.
- Display issues depending on the monitor used can occur with Linux®.
- SFIx on STM32H743/753 devices fails via the debug interface.
- SFI-HSM V2 *get certificate* fails with STM32L462xx devices.
- Parallel Flash programming fails in macOS® for microprocessors in the STM32MP1 Series.

3.5 STM32CubeProgrammer v2.3.0 release information

3.5.1 New features

- Added the support of the STM32L4Pxxx and STM32L4Qxxx microcontrollers
- Added the support of the STM32H7Axxx and STM32H7Bxxx microcontrollers
- Added the beta support of the STM32WL Series microcontrollers
- Added the official support of the STM32L5 Series microcontrollers
- Added the support of HSM V1 SFI/SFIx for STM32H7Axxx microcontrollers
- Added the support of HSM V1 SFI/SFIx for STM32L5 Series microcontrollers

3.5.2 Fixed issues

Table 9. Main issues fixed in STM32CubeProgrammer v2.3.0

ID	Summary
63887	STM32CubeProgrammer does not program Option Byte from an `.hex` file for STM32F446xx.
64229	STM32Cubeprogrammer does not erase sector 128 and upper on STM32L476RG.
66609	STM32CubeProgrammer programming request of OTP byte via STM32CubeProgrammer.
67025	STM32Cubeprogrammer cannot connect ST-LINK without the mass storage feature.
77015	Support Flash Loader for STM32F769-EVAL:MT25QL512.

3.5.3 Known problems and limitations

- For the STM32L5 Series, the connection via the ST-LINK protocol is allowed only when mode is set to *hotplug* with `TZEN=1`.
- For the STM32L5 Series, the Option Byte programming GUI is not intuitive enough. Refer to the *STM32L552xx and STM32L562xx advanced Arm®-based 32-bit MCUs* reference manual (RM0438) for permitted accesses.
- For STM32L4Pxxx and STM32L4Qxxx devices, Option Byte programming via bootloader interfaces presents some limitations.
- For STM32H7Axxx and STM32H7Bxxx devices, Option Byte programming via bootloader interfaces (USB) presents some limitations.
- STM32L5 series programming presents limitation in macOS® when `TZEN=1` and `RDP=0x55`.
- With some small-screen resolutions, the graphical interface of STM32CubeProgrammer presents anomalies such as inaccessible buttons.
- Display issues depending on the monitor used can occur with Linux®.

3.6 STM32CubeProgrammer v2.2.1 release information

3.6.1 New features

No new feature is reported for this release. Minor release v2.2.1 is dedicated to issue correction (refer to Fixed issues).

3.6.2 Fixed issues

Table 10. Main issue fixed in STM32CubeProgrammer v2.2.1

ID	Summary
74031	STM32CubeProgrammer issue programming STM32H7 Rev V via DFU.

3.6.3 Known problems and limitations

- For the STM32L5 Series, the connection via the ST-LINK protocol is allowed only when mode is set to *hotplug*.
- For the STM32L5 Series, the Option Byte programming GUI is not intuitive enough. Refer to the *STM32L552xx and STM32L562xx advanced Arm®-based 32-bit MCUs* reference manual (RM0438) for permitted accesses.
- For the STM32L5 Series, Option Byte programming via bootloader interfaces presents some limitations.
- STM32CubeProgrammer does not work under Ubuntu® 18.04.
- With some small-screen resolutions, the graphical interface of STM32CubeProgrammer presents anomalies such as inaccessible buttons.
- Display issues depending on the monitor used can occur with Linux®.

3.7 STM32CubeProgrammer v2.2.0 release information

3.7.1 New features

- Added the support of the STM32L5 Series
- Added the support of HSMv2
- Added the support of IAP for the USB-DFU interface
- STM32WB firmware upgrade via the ST-LINK interface
- Added the support of OTP for the STM32L5 Series

- Added the support of SSP for the STM32MP1 Series

3.7.2 Fixed issues

Table 11. Main issues fixed in STM32CubeProgrammer v2.2.0

ID	Summary
58587	STM32CubeProgrammer does not support STM32L433RC-P and STM32L433RB.
61375	STM32L073 - How to erase the Data EEPROM?
61731	CLI Device not supported but programmed. RDP not programmed.
68802	USB DFU for STM32L452 and STM32L476 device IDs is unknown while connecting with the USB.
68916	STM32CubeProgrammer does not recognize STM32F413 USB DFU.
69927	IAP DFU is not working with STM32CubeProgrammer: `Error Unknown` or unsupported device (`DevID = 0x0000`).
71074	STM32CubeProgrammer v2.1.0 defect - DFU mode sector erase fails on STM32H743 2MB Rev V.

3.7.3 Known problems and limitations

- For the STM32L5 Series, the connection via the ST-LINK protocol is allowed only when mode is set to *hotplug*.
- For the STM32L5 Series, the Option Byte programming GUI is not intuitive enough. Refer to the *STM32L552xx and STM32L562xx advanced Arm®-based 32-bit MCUs* reference manual (RM0438) for permitted accesses.
- For the STM32L5 Series, Option Byte programming via bootloader interfaces presents some limitations.
- STM32CubeProgrammer does not work under Ubuntu® 18.04.
- With some small-screen resolutions, the graphical interface of STM32CubeProgrammer presents anomalies such as inaccessible buttons.

3.8 STM32CubeProgrammer v2.1.0 release information

3.8.1 New features

- Added support of STM32G4 Series
- Added support of STM32G03x/STM32G04x microcontrollers
- Added support of dual-core microcontrollers in the STM32H7 Series
- Added support of secure firmware install (SFI)

3.8.2 Fixed issues

Table 12. Main issues fixed in STM32CubeProgrammer v2.1.0

ID	Summary
62057	Download file is always executed after simple download with ST-LINK/V2 and STLINK-V3.
64155	Impossible to erase sector 128 and upper on STM32L476RG with STM32CubeProgrammer.

3.8.3 Known problems and limitations

- 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.
- UART flashing of devices in the STM32MP1 Series may fail with big partitions.
- Programming issues are observed with the STM32H7 Series when the STLINK-V3 I^2C interface is used.
- GUI issues are sometines observed with the OTA programming of devices in the STM32WB Series.
- Linux® 32 bits is not supported.
- STM32 Trusted Package Creator: only the CLI version is supported on macOS®.
- Mass Erase is not working with the SPI bootloader interface on the STM32WB Series.
- Mass Erase is not working with the I^2C bootloader interface on the STM32G4 Series; errors can occur when writing via the SPI interface.
- Shared mode: board detection failure is observed after multiple refresh operations.
- Writing 8-bit data in RAM on STM32L496G devices is not possible.

3.9 STM32CubeProgrammer v2.0.0 release information

3.9.1 New features

- Added support of STM32MP1 Series
- Added support of STM32WB Series
- Added support of *Automatic Mode* for programming devices in a loop
- Added support of OTA programming for the STM32WB Series

3.9.2 Fixed issues

Table 13. Main issues fixed in STM32CubeProgrammer v2.0.0

ID	Summary
58879	Internal Flash programming issue with STM32L433RC (SMPS version) and STM32L433RB.
60257	*stlinkv3.rules* is missing in the *drivers\rules* folder.

3.9.3 Known problems and limitations

- 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.
- UART flashing of devices in the STM32MP1 Series may fail with big partitions.
- Programming issues are observed with the STM32H7 Series when the STLINK-V3 I^2C interface is used.
- GUI issues are sometines observed with STM32WB Series OTA programming.
- Linux® 32 bits is not covered.
- STM32 Trusted Package Creator: only the CLI version is supported on macOS®.

3.10 STM32CubeProgrammer v1.4.0 release information

3.10.1 New features

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

3.10.2 Fixed issues

Table 14. 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.

3.10.3 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.

3.11 STM32CubeProgrammer v1.3.0 release information

3.11.1 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

3.11.2 Fixed issues

Table 15. 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".

3.11.3 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.

3.12 STM32CubeProgrammer v1.2.1 release information

3.12.1 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

3.12.2 Fixed issues

Table 16. 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

3.12.3 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.

3.13 STM32CubeProgrammer v1.2.0 release information

3.13.1 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

3.13.2 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.

3.14 STM32CubeProgrammer v1.1.0 release information

3.14.1 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

3.14.2 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.

3.15 STM32CubeProgrammer v1.0.0 release information

3.15.1 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

3.15.2 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 17. **Document revision history**

Date	Revision	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.
25-Feb-2019	8	Added information related to STM32CubeProg 2.0.0.
23-Apr-2019	9	Added information related to STM32CubeProg 2.1.0.
11-Oct-2019	10	Added information related to STM32CubeProg 2.2.0.
8-Nov-2019	11	Added information related to STM32CubeProg 2.2.1.
20-Dec-2019	12	Added information related to STM32CubeProg 2.3.0.
24-Feb-2020	13	Added information related to STM32CubeProg 2.4.0.
24-Jul-2020	14	Added information related to STM32CubeProg 2.5.0.
18-Nov-2020	15	Added information related to STM32CubeProg 2.6.0. Updated *Software requirements*.
12-Mar-2021	16	Added information related to STM32CubeProg 2.7.0.
22-Jul-2021	17	Added information related to STM32CubeProg 2.8.0.

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