Introduction

This release note is updated periodically to keep abreast of STM32CubeMX evolution, problems and limitations. Check STMicroelectronics support website at www.st.com/stm32cube for the latest version. Refer to *Table 1* for the latest release summary.

Table 1. STM32CubeMX 5.1.0 release summary

Type	Summary
Major release	– Added the support of the STM32WB Series with first examples in MX format available in the *STM32Cube_FW_WB_1.0.0* STM32CubeWB MCU Package – Added the support of the first MPUs: STM32MP1 Series – Performance enhancements for improved user experience – User interface updates – Graphics updates

Customer support

For more information or help concerning STM32CubeMX, contact the STMicroelectronics nearest 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 www.st.com/stm32cube webpage.

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1 General information

STM32CubeMX supports the STM32 Arm$^{®(a)}$-based microcontrollers.

1.1 Overview

STM32CubeMX is a tool provided to help designers to:

- Find an STM32 microcontroller most suitable for their application, by shortlisting products based on the user selection of peripherals.
- Configure the microcontroller I/Os, clock, peripherals, DMA, interrupts, middleware and generate the corresponding initialization code.
- Evaluate the power consumption.

Note: *Please check the latest version of the Errata Sheet for the STM32 microcontroller device(s) in use or planned to be used. These product limitations may not yet be implemented in the current version of STM32CubeMX. The Errata Sheets are available on www.st.com.*

1.2 Host PC system requirements

Supported toolchains

STM32CubeMX generates project files for the following toolchains:

- IAR Embedded Workbench$^®$ for Arm$^®$ (EWARM) by IAR systems$^®$
- Microcontroller Development kit for Arm$^®$ by Keil$^®$: MDK-ARM$^{™}$ V4 or V5 (minimum required version V4.73)
- TrueSTUDIO$^®$ by Atollic$^®$
- System Workbench for STM32 (SW4STM32) by AC6

Supported operating systems and architectures

- Windows$^®$ 7: 32-bit (x86), 64-bit (x64)
- Windows$^®$ 8: 32-bit (x86), 64-bit (x64)
- Windows$^®$ 10: 32-bit (x86), 64-bit (x64)
- Linux$^®$ (tested on Red Hat$^{®(b)}$, Fedora$^{®(c)}$ and Ubuntu$^{®(d)}$, 32 and 64 bits)
- macOS$^®$ (minimum version OS X$^®$ Yosemite)$^{(e)}$

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b. Red Hat is a registered trademark of Red Hat, Inc.

c. Fedora$^®$ is a trademark of Red Hat, Inc.

d. Ubuntu is a registered trademark of Canonical Ltd.

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

Software requirements

The Java Run Time Environment 1.7 (version 1.7_45 or newer) or 1.8 must be installed. Limited validation is done with Java™ 11. Java™ 9 and Java™ 10 are not supported.

After Oracle®(a) announcement related to "End of Public Updates for Oracle JDK 8", access to OpenJDK is possible via https://adoptopenjdk.net/.

More information on installation requirements and procedure is in the *STM32CubeMX for STM32 configuration and initialization C code generation* user manual (UM1718).

For Eclipse™ plug-in installation only, install one of the following IDEs (on Windows® OS):

- Eclipse™ IDE Juno (4.2)
- Eclipse™ IDE Luna (4.4)
- Eclipse™ IDE Kepler (4.3)
- Eclipse™ IDE Mars (4.5)

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

1.3 License

STM32CubeMX is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* software license agreement (SLA0048).

Table 2 summarizes the software components used in the development of STM32CubeMX, and their licenses.

Table 2. List of software component licenses

Name	Version	License type	Details[1]
log4j	1.2.17	Apache license, version 2.0	https://mvnrepository.com/
org.apache.httpcomponents	4.3.6		
commons-lang3	3.1		
org.apache.poi	3.17		
org.apache.commons.io	2.4		
com.github.markusbernhardt	1.0.3		
commons-net	3.2		
org.xerial	3.20.0		
com.fasterxml.jackson.core	2.9.4		
joda-time	2.9.9		
org.apache.ant	1.9.4		
org.swinglabs	1.6.1	GNU Lesser General Public License	
jfree	1.0.13		
org.scream3r	2.8.0	GNU Lesser General Public License 3.0	
com.lowagie	2.1.7	Mozilla public license	
org.jdom	1.1.3	jdom license	
org.json	20140107	json license	
org.freemarker	2.3.13	BSD style license	
com.vdurmont	2.0.2	The MIT license	
org.b1.pack	9.22.0	Public domain	

1. Search for the proper version of the component in the MVN repository.

2 What is new in STM32CubeMX V5.1.0?

- Added the support of the STM32WB Series with first examples in MX format available in the *STM32Cube_FW_WB_1.0.0* STM32CubeWB MCU Package
- Added the support of the STM32WB boards based on the STM32WB55xx devices.
- Added the support of the PCC Bluetooth® Low Energy feature for the STM32WB Series.
- Renamed USB middleware to *USB_Device* for the STM32WB Series only.
- Added the support of the STM32MP1 Series: STM32MP151xx, STM32MP153xx, and STM32MP157xx.
- Added the support of some STM32MP157 boards: STM32MP157A-EV1, STM32MP157C-EV1, and STM32MP157C-DK2.
- Added the support of the PCC feature for the STM32MP1 Series, and Tj versus Ta calculation.
- Added the support of the DDR Test Suite Tool for the STM32MP1 Series.
- Performance enhancements for improved user experience.
- User interface updates, especially regarding fonts, breadcrumb, progress bars, and hourglass.
- Added the support of USBPD middleware for the STM32G0 Series.
- Added the support of new middleware versions for the STM32F4 Series and STM32F7 Series.
- Added the support of a new board for the STM32H750 Value line: STM32H750B-DK Discovery kit.
- Graphics updates: TrueSTUDIO® is supported by TouchGFX Designer.
- New EXTI driver is included when available in the MCU Package.

2.1 Known limitations

When selecting microprocessors in the STM32MP1 Series:
- DMA configurations are not generated in the device tree.
- The *PDF report* feature is not updated for all features linked to the STM32MP1 Series such as runtime contexts, device tree, and DDR Tool.
- Import from and to MPU projects does not work properly.
- Additional software is not supported.
- Only the SW4STM32 toolchain is supported as IDE.
- OpenAMP middleware: in *Project Manager*, flags *Generate Under Root* and *Copy only the necessary library files* must be set to be able to build an OpenAMP project under SW4STM32 IDE.
- OpenAMP middleware and *Resource Manager* utility do not work properly when FreeRTOS® is activated.

When selecting microprocessors in the STM32WB Series:
- THREAD is not supported in Power Consumption Calculator (PCC) for the STM32WB Series.

When using TouchGFX graphics:

- TouchGFXDesigner code generation does not work when the STM32CubeMX project path contains a space. Make sure that the project path does not contain any space. Project path can be eventually changed using "File -> Save Project As".

- TouchGFXDesigner code generation does not work on Linux® and macOS® operating systems. TouchGFXDesigner supports only the Windows® operating system.

- The "Under Root" feature does not work properly with TouchGFX Designer
    - Impact on projects using SW4STM32 and TrueStudio IDEs
    - Errors are generated during the build step because of extra files added to the project
    - Option "Under Root" can be deactivated in the "Project Manager" panel to solve this issue or make sure that the extra files are excluded from the build in the IDE.

- When selecting "Generate peripheral initialization as a pair of .c/.h files per peripheral", two files are considered as the same file by the IDE: *gpio.c,* which is generated by STM32CubeMX, and *GPIO.cpp*, which is generated by TouchGFXDesigner. This option can be deactivated from the "Project Manager" panel. Otherwise, one of the files can be renamed by the user.

Some chapters in the *STM32CubeMX for STM32 configuration and initialization C code generation* user manual (UM1718 Rev 27) are not fully up to date.

STM32CubeMX Eclipse™ plugin is supported only with Windows® and Linux®. It is not supported with macOS® for this release.

2.2 Fixed issues

Table 3. Main fixed issues in V5.1.0

ID	Summary
46874	[MX-Clock] include frac formulas in frequency calculation when PLL frac is enabled.
51206	[MX-TIM] Break filter to be removed for TIM15, 16 and 17.
53264	[MX-Pinout][STM32H750IBKx] G10 must be VSS and not VDD.
55690	[MX-Board] Wrong configuration of special PHY reg for STM32F746 Discovery.
56760	RCC for LTDC clock of STM32L4R9.
56828	[MX-ETH]PHY DP83848 should support also RMII mode.
56999	FreeRTOS™ initialization sequence.
57348	[MX-LWIP] Exception generated due to undefined parameter in the ftl.
57520	[MX-SPI] Missing *Alternate Function Open Drain* in SPI configuration mode.
58043	[MX-TouchSensing] Missing user label in function `MyTKeys_ErrorStateProcess()`.

2.3 Firmware package versions

Table 4 shows the firmware package versions.

Table 4. Firmware package versions in V5.1.0

STM32Cube firmware and updated middleware	Version
STM32F0	V1.9.0
STM32F1	V1.7.0
STM32F2	V1.7.0
STM32F3	V1.10.0
STM32F4	V1.24.0
STM32F7	V1.15.0
STM32G0	V1.1.0
STM32H7	V1.3.2
STM32L0	V1.11.1
STM32L1	V1.8.1
STM32L4	V1.13.0
STM32MP1	V1.0.0
STM32WB	V1.0.0

3   Release information

3.1   Microcontrollers supported by this release

- STM32F030C(6-8-C)Tx, STM32F030F4Px, STM32F030K6Tx, STM32F030R(8-C)Tx
- STM32F031C(4-6)Tx, STM32F031E6Yx, STM32F031F(4-6)Px, STM32F031G(4-6)Ux, STM32F031K6Tx, STM32F031K(4-6)Ux
- STM32F038C6Tx, STM32F038E6Yx, STM32F038F6Px, STM32F038G6Ux, STM32F038K6Ux
- STM32F042C(4-6)Tx, STM32F042C(4-6)Ux, STM32F042F(4-6)Px, STM32F042G(4-6)Ux, STM32F042K(4-6)Tx, STM32F042K(4-6)Ux, STM32F042T6Yx
- STM32F048C6Ux, STM32F048G6Ux, STM32F048T6Yx
- STM32F051C(4-6-8)Tx, STM32F051C(4-6-8)Ux, STM32F051K(4-6-8)Tx, STM32F051K(4-6-8)Ux, STM32F051R8Hx, STM32F051R(4-6-8)Tx, STM32F051T8Yx
- STM32F058C8Ux, STM32F058R8Hx, STM32F058R8Tx, STM32F058T8Yx
- STM32F070C(6-B)Tx, STM32F070F6Px, STM32F070RBTx
- STM32F071C(8-B)Tx, STM32F071C(8-B)Ux, STM32F071CBYx, STM32F071RBTx, STM32F071V(8-B)Hx, STM32F071V(8-B)Tx
- STM32F072C(8-B)Tx, STM32F072C(8-B)Ux, STM32F072CBYx, STM32F072RBHx, STM32F072R(8-B)Tx, STM32F072V(8-B)Hx, STM32F072V(8-B)Tx
- STM32F078CBTx, STM32F078CBUx, STM32F078CBYx, STM32F078RBHx, STM32F078RBTx, STM32F078VBHx, STM32F078VBTx
- STM32F091C(B-C)Tx, STM32F091C(B-C)Ux, STM32F091RCHx, STM32F091R(B-C)Tx, STM32F091RCYx, STM32F091VCHx, STM32F091V(B-C)Tx
- STM32F098CCTx, STM32F098CCUx, STM32F098RCHx, STM32F098RCTx, STM32F098RCYx, STM32F098VCHx, STM32F098VCTx
- STM32F100C(4-6-8-B)Tx, STM32F100R(4-6-8-B)Hx, STM32F100R(4-6-8-B-C-D-E)Tx, STM32F100V(8-B-C-D-E)Tx, STM32F100Z(C-D-E)Tx
- STM32F101C(4-6-8-B)Tx, STM32F101C(8-B)Ux, STM32F101RBHx, STM32F101R(4-6-8-B-C-D-E-F-G)Tx, STM32F101T(4-6-8-B)Ux, STM32F101V(8-B-C-D-E-F-G)Tx, STM32F101Z(C-D-E-F-G)Tx
- STM32F102C(4-6-8-B)Tx, STM32F102R(4-6-8-B)Tx
- STM32F103C(4-6-8-B)Tx, STM32F103C(6-B)Ux, STM32F103R(4-6-8-B)Hx, STM32F103R(4-6-8-B-C-D-E-F-G)Tx, STM32F103R(C-D-E)Yx, STM32F103T(4-6-8-B)Ux, STM32F103V(8-B-C-D-E)Hx, STM32F103VBIx, STM32F103V(8-B-C-D-E-F-G)Tx, STM32F103Z(C-D-E-F-G)Hx, STM32F103Z(C-D-E-F-G)Tx
- STM32F105R(8-B-C)Tx, STM32F105V(8-B)Hx, STM32F105V(8-B-C)Tx
- STM32F107R(B-C)Tx, STM32F107VCHx, STM32F107V(B-C)Tx
- STM32F205RGEx, STM32F205R(B-C-E-F-G)Tx, STM32F205R(E-G)Yx, STM32F205V(B-C-E-F-G)Tx, STM32F205Z(C-E-F-G)Tx
- STM32F207I(C-E-F-G)Hx, STM32F207I(C-E-F-G)Tx, STM32F207V(C-E-F-G)Tx, STM32F207Z(C-E-F-G)Tx
- STM32F215R(E-G)Tx, STM32F215V(E-G)Tx, STM32F215Z(E-G)Tx

- STM32F217I(E-G)Hx, STM32F217I(E-G)Tx, STM32F217V(E-G)Tx, STM32F217Z(E-G)Tx
- STM32F301C(6-8)Tx, STM32F301C8Yx, STM32F301K(6-8)Tx, STM32F301K(6-8)Ux, STM32F301R(6-8)Tx
- STM32F302C(6-8-B-C)Tx, STM32F302C8Yx, STM32F302K(6-8)Ux, STM32F302R(6-8-B-C-D-E)Tx, STM32F302V(D-E)Hx, STM32F302V(B-C-D-E)Tx, STM32F302VCYx, STM32F302Z(D-E)Tx
- STM32F303C(6-8-B-C)Tx, STM32F303C8Yx, STM32F303K(6-8)Tx, STM32F303R(6-8-B-C-D-E)Tx, STM32F303V(D-E)Hx, STM32F303V(B-C-D-E)Tx, STM32F303V(C-E)Yx, STM32F303Z(D-E)Tx
- STM32F318C8Tx, STM32F318C8Yx, STM32F318K8Ux
- STM32F328C8Tx
- STM32F334C(4-6-8)Tx, STM32F334C8Yx, STM32F334K(4-6-8)Tx, STM32F334K(4-6-8)Ux, STM32F334R(6-8)Tx
- STM32F358CCTx, STM32F358RCTx, STM32F358VCTx
- STM32F373C(8-B-C)Tx, STM32F373R(8-B-C)Tx, STM32F373V(8-B-C)Hx, STM32F373V(8-B-C)Tx
- STM32F378CCTx, STM32F378RCTx, STM32F378RCYx, STM32F378VCHx, STM32F378VCTx
- STM32F398VETx
- STM32F401CCFx, STM32F401C(B-C-D-E)Ux, STM32F401C(C-D-E)Yx, STM32F401R(B-C-D-E)Tx, STM32F401V(B-C-D-E)Hx, STM32F401V(B-C-D-E)Tx
- STM32F405O(E-G)Yx, STM32F405RGTx, STM32F405VGTx, STM32F405ZGTx
- STM32F407I(E-G)Hx, STM32F407I(E-G)Tx, STM32F407V(E-G)Tx, STM32F407Z(E-G)Tx
- STM32F410CBTx, STM32F410C(8-B)Ux, STM32F410RBIx, STM32F410R(8-B)Tx, STM32F410T(8-B)Yx
- STM32F411C(C-E)Ux, STM32F411C(C-E)Yx, STM32F411R(C-E)Tx, STM32F411VEHx, STM32F411V(C-E)Tx
- STM32F412C(E-G)Ux, STM32F412R(E-G)Tx, STM32F412R(E-G)Yx, STM32F412RGYxP, STM32F412V(E-G)Hx, STM32F412V(E-G)Tx, STM32F412Z(E-G)Jx, STM32F412Z(E-G)Tx
- STM32F413C(G-H)Ux, STM32F413M(G-H)Yx, STM32F413R(G-H)Tx, STM32F413V(G-H)Hx, STM32F413V(G-H)Tx, STM32F413Z(G-H)Jx, STM32F413Z(G-H)Tx
- STM32F415OGYx, STM32F415RGTx, STM32F415VGTx, STM32F415ZGTx
- STM32F417I(E-G)Hx, STM32F417I(E-G)Tx, STM32F417V(E-G)Tx, STM32F417Z(E-G)Tx
- STM32F423CHUx, STM32F423MHYx, STM32F423RHTx, STM32F423VHHx, STM32F423VHTx, STM32F423ZHJx, STM32F423ZHTx
- STM32F427A(G-I)Hx, STM32F427I(G-I)Hx, STM32F427I(G-I)Tx, STM32F427V(G-I)Tx, STM32F427Z(G-I)Tx
- STM32F429A(G-I)Hx, STM32F429B(E-G-I)Tx, STM32F429I(E-G-I)Hx, STM32F429I(E-G-I)Tx, STM32F429N(E-G-I)Hx, STM32F429V(E-G-I)Tx, STM32F429Z(E-G-I)Tx, STM32F429Z(G-I)Yx

- STM32F437AIHx, STM32F437I(G-I)Hx, STM32F437I(G-I)Tx, STM32F437V(G-I)Tx, STM32F437Z(G-I)Tx

- STM32F439AIHx, STM32F439B(G-I)Tx, STM32F439I(G-I)Hx, STM32F439I(G-I)Tx, STM32F439N(G-I)Hx, STM32F439V(G-I)Tx, STM32F439Z(G-I)Tx, STM32F439Z(G-I)Yx

- STM32F446M(C-E)Yx, STM32F446R(C-E)Tx, STM32F446V(C-E)Tx, STM32F446Z(C-E)Hx, STM32F446Z(C-E)Jx, STM32F446Z(C-E)Tx

- STM32F469A(E-G-I)Hx, STM32F469A(G-I)Yx, STM32F469B(E-G-I)Tx, STM32F469I(E-G-I)Hx, STM32F469I(G-I)Tx, STM32F469N(E-G-I)Hx, STM32F469V(E-G-I)Tx, STM32F469Z(E-G-I)Tx

- STM32F479A(G-I)Hx, STM32F479AIYx, STM32F479B(G-I)Tx, STM32F479IGHx, STM32F479IITx, STM32F479N(G-I)Hx, STM32F479V(G-I)Tx, STM32F479Z(G-I)Tx

- STM32F722I(C-E)Kx, STM32F722I(C-E)Tx, STM32F722R(C-E)Tx, STM32F722V(C-E)Tx, STM32F722Z(C-E)Tx

- STM32F723I(C-E)Kx, STM32F723I(C-E)Tx, STM32F723VEYx, STM32F723Z(C-E)Ix, STM32F723Z(C-E)Tx

- STM32F730I8Kx, STM32F730R8Tx, STM32F730V8Tx, STM32F730Z8Tx

- STM32F732IEKx, STM32F732IETx, STM32F732RETx, STM32F732VETx, STM32F732ZETx

- STM32F733IEKx, STM32F733IETx, STM32F733VEYx, STM32F733ZEIx, STM32F733ZETx

- STM32F745I(E-G)Kx, STM32F745I(E-G)Tx, STM32F745V(E-G)Hx, STM32F745V(E-G)Tx, STM32F745Z(E-G)Tx

- STM32F746B(E-G)Tx, STM32F746I(E-G)Kx, STM32F746I(E-G)Tx, STM32F746N(E-G)Hx, STM32F746V(E-G)Hx, STM32F746V(E-G)Tx, STM32F746Z(E-G)Tx, STM32F746Z(E-G)Yx

- STM32F750N8Hx, STM32F750V8Tx, STM32F750Z8Tx

- STM32F756BGTx, STM32F756IGKx, STM32F756IGTx, STM32F756NGHx, STM32F756VGHx, STM32F756VGTx, STM32F756ZGTx, STM32F756ZGYx

- STM32F765B(G-I)Tx, STM32F765I(G-I)Kx, STM32F765I(G-I)Tx, STM32F765N(G-I)Hx, STM32F765V(G-I)Hx, STM32F765V(G-I)Tx, STM32F765Z(G-I)Tx

- STM32F767B(G-I)Tx, STM32F767I(G-I)Kx, STM32F767I(G-I)Tx, STM32F767N(G-I)Hx, STM32F767V(G-I)Hx, STM32F767V(G-I)Tx, STM32F767Z(G-I)Tx

- STM32F769AIYx, STM32F769B(G-I)Tx, STM32F769I(G-I)Tx, STM32F769N(G-I)Hx

- STM32F777BITx, STM32F777IIKx, STM32F777IITx, STM32F777NIHx, STM32F777VIHx, STM32F777VITx, STM32F777ZITx

- STM32F778AIYx

- STM32F779AIYx, STM32F779BITx, STM32F779IITx, STM32F779NIHx

- STM32G070CBTx, STM32G070KBTx, STM32G070RBTx

- STM32G071C(6-8-B)Tx, STM32G071C(6-8-B)Ux, STM32G071EBYx, STM32G071G(6-8-B)Ux, STM32G071G(8-B)UxN, STM32G071K(6-8-B)Tx, STM32G071K(8-B)TxN, STM32G071K(6-8-B)Ux, STM32G071K(8-B)UxN, STM32G071RBIx, STM32G071R(6-8-B)Tx

- STM32G081CBTx, STM32G081CBUx, STM32G081EBYx, STM32G081GBUx, STM32G081GBUxN, STM32G081KBTx, STM32G081KBTxN, STM32G081KBUx, STM32G081KBUxN, STM32G081RBIx, STM32G081RBTx

- STM32H743A(G-I)Ix, STM32H743BITx, STM32H743IIKx, STM32H743IITx, STM32H743VIHx, STM32H743VITx, STM32H743XIHx, STM32H743ZITx

- STM32H750IBKx, STM32H750VBTx, STM32H750XBHx

- STM32H753A(G-I)Ix, STM32H753BITx, STM32H753IIKx, STM32H753IITx, STM32H753V(G-I)Hx, STM32H753VITx, STM32H753XIHx, STM32H753ZITx

- STM32L010C6Tx, STM32L010F4Px, STM32L010K(4-8)Tx, STM32L010R(8-B)Tx

- STM32L011D(3-4)Px, STM32L011E(3-4)Yx, STM32L011F(3-4)Px, STM32L011F(3-4)Ux, STM32L011G(3-4)Ux, STM32L011K4Tx, STM32L011K(3-4)Ux

- STM32L021D4Px, STM32L021F4Ux, STM32L021G4Ux, STM32L021K4Tx

- STM32L031C(4-6)Tx, STM32L031C6Ux, STM32L031E(4-6)Yx, STM32L031F(4-6)Px, STM32L031G(4-6)Ux, STM32L031G6UxS, STM32L031K6Tx, STM32L031K(4-6)Ux

- STM32L041C6Tx, STM32L041E6Yx, STM32L041F6Px, STM32L041G6Ux, STM32L041G6UxS, STM32L041K6Tx, STM32L041K6Ux

- STM32L051C(6-8)Tx, STM32L051K(6-8)Tx, STM32L051K(6-8)Ux, STM32L051R(6-8)Hx, STM32L051R(6-8)Tx, STM32L051T(6-8)Yx

- STM32L052C(6-8)Tx, STM32L052K(6-8)Tx, STM32L052K(6-8)Ux, STM32L052R(6-8)Hx, STM32L052R(6-8)Tx, STM32L052T8Fx, STM32L052T(6-8)Yx

- STM32L053C(6-8)Tx, STM32L053R(6-8)Hx, STM32L053R(6-8)Tx

- STM32L062K8Tx, STM32L062K8Ux

- STM32L063C8Tx, STM32L063R8Tx

- STM32L071C(8-B-Z)Tx, STM32L071CZYx, STM32L071K(B-Z)Tx, STM32L071K(8-B-Z)Ux, STM32L071R(B-Z)Hx, STM32L071R(B-Z)Tx, STM32L071V(8-B-Z)Tx

- STM32L072CZEx, STM32L072C(B-Z)Tx, STM32L072C(B-Z)Yx, STM32L072KZTx, STM32L072K(B-Z)Ux, STM32L072RBHx, STM32L072R(B-Z)Ix, STM32L072R(B-Z)Tx, STM32L072V(8-Z)Ix, STM32L072V(8-B-Z)Tx

- STM32L073C(B-Z)Tx, STM32L073R(B-Z)Hx, STM32L073RZIx, STM32L073R(B-Z)Tx, STM32L073VZIx, STM32L073V(8-B-Z)Tx

- STM32L081C(B-Z)Tx, STM32L081KZTx, STM32L081KZUx

- STM32L082CZYx, STM32L082KZTx, STM32L082KZUx

- STM32L083C(B-Z)Tx, STM32L083R(B-Z)Hx, STM32L083RZTx, STM32L083VZIx, STM32L083V(8-B-Z)Tx

- STM32L100C6Ux, STM32L100C6UxA, STM32L100R(8-B-C)Tx, STM32L100R(8-B)TxA

- STM32L151C(6-8-B-C)Tx, STM32L151C(6-8-B)TxA, STM32L151C(6-8-B-C)Ux, STM32L151C(6-8-B)UxA, STM32L151Q(C-D-E)Hx, STM32L151R(6-8-B)Hx, STM32L151R(6-8-B)HxA, STM32L151R(6-8-B-C-D-E)Tx, STM32L151R(6-8-B-C)TxA, STM32L151R(C-D)Yx, STM32L151UCYx, STM32L151V(8-B-C)Hx, STM32L151V(8-B)HxA, STM32L151V(8-B-C-D-E)Tx, STM32L151V(8-B-C)TxA, STM32L151VDTxX, STM32L151VEYx, STM32L151VDYxX, STM32L151Z(C-D-E)Tx

- STM32L152C(6-8-B-C)Tx, STM32L152C(6-8-B)TxA, STM32L152C(6-8-B-C)Ux, STM32L152C(6-8-B)UxA, STM32L152Q(C-D-E)Hx, STM32L152R(6-8-B)Hx, STM32L152R(6-8-B)HxA, STM32L152R(6-8-B-C-D-E)Tx, STM32L152R(6-8-B-C)TxA, STM32L152RDYx, STM32L152UCYx, STM32L152V(8-B-C)Hx, STM32L152V(8-B)HxA, STM32L152V(8-B-C-D-E)Tx, STM32L152V(8-B-C)TxA, STM32L152VDTxX, STM32L152VEYx, STM32L152Z(C-D-E)Tx

- STM32L162QDHx, STM32L162R(C-D-E)Tx, STM32L162RCTxA, STM32L162RDYx, STM32L162VCHx, STM32L162V(C-D-E)Tx, STM32L162VCTxA, STM32L162VEYx, STM32L162Z(D-E)Tx

- STM32L412C(8-B)Tx, STM32L412CBTxP, STM32L412C(8-B)Ux, STM32L412CBUxP, STM32L412K(8-B)Tx, STM32L412K(8-B)Ux, STM32L412R(8-B)Ix, STM32L412RBIxP, STM32L412R(8-B)Tx, STM32L412RBTxP, STM32L412T(8-B)Yx, STM32L412TBYxP

- STM32L422CBTx, STM32L422CBUx, STM32L422KBTx, STM32L422KBUx, STM32L422RBIx, STM32L422RBTx, STM32L422TBYx

- STM32L431C(B-C)Tx, STM32L431C(B-C)Ux, STM32L431C(B-C)Yx, STM32L431K(B-C)Ux, STM32L431R(B-C)Ix, STM32L431R(B-C)Tx, STM32L431R(B-C)Yx, STM32L431VCIx, STM32L431VCTx

- STM32L432K(B-C)Ux

- STM32L433C(B-C)Tx, STM32L433C(B-C)Ux, STM32L433C(B-C)Yx, STM32L433R(B-C)Ix, STM32L433R(B-C)Tx, STM32L433RCTxP, STM32L433R(B-C)Yx, STM32L433VCIx, STM32L433VCTx

- STM32L442KCUx

- STM32L443CCTx, STM32L443CCUx, STM32L443CCYx, STM32L443RCIx, STM32L443RCTx, STM32L443RCYx, STM32L443VCIx, STM32L443VCTx

- STM32L451C(C-E)Ux, STM32L451R(C-E)Ix, STM32L451R(C-E)Tx, STM32L451REYx, STM32L451V(C-E)Ix, STM32L451V(C-E)Tx

- STM32L452C(C-E)Ux, STM32L452R(C-E)Ix, STM32L452R(C-E)Tx, STM32L452RETxP, STM32L452REYx, STM32L452V(C-E)Ix, STM32L452V(C-E)Tx

- STM32L462CEUx, STM32L462REIx, STM32L462RETx, STM32L462REYx, STM32L462VEIx, STM32L462VETx

- STM32L471Q(E-G)Ix, STM32L471R(E-G)Tx, STM32L471V(E-G)Tx, STM32L471Z(E-G)Tx

- STM32L475R(C-E-G)Tx, STM32L475V(C-E-G)Tx

- STM32L476J(E-G)Yx, STM32L476JGYxP, STM32L476M(E-G)Yx, STM32L476Q(E-G)Ix, STM32L476R(C-E-G)Tx, STM32L476V(C-E-G)Tx, STM32L476Z(E-G)Tx, STM32L476ZGTxP

- STM32L486JGYx, STM32L486QGIx, STM32L486RGTx, STM32L486VGTx, STM32L486ZGTx

- STM32L496A(E-G)Ix, STM32L496AGIxP, STM32L496Q(E-G)Ix, STM32L496R(E-G)Tx, STM32L496RGTxP, STM32L496V(E-G)Tx, STM32L496VGYx, STM32L496VGYxP, STM32L496Z(E-G)Tx, STM32L496ZGTxP

- STM32L4A6AGIx, STM32L4A6QGIx, STM32L4A6RGTx, STM32L4A6VGTx, STM32L4A6VGYx, STM32L4A6ZGTx

- STM32L4R5A(G-I)Ix, STM32L4R5Q(G-I)Ix, STM32L4R5V(G-I)Tx, STM32L4R5Z(G-I)Tx, STM32L4R5ZITxP, STM32L4R5Z(G-I)Yx

- STM32L4R7AIIx, STM32L4R7VITx, STM32L4R7ZITx

- STM32L4R9A(G-I)Ix, STM32L4R9V(G-I)Tx, STM32L4R9Z(G-I)Jx, STM32L4R9Z(G-I)Tx, STM32L4R9Z(G-I)Yx

- STM32L4S5AIIx, STM32L4S5QIIx, STM32L4S5VITx, STM32L4S5ZITx, STM32L4S5ZIYx

- STM32L4S7AIIx, STM32L4S7VITx, STM32L4S7ZITx

- STM32L4S9AIIx, STM32L4S9VITx, STM32L4S9ZIJx, STM32L4S9ZITx, STM32L4S9ZIYx

- STM32MP151(A-C)AAx, STM32MP151(A-C)ABx, STM32MP151(A-C)ACx, STM32MP151(A-C)ADx, STM32MP153(A-C)AAx, STM32MP153(A-C)ABx, STM32MP153(A-C)ACx, STM32MP153(A-C)ADx, STM32MP157(A-C)AAx, STM32MP157(A-C)ABx, STM32MP157(A-C)ACx, STM32MP157(A-C)ADx

- STM32WB55C(C-E-G)Ux, STM32WB55R(C-E-G)Vx, STM32WB55V(C-E-G)Yx

3.2 STM32CubeMX V5.0.1 release information

Bug fixes.

Performance enhancements when loading *ioc* file and creating new project.

3.2.1 Fixed issues

Table 5. Main fixed issues in V5.0.1

ID	Summary
56930	Custom optimization level lost.
57218	[PCC][L0/L1/L4] Impossible to disable Transition Checker.
58072	Import of an STM32F401 *ioc* into an STM32F446 project generates a project for STM32F401.

3.2.2 Firmware package versions

Table 6 shows the firmware package versions.

Table 6. Firmware package versions in V5.0.1

STM32Cube firmware and updated middleware	Version
STM32H7	V1.3.0
STM32F7	V1.13.0
STM32F4	V1.22.0
STM32F3	V1.10.0
STM32F2	V1.7.0
STM32F1	V1.7.0
STM32F0	V1.9.0
STM32L4	V1.13.0
STM32L1	V1.8.1
STM32L0	V1.11.0
STM32G0	V1.0.0

3.3 STM32CubeMX V5.0.0 release information

New user interface and new look and feel.

Code generation updates and enhancements for better alignment with STM32Cube™ firmware.

Added the support of STM32G0 Series with first examples in MX format available in the STM32Cube_FW_G0_1.0.0 STM32CubeG0 MCU Package.

Added the support of STM32L0 Value Line devices.

Added the support of TouchGFX for STM32F4 Series and STM32F7 Series.

Added the support of new middleware versions for STM32F4 Series, STM32F7 Series, and STM32L0 Series.

Added user behavior reporting feature.

3.3.1 Fixed issues

Table 7. Main fixed issues in V5.0.0

ID	Summary
30612	411788-[CodeGen] STM32CubeMX and *syscalls.c*.
42544	[MX-RCC] Wrong Flash latency for STM32L48x and STM32L47x.
48678	[MX-GUI] Only compatible *ioc* must be displayed in the recent menu.
50032	[MX-RCC] Missing code gen of LSE drive capability.
52706	Pull up should not be enabled on TS sampling channels.
52714	[MX-IWDG] Code reorganization in LL mode.
54409	[MX-RTC] Wrong code generated when selecting PB2 for RTC_OUT.
55082	[MX-Clock] RTC clock value is MHz while the unit is kHz.
55132	[MX-CAN] The activation of CAN2 requires the activation of CAN1 clock.
55692	[MX-GPIO] [CodeGen] Wrong alternate mode for I2S3 clock pin and I2S3 extSD pin.
55700	[MX-Boards] wrong default pin assignment for Nucleo-32 boards: NUCLEO-F042K6 and NUCLEO-F303K8.

3.3.2 Firmware package versions

Table 8 shows the firmware package versions.

Table 8. Firmware package versions in V5.0.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.3.0
STM32F7	V1.13.0
STM32F4	V1.22.0
STM32F3	V1.10.0
STM32F2	V1.7.0
STM32F1	V1.7.0
STM32F0	V1.9.0
STM32L4	V1.13.0
STM32L1	V1.8.1
STM32L0	V1.11.0
STM32G0	V1.0.0

3.4 STM32CubeMX V4.27.0 release information

Added the support of new STM32L4 Series part numbers: STM32L412xx and STM32L422xx.

Added the support of STemWin library v5.44 for STM32L4+ Series.

Added FreeRTOS™ v10 integration for STM32L4 Series and STM32L4+ Series.

Added USB Host 3.3 integration for STM32L4 Series and STM32L4+ Series.

Added IAR™ EWARM v8.x to the list of supported IDEs.

3.4.1 Fixed issues

Table 9. Main fixed issues in V4.27.0

ID	Summary
48565	[MX-UART] "Hardware Flow Control" must be available only when asynchronous mode is selected for UART4/UART5.
49525	[MX-RTC] RTC_OUT on PC13 (or PB2) requires to configure PC13 (or PB2) GPIO registers as alternate function.
48277	[MX-DMA] "*DMA.h*" in *Sai.c* written in capital letters causes compilation error under Linux.
48955	Bug in the BSP bus creation when more than one SPI and I^{2}C instances are used.
49087	STM32CubeMx duplicates the Middleware files in an IDE when regenerating the project.
49941	*nucleo_l152re_bus.c* does not compile when I^{2}C bus is used.
47485	STemWin wrapper does not handle 90° rotation.
50198	Missing `LCD_LL_Reset()` call in generated code since STM32CubeMX V4.26.0.
51210	[MX-ProjectManager] *stm32f3xx_ll_exti.c* added to C_SOURCES twice in *makefile*.
51963	STM32CubeMx V4.26.1 not working for the STM3220G-EVAL board

3.4.2 Firmware package versions

Table 10 shows the firmware package versions.

Table 10. Firmware package versions in V4.27.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.4.0
STM32F7	V1.12.0
STM32F4	V1.21.0
STM32F3	V1.10.0
STM32F2	V1.7.0
STM32F1	V1.7.0
STM32F0	V1.9.0
STM32L4	V1.13.0

Table 10. Firmware package versions in V4.27.0 (continued)

STM32Cube firmware and updated middleware	Version
STM32L1	V1.9.0
STM32L0	V1.11.0

3.5 STM32CubeMX V4.26.1 release information

Added support of STM32F7 Series and STM32H7 Series part numbers with configuration, and HAL and LL code generation.

3.5.1 Fixed issues

Table 11. Main fixed issues in V4.26.1

ID	Summary
44784	[MX-SYS] Maximum number of MPU regions must be 16 for STM32H7.
46866	[MX-ADC][LL] CubeMX code generation, ADC injected, wrong rank/channel.
47061	[MX-Updater][F3] Fail to Install STM32CubeF3 packages "From Local".
48180	[MX-LWIP] LWIP_TCP must be generated in *lwipopts.h* when TCP is disabled.
48204	[MX-RCC] Wrong code generation when using HSE instead.
49968	[MX-Graphics] `OS_TimeMS++` to be removed if FreeRTOS™ is enabled.

3.5.2 Firmware package versions

Table 12 shows the firmware package versions.

Table 12. Firmware package versions in V4.26.1

STM32Cube firmware and updated middleware	Version
STM32H7	V1.3.0
STM32F7	V1.12.0
STM32F4	V1.21.0
STM32F3	V1.10.0
STM32F2	V1.7.0
STM32F1	V1.6.1
STM32F0	V1.9.0
STM32L4	V1.12.0
STM32L1	V1.8.1
STM32L0	V1.10.0

3.6 STM32CubeMX V4.26.0 release information

Added support for STMicroelectronics BlueNRG-MS pack.

Added contextual documentation of a selected MCU in MCU Selector and Peripheral tree.

Added STM32L4+ Series and completed STM32F4 and STM32F7 Series support in the Graphics Selector, Graphics Simulator, and STemWin library.

Added TrueSTUDIO® support for graphics projects.

3.6.1 Fixed issues

Table 13. Main fixed issues in V4.26.0

ID	Summary
42586	[MX-MCU] STM32H743IIKx is not usable in STM32CubeMX.
42620	[MX-USB] The `USBD_SUPPORT_USER_STRING` must be set to 0 except for DFU class.
42737	[ADC/OPAMP] Wrong regular channel configuration generated when setting ADC1_IN8 or ADC1_IN15 to OPAMP x output differential.
43350	[MX-TIM] ETR is requesting the HSI48 from clock without using it.
43537	[MX-ProjectManager] Generated projects are no more compatible with new Keil® packs.
43643	[MX-CodeGen] PWR must be enabled in `LL_Init()` for all Series.
45279	[MX-Pinout] G10 pin must be VSS.
45879	[MX-USART] Wrong default value for word length.
46302	[MX-GPIO] The pull status is not generated for USART3.
46635	STM32CubeMX TouchSensing `TSL_OBJ_TOUCHKEY` generated instead of `TSL_OBJ_TOUCHKEY_B`.
46862	[MX-SDMMC] Wrong max SD div.
46864	[MX-NVIC] Timebase interrupt lost.
46997	[MX-TIM] Remove master mode configuration from TIM7 in STM32F412.

3.6.2 Firmware package versions

Table 14 shows the firmware package versions.

Table 14. Firmware package versions in V4.26.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.2.0
STM32F7	V1.11.0
STM32F4	V1.21.0
STM32F3	V1.9.1
STM32F2	V1.7.0
STM32F1	V1.6.1

Table 14. Firmware package versions in V4.26.0 (continued)

STM32Cube firmware and updated middleware	Version
STM32F0	V1.9.0
STM32L4	V1.12.0
STM32L1	V1.8.1
STM32L0	V1.10.0

3.7 STM32CubeMX V4.25.1 release information

Minor release fixing an issue related to PLLM code generation for STM32L4 Series.

3.7.1 Fixed issue

Table 15. Fixed issue in V4.25.1

ID	Summary
45399	[MX-Clock] PLLM is not generated for STM32L4.

3.7.2 Firmware package versions

Table 16 shows the firmware package versions.

Table 16. Firmware package versions in V4.25.1

STM32Cube firmware and updated middleware	Version
STM32H7	V1.2.0
STM32F7	V1.11.0
STM32F4	V1.21.0
STM32F3	V1.9.0
STM32F2	V1.7.0
STM32F1	V1.6.1
STM32F0	V1.9.0
STM32L4	V1.11.0
STM32L1	V1.8.1
STM32L0	V1.10.0

3.8 STM32CubeMX V4.25.0 release information

Added support for STemWin v5.40 graphics middleware.

Added graphics criteria in the MCU selector: 16 part numbers supported in the STM32F4 Series and STM32F7 Series.

Added a graphics simulator for performance evaluation based on specific parameter configuration.

3.8.1 Fixed issues

Table 17. Fixed issue in V4.25.0

ID	Summary
42936	[SPI Code gen] include file stm32f1xx_hal_spi_ex.h in gpdsc file does not exist. Do not mention it.
43135	[MX-Clock] Add the backup domain enable before LSE drive configuration.
43142	[MX-Clock] PLLM is no more generated for L4+.
43046	Code generation fails when RTC is enabled.
43144	[MX-CAN][F4] From 4.23 to 4.24: compatibility issue for CAN.
43317	[Project Generation] Broken for TrueSTUDIO® using STM32CubeMX 4.24.
43318	[Project Generation for TrueStudio] Invalid symbol definition for MBEDTLS_CONFIG_FILE.
43379	[MX-USART][F3] Incorrect maximum baudrate value for USART2.
43581	[MX-Project Manager] Missing stm32f0xx_ll_rcc.c file in generated project.

3.8.2 Firmware package versions

Table 18 shows the firmware package versions.

Table 18. Firmware package versions in V4.25.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.2.0
STM32F7	V1.11.0
STM32F4	V1.21.0
STM32F3	V1.9.0
STM32F2	V1.7.0
STM32F1	V1.6.0
STM32F0	V1.9.0
STM32L4	V1.11.0
STM32L1	V1.8.1
STM32L0	V1.10.0

3.9 STM32CubeMX V4.24.0 release information

Added support for the STM32F0 Series, STM32F3 Series, STM32F4 Series, STM32F7 Series, STM32L0 Series, STM32L1 Series, and STM32L4+ Series new part numbers.

Added support for STM32F1 code generation using the low-level libraries (LL).

Added support for the TouchSensing and PDM2PCM middleware

Added framework to add additional software components to the project.

3.9.1 Fixed issues

Table 19. Fixed issue in V4.24.0

ID	Summary
41450	[MX-MDMA] MDMA blocked after adding a QSPI request.
41131	[MX-GUI] Project manager window must fit in a resolution with 600-pixel height.
39814	Project that contains "ac6" on the project name generates an error.
25745	301525-[MX-ProjectManager] ICF files must not be overwritten.
39269	[MX-HRTIM] TIMD DMA turned to TIME DMA after switching from TD2 to TD1 output.
41799	[MX-Load] ioc is not loaded without full path.
39931	[FATFS SD-CARD] sd_diskio.c missing some code and call to BSP_SD_init().
30723	414377-[MX-Project Manager] Improve the error message when generation fails.
30724	414384-[MX-CodeGen] Move the bracket of while(1) in the second user tag.
40166	[STM32L1 Makefile] RCC LL driver missing from generated project.
40525	[MX-Clock LL] Flash 64-bit access must be enabled over 16 MHz.
41269	[MX-ADC] InjectedNbrOfConversion is not generated.
41466	[MX-SPI] H7 SPI must be able to go up to 150 Mbit/s.
36245	[MX-RTC] Move the test on the calendar reeinit.
40086	[MX-ADC] Rank register corrupted due to the non-usage of the dedicated defines.
39933	[Nucleo144 H7] Ethernet IP missing.
33868	MCUFinder in CubeMX: Add missing datasheets for STM32F301xx devices.
35008	[MX-USART/GPIO] USART having level inversion should be able to have a pulldown configuration on their IOs.
41270	[MX-Clock] PLL3R is not enabled when using the LTDC.
34325	[TIMx] The description in the TRGO menu does not reflect the right function.

3.9.2 Firmware package versions

Table 20 shows the firmware package versions.

Table 20. Firmware package versions in V4.24.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.2.0
STM32F7	V1.9.0
STM32F4	V1.19.0
STM32F3	V1.9.0
STM32F2	V1.7.0
STM32F1	V1.6.0
STM32F0	V1.9.0
STM32L4	V1.11.0
STM32L1	V1.8.0
STM32L0	V1.10.0

3.10 STM32CubeMX V4.23.0 release information

Added code generation support using the low-level libraries (LL) for the STM32F2 Series, STM32F4 Series, and STM32F7 Series.

Added support for the new part numbers in the STM32F7 Series and STM32H7 Series.

Added support for the MbedTLS middleware.

3.10.1 Fixed issues

Table 21. Fixed issue in V4.23.0

ID	Summary
36160	Rename FDCAN modes from slave/master to classic and from full duplex to FD
37072	[MX-ADC] ADC maximum frequency must be 36 MHz
37531	[Mx-GPIO] GPIO output level configuration is missing
38047	[MX-Clock] PLLM is no more generated
35083	[MX-clock] Periph clock config is not generated when the PLLSAI is used for LTDC
26700	[Project Manager]} A Debug folder should be removed from project tree under SW4STM32
27635	[UI] Loading of project shows project as modified

3.10.2 Firmware package versions

Table 22 shows the firmware package versions.

Table 22. Firmware package versions in V4.23.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.1.0
STM32F7	V1.8.0
STM32F4	V1.17.0 – FatFS R0.12c
STM32F3	V1.9.0
STM32F2	V1.6.0
STM32F1	V1.6.0
STM32F0	V1.9.0
STM32L4	V1.10.0
STM32L1	V1.8.0
STM32L0	V1.10.0

3.11 STM32CubeMX V4.22.1 release information

Added support for STM32L4+ Series and for new part numbers of STM32F0 Series, STM32F3 Series, STM32F4 Series, STM32F7 Series, and STM32L1 Series.

3.11.1 Fixed issues

Table 23. Fixed issue in V4.22.1

ID	Summary
25102	[USB] Issue with the Device_Only parameter "Use dedicated endpoint 1 interrupt"
36182	[ADC] Wrong defines used for two sampling delay in dual mode
37066	[I2S] Wrong Alternate Function for I2S_CK on PB12
36143	[GUI] Wording fix
26262	[DMA] An issue with DFSDM DMA requests / interrupts after disabling DMA mode parameter.
28946	[FATFS] Dependencies issue when using no check for some FatFS parameters
36247	[ADC] DMA access mode is disabled by MX after hitting cancel button
36184	[ADC] multi mode configuration must not be generated for slave ADCs

3.11.2 Firmware package versions

Table 24 shows the firmware package versions.

Table 24. Firmware package versions in V4.22.1

STM32Cube firmware and updated middleware	Version
STM32H7	V1.1.0
STM32F7	V1.8.0 – FatFS R0.12c – FreeRTOS™ V9.0.0
STM32F4	V1.16.0
STM32F3	V1.9.0
STM32F2	V1.6.0
STM32F1	V1.6.0
STM32F0	V1.9.0
STM32L4	V1.9.0 – FatFS R0.12c
STM32L1	V1.8.0
STM32L0	V1.10.0

3.12 STM32CubeMX V4.22.0 release information

Added support for code generation using the low-layer libraries for the STM32L1 Series.

The chip view of the pinout tab can be rotated and flipped.

In the MCU selector and if there are less than 50 MCUs matching the search criteria, a search can be run on approaching MCUs.

In the pinout view, the user can define several signals on a pin but use them at different time in his code.

3.12.1 Fixed issues

Table 25. Fixed issue in V4.22.0

ID	Summary
33855	[MX-HRTIM] Wrong argument generated for HRTIM Fault level
34310	DSI color mode not correctly generated
30832	[MX-LwIP] With GCC + LwIP + FreeRTOS™, redefined struct timeval causes compilation error
34938	[LwIP/H7] Compilation error in lwip.c with LwIP + LWIP_NETIF_LINK_CALLBACK and without RTOS
29403	[GUI] STM32CubeMX pin user label problem
34383	[MX-RCC] Set the default LSE drive to "LSE High Level Drive"

Table 25. Fixed issue in V4.22.0 (continued)

ID	Summary
34641	[MX-Clock] Please add the handling of the DFSDM ACLK in the clock tree
34642	[MX-Clock] The auto resolver does not refresh the AHB and APBs dividers
35137	[MX-Clock] Min frequency of ADC for L433 must be set to 0.14 MHz
34380	[STM32H7] Alternate functions in PA0, PA1, PC2 and PC3 are not available in PA0_C, PA1_C, PC2_C and PC3_C GPIOs

3.12.2 Firmware package versions

Table 26 shows the firmware package versions.

Table 26. Firmware package versions in V4.22.0

STM32Cube firmware and updated middleware	Version
STM32H7	V1.0.0
STM32F7	V1.7.0
STM32F4	V.1.16.0
STM32F3	V1.9.0
STM32F2	V1.6.0
STM32F1	V1.6.0
STM32F0	V1.8.0
STM32L4	V1.8.1
STM32L1	V1.7.0
STM32L0	V1.9.0

3.13 STM32CubeMX V4.21.0 release information

Support of code generation, clock and power consumption calculation for STM32F1, STM32F4, STM32H7, STM32L0, STM32L1, and STM32L4 Series new part numbers is added. Support for code generation using the low-layer libraries for the STM32L0 and STM32F0 Series is added. Project can be generated as a general purpose makefile. It is possible to generate the code using the HAL library or the LL library for each peripheral instance. The MCU selection for a new project is using the same interface as STMCUFinder.

3.13.1 Fixed issues

Table 27. Fixed issue in V4.21.0

ID	Summary
30838	[FATFS] Generated project no longer compiles after migration
33343	[MX-LWIP] MII arguments used in RMII mode

Table 27. Fixed issue in V4.21.0 (continued)

ID	Summary
30938	[NVIC] STM32CubeMX ignores "Uses FreeRTOS™ functions" checkbox
29321	[DMA] DMA Wrong FIFO configuration in MEMTOMEM case
30923	Project compatibility: from 4.16 to 4.20, load issue / code gen clock issue / run time issue
30829	[MX-Clock] Remove the PCLK constraint when the I^2C is activated
30854	[MX-Clock] Move the LSE drive configuration in the generated code
30790	[TIM] Wrong Remap for TIM16 on TI1
30833	[MX-LTDC] Missing some pixel format in 16-bit mode

3.13.2 Firmware package versions

Table 28 shows the firmware package versions.

Table 28. Firmware package versions in V4.21.0

STM32Cube firmware and updated middleware	Version
STM32H7 – LwIP – FreeRTOS™ – FatFS – LibJPEG	V1.0.0 – V2.0.0 – V9.0.0 – R0.12c – V8d
STM32F7	V1.7.0
STM32F4	V.1.16.0
STM32F3	V1.8.0
STM32F2 – LwIP – FreeRTOS™ – LibJPEG	V1.6.0 – V2.0.0 – V9.0.0 – V8d
STM32F1	V1.4.0
STM32F0 – FreeRTOS™	V1.8.0 – V9.0.0
STM32L4	V1.8.0
STM32L1	V1.7.0
STM32L0 – FreeRTOS™	V1.9.0 – V9.0.0

3.14 STM32CubeMX V4.20.1 release information

Regression is fixed in the management of peripherals parameters default value.

3.14.1 Fixed issue

Table 29. Fixed issue in V4.20.1

ID	Summary
-	Regression in the management of peripherals parameters default value.

3.14.2 Firmware package versions

Table 30 shows the firmware package versions.

Table 30. Firmware package versions in V4.20.1

STM32Cube firmware and updated middleware	Version
STM32F7	V1.6.0
STM32F4 – LwIP – FreeRTOS™ – LibJPEG	V.1.15.0 – V2.0.0 – V9.0.0 – V8d
STM32F3	V1.7.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.7.0
STM32L4 – FreeRTOS™	V1.7.0 – V9.0.0
STM32L1	V1.6.0
STM32L0	V1.8.0

3.15 STM32CubeMX V4.20.0 release information

Configuration and code generation for the libjpeg middleware on the STM32F4 Series is added. Support for security IPs: Crypt, AES and HASH is added. Support for hardware JPEG on STM32F7 is added. Code generation on the low-layer Libraries for the STM32F3 Series is added. The user can assign several analog signals on the same pin. This allows to use the output of an analog peripheral as input of another analog peripheral.

3.15.1 Fixed issues

Table 31. Fixed issues in V4.20.0

ID	Summary
407521	mxconstants.h user section not migrated to main.h (4.15 to 4.19 migration)
407571	ADC config migration 4.15 to 4.19
411761	[IMPORT] DAC parameteres are not imported (regression first apprears in 4.19-A.5)
411058	[MX-HRTIM] event fast mode arguments are inverted

Table 31. Fixed issues in V4.20.0 (continued)

ID	Summary
409934	[L082CZ] WLCSP49 part numbers are missing
409316	[USB]: Remove Class for HS IP from USB_Device and Host from Series that do not support USB HS
409781	[STM32 Eval board names] remove F from board name for F0,F1,F2 and F4 eval board partnumbers
409983	[USB Host All classes]: FatFS USB Disk must be available when selecting USB Host All Classes
413906	[FreeRTOS v9] USE_TICKLESS_IDLE missing in configuration panel
398593	[MX-LCD] Active width and height update
408240	[MX-ADC] ADC2 is locked with ADC1 configuration even if dual mode is disabled
408680	[MX-RTC LL] The sync and async prescalers are not generated in LL mode
409825	[MX-DSI] video null packet size must be in byte
409826	[MX-DSI] The color coding must be defined by the LCD one
413430	[MX-CRS] Reload value must be divided in accordance with the selected CRS divisor
413434	[DMA] SPI1_RX_DMA request not loaded
410719	[MX-Board]HSI is set to 8 MHz for Nucleo 144 F412
413407	[MX-RCC]remove cache option in RCC configuration TAB for F0 family
413804	[MX-NVIC] Wrong Time base priority after reload with FreeRTOS™ activated
380815	[MX-Clock] the clock selection of I2C4 is missing from the clock tree
411164	CPU is significanctly increasing under Clock Configuration tab
409435	[USB/NVIC]: USB interrupts and their remaps will be checked after clicking button Cancel or Close [X]
403271	[Installer] startuninstaller.desktop file missing when using an automatic install under Linux.
411181	[Boards] no Nucleo-F767ZI anymore
403293	[Project generation GPDSC option]: system.c file not copied with Src files
409298	[MX-Clock] unable to resolve clock configuration conflit between USB and SDMMC requirement in STM32F7
410415	[MX-GUI] error ioc version message to be improved
414004	[MX-GUI] Show the MX ioc version in the migration dialog
345588	[MX-RTC] IT will be nice to avoid the calendar reconfiguration after wakeup from low-power mode
408018	[Project Manager] Remove duplicated startup file.

3.15.2 Firmware package versions

Table 32 shows the firmware package versions.

Table 32. Firmware package versions in V4.20.0

STM32Cube firmware and updated middleware	Version
STM32F7	V1.6.0
STM32F4 – LwIP – FreeRTOS™ – LibJPEG	V.1.15.0 – V2.0.0 – V9.0.0 – V8d
STM32F3	V1.7.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.7.0
STM32L4 – FreeRTOS™	V1.7.0 – V9.0.0
STM32L1	V1.6.0
STM32L0	V1.8.0

3.16 STM32CubeMX V4.19.0 release information

Support of code generation, clock and power consumption calculation for the new part numbers of the STM32F4 and STM32F7 Series is added. Configuration and code generation for the libjpeg middleware for the STM32F7 Series is added.

3.16.1 Fixed issues

Table 33. Fixed issues in V4.19.0

ID	Summary
379904	[L0 ADC] wrong Sampling time literals
402731	[MX-] All boards user button must be configured in external iBoardnterrupt mode
402997	[Project Manager] Wrong generated Ram size. for F103 with CSP package.
403090	[Project Manager-TrueStudio] Missing Device parameter for STM32L031G6UxS MCU
403192	[IDE] Empty DMA section in MX_Device.h
403508	[Project migration issue] Build error, system file duplicated
404470	[MX Project Generation] Source files are generated twice in USER group of the IDE tree when generating a code for a copied IOC in other directory
406121	[CSV Pinout generation]: An exception is occurred when try to overwrite an opened csv file
406644	MX-Clock HSI is accepted as USB clock source

Table 33. Fixed issues in V4.19.0 (continued)

ID	Summary
406662	Errors due to __weak and __packed symbols for Mac and Linux
408464	[MX-Clock] Wrong generated argument for MCO at PB13
406365	[Code_Gen] STM32CubeMX generating bad code for TIM3
287957	[MX-I2S] Allow to enter any I2S audio frequency
351190	[Generation under root for SW4STM32] startup file location
376940	[MX-GPIO] GPIO level set should be done before init to avoid glitches
381211	[MX-RCC] Add the configuration of LSE drive capability
401467	[STM32F446] Misleading or Issue for I2S clocks in clock tree
402068	[True studio project generation] copy startup file to project

3.16.2 Firmware package versions

Table 34 shows the firmware package versions.

Table 34. Firmware package versions in V4.19.0

MCU	Version
STM32F7	V1.6.0
STM32F4	V.1.14.0
STM32F3	V1.7.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.7.0
STM32L4	V1.6.0
STM32L1	V1.6.0
STM32L0	V1.8.0

3.17 STM32CubeMX V4.18.0 release information

New option to find all the MCUs that are compatible with the current configuration, either strict pinout compatibility or ignoring power pins or allowing the remap of signals on other pins. A list of compatible MCUs is provided with a percentage of matching. The developer can then select an MCU and import the current configuration on that MCU.

In the configuration window of the peripherals or middleware, a new restore default button has been added to restore the configuration parameters to their default value.

3.17.1 Fixed issues

Table 35. Fixed issues in V4.18.0

ID	Summary
397057	repository path error when the repository is on a secondary drive
398447	IDE Project settings lost at re-generation
398665	IAR generated projects contain duplicated entries for STM32Cube files
396444	Labels are not generated if equal to the active signal
397972	Prescaler generated two times with different values with no_check options.
399163	DMA remap must not be checked with HAL_OK in F0 series
396790	Remove the call of function HAL_COMPEx_EnableVREFINT(); as now it is managed by the HAL_COMP_Init
315052	Red cross appears when changing from LIN mode to Synchronous mode
382182	The USB NOE mode is missing
382181	USB Sof activation is missing in the configuration UI
401442	Wrong default EXTI signals configuration on Nucleo Boards, it must be Interrupt instead of event
398907	STM32F4 ADC Vref and Temperature channels no longer accessible
401889	STM32CubeMX incorrect clock configuration for Nucleo-F446ZE
401998	LSI Clock is not activated when used for the RTC in L0
383523	Wrong GPIOSpeed values
397936	Init of (EXTI_InitStruct->LineCommand) should be added
398069	STM32F7 SPIwrong max baud rate value
398871	RTC MSP is empty for L0x1 series (tiny Nemo)
401007	Warning due to __weak symbol
398461	Import: invalid configuration in the clock after import
400583	Wrong limits for RTC Clock coming from the HSE
398011	STM32F7 USART: request to support RS485 mode
396422	Timers PWM without output mode is missing
292012	STM32F0 USART: Issue with hardware flow control in USART5-8
401441	Blue push button is missing on STM32F407G-DISC1
396449	Wrong diagnostic for wakeup pin
356333	ADC DMAAccessMode and TwoSamplingDelay are causing the assert fail if multi mode is set to independent in L4
400709	FreeRTOS™ callbacks are not generated as weak functions
357218	Switch between PA9 PA10 and PA11 PA12 in TSSOP20 packages not trivial
315538	System file should be copied in the src folder

3.17.2 Firmware package versions

Table 36 shows the firmware package versions.

Table 36. Firmware package versions in V4.18.0

MCU	Version
STM32F7	V1.5.1
STM32F4	V.1.14.0
STM32F3	V1.6.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.7.0
STM32L4	V1.6.0
STM32L1	V1.6.0
STM32L0	V1.7.0

3.18 STM32CubeMX V4.17.0 release information

3.18.1 Fixed issues

Table 37. Fixed issues in V4.17.0

ID	Summary
317162	[Project Manager SW4STM32] : Wrong RAM size/Name of Flash file for all series
347913	[SW4STM32 generation] RAM size issue in ld script
351598	[Project Manager]: Wrong management of non-contiguous Flash memories for some L1 devices in Keil, SW4STM32 and True Studio IDEs
357067	[MX-ProjectManager] .elf.launch cannot be found while generating and the generation ends with an error
373627	RTC masks management in CubeMX does not allow a 60s wakeup time
373912	[Project Manager]: double startup files and system_xxx.c in IAR project tree when migrate an old IOC from Project settings window
374901	[MX-ETH] Extended PHY parameters must dependent of the selected PHY
375914	[ADC] "Scan Conversion Mode" and "Continous Conversion Mode" present a red cross when loading an old ioc
375940	[Project Manager] Duplicated While and missing "}" when loading an old IOC
378297	[MX-Project Manager] System file is duplicated after migration to the FW patch
378306	[MX-RTC] date corrupted after regeneration
380193	update stm32f4xx_hal_conf.h with new PHY parameters
380745	[MX-I2C/Board] Wrong generated timing with L4 64 Nucleo
382220	[MX-Timers] Pulse must be 16 bit for TIM2

Table 37. Fixed issues in V4.17.0 (continued)

ID	Summary
382305	[MX-FMC] The row bit number must be equal to the address value
391941	[USB/GPIO] The Vbus pin must be configured in input mode for all L4 PNs
393960	[MX-USART] The USART2 and USART3 max baudrate is not updated with the PCLK frequency
395447	[MX-Clock]Hal alignment fro PLLI2S define when generated only as MCO source
396004	[MX-NVIC] some flags are missing for I2C in smbus mode
396583	[MX-Project Manager] IRAM1 is empty with L4 and Keil
357744	[MX-Project Manager] unused headers are causing error red cross display on SW4STM32
377019	[MX-Timers] OSSR must be generated to avoid struct corruption
379917	[F303 Clock tree] empty mux picture
291227	[MX-RTC] It would be nice to add a Calendar mode in the RTC
349907	[I2S for F0] Default CubeMX valid value for Audio frequency leads to invalid I2S configuration
379309	[MX-Clock]I2S1/2 clock source renaming
379527	[MX-Clock]naming update in F412 Clock
395034	[STM32F1 USART] The minimum baudrate is wrongly calculated
381511	[MX-Project Manager] MX keeps generated files locked after generation

3.18.2 Firmware package versions

Table 38 shows the firmware package versions.

Table 38. Firmware package versions in V4.17.0

MCU	Version
STM32F7	V1.5.0
STM32F4	V.1.13.1
STM32F3	V1.6.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.6.0
STM32L4	V1.5.2
STM32L1	V1.6.0
STM32L0	V1.7.0

3.19 STM32CubeMX V4.16.1 release information

3.19.1 Fixed issues

Table 39. Fixed issues in V4.16.1

ID	Summary
376010	[MX-CodeGen] Generation corruption when project is under source control
381627	[MX-GPIO] The output level configuration is missing
382171	[MX-LWIP] SNMP MIB2 constraints (regression)
382264	[MX-Clock] Clock reload corrupts the HSI value
382506	[MX-ADC] NbrOfDiscConversion should be generated to 1 by default
372193	[Pinout user labels] forbid labels starting with numbers

3.19.2 Firmware package versions

Table 40 shows the firmware package versions.

Table 40. Firmware package versions in V4.16.1

MCU	Version
STM32F7	V1.4.1
STM32F4	V.1.13.0
STM32F3	V1.6.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.6.0
STM32L4	V1.5.1
STM32L1	V1.6.0
STM32L0	V1.7.0

3.20 STM32CubeMX V4.16.0 release information

3.20.1 Fixed issues

Table 41. Fixed issues in V4.16.0

ID	Summary
374760	[MX-LCD] Wrong description of LCD_VLCD.
375315	[Projectgenerator-FPU] Within IAR, FPU value should be VFPv5 double precision.
375609	[Compatibility-FatFS]: Some FatFS functions have changed when migrated from 4.7 to 4.15.1.

Table 41. Fixed issues in V4.16.0 (continued)

ID	Summary
376318	[MX-FreeRTOS] FreeRTOS™ accepts a maximum number of 16 for tasks and queues.
378424	[MX-Clock] Wrong clock source for I^2S in F103.
378655	[MX-DMA] Data size corrupted after regeneration.
378703	[User constants] Remove restrictions on hex values.
378771	[MX-Clock] Update the SDMMC maximum limit to 50 MHz.
379958	[USB Device] USBD_static_free function bug.
338480	[Ethernet] Add user section for overwriting default MAC address.

3.20.2 Firmware package versions

Table 42 shows the firmware package versions. New package revisions for STM32F2, STM32F3, STM32F4 and STM32L1 Series are now available.

Table 42. Firmware package versions in V4.16.0

MCU	Version
STM32F7	V1.4.1
STM32F4	V.1.13.0
STM32F3	V1.6.0
STM32F2	V1.4.0
STM32F1	V1.4.0
STM32F0	V1.6.0
STM32L4	V1.5.1
STM32L1	V1.6.0
STM32L0	V1.7.0

3.21 STM32CubeMX V4.15.1 release information

This release is a minor release, fixing bugs shown in *Table 43*.

3.21.1 Fixed issues

Table 43. Fixed issues in V4.15.1

ID	Summary
374212	[Nucleo 144 F429ZI] HSI frequency need to be fixed to 16 MHz.
374542	[HAL timebase] Revisit generated stm32xxxx_hal_timebase_TIM.c file.
375253	[Mx-Board] Compatibility fails when loading L4 board with ADC.

3.21.2 Firmware package versions

Table 44 shows the firmware package versions. New package revisions for STM32F0, STM32L4 and STM32L0 Series are now available.

Table 44. Firmware package versions in V4.15.1

MCU	Version
STM32F7	V1.4.0
STM32F4	V1.12.0
STM32F3	V1.5.0
STM32F2	V1.3.1
STM32F1	V1.4.0
STM32F0	V1.6.0
STM32L4	V1.5.1
STM32L1	V1.5.0
STM32L0	V1.7.0

3.22 STM32CubeMX V4.15.0 release information

Added support of code generation, clock and power consumption calculation for STM32F1, STM32F2, STM32F3, STM32F4, STM32F7, STM32L0 and STM32L4 Series new part numbers.

3.22.1 Enhancements

- An STM32CubeMX configuration are imported into an empty MCU belonging to a different Series
- In the generated code, the return code of the HAL functions is checked
- In FreeRTOS™ it is now possible to create objects according to the available heap size

3.22.2 Fixed issues

Table 45. Fixed issues in V4.15.0

ID	Summary
351196	[Clock tree F7] Regression infinite search
343804	[MX-NVIC] Not all interrupts priority must be modified when activating FreeRTOS™
348024	[MX-Timers] Combined trigger + reset slave mode is missing
348472	[PCC][MacOS] Invisible Combobox elements Under "Optional settings" in "Step" Window
349010	[Wrong warning on exit] Requesting the user to save a project that has not been modified
353005	[4.14 Project Generation for TrueStudio] 4.13 projects no longer compile
353069	[MX-OPAMP] Wrong IO number for the OPAMP4 non inverting input on PB11

Table 45. Fixed issues in V4.15.0 (continued)

ID	Summary
353229	[MX-SYS] The disable value must be removed from F1 debug and no debug value must be set by default
356250	[MX-Board] Wrong Ethernet PHY address and name for Nucleo 144 boards
356275	[Custom Code Generation]:Generate template files using command line doesn't work
356387	[MX-ADC] Illegal frequency allowed for ADC in F401
356440	[MX-SAI] The active slot value is shifted
356454	[MX-USB] dedicated ep1 interrupt couldn't be enabled
356521	[MX-Board] Wrong HSI in Birdie/bigbirdie 144 Nucleo
356556	[MX-Project Manager] Project generation always fail with any IDE
356566	[USB Host] usbh_conf.h missing closing braket for extern "C"
356879	[MX-Clock] APB1 timer clock and TIM2 clock selection not well synchronized
357148	[MX-ProjectManager] link processing issue in TrueSTUDIO® when generating with under root unchecked
357191	[MX-RTC] RTC ALARMA date corrupted after regeneration
357287	[F4 HAL conf] wrong value for PHY_MICR_INT_OE Define
357558	[CAN F1 evalboard] CAN1_RX GPIO configuration regression
332701	[FatFS] : Wrong EVAL name in the comment in bsp_driver_sd files (.c and .h)
345444	[Project Manager IAR]: Wrong selected device of STM32L031G6UxS PN
347778	[NVIC]: Select for init ordering and generate IRQ handler checkboxs should be same as the last saved modification
348606	[SPI] CRC define always there whatever the setting CRC (enabled or disabled)
348677	[SYS]: To be coherent with all MCU, SYS synchronous traces PINs should not be configured
350080	[Installer-MacOS] Displayed uninstaller Path is truncated under Mac OS
349741	[NVIC]: System service call and Pendable request for system service interrupts are missing in the NVIC UI
349219	[MX-ProjectManager] Unable to regenerate project after project settings modification (convert C project into C++)
356587	[MX-USB] dev_endpoints is always generated equal to 7
357448	[MX-ADC] Issue with internal channel Load for L4 MCUs
370934	[MX-PCC] DMA streams consumption is multiplied by 1000 for STM32F411xx
372077	[MX-Clock] APB1 timer multiplier is not well set with a manual modification and after a search for STM32F411xx

3.22.3 Firmware package versions

Table 46 shows the firmware package versions.

STM32F7 and STM32F4 Series firmware packages include a major new version of the LWIP middleware (v1.5.0_RC0_20160211). When migrating an old LWIP project to this new version, it is recommended to check the name of the advanced parameters or their default value, since they may have changed.

Table 46. Firmware package versions in V4.15.0

MCU	Version
STM32F7	V1.4.0
STM32F4	V1.12.0
STM32F3	V1.5.0
STM32F2	V1.3.1
STM32F1	V1.4.0
STM32F0	V1.5.0
STM32L4	V1.5.0
STM32L1	V1.5.0
STM32L0	V1.6.0

3.23 STM32CubeMX V4.14.0 release information

Added support of code generation, clock and power consumption calculation to support STM32L4 new part numbers.

3.23.1 Enhancements

- Added an option in the updater to request user proxy password at each session
- Project files are now generated at the root of the project for SW4STM32 and TrueSTUDIO®. The path of the files in the project corresponds to the physical path on the disk.
- NVIC interrupts activation can be done either in the IP init function or at the end of the initialization sequence. Activation can also be sorted to make sure the first interrupt is received in the right order.
- Generated code uses the latest HAL define and does not require anymore in most cases the inclusion of the stm32_hal_legacy.h file. When generating again an old project migrated to this release, the generated code is updated to use the latest HAL defined.

3.23.2 Fixed issues

Table 47. Fixed issues in V4.14.0

ID	Summary
348002	[User Constants] are lost when clicking cancel
315023	[MX-Import] Import must display an error when the IP exists but not the functional mode
315035	[MX-Import] Import sets an invalid value when parameters exists but not the selected value

Table 47. Fixed issues in V4.14.0 (continued)

ID	Summary
315868	[MX-Import] The FW version must be imported only if the FW version is available and import is done for the same family
341927	[MX-Project Manager] Generated project with new IPs is not well cleaned from the previously enabled IPs
344253	[MX-ProjectGenerator] Wrong RAM size for F3 in Keil
344431	[Project manager] Wrong generated Ram Size with TrueSTUDIO® and SW4STM32
344919	[MX-ProjectGenerator] Project generation issue with Keil in F1
345460	[Project manager] Wrong Ram Size with TrueSTUDIO®
345912	[Installer] Enable to create automatic script from command line under Linux
346066	[SPI] with STM32F410xx CRC polynome should be odd
346135	[MX-Clock] Wrong I2S clock selection for F446
346180	[NVIC] wrong name for Hard Fault Handler
346378	[USART] Baudrate min/max values computation issue
346887	[DMA] Add tooltip for "Use Fifo" option checkbox
347860	[Installer Linux] does not detect 1.8 java version as more recent than 1.7 pre-requisite
348048	[Code generator]: Compatibility issue detected when using DB 4.12 after loading an old IOC from 4.14 and created with 4.12 and choose to not migrate
348609	[SPI for STM32F0] NSS not seen as alternate signal
348875	[MX-Linux] Startup files are not generated under linux with GPDSC
349127	[MX-Board] Flash latency is always set to 2 in F446 Nucleo
349487	[MX-Clock] TIMPRE is missing for STM32F411/410/401
314820	[MX-Import] A warning must be displayed if some IP parameters cannot be imported
315021	[MX-Import] Cannot import USB Device FS to USB OTG FS
315058	[MX-Import] Warning message for unloaded DMA streams should be improved
315169	[MX-Import] Can't import SDIO to SDMMC
315190	[MX-Import] A DMA request must be imported even if the stream is different
327441	Do not enable IRQ in the MX_xxx_Init()
343879	[IOC] Detect ioc file is read-only and warn the user
345088	[GPIO UI]: GPIO Pin state parameter renaming
347769	[MX-USB] CDC_Transmit could fall in a blocking state

3.24 STM32CubeMX V4.13.1 release information

This release is a minor release, fixing the bugs reported in *Table 48*.

3.24.1 Fixed issues

Table 48. Fixed issues in V4.13.1

ID	Summary
346989	command line arguments -tpl_path and -dest_path are ignored
347429	middleware Init function is being called in the main function and again in the default task of FreeRTOS™

3.25 STM32CubeMX V4.13.0 release information

- Added support of code generation, clock and power consumption calculation for the for new part numbers of the STM32F0, STM32F3, STM32F4, STM32F7 and STM32L0 Series.
- Added over-order control of initialization functions in generated code.

In the project settings, the user chooses to generate a CMSIS-Pack description file (gpdsc) to integrate with other IDEs.

3.25.1 Enhancements

- The clock automatic resolution proposes now the nearest possible value when no solution for an entered value is found.
- A user interface has been added to configure the generation of the user's customized files based on templates.
- Added the choice of time-base source for the HAL library, since choosing another time-base source is highly recommended in a configuration with RTOS.
- Added a user interface to configure the amount of heap and stack required for the application.
- Added the support of GPIO output level in GPIO configuration window.
- Added search feature in peripheral and middleware configuration windows.

3.25.2 Fixed issues

Table 49. Fixed issues in V4.13.0

ID	Summary
322128	[MX on Linux] Error when configuring a GPIO
326364	[MX-Import] Not saved parameters in the ioc are not imported
335703	[SPI] wrong GPIO settings for NSS hardware mode
336475	[Project Generation MDK v5] duplicate startup.s
339006	project using DAC F334 saved with MX 4.11 improperly loaded in MX 4.12
339116	[FreeRTOS] incompatibility between code generator V4.6 and code generator V4.11

Table 49. Fixed issues in V4.13.0 (continued)

ID	Summary
339199	Subseconds parameter must appear in the configuration UI for all families
339309	[MX-Timers] All sClockSourceConfig parameters should be generated to avoid asserts stuck when internal clock is used for the TIM
339359	[MX-Import] Import from Timers with different mode presentation is not possible
339625	[MX-ADC] The GPIO mode compatibility between 4.11 and older is not managed
340574	[MX-ADC] ADC channels configuration is not generated
343224	[USB CDC] usb_cdc_if.c receive function needs update to detect received packets
343267	[Custom code generation]: Wrong default location for source Folder
343837	[I2S] Init code missing a parameter
307099	[GPIO L4]: With multi selection of several GPIO parameters rows the GPIO Mode parameter disappears even when it the same for all selected rows
337239	[FreeRTOS] Support same entry function for different tasks
330999	[MX-FreeRTOS] Add the possibility to generate the FreeRTOS™ callbacks as weak functions
338262	[Project Manager]: Some Devices newly supported by IAR last version are generated as 'None'

3.26 STM32CubeMX V4.12.0 release information

- Added support of code generation, clock and power consumption calculation for the new part numbers of the STM32L0 Series.
- When importing an existing project the user selects now the instance of the peripheral to be used.

3.26.1 Enhancements

- Hard fault interrupt handler is now generated.
- Only inputs pins are managed.
- Added support for Nucleo 144 boards.

3.26.2 Fixed issues

Table 50. Fixed issues in V4.12.0

ID	Summary
244833	[MX-ETH] Multicast MAC addresses shouldn't be accepted
332587	With ETH on F1, Clock Constraint solver cannot solve HCLK default value setting
333131	[MX-CRC] CRC is missing in LQFP100 packages for bigManta
333234	[MX-Comp] Comp2 inp must be shorted to comp1 inp when the window mode is selected
333309	[STM32F107 Eval Board] GPIO pin PA8 requires high speed

Table 50. Fixed issues in V4.12.0 (continued)

ID	Summary
333755	[MX-FreeRTOS/NVIC] HAL_IncTick must be removed and systick prio must be the lowest when FreeRTOS™ is activated
333931	[MX-Comp] wrong generated argument for non inverting input
333982	[MX-Timers] The mode config is missing for TIM13 and 14 output compare
335369	[Code Gen] GPIO Labels defines not generated for projects done with former version of CubeMX
321698	[NVIC]: Suggestion to add HardFault handler
329785	[MX-FMC] Some FMC parameters must be added for FMC NAND
336263	[F4 SDIO DMA] Mode is DMA_Normal instead of DMA_PFCTRL
335414	[MX-HRTIM F3] Event source 1 is configured for HRTIM event 2 even if not selected
336803	[MX-GPIO L4] OSC and OSC32 pins do not keep the user configuration in GPIO mode
336207	[MX-STM32F7 - Clock] Update of Birdie clock max frequencies

3.27 STM32CubeMX V4.11.0 release information

This release is a minor release, fixing four important bugs (see *Table 51*).
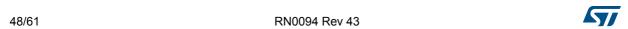
3.27.1 Enhancements

- Added support of code generation, clock and power consumption calculation for support for STM32L0 Series new part numbers
- About the power consumption calculator:
    - It interpolates now consumption data based on user defined frequency
    - The L4 consumption data now supports voltage from 1.8V to 3.6V
    - It computes max ambient temperature
    - The load sequence mechanism loads sequences from different low-power Series (STM32Lxxx)
- User defined labels are now generated in the code
- In the clock configuration a new button has been added, to trigger automatic clock issue resolution
- DMA parameters are now dependent on the DMA request
- User constants can be defined for string values

3.27.2 Fixed issues

Table 51. Fixed issues in V4.11.0

ID	Summary
326911	[SPI] CRC Polynomial even coefficients not allowed
327107	[MX-SPI] Wrong baudrate max value
327389	[TSC] Generated code misses to initialize some fields of the init structure
327641	[MX-Exception] Exception generated when loading a project from 4.9 to 4.10

Table 51. Fixed issues in V4.11.0 (continued)

ID	Summary
330371	[MX-HRTIM]Dead time insertion is done only for timer A and B
330539	[MX-CodeGen] the generated HSI_VALUE value should be kept to 16MHz
330954	[MX-Boards] LED2 must be on PB13 instead of PA5 NUCLEO F302 64 pin
331425	[ADC L4] gpio mode for ADC signals should be GPIO_MODE_ANALOG_ADC_CONTROL instead of GPIO_MODE_ANALOG
331615	[L0 Clock] wrong HSI value

3.28 STM32CubeMX V4.10.0 release information

3.28.1 Enhancements

- Support of code generation, clock and power consumption calculation for STM32F4 Series new part numbers.
- Added new tab "User Constants" in the peripheral configuration window to allow the user to add and manage needed constants.
- Import of an existing configuration into a MCU of the same Series, now imports FreeRTOS™ configuration and the power consumption calculator data.
- Default mode for GPIO EXTI is now interrupt mode with a rising edge. Existing projects are unchanged.
- Added more parameters in RTC configuration window to allow time and alarm initialization (Hours, Minutes, Seconds and Sub-Seconds).

3.28.2 Fixed issues

Table 52. Fixed issues in V4.10.0

ID	Summary
323581	[USB STM32L1] USB device conf.c file error
323958	[l4 RAM size] wrong RAM size shown on MCU selector
324839	[MX -TSC] Add default IOMode for TSC signals to be used with single mapped pins
324503	[FreeRTOS] possible failure when loading a Mx 4.8 project with Mx 4.9 or later
324514	[Project Loading] ADC configuration has an issue
324931	[ETH] wrong generated code when auto-negotiation enabled
325149	[STM32F7] wrong generated parameter value PeriphClkInitStruct.PLLSAIP
325603	[MX-COMP] wrong COMP status even if input [-] DAC1/2 OUT1/2 mode is selected

3.29 STM32CubeMX V4.9.0 release information

3.29.1 Enhancements

- Support of code generation, clock and power consumption calculation for STM32L4 Series new part numbers.
- Changing MCU is easier than before, since now an existing configuration can be imported into another selected MCU of the same Series.
- Recursive mutexes are created in FreeRTOS™ configuration UI.
- Configuration report now contains the clock tree and active IP, NIVC, GPIO and DMA configuration.
- Clock tree can be reset to its default value with a button or a menu.
- FIFO threshold and burst size constraints are managed in the DMA configuration.

3.29.2 Known problems and limitations

When importing a configuration into another MCU, FreeRTOS™ configuration is not imported.

3.29.3 Fixed issues

Table 53. Fixed issues in V4.9.0

ID	Summary
319419	[STM32F407/417VETx] wrong #21 pin set
320275	[MX self-update] issue when MX UI open
306064	[Project Manager] issue copying DSP example files to the project

3.30 STM32CubeMX V4.8.0 release information

3.30.1 Enhancements

Support of code generation, clock and power consumption calculation is available for the new part numbers of the STM32F7 Series.

Management of the dependency and configuration of external I/O, when required by a peripheral. For example it is now possible to configure how to drive the V_{BUS} in the USB peripheral.

STM32CubeMX can be installed using 3 methods:

- Installation with a graphical user interface
- Installation on a console with questions asked on the console
- Silent installation allowing to replay a previous installation

To facilitate its integration with other tools, STM32CubeMX provides a command-line mode: STM32CubeMX executes a script of commands without user interface and be launched in background by another application, like for example Matlab.

3.30.2 Fixed issues

Table 54. Fixed issues in V4.8.0

ID	Summary
311828	[Code Gen] user code corrupted at next code generation
293193	[ADC] MX must manage ADC max frequency value
310698	[USB-DFU]: Issues with DFU generated code
311839	[Project Manager] wrong RAM size
311850	[ADC code gen] issue initializing Rank 1
311951	[DMA]: DMA requests must be managed according to I2S mode (Master Transmit or
313498	[F103] HAL_AFIO_REMAP_SWJ_NOJTAG() macro call misplaced
313845	[LTDC] wrong max for active width & height
314365	[LTDC] calculated values not updated (left to default) on project load
314366	[I2C fast mode] max speed of 400 kHz can not be reached
251735	[Installer]:Incorrect message displayed when JVM missing
308956	Assertion issue with not initialized parameters
316076	[FreeRTOS] heap/stack issue with Timers enabled on STM32F1
317882	[MX-CodeGen] __SYSCFG_CLK_ENABLE(); must be moved to HAL MSP Init
315631	[SDIO] GPIO settings to adjust to Pull-Up High-Speed

3.31 STM32CubeMX V4.7.1 release information

3.31.1 Enhancements

None

3.31.2 Fixed issues

Table 55. Fixed issues in V4.7.1

Issue Number	Description
314366	[I2C fast mode] max speed of 400 kHz can not be reached
313849	Core Engine / DMA / HRTIM]: Incorrect loading of HRTIMER ioc file with DMA request
313437	[MX-CodeGen] a different handle must be declared for UART, USART and LPUART
311828	Code Gen] user code corrupted at next code generation
311850	[ADC code gen] issue initializing Rank 1
313498	[F103] __HAL_AFIO_REMAP_SWJ_NOJTAG() macro call misplaced

Table 55. Fixed issues in V4.7.1 (continued)

Issue Number	Description
313807	[MX-CodeGen] User tags have been removed from the systick handler
311839	[Project Manager] wrong RAM size
314799	Keil STM32F072RB: Flash programming algorithm is not set
311803	CpuCode entry in the generated uvoptx file is causing a build error (with Free M0/M0+ license of Keil)
312256	[Keil L0] STLINK settings are missing

3.32 STM32CubeMX V4.7.0 release information

3.32.1 Enhancements

Support of code generation, clock and power consumption calculation for support for STM32L1, STM32F0, STM32F3, and STM32F4 Series new part numbers.

In the power consumption calculator and for STM32L0&L1 Series only, wakeup times, as specified in the products datasheets, have been introduced as well as a new option, to allow only possible transitions and to check a sequence for impossible transitions.

Code generation generates a project for the System Workbench for STM32 (SW4STM32) IDE.

3.32.2 Fixed issues

Table 56. Fixed issues in V4.7.0

Issue Number	Description
306025	[ADC]: Wrong reloaded value of the injected conversion number after save and close CubeMX
309387	[I2C]: Issue with I2C initialization code
308872	[SDADC]: wrong generated code for injected channels configuration
306991	[NVIC]: Wrong generated code in stm32f4xx_it.c
305962	[L0] ADC multi-config channel generated code is wrong
307425	[I2C Clock no stretch mode] reverse enabled/disabled mapping
310404	[PCC] [L1] "Load sequence" doesn't correctly update the step consumptions (when vdd is different)
302889	[USB NVIC]: incorrect USB wake-up IRQ handler
306065	[NVIC for F334] missing global interrupt for TIM3
306675	[NVIC]: code generation error for EXTI2 IRQ handler of F1 devices
309993	[F2 Series] CRC IP missing
308890	[MX-Clock]: wrong default HSI calibration value

3.33 STM32CubeMX V4.6.0 release information

3.33.1 Enhancements

Support of code generation, clock and power consumption calculation for the STM32F1 Series, STM32F0 and STM32F4 new part numbers.

When entering a frequency value for the CPU clock, buses or peripheral clocks, the rest of the clock tree is automatically calculated.

Custom third party code can be generated, allowing smooth integration with third party applications.

3.33.2 Known problems and limitations

PPP and SLIPIF are configured in the LWIP library, but the generated code doesn't have all the required links to the hardware interface.

3.33.3 Fixed issues

Table 57. Fixed issues in V4.6.0

Issue number	Description
292320	Code generation blocking issue when the SAI peripheral AND an SAI signal not associated to any peripheral mode are selected.
294780	Wrong AF number for few LTDC IOs.
244269	[Project Generation] ToolChain ST-Link configuration does not match the selected debug type in CubeMX.
272065	[Config with RTC] missing macro __HAL_RCC_RTC_ENABLE()
276519	[Clock]: Refresh issue for clock parameters values.
285899	[Generated project] Compilation issue with Atollic IDE when MX Code Generation option was set to "Add necessary library ..." in project settings menu.
286984	[MX-Installer] All CubeMX instances should be displayed in the add or remove program window
290893	[CAN]: Possible value for prescaler parameter should be updated after each modification on APB1 clock frequency
291867	[MX-Clock] Wrong loaded config when constraints are applied on radio buttons
291968	[GPIO]: Fast mode still enabled after remapping the used pin to another which does not use Fast mode feature.
292022	[Clock]: SDADC Prescaler should be considered in the clock reverse path
292535	[ADC]: When disabling Injected Conversion, Scan Conversion Mode should be Disabled.
294771	[RTC] synchronous pre-divider max is wrong
294997	[FreeRTOS] configMAX_CO_ROUTINE_PRIORITIES must be greater than or equal to 1
295830	[DAC2 F3] should not support wave generation possibility
298516	[MX-FreeRTOS] configTICK_RATE_HZ must not be higher than 1000

Table 57. Fixed issues in V4.6.0 (continued)

Issue number	Description
298741	[MX-FreeRTOS] TIMER_TASK_PRIORITY max value must be equal to configMAX_PRIORITIES-1
300761	[MX-Database] Wrong SD and SD_ext pin assignment for I2S3 (F302K8U6)
301118	[GPIO Configuration] Labels not saved issue
302133	DMA handle for SAI declared as static local variable
238614	[MX-FreeRTOS] Some parameters are missing in the UI

3.34 STM32CubeMX V4.5.0 release information

3.34.1 Enhancements

Support of code generation, clock and power consumption calculation for new MCUs in the STM32F0 and STM32F3 Series (STM32F09xx, STM32F303xE, STM32F302xE).

3.34.2 Known problems and limitations

- The Clock and peripheral configuration and the associated code generation are only supported for STM32F4, STM32F3, STM32F2, STM32F0, STM32L0 and STM32L1 Series, using the STM32Cube Firmware library[a]

- Power consumption calculation is only supported for STM32F4, STM32F3, STM32F2, STM32F0, STM32L0 and STM32L1 Series[a]

- PPP and SLIPIF can be configured in the LWIP library, but the generated code doesn't have all the required links to the hardware interface

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a. Full support for other Series is planned for future releases.

3.34.3 Fixed issues

- 242270 [USART] Incorrect setting for smartcard on STM32F2
- 265903 [Pinout STM32L0] UFQFPN32 doesn't show the exposed pad
- 269308 N/A wording not understood correctly in some countries
- 280107 [Code Generation] NVIC pending IRQ flag clearing is useless
- 284134 [MX-Clock] The MSI values are not accepted by the HCLK solution finder 284622 [MX-FreeRTOS] Wrong total heap size max value (L1 family)
- 285000 [MX-Clock] The PLL entry divider for MCO is missing
- 285099 [MX-Clock] I2S clock source configuration should be generated only when I2S is activated
- 285111 [MX-Clock] The I2S clock source configuration is not generated when the external audio input is selected
- 285114 [MX-Clock] Wrong generated sysclock when the Timers PLL constraint for clock source is applied
- 285117 [MX-Clock] The PLL activation is not generated when the TIM4 source clock is the PLL
- 286648 [ADC] Issue of INxb channels available for Bank A when they should be for Bank B only
- 287594 [MX-DMA] The burst size should be available even if the address increments is disabled 287797 [PCC] Wrong battery life estimation with all steps on "vbus"
- 288325 [PCC] Project not modified after a change of battery

3.35 STM32CubeMX V4.4.0 release information

3.35.1 New features

STM32CubeMX now fully supports STM32L1 Series.

3.35.2 Enhancements

The MCU selector window has been improved to allow filtering on Flash, RAM, EEPROM and number of I/Os.

STM32L052TxY WLCSP package is now supported.

The clock tree now automatically proposes a solution based on the frequencies entered: it either suggests a solution based on the selected path or a new path if no solution is found.

3.35.3 Known problems and limitations

- The clock and peripheral configuration and the associated code generation are only supported for STM32F4, STM32F3, STM32F2, STM32F0, STM32L0 and STM32L1 Series, using the STM32Cube Firmware library
- Power consumption calculation is only supported for STM32F4, STM32F3, STM32F2, STM32F0, STM32L0 and STM32L1 Series
- PPP and SLIPIF can be configured in the LWIP library, but the generated code doesn't have all the required links to the hardware interface

3.36 STM32CubeMX V4.3 and 4.3.1 release information

3.36.1 Fixed issues

- STM32F0 MCUs
  - Wrong CEC alternate function
  - Invalid presence of TIM6 and TIM7
- STM32F2 MCUs
  - Activation of CAN1 clock is missing when only CAN2 is used
- STM32F3 MCUs
  - Wrong management of PLL constraint
  - GPIOs in output mode are not correctly initialized
  - Invalid presence of TIM6 and TIM7 on some MCUs
  - Missing IRTIM on STM32F318xx
- STM32F4 MCUs
  - Missing ETM options on some STM32F4 MCUs
  - Missing files when generating code for USB
  - Wrong clock constraints and Flash memory latency on STM32F401/411 lines
  - Invalid presence of TIM6 and TIM7 on some MCUs.
- All Series
  - Timers: missing initialization field for Dead Time register

3.36.2 Enhancements

In the pinout view:
- signals can be individually locked on a pin
- the Find feature is now case insensitive

In the Power Consumption Calculator view:
- A new battery model can now be defined by the user
- The result of a simulation can now be displayed in different graphical formats, that can be compared with the simulations previously saved

3.36.3 Known problems and limitations

- Clock and peripheral configuration and the associated code generation is only supported for the STM32F4, STM32F3, STM32F2, STM32F0 and STM32L0 Series, using the STM32Cube Firmware library
- Power consumption calculation is only supported for the STM32F4, STM32F3, STM32F2, STM32F0, STM32L0 and STM32L1 Series
- PPP and SLIPIF can be configured in the LWIP library, but the generated code doesn't have all the required links to the hardware interface
- When generating code using middleware and IAR EWARM, an issue may occur during the build phase due to a missing path. To avoid such behavior, save the IAR project after each project generation. This problem does not happen when IAR EWARM is closed

3.37 STM32CubeMX V4.2 release information

3.37.1 New features

STM32CubeMX now fully supports the STM32L0 Series.

3.37.2 Enhancements

- A label can be assigned to a signal mapped on a pin
- In the pinout view, a search box allows one to search for a pin, a signal or a label

3.37.3 Known problems and limitations

- Clock and peripheral configuration and the associated code generation is only supported for the STM32F4, STM32F2 and STM32L0 Series, using the STM32Cube Firmware library
- Power consumption calculation is only supported for the STM32F4, STM32F2, STM32L0 and STM32L1 Series
- PPP and SLIPIF can be configured in the LWIP library, but the generated code doesn't have all the required links to the hardware interface
- When generating code using middleware and IAR EWARM, one may face issues during the build phase due to a missing path. To avoid such behavior the IAR project should be saved after each project generation. This problem doesn't happen when IAR EWARM is closed

3.38 STM32CubeMX V4.1 release information

3.38.1 New features

STM32CubeMX now fully supports the STM32F2 family.

3.38.2 Enhancements

None.

3.38.3 Known problems and limitations

- Clock and peripheral configuration and the associated code generation is only supported for the STM32F4 and STM32F2 Series, using the STM32Cube Firmware library
- Power consumption calculation is only supported for the STM32F4, STM32F2 and the STM32L1 Series
- PPP and SLIPIF can be configured in the LWIP library but the generated code doesn't have all the required links to the hardware interface
- The list of files to compile in the project, may not be correctly updated after a second code generation, with less peripherals or middleware. Although the files are removed in the project folder, they still appear in the project list. These files have to be manually removed from the list in the IDE

3.39 STM32CubeMX V4.0 release information

3.39.1 New features

STM32CubeMX has the following key features:

- **Easy microcontroller selection** covering whole STM32 portfolio
- **Easy microcontroller configuration** (pins, clock tree, peripherals, DMA, interrupts, middleware) and generation of the corresponding initialization code
- **Generation of configuration reports**
- **Generation of IDE ready projects** for a selection of integrated development environment tool chains
  STM32CubeMX projects include the generated initialization code, STM32 HAL drivers, the middleware stacks required for the user configuration, and all the relevant files needed to open and build the project in the selected IDE
- **Power consumption calculation** for a user-defined application sequence
- **Self-updates** allowing the user to keep the STM32CubeMX up-to-date
- **Downloading and updating STM32Cube firmware packages** allowing the download from *www.st.com* of the MCU firmware package required for the development of the user application

3.39.2 Enhancements

STM32CubeMX 4.0 is a major new release of MicroXplorer 3.2 adding the full generation of code for STM32F4 Series and integration into the STM32Cube ecosystem.

3.39.3 Known problems and limitations

- Clock and peripheral configuration and the associated code generation is only supported for the STM32F4 Series using the STM32Cube Firmware library
- Power consumption calculation is only supported for the F4 and the L1 Series
- PPP and SLIPIF are configured in the LWIP library but the generated code won't have all the required link to the hardware interface

4 Revision history

Table 58. Document revision history

Date	Revision	Changes
17-Feb-2014	1	Initial release.
27-Mar-2014	2	Release for STM32CubeMX 4.1 Added *Release information for previous releases* to trace content from the previous releases. Added Cube logo
24-Apr-2014	3	Added information related to STM32CubeMX 4.2
19-Jun-2014	4	Added information related to STM32CubeMX 4.3. Added Eclipse plug-in in *Section 1.2: Host PC system requirements* Updated *Section 3.24.3: Known problems and limitations* and *Section 3.25: STM32CubeMX V4.2 release information*.
05-Aug-2014	5	Added information related to STM32CubeMX 4.3.1 as well as *Section 3.24: STM32CubeMX V4.3 and 4.3.1 release information*.
16-Sep-2014	6	Added information related to STM32CubeMX 4.4.0.
21-Oct-2014	7	Added information related to STM32CubeMX 4.5.0.
15-Jan-2015	8	Added information related to STM32CubeMX 4.6.0.
20-March-2015	9	Added information related to STM32CubeMX 4.7.0.
27-Apr-2015	10	Added information related to STM32CubeMX 4.7.1.
28-May-2015	11	Added information related to STM32CubeMX 4.8.0.
07-Jul-2015	12	Added information related to STM32CubeMX 4.9.0.
25-Aug-2015	13	Added information related to STM32CubeMX 4.10.0.
24-Sep-2015	14	Added information related to STM32CubeMX 4.10.1 minor release.
15-Oct-2015	15	Added information related to STM32CubeMX 4.11.0
27-Nov-2015	16	Added information related to STM32CubeMX 4.12.0.
03-Feb-2016	17	Added information related to STM32CubeMX 4.13.0.
03-Mar-2016	18	Added information related to STM32CubeMX 4.13.1.
16-Mar-2016	19	Added information related to STM32CubeMX 4.14.0.
19-May-2016	20	Added information related to STM32CubeMX 4.15.0.
08-Jun-2016	21	Added information related to STM32CubeMX 4.15.1.
12-Jul-2016	22	Added information related to STM32CubeMX 4.16.0.
22-Jul-2016	23	Added Table 1: STM32CubeMX 4.16.0 release summary.
30-Aug-2016	24	Added information related to STM32CubeMX 4.16.1.
06-Oct-2016	25	Added support for code generation using the HAL low-layer (LL) library.

Table 58. Document revision history (continued)

Date	Revision	Changes
21-Nov-2016	26	Added information related to STM32CubeMX 4.18.0. Updated the supported operating systems list in *Chapter 1.2: Host PC system requirements*.
10-Jan-2017	27	Added information related to STM32CubeMX 4.19.0.
27-Feb-2017	28	Added information related to STM32CubeMX 4.20.0.
24-Mar-2017	29	Added information related to STM32CubeMX 4.20.1.
05-May-2017	30	Added information related to STM32CubeMX 4.21.0.
06-Jul-2017	31	Added information related to STM32CubeMX 4.22.0.
04-Sep-2017	32	Added information related to STM32CubeMX 4.22.1.
17-Oct-2017	33	Added information related to STM32CubeMX 4.23.0.
12-Jan-2018	34	Added information related to STM32CubeMX 4.24.0.
6-Mar-2018	35	Added information related to STM32CubeMX 4.25.0.
3-May-2018	36	Added information related to STM32CubeMX 4.25.1.
31-May-2018	37	Added information related to STM32CubeMX 4.26.0.
16-Jul-2018	38	Added information related to STM32CubeMX 4.26.1.
6-Sep-2018	39	Added information related to STM32CubeMX 4.27.0.
12-Nov-2018	40	Added information related to STM32CubeMX 5.0.0.
15-Nov-2018	41	Updated *Table 4: Firmware package versions in V5.0.0*.
20-Dec-2018	42	Added information related to STM32CubeMX 5.0.1.
21-Feb-2019	43	Added information related to STM32CubeMX 5.1.0.

IMPORTANT NOTICE – PLEASE READ CAREFULLY