STM32CubeIDE release v1.0.0

Introduction

This release note is updated periodically to keep abreast of STM32CubeIDE evolution, problems and limitations. Check the STMicroelectronics support website at www.st.com/stm32softwaretools for the latest version. For the latest release summary, refer to Table 1.

Table 1. STM32CubeIDE v1.0.0 release summary

Type	Summary
Major release	• Windows®, Linux® and macOS® installers • STM32CubeMX v5.2.0 integration including MCUFinder • Integration of TrueSTUDIO® advanced functions • STM32CubeProgrammer (STM32CubeProg) CLI integration for Flash handling • ST-LINK, OpenOCD and SEGGER J-Link GDB servers

Customer support

For more information or help concerning STM32CubeIDE, contact the nearest STMicroelectronics sales office. For a complete list of STMicroelectronics offices and distributors, refer to the *www.st.com* webpage.

Software updates

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

RN0114 - Rev 1 - April 2019
For further information contact your local STMicroelectronics sales office.

www.st.com

1 General information

1.1 Overview

STM32CubeIDE is an integrated development environment (IDE) based on the ECLIPSE™ framework. It is aimed at users developing embedded software in C/C++ for the STMicroelectronics STM32 products. It uses an enhanced GNU tool chain for STM32, based on *GNU Arm Embedded*. It has an integrated version of STM32CubeMX and MCUFinder, which allows easy project configuration as well as the generation of the corresponding initialization C code through a step-by-step process. Furthermore, STM32CubeIDE integrates the command-line version of STM32CubeProgrammer (STM32CubeProg) for Flash memory handling while using the ST-LINK GDB server. This allows the STM32 device programming through debug interfaces (JTAG and SWD).

STM32CubeIDE is based on the following technology, with STMicroelectronics-specific enhancements:

- ECLIPSE™ 2019-03 and CDT version 9.7.0
- GNU Tools for STM32, based on *GNU Tools for Arm Embedded Processors 7-2018-q2-update 7.3.1 20180622 (release) [ARM/embedded-7-branch revision 261907]*
- GNU gdb (GNU Tools for STM32 7-2018-q2-update.20190328-1800) 8.1.0.20180315-git
- GNU Tools for Arm Embedded Processors 7-2018-q2-update 7.3.1 20180622 (release) [ARM/embedded-7-branch revision 261907]
- GNU gdb (GNU Tools for Arm Embedded Processors 7-2018-q2-update) 8.1.0.20180315-git
- AdoptOpenJDK Runtime Environment (build 1.8.0_202, 64-bit)
- ST-LINK_gdbserver 5.2.2, supporting ST-LINK/V2 and STLINK-V3
- OpenOCD 0.10.0+dev00021-g524e8c8

Windows® specific build tools:

- BusyBox v1.31.0.st_20190204-1549: `mkdir.exe`, `rm.exe`, `echo.exe`
- BusyBox v1.27.0.git_20170627-1617: `sh.exe`
- Make 4.2.1_st_20190204-1507: `make.exe`

Linux® specific build tools:

- Make 4.2.1_st_20190204-1510: `make.exe`

macOS® specific build tools:

- Make 4.2.1_st_20190204-1510: `make.exe`

STM32CubeIDE supports STM32 32-bit products based on the Arm® Cortex® processor.

Note:
- *ECLIPSE is a registered trademark of the Eclipse foundation.*
- *macOS® is a trademark of Apple Inc. registered in the U.S. and other countries.*
- *Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.*

arm

1.2 Host PC system requirements

Supported operating systems and architectures

- Windows® 7, 8, and 10: 32 bits (x86) and 64 bits (x64)
- Linux® (tested on Ubuntu® LTS 14.04, LTS 16.04, LTS 18.04, and Fedora® 29, 64 bits)
- macOS® 10.12 (Sierra), 10.14 (Mojave)

Note:
- *Ubuntu® is a registered trademark of Canonical Ltd.*
- *Fedora® is a trademark of Red Hat, Inc.*

1.3 Setup procedure

Refer to the *STM32CubeIDE installation guide* (UM2563) and *STM32CubeIDE quick start guide* (UM2553) available at *www.st.com*.

1.4 Licensing

STM32CubeIDE is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* software license agreement (SLA0048).

The open-source and third-party software components used in the development of STM32CubeIDE and their licenses are listed in a zip file available from the product page in STMicroelectronics *www.st.com* web site.

Table 2 provides the description of the licenses of additional components in STM32CubeIDE.

Table 2. Complementary component licenses

Name	Version	License detail
STLink-USB-Driver	-	*Image V2* software license agreement (SLA0047)
STLink-USB-Driver-lib	-	*Ultimate Liberty* software license agreement (SLA0044)
ST-LINK Server	v1.2.0-2	www.gnu.org/licenses/old-licenses/gpl-2.0.en.html
jacl	1.4.1	fossies.org/linux/jacl/docs/license.html
Tcl/Java	1.4.1	tcljava.sourceforge.net/docs/website/index.html
MigLayout	v3.7	www.miglayout.com
Velocity	v2.0	velocity.apache.org/engine/2.0/license.html
slf4j	v1.7.26	www.slf4j.org/license.html
commons-io	2.5	www.apache.org/licenses
commons-lang	3.6	www.apache.org/licenses

2 STM32CubeIDE v1.0.0 release information

2.1 Features

- Integration of STM32CubeMX that provides services for:
    - STM32 microcontroller selection
    - Pinout, clock, IP, and middleware configuration
    - Project creation and generation of the initialization code
- Based on ECLIPSE™/CDT, with support of ECLIPSE™ add-ons
- GNU C/C++ for Arm® toolchain and GDB debugger:
    - *GNU Arm Embedded*
    - GNU tools for STM32, with enhancements compared to the standard toolchain
- Additional advanced features including:
    - Build Analyzer view
    - Static Stack Analyzer view
    - CPU core, IP register, and memory views
    - Live Expressions view
    - System analysis and real-time tracing views (SWV)
    - Fault Analyzer view
    - ITM software tracing
    - SFR view
- Support of STMicroelectronics ST-LINK/V2 and STLINK-V3:
    - ST-LINK_gdbserver 5.2.2
    - OpenOCD 0.10.0+dev00021-g524e8c8
- Support of SEGGER J-Link
    - SEGGER J-Link gdbserver v6.44c
- Import of projects from Atollic® TrueSTUDIO® and AC6 System Workbench for STM32

2.2 Known problems and limitations

- Changing from HAL to LL driver or vice versa in the ioc editor does not save the ioc file.
- The [**Run**] button is not yet implemented and has therefore been hidden from the toolbar menu and *Run* menu.
- Te creation of static libraries with the option *add libraries as reference* leads to the unintented generation of the `Drivers` folder.
- The `USE_HAL_DRIVER` symbol is not properly removed when switching from HAL to LL driver, which can cause build failure.
- Creating BOARD projects with *Code generator options == add necessary library files as reference..* and *Initialise all peripherals with default settings* can cause build errors if BOARD depends on the USB library.
- The user cannot change Application Structure from Basic to Advanced or vice versa without losing user code.
- Importing the ioc file created by stand-alone STM32CubeMX is not supported.
- Editor hyperlinks sometimes jump to declaration instead of definition.
- It is not possible to open an SW4STM32 or TrueSTUDIO® workspace with STM32CubeIDE. Refer to *Migration guide from TrueSTUDIO® to STM32CubeIDE* (UM2578) and *Migration guide from System Workbench to STM32CubeIDE* (UM2579).
- The font size menu is not available for ioc editor content.
- The [**Help**]>[**Data refresher**] can be invoked several times without pop-up dialog.
- The uninstaller sometimes does not work on non-English Windows® installations.
- Some Linux® installers install a few packages before the license agreement has been accepted.

- The macOS® installer displays incompatible version dialog when installing the stlink-server package. This can safely be ignored.
- Some STM32CubeMX pop-up dialogs are not opened in front of the STM32CubeIDE workbench on all OS.
- On macOS®, the ioc editor does not show the *Peripheral categories* frame on the left side by default.
- STM32CubeIDE does not support switching from one MCU to another once the project is created.
- The Additional Software UI in the ioc editor is not updated after software install until the user closes and opens STM32CubeIDE again.
- Opening one ioc file and trying to open a second ioc-file while the first one loads causes the IDE to crash.
- Anti-virus tools may be sensitive to STM32CubeIDE and bundled exe files despite the addition of vendor certificates since it is not yet deployed widely.
- STM32CubeIDE SWV selecting large amounts of data to copy to the clipboard may crash STM32CubeIDE.
- Conditional breakpoints do not work.
- The project importer for SW4STM32 cannot import all settings in projects from very old versions (older than 2.0).

Revision history

Table 3. Document revision history

Date	Version	Changes
19-Apr-2019	1	Initial release.

Contents

List of tables

IMPORTANT NOTICE – PLEASE READ CAREFULLY