

STMicroelectronics

# Installation guide

Bootcamp STM32

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## About this procedure:

The purpose of this procedure is step-by-step configuration for the STM32 bootcamp. At the end of this procedure, you will be able to connect any STM32 boards to your ST's laptop but also use STM32CubeIDE under proxy rules.

## Prerequisite:

### Hardware:

Personal laptop or ST's laptop

### Software:

Windows7 (or higher)

*(Linux distribution or macOS won't be supported during the bootcamp)*

TeraTerm or equivalent.

### IT Flow requirements (for ST's laptop only):

Administration right to install the STM32CubeIDE software (Request in flow)

Unblock USB ports on your PC (Request in flow)

Internet access request (Request in flow)

Extended internet communication http proxy (Request in flow), ajouter cette adresse ➔ appgw.gnb.st.com

## Step1 Tools installation:

Teach how to install the main tools for programming the STM32:

- STM32CubeMX, a tool to set and graphically program all STM32 boards and products.
- STM32CubeIDE, the free IDE to develop the STM32 software.
- STM32CubeProg, a tool to load/spy software in the STM32 memory.
- STM32CubeL1, an STM32L1 MCU software package with embedded examples.

Having completed this tutorial, you should be able to open the STM32 professional ecosystem.

You should also manage to bring applications from the ecosystem onto the NUCLEO board.

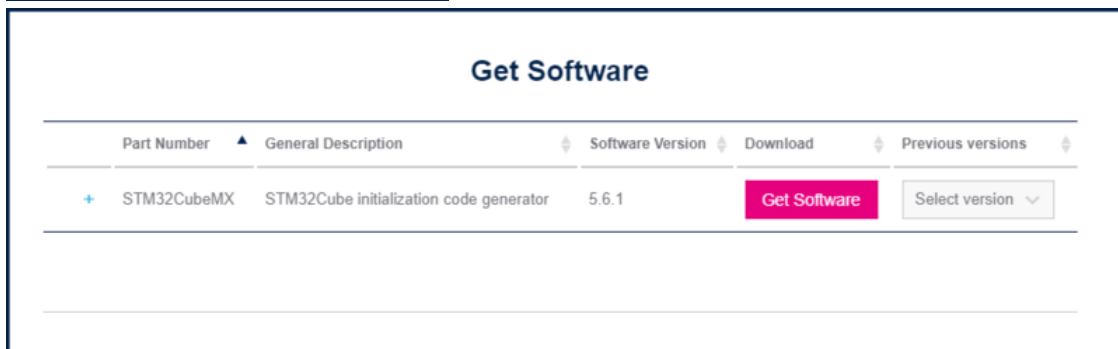
## Install STM32CubeMX:



10mins

STM32CubeMX is the tool to graphically program the STM32.

- Register on [www.st.com](http://www.st.com) website.
- Download STM32CubeMX



- Unzip the downloaded file and launch the SetupSTM32CubeMX-xxx corresponding to your OS.

STM32CubeMX is now installed on your computer.

## Install STM32CubeIDE:



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STM32CubeIDE is the Integrated Development Environment to develop STM32 software.

- Register on [www.st.com](http://www.st.com) website (if you haven't already).
- Download STM32CubeIDE.

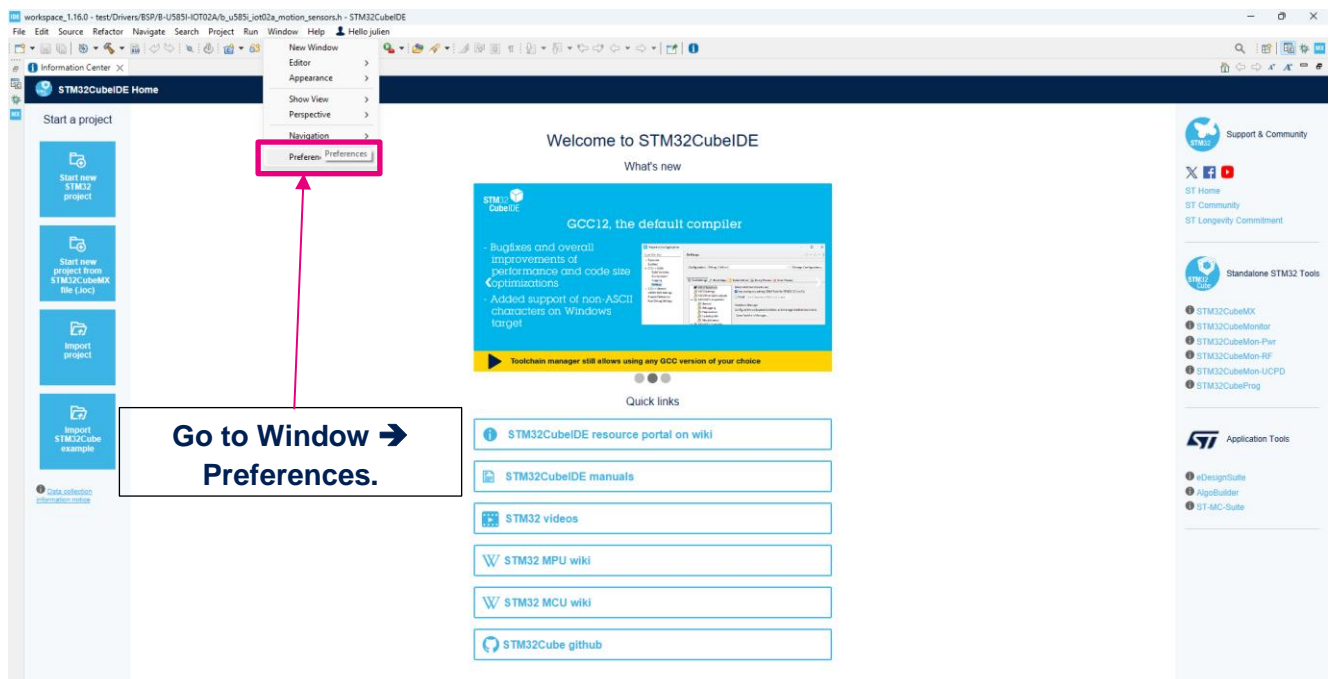
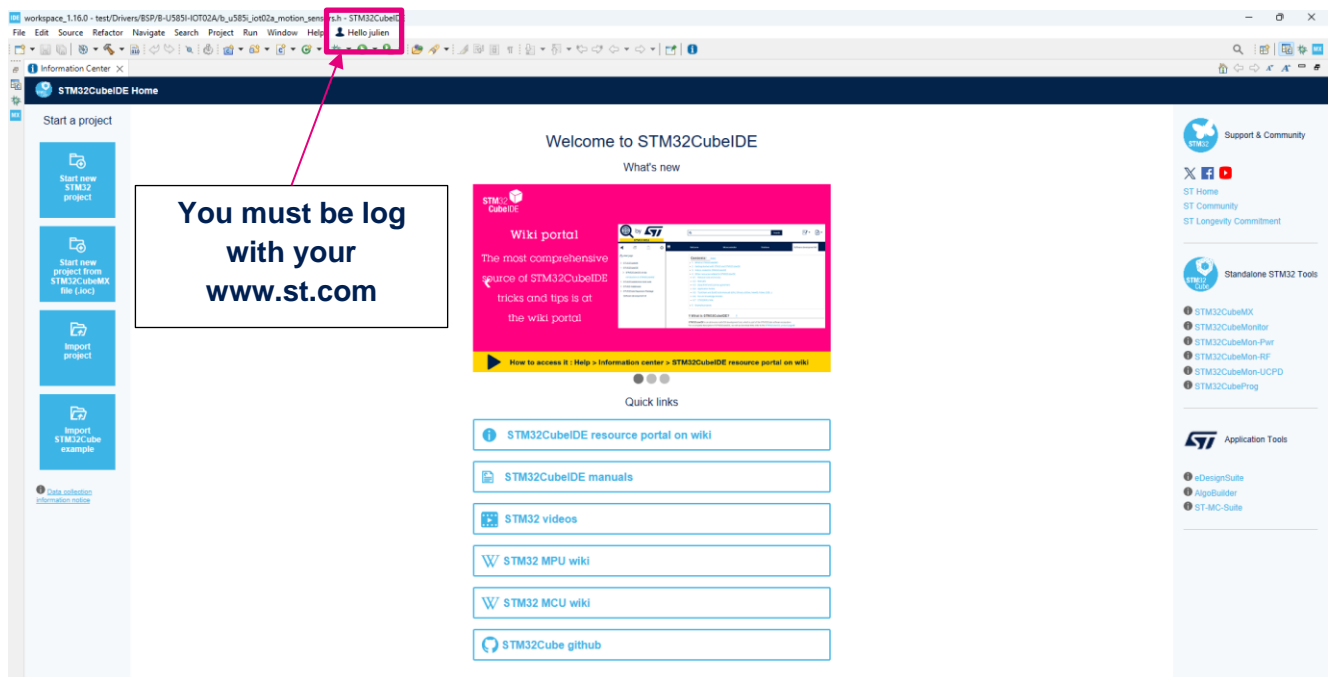
Get Software				
Part Number	General Description	Software Version	Download	Previous versions
STM32CubeIDE-DEB	STM32CubeIDE Debian Linux Installer	1.3.0	<a href="#">Download</a>	<a href="#">Select version</a>
STM32CubeIDE-Lnx	STM32CubeIDE Generic Linux Installer	1.3.0	<a href="#">Download</a>	<a href="#">Select version</a>
STM32CubeIDE-Mac	STM32CubeIDE macOS Installer	1.3.0	<a href="#">Download</a>	<a href="#">Select version</a>
STM32CubeIDE-RPM	STM32CubeIDE RPM Linux Installer	1.3.0	<a href="#">Download</a>	<a href="#">Select version</a>
STM32CubeIDE-Win	STM32CubeIDE Windows Installer	1.3.0	<a href="#">Download</a>	<a href="#">Select version</a>

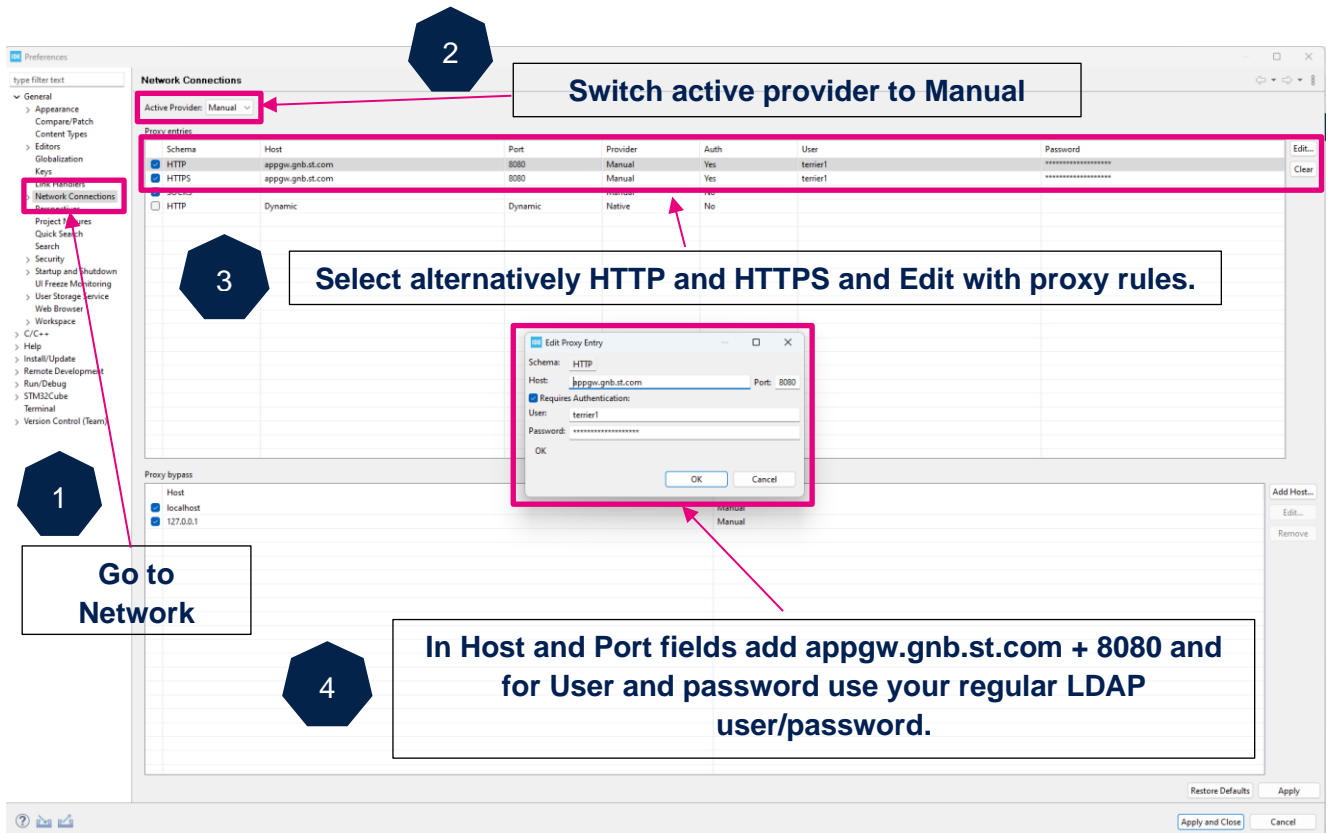
- Unzip the downloaded file and launch the STM32CubeIDE-xxx corresponding to your OS.

STM32CubeIDE is now installed on your computer, enjoy!

## STM32CubeIDE proxy configuration only for ST's laptop:

The step here is to configure the proxy rules to be able to connect your laptop to the ST's server to recover the STM32CubeL1 firmware.





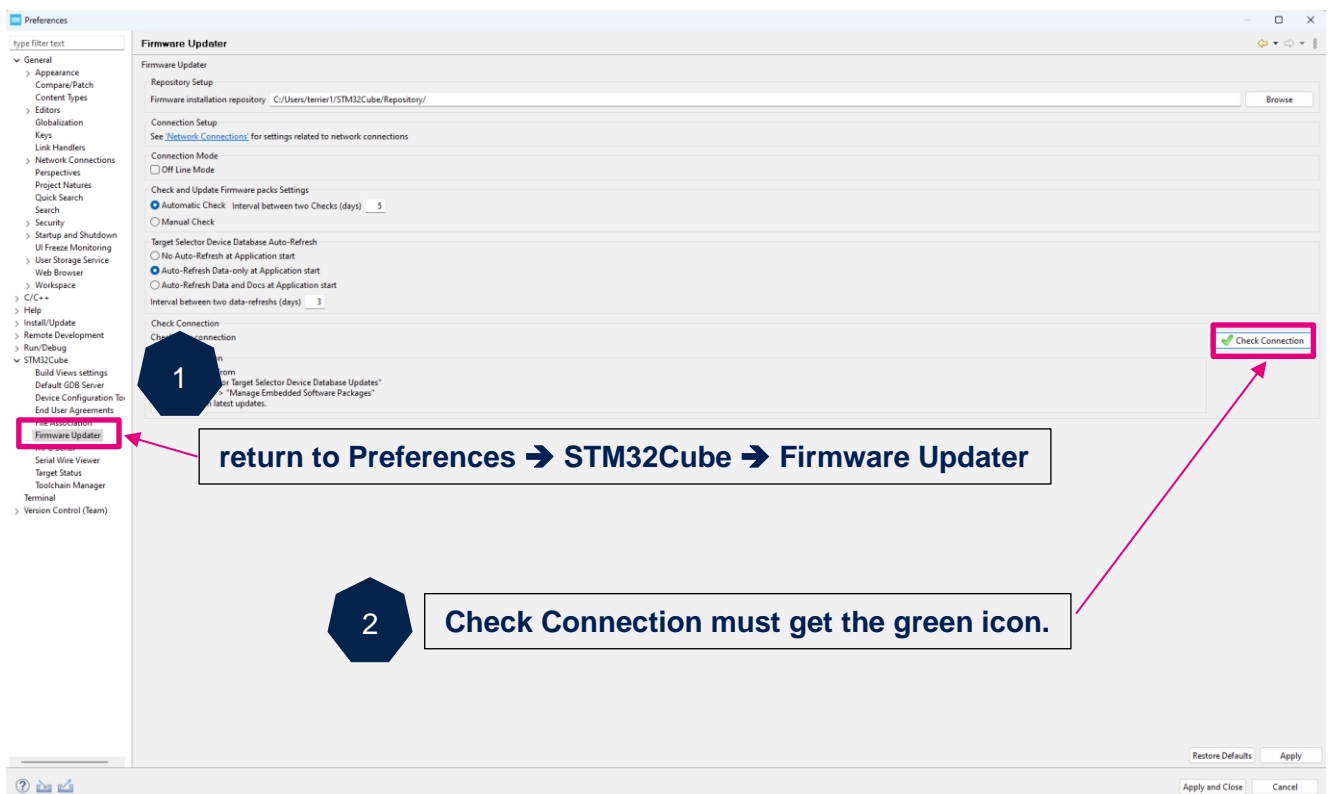
**1** Go to Network

**2** Switch active provider to Manual

**3** Select alternatively HTTP and HTTPS and Edit with proxy rules.

**4** In Host and Port fields add appgw.gnb.st.com + 8080 and for User and password use your regular LDAP user/password.

Schema	Host	Port	Provider	Auth	User	Password	Edit...
<input checked="" type="checkbox"/> HTTP	appgw.gnb.st.com	8080	Manual	Yes	tenier1	*****	Clear
<input checked="" type="checkbox"/> HTTPS	appgw.gnb.st.com	8080	Manual	Yes	tenier1	*****	
<input type="checkbox"/> HTTP	Dynamic	Dynamic	Native	No			



**1** return to Preferences → STM32Cube → Firmware Updater

**2** Check Connection must get the green icon.

Check Connection



## Workaround ST proxy if the first case doesn't work:

Find proxy and port:

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.4894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Jean-Baptiste OTTOU>netsh winhttp show proxy

Current WinHTTP proxy settings:

    Proxy Server(s) : http://gateway.zscaler.net:80
    Bypass List      : <local>;*.st.com;go.microsoft.com;definitionupdates.microsoft.com;www.microsoft.com;winatp-gw-neu
.microsoft.com;winatp-gw-weu.microsoft.com;*.wdcp.microsoft.com;*.wdcpalt.microsoft.com;*.wd.microsoft.com
```

HOST	PORT
<a href="http://gateway.zscaler.net">http://gateway.zscaler.net</a>	80

use this host + port = 80 if appgw.gnb.st.com doesn't work.

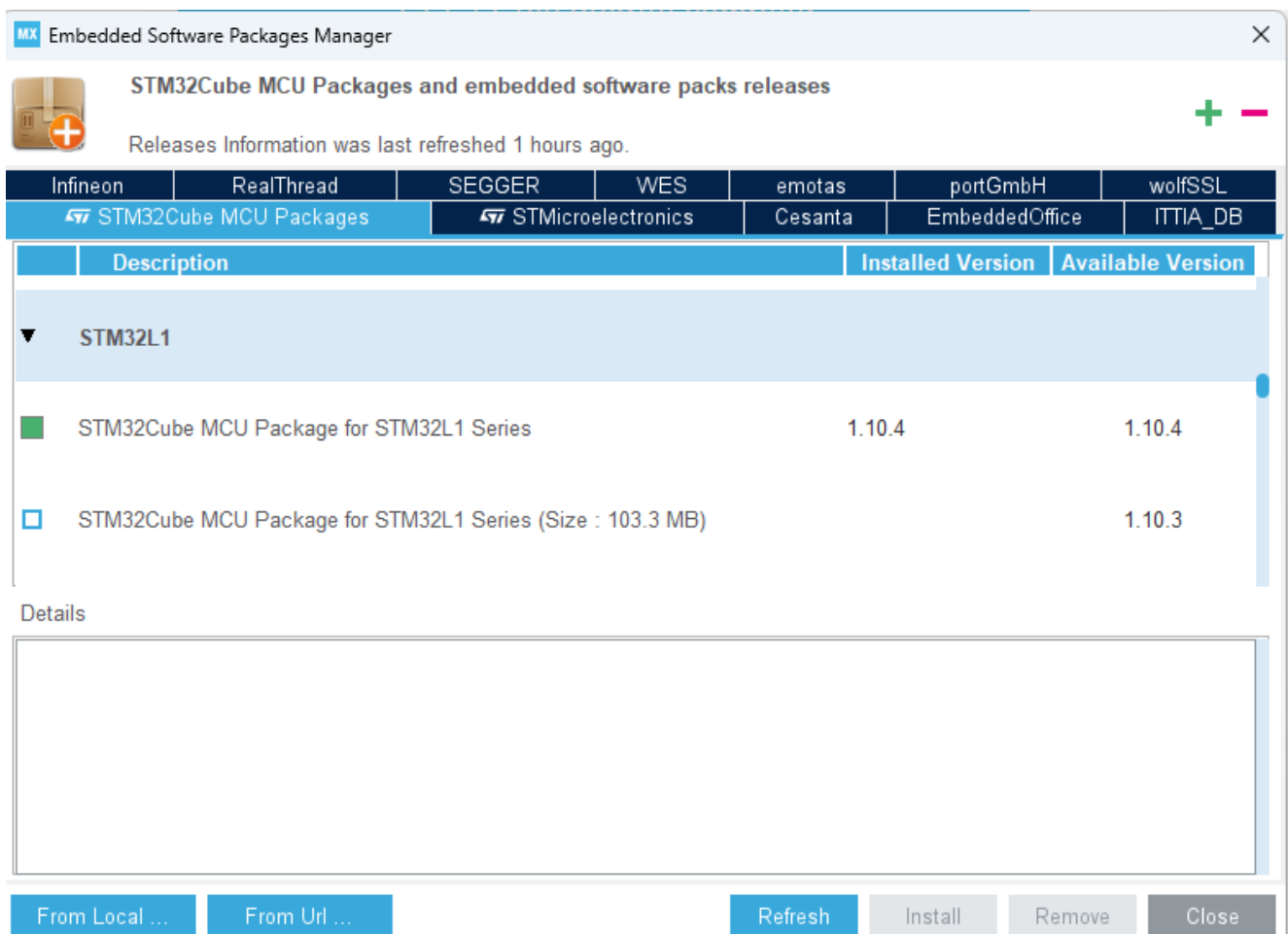
## Download STM32CubeL1 Firmware package:



10mins

### STM32Cube MCU Package for STM32L1 Series.

- Open STM32CubeMX
- Click Manage embedded software packages in Help.
- Check the last STM32CubeL1 release version.
- Click Install (it may take a long time)



The screenshot shows the 'Embedded Software Packages Manager' window. It displays a table of available packages for the STM32L1 series. The table has columns for 'Description', 'Installed Version', and 'Available Version'. Two packages are listed: 'STM32Cube MCU Package for STM32L1 Series' (version 1.10.4) and 'STM32Cube MCU Package for STM32L1 Series (Size : 103.3 MB)' (version 1.10.3). The 'Details' section is currently empty.

Description	Installed Version	Available Version
STM32Cube MCU Package for STM32L1 Series	1.10.4	1.10.4
STM32Cube MCU Package for STM32L1 Series (Size : 103.3 MB)		1.10.3

- Now STM32L1 libraries and examples are installed at the following location → C:\Users\name\STM32Cube\Repository\STM32Cube\_FW\_L1\_Vx.xx.x

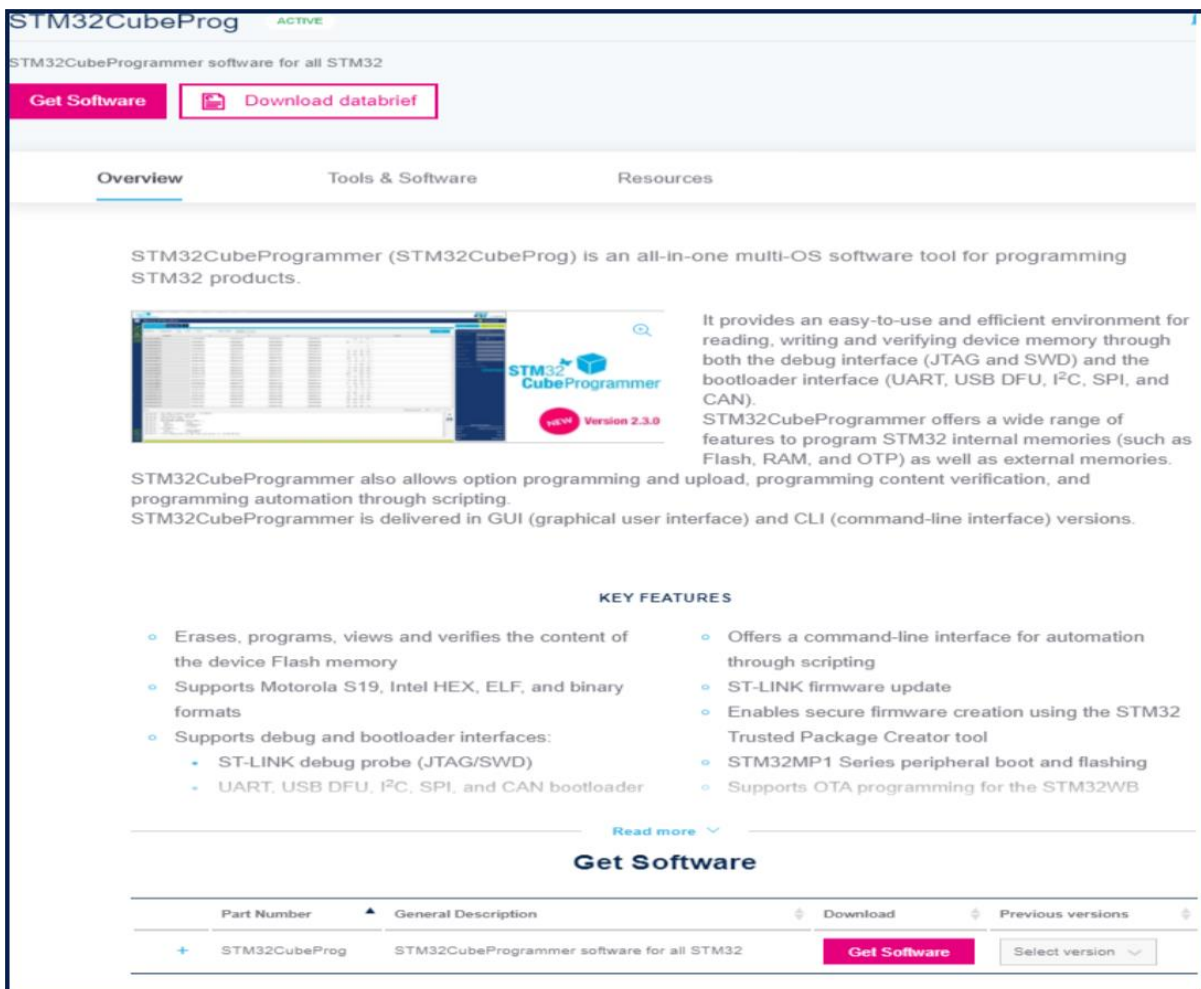
## Install STM32CubeProg:



5mins

STM32CubeProgrammer is a tool load/spy software in STM32.

- Download STM32CubeProg



The screenshot shows the STM32CubeProg software download page. At the top, there's a header with the STM32CubeProg logo and a status indicator 'ACTIVE'. Below the header, there are two buttons: 'Get Software' and 'Download databrief'. The main content area has three tabs: 'Overview', 'Tools & Software', and 'Resources'. The 'Overview' tab is selected, showing a description of the software: 'STM32CubeProgrammer (STM32CubeProg) is an all-in-one multi-OS software tool for programming STM32 products.' It includes a screenshot of the software interface and a 'VIEW Version 2.3.0' button. The text describes the software's capabilities: 'It provides an easy-to-use and efficient environment for reading, writing and verifying device memory through both the debug interface (JTAG and SWD) and the bootloader interface (UART, USB DFU, I<sup>2</sup>C, SPI, and CAN). STM32CubeProgrammer offers a wide range of features to program STM32 internal memories (such as Flash, RAM, and OTP) as well as external memories. STM32CubeProgrammer also allows option programming and upload, programming automation through scripting. STM32CubeProgrammer is delivered in GUI (graphical user interface) and CLI (command-line interface) versions.'

**KEY FEATURES**

- Erases, programs, views and verifies the content of the device Flash memory
- Supports Motorola S19, Intel HEX, ELF, and binary formats
- Supports debug and bootloader interfaces:
  - ST-LINK debug probe (JTAG/SWD)
  - UART, USB DFU, I<sup>2</sup>C, SPI, and CAN bootloader
- Offers a command-line interface for automation through scripting
- ST-LINK firmware update
- Enables secure firmware creation using the STM32 Trusted Package Creator tool
- STM32MP1 Series peripheral boot and flashing
- Supports OTA programming for the STM32WB

[Read more](#)

**Get Software**

Part Number	General Description	Download	Previous versions
STM32CubeProg	STM32CubeProgrammer software for all STM32	<a href="#">Get Software</a>	<a href="#">Select version</a>

- Unzip the downloaded file and launch the SetupSTM32CubeProgrammer-xxx.exe corresponding to your OS and follow the instructions.

STM32CubeProg are now installed on your computer.