Embedded Systems CS 397 TRIMESTER 3, AY 2021/22

Software Installation V2

Dr. LIAW Hwee Choo

Department of Electrical and Computer Engineering
DigiPen Institute of Technology Singapore
HweeChoo.Liaw@DigiPen.edu

1. CS397_Software_Part_2-3.zip

Name	^	Date modified	Туре	Size
BUSMASTER_Installer_Ver_	3.2.2.24.exe	23-Jun-22 9:33 PM	Application	72,525 KB
en.st-stm32cubeide_1.10.0)_12671_20220627_1643_x86_64.exe.zip	01-Jul-22 1:55 PM	Compressed (zipp	858,411 KE
Ref_11-2_RN0114_Release	Note_STM32CubelDE Release v1.9.0_R16_Feb2022.pdf	04-May-22 1:17 PM	Adobe Acrobat D	330 KE
Ref_11-2_RN0114_Release	Note_STM32CubeIDE Release v1.10.0_R17_Jun2022.pdf	04-Jul-22 4:42 PM	Adobe Acrobat D	516 KB
Ref_11-6_UM2609_STM320	CubelDE_User_Guide_R5_Nov2021.pdf	04-May-22 1:11 PM	Adobe Acrobat D	23,285 KB
Ref_11-6_UM2609_STM320	CubelDE_User_Guide_R6_Jun2022.pdf	04-Jul-22 4:51 PM	Adobe Acrobat D	23,858 KB

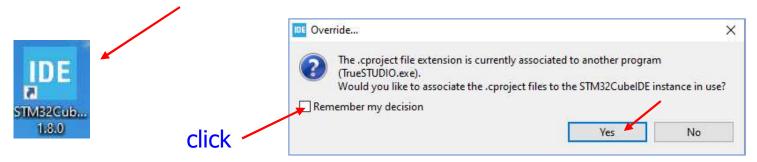
The latest STM32F7 MCU package

2. stm32cube_fw_f7_v1170.zip

- 1. The Development Software STM32CubeIDE
- **STM32CubeIDE** is an all-in-one multi-OS development tool, which is part of the STM32Cube software ecosystem.
- STM32CubeIDE is an advanced C/C++ development platform with peripheral configuration, code generation, code compilation, and debug features for STM32 microcontrollers. It is based on the ECLIPSE CDT framework and GCC toolchain for the development, and GDB for the debugging.
 Eclipse CDT: (C/C++ Development Tooling)
- https://www.st.com/en/development-tools/stm32cubeide.html
 Windows: en.st-stm32cubeide_1.10.0_12671_20220627_1643_x86_64.exe.zip
 Get Software

		Part Number	General Description	Supplier 💠	Download	All versions
	+	STM32CubeIDE-DEB	STM32CubeIDE Debian Linux Installer	ST	Get latest	Select version >
	+	STM32CubelDE-Lnx	STM32CubeIDE Generic Linux Installer	ST	Get latest	Select version V
=	+	STM32CubelDE-Mac	STM32CubeIDE macOS Installer	ST	Get latest	Select version ~
	+	STM32CubelDE-RPM	STM32CubeIDE RPM Linux Installer	ST	Get latest	Select version V
Liaw Hwee	+	STM32CubelDE-Win	STM32CubeIDE Windows Installer	ST	Get latest	Select version V

- Create folders C:\STM32CubeIDE\Repository and C:\STM32_CS397
- Unzip and run "st-stm32cubeide_1.10.0_12671_20220627_1643_x86_64.exe"
 to install it with default settings
- Run STM32CubeIDE, select workspace: C:\STM32_CS397, and click "Launch"





Release note will be displayed in the first run

RN0114

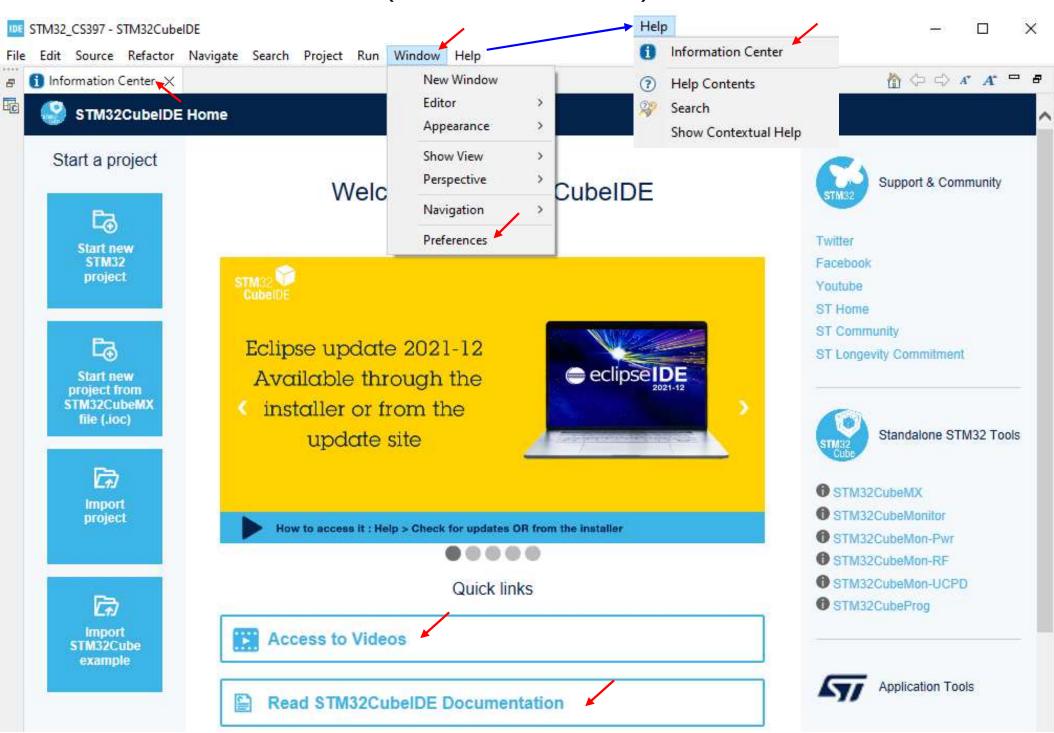
Release note

STM32CubeIDE release v1.10.0

Introduction

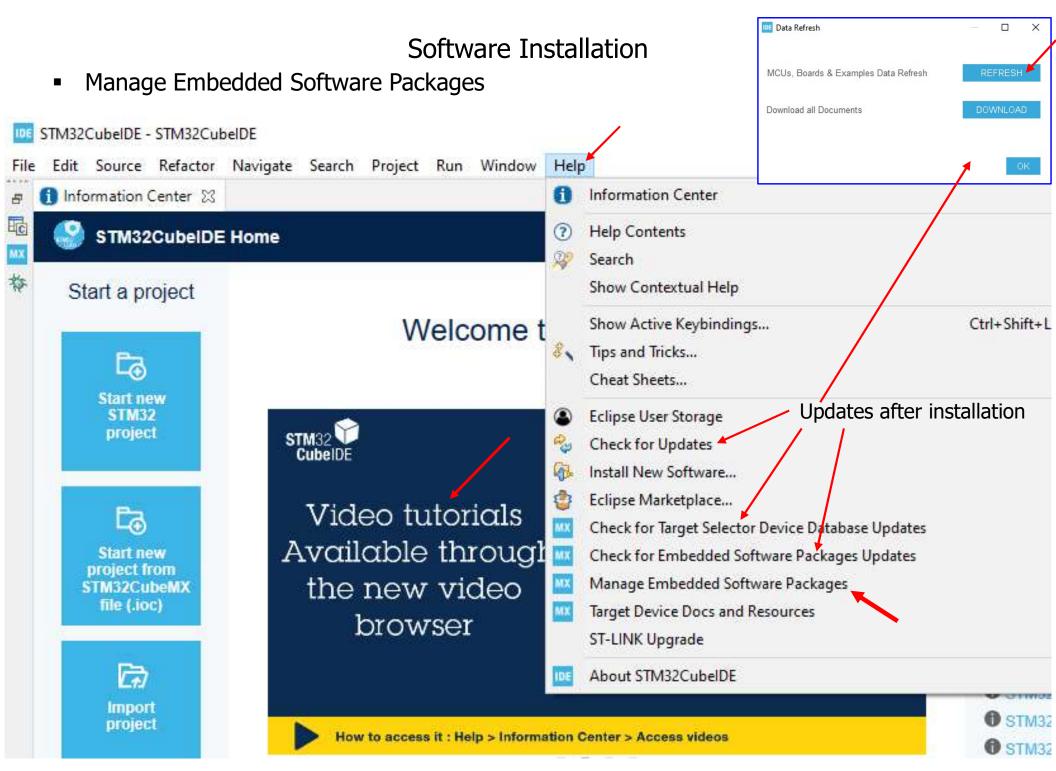
This release note is updated periodically to keep abreast of STM32CubeIDE evolution, problems, and limitations. Check the STMicroelectronics website at www.st.com/stm32softwaretools for the latest version. For the latest release summary, refer to

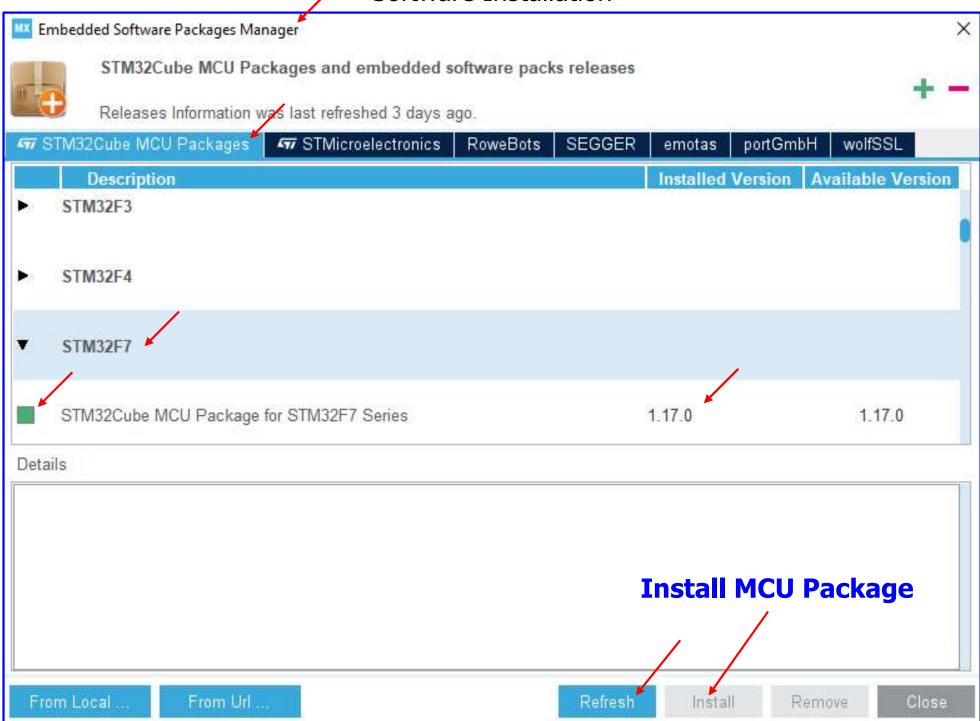
Select: Window -> Preferences (for firmware installation)



Liaw Hwee Choo, June 2022.

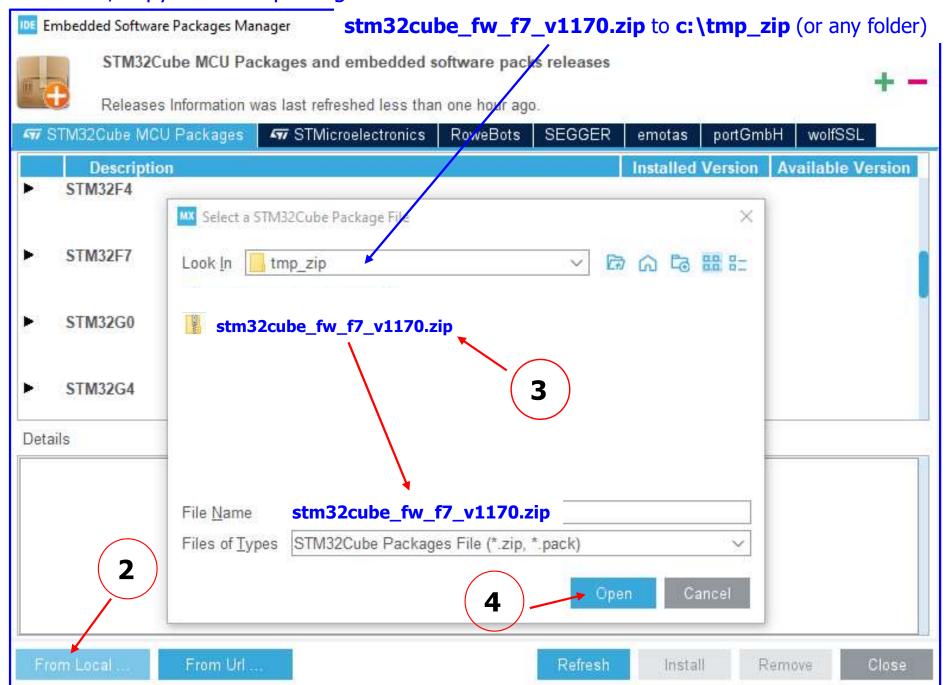
C:\STM32CubeIDE\Repository Specify Firmware Installation Repository Preferences ⟨⇒ ▼ □⟩ ▼ type filter text Firmware Updater > General Firmware Updater > C/C++ Repository Setup > Help > Install/Update Firmware installation repository | C:\STM32CubelDE\Repository Browse > Remote Development > Run/Debug Connection Setup ✓ STM32Cube See 'Network Connections' for settings related to network connections Device Configuration To-Connection Mode **End User Agreements** Off Line Mode File Association Firmware Updater Check and Update Firmware packs Settings MPU Serial Automatic Check Interval between two Checks (days) Serial Wire Viewer Target Status Manual Check Toolchain Manager Target Selector Device Database Auto-Refresh SWTChart Extensions O No Auto-Refresh at Application start Terminal Auto-Refresh Data-only at Application start > Version Control (Team) Auto-Refresh Data and Docs at Application start Interval between two data-refreshs (days) 3 Check Connection Check your connection Check Connection Restore Defaults Apply > Apply and Close Cancel





 Or, install STM32CubeIDE MCU Package Locally First, copy the MCU packages to folders:





- 2. Use J-Link on-board instead of ST-Link on-board with the ST hardware via USB
- The steps for converting the ST-Link on-board to a J-Link on-board are:
 - Make sure that the ST-Link USB drivers (STSW-LINK009) are installed.

Download: https://www.st.com/en/development-tools/stsw-link009.html

Unzip en.stsw-link009.zip, and run "stlink_winusb_install.bat"

- Make sure that the J-Link software package V5.12b or later

(JLink_Windows_V766a_x86_64.exe) is installed (default settings).

Download: https://www.segger.com/downloads/jlink/

Obtain the SEGGER J-Link software package (STLinkReflash_190812.zip)

Download: https://www.segger.com/downloads/jlink#STLink_Reflash

- Unzip and start the **STLinkReflash.exe** utility
- Agree to the license terms
- Connect ST-Link on-board to PC
- Select an option: "Upgrade to J-Link", "Upgrade J-Link Firmware", or "Restore ST-Link",

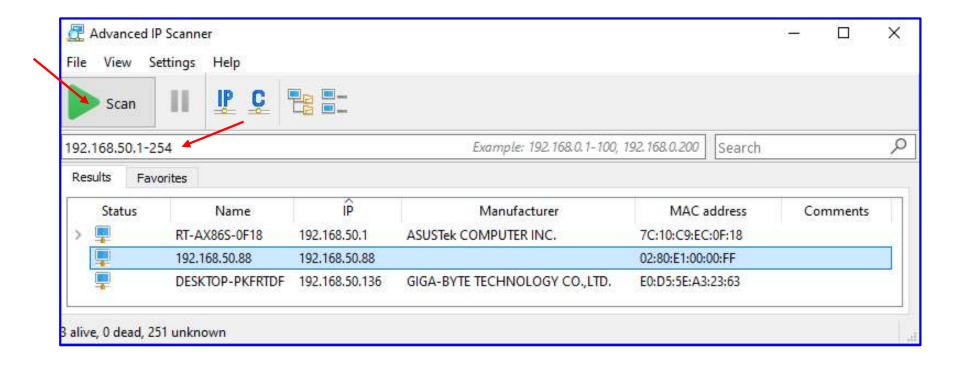
10

- Wait for operation to complete

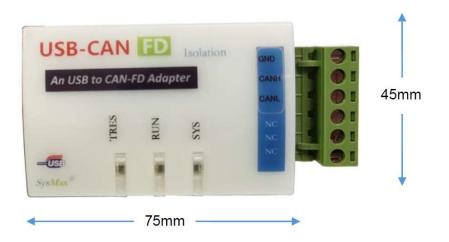
Info: https://www.segger.com/products/debug-probes/j-link/models/other-j-links/st-link-on-board/
Liaw Hwee Choo, June 2022.

- 3. Other Software (1/2)
- RealTerm A serial terminal for engineering and debugging
 - https://sourceforge.net/projects/realterm/files/Realterm/2.0.0.70/
 - Realterm_2.0.0.70_Signed_Wrapper_setup.exe
- Notepad++ A free source code editor
 - https://notepad-plus-plus.org/downloads/
 - npp.8.4.1.Installer.x64.exe
- Sumatra PDF A free PDF, eBook (<u>ePub</u>, <u>Mobi</u>), XPS, DjVu, <u>CHM</u>, <u>Comic Book</u> (CBZ and CBR) reader for Windows
 - https://www.sumatrapdfreader.org/download-free-pdf-viewer.html
 - SumatraPDF-3.4.3-64-install.exe
- 7-Zip A file archiver with a high compression ratio
 - https://www.7-zip.org/
 - 7z2107-x64.exe
- SystemView An application that performs system analysis and verification of embedded systems
 - https://www.segger.com/downloads/systemview/
 - SystemView_Windows_V332_x64.exe
- **EchoTool** Command line echo server and client for Windows
 - https://github.com/PavelBansky/EchoTool/
 - echotool.exe
- htmlgen A 'makefsdata' tool to create C code suitable for httpd for given html pages (or other files) in a directory
 - https://github.com/fetisov/lrndis/tree/master/makefsdata
 - **htmlgen.exe** (in Irndis-master.zip)

- 3. Other Software (2/2)
- Advanced IP Scanner Scan a network to obtain IP addresses
 - https://www.advanced-ip-scanner.com/
 - Advanced_IP_Scanner_2.5.4594.1.exe



4. USB-CAN FD adapter/analyzer







BM-USB-CANFD-X2

- Install BUSMASTER_Installer_Ver_3.2.2.1.exe with default settings
 Or, install (note that the software below is not tested)
- Install BUSMASTER_Installer_Ver_3.2.2.24.exe with default settings

5. STM32 Online Training

STM32 Education

https://www.st.com/content/st_com/en/support/learning/stm32-education.html

STM32 Online Training

https://www.st.com/content/st_com/en/support/learning/stm32-education/stm32-online-training.html

STM32 MOOCs (Massive Open Online Courses)

https://www.st.com/content/st_com/en/support/learning/stm32-education/stm32-moocs.html

STM32CubeMX & CubeHAL basics MOOC

https://www.st.com/content/st_com/en/support/learning/stm32-education/stm32-moocs/stm32cubemx-and-cubeHhal-basics.html

STM32H7 Online training

https://www.st.com/content/st_com/en/support/learning/stm32-education/stm32-online-training/stm32h7-online-training.html