Embedded Systems

CS 397

TRIMESTER 3, AY 2021/22

Software Installation V2

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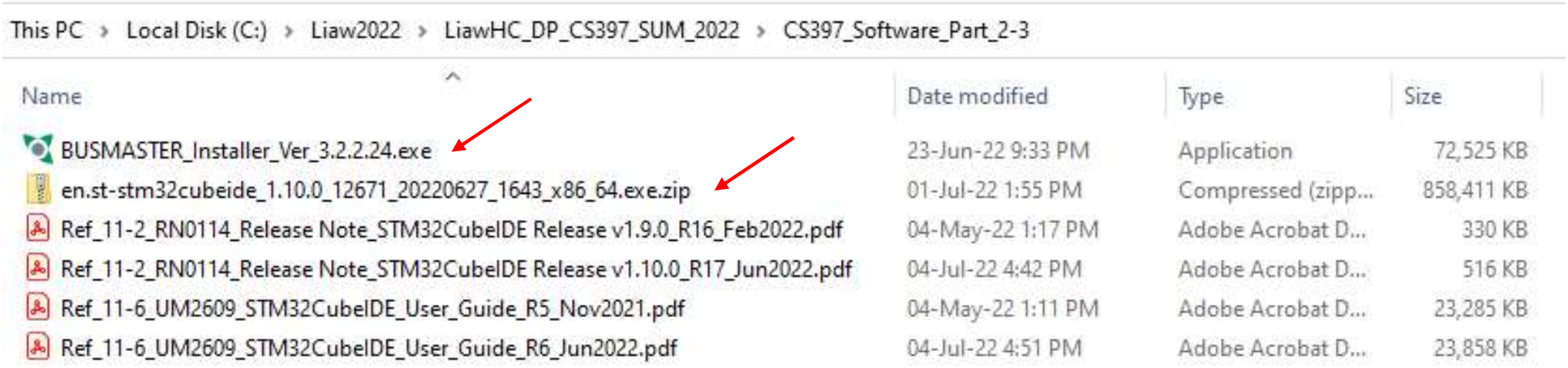
Software Installation

1. CS397_Software_Part_2-3.zip



The latest STM32F7 MCU package

2. stm32cube_fw_f7_v1170.zip

Software Installation

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

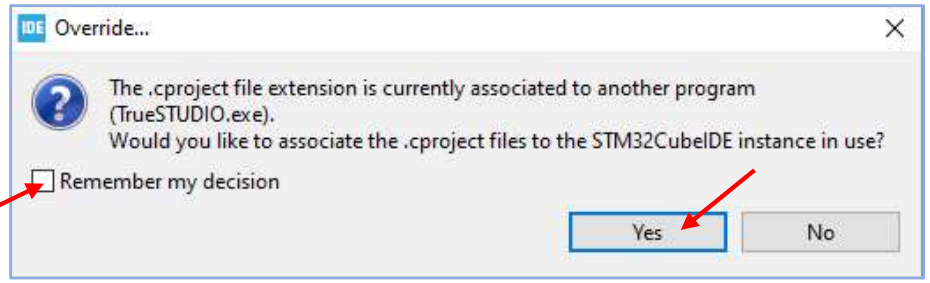
	Part Number	General Description	Supplier	Download	All versions
+	STM32CubeIDE-DEB	STM32CubeIDE Debian Linux Installer	ST	Get latest	Select version
+	STM32CubeIDE-Lnx	STM32CubeIDE Generic Linux Installer	ST	Get latest	Select version
+	STM32CubeIDE-Mac	STM32CubeIDE macOS Installer	ST	Get latest	Select version
+	STM32CubeIDE-RPM	STM32CubeIDE RPM Linux Installer	ST	Get latest	Select version
+	STM32CubeIDE-Win	STM32CubeIDE Windows Installer	ST	Get latest	Select version

Software Installation

- 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"

work folder

click



Release note will be displayed in the first run

life.augmented

RN0114

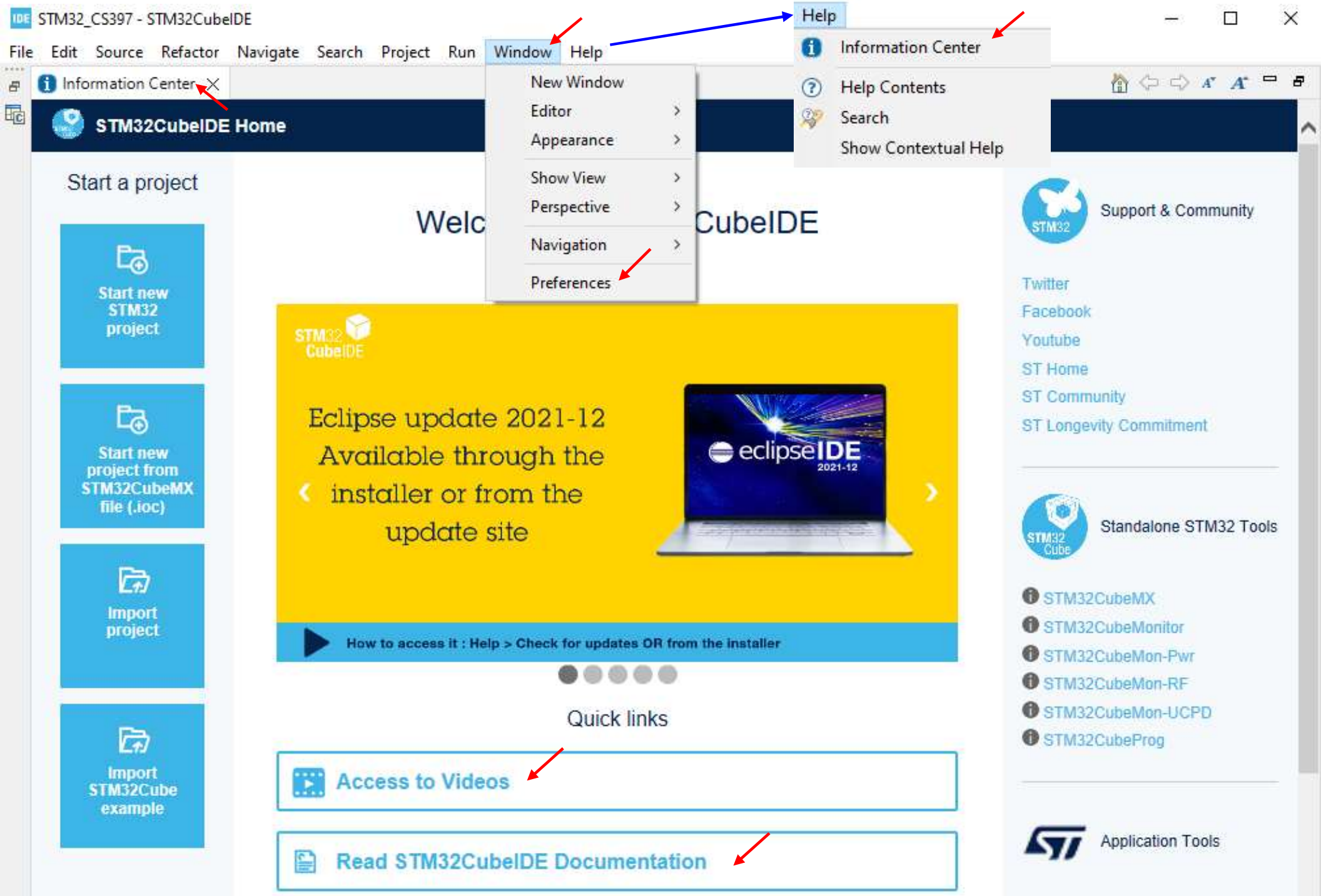
Release note

STM32CubeIDE release v1.10.0

Introduction

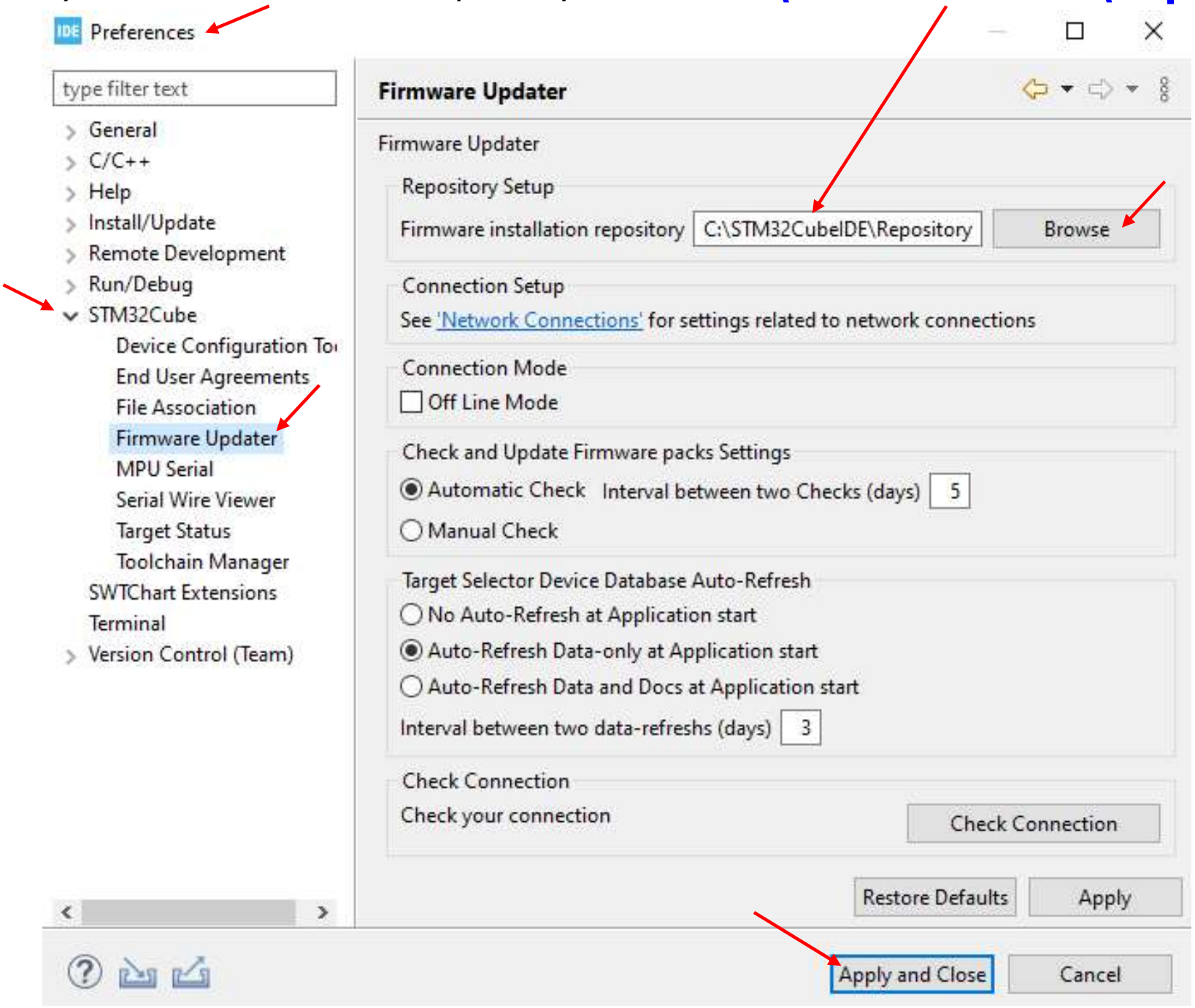
This release note is updated periodically to keep abreast of STM32CubeIDE evolution, problems, and limitations. Check the STMicroelectronics website at www.st.com/stm32softwaretools for the latest version. For the latest release summary, refer to

- Select: Window -> Preferences (for firmware installation)



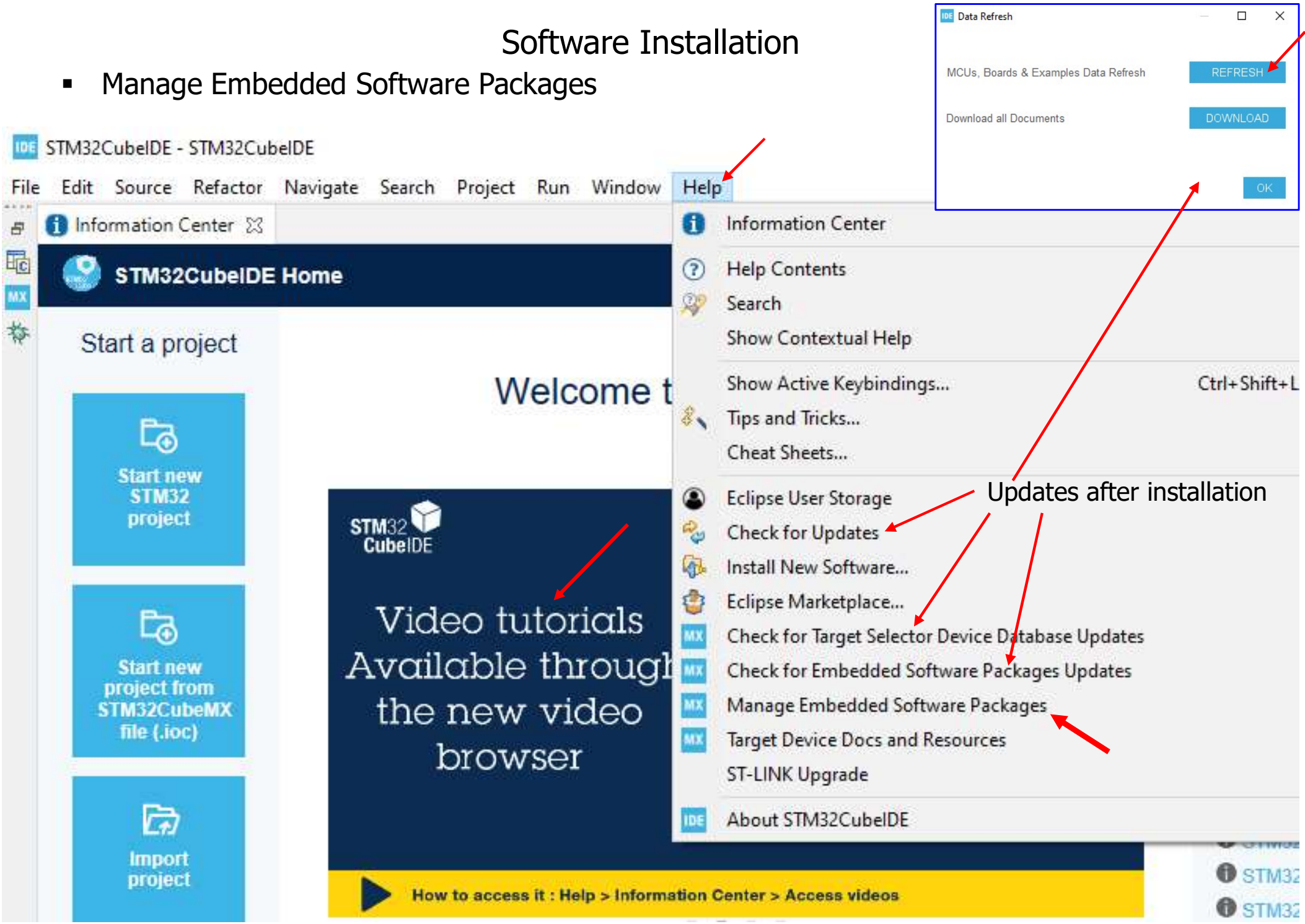
Software Installation

- Specify Firmware Installation Repository **C:\STM32CubeIDE\Repository**

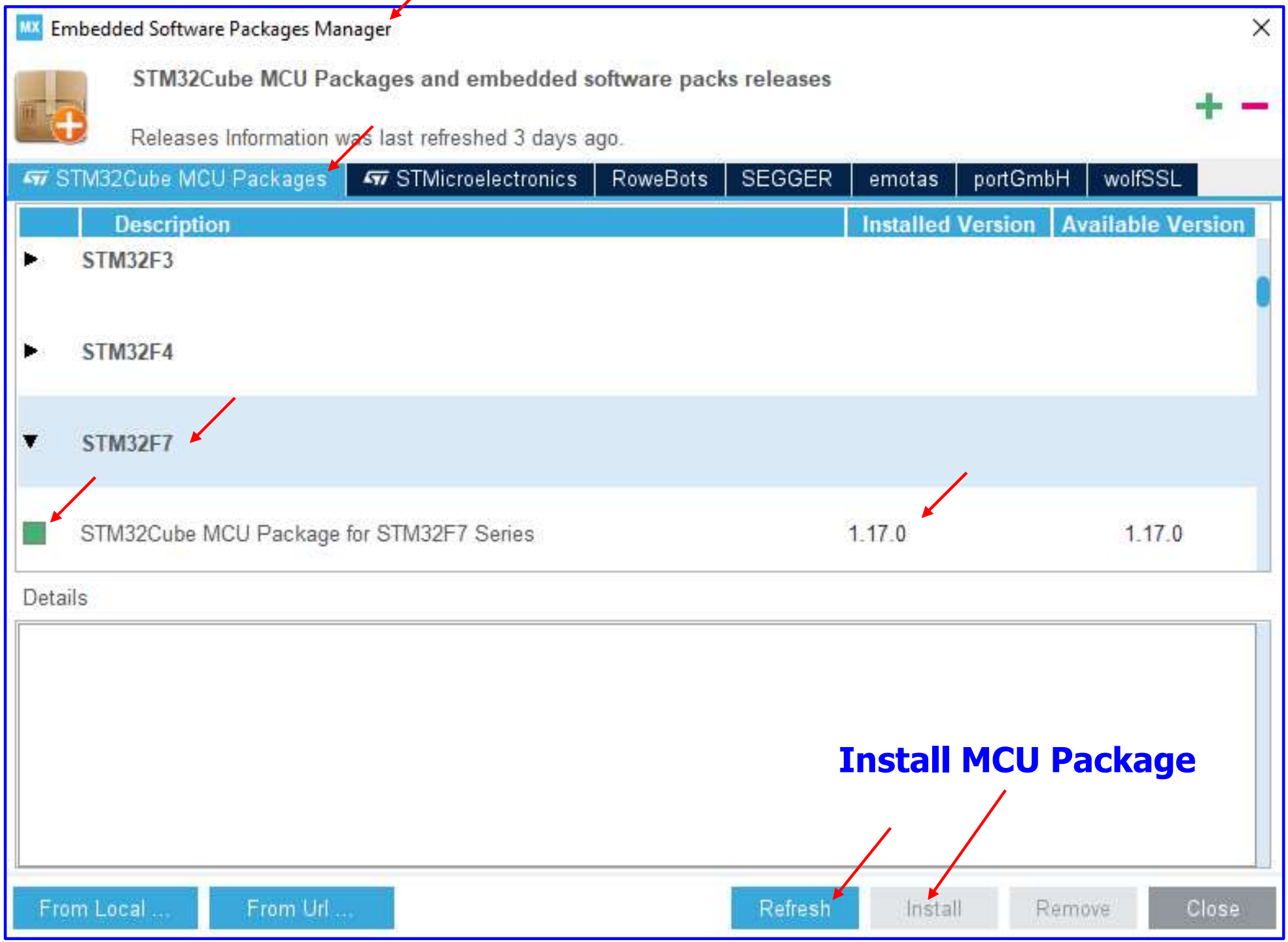


Software Installation

- Manage Embedded Software Packages



Software Installation

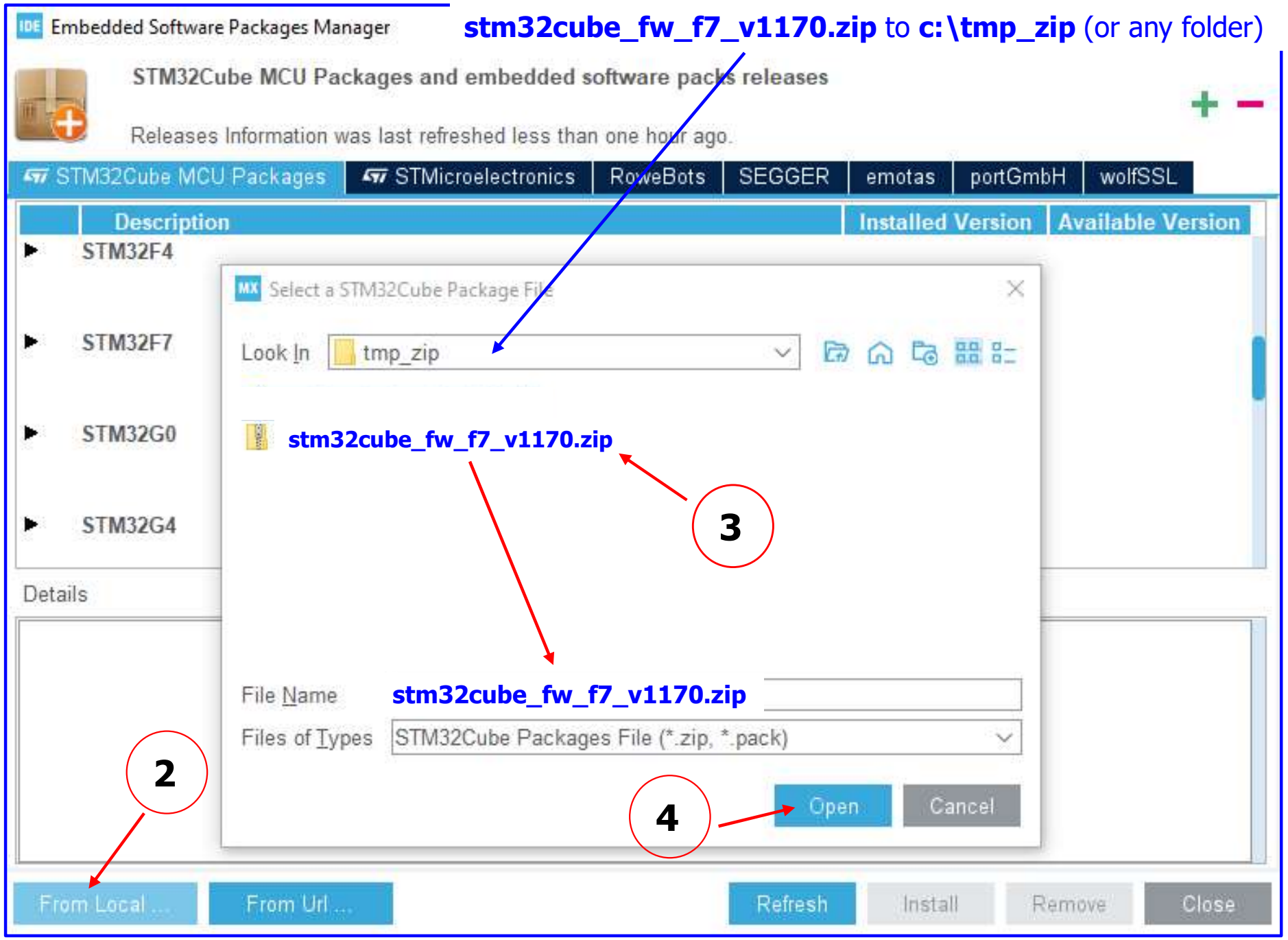


- Or, install STM32CubeIDE MCU Package Locally

  First, copy the MCU packages to folders:

1

(do not unzip the files)



Software Installation

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",
  - Wait for operation to complete

Info: https://www.segger.com/products/debug-probes/j-link/models/other-j-links/st-link-on-board/

Software Installation

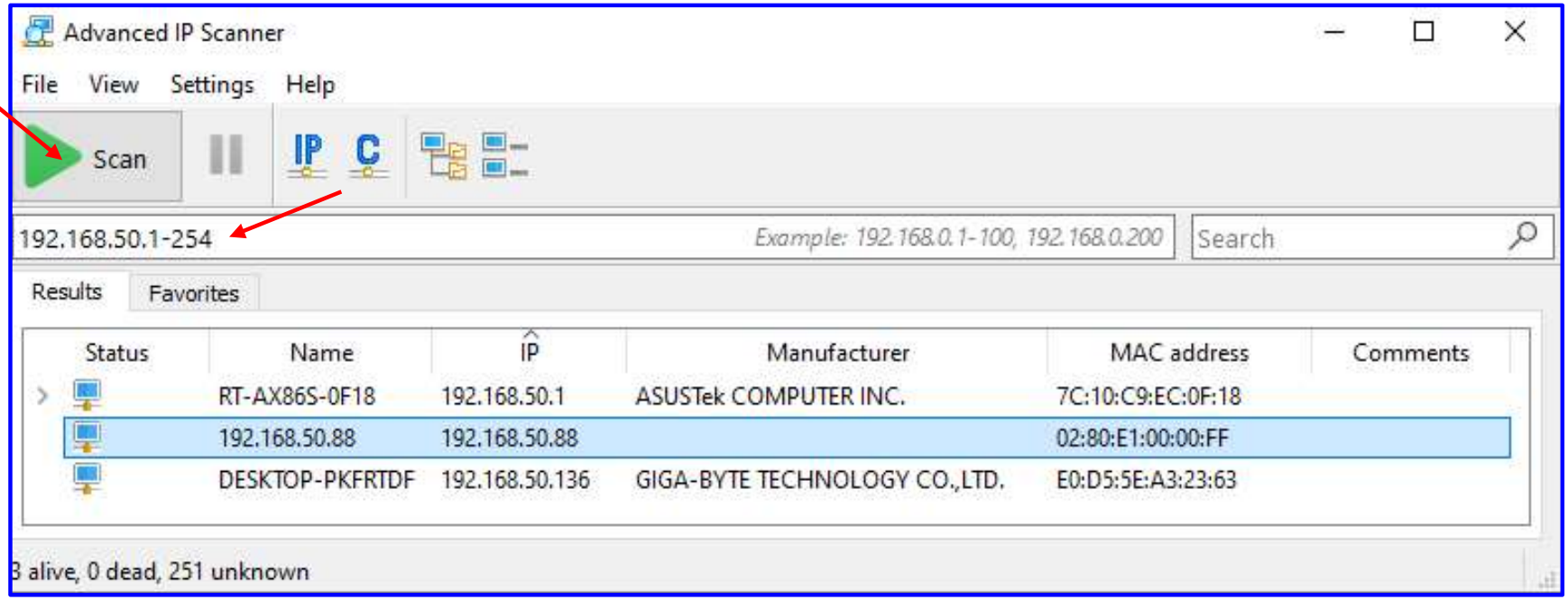
3. Other Software (1/2)

- **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 (ePub, Mobi), XPS, DjVu, CHM, Comic Book (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 lrndis-master.zip)

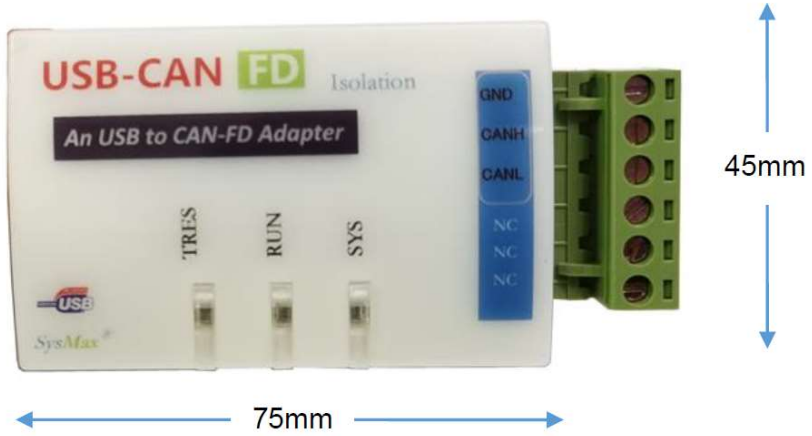
Software Installation

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_3.2.2.21.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