

Installing MDK-ARM

Install Keil Microcontroller Development Kit (MDK) Version 5

You can download the latest Keil MDK-ARM installation package from the Keil website: <http://www.keil.com/arm/mdk.asp> . As illustrated in Figure 1, MDK-ARM Version 5 (***μVision5***) comprises a set of core functions (IDE with editor, compilers, debugger, pack installer) and one or more *Software Packs*, each of which provides resources (device drivers, system/startup code, etc.) for a specific family of microcontrollers. The user must install a software pack for each microcontroller family to be used.

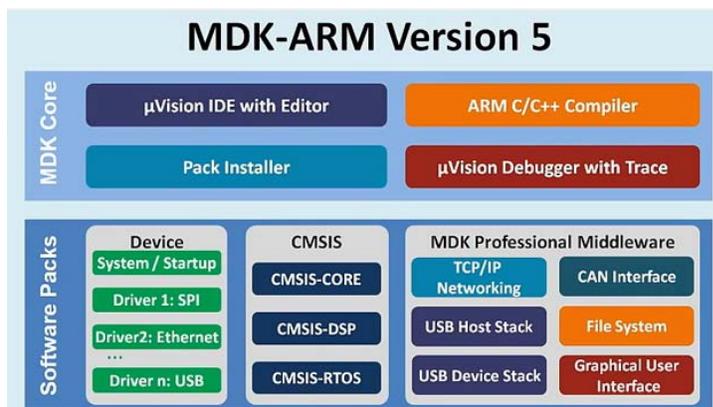


Figure 1. MDK-ARM V5 (***μVision5***) comprises the MDK Core and one or more Software Packs

When installing MDK-ARM on your PC, the *Pack Installer* (Figure 2) will prompt you to select one or more Software Packs. Scroll down to the “Device Family Pack” (DFP) for the microcontroller on your board and click the **Install** button, which changes to “**Up to date**” when the pack has been installed.

STM32L100C-Discovery board: Install Keil::STM32L1xx_DFP for STM32L1xx microcontrollers

STM32L476-Discovery board: Install Keil::STM32L4xx_DFP for STM32L1xx microcontrollers

STM32F4-Discovery board: Install Keil::STM32F4xx_DFP for STM32F4xx microcontrollers

STM32F401/411 Nucleo board: Install Keil::STM32F4xx_DFP for STM32F4xx microcontrollers

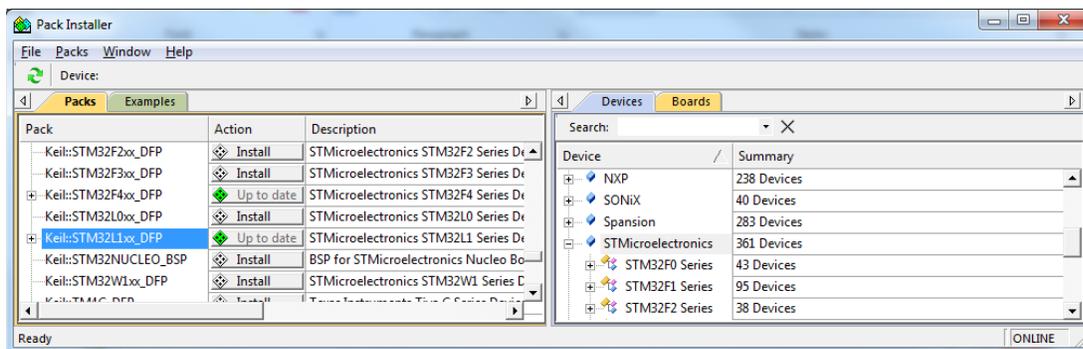


Figure 2. ***μVision5*** Pack Installer with Keil::STM32L1xx_DFP selected

To install a new software pack after MDK-ARM has been installed, open the *Pack Installer* from the μ Vision5 menu bar by selecting: **Project** → **Manage** → **Pack Installer** (or click on the *Pack Installer* icon.) If you have an Internet connection, scroll down to the desired software pack and click the Install button to download and install that pack. Alternatively, you may obtain the software pack file from the Keil web site (<http://www.keil.com/dd2/Pack/>), and then from the *Pack Installer* menu bar, select **File** → **Import**, and then locate and select the downloaded pack file.

Install the ST-Link USB Driver

For Windows systems, the ST-Link USB driver (needed to communicate with the ST Discovery and Nucleo boards) will need to be installed.

1. Connect the board to your computer with a USB cable.
2. Go to: **Computer** → **Properties** → **Device Manager**.
3. In Device Manager, find “STM32 STLink” or “STMicroelectronics STLink dongle”, right click, and select **Update Driver Software** → **Search automatically for updated driver software**.
4. If the automatic search does not find the driver, select **Browse my compute for driver software** and then select directory **C:\Keil\ARM\STLink\USBDriver**.

For other operating systems, you can find information on the ST website.

STM32 ST-LINK/V2 Utility

On the ST web page, [STM32 ST-LINK/V2 Utility](#), is the useful (and free) utility program *ST-LINK/V2 in-circuit debugger/programmer for STM32 microcontrollers*. This tool allows one to test, program, and debug a board containing an STM32 microcontroller, outside of the Keil MDK-ARM tools. To obtain this program, go to this web page, scroll down to “Related Tools and Software”, and then download and install the STM32 ST-LINK utility. This will also install the USB device driver for the ST-LINK/V2, needed to connect to the project board. Documentation for the tool is also available on this web page.