# Installing Keil MDK for Nuvoton Edition

KAN 342, Spring 2022, V 1.0



#### Abstract

Arm provides software developers working with Nuvoton devices based on the Arm Cortex-M0/M0+/M23 processors with a **free-to-use** professional tool suite for **commercial use**. The free **Keil MDK Nuvoton Edition** – **Cortex-M0/M0+/M23** includes the Arm C/C++ Compiler, the Keil RTX5 real-time operating system kernel, and the  $\mu$ Vision IDE and debugger. If you wish to program all Nuvoton's Arm Cortex-M based devices, <u>purchase the Keil MDK Nuvoton Edition online</u>.

This application note explains how to download, install, and use MDK with Nuvoton devices.

### Contents

1
1
1
1
2
2
3

#### License

To activate one of the editions, you need a valid License ID Code (LIC).

## Free Cortex-M0/M0+/M23 Edition

Go to <u>https://www.nuvoton.com/tool-and-software/ide-and-compiler/get-keil-mdk-lic/</u> to receive a valid license for the Cortex-M0/M0+/M23 edition. Once you have the email with the license, go to the **second** step in the Activation paragraph below.

#### Full Cortex-M Edition

To activate the full Keil MDK Nuvoton Edition (for all Cortex-M based devices), visit Arm's <u>online store and buy</u> <u>the extended Nuvoton edition</u>. You will receive a PSN that you can use in the Activation step.

#### 🗹 Note

• Both licenses are one-year term.

## Installation

- 1. Download Keil MDK.
- 2. Run the downloaded MDK5xx.exe installer.
- 3. Select your installation location (default is C: \Keil\_v5). If you have existing MDK installations that you want to keep, select a new folder. Once the installation has finished, Pack Installer opens.
- 4. In Pack Installer, click **Install** to download and install the device family packs supplied by Nuvoton.

🛞 Pack Installer - C:\Keil_v5\ARI	M\PACK				- C	) X
File Packs Window Help						
Device: Nuvoton - NuMicr	o Family					
<b>Devices</b> Boards	Þ	Image: Packs	amples			Þ
Search:	• × 🖻	Pack		Action	Description	
Device /	Summary	Device Specific		2 Packs	NuMicro Family selected	<b>_</b>
Nuvoton	487 Devices		JC1xx_BSP	📀 Install 🛛	Keil MCBNUC1xx Development Board Support Pa	ckage
🗄 🏤 ISD Family	6 Devices	Nuvoton::Nu	uMicro_DFP	🔅 Install	Nuvoton ARM Cortex-M NuMicro Family Device	Support
Hand States NuMicro Family	477 Devices	1.2.1 (20	18-04-13)	🚰 Unpack	Nuvoton ARM Cortex-M NuMicro Family Device	Support
🗉 🏤 NuVoice Family	4 Devices		. [		Nuvoton::NuMicro_DFP - Previous Pack Versions	
	1183 Devices 👻	i-		45 DI		
Output						џх
Ready					[	ONLINE

## Activation

- On your PC, login with an account that has administration rights.
- Right-click the μVision icon 💹 and select **Run as Administrator...** from the context menu.
- Open the dialog File License Management... and select the Single-User License tab.

License Management			×
Single-User License   Floating License   Flo	oating License Administrator   FlexLM Lic	ense	
Customer Information Name: Company: Email:	1	Computer ID CID: Get LIC via Internet	
Product MDK-ARM Cortex-M0/M23 for Nuvoton	License ID Code (LIC)/Product variant N7GFV-P8FIC-YJE0R-	Support Period Expires: Sep 2021	J
2		3	
New License ID Code (LIC):		Add LIC Uninstall	
		~	
	Close	Help	

- 1. Click the button **Get LIC via Internet...**, then click the button **OK** to register the product. This action opens the License Management page on the Keil web site. For the extended edition, enter the PSN that you have received via email after purchase. Also, add your contact information and click the button **Submit**. An e-mail is sent back with the **License ID Code (LIC)** within a few minutes.
- 2. To activate the product, enter the LIC in the field New License ID Code (LIC) of the dialog License Management...
- 3. Click Add LIC.

## **Example projects**

- 1. Open the Pack Installer from the  $\mu$ Vision toolbar.
- 2. Switch to the **Examples** tab. From the list, select the example you want to install. The **Devices** tab allows to filter for specific devices or device series.

🛞 Pack Installer - C:\Keil_v5\ARM\PAC	К			- C	) ×	
File Packs Window Help						
Nuvoton - M052LAN						
Devices Boards	Þ 4	Packs Examples			Þ	
Search:	< 🖻 🛛 🗍	Show examples from installed Packs only				
Device 🛆 Sur	mmary Ex	xample	Action	Description		
i i i i i i i i i i i i i i i i i i i	Devi 🔺	ACMP (NuTiny-SDK-M051)	🚸 Сору	ACMP comparison sample cod	e 🔺	
M052LAN AR	M Co	ADC_SingleMode (NuTiny-SDK-M051)	🚸 Сору	ADC single mode sample code		
M052LBN AR	M Co	GPIO_INT (NuTiny-SDK-M051)	🚸 Сору	GPIO sample code		
M052LDE AR	M Co	I2C_EEPROM (NuTiny-SDK-M051)	🚸 Сору	Read/write EEPROM via I2C int	erface sa 🖵	
M052LDN AR	<u>M Co</u> 🚽 🔳		· •	-1		
Output					д×	
Ready					DNLINE /	

3. When pressing **Copy**, a dialog box will ask for the desired destination. The example will be directly installed into this folder. Folders that do not exist will be created automatically.

Copy Example	×
Destination Folder	
C:\Projects	Browse
✓ Use Pack Folder Structure	└── Launch µVision
	OK Cancel

4. Tick Launch  $\mu$ Vision to open the project after installation.