



MDK-ARM Trainings Preparation

Prior to the day of the training

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- Notebook with local admin rights
- Win7, Win8, Win 10
- pdf viewer
- MDK and Training needs:
 - 512MB RAM available,
 - 1GB ROM,
 - Power Training: 1x USB port
- Mouse might be helpful (2nd USB port)
- Rights for connecting external USB Stick (not for Online Trainings)

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Download and Installation of the MDK





- <https://www.keil.com/download/product>

arm KEIL

Products Download Events Support Videos Search Keil... + Go

Download Products

Select a product from the list below to download the latest version.

 MDK-Arm Version 5.36 (September 2021) Development environment for Cortex and Arm devices.	 C51 Version 9.60a (May 2019) Development tools for all 8051 devices.
 C251 Version 5.60 (May 2018) Development tools for all 80251 devices.	 C166 Version 7.57 (May 2018) Development tools for C166, XC166, & XC2000 MCUs.

Keil products use a [License Management](#) system - without a current license the product runs as a Lite/Evaluation edition with a few [Limitations](#).

Maintenance Status and Previous Versions

Enter a valid Product Serial Number (**PSN**) or License Code (**LIC**) to get access to all product versions available to you, or to check the status of your support and maintenance agreement.

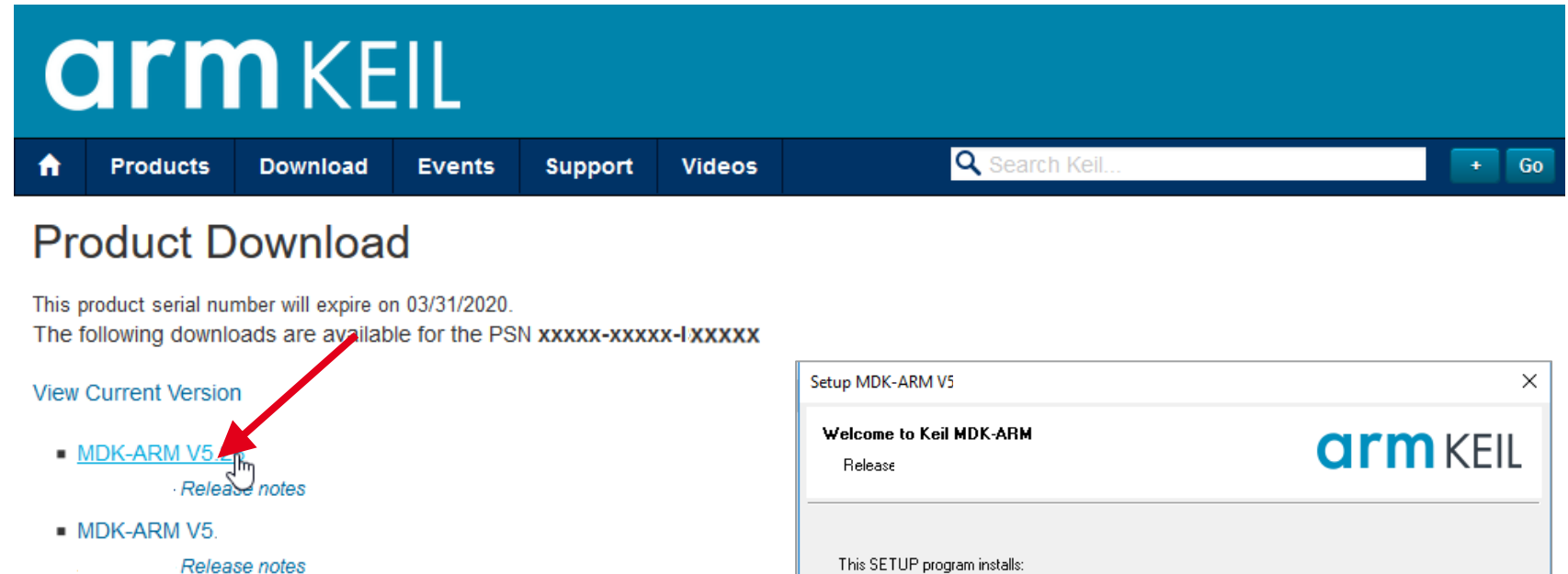
PSN or LIC:

- Enter PSN (from Email)

- Submit

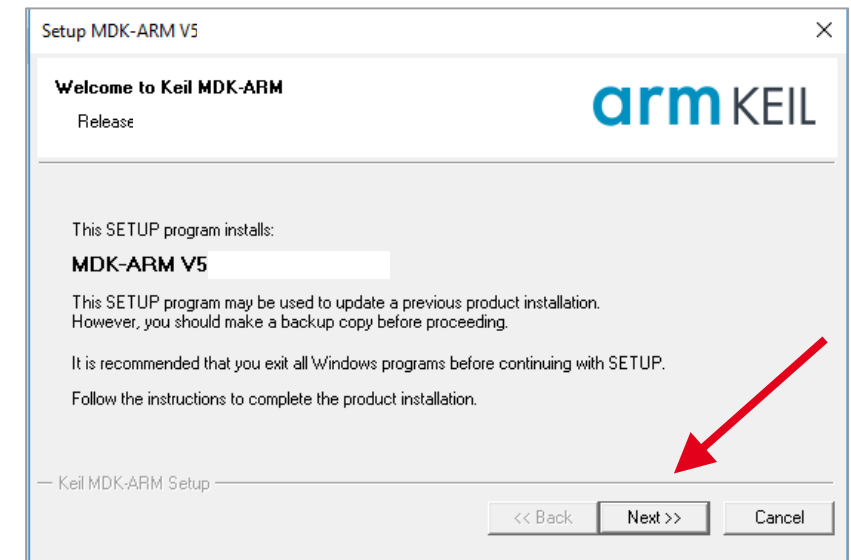
Download and Installation of the MDK

- Select current version and download



The screenshot shows the armKEIL website's 'Product Download' page. The page has a blue header with the 'armKEIL' logo and a navigation bar with links: Home, Products, Download, Events, Support, and Videos. A search bar is also present. Below the header, the 'Product Download' section displays a message about the product serial number expiration on 03/31/2020. It lists available downloads for the PSN 'xxxxx-xxxxx-Ixxxxx'. Under the 'View Current Version' link, there are two entries: 'MDK-ARM V5' and 'MDK-ARM V5'. A red arrow points to the 'MDK-ARM V5' link, which is highlighted with a mouse cursor. Below each entry is a link to 'Release notes'.

- Start installation as administrator



Download and Installation of the MDK

- Follow the instructions
- Do not change the suggested paths
- Confirm information

Setup MDK-ARM V5

Folder Selection

Select the folder where SETUP will install files.

arm KEIL

Press 'Next' to install MDK-ARM to these folders. Press 'Browse' to select different folders for installation.

Destination Folders

Core: C:\Keil_v5 Browse ...

Pack: C:\Keil_v5\ARM\PACK Browse ...

Update Installation: Create backup tool folder

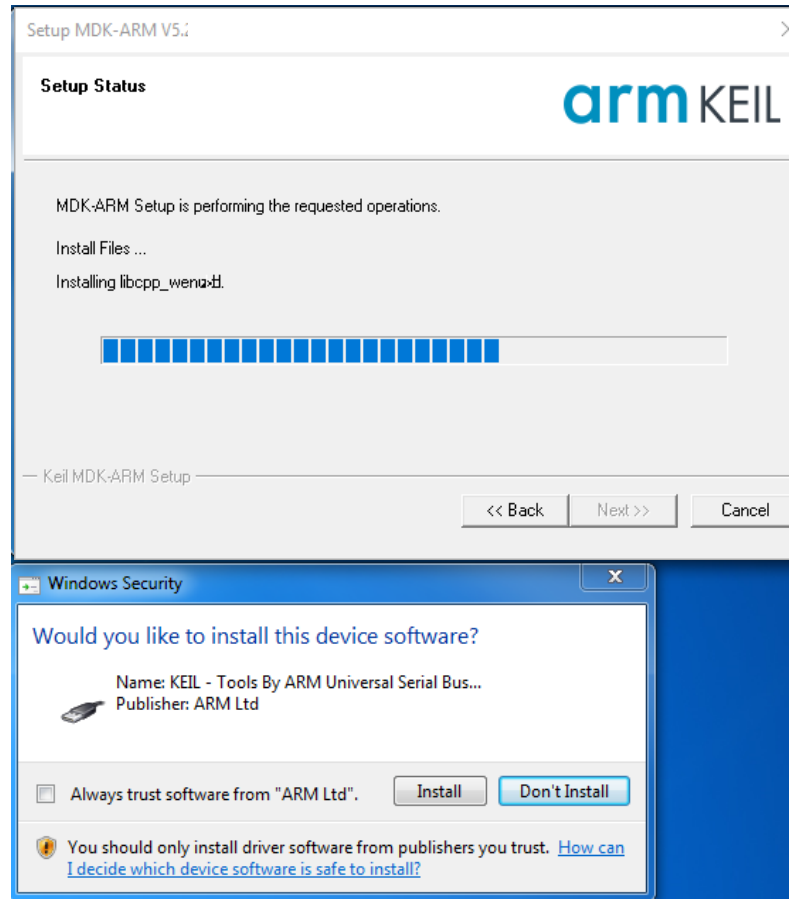
☒ Backup old core files to C:\Keil_v5\Backup.001

— Keil MDK-ARM Setup —

<< Back Next >> Cancel

Download and Installation of the MDK

- Install all components



- and finish installation

- The pack installer will start

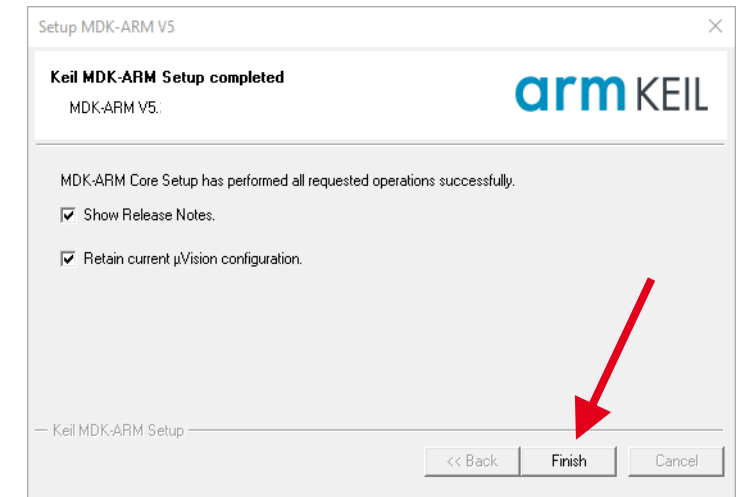
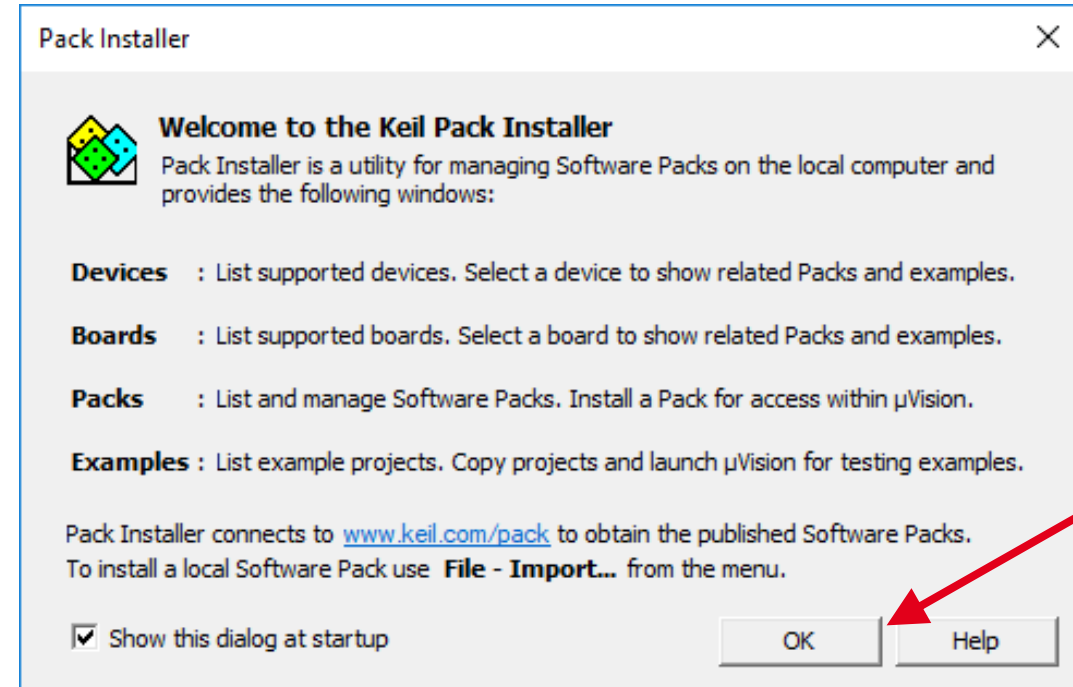


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Pack Installation

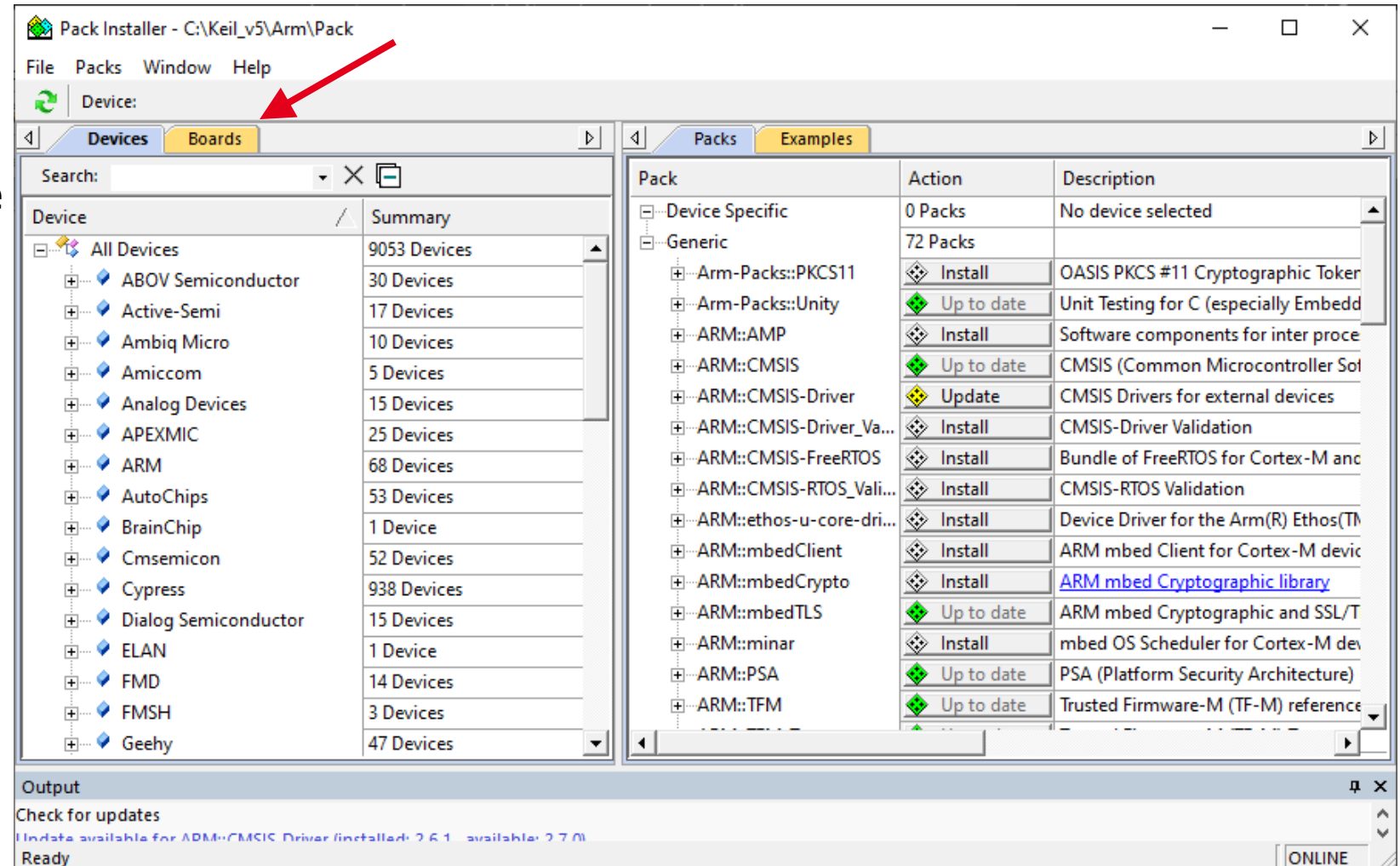
- Acknowledge the pack installation



- If the pack installation fails (limited download rights) please see the appendix of this document

Pack Installation

- Select tab **Boards** and follow pack installation according to your derivate



Pack Installation

- Select LPCXpresso55S69 and install both packages

Pack Installer - C:\Keil_v5\Arm\Pack

File Packs Window Help

Board: LPCXpresso55S69

Devices Boards

Search: [X] [icon]

Board	Summary
+ [icon] LPCXpresso55S06	LPC55S06
+ [icon] LPCXpresso55S16	LPC55S16
+ [icon] LPCXpresso55S28	LPC55S28
+ [icon] LPCXpresso55S36	LPC55S36
+ [icon] LPCXpresso55S69	LPC55S69
+ [icon] LPCXpresso802	LPC802

Packs Examples

Pack	Action	Description
- Device Specific	2 Packs	LPCXpresso55S69 selected
+ NXP::LPC55S69_DFP	[Install]	Device Family Pack for LPC55S69
+ NXP::LPCXpresso55S69_BSP	[Install+]	Board Support Pack for LPCXPRESSO55S69
- Generic	72 Packs	
+ Arm-Packs::PKCS11	[Install]	OASIS PKCS #11 Cryptographic Token Interface
+ Arm-Packs::Unity	[Up to date]	Unit Testing for C (especially Embedded Software)
+ ARM::AMP	[Install]	Software components for inter processor commun

Pack Installation

- Update according to needs

ARM-CMSIS,
ARM_Compiler,
Middleware

Pack Installer - C:\Keil_v5\Arm\Pack

File Packs Window Help

Board: LPCXpresso55S69

4 Devices Boards 4 Packs Examples

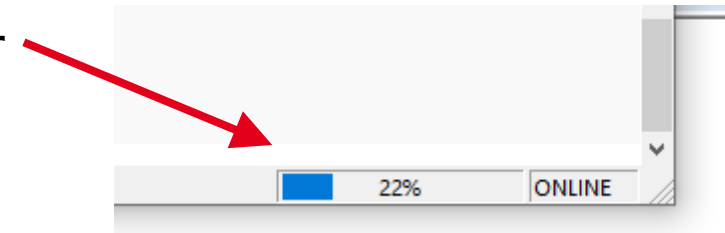
Search: [X] [F2]

Board	Summary
LPCXpresso55S06	LPC55S06
LPCXpresso55S16	LPC55S16
LPCXpresso55S28	LPC55S28
LPCXpresso55S36	LPC55S36
LPCXpresso55S69	LPC55S69
LPCXpresso802	LPC802
LPCXpresso804	LPC804
LPCXpresso812MAX	LPC812
LPCXpresso824MAX	LPC824
LPCXpresso845MAX	LPC845
LPCXpresso1125 (Rev. 1)	LPC1125JBD48/303
LPCXpresso54018	LPC54018
LPCXpresso54102	LPC54102J512
LPCXpresso54114	LPC54114J256
LPCXpresso54608	LPC54608J512
LPCXpresso54618	LPC54618J512
LPCXpresso54628	LPC54628J512
MAPS-KS22	MKS22FN256xxx12
MAX32570 EvKit (Rev A)	MAX32571_MAX32570_1 x 8 MB...
MAX32620_EVKIT (REV 3.0)	MAX32620
MAX32625_EVKIT (REV 3.0)	MAX32625
MAX32630_EVKIT (REV 3.0)	MAX32630
MAX32650_EVKIT (REV 3.0)	MAX32650
MAX32651_EVKIT (REV 3.0)	MAX32651
MAX32655_EVKIT (Rev A)	MAX32655
MAX32660_EVKIT (REV 3.0)	MAX32660
MAX32665-66 EvKit (Rev A)	MAX32666_MAX32665_1 x 8 MB...
MAX32670 EvKit (Rev A)	MAX32670
MAX32672 EvKit (Rev A)	MAX32672
MAX32675 EvKit (Rev A)	MAX32675
MCB9B500 (v2.1)	MB9BF506R
MCR11C14 (Ver 2.6)	LPC11C14FRD48/301

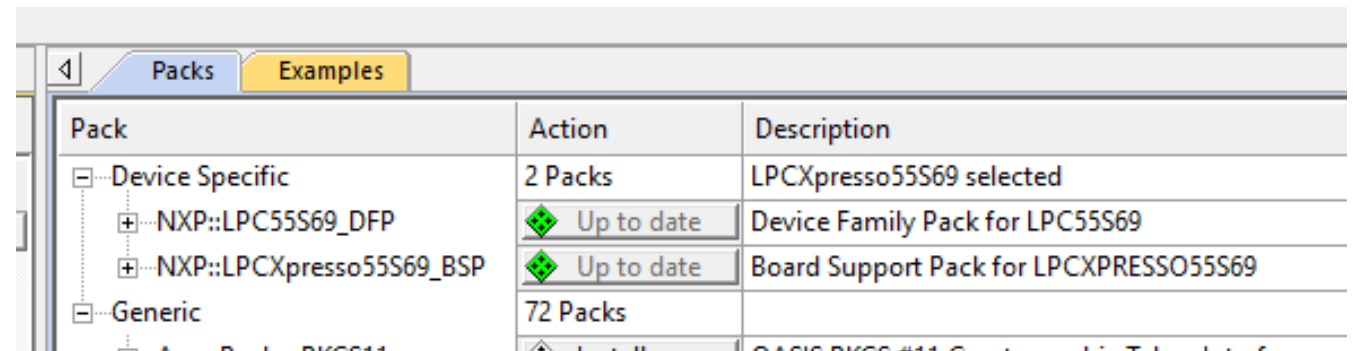
Pack	Action	Description
Arm-Packs_Munity	Up to date	Unit Testing for C (especially Embedded Software)
ARM::AMP	Install	Software components for inter processor communication (Asymmetric Multi Processing AI
ARM::CMSIS	Up to date	CMSIS (Common Microcontroller Software Interface Standard)
ARM::CMSIS-Driver	Update	CMSIS Drivers for external devices
ARM::CMSIS-Driver_Validation...	Install	CMSIS-Driver Validation
ARM::CMSIS-Freertos	Install	Bundle of FreeRTOS for Cortex-M and Cortex-A
ARM::CMSIS-RTOS_Validation	Install	CMSIS-RTOS Validation
ARM::ethos-u-core-driver	Install	Device Driver for the Arm(R) Ethos(TM)-U NPU.
ARM::mbedClient	Install	ARM mbed Client for Cortex-M devices
ARM::mbedCrypto	Install	ARM mbed Cryptographic library
ARM::mbedTLS	Up to date	ARM mbed Cryptographic and SSL/TLS library
ARM::minar	Install	mbed OS Scheduler for Cortex-M devices
ARM::PSA	Up to date	PSA (Platform Security Architecture)
ARM::TFM	Up to date	Trusted Firmware-M (TF-M) reference implementation of Arm's Platform Security Architect
ARM::TFM-Test	Up to date	Trusted Firmware-M (TF-M) Tests
ARM::V2M_MPS3_SSE_300_T...	Install+	ARM V2M-MPS3 TF-M Platform Support pack.
ASN::Filter_Designer	Install	Intuitive graphical FIR/IIR digital filter designer for CMSIS-DSP projects
AWS::AWS_IoT_Device_Defe...	Install	Client library for using the AWS IoT Device Defender service on embedded devices.
AWS::AWS_IoT_Device_Shad...	Install	Client library for using the AWS IoT Device Shadow service on embedded devices.
AWS::AWS_IoT_Jobs	Install	Library for using the AWS IoT Jobs service on embedded devices.
AWS::AWS_IoT_Over-the-air...	Install+	Client library for using the AWS Over-the-air Update service on embedded devices.
AWS::backoffAlgorithm	Install	Utility library to calculate backoff period using an exponential backoff with jitter algorithm
AWS::coreHTTP	Install	Client implementation of the HTTP/1.1 specification for embedded devices.
AWS::coreJSON	Install	A parser strictly enforcing the ECMA-404 JSON standard, suitable for microcontrollers.
AWS::coreMQTT	Install	Client implementation of the MQTT 3.1.1 specification for embedded devices.
AWS::coreMQTT_Agent	Install+	The coreMQTT Agent library is a high level API that adds thread safety to the coreMQTT libr
AWS::corePKCS11	Install+	Software based implementation of the PKCS #11 interface (API) to enable rapid developme
AWS::FreeRTOS-Plus-TCP	Install+	Thread safe FreeRTOS TCP/IP stack working on top of the FreeRTOS-Kernel to implement the
AWS::FreeRTOS-LTS	Install+	FreeRTOS LTS libraries that come with security updates and critical bug fixes to the included
Cesanta::Mongoose	Install	Mongoose Embedded Web server, HTTP/MQTT/Websocket library
EmbeddedOffice::Flex...	Install	Flexible Safety RTOS
Keil::ARM_Compiler	Update	Keil ARM Compiler extensions for ARM Compiler 5 and ARM Compiler 6
Keil::iMXRT105x_MWP	Install+	NXP iMX RT 1051/1052 MDK-Middleware examples and CMSIS-Drivers



Pack Installation

- See the progress of installation down at the right corner



- **Up to date** after installation



Pack	Action	Description
[-] Device Specific	2 Packs	LPCXpresso55S69 selected
[+] NXP::LPC55S69_DFP	 Up to date	Device Family Pack for LPC55S69
[+] NXP::LPCXpresso55S69_BSP	 Up to date	Board Support Pack for LPCXPRESSO55S69
[-] Generic	72 Packs	

- Close Pack Installer

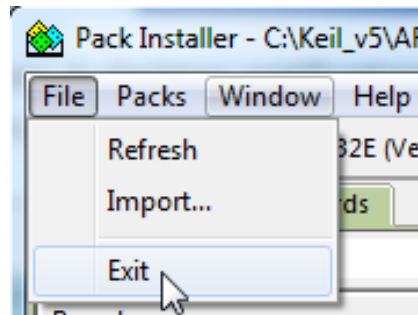


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License Request and License Installation

- You will need the PSN number which came per e-mail from Hitex concerning the MDK-ARM power training. It will provide a time limited license.
- Start the MDK5 **as administrator** (context menu / **run as administrator**)
- Start
File/License management
- Select
"Get LIC via Internet"

License Management

Single-User License | Floating License | Floating License Administrator | FlexLM License

Customer Information

Name:

Company:

Email:

Computer ID
CID: CFMSA-9PTAM

Get LIC via Internet...

Product	License ID Code...	Support Period
MDK-Lite	Evaluation Version	

New License ID Code (LIC):

Add LIC Uninstall...

Evaluate MDK Professional Close Help

License Request and License Installation

- Follow the instructions and insert PSN number

The image shows a screenshot of the KEIL website's 'Product Licensing' page. The page has a blue header with the 'armKEIL' logo and a navigation bar with links: Home, Products, Download, Events, Support, Videos. A search bar is also present. On the left, a sidebar lists 'Product Licensing' options: Overview, Single-User License, Single-User License Uninstall, and Floating-User License. The main content area is titled 'Single-User License' and contains instructions: 'Enter your Product Serial Number (PSN) and contact information using the following form to lic product. **Be sure to include dashes.**' It also states: 'Please make certain your e-mail address is valid. After verifying your Product Serial Numt ID (CID), we will send you a License ID Code (LIC) via e-mail. E-mail is sent from licmgr@! sure any spam blocker you use is configured to allow this address.'

Below the instructions is a form titled 'Enter Your Contact Information Below'. It includes fields for 'Computer ID (CID)' (pre-filled with 'CFMSA-9PTAM'), 'Product Serial # (PSN)', 'PC Description', and 'First Name'. A red arrow points to the 'Product Serial # (PSN)' field.

Overlaid on the right side of the page is a dialog box titled 'Obtaining a License ID Code (LIC)'. It contains the following text: 'You are about to register a Product and obtain a License ID Code (LIC). The following information must be sent to www.keil.com: Product Serial Number (PSN) Computer ID Number (CID): CFMSA-9PTAM'. It also includes 'Notes' with three bullet points: 'You may register the product manually at http://www.keil.com/license/install.htm.', 'After registering, you will receive an e-mail containing the LIC for your computer.', and 'Enter the LIC into the New License ID Code field.' The dialog box has 'OK' and 'Cancel' buttons at the bottom.

A large, diagonal watermark reading 'PLEASE DO NOT LIC request only once' is overlaid across the center of the image.

License Request and License Installation

KEIL™
Tools by ARM

ARM

Home / Product Licensing

Thanks for Licensing Your Product

We have sent your product registration information including the License ID Code (LIC) via e-mail to andres.richter@hitex.de.

When you receive this e-mail, copy the License ID Code (LIC) and paste it into the **New License ID Code** input field in the **µVision License Manager Dialog** — Single-User License Tab (available from the File Menu).

If you have multiple Keil products you may [Register Another Product](#) at this time.

Product Licensing

- Overview
- Single-User License
- Single-User License Uninstall
- Floating-User License

Quick Links

- [Licensing User's Guide](#)

Knowledgebase

- [UNABLE TO REGISTER PRODUCT SERIAL NUMBER \(PSN\)](#)
- [MOVING A LICENSE TO A NEW WORKSTATION](#)
- [WHAT IS A CID?](#)

Top 3 License Issues

License Request and License Installation

- You will get the LIC (license id code) via email
- Copy / paste to "New License ID Code"
- Select "Add LIC"
- Close license manager and restart MDK5

The screenshot shows the 'License Management' dialog box. It has tabs for 'Single-User License', 'Floating License', 'Floating License Administrator', and 'FlexLM License'. The 'Single-User License' tab is active. It contains a 'Customer Information' section with fields for Name, Company, and Email. To the right, there is a 'Computer ID' section with a 'CID' field containing 'CFMSA-9PTAM' and a 'Get LIC via Internet...' button. Below this is a table with columns 'Product', 'License ID Code...', and 'Support Period'. The table has one row: 'MDK-Lite' and 'Evaluation Version'. At the bottom, there is a 'New License ID Code (LIC):' text box, an 'Add LIC' button, and an 'Uninstall...' button. A red arrow points from the bottom left towards the 'New License ID Code (LIC):' text box. A large, diagonal watermark text 'PLEASE DO NOT request only once' is overlaid across the center of the dialog box.

Product	License ID Code...	Support Period
MDK-Lite	Evaluation Version	

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- Your pack installation may fail if your download options are restricted by IT rules.
- The workaround is a manual download and installation:
- Visit www.keil.com/pack (-> www.keil.com/dd2/pack)

The screenshot shows the ARM KEIL website. The header features the 'arm KEIL' logo on a blue background. Below the logo is a navigation bar with links: Home, Products, Download, Events, Support, and Videos. A search bar is located on the right side of the navigation bar. The main content area is titled 'MDK5 Software Packs' and includes a breadcrumb trail: Home / MDK5 Software Packs. The page text explains that for MDK, additional software components and support for microcontroller devices are provided by software packs. It also mentions that a Device Family Pack (DFP) indicates that a software pack contains support for microcontroller devices. The page lists software packs provided by ARM or third parties, noting that a version history is available for each pack. The left sidebar contains links for Product Information, Technical Support, and Software Downloads. The right sidebar contains a Quick Links section with links to Device List, MDK Version 5, Legacy Support, and Feedback.

arm KEIL

Home / MDK5 Software Packs

MDK5 Software Packs

For **MDK**, additional software components and support for microcontroller devices is provided by **software packs**. **DFP** (Device Family Pack) indicates that a software pack contains support for microcontroller devices.

The following software packs are provided by ARM® or third parties. For each software pack, a version history is available and you may choose to download previous versions.

Product Information

- Product Overview
- Supported Microcontrollers
- Shows and Seminars

Technical Support

- Support Knowledgebase
- Product Manuals
- Application Notes
- Discussion Forum

Software Downloads

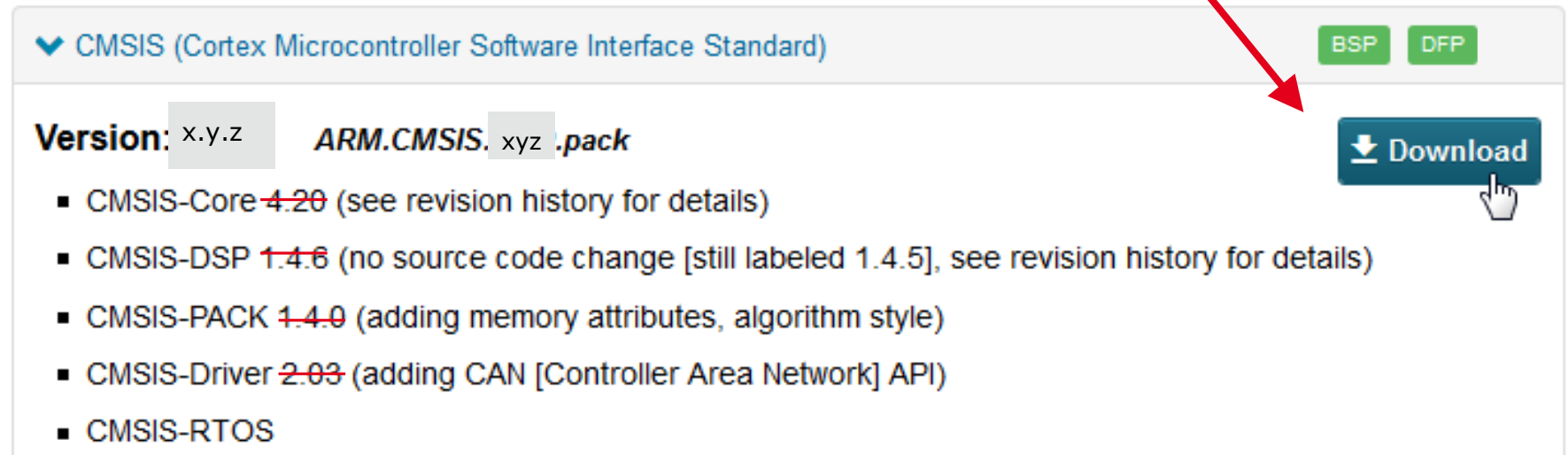
Quick Links

- Device List
- MDK Version 5
- Legacy Support
- Feedback

■ Download **CMSIS**

- Scroll down to ARM and unfold CMSIS
- Download current CMSIS pack (at top of the list)

ARM



The screenshot shows the CMSIS (Cortex Microcontroller Software Interface Standard) download page. A red arrow points from the top right towards the 'Download' button. The page displays the version 'x.y.z' and the pack name 'ARM.CMSIS.xyz.pack'. Below this, a list of components is shown with their respective versions and descriptions.

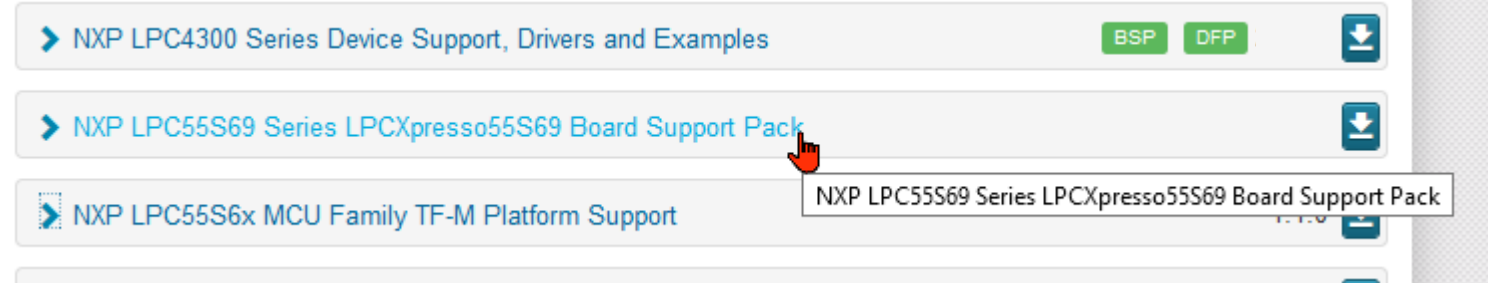
▼ CMSIS (Cortex Microcontroller Software Interface Standard) BSP DFP

Version: x.y.z **ARM.CMSIS.xyz.pack**

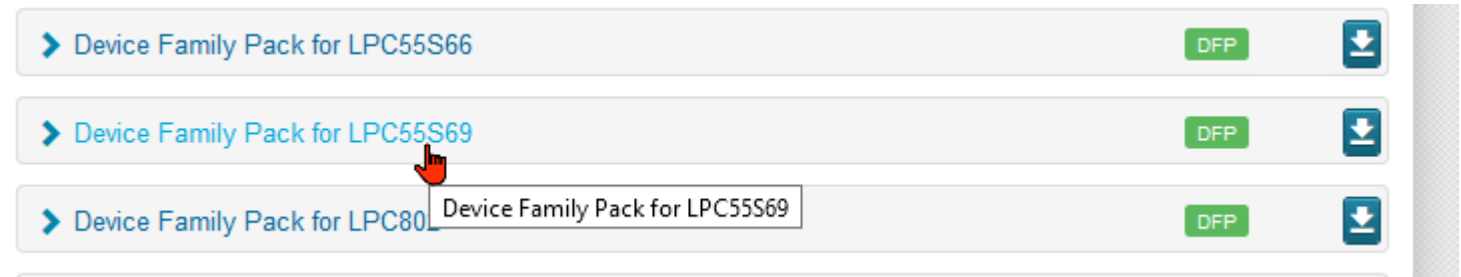
- CMSIS-Core ~~4.20~~ (see revision history for details)
- CMSIS-DSP ~~1.4.6~~ (no source code change [still labeled 1.4.5], see revision history for details)
- CMSIS-PACK ~~1.4.0~~ (adding memory attributes, algorithm style)
- CMSIS-Driver ~~2.03~~ (adding CAN [Controller Area Network] API)
- CMSIS-RTOS

[Download](#)

- Download matching Device Support Packages
- Select **Keil** / **NXP LPC55S69 Series LPCXpresso55S69 Board Support Pack**
 - Unfold, select most current one and **Download**
 - Support for the board



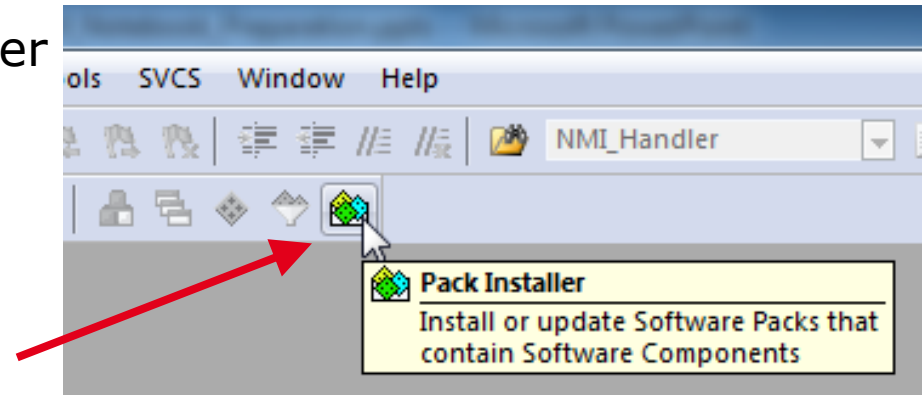
- Scroll Down to **NXP** and select **Device Family Pack for LPC55S69**
 - Unfold, select most current one and **Download**
 - Support for the controller



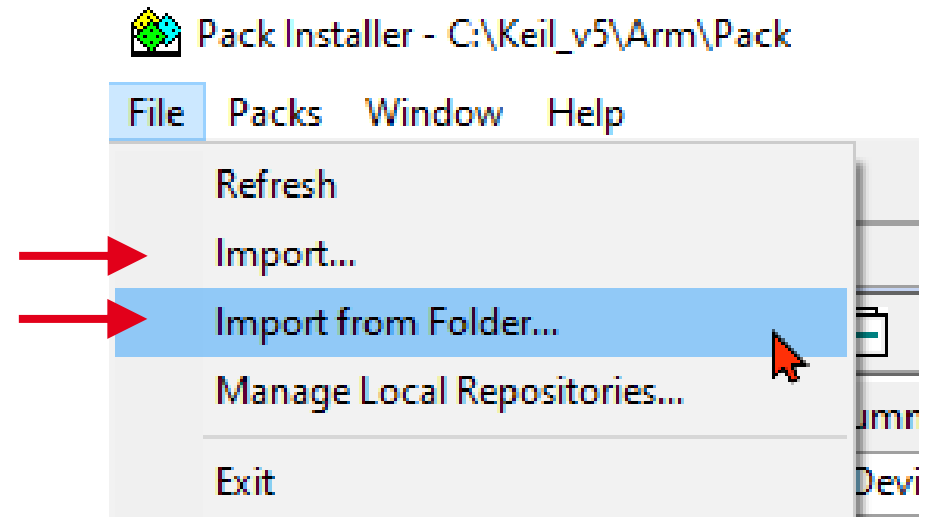
- Download others if required

Manual Pack Installation

- Install the downloaded files manually in the pack installer
 - open pack installer, e.g. from µVision IDE



- Select **File / Import** or **Import from Folder**
- Select the downloaded packs or folder
- **Open**



Learn more about Hitex at www.hitex.com

