Hands-on Professional Middleware for Cortex-M

prior to the day of the training

Agenda

1 Notebook and Tools

2 Download and Installation of the MDK

3 MCB4357: Selection of Board and Target, Pack Installation

4 License Request and License Installation (PLEASE ONLY ONCE)

5 Appendix, Manual Pack Installation

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Notebook and Tools

- **Notebook with local admin rights**

- **MS Windows XP, Vista, Win7, Win8, Win10**
- **pdf viewer**

- **MDK and Training needs:**
    - 512MB RAM available,
    - 1GB ROM,
    - 2x USB

- **Rights for connecting external USB Stick**

- **Mouse might be helpful (3rd USB slot)**

Agenda

Download and Installation of the MDK

■ https://www.keil.com/download/product/

■ Enter PSN (from email)

■ Submit

Download and Installation of the MDK

- Select current version and download
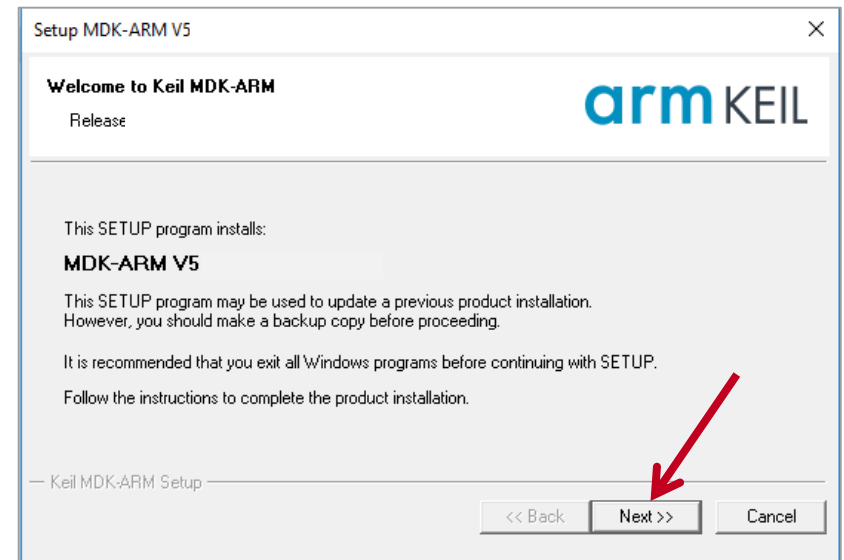
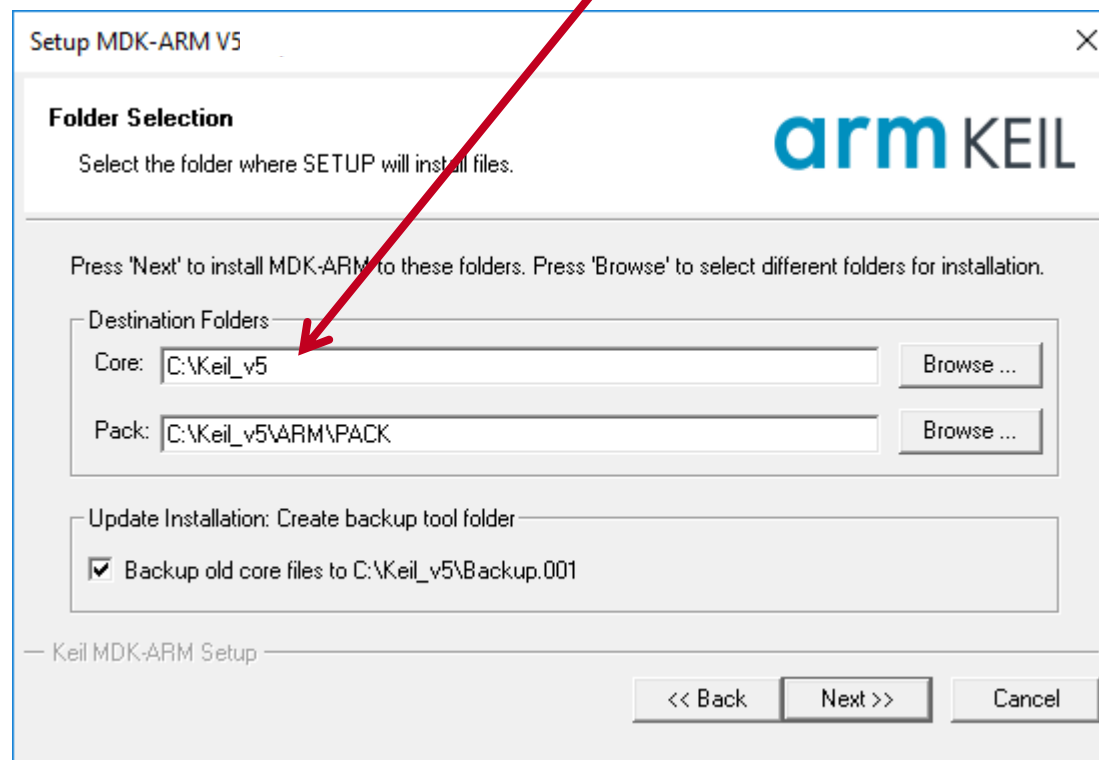(IF YOU ALREADY HAVE MDK SKIP TO SLIDE 9 "PACK INSTALLATION")

- Start installation as administrator
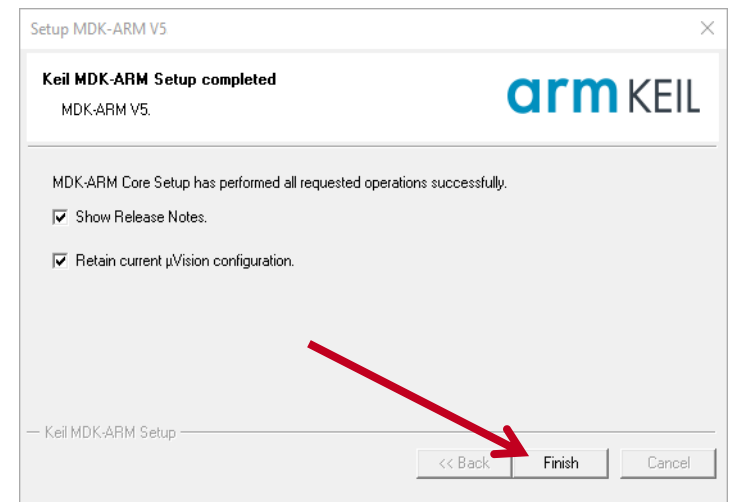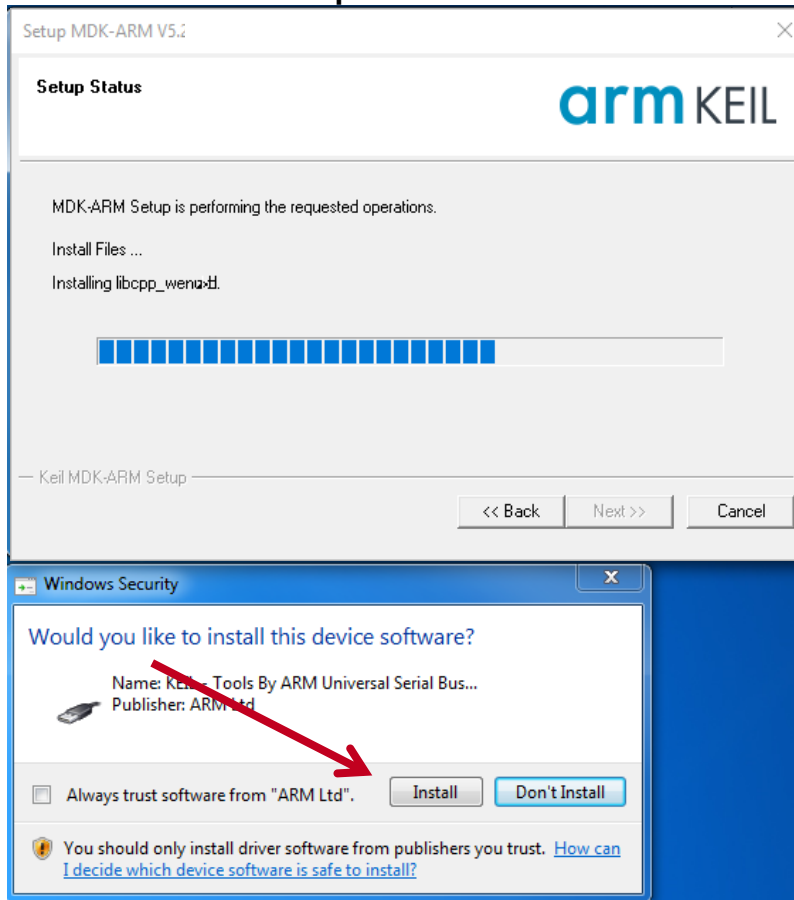
Download and Installation of the MDK

- Follow the instructions
- Do not change the suggested paths
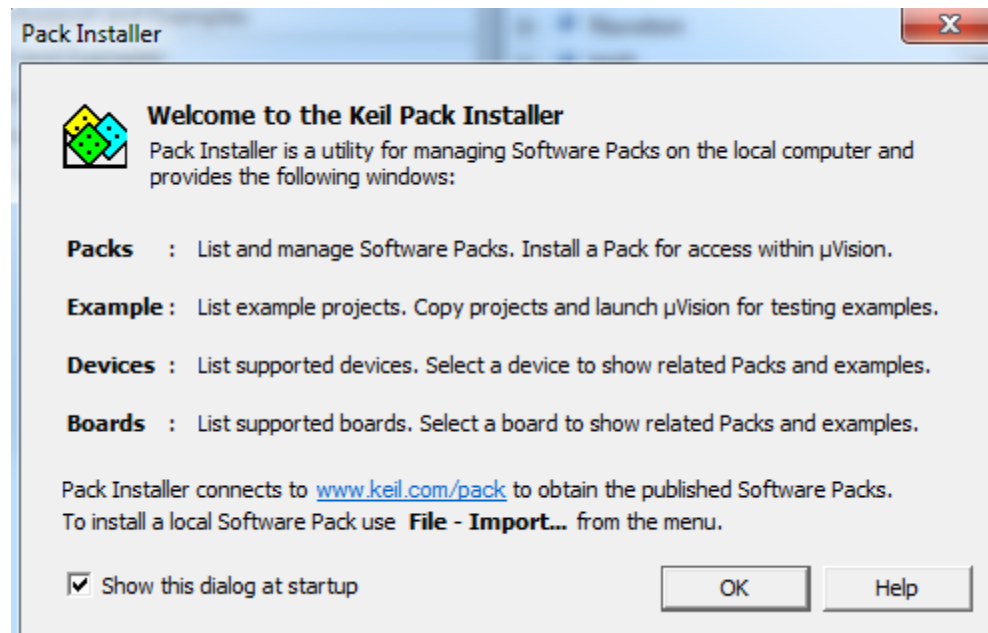

- Confirm information

Download and Installation of the MDK

- Install all components and finish installation


- The pack installer will start

Pack Installation

- Acknowledge the pack installation

Pack Installer

Welcome to the Keil Pack Installer
Pack Installer is a utility for managing Software Packs on the local computer and provides the following windows:

Packs : List and manage Software Packs. Install a Pack for access within µVision.

Example : List example projects. Copy projects and launch µVision for testing examples.

Devices : List supported devices. Select a device to show related Packs and examples.

Boards : List supported boards. Select a board to show related Packs and examples.

Pack Installer connects to www.keil.com/pack to obtain the published Software Packs.
To install a local Software Pack use **File - Import...** from the menu.

☑ Show this dialog at startup   OK   Help

Pack Installation

- Select tab **Boards** and follow the pack installation according to your derivate
- If the pack installation fails (limited download rights) please see the appendix of this document
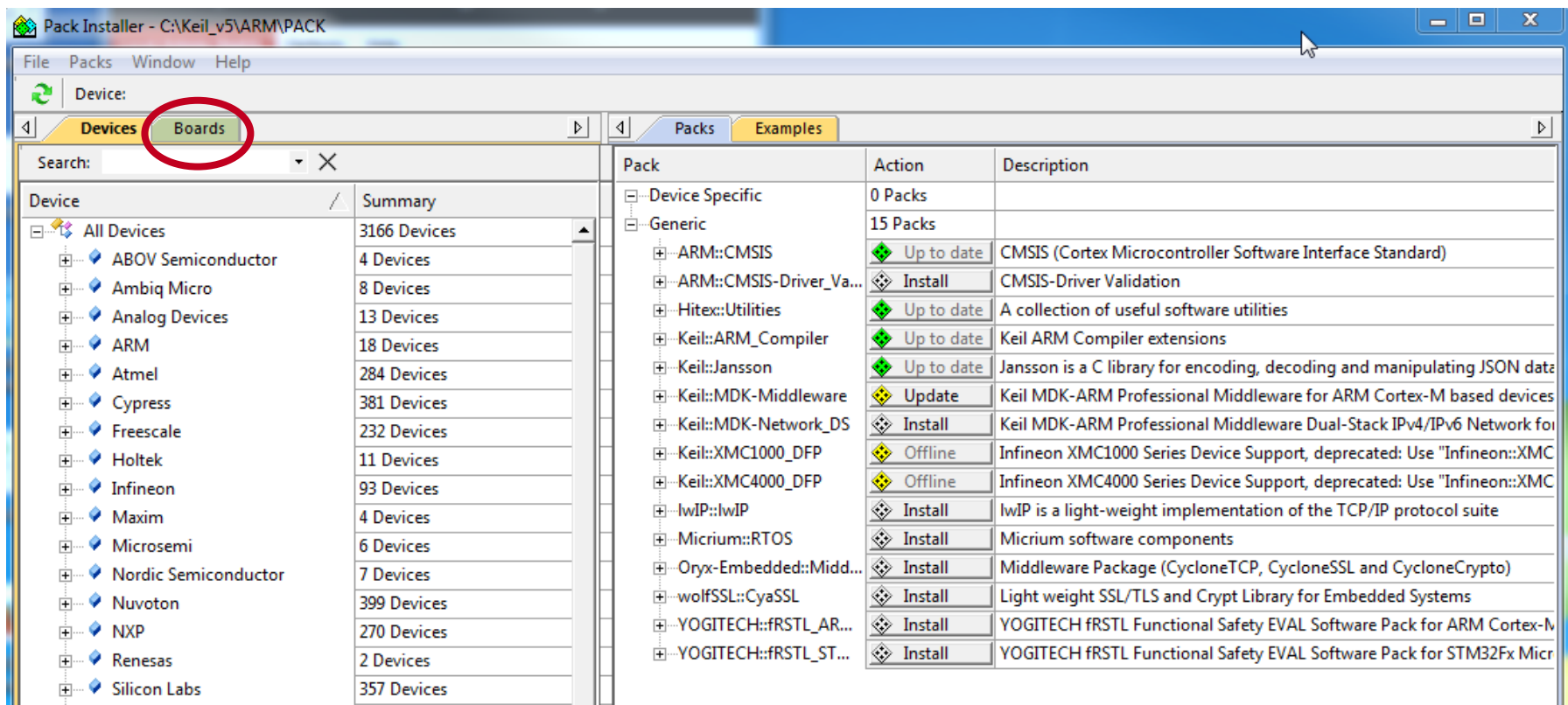
Agenda

1   Notebook and Tools

2   Download and Installation of the MDK

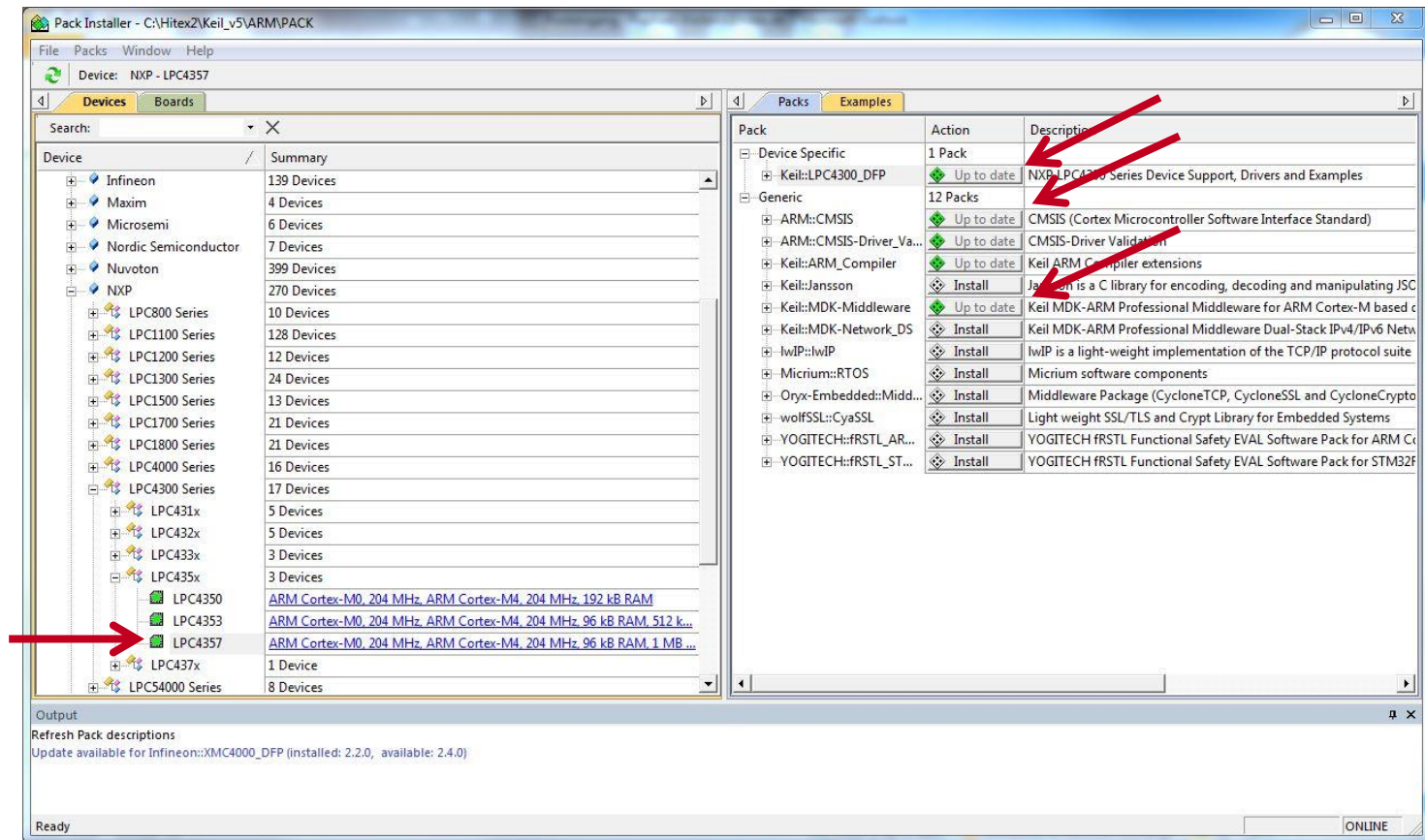**3**   MCB4357: Selection of Board and Target, Pack Installation

4   License Request and License Installation (PLEASE ONLY ONCE)

5   Appendix, Manual Pack Installation

MCB4357 Pack Installation

■ „Select the device **NXP::LPC4300::LPC4357**
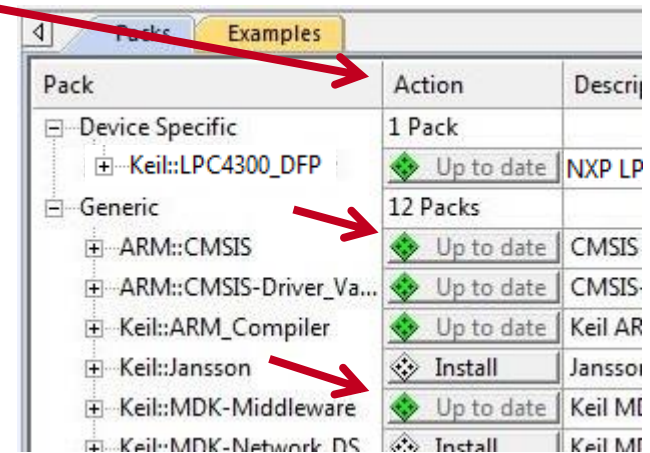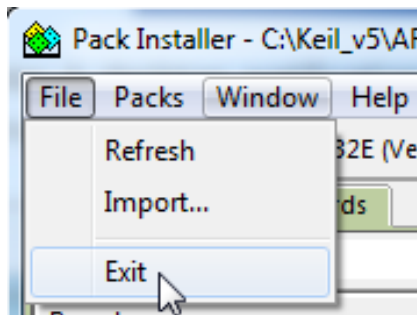

and install ARM-CMSIS, Middleware and LPC4300_DFP

MCB4357 Pack Installation

- See the progress of installation down at the right corner
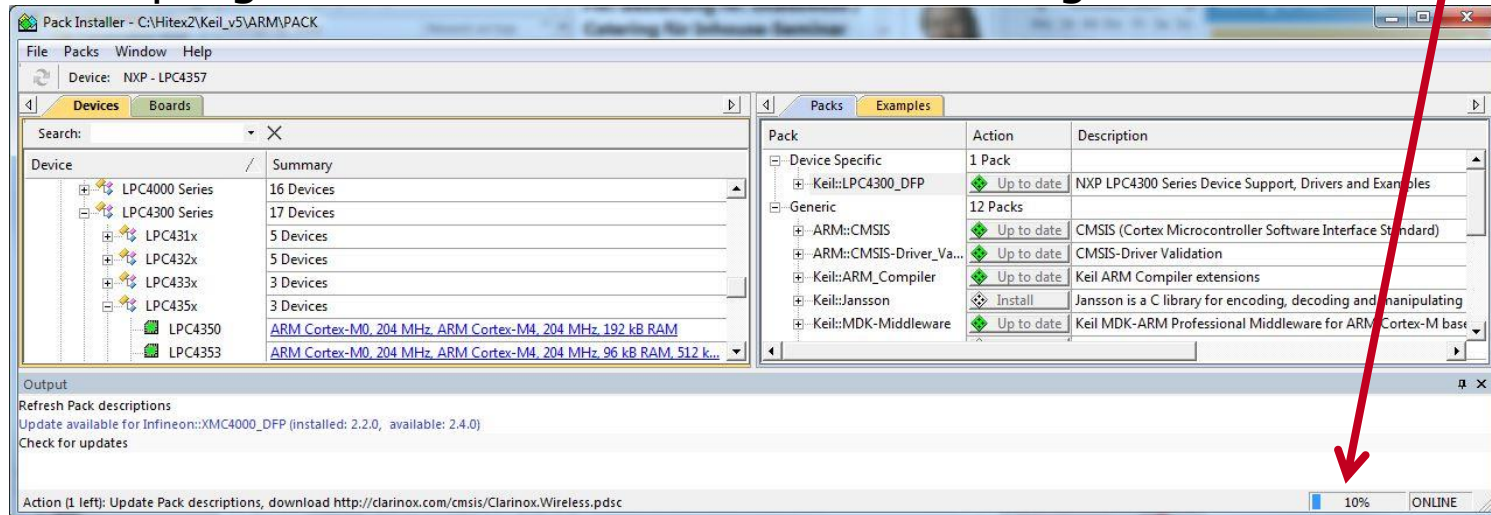
- **Up to date** after installation

- File / Exit will close pack installer

Agenda

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 MDK5 **as administrator** (context menu / run as administrator)

- Start

  File/License management

- Select

  "Get LIC via Internet"
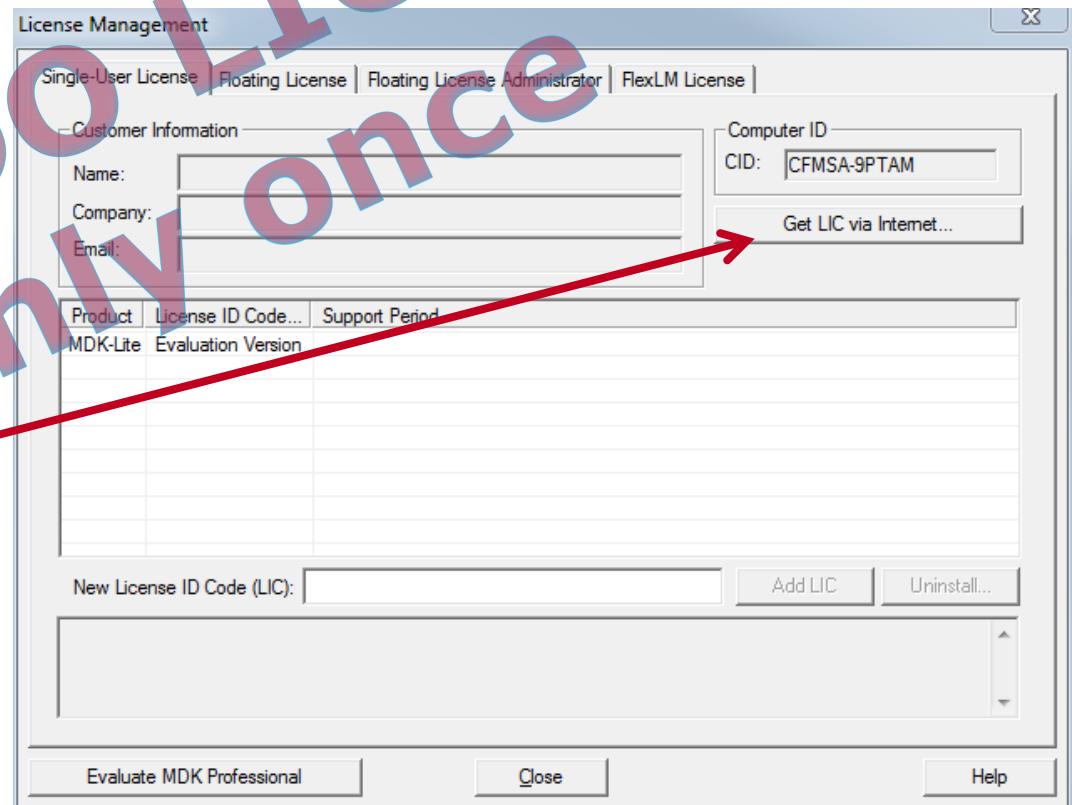
License Request and License Installation

■ Follow the instructions and insert PSN number

License Request and License Installation

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

Agenda

Manual Pack Installation

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

Manual Pack Installation

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

ARM

| ❤ CMSIS (Cortex Microcontroller Software Interface Standard) | BSP | DFP |

Version: *ARM.CMSIS*   *pack*   ⬇ Download

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

Manual Pack Installation

- **Download matching Device Support Packages**
  - □ Select Keil
  - □ Scroll down and download current *._DFP

Infineon

> Infineon XMC1000 Series Device Support, Drivers and Examples Note: The	BSP DFP	2.9.0
> Infineon XMC4000 Series Device Support, Drivers and Examples Note: The	BSP DFP	2.11.0
> Infineon TLE984x Series Device Support	BSP DFP	1.1.1
> Infineon TLE986x Series Device Support	BSP DFP	1.4.0
> Infineon TLE987x Series Device Support	BSP DFP	1.4.0

Keil ← NXP LPC4300 (MCB4357)

> ARM V2M-MPS2 Board Support PACK for Cortex-M System Design Kit	BSP DFP	1.7.0

Manual Pack Installation

- MCB4357

NXP LPC4300 Series Device Support, Drivers and Examples `BSP` `DFP` 2.8.0

Version: 2.8.0 (2017-11-16) *Keil.LPC4300_DFP.2.8.0.pack*   ⬇ Download

Device Support:
- Updated system file with corrected SystemCoreClock initial value to match SystemInit function

Debug Description:
- Updated debug sequences: use read modify write operation on updating DEMCR_Addr to avoid side effects.

Board Examples:
- Updated Board Support LED_*.c files.
- Updated USB Device Audio example for Keil MCB4300 evaluation board
- Updated examples for MDK-Middleware Network using Cbundle="MDK-Pro Net_v6"

CMSIS-Driver:
- Updated CAN driver:
  - Corrected SetBitrate function
- Updated EMAC driver:
  - Added support for CMSIS-RTOS2

Manual Pack Installation

- Install the downloaded files manually in the pack installer
  - open pack installer, e.g.from µVision IDE
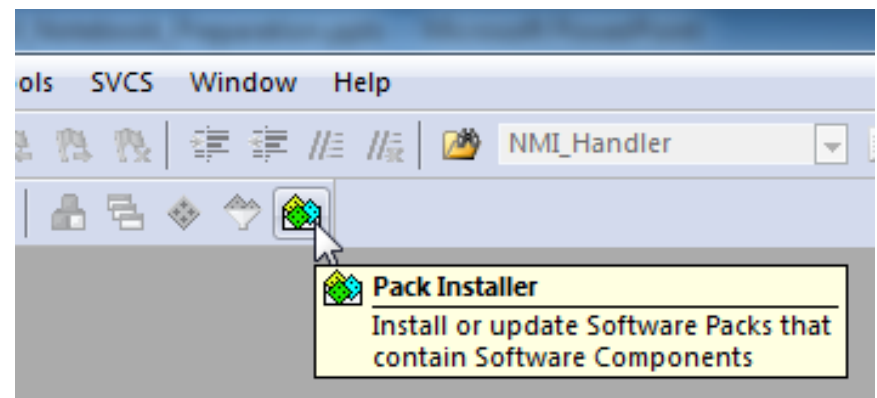
  - Select **File** / **Import**
  - Select the appropriate packs
    ARM.CMSIS.xxx.pack
    Keil.<derivate>._DFP.x.x.x.pack
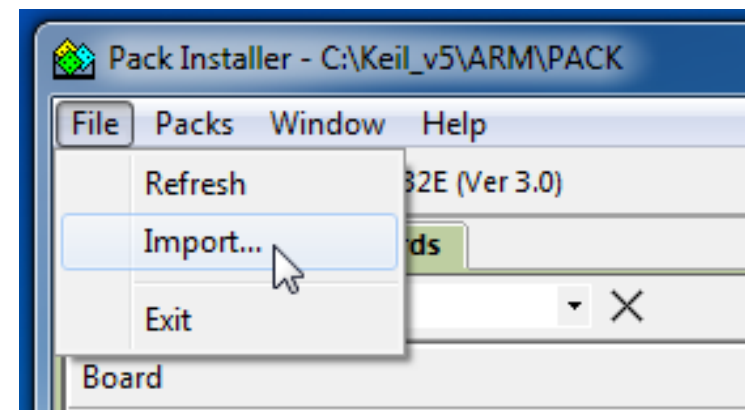
Thank you for preparing.
Enjoy your training.

Learn more about Hitex at www.hitex.com