

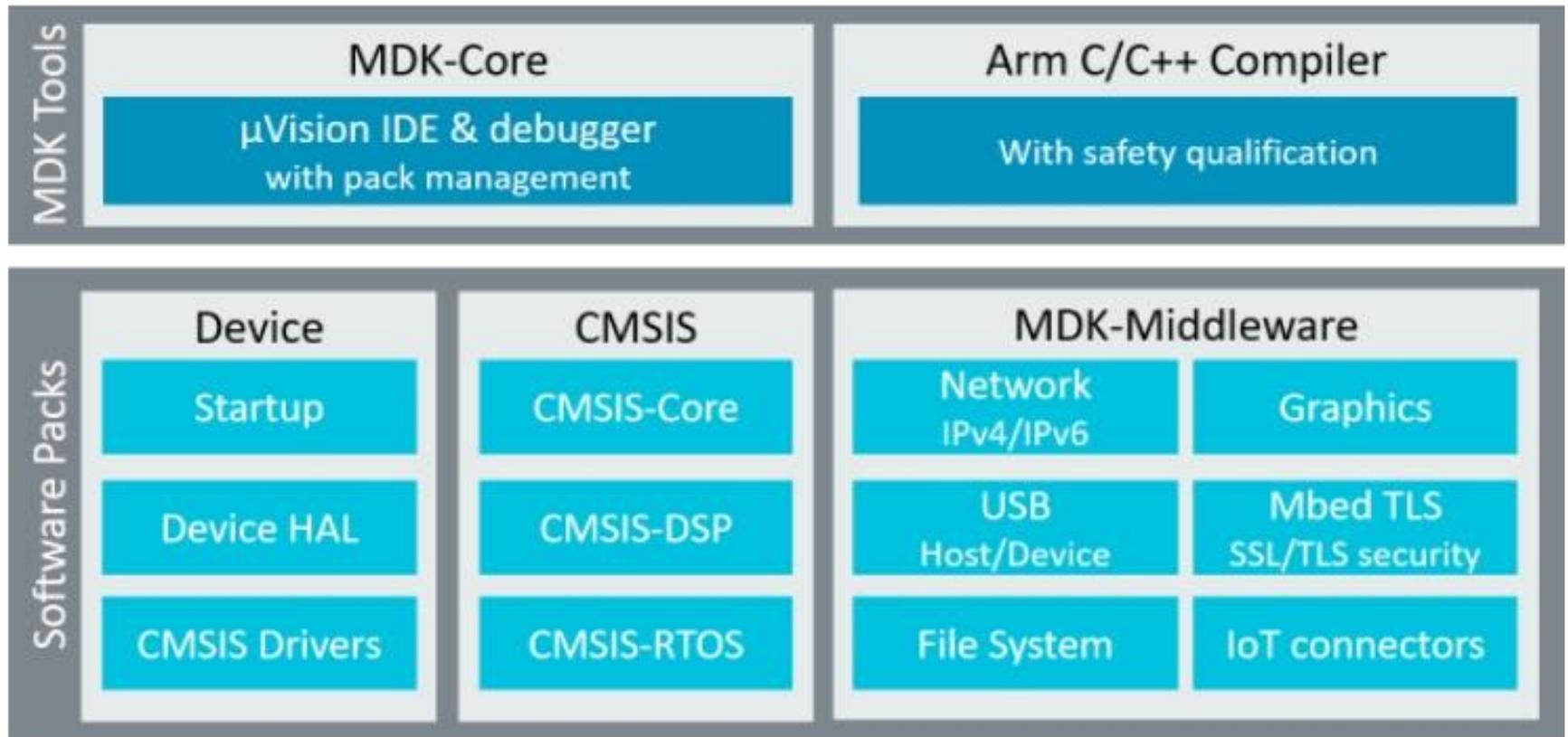


# Keil MDK uVision

# Overview

- Keil® MDK is the most comprehensive software development solution for Arm®-based microcontrollers and includes all components that you need to create, build, and debug embedded applications
- MDK includes two **Arm C/C++ Compilers** with assembler, linker, and highly optimize run-time libraries that are tailored for optimum code size and performance

# Product components



## Download and install Keil MDK (lite) and device pack

- Connect to

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

- select MDK-Arm
- provide requested information and download
- Alternatively, download version 38.a from teacher web site
- Install
- Launch
- In (Project... Manage...) Pack installer:
  - Devices...* search H7A3ZI, select *STM32H7A3ZITxQ*
  - Packs...* Device specific... Keil::STM32H7xx\_DFP: install

## Create the project in STM32CubeMX

- The same step of our first *blinky* project, but
  - Application Structure: Advanced
  - Toolchain / IDE: MDK-ARM

# Keil MDK

- Project... open project... <project\_home\_page>... MDK-ARM... <project\_name>.uvprojx
  - MDK projects have *.uvprojx* extension
- Project... Options for target... Debug... Use ST-Link Debugger... Settings... Flash download: set RAM to 0x10000
- Project... Options for Target... Target... ARM Compiler: Use version 6
- Application/User/Core... main.c: add the *blinky.c* code
- Project... build target
- Flash... Download
- The s/w may not start automatically
  - press the reset button

## Keil MDK: debugging

- Project... build target
- Debug... start debug session (loads the executable)
- Debug... run (F5)
- You can insert/remove breakpoints (F9), step (F11), step over (F10), step out (ctrlF11)...
- To restart: the only way is to stop/start debug execution?
- You have to stop debug session before rebuilding

## Keil MDK: in order to use the full version

- ... you need to exploit the license kindly provided by ARM
- Server side: the license server has already been installed on a computer of the Dept
  - Client side: in Keil (**run as Administrator**):
    - File... license management... FlexNet License
    - Use FlexLM / FlexNet
    - Edit... [8224@SRV7.di3.units.it](mailto:8224@SRV7.di3.units.it)
  - In Windows: in Network settings... Wireless Network Connection... TCP/IPv4... properties, “Obtain DNS server address automatically” must be set
  - When working outside campus, **connection to the license server has to be done via VPN**
    - instructions for VPN installation are on <https://vpn-client.units.it/>