

HW and SW configuration

- Tools needed for running projects
 - **KEIL** v.516a (This full version, end at end of October)
 - **ST Link Utility**
 - **CubeMX**
 - **STM32F7 Library**
- HW needed
 - **F7 discovery kit**
 - **Mini USB cable**



Disconnect your PC from Internet

HW and SW ST-LINK Utility

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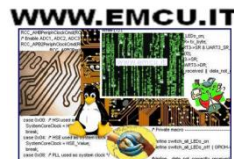
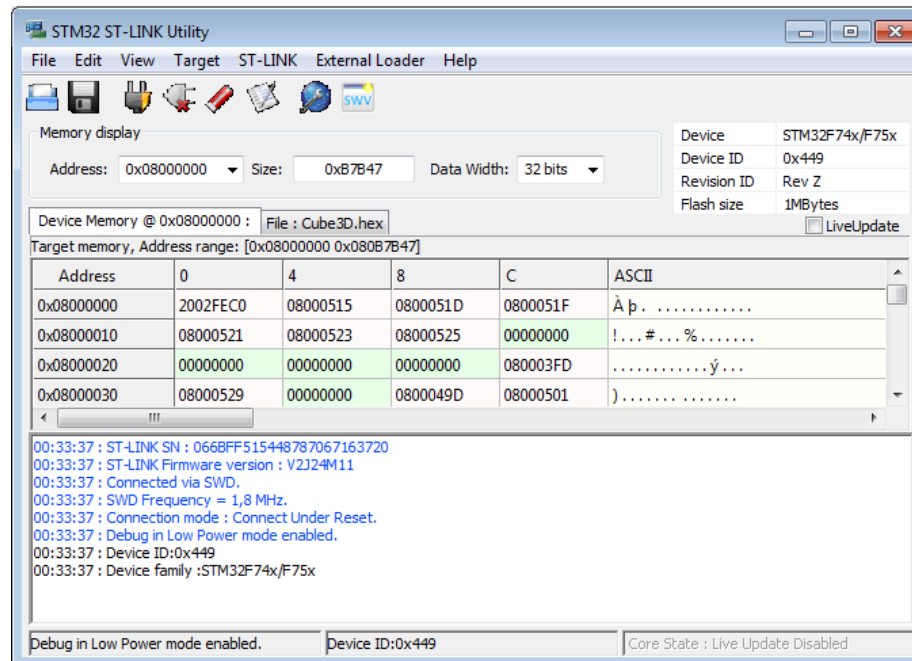
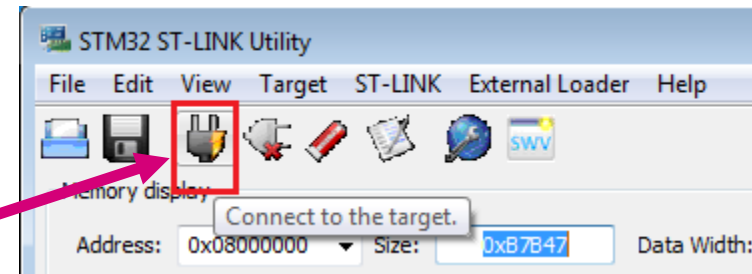
- Install the:
STM32 ST-LINK Utility_v3.7.0.exe
It is in the directory:
C:\...\SILICA-STday2015_M7_PoliTO\Tools\ST-LINK-v2

- Test ST-LINK Utility**

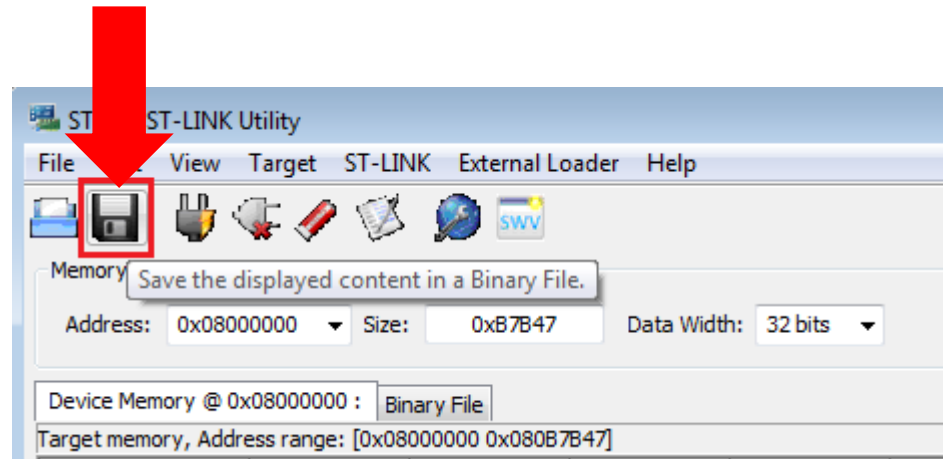
Connect STM32F7-DISCO to your PC and run ST-LINK Utility

Press the icon: **Connect to the target**

You must see something like below.



Save the content of the flash memory.



In the coming exercises, we will install new programs on STM32F7-DISC, having saved the contents of the flash memory, you have the possibility to restore the original demo.

- Install in sequence the:

MDK516a.exe

and

MDKCM516.EXE

They are in the directory:

C:\...\SILICA-STday2015_M7_PoliTO\Tools\KEIL\Installazione

- Now install the KEIL license:

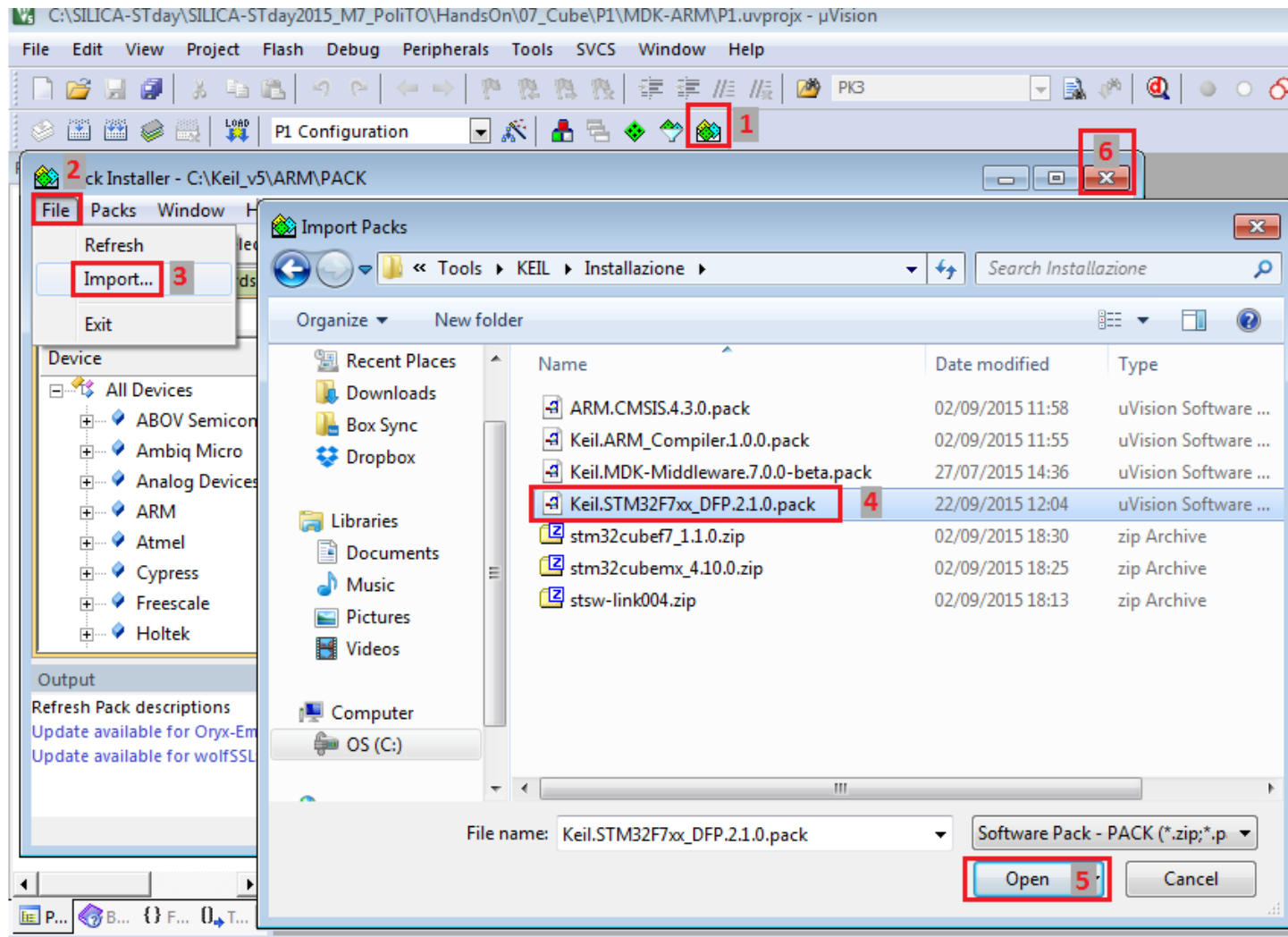
MDK-ARM_Pro_Eval_AddOn_2015-10.exe

It is in the directory:

C:\...\SILICA-STday2015_M7_PoliTO\Tools\KEIL\Licenza

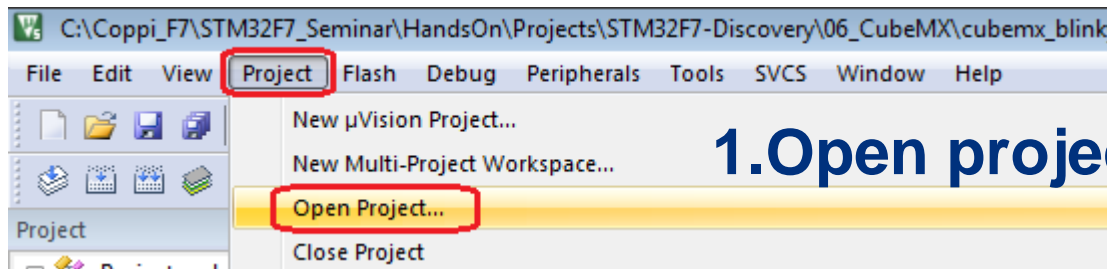
This license expire at the end of October 2015

Open KEIL and load the F7 package: **Keil.STM32F7xx_DFP.2.1.0.pack**
 It is in the directory:
C:\...\SILICA-STday2015_M7_PoliTO\Tools\KEIL\Installazione

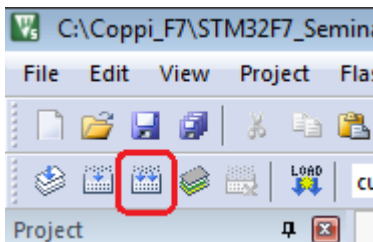


How to use KEIL in 4 steps

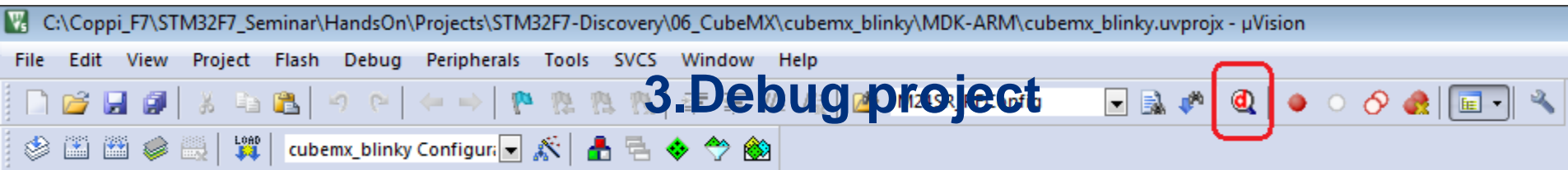
8



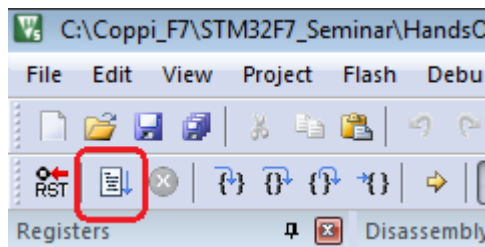
1. Open project (name.uvprojx)



2. Build project



3. Debug project



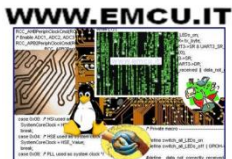
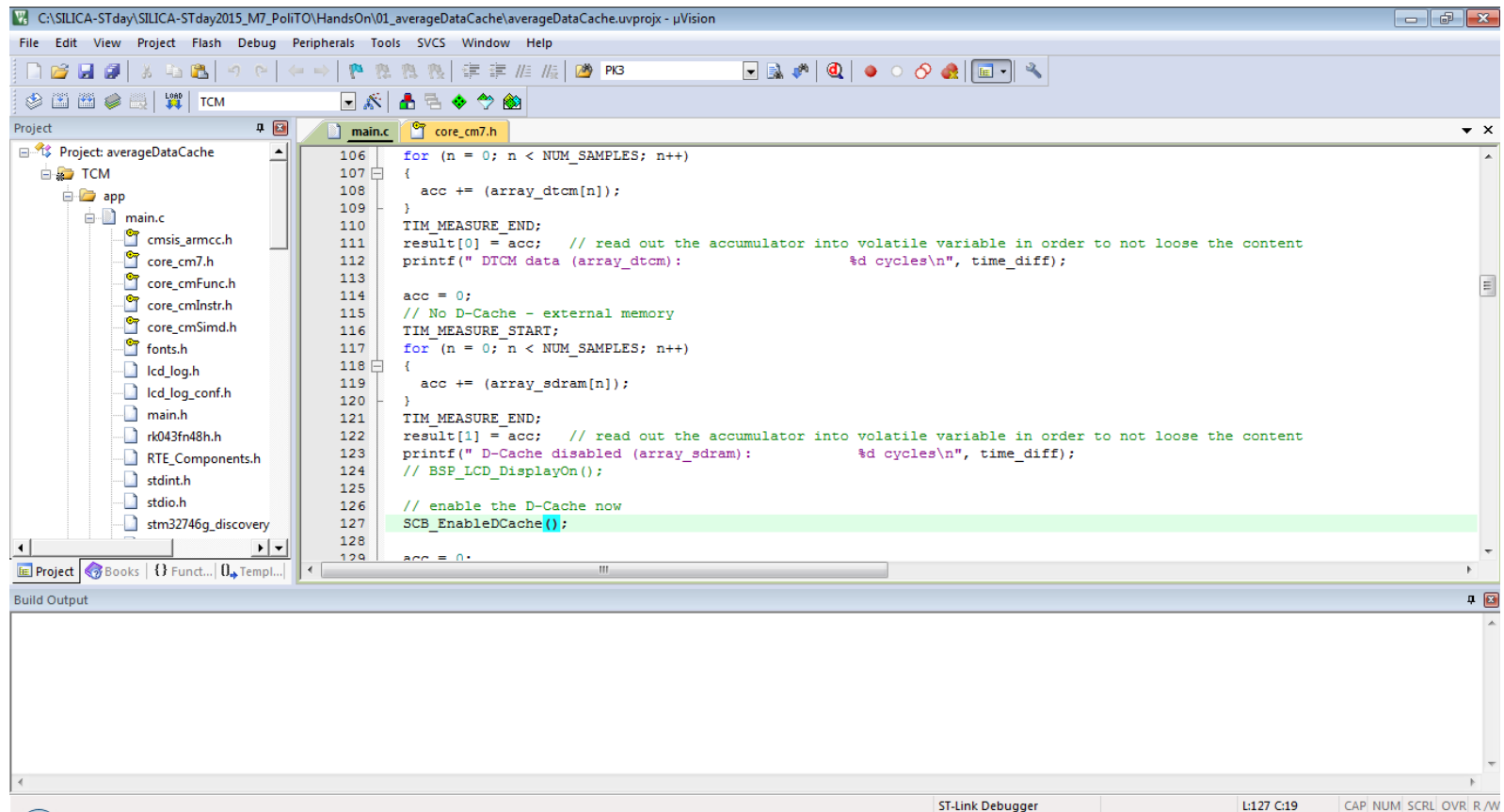
4. Run → F5

Connect the STM32F7-DISCO to your PC and double click on the: **averageDataCache.uvprojx** 

It is in the directory:

C:\...\SILICA-STday2015_M7_PoliTO\HandsOn\01_averageDataCache

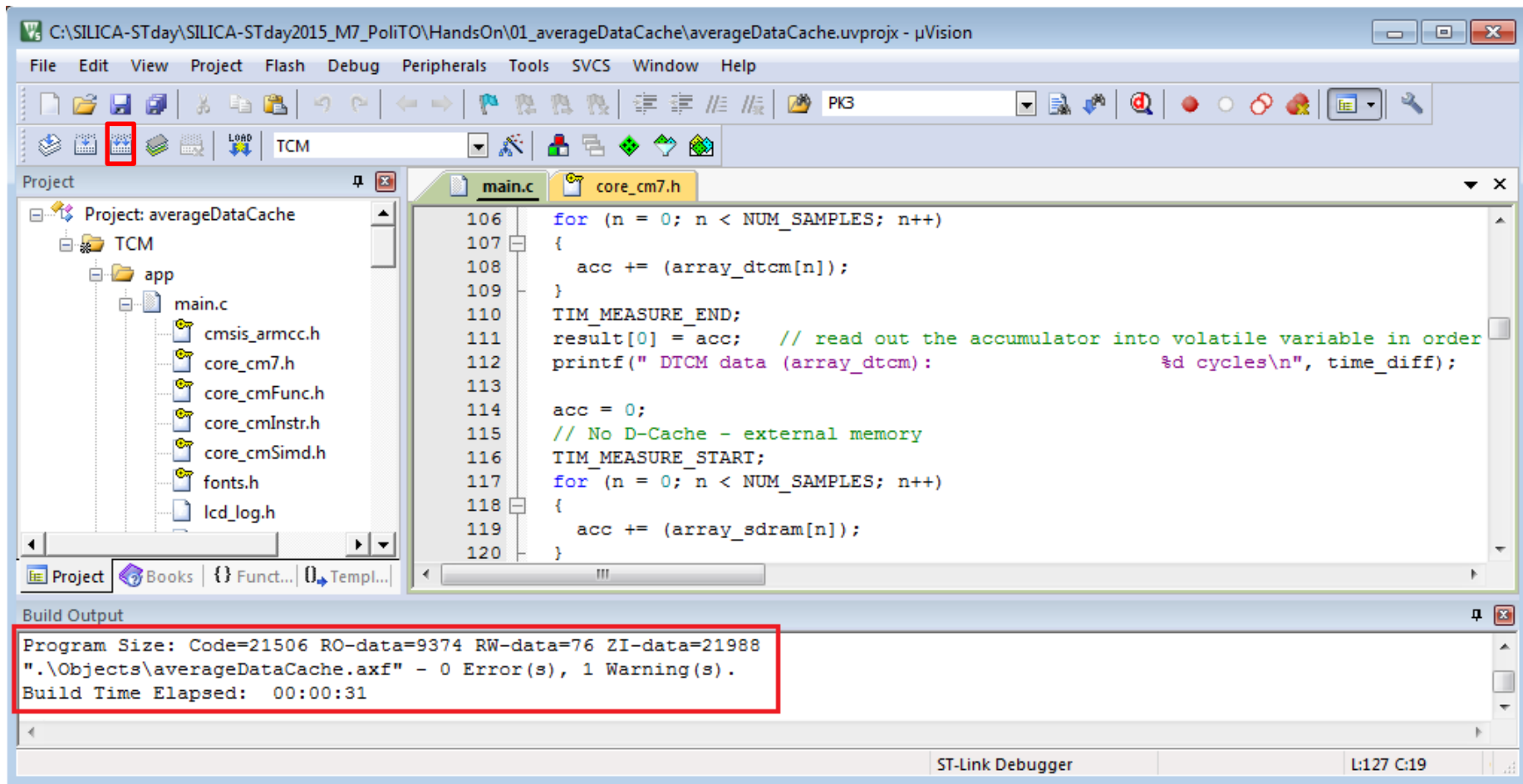
The KEIL must start and you must see something like below.



KEIL, test the installation

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Try to compile, you must see something like below.



KEIL, test the installation

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Options for Target 'TCM'

Device | Target | Output | Listing | User | C/C++ | Asm | Linker | **Debug** | Utilities

☐ Use Simulator [with restrictions](#) ☒ Use: **ST-Link Debugger** [Settings](#)

☐ Limit Speed to Real-Time

Cortex-M Target Driver Setup

Debug | Trace | **Flash Download**

Download Function

LOAD

☐ Erase Full Chip ☒ Program
☒ Erase Sectors ☒ Verify
☐ Do not Erase ☒ Reset and Run

RAM for Algorithm

Start: 0x20010000 Size: 0x1000

Programming Algorithm

Description	Device Size	Device Type	Address Range
STM32F7xx 1MB Flash	1M	On-chip Flash	08000000H - 080FFFFFFH
STM32F7xx 1MB Flash (TCM)	1M	On-chip Flash	00200000H - 002FFFFFFH

Start: Size:

Add Remove

OK Cancel Apply

Project: averageDataCache

TCM

app

main.c

cmsis_armcc.h

core_cm7.h

core_cmFunc.h

core_cmInstr.h

core_cmSimd.h

fonts.h

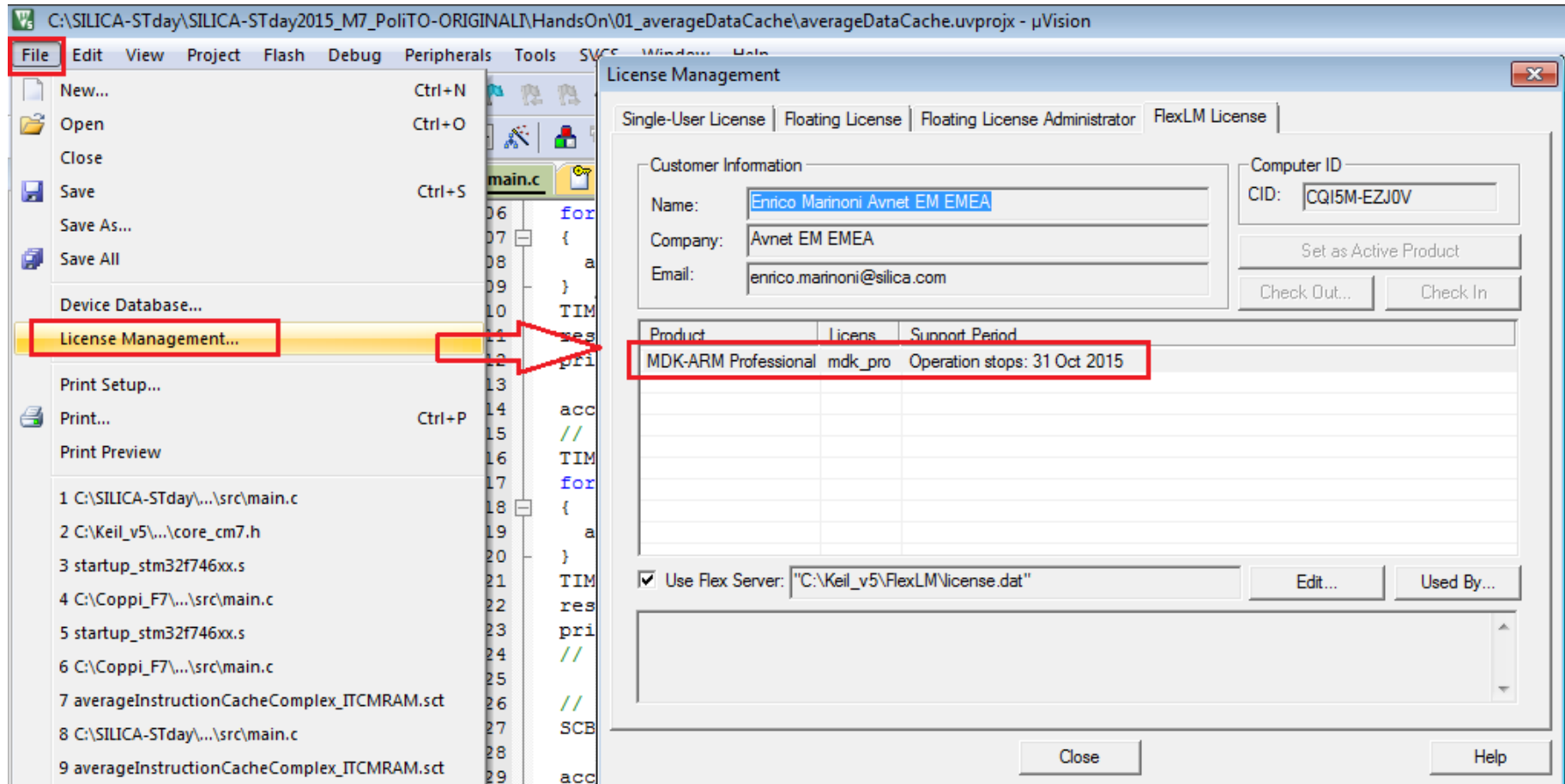
lcd_log.h

Build Output

Program Size: Code=21506 RO-data=93

".\Objects\averageDataCache.axf" -

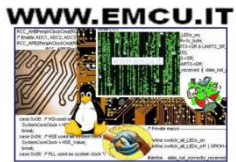
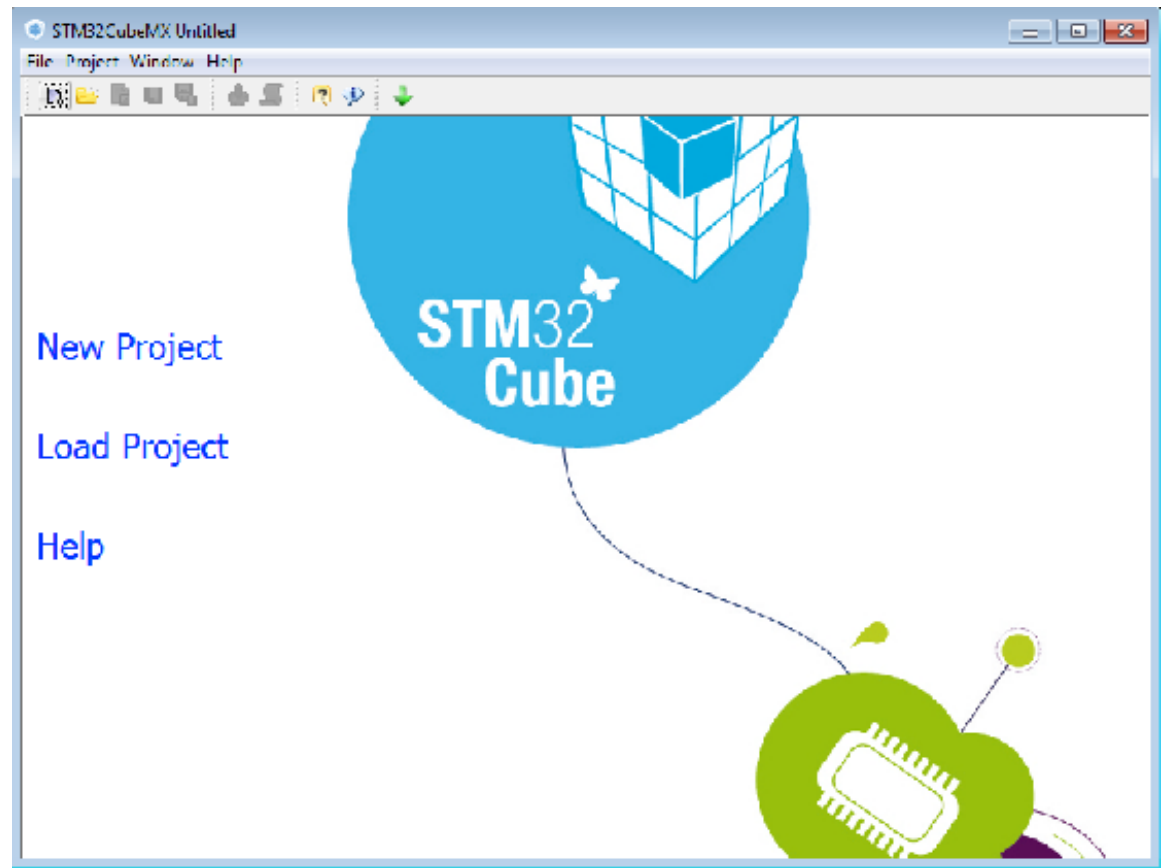
Build Time Elapsed: 00:00:31



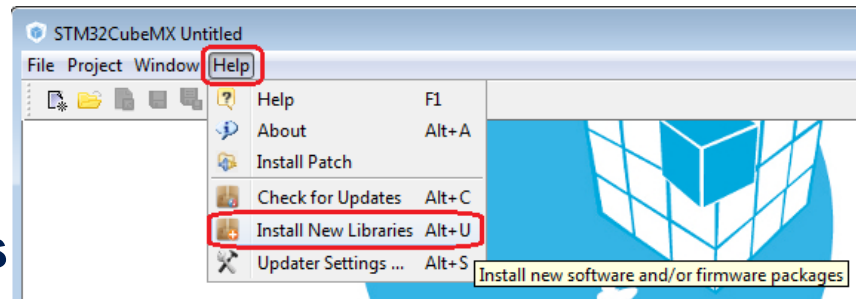
HW and SW configuration - CubeMX

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- Install CubeMX:
SetupSTM32CubeMX-4.10.0.exe
It is in the directory:
C:\...\SILICA-STday2015_M7_PoliTO\Tools\STM32CubeMX
- Run the CubeMX



- Click on:
Help → Install New Libraries



- From the window that appears select:

From Local

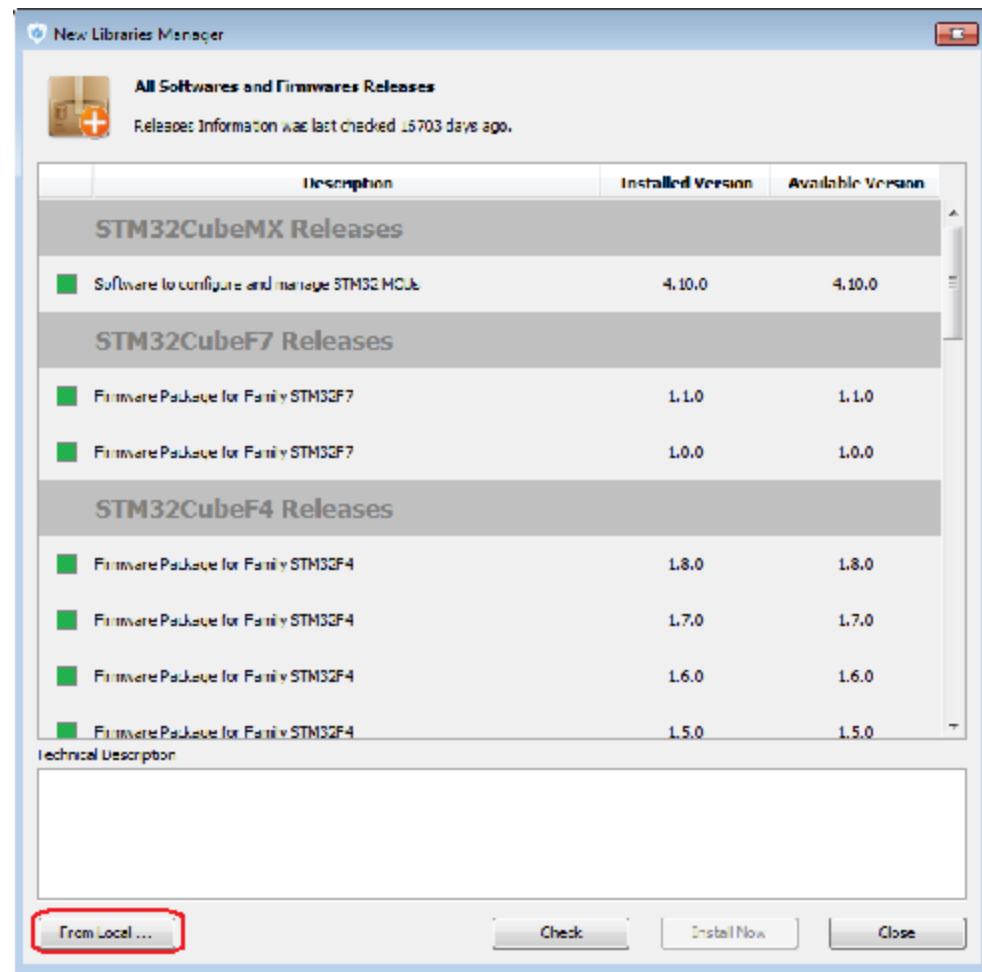
and select:

stm32cubef7.1.1.0.zip

It is in the directory:

C:\...\SILICA-STday2015_M7_PoliTO
\Tools\STM32CubeMX

- Now you are ready to use the
CubeMX and STM32F7



WWW.EMCU.IT



ARM - STMicroelectronics STM32: Cortex™-M4 Lab

Discovering the STM32 Microcontroller

Need more info ?

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For more info contact:

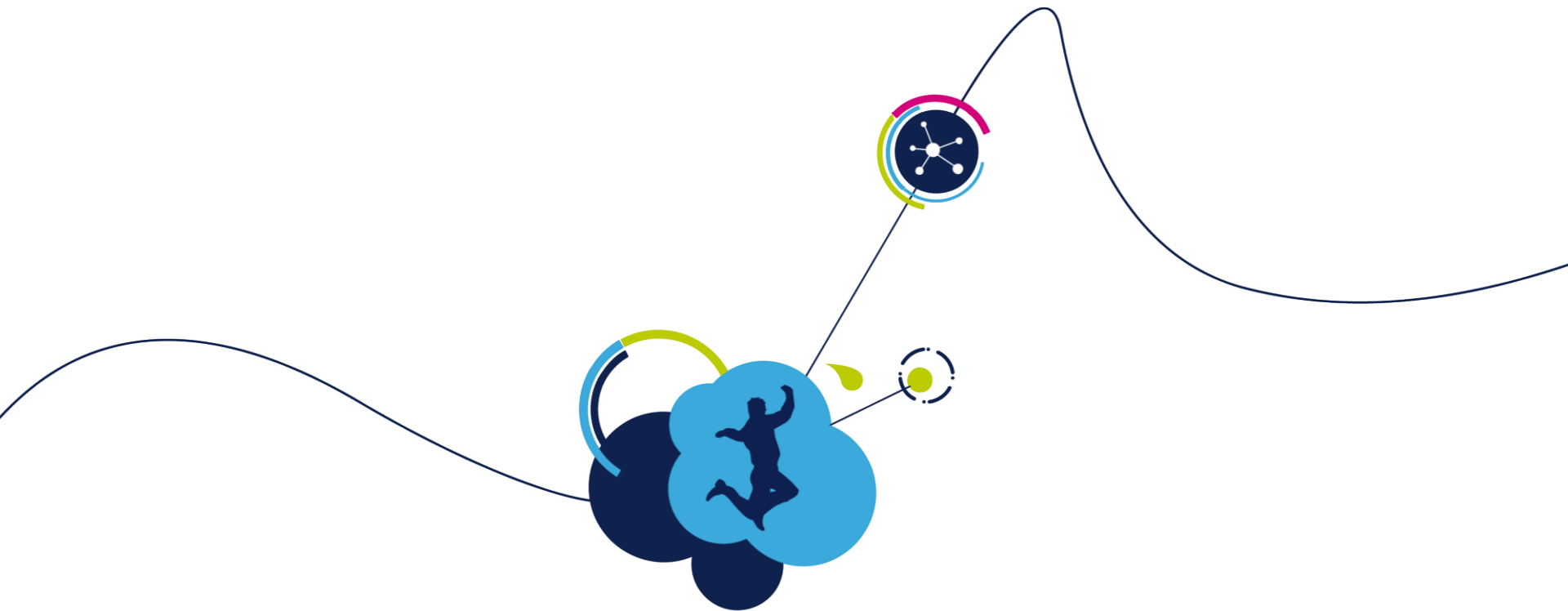
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(B.D.M.)





Thank you

www.st.com/stm32