

Microsemi Libero Installation Instructions

2023

1. Libero Download and Installation:

Go to the Microsemi website and search for Libero. It should take you to <https://www.microsemi.com/product-directory/design-resources/1750-libero-soc#downloads> Click on the Downloads tab and then <https://www.microchip.com/en-us/products/fpgas-and-plds/fpga-and-soc-design-tools/fpga/libero-software-later-versions#Documents%20and%20Downloads> and go to Software Archives. **Download Libero SoC 12.6.** This will require about 25 GB of hard drive space, make sure you have it before installing. You may have to register with Microchip/Microsemi to get to the actual download page.

Products / FPGAs and PLDs / FPGA Design Tools / Hardware Design / Libero® SoC Design Suite Versions 2022.3 to 12.0

Download Software Documentation

Libero SoC Design Suite v12.6 Software (Dec 11, 2020)

This release supports PolarFire SoC, PolarFire, RT PolarFire, SmartFusion 2, IGLOO 2 and RTG4 families only. Read the release notes to know the supported new features, enhancements and known issues.

Libero SoC Design Suite v12.6 Release Notes

Download Libero SoC Design Suite v12.6 for Windows Web Installer

- MD5: 02708463c81e985c406e2831d9aca816
- SHA256:6bb1a1e36217bb266c00ef3338281fc3efca2812de63c6f493ac8d4c58cc2f02

Download Libero SoC Design Suite v12.6 for Windows Full Installer

- MD5: 9567e658b6668849144b5ec56fad0e7c
- SHA256:c20ab2b2b4d174d8a9c9370660dd807e1631a11c5110146b7ef2b58331e4017a

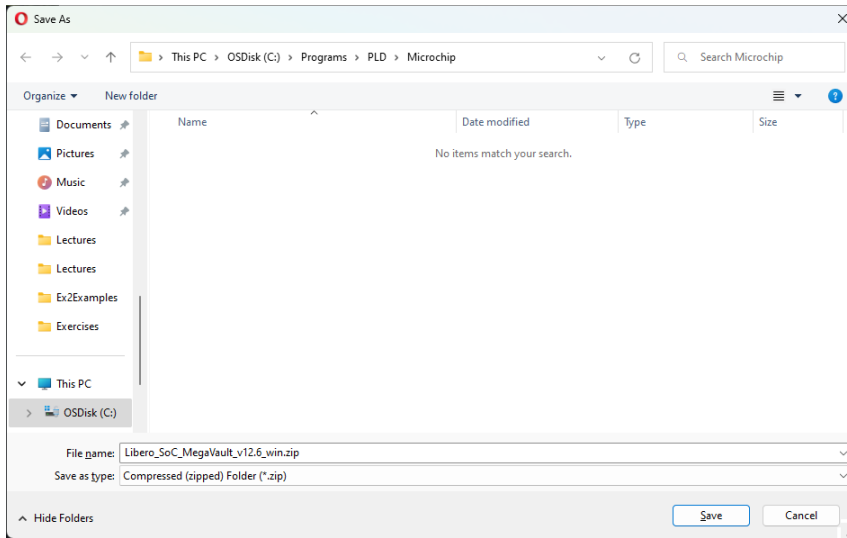
Download Libero SoC Design Suite v12.6 for Linux

- MD5: 732cdbe8b9446b3df99a043905399dc5
- SHA256:20adee1f713751a0d39cacfda4560f4cb21808e1d0fc9877b18ece9b39ec7da2

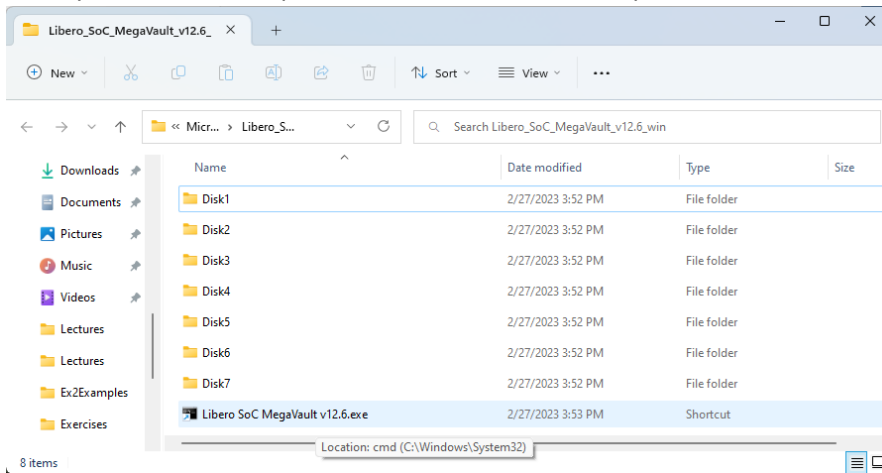
Important Note:

For users working offline with Libero SoC Design Suite v12.6, **MegaVault v12.6 for Windows** or **MegaVault v12.6 for Linux** has to be installed.

Then **download the Libero SoC Megavault**, which requires another 5.5 GB:



Once you extract the zip file, execute the exe to complete the installation, accepting all defaults:



Then **download SoftConsole version 5.1** from <https://www.microchip.com/en-us/products/fpgas-and-plds/fpga-and-soc-design-tools/programming-and-debug/softconsole#downloads> by navigating to software archives or previous software versions, you should see:

https://www.microsemi.com/product-directory/design-tools/4879-softconsole#downloads

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2. For operating system and minimum requirements, visit [Libero SoC](#) page.

3. SoftConsole v5.3 is available as a standalone installer and not bundled with Libero SoC or Libero SoC PolarFire software

SoftConsole v5.2 Release (11/24/2017)

- Must read [SoftConsole v5.2 Release Notes](#) before working with software
- [SoftConsole v5.2 Download for Windows](#)
- [SoftConsole v5.2 Download for Linux](#)

Notes

1. For operating system and minimum requirements, please refer to the [SoftConsole v5.2 Release Notes](#)
2. For operating system and minimum requirements, visit [Libero SoC](#) page.
3. SoftConsole v5.3 is available as a standalone installer and not bundled with Libero SoC or Libero SoC PolarFire software

SoftConsole v5.1 Release (06/06/2017) ←

- Must read [SoftConsole v5.1 Release Notes](#) before working with software
- [SoftConsole v5.1 Download for Windows](#)
- [SoftConsole v5.1 Download for Linux](#)

Notes

1. SoftConsole v5.1 is the first release that supports RISC-V on Windows platform
2. SoftConsole v5.1 is available as a standalone installer and not bundled with Libero SoC or Libero SoC PolarFire software
3. For operating system and minimum requirements, visit [Libero SoC](#) page.
4. SoftConsole v5.1 Release Notes contain instructions for installing

SoftConsole v5.0 For RISC-V Introduction (11/16/2016)

- [Microsemi SoftConsole v5.0 Release Notes](#)
- [Microsemi SoftConsole v5.0 Download Linux](#) (Linux only available at this time)

SoftConsole v4.0 Release (10/21/2015):

- Downloads
 - [Microsemi SoftConsole v4.0 Software - Windows](#) (278 MB)

t-portal/doc_download/136902-microsemi-softconsole-v5-1-download-for-windows Stay Informed +

If any of the above downloads fails, then go ahead and download these files from the Google Drive Link or Canvas, and run them in this order:

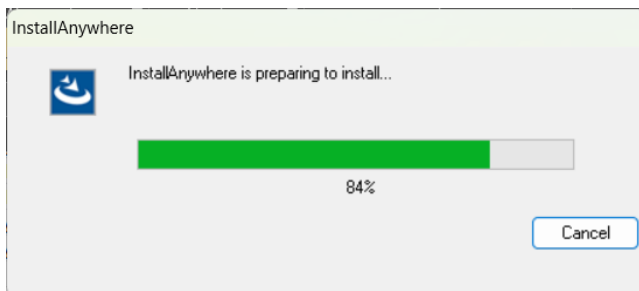
Libero_SoC_v12.6_win.zip (not on Canvas – too large, see One Drive Link here: [Microsemi](#))

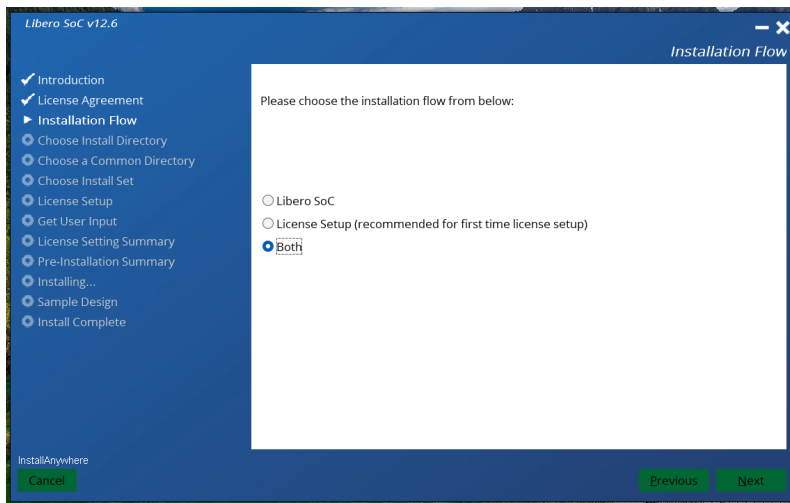
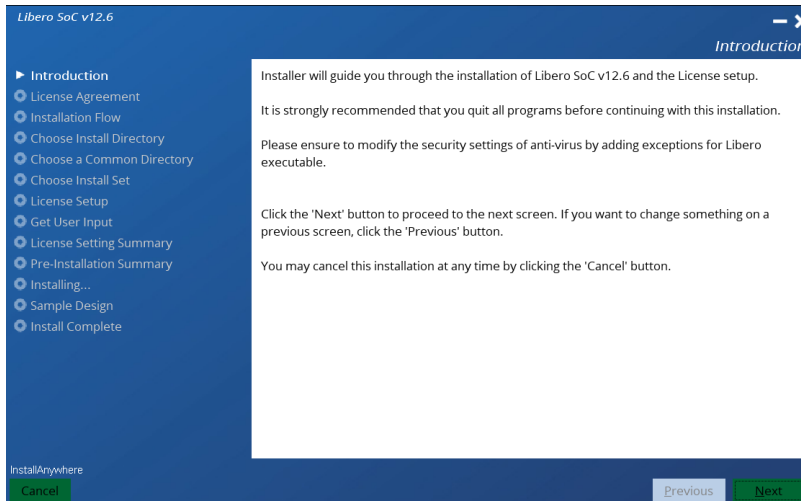
Libero_SoC_Megavault_v12.6_win.zip

Microsemi-SoftConsole-v5.1.0.19-Windows-Installer.exe

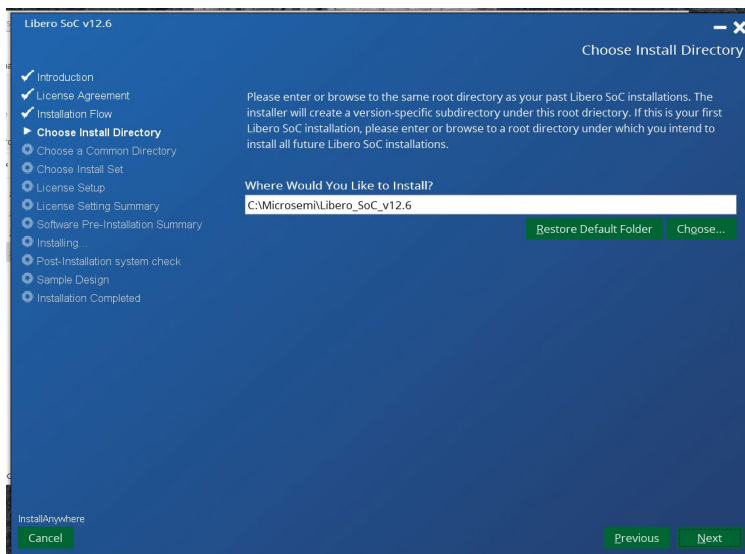
Install Libero

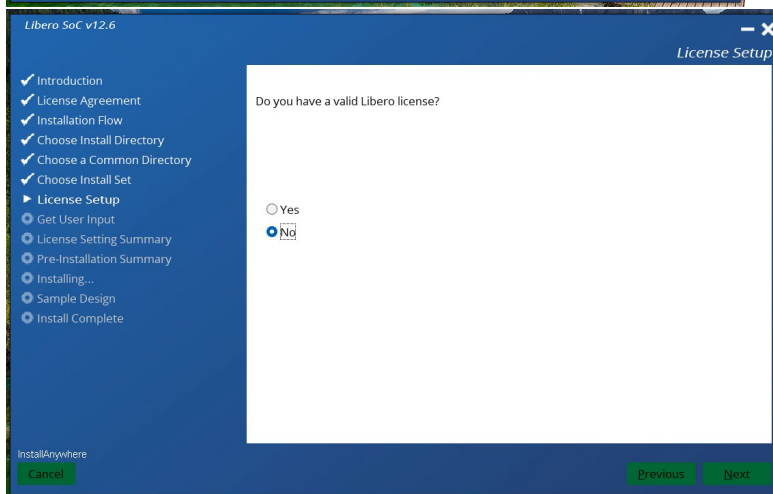
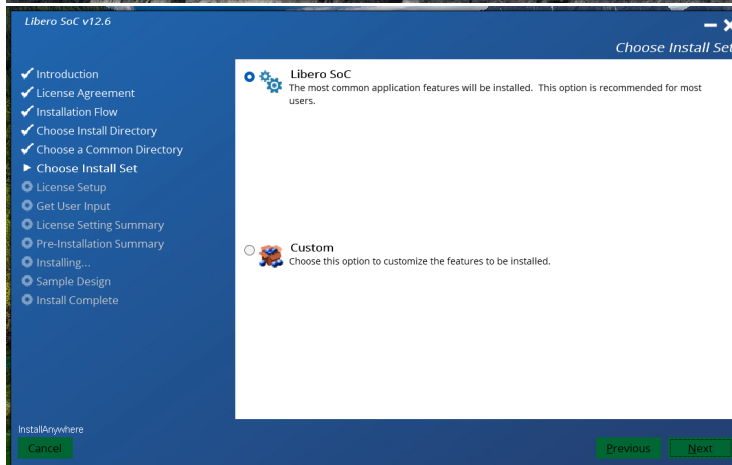
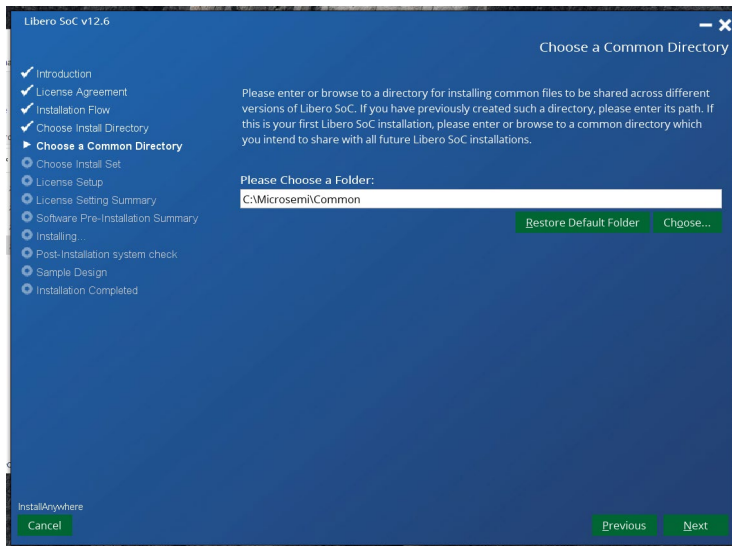
In the directory where you unzipped the zip file or stored the Libero installer exe, click on Libero_SoC_v12.6.exe. Allow it to install in the default folder:



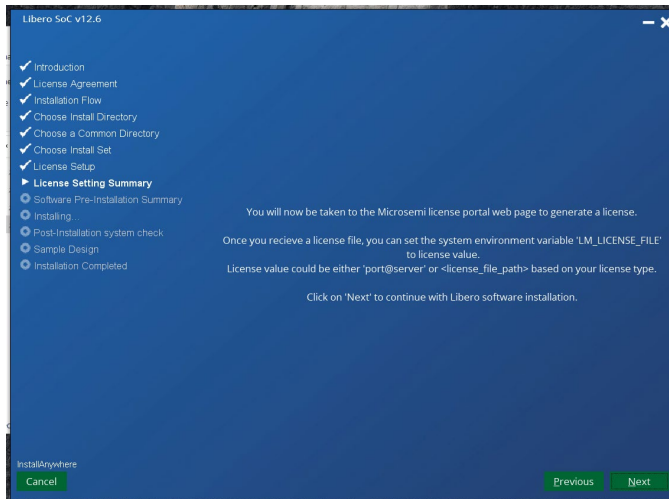


From here it is recommended that you use all the default installation locations and options. Allow the installation of the USB driver at the end.

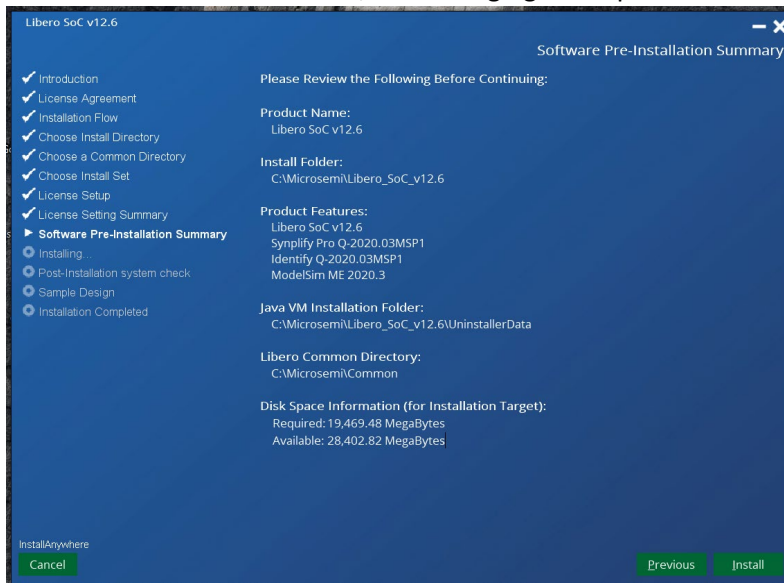




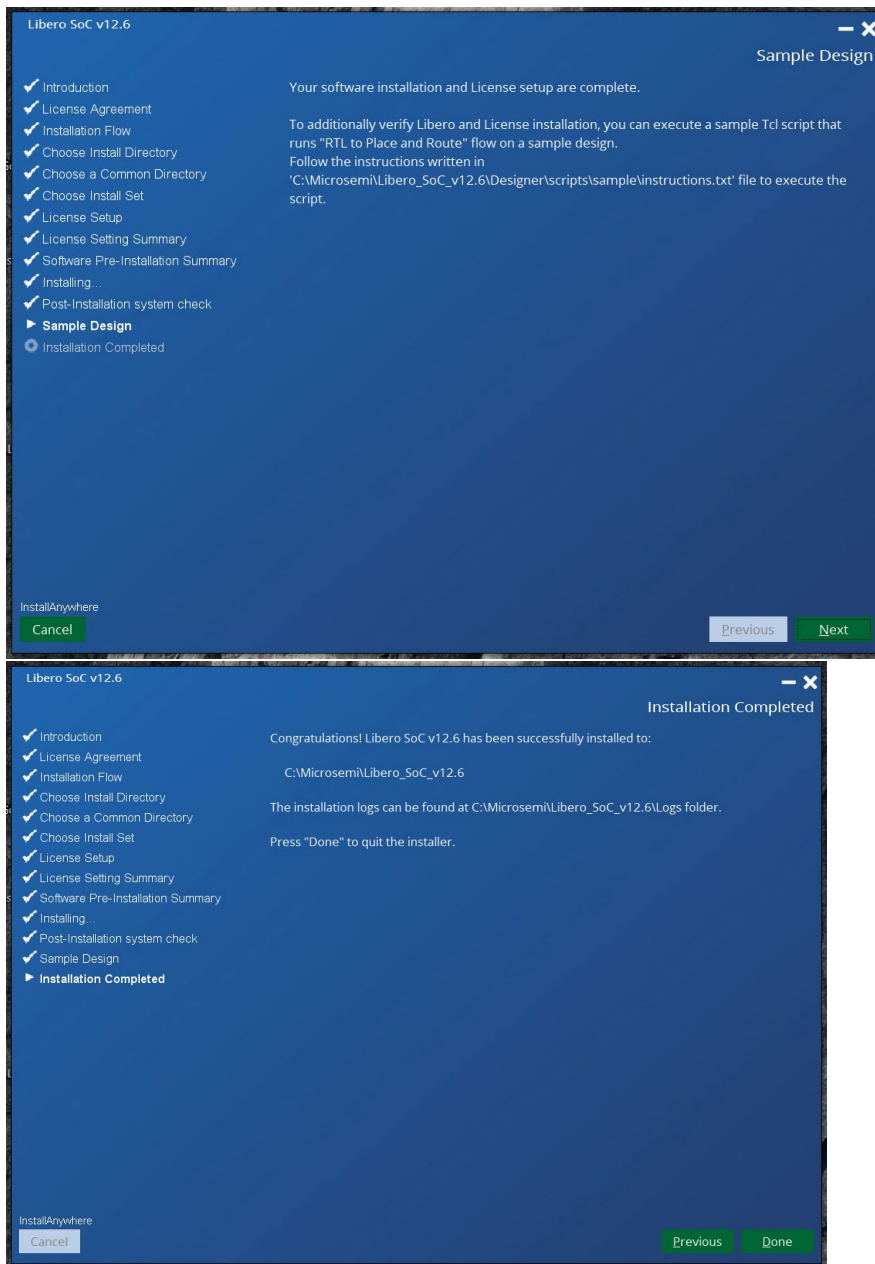
Answer “no” when asked if you have a valid license.



Click install at the next screen, and then go get a cup of tea because it may be awhile.



Allow the driver install to complete.



If you get here, then Hurrah! You are done.

2. After installing Libero (and any other software such as ModelSim and Synplify Pro), you must request a Libero license.

There are three ways to access the software registration web site:

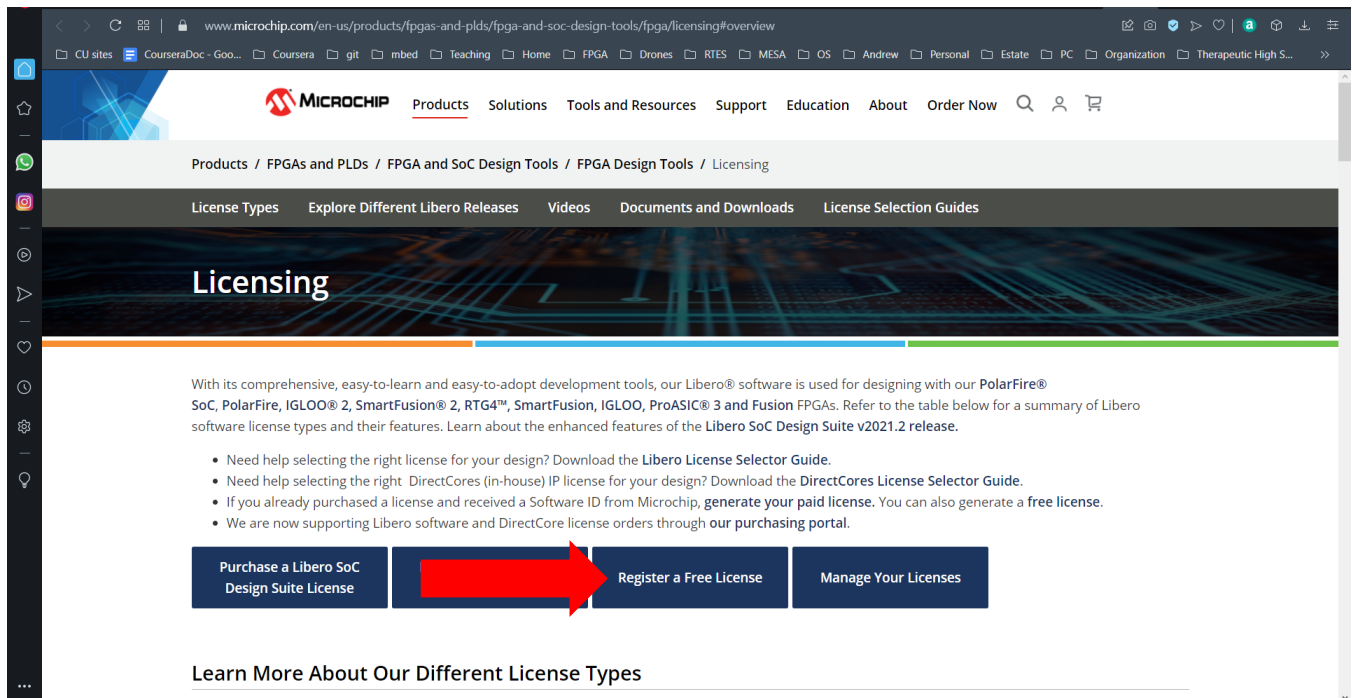
From the Microchip/Microsemi website as shown below

From the "Obtain license" button in the Libero InstallShield window during Libero installation

From Start > Programs > Libero SoC v12.6 > Microsemi License Utility

Either of these methods opens the registration screen shown on the slide.

Libero Silver customers and customers requesting an evaluation license do not have a software id. The Libero licensing system is fully automated and available 24/7. Licenses are generally received within a few minutes.



You may need to fill out a short survey. Use the responses shown below:

What attracted you to Microsemi?
Static Power Consumption

What industry does your end product serve?
☐ Communications
☐ Automotive
☐ Commercial Avionics
☐ Computing
☒ Industrial
☐ Medical
☐ Military
☐ Storage

What FPGA family are you using?
SmartFusion

What development kit are you using?
SmartFusion Eval Board

Or you could use the SmartFusion2.

Then you will see the request license page. Before 2019, we could get Gold licenses for free, but now those are for purchase only. Request a Silver license.

Are you looking to Secure your Supply for the Next 12 Months? [Ask us about our Preferred Supply Program](#)

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Microchip Part	Seats	Registration Date	Expiration	Download License
Libero Silver 1 Yr DiskID NL License (LIB-SLV-N-1YR-DISKID)	1	21-Feb-2022	21-Feb-2023	Download License
Libero Silver 1 Yr DiskID NL License (LIB-SLV-N-1YR-DISKID)	1	17-Feb-2021	17-Feb-2022	Download License
Libero Silver 1 Yr DiskID NL License (LIB-SLV-N-1YR-DISKID)	1	27-Nov-2019	26-Nov-2020	Download License
Libero Silver 1 Yr DiskID NL License (LIB-SLV-N-1YR-DISKID)	1	05-Nov-2018	05-Nov-2019	Download License
Libero Silver 1 Yr DiskID NL License (LIB-SLV-N-1YR-DISKID)	1	18-Oct-2017	18-Oct-2018	Download License

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Purchasing & Client Services

What can we help you find today? You can type in any Microchip or Competitor Part Number

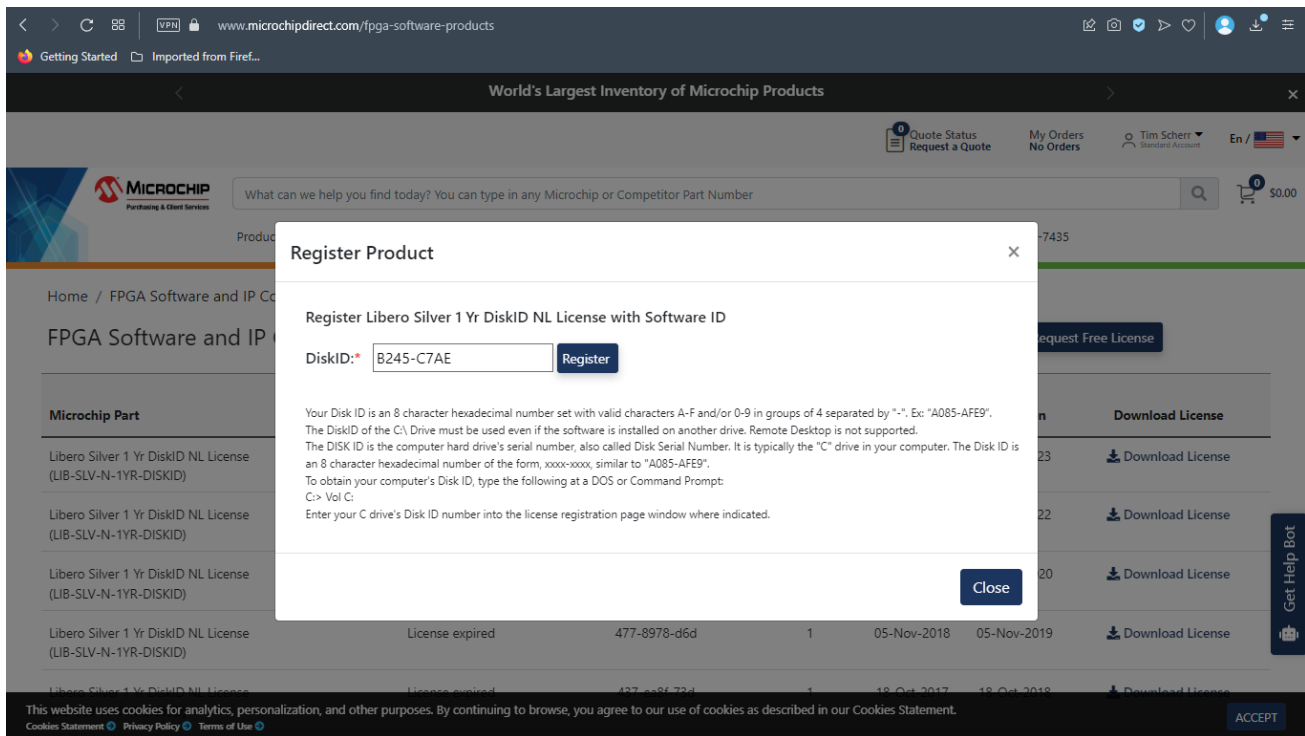
Register Free FPGA license

Microchip Part	Type	Register License
Libero Evaluation Floating License for Windows or Linux Server	Libero	Register
Libero Evaluation Node Locked License for Windows	Libero	Register
Libero Silver 1 Yr DiskID NL License	Libero	Register
Libero Silver 1Yr Floating License for Windows/Linux Server	Libero	Register
PolarFire Seminar license for Windows PC	Libero	Register
SmartHLS 1 Year Node Locked License for Windows	SmartHLS	Register
SmartHLS 1 Year Floating License for Windows or Linux Server	SmartHLS	Register
CoreVECTORBLOX OBS FLOATING MACID	VectorBlox	Register
CoreVECTORBLOX OBS nodelocked DISKID	VectorBlox	Register
Legacy IP Core RTLsource Node Locked License	IP Core	Register
Legacy IP Cores RTL Floating MACID license	IP Core	Register
Legacy IP Cores RTL Floating Solaris (HOSTID) License	IP Core	Register
Synopsys Symphony Model Compiler AE 1 Yr for Windows	Synphony Model	Register

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ACCEPT

Choose either the Silver license or the 60 day evaluation license.



To find DiskID, open a command prompt and type 'vol c:' Enter the 8 digit disk ID in the box. You will get a response like: **Your Software ID is 437-ea8f-73d** ticket number CAS-17014-H2G8V5. A license file will be emailed to you, usually within the hour.

Register Product

Register - Libero Silver 1 Year Node-lock License for Windows with Software ID 5a0-55db-d09

DiskID:*
Register

Thank you for registering. Your software Id is 5a0-55db-d09.

Your software license will arrive via email within 45 minutes. If you did not receive your license, please contact FPGASoftwareSupport@microchip.com.

Your Disk ID is an 8 character hexadecimal number set with valid characters A-F and/or 0-9 in groups of 4 separated by "-". Ex: "A085-AFE9". The DiskID of the C:\ Drive must be used even if the software is installed on another drive. Remote Desktop is not supported. The DISK ID is the computer hard drive's serial number, also called Disk Serial Number. It is typically the "C" drive in your computer. The Disk ID is an 8 character hexadecimal number of the form, xxxx-xxxx, similar to "A085-AFE9". To obtain your computer's Disk ID, type the following at a DOS or Command Prompt: C:> Vol C: Enter your C drive's Disk ID number into the license registration page window where indicated.

Close

3. License and Environment Variable Setup

COPY LICENSE FILE TO YOUR SYSTEM

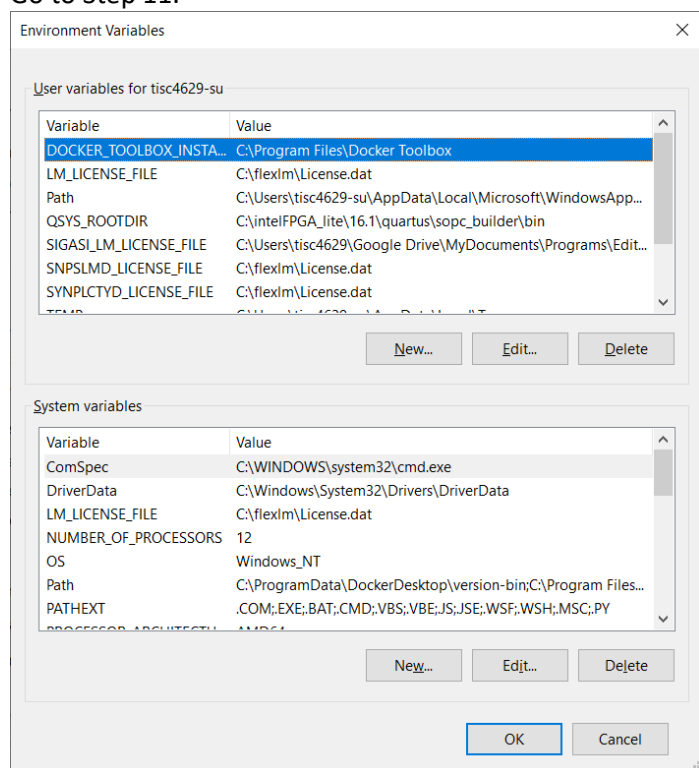
1. Create a folder named flexlm under your c: drive.
2. Save the attached license.dat file in the flexlm folder. Alternately, you can save the license.dat in another folder in your c: drive. Make sure you do not already have a license.dat file in this same directory that may conflict.

SET LM_LICENSE_FILE, SNPSLMD_LICENSE_FILE AND SYNPLCTYD_LICENSE_FILE ENVIRONMENT VARIABLES

3. Bring up Control Panel, in Windows 10 it may be under Windows System.
4. Double click on 'System'.
5. In the 'Systems Properties' dialog click on the 'Advanced' tab, or you may see a menu item "Advanced system settings".
6. Click on the 'Environment Variables' button.

IF LM_LICENSE_FILE IS ALREADY LISTED IN USER VARIABLES:

7. Select it, then click 'Edit'.
 8. Add the path to the Microsemi license.dat file after any existing Variable Value, separated with a semicolon, or replace the existing Value. Be sure to retain the license.dat file name and extension at the end of the path.
- Go to Step 11.



IF LM_LICENSE_FILE IS NOT LISTED IN USER VARIABLES:

7. Click on the top most 'New' button. 'New User Variable' should be visible.
8. In the 'Variable Name' field type: 'LM_LICENSE_FILE' (no quotes).

9. In the 'Variable Value' field type: c:\flexlm\license.dat (or path to your license location).
10. Click OK.

ADD **SNPSLMD_LICENSE_FILE** and **SYNPLCTYD_LICENSE_FILE** TO USER VARIABLES:

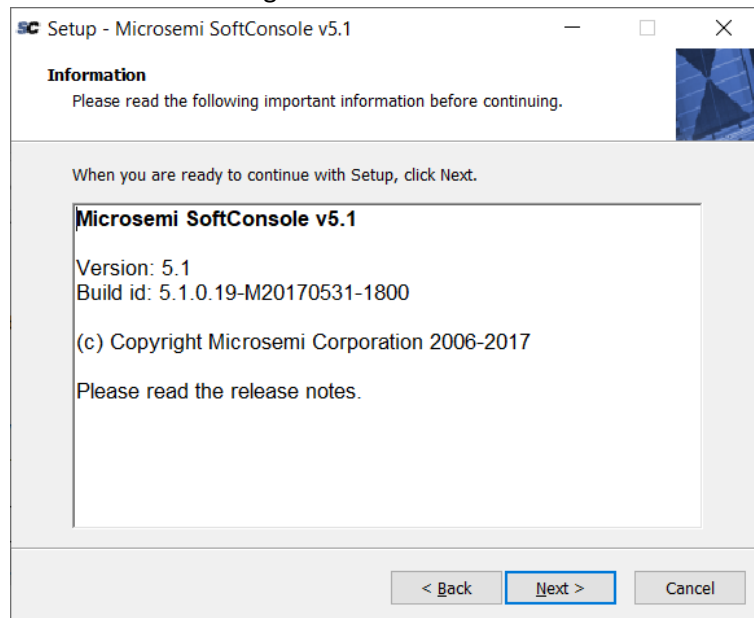
11. Click on the top most 'New' button. 'New User Variable' should be visible.
12. In the 'Variable Name' field type: 'SNPSLMD_LICENSE_FILE'(no quotes).
13. In the 'Variable Value' field type: 'c:\flexlm\license.dat'(no quotes).
14. Click OK.
15. Repeat steps 11-14 to add SYNPLCTYD_LICENSE_FILE.
16. Click OK to save new Environment Variables and return to System Properties. Click OK to exit.

4. Soft Console Download and Installation

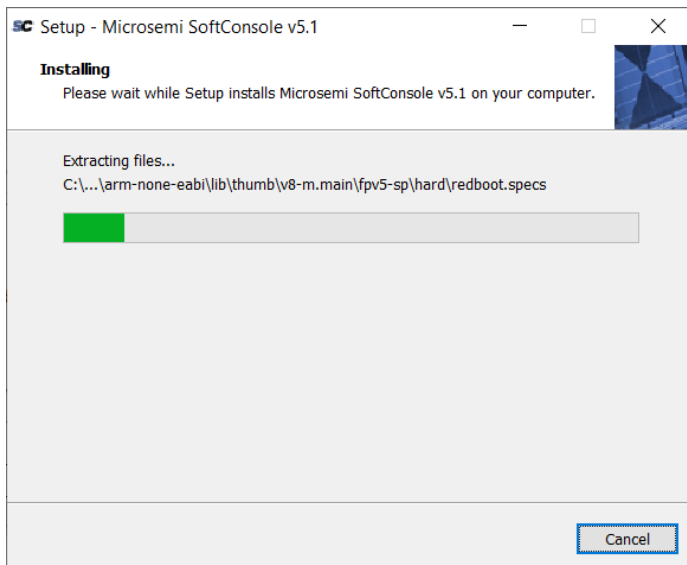
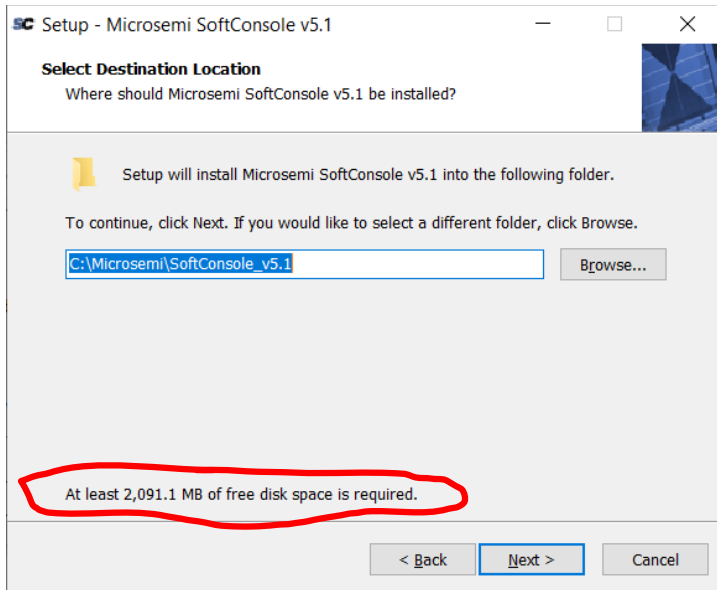
Go to <https://www.microsemi.com/products/fpga-soc/design-resources/design-software/softconsole#downloads>

Download both the 5.1 Release Software for the Software Archives Tab:

Run the install file to get:



Install in the default folder:



After this, device drivers may be installed and then

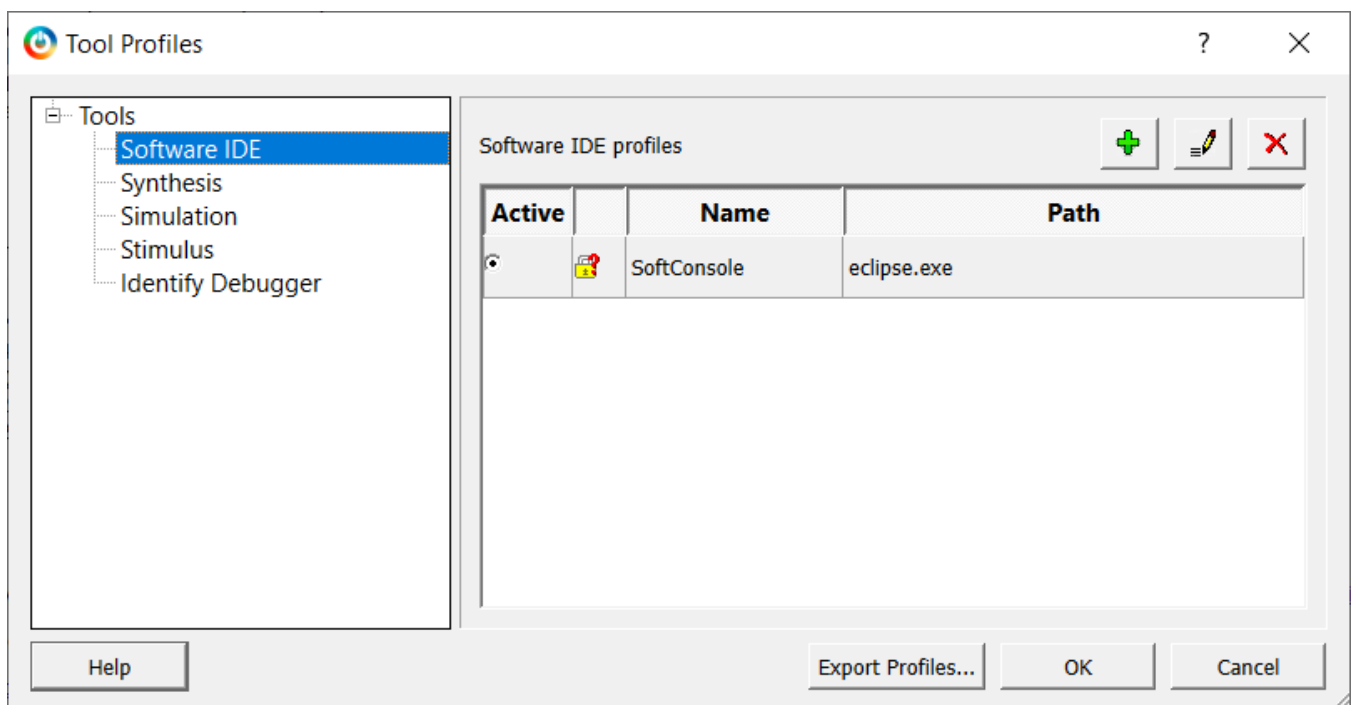
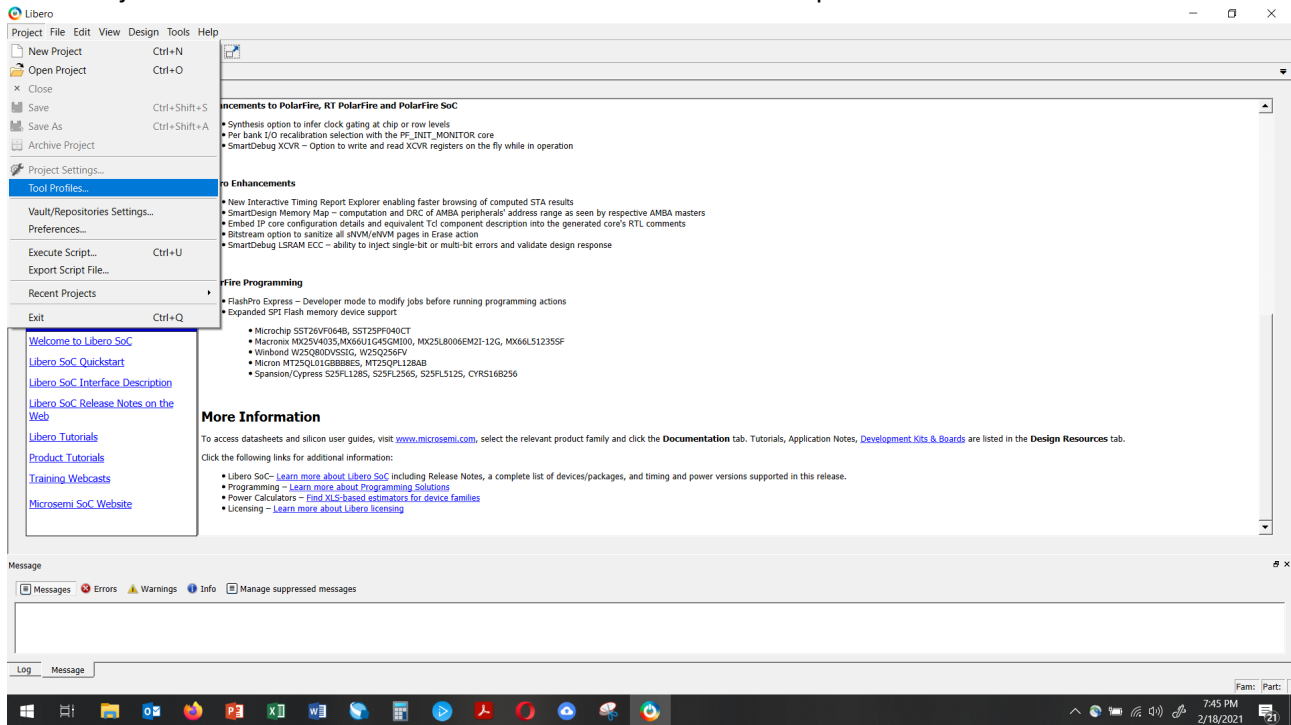


5. Soft Console Setup

Open Libero from the Desk top Icon, **once all steps above are complete.**

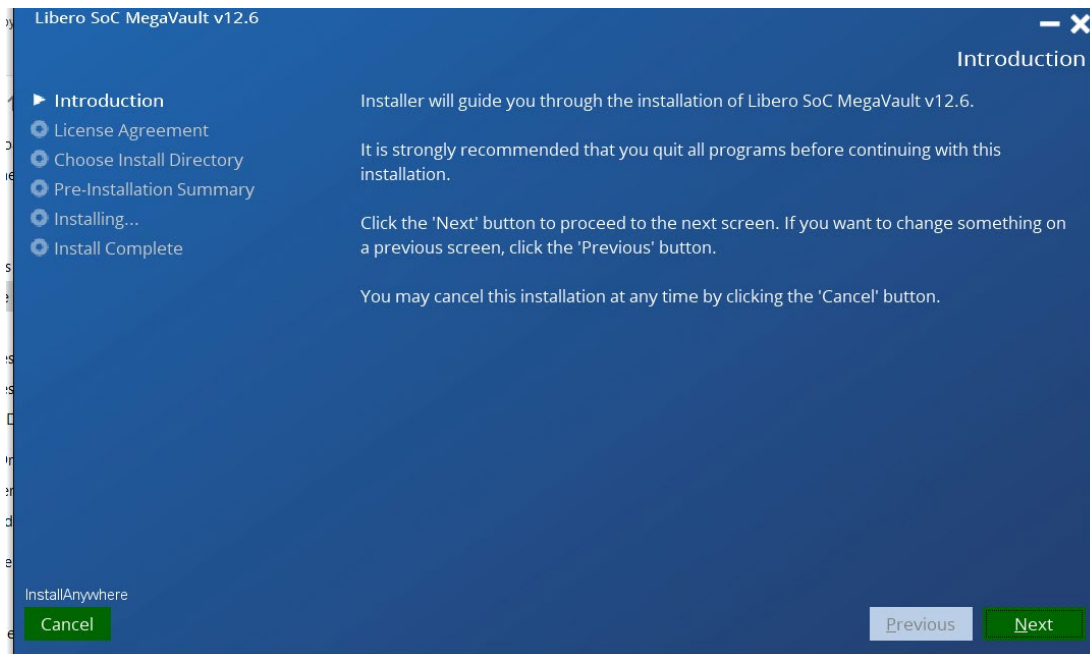
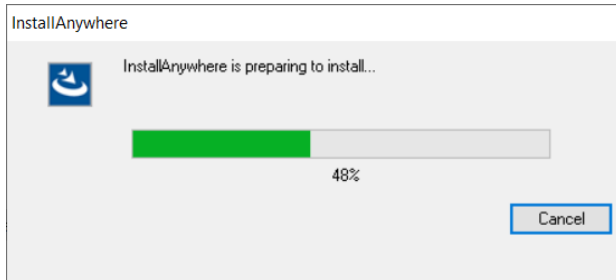
Ensure the softconsole tool profile is correctly set and active.

Go to Project > Tool Profiles - Location is the install folder under Eclipse

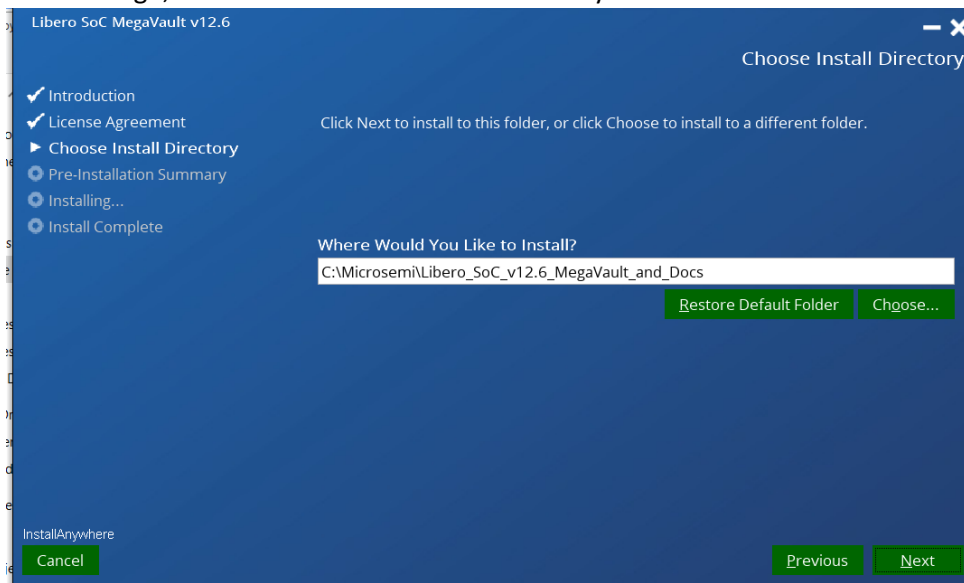


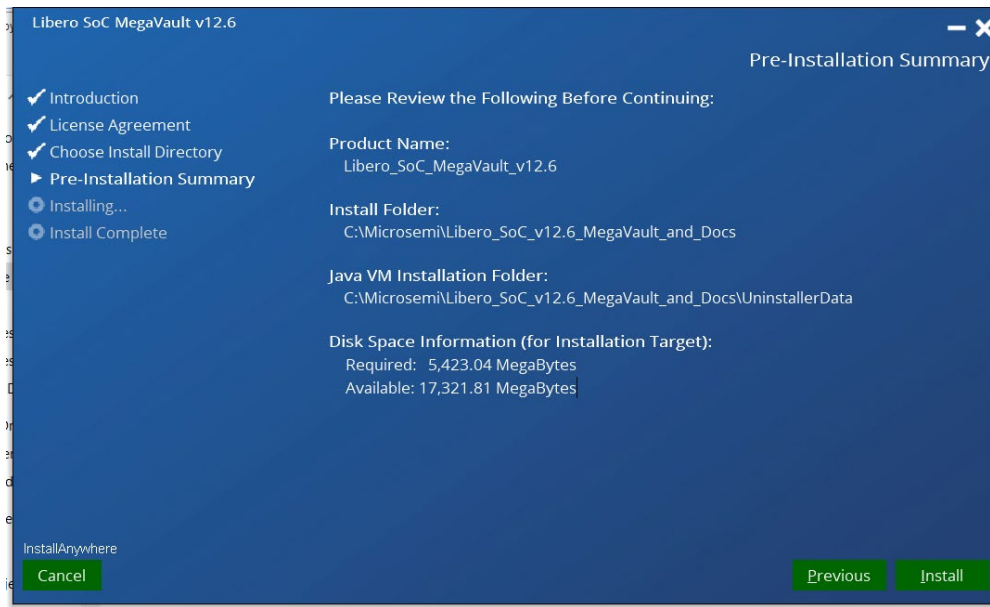
6. IP Vault Installation and Setup

Run the MegaVault installer:

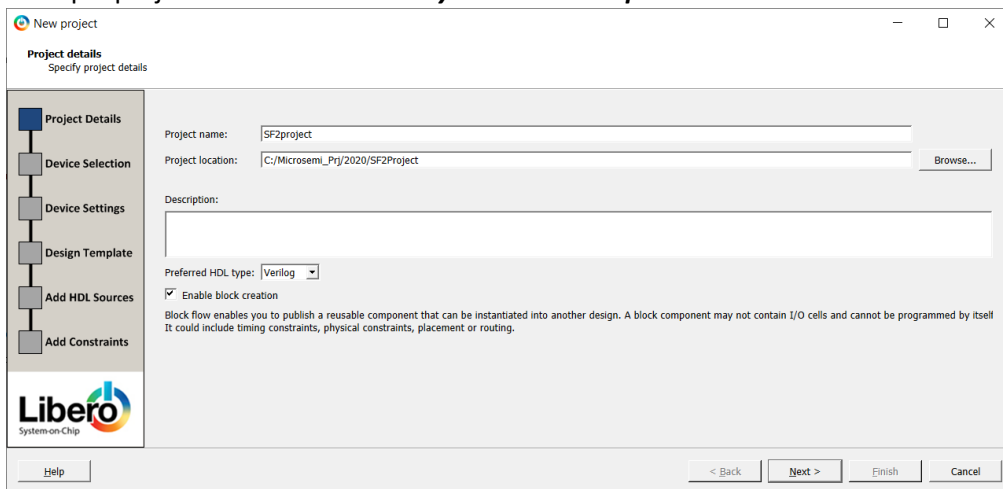


Click through, and install into the default directory.





Setup the Vault. Once Libero SoC is installed, open the software and create a new project. The details of an example project are below. ***Ensure system builder option is chosen.***



Enter a name for the project. Then choose a SmartFusion2 device:

New project

Device selection
Select a part for your project from the part number list

Selected part: **M2S010-FG484**

Project Details

Device Selection

Device Settings

Design Template

Add HDL Sources

Add Constraints

Libero
System-on-Chip

Part filter

Family: SmartFusion2 Die: M2S010 Package: 484 FBGA

Speed: STD Core voltage: 1.2 Range: COM

Reset filters

Search part:

Part Number	4LUT	DFF	User I/Os	uSRAM 1K	LSRAM 18K	Math (18x18)	PLLs and CCCs
M2S010-FG484	12084	12084	233	22	21	22	2

Help

< Back Next > Finish Cancel

Click next through all sections using default settings, except select Create a MSS Design.

New project

Design Template
Choose a design template

Selected part: **M2S010-FG484**

Project Details

Device Selection

Device Settings

Design Template

Add HDL Sources

Add Constraints

Libero
System-on-Chip

Design templates and creators

☐ None

☐ Create a system builder based design

☒ Create a microcontroller(MSS) based design

Core	Version
SmartFusion2 Microcontroller Subsystem (MSS)	1.1.500
SmartFusion2 Microcontroller Subsystem (MSS)	1.1.400

☐ Show only latest version

Design methodology

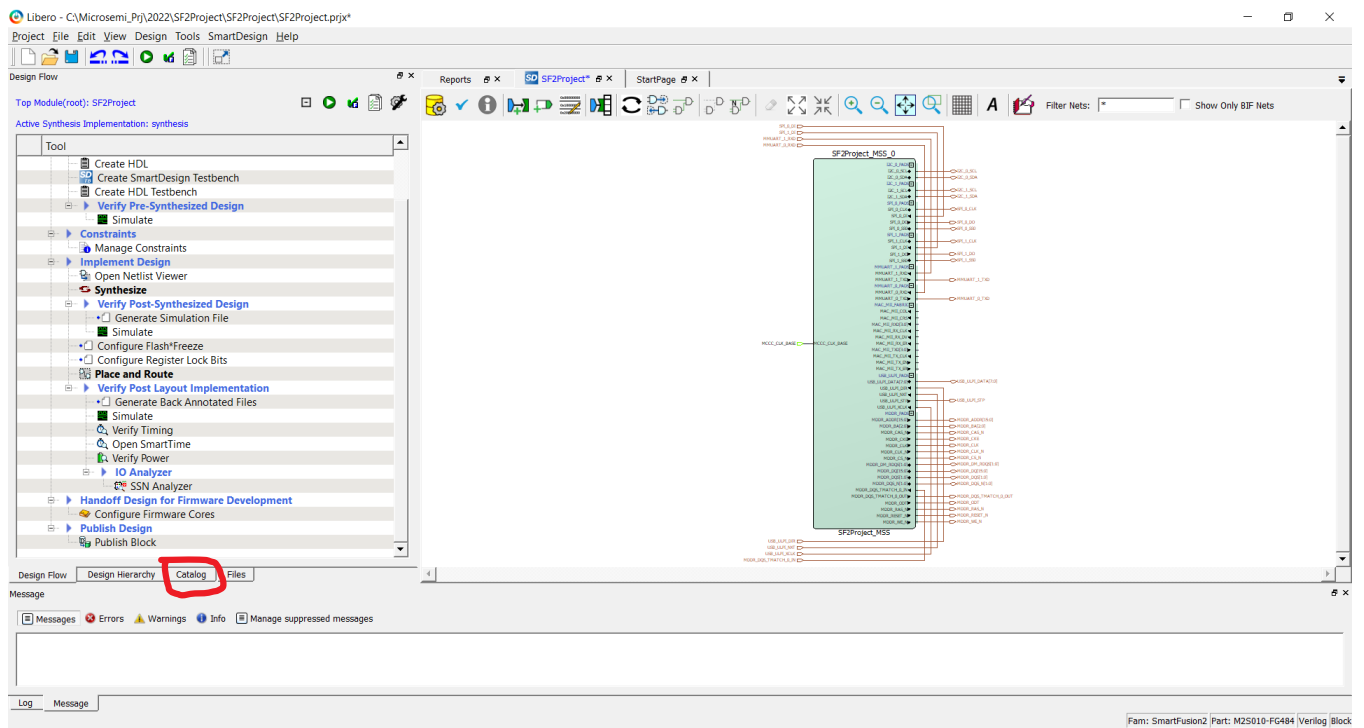
☐ Use standalone initialization for MDDR/FDDR/SERDES peripherals

☒ Instantiate SystemBuilder/MSS component in a SmartDesign on creation

Help

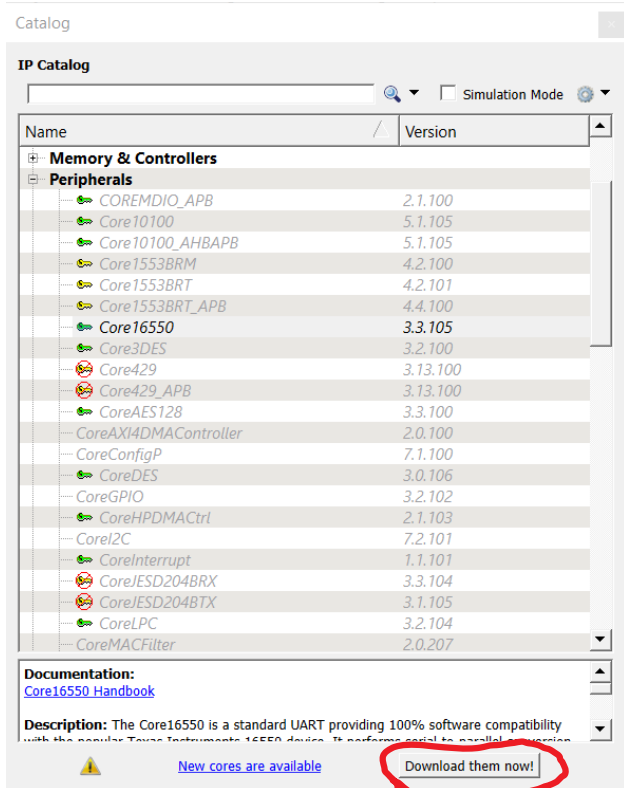
< Back Next > Finish Cancel

Once finished, you have a SmartFusion2 SmartDesign seen below. You will need to right click on the MCCC_CLK_BASE signal on the center left of the MSS component and promote it to the top-level. Check to assure that all signals are at the top level showing connections to pins.



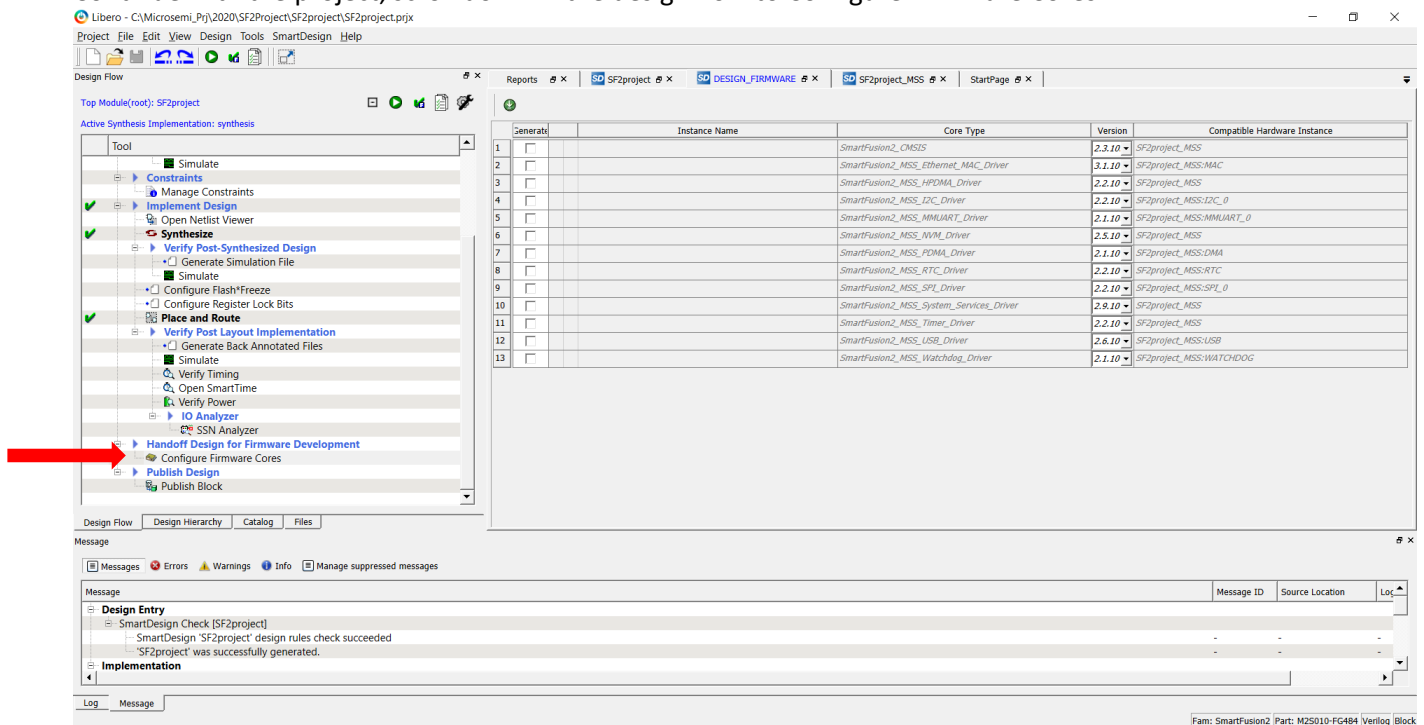
In the catalog section, ensure all of the newest cores have been downloaded.

If your cores are listed in grey italics, then that indicates that you need to download them. Click on Download them now.

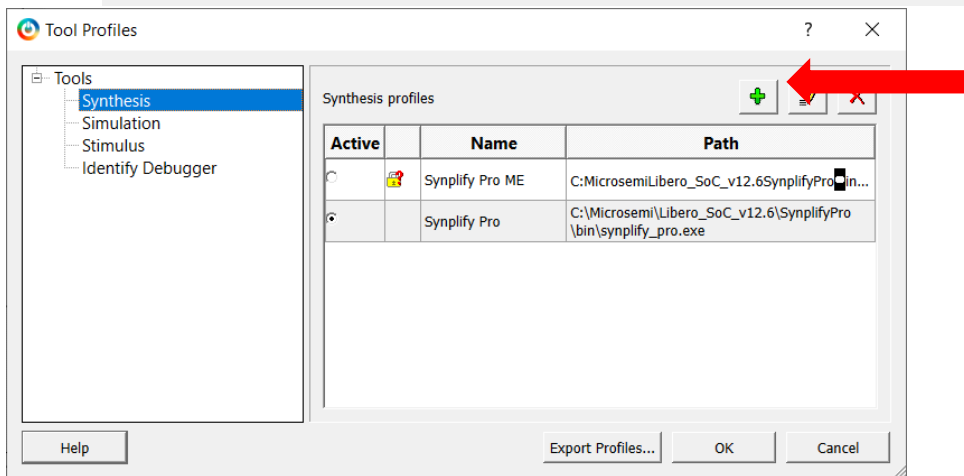
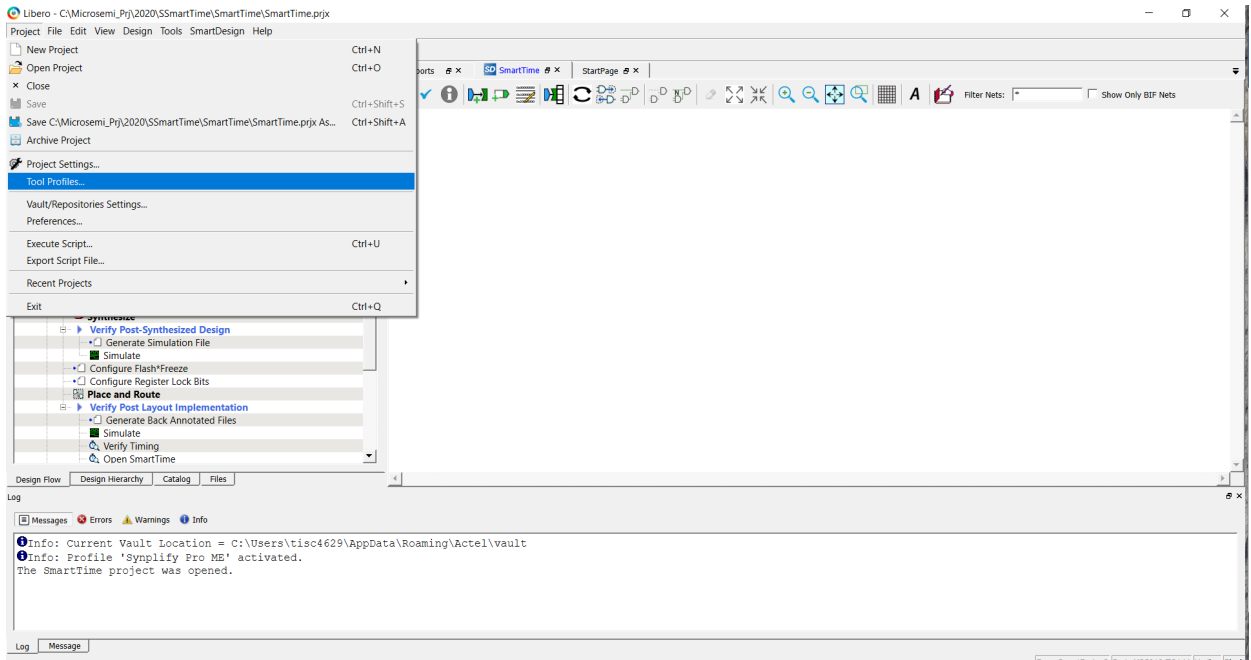


7. Firmware Catalog Setup

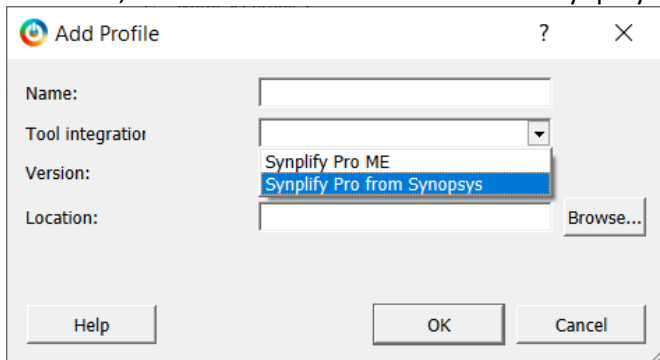
Continue with the project, scroll down in the design flow to Configure Firmware Cores:




In Design firmware window, right click to download all cores



Here you may need to add a profile to the list and make it active, as shown above. Click on the green plus sign to do this, and enter the installed location for Synplify Pro:



Do the same for ModelSim:

 Add Profile ? X

Name:

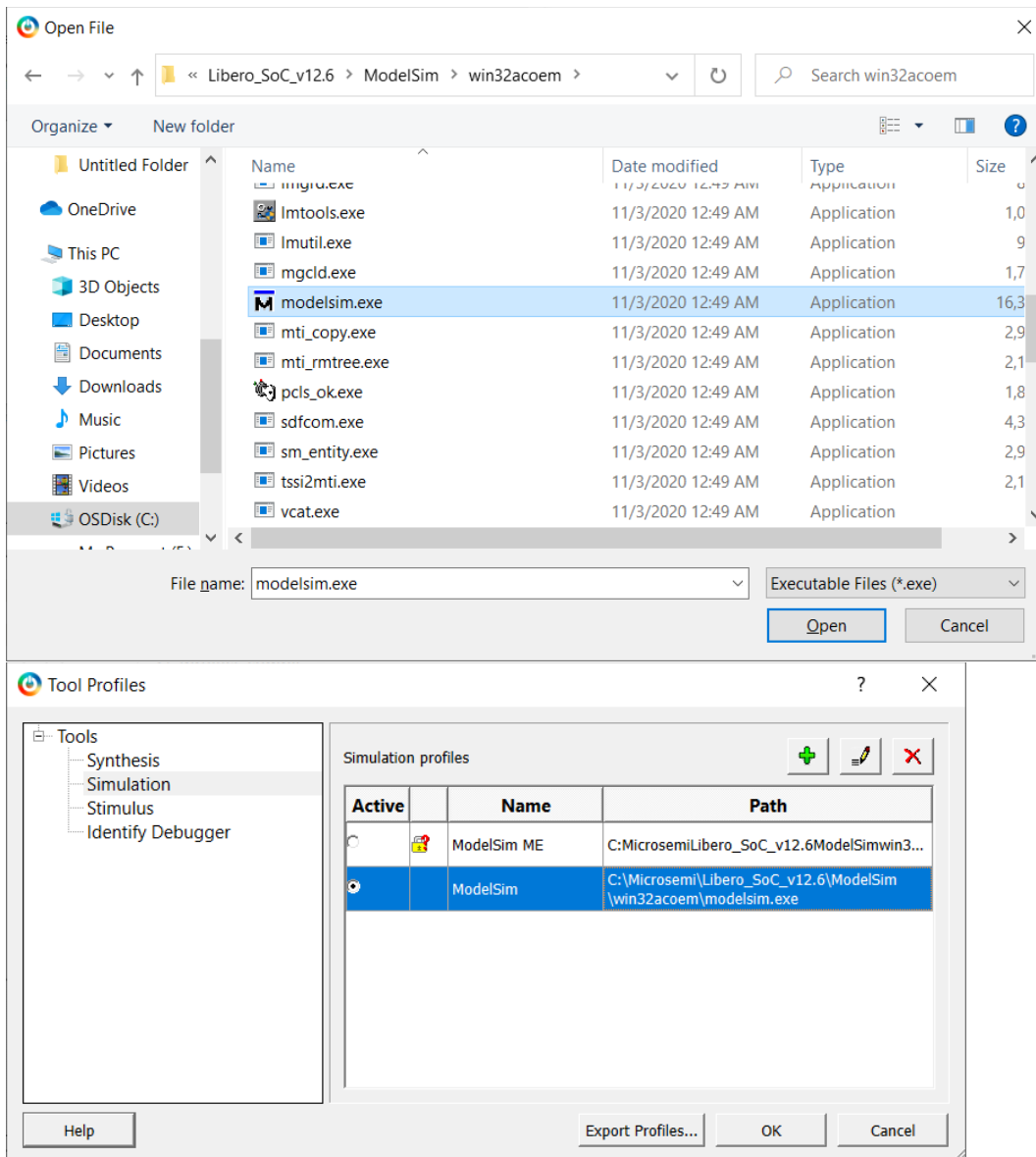
Tool integration:

Version:

Location: Browse...

ModelSim
ModelSim Standard Edition
ModelSim Pro Edition
Riviera-PRO
Active-HDL
QuestaSim

Help OK Cancel



You are done, and ready to design new systems on a chip using Libero!