USER GUIDE

UG004 | Using the OrCAD Libraries

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1. INTRODUCTION

OrCAD is a popular Electronic Design Automation (EDA) software used for PCB design. It offers a variety of products, including the popular OrCAD Capture, which is Cadence's schematic capture tool, Padstack Editor, OrCAD PCB Designer and OrCAD PSpice Designer.

This user guide demonstrates how to locate, download and install WE component libraries for OrCAD (17.2-2016 Lite Version). WE component libraries for OrCAD consist of symbol file (*.olb) and package file (*.dra) You can access our libraries through the Würth Elektronik website or our GitHub repository. For the most up-to-date version, we recommend visiting our GitHub repository.

2. INSTALLING THE LIBRARIES

a. Downloads from Würth Homepage

Visit the WE product portfolio and navigate to the product you are interested in.

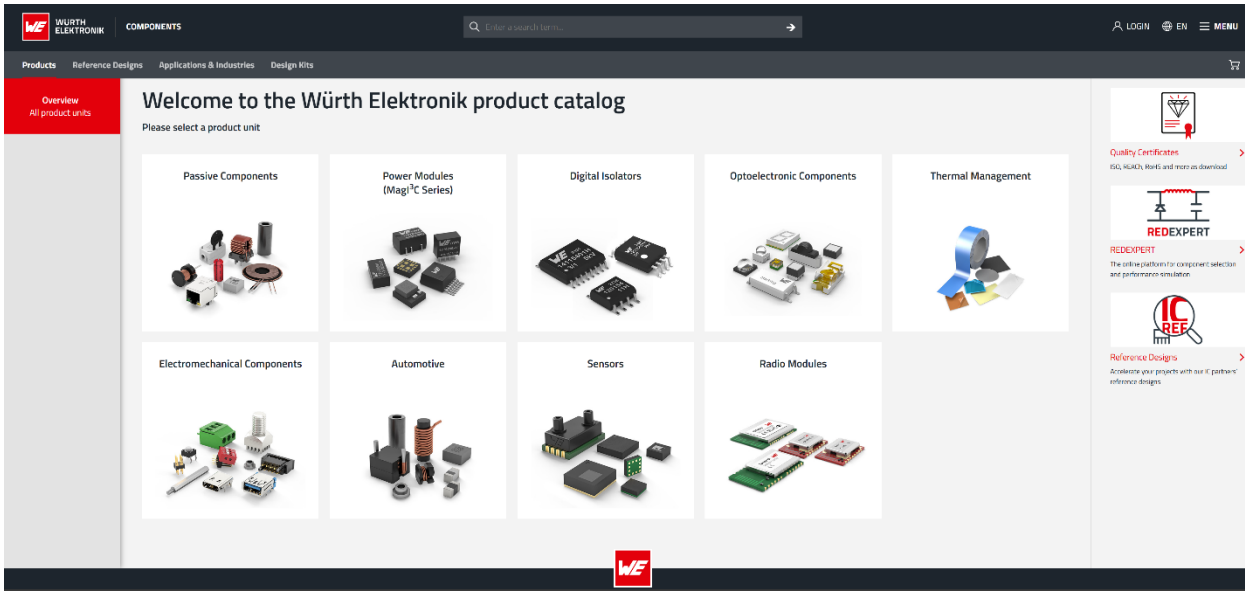


Figure 1: Würth Elektronik Homepage.

Alternatively, enter the part number or product series into the search bar located at the top of the page.

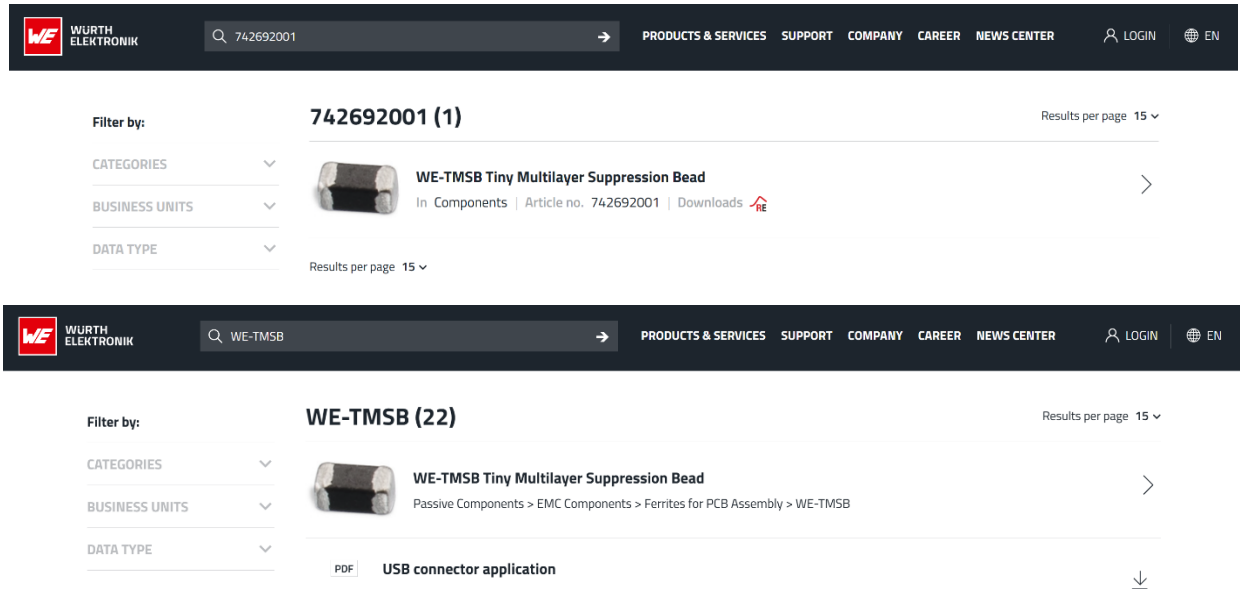


Figure 2: Search part number or series.

On each product series page, you will find the download column in the product list. Locate the OrCAD library in the dropdown list.

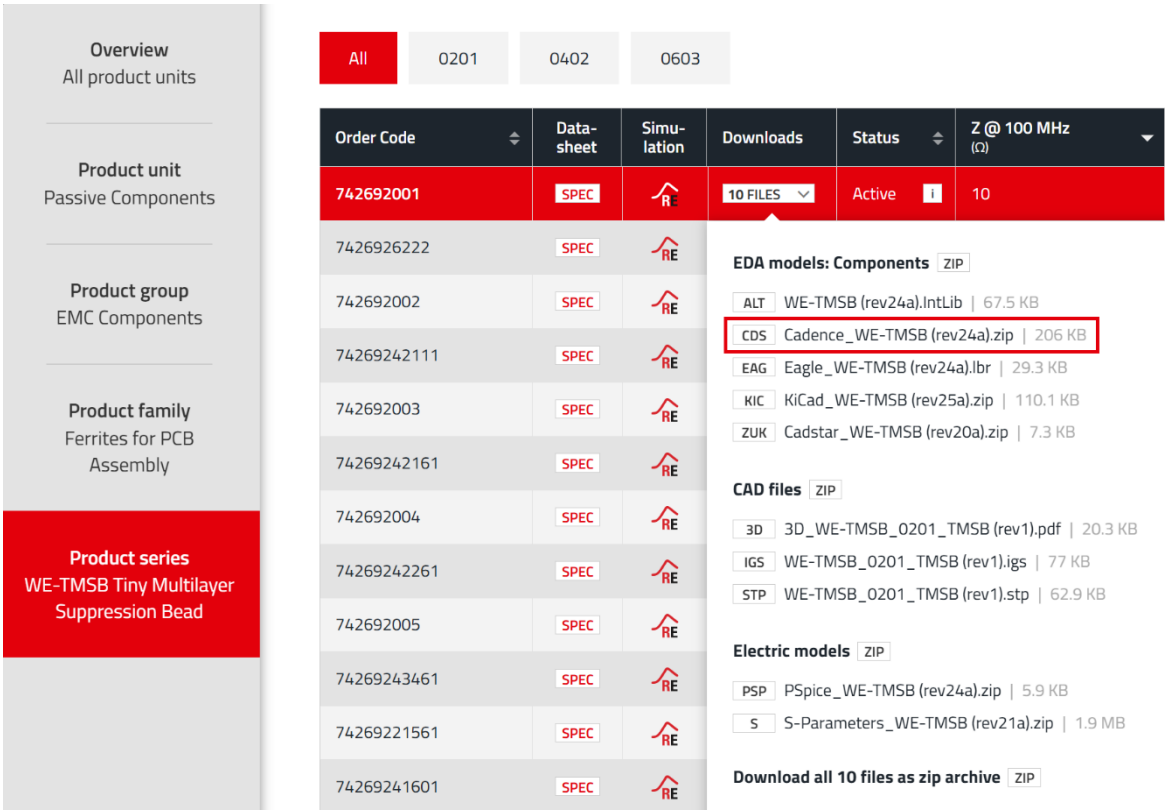


Figure 3: Download OrCAD libraries on Würth Elektronik Homepage.

b. Save the Libraries

Save and extract the *.zip file directly into your chosen directory. Saving the libraries into the same folder as your design is recommended.

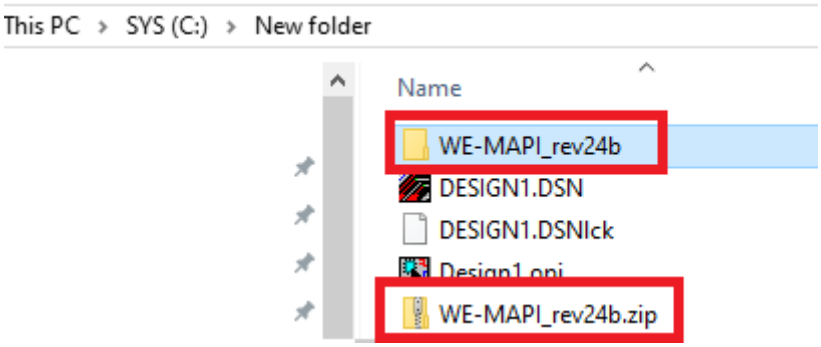


Figure 4: Model files in the same folder as schematic files.

c. Install the symbols

Run OrCAD Capture and open or create a design. Open the schematic page.

Add a symbol library to your design by clicking the "Add Library" symbol in the "Place Part" window. Open the "Browse File" window, select the desired symbol file (*.olb) and then open it.

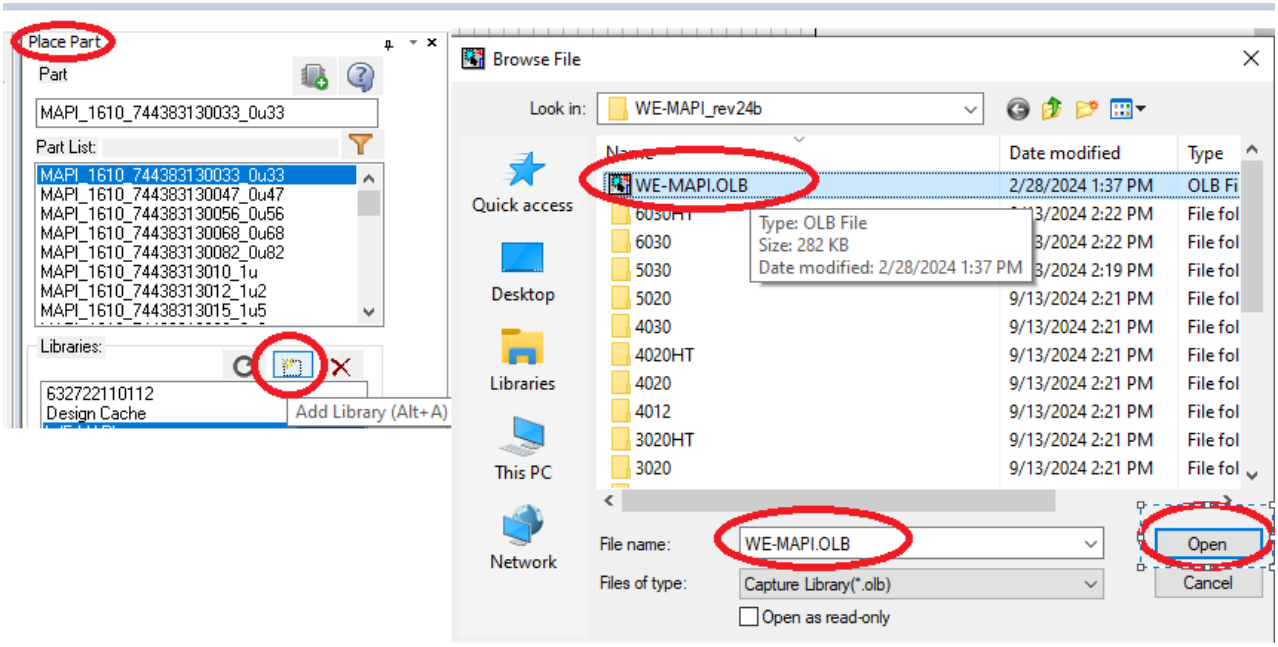


Figure 5: Adding the library to the "Place Part" window.

Place the symbols by clicking the "Place" tab and select "Part" option from the menu or pressing the "P" key directly. Alternatively, select "Place" in the action toolbar.

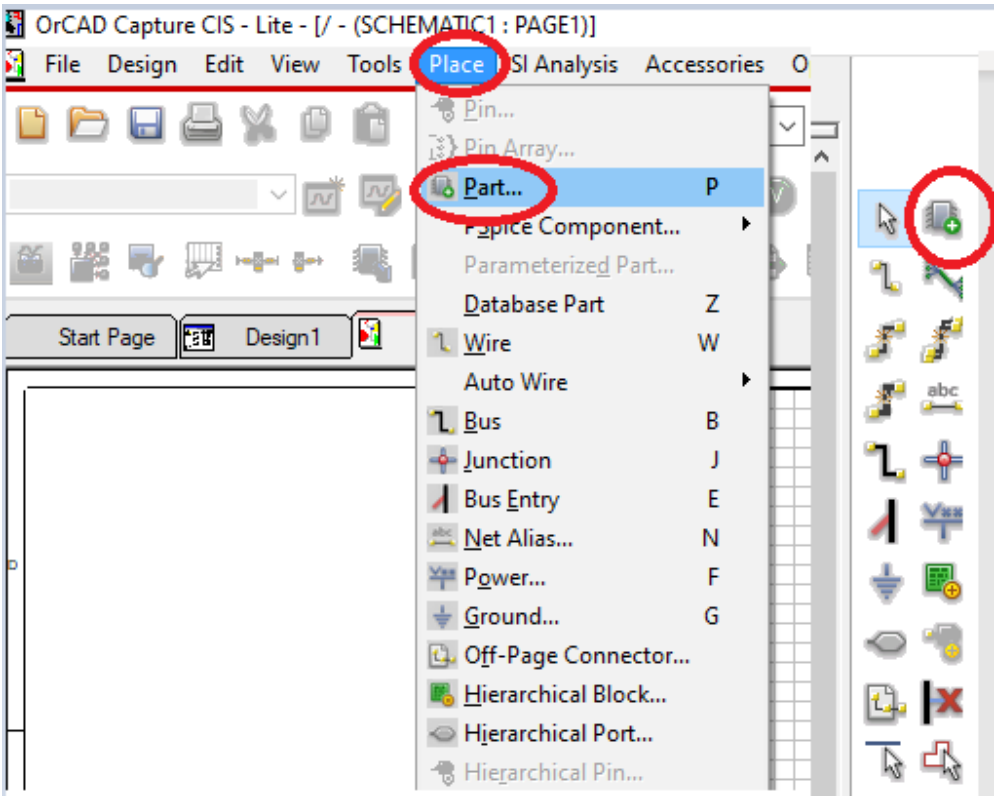


Figure 6: Navigating to the "Place Part" window using the menu (left) and using the toolbar (right).

Double click on the desired part number and place the symbol in the schematic.

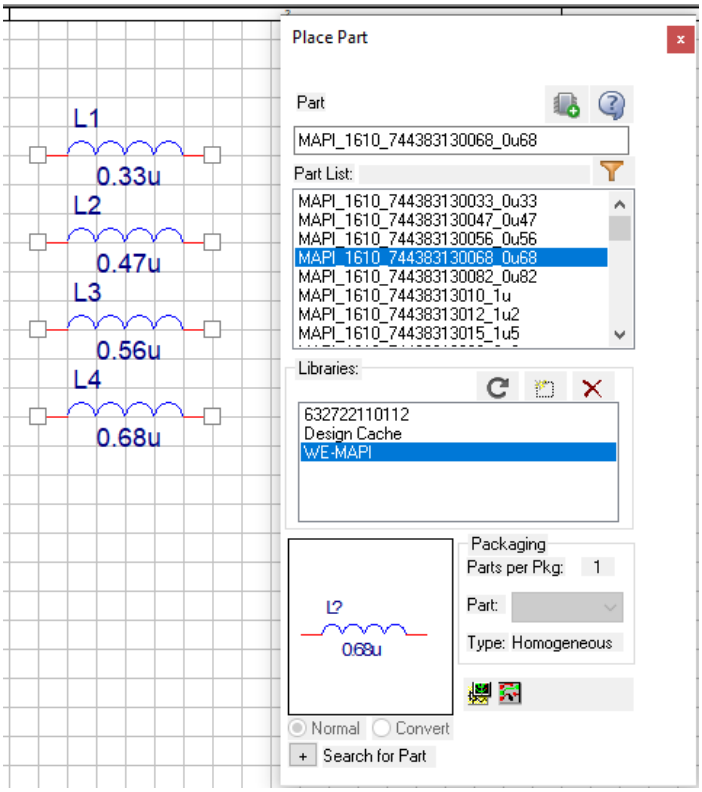
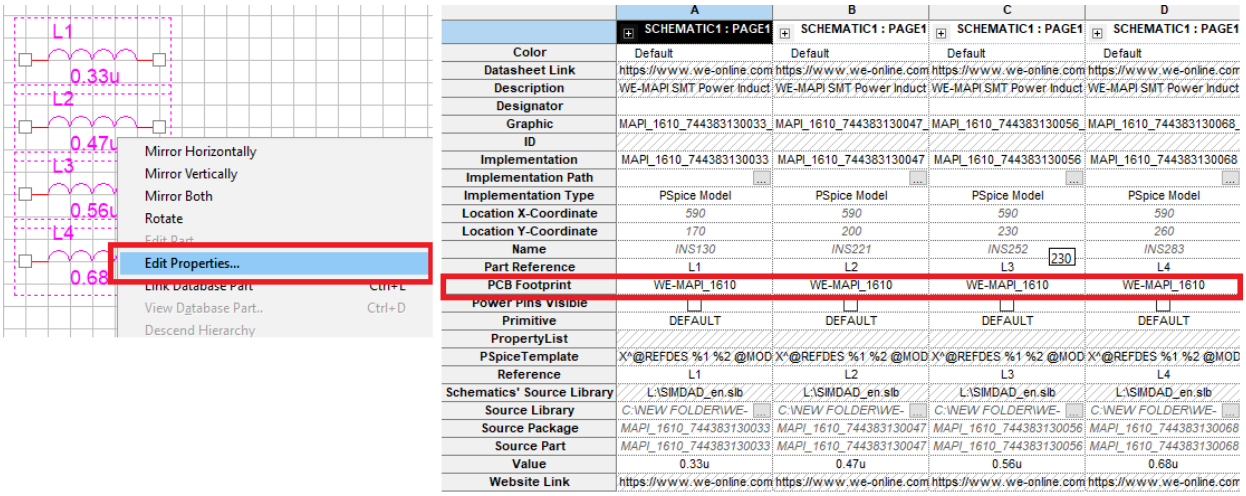


Figure 7: Place symbols in the schematic from the "Place Part" window.

Edit the properties of the symbols. selecting the symbols, double click them or click the right mouse, select "Edit Properties" to open the properties window and check the footprint information.



	A	B	C	D
	SCHEMATIC1 : PAGE1	SCHEMATIC1 : PAGE1	SCHEMATIC1 : PAGE1	SCHEMATIC1 : PAGE1
Color	Default	Default	Default	Default
Datasheet Link	https://www.we-online.com	https://www.we-online.com	https://www.we-online.com	https://www.we-online.com
Description	WE-MAPI SMT Power Induct	WE-MAPI SMT Power Induct	WE-MAPI SMT Power Induct	WE-MAPI SMT Power Induct
Designator				
Graphic	MAPI_1610_744383130033_	MAPI_1610_744383130047_	MAPI_1610_744383130056_	MAPI_1610_744383130068_
ID				
Implementation	MAPI_1610_744383130033	MAPI_1610_744383130047	MAPI_1610_744383130056	MAPI_1610_744383130068
Implementation Path				
Implementation Type	PSpice Model	PSpice Model	PSpice Model	PSpice Model
Location X-Coordinate	590	590	590	590
Location Y-Coordinate	170	200	230	260
Name	INS130	INS221	INS252	INS283
Part Reference	L1	L2	L3	L4
PCB Footprint	WE-MAPI_1610	WE-MAPI_1610	WE-MAPI_1610	WE-MAPI_1610
Power Pins Visible				
Primitive	DEFAULT	DEFAULT	DEFAULT	DEFAULT
PropertyList				
PSpiceTemplate	X^@REFDES %1 %2 @MOD	X^@REFDES %1 %2 @MOD	X^@REFDES %1 %2 @MOD	X^@REFDES %1 %2 @MOD
Reference	L1	L2	L3	L4
Schematics' Source Library	L:\SIMDAD_en.slb	L:\SIMDAD_en.slb	L:\SIMDAD_en.slb	L:\SIMDAD_en.slb
Source Library	C:\NEW FOLDER\WE-	C:\NEW FOLDER\WE-	C:\NEW FOLDER\WE-	C:\NEW FOLDER\WE-
Source Package	MAPI_1610_744383130033	MAPI_1610_744383130047	MAPI_1610_744383130056	MAPI_1610_744383130068
Source Part	MAPI_1610_744383130033	MAPI_1610_744383130047	MAPI_1610_744383130056	MAPI_1610_744383130068
Value	0.33u	0.47u	0.56u	0.68u
Website Link	https://www.we-online.com	https://www.we-online.com	https://www.we-online.com	https://www.we-online.com

Figure 8: Information in the properties.

Copy the footprint files (*.dra,*.psm,*.pad,*.step) for the symbols from the library to below folder:
C:\Cadence\SPB_17.2\share\pcb\pcb_lib\symbols

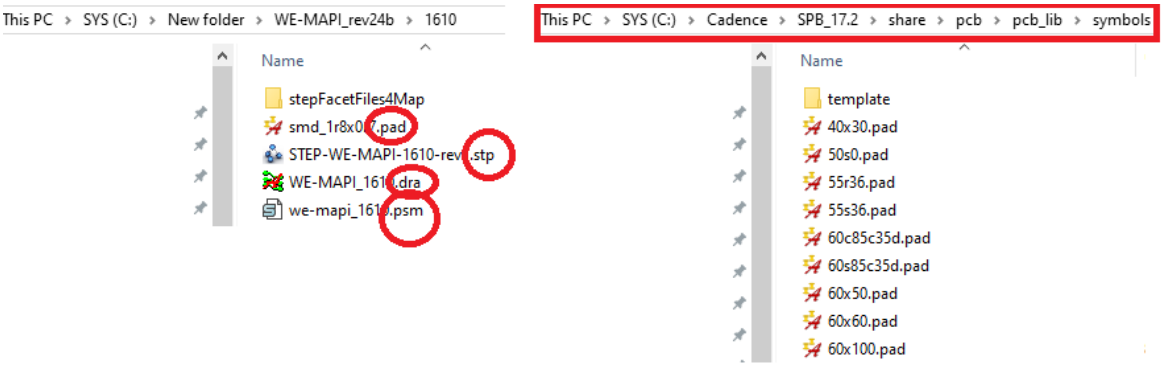


Figure 9: Copy the footprint files to Cadence.

Next, the netlist can be exported.

d. Export Netlist File

Go back to your design page, select your design, click "Tools" and select the "Create Netlist" option from the menu. The "Create Netlist" window will then open.

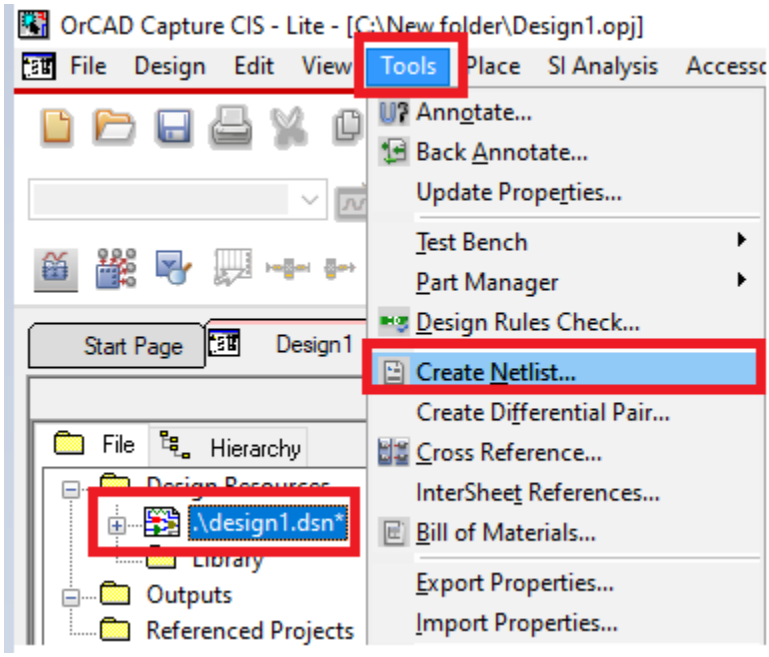


Figure 10: Navigating to the "Create List" menu options.

In the "Create Netlist" window, make sure "Create PCB Editor Netlist" is selected, click "Create or update PCB Editor Board (Netrev)", change the board name if you want, click "Open Board in OrCAD PCB Editor", then click "OK" button. Click "Yes" in the new Pop-up window and the Click "OK" for the second Pop-up window.

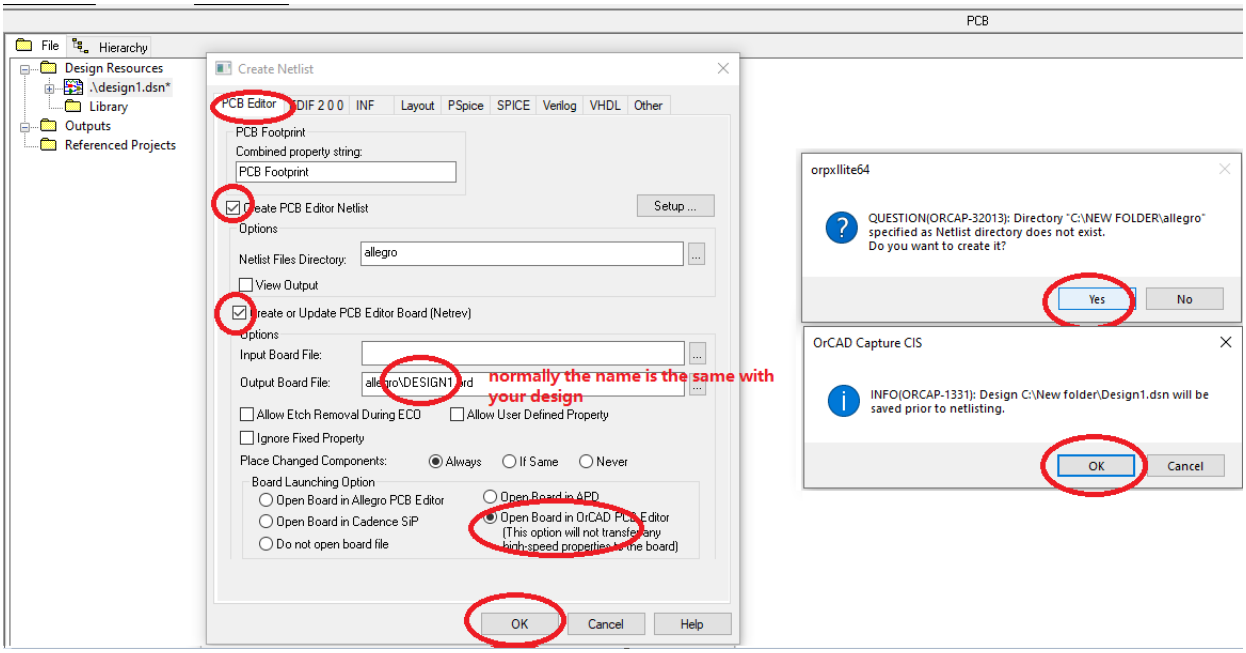


Figure 11: Navigating the "Create List" window.

In this way, you can create and open a new board directly.

If the process goes well, we can get three files "pstxnet.dat","pstxprt.dat","pstchip.dat" , and two folders named "allegro" and "signoise.run" in the same folder as your design is saved. The files, "pstxnet.dat","pstxprt.dat","pstchip.dat" are all saved automatically in the "allegro" folder.

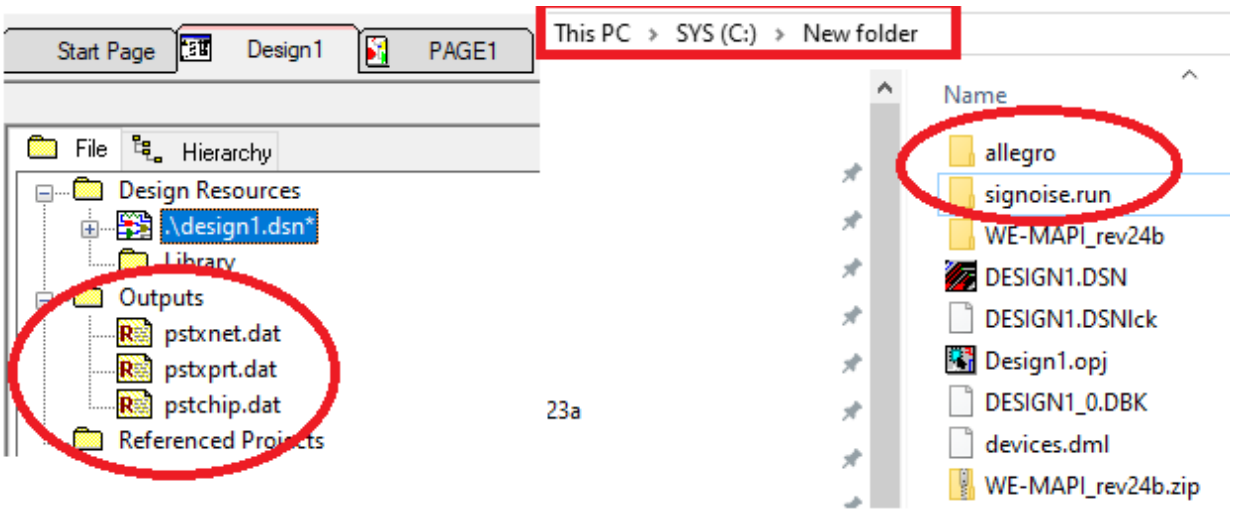


Figure 12: Netlist files and saved location.

e. Import Netlist File

Open the board directly or run the" OrCAD PCB Editor" to create a new board", the*.brd" file. Click "Import" tab and select "Netlist" option, then "Import Logic" window will be open. Click "import logic type" according to your need, you can choose "Design entry CIS (Capture)". The most important point is to change the "Import directory" to the directory where your netlist files are saved.

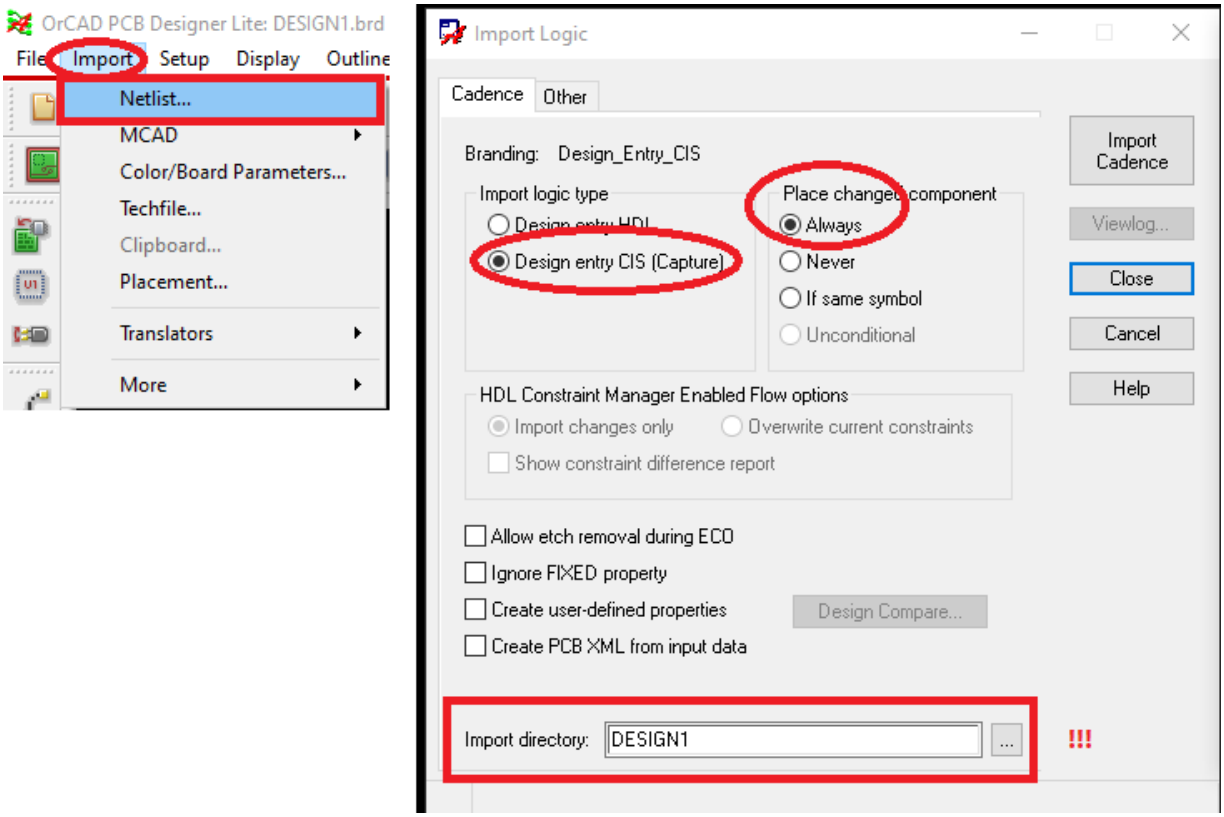


Figure 13: Navigating to the "Import Logic" menu options.

Click the "..." button on the right of the "Import directory" to change the path of the netlist files saved, open the browser window, choose the folder named "allegro" you've just created and then click "OK".

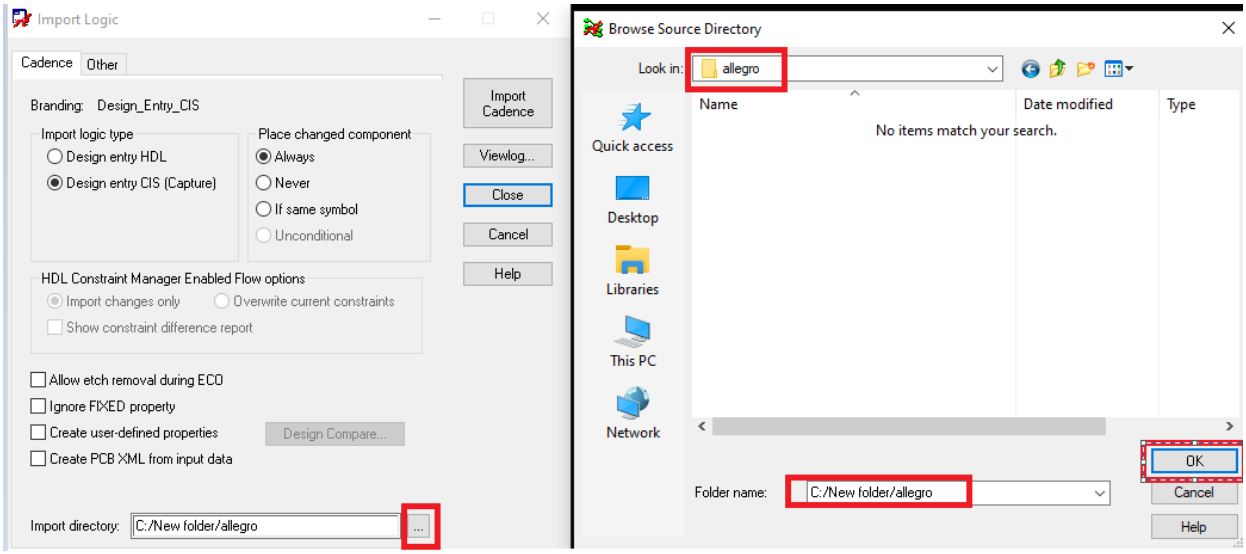


Figure 14: Navigating to find the netlist files.

Then click "Import Cadence". If there's no error information informed, it means the netlist files are imported successfully.

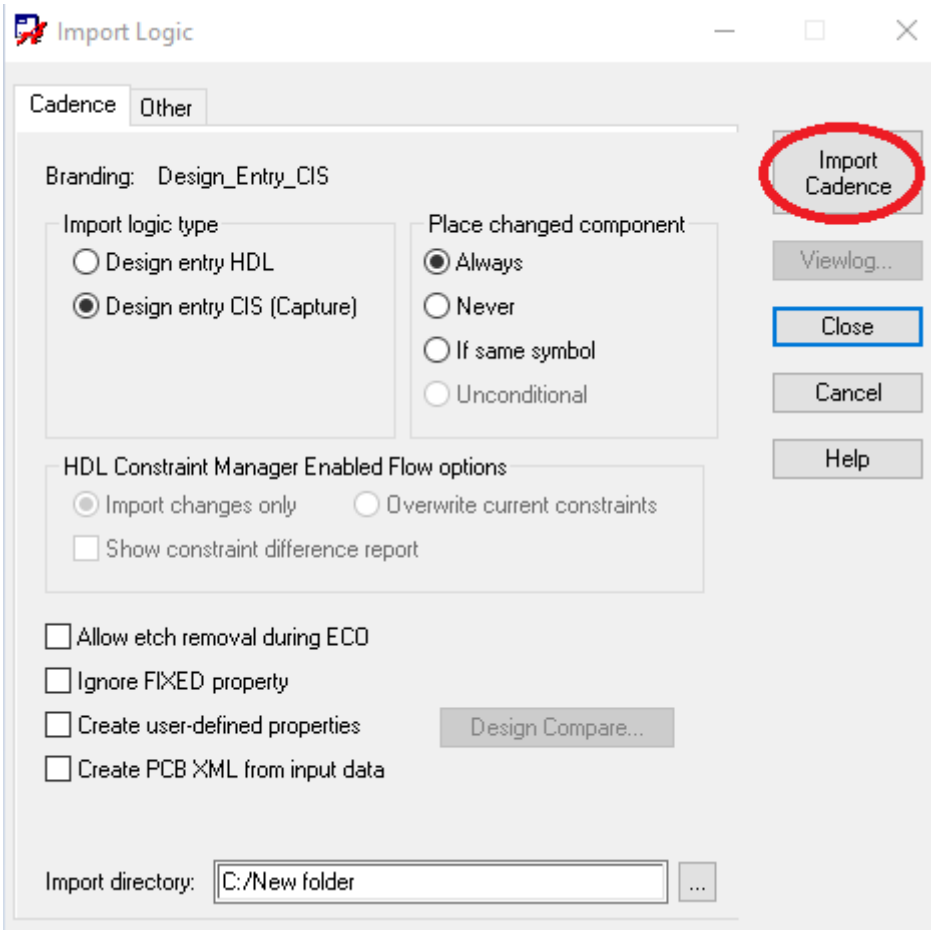


Figure 15: Import Cadence Option.

Place a footprint by clicking the “Placement” bar to open the “Placement” window and click a component to add it to the board.

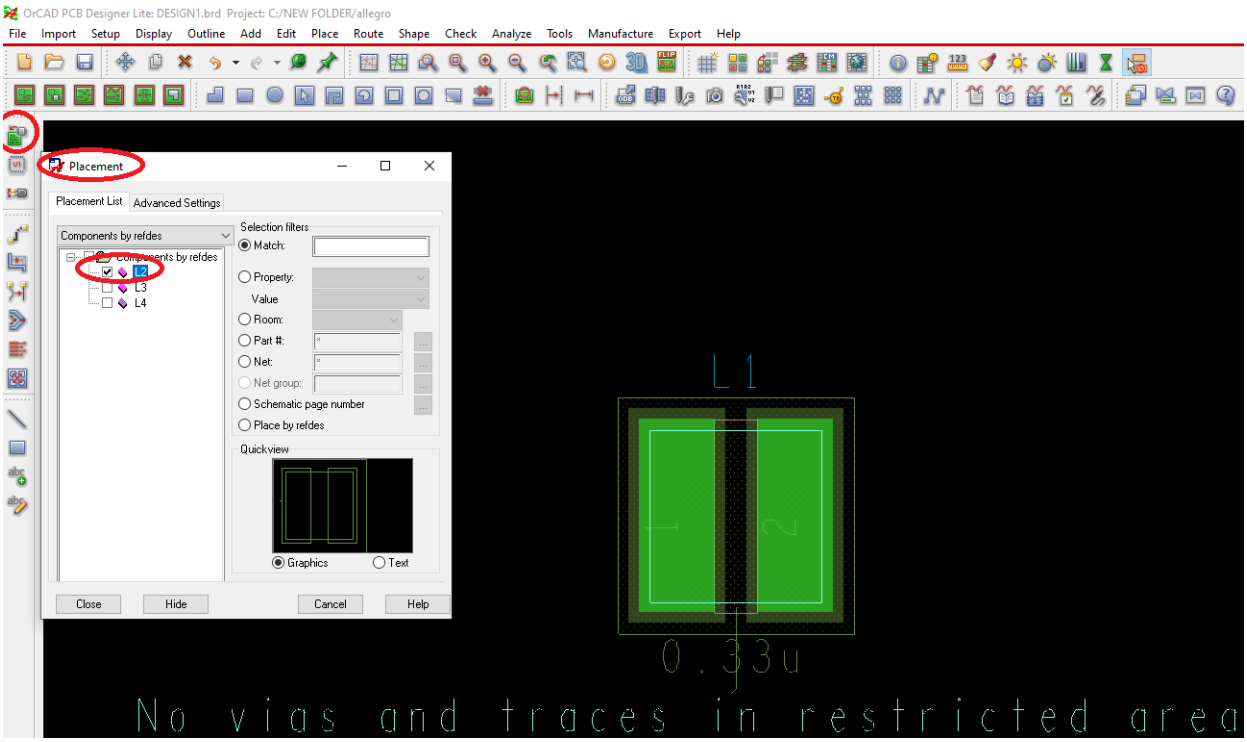


Figure 16: Add Components to board.

3. INSTALL FROM GITHUB REPOSITORY

a. Install GitHub Desktop

GitHub Desktop is the most user-friendly tool for working with GitHub projects, and we recommend you use it for keeping your library files up to date.

Go to https://desktop.github.com/to download the appropriate package for your operating system and install it on your computer.

During the Desktop installation, register or sign in with your GitHub Account and click next. On opening the GitHub Browser webpage, authenticate yourself and give permission to the GitHub desktop application. The process will then return you to the desktop application.

b. Clone the Library

From GitHub Desktop, click the button "Clone a repository from the Internet...".

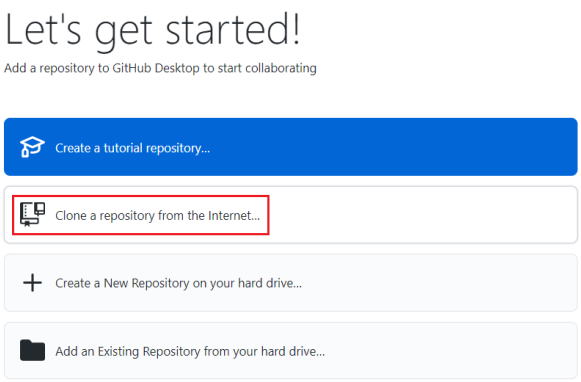


Figure 17: Clone a repository from the Internet.

Enter the URL of Würth Elektronik OrCAD Library repository: https://github.com/WurthElektronik/CadenceLibrary.git and define a local directory to which to clone the repository.

Then click the "Clone" button. A window will then open, synchronizing the libraries into your local directory from the online repository. Cloning repository may take some time.

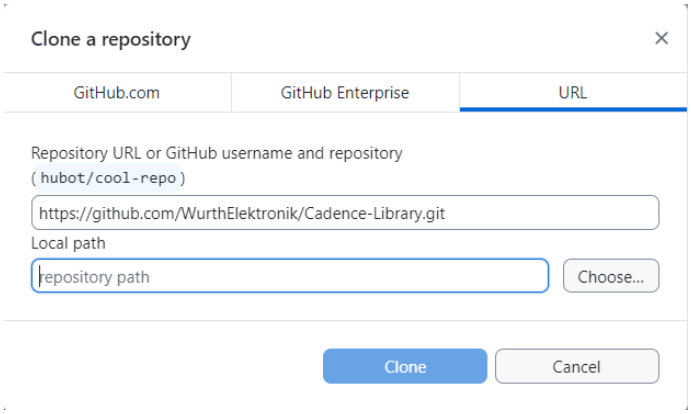


Figure 18: Cloning the Würth Elektronik OrCAD Library repository to your local directory.

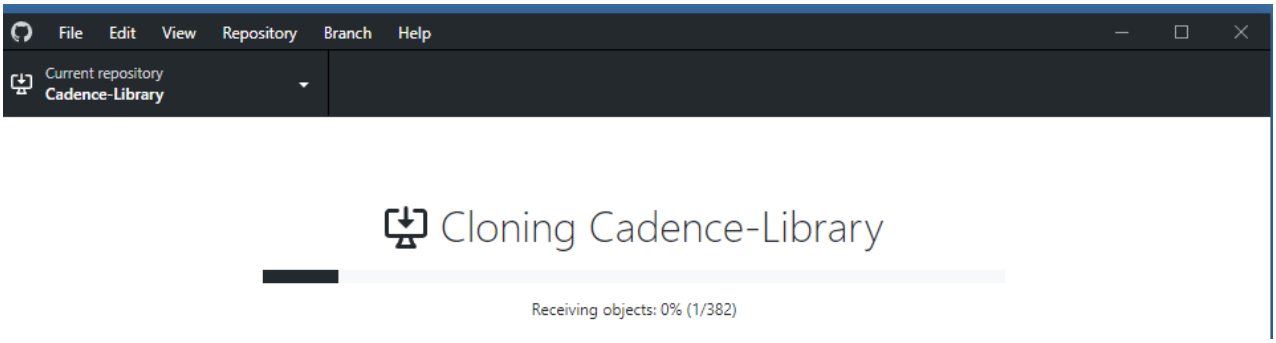


Figure 19: Cloning in progress.

c. Synchronize Local Library from GitHub

If there are updates in GitHub repository, GitHub Desktop will detect it. You can "Pull" the update to your local directory. If there are any new commits on the online master repository, from GitHub Desktop you'll receive the update information automatically.

Click "Pull origin" button to fetch the updates to your local directory immediately.

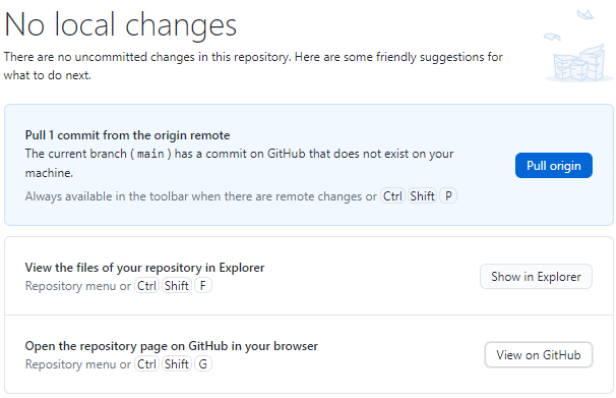


Figure 20: Pulling the repository to your local directory.

Click "View on GitHub" to explore more details of the latest updates.

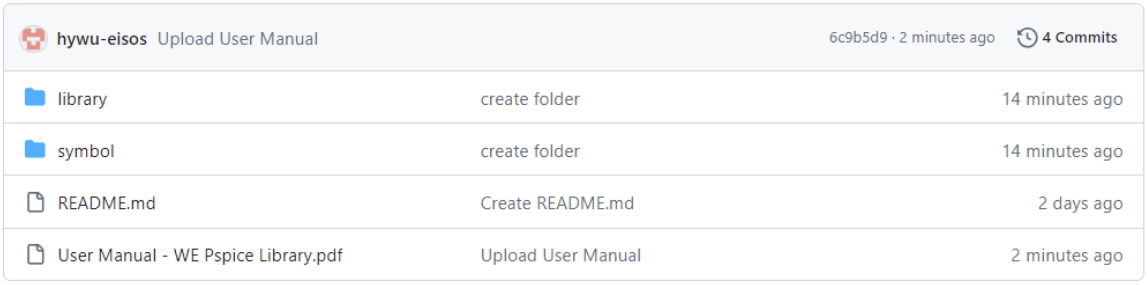


Figure 21: View the updates on GitHub.

IMPORTANT NOTICE

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Product Catalog
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