

APPLICATION NOTE

UG003 | How to use the WE Altium Database Library



Baojun Chen

01. INTRODUCTION

Altium Designer is a popular Electronic Design Automation (EDA) software used for PCB designs. One of its key features is the ability to place components directly from a company database using a database library. This can be done easily from the components panel, which acts as a browser into the database after installing a database library.

Once components are placed on the PCB, design parameter information can be synchronized between the placed components and their corresponding linked records in the database. This allows for full component updates, including graphical symbols, model references, and parameters. Parametric information from the database can also be included in the final Bill of Materials (BOM), making it easy for component procurement.

The Würth Elektronik Altium database library is constantly adding new footprints and symbols. To keep up to date with the database data, we recommend to use a Git tool to allow easy cloning of the library files.

02. 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 the opening Github Browser webpage authenticate yourself and give permission to the Github desktop application. Then the process jumps back to the Desktop tool/application.

03. CLONE THE LIBRARY

From GitHub Desktop, click the button **Clone a repository from the Internet** as shown in the following screen in Figure 1.

Let's get started!

Add a repository to GitHub Desktop to start collaborating

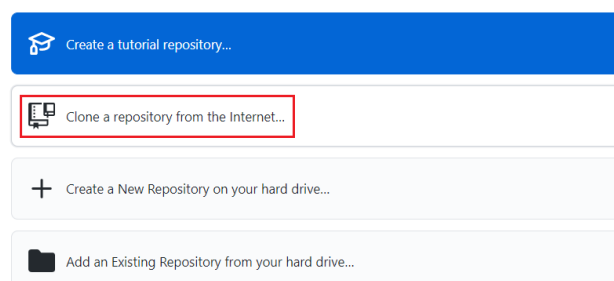


Figure 1: Clone a repository from the Internet

On the popup window, go to URL panel in Figure 2, enter the URL of Würth Elektronik Altium Database Library repository <https://github.com/WurthElektronik/Altium-Library.git> and define the local directory to clone the repository.

Then click the **Clone** button, all the files from the online repository will begin to synchronize to local.

APPLICATION NOTE

UG003 | How to use the WE Altium Database Library

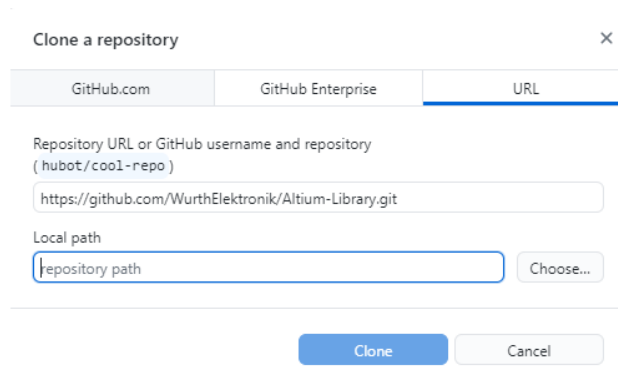


Figure 2: Clone setup

Cloning the Altium library will take some time.



Figure 3: Clone in progress

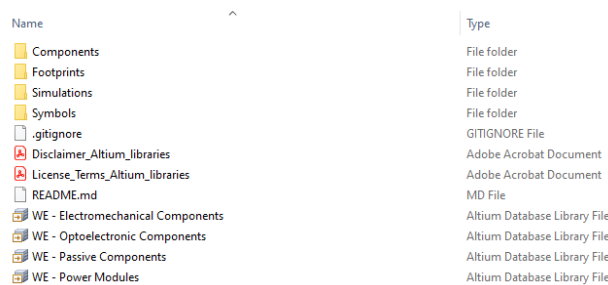


Figure 4: Files cloned from GitHub

04. INSTALL DATABASE LIBRARY IN ALTIUM

Go to **component panel** and click the following buttons.

If the component panel is not visible, navigate to the Menu bar and click View->Panels->Components to activate it, showing up on the right side of Altium Designer. Or click on the far top right sidebar menu.

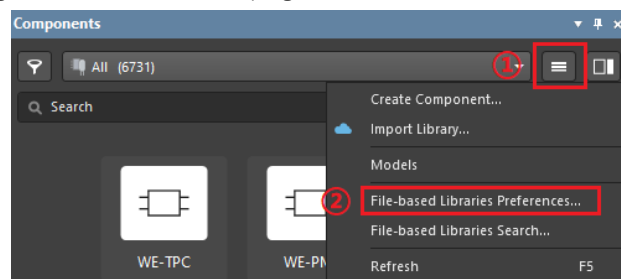


Figure 5: Install library from Components panel

From the popup panel, click **Install** button.

After clicking on the Install button, select the correct drive and folder. Could be on your local drive, shared drive or a cloud folder. If you don't remember where the Github import Library was saved, switch to the Desktop Github application, select on the top left: Altium-Library repository from WuerthElektronik -> click on it -> and then on the right panel click on "show in Explorer".

APPLICATION NOTE

UG003 | How to use the WE Altium Database Library

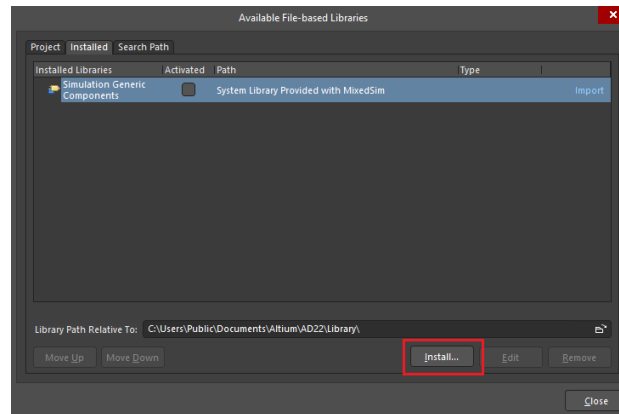


Figure 6: Install library

Select all the .DbLib files in the folder which cloned from GitHub.

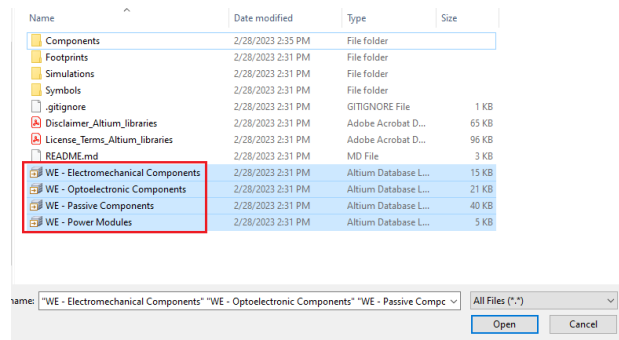


Figure 7: Select database library

After installing the database libraries successfully, all the database libraries will be listed in the component panel.

You can use the component directly onto your PCB designs as the integrated library.

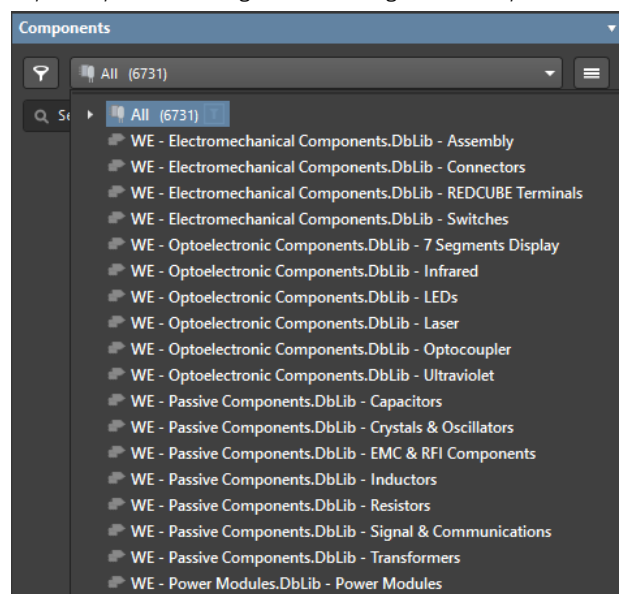


Figure 8: Database library list

05. SYNCHRONIZE LOCAL LIBRARY FROM GITHUB

Once there's any new commits on the online master repository, from GitHub Desktop you'll receive the update information automatically.

APPLICATION NOTE

UG003 | How to use the WE Altium Database Library

Click **Pull origin** button to fetch the updates to local folder immediately.

No local changes

There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.



Pull 1 commit from the origin remote

The current branch (main) has a commit on GitHub that does not exist on your machine.

Pull origin

Always available in the toolbar when there are remote changes or **Ctrl Shift P**

View the files of your repository in Explorer

Repository menu or **Ctrl Shift F**

Show in Explorer

Open the repository page on GitHub in your browser

Repository menu or **Ctrl Shift G**

View on GitHub

Figure 9: Local repository update option

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

	bjch-eisos added simulation model for WE-CMDC	bb7495 6 minutes ago 44 commits
Components	added simulation model for WE-CMDC	6 minutes ago
Footprints	added new match code: WE-PPT1 (18 parts)	2 weeks ago
Simulations	added simulation model for WE-CMDC	6 minutes ago
Symbols	added new match code: WE-PPT1 (18 parts)	2 weeks ago
.gitignore	Update .gitignore	last month
Disclaimer_Altium_libraries.pdf	Add files via upload	3 months ago
License_Terms_Altium_libraries.pdf	Add files via upload	3 months ago
README.md	Update README.md	3 weeks ago
WE - Electromechanical Components...	initial upload	last month
WE - Optoelectronic Components.Db...	initial upload	last month
WE - Passive Components.DbLib	initial upload	last month
WE - Power Modules.DbLib	add	2 months ago

Figure 10: View the updates on GitHub (added simulation model for WE-CMDC)

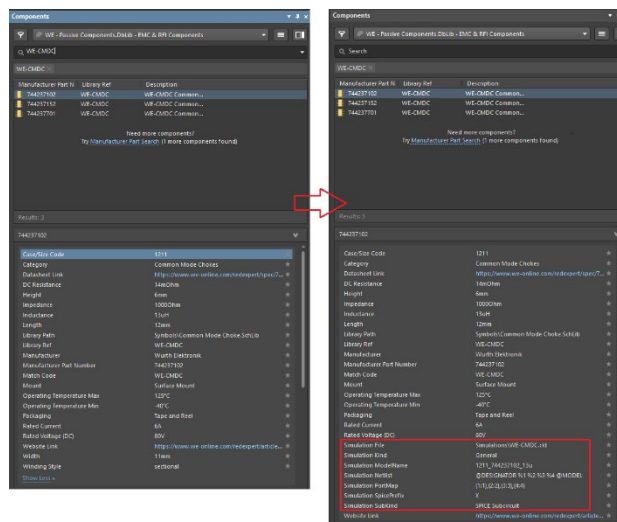


Figure 11 Local library after updated (added simulation model)

APPLICATION NOTE

UG003 | How to use the WE Altium Database Library

IMPORTANT NOTICE

The Application Note is based on our knowledge and experience of typical requirements concerning these areas. It serves as general guidance and should not be construed as a commitment for the suitability for customer applications by Würth Elektronik eiSos GmbH & Co. KG. The information in the Application Note is subject to change without notice. This document and parts thereof must not be reproduced or copied without written permission, and contents thereof must not be imparted to a third party nor be used for any unauthorized purpose.

Würth Elektronik eiSos GmbH & Co. KG and its subsidiaries and affiliates (WE) are not liable for application assistance of any kind. Customers may use WE's assistance and product recommendations for their applications and design. The responsibility for the applicability and use of WE Products in a particular customer design is always solely within the authority of the customer. Due to this fact it is up to the customer to evaluate and investigate, where appropriate, and decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not.

The technical specifications are stated in the current data sheet of the products. Therefore the customers shall use the data sheets and are cautioned to verify that data sheets are current. The current data sheets can be downloaded at www.we-online.com. Customers shall strictly observe any product-specific notes, cautions and warnings. WE reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services.

WE DOES NOT WARRANT OR REPRESENT THAT ANY LICENSE,

EITHER EXPRESS OR IMPLIED, IS GRANTED UNDER ANY PATENT RIGHT, COPYRIGHT, MASK WORK RIGHT, OR OTHER INTELLECTUAL PROPERTY RIGHT RELATING TO ANY COMBINATION, MACHINE, OR PROCESS IN WHICH WE PRODUCTS OR SERVICES ARE USED. INFORMATION PUBLISHED BY WE REGARDING THIRD-PARTY PRODUCTS OR SERVICES DOES NOT CONSTITUTE A LICENSE FROM WE TO USE SUCH PRODUCTS OR SERVICES OR A WARRANTY OR ENDORSEMENT THEREOF.

WE products are not authorized for use in safety-critical applications, or where a failure of the product is reasonably expected to cause severe personal injury or death. Moreover, WE products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc. Customers shall inform WE about the intent of such usage before design-in stage. In certain customer applications requiring a very high level of safety and in which the malfunction or failure of an electronic component could endanger human life or health, customers must ensure that they have all necessary expertise in the safety and regulatory ramifications of their applications. Customers acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of WE products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by WE.

CUSTOMERS SHALL INDEMNIFY WE AGAINST ANY DAMAGES ARISING OUT OF THE USE OF WE PRODUCTS IN SUCH SAFETY-CRITICAL APPLICATION.

USEFUL LINKS



Application Notes

www.we-online.com/appnotes



REDEXPERT Design Platform

www.we-online.com/redexpert



Toolbox

www.we-online.com/toolbox



Product Catalog

www.we-online.com/products

CONTACT INFORMATION



appnotes@we-online.com

Tel. +49 7942 945 - 0



Würth Elektronik eiSos GmbH & Co. KG

Max-Eyth-Str. 1 74638 Waldenburg Germany

www.we-online.com