How to Install EPC's KiCad Libraries Quick Start Guide

User Instructions

Revision 1.0



QUICK START GUIDE

EPC KiCad Library is for Version 7 Unzip the downloaded EPC KiCad library,: EPC_KiCad_Libraries_2023_Q3a

HOW TO INSTALL EPC'S KICAD LIBRARIES

Note: EPC KiCad Library is for Version 7 of KiCad

Unzip the downloaded EPC KiCad library,: EPC_KiCad_Libraries_2023_Q3a

Make an environment variable

1. From the windows start menu, type **environment** in windows search bar (1) and select **Edit the system environment variables** (2).

| All Work Apps Documents | We | eb Settings Peo ► Efficient Power P | |
|--|----|--|---|
| Best match | | | |
| Edit the system environment variables Control panel | | 2 🗳 | |
| Settings | | Edit the system environment variables | |
| Edit enviro nment variables for your account | > | Control panel | • |
| Search work and web | | 🖸 Open | |
| 𝒫 enviro - See work and web results | > | | |
| | > | | |
| | > | | |
| ♀ environmental | > | | |
| 𝒫 environment synonym | > | | |
| 𝒫 environmental science | > | | |
| 𝒫 environmentalist | > | | |
| | | | |

| ystem Properties | | 1 | | | |
|--------------------|--------------|---------------|---------------------|--------------|----|
| Computer Name | lardware | Advanced | System Protection | Remote | |
| You must be logg | ed on as ar | n Administrat | orto make most of t | hese changes | ŝ. |
| Performance | | | | | |
| Visual effects, pr | ocessor sc | heduling, m | emory usage, and vi | tual memory | |
| | | | C | Settings | |
| User Profiles | | | | | |
| Desktop settings | related to | your sign-in | | | |
| | | | | Settings | |
| Startup and Rec | overy | | | | |
| System startup, | system failu | re, and deb | ugging information | | |
| | | | | Settings | |
| | | | | | |
| | | | Environme | of Variables | - |
| | | | | | |
| | | | | | |

3. Click on New

| | Value | | | | | | | |
|--|---|--|--|--|--|--|--|--|
| OneDrive | C:\Users\ParindaChantaraseree\OneDrive - Efficient Power Co | | | | | | | |
| OneDriveCommercial | C:\Users\ParindaChantaraseree\OneDrive - Efficient Power Co | | | | | | | |
| Path C:\Users\ParindaChantaraseree\AppData\Local\Microsoft\Wi | | | | | | | | |
| TEMP C:\Users\ParindaChantaraseree\AppData\Local\Temp | | | | | | | | |
| TMP C:\Users\ParindaChantaraseree\AppData\Local\Temp | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | New Edit Delete | | | | | | | |
| | | | | | | | | |
| stem variables | | | | | | | | |
| Sterri variabies | | | | | | | | |
| Variable | Value | | | | | | | |
| Variable ComSpec | Value C:\Windows\system32\cmd.exe | | | | | | | |
| Variable ComSpec DriverData | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB NUMBER_OF_PROCESSORS | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw 12 | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB NUMBER_OF_PROCESSORS OS | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw 12 Windows_NT | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB NUMBER_OF_PROCESSORS OS | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw 12 Windows_NT C:\Windows\system32;C:\Windows;C:\Windows\System32\Wb | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB NUMBER_OF_PROCESSORS OS Path PATHEXT | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw 12 Windows_NT C:\Windows\system32;C:\Windows;C:\Windows\System32\Wb .COM;.EXE;.BAT;.CMD;.VBS;.VBE;JS;JSE;.WSF;.WSF;.MSC | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB NUMBER_OF_PROCESSORS OS Path Path PATHEXT | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw 12 Windows_NT C:\Windows\system32;C:\Windows;C:\Windows\System32\Wb COM;EXE;BAT;CMD;VBS;VBE;JS;JSE;WSF;WSH;MSC | | | | | | | |
| Variable ComSpec DriverData IGCCSVC_DB NUMBER_OF_PROCESSORS OS Path PATHEXT | Value C:\Windows\system32\cmd.exe C:\Windows\System32\Drivers\DriverData AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAsy0EGkMwpUiLOw 12 Windows_NT C:\Windows\system32;C:\Windows;C:\Windows\System32\Wb .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;JSE;.WSF;.WSH;.MSC | | | | | | | |

2. Select Advanced tab (1) then select Environment Variables (2).

Installing EPC KiCad (V7) FETs

QUICK START GUIDE

4. In Variable name, type in exactly (or copy from here), KICAD_3D_MODELS

5. Click on Browse Directory



- 6. Navigate to EPC_KiCad_Libraries_2023_Q3a and select Ki3DModels folder
- 7. Click **OK**.



8. Click **OK**.

| New User Variable | | > |
|-------------------|--|--------|
| Variable name: | KICAD_3D_MODELS | |
| Variable value: | C:\Program Files\KiCad\EPC_KiCad_Libraries_2023_Q3a\Ki3DMode | ls |
| Browse Directory | Browse File OK | Cancel |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Adding EPC Symbols Library to KiCad

- 1. Open KiCad 7.0
- 2. Under Preferences tab, click on Manage Symbol Libraries



3. In the lower left, click on **Add existing library to table** icon as shown below

| Global Libraries | | | | | |
|-------------------|----------------|--|----------------|---------|--------------|
| Active Visible | Nickname | Library Path | Library Format | Options | Des |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | _ | |
| - | | | | | |
| + • • • | | | | Migrat | te Libraries |
| hth Substitutions | | | | | |
| KICAD7 SYMBOL | DIR) C\Program | iles\KiCad\7.0\share\kicad\symbols\ | | | |
| {KIPRJMOD} | | nee (nead) is (nai e (nead () in e is (| | | |
| | | | | 01 | Connel |
| | | | | UK | Cancel |

4. Navigate to EPC_KiCad_Libraries_2023_Q3a folder. Select KiSymbols folder, then EPC_FETs.kicad_sym file, and press Open.

| G Select Library | | | |
|---|------------------------------------|-------------------------------|--------------------------|
| ← → ∨ ↑ ■ « | EPC_KiCad_Libraries_2023_Q KiSymbo | ols V C Search Kis | م ymbols |
| Organize New folder | | | = • 🔳 🤇 |
| Kicad | Name | Date modified | Туре |
| | EPC_FETs.kicad_sym | 11/28/2023 10:30 AM | KICAD_SYM File |
| Efficient Power Conversi Apps - Documents Inis PC | | | |
| > 🗳 OS (C:) | | | |
| > 📬 Network | | | |
| File name: | PC_FETs.kicad_sym | All KiCad | symbol library files (*. |



Adding EPC Footprints Library to KiCad

1. Under Preferences tab, click on Manage Footprint Libraries

| K (| GCad 7.0 | | | | | | - | × |
|------------|---------------|-------|---------|---------------------------------------|---|---|-----|---|
| File | Edit View | Tools | Prefe | erences Help | | | | |
| | Project Files | | ÷Ļ | Configure Paths | |] | | |
| - | | | | Manage Symbol Li | braries | atic | | |
| - | | | | Manage Footprint | Libraries | | | |
| | | | \$ | Preferences | Ctrl+, | ject schematic symbol libraries | | |
| | | | ₹ 4A | Set Language | > | | | |
| C | | | | - | con the project PCB | design | | |
| | | | | | Footprint Editor Edit global and/or pr | r oject PCB footprint libraries | | |
| | | | | a a a a a a a a a a a a a a a a a a a | Gerber Viewer Preview Gerber files | | | |
| | | | | , 5 ² | Image Converte Convert bitmap imag | er ges to schematic symbols or PCB footprints | | |
| | | | | + - × = | Calculator Tools Show tools for calcul | ating resistance, current capacity, etc. | | |
| | | | | × | Drawing Sheet | Editor orders and title blocks for use in schematics and PCB desig | ins | |
| | | | | | Plugin and Cont | tent Manager | | |
| | | | | | | | | |

2. In the lower left, click on Add existing icon as shown below

| Global Libraries | Project Specific Libraries | | | |
|--|--|--------------------------------|----------------|--------|
| Active | Nickname | Library Path | Library Format | Option |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| + | • | | | |
| + • • | J B | | | |
| + D • 1 | ↓ ■ s | 0. church kirzeth 2. demodel A | | |
| + + + + + + + + + + + + + + | CAProgram Files/KiCad/7 ENIX DIRL CAProgram Files/KiCad/7 | 0\share\kicad\3dmodels\ | | |

3. Navigate to EPC_KiCad_Libraries_2023_Q3a folder. Select KiFootprints folder, then EPC_FETs.pretty file, and click select folder.



4. Click OK

5. Close **KiCad** program, then reopen **KiCad** program so changes will take effect.

Using EPC Library

- 1. Open KiCad 7.0
- 2. Open KiCad schematic
- 3. Click on Add a symbol icon (1)

You should be able to see all the EPC symbols and footprints (2).

| Choose Symbol IIS items loade | 4 | × 1 | |
|-------------------------------|-----------------------|------------------------------------|--|
| Q.+ Filter | | 0 | |
| item Recently Used | Description | | |
| V EPC, FETS | 100 (3-7.3(4) - | | |
| Checkone Checkone | 1007 782 304 | | |
| EPC2047C | 2004 25ml 224 | 100V 7mE 36A | |
| 62/20120 | 2007 120 ve 54 | | |
| EPC2014C | 40V 16mil 100 | | |
| EPC2015C | 407 4mi 53A | | |
| EPC2016C | 100/ 15mil 18A | | |
| EPC2019 | 2007 50mE 8.5A | (Defa-gri (27 187+00198 v | |
| EPC2020 | 60V 2.2mE 90A | | |
| EPC2021 | 80V 2.5mE 90A | | |
| | | | |
| EBCAMAC | | | |
| LI OLIVIO | | and a strategy of the state of the | |
| | | | |
| Reference Q? | | | |
| Footprint EPC_FETs:0 | 0188 | | |
| Datasheet | | | |
| Description 100V 7mE 30 | N | | |
| Select with Browser | Place repeated copies | OK Cancel | |
| | | Date: 1 Box | |

- 4. Select the part and place it on the schematic.
- From the schematic editor, under Tools tab, select Update PCB from Schematic. The footprint will now be attached to your cursor place it on the pcb.

| File Edit View Place | Inspect | Tools | Preferences Help | _ | | | | | | | | | | | | | | | | |
|----------------------|------------|-------|---|----|---|---|------------|---|----|----|------|-----|------|----|---|----|-----|----|---|----|
| 8 🕹 🗅 🕀 9 | | 2E | Update PCB from Schematic | F8 | Q | Q | - | 1 | • | 6 | C | ۲ | | Do | 略 | 20 | 122 | 10 | ۲ | de |
| chematic Hierarchy > | | | Switch to PCB Editor | - | | | | | | | | | | | | | | | | |
| Root (page 1) | 414 mil | 20 | Symbol Editor Update Symbols from Library | | | | | | | | | | | | | | | | | |
| | | 000 | Rescue Symbols Remap Legacy Library Symbols | | | | | | | | | | | | | | | | | |
| | | 6) | Edit Symbol Fields Edit Symbol Library Links | | | | | - | Ļ | Q2 | | | | | | | | | | |
| | 12 | 138 | Annotate Schematic | | | | 0 + | K | 1≛ | EP | C20: | 100 | | | • | | | | | |
| | Ł | do | Assign Footprints | | | | | | Γ | 20 | 0V 2 | 5m | E 22 | A | | | | | | |
| | K | 5 | Generate BOM | | | | | | 9 | | | | | | | | | | | |
| | 131 | ₹ł | Update Schematic from PCB | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

6. Alt-3 will open the 3D viewer and you will see the 3D body of the part.

l

For More Information:

Please contact **info@epc-co.com** or your local sales representative

Visit our website: www.epc-co.com

Sign-up to receive EPC updates at **bit.ly/EPCupdates**

