

EASYLOGIX.DE

PCBI EPL





EPL managed library

Our managed library is a collection of design resources that are organized and maintained in a centralized location. It is recommended for PCB assembly NPI (new product introduction) because it offers several advantages:

- **1.Standardization:** A managed library ensures that all design resources, such as component footprints and symbols, adhere to a set of standards. This helps to eliminate errors and inconsistencies in the design process.
- **2.Efficiency**: Designers can easily access and reuse resources from the managed library, which saves time and effort compared to creating them from scratch.
- **3.Collaboration**: A managed library allows multiple designers to access and contribute to the same set of resources, which promotes collaboration and helps to ensure that the most up-to-date and accurate resources are used.
- **4.Version control**: A managed library includes version control, which allows designers to track changes to resources and revert to previous versions if necessary.
- 5.Customization: A managed library can be customized to fit the specific needs of a company or project, making it easier to adhere to internal standards and processes.



Why a managed library is recommended

PCB-Investigator's managed library offers a range of benefits to streamline your PCB assembly NPI process. With user right management, multiple users can access and contribute to the library, making collaboration easy even if team members are located in different locations. The library's easy distribution feature allows you to share resources with ease, ensuring that everyone has access to the most up-to-date and accurate data.

In addition, the library's common data source labels facilitate easy automation, allowing you to quickly and accurately design and assemble PCBs. Property value validation ensures that all resources meet the necessary standards and requirements, eliminating errors and improving efficiency. Overall, the managed library is a powerful tool that will help you bring your products to market faster and more efficiently.

- User right management
- Multiuser enabled
- Easy distribution over different location
- Common data source labels for easy automation
- Property value validation

License variants

Subscription Single User



For small companies with just one user doing data preparation

Subscription Multiple User per Company



For companies with at least 5 user doing data preparation

Terms: All resolved data are only allowed to be used within an PCB-Investigator design



MPN quantity in subscription

Total number of components: 2,5 Mio

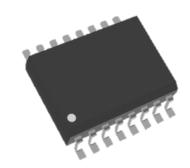
Components with 3D data: 1,2 Mio. Components with Packages: 1,6 Mio.

Components with Test Model: 1,8 Mio

Total number of Packages: 834

Packages with Pin definition: 100%

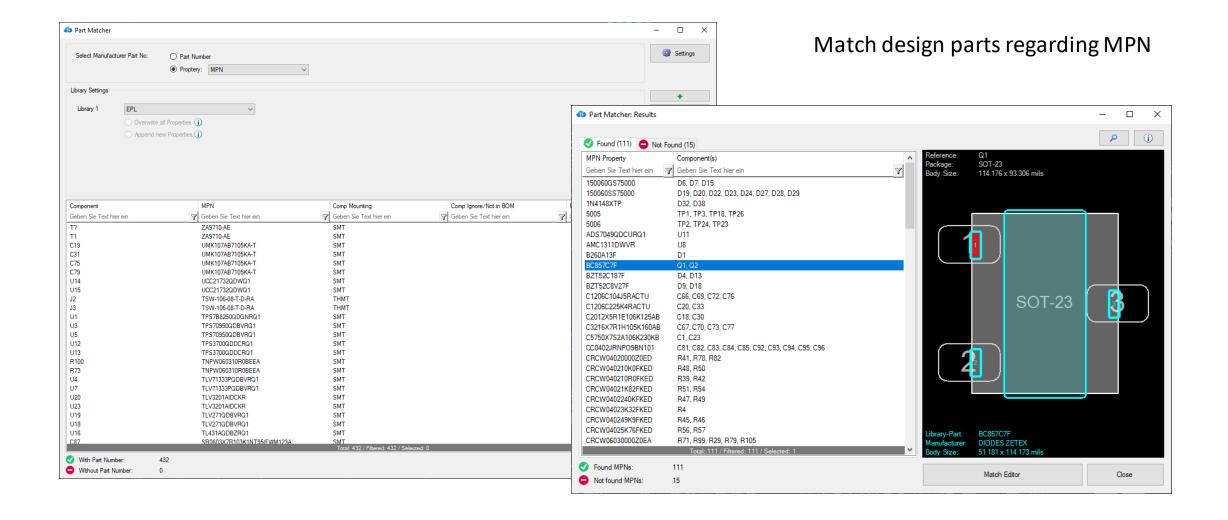




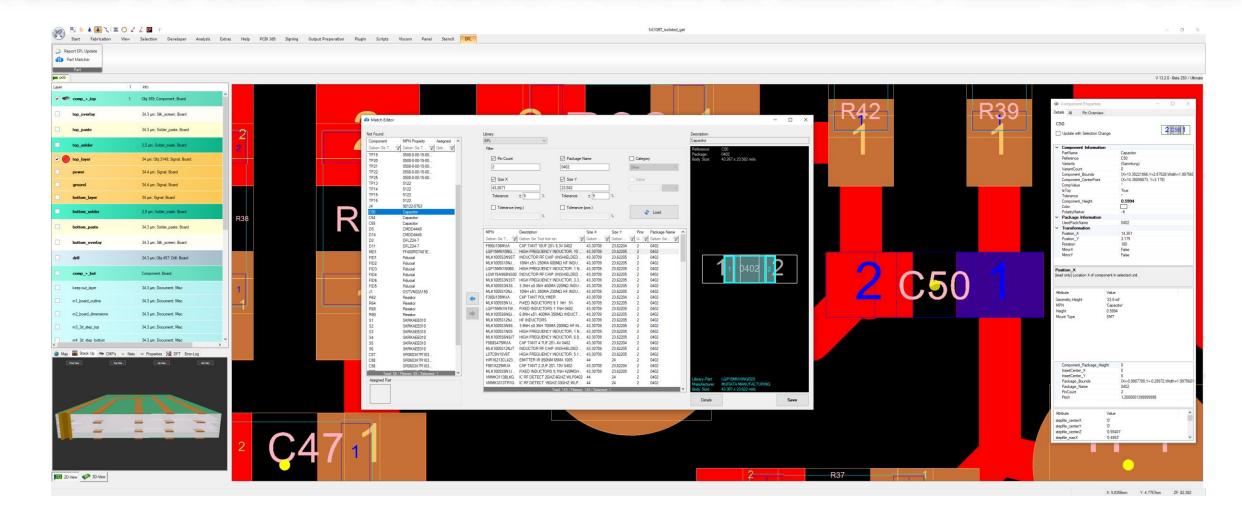
Resistors:830.000Capacitors:925.000Inductors:56.000Diodes:44.000IC's:300.000Rest:320.000



Part Matcher

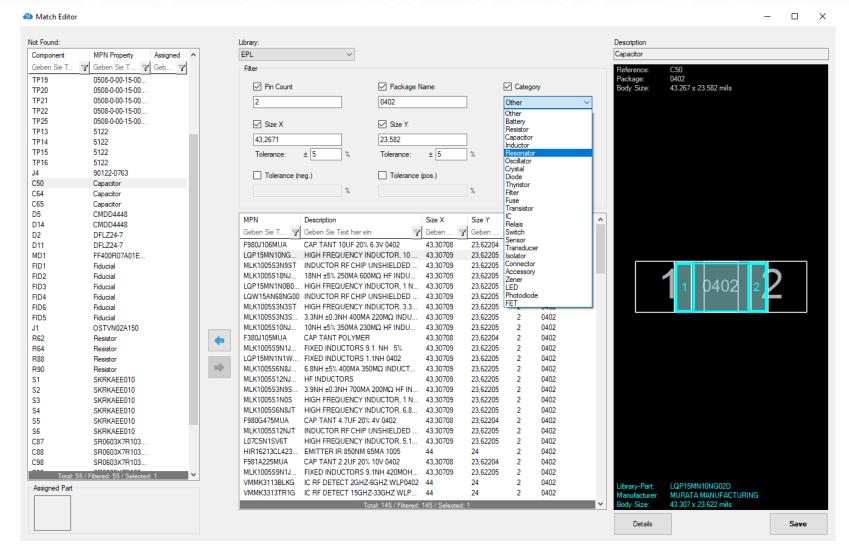


Part Matcher





Part Matcher



Match design parts regarding component properties

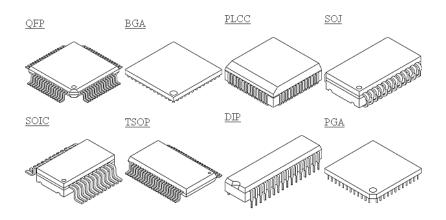


EPL Easylogix Parts Library





Search request Material Part Number Manufacturer { Rest:API }



Search response

Mpn MSP430A139IPZR Manufacturer Texas Instrument FamilyName

AliasesJson MountingTy

PackageName

PackageType

Category

Subcatego OFP Value

Unit SizeX SizeY SizeZ PinCount Pitch 276 276 551 100 0,









Part Search



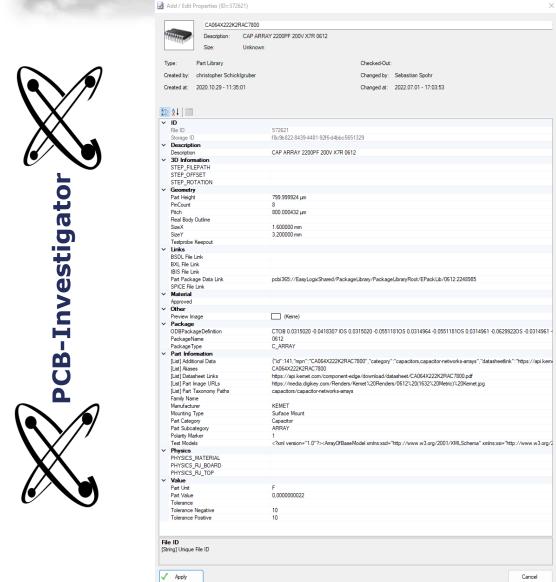


Part Height The depth of a component in frontal top-down view. [Unit MM/Inch] Examples: "~5, ">6.7, "<~8.1", "1-4", "10-15"
PinCount Examples: '+5', >6.7', '<+8.1', '1=4', '10-15'

Search for parts using known properties



Part Information



Properties sample from a component



Part Information



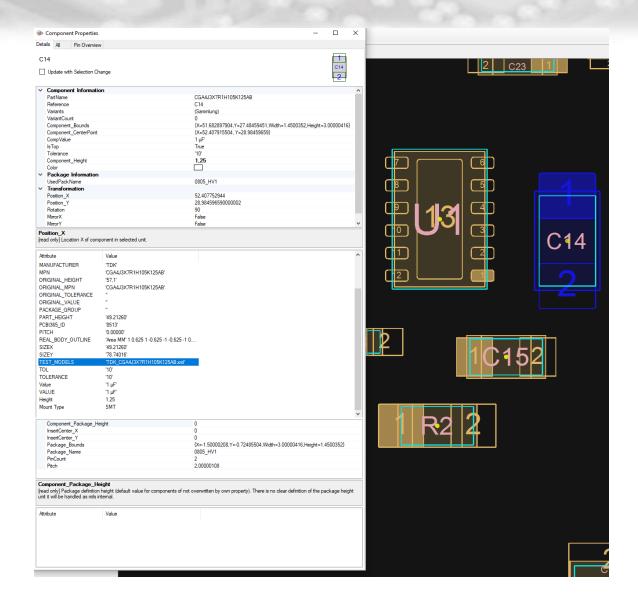
art Number	Manufacturer	PackageName	PackageType	PinCount	Part Height	SizeX	SizeY	Pitch	Tolerance	Part Category	Part Subcategory	Mounting Type Family I	Name Tolerance Posit	ve Tolerance Nega.	Part Value	Part Unit	Part Package Data Link	ODBPackageD	Polarity Marker	
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064X103K1RACAUTO	KEMET	0612	C ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000010	F	pcbi365://EasyLogixShared/Packa	CTOB 0.031502	1	
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A064X103K2RAC7800	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.00000010	F	pcbi365://EasyLogixShared/Packa	CTOB 0.031502	1	
064X103K2RACAUTO	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000010	F	pcbi365://EasyLogixShared/Packa	CTOB 0.031502	1	
064X153K1RAC7800	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.00000015	F	pcbi365://EasyLogixShared/Packa		1	
064X153K1RACAUTO	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.00000015	F	pcbi365://EasyLogixShared/Packa		1	
064X222K2RAC7800	KEMET	0612	C_ARRAY	8	0.800	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000002	F	pcbi365://EasyLogixShared/Packa			
064X222K2RACAUTO	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000002	F	pcbi365://EasyLogixShared/Packa			
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064X332K2RACAUTO	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000003	F	pcbi365://EasyLogixShared/Packa	CTOB 0.031502	1	
064X332K2RACTU	KEMET	0612		8				0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000003	F	pcbi365://EasyLogixShared/Packa			
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	KEMET	0612	C_ARRAY	8	0.900	1.600	3.200	0.800	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000022	F	pcbi365://EasyLogixShared/Packa			
CA43C0G1H100F100AA		1206	C_ARRAY	8	1.150	3.200	1.600	2.750	400 / 40-	Capacitor	ARRAY	Surface Mount	40.000	40.000	0.000000000010		pcbi365://EasyLogixShared/Packa			
CA43C0G1H101K100AA		1206	C_ARRAY	8	1.150	3.200	1.600	2.750	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000000100	F	pcbi365://EasyLogixShared/Packa			
CA43C0G1H102K100AA		1206	C_ARRAY	8	1.150	3.200	1.600	2.750	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000001	F	pcbi365://EasyLogixShared/Packa		1	
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CA43C0G1H151K100AA		1206	C_ARRAY	8	1.100	3.200	1.600	2.750	+10.0 / -10.0	Capacitor	ARRAY	Surface Mount	10.000	10.000	0.000000000150		pcbi365://EasyLogixShared/Packa			
CA43C0G1H220K100AA CCA43C0G1H221K100AA		1206 1206	C_ARRAY C_ARRAY	8	1.150 1.150	3.200 3.200	1.600 1.600	2.750	+10.0 / -10.0 +10.0 / -10.0	Capacitor	ARRAY	Surface Mount Surface Mount	10.000	10.000 10.000	0.000000000022		pcbi365://EasyLogixShared/Packa pcbi365://EasyLogixShared/Packa		1	
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CA43C0G1H331K100AA		1206	C_ARRAY	0	1.150	3.200	1.600	2.750	+10.0 / -10.0		ARRAY	Surface Mount Surface Mount	10.000	10.000	0.000000000330					
CA43C0G1H470K100AA		1206	C_ARRAY	0	1.000	1.600	3.200	2.750	+10.0 / -10.0	Capacitor Capacitor	ARRAY	Surface Mount Surface Mount	10.000	10.000	0.00000000047		pcbi365://EasyLogixShared/Packa pcbi365://EasyLogixShared/Packa		1	
CA43C0G1H471K100AA CA43X5R1E473M100AA		1206	C ARRAY	9	1.150	3.200	1,600	2.750	+10.0 / -10.0	Capactor	ARRAY	Surface Mount	20.000	20.000	0.000000000470	Ē	pcbi365://EasyLogixShared/Packa pcbi365://EasyLogixShared/Packa		1	
CA43X5R1E473M100AA		1206	C ARRAY	8	1.150	3.200	1.600	2.750	+20.0 / -20.0	Capactor	ARRAY	Surface Mount	20.000	20.000	0.000000001	i i	pcbi365://EasyLogixShared/Packa pcbi365://EasyLogixShared/Packa		1	
CA43X5R1H102M100AA		1206	C ARRAY	8	1.150	3.200	1.600	2.750	+20.0 / -20.0	Capacitor	ARRAY	Surface Mount	20.000	20.000	0.00000001	ė.	pcbi365://EasyLogixShared/Packa pcbi365://EasyLogixShared/Packa			
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Test Models



- Takaya
- Seica
- Hp 3070
- Spea
- ...





Files connected to parts



STEP 3D

BSDL Boundary Scan

IBIS Input/Output Buffer Information

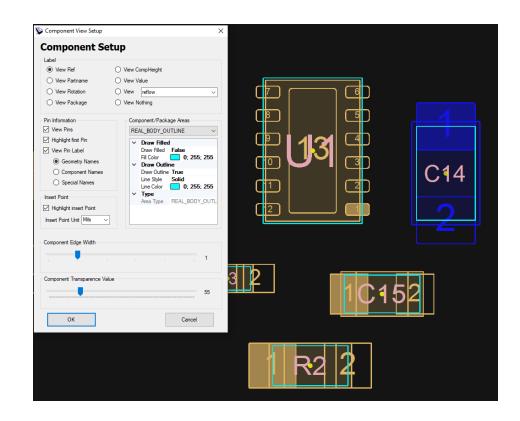
XML Test Models

• ...



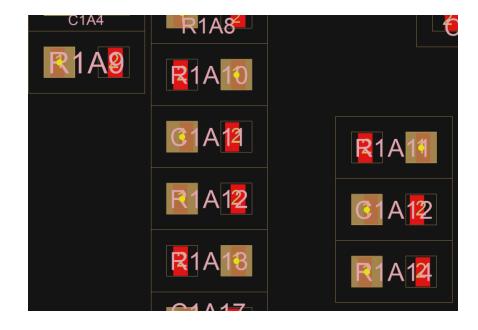
Real Body size of components





If a 3D model is available also the pins are shown

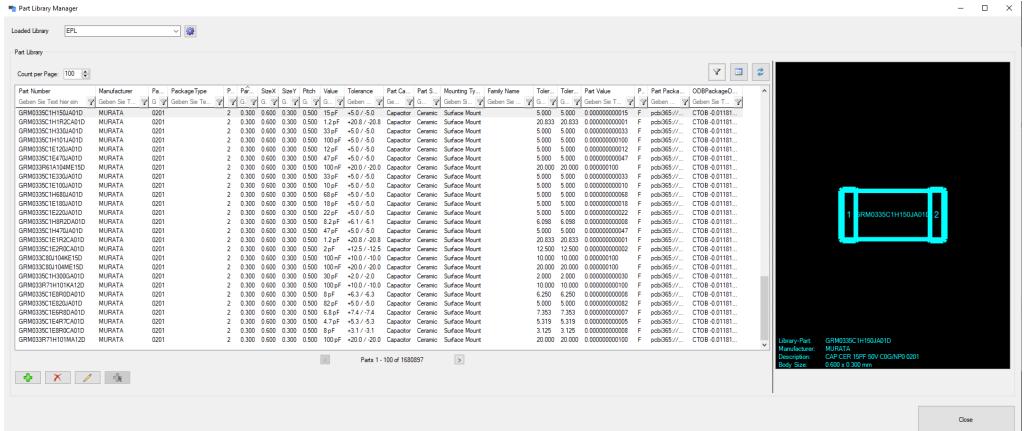
Pads from 3D model are red





EPL Part Information

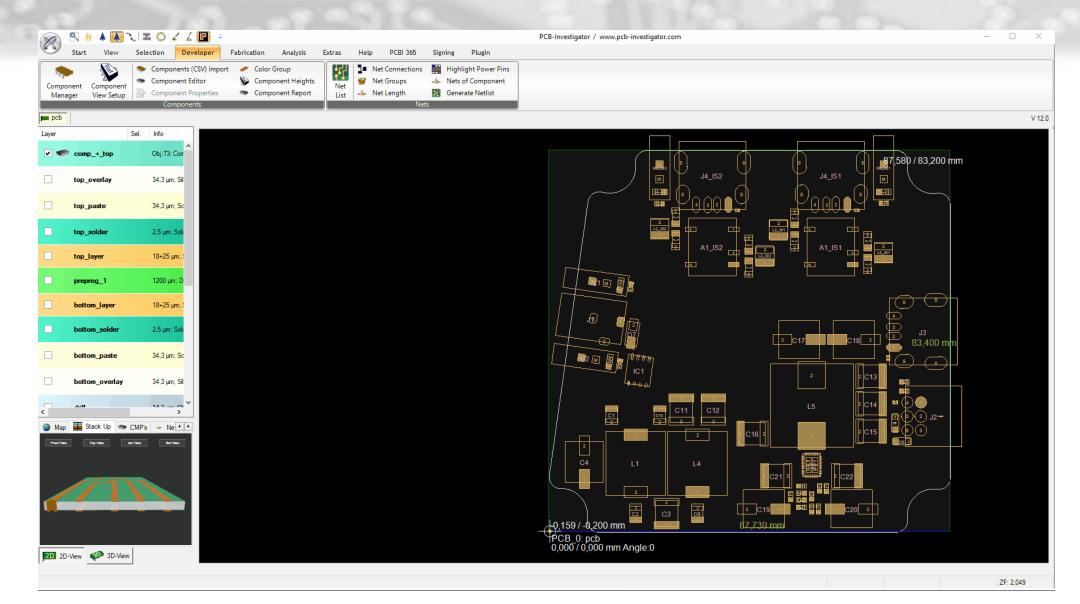






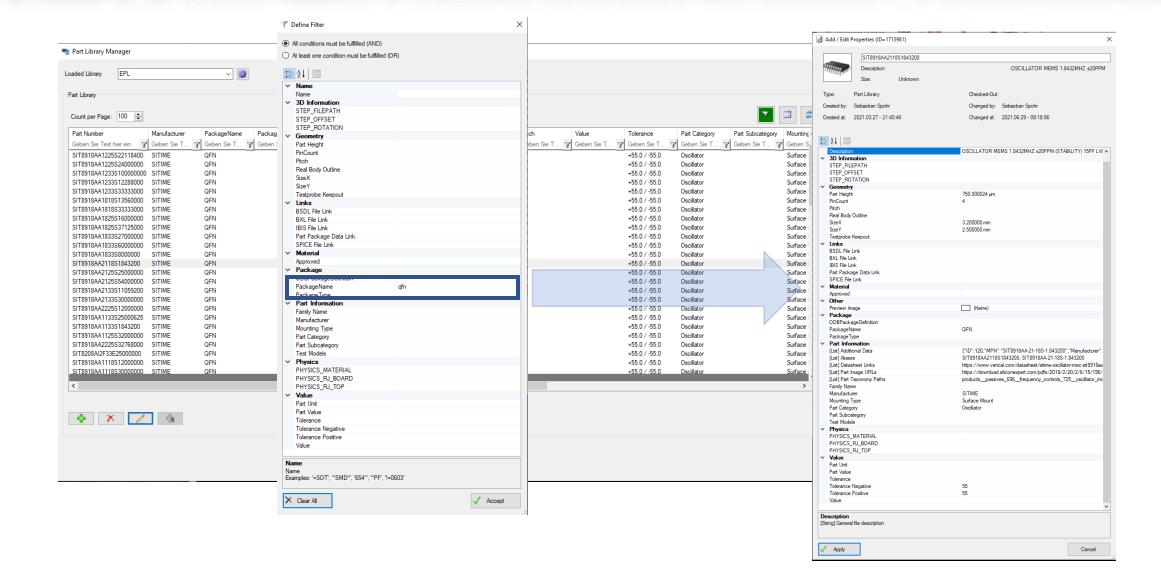
Part Information



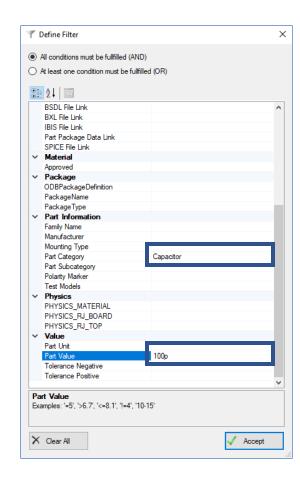


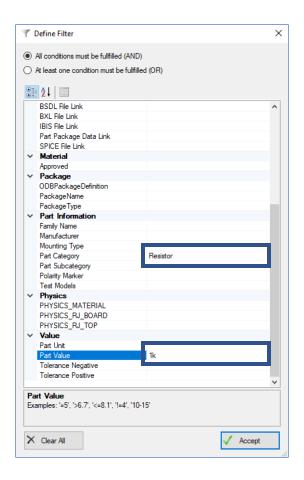


EPL Reverse Search



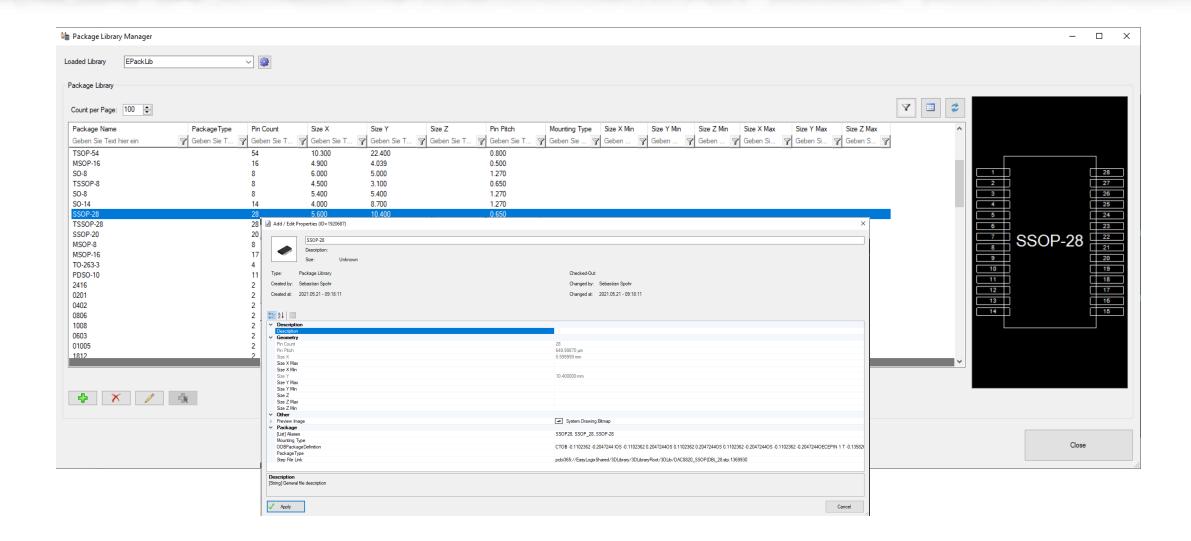








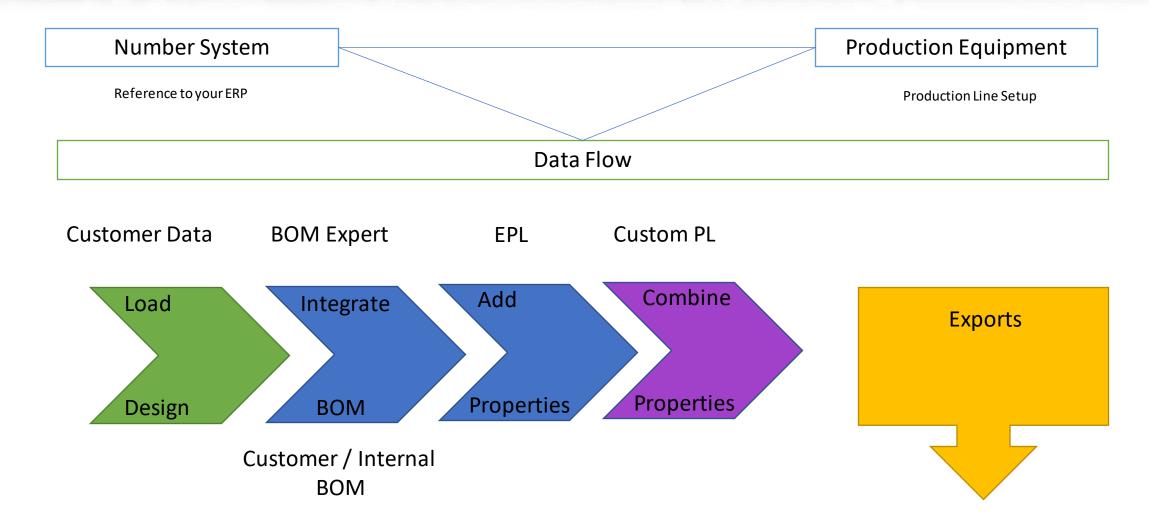
PCBI 365 Package Library



Custom Library

Why we need a custom library
Different ERP System Setup
Customized Parts (connectors...)
Equipment Individual Properties
Product Segment Adjustment

Material Information Flow



Pick & Place Package Reader

e.g. ASM OIB

Read information from Pick & Place machine

- Part Name
 - Package definition
 - Body
 - Pin pos
 - Pin size
 - Polarity Marker
 - Part height
 - Part height tolerance
 - Tolerance X,Y,Z
 - Contrast
 - Angle
 - Center

Custom Package Library

Sample Package Library

Package Name	String	qfn44					
Part Type	String	IC					
Pin Count	Int	44					
Pin Pitch	Double	0,5					
Package Type	String	qfn					
Mounting Type	String	SMT					
ODB_Package	JSON String						
Pick_Place_Package	JSON String						

Store Package related data

Custom Part Library

Sample Part Library

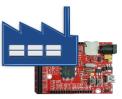
Manufacturer Part Number	Туре	AD633JRZ						
Part Alias List	JSON String	<a1><ad633jrz-nd></ad633jrz-nd></a1>						
Internal_Part_Information	JSON String	<1 <ipn>2345678> <function<analog multiplier="">></function<analog></ipn>						
Part Type	String	IC						
Pin Count	Int	8						
Pin Pitch	Double	0,5						
Polarity Pin	Int	0						
Polarity Marker Type	String	Point						
Image	Bitmap	BIN						
Test Model	XML String	IC						
Package Link	String	DB Connection String						
Package Type	String	SOIC						
Mounting Type	String	SMT						
STEP	String	<pcbi_365:link><\\myStep></pcbi_365:link>						
Documents	JSON String	<pre><spec><https: ad633.pdf="" cal-documentation="" data-sheets="" en="" media="" techni="" www.analog.com=""></https:></spec></pre>						

Store Part related data

Library supported tasks

EPL task enhancement

- BOM preparation
- AOI
- DRC
- DFM
- DFA
- DFT
- Solder Process
- Supplier selection



Panel Building DFM Analysis

DFA Analysis

SMT Reflow
Simulation

AOI Analysis
+Machine Export

DFT Preparation +Machine Export

Library SDK

Use EPL and your custom library with an advanced SDK

- Automate your task within PCB-Investigator products
- Automate your task from any .Net App
- Add your own data sources

Advantage

EPL library success

- Shorten quoting times.
- Increase the throughput of orders.
- Turn existing data into knowledge.
- Create an end-to-end process.
- Minimize errors. Increase quality.
- Reduce manufacturing costs.



Terms

EPL EasyLogix Part Library

Subscription Based
Storage is only allowed within ODB++ Jobs
ODB++ Jobs are allowed to share with others
All resolved data are only allowed to be used within an PCB-Investigator design

Synchronization of components direct integrated in PCB-Investigator Works best in conjunction with PCBI PLM

Your Full-Service Provider

Request Customized Functions

Get in touch,

info@easylogix.de

Guenther Schindler

Tel. +49 941 568 136 26

Useful Links:

PCB-Investigator www.pcb-investigator.com

PCBi-Physics www.PCBi-Physics.com

Native Board Import (3D Interface to CATIA, SiemensNX, SolidWorks, SolidEdge) www.sts-development.biz

GerberLogix www.gerberLogix.com

Online Gerber Viewer www.Gerber-Viewer.com

Software Development, CAD Converter, data connection $\underline{www.easyLogix.de}$