



Quadcept V10 Release Note

11. 11. 2019

Quadcept Inc.

Access Everything from Start Page

01

Learn

- Quadcept sample projects are referable.
- Provides tips for starting to use Quadcept.

02

New Project

- Every design in Quadcept starts with a project file. Clicking New Project creates a new Quadcept project.

03

Open Project

- Opens an existing Quadcept project file.
- As a project you opened is displayed in the history, you can easily reopen it when you resume your work.

Access support forum, online manual and tutorial videos from here

Full of information such as latest news, release notes, sample data and tips for useful features

Frequently used projects can be pinned to the Recent Projects for easy reference

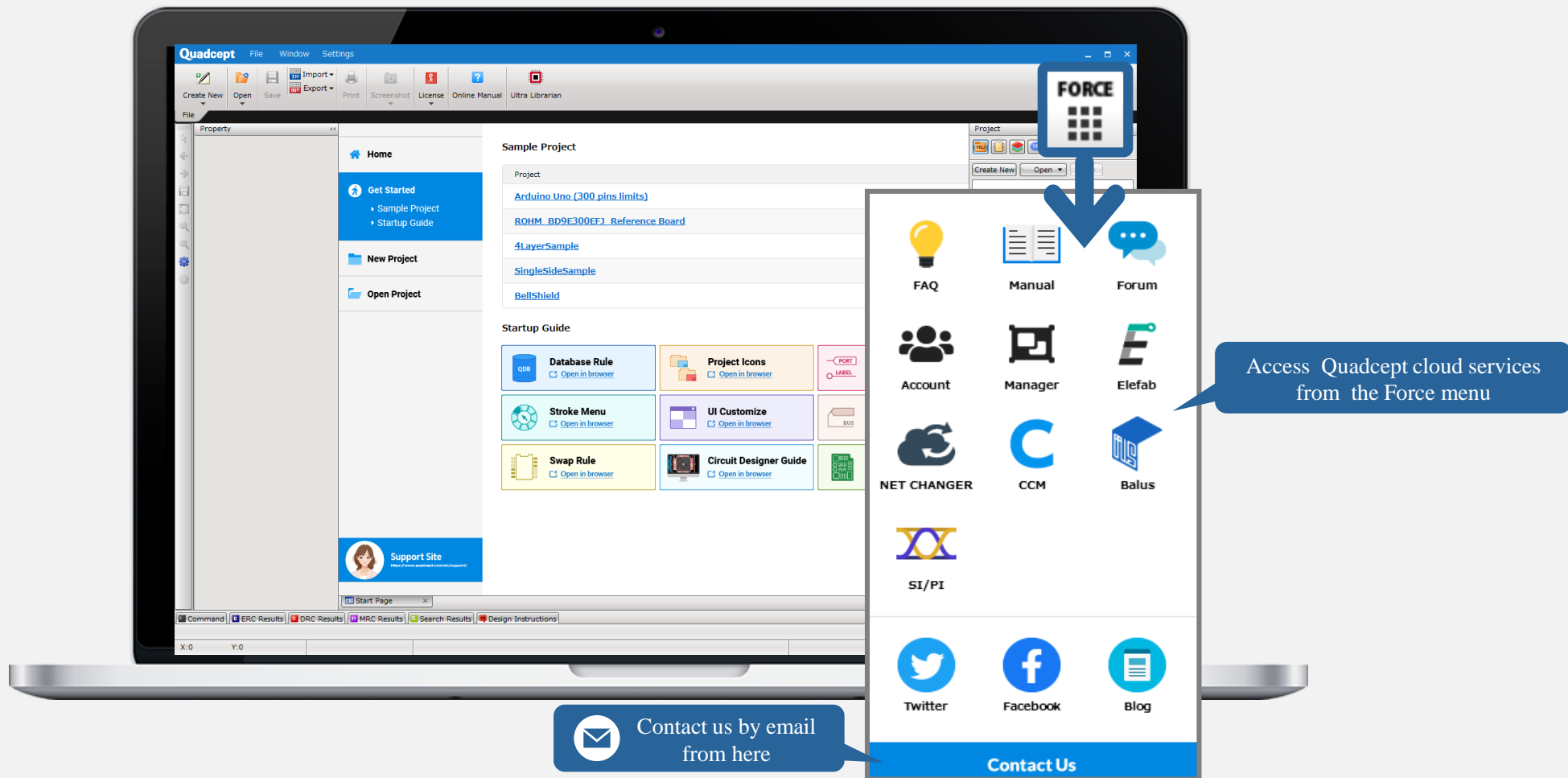
The screenshot shows the Quadcept Start Page interface on a laptop. The page is divided into several sections:

- Home:** A sidebar menu with options for Home, Learn, New Project, and Open Project.
- Learn:** A section with sub-headers for Beginner, Experienced, and Sample Project.
- What's New:** A section with a dropdown menu (currently set to 'Announcement') and a list of recent news items. Each item has a date (7/5/2019) and a category (Seminar, Info, Important, Release, Event).
- Recent Projects:** A section with a dropdown menu (currently set to 'Project') and a list of recent projects. Each project has a name, a date opened, and a 'Pinned' checkbox. The 'Pinned' checkbox for the first project is highlighted with a yellow circle.

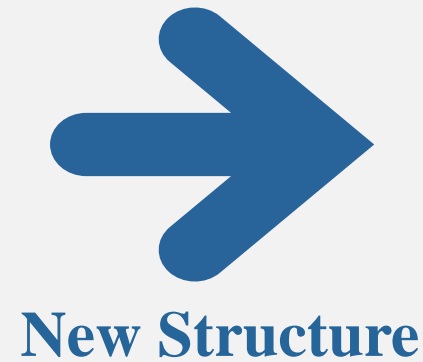
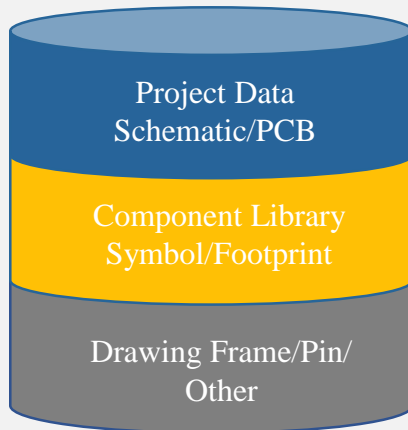
Callouts and icons highlight specific features:

- A yellow circle with a circuit board icon points to the 'Info/News' section.
- A blue circle with a trash can icon points to the 'Recent Projects' section.
- A yellow circle with a pushpin icon points to the 'Pinned' checkbox in the 'Recent Projects' section.
- A blue circle with a speech bubble icon points to the 'Support Site' link at the bottom of the page.
- A yellow circle with a play button icon points to the 'Support Site' link.
- A yellow circle with a stack of books icon points to the 'Support Site' link.

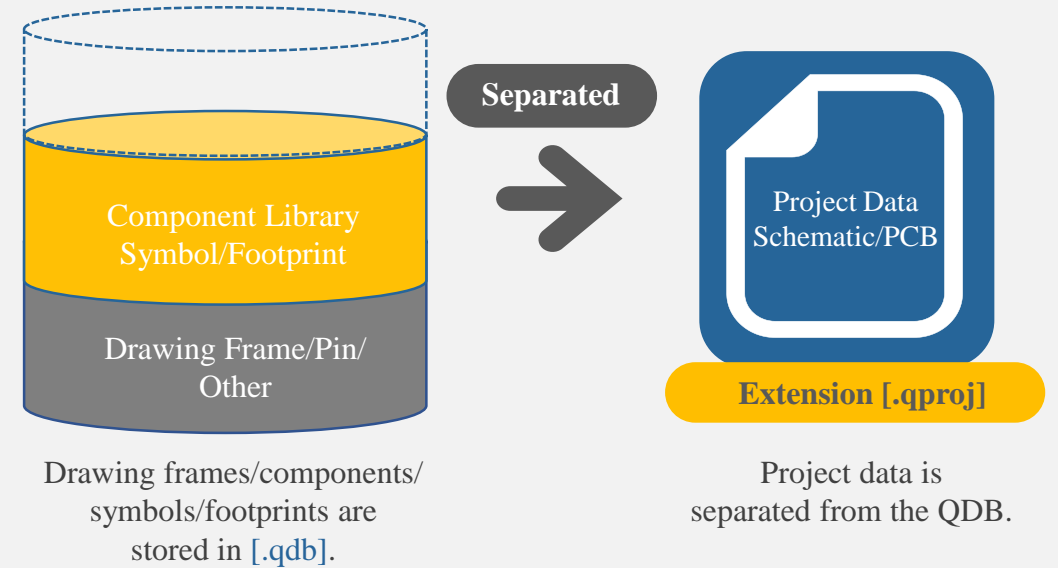
Access All Quadcept Cloud Services Directly from CAD System



QDB Structure in V9



Project Data Separated from QDB and Managed as Files in V10



01

About File Structure in V9 or Earlier

- All the data is stored in the QDB. This allows you to manage all the objects in one database, but there have also been some challenges where the database size becomes larger as the number of projects increases and it needs some steps to share project data.

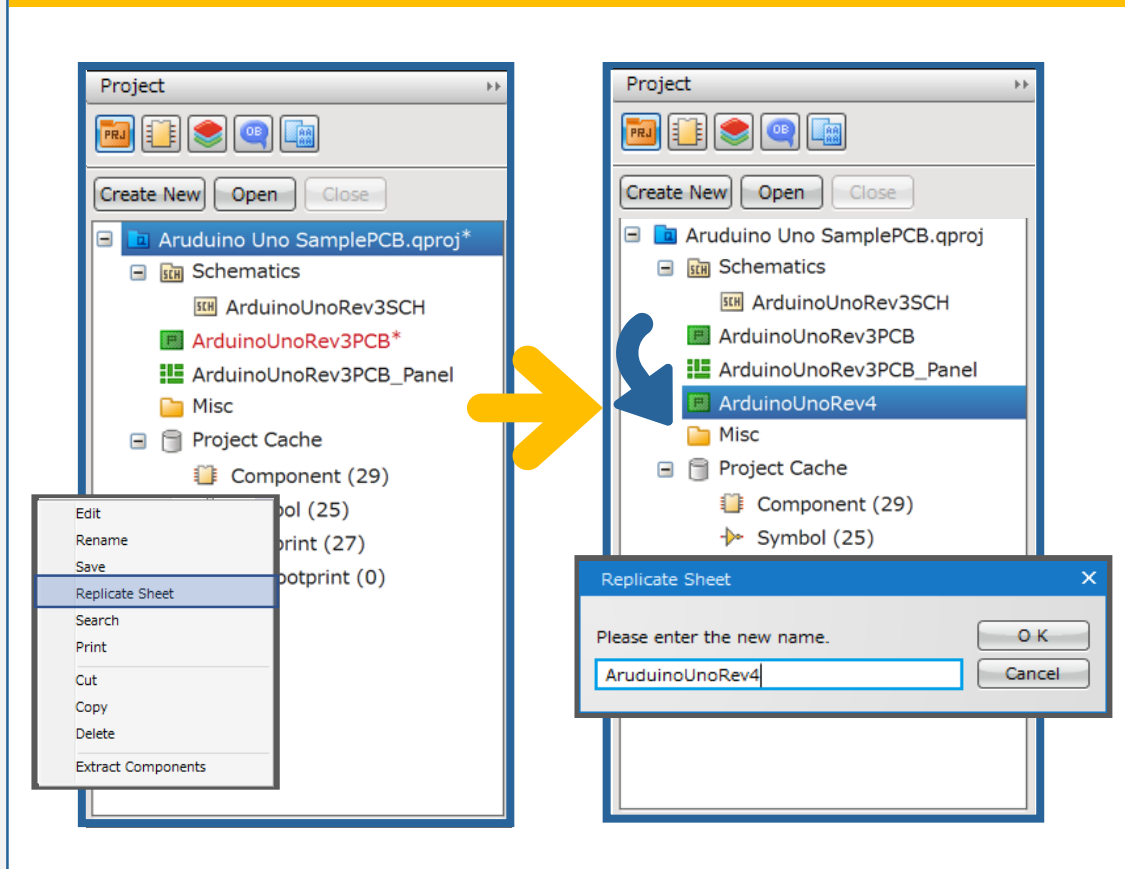
02

From V10, Project Data Is Separated from QDB.

- More intuitive project management and sharing
- Improved performance when saving and reading projects
- Less database size (qdb)
- Enhanced affinity with various cloud storage services
- Launch application by double-clicking project files

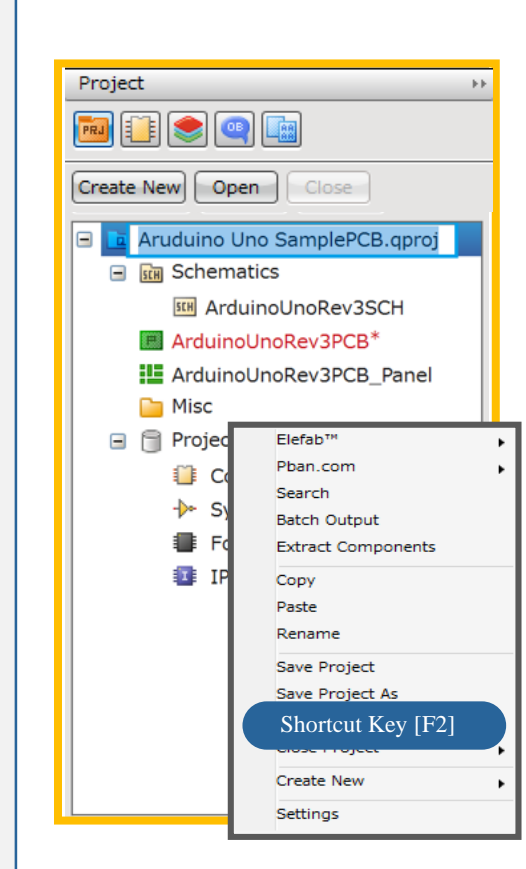
Design Sheets in Project Now Replicable with a New Name

This now allows you to reduce the steps to copy your design sheets



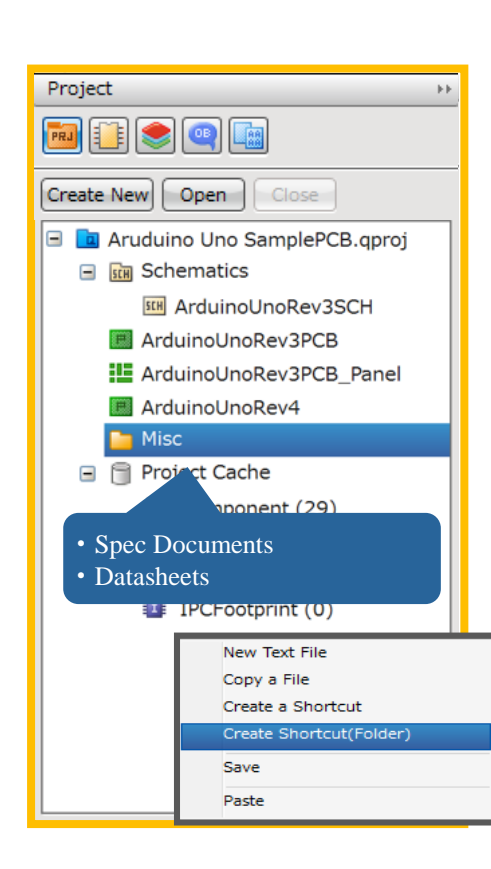
Rename Project Dynamically

The file name is also changed dynamically

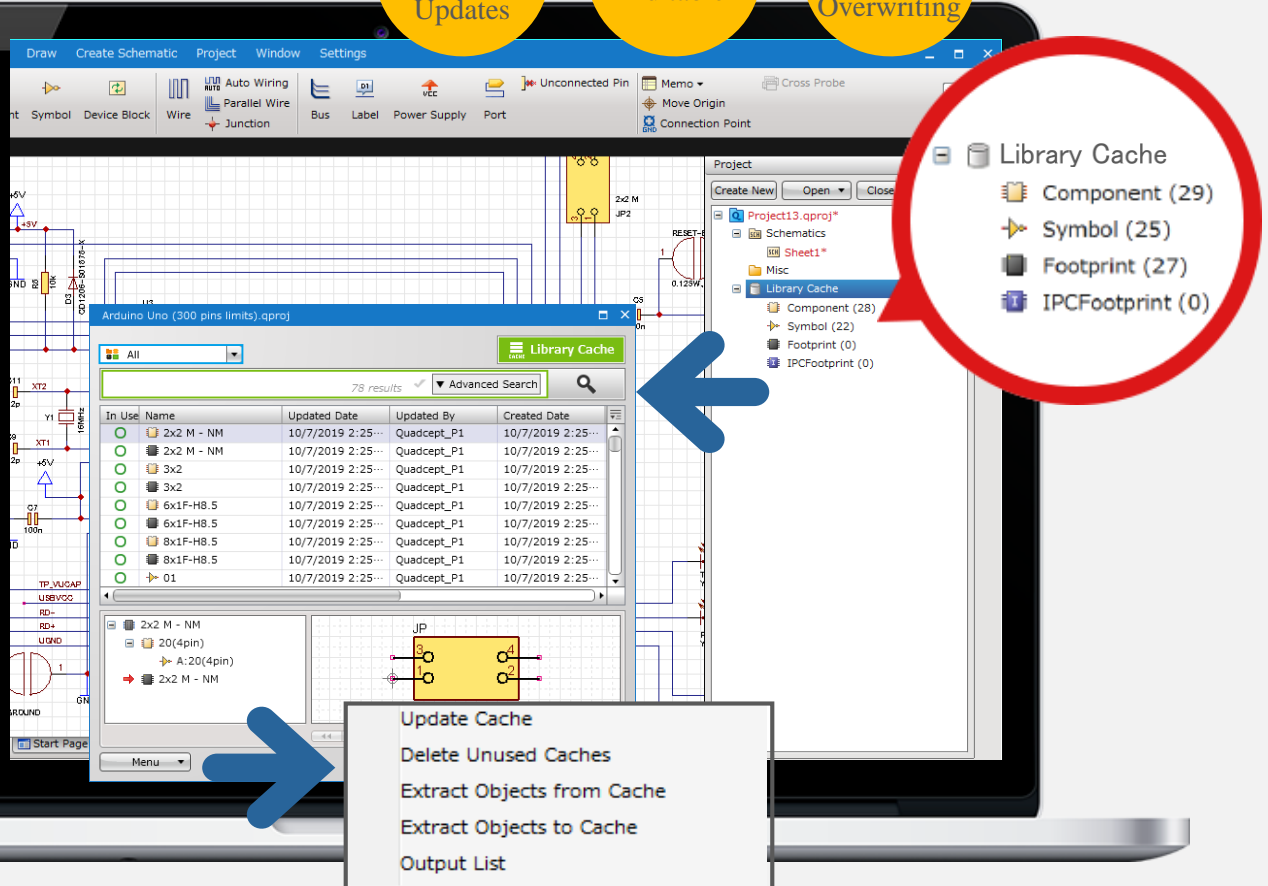


Create Shortcut for Folder

Shortcuts for Windows folder now registrable



- Prevents Unintended Updates
- Freely Editable
- Prevents Accidental Overwriting



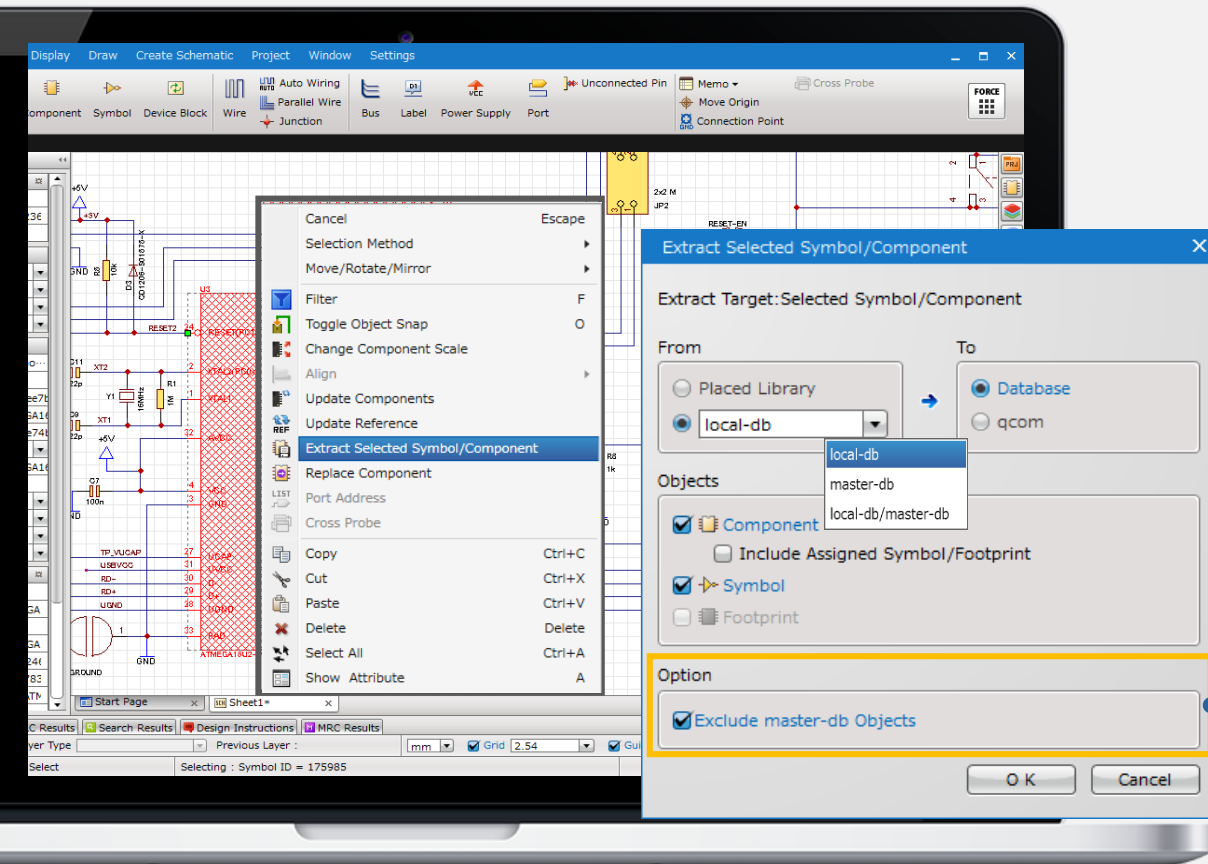
01 Library Cache Stored in Each Project
 A Quadcept project stores caches for components, symbols and footprints used in your design. An independent component library (Library Cache) is built for each project file.

- More robust component library
- Components placeable from data cache
- Data caching toggleable between ON or OFF

02 Prevents Accidental Component Data Change
 Since the objects in a library cache are preferentially used for component update / place, every object used in a design will not be affected by external libraries. This helps you to prevent unintended data change when you update or replace objects.

03 Each Object Updatable / Replaceable from Library Cache
 You can choose a source library from a Quadcept DB or a library cache to update / replace each object.

- Update Cache
- Delete Unused Caches
- Extract Objects from Cache
- Extract Objects to Cache
- Output List

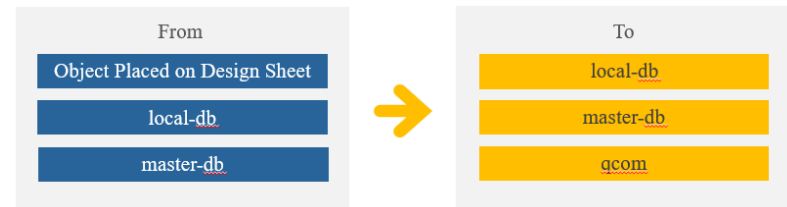


01

Choose Where You Extract Objects From / To

As *master-db* is added in V10, you can now choose where you extract libraries from and to as follows.

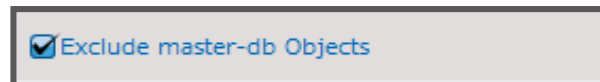
Each object will be extracted based on its object ID.



02

Objects in *master-db* Excludable from Extraction

When objects that are subject to be extracted already exist in the *master-db*, you can exclude them from the extraction by enabling this option.



local-db **master-db** share

Read Only **Smoother Experience** **Flexible Library Management**

Manage Your Libraries in 3 Categories

01

- **local-db** *1

local-db is a personal database that allows you to freely add, delete and edit objects. This is available as with the QDB that used to be in V9 or earlier.

(*1) This is called *local-db*, but this can be placed not only in a local storage but also in a shared location.

02

- **master-db**

master-db is a read-only database where only an administrator can add, delete and edit objects. This is useful when you share libraries in your team. The users except an administrator can only refer to or place the libraries.



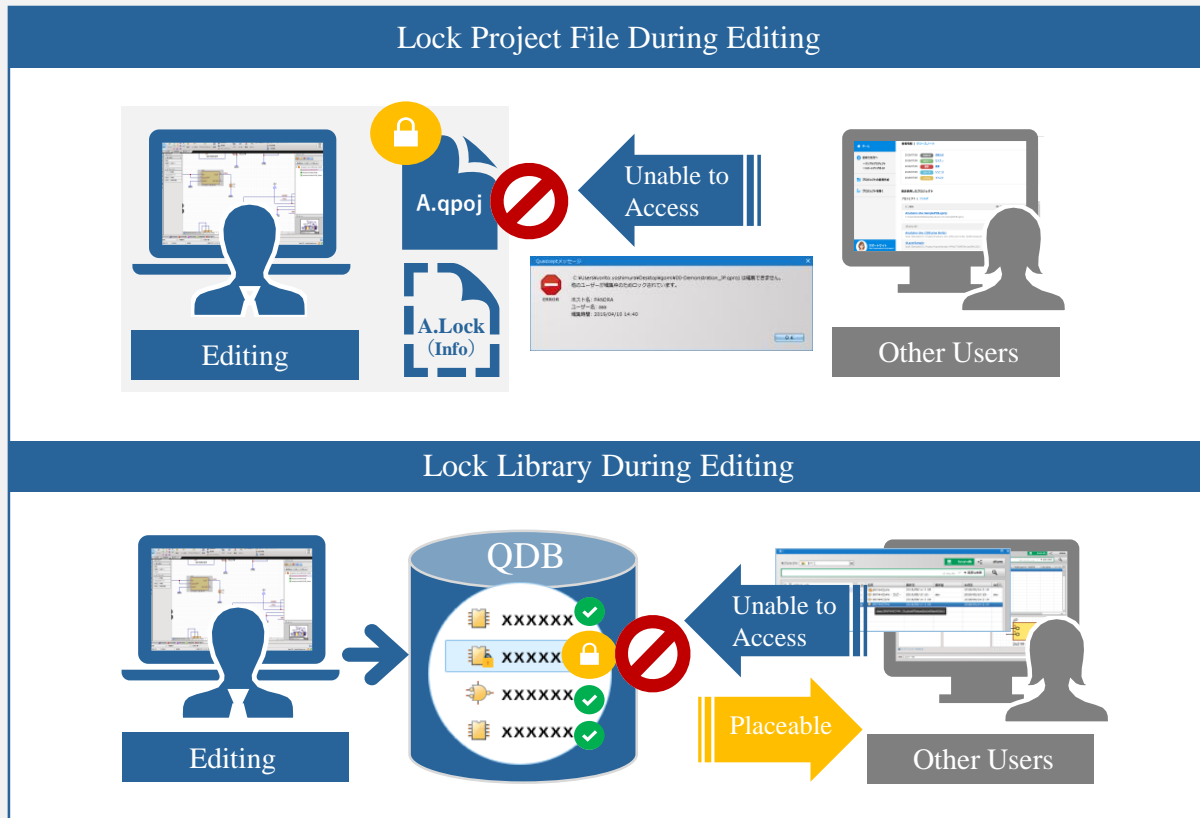
03

- **Share**

Share is a free component library Quadcept provides on cloud. You can find what you need with a fuzzy search.

We have added new libraries by co-operating with Omron, Token, KEMET and Murata Manufacturing.

File Locking – Now Available for Objects Including Project, Component, Symbol and Footprint During Editing



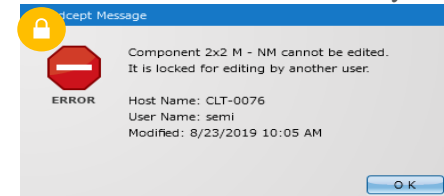
01

Project Locking

A project file cannot be opened while another user is editing it. If you attempt to open the file, the following error will appear.

About Lock File

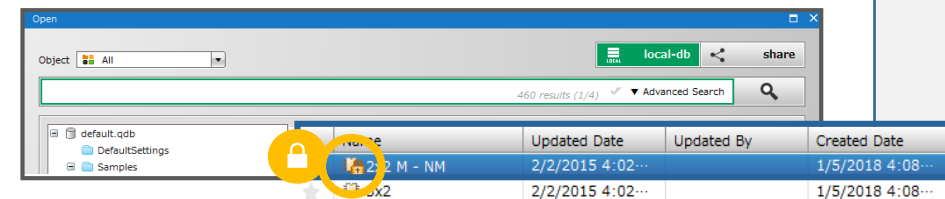
A .lock file will be automatically generated during editing. This file stores the information including the date modified and the user name which is currently editing.

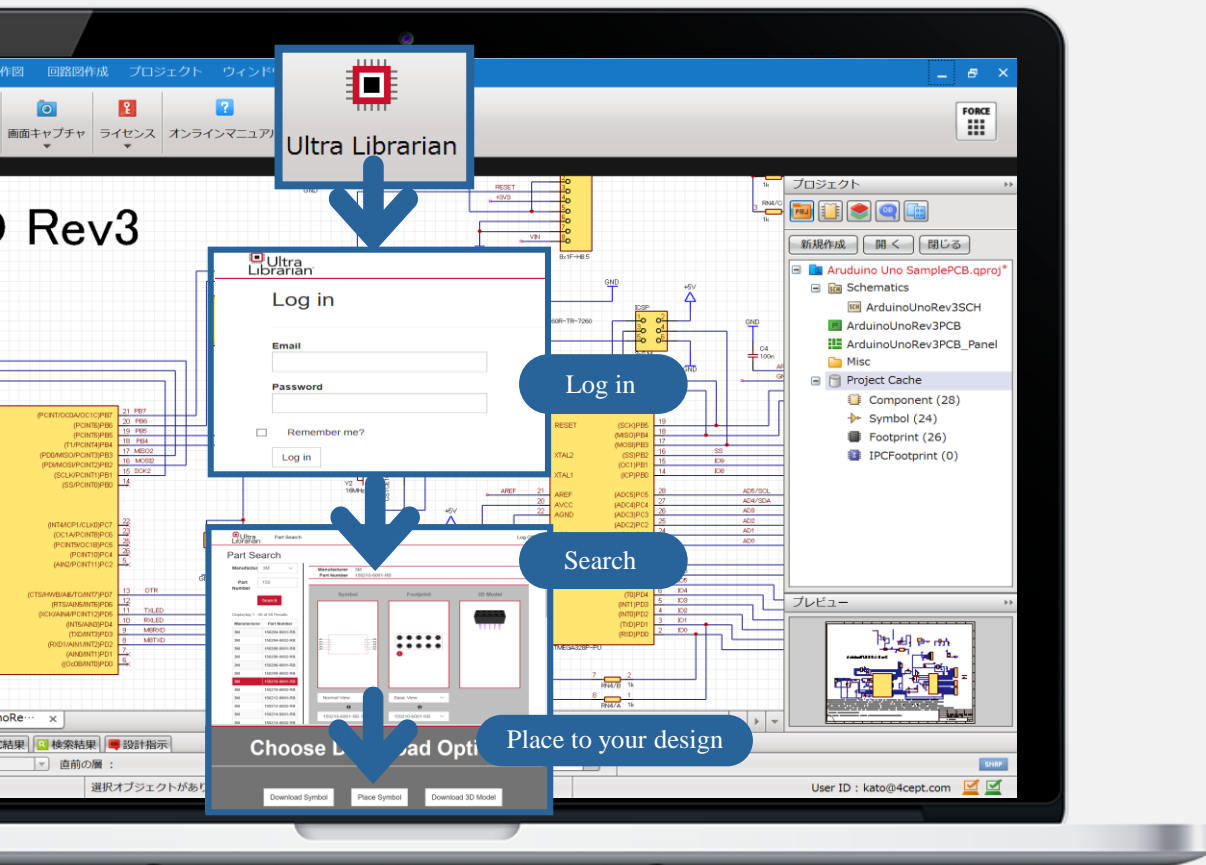


02

Library Locking

While components / symbols / footprints in a QDB are being edited, other users will be unable to edit them. As for placement, all the libraries including the objects that are being edited can be placed onto a design sheet.

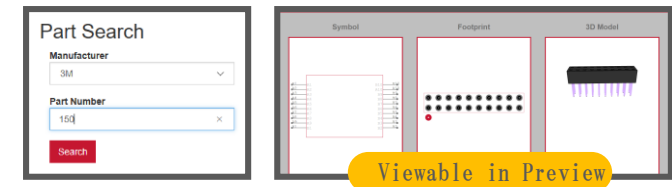




01

Search and View

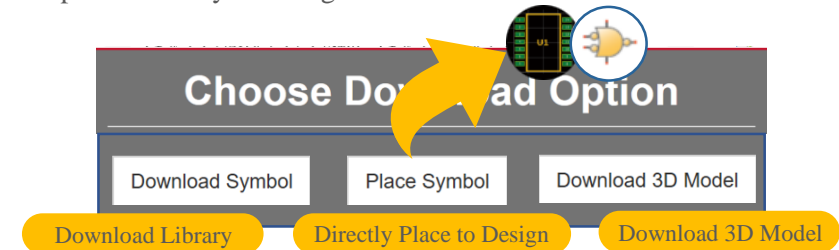
You can search for a library by a manufacturer name and a part number. After the search, its schematic symbol, footprint and 3D model are viewable in the preview.



02

Directly Placeable from Search Results

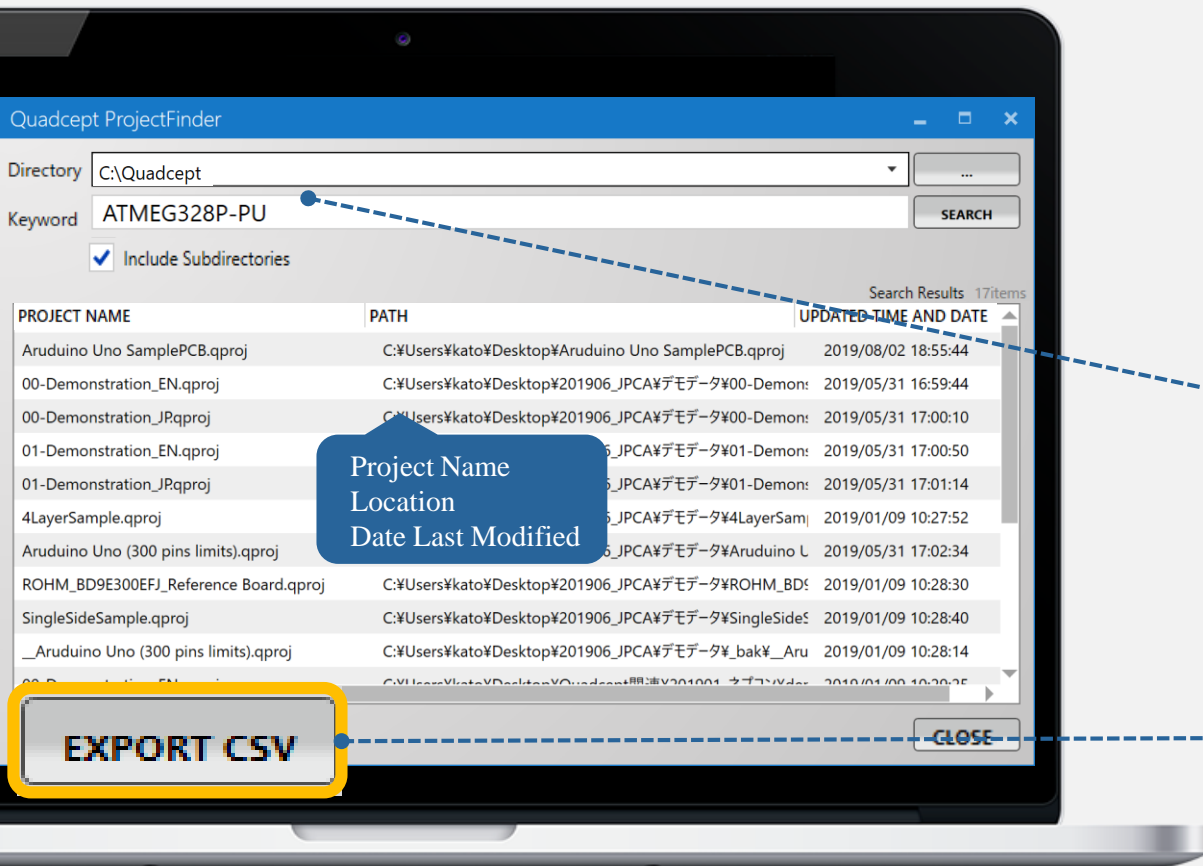
In the search results, there are two options for the part you have found: Download the library into your local database or directly place it onto your design.



* Please make sure to verify its figure and attributes before using the library.

* Downloading 3D models is currently under development.


Find Projects Containing Obsolete or Discontinued Parts with Quadcept ProjectFinder



01

Launch Quadcept ProjectFinder

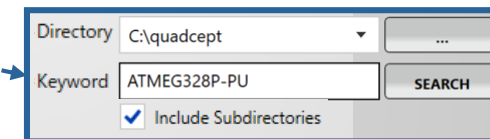
Double-click the Quadcept.ProjectFinder.exe to launch the application.

 Quadcept.ProjectFinder.exe

02

Search for Projects with Obsolete or Discontinued Parts

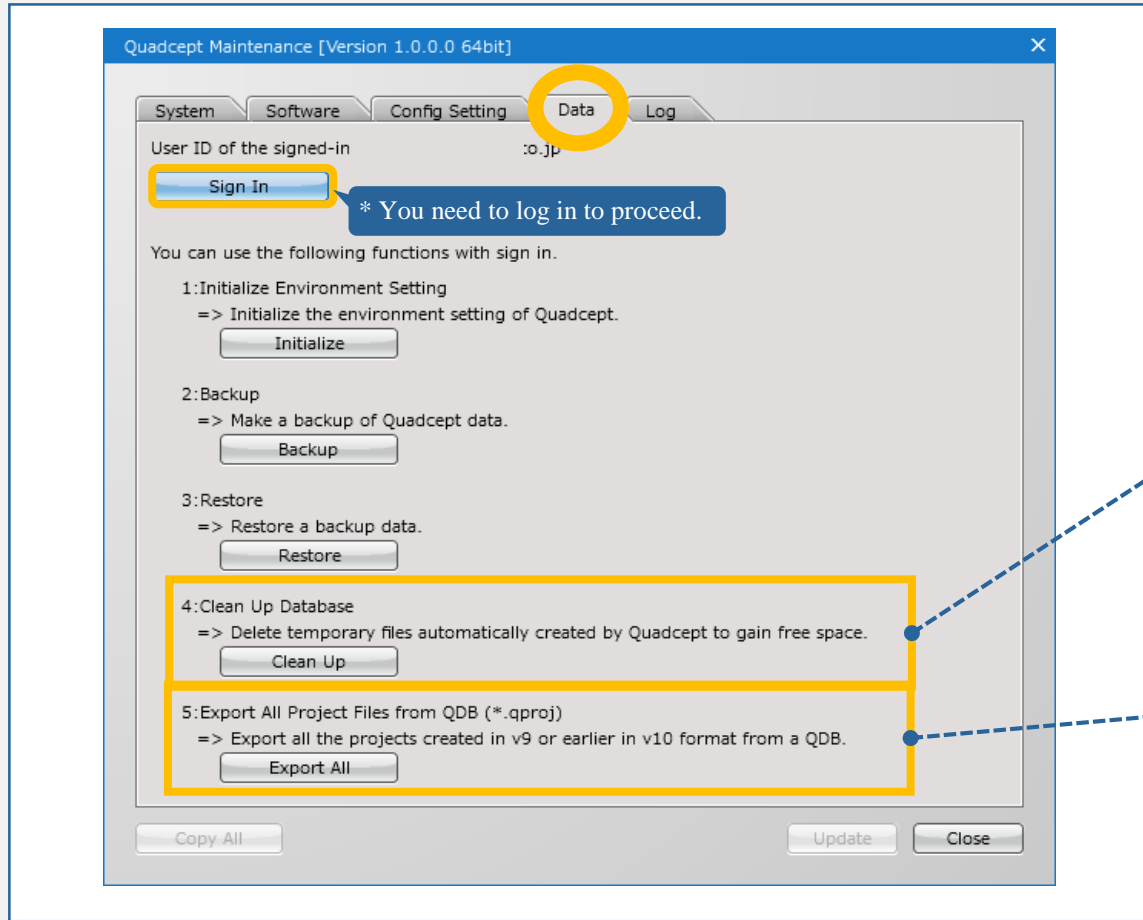
Quadcept ProjectFinder allows you to search for project files by the name of a symbol, footprint and component. With this, you can find projects that contain obsolete or discontinued parts.



03

A List of Projects Exportable in CSV Format

The list of the projects you have searched for can be exported in CSV format.



01

Launch Quadcept Maintenance

Double-click the Quadcept.ProjectFinder.exe to launch the application. In the Data tab, you can perform each operation.

M Quadcept.Maintenance.exe

02

Clean up Your Database to Gain Free Space *

This enables you to clean up temporary files stored in a QDB and gain free space. Select *Clean Up* to run. Temporary files including back-up files will be deleted.

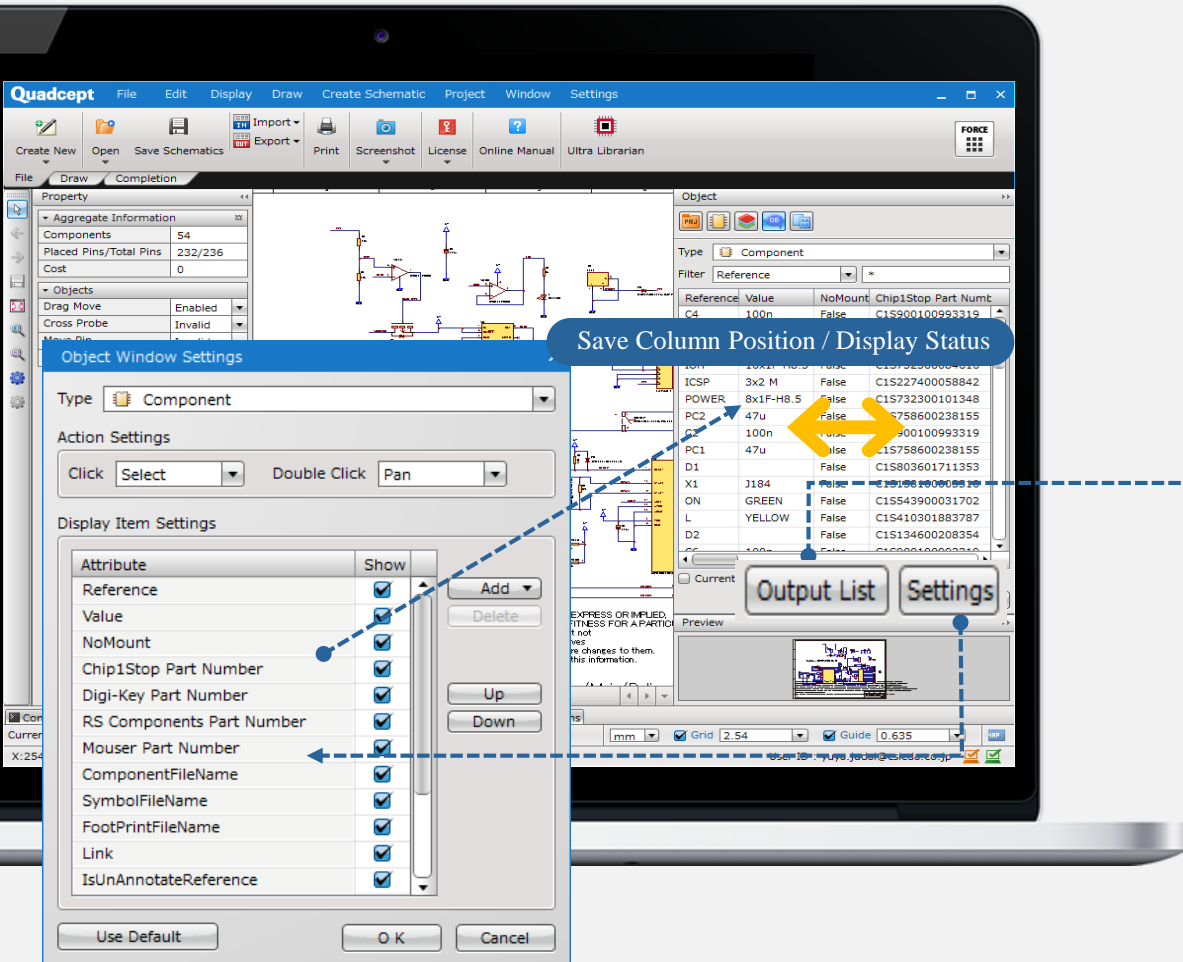
4: Clean Up Database
=> Delete temporary files automatically created by Quadcept to gain free space.

03

Export All the Projects Stored in a QDB *

In Quadcept V10, Quadcept projects will be file-based. With this feature, you can export all the projects from your QDB. The extension of an exported project is *.qproj*.

5: Export All Project Files from QDB (*.qproj)
=> Export all the projects created in v9 or earlier in v10 format from a QDB.



01

Reworked Object Window

The performance of the Object Window has been improved for smoother experience. It also now allows you to save the position and the display status of attribute columns.

02

A List of Objects Now Exportable in CSV or Text Format

A list of objects on the Object Window can be now exported in CSV or text format.

	A	B	C	D	E	F	G	H	
1	Reference	Value	NoMount	Chip1Stop	Part Number	Digi-Key Part Number	RS Components Part Number	Mouser Part Number	ComponentFileName
2	C4	100n	FALSE	C15900100993319	311-1344-1-ND	669-8767		603-CC603KRX7R98B104	C
3	IOL	8x1F-H8.5	FALSE	C15732300101348	S7006-ND				8x1F-H8.5
4	AD	6x1F-H8.5	FALSE	C15732300101311	S7004-ND				6x1F-H8.5
5	IOL	10x1F-H8.5	FALSE	C15732300084616	S7008-ND				10x1F-H8.5
6	ICSP	3x2 M	FALSE	C15227400058842	609-3218-ND		649-67996-406HLF		3x2
7	POWER	8x1F-H8.5	FALSE	C15732300101348	S7006-ND				8x1F-H8.5
8	PC2	47u	FALSE	C15758600238155	565-2103-1-ND	756-7973		661-EMVA250ADA470MF5	47U
9	C2	100n	FALSE	C15758600238155	565-2103-1-ND			603-CC603KRX7R98B104	100n
10	PC1	47u	FALSE	C15758600238155	565-2103-1-ND			661-EMVA250ADA470MF5	47U
11	D1	100n	FALSE	C15758600238155	565-2103-1-ND			5-EGF1T-E3	M7
12	X1	J184	FALSE	C15158100003310	CP-102AH-ND		490-PJ-102AH		POWERSUPPLY_D
13	ON	GREEN	FALSE	C15543900031702	475-1410-1-ND	497-4668		720-LG971-KN-1	YELLOW
14	L	YELLOW	FALSE	C15410301883787	754-1135-1-ND			604-APT2012YC	YELLOW
15	D2	100n	FALSE	C15134600208354	CD1206-S01575CT-ND	773-4514		652-CD1206-S01575	M7
16	C6	100n	FALSE	C15900100993319	311-1344-1-ND	669-8767		603-CC603KRX7R98B104	100n
17	TX	YELLOW	FALSE	C15410301883787	754-1135-1-ND			604-APT2012YC	YELLOW
18	RX	YELLOW	FALSE	C15410301883787	754-1135-1-ND			604-APT2012YC	YELLOW
19	RESET-EN	0	FALSE	C15625901565935	RHM0.DARCT-ND	901-3664		604-APT2012YC	RESET
20	C5	100n	FALSE	C15900100993319	311-1344-1-ND	669-8767		603-CC603KRX7R98B104	100n

Export Attribute List in CSV Format

Arduino(TM) UNO Rev3

Save Column Position / Display Status

Export Attribute List in CSV Format

Output List

01

Save Position / Display Status for Each Dialog

You can now save the position and the display status of attribute columns for each dialog.

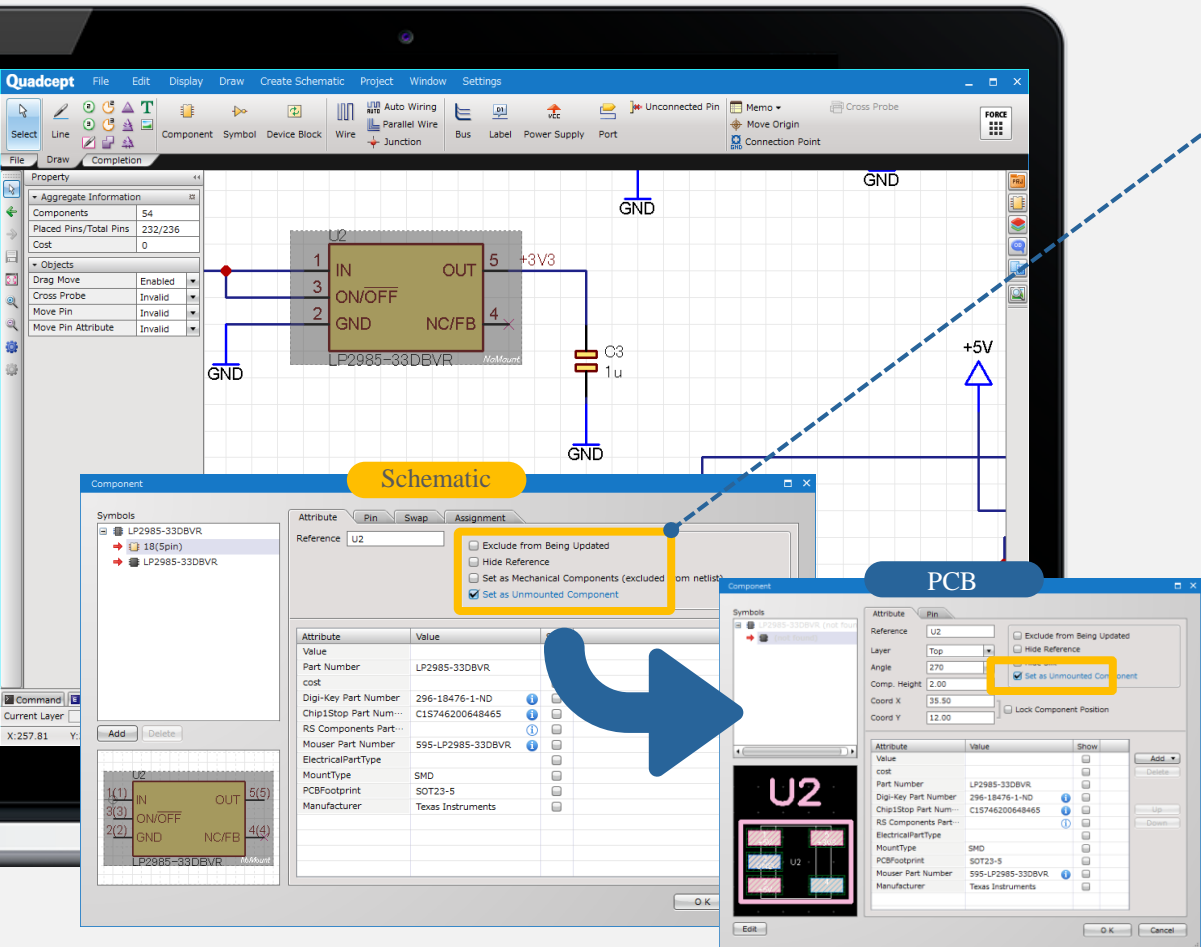
02

A List of Objects Now Exportable in CSV or Text Format

A list of objects on each dialog can be now exported in CSV or text format.

☆	Name	Updated Date	Created Date	Created By	Revision	ID		
FALSE	2x2 M - NM	2/2/2015 4:02:25 PM	1/5/2018 4:08:09 PM		1	54ca0370b4b19312a04f019c		
FALSE	3x2	2/2/2015 4:02:23 PM	1/5/2018 4:08:09 PM		1	54c99f97b4b19312a04efb04		
FALSE	6x1F-H8.5	2/2/2015 4:02:22 PM	1/5/2018 4:08:09 PM		1	54c8a7b5b4b1931130e4417b		
FALSE	8x1F-H8.5	2/2/2015 4:02:22 PM	1/5/2018 4:08:09 PM		1	54c89fc0b4b19308b0f549d6		
FALSE	03(R)	2/2/2015 4:02:25 PM	1/5/2018 4:08:09 PM		1	54c8a675b4b1931130e44152		
FALSE	04(R)	2/2/2015 4:02:26 PM	1/5/2018 4:08:09 PM		1	54c8a69db4b1931130e4415e		
FALSE	10x1F-H8.5	2/2/2015 4:02:22 PM	1/5/2018 4:08:09 PM		1	54c8a9c9db4b1931130e441bc		
FALSE	47U	2/2/2015 4:02:23 PM	1/5/2018 4:08:09 PM		1	54c9cc18b4b19312a04efe2a		
FALSE	100n	2/2/2015 4:02:23 PM	1/5/2018 4:08:09 PM		1	54c9cc18b4b19312a04efe38		
FALSE	4000	4/24/2012 11:43:04 AM	1/5/2018 4:08:09 PM		1	54f4c43b86040921280d35359		
FALSE	4001	2/21/2013 1:20:52 PM	1/5/2018 4:08:09 PM		1	54f4c43b860409212b4cfa2da		
FALSE	4002	2/21/2013 1:59:14 PM	1/5/2018 4:08:09 PM		5	54f4c43b86040920ac0b6bf0		
FALSE	4006	2/22/2013 1:47:13 PM	1/5/2018 4:08:09 PM		3	54f4d75036040921280d3537e		
FALSE	4007	2/22/2013 1:47:54 PM	1/5/2018 4:08:09 PM		3	54f4d75036040921280d35385		
FALSE	4008	2/22/2013 1:48:32 PM	1/5/2018 4:08:09 PM		3	54f4d75036040921280d3538c		
FALSE	4011	2/21/2013 2:02:15 PM	1/5/2018 4:08:09 PM		5	54f4b59ed60409212b4cfa30b		
FALSE	4012	2/21/2013 2:03:54 PM	1/5/2018 4:08:09 PM		5	54f4c52706040920ac0b6bdf8		
FALSE	4013	4/24/2012 11:43:04 AM	1/5/2018 4:08:09 PM		4	54f4c79126040920b24dcadbf		
FALSE	4014	2/22/2013 1:51:32 PM	1/5/2018 4:08:09 PM		4	54f4d75036040921280d353bb		
FALSE	4015	4/24/2012 11:43:04 AM	1/5/2018 4:08:09 PM		4	54f4c7a216040920b24dcadff		

Unmounted Components Now Viewable on Schematic Design



01

Set as Unmounted Component

You can set a part as an unmounted component in a component property dialog. This setting is transferred to the PCB as well as exported to a BOM file.

- Exclude from Being Updated
- Hide Reference
- Set as Mechanical Components (excluded from netlist)
- Set as Unmounted Component

02

Changeable No Mount Mark Color

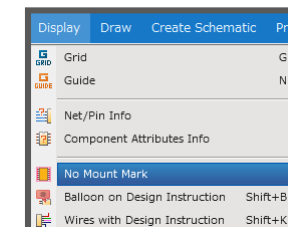
The No Mount mark color can be changed at the color setting of *No Mount Mark* in the Settings dialog that can be opened by selecting *Settings >> Settings >> Color*.

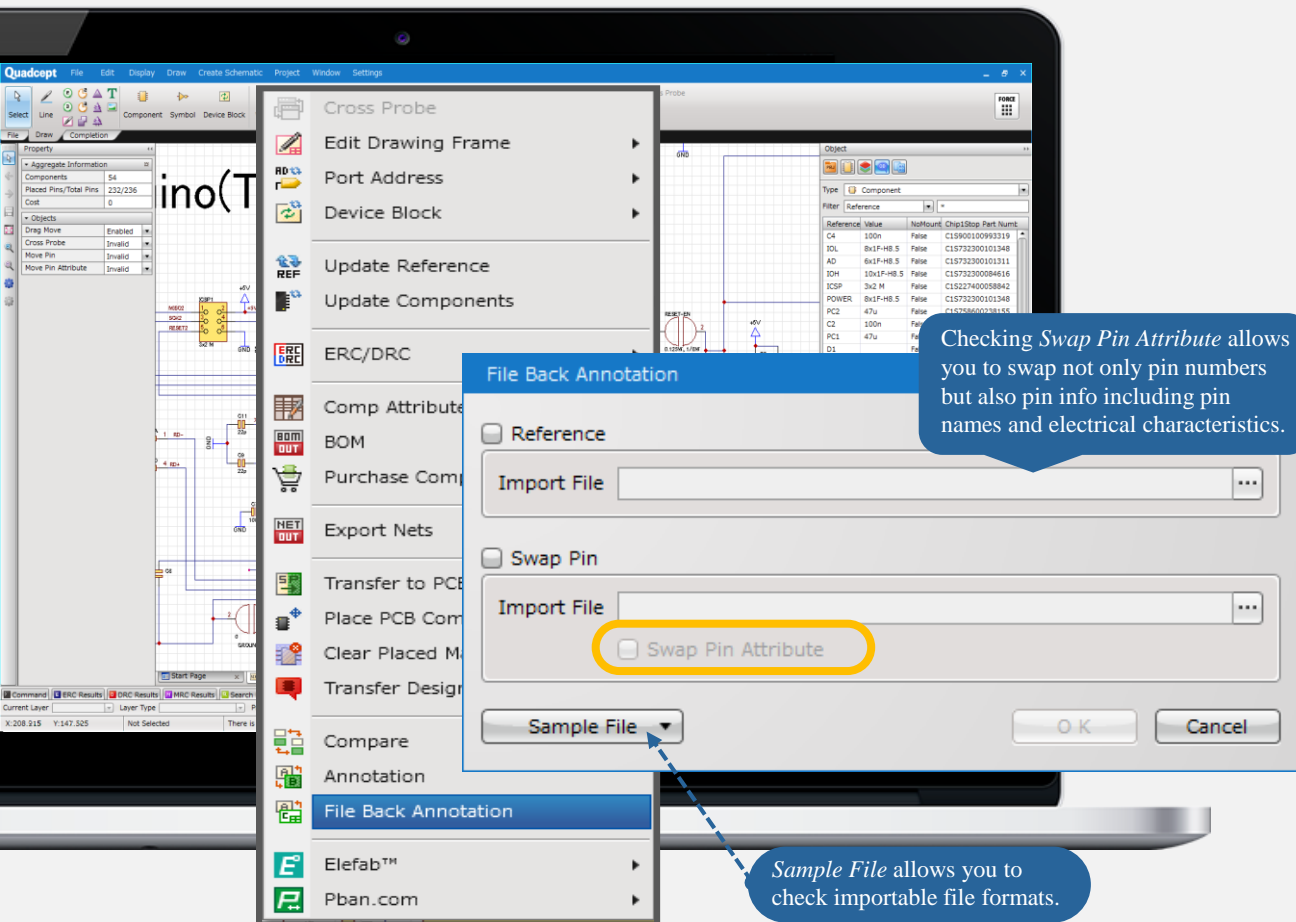
No Mount Mark

03

Toggle the Visibility of No Mount Marks Between ON / OFF

You can also toggle the display of No Mount marks between ON / OFF by selecting the *No Mount Mark* command in the *Display* menu.





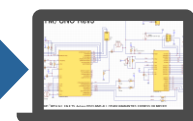
01

Synchronize Changes Made in Other CAD Systems

Importing a back-annotation file output from another CAD system enables you to synchronize your PCB design created in the software back to your Quadcept schematic design.



- Reference
- Pin Swap
- Pin Attribute



02

Pass Changes to Schematic by CSV Import

Click *Project >> File Back Annotation* and then choose a back-annotation file to pass the changes in PCB to your schematics.

* The format just consists of *old* and *new* columns.

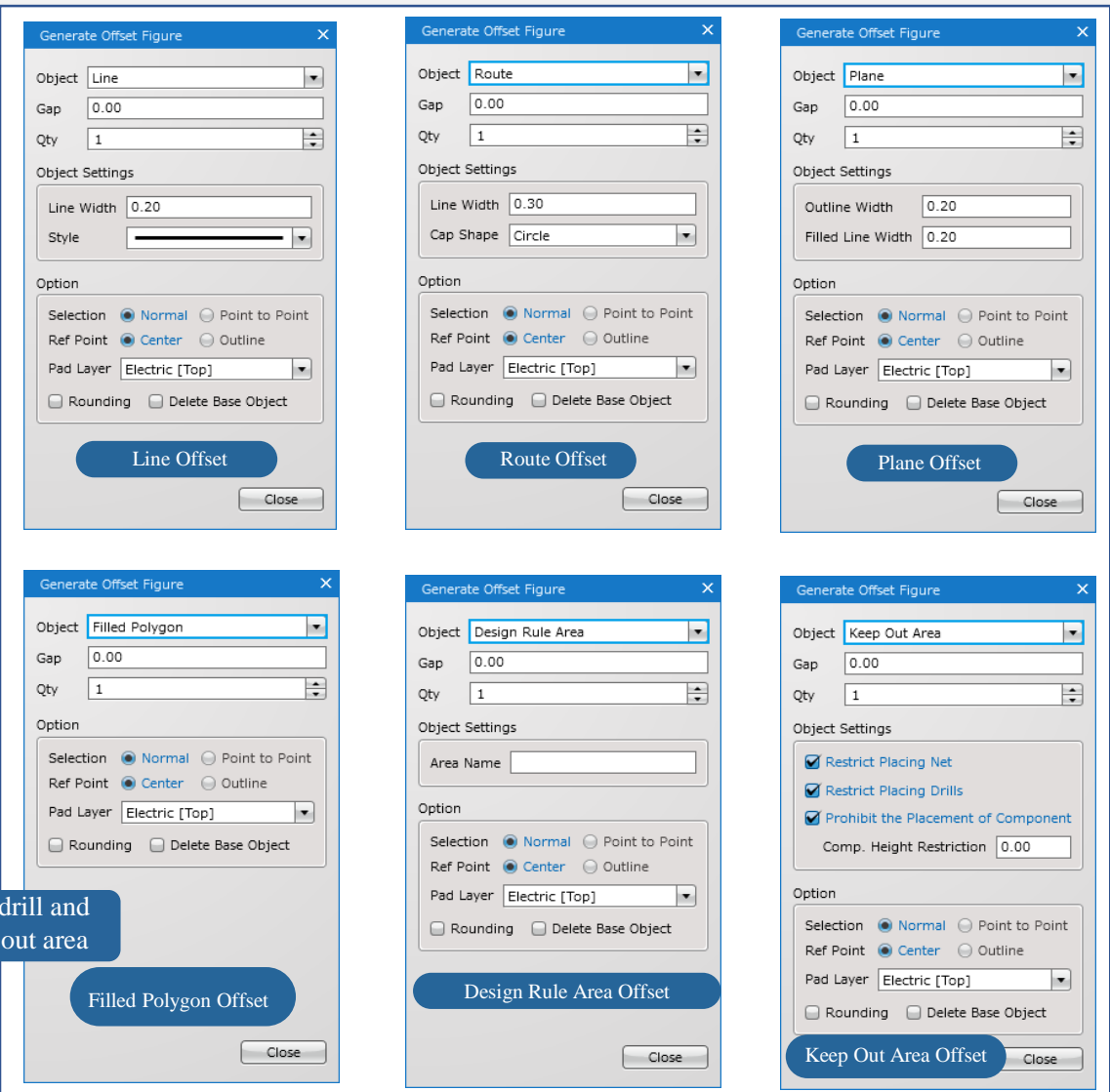
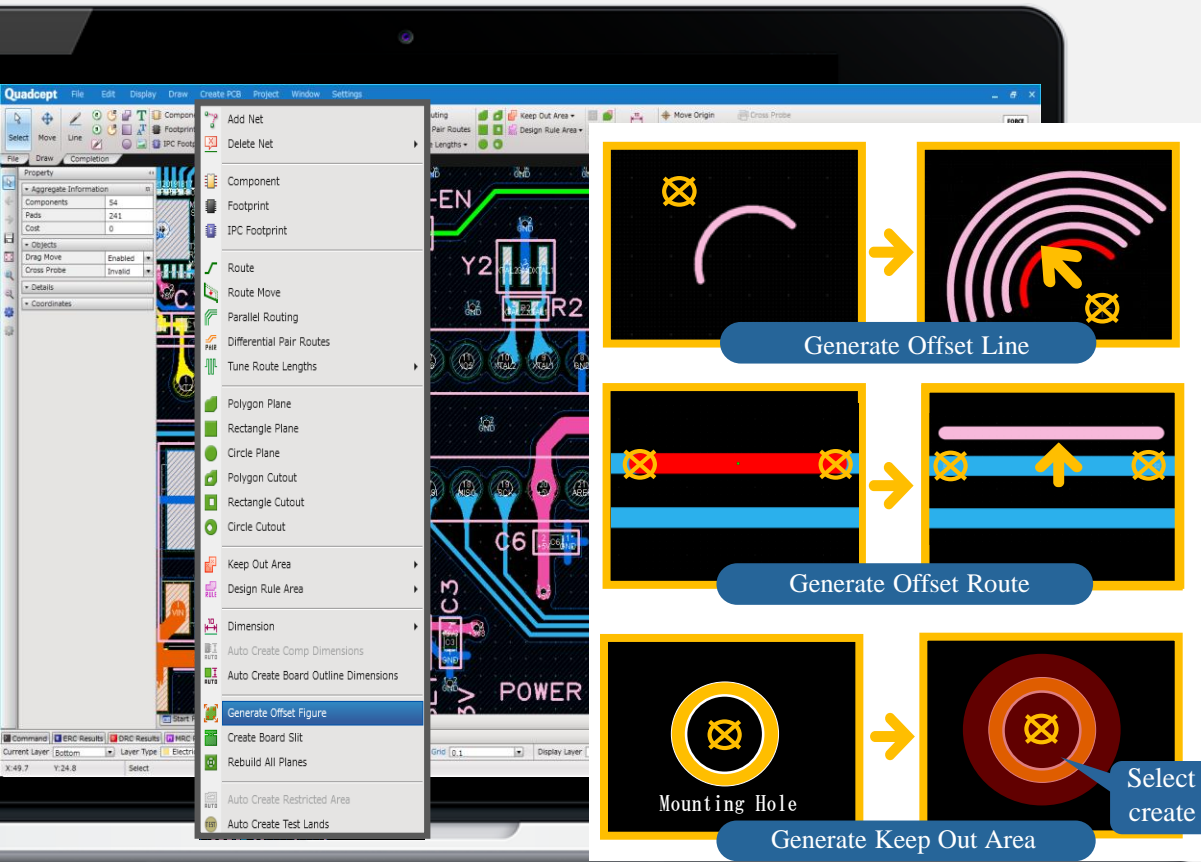
old	new
AD	AD11
C1	C3
C2	C5
C3	C1
C4	C4
C5	C2
C6	C6
C7	C7
C8	C8
C9	C9

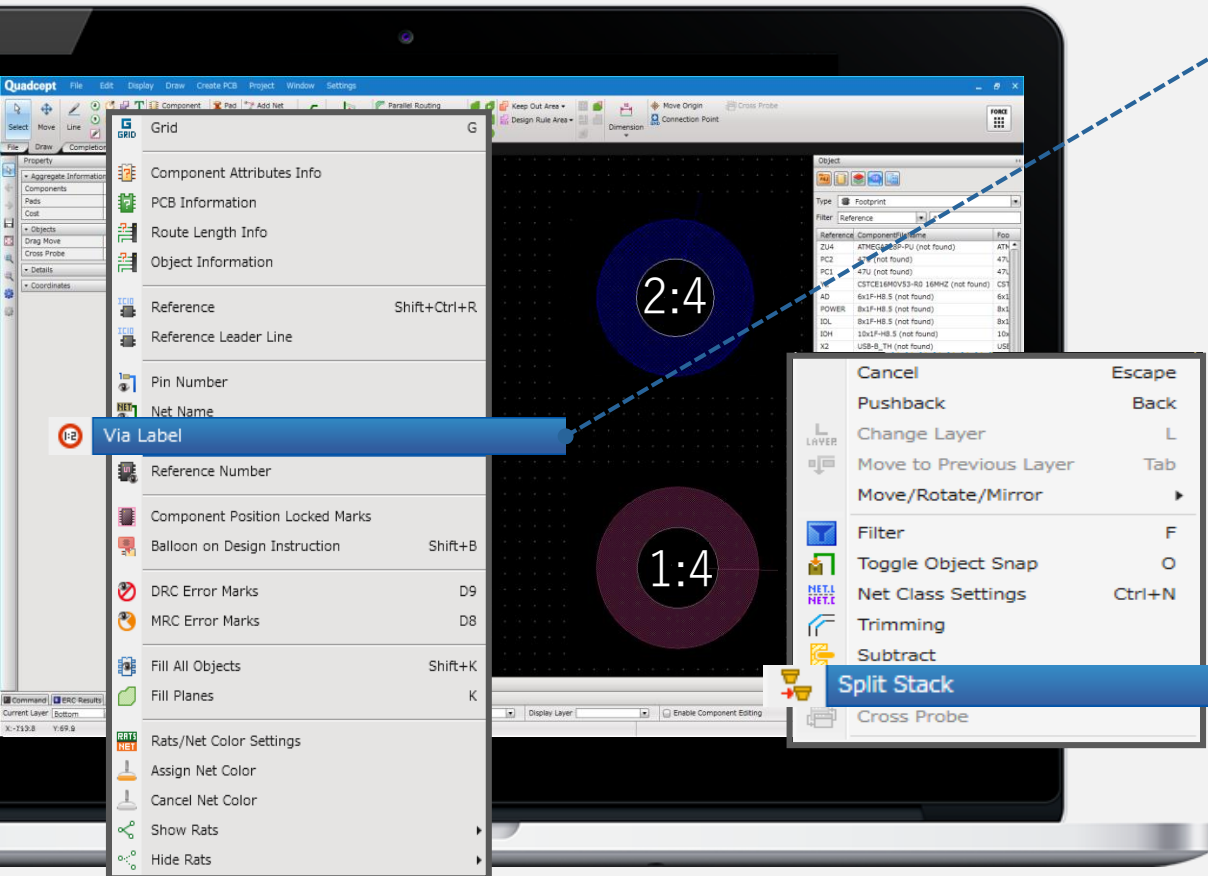
Reference

old.pin	new.pin
RN2.2	RN2.4
RN2.3	RN2.3
RN2.6	RN2.7
RN2.7	RN2.6
RN3.1	RN3.3
RN3.2	RN3.2
RN3.3	RN3.1

Pin Swap

Generate Offset Figure Makes it Easier and More Efficient to Create Offset Objects

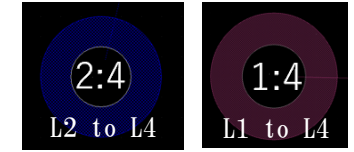




01

Begin / End Layers for Via Viewable on PCB Design

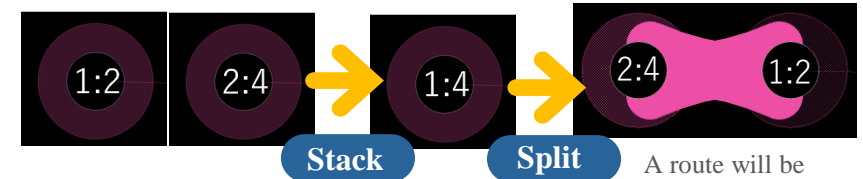
You can toggle the display of via labels between ON and OFF.



02

Stack / Split Vias

Stack Via : Vias are stacked by placing on the same coordinates.
Split Via : Vias are split by selecting *Split Via* in the right-click menu.

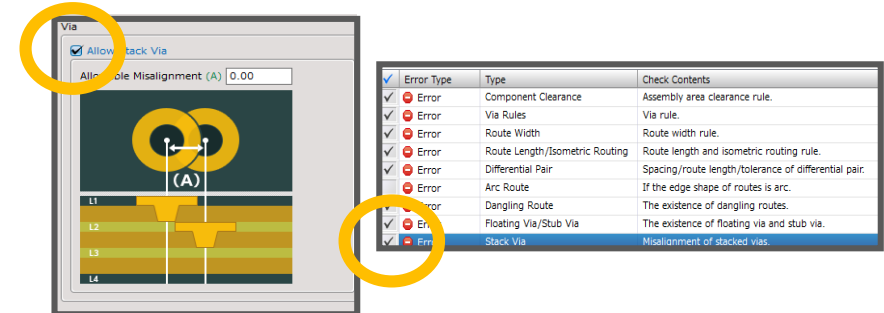


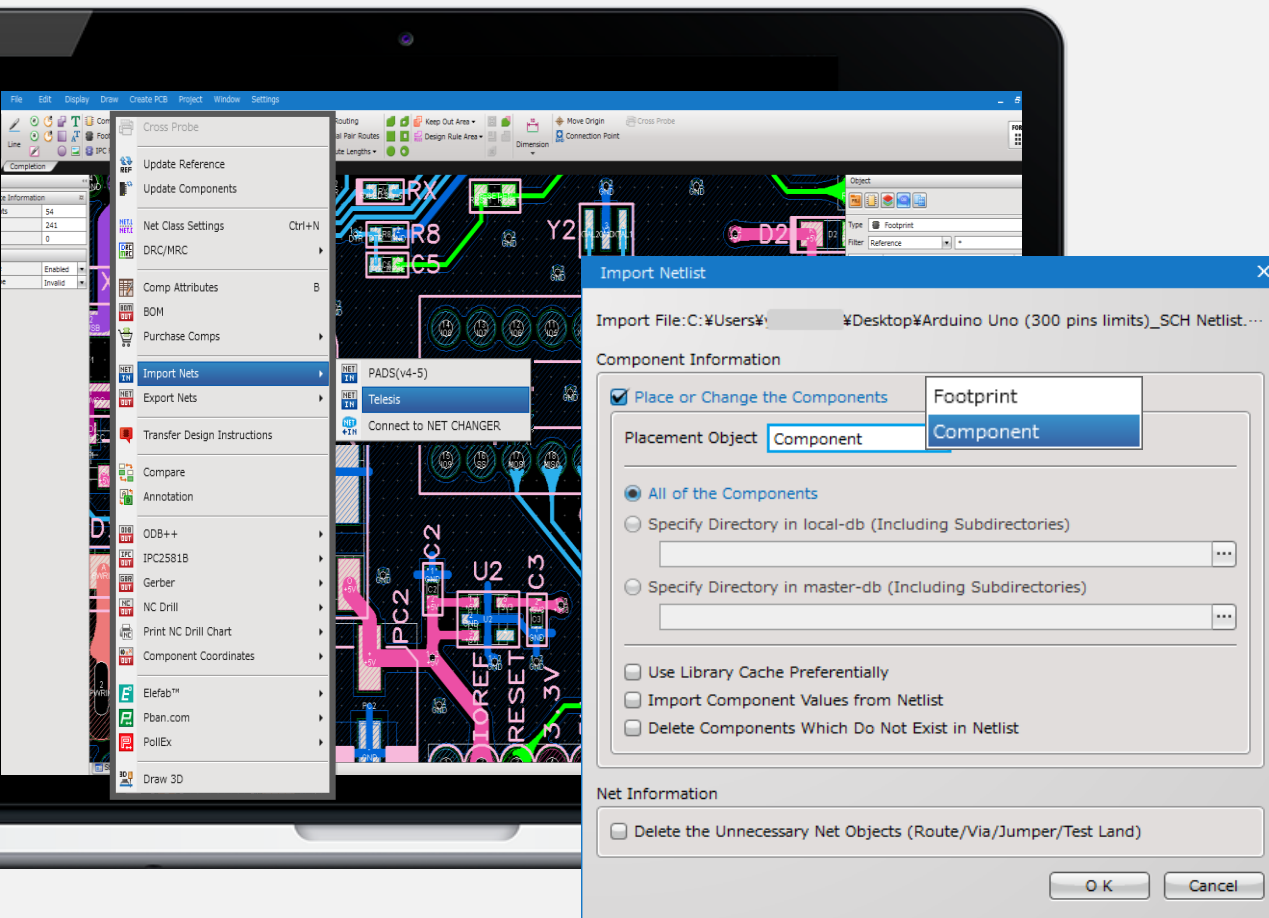
A route will be generated to keep the connection.

03

Related DRC Settings

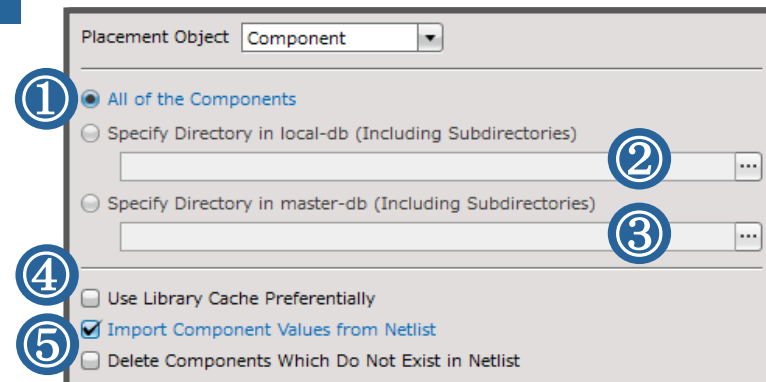
- To stack / split vias, please enable *Allow Via Stack*.
- A DRC item, *Stack Via* allows you to check the misalignment between vias in a stacked via.



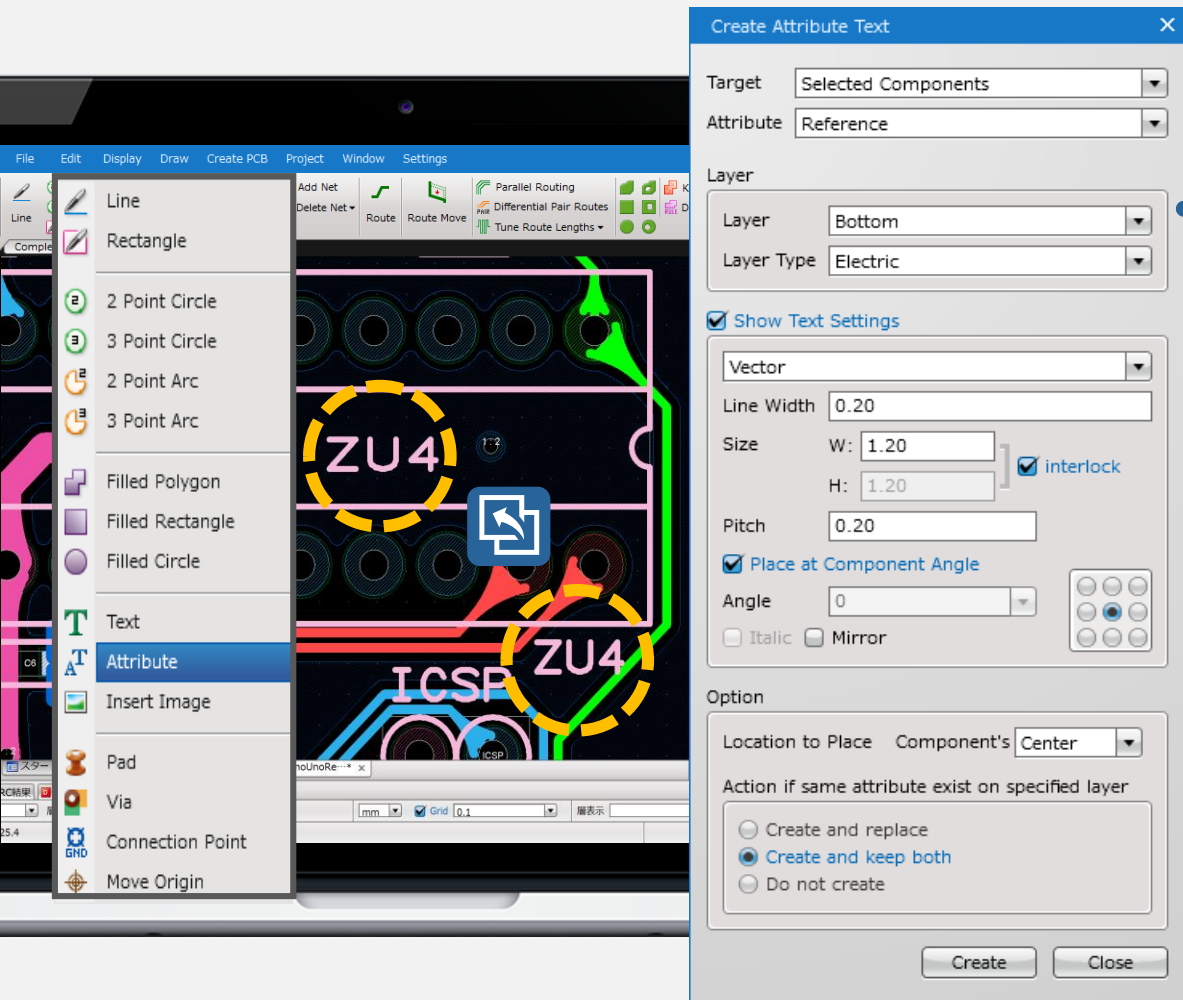


01

Specify a Source Library for Components or Footprints When Importing a Netlist File



- ① **All of the Components**
Places or replaces components / footprints based on the libraries stored in the local-db and master-db.
- ② **Specify Directory in local-db**
Places or replaces components / footprints based on the libraries stored in the local-db.
- ③ **Specify Directory in master-db**
Places or replaces components / footprints based on the libraries stored in the master-db.
- ④ **Preferentially Use Library Cache**
This option allows you to preferentially use components / footprints stored in a library cache.
- ⑤ **Import Component Values from Netlist**
This option allows you to import component values in a netlist.



01

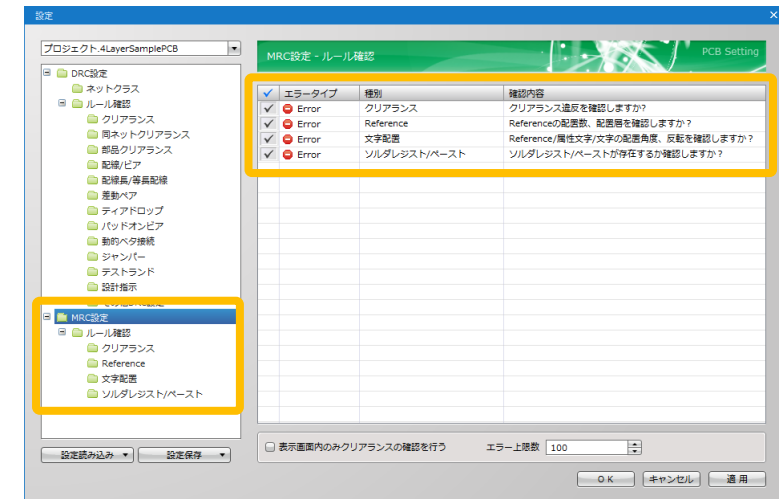
Multiple Attribute Texts Now Placeable on PCB

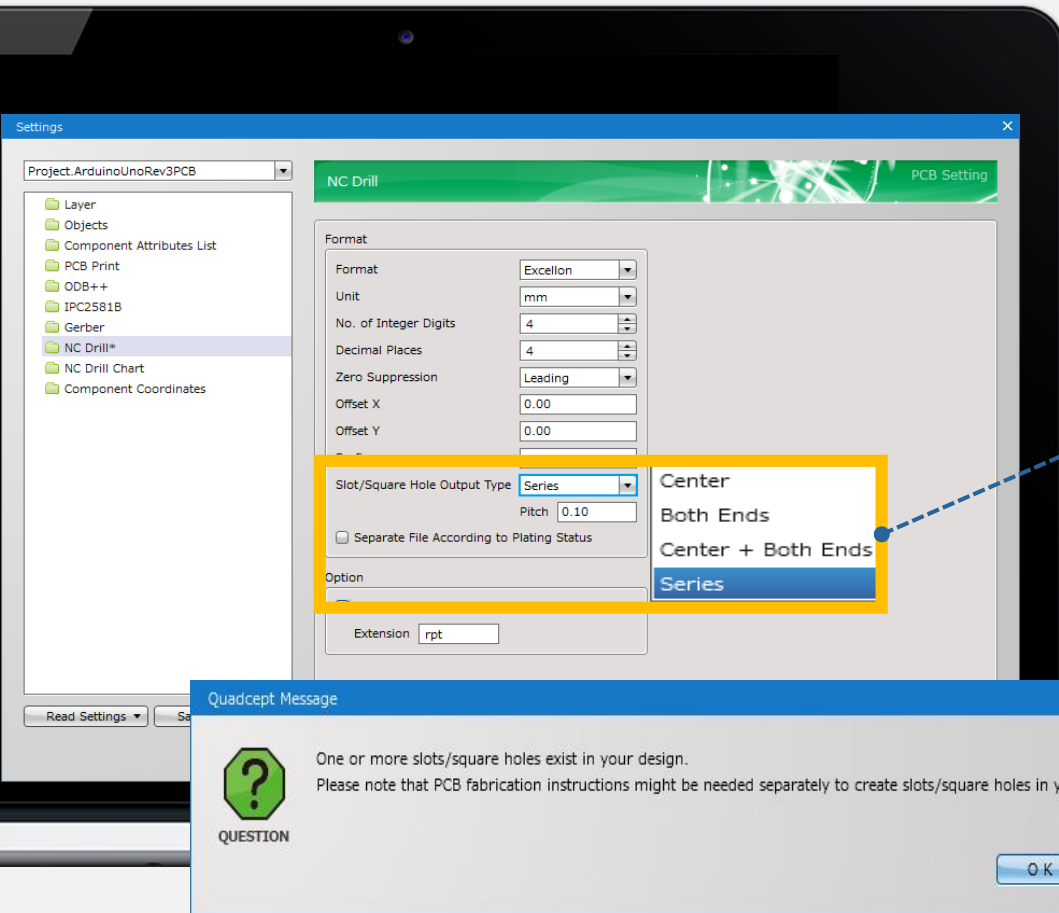
Attribute texts can be now added to selected parts or all the components on your design. With its fulfilling settings and options, you can save your time creating the attributes.

02

Number/Layer of Placed References Now Checkable by MRC

The number/layer of References on a PCB document can be now checked by MRC. This can prevent you from placing multiple References accidentally or creating References on unexpected layers.



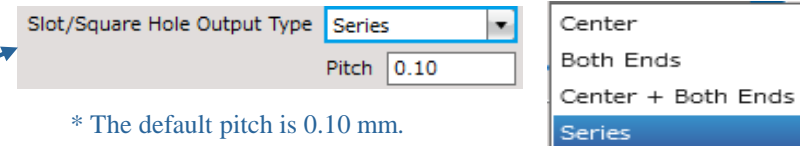


01

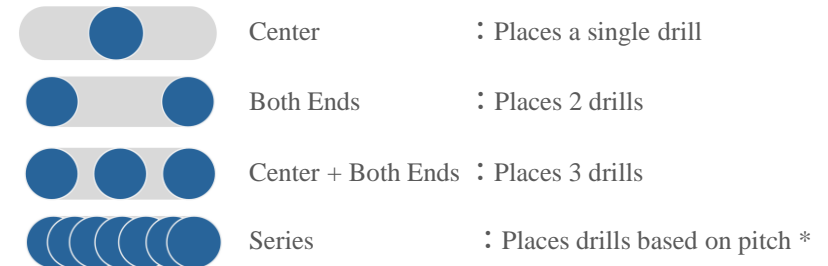
New Option Available for Slot / Square Holes When Exporting NC Drill Files

You can choose how you export slot /square holes in the NC drill settings.

Selecting a new option, *Series*, allows you to export multiple drills to form those types of holes.



* The default pitch is 0.10 mm.



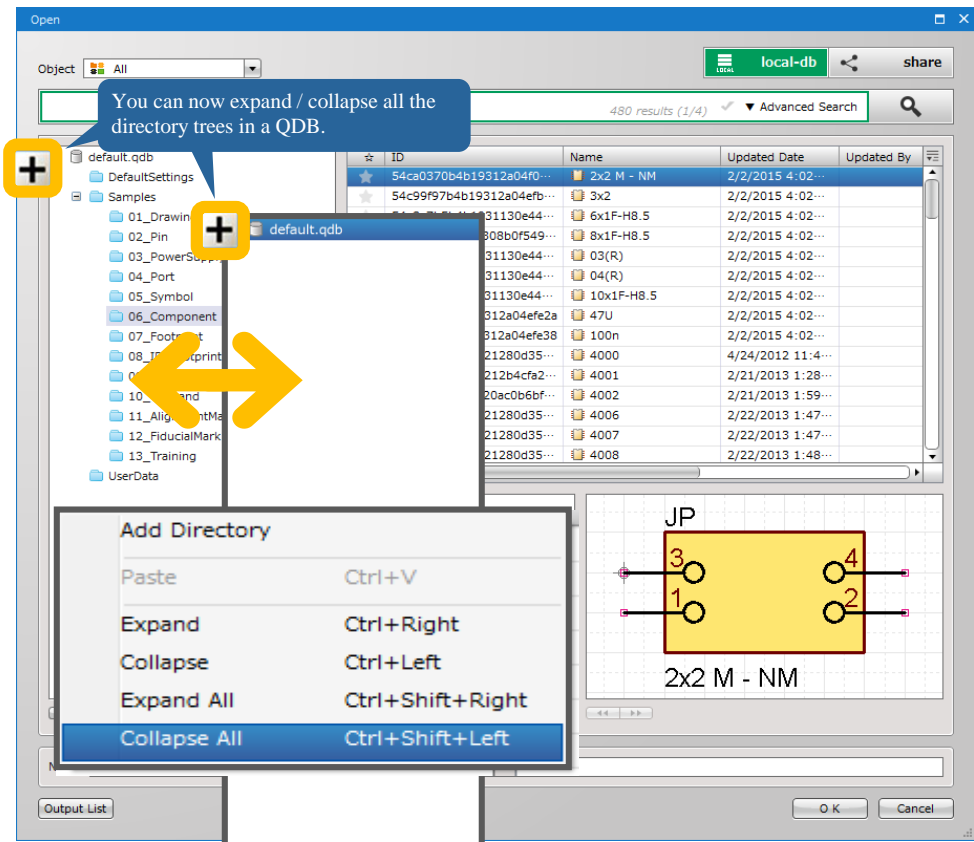
02

Shows a Confirmation Dialog When Exporting NC Drill Files

Depending on the board manufacturer, you might need to prepare a drill chart or only one point at the center is enough to manufacturer slot holes. For your information, this dialog is displayed when exporting NC drill files to prevent rework.

Now Possible to Expand / Collapse All the Directory Trees in QDB

Select Expand All or Collapse All in the Right-Click Menus



Pad / Via Details, Route Length Per Net and Route Width Now Viewable

Enhanced Object Window

Route Length / Width

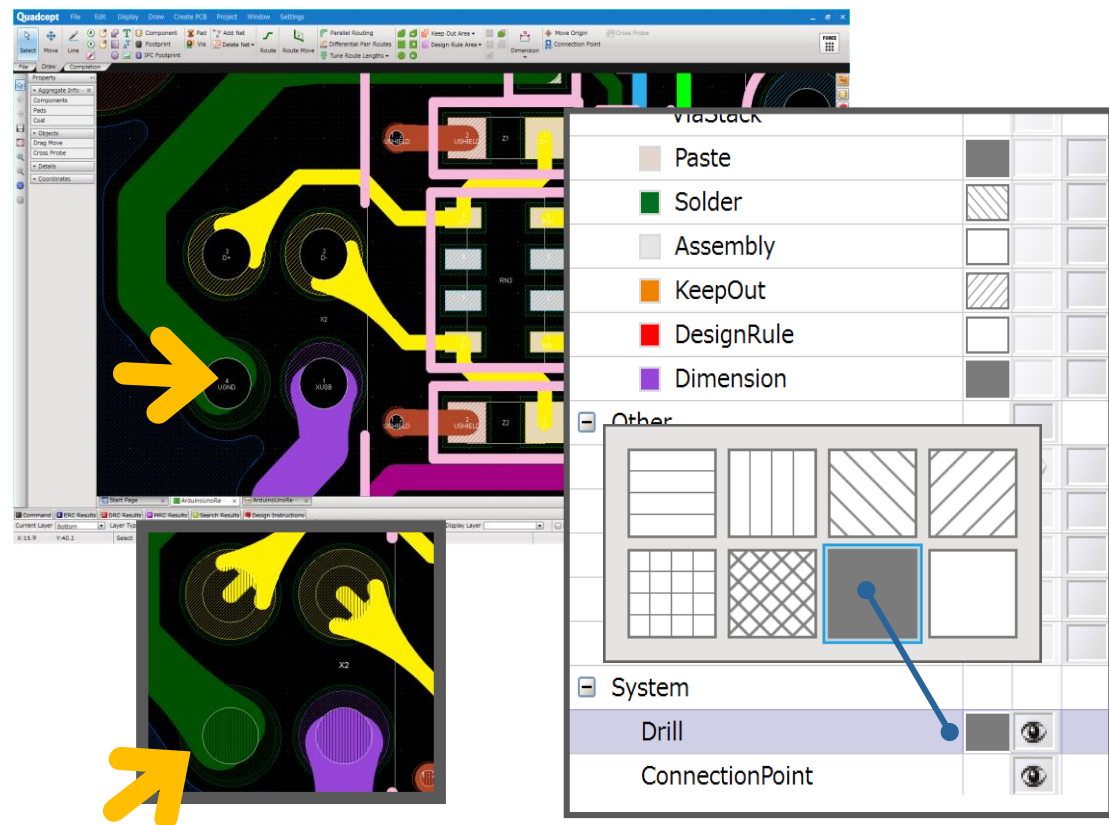
NetName	Layer	Width	Length	Start Point	End Point
XT1	Top	0.3	3.18	(18.19,34.19)	(18.19,31.01)
IO6	Bottom	0.3	9.192388155	(38.5,49)	(32,42.5)
IO7	Bottom	0.3	9.588367952	(38.28,49.5)	(31.5,42.72)
IO7	Bottom	0.3	6.44	(44.72,49.5)	(38.28,49.5)
IO7	Bottom	0.3	10.38	(31.5,32.34)	(31.5,42.72)
IO7	Bottom	0.3	4.992173875	(35.03,28.81)	(31.5,32.34)
IO5	Bottom	0.3	7.071067811	(48.8,48.5)	(53.8,53.5)
IO6	Bottom	0.3	6.36396103	(46.76,49)	(51.26,53.5)
IO7	Bottom	0.3	5.656854249	(44.72,49.5)	(48.72,53.5)
IO8	Bottom	0.3	4.25	(42.25,50)	(38,50)
IO8	Bottom	0.3	4.949747468	(42.25,50)	(45.75,53.5)
IO9	Bottom	0.3	2.46	(40.21,50.5)	(37.75,50.5)
IO9	Bottom	0.3	4.242640687	(40.21,50.5)	(43.21,53.5)

Angle / Coordinates for Pad & Via

NetName	PinNo	X	Y	Layer	Angle
XT1	U3.1	18.19	34.19	Top	90
XT2	U3.2	18.69	34.19	Top	90
GND	U3.3	19.19	34.19	Top	90
+5V	U3.4	19.69	34.19	Top	90
	U3.5	20.19	34.19	Top	90
M8TXD	U3.8	21.69	34.19	Top	90
RXLED	U3.10	22.4725	35.44	Top	180
TXLED	U3.11	22.4725	35.94	Top	180
DTR	U3.13	22.4725	36.94	Top	180
SCK2	U3.15	22.4725	37.94	Top	180
MOSI2	U3.16	22.4725	38.44	Top	180
MISO2	U3.17	21.69	39.19	Top	90
PB4	U3.18	21.19	39.19	Top	90
PB5	U3.19	20.69	39.19	Top	90
PB6	U3.20	20.19	39.19	Top	90
PB7	U3.21	19.69	39.19	Top	90
RESET2	U3.24	18.19	39.19	Top	90
TP_V...	U3.27	17.44	37.44	Top	180
M8RXD	U3.9	22.4725	34.94	Top	180
UGND	U3.28	17.44	36.94	Top	180

Filled Style for Drills Now Settable

The Objects Behind Drills Are Now Easy to See by Changing Their Filled Style



Enhanced Grid Settings

Grid Settings Can Be Now Set as Default as Well as Saved in a Setting File

