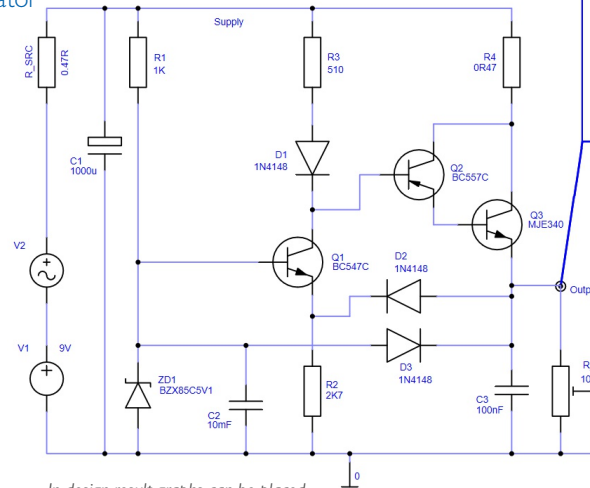


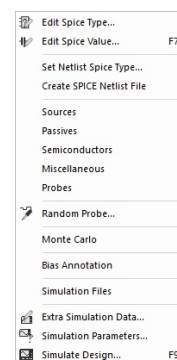
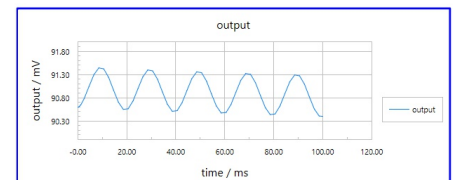
Pulsonix Version 14.0 Update

Pulsonix Sim – Spice Mixed Mode Simulator

Pulsonix V14 releases the new PulsonixSim Spice simulator option. Based on the industry standard ngspice Spice engine, Pulsonix offers seamless integration from the Pulsonix Schematic editor. Use the in-built library of primitives to create ready-to-simulate designs. In-design result graphs can be hooked onto critical areas of your circuit. Random probing enables you to 'live' probe in the design using simulator results as you would with a physical scope.



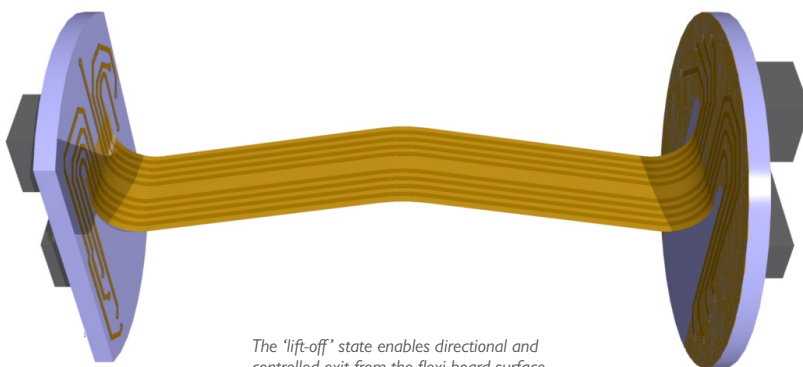
In-design result graphs can be placed anywhere on a net or component



The simulation menu and toolbar provide instant access to primitives, probes and stimuli

3D Flexi Bend Region – Lift-off State

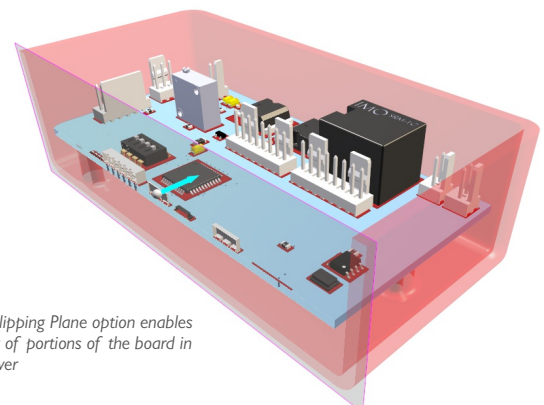
Flexi bend regions can now have a 'Lift-off' state applied to them. This means the flexi portion of the board can start within an existing boundary and not exit through the 'edge' of the board. The bend transforms from the edge of the bend area using the radius parameter.



The 'lift-off' state enables directional and controlled exit from the flexi board surface

3D Interactive Clipping Plane

A Clipping Plane option has been added to the 3D Viewer. This visualisation option allows areas of the design to be selectively disabled from view enabling you to focus on areas of interest. Planes in the X, Y and Z axis can be viewed independently as well as reversing the normal clipping view.



Using the Clipping Plane option enables decluttering of portions of the board in the 3D Viewer

Additional 3D Viewer Features:

- 3D Viewer Performance Improvements
- 3D Exploded View Performance Improvements
- 3D Hierarchy Bar
- Change Variant option in 3D Viewer
- Type Coord and Type Offset in 3D Viewer
- Generate Height for Selected Components
- New Display Mode for wireframe or solid
- Preserve Colours for Single Entity Merge
- New Area, Measure & Clash Marker Colours
- Component Keep Out Clash Detection
- New <STEP Suppress> Attribute
- STEP Model filter in Position STEP Model
- Measure option in Position STEP Model

Interactive HTML BOM Option

Support has been added for the Interactive HTML BOM option. This plugin option exports limited Pulsonix design information into a HTML format that produces an interactive design and BOM listing that can be viewed and searched in a web browser. It is particularly useful where boards are being produced in-house and for hand soldering prototypes.

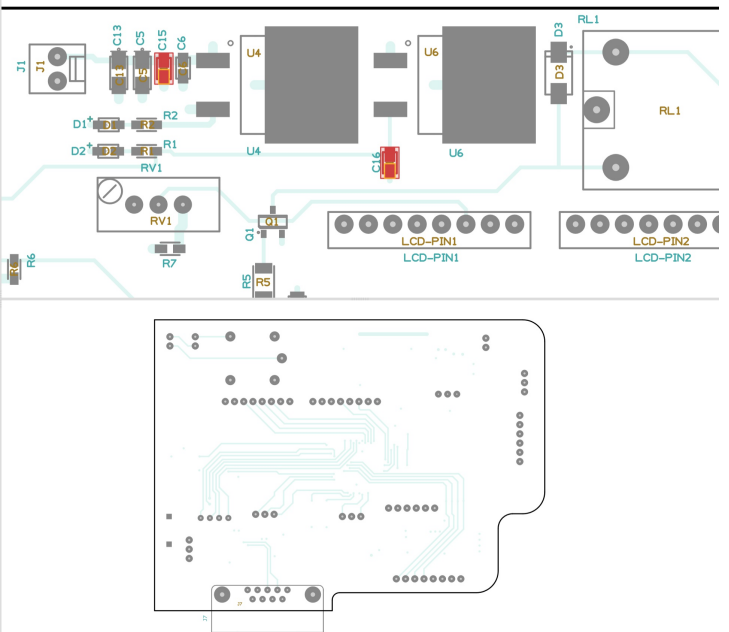
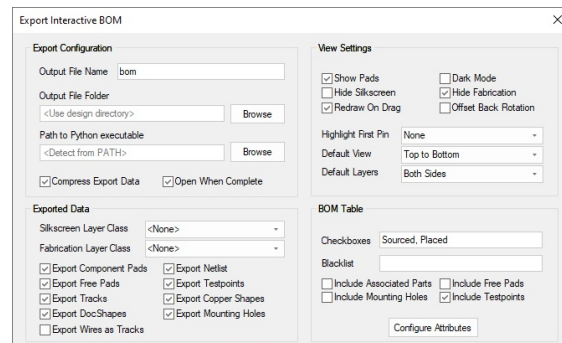
Announcer
Pulsonix

Rev: 344
Thu Sep 19 14:22:49 2024

Ref	Source	Place	References	Part Name	Value	Quantity
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C5, C7, C13, C14, C17	Cap Tant A	10µF	5
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C5, C10, C11, C12	Cap Tant A	1µF	4
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C2, C15, C16	Cap Generic 0805	1µF	3
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C3, C4	Cap Generic 0803	22pF	2
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C6, C8	Cap Generic 0805	10000pF	2
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C1	Cap Generic 0805	10µF	1
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R1, R3, R4, R6	Res Generic 0805	10K	4
8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R8, R9, R10, R11	Res Generic 0803	330R	4
9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R12, R13, R14, R15	Res Generic 0803	4K7	4
10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R2, R7	Res Generic 0805	330R	2
11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R5	Res Generic 1206	10K	1
12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	D1, D2	XP-3812EC	Red	2
13	<input type="checkbox"/>	<input type="checkbox"/>	D3	GF16	GF16	1
14	<input type="checkbox"/>	<input type="checkbox"/>	U1	EDS1144_S0	EDS1144	1
15	<input type="checkbox"/>	<input type="checkbox"/>	U2	DS19872N+T8A	DS1987	1
16	<input type="checkbox"/>	<input type="checkbox"/>	U3	PIC18F4520T-I_P1		1
17	<input type="checkbox"/>	<input type="checkbox"/>	U4	L7805ABD2T-T8		1
18	<input type="checkbox"/>	<input type="checkbox"/>	U5	MAX3232CDE+	MAX3232A	1
19	<input type="checkbox"/>	<input type="checkbox"/>	U6	L7812ABD2T-T8		1
20	<input type="checkbox"/>	<input type="checkbox"/>	X1, X2	ABX3-8.800MHz-02Y-T	ABX3-8.800MHz	2
21	<input type="checkbox"/>	<input type="checkbox"/>	X3	CSTCA400032-R8	40K2	1
22	<input type="checkbox"/>	<input type="checkbox"/>	SW1, SW2	A654104H	A654104H	2
23	<input type="checkbox"/>	<input type="checkbox"/>	AC, BELL, J1	22-27-2001		3
24	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LCD-PIN1, LCD-PIN2, PL1	22-27-2001		3
25	<input type="checkbox"/>	<input type="checkbox"/>	Q1	BC846A	BC846A	1
26	<input type="checkbox"/>	<input type="checkbox"/>	RL1	2ND SMD SCDC Relay 24V		1
27	<input type="checkbox"/>	<input type="checkbox"/>	RV1	3323M1-2011P	200R	1
28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	J5, J6, J9, J11	22-27-2001		4
29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	J2, J3	SWP		2
30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	J4, J8	22-27-2001		2
31	<input type="checkbox"/>	<input type="checkbox"/>	J7	DS9FM		1
32	<input type="checkbox"/>	<input type="checkbox"/>	J10	22-27-2001		1

Major Update to Scripting

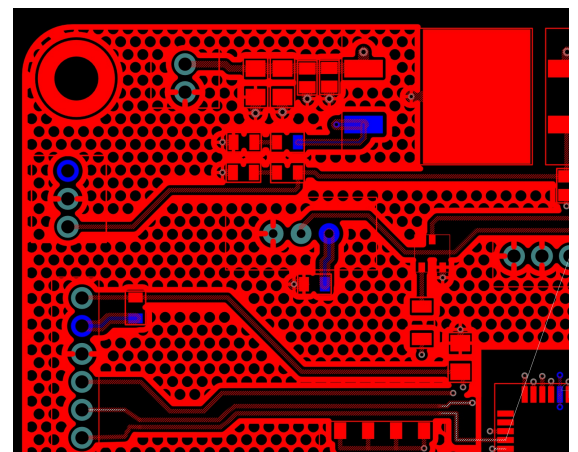
Pulsonix V14 introduces a new scripting interface built on in-house technology. This interface replaces the legacy ActiveX-based system with a modern, high-performance API accessed via named pipes. There is extensive documentation provided for the new API which is generated from the code - ensuring the documentation never goes out of date. To make scripting more accessible and powerful, Pulsonix now ships with a dedicated Python module. This module exposes the full internal API, allowing developers to explore available calls directly and write automation scripts with significantly improved ease and flexibility. The result is a more efficient way to interrogate and manipulate design data, tailored to your specific workflow needs. The shipped Python module is supported by Python 3.10 and above.



Circular Hatching Style

In addition to the traditional line hatching, a circular hatching style has been added.

Hatching using round shapes means problematic corners during etching are significantly reduced, therefore the difference does not influence the impedance of tracks which are adjacent to the 'hatched' copper.



Reduce impedance and etching issues using circular hatch styling

Updated Pulsonix Vault

Provided free of charge, the Pulsonix Vault has been updated in Version 14.

Pulsonix Version 14 Vault Features:

- Vault Database Updated for V14.0
- Vault Browser Shows Design Previews
- Visibility of tabs and Options reflects the Sign-in status
- Spice Models available in Vault
- Format Files available in Vault
- View Text Vault Files
- Filter the Audit Trail on Item ID
- Synchronise Selected Item in Vault Browser
- Report Vault Parts without Symbols
- Recent Notes option in Vault
- Folder Search Filter
- Type Specific Vault Revision Schemes
- Folder Searching
- Vault Attributes in Browser Grid
- Define CSV Separator For audit Trail Report
- Import Vault Users from CSV
- Update Vault Cross-References Progress dialog

Item Details: Audit Trail Revision: 1.2 (17

Item ID	Type	Action Date	Timestamp
121	PCB Design	16-01-2025 12:44:22.792	17-04-20
121	PCB Design	16-01-2025 12:37:40.555	17-04-20
121	PCB Design	17-04-2024 14:54:18.354	17-04-20
121	PCB Design	17-04-2024 14:54:18.354	17-04-20



A graphical preview of the design enables you to identify the design selected

Control of Touching Isolated Islands during Copper Pour

The way touching copper items are handled when considering islands has been updated and improved.

With this new option selected, items of copper that touch another item of copper will be counted as connected; this means the minimum island size doesn't apply to them, (the touching items of copper are effectively the same item of copper). This refinement means absolute control over poured copper and forms part of the overall copper pour overhaul.

Attribute: <Net Class Name> ☐ Hatched

Match: * ☐ Avoid Same Net: Style: CrossHatched(50%)

Isolated Islands

Remove: ☒

Keep Touching Copper: ☐

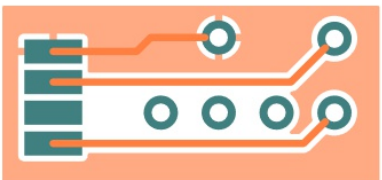
Make Non Connecting: ☐

Minimum Size (Area)

1.613 mm sq.

Squared Pad Corners: ☐

Use Template Centreline: ☐

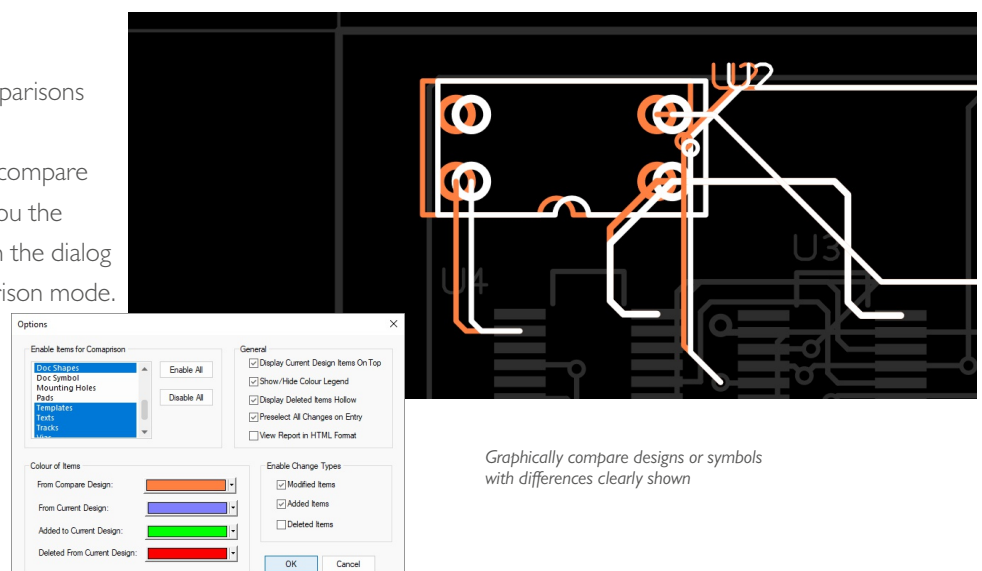


Graphical Design and Symbol Comparison

Two new modes for design and symbol comparisons have been added to Pulsonix V14.

The Symbol/Footprint Compare option will compare two symbols together and report or show you the differences. Differences can be shown within the dialog or 'overlaid' within a new interactive comparison mode.

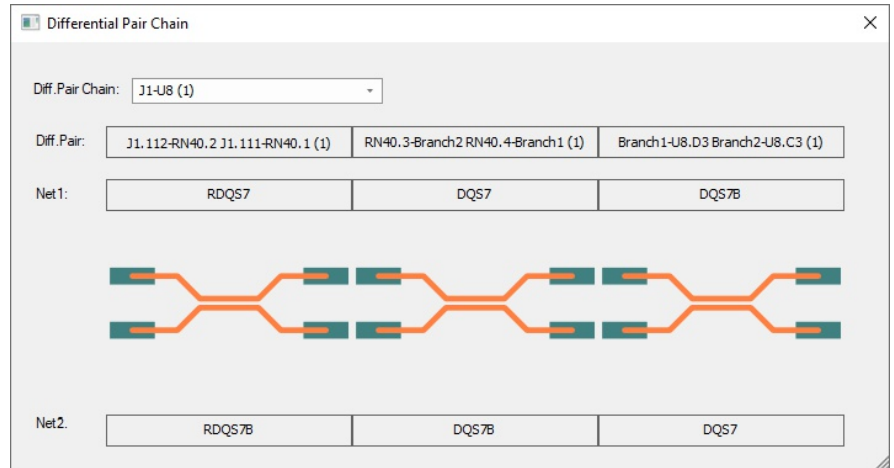
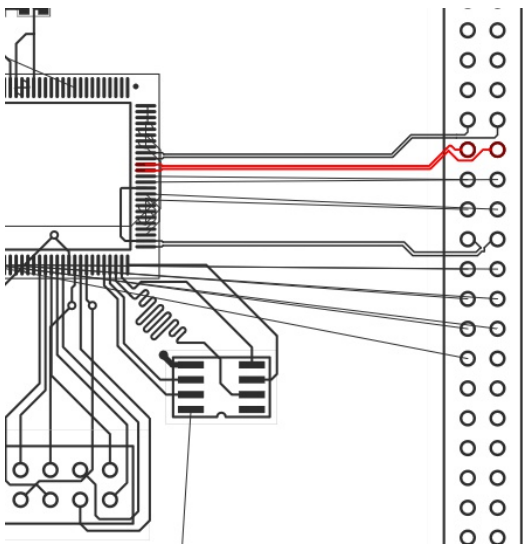
A new Interactive Mode can be accessed from within the Design Revision Analyser and can display design differences in an overlaid graphic with dimming and lowlighting.



Graphically compare designs or symbols with differences clearly shown

Preview Differential Pair Chains

This feature allows you to view a detailed representation of the whole Differential Pair Chain regardless of how many pairs are within it. Each net, component and attached pin are displayed giving you a comprehensive overview of the selected chain.



Find from Differential Pairs and Signal Paths Dialogs

Use the Find option from within Differential Pairs and Signal Path dialogs. The design is lowlighted using the dimming options to highlight the nets selected.

Pulsonix Version 14.0 Feature Summary:

- Tear-off Windows – Use of Dock Bars
- Disable Variant Attributes
- Ability to Find in dialog grids
- Fast Category Switching in Parts Browser
- Treat All Dangling Connections As Unfinished Option in ERC
- Alternative Error Marker Symbol
- Allow Moved Names on Locked Components
- Changes to the Select Mode context menu
- Check Spacing Values Net Pre-selection
- Same Net Drill Spacing Values for Plated Drills
- Back Drilling – Inner Start Layer
- Layer Materials new Density field added
- New command to Rotate Clockwise One Step
- Apply Vias/Pads – New Options
- Apply Layout Pattern Apply to Attributes Only
- Hatch Style Override in Template Properties
- Search bar on Technology and Options dialog
- Ability to add Via Attributes in Properties
- Load/Save Technology of Named Acceptance Rule Sets
- New Cutout Text option
- Insert Spiral Around Shape
- DRC Error Bar – Sub-totals of found errors
- DRC Named Rules Sets
- Odd Angled Track DRC Check
- Colours - Highlight Odd Angled Tracks / Connections
- Import Allegro PCB
- New commands in Report Maker
- New SPICE Folder/Models page in Library Manager
- Pulsonix 14.0 is fully supported under Windows 11
- Plus many more features...