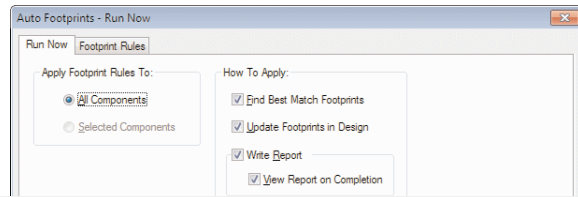


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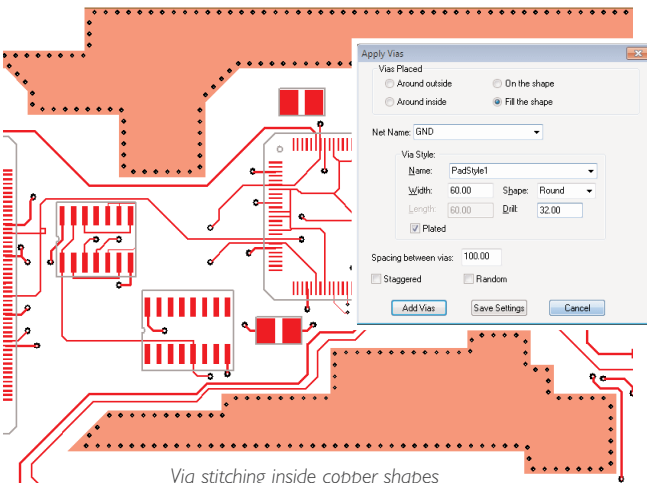
Footprint Rules

Where alternative soldering technologies are to be used you can define special Footprint Rules. For example, you can swap Footprints or rotations in the design based on Wave or Reflow soldering. You can also use this option to change Footprints when different Footprints are required where thieving is used. This new feature also allows smaller alternative Footprints to be defined in an Area where more 'real estate' is required, thus allowing denser component placement or where space is of a premium.



| | Layer | Area | Flow Direction | Footprint Criteria Attributes | | |
|---|----------|--------------|----------------|-------------------------------|----------|-------------------------------------|
| | | | | Name | Value | Essential |
| 1 | *Top* | Special Reqs | <None> | process | special | <input checked="" type="checkbox"/> |
| 2 | *Top* | | Left to Right | process | *Reflow* | <input checked="" type="checkbox"/> |
| 3 | *Bottom* | SM | Top To Bottom | <Multiple Criteria> | | <input checked="" type="checkbox"/> |
| 4 | *Bottom* | | Top To Bottom | <Footprint Name> | *Wave* | <input checked="" type="checkbox"/> |
| 5 | *Bottom* | | Top To Bottom | | | <input type="checkbox"/> |

Powerful Footprint Rules means detailed restraints can be applied to the design based on Soldering Technologies or placement strategies



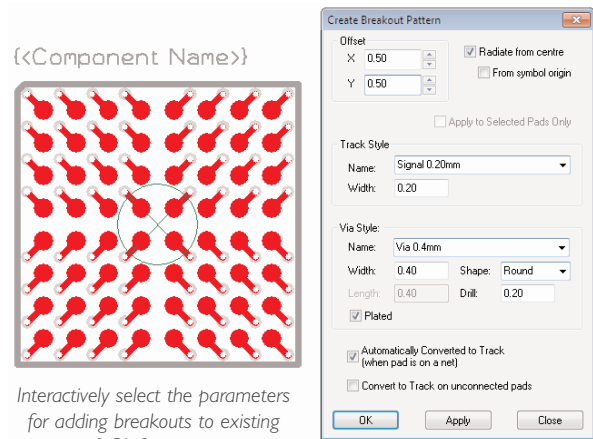
Via stitching inside copper shapes provides ideal RF shielding

Via Stitching for Tracks and Copper Areas

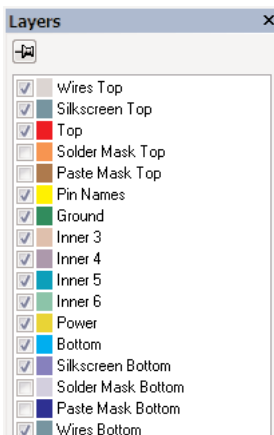
Vias can be automatically added along, inside or outside of tracks and shapes. These can be used for shielding in RF or high speed designs for example. Via stitching into copper areas can also be achieved; Vias will be spaced, staggered or randomly added within a selected shape as an alternative to 'pouring' copper. This technique can be used for high-voltage applications.

Add Breakout Patterns in Footprint Editor

Add breakout patterns (fanouts) to an existing BGA footprint in the footprint editor using a dialog driven interface without having to recreate it from scratch. This feature will save a huge amount of time where the footprint has been imported or created without the use of breakout patterns. The breakouts could have been defined after the footprint has been created, now they can be added retrospectively without completely redefining it again.



Interactively select the parameters for adding breakouts to existing BGA footprints



Display of Layer Colours in Layers Bar

As part of a collection of intricate changes aimed at high-productivity for everyday power-users, the Layers bar now contains layer colours previously defined in the Colours dialog. This helps with instant identification of layers when working on complex multi-layer designs.

Windows 8 Support

With the official release of the Windows 8 operating system from Microsoft, Pulsonix release 8.0 is fully supported and certified. As an MSD certified partner, Pulsonix has kept track of progress with Windows 8 and has been constantly tested during its development using pre-release versions of this new operating system. Pulsonix is also fully supported under both 32 and 64-bit variants.

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High Speed Rules Spreadsheet editor

As a powerful addition to the Interactive High Speed suite, the Rules Spreadsheet enhances the head-up display by allowing you to view constraint Rules on each net with their lengths when editing, all in real time. Colour keys enable the rule and its current status to be clearly viewed in context, especially when a rule has been violated.

Editing high speed tracks with both head-up display and rules spreadsheet takes the work out of constraints-based designing

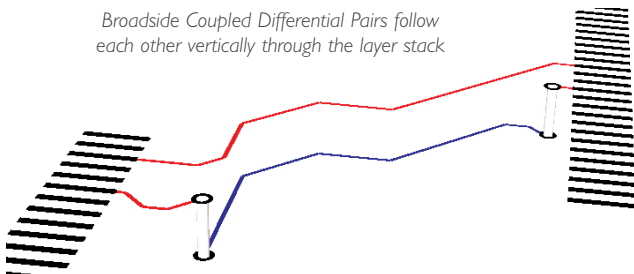
| Net | Net Class | Bus Name | Sub-Net Att | Pad1 | Pad2 | Min Length | Max Length | Length | Complete | Max Vias | Num Vias | Min Text Pr | Num Test P | Max Length | Length Diff |
|----------|-----------|----------|-------------|-------|-------|------------|------------|--------------|-------------------------------------|----------|----------|-------------|------------|------------|-------------|
| Diff1 | PAIR | | | | | 38.100 | 45.720 | 6.470- Est. | <input type="checkbox"/> | | | | 0 | 6.350 | 40.101- |
| HSE1 | HSE | | | | | 8.000 | 24.000 | 19.624+ Est. | <input type="checkbox"/> | 1 | | | 0 | 2.000 | 29.770+ |
| | | | | U8.33 | U13.1 | 8.000 | 14.000 | 10.875+ Est. | <input type="checkbox"/> | 1 | 0 | | | | |
| | | | | U8.33 | U13.9 | 8.000 | 14.000 | 19.624+ Est. | <input type="checkbox"/> | 1 | 0 | | | | |
| | | | | U13.1 | U13.9 | 8.000 | 14.000 | 8.749- Est. | <input type="checkbox"/> | 1 | 0 | | | | |
| HSE2 | HSE | | | | | 8.000 | 24.000 | 36.792+ Est. | <input type="checkbox"/> | 1 | | | 0 | 2.000 | 29.770+ |
| | | | | U8.32 | U13.2 | 8.000 | 14.000 | 10.875+ Est. | <input type="checkbox"/> | 1 | 0 | | | | |
| | | | | U8.32 | U13.8 | 8.000 | 14.000 | 19.297- Est. | <input type="checkbox"/> | 1 | 0 | | | | |
| | | | | U13.2 | U13.8 | 8.000 | 14.000 | 29.770+ | <input checked="" type="checkbox"/> | 1 | 2 | | | | |
| SDI_In_1 | PAIR | | | | | 38.100 | 45.720 | 40.101- | <input checked="" type="checkbox"/> | | | | 0 | 6.350 | 40.101- |
| SDI_In_2 | PAIR | | | | | 38.100 | 45.720 | 40.101- | <input type="checkbox"/> | | | | 0 | 6.350 | 40.101- |

Bus Routing in PCB

Routing multiple tracks across the design is made easy using the new Bus Routing option. Included within the Interactive High Speed suite, Bus routes are easily selected in the design from pads, vias, connections and tracks. Collections of Bus connections identified in the Schematic are carried through into the PCB design for easy selection.



Broadside Coupled Differential Pairs follow each other vertically through the layer stack



Differential Pair Broadside Coupled pairs

In addition to Edge Coupled Differential Pairs (pairs side-by-side), Pulsonix now introduces Broadside Coupled Differential Pairs. This is where the two tracks are positioned directly on top of each other on different (normally adjacent) layers. This new advanced tracking option uses existing constraint rules and parameters for verification.

Additional Features Summary

- Sorting/ordering in columns/rows Part Attribute Editors
- Modeless Library Manager dialog
- Drag & drop of items on Library Manager to add to library
- Save To Library mode from Component in the design
- 45-degree crosshair cursor
- Extra 100 user-defined tools in Customise dialog added
- Locked Pin Attributes using 'No Override' flag
- Next/Previous Style (Tracks, Vias, Pads)
- Next/Previous Grids and User Defined Grids
- Toggle True Width/Hollow Tracks commands
- Manhattan connection length displayed in Nets Report
- Change Style/Layer of Multiple Items
- Show Dynamic Connections only
- New <Item position> attribute
- Additional wildcard string matching
- Tooltips in the Customise dialog
- Rename a user-defined Grid
- Allow Silkscreen 'Break Around Pads Override' in CAM Plots
- Insert Track, ability to intelligently Snap to Target
- STEP output improvements - much smaller file sizes
- Intelligent Gerber Import - import Parameterised Macros
- Additional Report Maker commands
- Cadence Allegro PCB Importer (cost option)
- Fully supported under Windows 8 (32 & 64 bit)

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