Новые возможности CAM350

Версия 12.1

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General CAM350 Updates

Refreshed User Interface

Updated User Interface Look and Feel

The user interface was refreshed to comply with current MS Windows styles. Panes can now be docked to any part of the application frame. In addition, use the auto-hide feature to have panes disappear from view when not in use.

Set Hole Type in NC Tools Table

New option to set the hole type in the NC tool table

A new option was introduced in the NC tool table in the Tolerance data section. Select the option to define a drill as Through drill, backdrill, dual drill, via, laser via, blind via, buried via, or a combination of the choices. (56952)

Drill Layer Name for Each Tool Table

NC tool tables display drill layers assignment

The NC tool table dialog was updated to display the drill layers referenced by the tools in the table. (57523)

IPC-2581 Revision B Import/Export Support

IPC-2581 revision B import and export fully supported

The B revision of the IPC-2581 file format is currently available and supported by several PCB CAD vendors. The import/export functions for IPC-2581 are now compatible with this newest revision.

ODB++ Version 8.0 Support

ODB++ version 8.0 fully supported

Version 8.0 of the ODB++ file format is currently available and supported by several PCB CAD vendors. The import/export functions for ODB++ are now compatible with this newest version.

Complex Stencil Shapes in Aperture Table

Define aperture shapes commonly used in solder paste stencils

The aperture table was updated to support aperture shapes for stencil as shown in the table below. Each shape can be customized with variable parameters including line widths, round or square corners, width, height and so on. (57022)

DFMStream Updates

New DFM Stream Look and Feel

The DFM Stream pane updated…

The DFM Stream pane was updated to streamline the user interface. The Streams RC dialog functions solely as a Streams list manager. All streams options were integrated into the Options dialog. Multiple Streams can be managed from one common versus multiple Streams panes. In addition, more commands are available from the pop-up menu in the results tab.

New Default Stream Option

Set a preferred Stream file as the default Stream (or Streams) to open

Assign a default stream file to be opened each time a new DFM Stream session is started. Define a default stream, export it to a file and use it as the default Stream. Create a default stream file with streams for various technologies and reuse them across multiple designs.

Select and Manage Errors in Results View

Error markers can be selected and acted upon from the results view

Enable Error Select mode in the results toolbar to select errors in results view. Select errors individually or by area selection and then perform actions on them. Switch between Error only or PCB and Error display modes to facilitate selection.

Multi-threading Support Leads to Improved Processing Speed

Enhanced support for multi-core processors leads to shorter analysis cycle

Several of the core algorithms for DFM analysis were updated to take advantage of multi-threading for faster overall execution. For some design samples, analysis processing was 3 to 5 times faster with this release on the same computer using the previous release.

Preprocess – Improved Laser Via Detection

Use size threshold and layer traversal for detecting laser vias

New option for laser vias to be more correctly identified using a diameter threshold and the layers traversed. Through vias greater than the specified diameter are set as (through) vias. Through vias of the specified size or less are set as laser vias. Vias with a diameter less than the specified size that traverse two layers are set as laser vias. (57488)

Preprocess – Global Fiducial Detection

Use pad characteristics to derive fiducial status

New option for detection of fiducials. Any pair of coincident pads on opposing outer electrical layers, having no connections to a net, are identified as global fiducials. (56984)

Preprocess – Netlist Extract Added to Preprocess

Extraction of CAM netlist now part of preprocessing

The Extract CAM netlist options available in for Netlist Compare have been added to Preprocess. Use this addition in preprocessing to prevent stripping of net names from the database and provide continuity in net names when cross probing errors. (57520)

Signal Layer - Trace to Anti-Pad Spacing Check
Minimal spacing check of traces against anti-pads on adjacent layers
A new check to analyze the minimal distance between an anti-pad (or void in a plane layer) and traces on adjacent layers. Traces will be analyzed against either negative plane anti-pads or positive plane voids. (56676)
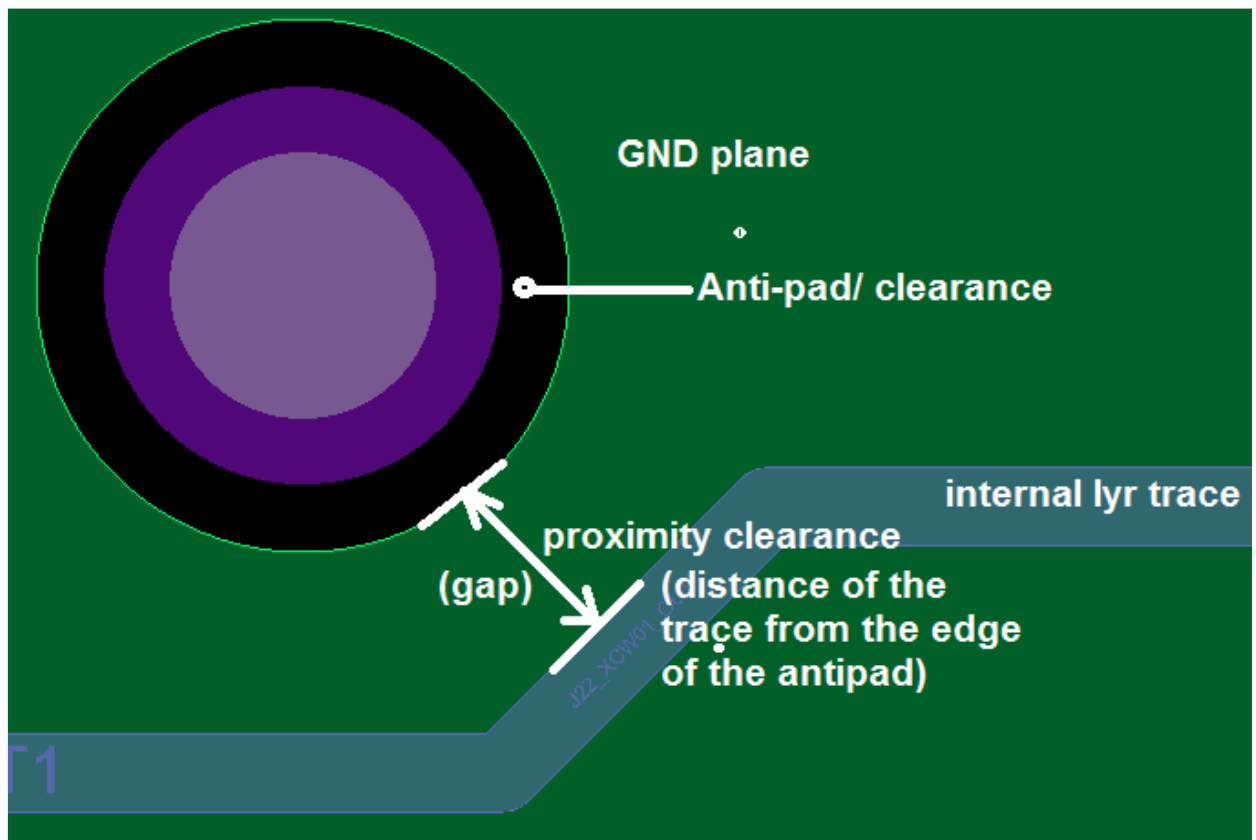
Signal Layer - Same Net Spacing Checks
New minimum gap analysis for same net copper
Clearances between copper, traces, and pads of the same net are analyzed against a user specified minimum distance. (57521)

Negative Plane - Additional Negative Plane Checks
New minimum width and gap and other minimal spacing checks
Several new checks were added to the negative plane layer checks. Minimum width will detect copper elements less than the specified value. Minimum gap will detect spacing between copper elements less than the specific value. Anti-pad to anti-pad will detect spacing between adjacent anti-pads of less than the specified value.(57423)

Negative Plane - Annular Ring Check Definition Expanded
Annular ring check applied to other constructs on negative planes
Annular ring checking for negative planes in the previous release looked at only pads centered on drills. Annular ring checking now will analyze anti-pads, filled polygons, or drawn lines having a drill embedded or nested within them.(57423)

Netlist Compare - No Connect Nets
No connect nets are now checked by netlist compare
The netlist compare check now analyzes No Connect nets to verify no shorts occur between named nets and no connect nets. New options are added to the netlist compare to specify the name of the No Connect Nets and an option to ignore open portions of a named no connect net. (56859)

Netlist Compare - Support for Plated Mill Routes
Plated mill routes respected as net connectivity
Any mill route having plating is treated much in the same way as a plated slot
during netlist compare.(57149)
Soldermask - Ignore Non-plated Holes for Missing Copper and Missing Pad Checks
Non-plated holes having no pad or copper are ignored
New options are added so any non-plated hole without a pad or any copper will be
ignored by soldermask checks for the missing copper and missing pad checks.
(57516)
Results - Report Check Results Having No Errors
New option to include checks with no errors detected in results
New option added to the Streams option dialog to include in the results and
checks that were completed without any errors detected. (54125)

Defect fixes for CAM350 V12.1 Build 1007 (Beta)

Software corrections and enhancements have been made to previously existing functionality, further improving upon CAM350's quality and reliability:

Project ID Description

NC Mill 53162 Mill Path not routed correctly
NC Drill 57389 Drill export incorrect after flip panel
NC Drill 57366 Support for Allegro NC Drill file updates for version 16.6
Gerber Import 56977 Voids lost on file import
Cross Probing 57395 Cross probing with PADS VX.0 freezes
Streams 57477 Missed AR violations based on units setting
Streams 57478 No connect vias incorrectly flagged as AR error
Streams 57518 Board Thickness value not propagated to Board Aspect Ratio check and Design Analyzer
Import 57013 Backdrills are not detected properly for various CAD imports
Import 57000 IPC-2581 import drops assembly outlines for ProtoExpress output
Flying Probe 57682 No adjacency information settings for Microcraft export
Flying Probe 57340 No adjacency information settings for IPC-D356A export
Flying Probe 57682 Endpoint status is incorrect for Microcraft export