



Release Highlights for CAM350 / DFMStream 12.2

Introduction

CAM350/DFMStream Release 12.2 is the latest in customer driven releases. New features and enhancements were requested by existing customers. Over the preceding year, DownStream Technologies queried our customer base for new ideas or enhancements to existing features. Each release of CAM350/DFMStream contains many user requested features as well as quality enhancements.

New Functionality

The following functional enhancements are contained in Release 12.2

Slot Checking in DFM Streams Mill Path Compensation Option for Straight Corners

New Functionality Details

Slot Checking in DFM Streams

Support for slots added to Drill Spacing and Annular Ring Checks

Existing checks were updated to support checks against slotted holes. (57955)
Support for slot verification was added to Drill spacing checks, including:

UDTHC – Unplated Through Hole Drill to Copper
UDTHP – Unplated Through Hole Drill to Pad
UDTHT – Unplated Through Hole Drill to Track
DTHC – Through Hole Drill to Copper
DTHP – Through Hole Drill to Pad
DTHT – Through Hole Drill to Track

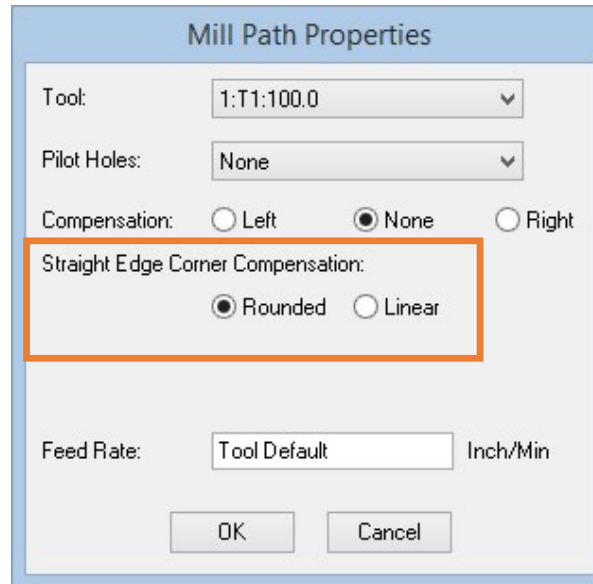
Support for slot verification was added to the existing Annular Ring check:

CPD - Pin Pad to Drill

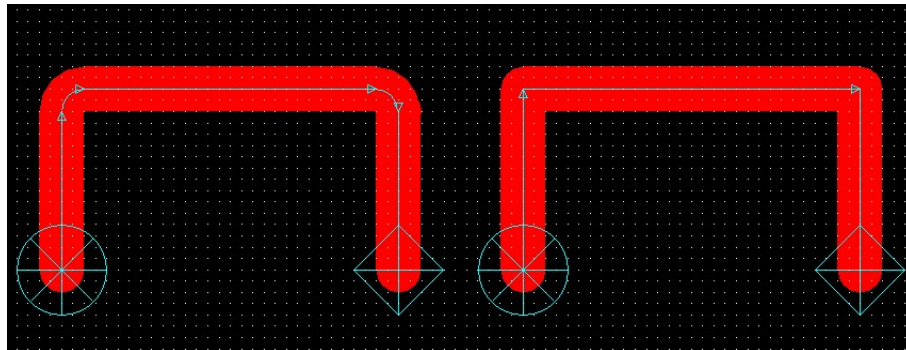
Mill Path Compensation Option for Straight Corners

New Compensation Option for Mill Paths

Mill Path Properties can be used to set Rounded or Linear compensation for Straight Edge corners. (57918)



The left image is Rounded compensation. The right image is linear compensation.



Defect fixes for CAM350 V12.2

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

Build 1155

Project	ID	Description
File Import	58911	ODB++ import CADENCE reports false errors on Rectangle Chamfer parameters.
File Import	59085	ODB++ import reports false errors on attributes file.
File Import	58642	ODB++ import for flattened panel incorrectly rotates custom apertures.
File Import	59035	ODB++ import CADENCE example drops pins.
File Import	59032	ODB++ import Altium does not assign pins to nets.
File Import	59060	PADS ASCII Import does not support Virtual Pins from PADS Layout data elements.
File Import	59055, 59056	Mentor BoardStation import fails to complete for sample files.
Analysis	58941	Minimum width check reports false error for designs with very small gaps.
Analysis	58898	Annular rings are reported as false errors for SMD to Solder Mask check.
Analysis	58899	Pads identified as THRU are failing for SMD to Solder Mask check.
Analysis	58904	Changing Padstack to VIA type does not change the analysis.
Analysis	59059	Design Compare – you cannot set up parameters to compare two (2) single layers.
Analysis	56443	Design Compare and File Merge command – remove warning about custom apertures with the same name.
Analysis	59173	Design Compare check does not retain Layer mapping settings.
Analysis	59227	Design Analyzer check does not replace User Defined Parameters correctly.
Tables	59043	Aperture table does not support creating “C” shape for new Dogbone aperture type.
Tools	58940	Query popup dialog does not go away during Allegro cross probing.
Tools	58915	Allegro cross probing fails to correctly map non-electrical layers.
Licensing	59058	WAN 485w bundle incorrectly depends on the 480w bundle.

Build 1147

Project	ID	Description
File Import	58833	File Import Gerber Data loses polygon void for self-intersecting polygon repair.
File Import	58911	File Import Cadence ODB++ reports false error on intrinsic Rectangle Chamfer parameters.
File Import	58837	File Import ODB++ crash
File Import	58899	File Import IPC-2581 creates incorrect pad rotation for padstacks for through hole pins.
File Import	58750	File Import IPC-2581 reports false errors on zero length arcs.
Analysis	58804	Netlist Compare crash for comparison error that is a short of many nets.
Analysis	58785	Copper Area command crash for designs with long layer names.
Streams RC	58839	Long names for Stream checks cause CAM350 to crash.
Streams RC	58793	Remove covered data operation causes false Track to Track constraint errors.
Utilities	58732	The Crash Report dialog that emails crash information to DownStream Technologies does not appear.

Build 1135

Project	ID	Description
File Import	58750	File Import Zuken IPC-2581 polygon outline is incorrect for zero length arcs.
File Export	58733	File Export Panel Gerber Data creates incorrect Custom Aperture rotation
File Export	58642	File Export ODB++ creates incorrect pad rotation
Utilities	58294	Draw To Flash Interactive creates incorrect flash rotation for Dcode substitution when Dcode is custom
Streams RC	58656	DFMStream crash on Preprocess check
Streams RC	58666	DFMStream Minimum Gap check detects false errors for small designs.

Build 1133

Project	ID	Description
File Merge	58504	Mill Path data is lost after File Merge command.
File Import DXF	58614, 58618	File DXF import command fails to complete for Blocks with long names.

Netlist Extract	58611	Netlist Extract command fails to complete for Annular Ring apertures.
Netlist Extract	58630	Netlist Extract command does not recognize the connectivity for plated mill paths that define slots.
Analysis	58592	Find Pin Holes check fails to find small pin holes.
Analysis	58472	Minimum Gap check finds false errors for small designs.
Analysis	58471	Minimum Width check finds false errors for small designs.
Streams RC	58531	Pads to Drill (PD) check for Basic Streams signal check does not find errors.
Installation	58533	Silent installation options do not work for non-default installation folder.

Build 1127

Project	ID	Description
ODB++ Import	58498	ODB++ import Expedition 8.1 false warnings on CAD Netlist
User Interface	58469	Layer Bar Classic displays context menu incorrectly

Build 1124

Project	ID	Description
ODB++ Import	58276	ODB++ import false warnings on missing SMD pads
ODB++ Import	58291	ODB++ netlist incorrect for small test point shapes
Auto Import	58293	Wrong drill data precision for PADS Layout data
Mill Import	58258	Mill import does not retain self-intersections
Mill Export	58271	Mill export failure on small arcs
Mill Export	58283	Circle Mill path lost on export
Gerber Import	58292	Gerber import error – incorrect layer polarity handling
Gerber Import	58303	Gerber import error – incorrect CAP rotation
DXF Import	58366, 58309	DXF import error – incorrect arcs for polygons with variable widths
Graphics	58329	User defined graphics lost for buttons
Panel Wizard	58262	Bad rotation on second run of Panel wizard
Undo	58308	UNDO closes CAM350
Undo	58255	Hang on UNDO
BPD Import	58248	Incorrect Panel Data on BPD load into CAM350
Mill Export	58259	NC Origin ignored on panel data export
File Merge	58058	Parts with null fields created on File Merge
Milling	58062	Compensated routes get arcs on corners
Mill Export	57918	Mill export small arcs added

Import	57955	Slots not coming across and being checked
Import	57965	Cutline polygon results in invalid data
Netlist Reports	58074	Netlist report missing pins
Draw To Raster	58370	Polygon Conversion Draw to Raster incomplete for sample vector polygons
Minimum Gap	58285	Minimum Gap check does not retain errors for invisible layers
Design Compare	54863	Run one up border work with Design Compare
Import/Export	56799	Plating not retained on ODB++ IPC-2581 export/import
Netlist Extract	56894	Milled slots in Netlist Extract
DXF Import	58366	DXF import creates bad arcs in Polygons
DXF Import	58309	DXF import problem
Highlight	58241	Highlight and Redraw problems with large objects
Selection	57951, 58306	Select all does not highlight all data
Query	58342	Query dialog does not displace for Chinese CAM350

Patents, Copyrights, and Trademarks

Patents

“AUTOMATED PCB MANUFACTURING DOCUMENTATION RELEASE PACKAGE SYSTEM AND METHOD”, United States Patent No. 7,409,666 B2

“ADAPTIVE TEMPLATE SYSTEM FOR AN AUTOMATED PCB MANUFACTURING RELEASE PACKAGE SYSTEM”, United States Patent No. 8,875,072 B2

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