

Release Highlights for CAM350 Product Version 7.5

Release, May 2002
Copyright 1994-2002, DownStream Technologies, LLC

Introduction to CAM350 Version 7.5

Version 7.5 is the follow update to Version 7.0, which was the first major release of CAM350 with special focus specifically to the Printed Circuit Board Fabricators. The ODB++ Interface and Panelization Editor are the most significant fabrication technologies to be applied within 7.0 and 7.5. However, Version 7.0 was focused on more than just the PCB Fabricators. The Latium architecture, representing a significant technological breakthrough in EDA system architecture, was integrated into this release. Through Latium all users benefit from 10 times, to as much as 100 times, performance improvement in critical design and manufacturing analysis areas. Acid trap detection processes that use to take minutes now take seconds. Sliver detections that took hours now run in seconds as well. Latium was also applied to some of the key data optimization functions, like Netlist Extraction, in order to help increase throughput and reduce overall processing times.

A secondary benefit to migrating to the Latium architecture is accuracy. Prior to using Latium the DFF Audits were processed using a “Raster” technique, which meant that the user had to define a resolution. Ultimately the accuracy of the test that was being performed was then bound by the resolution the user picked – if they didn’t choose a tight enough resolution the check would fail to find all the problems that might exist on the PCB. Since Latium is a “Contour” based environment it has eliminated the need for any raster processing and has improved the accuracy by as much as 50 times, since we now have an exact edge representation of all the objects within a PCB.

With Version 7.5 from DownStream Technologies, the FabFactory product line and the CAM350 product line are merged back into a single product line which will retain the CAM350 name. The focus of DownStream Technologies remains to provide leading edge CAM tools to both the PCB Design and PCB Fabrication markets. However, this merger of the two product lines provides all customers with access to powerful modules previously only available in the high-end FabFactory product line. This allows both the PCB Fabricator and the PCB Designer to access tools for DFF analysis, MRC and Quote Agents, Advanced Panel and NC Editors, ODB++ Input and Output, and many other features. Version 7.5 also contains a number of software corrections made since the release of Version 7.0.

Listed below you will find the Version 7.5 CAM350 Configuration Matrix, and the Transition Map for mapping customers from CAM350/FabFactory Version 7.0 configurations to CAM350 Version 7.5 configurations. This new transition map from DownStream Technologies is for a product line with a long and bright future ahead of it.

CAM 350 Fabrication Modules	CAM 350 Version 7.5 Design Family Configurations					
	C 350-750	C 350-500	C 350-450	C 350-250	C 350-100	C 350-050
Import	X	X	X	X	X	X
Information	X	X	X	X	X	X
Export	X	X	X	X	X	Opt.
Modification	X	X	X	X	X	Opt.
Optimization	X	X	X	X	X	Opt.
MRC/DRC	X	X	X	X	X	Opt.
DirectCAD Interface In	X	X	X	X	X	Opt.
Basic NC Editor	X	X	X	X	X	Opt.
Quote Agent	X	X	X	X	X	Opt.
DXF Interface	X	X	X	X	Opt.	Opt.
DFF Audit	X	X	X	X	Opt.	Opt.
MRC Agent	X	X	X	X	Opt.	Opt.
Macro Debugger	X	X	X	X	Opt.	Opt.
Panel Editor	X	X	X	Opt.	Opt.	Opt.
Advanced NC Editor	X	X	X	Opt.	Opt.	Opt.
ODB++ Import	X	X	Opt.	Opt.	Opt.	Opt.
ODB++ Export	X	X	Opt.	Opt.	Opt.	Opt.
DirectCAD Interface Out	X	X	Opt.	Opt.	Opt.	Opt.
Reverse Engineering	X	X	Opt.	Opt.	Opt.	Opt.
Flying Probe Editor	X	Opt.	Opt.	Opt.	Opt.	Opt.
Bed of Nails Editor	X	Opt.	Opt.	Opt.	Opt.	Opt.
Camtek AOI	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.

Mapping for CAM350 Customers		
CAM350 V7.0 Configuration	Maps to ⇔	CAM350 V7.5 Configuration
CAM350-050	⇔	CAM350-050
CAM350-100	⇔	CAM350-100 plus: Quote Agent
CAM350-250	⇔	CAM350-250 plus: Quote Agent Macro Debugger
CAM350-500	⇔	CAM350-500 plus: Panel Editor Advanced NC-Editor

Mapping for FabFactory Customers		
FabFactory V7.0 Configuration	Maps to ⇔	CAM350 V7.5 Configuration
FF-050	⇔	CAM350-050
FF-100	⇔	CAM350-100 plus: Export Direct CAD Interface (Import) Basic NC Editor
FF-125	⇔	CAM350-250 plus: Quote Agent DFF Audit DXF Interface Direct CAD Interface (Import)
FF-250	⇔	CAM350-450 plus: Quote Agent MRC Agent Direct CAD Interface (Import)
FF-500	⇔	CAM350-750 plus: Reverse Engineering Direct CAD Interface (Import)

Customer Reported Software Corrections

Some of the customer reported issues were addressed in CAM350 7.5 include:

MACROS

10387 – The macro command "add_gr_poly@" no longer fails when used in CAM350 macro files.

EXPORT

10448 – The ODB+ export command no longer fails when attempting to export using metric units.

10486 – The Gerber command "M02" is no longer missing at the end of RS-274 exported files.

EDIT

10406 – The Edit | Mirror command no longer results in undefined apertures for certain designs.

10457 – The Edit | Copy command no longer fails for designs with certain polygon definitions.

10460 – The Edit | Change | Explode | All command no longer causes lost data for certain designs.

10483 – The Edit | Change | Origin | Datum Coordinate command no longer fails when negative values are added for X and Y values.

ANALYSIS

10504 – The ACID TRAP command no longer fails for designs with certain polygon definitions.

10519 – The DRC command check for track to track clearance no longer fails for designs with certain polygon definitions.

IMPORT

10391 – The File Merge command now warns the user that apertures may be lost when merging designs that have custom apertures with the same names.

10435 – The Gerber Import command no longer fails for designs with certain polygon definitions.

10437 – The Fire 9XXX Import command no longer fails for certain designs with "REA" commands.

10440 – The Fire 9XXX Import command no longer fails for designs with certain polygon definitions.

10447 – The PADS Import command now correctly handles multiple reference designators for a single component for all text orientations when importing PADS ASCII files.

10449 – The Fire 9XXX Import command no longer fails for designs with certain polygon definitions.

10464 – The Gerber Import command no longer fails for designs with certain polygon definitions.

10485 – The Fire 9XXX Import command no longer fails for designs with certain polygon definitions.

UTILITIES

10424 – The Composite To Layer command no longer fails for designs with certain polygon definitions.

10509 – The Netlist Extract command no longer fails for designs with certain polygon definitions.

10518 – The Netlist Extract command no longer fails for designs with certain polygon definitions.