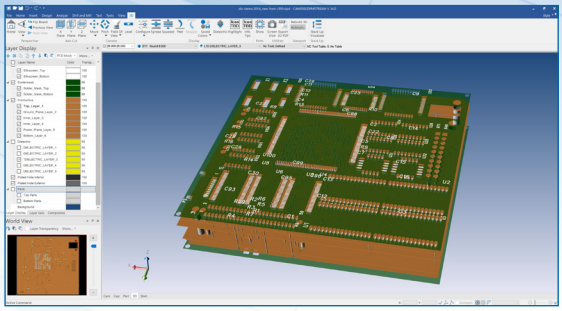
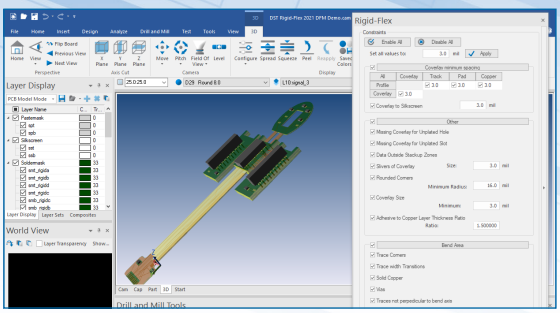
CAM350®

DATASHEET



Visualize PCB construction intent using rich 3D modeling of CAM data.



DFM Analysis for Flex and Rigid-Flex designs.

CAM350 is the industry de facto standard for verification, optimization and output generation to efficiently and effectively drive PCB fabrication. Our latest release includes 3D technology, a completely restructured GUI, support for Flex / Rigid Flex and a common database among all DownStream products.

- Gerber Data Viewing / Editing
- Data Optimization
- Netlist / Layer Comparison
- PCB Fabrication Panel
- Stencil and Mask Generation
- Gerber/Drill/Mill Generation
- Bare Board Test
- Visualize 2D CAM Data as a 3D PCB
- Common Database Between DownStream Products
- Support for Flex, Rigid Flex and Embedded Component CAD Data
- Flex/Rigid, Flex/Inter-Layer DFM checks

Importance of Post Processing

Inspecting, preparing and validating a PCB design prior to release to manufacturing will ease the transition of the design into production. PCB design preparation can eliminate delays by understanding the design complexities and fabrication requirements upfront. Having the design manufacturing-ready will result in increased efficiency, less risk of design re-spin, and most importantly, successful electronic products, built faster, at less cost.

Streamlining the Transition of Engineering Data into PCBs

CAM350 prepares and optimizes design files for fabrication, from data input through analysis, test, mill and drill, to final bare-board production. Utilizing CAM350 to manage these functions will result in an automated, highly effective process.

- Seek out and repair manufacturability flaws located in the design
- Create NC files quickly and accurately
- Optimize the drill and mill machine performance
- Streamline tooling with panelization functionality
- Extract essential data to drive test equipment
- Optimize test machine performance and probing time
- Identify collisions, break-outs, and un-probable conditions

The Benefits

Complications during fabrication lead to production delays, increased time and labor expense, resulting in decreased profitability. CAM350 can safeguard against these setbacks. CAM350 gives you the ability to effectively manage each operation while increasing productivity, reducing turn-around time, and ensuring top quality board output.
If achieving new levels of speed, accuracy and excellence is your goal, CAM350 is your solution.

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Features and Highlights

Flex/Rigid Flex/Inter-layer DFM Module

CAM350 supports importation and visualization of PCB designs contaiing Flex, Rigid-Flex or Embedded components. Visualize designs in both 2D and 3D, and easily document complex Flex or Rigid-Flex Stack-Ups for submittal to PCB Fabricators.

- Detection of potential trace fracture conditions such as the presence of vias, trace corners, and solid copper in bend areas.
- Inter-layer comparison of layer types in a rigid flex stack up for fabrication. For example, detection of silkscreen ink in a coverlay exposure, coverlay to solder mask minimum overlap and many other layer combinations including any layer to any layer analysis.
- Flex/Rigid Flex and Interlayer checking may be run as a one-time check or integrated into a new or existing batch stream of checks.

Visual Basic API and Recording/Playback

1000 API calls have been enabled to start coding Visual Basic scripts in CAM350/DFMStream. In addition to offline VB coding support. CAM350 VB API allows interactive recording and playback functionality while in a CAM350 or DFMStream editing session.

- Write VB code using CAM350 API offline in user's editor of choice
- All CAM350 commands can be recorded then played back using VB scripting
- Ability to record API functionality and edit in offline editor and playback
- An advanced VB Editor is included in the release for playback and VB script debugging

New 2D OpenGL Graphics Acceleration

The previous CAM350 2D graphics has been replaced by a new 2D Graphics Engine based on openGL. Every graphics entity has been re-written to maintain continuity with previous capability while providing faster performance with 2D graphics.

- New 2D graphics have been implemented into both CAM350 CAM and Panel editors
- The display performance is also improved for every CAM database preview in a CAM350 command; this includes the World View, Layer Compare, and Design Compare.

IPC-2581 Rev C Support

The IPC-2581 Rev C specification includes updates for defining Vias In Pads and Net Bridges.

- CAM350 IPC-2581 interface includes import and export of via in pads, net bridges
- Definition of via in pad type drills and recognition of vias in pads in DFM analysis.
- Drills in the Drill and Mill and Padstack tables can be set as Via in Pad hole types.
- Copper Geometry DFM checks that detect Via In Pads were updated to report Via in PADS hole type presence in error reports.
- The Design Analyzer no includes presence of Vias in Pads.

Net Bridge Support

Net Bridges are used to identify design elements where intentional shorts are present in PCB designs.

- Import and export Net Bridges from existing CAD tools. Note that each CAD tool may have varying degrees of support and varying formats to exchange data.
- Ability to assign and manage net bridges within CAM350/DFMStream
- Updates to netlist extraction and compare functions to support net bridges

BluePrint Panel Translation to CAM350

The Panel Drawing elements in BluePrint allow the user to design and document Assembly panels using advanced features like step and repeat and merge web routes and mill tabs. These panel definitions can now be read in and support by CAM350 panel design functions.

- Imports and converts BluePrint panel size and array, fiducials, pinning holes, mill tabs, routes, and drill rows into CAM350 data.