

NEW FEATURES and COMMANDS

Windows 10 Operating System Compatibility

For this release we have made the necessary changes to ensure that VisualCAM is compatible with the Windows 10. This includes all necessary drivers, for components like hardware keys and FlexLM™, have been updated and tested for compatibility.

Add Polyline Command

Straight, Arc or Tangential

Add Polygon Voids Command

To existing Polygon using Circle, Rectangle, Flash or Draws.

Edit Polylines/Polygons Command

Add, copy, move, delete, fillet and chamfer polyline vertices. Also, Add Slot and Delete Segment. Supports Mill Paths.

Create Border Command

Creates a single polyline border outline around multiple data items (Flash, Draws, Polylines, Mill Paths) from a chosen source layer to destination Layer. Allows easy creation of complex borders and cut-outs.

Add Panel Tooling Hole Command

This command allows user to set the size and clearance of the Tooling Hole and creates the necessary NC tool and places the features and their clearances on the active NC layer and other pertinent layers.

Add Panel Fiducial Command

This command creates the necessary apertures and places the features and their clearances on the pertinent layers.

Mirror and Rotate commands added to right click menu

These new commands added to the Right Click menu make editing much easier.

Apply Compensation to Mill Path command added to right click menu

With this new command in the Right Click Menu you can select a mill path and add the compensation in one step. You no longer have to explode and apply compensation.

New Part Viewing Controls

Added "Part Settings" page to the Configuration dialog, the settings control the drawing of part pins and part annotation including:

- Top SMD Pin pads (PADS, PASTE, MASK)
- Bottom SMD Pin pads (PADS, PASTE, MASK)
- THD Pin pads
- Reference Designator
- Pin 1 Marker
- Centroid Marker
- Insertion Point Marker
- Outline
- Pin Numbers
- Assembly Outline
- SilkScreen Outline
- SilkScreen Markers

Added Import Stackup Command

This new command will import just the Stackup section from any IPC2581 file.

Added Design file locking

This new feature creates a lock file when you open a .vcam file. Anyone else that tries to load this file while it is locked will get a Read Only version to prevent overwriting of a file that is in use.

Site Wide Environment Variable WSSI_SITE

This new feature allows all users of a floating license automatically have access to common macros and user menu settings on startup. This feature can be enabled/disabled in Options|Configure|General dialog.

Dynamically Create DRC Rule Files

Added option to DRC dialog to save rule files in a dynamic form where abstracted layer types are output instead of absolute layer numbers.

Drag & Drop and Auto Map Layers in Design Compare

Added drag & drop inter-design layer mapping. Also added command button to auto map the layers.

Film Box display is now optional

Added check box to Options|Configure|Display|Filmbox setup to control this display feature.

Added ability to hide the Origin Marker

Added check box to options configure dialog display page to control this feature.

Added "Unhighlight All" option to right click menu in navigator

When click occurs in empty area it clears all analysis error highlighting when selected.

VisualCAM Stencils Enhancements

- NEW - Define Paste Shape by Pitch rules
- Many Paste Dialog Enhancements
 - Added additional information to Info Line on the Footprint dialog
 - Allow Rename of Shape Sets and Shape
 - Added offset ability to individual pin justification
 - Added option to set Shape by X, Y exact size
 - Added multi-select to Footprint list of paste tab, allows shape assignment or deletion
 - Added ability to set paste shape corner rounding on specific corners
 - Added ability to hide or show columns in paste tab footprint list
 - Added Stagger to Array Shape
 - Added Dimension, Query and Measure commands have been added to the preview window
 - Added shape type of "No Paste"
 - Added Pitch Column on the Paste tab
 - Added ability to use offset reduction on custom apertures
- Added Set Colors in the Footprint preview window to control the following colors:
 - Original Paste
 - Modified Paste
 - HighLight
 - Annotation
 - Dimensions
- Added QTY to the Paste Layer Report
- Added ability to Rotate a footprint using Right Click in the Library preview window

- Fixed Quick Convert Issues
- Enhancements to Footprint Identification dialogs
- Added Show Unused Only in the Footprint Library using Right Click
- 2-pin ambiguity check enhancement to use pins fully contained within a closed polyline, Skip Footprint option and Interactive Mode option added.
- Show Unused checkbox added to the Footprint Library Report
- Added ability to Create Paste Layer Report and Check Plot in Excel

Assembly Reverse Engineering (ARE) Enhancements

- Added Set Colors in the Footprint preview window to control the following colors:
 - Electrical Layers
 - HighLight
 - Annotation
 - Dimensions
- Added the following commands to the preview window:
 - Dimensions
 - Query
 - Measure Point-to-Point or Center-to-Center
 - Toggle part annotations
- 2-pin ambiguity check enhancement to use pins fully contained within a closed polyline, Skip Footprint option and Interactive Mode option added

IPC-2581 Enhancements and Fixes

- Export of Panelized IPC2581 references undefined pad definition
- LandPattern Pin number / Name reversed
- IPC2581 - Need to maintain Bom:name, BomHeader:assembly, and BomHeader:revision
- Added Import Stack Up Only command
- VCUT dialog enhancements
- Fixed spelling error in the Export of pin element attribute
- Added Export Function Mode support for Full and Fabrication Level 2 RevA and RevB
- Added ability to Export IPC2581 with a Macro
- VSCORE and ROUTE Layer Function names now export correctly
- AssemblyDrawing elements in Package
- Support for PinOneOrientation enumerated values
- Offset of pin transforms on import of 2581
- Fixed Layer Type issue of the first layer after re-import of 2581 layer
- Added ability to add BOM information to Item properties from text file
- Added IPC2581 to Options/Configure/File extensions
- Fixed handling of VScore layers during panel layer mapping
- Added support for "/" in step names in IPC2581 files
- Fixed export of IPC2581 to properly handle Vscore
- Fixed Export Panel Profile
- Fixed 2581 export of Layer elements attribute INTERNAL

NEW Macro Commands

- Footprint Identification by Library macro
- Stencil Generation macro
- Generate Paste Layer Report
- GetShapeSets
- Load DRC Rules on Startup

- InPlace option to MOVE and COPY macros
- Find Min Aperture and Min Pitch on a layer
- Combo box macro for list selection
- Export IPC2581 Macro
- Pad to Pad analysis
- ReplaceText
- SetAdvPanelParameters
- DefineAdvPanelLayerSet
- AddToolingHole
- AddFiducial
- Merge Design file
- Load in Punch files
- Added optional argument to GetMinFlashLayerInfo
- Added layer and used parameters to Custom Intrinsic macro
- Import IPC2581 Stackup
- DEFINEADVPANELLAYERSET now supports specified layers
- Get string array of print devices
- Layer Bar command "Show Unused" is now available in macro form
- VCUT
- Create Border
- Promote layers (promotes layers from Advanced Panel to panel level data)
- Compact Layers
- Sort macros in the Macro/Run list
- Generate Advanced Panel Venting and Thieving
- ADDPANELTOOLINGHOLES
- "INTERACTIVEONCE"
- Extract image data without promoting
- Fixed issue with copper area calc macro
- Alternate formatting for \$\$DATE variable
- ADDPANELFIDUCIALS
- Fixed PARTPANELINSTANCE parameter of the select filter is now valid for COPY, MOVE, ERASE, and ROTATE commands

Advanced Panelization

- New Add Panel Tooling Hole command
- New Add Panel Fiducial command
- Fixed Layer Icon issue in Panel Layer Mapping dialog
- Fixed Load Vent Pattern dialog issue being grayed out
- Added support for clearance around Text boxes for Panel Venting
- Added "Map Unmapped Layers by Type" button to layer mapping dialog, it will map any unmapped layers whose type matches a panel layer that does not have an image layer mapped to it
- Panel Layer Mapping dialog is now resizable
- Added Check Box to Layer Mapping dialog to hide unused layers
- Panelization dialog and tab controls are now resizable
- Fixed issue in Panel Optimize assuming the panel extents is at 0,0
- Enabled viewing components at the panel level in a panelized design
- Fixed highlighting of Panel images
- Automatically turn on composite viewing when generating venting
- Added Image Justification to Panel Edge to Image spacing options

NC DATA

- Enhanced Mill Path Editing
- Mill compensation command now saves settings in registry
- Add Mill command modifications: When adding mill paths compensation is not turned off while adding to existing mill paths and the compensation is inherited from the existing path
- Added Right Click to Apply Compensation to Mill Path
- Fixed issued when adding to existing Mill Path using Home key and REL coordinates
- NC Change Tool table is now working properly
- Fixed issues deleting vertex from mill paths

Other

- Fixed Netlist Generation command "max nets" issue
- Improved select filter handling of Part|Panel Instances
- Net open errors now list the layers affected in the properties
- Added "Unhighlight All" option to right click menu in navigator
- Added right click V-Cut extend and trim commands
- Changed Add/Rectangle to be polylines instead of draws
- Fixed several Custom to Intrinsic issues
- During Gerber import, the customs in this design become zero sized apertures. Changed handling of built in 274X macros. Non intrinsic macros now allow zero sized lines
- Fixed issue of export IPC- D-356 with adjacency
- Created a new error message, "Missing Pad/Drill", that combines the functionality of the missing pad and missing drill errors into one error so that multiple errors are not created for the same component
- Fixed issued with missing Polygon void
- "Show Unused" toggle command on the color bar now saves setting to the registry
- Fixed import of DXF issue with this file
- Move & Rotate commands are now able to move part instances
- Fine precision database support enhanced
- Increased the design precision when saving Virtual Panels
- Fixed two Toolbar keys that used the same Hotkey
- Fixed Consolidate Vector issue
- Fixed several Quick Convert issues
- Layer copy using the navigator now copies the NC Table from the source layer
- VScore layers are now handled correctly during panel layer mapping
- Fixed LayerToPolygon command missing data
- Fixed the calculated Print Area too small on Export BMP
- Fixed issue with creating small mill paths
- Fixed Custom Aperture interpretation issue
- Fixed problem deleting apertures over D999 from aperture table
- Fixed Highlight issues during zoom in and out
- Modified "View | Clear Highlights" command to also turn off any analysis error highlighting