

What's NEW in VERICUT 8.1.4

IMPORTANT! - Licensing is NOT included in software shipments. See "How to get a license" below for details.

March 29, 2018

Dear VERICUT® User:

Thank you for your continued investment in VERICUT, an important part of your NC programming and machining process!

The VERICUT 8.1.4's NC program simulation, verification, and optimization technology is packed with new features making it more powerful and easier to use. This letter describes important changes in VERICUT 8.1. Take a moment to review what's new and improved in this release.

Maintenance and Licensing Information

How To Get a License - All users must complete and return the License Request Submit the application at:
http://www.cgtech.com/vericut_support/request-license/. Licensing is sent via Email only.

NOTE: This software requires a VERICUT 8.1 license.

Software maintenance keeps you on the cutting edge - CGTech provides update software to customers with current software maintenance. Your continued maintenance ensures that you have the most advanced verification technology available. If your maintenance has expired, please contact your CGTech representative (<http://www.cgtech.com/about/contact-us/>).

Sincerely,

Gene Granata

CGTech VERICUT Product Manager

V8.1.4 Release Notes

March 29, 2018

VERICUT VERSION 8.1.4 is not available for 32 bit Windows computers. It will only run on 64 bit Windows, and is supported on Windows 7 and Windows 10 computers.

VERICUT's license server will continue to run and be supported on 32 bit or 64 bit computers.

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Enhancements in V8.1.4

CAM Interfaces

CATV

Support has been added for CATV6 2018 3D Experience.

Edgecam

Support has been added for Edgecam 2018 R1 interface.

MasterCAM

Support has been added for MasterCAM 2018

Export Tool from Mastercam 2017/18 creates shank diameters.

NX

NXV automatically imports tool cutting direction that has been defined in NX.

Library Files

Heidenhain 530 controller has been updated for the CT function.

Support has been added for Heidenhain 530 library control CYCL DEF 12.

Heidenhain TNC640 formulas can be entered directly.

Other

TRAORI and TRANSMIT macros have been modified to be List-Numeric.

TDM

A new column in the TDM Interface dialog - Insert. This checkbox allows the user to determine whether the cutter portion of the tool assembly should be a 'revolved' or 'insert'.

TDM can import Holders as STEP files.

Teamcenter

Teamcenter Interface has been updated with a message field to display responses to actions and a red/green connection status light.

Tool Manager

Snap to Orthogonal View and Select View CSYS buttons have been added to the Tool Manager Ribbon Menu.

Grinding/Dressing tool has been enhanced for better simulation.

CRP origin coordinates are now read and used for the driven point in NOVO and MachiningCloud interfaces. LTA and WF values are now obsolete.

Corner radius has been added to Tool Manager report for SOR cutters.

Holders can be copied from tools of different usage types.

VDAF

VDAF Programming command button has been added to the Ribbon Menu interface.

CSYS can be set based on a fastener location.

Ability to show/hide multiple sequences has been added to Project Tree.

VERIFICATION

VERICUT Logger Analyze Message tab can be expanded or collapsed.

X-Caliper Distance/Angle sections show previous dropdown selection from last VERICUT session rather than always being set to "From Point" and "To Point."

Display of units has been standardized to always display four decimal places.

When the VERICUT window is resized, Ribbon Menu buttons lose their text and shrink to smaller sizes to better fit within the smaller window.

Icon has been added for G-Code Log File: debug.log View.

New grinding wheel display enables users to view the wheel changing size with reuse, allowing users to verify grinding motions will still work after routine wear tear from repeated operation.

VNCK

A tab has been added for program control options like ROV m1 DRY.

VNCK retains initial VNCK values even if the machine simulation is reset.

Zoller Interface

Zoller Interface has been enhanced to read units from DXF files.

Problems Resolved in V.8.1.4

CAM Interfaces

CATIA

CATV6 tree no longer displays incorrect names when 3DXML files are exported from a 3DEXPERIENCE session.

Edgecam

Issues with ECV installer not working correctly have been fixed.

MasterCAM

Fixed tools translation when there are subgroups and "Put Operations into a single VERICUT setup" is checked.

MasterCAM interface now generates minor diameter for the tap tool correctly.

NX

NXV has been improved to handle tool type = 11.

Issues of NXV transferring drilling tools with false point length have been resolved.

An issue with NXV producing incorrect inside diameters has been corrected.

G-Code Processing

Instance of unexpected termination when Play or Single Step is used in the Animation Controls have been eliminated.

G77 jump logic has been improved to work better with **NumSubSequenceLoop** macro.

G-Code debug.log displays Probe variables defined.

TripodArmLength and TripodRodLength now update to when project units are changed.

G-Code Offset method has been updated so that existing offsets can be edited after being added.

Automatic syntax check no longer has to be saved in the ON position before it can be used.

Instances of unexpected VERICUT termination when Sin840D with cutter compensation have been eliminated.

SiemensAxisMappingOnOff macro has been added to VERICUT.

CallNCMacroMotion macro can now now be used to call nested subroutines with same name.

VERICUT no longer experiences unexpected termination when an offset is deleted.

Issues with IP files failing to load on stocks and fixtures have been eliminated.

VERICUT no longer experiences unexpected terminations when proceession ORISOLH function.

An instance of collisions generating without error message has been corrected.

Machine Simulation

Safety distance warning message is no longer disabled when projects are stopped and restarted.

False collision errors no longer generate when the Animation Slider is adjusted.

Tool Manager

An issue related to TDM-imported tools displaying different values depending on which version of VERICUT they were imported into has been resolved.

Tool Manager cutter lengths no longer fail for TAP, REAM, and CENTERDRILL.

New probe tools no longer changes forms without prompting from user.

Toolman.bat now stores dynamic controls in the Tool Manager preferences file.

Tool Manager has a new Reverse Stacking feature.

VERICUT no longer has difficulty reading STEP files on import.

OptiPath & Force

Force Optimization no longer violates force limits.

Other

Instances of GOTO point not appearing in APT output have been eliminated.

Instances of unexpected VERICUT termination when MDI is running Windows 10 have been eliminated.

An issue related to outputting STEP files with model export module has been resolved.

VERICUT no longer experiences unexpected termination when a new setup is added and then deleted.

Tools no longer disappear when the tool change macro is used to return tools to the carousel.

Reports

Generating a report in PDF as opposed to other outputs no longer produces different output results.

Issue with PDF reports generating incorrect page numbers has been corrected.

Reports have been corrected to display the correct optimization times shown in FORCE.

HTML reports no longer misalign when viewed through Print Preview.

Reviewer

Reviewer files no longer fail to stop at designated stop points.

Reviewer has been enhanced to work with MillTurn.

VDAF

A licensing error is no longer generated when the graphics view is manipulated.

Verification

Instances of false Probe Tip collisions have been reduced.

Instances of round tool error causing false gouges have been eliminated.

The Animation Slider being set to slower speeds no longer warps images in the graphical display.

Adjusting the Animation Slider no longer affects the number of collisions reported.

STL files can now be output with reduce triangle feature active.

Machine Offsets window displays SubRegister and Name.

Instance of projects setting the zero point incorrectly at counter spindles have been eliminated.

Mouse cursor is no longer disabled during NC Program Review.

Models that are set to invisible no longer lose their X-Caliper From/To location points.

X-Caliper no longer displays the wrong diameter when Highlight Same Plane/Cylinder function is used.

Instance of projects failing to open after being saved with a Zoller tool list have been eliminated.

Loading IP files no longer cause "Cutter Compensation Data Error 1" messages to generate.

VERICUT no longer experiences unexpected termination when applying Section views.

An issue related to incorrect stock volume calculation has been corrected.

VERICUT no longer experiences unexpected termination when text is selected within an NC Program.

Workpiece View no longer fails to update when the Animation Slider is adjusted.

Zoller

Instances of unexpected Zoller TMS termination when more than 40 tools are being used have been eliminated.

New Macros in V8.1.4

CancelSecondaryWorkOffset
ConditionalActionCancelList
CoupleCompNames
GageOffsetDirect
PartNormalModal
ReportExpressionErrorsOnOff
SiemensAXISMappingOnOff
SiemensPAROT2
SiemensRotaryRanges2
SiemensTCOFR2
TransformXyzUvwOnOff
UnCoupleCompNames
WPRelativeOnOff

V8.1.2 Release Notes

November 23, 2017

VERICUT VERSION 8.1.2 is not available for 32 bit Windows computers. It will only run on 64 bit Windows, and is supported on Windows 7 and Windows 10 computers.

VERICUT's license server will continue to run and be supported on 32 bit or 64 bit computers.

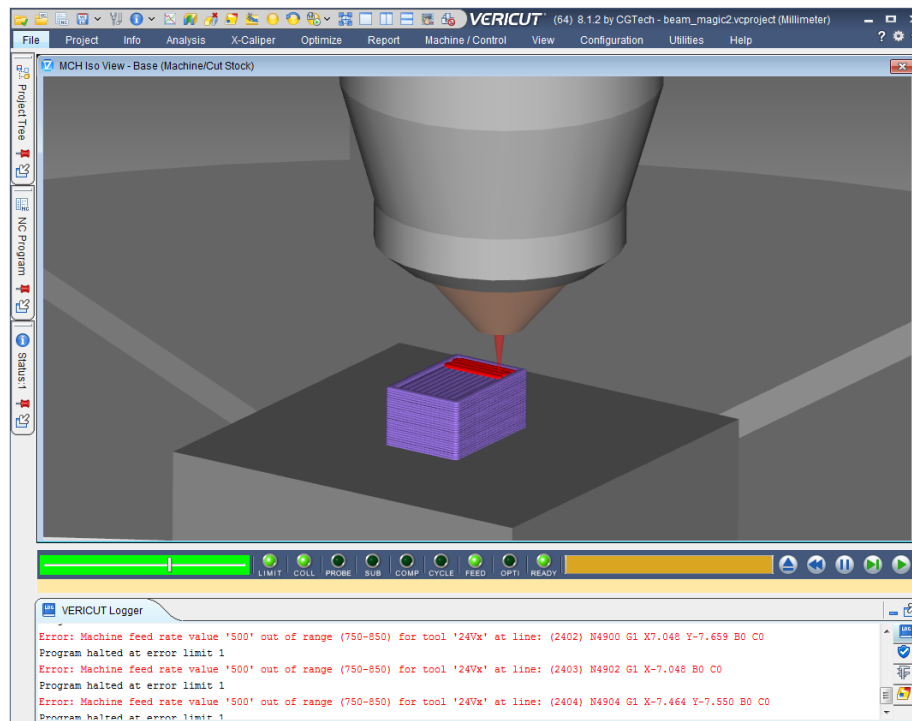
Both VERICUT and the license server can be installed by both 32 bit and 64 bit computers. When installing VERICUT with a 32 bit computer you will be warned that it can only run on 64 bit systems. The warning will not display when installing the license server.

Enhancements in V8.1.2

Additive Manufacturing

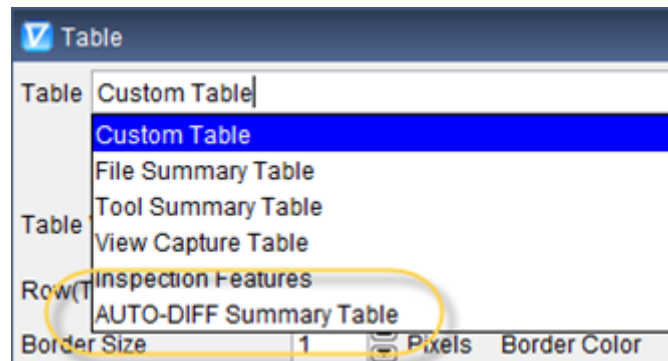
Additive material deposition has been added to VERICUT Reviewer and NC Program Review.

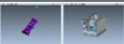
Additive errors and error color are applied to material deposited when any of the additive functions being checked are not compliant.



AUTO-DIFF

AUTO-DIFF can be run automatically and a summary of AUTO-DIFF results can be added to reports.



Setup Name	View Capture	Gouge Tolerance	Gouge Count	Max. Gouge	Line # (Max. Gouge)	Record (Max. Gouge)	Tool ID (Max. Gouge)	NC Program (Max. Gouge)
3		0.0015	3	0.1311	58	N500X0.Y-2.1	6	vericut_setup;.mcd

CAM Interfaces

Support has been added for 3DEXPERIENCE 2017X.

Support has been added for Esprit 2017.

Support has been added for NX12.

Stock Csys option has been added to NXV Interface which enables you to select the coordinate system which will be used for cut stock transition between setups in VERICUT.

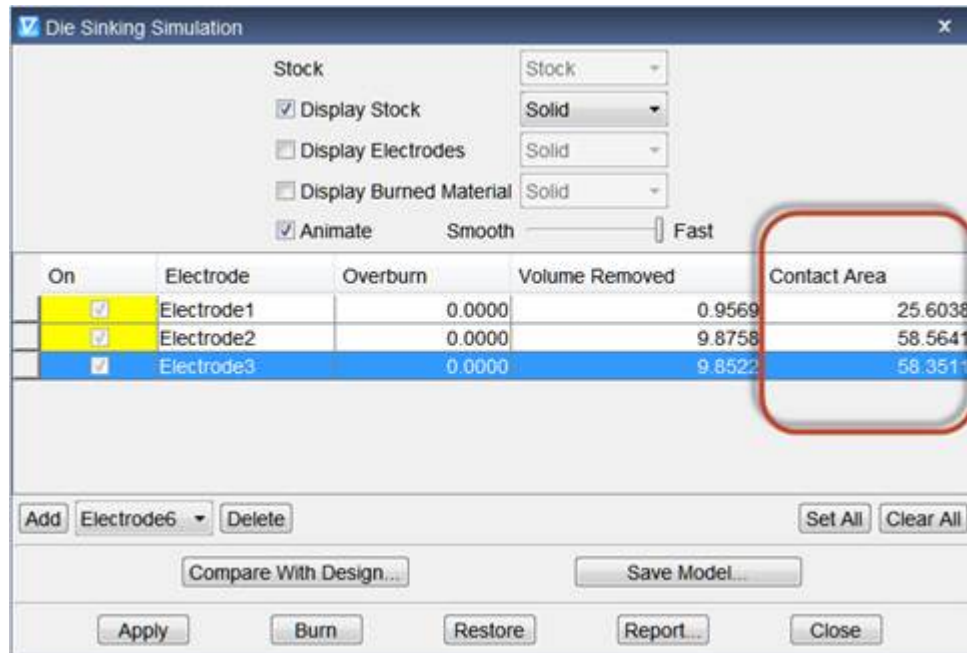
Controls

A new SiemensMODAXVAL has been created.

Logic to determine ID/OD machining for Okuma takes into account facing operations.

Die Sinking Contact Area

This column feature displays the area of material that was removed by each active electrode during the burn process. The "contact area" value is updated in the table as each electrode completes the burn process.

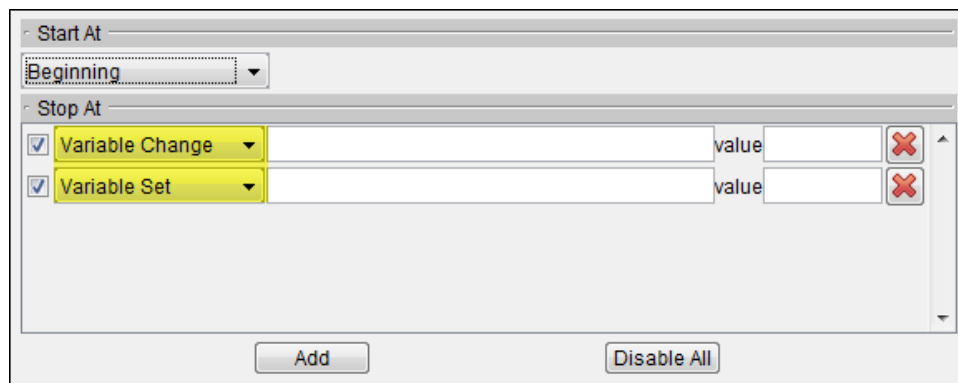


Help

VERICUT Help Library and supporting documents have been entirely converted to HTML. This allows for easier navigation, faster searching, and viewing higher quality images at a larger size.

Machine Simulation

New Stop At condition has been added stop at specific variables when they are set, or changed.



Optimization (Force & OptiPath)

Users can select optimization output method. This eliminates instances of non-optimized sections of code not being output with the optimized file.

Optimize NC Programs with looping, branching, and do-while code have been enhanced to retain all decision logic.

Force Charts has been enhanced to display material volumes and forces that are encountered.

Tool Manager

Support has been added for non-rotating 3D STL model as Polishing Tool.

Support has been added for ablation and painting tools that do not rotate.

Support has been added for STL cutters in Paint mode without turning tool spindle ON

The above new capabilities provide enhanced support for simulating ablation, painting, polishing and other specialized manufacturing processes.

TDM

Added check boxes to TDM Interface to select and deselect individual tools for import.

Removed reference to CAD file in saved tool under TDM Interface.

The screenshot shows the 'TDM Interface' window. It features a 'Database' section with a 'Disconnected' status. A 'Tools' table lists three items, each with an 'Import' checkbox. A 'Filters' section at the bottom left contains input fields for 'List Name', 'NC Program', and 'Part Name', along with a 'Load' button. At the bottom right, there are checkboxes for 'Build Tool Assignment List' and 'Remove reference to CAD file in saved tool', and buttons for 'Import Selected' and 'Close'.

Position	Tool ID	Description	Tool No.
1	10011654	MAG3 Kaiser Bore assembly REF 1	10011654
2	10012137	KAISER7	10012137
3	A029269	HEAD, BORING DEVLIEG 25	40137601

Zoller Database

Added an error column to the Zoller Database 3D CAD tool to show which tools do not have DXF files.

Zoller Database can perform more advanced tool searches including search in database by Tool ID, Description, Graphic File, and Graphic Group.

Added import column to Zoller Database to individually select tools.

"Description" has been added as an import option for Import Tool ID from in Zoller Database.

Setup Sheet ID	Name	NC Program No.
1124	Toolist2	
112451	Toolist1	

Import	Position	Tool ID	Description	Tool No.	Error
<input checked="" type="checkbox"/>	1	504145R...	Reamer with shrink ch...	21	
<input checked="" type="checkbox"/>	2	FDAFBN	Helical mill with cutter a...	23	
<input checked="" type="checkbox"/>	3	508145B...	Core drill with shrink ch...	24	
<input checked="" type="checkbox"/>	4	Zyl_SK5...	Spotdrill with collet chuck	25	
<input checked="" type="checkbox"/>	5	508145B...	Core drill with shrink ch...	27	
<input checked="" type="checkbox"/>	6	FDAF0015	Face mill with cutter ar...	29	
<input checked="" type="checkbox"/>	7	SP26343...	Thread cutter with collet	30	

Problems Resolved in V.8.1.2

CAM Interfaces

Esprit Interface

Driven Points display in the correct location for turning tools.

Duplicate holders and inserts are no longer created for turning tools.

ESV considers Start Position value when exporting Stock model location.

GibbsCAM

GibbsCAM exports SOR correctly.

NXV

NXV imports 3D turning tool assemblies correctly.

Translation of tap tools has been enhanced.

NX10 does not lose selected Attach CSYS upon reload of file.

G-Code Processing

CutterCompSuspend macro has been enhanced with Auto Motion.

Maximum Milling Depth no longer produces unintended motion in Fixture Components.

Optimization (Force & OptiPath)

Units in Tool Force Data remain consistent even when different from the tool's units.

Optimize Control Material and Machine selection features remain available for selection, even without OptiPath license.

Tool Manager

Stacking logic has been improved and a new "Reverse Stack" option has been added.

Holders are no longer automatically stacked when a Cutter component is added.

Verification

MDI "Move to Pick Locations" error has been corrected.

Heidenhain Machining CYCLES work with German expressions.

New Macros in V8.1.2

RelativeToDrivenSubsystem

See *VERICUT Macros* in the Help Library for more information.

V8.1.1 Release Notes

September 29, 2017

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Enhancement in V8.1.1

Additive Error Color

Additive beads that are added under error conditions display in red to visually alert the user that there is an error.

Reports

The option to create Text Report has returned to VERICUT.

GibbsCAM 2017 v12

Support for this interface has been added to VERICUT 8.1.1.

FORCE

FORCE Charts are able to display based on cutting resolution.

CAM Interfaces

Esprit Interface

A new preferences dialog mechanism has been added to the Esprit Interface.

G-Code Processing

AutosetToolManDrvPntVars2 and **AutosetToolManCutComVars2** macros are now able to produce warning messages when duplicate drive point IDs with different values and duplicate cutter compensation IDs with different values are present.

Machine Simulation

MatchParensInComment macro has been enhanced with new override values to better process comments.

Reviewer

Reviewer now saves a duplicated motion record whenever a visibility change macro is triggered.

VDAF

New “Stack Thickness – Total” column has been added to the Simulated Location Report.

Status lights now display as busy when fastener model files are loading.

Verification

VERICUT no longer experiences unexpected termination when saving projects after an IP merge.

AutosetToolManLengthVars2 macro has been created to supplement the

AutosetToolManLengthVars macro.

VERICUT Logger switches back to standard Logger automatically after X-Caliper feature is finished being used.

X-Caliper Distance/Angle feature now automatically remembers previous pulldown menu selections rather than always have “From Point” and “To Point” as the default selections.

Problems Resolved in V8.1.1

Machine Simulation

Colliding components correctly display in red.

Reviewer

Set Component Visibility now displays components correctly.

Turning Tool Holder/Inserts now display correctly in Profile view.

Machining logic has been enhanced to reduce instances of wrong tool path displaying.

Reviewer now correctly displays **SetVcMultiTools**.

Tool motion errors have been reduced in Review Mode.

VDAF

Cycle sort/search function has been improved to reduce instances of wrong results.

Verification

5-axis motion display has been improved to reduce instances of performance slowdown.

Radius cutting has been enhanced for greater accuracy.

Report Template creator now displays .bmp images correctly.

An error that was preventing User Defined Tags from being edited has been corrected.

New Macros in V8.1.1

For more details on these macros, visit the [VERICUT Macros document](#).

AutosetToolManLengthVars2
OffsetCalcDrivenAxes

VERICUT 8.1 Release Notes

September 15, 2017

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V8.1 Enhancements

Tool Manager

Additive Manufacturing

Tool Manager includes new Additive Manufacturing tools, enabling you to simulate additive manufacturing in VERICUT. From the Tool Manager, select the Additive button from the Add group. An Additive Bead Tool Component tab will open enabling you to specify the Laser Width, Laser Focal Distance, Bead Height, Bead Width, simulated Bead Color, and simulated Laser Color.

Grinder and Dresser Tools

Other new tools in the Tool Manager are the Grinder Tool and the Dresser Tool. The Grinder Tool is an abrasive surface wheel that is defined in the Tool Component tab. The dresser tool is a grinding dresser which is used to alter the surface of a grinder wheel and it is also defined in the Tool Component tab.

Teamcenter Interface

In VERICUT 8.1, you now have the ability to search for and import 3D cutting tool assemblies into Tool Manager from Teamcenter. This interface uses your same Teamcenter login to allow you to query for NX CAM projects or 3D cutting tool assemblies. For CAM projects, the interface finds all 3D tool assemblies used in that project and allows the user to import all tools at once or selected tools from that list. When searching for 3D tool assemblies, the user can import selected assemblies as needed. This interface works with or without the Siemens MRL (Manufacturing Resource Library) application. The Teamcenter Interface also checks the tooling for any assemblies that are out of date when reopening a VERICUT session using Teamcenter

cutting tools. This interface can be accessed through the Tool Manager window, Import Tools button.

Force

Multiple changes have been made to Force enabling it to provide a more detailed and complete breakdown of the forces that are acting on your tools. New Force Chart options include Radial/Axial Force, Machine Force, Deflection, and Feedrate. A Data Display option has been added to enable you to view a more detailed breakdown of Force. Mouse Followers and Limits have been added to more easily navigate Force Charts when using your mouse to trace the graph lines. Force Charts now also live update as the simulation is running, enabling you to view and analyze the forces that are acting on your project in real time.

Model Export

STL File has been merged into Export Cut Stock window which has been enhanced to enable you to select a file type, file format, and to reduce or offset file size as needed. A new Stitching option can be used to optimize export CAD models using the Planar method which results in models matching faces with adjacent faces and combining surfaces where possible. Additionally, the method feature of this window now contains a new polygon export method for CAD model file formats such as STEP, CATIA 4, CATIA 5, and ACIS.

Report Template Window

The Report Template window has been completely redesigned with a far more intuitive layout and features. The Page Layout, Styles, User-Defined Tags, and Page Setup tabs have been removed in favor of having a single content display window that can be manipulated through right-mouse clicks and adjust the pre-populated content boxes. An updated Report Template Toolbar integrates common word processing tools into the Report Template window, enabling you to perform such actions as undo and redo, cut/copy/paste, align text, indent and outdent, create bulleted or numbered lists, change font size and color, and bold/italicize/underline/strikethrough text as needed.

VNCK Machine Control Panel

The VNCK Machine Control Panel (VMCP) has been added to control VNCK server and VERICUT simulation. This panel is used to boot VNCK and then launch HMI, enabling your to control machine simulation in relevant projects with a greater degree of refinement.

X-Caliper

The X-Caliper tab has been updated with new features enabling you to label measurements that have been taken in the View windows. Labels display graphical dimension measurements in the active/measurement view window. Default label location is at centered at the mid-point of dimension line. Labels can be relocated by clicking and holding down the left mouse button then dragging the label to a new location. While X-Caliper is active for measuring, the dimension label for last measurement is displayed in the view where it was selected. Dimensions for multi-choice measurements, such as Distance-Angle, that traverse views appear in a view where both measurement selections are made. When X-Caliper is inactive, labels are removed from the View window.

Additionally, labels can be controlled through the Label Settings window which displays by default for various X-Caliper measurement labels. Changing settings in this window are effective for the current “unsaved” measurement (if any), and subsequent measurements of that variety. All settings are saved to the user’s Preferences. Label settings can also be altered by right-clicking an existing label to expose a menu of available choices that can be toggled on or off.

Lastly, Print View and View Capture buttons have been added to X-Caliper. These buttons function identically to the buttons of the same names in the VERICUT File tab.

VERICUT Help

VERICUT Help, VERICUT Drilling and Fastening Help, and VERICUT Reviewer Help have been converted from PDF to HTML format. The new layout retains the PDF’s side panel navigation and search features but allows for smaller and more focused topics to display when the F1 feature is used and allows for larger, better quality images than were possible in PDF format. Many supporting documents are still in PDF but will be converted to HTML by the next major release.

Other Enhancements

Model Utilities. New features have been added enabling you to Offset and Reduce the size of models from the Open Model window. Additionally, a Repair option has been added to analyzed and replace bad or inconsistent surface models. This same feature can be accessed from the Export Cut Stock window.

A Refine Machine Animation feature has been added to the VERICUT View tab and to the View Attributes window, OpenGL Settings tab, Display Options subtab. This features enables you to enhance the clarity of the display during animation though doing so will slow down the animation processing speed.

Section window has been restructured for easier usage. Planes sectioning and Wedges sectioning have been split into separate tabs in the Section window. Users now have the ability to set the CSYS from the Section window.

A Work Offsets command button has been added to the VERICUT Project tab, enabling you to access and manipulate work offsets more easily than before. This command button opens the new Work Offsets window which can be used to add and alter work offsets as needed.

Enhancement Details

CAD Model Interfaces

Ability to automatically find CAD files when using CAD Tool has been added

CAM Interfaces

EdgeCAM

Edgecam 2017 R2 is now supported.

MasterCAM

Support for MasterCAM 2018 has been added.

NXV

NXV has been enhanced to support multi setup files where duplicate parts are incorporated into the setup.

Stock CSYS selection interface now functions similarly to VERICUT's MasterCAM interface.

PROEV

PROEV has been enhanced to export turning tools with 8 output point options for increased accuracy.

Controls

New SiemensTCARRRotaries macro has been added to specify tool carrier kinematic rotary axes for Siemens 840D control

Support has been added for SYSWRITE ID212.

Heidenhain 530 library control has been updated.

Cutter Compensation macros have been enhanced to more accurately display circular cutting motion.

CutterCompLookAhead macro has been enhanced.

SiemensSpecialCircleHandling macro has been improved to better simulate circle cutting.

G-Code Processing

ToolIDToIndex can be associated with GETT word in Siemens840D.

CornerAutoAdjust and **CornerMaxAdjustment** macros have been added to improve simulation of radius/chamfers.

New **SetZeroForRpcpDWO** macro has been created to set and clears the "Zero" that is to be used with RPCP and DWO.

New **CutterCompOnWarning** macro has been added to VERICUT.

Library Files

Support has been added for Cycle Probe 403 in Heidenhain.

New mill_turn_dyamic_tool_tip.vcproject has been added to demonstrate **DynamicToolTip** macros.

Machine Simulation

Support has been added for Haas G150 general purpose pocket milling.

Turning Collision Detect on no longer causes simulation delays.

CutterCompFull is now supported with CUT3DC.

A new BitwiseNOT function has been added to support sin840d.ctl.

Optimization (Force and OptiPath)

Plunge and retract feedrate options have been added to OptiPath in Force.

Tool Manager

Individual axes can have different display colors as controlled by the Tool Manager Preferences window.

Verification

Air Cut Only OptiPath Air Time section reads multiple files at a time.

Check Coolant feature has been added to Project Tree > Configure Setup > Motion panel which allows user to check if the coolant is on or off.

Distance% and Air Time% no longer report decimal places values.

New Air Time option has been added to Reports Tool Summary Table. Air Time displays measurements in hours, minutes, and seconds rather than as a percentage.

The Tool Tip resulting from hovering over a word in the NC Program window no longer displays false "command word should not be in an expression" messages.

Variable values now supported according to GEOAX selections.

New **SiemensCutterCompOffsetError** macro introduced to help specify CutterCompValueWarning.

Problems Resolved in 8.1

CAM Interfaces

NXV

Stock CSYS selection has been added to the NXV Options dialog when using the Operations tab.

PROEV

CREO 3.0 has been enhanced to reduce instances of software losing file information upon reuse.

Controls

PROC statement has been added to reduce instances of undefined word error.

A synchronization problem has been corrected for Fanuc 31 mill turning.

PolarInterpretation logic has been improved to reduce instances of incorrect axis positioning.

G-Code Processing

Cutting resolution has been improved to reduce instances simulation slowdown.

\$P_PFRAME has been updated to display a green checkmark when FI values are used in Siemens 840D

Machine Simulation

The logic for calculating revolution of models has been refined.

Display has been refined in Machine/Cut Stock view.

PPRINT/VERICUT Motion On/Off has been made channel specific

Simulation of tools has been enhanced.

CutterCompSuspend and **CutterCompFull** macros have been altered to increase compatibility when used together.

Siemens can now define from sub-initialization file in main program.

Optimization (Force and OptiPath)

Force has been improved to reduce instances of unexpected simulation termination when using optimized multi spindle projects

OptiPath Learn Mode has been updated to output the error message “No valid optimizable cuts were detected yet for tool 1 during Learn Mode, no OptiPath record is created yet” when no optimizable cuts are detected.

Force logic has been corrected to properly save files in the csv format.

New **OptiRWord** macro has been added to give the user greater control over the Add More Cuts feature.

Verification

Logic for rotation of Spindles in STL files has been improved.

Stock display no longer switches to taper after milling in X-Caliper profile view.

Check Tools feature has been added to check for missing tools during scan pass.

Changing the animation speed settings no longer generates false collision reports when running the simulation.

Holder collision logic for 5-axis moves has been improved.

VERICUT checks for infinite loops detected before running simulation and produces an error message if an infinite loop is.

Import CAD Tool feature has been enhanced so that issues of unexpected termination during tool changes no longer occur.

OKUMA OSP Control logic has been refined to reduce instances of unexpected program termination.

Cut3dcMode macro has been updated to reduce instances of material failing to be removed.

Merging IP files no longer results in unexpected program termination.

New Macros in V8.1

For more details on these macros, visit the [VERICUT Macros document](#).

AutosetToolManCutComVars2
CornerAutoAdjust
CornerMaxAdjustment
CoolantCheckOnOff
CutterCompOffWarning
CutterCompOnWarning
ExecstringParensOption
FadalEndOfSubroutineSection
FadalProgram
HeidToolAxis
MacroVarState2
OkumaWorkVarsUpdate
OptiPathMergeSubs
OptiRWord
RotaryDirShortestDist4
SetDynamicVarsInterpolationPoint
SetSubsystemIDScan
SetZeroForRpcpDWO
SiemensApplyRotaryOffsets
SiemensCRPLOption
SiemensTCARRRotaries
TapeRollerDeformationOffset
WPAxisValues
WPCreateAxisValues