PC-DMIS 2021.1

Release Notes

Hexagon Manufacturing Intelligence
January 11, 2023

Pc

PC-DMIS

2021.1

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Table of Contents

Release Notes - 2021.1 SP11

Application Errors

You no longer get application errors:

- When you execute a scan multiple times. See PCD-97274.

- When you measure vision Auto features and then select **File | Quit** or **File | Exit**. See PCD-220746.

- When you import a PDF file with GD&T Selection mode turned on. See PCD-224208.

- When you use the MaxIndex or MinIndex expressions in a measurement routine. See PCD-232237.

- When you generate a graphical analysis for Geometric Tolerance commands. See PCD-233923.

- When you work with the Size command. See PCD-236582.

Auto Features

- PC-DMIS now executes vision auto features with multiple active targets at a better speed. See PCD-217856.

- You can now see that the **Auto Scale manual feature during execution** option in the **Setup Options** dialog box works correctly for the Auto Vector, Auto Surface, Auto Edge, Auto Angle, and Auto Corner points. See PCD-219841.

Constructed Features

- PC-DMIS now allows the selection of individual hits in constructed features. See PCD-208288.

- PC-DMIS no longer creates duplicate features in the Feature list of the Construct dialog box when the features have multiple relationships in the measurement routine. See PCD-231267.

DMIS

- You can now see the Clearplane definitions (CLEAR/) and MOVE/CLEARPLANE commands after you import DMIS files and you set PC-DMIS to a non-English language. See PCD-231991.

Execution

- You can now see a much better application performance with PC-DMIS. The software now calculates some commands much faster which allows measurement routines to execute much faster as well. See PCD-236563.

GD&T Dimensions

- PC-DMIS now prevents you from selecting scan commands as features for Legacy or Geometric Tolerance dimensions that are only used to drive the laser sensor. See PCD-212896.

- You can now reference a constructed Cast, Drop, Offset, or Vector Distance Point with the geometric tolerance command either as a tertiary datum or as the considered feature for the position. See PCD-215129.

- PC-DMIS now allows you to insert an ISO Size command when you define it as a DATDEF command. This prevents PC-DMIS from displaying a message that wouldn't allow you to insert ISO Size commands. See PCD-223638.

- PC-DMIS now remembers the state of the **DF** (feature diameter) check box in the **Nominals** tab of the **Geometric Tolerance** dialog box when you create tolerances and keep the dialog box open to create subsequent tolerances. See PCD-231009.

- PC-DMIS now deselects the selected features in the Graphic Display window after you create features from the **Geometric Tolerance** dialog box. See PCD-231497.

- PC-DMIS now applies the maximum available datum shift when you have a secondary datum at MMB and a tertiary datum at RMB (plane or line). See PCD-232180.

- PC-DMIS no longer multiplies the Size tolerance when you create multiple geometric tolerance commands and you don't close the **Geometric Tolerance** dialog box after you create each command. This was an issue when your measurement routine was in metric units but the report was in standard (inch) units. See PCD-233933.

- You can now see the correct size tolerance value in the **Geometric Tolerance** dialog box when you use the ASME standard. See PCD-236466.

- PC-DMIS now allows laser scans for a profile or surface when you use a CWS probe for Patch, Freeform, Linear Open, and Perimeter scans. See PCD-237052.

Graphic Display Window

- You can now see that PC-DMIS displays the Line Profile in the Graphic Display window for geometric tolerance commands that have less than four points. See PCD-227204.

- PC-DMIS now shows the measured hits correctly for orientation tolerances in the Graphic Display window. See PCD-230172.

Legacy Dimensions

- PC-DMIS now shows the correct deviation arrows for CAD graphical analysis of legacy orientation dimensions (Perpendicularity, Angularity, and Parallelism) when you report axial features (Lines, Cones, and Cylinders). See PCD-231417.

- PC-DMIS now takes less time to open and fill the dialog boxes that contain the feature list. See PCD-235881.

Pointcloud

- PC-DMIS no longer adds extra points to the pointcloud data when you use the Pointcloud Export command. See PCD-230147.

- PC-DMIS now populates the closest COP point coordinates and the deviation values correctly in the **Pointcloud Point Information** dialog box. See PCD-232256.

- PC-DMIS now has improved execution time when you run measurement routines that execute pointcloud or CAD alignment commands multiple times. See PCD-237471.

Probes

- PC-DMIS now includes Senmation probe component definitions to use with the HP-OW sensors. See PCD-234172.

Q-DAS Configurator

- PC-DMIS now sends the K8500 and K8501 values to a .dfq file when you set the **Value From** property to **Trace** in the **Setup K-Field Configuration** dialog box. See PCD-231741.

QuickFeature

- PC-DMIS no longer breaks the indexing sequence for a feature ID after you rename any feature ID in a sequence when you use QuickFeatures. See PCD-230748.

Quick Start

- You can now see that the **Parallelism Dimension** option works properly from the Quick Start interface. See PCD-130076.

Temperature Compensation

- PC-DMIS now shows the **Manual Temperature** dialog box when you execute a measurement routine that contains manual temperature compensation. See PCD-221872.

Vision

- PC-DMIS no longer stops responding when you measure vision auto features. See PCD-232235.

Release Notes - 2021.1 SP10

Application Errors

You no longer get application errors:

- When you use the Backspace key to edit an existing tolerance in the **Extended Sheet Metal Features** dialog box. See PCD-227394.

- When you select a feature and click **Measure** in the **Bundle Alignment** dialog box. See PCD-230512.

- When you load measurement routines from previous versions that contain toolkit features and legacy dimensions. See PCD-230527.

- When you click the **Global Used** button in the **Probe Utilities** dialog box. See PCD-230938.

Auto Features

- You can now see that Circular Moves on Auto Cone features work correctly when you insert MOVE/CLEARPLANE commands between hits. See PCD-212679.

- You can now see the correct measured value when you create Edge Point features with actual thickness. See PCD-214068.

Collision Detection

- PC-DMIS now detects all collisions in a measurement routine. Also, PC-DMIS no longer indicates colored collisions when you perform scans. See PCD-219052.

Constructed Features

- PC-DMIS no longer inverts the vector of a Constructed Primary Datum Plane. See PCD-229658.

GD&T Dimensions

- When you report multiple features in a single geometric tolerance command, if you edit the reported axes for any of the reported features, PC-DMIS now applies the same changes to the other reported features. See PCD-208985.

- PC-DMIS now supports laser Round and Square Slots for a geometric tolerance Profile command when you set the ITERATEANDREPIERCE option to YES. See PCD-225171.

- PC-DMIS no longer removes datums when you change the value of the Size tolerance in the Edit window for common datums. See PCD-226851.

- PC-DMIS now correctly re-displays the geometric tolerance feature list after you report conicity with the active **Geometric Tolerance** dialog box. See PCD-227395.

- PC-DMIS can now report the conicity of an Auto Cone (Adaptive Line Strategy) from the **Geometric Tolerance** dialog box. See PCD-227396.

- If you have a geometric tolerance command for a circular runout of a cone, PC-DMIS now correctly draws the tolerance band around the feature instead of around the alignment origin. See PCD-229599.

- PC-DMIS no longer removes features from the multi-features DATDEF command in the Edit window when you press F9 and click **OK** in the **Datum Definition** dialog box. See PCD-230085.

Metrology Reporting

- PC-DMIS can now send additional feature data, feature geometry, and CAD details to Metrology Reporting. See PCD-220590, PCD-221158, PCD-225506 and PCD-226061.

Laser

- PC-DMIS no longer stops responding on the start point of a laser scan when you stop a previous laser scan. See PCD-183559.

Legacy Dimensions

- You can now see the out-of-tolerance value in the XML statistics output file for legacy profile dimensions. See PCD-214720.

- You can now see the correct TP bonus value when you perform a partial execution and don't execute that dimension. See PCD-226987.

Machine Interface

- PC-DMIS now correctly reads the list of available parameter set names from the controller on UHA machines at startup when you need to home the machine. See PCD-230064.

Mesh

- You can now use Mesh Reset functionality through automation. See PCD-227726.

Paste with Pattern

- PC-DMIS no longer loses input features when you copy a Constructed feature and then you use the **Edit | Pattern** option. See PCD-227893.

Probes

- You can now see that you can no longer disable the ParFocal or Parcentric calibration for zoom cells because the **ProbeQualVisionParCalibrationEnable** setting was removed from the PC-DMIS Settings Editor application. See PCD-230056.

Q-DAS Configurator

- PC-DMIS now generates a .dfq file when you execute a measurement routine in Chinese languages. See PCD-229837.

- You can now use the **File | Update from DFQ** file option in Chinese languages. See PCD-231304.

- You can now access the help from the application's **Help** menu option. See PCD-231380.

Reporting

- PC-DMIS now applies the report modifications properly when you use the **AnalysisWindow** object. See PCD-205067.

- You can now see the colormap annotation labels in the report when you set the **GraphicOptions** menu option for CAD images to On to show the labels in reports. See PCD-226848.

Release Notes - 2021.1 SP9

Application Errors

You no longer get application errors:

- When you add a datum to the lower segment in the **Geometric Tolerance** dialog box for an ISO composite position and there is no datum in the upper segment. See PCD-220836.

- When you perform stop and continue operations multiple times during the execution of an Adaptive Circle Scan. See PCD-225749.

- When you close PC-DMIS after you delete Mesh or Pointcloud commands. See PCD-227251.

Several changes were made to improve the stability of the application.

Auto Features

- PC-DMIS no longer updates the measured hit values when you edit Auto feature theoretical values and press **No** on the message "Do you want to update measured values also?" box. See PCD-217722.

Constructed Features

- You no longer see an offset between the feature and CAD model when you report Flatness CAD Graphical Analysis of an Auto Plane or Constructed Extracted Plane. See PCD-221268.

ESF (VWMP)

- You can now see that PC-DMIS no longer returns deviations on skipped features when the measurement routine contains ESF (VWMP) features that use OnError. See PCD-186761.

GD&T Dimensions

- PC-DMIS now displays the correct **Datum** list in the **Datum Definition** dialog box. See PCD-210217.

- PC-DMIS now displays a message to update the ID as a default geometric tolerance ID when you change an ID in the **Geometric Tolerance** dialog box. See PCD-210673.

- You can now see the measured lines drawn between the last two hits for various dimension types when you use the geometric tolerance command in the Graphical Analysis window. See PCD-216255.

- PC-DMIS now uses the same calculations for the ISO Size command as well as the ISO Tolerance command for the size output. See PCD-216266.

- PC-DMIS no longer allows you to select the parent cylinder feature of the concentric circle scan in the legacy dimension **Circularity** dialog box. See PCD-221588.

- PC-DMIS now reports the correct measured value for the legacy straightness of a child feature from an Adaptive Line Scan (Cylinder). See PCD-223521.

- PC-DMIS now displays all the elements of a common datum in the **Nominals** tab of the **Geometric Tolerance** dialog box. See PCD-225222.

- PC-DMIS now updates XYZ nominal and deviations with Geometric Tolerance Position callout when you add a simultaneous evaluation command to the measurement routine. See PCD-226313.

- PC-DMIS now displays the maximum and minimum values in the correct units on the DIMINFO labels. See PCD-226567.

- You can now see the correct per unit flatness CAD graphics in a non-Z-workplane. See PCD-227168.

- PC-DMIS now correctly migrates geometric tolerance commands when a secondary datum is a pattern of holes in your measurement routine. See PCD-227422.

Generic Export

- You can now see the correct unit (inch) in the generic export when you create a measurement routine in mm and perform a dimension evaluation in inch. See PCD-162396.

Laser

- You can now see the MIN_SEP results for a laser Auto Plane when you select the MIN_SEP calculation method in the **Auto Feature** dialog box. See PCD-222893.

- PC-DMIS no longer brings back the Quality Filter value to the original value after you change it on embedded control systems. Also, PC-DMIS uses the last set value for the tolerance values. See PCD-226038.

- You can now see that the incidence angle filter for Auto Laser, Constructed Extracted Edge Points, and Flush and Gap affects the segregated points. Also, you can now see the vertices vectors are passed correctly to the COP command when you construct a COP command from a Mesh command. See PCD-226311.

Mesh

- PC-DMIS now retains the mesh size you set from the **Mesh Operator** dialog box after you close and reopen the measurement routine. See PCD-226692.

- PC-DMIS no longer displays an error when you open or save a measurement routine in PC-DMIS 2020 R2. See PCD-226955.

Portable

- PC-DMIS now colors measured point features with the correct dimension color scale. See PCD-221813.

Probes

- PC-DMIS now includes the correct geometry for the Senmation_HH-AS8-OT2.5-TKJO probe component. See PCD-223574.

- PC-DMIS now includes models for the Senmation horizontally mounted wrists. See PCD-225390.

Reporting

- PC-DMIS no longer ignores a RECALL/ALIGNMENT if you skip a command before a RECALL command and then you use the same skipped command in another command after the RECALL command. See PCD-216537.

- PC-DMIS no longer adds the additional text in the report window when you use the EXCELFORMREPORT command. See PCD-225798.

SFx

- PC-DMIS no longer displays incorrect non-English characters in the SFx solutions. See PCD-175745.

Summary Mode

- PC-DMIS now updates the correct text and color status of the location dimension in the Summary mode when you edit **Auto Feature** dialog box properties. See PCD-225477.

- PC-DMIS now selects the last created feature during the CAD selection when you disable the measurement strategy. See PCD-226301.

Release Notes - 2021.1 SP8

Application Errors

You no longer get an application error:

- When you press F9 on the TTP Free Form Plane Strategy feature, change the **Avoidance move** option in the **Auto Features** dialog box, and then click **OK**. See PCD-219563.

- When you create or edit a geometric tolerance command that references features from another measurement routine. See PCD-221290.

- When you move a measurement routine with vision features to a machine configured with more lamps. See PCD-221501.

- When you switch mesh type from Grid Mesh to 3D Mesh of Mesh command in the Edit window and then re-execute a measurement routine. See PCD-222475.

Auto Features

- You can now see the correct path line from the last sample hit to the cylinder's center. See PCD- 212842.

- You can now see the improved FIXED_RAD math in the Cylinder **Auto Feature** dialog box. See PCD-214120.

- PC-DMIS probe no longer moves to the feature center before the probe takes the first hit inside a hole after the last sample hit on a plane when you measure the Auto Circle feature. See PCD-222995.

- You can now use the **ScanDrawPointSize** setting under the **PointSymbol** section in the Settings Editor to control the diameter of the points for Adaptive Freeform Plane scans. See PCD-224346.

CAD

- You can now see CAD surfaces trim correctly when you import a .CATPart file. See PCD-217592.

- You can now see better tessellation for torus features in an NX (.prt) file. See PCD-219628.

- You can now see Circle features when you import a Parasolid CAD file. See PCD-221410.

- You can now correctly import IGES CAD files into PC-DMIS measurement routines. See PCD-222308.

Constructed Features

- PC-DMIS now displays a "No laser stripes found" error message when you create or execute a constructed extracted feature and there is no pointcloud data within the defined search area. See PCD-219955.

- You can now see the points around the circumscribed circle on a slot feature and not around its border in the Graphic Display window. See PCD-220772.

- You can now use the **Diameter** box in the **Symbols** tab of the **CAD and Graphic Setup** dialog box to set the segregation point size for Constructed Extracted Features. See PCD-222655.

- You can now see that the Laser Auto Cylinder, Laser Auto Cone, Constructed Extracted Cylinder, and Constructed Extracted Cone uses the correct outer segregation diameter. See PCD-225131.

ESF (VWMP)

- PC-DMIS now works properly for the Avoidance Move after each measurement when you measure BH ESF (VWMP) features. See PCD-221205.

External Commands

- PC-DMIS no longer displays an empty Edit window after you execute measurement routines with external report objects. See PCD-208251.

- PC-DMIS no longer inserts a comma at the beginning of a new line in a text file during the execution of a FILE/WRITE command. See PCD-220181.

GD&T Dimensions

- You can now see a reduced number of false migration errors during Geometric Tolerance migrations. See PCD-218445.

- PC-DMIS no longer changes a measured value when you scan a curve and then evaluate the dynamic profile with very small tolerances. See PCD-219031.

- PC-DMIS now increased the maximum number of points from 50000 to 200000 for geometric tolerance commands. See PCD-221236.

- You can now see the **Local Size** option when you select a size feature from the Graphic Display window and the **Geometric Tolerance** dialog box is open. See PCD-221340.

- You can now change the **Arrow Density** option in the **Geometric Tolerance** dialog box to other values than 100% with orientation callouts. See PCD-221611.

- PC-DMIS now informs you when you need to provide specific size tolerance in the **Geometric Tolerance** dialog box. See PCD-221759.

- You can no longer select line profile tolerances without datums when you create simultaneous tolerance commands. PC-DMIS now removes simultaneous line profile tolerances without any datums in current measurement routines from the simultaneous tolerance during migration and evaluates individually. See PCD-221860.

- PC-DMIS now supports constructed mid-points as a tertiary datum for ISO or ASME and 1D width features as a tertiary datum for ISO. Also, you can now see the Distance Fixed (DF) modifier for ISO. See PCD-222277.

- PC-DMIS doesn't display the size values in the report when you didn't select **Report Datum Size** in the **Reporting** tab of the **Geometric Tolerance** dialog box. See PCD-222543.

- You can now use the **ScanDrawPointSize** setting under the **PointSymbol** section in the Settings Editor to control the diameter of the points for Adaptive Freeform Plane scans. See PCD-224346.

- PC-DMIS now shows per unit flatness and straightness in the report for the CADONLY and CADONLY_LANDSCAPE report templates. Also, SEGMENT#_POS labels now pull data from the correct segment. See PCD-225758.

- PC-DMIS now updates XYZ nominal and deviations with Geometric Tolerance Position callout when you add a simultaneous evaluation command to the measurement routine. See PCD-226313.

Graphical Analysis Window

- You can now see the correct per-unit flatness in the Graphical Analysis window when you create a PATCH scan and construct a plane. See PCD-223930.

Laser

- PC-DMIS now limits the number of wrist rotations for the Auto Wrist functionality when you create laser perimeter scans. Also, with this fix, you can see an improved cycle time performance and part accessibility when you scan complex surfaces with a laser probe. See PCD-140742.

- PC-DMIS now draws the COP/Mesh Select operator in the correct location in the Graphic Display window when you transform a model or modify the PART/ MACHINE setup. See PCD-225328.

Mesh

- You are now able to select the units (mm/inch) for a mesh import command. See PCD-212531.

Pointcloud

- You can now see that the **Compute** button is available after you click the **Undo** button in the **Pointcloud/CAD Alignment** dialog box. See PCD-173782.

- PC-DMIS now retains the COP/SELECT operator parameters when you click **Reset** in the **Pointcloud Operator** dialog box. See PCD-208116.

- PC-DMIS no longer displays graphical errors when your measurement routine contains pointcloud data and you have both the Graphic Display window and the report window open at the same time. See PCD-208905.

Probes

- PC-DMIS now sends the correct HP-THD probe-related geometry information to the controller before you take the calibration hits. This happens when you edit the probe with the same name and perform calibration before you close the **Probe Utilities** dialog box. See PCD-158192.

- PC-DMIS no longer replaces your defined Parameter Set name with All-TIPS-WITH-DEFAULTS in an AUTOCALIBRATE command when you migrate your measurement routine into a different version. See PCD-221886.

- PC-DMIS no longer switches automatically to the **Vision** tab in the Graphic Display window for non-vision probes when you click **Results** in the **Probe Utilities** dialog box. See PCD-223790.

- PC-DMIS no longer displays errors when you execute a measurement routine that contains contact and laser features and it attempts to measure a contact feature with a laser probe. See PCD-225516.

- PC-DMIS can now add tip angles for a probe with the PH1 manual head. See PCD-225741.

Protected Mode

- PC-DMIS no longer allows you to edit in Protected mode when you set PC-DMIS to Protected Mode and then you close PC-DMIS and re-open it. See PCD-224234.

Reporting

- PC-DMIS now shows the correct labels in Hyper-Reports. See PCD-218771.

Tool Changers

- PC-DMIS probe head no longer crashes in the destination slot of the CW34L rack during a probe change. See PCD-224301.

- PC-DMIS now correctly manages the probe type when you take hits with the probe in the HR-R rack during HR-R calibration. See PCD-225518.

Vision

- PC-DMIS vision probe optical calibration now performs execution more quickly and has a shorter black screen period during the focus calibration portion. See PCD-207735.

- PC-DMIS now shows the correct raw data instead of the nominal point data when the scan fails to collect data or the thickness curve calculation fails. See PCD-219713.

- PC-DMIS now creates polylines correctly when you click on a CAD model for Thickness Scan. See PCD-220164.

Release Notes - 2021.1 SP7

Application Error

- PCD-220180 - You no longer get an application error when you select the **Iterate and repierce CAD** check box and click the **Compute** button on the **Best Fit Alignment** dialog box.

CAD

- PCD-218602 - PC-DMIS now converts inch to mm correctly for the profile tolerance when you import the DCI CAD files.

- PCD-219685 - You can now see the correct deviation colors for CAD graphics of a flatness geometric tolerance in the Graphic Display window.

Constructed Features

- PCD-220981 - PC-DMIS no longer deletes features when you delete commands from the Edit window.

Gage

- PCD-218789 - You can now press Ctrl + L to correctly execute a thickness gage block and its commands. PC-DMIS no longer marks the commands automatically.

GD&T Dimensions

- PCD-219702 - You can now see similar concentricity dimension results when you use the median points method and Axis method of ASME standard.

- PCD-219708 - PC-DMIS now shows the nominal values for position tolerance correctly in the Status window and **Geometric Tolerance** dialog box.

- PCD-219774 - You can now set customized DRF values in the **Geometric Tolerance** dialog box and Edit window.

- PCD-219990 - PC-DMIS now shows the correct units in the report when you report the position of a pierce point from a geometric tolerance command.

- PCD-220122 - You can now see the datum material modifier for ISO concentricity in the report and status window.

HxGN SFx | Asset Management

- PCD-220075 - PC-DMIS no longer creates duplicate events in HxGN SFx | Asset Management when you have two types of reports (such as PDF and Excel) open at the same time.

Laser

- PCD-218940 - PC-DMIS no longer sends probe-related information for probes that have not yet been loaded in an executed measurement routine when tempcomp commands precede loadprobe commands.

- PCD-219457 - PC-DMIS no longer performs automatic dark reference when you load the HP-OW sensor.

- PCD-219650 - PC-DMIS now shows the correct refractive index value of Distance 2 in the **Probe Readouts** window for thickness measurements when you use an HP-OWT sensor. Also, PC-DMIS no longer displays application errors for thickness scans.

- PCD-219661 - PC-DMIS now considers invalid values correctly when you measure a thickness dimension with the HP-OW sensor.

Pointcloud

- PCD-214593 - You can now see the effect on CAD surfaces when you change the Refine factor value for a surface colormap in the **Pointcloud Operator** dialog box.

Probe

- PCD-202554 - PC-DMIS no longer creates duplicate tips in the probe file when you use the tip selection toolbar in the execution layout.

- PCD-205369 - PC-DMIS now halts the probe change cycle if the laser sensor fails to get dropped off in the port for the CW43L probe changers and DC4K controllers.

Reporting

- PCD-212705 - You are now able to view mesh colormaps in a 3D PDF file.

Release Notes - 2021.1 SP6

Application Errors

- PCD-220180 - You no longer get an application error when you select the **Iterate and repierce CAD** check box and click the **Compute** button on the **Best Fit Alignment** dialog box.

- Constructed Features

- PCD-220981 - PC-DMIS no longer delete features when you delete commands from the Edit window.

GD&T Dimensions

- PCD-219990 - You can now see the datum material modifier for ISO concentricity in the report and status window.

HxGN SFx | Asset Management

- PCD-220075 - PC-DMIS no longer creates duplicate events in HxGN SFx | Asset Management when you have two types of reports (such as PDF and Excel) open at the same time.
  - PCD-219990 - PC-DMIS now shows the correct units in the report when you report the position of a pierce point from a geometric tolerance command.
  - PCD-219774 - You can now set customized DRF values in the **Geometric Tolerance** dialog box and Edit window.

- PCD-219708 - PC-DMIS now shows the nominal values for position tolerance correctly in the Status window and **Geometric Tolerance** dialog box.

- PCD-219702 - You can now see similar concentricity dimension results when you use the median points method and Axis method of ASME standard.

CAD

- PCD-219685 - You can now see the correct deviation colors for CAD graphics of a flatness geometric tolerance in the Graphic Display window.

Probes

- PCD-181755 - PC-DMIS now translates the ALL-TIPS-WITH-DEFAULT parameter set name correctly when you change languages.

- PCD-212976 - PC-DMIS now shows the correct color (blue) for the ring on the HP-TM-EF probe.

Reporting

- PCD-212475 - PC-DMIS now allows newer versions of the software to correctly read report templates and custom reports created with the 2020 R1 version. Also, PC-DMIS now allows newer versions of the software to correctly save report templates and custom reports to the 2020 R1 version when you perform a Save As operation.

- PCD-218514 - PC-DMIS now reports geometric tolerance profile dimension commands in Excel reports when you select textual analysis.

Temperature Compensation

- PCD-202106 - You can now perform a part temperature compensation in a rotary table coordinate system.

Release Notes - 2021.1 SP5

Application Errors

You no longer get an application error in these instances:

- When a measurement routine contains multiple probes and you open the **Auto Insert Moves** dialog box.

- When the Vision box displays error messages. See PCD-211421.

- When you open the **Datum Definition** dialog box and then select a feature in the Graphic Display window. See PCD-216264.

Auto Features

- PCD-215072 - You no longer get an error message when you copy and paste parameters of an Auto feature that you created with a CWS probe.

GD&T Dimensions

- PCD-208745 - You can now reference a constructed offset line as a primary, secondary or tertiary datum with the geometric tolerance command. PC-DMIS now treats this line as a pre-resolved line on a surface.

- PCD-212900 - You can now perform a simultaneous evaluation on multiple geometric tolerance commands where the considered features are a combination of width-wise and length-wise slots. PC-DMIS no longer considers the slots in the same width-wise or length-wise orientation.

Measurement Strategy Editor

- PCD-216407 - PC-DMIS now recognizes the parameter changes for the measurement strategy editor and quick feature widget when you run PC-DMIS in a language other than English.

Probes

- PCD-205699 - PC-DMIS can now read the Kinematics file and configures the probe correctly for the Roughness sensor.

Vision

- PCD-194261 - You no longer get an extra move to a vision feature's focus end location when you execute on a FDC or Leitz controller.

Release Notes - 2021.1 SP4

Application Error

- PCD-216710 - You no longer get an application error when you open and close a measurement routine through automation.

Auto Features

- PCD-200282 - When you are in Command mode, PC-DMIS now displays the correct boundary offset value in the Edit window when you create an Auto Plane in inch units.

- PCD-210273 - PC-DMIS now no longer resets the **Starting/Ending Face** option to the **Use Tip Vector** option automatically in the **ClearanceCube Definition** dialog box. This was an issue when, after you reset the **Starting/Ending Face** option in the **ClearanceCube Definition** dialog box, you open the **Auto Features** dialog box and, without making any changes, you click **Cancel**.

- PCD-212548 - You no longer get an extraction error when you extract a Laser plane with the **CAD Offset** option in the **Auto Features** dialog box set to zero.

- PCD-215072 - PC-DMIS no longer displays an error message for copy and paste parameters when you create Auto features with CWS probes.

CMM

- PCD-204855 - You can now see the correct message at start-up when you minimize PC-DMIS.

- PCD-206502 - PC-DMIS no longer makes unexpected incremental moves immediately after a tool change.

ESF (VWMP)

- PCD-213079 - PC-DMIS now applies the correct reference system for the ESF features when you perform a mirror operation through automation.

GD&T Dimensions

- PCD-212449 - PC-DMIS now updates the Size command based on the settings from the **GD&T Standard** area in the **Geometric Tolerance** tab of the **Setup Options** dialog box.

- PCD-212450 - PC-DMIS now increased the maximum UZ value to 10 times the total ISO profile tolerance value for Geometric Tolerance commands.

- PCD-213127 - PC-DMIS no longer displays previous datum features when you switch the datum for Geometric Tolerance commands.

- PCD-213961 - PC-DMIS now appends an instance inside square brackets to the end of the Geometric Tolerance ID when you execute features or dimensions inside a loop.

- PCD-214097 - You no longer see empty position labels in the report when you re-open measurement routines.

- PCD-214471 - PC-DMIS now creates commands in GD&T Selection mode.

Laser

- PCD-211338 - PC-DMIS now updates the CWS spectrum chart correctly even after you carry out a scan.

Pointcloud

- PCD-210997 - You no longer get an empty file when you export a COP that was created with the chromatic white light sensor.

- PCD-214381 - You can now see the COP reference in the COP/OPER, EMPTY commands after you re-open a measurement routine.

Probe Changer

- PCD-216628 - PC-DMIS now allows you to load TKJ extensions from an HR-R tool change rack when the wrist and head has a TKJO or TKJOW optical joint.

Reporting

- PCD-214396 - PC-DMIS now displays text reports correctly when you print PDF or RTF reports. This means that PC-DMIS no longer positions print report text to the right edge of the page.

Summary Mode

- PCD-215417 - PC-DMIS now displays the cursor in the Edit window after you close the **Auto Feature** dialog box.

Vision

- PCD-216426 - You can now see that the EnumProp and the EnumAllProp I++ commands correctly reference the requested tool instead of the active tool.

- PCD-216606 - PC-DMIS now displays the calibration results correctly for the Chinese operating system.

- PCD-216525 - PC-DMIS now properly saves and restores the I++ tool properties.

Release Notes - 2021.1 SP3

Application Errors

You no longer get an application error in these instances:

- PCD-213322 - When you cancel a **Dimension** dialog and the Status window is visible.

- PCD-213335 - When you close a measurement routine while you are editing a report that contains a CAD Reporting Object (CRO).

- PCD-213348 - When you select items from the CAD, and your mouse cursor is above the first alignment in the Edit window.

- PCD-213396 - When you are in Step mode, and you step past the last command.

- PCD-213410 - When you save a label in an old format that contains an analysis object.

- PCD-213540 - When you cut or paste commands and then execute a feature.

- PCD-213565 - When you print reports that contain Geometric Tolerance labels.

- PCD-213578 - When you close the PC-DMIS application after you use the Quick Start in Tutor.

- PCD-213584 - When the Paste operation fails to create a Copy command.

- PCD-213723 - When you center the probe on a command after you delete a group that the command uses.

- PCD-213729 - After you delete command selections and then create an Auto feature.

Auto Features

- PCD-213268 - PC-DMIS now ignores the spacer value when you measure outer Auto features with zero sample hits and a negative spacer. This allows for the avoidance move to occur along the feature's vector.

CAD

- PCD-213687 - You can now import all CatiaV5 CAD models. This also fixed the issue where CAD surface tessellation would stop responding.

- PCD-213959 - PC-DMIS now correctly trims CAD surfaces on all holes.

Dimensioning

- PCD-210350 - You can now undo a feature's deletion to restore the correct link to its dimension.

- PCD-214967 - PC-DMIS no longer displays an error message when you click the **Update** button in the QDAS Configurator's **Update Window** dialog box.

Gages

- PCD-210252 - The controls in the **Caliper** dialog box no longer overlap.

GD&T Dimensions

- PCD-213575 - The Iterate and Re-pierce CAD now works for Geometric Tolerance commands.

- PCD-213871 - You can now see the migration improvements made with the XactMeasure conversion to Geometric Tolerance commands.

- PCD-213908 - PC-DMIS now shows the nominal start point in Report, Dialog, and Dimension Info for Position tolerances in Geometric Tolerances.

- PCD-214776 - You no longer get an error in Geometric Tolerance when you reference a generic line as a datum feature.

General Application Issues

- PCD-210223 - PC-DMIS now opens more quickly.

HxGN SFx Asset Management

- PCD-214298 - Dimensions are no longer sent to SFx when the output parameter is set to None.

Laser

- PCD-203097 - You can now more easily select points on a Mesh object during alignment and feature extraction operations.

- PCD-215206 - The IPP Server with HPL now succeeds with multi-part scans.

Q-DAS

- PCD-213566 - The correct value for K2020 is now defined as required by QDAS.

- PCD-214558 - You can now report the tolerances of the TP axes option in the QDAS Interface.

Reporting

- PCD-213926 - Vertical lines in custom reports are now correctly aligned for all screen resolutions.

Summary Mode

- PCD-214974 - The Tip Vector option is now available in the Clearance Cube context menu in Summary mode.

Release Notes - 2021.1 SP2

Application Errors

You no longer get an application error in these instances:

- PCD-203819 - When you open the **Grid Scan** (**Insert | Scan | Grid**) dialog box, clear the **Select** check box under the CAD controls area and then select the item on the CAD.

- PCD-204768 - When you switch between the portable interfaces and then click the **File** menu.

- PCD-209214 - When you import a .dxf file in certain cases.

- PCD-211329 - When you close PC-DMIS on the Arm2 computer after you complete your work on dual arm.

- PCD-212224 - When you open a measurement routine from the protected directories.

- PCD-212766 - When you copy and paste a true position dimension that contains a laser feature as a datum.

Auto Features

- PCD-211055 - PC-DMIS now avoids the probe collision when you measure a small cylinder feature with a probe size more than 2/3 the diameter of the hole.

- PCD-211587 - PC-DMIS no longer resets the actual values to the nominal values on some Auto features that use scanning strategies when path lines are set to show or hide.

- PCD-212194 - PC-DMIS now consistently saves the COM port setting for the HP-C-VE probe.

- PCD-212277 - PC-DMIS now correctly converts the dimension units for the legacy position of a slot when you use the LF and WF axes.

CAD

- PCD-198413 - You can now define the A and B wrist angles in the **Measure Probe** dialog box from the **Wrist Calibration** area. This allows you to put the related Offset values in the controller.

- PCD-209181 - You can now see that the revolved surfaces are correct when you import a CAD model.

- PCD-211295 - PC-DMIS no longer creates files for mini routines when you clear the **Support execution time display and Inspect** check box in the **Setup Options** dialog box.

- PCD-212926 - PC-DMIS now adds all the visible geometry of the imported CAD model into the active Model View when a Model View is active, and you merge an imported CAD file.

- PCD-211966 - PC-DMIS now correctly updates wrist angles for Paste with Pattern.

CMM

- PCD-211352 - PC-DMIS no longer shows a probe error when you take manual hits for the TP200 probe on a Wenzel controller.

Dual Arm

- PCD-211667 - PC-DMIS no longer keeps the **Execution** dialog box open when you calibrate a group of tips on the Arm 2 contact probe.

GD&T Dimensions

- PCD-206584 - PC-DMIS no longer reverts back to **Median Points** in the **Geometric Tolerance** dialog box when you press F9 on the geometric tolerance concentricity command.

HxGN SFx | Asset Management

- PCD-212187 - PC-DMIS now updates Edge Client data streams to add session trace fields.

Laser

- PCD-202632 - You can now use animation speed for Collision Detection. Also, the TTP Circular Plane now supports circular and straight paths.

Q-DAS

- PCD-209253 - PC-DMIS now shows the zero value for K2008 in a .dfq file when the tolerance zone for a position dimension is only in one axis.

- PCD-210023 - PC-DMIS now controls K2005 for the profile characteristics with the Q-DAS Interface Settings.

Reporting

- PCD-209384 - PC-DMIS now opens reports that contain many graphical elements a lot quicker.

- PCD-210256 - PC-DMIS now correctly inserts report labels in reports.

- PCD-211674 - PC-DMIS now displays the custom report properly when you delete a dimension from a measurement routine and then open an existing custom report.

- PCD-212153 - PC-DMIS now shows correct columns in the PDF report when a measurement routine contains customized dimension formats.

Summary Mode

- PCD-211531 - PC-DMIS now properly shows the selection of items when you copy and paste items.

- PCD-212392 - You can now perform Shift + Tab selections correctly.

Temperature Compensation

- PCD-212274 - PC-DMIS now correctly converts the temperature values when you switch from Celsius to Fahrenheit in the **Temperature Compensation Setup** dialog box.

Vision

- PCD-210255 - You can now see the correct verification results after you perform a gage calibration for the Chinese Operating System.

Release Notes - 2021.1 SP1

Application Errors

You no longer get an application error in these instances:

- PCD-209148 - When you click the **Generate** button on the **Scan** dialog box to re-generate hits after you edit a scan feature.
- PCD-210119 - When you copy true position dimensions in certain cases.
- PCD-210133 - When you delete features that use true position legacy dimensions.
- PCD-210361 - When you open PC-DMIS Online in certain cases.
- PCD-210366 - When the Romer interface fails to initialize in certain cases.
- PCD-210455 - When you switch from probe to scan in certain cases.
- PCD-210456 - When you select **File | Close** in certain cases.
- PCD-210466 - When you preview a pointcloud in certain cases.
- PCD-210587 - When you select **File | Exit** in certain cases.
- PCD-210593 - In the **Probe description** area of the **Probe Utilities** dialog box in certain cases.
- PCD-210681 - When PC-DMIS displays a license failure error message immediately after you open PC-DMIS.
- PCD-210719 - When you close a measurement routine with an active clearance plane.
- PCD-210955 - When you drag and drop an item from Summary mode to within or outside (such as custom report) Summary mode.
- PCD-210987 - When you calibrate probes in certain cases.
- PCD-211001 - At the end of the execution when you switch measurement routines.
- PCD-211060 - When you calibrate tips in certain cases.
- PCD-211077 - When the device manager interface generates an error message before PC-DMIS is ready.
- PCD-211122 - When you close a measurement routine in certain cases.
- PCD-211128 - When you perform an undo operation on an alignment.
- PCD-211308 - When you carry tolerances forward.
- PCD-211353 - When you close a measurement routine and then immediately open another measurement routine.
- PCD-211969 - When the GD&T Selection option is not available in your license and you select the **Pan, Zoom, Rotate** tab in the **CAD and Graphic Setup** dialog box.

Auto Features

- PCD-185254 - You can now change the **Row overlap** value in the **Auto Feature** dialog box on Auto Laser plane features.

- PCD-210189 - You can now see the improved spectrum output for the Precitec CHRocodile S and CHRocodile SE controllers.

- PCD-210200 - You can now see that Re-measure works correctly when you use Rmeas on all contact features.

- PCD-211612 - You can now see that, when in Offline mode and you measure an Auto Circle Contact with zero sample hits relative to a feature, PC-DMIS projects the circle onto the theoretical plane of the circle.

CAD

- PCD-210145 - You can now see all the CAD entities when you import a CAD file.

- PCD-210872 - You can now see an improved import of CAD STEP files.

CMM

- PCD-163494 - PC-DMIS can now save the wrist speed in the settings editor whenever you have PC-DMIS read the machine defaults on startup. To do this, mark the **Read machine defaults on startup** check box for FDC controllers in the **Machine Options** dialog box.

- PCD-211016 - You can now correctly calibrate multiple arms in INCH mode when you use the AUTOCALIBRATE/MULTIPLEARM command.

- PCD-211376 - PC-DMIS no longer converts the external command line from lowercase to uppercase.

GD&T

- PCD-208983 - PC-DMIS now allows 10 million hits for features in the **Geometric Tolerance** dialog box.

- PCD-211223 - You can now see that the FCF or Tolerance indicator with ISO behaves correctly for datums in the lower segment between Position and Line Profile or Surface profile.

HxGN SFx | Asset Management

- PCD-196206 - PC-DMIS no longer sends incorrect error events when you enable the Find Hole option for auto features.

Laser

- PCD-208943 - You can now execute thickness scan features with the Precitec 2SHS controller.

- PCD-209468 - PC-DMIS now automatically performs a dark reference with a probe change to an HP-OW sensor.

Probe

- PCD-211073 - You can now show or hide the Probe Readouts window through automation.

Protect

- PCD-212003 - PC-DMIS now provides edit capabilities to authorized users to modify certified measurement routines created prior to PC-DMIS 2021.1.

Q-DAS

- PCD-210022 - You can now see the material condition information of K2020 in a part-specific Q-DAS data file.
- PCD-210585 - You can now see the Max/Min profile reporting in a .dfq file for the Geometric Tolerance dimensions.

Reporting

- PCD-210875 - You can now see the correct ball color for leader lines drawn on the CAD reporting object in a custom report.

Temperature Compensation

- PCD-208280 - PC-DMIS Temp Comp V2 now lets you detect the mismatch in the compensation method and apply the correct method for the actual CMM for these two conditions:
  - H3C/FDC/CC controller
  - Measurement routines created with Temp Comp V1 that use the "Read Temperatures" method

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Release Notes

PC-DMIS 2021.1 is a significant development release of the software. For detailed information and video tutorials about this release, visit hexagonmi.com/products/software.

Featured Items

Summary Mode Transformation

You can now see Summary mode with a new look and better experience. Also, you can now show and hide features with a single-click. You no longer need to access the Feature Shortcut menu in the Graphic Display window.

See "In Summary".

Embrace the Curve

Paste with Pattern now allows you to copy and paste items at specified intervals along a CAD curve. There is also an improved workflow and a reduction of unnecessary commands for an existing functionality.

See "Embrace the Curve".

Scan and Go in Inspect

You can now use a barcode or QR code to read in a measurement routine. This provides a faster way for you to recall and launch the correct measurement routine as soon as it's scanned.

See "Scan and Go".

SFx Asset

You can now connect your assets to your smart phone with the new mobile app version of SFx Asset Management. This allows you to receive and manage notifications while on the go.

See "SFx Asset".

GD&T Selection From File

The **GD&T Selection Mode (from file)** now identifies plus and minus tolerances.

- You can select the tolerances in the same way as any other GD&T item.

- Except for linear dimensions, the process to define the needed features is the same as any other element. The exception is a linear dimension.

- A pause button is available on the widget to pause the creation process. You can use this button when you cannot create needed features with quick features.

- If a print is ballooned, the balloons are also recognized.

See PCD-196526.

Measurement Strategy Editor (MSE)

The Measurement Strategy Editor now supports smart parameters. These are the current supported parameters:

- Circle - Number of hits

- Cylinder - Hits per level

- Circle Adaptive Scan - Scan Speed, Point density, and Acceleration

- Cylinder Concentric Circle Scan - Scan Speed, Point density, and Acceleration

You can now define custom parameters based on the diameter. A grid allows you to define the value for the parameter based on its size. You can enable or disable smart parameters. If you want, you can apply them to Quick Features.

See PCD-201271.

Collision Detection

You can now see an improved collision detection when calibrating tactile probes that are extended to horizontal and dual arm machines.

See PCD-162853.

New Enhancements

CAD

- The CAD tessellation algorithm has been improved. You can now see up to a 40 percent reduction in the CAD size for large CAD files. See PCD-140675.

- You can now show feature labels on the CAD model based on a visible range specified by a rotation angle. See PCD-162940.

- You can now adjust the level of transparency for the feature labels. See PCD-172856.

- You can now use the Virtual Machine and animation only in Offline mode. See PCD-195204.

- You can now use the GD&T from File option to read the default tolerances and print the units from the title block. You can use this information while you process elements from the print. See PCD-198436.

- The Demo mode option has been removed. See PCD-198437.

- You can now see the HP-S-X1C/H Stylus Clamping (1x D2) probe component in the **Probe Utilities** dialog box. See PCD-202385.

- You can now see Creo 7, NX 1926 series, Catia V6 R2020, and Inventor 2021 for the Direct CAD translator. See PCD-185594, PCD-200074, PCD-202402.

HTML5 Help

- You can now easily give feedback to the Documentation Team on each topic from a comment icon in the header. Additional feedback options are available in the form of **Yes** and **No** buttons at the bottom of each topic. You no longer need to expand the footer's drop-down link to submit feedback. See PCD-188659.

- There is now an improved introductory page for the PC-DMIS Help. It provides a better user experience with a prominent search bar, embedded What's New content, video links, and so forth. You can help us improve the introductory page with the Take Survey button on that page. See PCD-200562.

Machine Interface

- PC-DMIS now supports the CSI Box (Tech80) in the Manual CMM Interface. See PCD-183315.

Pointclouds

- For sensors that support intensity values, you can now set the Pointcloud display to grey scale. See PCD-170544.

- You can now project all the points of the pointcloud onto the tessellated CAD model. To do this, select the **Direct projection** check box in the Surface Colormap **Pointcloud Operator** dialog box. Without **Direct projection**, PC-DMIS searches for the closest point at each triangle vertex within a default angle. See PCD-195476.

Portable

- You can now access the probe calibration date and time via automation. To do this, use the ASSIGN variable and PROBEDATA ("Date") and ("Time") commands. PC-DMIS now stores the value of date and time in the **Edit Probe Data** dialog box for portable arms. See PCD-154363.

- You can now use the **Area Scan** and **Line Scan** dialog boxes and click on the CAD model to define the area or line to scan for the ATS600 tracker. You can also take hits with the tracker to define the area or line from the respective dialog boxes. See PCD-169487.

- You can now insert the Line Scan from the menu (**Insert | Scan | Line Scan**), or click the **Line Scan** button from the **Tracker Measure** toolbar. With the line scan, you can use the Surface probe to scan and store linear or crossline data in a pointcloud (COP) based on the settings defined in the Overview Camera. See PCD-189786.

- You can now see the latest Faro portable arm driver version 6.6.0.2. See PCD-199173.

- PC-DMIS now colors the trigger zone for the Point Auto Trigger and Point Manual Trigger to show when the probe is inside the zone (green) or outside the zone (yellow). See PCD-200200.

- You can now create offline Area and Line scans for the ATS600 tracker. See PCD-201150.

- You can now separate the Romer RDS portable arm contact probe components so that you can hide the probe body in the Graphic Display window. If you use a previous versions of PC-DMIS, you need to first delete the Romer RDS contact probe files to see the individual components. After you delete the probe files, they are automatically re-created the next time you connect to the portable arm. See PCD-203220.

Protect

- PC-DMIS now only allows you to open certified measurement routines in Protected mode.
  - To edit a certified measurement routine, a Protect-User group member must click the **Edit Certified Routine** button on the **File Operations** toolbar.

  - To recertify a measurement routine with changes, a Protect-Programmer group member must click the **Recertify** button on the **File Operations** toolbar.

This means the operator can execute the certified measurement routine even when the changes are in-progress for the next certified version.

See PCD-197873.

- A Protect-Programmer group member can now compare the differences between the certified measurement routine and the revised measurement routine visually with colored text in the **Revision** dialog box. See PCD-197875.

- The software now tracks changes to GEOMETRIC TOLERANCE commands and displays them in the protect log file. See PCD-197878.

Summary Mode

- If you are in Summary mode, you can now use a toggle button next to the MODE command to switch between DCC and Manual modes. See PCD-197650.

- You can now search for commands in the **Add Command** dialog box. See PCD-201366.

List of Fixes

Application Errors

- PCD-171147 - You no longer get an application error when you execute a MOVE TO or POINT TO command in a measurement routine with a tracker.

- PCD-183005 - You no longer get an application error when you assign a property in custom reports.

- PCD-186086 - You no longer get an application error when you import a Solidworks DCI file.

- PCD-194418 - You no longer get an application error during the focus part of the optical calibration process after you reset the tips in the **Probe Utilities** dialog box.

- PCD-195565 - You no longer get an application error when you switch the STATS command from On to Off and then you click the left button on your mouse.

- PCD-199246 - You no longer get an application error when you open the **Area Scan** dialog box and click the toggle button to turn the Overview Camera on or off.

- PCD-200090 - You no longer get an application error when you save 3D PDF reports.

- PCD-201056 - You no longer get an application error when you add tips to a CMS probe in the **Probe Utilities** dialog box.

- PCD-201065 - You no longer get an application error for a set of constructed scan features on a surface profile when you migrate from XactMeasure to a geometric tolerance.

- PCD-203637 - You no longer get an application error when you modify an animated machine in Command mode.

- PCD-204426 - You no longer get an application error when you set the value greater than zero in the **Any order execute tolerance** box of the **Setup Options** dialog box and then perform a scan with a portable arm.

- PCD-205151 - You no longer get an application error when you copy and paste in PC-DMIS.

- PCD-205626 - You no longer get an application error when you import a PMI CAD model that contains multiple GD&T callouts with multiplier wrapped within parentheses.

- PCD-205678 - You no longer get an application error when you edit a pointcloud cross section, create a radius gage, and click **Apply** in the **Pointcloud Operator** dialog box.

- PCD-208339 - You no longer get an application error when you execute a basic script.

CAD

- PCD-134548 - You can now see that Void Detection works correctly when you set **Depth** as 1 in the **Auto Feature** dialog box.

- PCD-171072 - You can now import and export DMIS files for 2D Angle and Distance commands.

- PCD-173277 - PC-DMIS no longer hangs when you execute a GOTO command inside a nested loop.

- PCD-175712 - You can now create Auto circle hits at the correct depth.

- PCD-184700 - PC-DMIS now displays the cylinder correctly in the Graphic Display window after you import a DMIS file and create a cylinder feature.

- PCD-184886 - You can now see that Quick Path works well with star probes.

- PCD-187458 - PC-DMIS now displays the text correctly under the **Path Definition** tab in the **Auto Plane** dialog box.

- PCD-189143 - You can now see that Auto Insert Moves works well with the Move Clearance Plane command.

- PCD-192457 - PC-DMIS no longer causes problems when you select **File | Direct CAD Interface | CATIA 5** and import the file.

- PCD-194188 - You can now create quick scan and quick feature points when you select **File | Direct CAD Interface |Creo**.

- PCD-197533 - You can now import CREO files from the **Import** dialog box when you click **Import from CAD file** from the **CAD Setup** toolbar.

- PCD-198039 - You can now see better tessellation for spherical surfaces.

- PCD-202714 - You can now see the correct unit conversion to define the CMM limits for the Legs Collision in inches.

- PCD-203116 - You can now see the correct definition of the probe styli 1x25mm M3 and 1x10mm M2 in the **Probe Utilities** dialog box.

- PCD-203895 - You can now deselect a probe angle in the **Add Angles** dialog box.

- PCD-204063 - PC-DMIS now only creates one circle on the selected plane side of a counterbore. PC-DMIS no longer creates circles on both sides of the counterbore.

CMM

- PCD-178469 - PC-DMIS now supports all Tool.C() functionalities to the PC-DMIS I++ server.

- PCD-198173 - You can now perform multiple arm calibrations on the qualification sphere in a measurement routine with an active alignment when there is an axis rotation.

- PCD-204168 - The Arm2 CMM limits are now drawn in the Graphic Display window.

ESF (VWMP)

- PCD-190868 - PC-DMIS now updates the dimension of the ESF features when you change the current alignment.

- PCD-194500 - PC-DMIS now computes the correct actual value in a measurement routine when you create ESF (VWMP) features for cylinder or cone from an external application.

Excel Form Report

• PCD-195302 - You can now see that the Excel Form Report works correctly when you report the half-angle dimensions of a cone.

Featured Items

Summary Mode Transformation

You can now see Summary mode with a new look and better experience. Also, you can now show and hide features with a single-click. You no longer need to access the Feature Shortcut menu in the Graphic Display window.

See "In Summary".

Embrace the Curve

Paste with Pattern now allows you to copy and paste items at specified intervals along a CAD curve. There is also an improved workflow and a reduction of unnecessary commands for an existing functionality.

See "Embrace the Curve".

Scan and Go in Inspect

You can now use a barcode or QR code to read in a measurement routine. This provides a faster way for you to recall and launch the correct measurement routine as soon as it's scanned.

See "Scan and Go".

SFx Asset

You can now connect your assets to your smart phone with the new mobile app version of SFx Asset Management. This allows you to receive and manage notifications while on the go.

See "SFx Asset".

GD&T Selection From File

The **GD&T Selection Mode (from file)** now identifies plus and minus tolerances.

• You can select the tolerances in the same way as any other GD&T item.

• Except for linear dimensions, the process to define the needed features is the same as any other element. The exception is a linear dimension.

• A pause button is available on the widget to pause the creation process. You can use this button when you cannot create needed features with quick features.

• If a print is ballooned, the balloons are also recognized.

See PCD-196526.

Measurement Strategy Editor (MSE)

The Measurement Strategy Editor now supports smart parameters. These are the current supported parameters:

- Circle - Number of hits

- Cylinder - Hits per level

- Circle Adaptive Scan - Scan Speed, Point density, and Acceleration

- Cylinder Concentric Circle Scan - Scan Speed, Point density, and Acceleration

You can now define custom parameters based on the diameter. A grid allows you to define the value for the parameter based on its size. You can enable or disable smart parameters. If you want, you can apply them to Quick Features.

See PCD-201271.

Collision Detection

You can now see an improved collision detection when calibrating tactile probes that are extended to horizontal and dual arm machines.

See PCD-162853.

GD&T

- PCD-201661 - There is now a dark theme support for the import window when you use **GD&T Selection Mode (from File)**.

- PCD-201919 - When you import a PMI CATIA model that is in inch units into PC-DMIS, the software no longer converts the model to metric units. This used to create problems when you used GD&T Selection.

- PCD-202166 - You can now see improved GD&T from file recognition when you use high DPI monitors.

- PCD-202167 - There are now better messages when GD&T from file recognition fails.

- PCD-202236 - You can now see a warning message when you clear the **Advanced Modifiers** check box in the **Geometric Tolerance** dialog box.

- PCD-204161 - PC-DMIS now doesn't allow to delete the commands in Summary mode when you press F9 and edit any command.

- PCD-204185 - You can now see the same deviation direction for the geometric tolerance cylindricity textual analysis as the legacy cylindricity textual analysis.

- PCD-205520 - You can now see the same ID in the **Geometric Tolerance** dialog box as defined in the **ID Setup** tab of the **Setup Options** dialog box.

- PCD-205908 - You can now update DIMINFO and POINTINFO expressions when you remove the segment from the tolerance command.

Home Page

- PCD-176579 - Only administrators can change the **Web Access** settings for the Home Page with this release.

HxGN SFx Asset Management

- PCD-187972 - PC-DMIS no longer fails to send BusyCreate events when you edit the measurement routine.

Laser

- PCD-195009 - PC-DMIS now displays a clear message when you exceed the maximum number of control points in a scan.

- PCD-201151 - You can now only execute a ring scan when you create it in an online measurement routine. This means you no longer can execute a ring scan when you create it in an offline measurement routine.

- PCD-204469 - You can now create a 30-degree HP-O sensor.

- PCD-204573 - PC-DMIS no longer fails to execute a constructed midpoint feature from two ESF features.

Pointcloud

- PCD-67283 - PC-DMIS now sets the non-integrated graphics card as the default card for laser or pointcloud users.

- PCD-175305 - You can now create a Thickness colormap command from the Edit window. To do this, in Command mode type COPT to display the COPTHKCOLORMAP command, and then press the Tab key.

- PCD-197683 - You can now edit Laser scan profiles inserted in the measurement routine from the Edit window when you press F9.

- PCD-200680 - You can now retain a hidden state of a scan feature's display line on CAD in the Graphic Display window even after you execute a measurement routine or edit a scan feature. This means you no longer need to save, close, and then reopen a measurement routine after you select **Off** from the **Display** area in the **Edit Feature Appearance** (**Edit | Graphic Display Window | Feature Appearance**) dialog box.

- PCD-203519 - You can now see the reduced triangle size in the Mesh SELECT command.

- PCD-206400 - You can now insert the correct laser scanning profile from the **Laser Data Collection Settings** dialog box.

Portable

- PCD-199028 - You can now see that the **Distance to Target** and **With Auto Zoom** options works well for the **Probe Readouts** window when you select the **Auto scale manual feature during execution** check box in the **Setup Options** dialog box.

- PCD-201633 - You can now save a measurement routine that contains an OPTIONPROBE command.

Reporting

- PCD-185278 - You can now see the correct display of the angle between the two laser planes for the Angle dimension.

- PCD-199626 - You can now insert a SNAPSHOT command above the POINT COLORMAP command in the Edit window.

- PCD-201456 - You can now see the **3D PDF** option in the **Output Type** list from the **Report Output** dialog box. This means you no longer need to configure this in the **Output Configuration** (**File | Printing | Report Window Print Setup**) dialog box.

- PCD-202524 - The Snapshot command now hides the pointcloud in the image when the pointcloud is hidden in the CAD in the Graphic Display window.

- PCD-204753 - You can now see that PC-DMIS forms have an improved size when you view them from Inspect or other automation interfaces.

- PCD-207963 - When you copy and paste parameters for auto features, you no longer need to paste the parameters twice. It now pastes the parameters the first time.

Vision

- PCD-152812 - PC-DMIS no longer makes a line feature after the second link when you are trying to create a 2D profile feature in the Live Image view.

- PCD-168844 - The CAD View now works well on various features when you switch **Point Density** to **None**.

- PCD-190550 - You can now see the correct tip size of the TIP2BY57MM_LEITZ component in the Probe.dat file.

- PCD-193296 - PC-DMIS now displays the correct arc position at the correct measuring position when you measure a portion of a circle.

- PCD-194053 - You can now define the 40.00-BT40(Shank) probe from the **Probe Utilities** dialog box so that you no longer get an error message.

- PCD-194461 - PC-DMIS no longer hangs when you execute multi-capture vision features with automatic and non-automatic targets.

- PCD-200993 and PCD-201666 - PC-DMIS now uses the correct avoidance move after you perform a 4-axis scan inside linear open and linear closed scans.

Information about this Release

We at Hexagon Manufacturing Intelligence are proud to bring you PC-DMIS 2021.1. PC-DMIS brings together aspects of the software for the development of a complete manufacturing process control solution. With PC-DMIS, dimensional measurement data can flow through your organisation, as it is collected from coordinate measuring machines (CMMs), portable measuring arms, and laser trackers.

The testing of this version has been significant. We'd like to take a moment to discuss this process and also make you aware of the various components of testing.

Testing consists of two parts. These can be described as functional testing and integration testing.

- The vast majority of testing effort goes on in the functional area. This is the testing that determines that specific functions that are core to the software, regardless of what type of machine is used, are working correctly.

- The integration testing is essentially a testing of the interface with a particular type of machine.

In the ideal scenario, Hexagon Manufacturing Intelligence would have access to at least one of every piece of hardware running the software that is operating in the field. However, in practical terms, this is impossible. This integration test plan is then performed on as many types of machines as we have available.

Should you experience problems with your system after you install PC-DMIS 2021.1, it could possibly be an integration problem. If it is a problem of this nature, it will probably be evident immediately upon first use of the possibly untested configuration. To report any integration problems, see "Contact Hexagon Manufacturing Intelligence". Should such a problem materialize on a commercial release, you will be given the highest priority for correcting these problems.

For existing users of the software who currently have earlier versions of the software installed, it is advised that you install PC-DMIS 2021.1 into a new directory. This lets you continue to use your current version if you have problems with the new version.

Important Information about the Geometric Tolerance Command

The release of PC-DMIS 2020 R2 introduced the Geometric Tolerance command which completely replaces XactMeasure (Feature Control Frames). The Geometric Tolerance command offers numerous improvements over XactMeasure and provides these benefits:

- Support for the latest revisions of GD&T standards. The standards governing dimensional analysis have or will soon be updated to define datums in a precise

and consistent way and to provide a new, single value definition for profile (ASME Y14.5 – 2009, ASME Y14.5 – 2018, ASME Y14.5.1 - 2019, ISO 1101: 2017, ISO 5459: 2011).

• Robust and intelligent validity checking of feature control frames and measurement strategies of associated features.

With the replacement of the XactMeasure command with the new Geometric Tolerance command, when you open measurement routines in this latest version, PC-DMIS now does an automatic review and migration.

The reason for this automatic review is that in some cases there may be invalid GD&T or measurement strategies in the original routine.

With this latest version, PC-DMIS now automatically checks for and only allows the creation of correct GD&T commands. In previous versions, this was less stringently enforced. Now, in this latest version, when you open a measurement routine, PC-DMIS performs the validity checks, and then one of these cases occurs:

• All the XactMeasure GD&T commands in the original measurement routine are valid or these routines contain no XactMeasure commands (Legacy dimensions remain unaffected). In this case, PC-DMIS doesn't generate any migration report which indicates that the migration is successful and needs no further action.

• The original measurement routine contains invalid XactMeasure GD&T commands or measurement strategies. In this case, PC-DMIS generates a detailed migration report to notify you of any changes that PC-DMIS made and any other items that require further attention.

> **(!) IMPORTANT**
>
> In all cases, to maintain compatibility with your previous versions, PC-DMIS retains the original unchanged measurement routine and sets it aside in this folder:
>
> C:\Users\Public\Documents\Hexagon\PC-DMIS\<version>\MigrationBackup, where <version> is the PC-DMIS version.
>
> Whenever PC-DMIS performs a migration, the probe hits, and probe paths of those measurement routines remain untouched.

We recommend that you can perform the migration process as a separate offline activity before you update your production machines. To help you with this, Hexagon has created a utility that sorts measurement routines based on the presence of a migration report.

- Routines that generate a migration report require review by a programmer.

- Routines without a migration report do not require a review, and you may release them to production.

To help with this offline migration, if needed, Hexagon can provide free access to an offline subscription to PC-DMIS for a limited time period.

For more details, please contact your local Hexagon representative.

Recommended System Requirements

Operating System

PC-DMIS 2021.1 operates under 64-bit Windows 10, Windows 8.1, Windows 8, and Windows 7. No other operating systems are supported.

> **NOTE**
>
> For HP-L systems and systems that use RS-SQUARED sensors that run PC-DMIS in DCC mode, you need to use a 64-bit Windows 10 Pro Computer with up to 4 Cores.

You can find a list of supported operating systems for most versions of PC-DMIS here:

https://support.hexagonmi.com/s/article/Windows-OS-Compatibility-Listing-for-PC-DMIS

> **IMPORTANT**
>
> When you use third-party drivers, be sure to contact your local Hexagon Manufacturing Intelligence representative to ensure operating system compatibility. Running PC-DMIS inside a Virtual Machine (VM) is supported only if the VM supports OpenGL 3 or higher.

> **NOTE**
>
> The Matrox Framegrabber PC-DMIS Vision hardware component does not support a 64-bit operating system.

Microsoft .NET Framework

Microsoft .NET Framework 4.6.1 for Windows. If you do not have Microsoft .NET Framework 4.6.1, the PC-DMIS installer will install it for you.

RAM

• 4 GB of RAM or higher

The size of the CAD data file and the tessellation multiplier value used affect the amount of memory needed. These both affect the amount of tessellated facets needed to display the model. The smaller the tessellation multiplier value used, the more memory needed for the facets. For large CAD models, this could cause an "Out Of Memory" error. If this occurs, the current PC-DMIS session will be left in an unstable state and should be terminated.

The default tessellation multiplier value is 1.0. Setting a tessellation multiplier of 0.1 will result in a 10 to 20 percent increase in the memory required over the default value of 1.0. Decreasing the tessellation multiplier further to 0.01 will result in an additional 50 to 65 percent increase of memory required.

• 1 GB of video RAM

• 64 GB of RAM Dual-Channel @1063 MHz DDR4-2666 MHz ECC RDIMM memory (for HP-L systems and systems using RS-SQUARED sensors)

CPU

• 2 GHZ or higher quad core processor

• Intel Xeon W-2223 Processor (3.6GHz, 3.9GHz) for HP-L systems

• Intel Xeon Processor E3-1505M (3.00 GHz) for systems using RS-SQUARED sensors

• Intel Core i7 9th Generation or higher (for example, i7-9xxxHx) 6 Cores hyper-threading enabled (for HP-L systems and systems using RS-SQUARED sensors)

Graphics

Any popular graphics card that meets or exceeds the following suggested minimums:

• GPU Memory 2 GB DDR3*

• 6 GB Memory Bandwidth 29.0 GB/s (for HP-L systems)

• CUDA Cores 384

• Open GL 3.0

• NVIDIA Quadro P5000 (4 GB) (for HP-L systems and systems using RS-SQUARED sensors)

• AC or AX type Wi-Fi card for systems using RS-SQUARED sensors

* For an RS4 laser sensor or later model, you need to have a GPU with at least 4 GB DDR3.

The graphics driver must support OpenGL 3.0 or higher. A warning message appears on PC-DMIS startup if the driver does not support OpenGL 3.0 or if your graphics driver is more than three years old.

Hard Drive

- 2 GB of free hard drive space plus allocated virtual memory of eight times the largest CAD file used

- SSD drive, HDD 10K, or two disks in RAID 0 mode (high-performance hard disk drive)

- 128 SSD, 128 SSD RAID, 1 TB HDD

Display

Screen resolution of 1920 x 1080 or higher

> **NOTE**
>
> If you use a high resolution monitor under low-light conditions, some PC-DMSI UI elements may be difficult to see. If so, you can try these options:
>
> - From the PC-DMIS Home screen, select the theme (**Light** or **Dark**) that provides the best UI visibility. For details on how to change the PC-DMIS theme, see "Changing the Theme" in the online Help.
>
> - Increase the ambient lighting.

Connectivity

- One Serial port

- Three Ethernet ports. This may be required for specific installations in consideration of local needs, including but not limited to CMM systems where one port is required for controller communications and another for intranet/Internet communications.

- Two USB ports

- A properly-configured LMS license or a HASP key (a physical USB portlock)

- LAN port with Intel Chipset (for example, I219) (for HP-L systems)

A HASP key does not act as general-purpose data storage; therefore, you cannot use a HASP key to store (download) arbitrary data from a computer. Similarly,

you cannot use a HASP key to put (upload) arbitrary data on a computer. Also, only Hexagon Manufacturing Intelligence applications can read or write to a HASP key; other applications do not have this capability. As a result, you cannot use a HASP key to load and unload data to and from a computer.

Firmware Distributed Controller (FDC) Connection

PC-DMIS establishes a connection with FDC with the following parameters:

- Controller address - 100.0.0.1

- PC-DMIS computer address - 100.0.0.2

- Subnet mask - 255.255.255.0

- Port - 1234

Pcdlrn.exe and PC-DMIS process listens on port 1294.

Some other ports used are 138 and 1900. The port 1900 was listed as a UDP port.

LMS Licensing

The License verification server and ClmAdmin utility for node locked licenses:

https://licensing.wilcoxassoc.com/flexnet/services

The Floating License servers with Flexnet LmAdmin64.exe uses port 27000-27009 on the server. The LocalHost server on port 8090 and older versions defaults to port 8080. You can define these ports when you install license server or through the server interface. These are only Offline licenses when you are not connected to a machine.

Hexagon Universal Updater

WebSocket URL - ws://webupdater.hexagonmi.com

Server - http://webupdater.hexagonmi.com/v2/db.live

Username - Null

Password - Null

Port - 80

File - updates_v4.20190702090658181.db

If you select to install Offline Help when you update the software, it opens the second remote address on port 443. This port verifies the license.

CrashSender1403.exe

This executable is of PC-DMIS Crash Report Utility tool. You can turn off this option because of Windows Event management.

C:\Program Files\Hexagon\2021.1 64-bit\Launcher\HexagonLauncher.exe

LauncherPC-DMIS.config/nocrashdump

A few Hexagon products need to establish remote connections such as Pulse, Notification Center/Message Lights and Smart Factory.

Browsers

• Microsoft Edge, Mozilla Firefox, Google Chrome

> **NOTE**
> We recommend that you keep your browser up to date by installing its latest version.

Anti-Virus Software

Hexagon Manufacturing Intelligence used the Sophos anti-virus tool to test PC-DMIS 2021.1. You will need to confirm the performance of any other anti-virus tool.

http://sophos.com/products/enterprise/endpoint/security-and-control/

Solutions for CMMs Using RS-232 Communications

If you are installing PC-DMIS 2021.1 on a new or existing computer, but you have an older CMM model that uses RS-232 communications, then you will need to install one of these solutions on your computer:

• An external RS-232 serial-to-USB adapter cable plus the serial-to-USB adapter cable driver

• An internal serial adapter card with serial ports

Installing the Software

To install the software, follow these steps:

Step 1: Check System and Hardware Requirements

Before you attempt to install a new version, ensure that you meet the system and hardware requirements discussed in "Recommended System Requirements [57]". You must also have a USB portlock or valid LMS license for the installation to work. Your IT specialist can help you with this information.

- To get your computer's properties, highlight the **This PC** icon, right-click on it, and select **Properties**.

- To check the display properties for the graphics card, go to **Start** and type **Control Panel**, and then select **Display and Settings**.

Step 2: Log on as an Administrator

To install and run your new version for the first time, you must be logged on as a user with administrator privileges.

Step 3: Back Up Existing Settings

Back up your settings from your previous version. By default, PC-DMIS 2021.1 attempts to migrate existing settings from previous installs on the same computer, even from very old versions of the software where settings were stored in the pcdlrn.ini file.

- If your current version uses the pcdlrn.ini file for its settings, back up your pcdlrn.ini file. This file is in the Windows system directory. Save a copy of the file in a safe place.

- If your current version uses the PC-DMIS Settings Editor, back up your PC-DMIS Settings Editor data. To do this, follow these steps:
  1. Start the Settings Editor.

  2. Click the **Backup** button (or **Export**) to open the **Backup** dialog box.
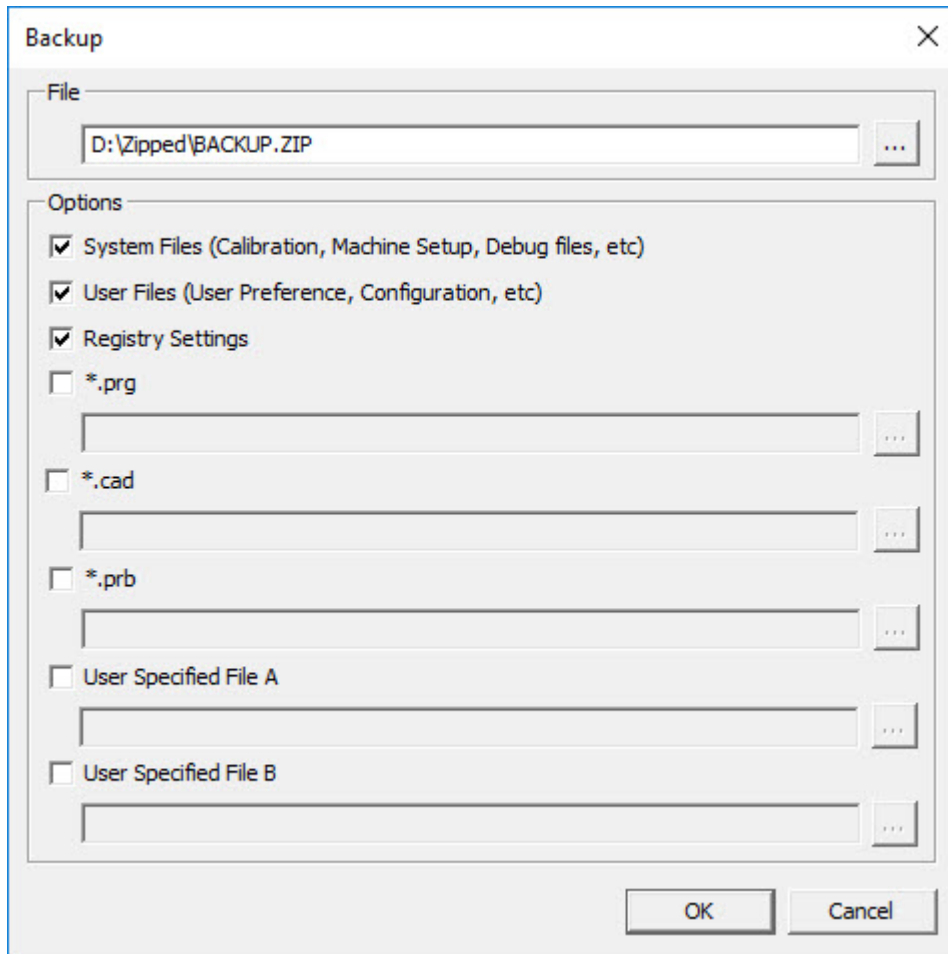
Backup dialog box

3. In the **File** box, define a safe location to save the backed-up files, and give the file a .zip extension.

4. Under the **Options** area, select the first three check boxes, and click **OK**.

If you replace your computer or transfer settings that reside on another computer, you can use the Settings Editor's **Backup** and **Restore** buttons:
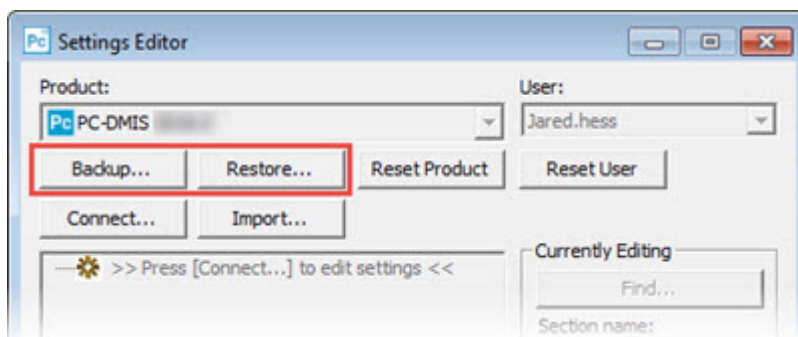
Backup and Restore buttons

For more information on the backup and restore functionality, refer to the Settings Editor documentation.

Backing Up Machine Files for an Xcel CMM or a Sharpe Controller

If you are using a Brown and Sharpe Xcel CMM or a CMM that uses a Sharpe controller, and you are going to install PC-DMIS 2021.1 on a new computer, save copies of the following CMM machine files from your previous version to a safe place:

• comp.dat
Starting with PC-DMIS 2013 MR1, the comp.dat file moved to:
C:\ProgramData\WAI\PC-DMIS*version*

• downl.oad

The files are located in the installation (root) directory for all software versions prior to 2013 MR1, regardless of the operating system.

The location of the installation (root) directory is:

C:\Program Files\WAI\PC-DMIS *version*

For versions of PC-DMIS up to and including 3.7 MR3, the location of the installation (root) directory is:

C:\PCDMISW

Backing Up Machine Files for a CMM with a DEA Controller

If you are using a DEA or other CMM with a DEA machine controller, and you are going to install PC-DMIS 2021.1 on a new computer, save copies of the following CMM machine files from your previous version to a safe place (the files vary according to the type of CMM):

• cosdat1.bin
• compens.dat
Starting with PC-DMIS 2013 MR1, the compens.dat file moved to:
C:\ProgramData\WAI\PC-DMIS*version*

• Fzyfile.txt
• Rcxfile.txt
• Rmxfile.txt
• Any file with your machine's serial number in its name

The files are located in the installation (root) directory for all software versions prior to PC-DMIS 2013 MR1, regardless of the operating system.

The location of the installation (root) directory is:

C:\Program Files\WAI\PC-DMIS *version*

For software versions up to and including 3.7 MR3, the location of the installation (root) directory is:

C:\PCDMISW

Step 4: Install the Software

The following steps run you through a typical installation. Your installation screens may differ if you are running a different version of PC-DMIS 2021.1 or if you are installing a custom build with additional options. In addition, your license may be configured with different options.

1. Locate the installation file on your installation media; or, if you downloaded it, open the directory that contains the downloaded file. The name of the installation file is:
   Pcdmis2021.1_release_##.#.###.#_x64.exe
   The # symbols represent the version and build numbers.

2. Right-click on this executable file and click **Run as administrator** to open the installation program.

3. If a security warning appears, click **Run**.

4. From the initial license screen, read the license agreement, and select the **I agree with the End User License conditions** check box.

5. In the box at the bottom, you can define the installation folder. By default, the file installs to:
   C:\Program Files\Hexagon\PC-DMIS 2021.1 64-bit

   To change the folder, either click the browse button () and choose a folder, or in the box, type a new path.

6. Once you accept the license agreement and choose the installation folder, click **Next** to open the licensing screen.

7. From the licensing screen, choose your license type:
   - **LMS (Software) License** - If you have a software license (called an Entitlement ID), select this option. Complete the boxes beneath this option.

   - **LMS License Server** - If you have a license server to connect to, select this option and then type the server address.

   - **HASP** - If you have a portlock (a physical USB device with the licensed options), ensure that it is connected to your computer, and then select this option.

   For help on how to set up an LMS license, see "LMS License Setup [66]".

8. Click **Next**.

9. Choose to install additional software components. If you chose a custom installation path, the additional software still installs to your default measurement routine directory (usually C:\Program Files\Hexagon\).
   - **PDF Converter 5.0** - This third-party tool converts PC-DMIS 2021.1 reports to PDF outputs.

If you are a Portable user and you have the appropriate license, you can select a Portable interface as your default. For details, see "Switchable Portable Interface" in the PC-DMIS Portable documentation.

- **Offline English Help** - This option installs the English HTML5 Help into an installation folder that you define in step 14. When you access the Help, PC-DMIS tries to use the Internet-based Help, but if it cannot detect an Internet connection, it then attempts to access this offline fallback Help. If you mark the **Use Offline Help** option from the **Help** menu, then it also accesses this offline fallback Help even if you are connected to the Internet. This option appears if you have not installed the offline Help yet. Once you install the offline Help, and you later install an update to PC-DMIS, any updates to the Help occur automatically without presenting a prompt.
  If you need a non-English offline Help, see "Installing Non-English Offline Help Files from Language Packs [80]".

- **Join the Hexagon Customer Experience Improvement Program** - To help improve the product and send usage data to Hexagon Manufacturing Intelligence, select this check box. To opt out of sending usage data, clear the check box. For more information about this program, visit the Hexagon Customer Experience Improvement Program website.

10. Click **Install** to start the installation. A progress bar shows the overall progress.

11. When the installation finishes, a screen shows any warnings or errors. It also contains these options:

    - **Launch PC-DMIS 2021.1 64-bit** - To launch PC-DMIS 2021.1 now, select this check box. If this is your first time installing this version on this computer, you should do this to initialize registry entries. For more information, see "Administrator Privileges Explained [69]".

    - **Show Release Notes** - To display a Readme.pdf file that shows what is new or has changed in this release once you click **Close**, select this check box.

12. Click **Close** to close the installation program.

13. If you have marked the **Offline English Help** check box in step 9, the Help installer program opens to install the offline Help.

14. In the box at the bottom, you can define the installation folder. By default, the file installs to:
    C:\Program Files\Hexagon\PC-DMIS 2021.1 64-bit English Help

    To change the folder, either click the browse button ( ) and choose a folder, or in the box, type a new path.

15. Click **Install** to start the installation. A progress bar shows the overall progress.

16. When the installation finishes, a screen shows any warnings or errors. Click **Close** to close the installation program.
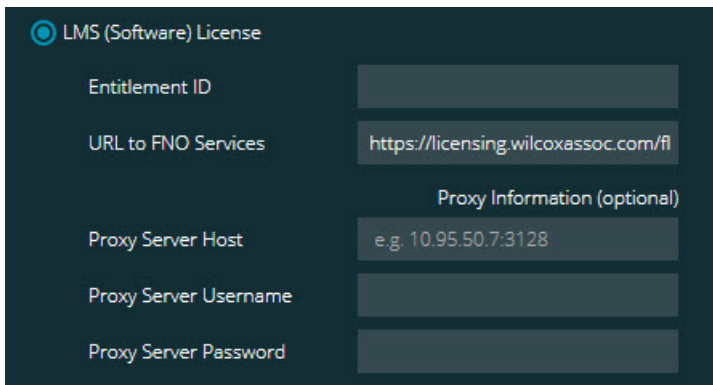
LMS License Setup

This topic provides information if you need to:

- Set up your LMS (software) license

- Connect to an LMS license server

- Update your LMS license

- Provide licensing information to the installer from the command line

LMS (Software) License

If you chose **LMS (Software) License** on the licensing screen [65], and the installation cannot find a valid license on your system, you need to complete these options:

LMS (Software) License option

1. Complete the options:
   - **Entitlement ID** - If you have an Entitlement ID, type or paste the ID you were issued in the box. If you have supplied this value in a previous installation, the installer pulls in that value from the registry.

   - **URL to FNO Services** - This points to the URL that verifies your license. Ensure that it has this URL:
     https://licensing.wilcoxassoc.com/flexnet/services

   - Proxy information - If your computer is on a network where you need a proxy server to reach the Internet, contact your IT specialist to get this information. Enter the server host, user name, and password.

2. If you do not have an Entitlement ID and you need to activate your license offline, use the CLM Admin application. From the CLM Admin application, choose **Activate new licenses**, and follow the on-screen instructions.

> **NOTE**
>
> For information on how to use the CLM Admin application, consult the Hexagon Client License Manager (CLM) Software documentation. You can find this in the subfolder for your language (such as the **en** directory for English).

3. Click **Next**. The installation software connects to the Internet and activates your license. It then installs the FLEXnet Licensing Service required to use LMS licenses.

LMS License Server

LMS License Server option

If you use a license server, select this item, and then type your license server name in the **License Server(s)** box. The format of this line of text is *port number@server name*, where *port number* is the TCP port number for the license server, and *server name* is the name of the server.

The default TCP port number is 27000. If you don't identify a specific port, the license server uses the default. For example, these mean the same thing:

@server1

27000@server1

<table>
<tr>
<td>❗</td>
<td>

IMPORTANT

If you use this option, place the "@" symbol in front of the server address. If the "@" symbol is left off, the installation process attempts to look locally for the license. This may result in an error.

</td>
</tr>
</table>

You can also specify multiple license servers. You can separate them with semicolons. For example, suppose that you have three license servers called licenseserver1, licenseserver2, and licenseserver3, and all of them use the default TCP port. You can specify all of them in a single line of text, like this:

@licenseserver1;@licenseserver2;@licenseserver3

Updating Your LMS License

Once you finish with the license setup and install PC-DMIS 2021.1, it checks for license updates when it starts and after every eight hours of running. If a license update is available, this notification appears:

PC-DMIS

Updates are available for your PC-DMIS license. Applying them now will require PC-DMIS to restart. Would you like to apply the updates now?

To apply the update, click **Yes**. If you click **No**, PC-DMIS 2021.1 displays the message every eight hours of running or the next time it runs.

- If an option or a feature is added, you are given the choice to apply the changes. A pop-up message displays in the system tray if you apply the changes.

- If an option or feature is removed, a message that requests you to restart PC-DMIS 2021.1 appears. A pop-up message also appears in the system tray to inform you of this.

- If an option or feature is obsolete, it is automatically removed.

> **NOTE**
> After you apply an update, restart PC-DMIS to ensure that it functions properly.

Providing LMS Licensing Information to the Installer from the Command Line

You can send LMS licensing information to the installer through command line parameters. For more information, see "Providing LMS Licensing Information to the Installer from the Command Line [83]" in Appendix A.

Administrator Privileges Explained

Software versions earlier than version 2012 require that you run the software as an administrator because some system settings (such as the last probe used, wrist angles, and other items) were shared among all users on that computer. This required that these settings were placed in the LOCAL_MACHINE section of the Windows registry instead of in the CURRENT_USER section (for user-specific settings). Making changes to settings in the LOCAL_MACHINE section requires administrator privileges.

In PC-DMIS version 2012 and later, the settings mechanism used by PC-DMIS changed to only require administrator access the very first time it runs at the end of the installation. From that point forward, standard user access is sufficient.

The PC-DMIS installer has a flag that is built into the setup executable file (Pcdmis2021.1_release_##.#.###.#_x64.exe) that requires the setup process to run with administrator privileges. If the current user has lesser privileges, the setup program displays a prompt to provide a user name and password of an account with administrator privileges.

Once the installation finishes, the first time you run PC-DMIS 2021.1, you must launch it with administrator privileges. If you mark the **Launch PC-DMIS 2021.1 64-bit** check box when the installation finishes, PC-DMIS 2021.1 does this automatically, bypassing the original privilege level of the installer onto PC-DMIS.

Note, however, that if you do not mark this check box, you will need to explicitly right-click on the shortcut and select **Run as administrator** as described in step 6.

For more information on the file system and registry rights that PC-DMIS 2021.1 requires, see "Required User Access Rights [84]" in Appendix B.

Step 5: Copy Files after Installation

If these files are available, copy them from your old PC-DMIS installation directory to the directory where you installed the newer version:

- Sysparam.dat

- Downl.oad

- Fzyfile.txt

- Rcxfile.txt

- Rmxfile.txt

Starting with PC-DMIS 2010 MR2, PC-DMIS automatically copies common system files to the program data files directory when you install a newer version of PC-DMIS.

The comp.dat, compgrid.at, comp.enc, and compens.dat volcomp files used with volcomp methods 13 (ASI) and 14 (BNS) must be in the program data files directory. When you install a newer version of PC-DMIS, these files automatically copy to the program data files directory for the new version. For the default path location of this directory, see "Understanding File Locations" in the PC-DMIS Core documentation.

For additional information on volumetric compensation files and setup, see the Machine Interface Installation Manual (MIIM).

Copying Machine Files for an Xcel CMM or a Sharpe Controller

If you are using a Brown and Sharpe Xcel CMM or a CMM that uses a Sharpe controller, and you installed PC-DMIS2021.1 on a new computer, copy the backed-up CMM machine files to the following location on the new computer:

C:\Program Files\Hexagon\PC-DMIS *version*

For more information about these files, see "Backing Up Machine Files for an Xcel CMM or a Sharpe Controller [64]".

## Copying Machine Files for a DEA CMM with a DEA Controller

If you are using a DEA CMM with a DEA machine controller, and you installed PC-DMIS 2021.1 on a new computer, copy the backed-up CMM machine files to the following location on the new computer:

C:\Program Files\Hexagon\PC-DMIS *version*

For more information about these files, see "Backing Up Machine Files for a DEA CMM with a DEA Controller [64]".

Step 6: Launch the Software for the First Time

1. When you run PC-DMIS 2021.1 for the first time, go to **Start** and type **PC-DMIS 2021.1 64-bit**.

2. From the list of shortcuts in the **Start** menu, right-click on either the **Online** or **Offline** icon, and then select the **Run as administrator** option (required only if the **Launch PC-DMIS** check box wasn't checked at the end of the installation).
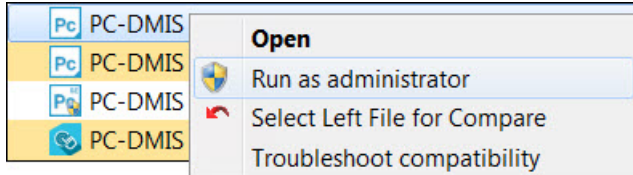
   Run as administrator option

   The **Run as administrator** option allows the program to write the needed machine-specific settings.

3. You can import settings from a previous version.

   If your previous version used the pcdlrn.ini file, PC-DMIS 2021.1 asks if the settings in your PCDLRN.INI file should be used as your registry settings. Click **Yes** at the prompt. Otherwise, PC-DMIS 2021.1 loads in the factory defaults.

   If your previous version used the Settings Editor, follow these steps to use your previous software settings:

   a. Close PC-DMIS 2021.1.

   b. Launch the PC-DMIS Settings Editor from the **Start** menu.

   c. Once it opens, click **Import**, and open the PCDRegFile.dat file you backed up in thStep 3: Back Up Existing Settings [62]. PC-DMIS 2021.1 imports your settings.

   d. Close the PC-DMIS Settings Editor.
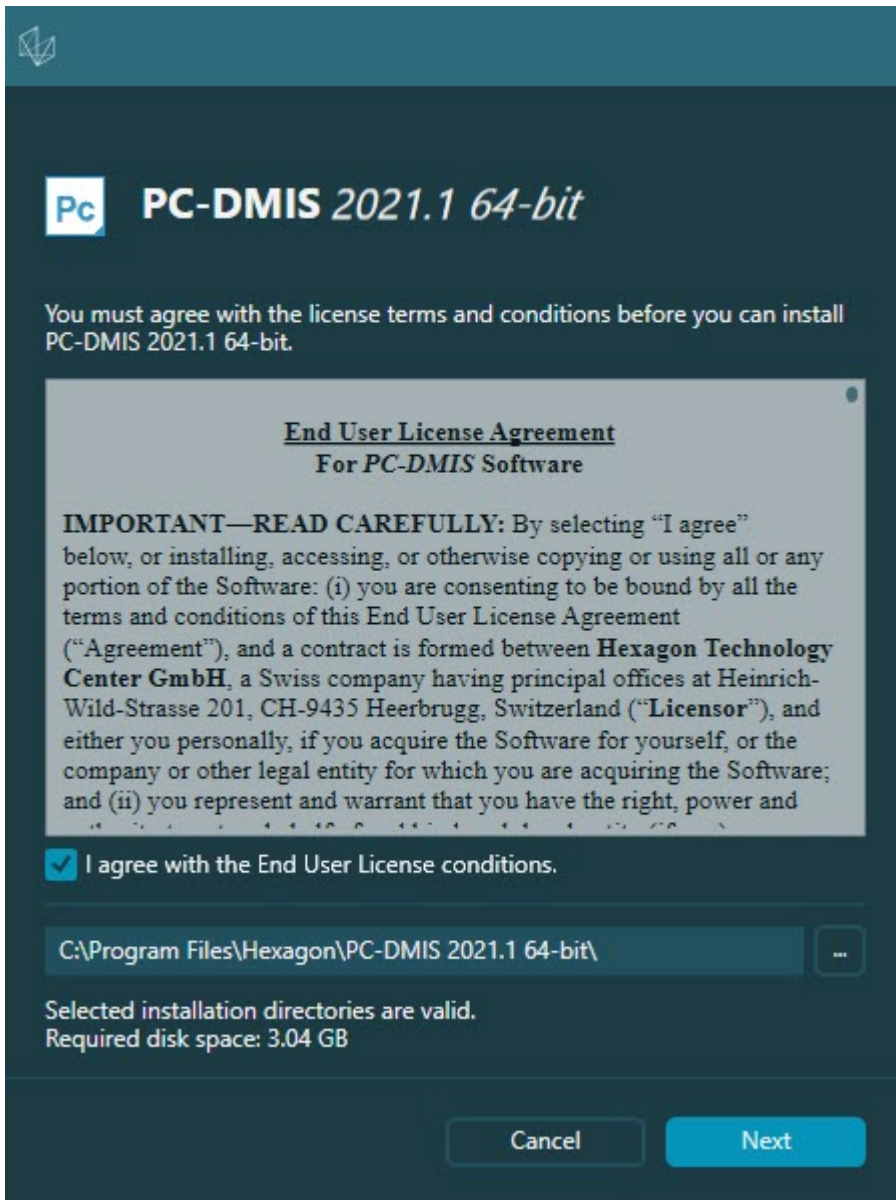
Subsequent Startups

For subsequent startups, click the usual **Offline** or **Online** shortcut to launch PC-DMIS 2021.1 normally :

PC-DMIS 2021.1 shortcuts

Once PC-DMIS 2021.1 starts, the **Software License** screen displays the current license agreement. Read the agreement carefully and then at the bottom, click **I agree with the License terms and conditions** to proceed:

Software License screen

Once PC-DMIS 2021.1 runs, an icon displays in your system tray. If your portlock or LMS license is programmed correctly, the icon displays a green check mark as shown below:
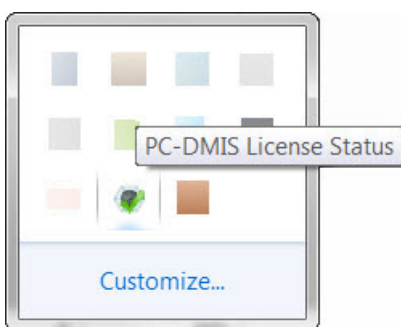
Message for valid PC-DMIS license

If your portlock is not connected or is not programmed correctly, or if you are using an LMS license and your software has not been properly licensed, the icon appears with a red exclamation point overlay. A pop-up message says that the license is disconnected:

Message for disconnected PC-DMIS license

If the license is disconnected, PC-DMIS 2021.1 functions normally, but after 5 minutes, it automatically closes. Be sure to save your data immediately before this occurs.

Note About CMMs Using RS-232 Communications

By default, PC-DMIS 2021.1 communicates through the COM1 communications port. You need to change this port number to the number that Windows automatically created if a serial-to-USB adapter cable or serial adapter card was installed for communicating with an older RS-232 CMM.

To change the COM port number, follow these steps:

1. In Windows Device Manager, note the number that Windows assigned to the communications port on your computer. For help, refer to Windows Help.

2. Open PC-DMIS in Online mode, and then open or create a measurement routine.

3. Select **Edit | Preferences | Machine Interface Setup**.

4. In the **Comm port** box, enter the port number from Windows Device Manager.

Command Line Installation

You can install PC-DMIS from the command line instead of double-clicking on the PC-DMIS installation executable. In addition, you can turn various command line arguments on or off to speed up the installation process.

This topic lists the supported command line arguments.

> **NOTE**
> Command line arguments are case sensitive.

User Interface Parameters

-q, **-quiet**, **-s**, **-silent** - Installs without any user interaction

-passive - Does a progress-bar-only install

Installation Commands

-uninstall - Removes the application from the computer

-repair - Repairs (or installs if not installed) the application

-package, **-update** - Install (default)

-layout - Creates a local/admin image

HEIP - This parameter sets the Opt-in option for the Hexagon Customer Experience Improvement Program. This provides analytics for PC-DMIS to help us improve the application. By default, this option is on (*HEIP=1*). Set this parameter to 0 (zero) to turn this option off.

USELMSLICENSING - When this parameter is turned on (*USELMSLICENSING=1*), PC-DMIS checks for an LMS license. Set this parameter to 0 (zero) to turn this option off.

INSTALLPDFCONVERTER - When this parameter is turned on (*INSTALLPDFCONVERTER=1*), the PC-DMIS installation installs the PDF Converter. By default, this option is turned on. Set this parameter to 0 (zero) to turn this option off.

INSTALLOFFLINEHELP - When this parameter is turned on (*INSTALLOFFLINEHELP=1*), the PC-DMIS installation installs the offline English help system. By default, this option is turned on. Set this parameter to 0 (zero) to turn this option off.

Restart Handling

-norestart - Suppresses any restarts

-promptrestart - Prompts if a restart is required (default)

Logging

-l, **-log** - Creates an installation log to a specific file (default TempFolder)

-logtoconsole - Logs installation information to the console, if started from the console

Help

-? - Shows the **Supported command line arguments** information screen

Additional Parameters

INSTALLDIR - Specifies the installation folder for the PC-DMIS application. The default location is "C:\Program Files\Hexagon\PC-DMIS <version>", where <version> is the PC-DMIS install version.

SQLCONNECTIONSTRING - Defines the connection string if required by the application

LICENSESTRING - Defines the license string if required by the application

LMSENTITLEMENTID=<EID> - This parameter specifies the LMS Entitlement ID (EID) for your LMS license. Replace "<EID>" with your actual Entitlement ID. For example: ***LMSENTITLEMENTID=99999-12345-67890-12345-67890***

LMSURLTOFNOSERVICES=<FNO server address> - This parameter defines the URL address to the LMS FNO server. Replace "<FNO server address>" with the actual URL to the LMS server. For example: ***LMSURLTOFNOSERVICES=https:// licensing.wilcoxassoc.com/flexnet/services***

LMSPROXYHOST=<\{proxyhostname}> - This parameter defines the name of the proxy host server. Replace <\{ProxyHostName}> with the name of the proxy host server. For example: ***LMSPROXYHOST={\fnoserver}***

LMSPROXYUSERNAME=<\{proxyhostusername}> - This parameter defines the user name of the proxy server. Replace <\{proxyhostusername}> with the user name of the proxy server. For example: ***LMSPROXYUSERNAME={\jrjones}***

LMSPROXYPASSWORD=<\{proxyhostpassword}> - This parameter defines the password for the proxy server. Replace <\{proxyhostpassword}> with the password for the proxy server. For example: ***LMSPROXYPASSWORD={\AS4BGxpZyu}***

LMSLICENSESERVERS (@\{ipaddress}) – This parameter defines a comma-separated list of the LMS license servers.

LICENSETYPE - This parameter specifies the license type. The options are HASP, LMSEntitlement, or LMSServer. For example: ***LICENSETYPE=LMSEntitlement*** .

The correct usage for the additional parameters is:

PARAMETER=*value*

Unattended Installation Example

To perform a fully-unattended installation into a directory named **C:\PCDMISW**, use the following command line argument:

Pcdmis*<installer information>*.exe -q INSTALLDIR="C:\PCDMISW"

Where *<installer information>* is the PC-DMIS version and build numbers of the .exe file that you are installing.

Network Connections

This section describes network access details for some Hexagon products.

Firmware Distributed Controller (FDC) Connection

PC-DMIS uses these parameters to establish its connection with FDC:

- Controller address - 100.0.0.1

- PC-DMIS computer address - 100.0.0.2

- Subnet mask - 255.255.255.0

- Port - 1234

LMS Licensing

You can find the license verification server and the ClmAdmin utility for node-locked licenses here:

https://licensing.wilcoxassoc.com/flexnet/services

The Floating License server with Flexnet LmAdmin64 uses ports 27000-27009 on the server. lmgrd and lmadmin listen on TCP port 27000 by default. Communication must be allowed from the client computer to the network license server on this port (or another port if the network license administrator has changed the default). Communication is transitioned from lmgrd / lmadmin to the vendor daemon after the initial connection is made. By default, this is done on a random TCP port. Unless your firewall has built-in support to recognize the randomly chosen port, you need to manually specify a port for the vendor daemon.

The LocalHost server on port 8090 and older versions defaults to port 8080. You can define these ports when you install license server or through the server interface. These are only Offline licenses when you are not connected to a machine.

Offline Help

If you select to install Offline Help when you update the software, it opens the second remote address on port 443. This port verifies the license.

Hexagon Universal Updater

Server - http://webupdater.hexagonmi.com

Port - 80 and 8089 (SignalR)

CrashSender1403.exe

This executable is for the PC-DMIS Crash Report Utility tool. If you run this executable with the /nocrashdump switch, the Event Viewer screen takes over the crash report functionality.

C:\Program Files\Hexagon\PC-DMIS 2021.1 64-bit\Launcher\HexagonLauncher.exe

LauncherPC-DMIS.config /nocrashdump

Other Products

A few Hexagon products need to establish remote connections which enables them to send emails and text alerts. These products include Pulse, Notification Center/ Message Lights, and SMART Factory.

Updating the Software

The Hexagon Universal Updater application automatically checks for software updates if your computer is connected to the Internet. This application is installed with PC-DMIS and Inspect. If the updater detects that an update is available, the updater uses the Windows notification area to the right of your clock on your taskbar to inform you of the update. You can then click on a notification to open the updater to download and install that update.

If the updater is running, a small icon for the updater appears in your taskbar's Notifications area (⬆). You can click this icon to open the updater.

If the updater is not running, you can manually run the updater to check for updates. You can also use the updater to launch software or install new software applications. To run the updater, from the **Start** menu, type **Universal Updater**, and select the shortcut for the updater.

If you need additional help with the updater, you can access the help content available from within the updater itself.

> 🛈 **IMPORTANT**
>
> During the download and installation processes, your firewall must allow the http://webupdater.hexagonmi.com Internet address. In addition, you must have Administrator privileges to install the software update.

For information on the installation process, follow the installation steps described in the topics above. Once the installation process finishes, you can use the latest version.

When you update PC-DMIS from the Universal Updater, the software opens the **Associated Products** dialog box. The software displays a list of the required and recommended products.

Required

HxGN SFx | Connector - This software connects your assets to your SFx account. It also monitors your assets and sends data to your SFx account.

Recommended

Inspect - This software provides a simplified operator interface for operators to execute measurement routines from supported products and then generate reports.

Notification Center - This software sends notifications from a client application (such as PC-DMIS) to a measurement device (such as a CMM) during certain events (such as when the machine has an error).

For information on evaluation versions and changing HASP to LMS, see "Updating the Software" in the PC-DMIS documentation.

Repairing or Removing an Installation

You can also repair or remove an installation once you install it. To do this, double-click the Pcdmis2021.1_release_##.#.###.#_x64.exe file as if you were beginning the installation process. The setup displays a screen with these options:
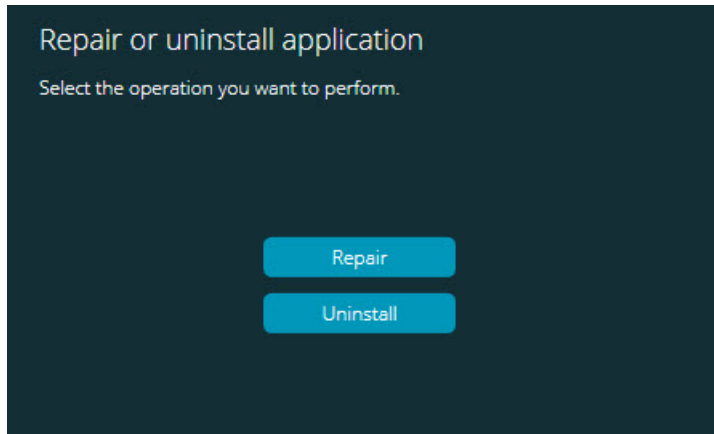
"Repair or uninstall application" dialog box

- **Repair** - This option reinstalls all of the product files as they were originally installed. This option may help resolve issues where an installation didn't properly install all of the files.

- **Uninstall** - This option removes the application from where you installed it. You can also use the **Apps and features** screen or the **Programs and Features** control panel item in Control Panel to uninstall the application.

Running the Software in Another Language

The initial installation setup file for PC-DMIS 2021.1 contains the user-interface files for all of the supported languages. When you install PC-DMIS 2021.1, it installs the language files based on your operating system's language.

To run PC-DMIS 2021.1 in a language other than the operating system's language, select **File | Language**, and then click the desired language. PC-DMIS shows a message that says the application will be shut down and restarted. Click **Yes** to continue. PC-DMIS 2021.1 immediately closes and then reopens in the selected language.

To get the help content available in a non-English language, see "Installing Non-English Offline Help Files from Language Packs [80]".

Installing Non-English Offline Help Files from Language Packs

This topic only applies to users who don't have Internet access.

- With Internet access, the online Help for PC-DMIS 2021.1 is already available from a public web server in all supported languages. The Help opens in your browser whenever you access it.

- Without Internet access, PC-DMIS 2021.1 uses the Help where you installed the offline Help for your version.

With the main installation file, you can install the offline Help in English. However, non-English offline Help files are not included in the main installation file. This means if you intent to use a non-English language, and you don't have Internet access, in order to see any Help content, you *must* also install a language pack for that language.

A language pack contains all of the offline Help content for that language.

To install a language pack, follow these steps:

1. Locate the desired language pack (and .exe file) on your installation media or download it from the Internet here:
   https://downloads.ms.hexagonmi.com/PC-DMIS-Versions/Release/2021.1/Release/x64/Lang

2. Run the .exe file and follow the setup instructions. You do not need to have administrator access to do this step.

This procedure installs the Help content into the folder where you installed the offline Help for your version.

You can then switch to that language in the software and access the Help content as expected.

Troubleshooting

This topic provides information for you to troubleshoot installation, startup, and software update problems.

Startup is Slow

Problem: You use a computer with at least the recommended system requirements as detailed in the "Recommended System Requirements [57]" topic, and it takes longer than 30 seconds to launch the software.

Description: This happens if you try to run PC-DMIS, but you didn't mark the **Launch PC-DMIS 2021.1 64-bit** check box on the installation wizard. This results in a problem loading the HASP driver. Note that this problem only occurs when you install with a HASP license type, as discussed in "Step 4: Install the Software [65]".

Solution: Uninstall PC-DMIS and then reinstall it. To reinstall it, right-click on the installation file and choose **Run as administrator**.

Setting Up the Network to Send Crash Reports

Problem: PC-DMIS 2021.1 cannot automatically send crash reports to Hexagon Manufacturing Intelligence even when your software configuration does not use the **/ nocrashdump** switch. (This switch disables crash reports in PC-DMIS 2021.1.)

Description: A firewall on your computer may be blocking the Hexagon Universal Updater application from connecting to the server. If PC-DMIS 2021.1 crashes, it uses a PHP script over HTTP to send the crash report. If this fails, it then tries to send the report to crashreport@wilcoxassoc.com. It tries using the standard SMTP email protocol. If that fails, it tries to send the email through MAPI.

Solution: The crash report system needs to be able to use port 80 to get out to the server, **http://www.wilcoxassoc.com**/.

Installing on top of an Existing Version Results in Unexpected Behavior

Problem: You installed on top of an existing version of the software, and now the software does not behave normally. Potential symptoms include:

- After you start up the software, you get a "Procedure Entry Point" error.
- When you select **Help | About**, it does not show the new build number.
- Reported bug fixes do not seem to be fixed, and PCDLRN.EXE does not have a newer date and time than the original release.

Description: Something did not install properly on top of the existing version.

Solution: Use **Apps & Features** or Control Panel to completely uninstall the existing version and then reinstall the version you're trying to install.

Running the Legacy DPUPDATE.EXE Does Not Work

Problem: The legacy DPUPDATE.EXE does not run.

Description: If you run PC-DMIS 2021.1 without administrator privileges, DPUPDATE.EXE does not work.

Solution: Run PC-DMIS 2021.1 with administrator privileges.

Contact Hexagon Manufacturing Intelligence

If you are participating in the *technical preview* of PC-DMIS 2021.1, please post your feedback in the appropriate technical preview forum located at www.pcdmisforum.com/forum.php. Please do not contact Hexagon Technical Support for technical previews.

If you are using the *commercially-released version* of PC-DMIS 2021.1 and would like further information or technical support, please contact hexagonmi.com/contact-us or visit hexagonmi.com/products/software. You can also reach Hexagon Technical Support at support.hexagonmi.com or by calling (1) (800) 343-7933.

Appendix A

Providing LMS Licensing Information to the Installer from the Command Line

You can send LMS licensing information to the installer by using the command line:

- If the installer is running in silent mode (**-q**) or basic silent mode (**-passive**), and the correct information is provided, everything runs without user interaction. The command switch **-q** displays the progress bar and handles installer errors. The **-passive** switch hides the user interface.

- If the installer is not running in silent mode, the information provided is used to populate the LMS activation form and skip the license screen [65].

- You can provide the **-?** to review additional command line arguments.

Descriptions of the parameters follow, along with examples.

Descriptions

USELMSLICENSING=1 - This flag is useful only if the system already has an LMS license that the user is using. It allows silent mode to work without having to prompt the user for a license choice. If the installer is not running in silent mode, it still allows the install process to skip the license type selection dialog (thus saving some time).

LMSENTITLEMENTID=*entitlement id* - This parameter and value are useful on a new system where no LMS license was previously installed. It indicates that you want LMS licensing and provides an Entitlement ID to try and activate. When this value is specified, there is no need to specify **USELMSLICENSING**.

LMSLICENSESERVERS="*server1,server2…***"** - This parameter is used on systems that communicate with a license server. It also allows the license type selection dialog box to be skipped and the installation to be done silently.

LMSPROXYHOST="*proxyhostaddress***"** - This optional parameter gives the address of a proxy host. In silent mode, it is used directly in activation. In non-silent mode, it populates the activation form with this value.

LMSPROXYUSERNAME="*user name***"** - This parameter is another optional parameter for the proxy user name. It behaves in the same manner as **LMSPROXYHOST**.

LMSPROXYPASSWORD="*unencrypted password***"** - This parameter is another optional parameter for the proxy password. It behaves in the same manner as **LMSPROXYHOST**.

LMSURLTOFNOSERVICES=*URL to FNO server* - This parameter is mostly for internal development. The default URL is to the production server. The new value can be used to override the default value and point to the development server.

Examples

On a brand-new system with a node-locked Entitlement ID, the following line installs PC-DMIS 2021.1 in silent mode:

-q LMSENTITLEMENTID=99999-88888-77777-66666-55555

On a system that already has a license, the following line installs PC-DMIS 2021.1 in silent mode:

-passive USELMSLICENSING=1

On a brand-new system using license servers, the following line installs PC-DMIS 2021.1 in silent mode:

-passive LMSLICENSESERVERS="123.12.134.42"

On a brand-new system with no license, the following line skips the license type selection dialog box and populates the activation form:

LMSENTITLEMENTID=99999-88888-77777-66666-55555 LMSPROXYHOST="123.123.123.123" LMSPROXYUSERNAME="bob" LMSPROXYPASSWORD="marley"

Appendix B

Required User Access Rights

PC-DMIS 2021.1 requires read, write, and create access to the locations defined below in the file system and registry.

File System

Windows 10, Windows 8, Windows 7, and Windows Vista:

- C:\ProgramData\Hexagon\PC-DMIS\2021.1

- C:\Users\Public\Documents\Hexagon\PC-DMIS\2021.1

- C:\Users\UserName\AppData\Local\Hexagon\PC-DMIS\2021.1

- Any user-specified folder locations for storing measurement routines, probes, subroutines, and so on

Registry

All of these versions have their own registry settings, which are stored in a version-specific registry key. The items shown below are for version 2021.1.

- HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hexagon\PC-DMIS\2021.1 Key and all sub keys

- HKEY_CURRENT_USER\Software\Hexagon\PC-DMIS\2021.1 and all sub keys

- HKEY_USERS\.DEFAULT\Software\Hexagon\PC-DMIS\2021.1 and all sub keys

Notes

The first time you run a new version, PC-DMIS automatically copies the settings from the most recent version of PC-DMIS that is installed. For this to work, PC-DMIS needs to run with administrator privileges the first time you run it. During the installation, if you select the **Launch PC-DMIS** check box in the setup wizard, it runs PC-DMIS as an administrator and completes this first step.

This initial migration automatically sets read, write, and create permissions on the registry for the relevant keys.

If you are using fixturing or laser sensors, the following registry keys are stored back one level:

- HKEY_LOCAL_MACHINE\SOFTWARE\Hexagon\FxtServer

- HKEY_LOCAL_MACHINE\SOFTWARE\Hexagon\PC-DMIS\NCSENSORSETTINGS

It may be easier to just apply create/read/write privileges to the HKEY_LOCAL_MACHINE\SOFTWARE\Hexagon\ key and all sub keys to cover these also.

Appendix C

First-Time Installation with Flexible Fixturing

To be compliant with the permission rules for PC-DMIS products, files associated with fixturing are now located in this folder:

C:\Program Files\Hexagon\PC-DMIS 2021.1 64-bit\Models\QuickFix

This allows access to the files without needing administrator privileges on the computer running PC-DMIS. To accomplish this, the following steps are required when you install PC-DMIS for the first time:

1. The first time you install PC-DMIS and FxtServerInterface, run the FxtServerInterface installation program for the first time with administrator privileges (as is required for the PC-DMIS installation).

2. When you run FxtServerInterface, a message states that the system will migrate all of your data files to the "FIVEUNIQUE" Documents folder described above.
   - If you choose **Yes**, the files are moved, and the original folder is deleted.
   - If you choose **No**, the files are copied, but the original folder is kept.

   Once this is done, the files are moved (or copied), and you are able to run FxtServerInterface.exe without administrator privileges.