PC-DMIS 2024.1

Release Notes

Hexagon Manufacturing Intelligence
March 26, 2024

PC-DMIS

2024.1
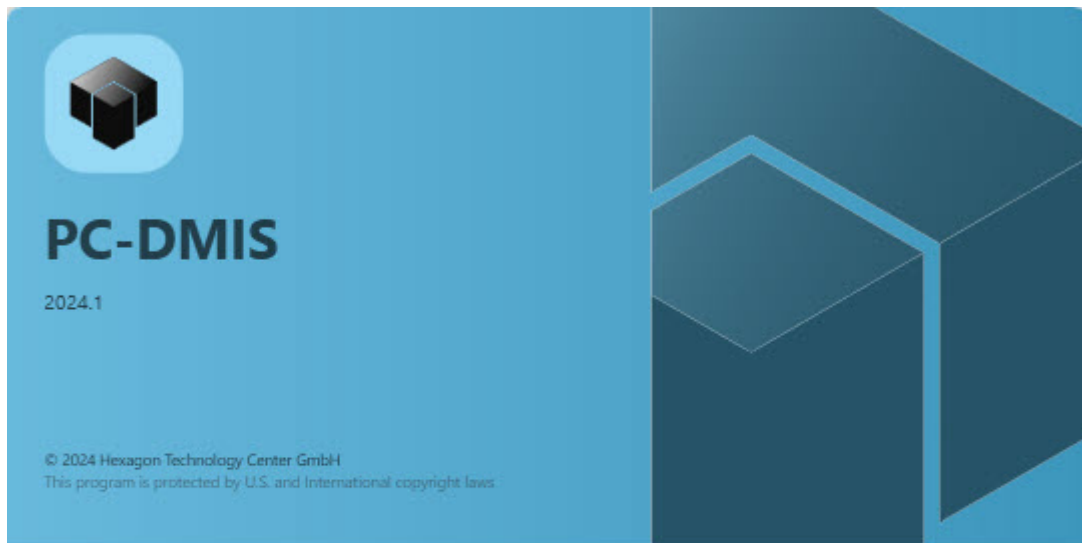
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What's New

ClearanceCube Improvements

You can now set ClearanceCube motion for the main scan and the Basic scan in the Edit window when you are in Summary mode. With this, you no longer need to change the Edit window mode to see or set the ClearanceCube motion for scans.

See ClearanceCube Improvements.

Geometric Tolerance now Supports ISO Codes

You can now enter an ISO Tolerance code instead of the values when you work with a Size feature. This saves time, as you no longer have to look up the upper and lower tolerance values.

See Geometric Tolerance now Supports ISO Codes.

Improved Integration with Nexus

• You can now see the **Logout** icon in the **Nexus Settings** dialog box.

• PC-DMIS now displays the "Data upload to the Metrology Reporting Cloud is in progress" message when you close the PC-DMIS application and Nexus data upload is in progress. PC-DMIS now waits until the data upload is complete before closing.

See Improved Integration with Nexus.

Mesh and Pointcloud Enhancements

• You can now export Mesh cross-section data in XYZ or IGES format.

• You can now see the **Normals** option in the **Default display** drop-down list in the **Pointcloud** area on the **OpenGL** tab of the **CAD and Graphic Setup** dialog box.

See Mesh and Pointcloud Enhancements.

PC-DMIS ECO Mode

You can now start PC-DMIS with an Online license in Offline mode when you are not connected to a machine. This enables you to create a measurement routine without the need to power up your machine, saving energy.

See PC-DMIS ECO Mode.

QIF CAD PMI Data Enhancements

You can now access CAD assembly-level PMI data when you import a QIF CAD file. This gives you more opportunities to measure features with just a few clicks. You can now see the Depth callout PMI data in the Graphic Display window.

See QIF CAD PMI Data Enhancements.

Renishaw Equator Workflow Improvements

PC-DMIS now has the **Equator** toolbar which provides buttons for all the new Equator commands. This makes it easier to create workflows for the Equator machine without scripts. To access the toolbar, select the menu option **View | Toolbars | Equator** or right-click in a blank area near the menu bar and select the **Equator** toolbar option.

See Renishaw Equator Workflow Improvements.

Other Improvements

Application

- When you install PC-DMIS, it now installs the HexMI_DemoPart_Vision.IGS CAD file.

Auto Features

- You can now see the **Vertical Up/Down** box in the **Feature Based Clipping** area in the **Feature Extraction** tab of the Probe Toolbox. With this, you can set independent values for up and down Vertical clipping instead of a single value when you create a laser auto feature. This helps you to fine-tune the extraction to exclude unwanted data from the segregation.

- You can now filter out points with normals outside of a specified angle when you extract a stud feature from Laser data. This filter is beneficial when dealing with data scanned from both sides of a sheet metal part and acts only on the planar portion of the given point cloud data, leaving the cylindrical portion unfiltered.

- When you program a Flush and Gap feature using the **Auto Features** dialog box, the nominal Flush value is now obtained using a different calculation method.

- You can now see that the **Max incidence angle** filter in the **Feature Extraction** tab of the Probe Toolbox is renamed to **Angle**.

- You can now disable the Cylinder Ending Offset smart parameter using the EnableEndingOffsetSmartCalculation registry key.

CAD

- PC-DMIS now displays the part names in the Assembly Tree View of the CAD Assembly dialog box when the VISI CAD model includes the part details.

Command Mode

- PC-DMIS now provides the ability to find or find and replace key words that are in a collapsed group. When a keyword is found, PC-DMIS expands the group and places the cursor on the first found string.

Constructed Features

- You can now see these additional controls in the **Construct Point** dialog box when you create a Constructed Extracted feature:
  - **Polar / Cartesian**

- **Find Nearest CAD Element**

- **Snap To Grid**

- **Flip Vectors**

- **Vertical Up/Down**

- **Visualization Tools On/Off**

- **Show/Hide segregated points**

Documentation

- The "Geometric Tolerance" chapter in the PC-DMIS Core help documentation now has information on how to perform a Profile of a Line In Between and All Around, and Profile of a Surface In Between, All Around, and All Over.

- You can now see that when you run PC-DMIS and you have it set to use the online help, when press the F1 key for help, the help opens from Hexagon's Nexus Documentation Center (NDC) site.

- The "ClearanceCube Definition - Constraints tab" topic in the PC-DMIS Core documentation is now updated to remove information about Resize ClearanceCube.

- The "Step 2: Start Up and home the CMM" topic in the PC-DMIS CMM documentation now has information about starting PC-DMIS in Offline mode with an online license when the machine is not connected. Also, the PC-DMIS Release Notes documentation now explains how to start PC-DMIS with an Online license in Offline mode when you are not connected to a machine.

ESF (VWMP)

- You can now extract ESF (VWMP) Optical features using the **Filter**, **CROSS SECTION**, and **SELECT** Pointcloud operators as inputs.

Execution

- You can now see the **Dynamic Inspection** icon in the **Execute** toolbar. You can use this icon to execute a measurement routine with Dynamic Inspection.

HxGN Robotic Automation

- PC-DMIS now transfers the original CAD model to Robotic Automation along with the measurement routine. If Robotic Automation cannot find the CAD file that is associated with the current measurement routine in the default location, PC-DMIS displays a message stating this.

- You can now load measurement routines from the desired directory instead of just the defined PC-DMIS working directory when you work with the Robotic Automation Execution manager.

Laser

- You can now click on the Color box in the **Laser Sensor** tab of the **Setup Options** dialog box to change the Laser Working Area color.

- You can now see an icon for the menu option **Edit | Laser Sensor Setup**.

Licensing

- You can now start PC-DMIS with an Online license in Offline mode when you are not connected to a machine. To do this, answer "YES" to the "Do you want to switch to Offline mode" message after you start PC-DMIS in Online mode and the machine is not connected.

Reporting

- PC-DMIS is now updated with the latest uploader NuGet package. This means you can now see the Nexus icon in the **Nexus Settings** dialog box, **Upload to Nexus Cloud** dialog box, and the Upload window.

Scanning

- You can now convert Laser Patch scans to Freeform scans when your active sensor is an HPL-10.10 sensor. This results in reduced cycle time and smoother scan execution. To do this, select the **Create as Freeform scan** check box in the **scan parameters** area of the **Scan** dialog box.

What's Fixed

Alignments

• PC-DMIS now displays an error message for a ROTATE_CIRCLE alignment command that has no associated features assigned to it. See PCD-249235.

Application

• You can now see that PC-DMIS shuts down when you select the **Shut Down** button in the PC-DMIS error message dialog box for a machine error event. See PCD-172971.

• PC-DMIS now correctly stores the value and description of the argument associated with the subroutine. You can now see the description of the argument in the **Argument Edit** dialog box when you call a subroutine. See PCD-252485.

Application Errors

You no longer get application errors:

• When you select the menu option **Operation | Enter Multiple Arm Mode**. See PCD-92404.

• When you use a child feature as a datum definition. See PCD-247705.

• When you enable **Stable Probing** for an AT901 Leica Tracker. See PCD-248487.

• When you click **Cancel** in the **Migration Report** dialog box after you open a measurement routine that requires migration and is not the first one opened. See PCD-249663.

• When you delete a block of commands that includes a geometric tolerance command. See PCD-250166.

• When you delete a dimension associated with a POINTINFO command. See PCD-251996.

• When you delete a dimension that has its features deleted. See PCD-252288.

Auto Features

• You can now see that the probe in the Graphic Display window no longer rotates back to the previously active tip when you select the **OK** button in the **Auto Wrist** dialog box to confirm the new tip selection when creating an Auto feature using the AutoWrist option. See PCD-217949.

- You can now see that the **Measure Now** icon in the **Feature properties** area of the **Auto Feature** dialog box is disabled when you select the **To Points** icon in the **Measurement properties** area. See PCD-232325.

- You can now see that constructed extracted Surface Points and laser auto Surface Points with the same parameters produce the same result. See PCD-249659.

- PC-DMIS now correctly moves the probe in the tip vector direction when you create an Auto Cylinder feature after you select **Both** from the **Avoidance move** list and select **Along Tip Vector** in the **Contact Auto Move Properties** tab of the **Auto Feature** dialog box. See PCD-252283.

CAD

- PC-DMIS now highlights the correct area in the Graphic Display window when you press the Shift key and hover your mouse over the GD&T callout after you transform the CAD model when you click **Apply** and then **OK** in the **CAD Transform** dialog box. See PCD-238053.

- You can now see the CAD model in the Graphic Display window when you import DCI CATIA files. You should now import a CATIA file with a sheet metal view using the DCI option. See PCD-246510.

- PC-DMIS now correctly maintains a feature ID label's show/hide status in the Graphic Display window when you double-click a Dimension Info box and select **Cancel** in the **Edit Dimension Info** dialog box. See PCD-249799.

- PC-DMIS now correctly imports a QIF file that includes PMI data. See PCD-250549.

- PC-DMIS now displays the hole on trimmed surfaces in the Graphic Display window after a CAD tessellation. See PCD-251090.

Calibration

- You can now see that the probe no longer collides with the calibration tool when you perform a qualification check after a collision check. See PCD-244399.

Constructed Extracted Feature

- You can now set the BF_MATH_TYPE for a constructed extracted surface point using BASIC scripting. See PCD-251709.

- You can now delete a selected hit when you press the Alt key plus the - (minus) key when you create a Constructed Extracted feature from a pointcloud data with no CAD model. See PCD-252229.

Constructed Features

- PC-DMIS now correctly selects the hits when you click **Select All Hits** after you hold down the Shift and select features in the feature list area of the **Construct Plane** dialog box. See PCD-250360.

Environment Configurator

• PC-DMIS now correctly downgrades to an earlier version when you use the Environment Configurator to configure an environment for an earlier version. See PCD-250052.

ESF (VWMP)

• PC-DMIS now executes using Arm 2 instead of Arm 1 when you create an ESF contact feature with Arm 2 as the active arm. See PCD-191327.

• You no longer get an execution error when you click **Test** in the **Extended Sheet Metal Features** dialog box for an ESF (VWMP) optical feature. See PCD-248739.

• PC-DMIS now shows the orange points in the segregation area when you select **Show Parameters** after you press F9 to edit an existing Flush NA feature. See PCD-250619.

• You can now extract EG ESF (VWMP) features from pointcloud data for features that have a particular shape with high radius rounded corners and very short side segments. See PCD-255513.

GD&T Dimensions

• You can now see the features in the Features List area of the **Size** dialog box when you attach a measurement routine to the current measurement routine. See PCD-124652.

• PC-DMIS now pauses OCR parsing when you press the Esc key when working with GD&T Selection Mode (from File). See PCD-191334.

• PC-DMIS now uses the CAD elements of a linked GD&T reference when you use GD&T Selection Mode (from CAD) and the selected GD&T callout has no associated CAD elements. See PCD-199699.

• PC-DMIS now reports the RMB case when the datums referencing material condition modifiers fail their geometric tolerance to higher precedence datums. See PCD-219257.

• PC-DMIS now correctly draws the tolerance zone for a cylindricity tolerance. See PCD-242797.

• You can now see the expressions that use the .meas extension display the correct (measured) value when referencing geometric tolerance commands. See PCD-244140.

• PC-DMIS now correctly draws the tolerance zones relative to the datum reference frame instead of the alignment origin when displaying graphical analysis for a symmetry geometric tolerance command. See PCD-246687.

• PC-DMIS no longer requires an external .csv file for ISO tolerance codes when working with GD&T selection. All ISO tolerance codes are handled internally, based

on ISO 286-1:2010 + AC:2013 (D). PC-DMIS no longer has the menu option **Edit | Preferences | CAD GD&T Selection**. See PCD-249000.

- PC-DMIS no longer changes the measured value of a profile of a surface to NAN in the Edit window when in Command mode when you select the menu option **FILE | Export | Part Model | STEP | STEP AP214**. See PCD-249034.

- PC-DMIS now correctly stores the CADToPart and MachineToPart transforms of a child feature from Adaptive Cone Line Scan, Adaptive Cylinder Line Scan, and Adaptive Plane Line Scan strategies. You no longer get an error message stating that the child features are out of sync when using them to create a geometric tolerance command. See PCD-249966.

Graphics

- PC-DMIS now displays a warning message when the graphics driver is not the latest version available. See PCD-247881.

Help / Documentation

- PC-DMIS now displays the correct help topic when you press F1 on the menu option **View | Summary Mode**. See PCD-245742.

- The "Results" topic in the PC-DMIS Core documentation is now updated to show that the **Results** dialog box now displays the sphere's standard deviation instead of the actual angle and roundness. See PCD-249337.

HxGN Robotic Automation

- The **HxGN Robotic Automation Connector** application dialog box now opens when you click the left-most green **Connector Application** button in the bottom-right corner of the **HxGN Robotic Automation** application screen. See PCD-250189.

I++

- PC-DMIS now correctly handles the Temperature Compensation for the Renishaw UCC. PC-DMIS now only reads the temperature and does not set it. See PCD-246947.

Laser

- By default, PC-DMIS now has the exposure value for the HP-L-10.10 sensor set to 22% instead of 0%. This makes the part visible for the scanner. See PCD-218943.

- PC-DMIS no longer displays a Live View graph for the HP-OW sensor when it is not the active sensor. See PCD-246327.

- The Edit Window Print command now supports all the Laser Auto Features. You must delete the file "colors.dat" located in the

C:\Users\YourUserName\AppData\Local\Hexagon\PC-DMIS\2024.1 folder to enable this support on existing PC-DMIS installations. See PCD-247066.

- You can now see that the HP-L-10.10 Laser beam no longer turns on automatically when you change the Exposure value in the Probe Toolbox. PCD-248644.

- You can now see that the tip angles in the scan path points now match the commanded tip position when you set the entry FlipBAxis to **True**. See PCD-249228.

- The Variable Scan Speed functionality is now available for the HP-L-10.10 LITE sensor. See PCD-250313.

- PC-DMIS now correctly uses the assigned expressions to parameters in a Laser feature when you use an HP-OW / CWS sensor. See PCD-250680.

Laser Feature Extraction

- PC-DMIS now compares each scanned point's estimated normal to the pointcloud point's nominal normal when you use the **Angle** (formerly **Max incidence angle**) filter to create a 3D Laser feature from the **Auto Feature** dialog box. See PCD-247677.

- PC-DMIS now has improved behaviour for the **Angle** (formerly **Max incidence angle**) filter when extracting studs (external cylinders) from thin sheet metal parts with pointcloud data on both sides. The filter now excludes data from the lower surface during feature extraction. See PCD-248468.

Legacy Dimensions

- PC-DMIS now updates the polar angle upper and lower tolerance to all the dimensions with the same values you type in the **Feature Location** dialog box when you click the **Create** button after you select multiple features from the Feature List area of the **Feature Location** dialog box. See PCD-226504.

- PC-DMIS now correctly assigns each feature a number to the right of the feature ID in the **Feature List** area when you use the **Search ID** box in dimension dialog boxes. See PCD-249703.

- You can now see the complete feature list in the **Feature List** area of the **Angle** dialog box when you use a high-resolution monitor. See PCD-249704.

Moves

- You can now see that the probe no longer moves when you define the ClearanceCube and extract features from COP data. See PCD-249742.

Probes

- PC-DMIS now supports the M00-694-292-000 star holder probe. See PCD-247457.

Reporting

- PC-DMIS now sends the correct algorithm that it used to measure dimensions to the Metrology Reporting cloud. See PCD-242357.

- You can now see the results from caliper and radius gage measurements in an Excel form report. See PCD-246113.

- You can now see the icons for the Dimensions of constructed features in Metrology Reporting. See PCD-250347.

- PC-DMIS no longer adds the .PRG file extension to program names in the **Upload to Nexus Cloud** dialog box when you execute a measurement routine. See PCD-250744.

- You can now export the results from caliper and radius gage measurements for statistics. See PCD-252757.

Scanning

- You can now see a collision-free movement when you measure a cylinder's outside diameter using the Basic scan and a Clearance plane. See PCD-249362.

Summary Mode

- PC-DMIS no longer displays the **Upload to Nexus Cloud** dialog box when you are in Summary mode and you right-click a feature and then you select the **Feature | Move To** menu option. See PCD-246889.

Toolkit

- You can now see the trace field name in the trace field error message when you execute a measurement routine and the input has an error. See PCD-251995.

Version Support

- You can now only load measurement routines created in PC-DMIS version 2018 R2 and later, and you can only save measurement routines back to PC-DMIS version 2018 R2. See PCD- 248153.

Vision

- You can now see that the measurement routine execution does not stop when the measurement routine has more than one DISPLAY/METAFILE command. See PCD-175317.

- PC-DMIS now correctly applies the filter and enables the **Show Filtered Points** icon when you select the **Nominal Form** filter type in the **Hit Targets** tab of the **Auto Feature** dialog box. See PCD-233817.

5Unique

- The term "5Unique" is now correct across the Help and the User Interface. See PCD-249113.

Information about this Release

We at Hexagon Manufacturing Intelligence are proud to bring you PC-DMIS 2024.1. 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 organization, 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 2024.1, 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 [48]". 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 2024.1 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 2024.1 operates under 64-bit Windows 11 and Windows 10. No other operating systems are supported.

> **IMPORTANT**
> Starting with RDS version 6.3, the Windows 11 operating system is 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.

Microsoft .NET Framework

Microsoft .NET Framework 4.8 for Windows. If you do not have Microsoft .NET Framework 4.8, 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)

> **NOTE**
> 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 through 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\2024.1 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 2024.1. 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 2024.1 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

HP-L-10.10 Laser Scanner System

If you need to use the HP-L-10.10 laser scanner system, your laser scanner controller firmware version must be updated to version 0.10.6. Please contact your local Hexagon representative to perform the firmware upgrade.

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 [21]". 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 2024.1 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.
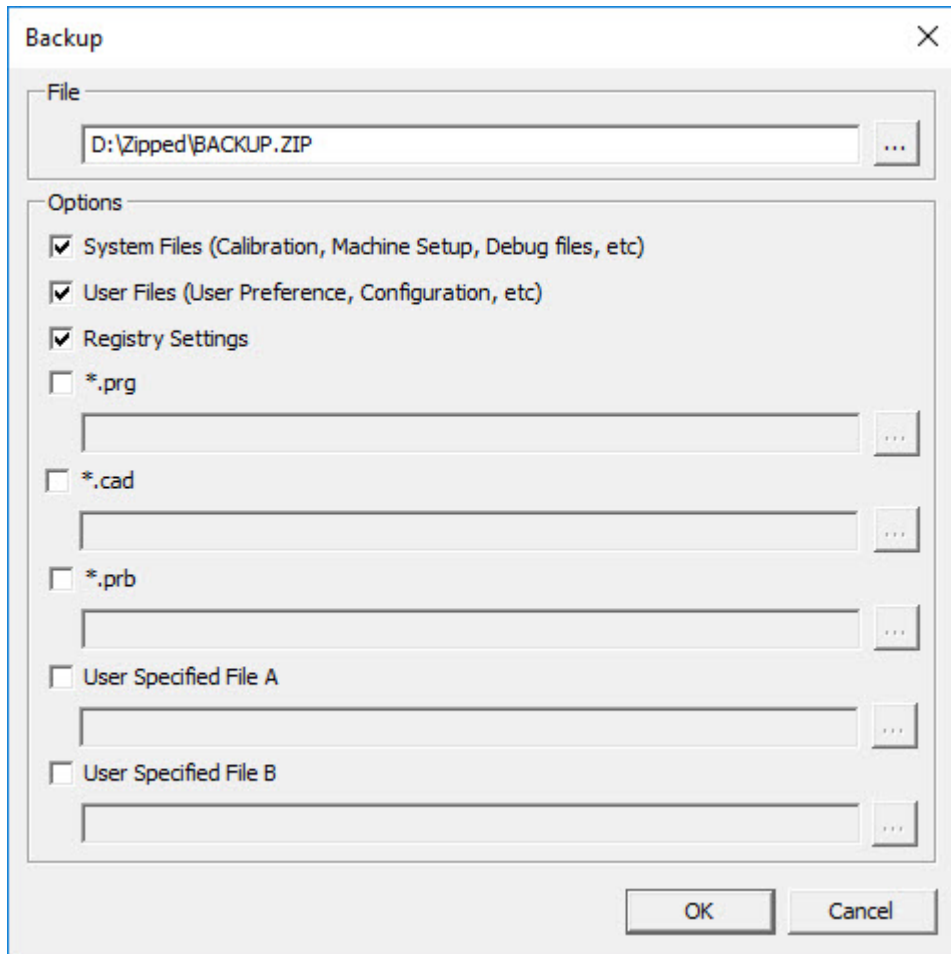
Backup dialog box

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:
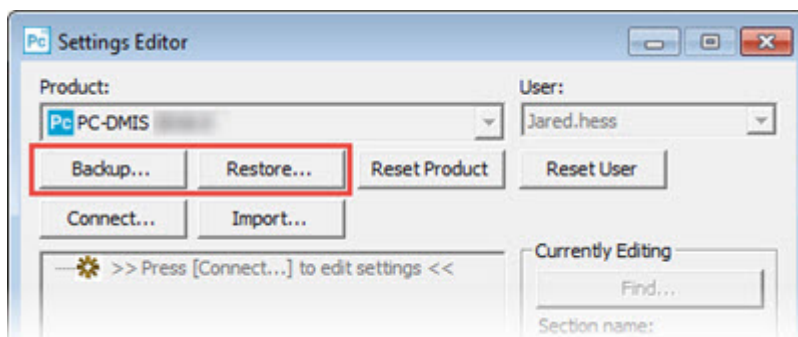
Backup and Restore buttons

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 2024.1 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 2024.1 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 2024.1 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:
    Pcdmis2024.1_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 2024.1 64-bit

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

6. By default, the software marks the **Install Universal Updater** check box to install the Universal Updater application. If you do not want to install the application, clear this check box.

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

8. 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 [31]".

9. Click **Next**.

10. You can choose to install additional software components. If you selected a custom 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 2024.1 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 [45]".

   - **Select default portable interface** - From the list, select the Portable interface that you want defined when PC-DMIS starts up. You can choose from any of these supported Portable devices:
     RomerRDS Arm
     Romer Arm (WinRDS)
     AT40x Leica Tracker
     AT500 LeicaLMF Tracker
     AT9x0 LeicaLMF Tracker
     AT901 Leica Tracker
     ATS600 Leica Tracker
     TDRA6000 LeicaTPS Tracker
     Aicon - Offline
     MoveInspect
     Faro Arm

   - **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.

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

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

   - **Launch PC-DMIS 2024.1 64-bit** - To launch PC-DMIS 2024.1 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 [34]".

- **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.

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

> **NOTE**
>
> If you selected the **Offline English Help** check box in step 10, the English help installer starts up as soon as the PC-DMIS application installation is complete.

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 2024.1 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.
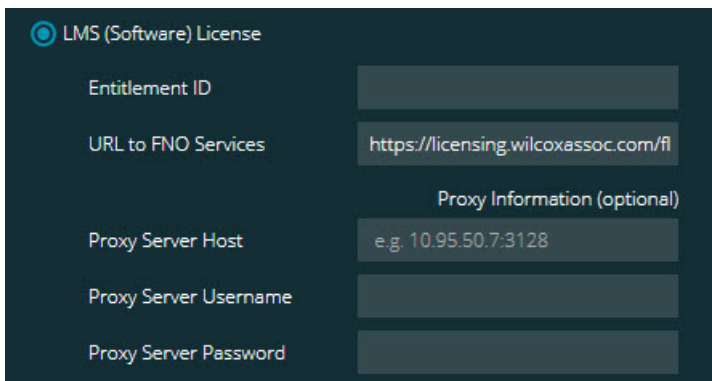
LMS License Setup

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 [29], 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:
    *   **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

> **❗ 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.

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 2024.1, 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 2024.1 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 2024.1 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 [48]" 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 (Pcdmis2024.1_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 2024.1, you must launch it with administrator privileges. If you mark the **Launch PC-DMIS 2024.1 64-bit** check box when the installation finishes, PC-DMIS 2024.1 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.

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-DMIS2024.1 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 [28]".

## 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 2024.1 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 [28]".

Step 6: Launch the Software for the First Time

1. When you run PC-DMIS 2024.1 for the first time, go to **Start** and type **PC-DMIS 2024.1 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).
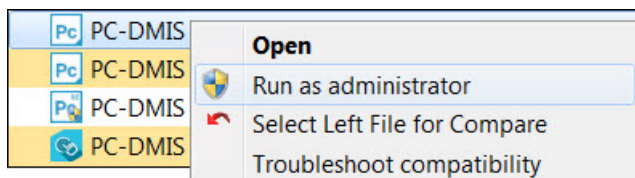
    Run as administrator option
    The **Run as administrator** option allows the program to write the needed machine-specific settings.

3. You can import settings from a previous version.
    If your previous version used the Settings Editor, follow these steps to use your previous software settings:
    a. Close PC-DMIS 2024.1.

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 [26]. PC-DMIS 2024.1 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 2024.1 normally :

PC-DMIS 2024.1 shortcuts

Once PC-DMIS 2024.1 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:
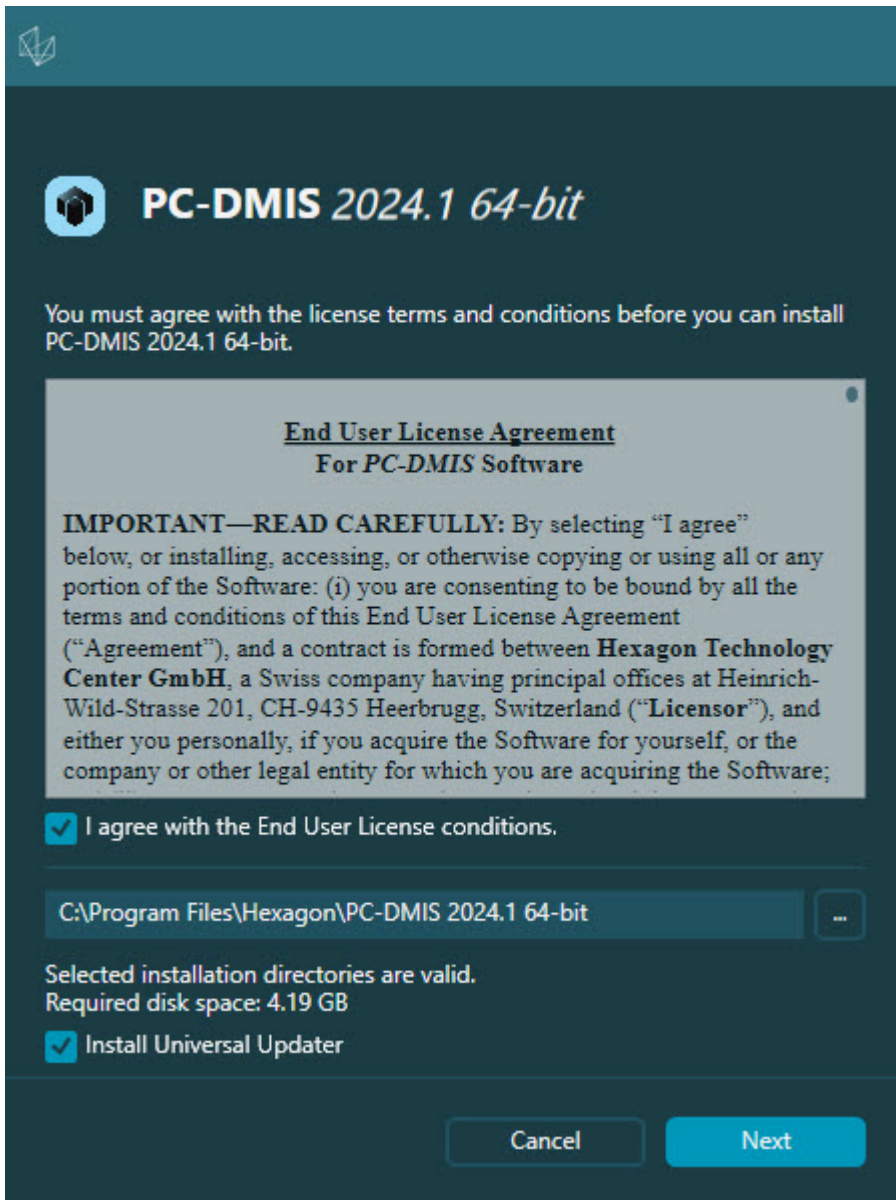
Software License screen

Once PC-DMIS 2024.1 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:
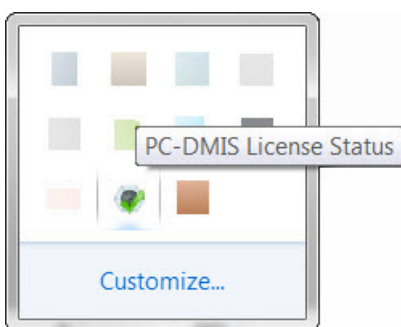
Message for valid PC-DMIS license

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 2024.1 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 2024.1 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

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 2024.1 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://www.wilcoxassoc.com/WebUpdater 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 Core documentation.

Repairing or Removing an Installation

You can also repair or remove an installation once you install it. To do this, double-click the Pcdmis2024.1_release_##.#.###.#_x64.exe file as if you were beginning the installation process. The setup displays a screen with these options:
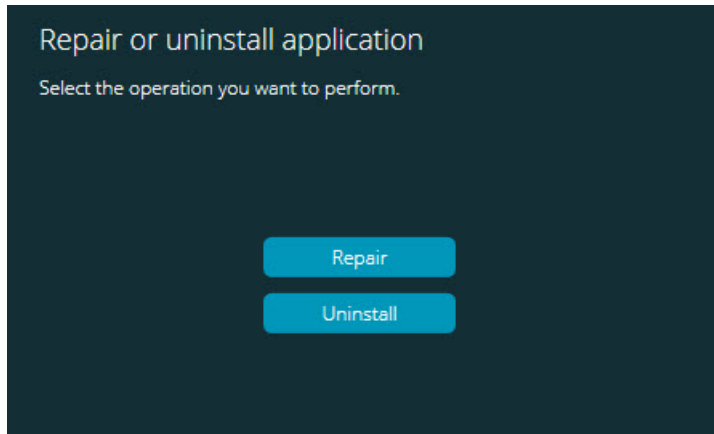
"Repair or uninstall application" dialog box

- **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 2024.1 contains the user-interface files for all of the supported languages. When you install PC-DMIS 2024.1, it installs the language files based on your operating system's language.

To run PC-DMIS 2024.1 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 2024.1 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 [45]".

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 2024.1 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 2024.1 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/2024.1/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.

Starting PC-DMIS with an Online License in Offline Mode

To start PC-DMIS with an Online license in Offline mode when you are not connected to a machine:

1. From the Windows **Start** menu, locate the PC-DMIS 2024.1 Online shortcut and click on it.

2. Once PC-DMIS opens, it displays an error message that says the machine is not connected. It then shows this message and asks you if you want to switch to offline mode.

PC-DMIS MESSAGE:
Do you want to switch to offline mode?
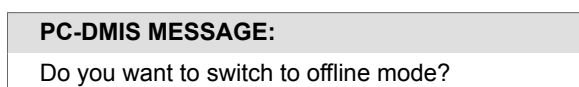
To start PC-DMIS in Offline mode, Click **Yes**.

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 [21]" 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 2024.1 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 [29]".

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 2024.1 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 2024.1.)

Description: A firewall on your computer may be blocking the Hexagon Universal Updater application from connecting to the server. If PC-DMIS 2024.1 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 2024.1 without administrator privileges, DPUPDATE.EXE does not work.

Solution: Run PC-DMIS 2024.1 with administrator privileges.

Contact Hexagon Manufacturing Intelligence

If you are participating in the *technical preview* of PC-DMIS 2024.1, 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 2024.1 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 [29].

- 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 2024.1 in silent mode:

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

On a system that already has a license, the following line installs PC-DMIS 2024.1 in silent mode:

-passive USELMSLICENSING=1

On a brand-new system using license servers, the following line installs PC-DMIS 2024.1 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

File System

- C:\ProgramData\Hexagon\PC-DMIS\2024.1

- C:\Users\Public\Documents\Hexagon\PC-DMIS\2024.1

- C:\Users\UserName\AppData\Local\Hexagon\PC-DMIS\2024.1

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

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.

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 2024.1 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.