SIEMENS

Factory 2018

Install Guide

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Chapter 1: System requirements

System requirements for Factory software are the same as for the underlying AutoCAD/Windows combination. FactoryCAD® and FactoryFLOW® work within the AutoCAD® graphics environment. Each machine or network where these programs are installed must have a licensed copy of AutoCAD.

To accommodate temporary disk space requirements during FactoryFLOW program operation, there must be at least 100 MB of free disk space on the disk partition containing the active FactoryFLOW project file.

Supported platforms

Microsoft Windows operating systems 64 bit versions for factory 2018

- Windows 10 (64-bit only)
- Windows 8.1 with Update KB2919355
- Windows 7 SP1

> **Note**
>
> Release 2017 and 2018 no longer support 32-bit operating systems.

Autodesk packages, as supported by Autodesk on the underlying operating system

- AutoCAD 2017 and 2018
- AutoCAD Architecture 2017 and 2018
- AutoCAD MEP 2017 and 2018

If you run the software on an unsupported platform and encounter a problem, and the problem can be duplicated on a supported platform, we will work to fix the problem on the supported platform. A fix developed for a supported platform might resolve a problem on an unsupported platform. However, we may not work on resolving problems that do not occur on supported platforms.

Registry Information

If you have access to your registry file, a new key is added in HKEY_LOCAL_MACHINE\SOFTWARE\Siemens PLM Software\Factory Programs\[version]:

Factory→DWORD→1

This will resolve the issue of Factory license check and DAT file error for enablers.

AutoCAD requirements

Autodesk recommends that non-English language versions of AutoCAD be installed on an operating system with a matching user interface language.

You must have administrative permissions to install AutoCAD.

For multi-user or floating license configurations, a Network interface card and TCP/IP or IPX support is required.

AutoCAD 2018 System Requirements	
Operating System	• Microsoft® Windows® 10 (64-bit only) • Microsoft® Windows® 8.1 with Update KB2919355 • Microsoft® Windows® 7 SP1
CPU Type	• 1 gigahertz (GHz) or faster 64 bit (x64) processor
Network	• Deployment via Deployment Wizard • The license server and all workstations that will run applications dependent on network licensing must run TCP/IP protocol. • Either Microsoft® or Novell TCP/IP protocol stacks are acceptable. Primary login on workstations may be Netware or Windows. • In addition to operating systems supported for the application, the license server will run on the Windows Server® 2012, Windows Server 2012 R2, Windows Server 2008, Windows 2008 R2 Server editions. • Citrix® XenApp™ 7.6, Citrix® XenDesktop™ 7.6
Memory	4 GB (8GB recommended)
Display Resolution	1360 x 768 (1920 x 1080 recommended) with True Color. For High Resolution & 4K Displays: Resolutions up to 3840 x 2160 supported on Windows 10 (with capable display card)
Display Card	Windows display adapter capable of 1360 x 768 with True Color capabilities and DirectX® 9. DirectX 11 compliant card recommended. For High Resolution & 4K Displays: Windows display adapter capable of resolutions up to 3840 x 2160 and manufacturer-recommended for high resolution applications with True Color capabilities and DirectX9. DirectX11 card recommended.
Disk Space	Installation 4.0 GB
Pointing Device	MS-Mouse compliant
Digitizer	WINTAB support
Media (DVD)	Download and installation from DVD
Browser	Internet Explorer® 11 (or later)
ToolClips Media Player	Adobe Flash Player v10 or up
.NET Framework	.NET Framework Version 4.6

AutoCAD 2017 System Requirements	
Operating System	• Microsoft® Windows® 10 • Microsoft Windows 8.1 with Update KB2919355 • Microsoft Windows 7 SP1
CPU Type	• 1 gigahertz (GHz) or faster 64-bit processor
Network	• Deployment via Deployment Wizard • The license server and all workstations that will run applications dependent on network licensing must run TCP/IP protocol. • Either Microsoft® or Novell TCP/IP protocol stacks are acceptable. Primary login on workstations may be Netware or Windows. • In addition to operating systems supported for the application, the license server will run on the Windows Server® 2012, Windows Server 2012 R2, Windows Server 2008, Windows 2008 R2 Server editions. • Citrix® XenApp™ 7.6 FP1, Citrix® XenDesktop™ 7.6
Memory	4 GB (8GB recommended)
Display Resolution	1360 x 768 (1600x1050 or higher recommended) with True Color. 125% Desktop Scaling (120 DPI) or less recommended.
Display Card	Windows display adapter capable of 1360 x 768 with True Color capabilities. DirectX® 9. DirectX 11 compliant card recommended.
Disk Space	Installation 10.0 GB
Pointing Device	MS-Mouse compliant
Media (DVD)	Download and installation from DVD
Browser	Windows Internet Explorer® 9.0 (or later)
.NET Framework	.NET Framework Version 4.6

Additional requirements for large datasets, point clouds, and 3D modeling with AutoCAD 2017 and 2018	
Memory	8 GB RAM or more
Disk Space	6 GB free hard disk space available, not including installation requirements
Display Card	1920 x 1080 or greater True Color video display adapter, 128 MB VRAM or greater, Pixel Shader 3.0 or greater, Direct3D®-capable workstation class graphics card.

Notes:

Chapter 2: Prepare the license

Each machine where FactoryCAD or FactoryFLOW software will be run must have access to a license. The license can be obtained from a license server or from a local license file. The following table lists some considerations for choosing a license location.

License Location	Relative Characteristics
License server	• Can be readily managed and upgraded. • Requires workstation connection to a network. • License can be obtained by any workstation on the network. • May reduce the number of licenses required. • A license timeout value specifies the period of inactivity after which a checked out license is automatically checked back in to the license server.
Local file	• Does not require connection to a network • For multi-user sites, may require more labor to manage and upgrade than a network license server. • Software license cannot be used by another workstation.

At the time of software purchase, a license file is provided to the license contact person. The license file is valid only for a specified machine (either a network server or a local workstation). The license file may include information and licensing for more than one product. For assistance with license issues, contact Global Technical Access Center (GTAC).

In this situation	Do this
You do not want to use a license server.	Copy the license file to a drive on the workstation.
You already have a Siemens PLM license server (version 8.2.4 or newer) that you want to use to serve the Factory licenses.	Add the FEATURE and INCREMENT data from the supplied license file to your existing license file. **Note** You can only add your feature lines to an existing license file if all of the features have the same daemon.

In this situation	Do this

You want to install a new license server to serve the licenses.	1. Copy the license file to some location on the server.
	
	Note
	
	The first data line in the license file is typically the server line. The server line can contain hardware information or network information:
	
	`SERVER YourHostname hardwareID port`
	
	The second line is typically the vendor line:
	
	`VENDOR daemonName pathToDaemon`
	
	The rest of the license file typically contains FEATURE lines.
	
	You can edit the following:
	
	• On the server line, the hostname (first value) and the port address (third value)
	
	• On the vendor line, the optional path to the daemon (second value)
	
	2. Copy the appropriate compressed server setup file from the installation disk folder **\License Server Installer\License Server Setups** to the server.
	
	3. Extract the server setup file and then run the setup executable, typically **setup.exe**.
	
	4. Follow the on-screen instructions.

Chapter 3: Set up configuration files

Configuration files set values used by FactoryCAD, FactoryFLOW, and the Translate to JT module. While program operation requires that some settings are present in a configuration file, many configuration settings are optional.

The Factory installation disk contains configuration file templates **Factory.xml** and **TransToJt.xml** in corresponding folders within the **Config** folder. For convenience, you can combine the contents of the separate configuration files into one xml file.

Configuration setting precedence

Configuration settings for program operation can be stored in either Local or Enterprise configuration files.

1. If a setting is present in a Local configuration file, the Local setting value is used.

2. When a setting is not present in a Local configuration file, but is present in an Enterprise configuration file, the Enterprise setting value is used.

3. If a setting is not specified in either a Local or Enterprise configuration file, an internal default setting value is used.

4. Some settings are available to change inside ICE in the Options dialog box. The settings are applied without restarting ICE.

As compared with Local configuration files, Enterprise configuration files enable consistent settings for multiple users and facilitate administration.

Configuration file locations

The Factory programs check for **Local Configuration File** and **Enterprise Configuration File** file location string values in the following registry keys, which are created and populated during Factory program installation. The string values for enterprise configuration files can contain URL addresses as well as network or local paths. String values for local configuration files should point to files on the local machine.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Siemens PLM Software\Factory Programs\[version]

HKEY_LOCAL_MACHINE\SOFTWARE\Siemens PLM Software\Translate to JT for AutoCAD\[version]
```

The Translate to JT setting is available in the Options dialog box.

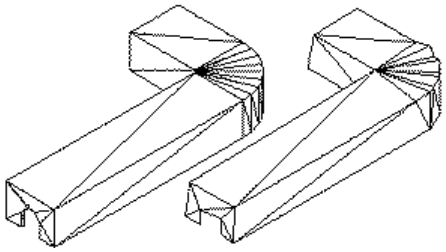
Factory programs configuration file

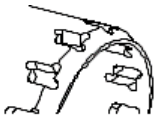
```
<Configuration>
  <Factory>
    <Setting name="Use JT Simplification [True/False]" value="True"/>
    <Setting name="JT Simplification Type [DECIMATE/BBOX]" value="DECIMATE"/>
    <Setting name="JT Simplification LOD [min 0.0, max 1.0]" value="1.0"/>
    <Setting name="JT Simplification Level [min 0.0, max 1.0]" value="0.25"/>
    <Setting name="Use Parasolid Surface Plane Tolerance [True/False]" value="True"/>
    <Setting name="Parasolid Surface Plane Tolerance" value="1.0"/>
    <Setting name="Use Parasolid Surface Plane Angle [True/False]" value="True"/>
    <Setting name="Parasolid Surface Plane Angle" value="30.0"/>
    <Setting name="Use Parasolid Curve Chord Tolerance [True/False]" value="True"/>
    <Setting name="Parasolid Curve Chord Tolerance" value="1.0"/>
    <Setting name="Use Parasolid Curve Chord Angle [True/False]" value="True"/>
    <Setting name="Parasolid Curve Chord Angle" value="30.0"/>
    <Setting name="Use Parasolid Ignore Small Features [True/False]" value="False"/>
    <Setting name="Parasolid Ignore Small Features Type [Ratio/Size]" value="Ratio"/>
    <Setting name="Parasolid Ignore Small Features Ratio" value="10.0"/>
    <Setting name="Parasolid Ignore Small Features Size" value="1.0"/>
    <Setting name="Simplify XREF facets [True/False]" value="True"/>
    <Setting name="JT Insertion Units [Inches/Millimeters/Undefined]" value="Undefined"/>
    <Setting name="Default Factory Drawing Units [Inches/Millimeters]" value="Inches"/>
    <Setting name="Library Manager File [Default/path]" value="Default"/>
  </Factory>
</Configuration>
```

Default Factory configuration file

The following settings are related to configuration of the **Create Object from Direct Model** and **Create Object from Parasolid** commands used with XML objects, and the **Import from JT** option for creating 3D blocks for generic tools. All of the settings are optional. If a setting is not specified, the internal default value is used.

Setting	Description	Internal Default
Use JT Simplification [True/False]	In FactoryCAD, JT Simplification removes triangles from the tessellated surface while attempting to preserve as much detail as possible, using the specified JT Simplification Level.	True
JT Simplification Type [DECIMATE/BBOX]	**Decimate —** Removes triangles from the tessellated surface while attempting to preserve as much detail as possible. The portion (between 0 and 1) of triangles removed is specified by the value in Simplification Level **Bounding box —** Represents an object by a simple box exactly large enough to contain the object geometry.	DECIMATE
JT Simplification LOD [min 0.0, max 1.0]	Specifies which model detail level to start the simplification process with. Valid values are in the range 1 to 0 (high to low).	1.0

Setting	Description	Internal Default
JT Simplification Level [min 0.0, max 1.0]	The target percentage for simplifying the JT model. If you enter .9, the resulting model in AutoCAD looks a lot like the model in the JT file (the AutoCAD display version contains ninety percent of the triangles in the JT file). If you specify .5, a fifty percent simplification occurs (the AutoCAD display version contains fifty percent of the triangles in the JT file). Lower values produce less detail in the model, but the model loads faster.  Model with a .9 simplification. Model with a .5 simplification.	0.25
Use Parasolid Surface Plane Tolerance [True/False]		True
Parasolid Surface Plane Tolerance	Upper bound on the distance from a facet to the surface which it approximates. A higher value produces fewer facets for curving surfaces.	1.0
Use Parasolid Surface Plane Angle [True/False]		False
Parasolid Surface Plane Angle	Maximum angle allowed between a facet plane and its originating surface; calculated as the sum of the angular deviation between the surface normal and facet planar normal at any two positions within the facet boundary. A higher value produces fewer facets for curving surfaces.	15.0
Use Parasolid Curve Chord Tolerance [True/False]		True
Parasolid Curve Chord Tolerance	Maximum permitted distance from a chord to the curve which it approximates. Higher values produce fewer chords.	1.0
Use Parasolid Curve Chord Angle [True/False]		False
Parasolid Curve Chord Angle	Maximum angle allowed between a chord and its originating curve. Curve chord angle is calculated as the sum of the two angles between a chord and the curve tangents, measured at the chord ends. Higher values produce fewer chords.	15.0

Setting	Description	Internal Default
Use Parasolid Ignore Small Features [True/False]	Allows small features to be ignored, where the small feature is a set of connected faces whose bounding box is smaller than the specified Small Features Ratio or Size and whose boundaries lie completely within a face of the model.  Small features within a face can be ignored  Small features that cross faces cannot be ignored	False
Parasolid Ignore Small Features Type [Ratio/Size]	Method for classifying a feature as “small”.	Ratio
Parasolid Ignore Small Features Ratio	Percent of model bounding box to use as the qualifier for Small Feature classification	10.0
Parasolid Ignore Small Features Size	Size of bounding box to use as the qualifier for Small Feature classification.	1.0
Simplify XREF facets [True/False]	Simplify facets in AutoCAD sections when activated on FactoryCAD objects in xrefs.	True
JT Insertion Units [Inches/ Millimeters/ Undefined]	Scale inserted Direct Model (JT) models to the specified unit. Applies to JT models inserted for inclusion in XML objects and the generic tool object. **Note** The configuration file setting has highest priority in a sequence of settings checked when determining scale factor for inserted JT models. See *JT import scaling*.	Undefined
Default Factory Drawing Units [Inches/ Millimeters]	Default value for **Factory Drawing Units** setting as appears in the **Set Factory drawing parameters** dialog box. **Factory Drawing Units** specify the unit system for dimensioning, selecting points, and any other interaction with AutoCAD. Smart Factory Objects graphics automatically scale according to the current drawing unit. • **Inches** specifies one drawing unit = 1 inch • **Millimeters** specifies one drawing unit = 1 millimeter	Inches
Library Manager File [Default/ path]	Location of the library manager file, **LibraryManager.xml**. The default location is **[Factory installation folder]\Support**.	Default

JT import scaling

When JT geometry is imported to AutoCAD by means of FactoryCAD or In Context Editor, the JT entities are scaled to match the drawing units. The drawing units are determined based on the following priority order:

1. The configuration file setting **JT Insertion Units** in Factory and In Context Editor configuration files.

   (The default Factory configuration file name is **FactoryConfig.xml** and the default ICE configuration file name is **IceConfig.xml**; another file name may have been specified during installation, and the Factory and ICE configurations may have been consolidated in a single file.)

   Note

   - The **JT Insertion Units** in **FactoryConfig.xml** are used to scale JT geometry for inclusion in XML objects and the generic tool object.
   - The **JT Insertion Units** in **IceConfig.xml** are used when loading BOM lines with JT datasets or adding JT datasets in hybrid mode.

   Best practice is to set **JT Insertion Units** to the same value in the Factory and ICE configuration files.

   ```
   <Setting name="JT Insertion Units [Inches/Millimeters/Undefined]" value="Undefined" />
   ```

   This setting should match the units of your drawing, or should be set to **Undefined** to use one of the values below.

2. If the **JT Insertion Units** value does not exist in the configuration file or is set to **Undefined**, the Factory Drawing Units value is used.

3. If the Factory Drawing Units value is not defined, the AutoCAD variable INSUNITS value is used.

   This situation exists only for ICE users who do not have FactoryCAD installed on their machine.

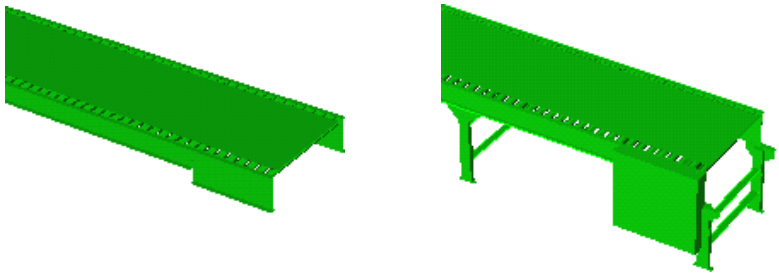
4. If the current AutoCAD variable INSUNITS value is set to Unitless, then Inches are used.

TransToJT configuration file

```
▼<Configuration>
  ▼<TransToJT>
     <Setting name="Advanced Compression Level [min 0.0, max 1.0, negative (off)]" value="0.25"/>
     <Setting name="Alternate Base Point X" value="0.0"/>
     <Setting name="Alternate Base Point Y" value="0.0"/>
     <Setting name="Display Translation Messages [True/False]" value="False"/>
     <Setting name="High LOD Level [min 0.0, max 1.0]" value="1.0"/>
     <Setting name="Level of Detail [Low/High/All]" value="High"/>
     <Setting name="Low LOD Level [min 0.0, max 1.0]" value="0.08"/>
     <Setting name="Middle LOD Level [min 0.0, max 1.0]" value="0.25"/>
     <Setting name="Process 3D Only [True/False]" value="False"/>
     <Setting name="Process Dimensions [True/False]" value="True"/>
     <Setting name="Process Empty Blocks [True/False]" value="True"/>
     <Setting name="Process Object Text [True/False]" value="True"/>
     <Setting name="Process Points [True/False]" value="True"/>
     <Setting name="Process Proxies [True/False]" value="True"/>
     <Setting name="Process SDX Objects Only [True/False]" value="False"/>
     <Setting name="Process Text [True/False]" value="True"/>
     <Setting name="Run Boundary When Attaching Xref [True/False]" value="True"/>
     <Setting name="Simplify Geometry [True/False]" value="False"/>
     <Setting name="Use Alternate Base Point [True/False]" value="False"/>
     <Setting name="Use Auto Normals [True/False]" value="True"/>
     <Setting name="Use Primitives [True/False]" value="True"/>
     <Setting name="Use SDX Names [True/False]" value="True"/>
     <Setting name="Use Tristrip Optimization [True/False]" value="True"/>
     <Setting name="Process Invisible Objects [True/False]" value="True"/>
     <Setting name="JT Creation Units [Inches/Millimeters/Undefined]" value="Undefined"/>
     <Setting name="Out Of Range Objects Show Popup Message [True/False]" value="False"/>
     <Setting name="Out Of Range Objects Log File Path" value="C:\FactoryOutOfRangeObject.log"/>
     <Setting name="Deviation [min 0.01, max 1.0]" value="1.0"/>
     <Setting name="Jt Version [9.0/9.5/10.1]" value="9.0"/>
   </TransToJT>
 </Configuration>
```

The following settings affect the AutoCAD to JT translator when it generates Direct Model (JT) files. All of the settings are optional.

Setting	Description	Internal Default
Advanced compression Level [min 0.0, max 1.0, negative (off)]	For compatibility with older versions of visualization software (before Teamcenter Visualization Mockup 5.0) the value should be 1.0 or negative.	0.0
Alternate Base Point X	Location value for “Use Alternate Base Point” parameter.	0.0
Alternate Base Point Y	Location value for “Use Alternate Base Point” parameter.	0.0
Display Translation Messages [True/False]	During translation, display a print message at command line for each entity translated.	False

Setting	Description	Internal Default
High LOD Level [min 0.0, max 1.0]	Portion of the model to include in the translated file at the High level of detail.	0.0
Level of Detail [Low/High/All]	Level of detail (LOD) versions to include in the translated file. **Low** – Export only the version with the lowest LOD **High** – Export only the version with the highest LOD **All** – Export all versions Many Smart Factory Objects include specifications of what geometry to include at several levels of detail. A version with a low LOD might omit some geometry in order to draw quickly and use few resources. A version with a high LOD might present a more complete or accurate representation of the object, but might also take longer to draw and use more computing resources.  Low LOD High LOD Having multiple LOD versions can improve the performance of 3D viewing within Teamcenter lifecycle visualization software. Object versions with a low LOD are displayed when an object is far away in the scene and details of the model are not easily visible. Object versions with a high LOD are displayed when the object is close to the viewer and more details are easily seen. **Tip** You can simplify exported JT files of High LOD package conveyors by turning off, in FactoryCAD, translation of package conveyor rollers.	All
Low LOD Level [min 0.0, max 1.0]	Portion of the model to include in the translated file at the Low level of detail.	0.0
Middle LOD Level [min 0.0, max 1.0]	Portion of the model to include in the translated file at the Middle level of detail.	0.0
Process 3D Only [True/False]	Filter out all 2D entities, such as 2D lines, circles, and arcs.	False

Setting	Description	Internal Default
Process Dimensions [True/False]	Include dimension objects in the JT file.	False
Process Empty Blocks [True/False]	Include empty blocks in the JT file.	True
Process Invisible Objects [True/False]	Translate objects even when their visibility property is set to off. **Note** This setting is independent of the ICE configuration setting “Set Invisible Objects Visible before Publish”.	True
Process Object Text [True/False]	Include text elements of objects. Visible text elements are translated as geometry. Invisible text elements are translated as properties.	False
Process Points [True/False]	Include points in the JT file.	False
Process Proxies [True/False]	Include proxy graphics in the JT file.	False
Process SDX Objects Only [True/False]	Export only objects that have SDX data attached to them.	False
Process Text [True/False]	Include AutoCAD MTEXT or DTEXT objects in the JT file.	False
Run Boundary When Attaching Xref [True/False]	When using AutoCAD Manager, automatically execute the Boundary command when you attach an XREF.	False
Simplify Geometry [True/False]	Create multiple LODs of AutoCAD geometry and of FactoryCAD objects that do not have multiple LODs internally defined. **Note** This setting does not affect creation of JT files for FactoryCAD objects that do have multiple LODs defined. In most cases, even though initial creation of the JT file takes longer when Simplify Geometry is selected, it should be selected in order to improve performance when viewing the output JT file.	False

<table>
<tr><th>Setting</th><th>Description</th><th>Internal Default</th></tr>
<tr><td>Use Alternate Base Point [True/False]</td><td>Use specified X,Y base point coordinates as the point from which to calculate geometry locations for the output JT file.

Note

While numeric values in AutoCAD can be stored with up to 15 significant digits, numeric values in Teamcenter visualization tools are stored with a maximum of 7 significant digits. Usually, this limitation does not present a problem. However, if for some reason the AutoCAD geometry is clustered at a large distance (more than 7 significant digits) from 0,0, as might be the case if a model is drawn relative to a far distant base point, you can use an alternate base point relatively close to the AutoCAD geometry so that the geometry can be successfully translated and viewed.</td><td>False</td></tr>
<tr><td>Use Auto Normals [True/False]</td><td>If you are getting black geometry in the JT file, flipping this setting may fix the color of the geometry.</td><td>False</td></tr>
<tr><td>Use Primitives [True/False]</td><td>Where possible, translate primitives from the drawing to corresponding primitives in the JT file, rather than tessellating the object shapes.

Note

Using primitives reduces the size of the JT file and increases the rendering speed for the object in Teamcenter visualization tools.</td><td>False</td></tr>
<tr><td>Use SDX Names [True/False]</td><td>Use SDX names when naming an object in the JT file.

<table><tr><th>Value</th><th>Result</th></tr><tr><td>True</td><td>  </td></tr><tr><td>False</td><td>  </td></tr></table></td><td>False</td></tr>
<tr><td>Use Tristrip Optimization [True/False]</td><td>Reduce the number of triangles in the tristrips in each JT part file without reducing the quality of the geometry displayed, thereby increasing visualization performance but at the expense of translation time.</td><td>False</td></tr>
</table>

Setting	Description	Internal Default
JT Creation Units [Inches/ Millimeters/ Undefined]	Units value in the exported JT file. **Note** The configuration file setting has highest priority in sequence of settings checked when determining units value for exported JT models. See *JT export units*.	Undefined
Out Of Range Objects Show Popup Message [True/False]	Shows a message for each out of range object, such as an infinite line. Out of range objects are not translated. The translator creates a log of out of range objects and saves the log as specified in **Out Of Range Objects Log File Path**.	True
Out Of Range Objects Log File Path	Location of **FactoryOutOfRangeObject.log** log file for listing objects that were out of range.	**C:\temp**
Deviation [min 0.01, max 1.0]	Allowed amount of deviation from mathematically true curve when tessellating. Affects how smooth the displayed curve will be. Smaller deviation values can cause longer JT creation times if the model is complex and can also increase JT file size as more faces are drawn.	1.0
Jt Version [9.0/9.5/10.1]	Default JT (Direct Model) file format version when exporting drawings to JT.	9.0

JT export units

The translator sets the units in the exported JT file according to the following priority order:

At this Priority level	The export units are set this way
1	Units are set by the translator configuration file setting **JT Creation Units**. (The default configuration file name is **TransToJtConfig.xml**; another file name may have been specified during installation, and the configuration parameters may have been consolidated with ICE or Factory configuration parameters in a single file.) `<Setting name="JT Creation Units [Inches/Millimeters/Undefined]" value="Undefined" />` This setting should match the units of your drawing, or should be set to **Undefined** to use one of the values below.

At this Priority level	The export units are set this way
2	If the **JT Creation Units** value does not exist in the configuration file or is set to **Undefined**, units are set by the Factory Drawing Units value. • For export from FactoryCAD, the Factory Drawing Units are always taken from the current drawing. • For export from In Context Editor (ICE), the units value source depends on the load status of the drawing (dwg) containing the objects to be translated. o For dwg files that have not been loaded (made visible) in the main drawing, the Factory Drawing Units are taken from the original drawing. o For dwg files that have been loaded (made visible), the Factory Drawing Units are taken from the main drawing.
3	If the Factory Drawing Units are not defined, units are set by the AutoCAD variable INSUNITS (insertion units) value. This situation exists only for ICE users who do not have FactoryCAD installed on their machine.
4	If the current AutoCAD variable INSUNITS value is set to Unitless, then units are set to Inches.

Chapter 4: Install the Factory programs

1. Ensure the following have been accomplished:
   - Ensure the current user has permissions to write to the Windows registry.
   - If an older version of the program is currently installed, follow the instructions in *Upgrade an older version*.
   - Install AutoCAD or AutoCAD Architecture.
   - Prepare the license.

     Note

     For assistance with license issues, contact GTAC.

   - If you want to use program configuration file values other than default values, prepare the configuration files and make note of their location.

     Tip

     For convenience, you can combine the contents of the separate configuration files into one xml file. You specify the file containing corresponding settings during program installation.

Configuration file location(s)
Factory
TransToJT

2. Insert the installation disk. If the setup program does not appear within 30 seconds, run **SETUP.EXE** from the root folder of the disk.
3. Follow the on-screen directions.

Note

During installation you specify the following paths:

Program Files Folder	The destination folder for the main program installation. Initially, Program, Symbols, and Python folders are created within the main program installation folder. Default value: **C:\Program Files\Siemens PLM Software\ Factory Programs [release]**
Menu Files Folder	The location for the menu files Default value: **C:\ProgramData\Siemens PLM Software\Factory Programs [release]\Menus**
Configuration Files	The destination for new copies of default configuration files (Local Configuration only), or the location of existing configuration files.
Licensing	Source(s) for acquiring a license when you later run the installed software. If you have a licensing environment variable set on the machine, and if you select the **Use UGS common licensing environment variable** check box, the installer shows the current value of the variable and adds the variable to the list of servers and license files. If a license is to be acquired from a standalone license file, you can browse to the file location and select it to add its path. If a license is to be acquired from a server, server name(s) must include the port number and be in the form : **port@servername** Port and server name can be found in the license file on the server.

Note

To enable certain capabilities, users need write permissions to files as shown in the following table. If necessary for system administration and user access control, you can move the Program, Symbols, and Python folders that are created within the main program installation folder to another location. If you do move the folders, you must also update the corresponding registry entries to point to the correct location. Factory registry entries are contained in the key **HKEY_LOCAL_MACHINE\SOFTWARE\Siemens PLM Software\Factory Programs\[release]**

For this capability	The user must have write permission to these files
Create new parameter sets for objects.	**.pst** and **.set** files in the Factory **Support\Metric** and **Support\Imperial** folders.
Create, modify, or delete custom objects.	**.xml** or **.geo** files for the objects, along with associated **.dlg**, **.set**, **.rpt**, **.app**, and **.ani** files. These files have no default location.
Modify object libraries, including adding objects to a library and modifying the library reference tree.	**.fcl** library files. These files have no default location.

4. When the installation wizard completes, exit the setup program.
5. To complete the installation, load the Factory menu file in AutoCAD.

Prepare a silent install

To simplify installation on multiple machines, you may want to prepare a silent install. A silent install can be prepared in the standard way, such as the following.

1. (Optional, recommended) Copy the setup files to the local machine.

   Caution

   Prepare the silent install on a machine with the same configuration as a machine on which it will be applied:

   - the same operation system
   - the same AutoCAD installation(s)

2. Open a command line and change directory to the setup file location.

3. To record the installation, run the setup as follows:

   Setup.exe /r /f1"<iss file location>"

   Example

   Setup.exe /r /f1"C:\Factory\Setup.iss"

   Pay special attention to the spaces in the syntax, particularly no space after **f1**.

   Caution

   While recording the installation, do not go back to previous screens to change settings.

   If you set some values in a screen X, go to screen X+1, then return to screen X and change values, the final .iss file will contain the original values from the screen X.

4. (Optional) To record a silent uninstall, on a machine where the software is installed, run the setup as follows:

   Setup.exe /r /uninst /f1"<iss file location>"

   Example

   Setup.exe /r /uninst /f1"C:\temp\uninstall_Factory.iss"

Perform a silent install

1. Run the setup as follows:

   Setup.exe /L<LCID> /s /f1"<iss file location>"

   The language switch **/L** is optional. If language is not specified, the language value is taken from the operating system. When the language switch is used, replace <LCID> with a language value from the following list.

English (United States)	1033
French (France)	1036
German	1031
Japanese	1041
Korean	1042

Example

Setup.exe /L1036 /s /f1"C:\Factory\Setup.iss"

Perform a silent uninstall

1. Run the setup as follows:

   Setup.exe /s /SMS /uninst /f1"<iss file location>"

Example

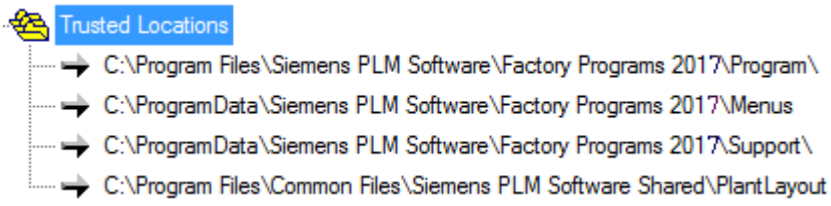
Setup.exe /s /SMS /uninst /f1"C:\temp\uninstall_Factory.iss"

Chapter 5: Load Factory customizations in AutoCAD

1. Start AutoCAD or AutoCAD Architecture.
2. Open a new or existing drawing.
3. Enter the command **Factory**.

The command performs the following actions:

a. Sets the following trusted paths in the current profile



> **Note**
>
> If a new profile is loaded, the trusted paths can manually be added to the profile, or the **Factory** command may need to be run again to set the trusted paths in the new profile.

b. Loads the **factory.cuix** menu file from **C:\ProgramData\Siemens PLM Software\Factory Programs [release number]\Menus**.

> **Note**
>
> Running the **Factory** command again at any time will simply confirm that the trusted paths are set and make sure that the menu file is loaded.

Notes:

Chapter 6: Upgrade an older version

1. In AutoCAD, run the **cuiload** command and unload any Factory menus.
2. Uninstall the older version.
3. Delete any old Factory menus (factory… .cuix, .cui, .mnu, .mnc, .mnl, .mnr, .mns) from the Factory menus folder and the Factory programs **\program** folder.

> **Note**
>
> The default menu location is as follows:
>
> **C:\ProgramData\Siemens PLM Software\Factory Programs [release]\Menus**

4. Install the new version using the instructions in *Install the Factory programs*.

> **Note**
>
> In some cases, uninstalling does not completely clear the Windows registry of all program settings, in which case the new installation encounters errors loading .dll files within AutoCAD.
>
> To resolve the issue, after installing the new version, run the executable file **CimfCleanRegistry17.exe** found in the program folder (default location **C:\Program Files\Siemens PLM Software\Factory Programs [release number]\Program**).

Convert legacy .flo projects

FactoryFLOW can convert **.flo** project files from earlier releases to the the **.qflo** format. The conversion requires the presence of the Java SE 7 or newer runtime extension. The 64-bit version of Java must be installed.

You can download Java from Oracle at http://www.oracle.com/technetwork/java/javase/downloads.

Multiple versions of Java can coexist on a machine. Java SE 7 or a higher version of JRE must be installed on your machine for FactoryFLOW to work properly.

Chapter 7: Global technical access center (GTAC)

To report any serious problems regarding the software, please contact Global Technical Access Center.

Phone:

- USA and Canada: 800-955-0000 or 714-952-5444
- Outside the United States and Canada: Contact your local support office.

Website:

You can log incident reports and view any existing resolutions for incident reports on the Web at https://support.industrysoftware.automation.siemens.com/gtac.shtml.

Notes:

Chapter 8: Siemens PLM Community

The Siemens PLM Community for FactoryCAD, FactoryFLOW, and In Context Editor are available at http://community.plm.automation.siemens.com/t5/General-Tecnomatix-Forum/bd-p/tecnomatix-forum . The Tecnomatrix Community (Siemens PLM Community for FactoryCAD, FactoryFLOW, and In Context Editor) is also available through the **Factory Layout Software Help**.

> **Note**
>
> A webkey and password are required to log on to the forum. Licensed users can get WebKey support at http:/www.siemens.com/plm/support.

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About Siemens PLM Software

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