GENIUS TOOLS®

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GENIUS TOOLS Model Processor User

12.0.0.0

Installation

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1 Installation

The help can be accessed directly from the application or under *<InstallationDirectory>/help*.

Run the installation program

Ensure that GENIUS TOOLS License Manager is accessible either locally or on the network and that the license for Model Processor is already stored.

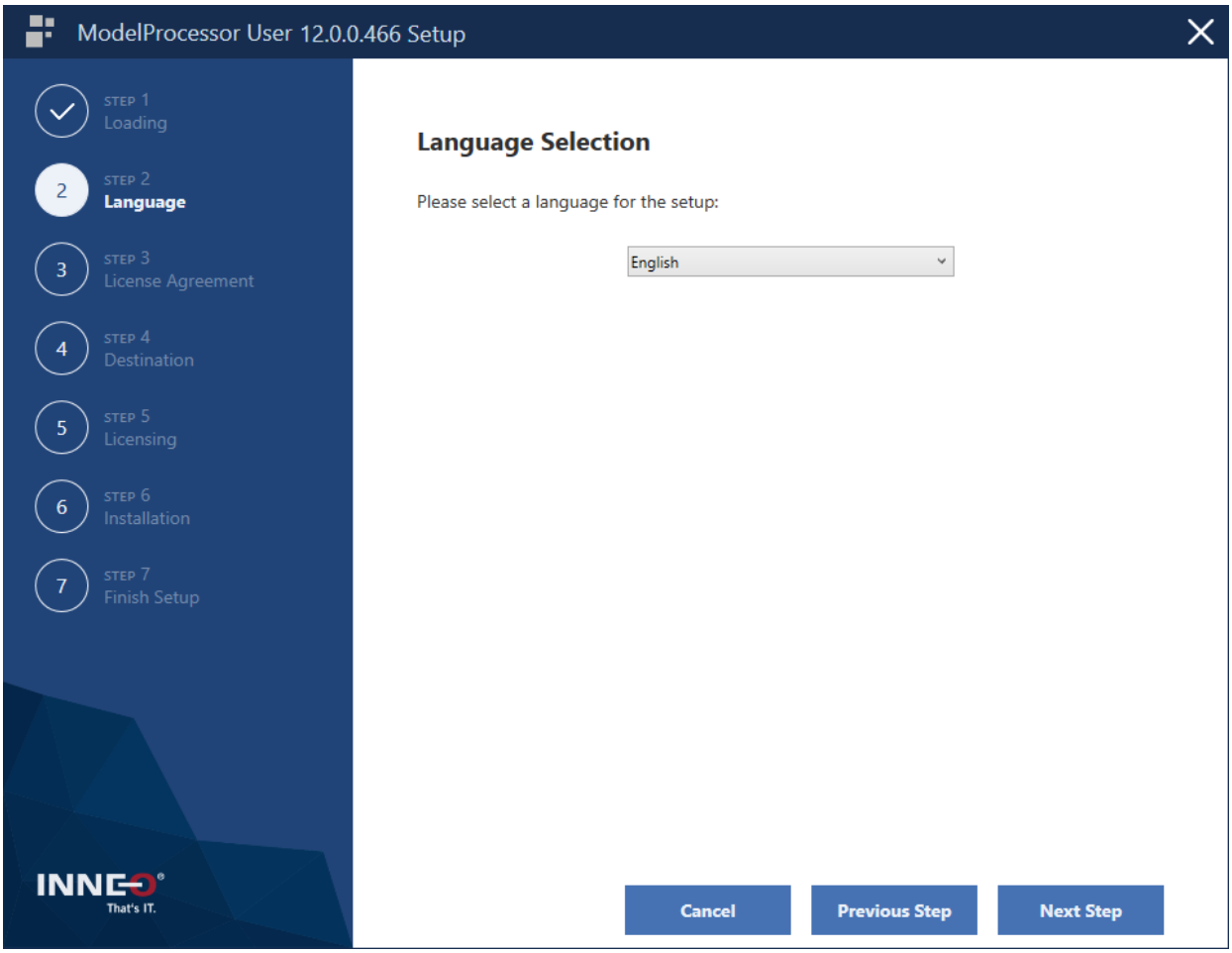
To install Model Processor, download the GENIUS TOOLS Model Processor software package. A ZIP file containing the software will be saved on your computer.

The ZIP file contains the installation file *setup_GT-ModelProcessorUser_<Version>.exe*.

Ensure that you close Creo Parametric before installation.

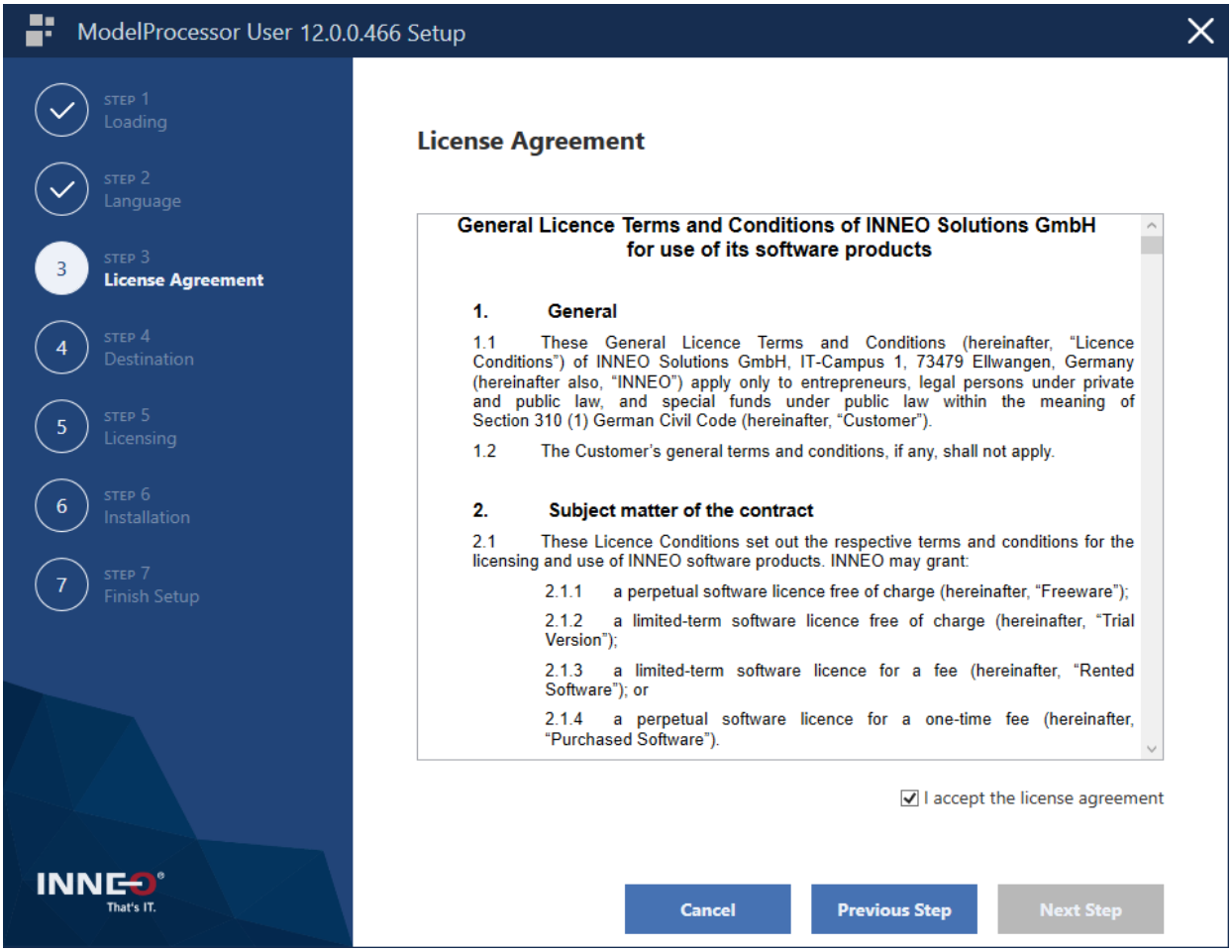
Procedure:

1. Start installation file
2. Select language.



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3. Accept license agreement.

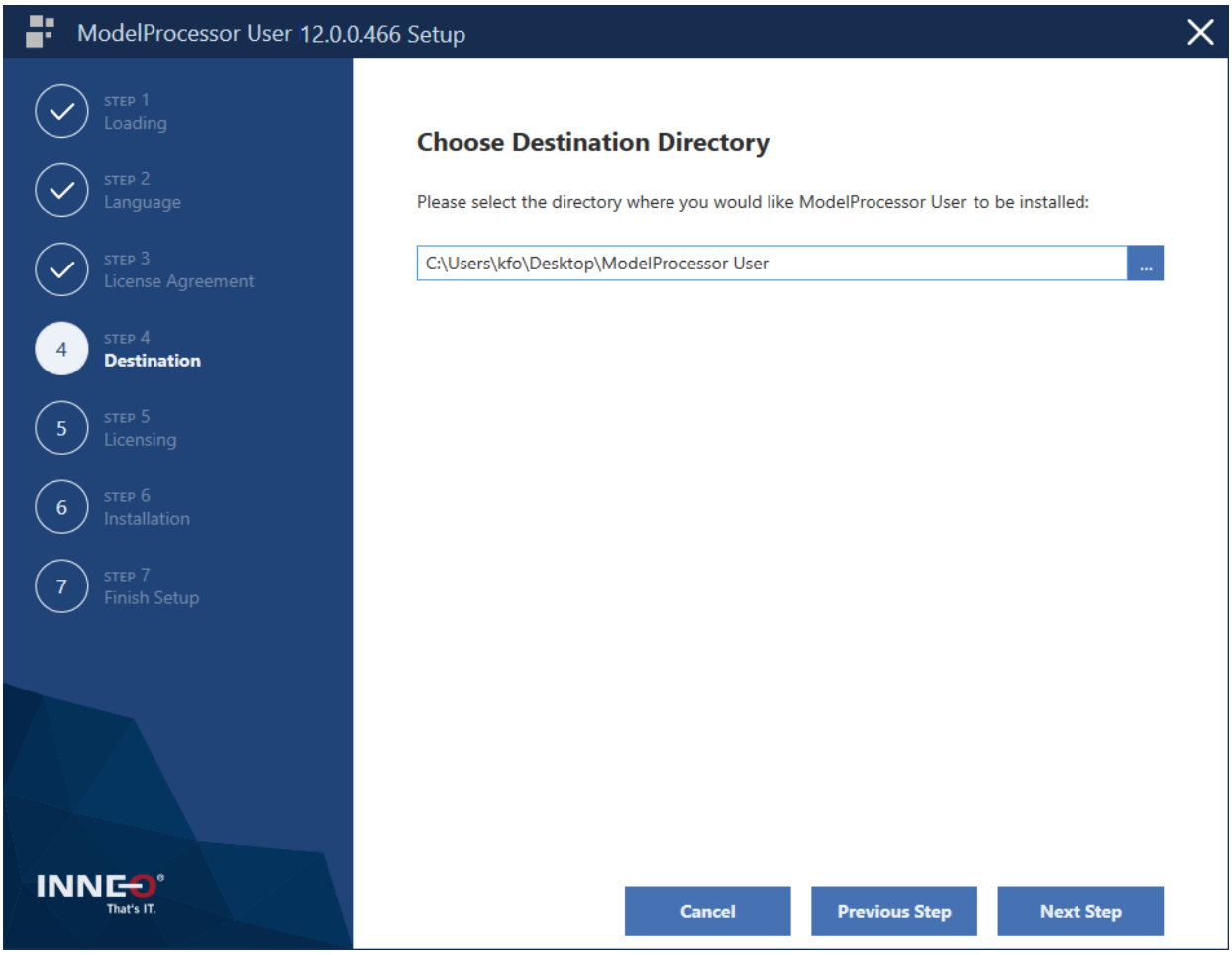


4. Specify the target directory for installation. The default directory is *C:\Users\<User>\Desktop\ModelProcessor User*.

   If you use Startup TOOLS, create a subdirectory in your working environment in the parametric/apps directory, e.g., with the name *mpuser*. Install GENIUS TOOLS Model Processor User in this directory in your working environment.

Please note: When selecting the directory, please note that users require read permissions in this folder structure for various functions.

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5. Install GENIUS TOOLS Model Processor
6. Complete installation

Please note: Please note that the GENIUS TOOLS Model Processor still needs to be integrated into Creo. For more information, see Integration in Creo 8.

1.1 Installation Directory

There are three different options available for installing GENIUS TOOLS Model Processor User:

1. UNC path on server
2. Local installation
3. GENIUS TOOLS Starter in network mode

1. UNC path on server

1. Open the folder *%\ModelProcessor User\conf* and open the file *mpu_main.cfg* in a text editor.

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2. Go to line 20:

   mpu_mpx_path=C:\temp\MPXs\

   ;mpu_mpx_path=%GTS_CONFIGURATION_DIR%\mpuser

   mpu_lic_path=7766@localhost

   ;mpu_lic_path=%GT_LIC_SERVER%

   mpu_temp_path=%TEMP%

   ;mpu_start_trigger_without_mpu=1

3. Change the path specification under mpu_mpx_path=C:\temp\MPXs\. Specify the desired UNC path of the server.
4. Open in the folder *%parametric\apps\mpuser* file *creotk_creo<Version>.dat* in a text editor.
5. Change the folder paths for the DLL directory and the text directory to the installation directory:

   EXEC_FILE \\<MPU-installation directory>\mpuser_creo12-x86e_win64.dll

   TEXT_DIR \\<MPU-installation directory>

2. Local installation

1. Install the program using the setup.
2. Move the installation folder from the desktop to the desired folder.
3. Run the file *rewriteCreoTK.cmd*. This will automatically correct the folder paths in the relevant configuration files.

Add manually GENIUS TOOLS Model Processor User in Creo

4. Click in Creo on the ribbon tab *Home* > *Utilities* > *Auxiliary Applications*.
5. Select the *GT Model Processor User* folder from the list.
6. Click on *Register...*
7. Enter the file name.
8. Click *Start*.

3. GENIUS TOOLS Starter in network mode

1. Install the program in a specified folder.
2. In Cadepot, a folder named *mpuser* must be added under *<work environment>\parametric\apps*.
3. In GENIUS TOOLS Starter App: Open the project folder in the Config tab by double-clicking on Project Configuration Modules (.pro).

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4. In the *creotk_mpuser.dat*, specify the name of the user folder instead of *MPUser*:

```
name   GT Model Processor User
startup dll
exec_file $GTS_APPS_DIR\MPUser\mpuser_$GTS_PROERELEASE-x86e_win64.dll
text_dir $GTS_APPS_DIR\MPUser\
allow_stop true
delay_start false
end
```

5. Create a folder under *%parametric\configuration\projects%* and create the file *config_2_start_mpu.pro*.
6. Enter the required configuration in *config_2_start_mpu.pro*:

```
! gts_display_name = Model Processor User
! gts_selection_name = MP User
! gts_selection_default = true
! gts_is_selectable = true
! gts_selectable_pos = 2

creotkdat   $GTS_CONFIGURATION_DIR\application\creotk_mpuser.dat
```

7. Open the file *mpu_main.cfg* in a text editor.
8. Either specify your own folder path and default server or use configuration path and license server of GENIUS TOOLS Starter:

Custom folder path and default server
Specify the folder path for mpu_mpx_path=MPX.

GT Starter configuration path and license server
Remove the semicolons from these configuration options:

```
mpu_mpz_path=%GTS_CONFIGURATION_DIR%\mpuser
mpu_lic_path=%GT_LIC_SERVER%
```

Add semicolons before these configuration options:

```
mpu_mpx_path=C:\temp\MPXs\
mpu_lic_path=7766@localhost
mpu_temp_path=%TEMP%
```

9. A checkbox in GENIUS TOOLS Starter is located for GENIUS TOOLS Model Processor User.

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1.2 Update

If you have already installed GENIUS TOOLS Model Processor User and would like to update the existing installation, follow the steps for initial installation.

During an update, the configuration file mpu_main.cfg in the folder <*installation directory*>*conf* is not updated so that no company-specific configuration settings are overwritten. The current configuration options included in the latest release can be found in the file *mpu_main_default.cfg* or in the chapter Configuration Options 10.

1.3 Multiple Installations

It is possible to install two GENIUS TOOLS Model Processor Users. The first option is to rename one Model Processor User, for example to MPUserBeta or MPUser<version number>. The second option is to install the Model Processor User in a different folder.

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2 Configuration

2.1 Integration in Creo

Integration into a Startup TOOLS environment

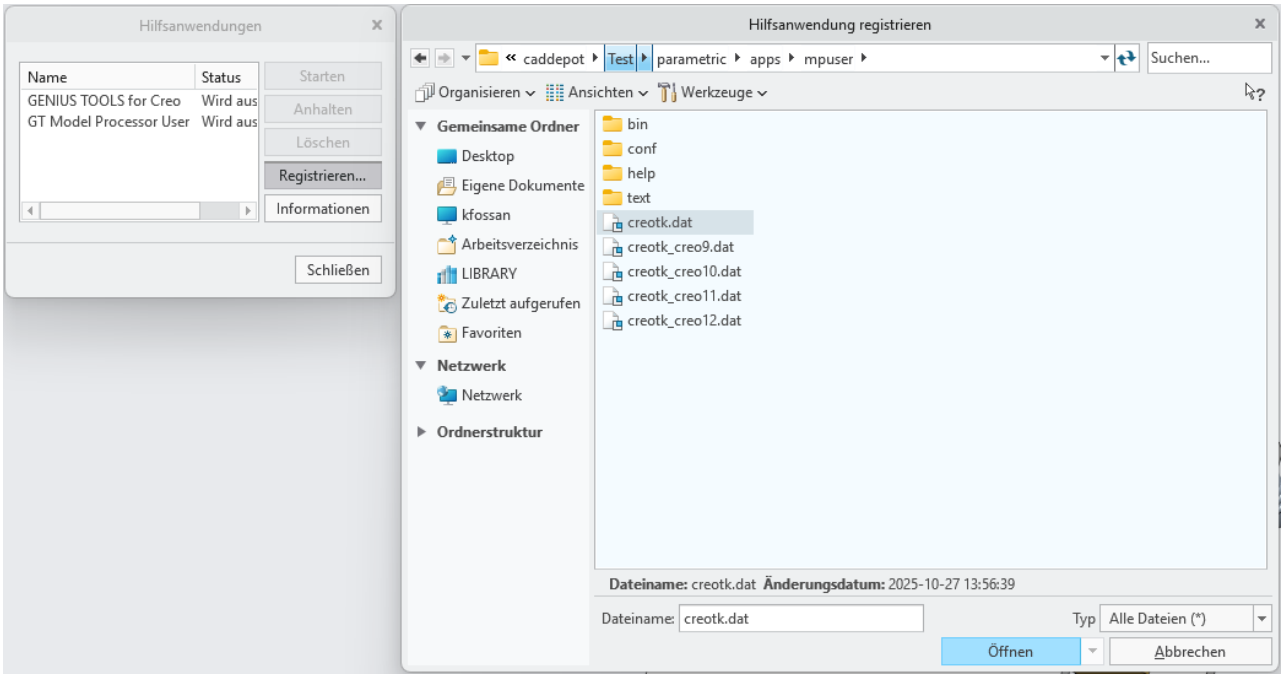
1. Install Model Processor User into your operating environment in the *parametric/apps/mpuser* directory.
2. Under <*InstallationDirectory*>*/conf*, edit the file *mpu_main.cfg*. You have to specify the license server. Adapt the following lines:
   mpu_mpx_path – Path to a directory which contains at least one MPX file.
   mpu_lic_path – Address for GENIUS TOOLS License Manager. The address has to be specified as *PORT@IP* or *PORT@NAME*.
   Example:
   ```
   mpu_mpz_path=%SUT_ROOT_DIR%\configuration\mpuser\
   mpu_lic_path=7766@localhost
   ```
3. Copy the *config_sut_en_start_mpu.pro* file from the <installation directory>.
4. Add the *config_sut_en_start_mpu.pro* file to the working environment in the *parametric/configuration* directory in one of the four folders, see *Starter projects* > *Configuration concept* in GENIUS TOOLS Starter Help:
   – standard (global settings)
   – units (unit specific settings)
   – projects (project specific settings)
   – users (user)
5. There you can adjust the default configuration values, e.g., *! gts_selection_default = true* or *false*.
6. Start your project using GENIUS TOOLS Starter App and open a model in Creo.

The installation is complete and the *Model Processor* tab has been added.

Integration as stand-alone application

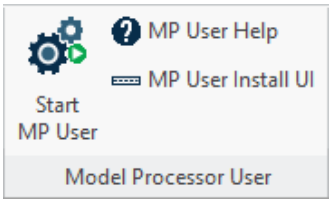
If you have installed Model Processor User as a stand-alone application, the software must be integrated into Creo via *Tools* > *Utilities* > *Auxiliary Applications*. In the *Auxiliary Applications* window, click *Register*. Select the file <*installation directory*>*creotk.dat*. Select the created Model Processor User so that it is highlighted in blue and click *Start*. Close the *Auxiliary Applications* window.

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Additional settings

In order to be able to access the configured example tasks in Creo, go to the *Model Processor* tab and select *MP User Install UI*. The buttons for the example tasks are displayed.



Model Processor UserTab

2.2 MPU configuration file

The file containing the configuration settings for Model Processor User is called *mpu_main.cfg*. It contains all configuration settings in German and English with a description.

The file is located in the conf directory of the MPU installation. It can also be stored in another file folder. To do this, this folder must be specified via the `MPU_CONF_DIR` environment variable.

The file must be saved with UTF-8 character encoding.

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Please note: Make sure that no extra spaces are used in the lines and that there is a blank line at the end of the file.

When updating the Model Processor installation, you can find the new configuration settings in the *mpu_main_default.cfg* file. The *mpu_main.cfg* file remains unchanged, see Update 7.

2.3 Configuration Options

Names of configuration options	Explanation
mpu_auto_unset_already_reworked_models=0	Specifies whether a preselection (1) of the displayed data should also be performed after the external data, or not (0).
mpu_cancel_if_not_checked_out=0	Only revise models that have been checked out in Windchill.
mpu_check_modifyable=0	Checks whether MPU has write access to the models.
mpu_check_parameter_value=1	Defines a corresponding value that should be within the defined parameter for mpu_check_parameter.
mpu_check_parameter	Defines a parameter to be checked.
mpu_column_parameter_width=10	Specification the width in the selection window.
mpu_column_parameter=BENENNUNG	Specification of the designation in the selection window
mpu_ext_filter_file=mp_check.xml	If an automatically selectable filter is available, it can be specified.
mpu_filter_asm=1	Specifies whether the Model Processor User is started (1) or not (0) when opening an assembly.

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Names of configuration options	Explanation
mpu_filter_curmod=1	Specifies whether the Model Processor User is started (1) or not (0) when opening the current model.
mpu_filter_drw=1	Specifies whether the Model Processor User is started (1) or not (0) when opening drawing.
mpu_filter_inst=1	Specifies whether the Model Processor User is started (1) or not (0) when opening Instance.
mpu_filter_prt=1	Specifies whether the Model Processor User is started (1) or not (0) when opening part.
mpu_lang=de	Specifies whether the language setting of the log (not in the user interface) is displayed in German (de) or English (en).
mpu_lic_path	Read-only, address of the license server
mpu_log_as_tree=1	Specifies whether the log output is displayed as a tree (1) or as a list (0).
mpu_log_show_filter_warning_on_parent_node=0	Specifies whether the warning symbols are inherited (1) or not (0) for filter warnings.
mpu_mpx_path=%GTS_CONFIGURATION_DIR%\mpuser	Read-only: This is where the MPX files are located.
mpu_no_debug_in_creo_log=0	No log is output directly in Creo Parametric, but rather in the MPU log file.
mpu_no_pro_notifications=1	MPU reacts (0) to the Creo model changes or it is deactivated (1).
mpu_pdm_mdl_change_dialog=0	Suppresses (0) the Windchill dialog that pops up when modifying read-only models.

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Names of configuration options	Explanation
mpu_show_log=0	The log area is folded down and is not filled (0) or is unfolded and is filled (1).
mpu_show_no_debug_in_log=0	Specifies whether a complete output of all messages defined in mpu_no_debug_in_creo_log is written to the Creo log file (1) or not (0).
mpu_show_no_pdm_server_informations=1	Does not display the model information from the PDM server in the model list.
mpu_start_mpx_	Automatically revises the selected data when saving with the selected MPX and task list (without file extensions).
mpu_start_trigger_without_mpu=1	Specifies whether the use of the MPU license is disabled (1) or not (0).
mpu_temp_path=%TEMP%	Read and write access: A temporary path that is as flat as possible and is also used to write the log files.
mpu_use_global_filter=0	Specifies whether the global filter of the task list is always evaluated (1), not evaluated (0), or not evaluated when it is activated (-1) in the list.
mpu_write_history_in_models=0	Write a parameter to all revised models that indicates whether the model has been edited.
mpu_write_id=1	Writes the application ID of the loaded DLL to the specified file.
mpu_write_reports_in_time=1	Reports are written to the file (1) each time the model is changed or when the MPU run is terminated (0).
mpu_write_welcome_message=1	Specifies whether the welcome message should be displayed (1) or not (0) when the MPU is started.

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2.4 Configuration for trigger

The Model Processor User offers the option of automatically revising files when defined events occur. Each trigger only supports one task list. Duplicating configuration options does not result in multiple task lists being executed.

Information in the configuration file

The desired triggers must be defined in the *mpu_main.cfg* 9 file. The following triggers are supported:

– Trigger before saving a model: before_save

– Trigger after opening a model: after_open

For the desired trigger, enter the trigger name *before_save* or *after_open* in the following configuration options. These settings must be configured.

Configuration options for triggers	Explanation
mpu_start_mpx_<Trigger name>=MPX file TaskList	Defines the MPX file to be executed and the task list. – MPX file: Name of the MPX file without the file extension – TaskList: Name of the task list to be used **ATTENTION:** Die Creo onfiguration option *retrieve_instance_dependencies* must be set to *instance_req_generic * for *after_open*.
mpu_start_mpx_<Trigger name>_conf	Specifies the filter selection for revision with the respective trigger (component, assembly, drawing, instances, and current model) as on (1) or off (0), see section Filter selection 14 below.
mpu_start_mpx_<Trigger name>_showUI	Specifies whether the user interface should be displayed after being revised by the respective trigger (1) or not (0).
mpu_start_mpx_<Trigger name>_write_check_rework_history	Specifies whether the history of a model should be evaluated (1) or not (0) and whether the history should be written to the models (1) or not (0).

Example:
mpu_start_mpx_before_save=autompx second_task_list

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mpu_start_mpx_before_save_write_check_rework_history=01

mpu_start_mpx_before_save_conf=11101

mpu_start_mpx_before_save_showUI=0

An MPX file is available as an example for controlling the tasks to be performed at: *C:\Users\Name\Desktop\ModelProcessor User\mpx\examples_int.mpx*

Filter selection

The *mpu_start_mpx_after_open_conf* option defines which model types are considered when the trigger is started. The default value is mpu_start_mpx_after_open_conf=11111. The sequence of digits indicates the following model types (1 = task is executed, 0 = task is not executed):

mpu_filter_prt=1 (part)

mpu_filter_asm=1 (assembly)

mpu_filter_drw=1 (drawing)

mpu_filter_inst=1 (Instance)

mpu_filter_curmod=1 (current model)

Example: mpu_start_mpx_after_open_conf=11001 means that the tasks in the task list are only executed for components, assemblies and current models.

The order of the model types can also be found in the comments in the configuration file.

2.5 Configure ribbon menu

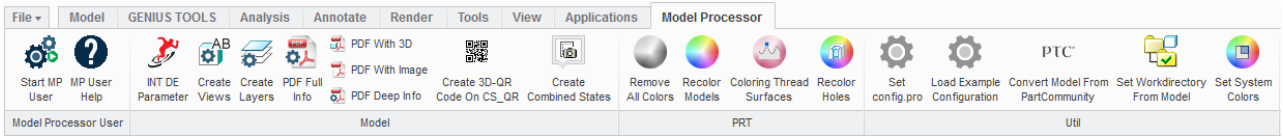
There is a sample command extension for GENIUS TOOLS Model Processor. With this extension, frequently used MPU tasks can be accessed directly from the Creo ribbon menu.

Each button in the ribbon menu calls up a list of tasks using a map key. These map keys can be customized and, for example, used in GENIUS TOOLS Quick Access extended with variables as intelligent map keys.

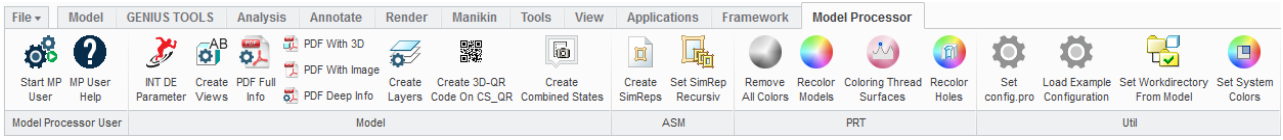
> **Please note:** The command extensions are examples and are only intended to illustrate possible areas of application. For productive use, the commands should be adapted to your application scenarios using the GENIUS TOOLS Model Processor.

This command extension must be installed separately.

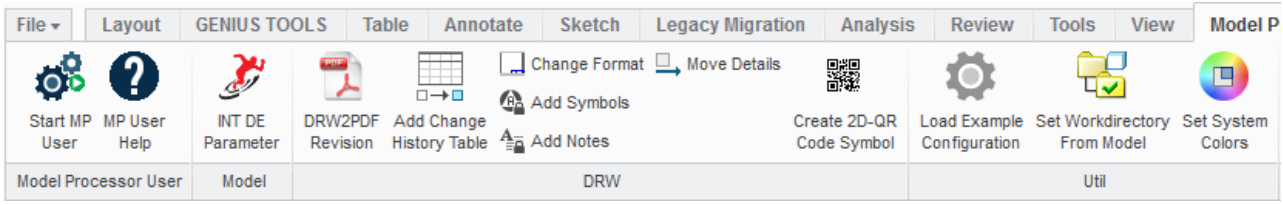
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Part mode



Assembly mode



Drawing mode

2.5.1 Installing and integrating the commands

The command extension is located in the Model Processor installation directory under *examples*.

Startup TOOLS installation: *apps\mpuser\examples*

Standalone installation: *C:\Program Files (x86)\GENIUS TOOLS\mpuser\examples*

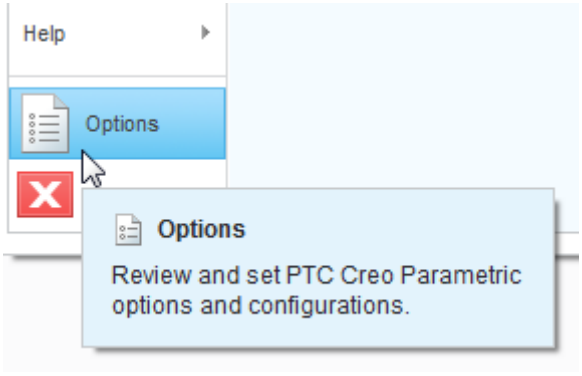
(1) Unpack the ZIP file into a subfolder.

(2) Copy the MPX file to the defined MPX folder (Standard: *<InstallationDirectory>\mpxs*).

(3) Copy the *config_mpuser_example_int.pro* file to your project directory (when using Startup TOOLS: configuration\projects\<ProjectDirectory>) to ensure that the *config.pro* block is loaded the next time Creo is started.

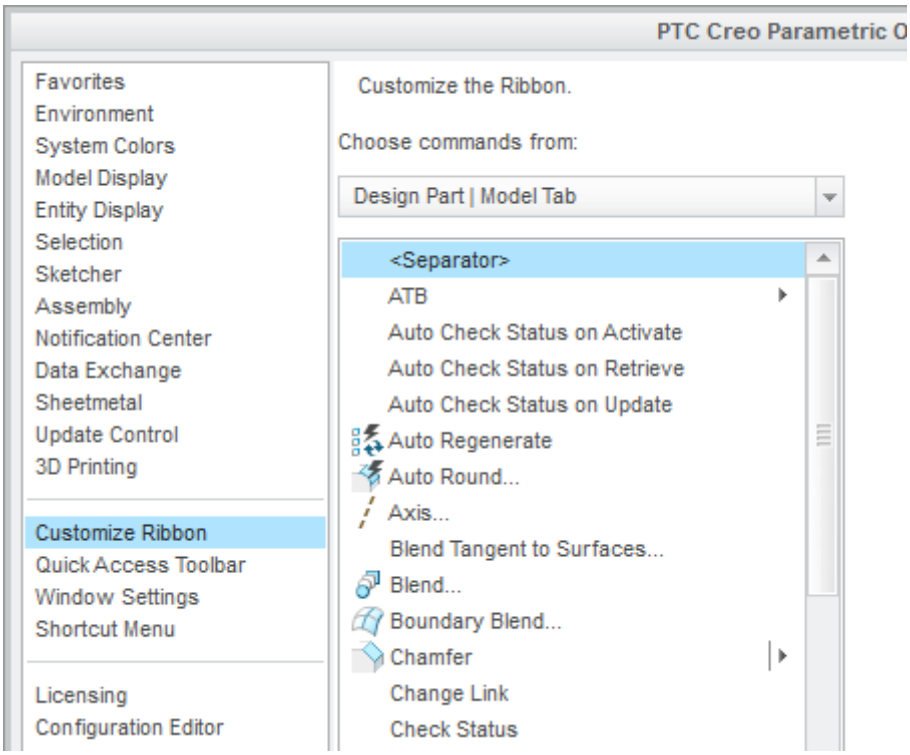
(4) Start Creo.

(5) Open the Creo *Options* dialog box.

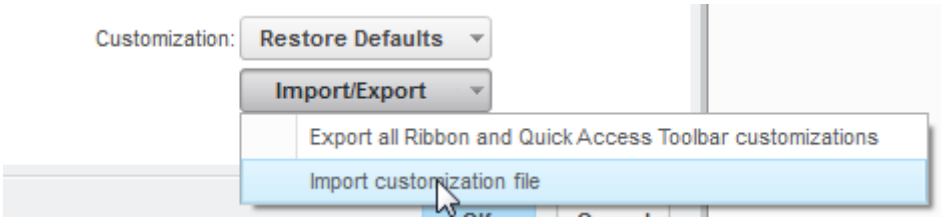


(6) Select *Customize Ribbon*.

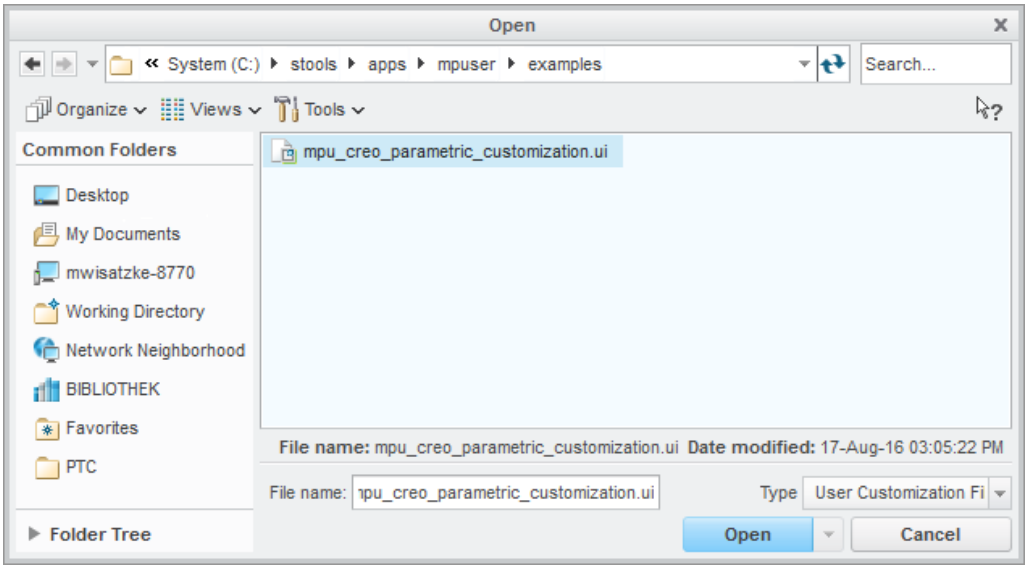
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(7) Click *Import/Export* and than *Import customization file*.



(8) Now navigate to the folder containing the ui file, select it, click *Open*, and then click *Import All*.



The GENIUS TOOLS Model Processor ribbon menu with sample tasks are now successfully installed.

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Please note: To ensure that the changes are successfully saved in Creo, it is recommended that you exit Creo normally and restart it.

When you open a part, assembly, or drawing, you will see the various tasks available to you.

2.5.2 Overview of commands

The following overview lists all available commands of the sample command extension.

Warning: The command extensions are examples and are only intended to illustrate possible areas of application. For productive use, the commands should be adapted to your application scenarios using the Model Processor.

Commands for the current model

Icon	Name	Description	Mode
	INT DE Parameter	This command generates all standard parameters for international use (and for use with Startup TOOLS) for a model, including descriptions, and sets the Designated option.	PRT, ASM, DRW
	Create Views	This command extension creates all views for a model (3D, front, right, rear, left, top, and bottom).	PRT, ASM
	Create Layers	This command removes all existing layers and adds new layers for all elements of a model. The new layers to be created are defined using a template (contained in the MPX file).	PRT
	PDF Full Info	Creates a predefined PDF overview report with lots of different information for the current model.	PRT, ASM
	PDF with 3D	Creates a 3D view of the current model in the temporary folder as a PDF file.	PRT, ASM

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Icon	Name	Description	Mode
	PDF with image	Creates a PDF file of the current model in the current orientation as an image.	PRT, ASM
	PDF Deep Info	Creates a predefined PDF report for the current model in its directory. All relations from features and sketches are also evaluated.	PRT, ASM
	Create 3D-QR Code on CS_QR	Creates a 3D QR code on a coordinate system on the component. This coordinate system must be named CS_QR. The 3D QR code is constructed from hole feature.	PRT, ASM
	Create Combined States	Creates predefined, combined views of the current model with associated layers and annotation features.	PRT, ASM

Commands for parts

Icon	Name	Description	Mode
	Remove all colors	Removes colors from all surfaces in the current model.	PRT, ASM
	Recolor Models	Colors surfaces, holes, threads, etc. of the current model with specified colors.	PRT, ASM
	Coloring Thread Surfaces	Colors all thread surfaces with a predefined color, depending on thread size and type.	PRT, ASM
	Recolor Holes	Colors all holes with a predefined color.	PRT, ASM

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Commands for assembly mode

Icon	Name	Description	Mode
	Create SimReps	Creates simplified representations of an assembly recursively (low detail, medium detail, or no geometry). These simplified representations must then be adjusted.	ASM
	Set SimRep Recursiv	Sets a simplified representation for an assembly (low detail, medium detail, or no geometry).	ASM

Commands for drawings

Icon	Name	Description	Mode
	DRW2PDF Revision	Exports a drawing as a PDF file to the temporary directory. Parameters are passed to the file name.	DRW
	Add Change History Table	Adds a change table to a drawing and inserts the latest changes from the designated internationalized parameters into the table.	DRW
	Change Format	Inserts internationalized parameters into parts, assemblies, and drawings, and changes the drawing format to ISO 7200 (A0-A4).	DRW
	Add Symbols	Adds symbols to the current drawing and the tables it contains.	DRW
	Add Notes	Adds drawing notes to a drawing.	DRW
	Move Details	Moves drawing details	DRW

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	Create 2D QR Code Symbol	Creates a QR code symbol with any content on the right side of a drawing.	DRW

Additional commands

Icon	Name	Description	Mode
	Set config.pro	Changes the display configuration of Creo to one of three different modes.	PRT, ASM
	Load Example Configuration	Loads the example configuration config_mpuser_example_int.pro once more (mapkey commands). The configuration options are applied immediately and can be used without restarting.	PRT, ASM, DRW
	Convert Model from PartCommunity	Converts a model from PTC's PartCommunity and changes properties such as units, layers, tolerances, etc. At the same time, the internationalized parameters are generated.	PRT
	Set Working directory from Model	Reads the current directory of the model and sets it as the working directory.	PRT, ASM, DRW
	Set system colors	Allows you to quickly switch between system color schemes (standard, black/white, dark background).	PRT, ASM, DRW

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