

MegaPart

User's Guide & Automation Manual

Version 1.0

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1. Introduction

MegaPart is an **Autodesk® Inventor®** add-in designed to significantly streamline the everyday workflow of engineers and designers by automating tasks that are normally repetitive, time-consuming, and prone to human error. Instead of manually opening countless parts, assemblies, or drawings one by one, users can rely on **MegaPart** to handle large batches of files with just a few clicks, freeing them to focus on actual design work rather than administrative overhead.

It offers the **Unified iProperty Editor**, allowing teams to maintain consistent metadata across entire projects without the usual hassle. Its **Smart Assembly Renamer** helps reorganize assemblies and components according to naming rules or project standards, which is especially valuable in large, complex design structures. **MegaPart** also features an **Instant Template Replacer** that simplifies the process of updating drawing templates across multiple files, ensuring that documentation stays aligned with evolving company standards. Furthermore, the integrated **Intuitive Reference Viewer** allows users to visualize and manage file dependencies, making it easy to identify broken links or missing references in complex assemblies. On top of that, its **High-Speed Batch Exporter** makes it easy to generate deliverables in various formats for clients, suppliers, or internal collaboration.

In short, **MegaPart** acts like a highly efficient assistant within Inventor, one that takes care of the tedious parts of CAD management so users can work faster, stay organized, and maintain consistency across even the largest design projects. **MegaPart** is an **Autodesk® Inventor®** add-in program that enhances user productivity and convenience by providing the **Unified iProperty Editor**, **Smart Assembly Renamer**, **Intuitive Reference Viewer**, **Instant Template Replacer**, and **High-Speed Batch Exporter**.

1.1 Installation/Uninstallation

How to Install

1. Download the installer from the **Autodesk® App Store** or from www.megapart.net.
 2. Close **Autodesk® Inventor®**.
 3. Run the installer and follow the on-screen instructions to install **MegaPart**.
- **Install Location:** **MegaPart** is installed in the following folder:
C:\ProgramData\Autodesk\ApplicationPlugins\MegaPart.bundle.

- **Upgrading:** You can install a newer version over an existing one. Only one **MegaPart** entry is kept in **Programs and Features**, and the files of the previous version are included in the new uninstall list.

Loading the Plugin in Inventor

After installation, you may need to enable the add-in within **Autodesk® Inventor®**:

1. Go to the **Tools** tab > **Options** panel > click **Add-Ins**.
2. In the **Add-In Manager** dialog, locate **MegaPart** in the list.
3. Ensure the **Blocked** checkbox is unchecked (if visible).
4. Ensure the **Loaded/Unloaded** checkbox is checked.

TIP:

Check **Load Automatically** to ensure the plugin is ready every time you start Inventor.

Unloading without Uninstalling

If you wish to temporarily disable the plugin:

1. Open the **Add-In Manager** and uncheck the **Loaded/Unloaded** checkbox for **MegaPart**.

TIP:

Note: You may need to restart Inventor for the changes to take full effect.

How to Uninstall

To completely remove the plugin from your system, please ensure the **Autodesk® Inventor®** product is closed, then choose one of the following:

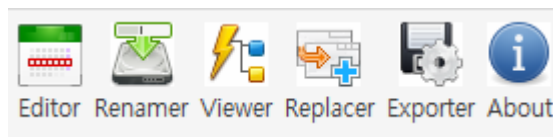
- **Via Installer:** Rerun the original installer and select the **"Uninstall"** button.
- **Via Windows Settings:** Go to **Control Panel** > **Programs and Features** (or **Windows Settings** > **Apps**) and uninstall MegaPart as you would any other application.

TIP:

If a file is in use during uninstallation (for example, this User Guide left open in a PDF viewer), the uninstaller asks you to close it and retry, or to remove it automatically on the next restart.

1.2 Location of MegaPart Menu

Once installed, the **MegaPart** ribbon becomes available within the **Tools** tab, providing a centralized interface that allows users to seamlessly access the suite's powerful automation features—including efficient iProperty management, bulk renaming of assemblies and components, comprehensive dependency analysis, and the flexible modification and conversion of drawing templates and file formats. By integrating directly into the **Autodesk® Inventor®** interface, **MegaPart** enhances workflow and improves productivity.



1.3 How To Get & Activate MegaPart License

1.3.1 Trial and Purchase Options

To use **MegaPart**, you can either activate a 15-day free evaluation trial or purchase a full license. Full licenses can be purchased directly from www.megapart.net or through the **Autodesk® App Store**. Follow these steps to set up your license properly:

- **Installation & Licensing**

MegaPart offers both a 15-day free evaluation trial and a full commercial license. You can get started by following the appropriate path below:

- **To Purchase a Full License:**

Please visit our official website at www.megapart.net to complete your purchase and download the software.

- **To Start a 15-Day Free Trial:**

You can download the evaluation version from either the Autodesk® App Store (search for "MegaPart") or directly from www.megapart.net.

- **Setup Steps:**

- **Install the Plugin:** Ensure **Autodesk® Inventor®** is closed, then run the downloaded installer file.

- **Launch and Locate:** Open **Autodesk® Inventor®**, navigate to the **Tools** tab, and click the **About** icon within the MegaPart panel to configure your license.

1.3.2 Choosing Your License Type

You can activate **MegaPart** using one of the two options below in the License Info section of the AboutBox:

- **Option A: Activating the 15-Day Free Trial**

- **No Purchase Required:** If you want to test the software before making a purchase, you can proceed directly with a trial version after downloading the installer.
- **Full Functionality:** The trial version is completely identical to the full licensed version with no feature restrictions. You can evaluate all modules and automated tasks with full access.
- **Instant Activation:** Open the **MegaPart** interface, go to the License Info section, select **Trial License** from the **License Source** drop-down, and click **Activate** to immediately unlock a 15-day evaluation period with full functionality.
- **Starting the Trial:** The trial starts only when you click **Activate** and confirm. **Refresh** only shows the current trial status (for example, the days left) and never starts a trial.

- **Option B: Activating a Purchased Full License**

To purchase a full license, please visit our official website at www.megapart.net to complete your purchase and receive your license key.

- **License Source:** Select **Commercial License** from the drop-down menu.
- **Enter License Key:** Input your purchased unique license key into the **License Key** field.
- **Hardware-Locked Binding:** The system automatically detects your PC's hardware identifier via the MAC Address field. No manual input is required.
- **Complete Registration:** Click the **Activate** button to communicate with the server and fully register your software.

CRITICAL: Moving License or Formatting Your PC

Important: Because your license is strictly tied to your specific hardware configuration (Mac Address), you must click the **Deactivate** button before formatting your operating system or making any hardware changes (such as

replacing a Network Interface Card). Failing to deactivate beforehand will lock the license to the old configuration and prevent you from reactivating it later.

1.4 Detailed Sample Files Guide

Included Sample Files for Testing and Evaluation

To help you get started quickly and safely evaluate the software's core automation capabilities, **MegaPart** provides a set of pre-configured sample data within the installation directory. These files are designed to serve as a safe sandbox environment before you apply batch operations to your live production models and drawings.

You can locate these files by navigating to the **'Sample'** folder located directly inside your **MegaPart** installation path. The directory contains the following assets:

- **Basic Sample Assemblies (.iam & .ipt):** A set of standard multi-level assemblies and part files. These models allow you to test modules like the iProperty Editor and Assembly Renamer instantly, letting you observe how **MegaPart** synchronizes property changes and replicates complex folder structures in real time.
- **Drawing Template Replacer Samples:** Pre-configured sample drawings specifically prepared for evaluating the Replacer module. These include master drawing templates containing various Drawing Border and Title Block definitions.

How to Use the Templates for Border & Title Block Replacement

- **Understand the Structure:** Use these sample drawings as a structural reference to see how boundary sizing and naming rules interact with the software's automated selection logic.
- **Execute a Safe Test Run:** Load the sample assembly, open the Replacer window, and assign the sample template definitions to verify how the tool automatically matches borders based on sheet size without breaking existing annotations or views.
- **Customize for Your Workflow:** Once you verify the batch replacement process in memory, you can directly modify these pre-configured templates to match your company's official engineering standards.

2. Unified iProperty Editor

2.1 General Workflow

This section describes how to configure the display settings and efficiently edit iProperties for your active models.

Opening the Editor Window

1. **Load the Model:** Open an **Autodesk® Inventor®** Assembly (.iam) or Part (.ipt) file containing the iProperties you wish to modify.
2. **Access the Menu:** Navigate to the **Tools** tab on the ribbon menu.
3. **Launch Editor:** Click the **Editor** icon within the **MegaPart** panel to open the main interface.

Configuring iProperties to Display

Before editing, you must select which properties will be visible in the editor grid.

1. **Open Configuration:** On the Editor Window toolbar, click the **Configuration** icon (located at the far right of the toolbar).
2. **Select Properties:** In the configuration window, Check/Uncheck the specific iProperties (→ Part Number, Description, Stock Number, or Custom Properties) you want to display on the screen for editing.

TIP:

Limiting the display to only necessary properties improves workspace clarity.

3. **Save & Exit:** Click **Save** to apply your preferences, then click **Close** to return to the main editor.

Editing and Applying Changes

1. **Read Data:** In the Editor Window, click the **Read Model** button. The current iProperty values from the active file will be loaded into the grid.
2. **Modify Values:** Directly edit the iProperty values within the on-screen grid cells. You can quickly navigate between cells using the Tab or Arrow keys.

3. **Commit Changes:** Once all modifications are complete, click the **Apply** button.

 Important Note: Caution

While most **Standard Properties** will function normally, certain properties—such as **density**—can cause malfunctions, calculation errors, or model corruption if modified incorrectly. **Please exercise great care when changing these core attributes**, as they are deeply tied to the model's physical and behavioral logic. **We are not responsible for any model issues or errors arising from improper modifications.**

 Important Note: Applying and Saving Changes

Please note that any modifications made within this tool are temporary until you click **Apply**. Once you click **Apply**, these changes are written to your Inventor document. To ensure these modifications are permanent, you must **save the Inventor document** after applying your changes.

2.2 Feature Description

- If a drawing file with the same name exists for a part or assembly, a drawing icon is displayed.
- A yellow background in the cell indicates that the part either has no property value or the existing value type does not match the expected type.
- **MegaPart** can malfunction when an iProperty name contains special characters such as **single quotation marks (')**, **commas (,)**, **quotation marks (")**, or **similar symbols (\ / : * ? " < > | ' , ;)**. These characters often interfere with how the Editor interprets or parses the property name.
- A gray background in the row indicates that the component is in a read only state.
- The **Part Number** cell is displayed in **bold, underlined, italic** text when it does not match the component's file name.
- The interface displays quantity information through the following metrics:
 - **【QTY】** : Represents the quantity of a component within its immediate upper-level assembly.
 - **【SUB_QTY】** : Indicates the cumulative quantity of a component, tracked from its immediate upper-level assembly up to the top-level assembly.

- **【SET_QTY】** : Shows the total quantity of the component calculated for the entire assembly. Normal and reference occurrences are counted separately: a normal row shows the total of all normal occurrences, and a reference row (a component set to **Reference**, or any component inside a **Reference** sub-assembly, shown in crimson text) shows the total of the reference occurrences only.
- Quantities are recalculated immediately when you change a **BOM Structure** in the grid (including Paste and Undo). Quantity cells changed by a BOM edit are shown in Aquamarine; changing the View Mode or the Phantom Control does not highlight quantities.
- When an iProperty is modified, the background color of the cell changes to Aquamarine.
- When a part is modified in an assembly, the properties of the same part are updated simultaneously throughout the entire assembly.
- **BOM Structure** changes follow where Inventor stores the value:
 - **Reference** and **Default** are stored on the occurrence in the parent assembly. They are applied only to the rows of the same part under the same parent assembly. The same rule applies when you change a row that was **Reference**.
 - **Normal**, **Purchased**, **Phantom**, and **Inseparable** are stored in the part file itself. They are applied to every row of the part, except rows placed as **Reference** under another parent assembly, which keep their reference setting.
- **Content Center Parts** are shown with a gray background and cannot be modified, except for the **BOM Structure** cell (shown in white). You can choose only **Reference** or the part's own BOM structure; choosing the own structure returns the occurrence to its default. The change is applied only to the occurrence in the parent assembly; the Content Center library file is never modified.
- **Copy & Paste Support:** Enables you to copy the selected area to the clipboard. You can also paste content back onto the screen, allowing you to copy data into Excel for bulk modifications and paste it back into the application.

Important Note: Restrictions on Read-Only Fields

Please be aware that while data in read-only fields can be copied to the clipboard, the **Paste** and **Find & Replace** functions are **strictly restricted for these specific areas** to prevent unintended modifications to your assembly data. If you need to perform bulk updates or overwrite values in these fields, you must first disable the

read-only attribute for the target cells. Once the read-only lock is removed, you will be able to **Paste** data or execute **Find & Replace** operations normally.

- Supports **Undo** functionality within the available limits.
- **Find & Replace**: Allows searching and replacing values within the **Current Column** or within the **Selected Cells**.
 - You can use the asterisk (*) as a wildcard in the search function to find matches based on specific patterns:
 - **Starts with**: Type ***text** (→ **Part*** finds all items starting with "Part").
 - **Ends with**: Type **text*** (→ ***Screw** finds all items ending with "Screw").
 - **Contains**: Type **text** or ***text*** (→ **Nut** or ***Nut*** finds all items containing "Nut").
- **Add Prefix & Add Suffix**: Prefixes and suffixes can be inserted into the selected cells.
- You can toggle the **View Mode** to change how the assembly data is displayed:
 - **TreeView (Hierarchical View)**: Displays the full assembly structure, maintaining the parent-child relationships between components. Use this mode when you need to navigate the assembly hierarchy or work on specific sub-assemblies.
 - **FlatView (List View)**: Flattens the hierarchy and displays all components as a single-level parts list (a.k.a. a "Parts List"). Use this mode for BOM generation or when you need to manage/edit all parts regardless of their assembly structure. When a part is used both normally and as a reference, it is listed on two rows, each with its own **【SET_QTY】**. The **BOM Structure** column is hidden in this mode.

 TIP:

You can easily transform the grid data into a professional Bill of Materials (BOM) or Parts List by copying it directly into Excel. Before copying the data to Excel, switch to FlatView mode. This ensures that your Excel list displays a clean **Single-Level BOM** containing all unique parts across the entire assembly.

- Each of the **iam**, **ipt**, **Lib Only** checkboxes operate as a separate filter.
- Use the **Phantom** Control dropdown menu to determine how phantom components are displayed in the current View Mode:
 - **Show Phantom**: Displays phantom parts within the structure, maintaining their defined position.

- **Hide Phantom**: Removes all phantom components from the list view. Their child components move up one level, and their **【QTY】** is multiplied by the quantity of the phantom component, so it shows the quantity per parent assembly.
- **Merge Phantom Parts**: Hides the phantom components as above and merges identical components under the same parent assembly into a single line item with the summed quantity. (Recommended for creating a cleaner **Single Level BOM** or simplified **Parts List**.)
- Context Menu Features: By right-clicking any part within the list, you can access powerful management tools to streamline your workflow.
 - **Copy to Clipboard** / **Paste from Clipboard**: Copies or pastes the selected cell data, in addition to the standard keyboard shortcuts.
 - **Check Selected Parts**: Checks the selected components for further batch operations.
 - **Uncheck Selected Parts**: Unchecks the selected components.
 - **Find Identical Parts**: Automatically selects all identical parts based on full file path within the assembly, which is useful for mass renaming or property modifications.
 - **How it identifies parts**: The tool scans the assembly structure and groups parts that share the exact same directory and file location, ensuring that all instances of the file are selected for simultaneous modification.
 - **Workflow impact**: When you trigger Find Identical Parts, **MegaPart** selects every instance of that component across the project. This allows you to perform mass operations—such as property updates or batch renaming—across the entire project with precision based on their specific file path.
 - **Quantities**: The status bar shows the number of rows found and the total quantity of the part, with the reference quantity shown separately (→ **Parts found: 5 | QTY: 27 (Reference: 6)**).
 - **Rename Selected Part**: Opens the rename dialog for the selected component. See **2.3 The Rename Dialog** below for details.
 - File & Document Management
 - **Open Containing Folder**: Opens the Windows Explorer directory containing the selected file.
 - **Open Document**: Opens the selected part or assembly file in **Autodesk® Inventor®**.

- **Close Documents**: Closes the selected part or assembly file(s).
- **Open Drawing**: Instantly opens the associated **.idw** or **.dwg** file for the selected part.
- **Close Drawings**: Closes the associated drawing file(s).
- Click the **Apply** button to commit any changes made to part properties or file names to the **Autodesk® Inventor®** assembly.
- **Update Drawings**: Updates the associated drawing file (**.idw/.dwg**) for the currently selected part(s) or assembly/assemblies.
 - At least one row must be selected in the grid; if nothing is selected, a warning message is shown instead.
 - A confirmation prompt appears before the update runs, indicating how many selected items will be processed.
 - Once confirmed, each selected item's drawing is updated and **saved** in turn, and a completion message is shown when all updates are finished.
- **Caution & Saving**: Changes made with **Apply** are applied only to the active memory and are not automatically saved to disk. Be sure to save the model files manually afterward to make the changes permanent. **Update Drawings** is the exception: it saves each updated drawing file.

 **Important:** When applying iProperty changes, ensure the top-level assembly is open and active. Updating properties while a sub-component is isolated or active may result in incomplete data synchronization.

- **Clearing Custom iProperties:** Clicking the **Clear Unlisted iProperties** button under **User Defined iProperties** allows you to remove unwanted custom iProperties from the currently loaded model and its subcomponents.

 **How it Works:** After a confirmation prompt, clicking **Clear Unlisted iProperties** deletes any hidden or obsolete user-defined iProperties that are not currently selected or displayed in the **Configuration Form's DataGrid**, from the active document and all of its referenced documents. The deletion is made in memory; save the documents afterward to make it permanent. This is an efficient way to purge legacy or messy metadata across your assembly structure.

- When a part is unchecked, it is set to read only mode, preventing any modifications.
- Clicking **Reset Column Setting** restores the width and display positions of all columns to their default values.
- If the **Preview** checkbox is checked, a separate window displays a preview of the selected part/assembly.
- A **Virtual Component** (a component that has no corresponding physical file) is shown in the tree with a distinct icon, making it easy to tell apart from regular file-based parts and assemblies.
- In **Autodesk® Inventor®**, modifying the Part Number iProperty of a Virtual Component triggers an update to its DisplayName, which is then reflected in the Occurrence Name within the Model Tree.

 TIP:

This synchronization ensures that the **Part Number** and the **Occurrence Name** remain perfectly aligned. When you perform a rename operation, both properties are automatically updated in tandem, keeping your model browser consistent with your part numbering system at all times.

2.3 The Rename Dialog

Selecting **Rename Selected Part** from the context menu (available in both the **Unified iProperty Editor** and the **Smart Assembly Renamer**) opens a dedicated dialog for renaming the underlying file.

- **Source / Target:** The **Source** field shows the component's current file name; enter the new name in the **Target** field.
- **Entire Assembly:** When checked, the rename is applied to every occurrence of that same file throughout the entire assembly, not just the row you right-clicked. Leave this unchecked to rename only the selected occurrence.
- **Rename** / **Cancel**: Confirms or cancels the rename.
- **Delete Target File**: If a file already exists at the new target name, this lets you permanently delete that conflicting file (and its associated **.idw/.dwg** drawings, if present) so the rename can proceed. Each file is deleted only after a separate confirmation prompt, and **this action cannot be undone**.
- **Open Folder**: Opens or reveals the source file in Windows Explorer.

3. Configure iProperties

Reads the iProperty of the currently loaded assembly or part, retrieves and displays settings stored in an XML file, and allows the user to select properties for editing in the iProperty Editor. Allows users to add custom properties as needed, enabling additional attributes for assemblies and parts.

Note: This software is built with a strong focus on the **type safety of iProperties** to ensure robust and reliable data handling.

3.1 Feature Description

- **Read Model**: Allows users to retrieve the properties defined in the currently loaded assembly or part. However, if the same property name exists in multiple files with different data types, the data type of the first detected property will be used.
Read File: Allows users to retrieve iProperty settings stored in an XML file.
- **Save**: Allows users to save the currently configured iProperties to an XML file and share them with others.
- **Item Selection**: Users can select items using the **context menu** and control which properties are displayed in the iProperty Editor by checking or unchecking the checkboxes on the screen.
- **Context Menu**: Right-clicking the list also gives you **Check Selected**, **Uncheck Selected**, and **Remove Selected** as quick alternatives to using the on-screen checkboxes. Note that **Remove Selected** only removes the item from this on-screen list and does not delete the actual property data from the model file.
- **Add**: The button at the bottom of the screen allows users to add a new iProperty definition and either create or modify the defined iProperty within the assembly or part.
- **Data Types**: The **System.Number** type represents any integer or floating point/double value. **Please avoid using this type if possible, as it may introduce type safety issues.**

TIP:

Sharing these saved XML files is highly recommended for standardization, as it ensures that all team members manage the exact same property set.

4. Smart Assembly Renamer

Smart Assembly Renamer helps reuse existing designs in new projects by duplicating assemblies and parts efficiently. With this feature, users can:

- Duplicate assemblies and parts without altering the original design.
- Synchronize renaming of models and associated drawings.
- Maintain references and drawings to ensure proper connectivity in copied designs.

4.1 Feature Description

- Using the **Read Model** button, users can load the currently active assembly and then modify **【Name1】** by utilizing Copy & Paste, Find & Replace, Add Prefix/Add Suffix, or Manual Editing.
- Each of the **iam**, **ipt** and **Lib Only** checkboxes operate as a separate filter.
- **Copy Library**: When checked, this option includes library files in the renaming process.
- Use the folder-mode drop-down to choose how copied files are organized in the destination folder:
 - **Keep Folder Structure**: Maintains the original assembly's directory hierarchy within the destination folder. When this option is selected, the **【Path1】** column adjusts accordingly, keeping the original folder structure intact as much as possible.
 - **Copy To Single Folder**: Collects all copied files into one flat directory, ignoring the original sub-folder structure.
- Set Folder: Designates the destination directory for your exported or copied files.
- Check Conflicts: Scans the target directory to identify potential file name conflicts or overwriting issues before proceeding.
- For proper program functionality, the assembly should ideally be stored within a common top folder.

TIP:

By entering an appropriate folder path in the **【Path1】** cell, the folder structure can be automatically reorganized during the renaming process. You can also use

Copy & Paste here to quickly fill in multiple paths or paste folder locations from Windows Explorer to accelerate your workflow.

- If components (excluding read-only ones) are not stored within a shared top-level directory, the system may be unable to maintain the original folder structure during processing. **Please note that files are copied into the destination folder automatically generated by the program, while the specific sub-directory organization is determined by the values defined in the 【Path1】 column. Ensure you verify the paths in 【Path1】 to align with your desired output structure.**

 TIP:

You can **Copy & Paste** or **Find & Replace** paths directly into the 【Path1】 column to quickly define folder reorganization for each component with precision; this is the most efficient method for applying consistent directory structures to large batches of files

- **Virtual Components:** A virtual component has no file of its own and is stored inside its parent assembly.
 - It is checked automatically when its parent assembly is checked, and you can uncheck it afterward. It is unchecked and locked while the parent assembly is unchecked.
 - While it is checked, you can edit its 【Name1】. On **Execute**, the virtual component is renamed (and its Part Number updated) inside the new copy of the parent assembly; the original assembly is not changed.
- Click **Execute** to run the batch copy/rename operation using the current grid settings.
 - An active **Autodesk® Inventor®** document must be open; otherwise a warning is shown and the operation does not run.
 - If one or more items could not be processed successfully, a separate results window opens automatically once the operation finishes, listing each problem file together with a description of the issue. If everything completes without errors, a simple completion message with the elapsed time is shown instead.
- Context Menu Features: By right-clicking any part within the list, you have access to the same document and part-management tools available in the iProperty Editor:
 - **Copy to Clipboard** / **Paste from Clipboard**

- **Check Selected Parts** / **Uncheck Selected Parts**
- **Find The Same Parts** : Selects every occurrence of the same file across the project (see **2.2 Feature Description** for how this identification works).
- **Rename Selected Part** : Opens the rename dialog described in **2.3 The Rename Dialog**.
- **Set New Path1** : Opens a folder browser and applies the selected folder to the **【Path1】** column for all selected rows, as a manual override for the folder-mode drop-down. This is automatically skipped for Virtual Components (which always inherit their parent assembly's **【Path1】**) and for any row currently locked from editing (unchecked, Content Center, or a missing reference with no file found).
- **Open Containing Folder** , **Open Document** , **Close Documents** , **Open Drawing** , **Close Drawings** .
- If the **Preview** checkbox is checked, a separate window displays a preview of the selected part.

5. Intuitive Reference Viewer

The **Intuitive Reference Viewer** is a powerful diagnostic tool designed to help users visualize and manage complex file dependencies within **Autodesk® Inventor®**. It provides a clear overview of how components, assemblies, and drawings are linked, making it easier to maintain project integrity and troubleshoot potential issues. Beyond simple viewing, the tool also lets you repair, relocate, or remove problematic references directly, without leaving the application.

5.1 General Concepts

- **Comprehensive Link Mapping:** Displays the hierarchical structure of your project, showing the relationship between **Parent Name** and **Referenced Name** for all files.
- **Reference Type Identification:** Clearly categorizes connections using intuitive icons, including:
 - **Regular:** Standard assembly references.
 - **Derived:** Derived part references.
 - **Drawing:** Documentation references.
 - **OLE Link:** Object Linking and Embedding references.
 - **AnyCAD:** Non-native or third-party CAD file references.
 - **Virtual:** Virtual component or non-file based references.
- **Issue Detection:** Helps users quickly identify broken links or missing references, ensuring all project files are correctly accounted for. A reference is flagged as a **Missing Reference** based on an actual check of the file's existence on disk, rather than relying solely on Inventor's internal reference status, giving a more reliable picture of what is truly broken.
- **Status Tracking:** Provides a dedicated **Status** column where users can input custom notes or update information. These manual entries are primarily designed to be captured and preserved when exporting data to Excel.
- **Data Export:** Features an **Export To Excel** button, which captures the entire dependency map, including your custom **Status** updates, for documentation, auditing, or further offline analysis.
- **Reference Repair Tools:** Provides direct repair actions—[Relink Reference](#),

Move Reference, **Copy Reference**, **Delete Missings**, and **Delete OLE Links**—so that broken or unwanted references can be resolved on the spot, without needing to track down and fix files manually outside of Inventor.

5.2 Feature Description

1. Click **Read Model** to scan the current assembly or project for all active references.
2. Review the list to understand the dependency tree. If you only want to focus on potential problems, check the **Show Issue Files Only** box to filter the view.
3. Check the **Preview** box to enable additional visual feedback for the selected files.
4. Input necessary information directly into the **Status** column for specific files to include these details in your final export.
5. Right-click on any file in the list to open the **Context Menu** for quick document management and reference repair:
 - **Open Document**: Opens **Autodesk® Inventor®** files directly in the application. For non-Inventor files, it opens the document using the system's default associated application.
 - **Open Containing Folder**: Opens the Windows Explorer window containing the selected file.
 - **Close Document**: Close the selected file if it is currently open in Inventor.
 - **Relink Reference**, **Move Reference**, **Copy Reference**, **Delete Missings**, **Delete OLE Links**: Repair, relocate, or remove broken or unwanted references. See **5.3 Repairing and Removing References** below for full details.
6. Use the **Export To Excel** function to save the full reference report, including your custom **Status** entries.
7. Click **Close** to exit the viewer when finished.

TIP:

Keep the **Intuitive Reference Viewer** open while you restructure or rename components to ensure that you are aware of how changes affect dependent assemblies and drawings.

5.3 Repairing and Removing References

Select a reference in the list, then right-click to choose one of the following repair actions. Each action first shows a confirmation prompt before making any changes.

- **Relink Reference**: Opens a file browser so you can select a new target file. The reference is updated to point to the file you choose, which is useful when a linked file has been renamed or moved outside of **MegaPart**.
- **Move Reference**: Physically moves the referenced file to a folder you select, then automatically updates the current reference to the new location. If the same file is also referenced by other **currently open** drawings or assemblies, those references are updated as well so nothing is left pointing to the old location.
- **Copy Reference**: Physically copies the referenced file to a folder you select and relinks the current reference to the new copy, leaving the original file untouched. Use this instead of **Move Reference** when the original file is still needed by other assemblies.
- **Delete Missings**: Removes every selected reference that is currently identified as a **Missing Reference**, to prevent valid geometry from being removed by mistake. This applies regardless of the reference type—both missing **Part/Assembly Occurrences** and missing **OLE Links** are deleted.
 - You can select multiple rows at once; **Delete Missings** processes every eligible (missing) reference in the selection in a single operation and reports how many were successfully removed.
- **Delete OLE Links**: Removes every selected **OLE Link** (linked Excel sheets, PDFs, and other attached documents), regardless of whether it is currently flagged as a **Missing Reference** or not.
 - You can select multiple rows at once; **Delete OLE Links** processes every selected OLE Link in a single operation and reports how many were successfully removed.



Important

Note:

Relink Reference, **Move Reference**, **Copy Reference**, **Delete Missings**, and **Delete OLE Links** all modify your Inventor document in memory only. As with the other repair actions, **save your work before proceeding**, and be sure to **save the parent document manually afterward** to make the change permanent. Should any of these operations fail partway through, some references may end up broken or pointing to the wrong file.

- **Reference Type Restrictions:**

- **AnyCAD References:** [Move Reference](#) and [Relink Reference](#) are not available for AnyCAD (non-native CAD) references.
- **Content Center Parts:** Because Content Center components are stored in a shared library, [Move Reference](#) is disabled for these parts to avoid affecting other assemblies that reference the same library file. [Copy Reference](#) remains available, since it creates an independent copy without modifying the original library file.

 TIP:

Tip: Before repairing a reference, use [Open Containing Folder](#) or [Open Document](#) from the context menu to quickly confirm where the file actually is and whether it is the one you intended to fix.

6. Instant Template Replacer

The **Instant Template Replacer** function updates the drawing's border and title block using a selected template. When executed, the function replaces the existing border and title block while preserving all drawing views, annotations, and model references. This feature ensures that drawings remain consistent with the required documentation standards and provides an efficient way to update outdated or incorrect title block information across multiple files.

6.1 Feature Description

- Using the **Read Model** button, users can load the currently active assembly and then modify **【Title Block1】** and/or **【Border1】** by utilizing **Copy & Paste**, **Find & Replace**, or Manual Editing.
- The drawings are listed in the order of the model tree, and the icon next to each drawing shows whether its model is a part or an assembly.
- You can **sort** the sheet order by clicking a column header. To perform a multi-column sort, hold the Shift key and select additional column headers.
- When you click **Set Title Block** or **Set Border** and select a drawing, the application populates the corresponding cells with a ComboBox. This list contains all title block or border definitions stored under **Resources > Title Block Definitions** (or **Border Definitions**) in the selected drawing.
- **Intelligent Border Selection**
The system automatically suggests the most appropriate border from the ComboBox based on the drawing's **SIZE** property, following these priority rules:
 - **Priority 1: Delimited Match (Exact Pattern)** The system prioritizes border names where the **SIZE** value is clearly separated by a delimiter (space, hyphen, or underscore), or positioned at the start/end of the name.
 - **If SIZE is "A":** Matches "A-Type", "Title_A", or "Sheet_A_Border".
 - **If SIZE is "A3":** Matches "A3-Special", "Type-A3 Vertical", or "BORDER_A3".
 - **Note:** Values like "AsizeType" or "SizeA" **do not** match here because they lack the required delimiters.
 - **Priority 2: Keyword Containment (Partial Match)** If no delimited match is found, the system performs a non-delimited search:

- **For single-character SIZE (→ "A"):** The system performs an exact equality check. It will match "A" but **will not** match "A3" or "A4".
- **For multi-character SIZE (→ "A3"):** The system scans for the **SIZE** value anywhere within the border name. It will match "AsizeType", "SizeA", "A3Size", or "SIZEA3".
- **Priority 3: Default Fallback** If the **SIZE** property does not match any of the above criteria, the system will automatically default to the first item listed in the ComboBox.
- In the **【Title Block1】** and **【Border1】** columns, users can copy and paste values as needed. This allows quick duplication of settings across multiple rows.
- When **Apply** button is clicked, the configured values are applied to the drawing;
- However, **these changes are applied only in memory** and are not written to disk. To permanently save and overwrite the changes, the user must click the **Save Drawings** button. If the drawings need to be saved to a different location, the user must click **Save To New Folder** and specify the desired folder.

Important Note:

You can only assign values that are already defined in the drawing's resources. **Values cannot be manually typed into these cells; you must select an available option from the ComboBox.** To facilitate efficient data management, you can use the **Sort** function to organize your list, making it easier to identify and copy/paste the appropriate values across multiple cells.

Important Note: Restrictions on Read-Only Fields

Please be aware that while data in read-only fields can be copied, these assignment functions are restricted for such areas to prevent unintended modifications to your drawing templates. You must first disable the read-only attribute for the target cells before you can apply new definitions. Once the read-only lock is removed, you will be able to perform these operations normally.

Important Note: Permanent Data Overwrite

Please be aware that clicking **Save Drawings** will permanently overwrite the original files with your current modifications. Because this action cannot be undone, please ensure that you have thoroughly reviewed and verified all changes before proceeding. We recommend performing a backup of your files before executing a bulk save.

- Context Menu Features: Right-clicking any sheet in the list gives you:
 - **Select All**, **Check Selected**, **Uncheck Selected**: Selects or toggles the checked state of sheets in the list.
 - **Remove Selected** / **Remove All**: Removes the selected sheet(s), or every sheet, from the on-screen list only (the underlying drawing files are not affected).
 - **Open Containing Folder**: Opens the Windows Explorer directory containing the selected drawing.
 - **Open Drawing** / **Close Drawings**: Opens or closes the associated drawing file(s) in **Autodesk® Inventor®**.

Sample Template

- **Ready-to-Use Templates:** For your convenience, sample templates for the Replacer feature are included in the 'Sample' folder within the installation directory.
- **Quick Start Guide:** You can use these templates as a reference to understand the required format and structure, or modify them directly to suit your specific project needs.
- **Easy Access:** Simply navigate to the Sample folder to find pre-configured templates that help you get started with batch renaming and property modification instantly.

7. High-Speed Batch Exporter

The **High-Speed Batch Exporter** simplifies the conversion of **Autodesk® Inventor®** drawings into various formats, including **AutoCAD® DWG, DXF, DWF, DWFx, PDF, PNG, JPG, and TIFF**. This tool is optimized for efficient documentation, design review, and external collaboration.

7.1 Feature Description

- **Add**: Adds drawings to the list from the source selected in the drop-down next to it:
 - **From Model**: Scans the active assembly and adds the drawings that share the same file name as their components, in the order of the model tree.
 - **From Files**: Adds the drawing files (or the drawings of the model files) you select.
 - **From Folder** / **From Subfolders**: Adds every **.idw** and **.dwg** file in the selected folder, or in the folder and all of its subfolders.

Drawings added with **From Files**, **From Folder**, or **From Subfolders** are sorted by file name. Drawings already in the list are not added twice.

- **Output Format**: Check one or more of **AutoCAD DWG, DXF, DWF, DWFx, PDF, PNG, JPG, and TIFF** to export the selected drawings into those formats in a single run.
- **Sheet Range**: Choose which sheets are exported from each drawing:
 - **Active Sheet**: Exports only the sheet that is currently active in the drawing.
 - **First Sheet**: Exports only the first sheet of each drawing.
 - **All Sheets**: Exports every sheet in each drawing.
- **High-Quality Export & Customization**: Export drawings with precision by configuring your preferred Color Mode (Grayscale/Color) and DPI resolution to meet documentation standards.
- **Merge PDF/TIFF**: When exporting to PDF or TIFF, choose how the output files are combined:
 - **Each Sheet**: Generates a separate file for every individual sheet within your drawings.
 - **By Drawing File**: Generates a single file for each separate drawing document

(containing all its internal sheets).

- **All in One File**: Merges all selected drawings and their sheets into a single, comprehensive file for efficient archiving and distribution.
- Intuitive Data Organization:
 - Instant Sorting: Click any column header to sort by attributes such as Name, Type, or Path.
 - Multi-Column Control: Hold the Shift key while clicking headers to perform hierarchical sorting (→ sorting by 'Sheet Name' first, then 'File Name'), allowing you to manage complex assembly data with ease.
- Context Menu Features: Right-clicking any drawing in the list gives you:
 - **Select All**, **Check Selected**, **Uncheck Selected**: Selects or toggles the checked state of drawings in the list.
 - **Remove Selected** / **Remove All**: Removes the selected drawing(s), or every drawing, from the on-screen list only.
 - **Open Containing Folder**: Opens the Windows Explorer directory containing the selected drawing.
 - **Open Drawing** / **Close Drawings**: Opens or closes the associated drawing file(s) in **Autodesk® Inventor®**.
- Click **Execute** to run the export using your selected format(s) and settings. At least one checked drawing must be present in the list, or the operation is stopped with a warning.

7.2 Understanding DWG Formats

Two kinds of files use the **.dwg** extension, and the Exporter treats them differently:

- **Inventor® DWG (input)**: A drawing created and saved by **Autodesk® Inventor®** in DWG format. It contains the drawing views linked to the 3D model, just like an **.idw** file. The Exporter reads both **.idw** and Inventor® DWG drawings as input.
- **AutoCAD® DWG (output)**: Contains only the 2D geometry (lines, arcs, text), without the link to the 3D model. Select **AutoCAD DWG** to export your drawings in this format for stakeholders who use **AutoCAD®** or do not need the 3D model data.



Keep using **.idw** or **Inventor® DWG** for your internal Inventor projects, and export to **AutoCAD® DWG** when distributing final drawings to clients or partners.

8. About MegaPart

8.1 License Management (License Info)

Activation is required to unlock the full functionality of the software.

- **License Source**: Select **Commercial License** or **Trial License** from the drop-down menu.
- **License Key**: Enter your purchased unique license key into this field.
- **MAC Address**: Displays your hardware identifier for licensing purposes. No manual input is required.
- **Status**: Shows the current state of your license.
- **Activate**: Click this button after entering your key to complete the registration. With **Trial License** selected, this starts the 15-day trial after a confirmation.
- **Deactivate**: Releases the license from your current machine. Click this before switching PCs, formatting your system, or replacing hardware.
- **Refresh**: Directs the software to communicate with the server to verify and update your license status. With **Trial License** selected, it only shows the current trial status and does not start a trial.
- **View Activated Licenses** (the small icon button next to Refresh): Opens the **License Viewer** window, listing every machine currently activated under your license key. This is especially useful for multi-seat licenses, letting you check exactly where and how many activations are currently in use before purchasing additional seats or deactivating unused machines.

Deactivate (CRITICAL): Use this to release the license from your current machine before switching to a new PC or formatting your system. Since the license is tied to your hardware, you must click Deactivate before making hardware changes (such as removing/replacing a Network Interface Card) or formatting your PC. Failing to deactivate may prevent you from reactivating the license later.

8.2 System Information

The System Info window provides essential technical details about your current **MegaPart** installation and your operating environment. This information is vital for troubleshooting and technical support.

- **System Details:** Displays your specific **MegaPart** version (→ 1.0.X) along with your Operating System and OS Architecture (x64) other underlying system parameters necessary for compatibility diagnostics.
- **Third-Party Credits:** Lists the third-party components used by **MegaPart**: Autodesk® Inventor® API, GemBox.Pdf and GemBox.Spreadsheets (© GemBox Ltd.), iGrid.NET (© 10Tec Company), and Newtonsoft.Json (© James Newton-King, MIT License).
- **Support Utilities:**
 - **Reload Info**: Refreshes the system details display.
 - **Copy To Clipboard**: Copies system details to your clipboard for easy pasting into support tickets.
 - **support@megapart.net** (Contact Support): Click this button to launch your default email client with our support address already filled in.
 - **Visit Website**: Directs you to the official MegaPart website for news and resources.
 - **Check for Update**: Connects to the official MegaPart server to check whether a newer version is available. If an update is found, a dialog lets you open the download page directly; otherwise, you are notified that you already have the latest version.

TIP:

TIP: When contacting support, always use Copy To Clipboard to include your system information; this allows our team to provide faster and more accurate assistance.

 **Note:** If you see a **[FAILURE]** status in the License Info section, please check your internet connection or use the support@megapart.net button for further assistance

9. Support Information

We are committed to ensuring a seamless experience for our users through reliable support and regular enhancements.

9.1 General Information

Expert Technical Assistance

If you encounter any technical challenges or have inquiries regarding the plugin's functionality, our support team is available to provide prompt and professional solutions. Please email us at support@megapart.net, and we will address your request as quickly as possible.

Seamless Feature Updates

We actively listen to user feedback to refine **MegaPart**. Regular updates are provided to ensure full compatibility with the latest versions of **Autodesk® Inventor®** and to introduce new features that enhance your design workflow.

Troubleshooting & Documentation

Users have access to comprehensive guides and troubleshooting resources to minimize downtime and maximize productivity.

Issue Reporting & Support

To help us resolve your issues more effectively, please feel free to email us with any problematic files or detailed descriptions of the error.

- **Sample File Submission:** If you encounter a specific issue with a model or drawing, please email a sample file and a brief explanation of the issue to support@megapart.net. This allows our team to diagnose the problem and provide a solution much faster.

Security & Data Privacy

- **Guaranteed Data Privacy:** We prioritize the security of your intellectual property. Please rest assured that any files or data shared with our support team are handled with the strictest confidentiality.
- **Secure Handling & Disposal:** Your sample files are used exclusively for troubleshooting and technical analysis. Once the issue is resolved, all provided data is

permanently and securely deleted from our systems to prevent any unauthorized access.

- **Non-Disclosure:** We guarantee that your design data will never be shared with third parties or used for any purpose other than providing you with technical assistance.

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