



GRX Upgrade Guide

GstarCAD 2024

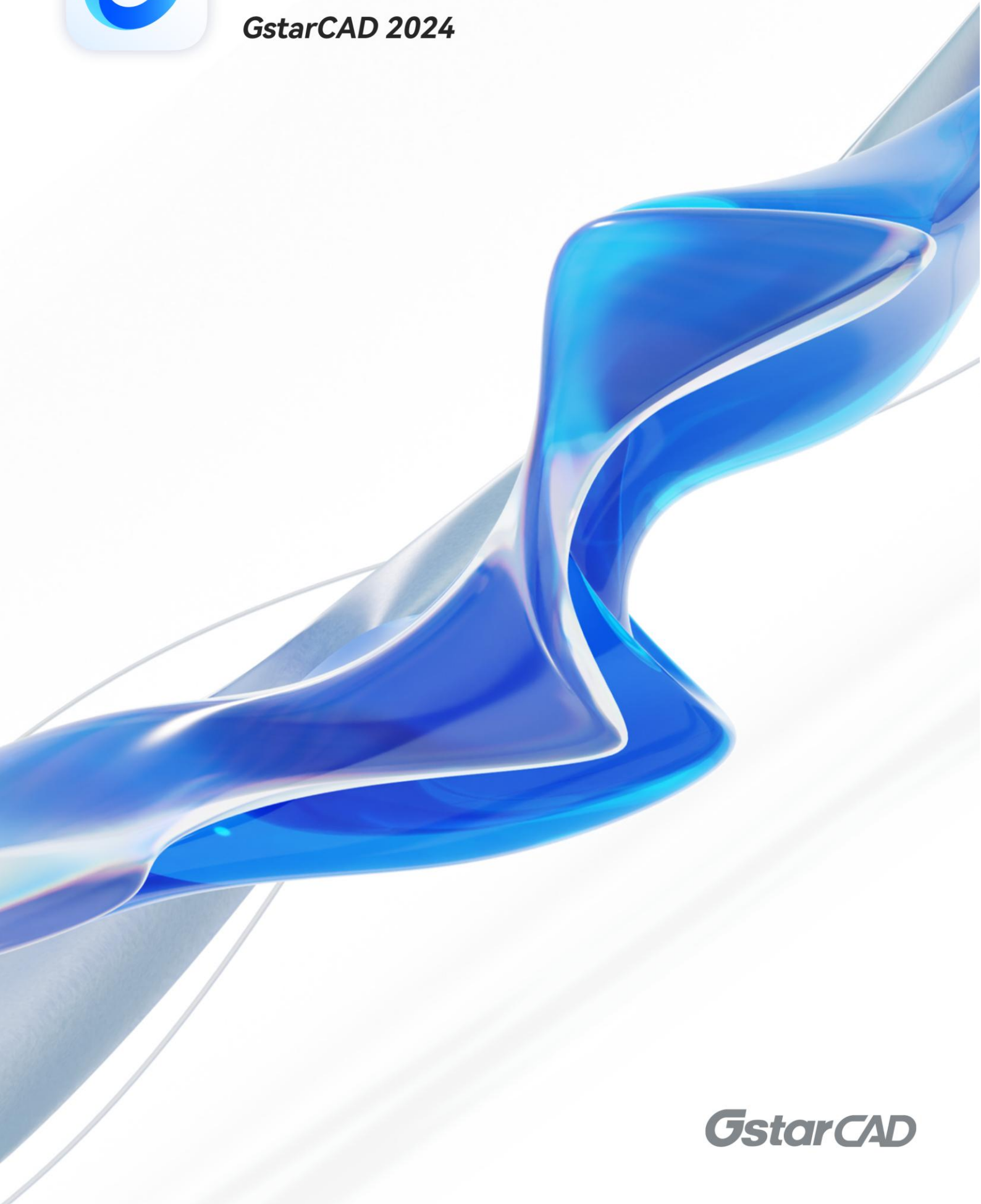


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1. Introduction

This guide is provided to facilitate upgrading the GRX programs running on GstarCAD of previous versions to the latest GstarCAD 2024.

2. Programming Environment

- Microsoft® Visual Studio Enterprise 2017 (Version 15.9.17)
- Windows SDK 10.0.17763.0
- CPU:
 - Basic: 1.6 GHz CUP
 - Recommended: 3.0 GHz CPU and above
- RAM:
 - Basic: 2 GB
 - Recommended: 8 GB and above
- Operation System (OS)
 - Windows 11
 - Windows 10 (version 1507 and above):
 - Home, Professional, Education and Enterprise (not support LTSC and Windows 10 S)
 - Windows 8.1 (with 2919355 update):
 - Core, Professional and Enterprise
 - Windows 7 SP1 (with the latest update):
 - Home, Professional, Enterprise and Ultimate
- Monitor Resolution:
 - 1028x800 and above true color display, including 4K (3840x2160) display
- GstarCAD SDK 2024
- GstarCAD 2024
- .NET Framework 4.8 and above

3. Requirement on Original Source Code

For the program source code with version lower than ObjectARX 2020, it needs to upgrade the source code to the ObjectARX 2020 first. Source code shall be compiled with Visual Studio 2017, under 'Use Unicode Character Set' and 'Multi-threaded DLL(/MD)' environment.

NOTE: Since the compatibility of GRX of GstarCAD 2024 has greatly enhanced compared to the previous versions, it is more convenient and quick to migrate program projects directly from ARX, rather than from previous GRX to the latest GRX of GstarCAD 2024. To migrate ARX program to GRX of GstarCAD 2024, please refer to '*GstarCAD 2024 GRX Migration Guide*'.

4. Install GstarCAD SDK

Download GstarCAD SDK ('GRXSDK.ZIP' file) from GstarCAD website:

<https://www.gstarcad.net/download/>

Unzip GRXSDK.ZIP file to the local disk (e.g. 'C:\grxsdk') and there will be 5 directories generated (in 'C:\grxsdk') which are: **arx**, **inc**, **inc-x64**, **lib-x64** and **utils**.

arx contains the header files, library files and sample programs used for porting ARX programs to GRX programs. It contains the following directories:

- **Inc:** Header files used for porting from ARX to GRX
- **inc-x64:** Files used by COM and .NET (for 64-bit)
- **lib-x64:** GRX libraries (for 64-bit)
- **Samples:** Sample projects, including Dotnet, fact_dg, HelloADS, HelloA and SimplePalette.
 - **Dotnet:** .NET programming samples
 - 1) **Addline:** .NET programming sample of adding solid lines
 - 2) **Hello:** .NET programming sample of outputting prompt information
 - 3) **Vbhello:** Sample of .NET programming with VB .NET
 - **fact_dg:** Sample of LISP function definition
 - **HelloADS:** Sample of ADS programming
 - **HelloARX:** Sample of GRX programming
 - **SimplePalette:** Programming sample of how to create a set Palette windows
- **Utils:** Directory contains sub-directories of GRX extended applications, including APIs for extended function development, e.g. BREP for boundary representation.

Inc: Header files used for programming the GRX

inc-x64: Files used by COM and .NET (for 64-bit)

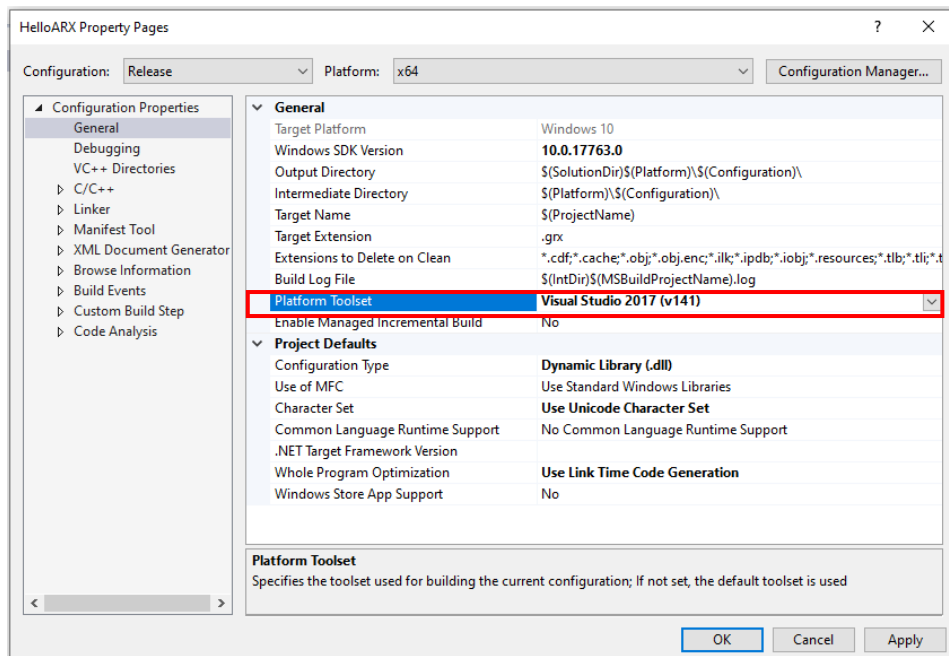
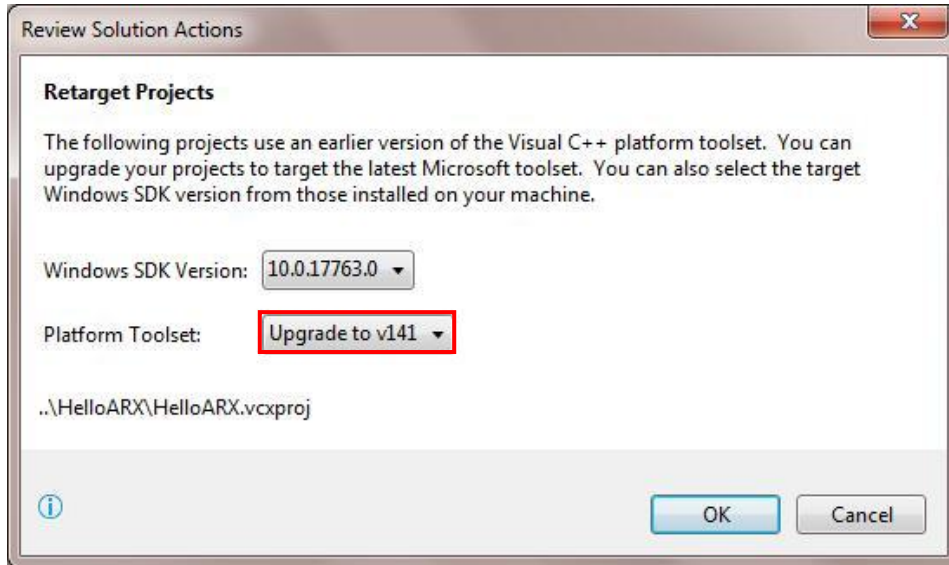
lib-x64: GRX libraries (for 64-bit)

Utils: Directory contains subdirectories of GRX extended applications, including APIs for extended function development, e.g. BREP for boundary representation.

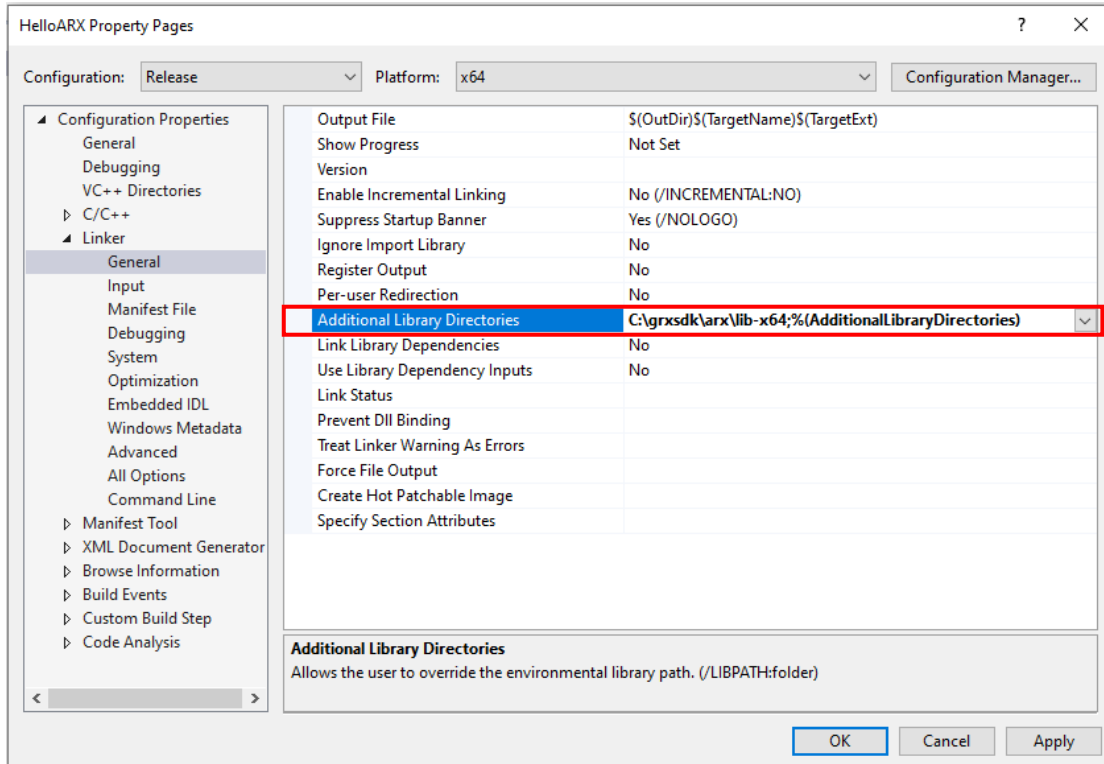
5. GstarCAD 2024 GRX Project Upgrade Step

The following are the steps to upgrade sample project 'C:\grxsdk\arx\Samples\HelloARX'.

- 1) Open the project 'HelloARX' with Visual Studio 2017, in **Review Solution Actions** dialog window set **Platform Toolset** to 'Upgrade to v141' and click OK. If the **Review Solution Actions** dialog window doesn't pop up automatically, find **Platform Toolset** in **General** of **HelloARX Property Pages** and set as 'Visual Studio 2017 (v141)' manually.

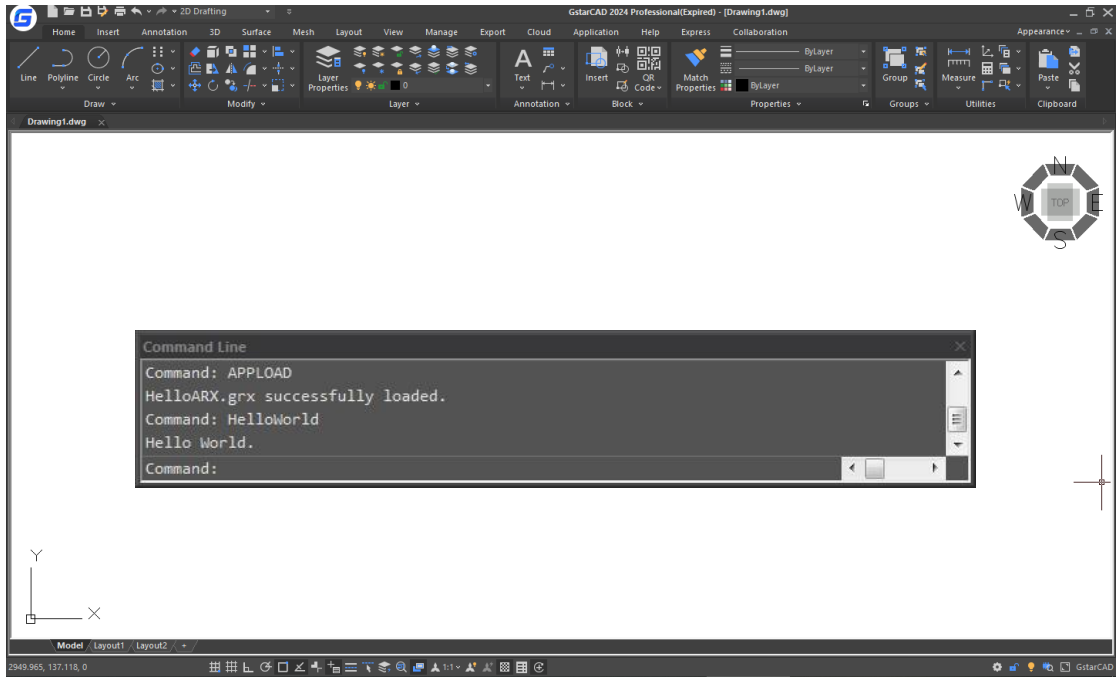


- In **Solution Explore** of Visual Studio 2017, right click on project 'HelloARX' and then click **Properties** from context menu to launch **HelloArx Property Pages** dialog window, as shown below.



- Select **C/C++** in **Configuration Properties** and set **Additional Include Directories** in **General** as 'C:\grxsdk\arx\inc'
- Select **Linker** in **Configuration Properties** and set as below:
 - General-Additional Library Directories:** C:\grxsdk\arx\lib-x64 (for 64-Bit)
 - Input-Module Definition File:** C:\grxsdk\arx\inc\AcRxDefault.def
 - Input-Additional Dependencies:**

```
AecModeler.lib;gcad.lib;gcax.lib;gcbase.lib;gcbri.lib;gccore.lib;gcdb.lib;GcDbConstraints.lib;GcDbPointCloudObj.lib;gcdyn.lib;GcGeolocationObj.lib;gcgs.lib;GcImaging.lib;GcModelDocObj.lib;gplot.lib;
```
- In Visual Studio 2017, click **Build** → **Build Solution** to create 'HelloARX.grx' file after compiling the project (If the compilation is not successful, repeat the above steps to reconfigure the project settings).
- Run GstarCAD 2024 and input 'apload' at the command line to load 'HelloARX.grx'. Input 'HelloWorld' at the command line. If 'Hello World!' is displayed at the command line then the upgrade of the project is successful.



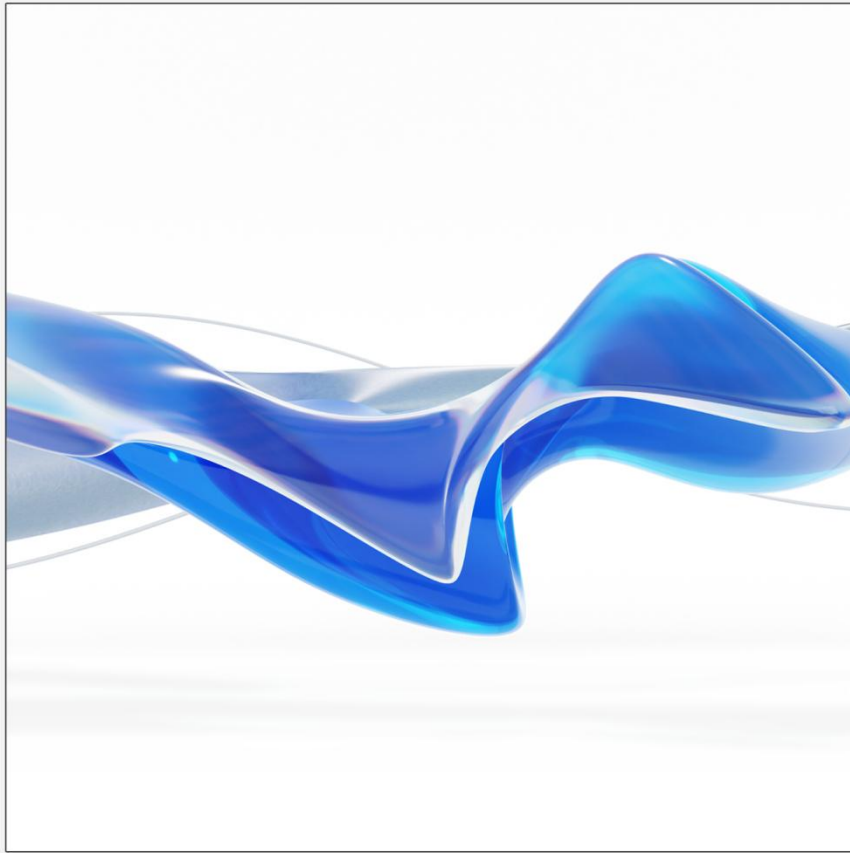
6. Copyright

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GstarCAD 2024



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