

DesignCAD 3D Max 2019 Release Notes

1). 3MF Export and Import

Available in DesignCAD 3D Max 2019 Only

3MF is a new 3D printing format used in manufacturing that allows design applications to send full-fidelity 3D models to a mix of other applications, platforms, services and printers. 3MF is an XML-based data format –that includes definitions for data related to 3D manufacturing, including third-party extensibility for custom data.

The 3MF file format is

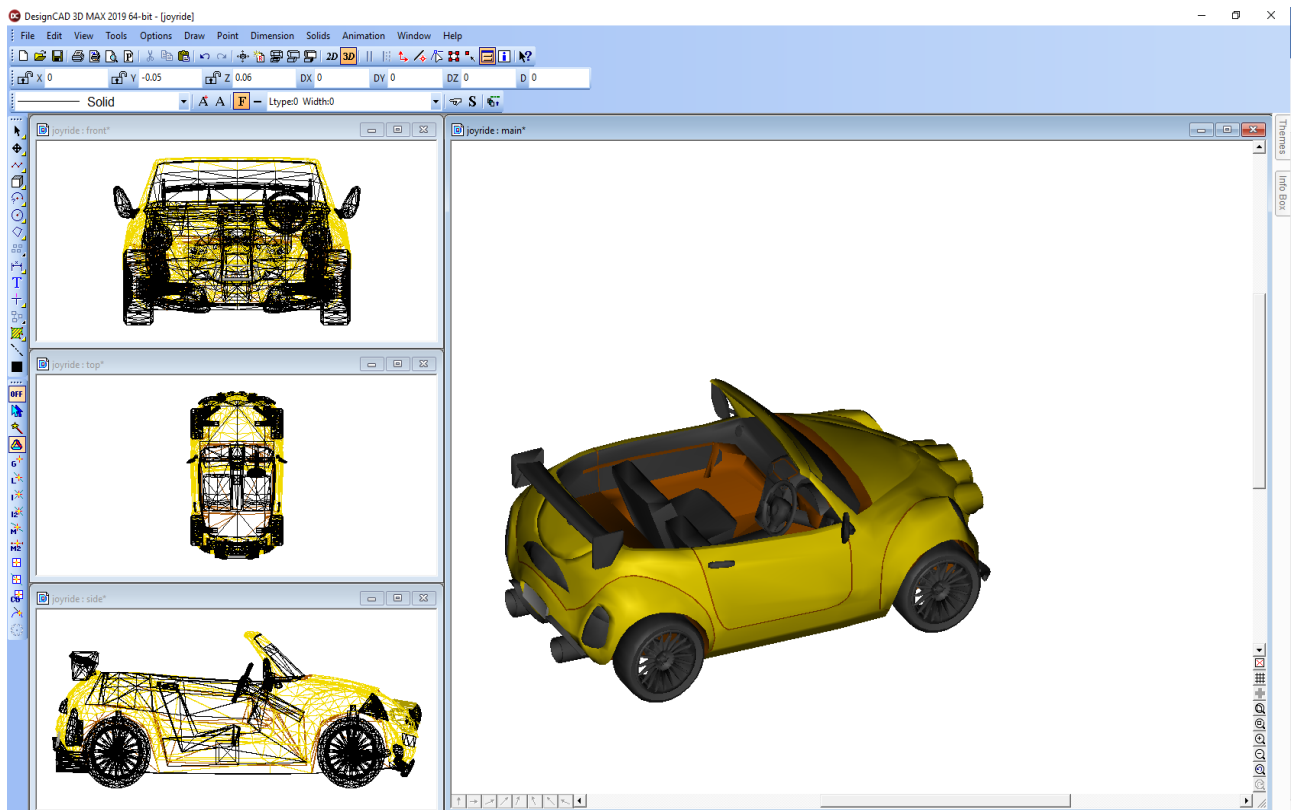
- Rich enough to fully describe a model, retaining internal information, color, and other characteristics
- Extensible so that it supports new innovations in 3D printing
- Interoperable
- Able to be broadly adopted
- Free of the issues besetting other widely used file formats such as STL

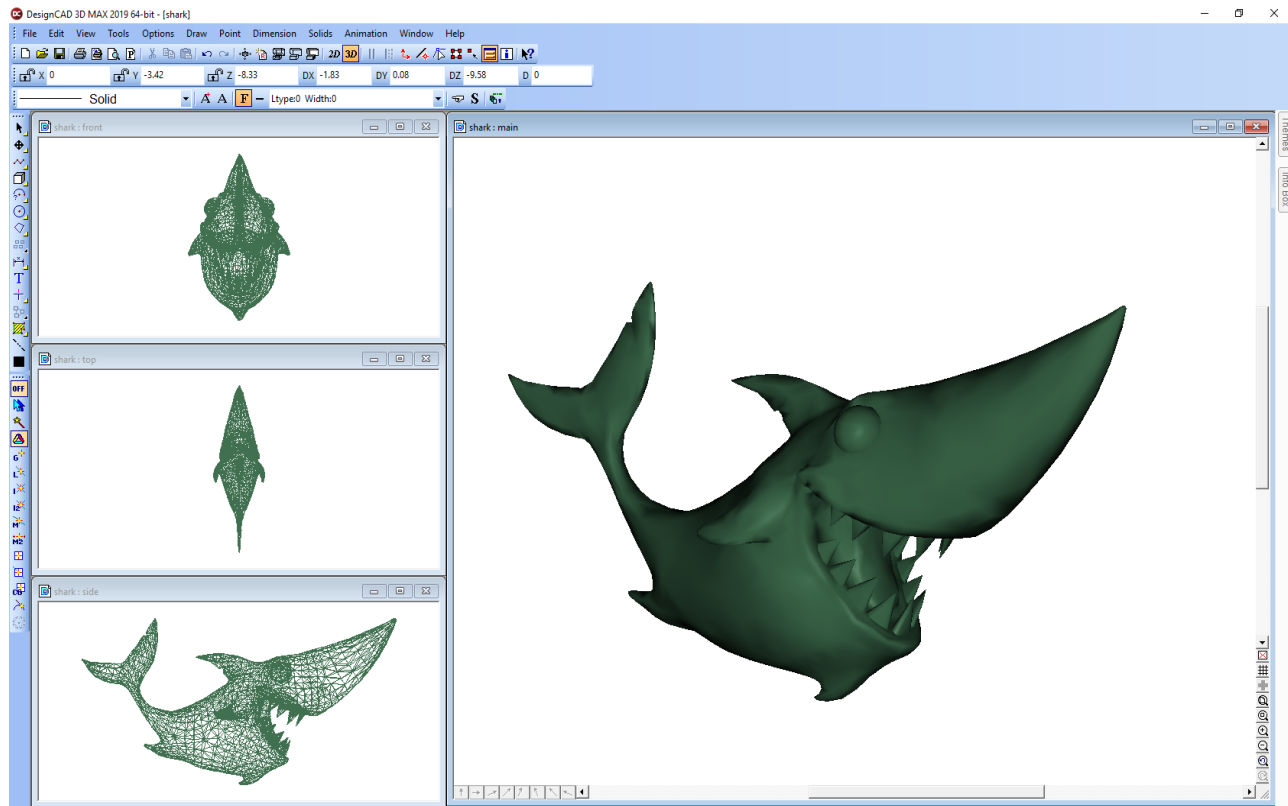
In DesignCAD, the user can export and import the geometry and colors of a mesh through 3FM file format.

The image below shows the new 3MF format in the dropdown list of import functionality.



The two below images are the 3MF file format files that are imported in DesignCAD.





2). FBX Import and Export

Available in DesignCAD 3D Max 2019 Only

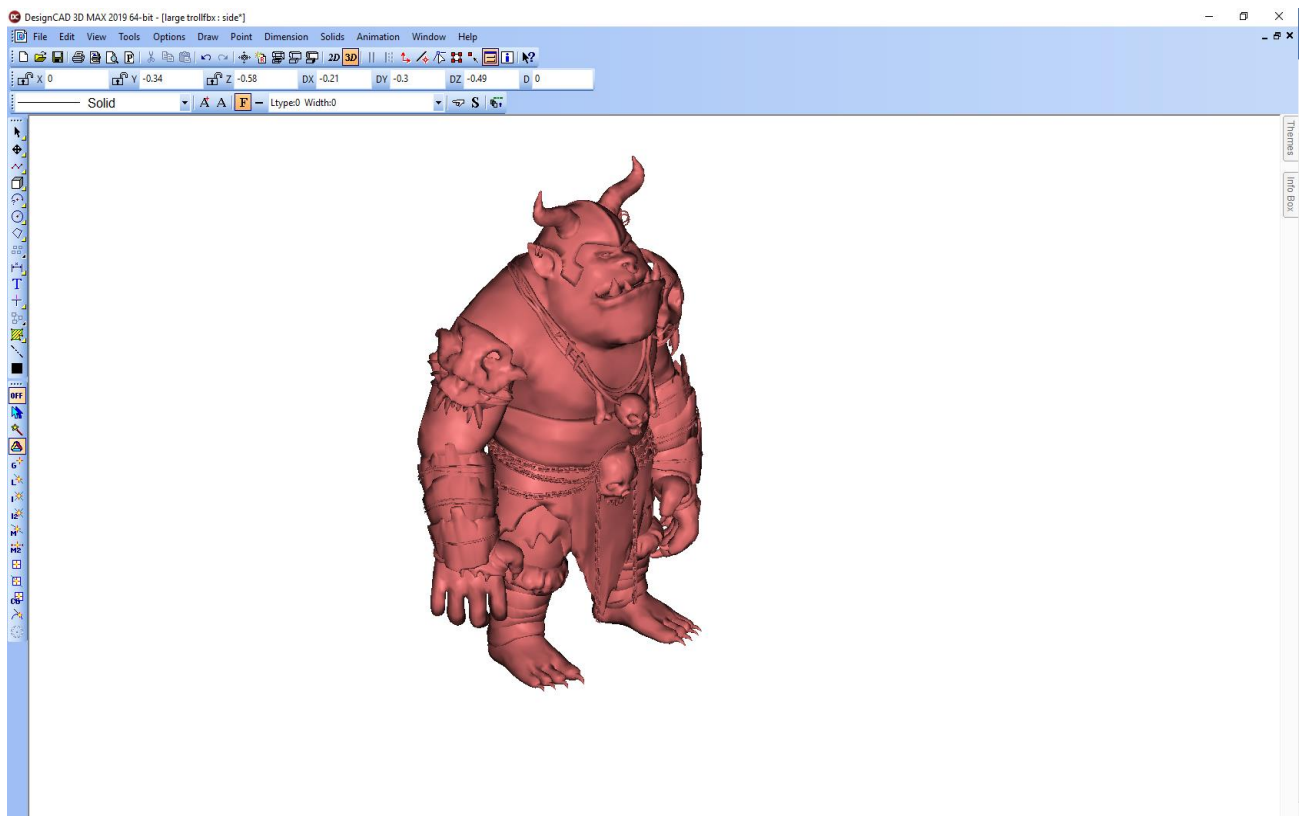
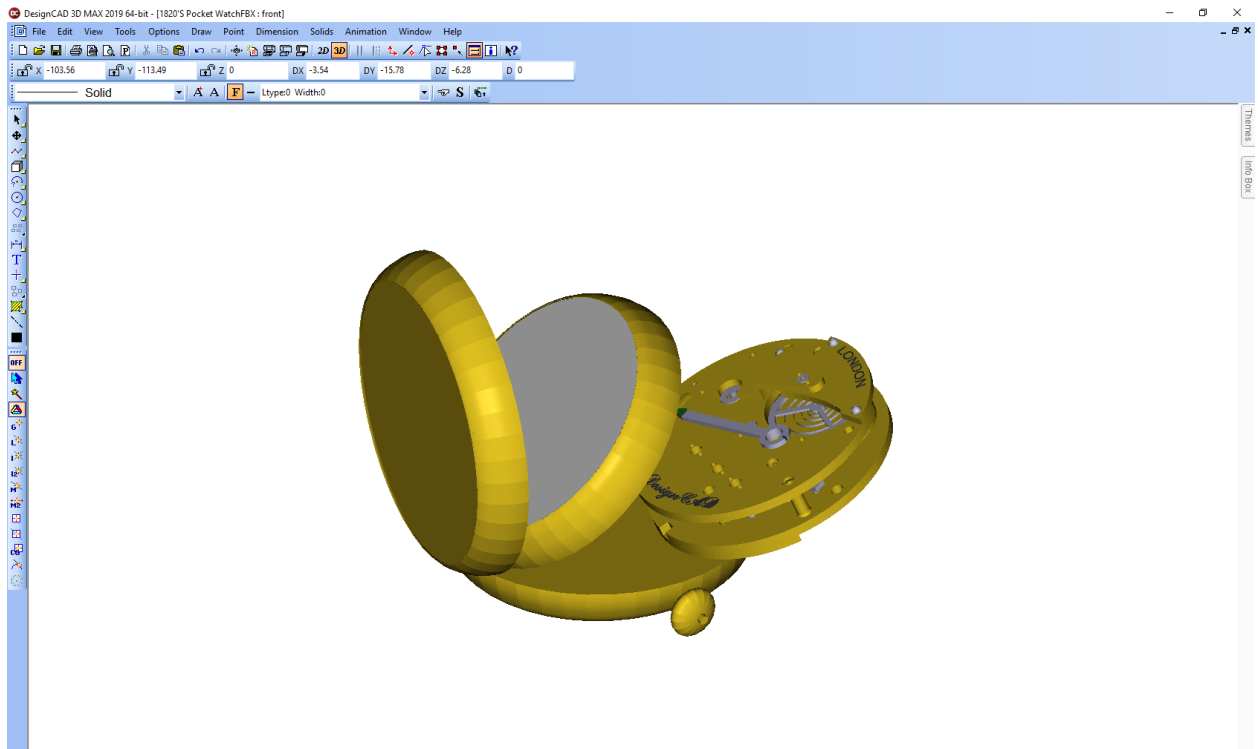
FBX, otherwise referred to as 'Film Box', a popular 3D file format is one of the main 3D exchange formats as used by many 3D animation software products. FBX is available in both binary and ASCII file format. The format was established to provide interoperability between digital content creation applications. There are many applications available for conversion from/to FBX file format.

DesignCAD has the ability to import and export the geometry to and from the FBX file format respectively.

The image below shows the new 3MF format in the dropdown list of import functionality.



The images below show the files that have been imported in DesignCAD from the FBX file format.

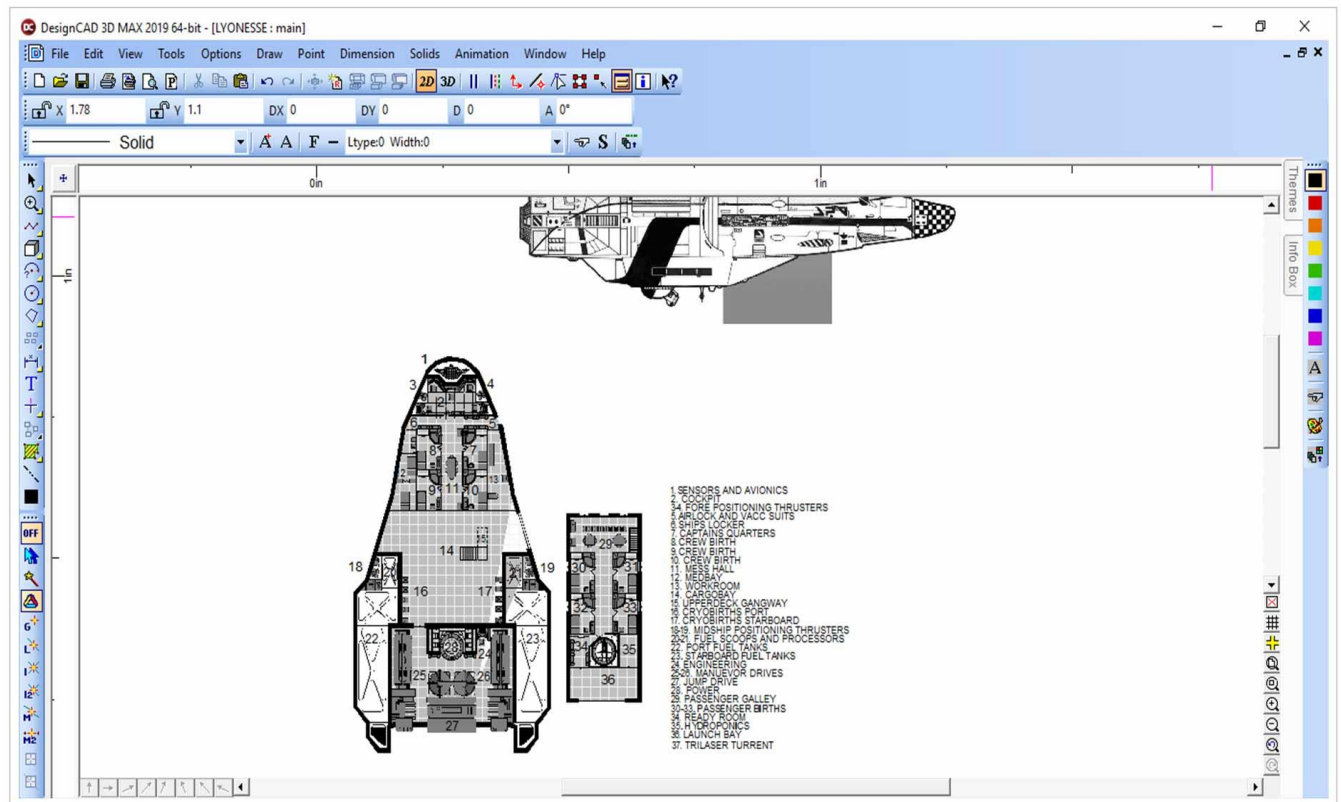


3). 2D PDF Import

Available in DesignCAD 3D Max 2019 and DesignCAD Express 2019

PDF compatibility has been expanded to now include 2D PDF (vector) file import. Previously, only 2D file export was supported.

Please see the example 2D PDF file imported successfully into DesignCAD 2019.

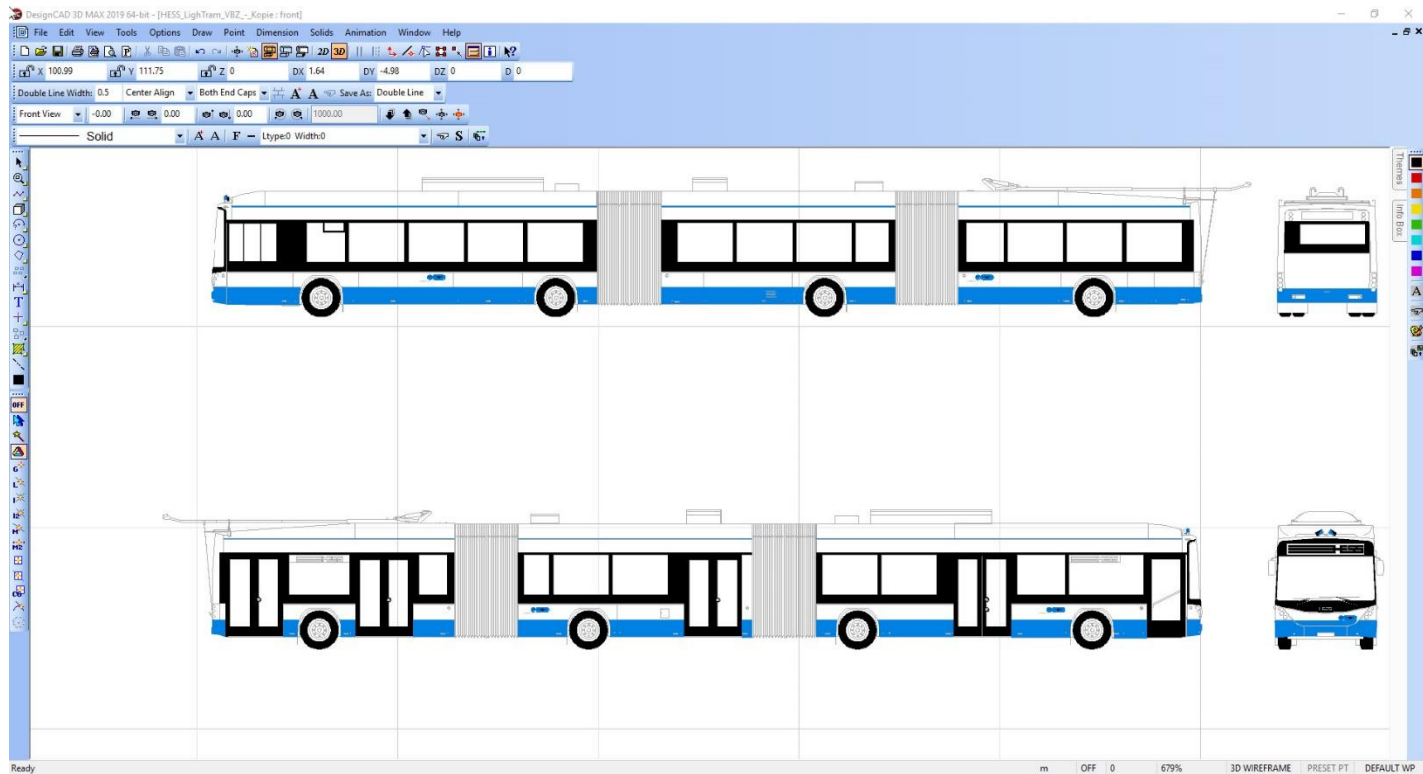


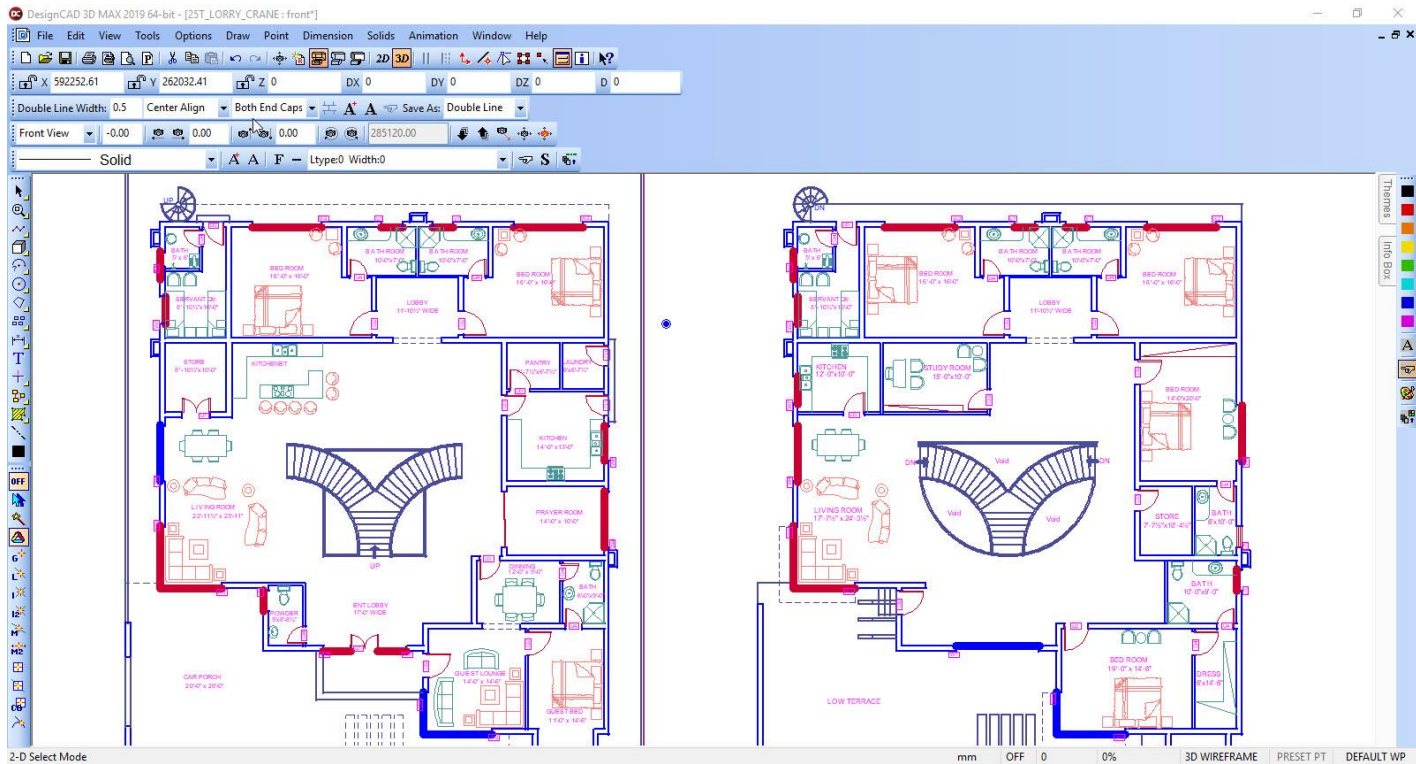
4). Support for AutoCAD 2019

Available in DesignCAD 3D Max 2019 and DesignCAD Express 2019

DesignCAD 2019 now supports import and export of AutoCAD 2019 .DWG and .DXF file formats

Below is an image which shows an AutoCAD 2019 DWG file that has been imported in DesignCAD 2019.





5). 3D Print Check Tool

Available in DesignCAD 3D Max 2019 Only

This New tool determines if an STL mesh is 3D printable or not. The result is based on the common tests for 3D printability. This tool checks a part for common topological errors such as: non manifold edges, duplicated and collapsed facets, open edges, shells and more. The Print Check tool also displays geometry information such as extents, number of facets/vertices, area, and volume. When saving an STL file, the user is given the option of performing this print check on the 3D model.

General Information include:

- Number of Facets
- Number of Edges
- Min XYZ/Max XYZ extents
- Length, Width, Height
- Maximum Length
- Minimum Length

Tests include:

- Duplicate facets
- Collapsed facets
- Closed and water tight
- Manifold
- Number of Parts/Shells
- Normal orientation

The images below show how the 3D Print Check tool functions after running a print check on a mesh object. The screenshot contains the results.

