Which 3D Software is the Best for 3D Architectural Modeling

TechRounder PDF Edition

Live article: https://www.techrounder.com/software/which-3d-software-is-the-best-for-3d-architectural-modeling/

By Vipin PG | Published October 17, 2021 | Updated January 4, 2026 | Format: Article | 3 min read

In brief

The best 3D software for architectural modeling depends on your specific needs. AutoCAD excels at 2D drafting and detailed drawings with its streamlined interface, while ArchiCAD and Revit both offer full BIM technology support, volumetric modeling, and visualization capabilities.

We all know that 3d architectural modeling can be pretty tricky without special programs. Therefore, today we will analyze the main ones.

Special programs designed for 3D modeling can be divided into specific groups, which we will now consider.

Diving into the world of 3D modeling: the most recognizable programs

The top three software products for engineers and architects include Autocad, Revit, and Archicad. We propose to analyze in detail the capabilities of the programs and see their pros and possible cons.

Diving into the world of 3D modeling: the most recognizable programs

If, nevertheless, we select software without binding to additional modules, then it may well be a product from Autodesk - 123D. Any 3D object can be developed in this universal program. In addition, a free library of ready-made volumetric models is provided at the services of users, which can help with their unique designs.

At the moment, ArchiCad has presented to the public its 22nd version, released in 2018. It combines the functions of engineering design, volumetric modeling, and the possibility of implementing BIM technologies, which allows you to monitor the state of an object from the stage of its development to daily operation after commissioning.

Next year, the legendary Graphisoft program will celebrate its 35th anniversary. The first version was released back in 1984. This graphic editor has become the leader in the 3D modeling market due to the optimal set of functions and a logical interface.

For the building to correspond to the declared functionality, a team of architects, designers, and engineers begins to work out plans for the future structure. To do this, the program provides tools that are responsible for the future construct. These are walls, slabs, beams, columns, partitions, and non-trivial approaches such as a shell. In addition, this tool allows you to create unusual geometric shapes in the design of facades or the interior of a building.

Work in ArchiCad is carried out in parallel in several directions:

- Development of constructive solutions
- Visualization
- Registration
- BIM technology support

Auto cad specialized software is more suitable for working with a two-dimensional image for detailed drawings and highlighting the necessary elements. Therefore, AutoCad has a meaner interface ideal for these purposes.

Work in AutoCad is carried out in parallel in several directions:

- Development of constructive solutions
- Visualization
- Registration

To work in the program, tools are used that are suitable for designing drawings and two-dimensional graphics. These are lines, arcs, points, circles - different, to a greater extent, geometric shapes that designers use for executive and working documentation.

Work can be carried out on different layers, which allows you to conveniently execute floor plans or various elements of the same product. The program is also suitable for designing furniture.

In terms of functionality and capabilities, Revit can be compared to ArchiCad. Work in Revit is carried out in parallel in several directions:

- Development of constructive solutions
- Visualization
- Registration
- BIM technology support

This program was created to a greater extent for solving the problems of architects, as it allows you to build a high-quality volumetric model with a reasonable degree of elaboration of the internal space. In the latest versions of the program, special functions are embedded that allow BIM design techniques. These capabilities make it possible to implement the construction process from the stage of pre-design work to the final stages of construction.

Additional modules of the program make it possible to create complex technical calculations and analyze the situation in different directions - construction work, procurement procedures, etc.

This program is chosen by the new architecture school representatives, who are not used to more traditional products.

References

1. treenitro.com - architectural-design / 3d-architectural-modeling-services - https://www.treenitro.com/architectural-design/3d-architectural-modeling-services/