

2016



VECTORWORKS®  
**FUNDAMENTALS**

Cover: Inspired by Polygon Architects

# IT'S ALL ABOUT YOUR EXPERIENCE

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As a designer, you respond to the world differently. You therefore seek software solutions that respond to the way you design.

At Vectorworks®, we deliver the tools you need and support your creative process, enabling design to materialize from inspiration, exploration, and discovery. Because our DNA originates in the creative part of design, we place a heavy emphasis on the freedom of artistic expression through the development and documentation of each project.

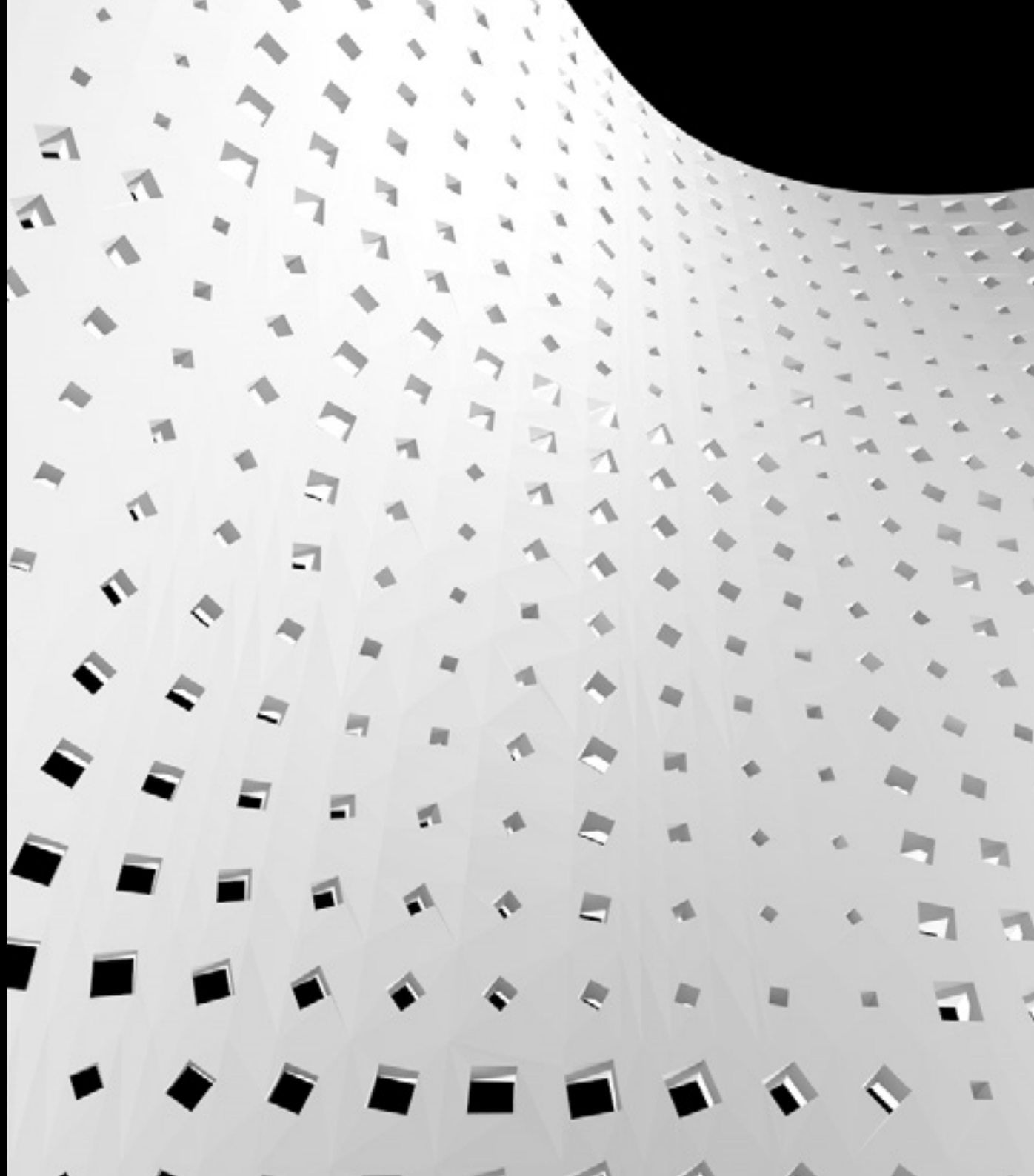
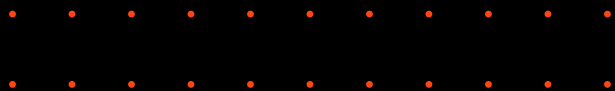
Our Vectorworks Fundamentals software gives you the freedom to design in your own way, use the tools you want, and capture and develop your ideas all in one place. Intuitive, 2D/3D modeling capabilities will transform your design process and help you produce beautiful drawings and high-quality, professional documentation with ease.

There's so much to explore. Take a look and see what you can do with Vectorworks Fundamentals.

# EXPLORE THE POSSIBILITIES

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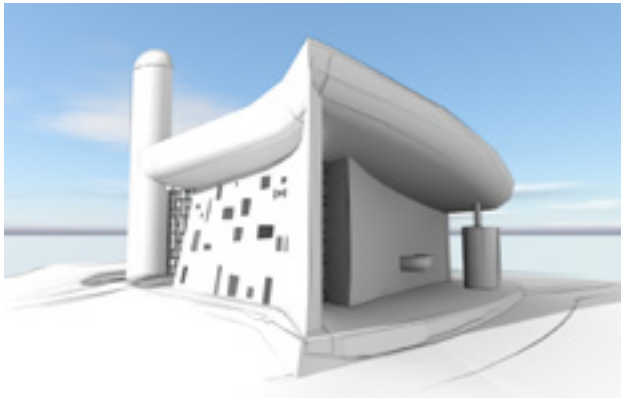
Great design begins with exploration. The Vectorworks family of software empowers you to bring your design ideas into the virtual world to investigate and discover, manipulate and examine. With us on your side, you have a suite of intuitive, flexible tools that encourages you to create and explore any form.





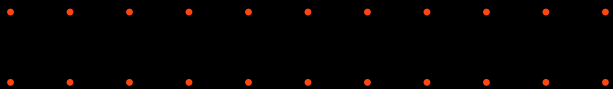
## POWERFUL CONCEPTUALIZATION

With Vectorworks Fundamentals, nothing stands between you and your drawings. Import hand sketches, site pictures, and even documents or models from other applications with ease. Invoke ideas in 2D, and explore them in 3D with free-form models.



# CAPTURE YOUR INSPIRATION

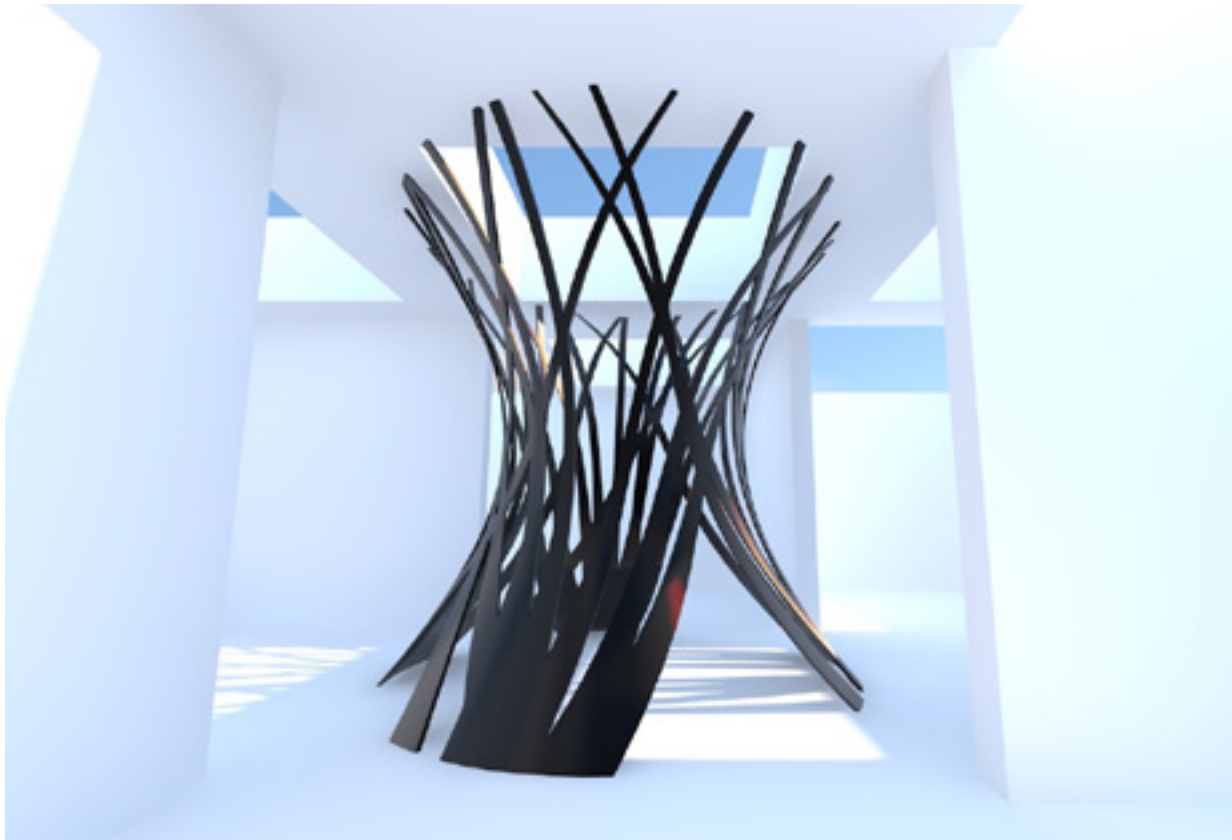
Go beyond exploration, channeling your inspiration into unmatched designs. With the Vectorworks family of software, you'll keep your creative edge with the support from the industry's most powerful partner in the journey from simple sketch to final experience.



## SUBDIVISION SURFACES

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Transform rigid lines and primitive shapes into smooth, malleable surfaces to create sculpted objects, unique furniture, and more with subdivision modeling. This technique, based on Pixar Animation Studios' OpenSubdiv library, allows you to design beyond the limits of traditional CAD software by subdividing and molding each surface into any form imaginable using the Edit Subdivision tool.



## FREE-FORM MANIPULATION

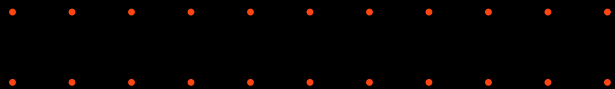
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With our intuitive interface, you can design from any 3D view using modes in modeling tools that automatically infer working planes as you move your cursor, and enjoy the superior quality that allows you to manipulate your model with ease. More accurate object information and better snapping make drawing in 3D easy. The SmartCursor™ helps by showing hints, like the angle from the previous segment, as you draw, and our patent-pending X-ray Select technology lets you see through models to select, move, and modify hidden objects with precision and ease. Plus, an advanced suite of solids and NURBS surface tools lets you create any shape and easily explore organic geometry. Push, pull, blend, twist, sculpt, deform, bulge, taper, or punch holes.



# DEVELOP YOUR DESIGN

The transition from virtual to actual presents distinct challenges. Vectorworks Fundamentals offers first-class tools and customizable workflows to go beyond exploration and into development. The pragmatic issues of materiality, fabrication details, structure, and constructability come into play as your concepts mature into concrete solutions.





## INSPIRATIONAL PRESENTATIONS

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Define and communicate your signature look with Vectorworks Fundamentals to create beautiful, graphically rich presentations. Tap into our large libraries of entourage, customizable line types, gradients, dash styles, and unlimited color palettes.

## ENDLESS DIGITAL IMAGES

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Make your work even more compelling and easier to communicate with digital imagery. Import scans, digital photos, or web images. Import or export a wide array of image files, including Illustrator® EPS and native Photoshop® PSD files. Also, export your design for inclusion in your firm's marketing materials or website.



## EASY-TO-USE INTERFACE AND DRAFTING TOOLS

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Do what you do best — design. Fundamentals' customizable interface and what-you-see-is-what-you-get display make it easier to learn and use than other CAD applications. Our software enhances the design process, delivering intuitive drafting tools that empower you to keep your creative edge.





## RENDERWORKS

Powered by MAXON's CINEMA 4D® render engine, Renderworks® is an industry-leading rendering application that produces amazing, high-quality renderings directly inside your Vectorworks design files. With new full-screen preview, as well as auto-start and quick-cancel features, our latest release streamlines the production of clear and accurate renderings.

Available as an add-on to the Vectorworks line of software products, Renderworks makes it simple to achieve breathtaking results with a simple drag and drop. Improved camera features allow you to manipulate the depth of field, apply vibrant back lighting, alter exposure, and generate panoramic images, creating striking visualizations and dynamic animations.

Further improvements that add new dimensions to your designs include:

- **Caustics Capabilities** — Refracts light through translucent surfaces like crystal and water
- **Ambient Occlusion** — Adds depth to your designs with more realistic shadowing
- **New Grass Shader** — Makes it simple to render realistic scenes with grass, carpeting, or hair

No matter what your visualization needs are, Renderworks gives you the power to deliver.

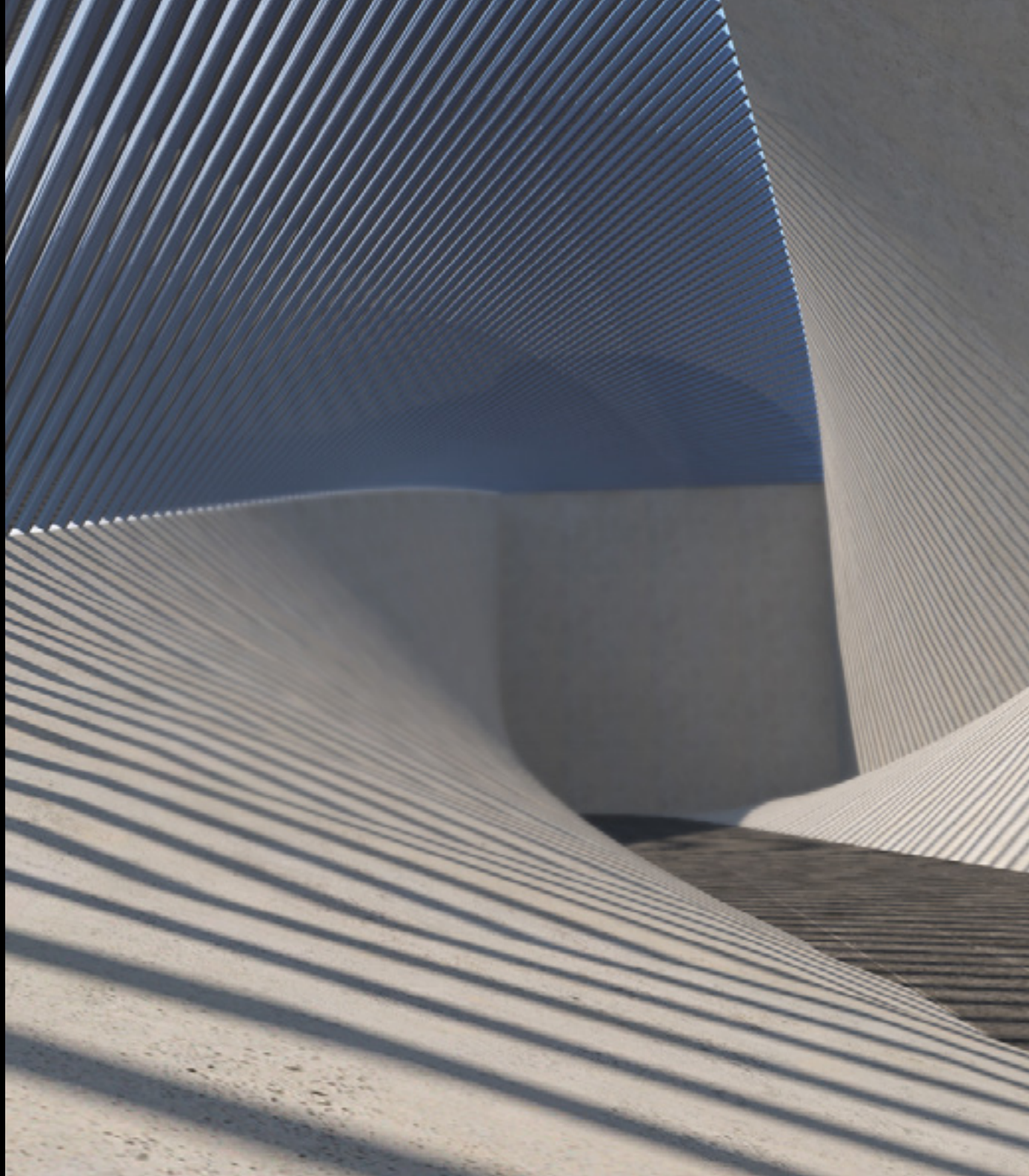
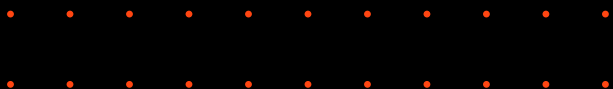
Visit [vectorworks.net/renderworks](http://vectorworks.net/renderworks) to learn more.



# ENHANCE YOUR WORKFLOW

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Vectorworks Fundamentals gives you more resources than ever to streamline and optimize your workflow. With access to reliable cloud-based storage solutions, improved communication and visualization tools, and the industry-leading development team that is always working to make your design software experience better, you'll design smarter than ever before.



## SUPERIOR 2D DOCUMENTATION

Make drawing fast and fun, no matter how complicated the design. Our streamlined drafting environment includes a suite of drawing and editing tools that make quick work of any type of project. Explore parametric constraints that maintain relationships between 2D objects. Use a full spectrum of dimensioning tools that support common standards. Take advantage of text and notation capabilities that make your drawings even more powerful. For your finishing touches, stylize the text with a choice of fonts and sizes, check your spelling, and extrude text into 3D.

## SEAMLESS INTEROPERABILITY

Get on the cutting edge of collaborative digital practices. Exchange 3D NURBS models with Rhinoceros®. Import, export, or directly reference AutoCAD® 2016 (and earlier) files. Publish drawing sets as multiple page PDFs, DWFs, or DXF/DWGs. Export 3D models to DXF, C4D, Rhinoceros, Google Earth®, and Vectorworks Nomad.\*

\*Vectorworks Nomad is only available to Vectorworks Service Select members. Visit [vectorworks.net/service-select](http://vectorworks.net/service-select) for more information.





# ABOUT VECTORWORKS

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Vectorworks cares about design. Since 1985, we have served the architecture, landscape, and entertainment industries, drawing inspiration from the world around us and encouraging the more than half a million designers who use our software to create experiences that transform the world.

Our commitment to develop the world's best cross-platform CAD and BIM software has taught us a simple truth: great design begins with the inspiration of the designer. Vectorworks supports that inspiration by guiding the exploration of discovery and finding creative solutions. We provide powerful tools to help designers

capture ideas, nurture innovation, communicate effectively, and realize their vision.

We serve those who desire to create experiences that are memorable and build things that truly matter. We recognize that great design is about revealing opportunities that explore the unexpected while fully satisfying the demands of an increasingly complex world. We acknowledge the value of a designer's dream and strive to facilitate the creation of something that's truly appreciated and uniquely positioned to express the best in the built environment.

# SYSTEM RECOMMENDATIONS

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Mac OS X 10.9 or later operating system

Windows 7 SP 1 (64-bit)

Windows 8 (64-bit)

Windows 8.1 (64-bit)

Windows 10 (64-bit)

64-bit Intel Core i5 (or AMD equivalent) or better

## **RAM**

4GB minimum, 8GB highly recommended

8GB — 16GB recommended for large files and complex renderings

## **Graphics\***

A dedicated graphics card is highly recommended.

Open GL 2.1 compatible graphics card

VRAM: 1GB, 2GB-4GB (recommended)

## **Screen Resolution**

1440x900 minimum

1920x1080 or higher recommended

\* Like past releases, Vectorworks 2016 added improvements that place still higher demands on graphic hardware. The performance and quality of the graphics provided by the Vectorworks Graphics Module depend directly on the speed, memory, and supported extensions of the graphics card. These new features have the potential to provide a very fast and fluid experience if used on capable hardware, or a noticeably slower experience if used on older or incompatible hardware. Graphic cards should support at a minimum OpenGL version 2.1; cards not meeting this recommendation will have limited functionality and poor performance, particularly when rendering in OpenGL mode. In general, the more powerful your video card is, the better your Vectorworks experience will be.

For the most current and updated technical information, please visit our Knowledgebase at [kbase.vectorworks.net](http://kbase.vectorworks.net).

See [vectorworks.net/sysreq/](http://vectorworks.net/sysreq/) for updated information.

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