Rewrite What's Possible

ThinkStation P620

Powering Your Workflow

AMD THREADRIPPER PRO

Lenovo

A Powerful Solution
For Complex IT Requirements

Designed specifically to provide fast, reliable processing power, the ThinkStation P620 workstation has the specifications professionals from all industries need when working with complex applications.

The ThinkStation P620 combines the professional power of both AMD Ryzen™ Threadripper™ PRO computing and NVIDIA RTX™ graphics capabilities to directly address the technological complexity that IT departments often face. Offering the only single 64-core CPU of its kind with PCIe Gen 4 technology, the P620 allows companies to scale up while easily managing the technology that is powering their growth.

Perfect for professionals everywhere, from architects, to designers, physicians, and more, the P620 can support your workforce with the secure and reliable technology your power users need.

With enterprise-grade features, software certification, and security, this system supplies power and speed to superusers when they need it most. Empower your workforce with the next generation of workstation technology and enjoy the endless possibilities the ThinkStation P620 offers.

AMD◢ THREADRIPPER PRO

Built for those who **demand more power** for today's multithreaded applications, the P620 is ideal for power users in:

M&E, AEC, Manufacturing, and Healthcare & Life Sciences

The Challenge and The Solution

The ThinkStation P620, with its game-changing capabilities, is perfect for any production function across the film, television, and game development industries.

The P620 delivers what is most important for you as an artist: a platform that can keep up with the speed of your creativity.

ThinkStation P620 Specifications
The world's only AMD Ryzen Threadripper PRO powered workstation. Choose from 12, 16, 24, 32 and 64-core high-frequency CPUs. Combine this with PCIe Gen 4 for the fastest data read/write times and graphics performance. In addition, the P620 supports up to two NVIDIA RTX A6000 or four RTX 4000 GPUs, is future-proofed for the latest cards, and includes 8-channel memory architecture. Integrated 10Gb Ethernet comes as standard, enabling you to move large amounts of data on and off the P620 quickly.

Key applications for Media & Entertainment
3ds Max®, After Effects, Arnold, Blender, Cinema 4D, Flame®, Fusion 360®, Houdini, Maya®, Media Composer®, MotionBuilder®, NUKE®, Premiere Pro, Renderman, Resolve, Unity®, Unreal®, V-Ray, ZBrush

"We always had to choose between high core count or high clock speed. The P620, powered by AMD's Ryzen Threadripper PRO Processor, is optimized for both aspects in a way that previous HEDT CPUs never quite were."

Unreal Engine

How the Thinkstation P620 Enhances M&E Workflows

3D Modelers and Animators

Workflow: Modeling, texturing, rigging, animation, and simulation

Description: Perfect for animation specialists creating photorealistic or stylized characters, environments, and props for film, television, and gaming. Most 3D applications operate best with high-frequency CPUs, and the P620 delivers up to 4.5GHz (at 12 cores) with AMD's Threadripper PRO CPU. PCIe Gen 4 facilitates faster read/write times and graphics performance. The latest NVIDIA RTX GPUs accelerate 3D modeling and animation workflows with real-time ray tracing and AI enhanced tools. The P620 provides a flexible platform to maximize your productivity and creative capabilities.

Compositors, Editors, and Colorists

Workflow: Adding and removing elements within an image or image sequence, editing and color correction

Description: Artists tasked with bringing the director's vision to life need a workstation that is capable and can reliably run at peak performance. The P620 delivers both high clock speed and high core count CPUs—ideal for compositing, editing, and creative finishing solutions. With 8-channel memory architecture and 10Gb Ethernet included, you have what you need to take on the most complex and challenging projects.

How the Thinkstation P620 Enhances M&E Workflows

Release & Build Specialist

Workflow: Prepare, configure and test game builds

Description: Specialists managing the game build process, whether for mobile, console, or PC titles, need a workstation that minimizes build times. With fast, high core count CPUs, ample fast storage and the ability to move data on and off the build system via 10Gb Ethernet, the P620 delivers the capabilities today's game developers require.

Image courtesy of **NeoScape**
Real-time ray tracing interior

Rendering Specialist

Workflow: Render project setup, monitor, and review

Description: Ideal for rendering specialists creating photorealistic and stylized renderings for film and television. With never-before-seen compute capabilities in an affordable package, the P620 provides high core count, high frequency CPUs. NVIDIA RTX technology delivers state-of-the-art visualization faster than ever before, with AI-enhanced tools that automate and reduce render times and cost per frame for tedious, time-consuming tasks.
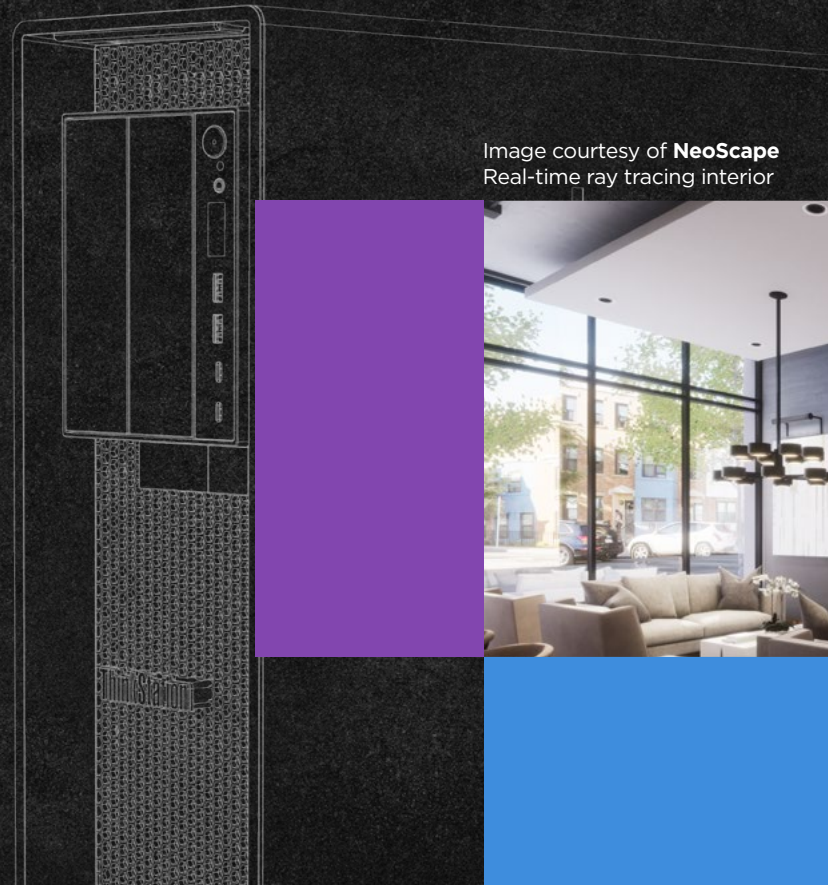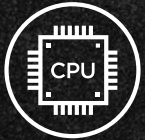
Advantages

The ThinkStation P620 provides faster, higher core count CPUs for complex multithreaded and multi-application workflows; equipped with up to two NVIDIA RTX A6000 or four RTX 4000 GPUs or graphics and compute intensive workflows; PCIe Gen 4 for faster storage and next-gen GPUs; the fastest 8-channel memory architecture; and integrated 10Gb Ethernet.

CPU

The World's Only
AMD Ryzen Threadripper PRO Workstation

"It provides groundbreaking performance for everything from professional visualization and simulation to compiling and building for game development."

Unreal Engine

AMD
THREADRIPPER PRO

Architecture, Engineering & Construction:
The Challenge and The Solution

From complex BIM, to generative design, reality capture, geospatial analysis, digital fabrication, and visualization the ThinkStation P620 enables high performance for emerging workflows and technologies for the built environment.

No other workstation offers architects, designers, engineers, and visualization specialists as much flexibility and power in a single CPU workstation package.

ThinkStation P620 Specifications
Full flexibility with AMD Ryzen's Threadripper PRO processor, up to 64 cores, up to two NVIDIA RTX A6000 GPUs, and 1TB of 3200MHz memory. Integrated 10Gb Ethernet comes as standard.

Key applications for AEC
Autodesk® Revit®, Autodesk ReCap™ Pro, Microstation®, Bentley® ContextCapture, Nemetschek Group®, Faro® SCENE, Leica Cyclone, V-Ray, Unreal® Engine, Unity, Twinmotion

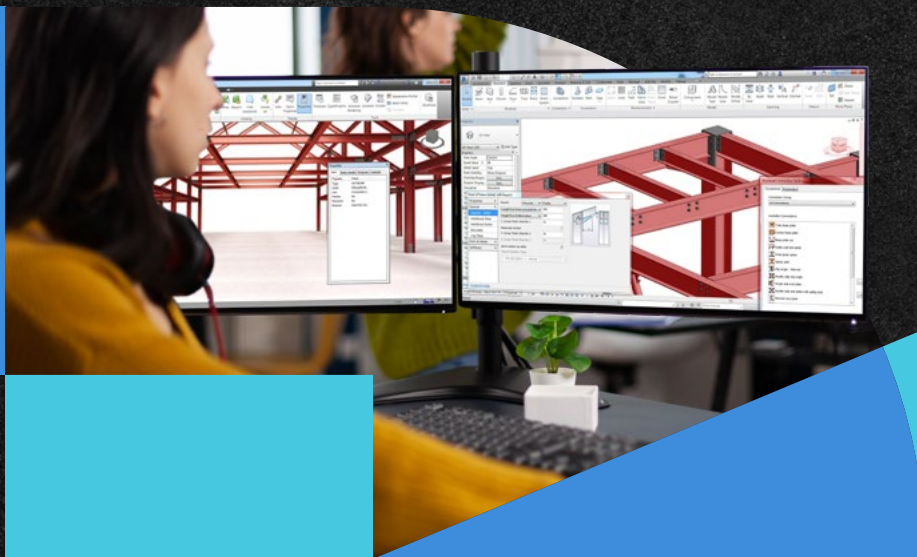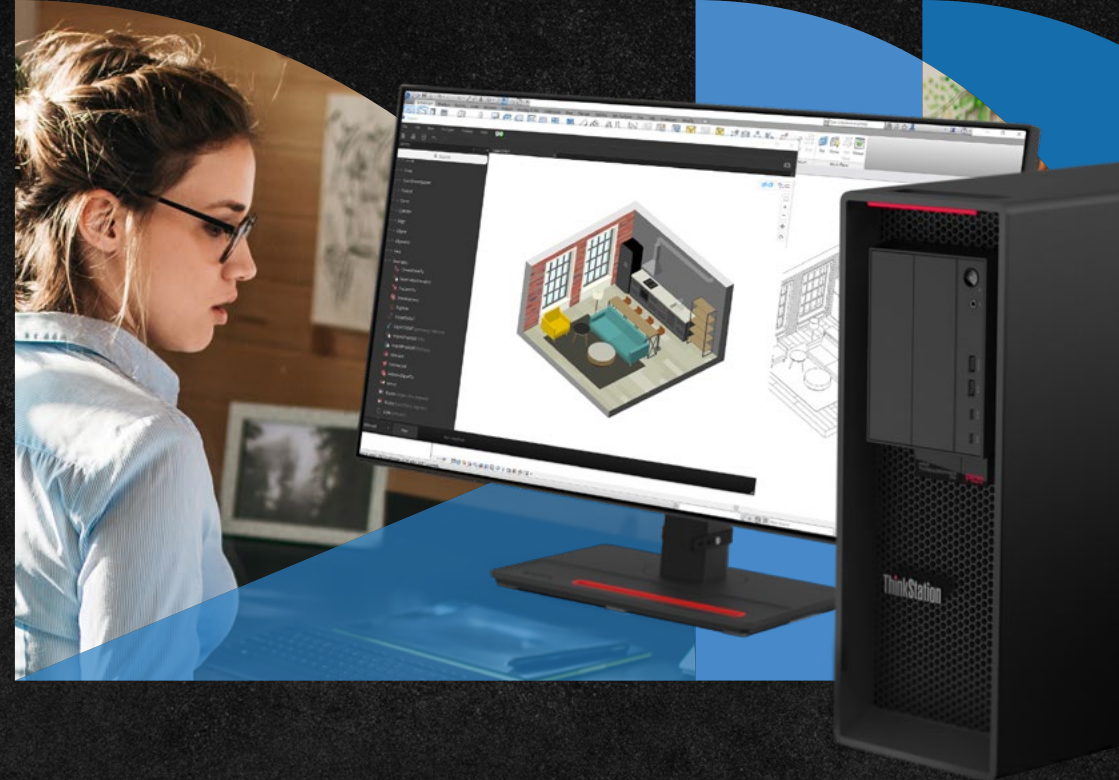# How the ThinkStation P620 Enhances AEC Workflows

Architects, Designers & Engineers

Workflow: High-performance BIM design and engineering

Description: Featuring the unique combination of high clock speeds with huge memory capacity and flexible graphics. NVIDIA RTX enables enhanced collaboration and product evaluation with immersive VR design reviews. The P620 is a powerful workstation for architects, designers, engineers, and visualization specialists who need maximum performance from every aspect of their BIM workflow.

Workflow: Reality Capture

Description: Lidar, point cloud scanning, photogrammetry processing, and visualization require a combination of multi-core solving and powerful graphics. Applications like Autodesk ReCap, Bentley ContextCapture, Faro SCENE and Leica Cyclone will benefit from the ThinkStation P620 next generation architecture and powerful configuration options.

Visualization Specialists

Workflow: Rendering and visualization

Description: Create complex photorealistic renderings, animations, and VR experiences with applications like Twinmotion, 3ds Max, V-Ray, Unreal Engine, and Unity. For CPU-driven workloads, choose between 32 and 64-core Threadripper PRO processors for maximum performance. For workflows that require both GPU and CPU performance, the ThinkStation P620 offers 12, 16 and 24 core Threadripper PRO processors with up to two NVIDIA RTX A6000 professional GPUs for outstanding performance.
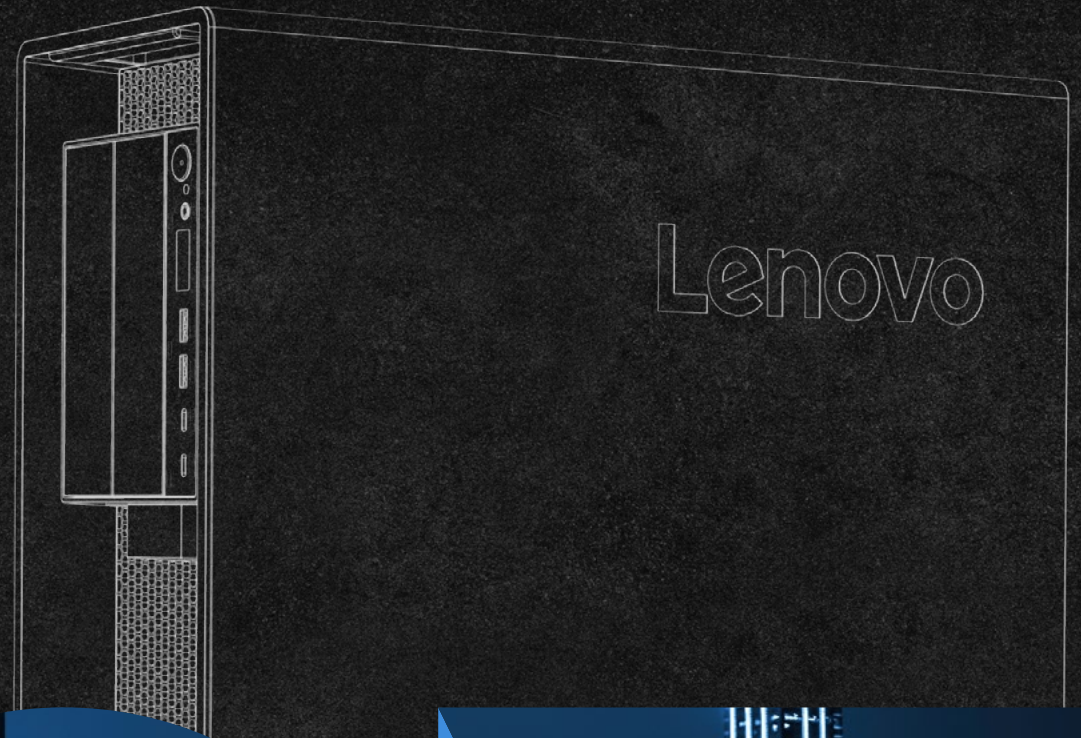
Advantages

The ThinkStation P620 is the only single CPU workstation offering up to 64 cores, with AMD Ryzen's Threadripper PRO processor. High clock speeds and flexible NVIDIA graphics options, together with PCIe Gen 4 architecture and up to 1TB of 3200MHz RAM, combines to create a truly cost-effective package for AEC.

The Most Powerful
Single CPU Workstation

The Challenge and The Solution

From solid modeling to simulation, generative design, CAM, and visualization the ThinkStation P620 delivers high performance for every product development and manufacturing workflow in a single workstation platform.

No other workstation offers designers, engineers, and visualization specialists as much flexibility and power in a single CPU workstation package.

ThinkStation P620 Specifications
Full flexibility with AMD Ryzen's Threadripper PRO processor, up to 64 cores, up to two NVIDIA RTX A6000 GPUs, and 1TB of 3200MHz memory. Integrated 10Gb Ethernet comes as standard.

Key applications for Manufacturing
SOLIDWORKS®, CATIA®, PTC Creo®, Siemens® NX®, Altair®, Ansys®, Autodesk, Bentley, COMSOL®, Hyperworks™, Matlab®, SIMULIA™, CAMWorks®, Mastercam®
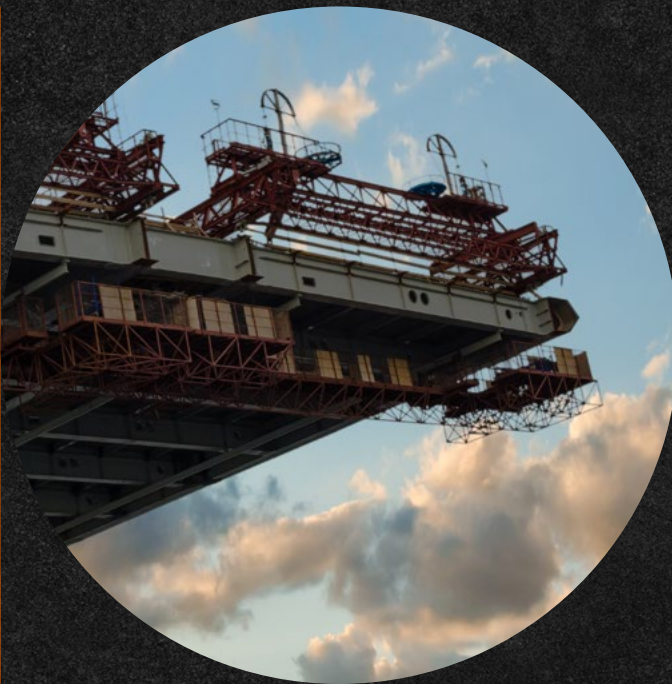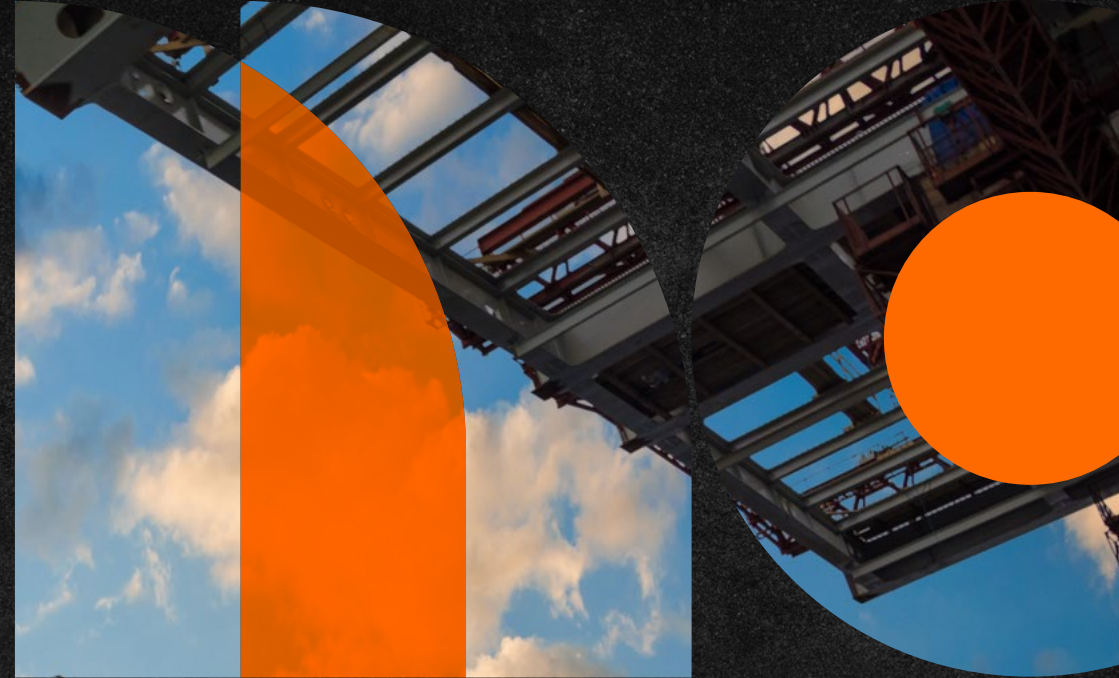
How the ThinkStation P620 Enhances Manufacturing Workflows

High Performance CAD

Workflow: High-performance BIM and CAD design and engineering

Description: Featuring the unique combination of high clock speeds with huge memory capacity and flexible graphics, the P620 is a powerful workstation for product designers, engineers, and visualization specialists who need maximum performance from every aspect of their CAD workflow.

Visualization Specialists

Workflow: Rendering and visualization

Description: Create complex photorealistic renderings, animations, and VR experiences with applications like 3ds Max, VRED™, SOLIDWORKS visualize, Unreal Engine, and Unity. For CPU-driven workloads, choose between 32 and 64-core processors for maximum performance. For workflows that require both GPU and CPU performance, the ThinkStation P620 offers 12, 16 and 24 core Threadripper PRO processors with up to two NVIDIA RTX A6000 GPUs for outstanding performance.

How the ThinkStation P620 Enhances Manufacturing Workflows

CAE

Workflow: Simulation

Description: NVIDIA RTX delivers GPU acceleration, scalability, and massive memory. Ideal for engineers performing complex core-dependent Multiphysics simulations, such as finite element analysis (FEA) and computational fluid dynamics (CFD), in applications like SIMULIA, Ansys, Altair Mathworks®, and COMSOL. The P620 offers an alternative to 2P workstations at a competitive price with the performance to match.

CAM

Workflow: Computer-Aided Manufacturing (CAM)

Description: For users working with CAM tools for product like CAMWorks and Mastercam, the P620 features high core counts to quickly calculate CPU-dependent tool pathing and G-code instructions for CNC or additive manufacturing.
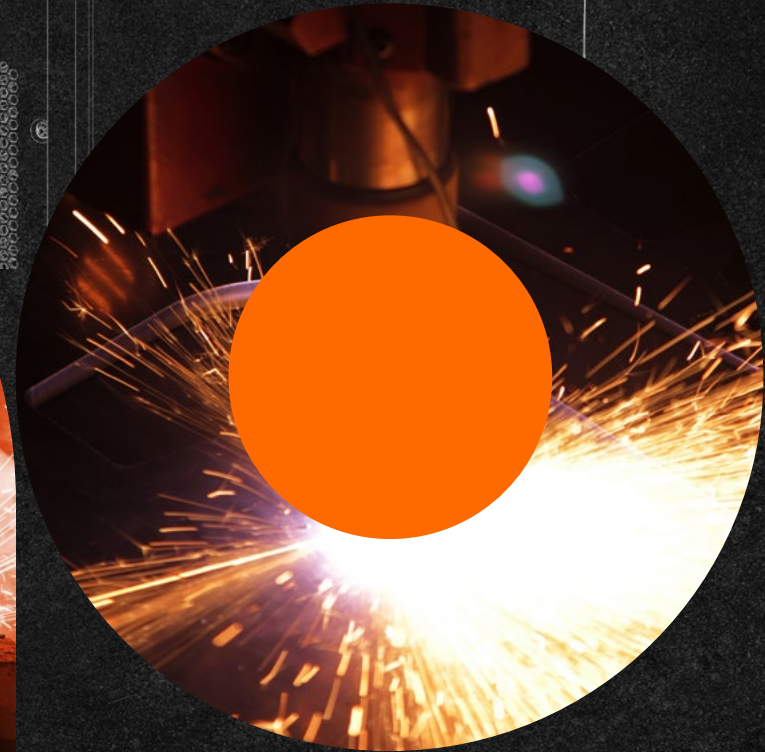
Advantages

The ThinkStation P620 is the only single CPU workstation offering up to 64 cores, with AMD Ryzen's Threadripper PRO processor. High clock speeds and flexible NVIDIA RTX graphics options, together with PCIe Gen 4 architecture and up to 1TB of 3200MHz RAM, combines to create a truly cost-effective package for product development and manufacturing workflows.

The only professional workstation to utilize PCIe Gen 4 technology
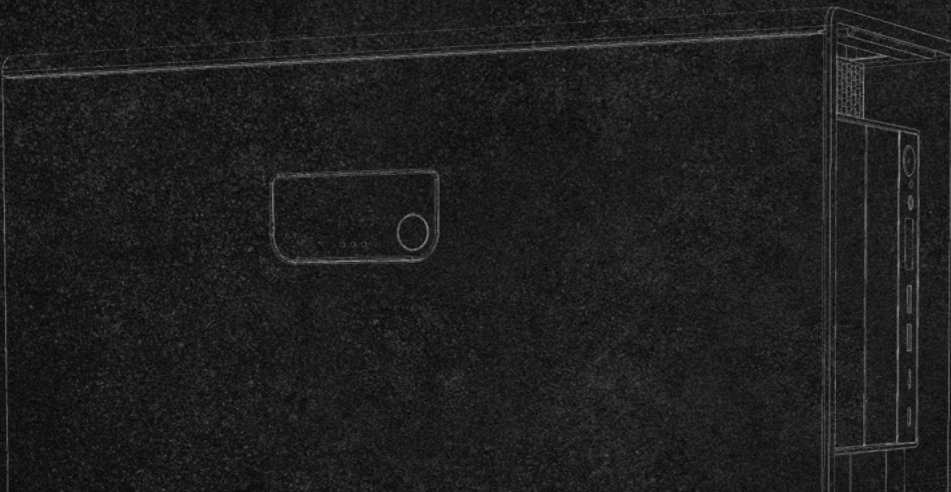
The Challenge and The Solution

Our workstation portfolio provides scientists, analysts, and imaging specialists with the power and performance they need for fast, accurate, reliable, and secure access to diagnostic images, patient files, and lifesaving research data across healthcare enterprises.

Life science professionals will truly appreciate this workstation when designing the next generation of medical devices or identifying the newest drug or treatment to address humanity's next crisis, disease, or epidemic.

ThinkStation P620 Specifications
Lenovo's new ThinkStation P620 with AMD Ryzen Threadripper PRO CPU architecture offers healthcare and life science professionals a premium workstation experience. Choose up to 64 cores in a single processor configuration, paired with PCIe Gen 4 support and powerful NVIDIA RTX graphics and a 10Gb Ethernet port onboard. The P620 will outperform all expectations.

How the ThinkStation P620 Enhances Healthcare Workflows

Imaging Informatics

Workflow: Medical image analysis and interpretation

Description: Imaging informatics are a key part of the healthcare workflow and demand for their services will only increase as populations grow older and the need for better healthcare continues. Analyzing and deciphering CT, MRI, and PET scans in real-time during a procedure can enhance the patient experience, provide better outcomes, and reduce the total cost of care. All this is made possible with the technological breakthroughs of the P620.

Research Scientists and Genomics Researchers

Workflow: DNA Sequencing, Molecular Biology, and Biological Engineering

Description: Research Scientists help broaden our understanding in areas such as biology, microbiology, biochemistry, physiology, and biomedical sciences. A powerful workstation helps life science professionals to conduct experiments, collect scientific data, develop models and reports, and perform simulations at rapid speeds. The ThinkStation P620 supports NVIDIA Clara™ Parabricks computational framework, allowing scientists to accelerate their analysis of genomics data.

How the ThinkStation P620 Enhances Healthcare Workflows
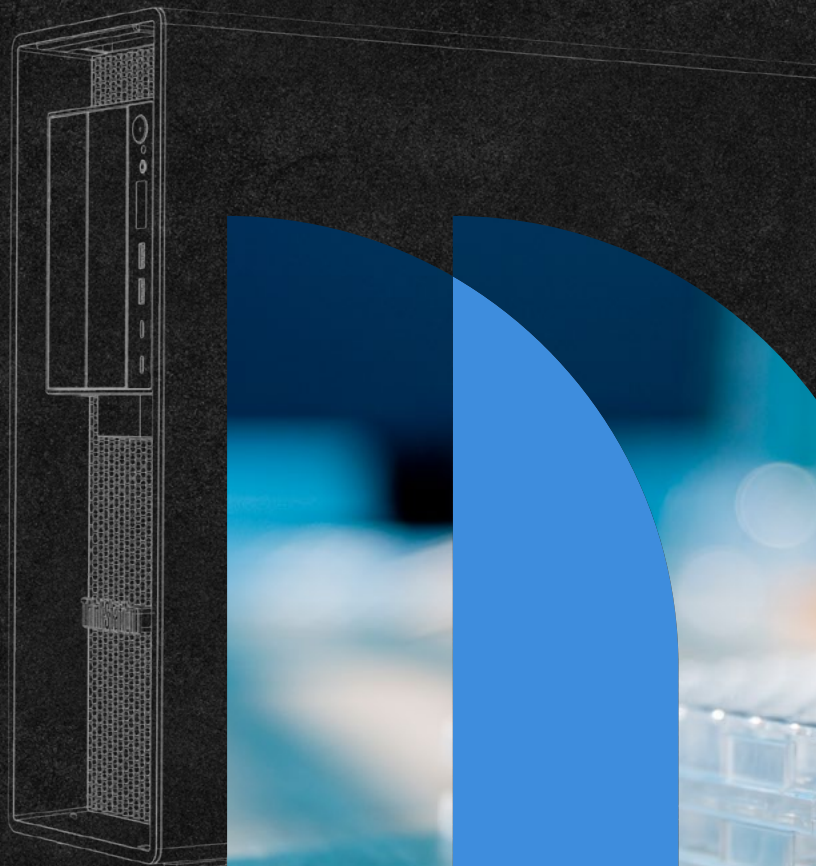
Bioinformatics Scientists

Workflow: 3D Molecular Imaging

Description: Professionals in the bioinformatics space require high-level compute power to analyze the sequence of biological molecules and compare genes, DNA, RNA, and proteins between organisms. The ThinkStation P620 has the power and speed to execute workflows and show results in real-time, freeing up valuable time for leading scientists around the world to share, collaborate, and unlock new discoveries.

Pharmaceutical Scientists

Workflow: Molecular Simulation, Computational Chemistry,
Quantum Chemistry, and Microscopy

Description: Pharmaceutical scientists spend time learning how different chemical compounds interact with disease-causing cells and organisms. In addition, they investigate how these compounds interact with the human body to ultimately determine if they can be used in new drugs. Pharmaceutical companies are always looking for ways to speed up the development of new drugs and reduce their overall costs. The ThinkStation P620 can accelerate two critical areas of research: the discovery and development phases. Its game-changing power and processing capabilities allow scientists to run molecular dynamics simulations on unprecedented timescales.
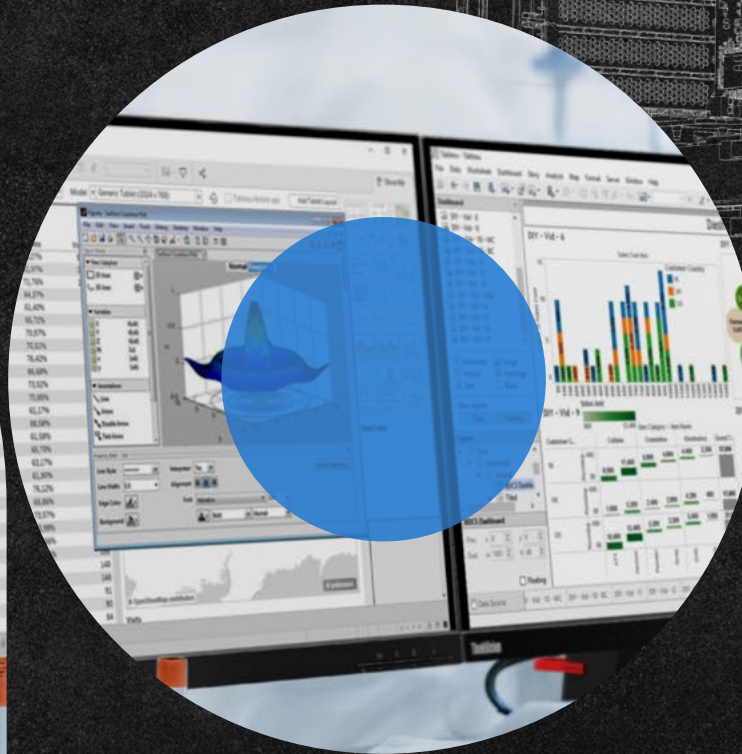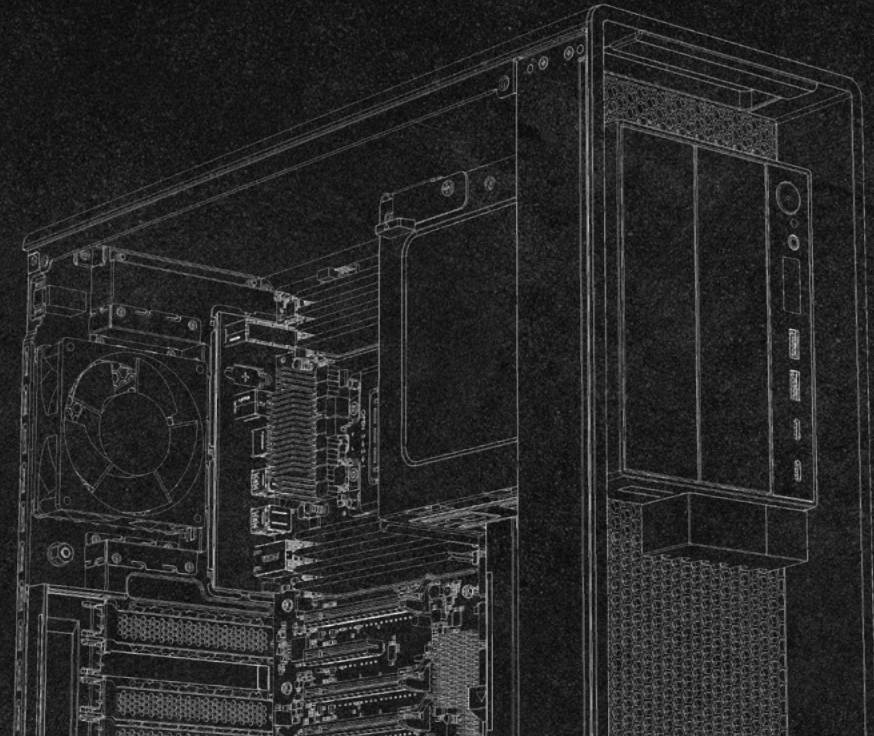
Advantages

The ThinkStation P620 with AMD's 32 or 64-core Threadripper PRO processor and dual NVIDIA RTX graphics capability allows healthcare professionals to run simulations, develop models, and view imaging in real-time with their core hungry applications. Plus, with a 10GbE onboard and up to 1TB of 3200MHz memory, Healthcare and Life Science professionals will never have to worry about the size of their data file when doing their job.

The World's Only to Offer
10Gb Ethernet as standard
without using a PCIe slot

Transforming What Is Possible in a Single-CPU Workstation

As project size and complexity continue to evolve across organizations, power users are finding their current systems struggle to keep up with their scaling workloads. The P620 delivers a powerful solution to these difficult challenges.

Collaborating with NVIDIA means our workstations are powered by NVIDIA RTX professional graphics, effortlessly tackling even the most complex visual workflows. Our workstations enable power users to create revolutionary products, design energy-efficient buildings, produce groundbreaking visual effects, develop the next chemical compound for drug discovery, and process tens of thousands of images in a 3D scan— better, smarter, and faster than ever before.

Learn More About the ThinkStation P620

Visit: Tech Today

Watch: Product tour video