

Lenovo
ThinkStation

The Pinnacle of Lenovo Technology

ThinkStation PX, P7, and P5
Product Development
Solution Guide



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**Smarter
technology
for all**

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High Performance Technology for Product Development

The manufacturing industry is seeing a shift in how products are being designed, developed and built. With advances in simulation, digital twins, and generative design enabling new design solutions to visualization and AR/VR enhancing collaboration and design, you need a powerful workstation to get the job done quickly and efficiently without fail.

The ThinkStation PX, P7, and P5 go beyond the limits of desktop performance to power your most demanding product development workflows. Featuring a groundbreaking chassis co-designed with Aston Martin, these systems feature 4th Gen Intel® Xeon® Scalable processors and Intel® Xeon® W processors, and support for NVIDIA RTX™ 6000 Ada Generation graphics. Our new ThinkStation family offers rich configurations enabling you to fine tune performance for virtually any design, visualization, simulation and AI workload.

“As a Lenovo workstation customer ourselves, this project was a unique opportunity to craft a high-performance system we will use to design and develop our high-performance vehicles.”

Cathal Loughnane

Head of Global Partnerships at Aston Martin

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Designers & Engineers

Workflows: CAD

Description: For designers and engineers who need a workstation that does it all, the ThinkStation P5 is a CAD design and engineering workhorse. The P5 offers an excellent balance of Intel® Xeon® processors with high clock speed and high core count, paired with powerful NVIDIA RTX graphics for visualization and rendering. You will be able to work with the most complex CAD models with ease, use visualization tools, render in real-time, run simulations, analyze digital twins, and create generative design, all on a single workstation. The ThinkStation P5 has been engineered for versatility and flexibility and is the ultimate solution to power CAD workflows.

Recommended configuration:

ThinkStation P5

CPU:	Intel® Xeon® W-2400 Series (up to 24 cores, up to 4.8GHz)
GPU:	NVIDIA RTX A2000
Memory:	Up to 8x 64GB RDIMM (512GB max.)
SSD:	1TB

Key Software Applications:



Dassault Systèmes – CATIA, SOLIDWORKS, PTC – CREO, SolidEdge, Autodesk Inventor, Fusion, Alias



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CAE Engineers & Data Scientists

Workflows: CAE Simulation

Description: CAE engineers running computationally intensive multiphysics workflows and AI data scientists sandboxing research concepts will benefit from the power and performance of the ThinkStation PX and P7. With multi-core CPU and GPU configuration flexibility, the PX and P7 can offer data center-like performance on the desktop.

Recommended configurations vary based on solver type and workloads:

	ThinkStation P7	ThinkStation PX
CPU:	Up to Intel® Xeon® W9-3400 Series (Up to 56 cores, 4.8GHz)	Up to two 4th Gen Intel® Xeon® Platinum Scalable 8490H (Up to 120 cores, 4.1GHz)
GPU:	Up to 3x NVIDIA RTX 6000 Ada	Up to 4x NVIDIA RTX 6000 Ada
Memory:	Up to 1TB DDR5, 4800MHz	Up to 2TB DDR5, 4800MHz
SSD:	Up to 4TB M.2 PCIe NVMe	Up to 4TB M.2 PCIe NVMe
HDD:	Up to 12TB SATA	Up to 12TB SATA

Key Software Applications:



SIMULIA, Altair, Ansys, MATLAB, STAR CCM+ and many more



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Visualization Specialists

Workflows: Collaborative Design Reviews, Digital Twins, Visualization, Augmented & Virtual Reality

Description: As the demand for immersive spatial computing workflows increases, so does the level of computational power & performance needed to execute enhanced generative AI, digital twins & augmented and virtual reality workstreams. The ThinkStation PX, P7 & P5 have been purpose-built and engineered from the ground up to exceed the rigorous performance requirements of these workflows and have unique features that help in the deployment of these workflows across any size organization.

Recommended configurations:

	ThinkStation P5	ThinkStation P7
CPU:	Intel® Xeon® W7-2495X (up to 24 cores, up to 4.8GHz)	Intel® Xeon® W9-3495X (56-cores up to 4.80 GHz)
GPU:	NVIDIA RTX A5500	NVIDIA RTX 6000 Ada
Memory:	64GB+	256GB
SSD:	1TB M.2 NVMe	1TB M.2 (OS & applications)
SSD 2:		4TB M.2 (cache & content)

Key Software Applications:



NVIDIA Omniverse Enterprise, Unreal Engine, Unity

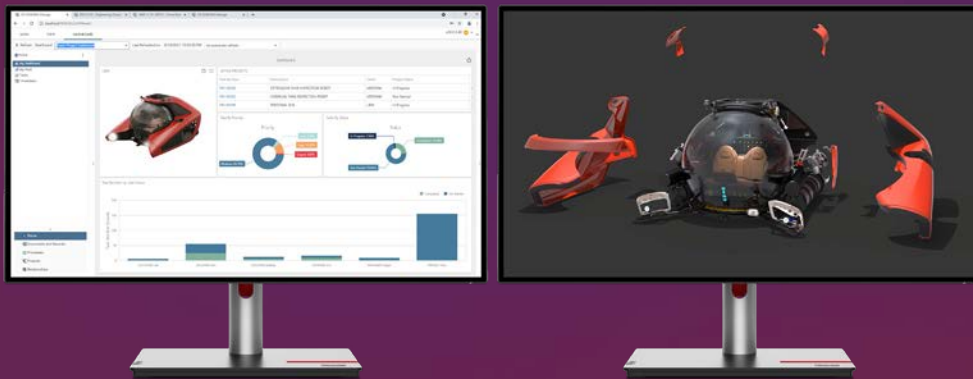


Lenovo

Manufacturing Solution Accessories

Enhance your product development and manufacturing workflows with our tailored accessory solutions

Designing, creating, and innovating have never been more seamless. Our suite of manufacturing solution accessories are meticulously designed to transform your workspace into a powerhouse of productivity.



Dual ThinkVision P27h-30 Monitors

27-inch monitor with QHD resolution and an IPS panel for crystal-clear, vivid imaging. With its USB Type-C interface and integrated hub, it provides seamless connectivity and smart power management. This monitor is ideal for multitasking, enhancing productivity, and providing a superior viewing experience.



ThinkReality A3

Experience the fusion of the real and the virtual world in unparalleled detail with ThinkReality A3 glasses, your ultimate gateway to augmented reality.

ThinkReality VRX HMD

This immersive, lightweight, slim profile six-degrees-of-freedom (6DoF) VR device provides full-color, high-resolution pass-through capabilities for mixed reality applications.



Varjo XR-3

Varjo XR-3 delivers the most immersive mixed reality experience ever constructed, featuring photorealistic visual fidelity across the widest field of view of any XR headset. And with depth awareness, real and virtual elements blend together naturally.

ThinkPad Thunderbolt 4 Workstation Dock

Unleash the full potential of your workspace with the ThinkPad Thunderbolt 4 Workstation Dock, a one-stop solution for unrivaled connectivity and productivity.



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Transforming the Art of What's Possible

As data sets, project sizes, and complexity continue to evolve across organizations, workstation users are finding their current systems can't keep up with their scaling and demanding workloads. The ThinkStation PX, P7, and P5 provide the superior level of performance needed to address these complex challenges.



Iconic Chassis, Inspired by Aston Martin

Features an advanced thermal architecture to maximize performance of ultra-high-end components



Desktop-to-Data Center Flexibility

Rack-optimized, 5U or 4U chassis with easy to attach rail kits and non-disruptive workstation acoustics in the ThinkStation PX and P7



Breakthrough Compute Architecture

Conquer your workload with up to two Intel® Xeon® Scalable processors and the latest Intel® Xeon® W-3400 processors delivering up to 56 cores in a single-socket platform



Superior Graphics Support

Up to 4 NVIDIA RTX 6000 Ada Generation GPUs can power virtual workstations and enable multi-user collaboration



Innovative, Modular Design

Offers greater expandability with hot-swap, front access storage for tool-less modifications and easy upgrades



Flexible High-Performance Configurations

CPU cores and memory are scalable based on workload with multiple options for power supplies and storage capacity

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