# **Lenovo Workstations** ThinkStation P Series and ThinkPad P Series

# Push the limits of productivity, creativity, and innovation



Lenovo

## Why Lenovo

Lenovo focuses on power, performance, and industry-leading reliability in every ThinkStation and ThinkPad we design. By combining the absolute top-of-theline components with groundbreaking designs, we are able to push our systems harder and have the raw power necessary to handle the most demanding workloads. Absolutely key for a top performing workstation is the ability to keep its components cool. This is where our patented Tri-Channel cooling in our towers and FLEX Performance cooling in our notebooks comes to fruition. These revolutionary designs allow CPUs and GPUs to run at peak performance until the job is done while simultaneously keeping the components cool, which makes for a long-lasting and reliable machine.



## **Design Philosophy**

Architects, product and software designers, financial traders, medical professionals, and engineers all need high-performing, easy-to-use, dependable power to get the job done. Lenovo Workstations are designed from the ground up with customer-driven innovation, delivering the highest levels of performance, ease of use and industry-leading reliability. With our ingenious ThinkStation modular design, making upgrades and customizations is effortless and supports a staggering number of possible configurations. The combination of our ground-breaking design with the latest Intel<sup>®</sup> and AMD Professional CPUs and NVIDIA RTX<sup>™</sup> professional GPUs delivers the absolute best possible user experience to turn ideas into reality.



#### **Key Features**



#### Ultimate Power & Performance

Powered by the latest Intel and AMD Professional CPUs and NVIDIA RTX Professional GPUs for maximum power and performance.



#### Tested & Certified

Tested and certified by independent software vendors (ISVs) to support the applications you need.



#### Expanded Solutions Expertise

Expanded support of emerging technologies such as AI and AR/VR, as well as software tools to optimize performance.

#### Sustainable Materials & Certifications

Manufactured and packaged responsibly to reduce carbon emissions without compromising on quality.



#### **ThinkShield Security**

Built with an advanced, comprehensive suite of ThinkShield features for the ultimate in security.



#### **Enhanced Serviceability**

Front panel LCD for error detection and tool-less modularity for easy upgrades and custom configurations.

# **ThinkStation P3 Tiny**

Engineered to go where others can't, the Lenovo ThinkStation P3 Tiny combines simple and efficient design with professional-level power. The industry's smallest workstation at only one liter in total volume, it offers uncompromising performance in a form factor that is 96% smaller than a traditional desktop. Featuring the latest Intel vPro<sup>®</sup> with 13<sup>th</sup> Gen Intel Core processors and up to NVIDIA T1000 graphics, this tiny but mighty system boasts support for a wide range of accessories and up to six independent displays.

Incredibly versatile with an array of mounting options, the ISV-certified P3 Tiny provides a reliable, easy-todeploy solution for professionals across architecture and engineering, finance, healthcare, and STEM education-a proven industry workhorse in a conveniently pint-sized package.

## The World's Smallest Workstation



#### **Key Features**



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Processor Intel vPro with 13<sup>th</sup> Gen Intel Core

Memory 64GB DDR5 5600MHz<sup>\*</sup>



Storage Support for Dual M.2 PCle Gen4 NVMe SSDs

**Power Supply** 170W, 230W, or 300W (up to 90% efficient)



Display Support for up to 6 Independent Displays\*\*

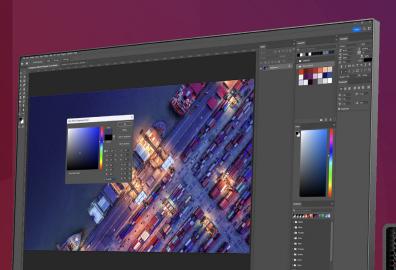
\* Memory spec frequency listed; system support frequency may vary by configuration \*\* Available with Discrete Graphics Only

## **ThinkStation P3 Ultra**

The Lenovo ThinkStation P3 Ultra features a revolutionary form factor that is redefining the power of small. With blazingly fast Intel vPro with 13<sup>th</sup> Gen Intel Core processors, now up to 24 cores, and support for up to NVIDIA RTX<sup>™</sup> A5500 mobile graphics, this system packs an unimaginable level of power and performance in a chassis less than four liters in total volume. Boasting 128GB of memory, PCIe Gen 4 for high-speed data transfer, up to 8TB of M.2 storage, and dual onboard ethernet ports, this workstation breaks new ground with an intelligently compact design that doesn't compromise on functionality.

Ideal for demanding workflows that require flexible configurations and maximum space-savings, the purposebuilt P3 Ultra is exactly what many professional users have been longing for—especially as they keep up with modern workplace changes. Now more than ever, organizations are hiring hybrid and remote workers, deploying additional resources to compute at the edge, and trying to do it all with minimal environmental impact.

## The Evolution of Small







Processor Intel vPro with 13<sup>th</sup> Gen Intel Core

SSD ....

**Storage** Up to 8TB M.2 PCIe NVMe Gen 4 Performance SSDs



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Graphics Support for up to NVIDIA RTX A5500 Mobile, RTX A2000, or Intel® Arc<sup>™</sup> Pro A40<sup>1</sup>

) USB 7 USB Ports (3 Front, 4 Back) including 2 Thunderbolt Ports 



Display 3 DisplayPorts with Support for up to 8 Displays

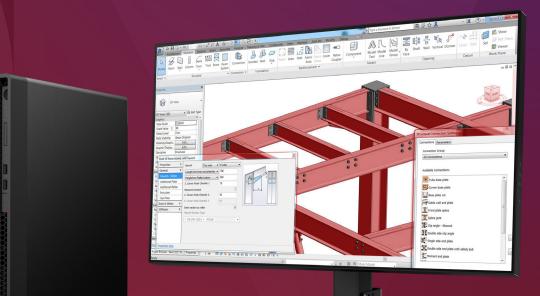
1 Planned shipment 2023

\* Memory spec frequency listed; system support frequency may vary by configuration

Workstation power is now within your reach with the ThinkStation P358. Built for mission-critical tasks that require superior reliability and performance, the ThinkStation P358 leads on both counts and does it with exceptional all-around value. Perfectly configured for the work you do, this ISV-certified system features the latest AMD Ryzen<sup>™</sup> PRO processors, NVIDIA RTX graphics, and support for power supplies up to 750W, offering premium performance at an affordable price.

The ideal workstation solution for entry-level CAD, product design, STEM educators and students alike, the versatile P358 is built to meet your individual workflow needs without breaking your budget.

### *Power of a Workstation, Price of a Desktop*



#### **Key Features**



Processor AMD Ryzen PRO

ssp SSD Up to 2TB M

Up to 10TB including up to 2TB M.2 PCIe NVMe SSDs



Graphics NVIDIA RTX A2000

ThinkStation



**изв** 9 USB Ports (5 Front, 4 Back) Memory Up to 128GB DDR4 3200MHz

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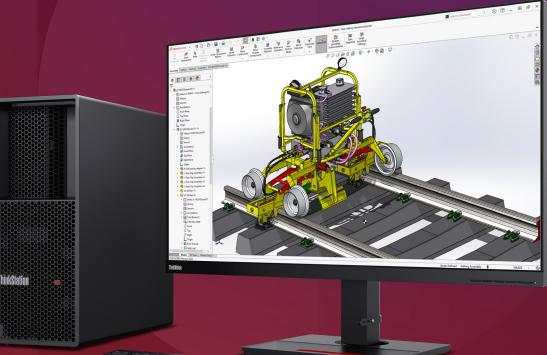
Power Up to 750W Power Supply (92% Efficient)

# **ThinkStation P3 Tower**

Experience the power of a workstation at the price of a desktop with the Lenovo ThinkStation P3 Tower. Built for mission-critical tasks that require superior reliability and powerful performance, the ThinkStation P3 Tower leads on both counts and does it with exceptional, all-around value. Perfectly configured for the work you do, this system features an all-new chassis with Intel vPro with 13<sup>th</sup> Gen Intel Core processors, now up to 24 cores, expanded storage with RAID flexibility, and higher power supply options up to 1100W. This powerhouse in the entry space is ISV-certified and can support up to NVIDIA RTX A5500 professional graphics.

Designed to provide value and performance, the P3 Tower offers up to 128GB of DDR5 memory and PCIe Gen 4 for high-speed bandwidth. The perfect workstation solution for designers, engineers, and students looking for versatility, flexibility, and breakthrough performance, the ThinkStation P3 Tower provides the value you need without compromising on compute power.

### Engineered by Engineers for Engineers



### **Key Features**



Processor Intel vPro with 13<sup>th</sup> Gen Intel Core

Memory 0000 Up to 128GB DDR5 5600MHz\*







**Power Supply** 500W, 750W, or 1100W (92% efficient)

> USB 9 USB ports (5 front, 4 rear)

Engineered for ultimate versatility, the Lenovo ThinkStation P5 is the all-around industry workhorse for professionals that demand scalable, future-proof solutions. Featuring an all-new Aston Martin inspired chassis design, the latest Intel Xeon W processors, and support for up to two NVIDIA RTX A6000 graphics cards, you can rely on the P5 to pack enough punch for any workflow, even in mission-critical environments.

Optimized for designers, engineers, and creatives alike, this workstation can support a broad range of computeintensive tasks with ease. Improve your productivity with high-speed DDR5 memory and ultra-fast PCIe Gen 5 bandwidth. And with convenient front access storage and an array of high-performance configurations available, enjoy the flexibility of customizing your P5 to tackle the workload needs of today, knowing you can easily upgrade for the ever-increasing datasets of tomorrow.

# The Future-proof Industry Workhorse



### **Key Features**



Processor Intel Xeon W processor (up to 24 cores, up to 4.8GHz)



Power Supply 750W or 1000W (up to 92% efficiency)



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Storage Up to 48TB with 6 Total Drives for Ultimate Flexibility

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Memory Up to 512GB DDR5 4800MHz ECC\*

Accessibility Front drive access and tool-less accessibility

The ThinkStation P620 was the first AMD Ryzen<sup>™</sup> Threadripper<sup>™</sup> PRO powered workstation, delivering game-changing power and speed with the largest core count in a professional workstation: up to 64 cores and 4.5GHz. Perfect for those who demand more power for multi-threaded applications, the P620 combines Lenovo's legendary reliability, experience and customer-driven innovation with professional manageability and enterprise-class support.

Purpose built with the speed and configurability you crave, this powerhouse workstation offers PCIe Gen4 for increased storage speed and expandable memory, as well as unmatched NVIDIA graphics support, and 10Gb of built-in ethernet—a new standard in connectivity.

### *Game Changing Power, Reliability and Speed*



### **Key Features**



**Processor** AMD Ryzen Threadripper PRO (up to 64 cores; up to 4.5GHz)

Ethernet Standard 10Gb



Graphics Up to 2 NVIDIA RTX 6000 Ada



Storage

Up to 48TB with Gen4 Support for PCIe Slots and M.2 SSDs



Memory Up to 512GB DDR4 3200MHz ECC

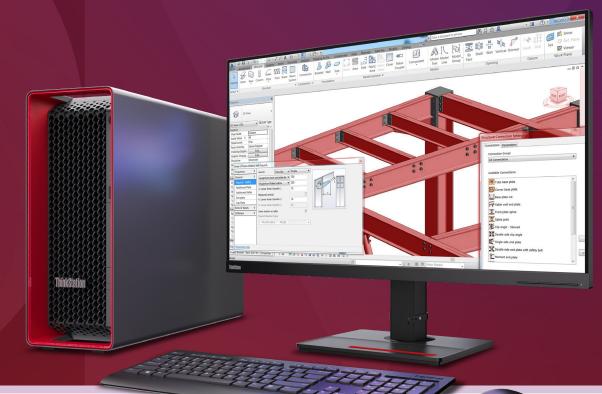
Thermals Air Cooled Thermals

The bold Lenovo ThinkStation P7 is a force to be reckoned with and brings together a breakthrough new compute architecture with an optimized thermal design in a versatile, Aston Martin-inspired chassis.

Featuring the latest Intel Xeon W processors, the P7 delivers up to 56 cores, robust PCIe Gen 5 connectivity, and high-speed DDR5 memory—all in a single-socket platform. Combined with the power of up to three NVIDIA RTX 6000 Ada Generation, the P7 is undaunted by massive datasets and tackles compute-intensive, multithreaded tasks head-on.

Rack-optimized for enterprises that demand flexibility between desktop and data center environments, the ThinkStation P7 breaks new ground by taking on workloads that were traditionally reserved for cloud or server resources—all while maintaining non-disruptive workstation acoustics.

### Staggering, Single-Socket Power



#### **Key Features**



Processor Intel Xeon W processor (up to 56 cores, up to 4.8GHz)



Power Supply 1000W or 1400W (up to 92% efficiency)



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Up to 3 NVIDIA RTX 6000 Ada

J Storage Up to 52TB Internal Storage with up to 7 Total Drives<sup>™</sup>



Memory Up to 1TB DDR5 4800MHz ECC<sup>\*</sup>



Ethernet Standard 1 Gigabit and 10 Gigabit

\* 4800MHz max speed; available depending on configuration \*\* Depending on drive configuration

Co-designed with Aston Martin, masters of aerodynamics, the PX is the epitome of form and function-combining a premium chassis with a fine-tuned thermal design that pushes out maximum performance from its ultra-high-end components.

Featuring the latest 4<sup>th</sup> Gen Intel Xeon Scalable dual processor architecture, up to 120 cores, and support for up to four NVIDIA RTX 6000 Ada Generation GPUs, this workstation goes beyond the limits of desktop performance to power even the most extreme workloads.

Offering flexibility for both desktop and data center environments, the ThinkStation PX is a versatile workstation that bridges the gap where previous solutions fell short. With an iconic, rack-optimized chassis and the processing power of multiple high-end GPUs, the PX was designed from the ground up to run the most complex computing tasks seamlessly.

With the option to include a dual redundant PSU, be confident in system stability when running mission-critical applications. Achieve next-level productivity with up to 2TB of DDR5 memory and ultra-fast bandwidth through PCIe Gen 5 lanes. Enable enterprise-wide digital transformation, with a workstation that facilitates virtual workflows and multi-user collaboration.

### The Pinnacle of Lenovo Technology



#### **Key Features**



Processor Dual 4<sup>th</sup> Gen Intel Xeon Scalable (up to 60 cores per CPU, up to 4.1GHz per CPU)



**Power Supply** 1850W (92% efficient) Optional redundant power supplies<sup>2</sup>



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Storage

Up to 60TB Internal Storage with up to 9 Total Drives<sup>3</sup>

Memory Up to 2TB DDR5 4800MHz ECC<sup>1</sup>

Accessibility Front drive access and tool-less accessibility

1 4800MHz max speed; available depending on configuration 2 Configuration dependent 3 Depending on drive configuration

# **ThinkPad P14s**

The Lenovo ThinkPad P14s, our thinnest and lightest mobile workstation, offers on-the-go performance at a comfortable price point, all in a 14-inch chassis with an optimized 16:10 display. Built with the latest AMD Ryzen PRO processors and integrated AMD Radeon graphics, the P14s is ISV certified, powering applications such as AutoCAD<sup>®</sup>, Revit<sup>®</sup> and SolidWorks<sup>®</sup> without missing a beat.

Perfect for highly mobile power users with an advanced suite of ThinkShield security features and comprehensive MIL-SPEC testing for ultimate durability, the P14s gives entry-level professionals, educators, and students alike the ability to innovate freely wherever life takes you.

Think Pad

#### **Key Features**



Processor AMD Ryzen PRO 7000 Series

Memory Up to 64GB 6400MHz LPDDR5x<sup>\*</sup>



SSD

Graphics Integrated AMD Radeon<sup>™</sup> 700M, 4GB VRAM, based on the RDNA<sup>™</sup> 3 Architecture + AMD PRO Graphics Driver

Lenovo's Best

Value Mobile

Workstation

Storage Up to 2TB PCIe Gen4 NVMe



Display Multiple 14" 16:10 Screen Options Including 2.8K OLED with X-Rite FCC



Thin & Light Starting at 2.97lbs (1.34kg) and 0.7" (17.9mm) Thin

## ThinkPad P14s i

The Lenovo ThinkPad P14s *i*, our thinnest and lightest mobile workstation, offers on-the-go performance at a comfortable price point, all in a 14-inch chassis with an optimized 16:10 display. Built with the latest Intel vPro with 13<sup>th</sup> Gen Intel Core processors and up to NVIDIA RTX A500 professional graphics, the P14s *i* is ISV certified, powering applications such as AutoCAD, Revit and SolidWorks without missing a beat.

Perfect for highly mobile power users with an advanced suite of ThinkShield security features and comprehensive MIL-SPEC testing for ultimate durability, the P14s *i* gives entry-level professionals, educators, and students alike the ability to innovate freely wherever life takes you. *Lenovo's Lightest Mobile Workstation* 

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#### **Key Features**



Processor Intel vPro with 13<sup>th</sup> Gen Intel Core

Memory Up to 6 Up to 4

Up to 64GB 4800MHz LPDDR5x (UMA)\* Up to 48GB 5200MHz DDR5 (SWG)\*



Graphics Up to NVIDIA RTX A500



storage Up to 2TB PCIe Gen4

NVMe SSDs



Display Multiple 14" 16:10 Screen Options Including 2.8K OLED with X-Rite FCC

Ports Dual Thunderbolt™ 4

## **ThinkPad P16s**

The Lenovo ThinkPad P16s provides a perfect mix of performance, sustainability, and power on-the-go at a comfortable price point, packed in a thin and light 16-inch chassis. Featuring the latest AMD Ryzen PRO processors and integrated AMD Radeon graphics, and high-speed LPDDR5x memory, the ISV certified P16s was built to move with its users and keep up with them when running AutoCAD, Revit, SolidWorks, and more.

Designed with enhanced usability including a new 5MB RGB-IR camera, fingerprint reader, full numeric keypad, wider touchpad, and all-day battery capacity, the P16s is the ideal solution for engineers, architects, and students, whether collaborating in the office, on a job site, or when visiting customers. *Workstation Power on the Go* 

**ThinkPad** 

#### **Key Features**



OLED

Processor AMD Ryzen PRO 7000 Series

Display Multiple 16" 16:10 Screen Options Including 4K OLED with X-Rite FCC



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Memory

Graphics Integrated AMD Radeon 700M, 4GB VRAM, based on the RDNA 3 Architecture + AMD PRO Graphics Driver

Up to 64GB 6400MHz LPDDR5x\*

storage Up to 2TB PCIe Gen 4 NVMe



Keyboard Numeric Keypad

\* Memory spec frequency listed; system support frequency may vary by configuration

## ThinkPad P16s *i*

The Lenovo ThinkPad P16s *i* provides a perfect mix of performance, sustainability, and power on-the-go at a comfortable price point, packed in a thin and light 16-inch chassis. Featuring the latest Intel vPro with 13<sup>th</sup> Gen Intel Core processors, up to NVIDIA RTX A500 graphics, and high-speed DDR5 memory, the ISV certified P16s was built to move with its users and keep up with them when running AutoCAD, Revit, SolidWorks, and more.

Designed with enhanced usability including a new 5MB RGB-IR camera, fingerprint reader, full numeric keypad, wider touchpad, and all-day battery capacity, the P16s *i* is the ideal solution for engineers, architects, and students, whether collaborating in the office, on a job site, or when visiting customers. Performance at the Speed of Life

Think Pad

#### **Key Features**



OLED

Processor Intel vPro with 13<sup>th</sup> Gen Intel Core

Display Multiple 16" 16:10 Screen Options Including 4K OLED with X-Rite FCC



Graphics Up to NVIDIA RTX A500



Memory Up to 64GB 4800MHz LPDDR5x (UMA)<sup>\*</sup> Up to 48GB 5200MHz DDR5 (SWG)<sup>\*</sup>



Storage Up to 2TB PCIe Gen4 NVMe SSDs

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Keyboard Numeric Keypad

\* Memory spec frequency listed; system support frequency may vary by configuration

# **ThinkPad P16v**

Built for creators who demand more value, the Lenovo ThinkPad P16v takes everything in stride, closing the gap in price and performance between entry-level and highend workstations. Packing the latest AMD Ryzen PRO processors and up to NVIDIA RTX 2000 Ada Generation graphics in an all-new chassis featuring a 16-inch 16:10 display, this workstation delivers a fast and visually stunning representation of your work. And with Ultra Performance Mode, a user-controlled performance boost that gives you the highest level of power and performance, you can tap into the full potential of your P16v.

The P16v is ISV certified and features advanced cooling with a dual thermal outflow in the rear of the system, ensuring any power user can push out maximum performance for large workloads and multitask with ease. Built with robust ThinkShield Security features, an integrated fingerprint reader, and MIL-SPEC tested for ultimate reliability, this ruggedly secure system is ideal for higher education, software developers, and beyond. 

 Power
 Image: Comparison of the compari

ThinkPad

### **Key Features**



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Processor AMD Ryzen PRO 7000 Series

Memory Up to 64GB DDR5 5600MHz<sup>\*</sup>



Graphics Up to NVIDIA RTX 2000 Ada

Accessible



UHD+

Display Multiple 16" 16:10 Screen Options Including UHD+ Display with HDR400, Dolby Vision, and X-Rite FCC

Advanced Configuration User Controlled Ultra Performance Mode

## ThinkPad P16v i

Built for creators who demand more value, the Lenovo ThinkPad P16v i takes everything in stride, closing the gap in price and performance between entry-level and highend workstations. Packing the latest Intel vPro with 13<sup>th</sup> Gen Intel Core H series processors and up to NVIDIA RTX 2000 Ada Generation graphics in an all-new chassis featuring a 16-inch 16:10 display, this workstation delivers a fast and visually stunning representation of your work. And with Ultra Performance Mode, a user-controlled performance boost that gives you the highest level of power and performance, you can tap into the full potential of your P16v i.

The P16v i is ISV certified and features advanced cooling with a dual thermal outflow in the rear of the system, ensuring any power user can push out maximum performance for large workloads and multitask with ease. Built with robust ThinkShield Security features, an integrated fingerprint reader, and MIL-SPEC tested for ultimate reliability, this ruggedly secure system is ideal for higher education, software developers, and beyond.

Bringing Mainstream to the Masses

#### **Key Features**



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Processor Intel vPro with 13<sup>th</sup> Gen Intel Core H-Series

Memorv Up to 96GB DDR5 5600MHz<sup>\*</sup>



Graphics Up to NVIDIA RTX 2000 Ada



Storage Up to 4TB M.2 PCle Gen4 NVMe Performance SSDs

**ThinkPad** 



Display Multiple 16" 16:10 Screen Options Including UHD+ Display with HDR400, Dolby Vision, and X-Rite FCC

Ports Dual Intel Thunderbolt 4

## **ThinkPad P1**

Powerful, mobile, and visually stunning, the Lenovo ThinkPad P1 is the perfect combination of form and function, designed to be admired. This sleek design hints at what's inside: a powerful system that offers the professional performance of the latest Intel vPro 13<sup>th</sup> Gen Intel Core H series processors and support for up to NVIDIA RTX 5000 Ada Generation graphics. And with a liquid metal thermal design, the P1 provides advanced cooling performance and long-term reliability.

Boasting a 16-inch panel with a 16:10 aspect ratio, narrow bezel, and the option to include an OLED touch screen, the P1 is a content creator's dream. Designed with the modern user in mind, the P1 offers low blue light displays, Dolby Vision and color calibration for crisp, clear images, plus 4G LTE connectivity, creating the perfect combination of power, ultra-premium design, and true mobility. Simply spectacular

#### **Key Features**



Processor Intel vPro with 13<sup>th</sup> Gen Intel Core H-Series

Memory Up to 96GB DDR5 5600MHz



Graphics Up to NVIDIA RTX 5000 Ada or NVIDIA GeForce® RTX 4090

ssp Up to 8TB M.2 PCIe Gen4 NVMe Performance SSDs ThinkPad



Display Multiple 16" 16:10 Screen Options Including UHD+ OLED Touch with HDR400, Dolby Vision, and X-Rite FCC



Audio Top-firing Dolby Atmos® Speaker System

## **ThinkPad P16**

The Lenovo ThinkPad P16 is a power-packed mobile workstation built for the ultimate professional user. Designed for those who demand the highest level of power and performance while on-the-go, the ThinkPad P16 features the latest Intel vPro with 13<sup>th</sup> Gen Intel Core HX series processors and unmatched graphics with support for up to NVIDIA RTX 5000 Ada Generation.

The P16 powerhouse is built to handle the fastest PCIe Gen 4 storage technologies, provides greater memory capacity, full connectivity, and features a 16-inch 16:10 display—all while being certified to run demanding ISV applications without missing a beat.

Allowing users to do more and go farther with no sacrifice, the ThinkPad P16 has the best of everything in a 16-inch standout, modernized design.



#### **Key Features**



Processor Intel vPro with 13<sup>th</sup> Gen Intel Core HX-Series



storage Up to 8TB M.2 PCIe Gen4 NVMe Performance SSDs



Graphics Up to NVIDIA RTX 5000 Ada



Memory Up to 192GB DDR5 5600MHz ECC or non-ECC\* ThinkPad



Display Multiple 16" 16:10 Screen Options Including UHD+ OLED Touch with HDR500 True Black, Dolby Vision, and X-Rite FCC



Camera

FHD Camera with ThinkPad Webcam Privacy Shutter

## Lenovo Desktop Workstations

	ThinkStation P3 Tiny	ThinkStation <b>P3</b> Ultra	ThinkStation P358	ThinkStation P3 Tower
	1 Liter	3.9 Liter	17 Liter	27 Liter
	The World's Smallest Workstation	The Evolution of Small	Power of a Workstation, Price of a Desktop	Engineered by Engineers for Engineers
Processor	Intel vPro with 13 <sup>th</sup> Gen Intel Core i3, i5, i7, i9 > up to 24 cores > up to 5.6GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i3, i5, i7, i9 • up to 24 cores • up to 5.8GHz	AMD Ryzen 3 PRO, Ryzen 5 PRO, Ryzen 7 PRO, Ryzen 9 PRO > Up to 12 cores > Up to 4.7GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i3, i5, i7, i9 • up to 24 cores • up to 5.8GHz
Graphics	Integrated: Intel UHD Discrete: NVIDIA T400, T1000	Integrated: <b>Intel UHD</b> Discrete: NVIDIA T400, T1000 NVIDIA RTX A2000, A5500 mobile Intel Arc Pro A40 <sup>4</sup>	Discrete: <b>NVIDIA RTX A2000</b> NVIDIA T1000	Integrated: <b>Intel UHD</b> Discrete: NVIDIA T400, T1000 NVIDIA RTX A2000, A4000, A4500, A5000, A5500
Memory Support	Up to <b>64GB DDR5 5600MHz</b> <sup>3</sup> > 2 DIMM Slots (SoDIMM) > 4GB / 8GB / 16GB / 32GB	Up to <b>128GB DDR5 5600MHz</b> <sup>3</sup> > 4 DIMM Slots (SoDIMM) > 8GB / 16GB / 32GB non-ECC 16GB / 32GB ECC	Up to <b>128GB DDR4 3200MHz</b> > 4 DIMM Slots (UDIMM) > 8GB / 16GB / 32GB3 non-ECC or ECC	Up to <b>128GB DDR5 5600MHz</b> <sup>3</sup> > 4 DIMM Slots (UDIMM) > 8GB / 16GB / 32GB non-ECC 16GB / 32GB ECC
Max Drives	2 Drives	3 Drives	3 Drives	5 Drives 6 Drives
Max Storage <sup>1</sup>	Max M.2 = 2 (4TB)	Max M.2 = 2 (8TB) Max 2.5" = 1 (1TB)	Max M.2 = 1 (2TB) Max 3.5" = 2 (8TB)	Max M.2 = 1 (2TB) <sup>2</sup> 3 (10TB) <sup>2</sup> Max 2.5" = 4 (4TB) or       3 (3TB) or         Max 3.5" = 4 (24TB)       3 (18TB)
Power Supply	<b>170W</b> (90% Efficient) <b>230W</b> (90% Efficient) <b>300W</b> (90% Efficient)	<b>170W Slim</b> (90% efficient) <b>230W</b> (90% efficient) <b>300W</b> (90% efficient)	<b>300W</b> (90% efficient) <b>500W</b> (92% efficient) <b>750W</b> (92% efficient)	<b>500W</b> (92% efficient) <b>750W</b> (92% efficient) <b>1100W</b> (92% efficient)
Dimensions (WxDxH)	37 x 182.9 x 179mm 1.5 x 7.2 x 7″	87 x 223 x 202mm 3.4 x 8.7 x 7.9"	170 x 315 x 376mm 6.7 x 12.4 x 14.8″	180 x 370 x 415mm 7.1 x 14.6 x 16.3"

1 Any combination of storage to equal Maximum Storage Drives

2 Additional M.2 or Add-in-Card PCIe SSD drives can be installed via rear PCIe adapters 3 Memory spec frequency listed; system support frequency may vary by configuration

Memory spec frequency listed; system support frequency may vary by confil
 Planned shipment 2023

## Lenovo Desktop Workstations

	ThinkStation P5	ThinkStation P620	ThinkStation P7	ThinkStation PX
	33 Liter	33 Liter	39 Liter	54 Liter
	The Future-proof Industry Workhorse	Game Changing Power, and Speed	Staggering, Single-Socket Power	The Pinnacle of Lenovo Technology
Processor	Intel Xeon W-2400 processor > up to 24 cores > up to 4.8GHz	AMD Ryzen Threadripper PRO  > up to 64 cores > up to 4.5GHz	Intel Xeon W-3400 processor > up to 56 cores > up to 4.8GHz	Dual 4 <sup>th</sup> Gen Intel Xeon Scalable processors > up to 120 cores > up to 4.1GHz
Graphics	Discrete: <b>NVIDIA RTX A2000, A4500, A5500,</b> <b>A6000</b> NVIDIA T400, T1000	Discrete: NVIDIA RTX 4000, 5000, 6000, 8000, A2000, A4000, A4500, A5000, A6000, 6000 Ada NVIDIA P1000, T400, T600, T1000	Discrete: <b>NVIDIA RTX A2000, A4500, A5500, A6000, 6000 Ada</b> NVIDIA T400, T1000	Discrete: NVIDIA RTX A2000, A4500, A5500, A6000, 6000 Ada NVIDIA T400, T1000
Memory Support	Up to <b>512GB DDR5, 4800MHz<sup>2</sup> ECC</b> > 8 DIMM Slots (RDIMM) > 16GB / 32GB / 64GB	Up to <b>512GB 3200MHz ECC</b> > 8 DIMM Slots (RDIMM) > 16GB / 32GB / 64GB	Up to <b>1TB DDR5, 4800MHz</b> <sup>2</sup> <b>ECC</b> > 8 DIMM Slots (RDIMM) > 16GB / 32GB / 64GB / 128GB <sup>4</sup>	Up to <b>2TB DDR5 4800MHz<sup>2</sup> ECC</b> > 16 DIMM Slots (RDIMM) > 16GB / 32GB / 64GB / 128G <sup>4</sup>
Max Storage	6 Drives	6 Drives	6 Drives 7 Drives	7 Drives 9 Drives
Max Drives <sup>1</sup>	Max M.2 = 3 (12TB) Max 3.5" = 3 (36TB)	Max M.2 = 2 (8TB) Max 3.5" = 4 (40TB)	Max M.2 = 5 (20TB)       4 (16TB)         Max 3.5" = 1 (12TB)       3 (36TB)	Max M.2 = 3 (12TB)7 (28TB)Max 3.5" = 4 (48TB)2 (24TB)
Power Supply	<b>750W</b> (92% Efficient) <b>1000W</b> (92% Efficient)	<b>1000W</b> (92% Efficient)	<b>1000W</b> (92% Efficient) <b>1400W</b> (92% Efficient)	<b>1850W</b> (92% Efficient) Optional redundant power supplies <sup>3</sup>
Dimensions (WxDxH)	165 x 453 x 440mm 6.5 x 17.8 x 17.3″	165 x 460 x 440mm 6.5 x 18.1 x 17.3"	175 x 508 x 435mm 6.9 x 20 x 17.1″	200 x 575 x 435mm 8.7 x 22.6 x 17.1″

1 Depending on drive configuration

2 4800MHz max speed; available depending on configuration

3 Configuration dependent

4 Available Fall 2023

## Lenovo Mobile Workstations

	ThinkPad P14s	ThinkPad P14s i Lenovo's Lightest Makie Washatation	ThinkPad P16s Workstation Power	ThinkPad P16s i Performance at the
	Mobile Workstation	Mobile Workstation	on the go	Speed of Life
Processor	AMD Ryzen PRO 7000 Series (5 PRO, 7 PRO) • up to 8 cores • up to 5.1GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i5, i7 > up to 14 cores > up to 5.2GHz	AMD Ryzen PRO 7000 Series (5 PRO, 7 PRO) • up to 8 cores • up to 5.1GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i5, i7 > up to 14 cores > up to 5.2GHz
Graphics	Processor Integrated: <b>AMD Radeon 700M</b> based on the RDNA 3 Architecture + AMD PRO Graphics Driver	Processor Integrated: Intel Iris Xe <sup>1</sup> Discrete: NVIDIA RTX A500	Processor Integrated: <b>AMD Radeon 700M</b> based on the RDNA 3 Architecture + AMD PRO Graphics Driver	Processor Integrated: Intel Iris Xe <sup>1</sup> Discrete: NVIDIA RTX A500
Memory Support	Up to <b>64GB LPDDR5x 6400MHz</b> <sup>2</sup> > 2 Soldered Down > 16GB / 32GB / 64GB (SDRAM)	Integrated Graphics: Up to <b>48GB DDR5 5200MHz</b> <sup>2</sup> > 1 Soldered Down / 1 SoDIMM Slot > 8GB / 16GB / 32GB (SDRAM/SoDIMM) Discrete Graphics: Up to <b>64GB LPDDR5x 4800MHz</b> <sup>2</sup> > 2 Soldered Down > 16GB / 32GB / 64GB (SDRAM Only)	Up to <b>64GB LPDDR5x 6400MHz</b> <sup>2</sup> > 2 Soldered Down > 16GB / 32GB / 64GB (SDRAM)	Integrated Graphics: Up to <b>48GB DDR5 5200MHz</b> <sup>2</sup> > 1 Soldered Down / 1 SoDIMM Slot > 16GB (SDRAM), 8GB / 16GB / 32GB (SoDIMM) Discrete Graphics: Up to <b>64GB LPDDR5x 4800MHz</b> <sup>2</sup> > 2 Soldered Down > 16GB / 32GB / 64GB (SDRAM Only)
Max Storage	Up to 2TB NVMe PCIe Gen4 SSD	Up to 2TB PCIe Gen4 NVMe SSD	Up to <b>2TB PCIe Gen4 NVMe SSD</b>	Up to 2TB PCIe Gen4 NVMe SSD
Power Supply	65W AC Adapter Type-C > Rapid Charge	65W or 100W AC Adapter Type-C > Rapid Charge	<b>65W, 100W AC Adaptor Type-C</b> > Rapid Charge	65W, 100W, 135W AC Adapter Type-C > Rapid Charge
Battery	<b>39.3WHr</b> or <b>52.5WHr</b>	<b>39.3WHr</b> or <b>52.5WHr</b>	52.5WHr or 86WHr	52.5WHr or 86WHr
Weight Thinness	Starting at: <b>2.97lbs</b> (1.34kg) <b>0.7</b> " (17.9mm)	Starting at: <b>2.97lbs</b> (1.34kg) <b>0.7</b> ″ (17.9mm)	Starting at: <b>3.76bs</b> (1.7kg) <b>0.81″</b> (20.5mm)	Starting at: <b>3.76lbs</b> (1.7kg) <b>0.81″</b> (20.5mm)
Display	<ul> <li>14" 16:10 Display</li> <li>2.8K OLED (2880 x 1800)</li> <li>&gt; IPS 400nit 1.1t, 100% DCI-P3, X-Rite FCC, AGAR, LBL, Eyesafe*</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>&gt; IPS, Touch, 500nit, Privacy Guard, LCLW, 100% sRGB, AG</li> <li>&gt; IPS, 400nit, 100% sRGB, 100% sRGB, ICC Template color calibration, AG, LBL, Eyesafe</li> <li>&gt; IPS, Touch, 300nit, LCLW, 45% CG, AG</li> <li>&gt; IPS, 300nit, 45% CG, AG</li> </ul>	<ul> <li>14" 16:10 Display</li> <li>2.8K OLED (2880 x 1800)</li> <li>&gt; IPS 400nit, 100% DCI-P3, X-Rite FCC, AGAR, LBL, Eyesafe</li> <li>FHD+ (2240 x 1400)</li> <li>&gt; IPS, 300nit, 100% sRGB, AG, LBL</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>&gt; IPS, Touch, 500nit, Privacy Guard, LCLW, 100% sRGB, AG</li> <li>&gt; IPS, 400nit, 100% sRGB, ICC Template Color Calibration, LBL, AG, Eyesafe</li> <li>&gt; IPS, Touch, 300nit, LCLW, 45% CG, AG</li> <li>&gt; IPS, 300nit, 45% CG, AG</li> </ul>	16" 16:10 Display WQUXGA (UHD+) (3840x2400) > OLED, 400nit, 100% DCI-P3, X-Rite FCC, AGAR, LBL, Eyesafe WUXGA (FHD+) (1920 x 1200) > IPS, 400nit, 100% sRGB, ICC Template Color Calibration, AG, LBL, Eyesafe > IPS, Touch, LCLW, 300nit, 45%CG, AG > IPS, 300nit, 45% CG, AG	<ul> <li>16" 16:10 Display</li> <li>WQUXGA (UHD+) (3840x2400)</li> <li>&gt; OLED, 400nit, 100% DCI-P3, X-Rite FCC, AGAR, LBL, Eyesafe</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>&gt; IPS, 400nit, 100% sRGB, ICC Template Color Calibration, AG, LBL, Eyesafe</li> <li>&gt; IPS, Touch, LCLW, 300nit, 45% CG, AG</li> <li>&gt; IPS, 300nit, 45% CG, AG</li> </ul>

## Lenovo Mobile Workstations

	ThinkPad P16v	ThinkPad P16v i	ThinkPad P1	ThinkPad P16
	Accessible Power	Bringing Mainstream to the Masses	Simply Spectacular	Next Level Power and Performance
Processor	AMD Ryzen PRO 7000 Series (5 PRO, 7 PRO, 9 PRO) > up to 8 cores > up to 5.2GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i5, i7, i9 H-Series > up to 14 cores > up to 5.4GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i7, i9 H-Series > up to 14 cores > up to 5.4GHz	Intel vPro with 13 <sup>th</sup> Gen Intel Core i5, i7, i9 HX-Series > up to 24 cores > up to 5.6GHz
Graphics	Discrete: <b>NVIDIA RTX A500, A1000, 2000 Ada</b> Processor Integrated: <b>AMD Radeon 700M</b> based on the RDNA 3 Architecture + AMD PRO Graphics Driver	Processor Integrated: Intel Iris Xe <sup>1</sup> Discrete: NVIDIA RTX A500, A1000, 2000 Ada	Discrete: NVIDIA RTX A1000, 2000 Ada, 3500 Ada, 4000 Ada, 5000 Ada NVIDIA GeForce RTX 4060, 4080, 4090	Processor Integrated: Intel UHD Discrete: NVIDIA RTX A1000, 2000 Ada, 3500 Ada, 4000 Ada, 5000 Ada Intel Arc Pro A30M
Memory Support	Up to <b>64GB DDR5 5600MHz</b> <sup>2</sup> > 2 SoDIMM Slots > 8GB / 16GB / 32GB	Up to <b>96GB DDR5 5600MHz</b> <sup>2</sup> > 2 SoDIMM Slots > 8GB / 16GB / 32GB / 48GB	Up to <b>96GB DDR5 5600MHz</b> <sup>2</sup> > 2 SoDIMM Slots > 8GB / 16GB / 32GB / 48GB	Up to <b>192GB ECC (128GB non-ECC)</b> <b>DDR5 5600MHz</b> <sup>2</sup> > 4 SoDIMM Slots > 8GB / 16GB / 32GB / 48GB non-ECC > 16GB / 32GB ECC
Max Storage	Up to <b>4TB PCIe Gen4 NVMe</b> Performance SSD	Up to 4TB PCIe Gen4 NVMe Performance SSD	Up to 8TB M.2 PCIe Gen4 NVMe Performance SSD	Up to 8TB M.2 PCIe Gen4 NVMe Performance SSD
Power Supply	135W Slim, 170W Slim › Rapid Charge	<b>135W Slim, 170W Slim</b> › Rapid Charge	170W Slim, 230W Slim	170W Slim, 230W Slim
Battery	90WHr	90WHr	90WHr	94WHr
Weight Thinness	Starting at: <b>4.85lbs</b> (2.20kg) <b>0.97"</b> (24.66mm)	Starting at: <b>4.85lbs</b> (2.20kg) <b>0.97″</b> (24.66mm)	Starting at: <b>3.92lbs</b> (1.78kg) <b>0.68"</b> (17.3mm)	Starting at: <b>6.5lbs</b> (2.95kg) <b>1.2</b> " (30.23mm)
Display	<ul> <li>16" 16:10 Display</li> <li>WQUXGA (UHD+) (3840x2400)</li> <li>&gt; IPS, 800nit, 100% DCI-P3, HDR400, Dolby Vision, X-Rite FCC, AG, LBL, TÜV, Eyesafe</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>&gt; IPS, 300nit, 100% sRGB, AG, LBL, TÜV</li> <li>&gt; IPS Touch, 300nit, 45% NTSC, LCLW, AG</li> <li>&gt; IPS, 300nit, 45% NTSC, AG</li> </ul>	<ul> <li>16" 16:10 Display</li> <li>WQUXGA (UHD+) (3840x2400)</li> <li>&gt; IPS, 800nit, 100% DCI-P3, HDR400, Dolby Vision, X-Rite FCC, AG, LBL, TÜV, Eyesafe</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>&gt; IPS, 300nit, 100% sRGB, AG, LBL, TÜV</li> <li>&gt; IPS Touch, 300nit, 45% NTSC, LCLW, AG</li> <li>&gt; IPS, 300nit, 45% NTSC, AG</li> </ul>	<ul> <li>16" 16:10 Display</li> <li>WQUXGA (UHD+) (3840x2400)</li> <li>OLED Touch, 400nit, 100% DCI-P3, HDR400, Dolby Vision, X-Rite FCC, Anti-Reflective/Anti- Smudge, LBL, TÜV</li> <li>WQXGA (QHD+) (2560 x 1600)</li> <li>IPS, 500nit, 100% sRGB, 165Hz, X-Rite FCC, LCLW, AG, LBL, TÜV</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>IPS, 300nit, 100% sRGB, AG, X-Rite FCC, AG, LBL, TÜV</li> </ul>	<ul> <li>16" 16:10 Display</li> <li>WQUXGA (UHD+) (3840x2400)</li> <li>&gt; OLED Touch, 400nit, 100% DCI-P3, HDR500 True Black, Dolby Vision, X-Rite FCC, Anti-Reflective/ Anti-Smudge, LBL, TÜV, Eyesafe</li> <li>&gt; IPS, 800nit, 100% DCI-P3, HDR400, Dolby Vision, X-Rite FCC, AG, LBL, TÜV, Eyesafe</li> <li>WQXGA (QHD+) (2560 x 1600)</li> <li>&gt; IPS, 500nit, 100% sRGB, 165Hz, X-Rite FCC, AG, LBL, TÜV, Eyesafe</li> <li>WUXGA (FHD+) (1920 x 1200)</li> <li>&gt; IPS, 300nit, 100% sRGB, X-Rite FCC, AG, LBL, TÜV, Eyesafe</li> </ul>

1 Dual RAM channel required 2 Memory spec frequency listed; system support frequency may vary by configuration

TÜV, Eyesafe

# Lenovo Workstations Powered by Intel, AMD, and NVIDIA

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