

# ELEMENTS OF INNOVATION

LENOVO MEETS  
ASTON MARTIN DESIGN



Lenovo



OFFICIAL WORKSTATION  
PARTNER

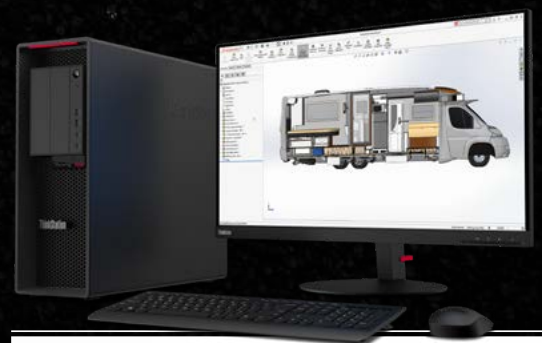
## INSPIRED DESIGN FROM START TO FINISH

**Since joining forces with Lenovo, Aston Martin's design team has been putting powerful Lenovo Workstation technology through its paces.**

"Lenovo and Aston Martin are similar, especially around the design philosophy and the cutting-edge technology driving the product"

We talked with Steve O'Connor (SC), director of IT at Aston Martin, about the agility and efficiency that high-performance, reliable PCs can bring to a complex design workflow.

SC: "Lenovo is present in our workflow right through from the design of the cars to the production."



Lenovo ThinkStation P620  
with ThinkVision P27q Monitor

# INNOVATION IN MIND

Aston Martin's design team begin with new possibilities and ideas for improvement, guided by a focus on outcomes. Graphic designers rely on RAM-intensive Adobe programs such as Photoshop, Illustrator and InDesign to start putting the first pieces in place.



**WE RELY ON THE POWER OF NVIDIA® QUADRO RTX™ GPUs RIGHT OUT OF THE GATE.**



Steve O'Connor, Director of IT at Aston Martin



**Lenovo Workstations run design tasks up to 30% faster than other high-performance PCs<sup>1</sup>**

Using NVIDIA Quadro RTX professional GPUs, Lenovo Workstations can handle lightning-quick computation and detailed graphics without breaking a sweat. Lending speed to this stage of the design process creates more opportunity to try exciting new concepts, fuelling innovation and reducing the time to market.

# RELIABILITY IS ESSENTIAL

**Engineers challenge and refine the style and design of any new build to ensure reliable performance.**

Design and validation tests are performed using computer-aided design and engineering programs that draw a massive amount of processing power. The quality of Aston Martin depends on these visualizations and simulations, which in turn rely on the high performance of Lenovo Workstations and the quality of NVIDIA Quadro RTX graphics.

SC: "The CAD team need powerful GPUs. When you're throwing around hundreds of thousands of surfaces... engine, headlights, wheels and a drive train... there's no substitute for just, you know, brute force."

The impressive processing ability of the Lenovo ThinkStation P920 gives it the extra capacity to run high-demand graphics programs, including VR, using NVIDIA Quadro RTX GPUs.



Lenovo ThinkStation P520 with ThinkVision P24q Monitor

# SOPHISTICATED PROBLEM-SOLVING

**Lenovo Workstations offer the cutting-edge performance capabilities that are needed to meet the demands of modern, resource-intensive software.**

These machines come with Independent Software Vendor (ISV) certification from all major vendors, such as Autodesk®, Siemens® and Altair®.

SC: “Lenovo’s workstation catalogue allows us to configure our machines across the main workloads of our organization including styling and design, CAD and engineering to match each team’s unique needs.”

And because Lenovo Workstations are built with NVIDIA Quadro RTX professional GPUs as a key component, design professionals can push the limits of possibility. RTX brings real-time ray-tracing into a single GPU, accelerating modelling, simulations and rasterizations.

These state-of-the-art graphics cards provide reliable performance with stunningly precise detail, at top speed.



Lenovo ThinkPad P1

## OPTIMIZING PERFORMANCE

**In the same way that Aston Martin rigorously analyzes and improves every aspect of its design,**

Lenovo Performance Tuner fine-tunes each workstation with application-based profiles customized for specific workflows, improving efficiency and enhancing productivity.

“We use a lot of different software from companies such as Adobe and Autodesk, and basically cover every application category that you can think of,” says Steve O’Connor.

“The Lenovo Performance Tuner allows us to easily keep the profiles changing and adapting to the applications that the designers and engineers are running. Not only are we confident that our workstations are the most up-to-date that they’ve ever been, but I can’t remember the last time I’ve had a complaint from engineering or design in the last three or four years since we standardized on Lenovo.”



Lenovo ThinkStation P720

Lenovo  
ThinkPad P15v

# FLEXIBILITY IN DESIGN



**Lenovo mobile workstations give Aston Martin employees the flexibility to collaborate from anywhere they need.**

Having the ability to quickly share ideas and information is critical, because just one design change can create a ripple effect of necessary adjustments. Having the power of NVIDIA Quadro RTX graphics on every Lenovo Workstation machine means design engineers are free to experiment and refine whatever is needed.

SC: "My impression of the ThinkPad was I didn't actually believe that we

could get everything that we were asking for inside something as small and light in comparison to other mobile workstations."

Whether people need to work from a wind tunnel, or run tests at the racetrack, they can rely on TGX Remote Workstation to speed up the design workflow.

Since the global pandemic, Aston Martin's response has been almost an unplanned system test. Steve O'Connor suggests "that flexibility has really helped us through this period as well."

# REALIZING EFFICIENCIES

**Aston Martin cars are built to be unique.**

The number of ways to customize any model of Aston Martin is truly dizzying. To bring each detail into perfect focus requires a sophisticated workstation setup. The power of Lenovo Workstations drives high quality virtual modelling. Customers can walk through, in pixel-perfect detail, the customization of their car before purchase. Meanwhile, engineers can engage with their designs in virtual space and find new opportunities for improvement.



**Lenovo Workstations perform 350% better for 3D graphics and 50% better for CAD<sup>1</sup>**

SC: "NVIDIA Quadro RTX GPUs can just race through renders... models, simulations... whatever you need, it's ready like that."

Making sure the design is right at prototyping stage is the last chance to generate efficiencies before the cars are assembled. The Lenovo ThinkStation P920 uses the latest Intel® Xeon® CPU and up to two NVIDIA Quadro RTX 8000 cards to drive immersive, photorealistic renders that can be examined from every angle. And Lenovo's modular design means that performance can be upgraded as required.



# PERFECTING THE DETAILS

**Aston Martin is passionate about build quality, down to the smallest detail.**

Every component is carefully selected, every design element painstakingly considered. Lenovo Workstations share this aesthetic. They are purpose-built and made for action, with an elegant design.



**THE THINKPAD GIVES ME THE IMPRESSION THAT IT'S BEEN MADE TO BE ENJOYED.**



Steve O'Connor, Director of IT at Aston Martin

Lenovo ThinkPads are made from tough carbon fibre and quality metals. They're MIL-SPEC tested to withstand extreme environmental variables including temperature, pressure, dust, humidity and vibration.

They're also designed for user-comfort with intuitive features and a compact form-factor.

Working together, Lenovo and Aston Martin designers can blend the capabilities of powerful workstation technology with the art of expert craftworkers.



# RIISING TO EVERY CHALLENGE

**Workstations are everywhere throughout Aston Martin's design process.**

Rolling out Lenovo has enabled a considered, coherent IT infrastructure that increases compatibility and interoperability that can scale across the entire company, rather than relying on a patchwork of legacy technology.

SC: "There are so many changes in our industry that are coming, Aston Martin needs a partner like Lenovo to help guide us along with technology to deliver that future."

Lenovo and Aston Martin are committed to the smarter pursuit of perfection. As the scope of practical, functional design is extended by a culture of constant innovation, Lenovo Workstations and Aston Martin are ready to take on the next generation of business.



Lenovo ThinkPad P15v



# GET EVEN MORE DETAIL

**LENOVO AND ASTON MARTIN ARE COMMITTED  
TO THE SMARTER PURSUIT OF PERFECTION**

---

Find out how Lenovo can help your business discover new efficiencies and ensure every result is delivered with outstanding quality.



OFFICIAL WORKSTATION  
PARTNER

<sup>1</sup> Independent benchmark tests. Workstation vs PC: In the Race to Meet Design Deadlines, Which Option Wins? Cadalyst.

©2020, Lenovo Group Limited. All rights reserved.

All offers subject to availability. Lenovo reserves the right to alter product offerings, prices, specifications or availability at any time without notice. Models pictured are for illustration purpose only. Lenovo is not responsible for typographic or photographic errors. Information advertised has no contractual effect. Lenovo, ThinkCentre, ThinkVision, ThinkStation and ThinkPad are trademarks of Lenovo. The NVIDIA logo, Quadro, and RTX are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. All other trademarks are the property of their respective owners.