

# SONUUS®

## HOW MANTIS TRANSFORMED PRECISION WORK INTO A PLEASURE AT SONUUS LIMITED

Sonus Limited is a pioneer UK brand that develops and exploits new technologies within the musical instrument and professional audio industries. Known for innovative products and cutting-edge technology, Sonuus designs and manufactures own brand products from prototype development to in-house testing before outsourcing mass production.

Another facet of their business is third-party manufacturing services. They excel in developing software and hardware that can serve as standalone product or integrated components within wider projects.

Sonus owns intellectual property and boasts an impressive patent library. As such, they also license their technology to third parties, who will often engage them to create prototypes and manufacture physical hardware when exploring new ideas and applications.

Sonus' dedication to high-quality prototypes ensures reliability and performance, crucial for both their branded products and third-party clients. Their purchase of a 3rd Generation optical stereo Mantis microscope has surpassed their expectations in supporting their pursuit of excellence.



*The introduction of Mantis at Sonuus has significantly enhanced the precision, efficiency, and enjoyment of their work on electronic components.*

### **The Challenge**

James Clark, Director and Co-Founder of Sonuus, details several challenges he encountered with the equipment previously used for precision work on electronic components:

- Head-mounted magnifiers require you to work very close to the components, leading to poor posture and exposure to solder fumes.
- Long-reach binocular eyepieces offer a relative improvement in posture, but a limited working area and required constant focus; if you look away, it takes some time for your eyes to readjust. This makes the process less efficient and more tiring.
- A high-quality 200x USB microscope: despite its impressive magnification, it also has drawbacks. The microscope's lack of stereo vision restricts depth of field, and it can be a challenge to arrange lighting without glare from metallic surfaces hindering the intricate work of assembling electronic components.

*“It’s night and day when using Mantis [after the USB microscope]; even at x4, you can see more. It’s impressive!”*

## The Solution with Mantis

Clark had initially explored Mantis over a decade ago but was deterred by its size and cost. However, the latest release of Mantis better suited his workspace and budget. Coincidentally the launch coincided with a project frustrated with issues soldering some tiny pin pitch MCUs. Recognising an opportunity, he decided to purchase Mantis and was able to resolve the issues immediately.

The decision was not without some lengthy discussion with the team at Vision Engineering. Clark acknowledges that having a live demonstration was invaluable, allowing them to run the product through some task-specific conditions, and understand wider application features.

Mantis provided several key advantages over their previous equipment:

- **Improved Posture and Health:** Unlike head-mounted magnifiers, Mantis allows the user to maintain a comfortable posture, reducing strain and exposure to solder fumes.
- **Enhanced Focus and Efficiency:** Mantis offers a larger working area with stereo vision, allowing the user to stay

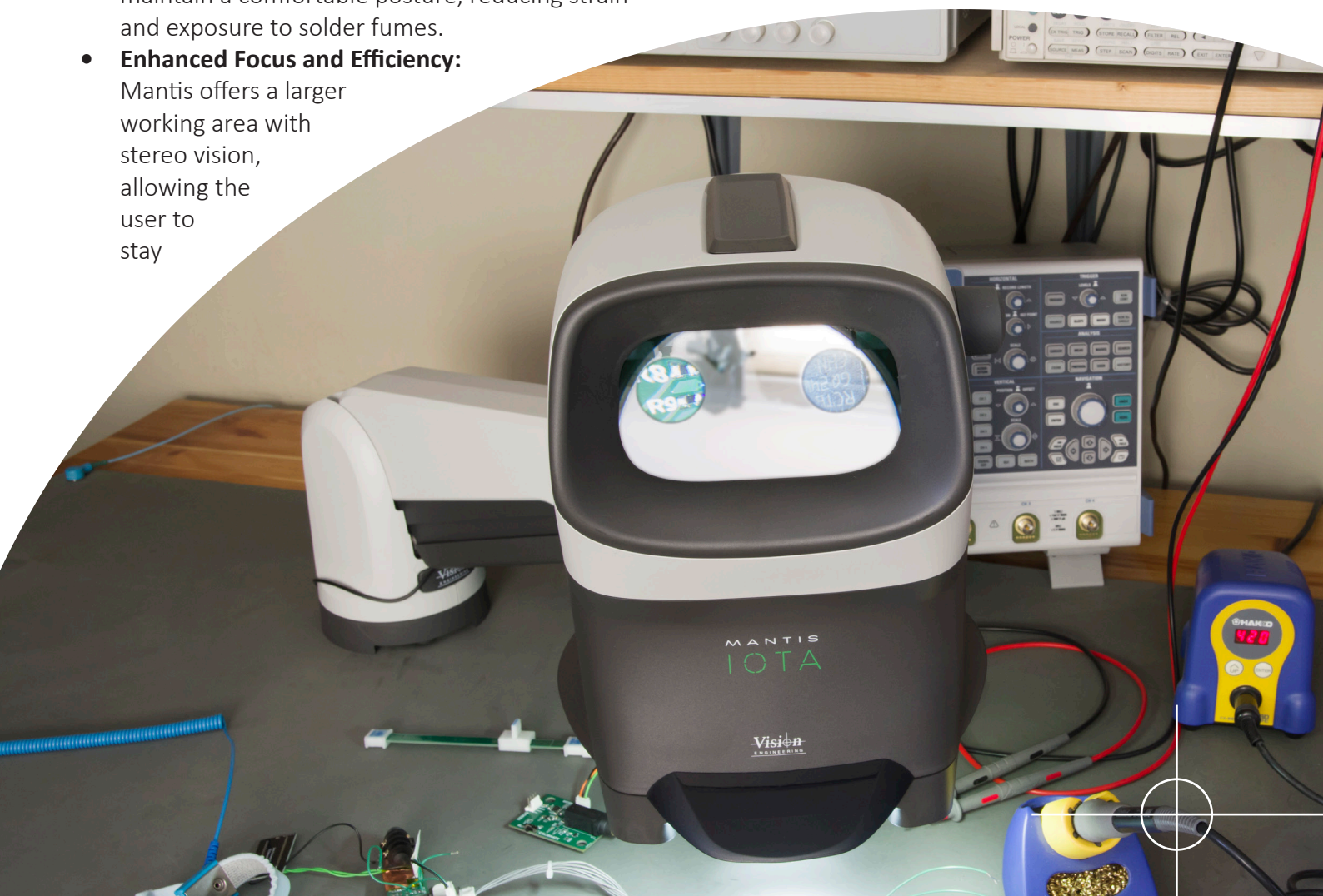
immersed in their work without the constant need to refocus.

- **Superior Lighting:** Mantis’ lighting system eliminated issues of reflections and shadows, providing clear visibility even at lower magnifications.
- **Precision and Detail:** The ability to rotate items and view them from different angles helps the user understand and work on intricate details more quickly and accurately.

*“The fact that you can rotate something in your hands or just move your head around – that extra bit of motion – helps you understand exactly what is happening so much quicker”.*

## Impact and Benefits

Mantis has transformed the way Sonuus works on prototypes and electronic components. They no longer need to use the USB microscope, as Mantis provides all the functionality required with superior performance. The stereo vision, exceptional illumination and ergonomic features have made the process of inspecting and modifying boards much more efficient.





Additionally, Mantis has contributed to better quality control. They can now inspect prototypes with confidence that the products sent to customers around the globe are reliable and free from defects.

The workspace has become more versatile with Mantis. With two bases, they can use it both in the office/research lab and in the larger workshop, accommodating different aspects of work.

Significantly, Mantis has also made the work more enjoyable according to Clark. The ability to work comfortably and efficiently has transformed the task of soldering and assembling prototypes into a more relaxing and pleasurable activity.

*“After a week of work, you might have some time and a prototype to make; it can be quite relaxing to go do that for a change when you have Mantis”*

## Conclusion

The introduction of Mantis at Sonuus Limited has significantly enhanced the precision, efficiency, and enjoyment of their work on electronic components. By addressing the limitations of previous equipment and providing superior functionality, Mantis has proven to be an invaluable tool in the company’s ongoing commitment to high-quality product development and innovation.

The positive impact of Mantis on Sonuus’ operations highlights the importance of investing in advanced tools that align with the specific needs and challenges of high-precision work. The team at Vision Engineering offer the expertise and experience to pick the solution and specification to achieve the best outcomes for your situation.

[www.visioneng.com](http://www.visioneng.com)