




# 32U Integrated Rack & Industrial Servers

## Vision Inspection for Contact Lens Manufacturing



Captec delivered an integrated rack and industrial server solution to support advanced vision inspection within contact lens manufacturing. The platform provides reliable processing, secure data handling and simplified deployment, helping maintain precision, consistency and operational continuity across high-volume production environments.

One of the world's leading eye care specialists, the customer is recognised for producing high-quality contact lenses that combine practicality with comfort. They manufacture both standard and specialist products to meet a wide range of visual needs and continuously invest in research and development to enhance production performance.



# The Challenge

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The customer set out to enhance the efficiency and reliability of their production monitoring equipment to keep pace with increasing manufacturing demands. The customer wanted a solution that could support expanding operational activity while enabling smooth system evolution without interrupting production.

To achieve this, they required a compact, full-height rack-mounted platform with the processing capability and secure data storage needed for advanced monitoring workflows. Consolidating multiple functions into a unified system was a priority, helping streamline supply chain management and create a more controlled, consistent hardware environment across their facility.

They also sought a ready-to-use system that would streamline deployment, provide clear diagnostic visibility and reduce the burden on internal technical teams. By introducing a system designed for ease of management and long-term scalability, the customer aimed to strengthen operational continuity and allow staff to maintain focus on core production performance.



# The Solution

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To meet the customer's performance and reliability objectives, Captec engineered a customised hardware platform that integrated seamlessly into their production environment. From initial consultation through to final build, the system was developed collaboratively, with full-height racks designed to optimise equipment density while maintaining clear access for servicing and maintenance.

Each rack was manufactured to best-practice standards and incorporated advanced thermal, acoustic, and cable management features to support efficient cooling, low noise levels, and long-term operational stability. Power continuity was safeguarded through the inclusion of a smart UPS and internal isolation switch, protecting against disruption from electrical fluctuations.

High-speed processing capability was achieved using embedded servers connected via an 8-port Gigabit network switch, supported by an integrated 17-inch LCD monitor and KVM switch for real-time system diagnostics and streamlined operator control.

To ensure lifecycle stability, Captec aligned component selection with the customer's roadmap, guaranteeing five-year consistency across key hardware elements. RAID-configured storage provided additional data protection, while comprehensive build verification testing and dedicated technical support reinforced reliability and sustained uptime throughout the system's operational lifecycle.



# The Outcome

The customised rack solution delivered measurable improvements in production reliability, efficiency, and system longevity. The integrated design now plays a key role within the customer's manufacturing infrastructure, supporting advanced vision inspection processes and helping maintain consistent product quality across three global divisions.

Consolidating the supply chain through Captec simplified management, reduced cost and risk and provided a single, dependable source for ongoing hardware support. The system's robust construction and standardised design strengthened uptime, improved data protection and ensured stable performance throughout the production environment.

Close collaboration throughout the programme enabled design refinements and site-specific adjustments, ensuring seamless integration with existing systems. Delivered on time and within budget, the project reinforced a strong working relationship and led to repeat orders and wider international deployment. The resulting platform is reliable, scalable and well positioned to support continued operational excellence.

The relationship continues to evolve through proactive technical support, periodic on-site reviews and forward planning for future system upgrades. This ensures the system remains aligned with the customer's evolving production goals and technology roadmap, reinforcing a shared commitment to quality and long-term performance.



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