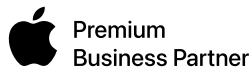




USE CASE

Edge AI on Mac transforms factory risk management

Factory environments are complex and risk laden. Heavy machinery, automated production lines, forklifts and human operators often work closely together. Traditional safety systems such as manual supervision, periodic audits and human-monitored CCTV can struggle to keep pace.

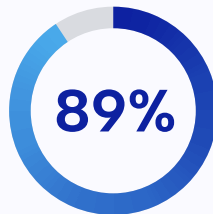


Proactive safety starts with AI

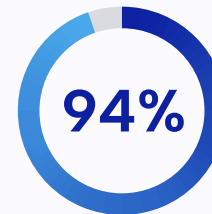
AI improves health and safety by continuously analysing video and sensor data to spot risks the moment they appear, from protective equipment violations to machinery faults. It delivers instant alerts, consistent oversight and safer working environments so organisations can shift from reactive incident response to proactive accident prevention.

Safety critical monitoring demands continuous, fast AI processing. Safety must not be compromised by the interrupted connectivity and high latency that AI running in the public cloud risks. Far edge AI solves the issue by using on-site compute to run inferencing for real time, on site analysis of sensor and video data. Keeping AI processing local also saves costs by avoiding public cloud AI processing fees and data-transfer costs.

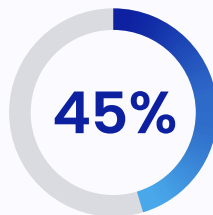
AI-enabled vision monitoring is showing promising results



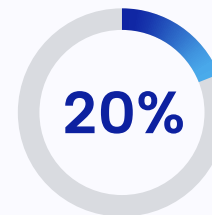
reduction in safety risks related to the absence of hard hats¹



of firms prioritise AI to boost health and safety automation in the next two years²



reduction in safety incidents³



lower insurance premiums³

¹ Artificial Intelligence in Manufacturing Industry Worker Safety: A New Paradigm for Hazard Prevention and Mitigation, MDPI, 2025

² AI for Workplace Safety: Predict, Prevent, and Protect Your Workforce, Cority, 20 February 2026

³ AI Proactive Safety Monitoring, Hire AI Developers



Mac protects the factory floor

Apple devices offer robust security and high performance to meet manufacturers' health and safety needs by running real time AI models for video and sensor analysis directly on site.

Mac mini is well suited for far edge inferencing, offering good local performance from a compact, quiet and cost effective package. For heavier workloads, Mac Studio provides a step up in capability, delivering high throughput and memory for large manufacturing sites. It functions well as a site level AI node that can support multiple users or continuous workloads without relying on cloud processing.

Both devices use powerful Apple silicon with integrated neural engines to analyse several video streams and data from multiple sensors. They can be interfaced with SCADA systems, PLCs and other industrial controllers to trigger immediate action such as stopping equipment, activating alarms or adjusting workflows.

5 ways far edge AI protects employees

- 1 PPE compliance:** Checks for hard hats, gloves and other protective gear at entry points and work zones, triggering immediate alerts.
- 2 Intrusion detection:** Recognises when someone enters a restricted machine area and can automatically stop equipment.
- 3 Ergonomic risk reduction:** Analyses posture and movement to identify unsafe lifting or repetitive strain behaviour to prevent musculoskeletal injuries.
- 4 Collision avoidance:** Analyses data from sensors and cameras to predict dangerous interactions and trigger warnings or automated vehicle braking.
- 5 Environmental hazard monitoring:** Analysis of air quality, temperature, noise, humidity and gas levels enables instant alarms or equipment shutdowns when necessary.

Lifecycle services for manufacturing

Computacenter provides end-to-end consultancy to help organisations assess their requirements and deploy far edge AI on Mac, supported by best in class device management that ensures operational continuity. Our specialists manage the full Mac lifecycle to meet the unique needs of manufacturers, maximising performance and return on investment.

With Computacenter, organisations can scale and operate their Mac estate as efficiently and cost effectively as possible. As an Apple Premium Business Partner and Apple Authorised Service Provider we deliver a complete lifecycle service from selection and implementation to maintenance, repair, replacement and retirement. We ensure Mac devices remain secure, reliable and ready for critical industrial workloads.



Get in touch

To discover how Computacenter can help you detect risks in real time and build a safer, more efficient manufacturing environment, please contact your Computacenter Account Manager call **01707 631000** or email **enquiries@computacenter.com**



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