



# AUTOMATED VISION INSPECTION

## 3U METROLOGY COMPUTERS

“Our product requirements are constantly pushing us to provide higher image processing speed, higher disk and memory bandwidth while maintaining a low cost and small footprint. We have been using a server class platform that was working for us, but Captec recommended a lower cost approach they believed would provide better performance. Captec provided a solution that met our packaging and reliability goals while also achieving 20% improvement in typical processing time. We have since adopted this solution into our premium product and are very satisfied with the lead time and terms provided by Captec.”

Senior Director of Inspection Technology



### THE CUSTOMER

A supplier of innovative, data-driven solutions that increase the yield and profitability of microelectronics and display manufacturing operations. Its solutions for semiconductor manufacturing and advanced packaging processes accelerate development and enable customers to be first to market with premium products at premium prices. Customised industrial computers delivering high performance are integral to enhancing the accuracy, throughput and dependability of the customer's vision inspection solution for semiconductor components.

### THE CHALLENGES

- Design of a highly custom and powerful industrial computer within a compact footprint for integration into the customer's new 2D and 3D inspection solution
- The customer's solution needs to analyse defects down to one micron, so image processing quality is paramount
- Components under inspection must be analysed in real-time, making processing performance and speed crucial to operations
- Memory bandwidth and 24/7 uptime are critical concerns for the customer
- Units must be highly expandable to support camera connectivity for increased throughput and accuracy
- The lifespan of the computer needs to be maximised while optimising reliability

## THE SOLUTION

- ▶ Design of a custom, short depth 3U industrial computer large enough to incorporate all the customer's required technology while compact enough to fit in the overall solution
- ▶ Skylake X Intel technology delivers optimised processing power and performance for real-time component analysis at a cost-efficient price
- ▶ Computer architected to deliver 24/7 uptime and the necessary expansion for the customer to connect peripheral equipment
- ▶ Long-life industrial components including an 80 per cent efficiency PSU enhances the reliability and lifespan of the computer



## THE OUTCOME

- ▶ The customer benefits from 20 per cent more computing power at 20 per cent of the cost when compared to its incumbent platform
- ▶ Loading of software and professional installation of expansion cards saved the customer time and assured peace of mind
- ▶ Free lifetime support further maximises the lifespan of the customer's application.
- ▶ The customer has access to a highly custom computer that can be reordered off-the-shelf with rapid turnaround

**CAPTEC**

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