

FAULT & THEFT DETECTION FIBER OPTIC SENSING EQUIPMENT

“ Captec enable us to focus on our core business of making fiber optic sensors, knowing we can rely on Captec to deliver reliable Industrial Computer units that match our sensing equipment. ”

Technical Manager

Our customer manufactures fibre optic surveillance equipment systems to a number of industries. Covering vast areas, they are able to instantaneously detect and react to subtle changes to an accuracy of one meter. In this way, companies can guard against occurrences such as damage, vandalism, theft, equipment failures or sabotage and respond quickly and efficiently to contravene such incidents.



REQUIREMENTS & ISSUES

- ▶ A high end computer for a range of environments, capable of operating in temperatures of 0 – 40°C and dusty surroundings
- ▶ Improved reliability and thermal optimisation over the customer's in-house solution
- ▶ Designed with top of the range processors and advanced CUDA graphics cards, to provide extremely powerful data processing and analysis
- ▶ Longevity of supply for at least five years
- ▶ Compliance and certification
- ▶ An option to transport large amounts of data easily

THE SOLUTION

- ▶ Cost effective COTS+ solution
- ▶ Specified power supply and motherboard operational at a wide temperature range
- ▶ Optimised and tested airflow through the unit to ensure the CPU and GPU are adequately cooled during operation and avoid failure. This posed a challenge as there was very high data throughput, causing extremely high temperatures
- ▶ Top of the range Xeon processor and Quadro graphics card, with SATA 3 data throughput for extremely fast data throughput and processing
- ▶ Motherboard I/O's utilising the latest USB3, SATA 3 connectivity and eSATA port for fast data transfer
- ▶ Consolidation of supply chain to manage a vast component portfolio, and negate the risk of time or budget over-runs
- ▶ Longevity of supply, obtaining motherboards with a 4 year roadmap
- ▶ A custom chassis tailored for the exact technical requirements of the customer



THE OUTCOME

- ▶ A two part solution, the 3U processing unit and a 1U chassis, for the customer to integrate their own components. These could be configured into a 4U space for ease of rack integration
- ▶ Quicker data speeds deliver instant real-time feedback, allowing faster reaction to issues as they occur
- ▶ Helps mitigate losses through faster processing, alerting operators to situations as they develop
- ▶ Independently and widely recognised UL compliance, allowing for global deployment
- ▶ Over 140 units have been deployed to date
- ▶ Large amounts of data can be moved between locations with secure removable storage drives



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