



Fibre Optic Sensing Computer

Secures Critical Infrastructure

“Captec enable us to focus on our core business of making fibre 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 for a number of energy sector industries, enabling companies to 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°C – 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 of 0°C – 40°C
- ▼ Optimised and tested airflow through the unit to ensure the CPU and GPU are adequately cooled during operation and avoid failure
- ▼ Top of the range Xeon processor and Quadro graphics card, with high speed interface for extremely fast data throughput and processing. Motherboard I/O's utilise an eSATA port, with the latest USB and SATA connectivity for fast data transfer
- ▼ Consolidation of supply chain to manage a substantial component portfolio, and negate the risk of time or budget over-runs
- ▼ Longevity of supply based on motherboards with an extended 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 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
- ▼ Hundreds of units have been deployed to date
- ▼ Large amounts of data can be moved between locations with secure removable storage drives



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EMEA Office

7 Whittle Avenue, Fareham,
Hants, PO15 5SH, UK

- ▼ +44 (0)1489 866 066
- ▼ sales@uk.captec-group.com

North America Office

15 Saltsman Dr. Cambridge, ON.
N3H 4R7, Canada

- ▼ +1 (519) 650 4000
- ▼ sales@ca.captec-group.com