



Blue Chip Data Systems gets a fire safety makeover from SMS and Custom Fire & Security

Award winning IT solutions provider, Blue Chip Data Systems, is currently benefitting from a new SMS fire detection system, which has been expertly designed and installed by Dorset based Custom Fire & Security.

Blue Chip Data Systems offers a diverse range of services and its customers rely on it for 24/7 uptime of their IT systems. This is important as the downtime caused by a network outage in a data centre can have serious financial, business continuity and reputational repercussions. In a typical year, two-thirds of all fires in commercial buildings start in power and climate control equipment, both critical elements of any data centre. In a large facility, which may house several thousand racks, up to 40kW of heat can be generated in each server rack, so a potentially dangerous condition can develop extremely rapidly if there is failure in the heat removal equipment.

After recognising the need for a new fire detection system, Custom Fire & Security was commissioned by Blue Chip Data Systems to provide an upgrade in March 2015. The brief was to deliver a high sensitivity smoke detection system for the company's data centre, which could provide an early warning to enable corrective action to be taken and avoid damage to expensive equipment. In addition, it had to detect smoke ingress and pollutants caused by industrial processes taking place in neighbouring buildings, which had previously infiltrated the facility.

Ralph Hooper, Custom Fire & Security's head of fire safety division, explains, 'For nearly 30 years we have delivered thousands of

installations to a wide variety of customers. For much of that time we have used products from SMS, so I knew they would be able to meet and even exceed Blue Chip's requirements. Providing effective fire protection for a data centre poses some interesting challenges and our solution comprised a fully addressable, analogue addressable SMS SenTRI TWO loop-based system, along with FAAST aspirating smoke detection equipment that was installed in the air handling ductwork and air intake grilles.

"Downtime is not an option for us, so having a state-of-the-art fire detection system in place is vital... we have a solution that meets our unique requirements and gives us the robustness and flexibility we need."

Aspirating smoke detection is the perfect solution for data centres, as it combines resilience, stability, high levels of sensitivity, early event warning and minimal false alarms. The FAAST system consists of an enclosure, housing the electronics that are powered from a supply, and a fan inside it that draws air in via pipes that are connected to the unit. The air that is drawn in then goes into an aspirating chamber after passing through a filter. The air then passes across a dual source blue LED and infrared laser projected into the air itself and, if enough smoke particles are detected, an alarm condition is activated.

FAAST's pipework contains sampling holes at predetermined

locations, through which the air is drawn. This offers far faster detection times than point detectors that are usually sited on ceilings and are often outside the air currents created by data centre cooling systems. With a level of sensitivity 300 times greater than a traditional smoke detector, issues can be quickly dealt with before having to evacuate a data centre and activate a fire suppression system.

Due to the nature of Blue Chip Data Systems' business, the installation had to be carried out while the equipment was fully operational. The entire system was installed with minimal disruption, completed within an agreed timeframe and since completion there have been no reported issues.

Blue Chip Data Systems' purchasing director, James Chapelle, concludes, 'Downtime is not an option for us, so having a state-of-the-art fire detection system in place is vital. I'm delighted that, thanks to Custom Fire & Security's exceptional service and the cutting edge technology offered by SMS and FFAST, we have a solution that meets our unique requirements and gives us the robustness and flexibility we need.'