

Real-time Cleanroom Monitoring

How a Building Management System (BMS) works

A cleanroom facility works with material or manufactures products that would be contaminated if manipulated in normal atmospheric conditions. The cleanroom is therefore closely controlled to provide the ideal environment for this specialized work. Control of temperature, room pressure, airborne particles, relative humidity, air flow and conductivity are of paramount importance. The cleanroom uses a dedicated Building Management System (BMS) to control this environment.

A BMS provides personnel with information on the performance of the cleanroom. This is required in order to meet the legislation requirements of the governing bodies (e.g. the FDA and the MCA in the USA).

The system consists of a server connected to a range of distributed data acquisition modules. The data acquisition modules in turn connect to cleanroom-mounted sensors. Each room within the cleanroom facility would be monitored for each parameter, with alarm limits applied to notify users of any deviation from the pre-set limits.



The Academic Medical Centre (AMC) is one of the largest teaching hospital campuses in the Netherlands. The functional administrator of the whole XiltriX system, Mr. Wijnand Rijsdam, was kind enough to comment on his experiences with the XiltriX.

“The decision was made to replace the existing monitoring and alarm system in the Academic Medical Centre (AMC) Hospital in Amsterdam. The old system used the Building Management System and was, because of the large number of connections and complexity, increasingly difficult to manage.

A search was started to find a system that could measure multiple physical parameters i.e. CO₂, temperature, differential pressure and relative humidity. Due to the more stringent legislation and accreditation needs for the Joint Commission International (JCI) the system had to comply with a large number of requirements.

The XiltriX system by IKS International was selected for the whole of the AMC campus. A large number of connections have now been transferred from the old system onto XiltriX. XiltriX has proven itself to be stable and IKS International has proven a reliable partner in solving malfunctions and other problems to our satisfaction.”

XiltriX monitoring gives the scientist control

Laboratory professionals find the complexity of a BMS overwhelming and oftentimes too technical to access important laboratory data. XiltriX plays an integral role as a bespoke add-on to a BMS where, for example, 100 scientists can control 1,000 sensors themselves within their laboratory environment and not have to rely on the 5 technicians who are controlling the 10,000 sensors of the BMS throughout a whole building.

XiltriX ensures a continuous, close watch on all equipment and environmental conditions. It tracks in real-time a myriad of vital parameters like temperature, pressure, CO₂, O₂, particle counting, and VOCs.

The XiltriX system puts control in the hands of the personnel working in the cleanroom or laboratory. Only will they know the strict parameters required for the material they are working with and the action to be taken in the event of an emergency in order to safeguard their work.

XiltriX is a hardware-based, cleanroom and laboratory security and monitoring system. It becomes the heart of daily Quality Control procedures of the laboratory team. Hand-in-hand with the Building Management System, XiltriX eliminates liability in the cleanroom environment.

About us

IKS International are the architects of XiltriX which is hardware-based, laboratory and cleanroom security and [monitoring system](#). The XiltriX solution delivers real-time monitoring, data logging and [alarm](#) signalling with hardware and software options to handle virtually any situation.

The system can be set for many important parameters as it covers many different options for failure reporting and follow-up protocols including door openings, pressure, temperature, [CO₂, O₂, particle counting](#), VOCs, [cryo-monitoring](#) and much more. The system also offers our partners wired or wireless solutions, or a combination of both, for total flexibility.

XiltriX is the solution for every quality system as it meets the highest worldwide standards such as the FDA, GLP and 21 CFR part 11. We support our partners at every stage in the laboratory monitoring process whether it be specifications, programming, maintenance, calibration and validation of the XiltriX system.

IKS International's US headquarters are located in the San Diego area in California and the European headquarters in the Netherlands. Its pioneering world class integrated monitoring solutions are the result of more than 25 years of research and development.

For more information:

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