Radiological Remote Monitoring & Alarm Management Systems for PET Centres and Hospitals

Area Monitoring & Control Systems for PET Centres

Complete Remote Monitoring Solutions

Automated Alarm Processing

Historical Event Tracking

Omniflex

REMOTE MONITORING SPECIALISTS

Corporate Overview

The Remote Monitoring Specialists

Why use Omniflex?

For establishments such as hospitals, laboratory's and isotope manufacturing facilities that need to continuously monitor radiation levels to meet nuclear and environmental safety, legal regulatory standards and to provide protection to their personnel, Omniflex's Radiation Monitoring System provides real time information both locally within the facility as well as remotely using our web based monitoring solution. Omniflex can provide the necessary radiation sensors as well as integrating conventional sensors into one system.

Unlike manual methods of reporting, Omniflex has assembled a well proven "end-to-end solution" that does not require in-house technical expertise or large capital budgets.

Don't ask us – ask our loyal customer base.

An investment in products that carry such a large responsibility requires confidence in our track record and the reliance of some of the world's leading nuclear industries, such as BNFL, Sellafield Ltd, Dounreay, Magnox, EDF, Magnox, Westinghouse and the MOD on Omniflex technologies, is sufficient testimony.

www.omniflex.com

your link to reliable solutions in radiological surveillance networking and abnormal alarm management

History

Omniflex was founded in 1965, and for over the last 30 years we have designed and delivered products and systems for all the major UK nuclear companies, specialising in alarm annunciators, alarm/event management systems, multiplexers and radiological surveillance and control systems.

As an independent systems integrator, we have developed specialist expertise in providing interfaces to all of the existing and new ranges of Mirion®, Ultra Electronics®, Berthold® and John Caunt Scientific® Alpha, Beta and Gamma radiation sensors.

This expertise is already being used in many PET centres and hospitals, where Omniflex and their associated partners have now formed alliances to provide fully networked systems with bespoke control options to meet regulatory standards enabling the PET facilities to operate efficiently and safely.
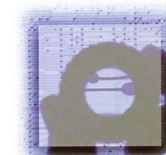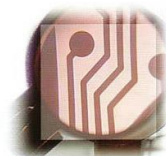
PET Centre Radiological Remote Monitoring Systems

The Omniflex Solution

In order to meet regulatory standards regarding environmental emissions and patient and staff safety, all new PET centres have a requirement for radiation monitoring and control similar to the systems that Omniflex have been successfully supplying to PET centres for the last 15 years, and to other Nuclear sites for over 30 years.

The Omniflex solution is designed to provide a cost effective and extremely flexible means of monitoring and recording any sensor in the building and reporting alarms as they occur.

Omniflex's solutions are modular in design and can interface to any type of measurement signal or intelligent instrument enabling interfaces to any radiation sensor type.

The Omniflex solution is installed discreetly throughout the building or site using a distributed network architecture supports and with our already well proven radiation sensor interfaces ensures that the monitoring of remote radiation sensors is made easy while providing the flexibility for future expansion.

Stack Emissions

Omniflex can interface to any manufacturer's radiation stack emission sensor used for monitoring the nuclide emissions into the environment. This ensures that the necessary daily/weekly/monthly reports on these emissions are available for the environmental agency.

SMS and email alarm notifications can be sent to personnel when permitted nuclide limits are being reached. These reports can be viewed and from any device that supports a web browser so special software is not required.

Radiation Sensors

Supported models:

- Mirion Sensors 3230,3280,AB96,G64 & iCAM
- Ultra Electronics - CMS 2000, CMS Gamma, Smart Cam
- Berthold Technologies - LB Range
- John Caunt Scientific Sensors

Evacuation Logic

Omniflex can also provide the building/site evacuation logic system linked to the remote monitoring system. All alarms and events can then be monitored and recorded on the entire system in a common database.

The evacuation system ensures that under a building radiation alert condition all personnel are safely evacuated.

Multiple Networks
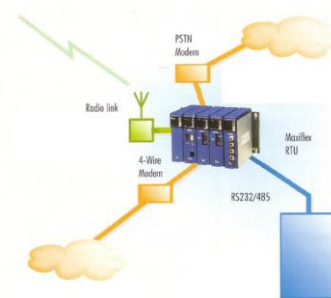
Cloud based solutions

Omniflex now offer secure cloud based solutions to your radiological surveillance needs.

By storing data off site in a secure cloud server, security is enhanced while eliminating initial capital outlay on specialised computer software and hardware.

Enterprises can now monitor multiple sites remotely with surprisingly little effort, expertise or cost.

Alarm & Event Management
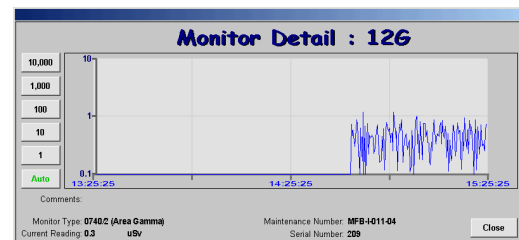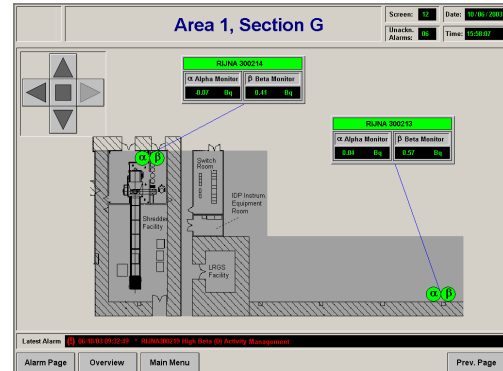
Independent Alarms

In many instances there is a requirement for an independent real-time Alarm management system.

The Omniflex remote monitoring and alarm system is designed to take in the hardwired high and trip alarms from each radiation sensor or other devices that need to be monitored. These alarms can be individually time-stamped ensuring that 1st up alarms can easily be identified. These alarms are then displayed on the supervisory system monitor for real-time and historical analysis and reporting.

These systems are widely used across many Nuclear sites.

Omniflex' range of independent alarm systems such as the **Omni 2 Door warning signs** and **Omni 8/16C** Alarm Annunciator range can also be integrated to provide independent backup for critical alarms, ensuring the appropriate levels of safety in the system can be achieved. These systems have now been successfully individually assessed for use in IEC61508 SIL applications. These are already in use in PET centres providing independent alarm fascias.

The Total Solution

Supervisory Systems

Omniflex engineers have extensive experience in the design and configuration of supervisory monitoring systems and have successfully implemented systems using most of the world's leading brands of SCADA sofrware.

These Supervisory systems are often known as SCADA (**S**upervisory **C**ontrol **A**nd **D**ata **A**cquisition) and are designed to provide a complete building or site-wide overview of every sensor or device. This enables an operator to keep an overview of the entire system, but to quickly zoom through the individual buildings and rooms down to individual sensors, all from the central monitoring/ control point.

Cloud based Monitoring

The future monitoring requirements of many of these sites, buildings and facilities can now benefit from the ability to be able to do this from a web browser on any PC using Omniflex's Datatodesktop service providing the capability to monitor the data from anywhere very cost effectively.
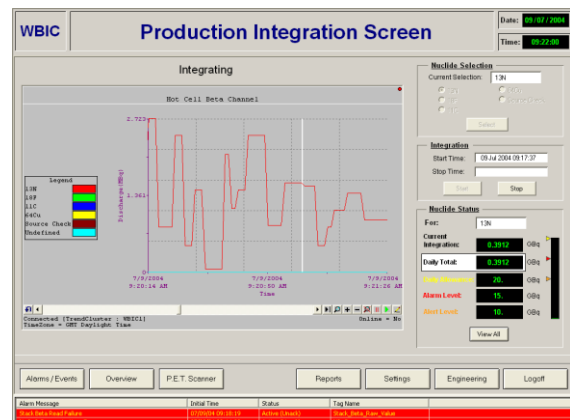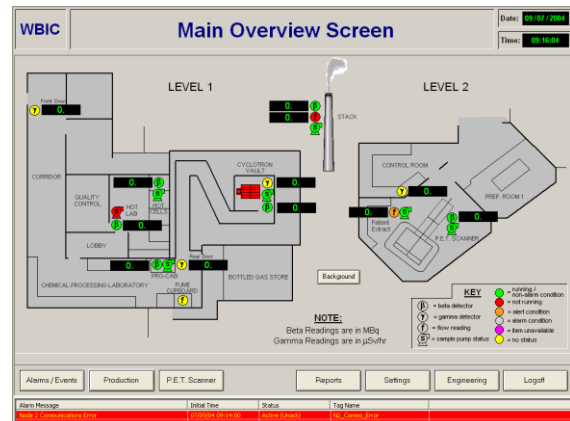
System Integration

Omniflex can provide you the complete solution including PC Servers, workstations, printers, network servers as well as project management, design to ISO9001-2008 and build of all node panels, configuration, testing, commissioning, and ongoing maintenance support.

References

We are proud of the projects in this specialised area that we have successfully completed.

Ask us for a reference list.

Radiological Surveillance & Control System

Ethernet

Ethernet – Modbus TCP / Conet/e

D2D

Conet/c
Gateway

Conet/r
Radio
Network

M3Ge

M3Re

Evacuation Logic

Conet/c / Conet/e (Ethernet) / Modbus

I/O

M2C

I/O

RS485

I/O

RS485

RS422

Alarm & Event Management

Omni4000 / SCADA

Reports

Omni4000 / SCADA

Ethernet – Modbus TCP / Conet/e

D2D

M2Ge

M3Ge

Conet/c Gateway

Maxilarm

I/O

Conet/c / Conet/e (Ethernet) / Modbus

Maxilarm

I/O

Maxilarm

Digital Alarm Signals

Digital Outps

Alarm Dispays

Alarm Annunciators with IEC61508 SIL Certification and Emphasis Approval

The Total Solution

- ❑ Integrate Radiation monitors from different manufacturers

- ❑ Integrate existing monitors into SCADA (Supervisory)and Web based monitoring solutions regardless of age

- ❑ Future proof modular design

- ❑ Take full advantage of the extensive Omniflex capabilities:

  - ➢ Multi Channel Radiation Sensors local or Distributed
  - ➢ Sensors optimised for Positron Emitting Isotopes
  - ➢ Sensors for stack/duct, contamination, hand, foot, clothing, dosimeters etc.
  - ➢ Cyclotron monitoring and control systems
  - ➢ Cyclotron door interlocking and warning signs
  - ➢ Stack control and emission monitoring to meet regulatory standards
  - ➢ Any instrument type interfacing
  - ➢ IEC61131 PLC Control
  - ➢ Real-time alarm/event management
  - ➢ Low cost networking up to 10km on twisted pairs
  - ➢ Networking of any type including cloud-based via the Data2desktop service
  - ➢ Integrated data logging and multiplexing
  - ➢ Supervisory systems for data acquisition, control, reporting, visualisation, alarm handling and logging.

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