



**Solutions, When the Conventional Ones
Run Out of Breath**



MONITORING OF INDUSTRIAL AND R&D PROCESSES

Identify and prevent hazards to your industry operation in real time

PROTECTION AGAINST

- downtimes
- rising costs
- temperature influences
- environmental effects
- material aging and fatigue
- natural disaster hazards

In this increasingly competitive world, companies just cannot take the liberty of industrial and R&D processes stopping or being interrupted due to any problems. Therefore the monitoring of industrial and R&D processes is necessary to ensure the **long term reliability of their operations**. Monitoring enables you to **receive intelligent real time insights** and thus **react preventively in the optimization, repair, and maintenance** of equipment and production lines, **minimizing downtimes and cutting down costs**.

INTENDED FOR

- industrial and R&D companies
- structural engineers
- cities

- ▶ customized sensing cables with FBGs
- ▶ rapid detection and high sensitivity
- ▶ real time information about anomalies, integrity, or process failures and their location



ANALYZING TECHNIQUES



strain to monitor changes



monitoring of linear structures or other layouts



monitoring of deflection caused by temperature



cracking to monitor changes

FEATURES & BENEFITS

Fiber Bragg Grating (FBG) technology

FBG technology brings many advantages over the conventional sensing methods, such as immunity to EMI/RFI, high precision, durability, quasi-distribution, absolute measurement, compact size, reduced cable requirement etc. The expected lifetime of the system is 30 years.

Immune to EMI/RFI

The sensing cable itself enables operation even in harsh environments, as the technology is passive, explosion safe and immune to electromagnetic/radio frequency interference.

Real-time monitoring 24/7

The system monitors any issues that may arise in real time, alerting you immediately about detected events, integrity or process failures, and their location. Furthermore, it enables you to work with collected data right away.

Integration into customer's system

Our monitoring system is fully automated and can be easily integrated into the customer's control system in many different ways (Modbus, Ethernet). Additional communication protocols are available on request.

System safety

Our system for monitoring industrial and R&D processes minimizes the number of false alarms using algorithms that monitor the rate of change and the value of change against the ambient conditions.

Service and maintenance planning

We will help you optimize your service and maintenance planning based on your specific needs to ensure efficient operation.

Customized solutions and adjustments

The system can be modified to meet your project's needs, such as the desired functionality, interoperability, etc.

Early warning of events

The system is equipped with direct alarm relays for immediate notifications via email or using any other communication interfaces in case of very large and unusual events. All alarm alerts can be integrated using one of the 3rd party integration modules in SigProc, relay contacts or Relay box.

Powerful software tools

Monitoring of processes itself is only one part of the solution. SAFIBRA also offers powerful software tools for the acquisition of raw data, consequent real-time data processing, analysis, storage, and visualization.

Use of existing fiber optic network

Installation of an expensive sensor infrastructure or availability of electrical power aren't necessary, and this makes our system the most economical solution for monitoring many sensors spread over a large area.

Web interface

You will be able to manage the system via a user-friendly web interface, which also provides all necessary information about the structure and reporting and data analysis features according to your SLA.

High number of measuring points

Several sensors with different functions can be connected in series on a single fiber without signals being confused. The necessary cable length becomes considerably smaller.

Reporting and data analysis

Our monitoring system provides the necessary reporting and data analysis features. The available level of service is according to SLA.

PRODUCTS USED



FBGuard 1550

Highly accurate monitoring system for industrial measurements



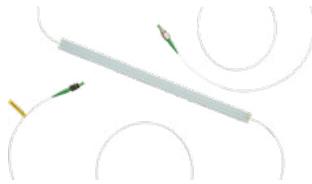
Data processing

Universal solution for your data analysis and processing needs



Grafux

Data visualization, storage and analysis service



Composite sensor

Strain sensor for composite structures



Fiber Bragg Gratings

Field proven FBGs as measurement elements for sensing applications



VideoGuard

Revolutionary camera fully operated over optical fiber



L-Bracket sensor

Strain sensor for constant structure behavior monitoring



Displacement sensor

Displacement sensor for continuous structure behavior monitoring

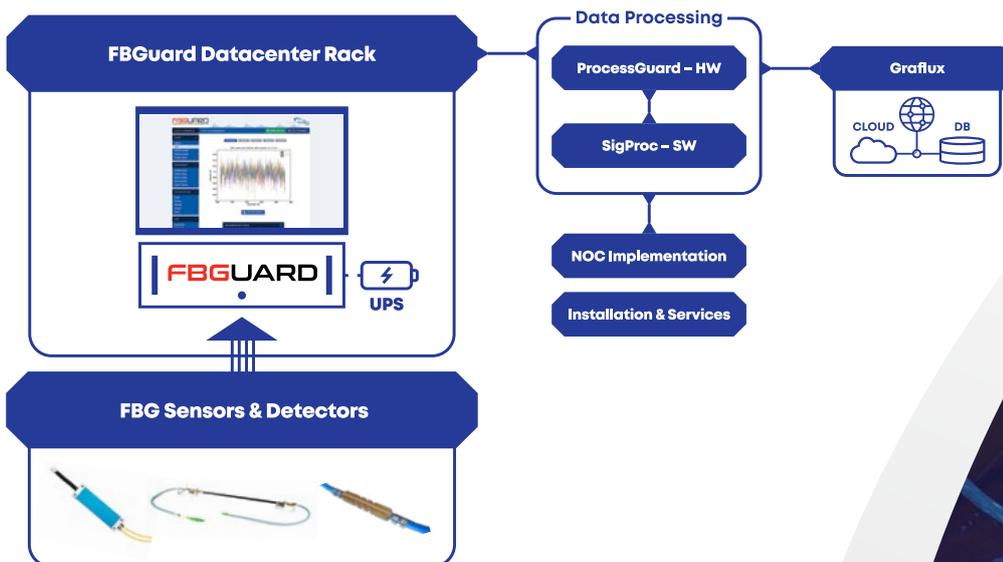


Anchor sensor

Strain sensor for structure behavior monitoring

APPLICATION SCHEME

Example of a typical setup. Choose the project scale that you prefer.



GET IN TOUCH WITH US
and we will recommend the most suitable solution for your project.

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