



CRITICAL INFRASTRUCTURE SECURITY

Protect Your Critical Infrastructure from Damage or Destruction

PROTECTION AGAINST

overloaded operation impacts
construction aging
fatigue
natural disaster hazards
damage/destruction

Critical infrastructure includes all **facilities that are important** to the community and economy, and which are **essential for ensuring public order, supplies, and other vital social functions**. Examples are the vast network of power grids, transport networks (highways, bridges, tunnels, railways), information and communication systems, utilities, and buildings. **Prompt and intensive monitoring** should be implemented as **preventive security** measures to protect **this critical infrastructure from damage or destruction** by natural disasters, terrorism, criminal activity, etc.

INTENDED FOR

infrastructure owners and supervisors
civil engineers
designers and architects
construction companies

- ▶ continuous monitoring of essential facilities
- ▶ early warning of events
- ▶ minimization and control of damages

ANALYZING TECHNIQUES



static loading
with force applied
slowly



dynamic loading
with force applied
rapidly



temperature/
strain to monitor
changes



bending to
measure the
average internal
stress



cracking
to monitor
changes

FEATURES & BENEFITS

Continuous real time monitoring

The system monitors any issues that may arise in real time, alerting you immediately as necessary. Furthermore, it enables you to work with collected data right away.

Early warning of events

Thanks to our critical infrastructure security system you will be able to take appropriate action early and thus minimize potential damages and losses.

Low operating costs

Our system for critical infrastructure security is very durable and, if installed correctly and protected from the environment, operates with minimal maintenance and servicing.

No calibration or determining of new zero

The wavelength reflected by each sensor is modulated by the measured quantity, for example strain. The system measures this reflected wavelength which is an absolute parameter. Hence you can turn off or replace the instrument without having to recalibrate it or reset the zero level.

Measuring over long distances

The distance between the unit and sensors can be several tens of kilometers. Therefore, you can cover a large area with one unit and a multitude of sensors.

Web interface

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

Service and maintenance planning

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

Multifunctional measuring platform

Several sensors with different functionalities can be connected by a single fiber without signals being confused. The cabling is simpler compared to conventional systems.

100% passive system immune to EMI/RFI

Our system operates without the need for power and therefore easily monitors places without electricity and hazardous or inaccessible areas. The technology is fully passive, explosion safe, and immune to electromagnetic/radio frequency interference.

Extremely low false alarm rates

Our monitoring system minimizes the number of false alarms using special algorithms that monitor the rate of change and value of the change against the ambient conditions. Moreover, the system responds to deactivation of monitoring points.

Customized solutions and adjustments

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

Reporting and data analysis

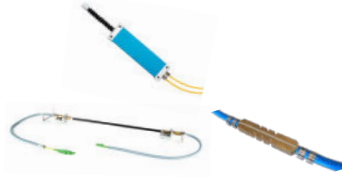
Our system provides all necessary reporting and data analysis features. The available level of service is according to SLA.

PRODUCTS USED



FBGuard 1550

Reliable interrogation and monitoring unit for static and dynamic measurements of different FBG sensors



FBG sensors & detectors

Fiber optic sensors and detectors based on FBG gratings, allowing to monitor different physical parameters



ObjectGuard

Highly accurate vertical movement measured



VideoGuard

Revolutionary camera fully operated over optical fiber



Data processing

Universal real time data analyzing and processing platform, covering the whole range of data processing tasks

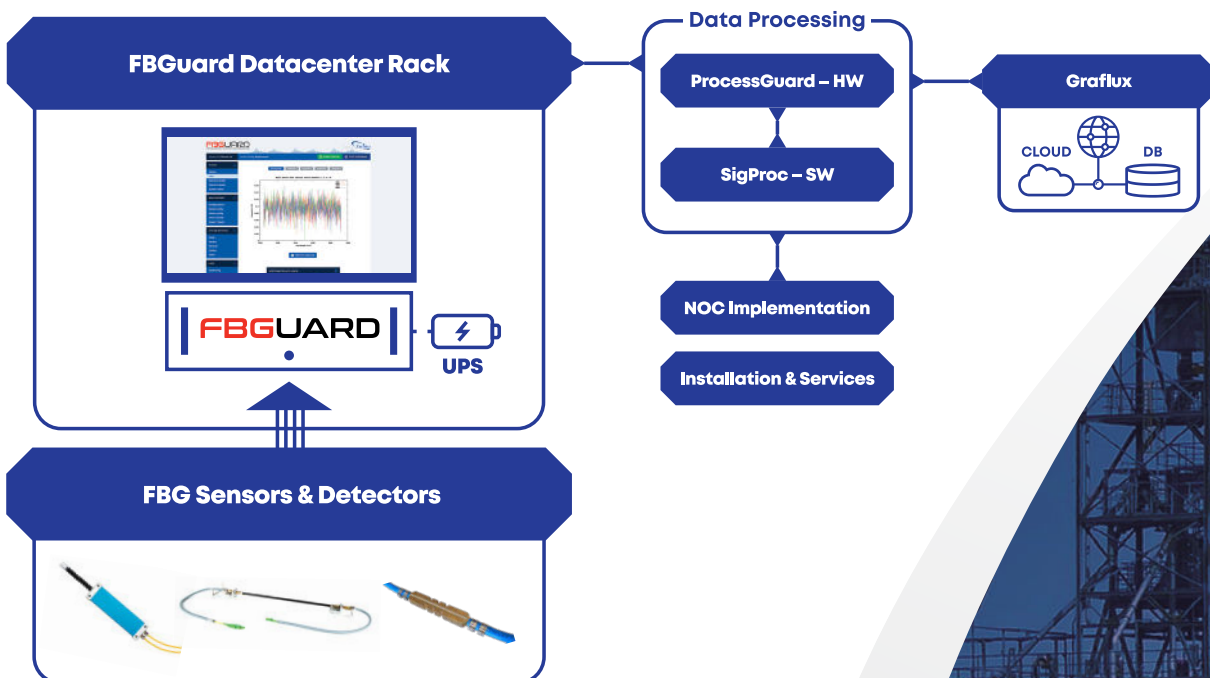


Graflix

Data storage, analyzing and visualization service for easy and user friendly presentation of collected data

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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