

Sentinel 2.0

Data collection is one of the most crucial parts of modern monitoring systems. Experts and structural engineers need a robust and user-friendly software solution for executing their tasks - to focus on the evaluation of the measured object (structure) and not to be bothered with the unnecessary theory and working principles of fiber optics or fiber bragg gratings. We developed our new data acquisition software, **Sentinel 2.0**, keeping all these requirements in mind.



Basic characteristics

- ▲ **Sentinel 2.0** – Enhanced and easy-to-use data acquisition software developed for S-line Scan interrogators, providing tools for management, data storage and analysis of FBG based sensing systems and communication with external control systems.
- ▲ **Sentinel 2.0** – Provides tools for collection, storage, broadcasting, analysis of FBG based sensing data.
- ▲ **Sentinel 2.0** – Is supplied free of charge with each S-line Scan interrogator.

Benefits

- ▲ **API for third-party applications**
 - ▲ Measurements can be accessed from external applications using the API.

- ▲ **Auto-recovery after accidental power outage**
 - ▲ All project settings are reloaded, monitoring runs again automatically

- ▲ **Post-processing - Application of rolling functions on the sensor values**
 - ▲ Floating average
 - ▲ Rolling minimum
 - ▲ Rolling maximum
 - ▲ Rolling standard deviation

- ▲ **Notifications**
 - ▲ Email notifications
 - ▲ Assignment of alert and warning limits

- ▲ **Reliable identification of FBG's by defining their wavelength regions**
 - ▲ Regions can be defined either manually or using the automated tool.
 - ▲ Graphical tools for further tweaking of the wavelength regions
 - ▲ Each wavelength region can have its own threshold value

- ▲ **Refined sensor definition interface**
 - ▲ Referencing of values can be done in click
 - ▲ Advanced filtering of the sensor list
 - ▲ Alert and warning levels can be edited either manually or in graphical mode
 - ▲ Cloning of existing sensors

- ▲ **Improved power budget of the S-line Scan interrogator**
 - ▲ Subtraction of the noise level resulting in 18dB dynamic range

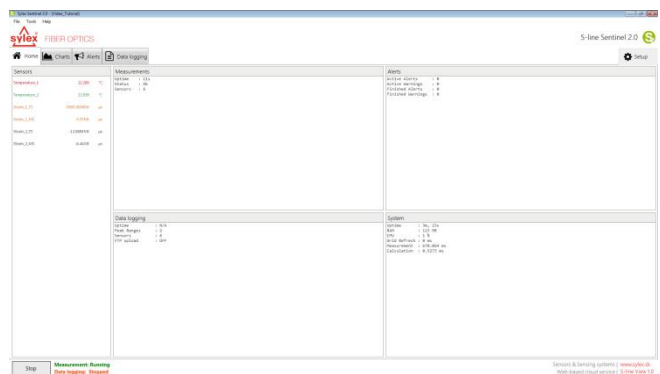
Features

- ▲ Automatic recognition and configuration of the connected interrogator
- ▲ Sophisticated sensor template editor
- ▲ Works in static mode only
- ▲ Datalogging
 - ▲ Wavelength values
 - ▲ Sensor values
 - ▲ Remote datalogging through FTP
 - ▲ Downsampling
- ▲ Export of interrogator and sensor configurations

Functions and tabs description

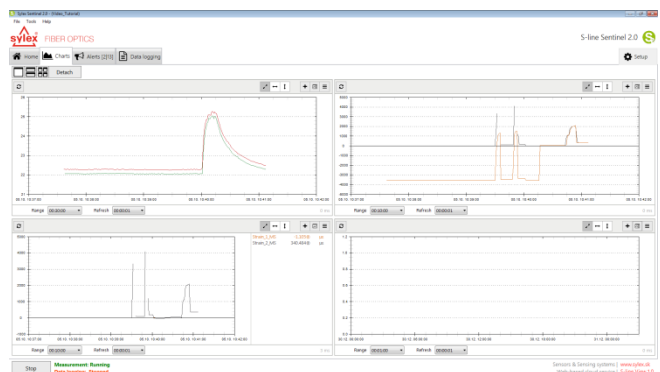
HOME

- ▲ Dashboard view with basic system metrics
- ▲ Overview of all sensors with their current values
- ▲ System uptime
- ▲ Current alert state
- ▲ State of data logging
- ▲ Usage of system resources



CHARTS

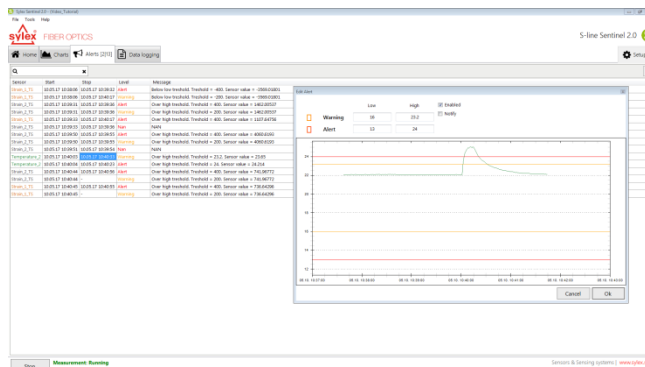
- ▲ Time plot of sensor values
- ▲ One window can contain max. 4 charts
- ▲ The number of sensor curves per chart is limited by the computing power
- ▲ Multiple chart windows can be created by detaching them from the main window



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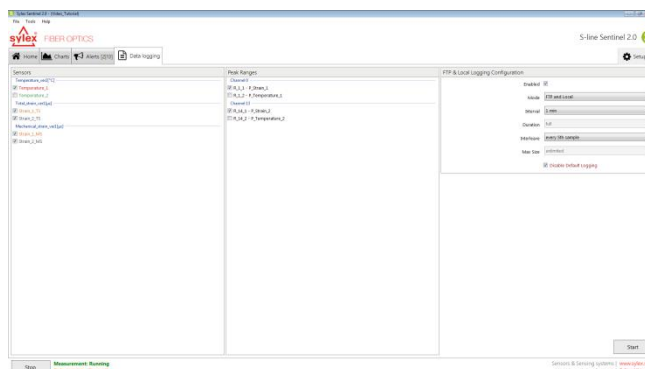
ALERTS

- Complete history of trigger events



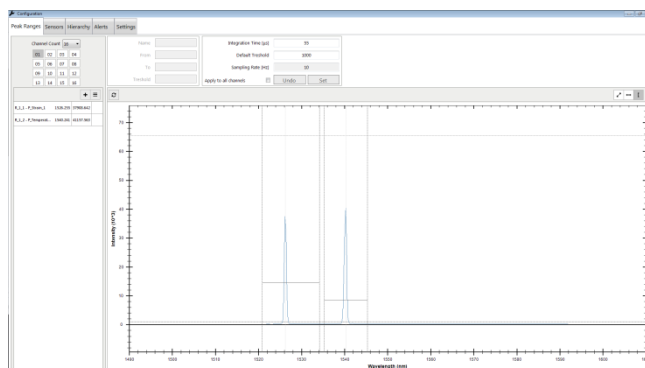
DATA LOGGING

- Select sensors for logging
- Local data storage
- Remote logging through FTP
- Downsampling through data interleave



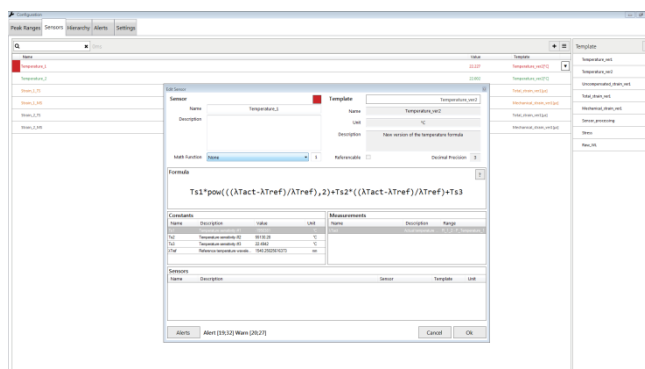
PEAK RANGE CONFIGURATION

- Spectrometer configuration
- Automated peak range creation



SENSOR DEFINITION

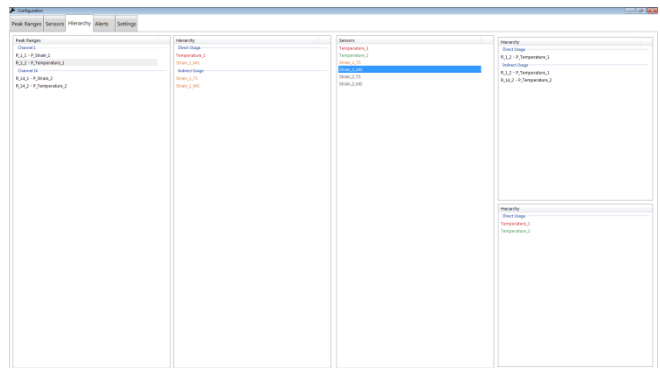
- Creation of sensors
- Enter sensor formulas
- Creation of custom sensor formulas



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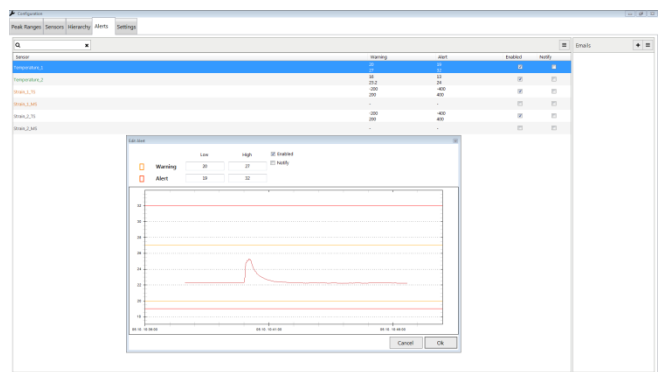
HIERARCHY

- ▲ Shows the relationship between FBGs and sensors
- ▲ Analysis of large-scale sensing schemes



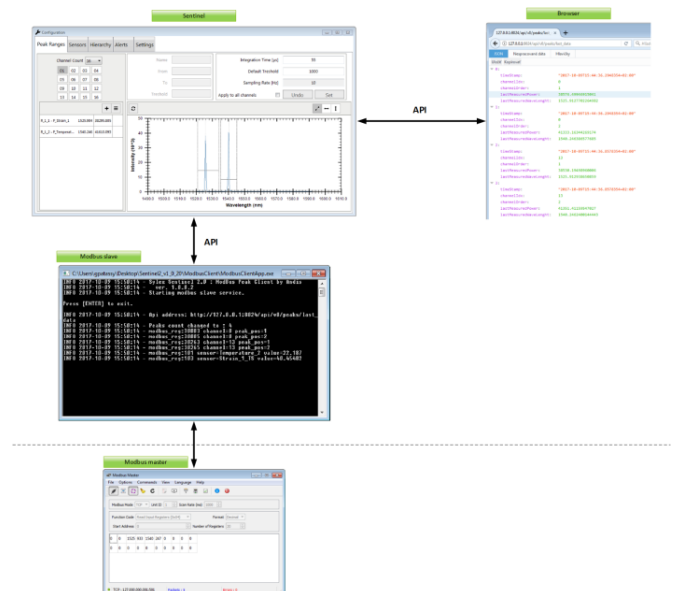
ALERT SETUP

- ▲ Configuration of trigger levels for individual sensors



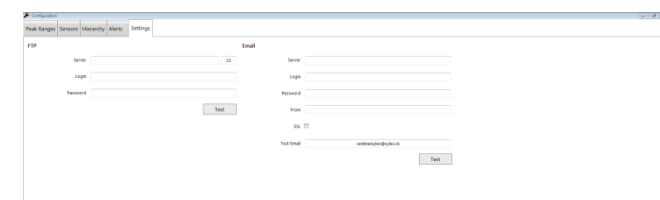
API

- ▲ WEB API for external access from third-party applications.
- ▲ Enables the integration of S-line Scan interrogators into larger control systems like SCADA.
- ▲ Custom modules can be coded on the receiving side to transmit the data to various industrial protocols: ModBus, Profinet, etc.



FTP and EMAIL SETUP

- ▲ Establish FTP connection
- ▲ Setup mail server for notification



For more information contact our sales team at sales@sylex.sk

* Specifications are subject to change without notice