# Sensing Analysis Software | ENLIGHT

## Features

- Simplified data acquisition from interrogation modules
- Optical wavelength conversion to engineering units and measurement quantities
- Wavelength provisioning tools
- Alarm configurations and alert options
- Graphical and schematic data visualization modes

## Functions

- Supports all current Micron Optics interrogators
- Configure sensors & ranges
- Set & manage alarm conditions
- Plot & save sensor data, multiple view formats available
- Save parameters for 100's of applications

## Benefits

- Results in engineering units: easily translate wavelength information to engineering units.
- Automatic temperature compensation: build transducers that include multiple FBG sensor wavelengths for temperature compensation or special measurements.
- One tool, many applications: manage data from many sensor sites. Store configurations and settings.
- Intuitive data display: use charts, alarm limits, images and three distinct visual indicators to clearly communicate measurement status and condition of structure

## Computer Requirements

- Windows OS, minimum 1GHz Pentium v, 1GB RAM, 30GB disk storage.

## Description

ENLIGHT Sensing Analysis Software is a powerful utility that is included with or embedded into Micron Optics sensing instruments. It provides a single suite of tools for data acquisition, computation, and analysis of optical sensor networks. ENLIGHT combines the useful features of traditional sensor software with the specific needs of the optical sensor system, making it easy to optimize optical properties during the design and implementation phases of an optical sensor system. Intuitive data display, data saving, and additional graphing and data visualization features make ENLIGHT easy to use.

ENLIGHT's Remote Command Interface function supports applications where specialized user interfaces or advanced data analysis tools are needed. A user can create a custom interface using their preferred development environment (e.g. LabVIEW, VisualBasic, C++) to enable streaming of calibrated sensor information from ENLIGHT. Meanwhile, ENLIGHT runs in the background serving as an instrument control and signal-conditioning utility. Once the sensor data is in the custom GUI, the data can be displayed, analyzed, used to control processes, archived and more.
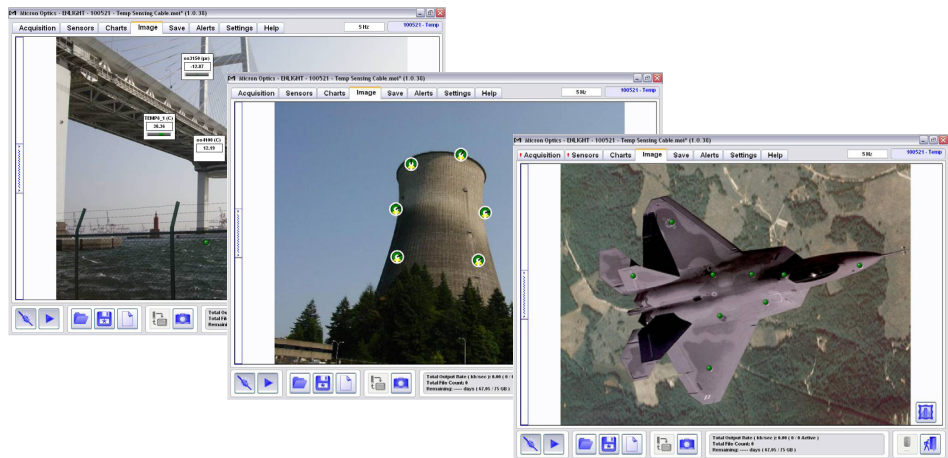


The ENLIGHT Sensing Analysis Software tool is included with the sm125 and sm130 Optical Sensing Interrogators. It is also available pre-loaded on the Micron Optics sp125 or sp130 sensor processing units which interface directly with sm125 or sm130 Optical Sensing Interrogators. ENLIGHT is a standard feature on other Micron Optics interrogators such as the si225, si230, si725 and si730.

Products displaying the "Micron Optics Tuned" logo include Micron Optics tunable technologies insuring high quality and performance.

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## Acquisition Tab

- Manage data connections

- Optimize and engage spectral peak detection

- View FBG spectral or peak data

- Configure module specific settings

- Enable channel multiplexing

- Display and save FFT information
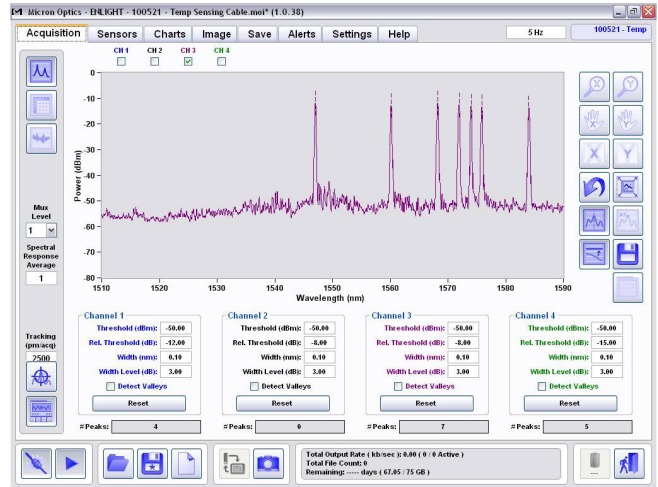
## Sensors Tab

- Define wavelength ranges for FBG peaks

- Perform averaging, referencing, and other data processing functions on FBGs

- Define sensors quantities (strain, temperature, displacement, pressure, or custom) based upon one or more FBG inputs

- Create calculated macro-sensor elements (e.g. combine two or more FBGs in one sensor value)

- Define sensor ranges, set warning and alarm limits

- Easily add Micron Optics sensors using pre-configured sensor templates with auto-insertion of standard constants
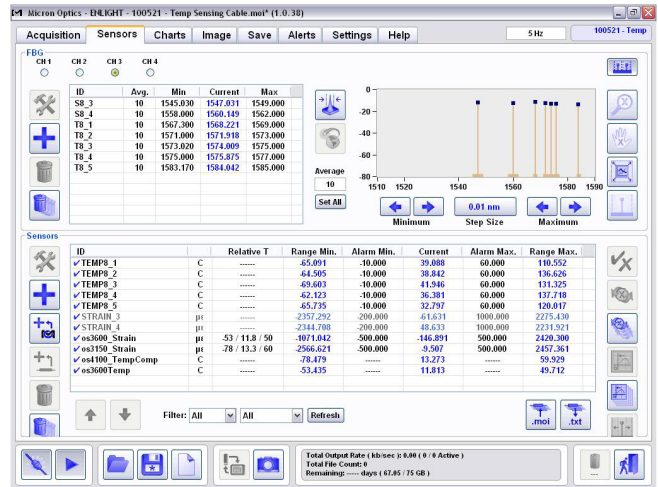
## Charts Tab

- Combine like sensors together on the same chart

- Display up to four charts simultaneously, each with multiple sensor display capability

- Show/hide alarm limits where needed

- View historical data

- Synchronize multiple charts

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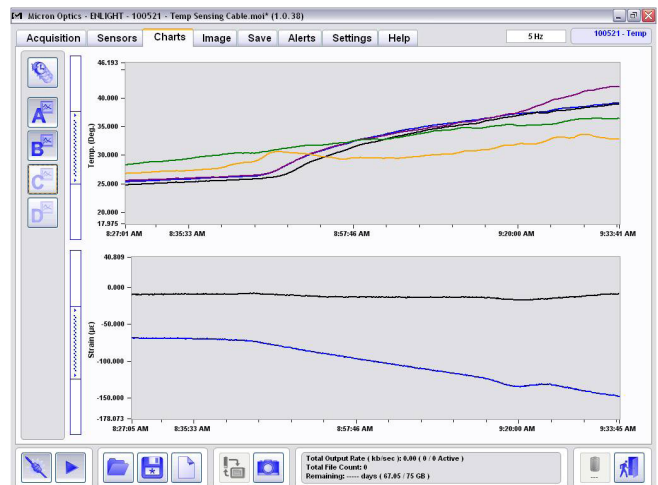
## Image Tab

- Import custom image for each application
- Choose from three types of transducer status indicators
- Position indicators directly on any image
- Receive fast visual updates on transducer status



## Save Tab

- Save data for sensors, peak wavelengths, spectral responses or events
- Save data by stop/start time, scheduled, repeated or triggered events
- Select triggered acquisitions and include pre-trigger data
- Manage files by time, date or file size
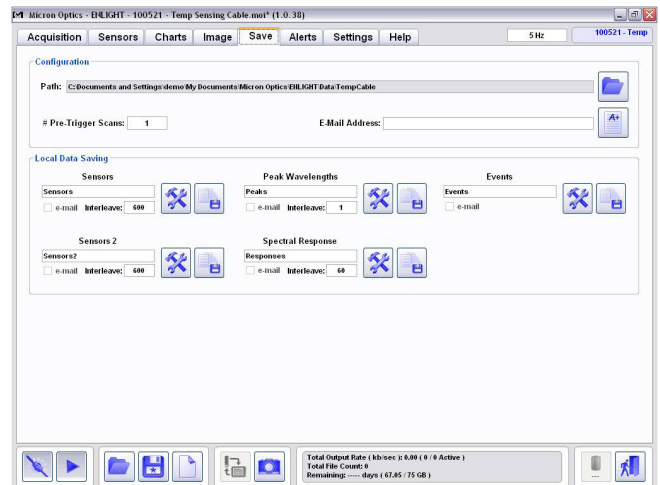


## Alerts Tab

- Selectively view information, warnings and alarms associated with sensor, software and instrument events
- Set notification instructions by type and condition for multiple e-mail addresses
- Trigger relays to physical devices (using sp) for audible alarms, warning lights and lights

## Settings Tab

- View and set instrument IP address and communication preferences

- Define e-mail notification settings

- Download on-board module diagnostic files

- Manage firmware upgrades

- Enable remote command interface to external applications, displays, analysis tools and control systems.

- Maximize display to full screen



## Help Tab and Global Controls

- Access the complete ENLIGHT manual for full description of all software functions, hardware and instrument capabilities

- Global controls on any tab allow:
  - connect/disconnect from instrument
  - stop/start acquisitions
  - open/save configurations
  - download configurations from memory stick
  - capture screen shots and save



## Remote Command Interface

- Create custom GUI's to display data, control processes and trip alarms

- Call or stream sensor data

- Run ENLIGHT in background



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