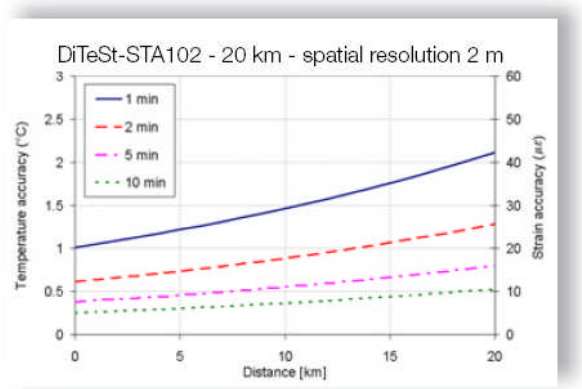
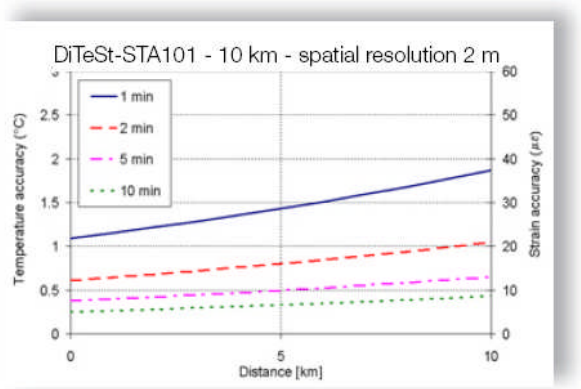
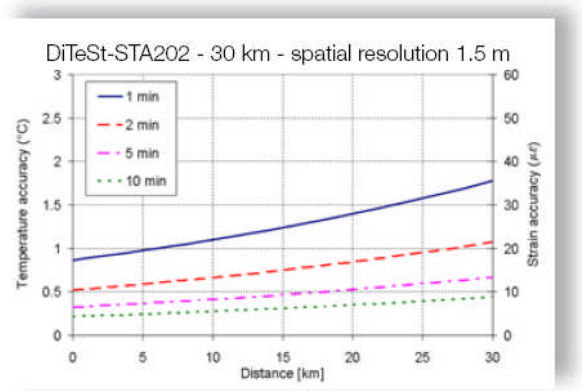
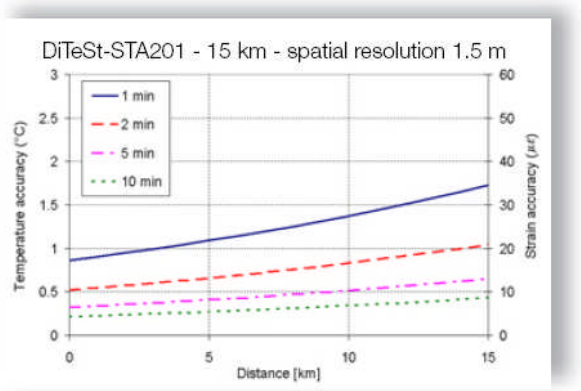
Performances

The instrument configuration flexibility allows the user to take advantage of the best performance of the instrument in every application. The hereunder figure shows typical achievable performances in terms of temperature and strain accuracy obtained with the highest spatial resolution available with the instrument models. The figures are given for acquisition times of 1minute, 2minutes, 5minutes and 10 minutes. Higher accuracy can be obtained by using a trade-off between the spatial resolution and measurement time in the sense that higher resolution can be obtained in a shorter acquisition time by compromising on the spatial resolution.









Graphical User Interface (GUI)

The built-in computer incorporates a user-friendly Graphical User Interface and a 12” screen display, which makes the menus extremely easy to be accessed. The instrument can be configured for long term automatic unattended measurements. Sensing cables can be divided in multiple sections in relation with the installation topology; each section being configured with different measurement settings and alarm levels for full monitoring flexibility. Examples are simultaneous strain and temperature measurements with different fiber sensors and connected to the same instruments. Compensation of thermal effects on strain measurements can be done automatically offering the highest accuracy in environment subject to variations of temperature and deformations. The measurements are recorded automatically with the help of a scheduler, stored in a database and can be retrieved at any time for further analysis. The database is easily accessible from remote computers via TCP/IP through the use of a profile viewer software that comes with the instrument. Measurement data can be export to various format types including text files, Excel files or bitmap image of graphical plot.

optical sensing

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GUI Features & benefits

Flexible and elaborated measurement setting configuration including :

- Spatial resolution, acquisition time, number of distance points,
- Powerful calibration tools for accurate strain and/or temperature measurements
- Sensing cable segmentation in user defined sections with different characteristics
- User defined alarm setting
- Automatic measurement with scheduler
- Unlimited number of stored measurement configurations

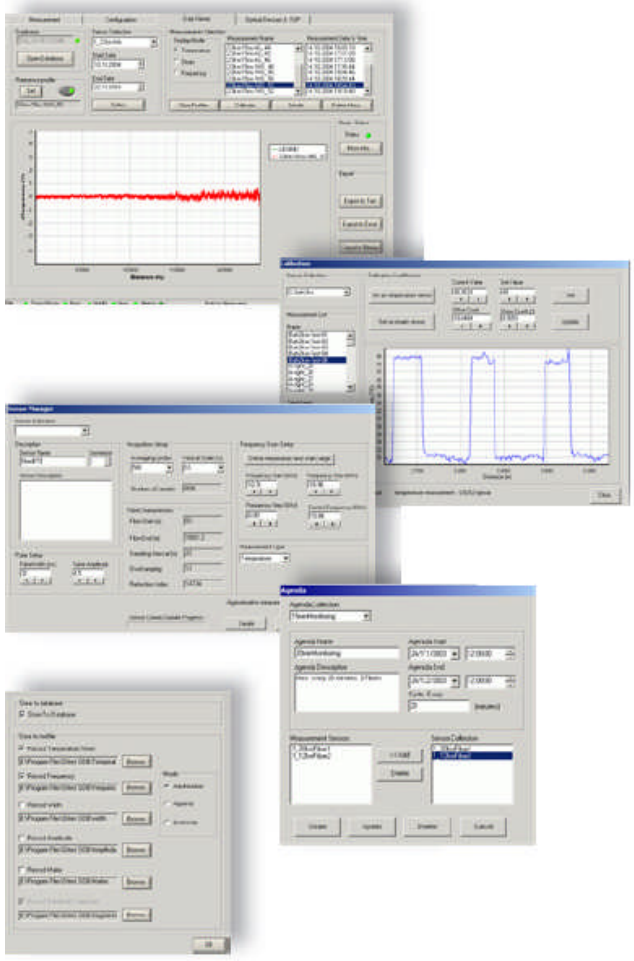
Data storage and analysis:

- Automatic analysis of recoded profiles with status information on measurement quality
- Multiple traces comparison with respect to selectable baseline, graphical zoom
- Automatic compensation of thermal effects on strain measurements
- Built-in database for data storage and retrieval
- Advanced data analysis including Brillouin gain and width profiles
- Various export options including text files, Excel files, or bitmap graphical plot

System & fiber Integration

Every project has its own specific requirements and the best system performance is guaranteed by a careful selection of the sensing fiber and its proper integration.

Omnisens, through its network of specialized system integrators, provides customer support and assistance in the definition of the appropriate fiber in order to get the best performances as well as in the selection of all required accessories (connectors, connection boxes, termination boxes, data acquisition and analysis software).



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