



Remote Sensing

- High Performance FT-IR Systems



Bruker remote sensing systems allow analysis of gases, liquids, and solids. In addition, HI 90 and SIGIS 2 are imaging spectrometers, adding mapping capabilities. All systems utilize ruggedized Bruker FT-IR interferometers assuring unsurpassed reliability and accuracy. All systems are available in mobile configurations for field applications.

Applications

- Identification and Quantification of Pollutants and Hazardous Material
- High-Precision Quantification of Trace Gases
- Cloud Imaging
- Air Quality Monitoring
- Fenceline Monitoring
- Emission Measurement
- Leak Detection
- Volcanic Gas Analysis

Industries

- Security and Defense
 - Identification and Mapping of Airborne TICs and CWAs
 - Identification and Mapping of Liquids
- Chemical Industry
 - Safety
 - Facility Surveillance
- Municipal Air Quality
- Atmospheric and Environmental Research

Features

- Qualitative and Quantitative Analysis
- Long Range Detection(> 10 km)
- Hyperspectral Imaging Using SIGIS 2 and HI 90
- Spectral Libraries of VOCs, TICs and CWAs
- Passive and Active Configurations
- Integrated Automatic Calibration Systems
- Operable with Remote Power Sources

Software and Libraries

OPUS RS software permits operation of Bruker remote sensing systems with minimal training. Using an intuitive graphical user interface, data is easily collected and automatically analyzed. Spectral libraries containing a wide range of compounds including toxic industrial chemicals (TICs) and volatile organic compounds (VOCs) are available.



● Remote Sensing Solutions



HI 90 Hyperspectral Imaging System

Atmospheric and environmental research, volcanology, industrial surveillance and homeland security outline the wide range of applications of the HI 90 Hyperspectral Imaging System.

The HI 90 is ideally suited for real-time identification, quantification, and visualization of gas clouds with high spatial resolution. Algorithms based on the combination of image processing and spectral analysis are implemented in the operating software. The system may also be used in a range of imaging applications for solids and liquids.



SIGIS 2 Scanning Imaging Remote Sensing System

SIGIS 2 is a scanning imaging remote sensing system that allows rapid identification, quantification and visualization of gas clouds from long distances. The system maps a predefined area and results of the analysis are visualized by a video image, overlaid by a chemical image.

The SIGIS 2 is part of the equipment of emergency response forces around the world. In addition, SIGIS systems are applied in environmental applications, atmospheric research, volcanology, and industrial facility surveillance.



EM 27 Remote Sensing FT-IR

The EM 27 is a ruggedized remote sensing system providing high performance spectroscopy in the field. The EM 27 can easily be deployed in the field for various air monitoring applications. Emissions from smoke stacks, waste disposal and hazardous emissions from chemical accidents can be observed with an operating range of typically several kilometers.

The EM 27 SUN features a solar tracker for measurements of atmospheric gases by solar absorption spectroscopy. The tracker is controlled using an innovative camera-based feedback system (Camtracker). The outstanding tracking accuracy is the basis for high-precision quantification.



OPS Open Path Air Monitoring System

The open path air monitoring system allows identification and quantification of airborne pollutants and atmospheric gases. Infrared radiation is modulated by an interferometer and transmitted to an array of retroreflectors positioned at a distance of typically several hundred meters. The reflected radiation is analysed for the target compounds. Due to the large spectral range, a wide range of compounds can be quantified simultaneously. Typical applications include air monitoring at industrial, construction or municipal sites and high-precision quantification of atmospheric gases.

• Service and Support

Application Support

Bruker is staffed mainly by scientists and engineers with in-depth knowledge of the science and instrumentation used in the field. Our product specialists are ready to offer advice concerning the use of sampling attachments, choices of optical components, and software procedures. Furthermore, we at Bruker specialize in close cooperation with our customers in the development of spectroscopic techniques.

Training

Customer training courses are held on a regular basis for the benefit of the instrument users. Customized on-site training is also available from our staff of application specialists.

Service

Bruker spectrometers are intended to provide years of trouble-free operation. Should a problem occur, a network of Bruker companies and representatives around the world is ready to respond to your needs. Professional installations and a high standard of post-delivery service are commitments Bruker makes to each of its customers.

Technologies used are protected by one or more of the following patents:
US 5923422; DE 19704598

Bruker Optics
is ISO 9001 certified.

Laser class 1

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