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Ingenieurbüro für Angewandte Spektrometrie
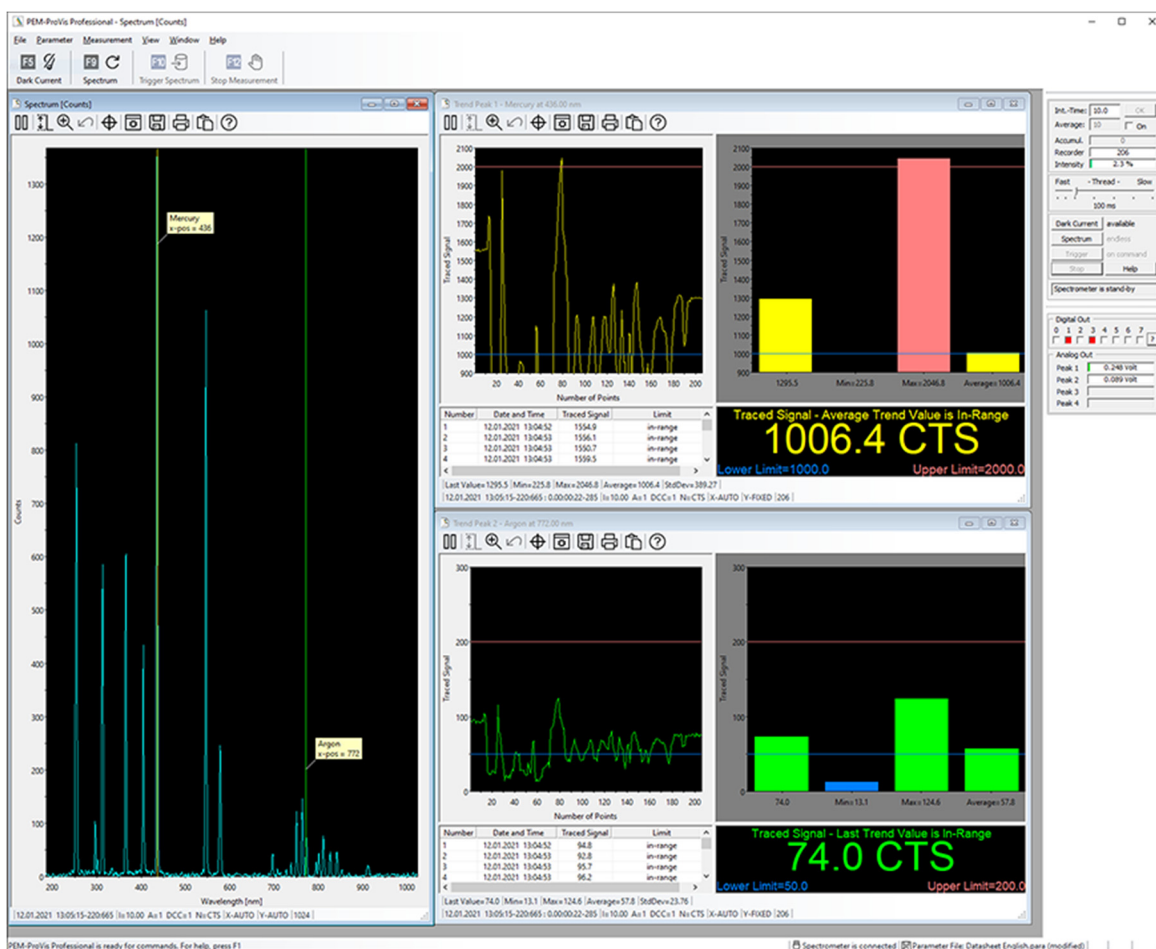
TranSpec

PEM-ProVis Professional

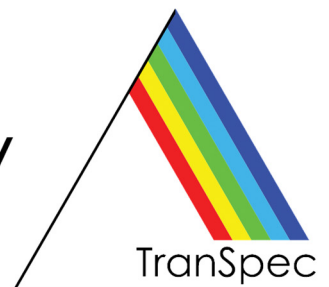## Software for Plasma Emission Measurement

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PEM-ProVis Professional is an easy-to-use and convenient Windows software package for optical plasma emission measurements running on our fiber optics coupled TranSpec process spectrometer. The software permits to simultaneously trace up to 4 emission peaks at any wavelength selectable in the spectral range of approximately 200 nm to 1000 nm. The captured emission spectrum and emission trend values to trace are viewed real-time in different charts ("plasma monitoring"). At the same time, the emissions trend values and certain measurement status information is reported to digital and analog out-ports, which permits a closed-loop measurement setup ("plasma controlling").

Exemplary screenshot of PEM-ProVis Professional

PEM-ProVis Professional Software • Technical Specifications
May 2025, related to version 3.0, without guarantee, subject to changes

Minimum Hardware and Software Requirements

- Standard PC/Laptop with Windows 10 or Windows 11
- Monitor with at least Full-HD, higher resolution is strictly recommended
- USB 2.0/ 3.x required or optionally Ethernet/LAN connection
- TranSpec Spectrometer

General Description

- Multi-Threaded and Multiple Document Interface handling
- Shell registration for drag-and-drop of PEM-ProVis Professional document files
- Minimum requirement of resource and memory
- Programmed in Visual C++ by use of the Microsoft Foundation Classes (MFC)
- Consideration of the Microsoft Application Design Guide: menu toolbar, status bar, tool tips, on-line help
- Fully supports Windows themes, multi-monitor use and Windows scaling
- Software documentation as detailed, color printed user manual with many examples
- Available in English

Various Options for Measurement and Visualization

- Performs manually or fully automatic triggered measurement runs, trigger by timer or TTL input
- Optionally high speed and lossless spectra burst mode into TranSpec local memory buffer
- Optionally separate TTL-out port on TranSpec for trigger-out of burst mode start/stop
- Supports 8-channel digital out for reporting measurement status information and emission trace high/low limits
- Supports 4-channel analog out (unipolar 0-10 volt) for reporting emission trace values
- User extendable x-axis line lists for labeling emission peaks, for example, of chemical elements in spectrum charts
- Real-time representation of emission spectrum during measurement
- Real-time representation of up to 4 emission trace results as trend and bar chart
- Logs up to 100,000 emission trace results to read-shared text files, accessible during measurement
- Logs up to 100,000 emission spectra as Spectra-Recorder, which permits a subsequent off-line re-evaluation
- Data export of Spectra-Recorder contents as tabulated text file
- Saves all your parameter settings into individual parameter files, password protection possible
- Quick access to last used parameter and Spectra-Recorder files