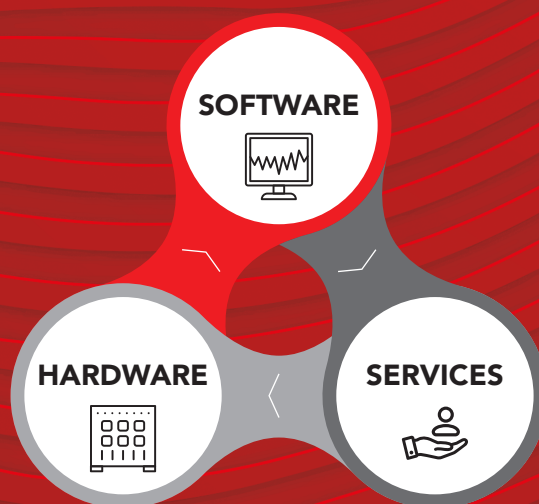


# Spectr+swiss

Mass spectrometry data acquisition, processing, and analysis

## BOOSTING INFORMATION BOOSTING KNOWLEDGE



Spectroswiss Inc. | 245 First Street | Riverview II | Cambridge, MA 02142 | USA

Spectroswiss Sàrl | EPFL Innovation Park | 1015 Lausanne | Switzerland

Spectrotech SAS | 132 rue Bossuet | 69006 Lyon | France

[www.spectroswiss.ch](http://www.spectroswiss.ch)

## Hardware tools to access the unreduced data in FTMS

Most Fourier transform mass spectrometers (FTMS) provide only processed and noise reduced data (mass spectra). Having access to the true raw data (FTMS time-domain transients) permits the most informative and efficient data processing possible. Our **FTMS Boosters**, compatible with all FTMS instruments on the market, enable time-domain transient acquisition and access to high quality unreduced data. Combine them with our **Peak-by-Peak** software for advanced data processing and data analysis to take the full advantage of your FTMS platforms!

### ORBITRAP™ TRANSIENT ACQUISITION & PROCESSING

## FTMS Booster X2T

- Easy add-on to any Orbitrap™
- Works in parallel with the in-built data acquisition electronics
- **Thunderbolt™** technology for remote control and rapid data transfer
- Unlocks **absorption mode FT (aFT)** mass spectra representation
- Full transient detection for enhanced sensitivity, (ultra-high) resolution, and duty cycle
- Patented technology to maximize sensitivity through simultaneous acquisition of low/high gain transients via proprietary PXIe amplifier
- Detection of ion signals across the full  $m/z$  range
- **[NEW]** **User-defined first  $m/z$  value** to minimize data sizes and maximize processing speeds
- **[NEW]** Acquires transients of any length, e.g., > 25 s
- Takes care of the heavy data sets
- Option: a stand-alone powerful **data analysis workstation**

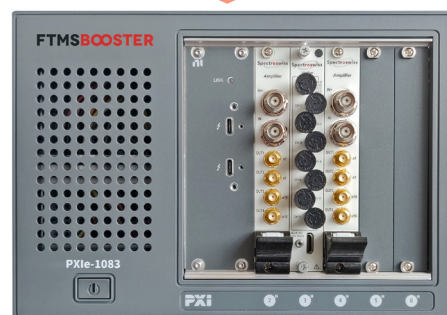


### FT-ICR MS TRANSIENT ACQUISITION & PROCESSING

## FTMS Booster X3T

- Easy add-on to any FT-ICR MS, as well as any Orbitrap™ FTMS
- **Thunderbolt™** technology for remote control and rapid data transfer
- Acquisition of both excite and detect waveforms in FT-ICR MS
- Unlocks **absorption mode FT (aFT)** mass spectra representation
- **User-defined first  $m/z$  value** to minimize data sizes and maximize processing speeds
- Full and accurate transient detection for enhanced FTMS performance
- Two reserved slots for hardware extension modules
- Option: a stand-alone powerful **data analysis workstation**

NEW

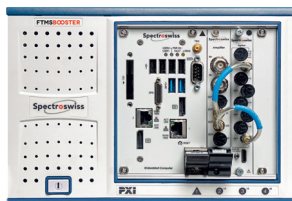


### INTEGRATED SINGLE-CHASSIS MODELS

## FTMS Booster X2

For Orbitrap™ transient acquisition

- Easy add-on to any Orbitrap™
- All capabilities of FTMS Booster X2T technology
- Rugged single-chassis system, small footprint
- High-capacity (4TB) fast SSD buffer



## FTMS Booster X3

For FT-ICR MS transient acquisition

- Easy add-on to any FT-ICR MS
- All capabilities of FTMS Booster X3T technology
- Rugged single-chassis system
- High-capacity (16 TB) fast SSD buffer



## Software tools for data processing and analysis

Spectroswiss software solutions provide a step-change in mass spectrometry data quality and processing sophistication. Our computationally-efficient tools are capable of processing any size datasets, whether these are **unreduced data** (time-domain transients and absorption mode FT, or aFT, mass spectra) or **reduced data** (e.g., full and reduced profile enhanced FT, or eFT, and magnitude mode FT, or mFT, mass spectra). These tools empower the application-specific workflows offering step-by-step data processing and analysis routines.

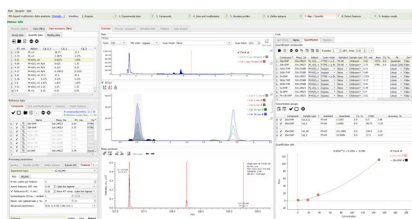
### ADVANCED MODULAR SOFTWARE

# PEAKBYPEAK

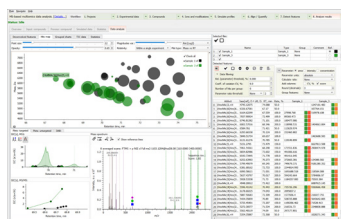
Peak-by-Peak suite: a powerful set of computational modules to process time-domain transients or mass spectra. Available in Base and Expert Editions.

NEW

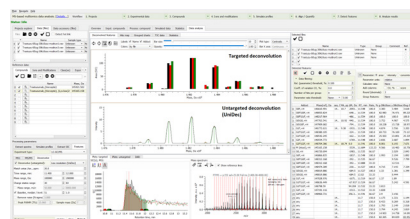
### PEAK-BY-PEAK MULTIOMICS ALL-IN-ONE WORKFLOW



**Small molecules:**  
metabolomics, lipidomics,  
protein-ligand interactions

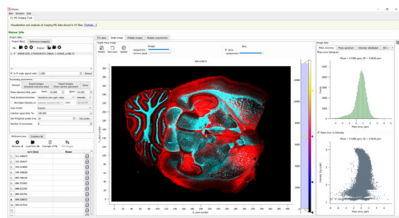


**Peptides & peptidofoms:**  
profiling & quantitation of glycopeptides  
& peptides with other modifications

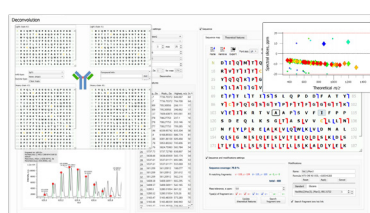


**Proteins & proteofoms:**  
intact mass & quantitation  
protein-ligand interactions

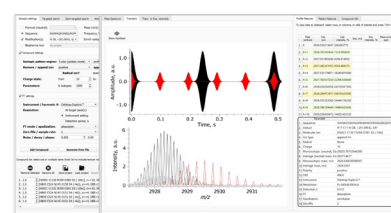
### PEAK-BY-PEAK APPLICATION-SPECIFIC WORKFLOWS



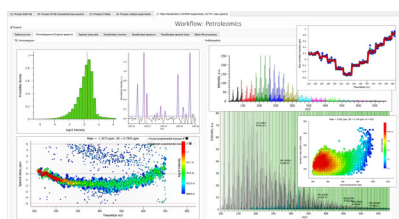
**MS Imaging:**  
MALDI & DESI



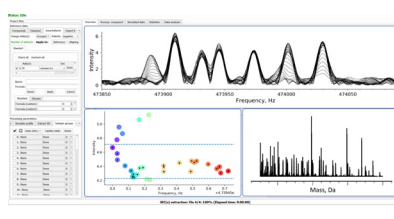
**Proteofoms sequencing:**  
top-down & middle-down analysis



**Accurate simulations of FTMS transients,  
isotopic envelopes, & mass spectra**



**Complex mixture analysis  
(direct infusion & LC-MS)**



**Charge detection mass spectrometry  
(CDMS)**



**Custom workflows to meet your specific  
requirements & needs!**

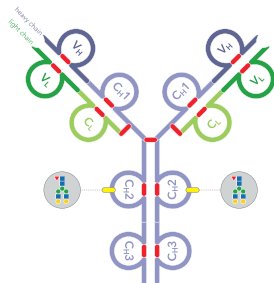
### KEY FEATURES

- step-by-step workflows for advanced processing and analysis of mass spectrometry data
- a **multi-vendor** toolbox, featuring a direct data import of major vendor and open-source file types
- support of reduced and unreduced data, including full profile mass spectra and time-domain transients
- targeted deconvolution and untargeted low-resolution (UniDec) and high-resolution (Hardklor) deconvolution
- targeted experimental data search and annotation with simulated centroid and profile isotopic envelopes
- parallel computing on multiple CPU-cores and GPUs for fast data processing
- powerful and memory-efficient handling of any size datasets

## Services to support your research & training

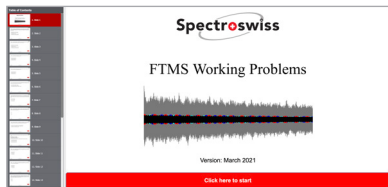
We offer a range of CRO services, consulting, and training courses. Utilizing our in-depth expertise and industry-leading know-how, and equipped with our proprietary advanced software and hardware tools, we look forward to supporting you in your routine and most challenging FTMS developments and applications.

### CRO SERVICES FOR PROTEIN (ANTIBODIES) ANALYSIS



- Advanced and proprietary mass spectrometry solutions for mAb analysis, including complex multi-specific mAbs and ADCs/AOCs
- Superior quality data due to our proprietary methods and techniques for Orbitrap FTMS, powered by our custom biopharma software tools
- Integration of intact mass, middle-up, middle-down, top-down, and bottom-up mass spectrometry approaches
- Personalized follow-up and dedicated customer support

### FTMS EDUCATION & TRAINING



- In addition to our on-demand on-line training programs, we offer advanced studies and a short course on “FTMS Fundamentals and Data Processing”
- The Short Course teaches and discusses current best practices and knowledge in FTMS (with an emphasis on Orbitrap FTMS fundamentals and FTMS data processing)
- The Course program mixes lectures, practical workshops, and hands-on problem solving
- The Course is designed for FTMS end-users in academic and industrial analytical departments. It is best suited for small groups (5-20 participants). On-site and On-line options are available

### FTMS INSTRUMENT & WORKFLOW DIAGNOSTICS



- Identify the strengths and limitations of your FTMS platforms
- Understand millisecond-timescale logistics of your experiments
- Explore ultra-high resolution capabilities
- Improve and expand your workflows
- Advance your most challenging applications

### COMPANY PROFILE

Spectroswiss is a 2014 spin-out from a Biomolecular Mass Spectrometry Laboratory at Ecole Polytechnique Fédérale de Lausanne (EPFL) in Switzerland. We provide software solutions for comprehensive data processing and data analysis in mass spectrometry, as well as advanced hardware for FTMS data acquisition. Capitalizing on our expertise in FTMS and proprietary advanced hardware and software solutions, we offer expert-level FTMS-related consulting, training, and CRO services. The company's headquarters are located in Lausanne, Switzerland. Our US office is in Cambridge, MA and our EU representative is Spectrotech SAS in Lyon, France. Welcome!



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