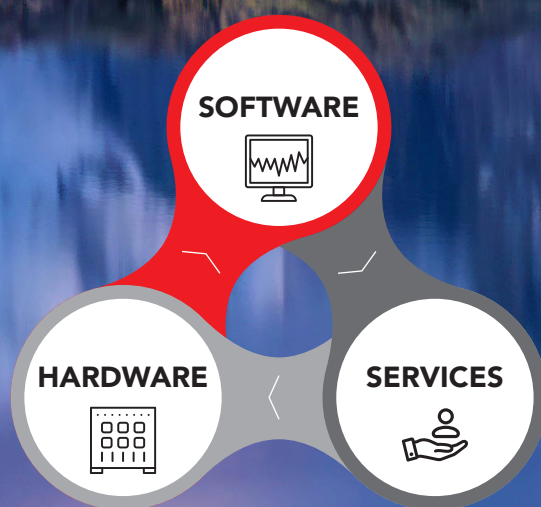


Spectro+swiss

EMPOWERING PRECISION UNLOCKING MOLECULAR INSIGHT

Mass spectrometry data acquisition, processing, and analysis

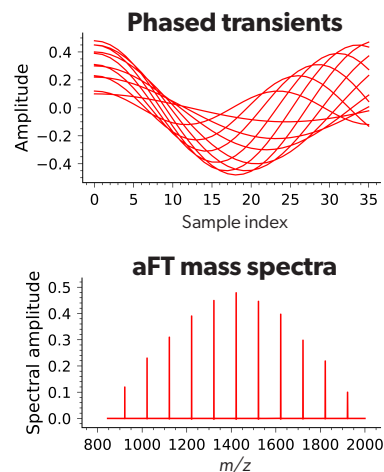
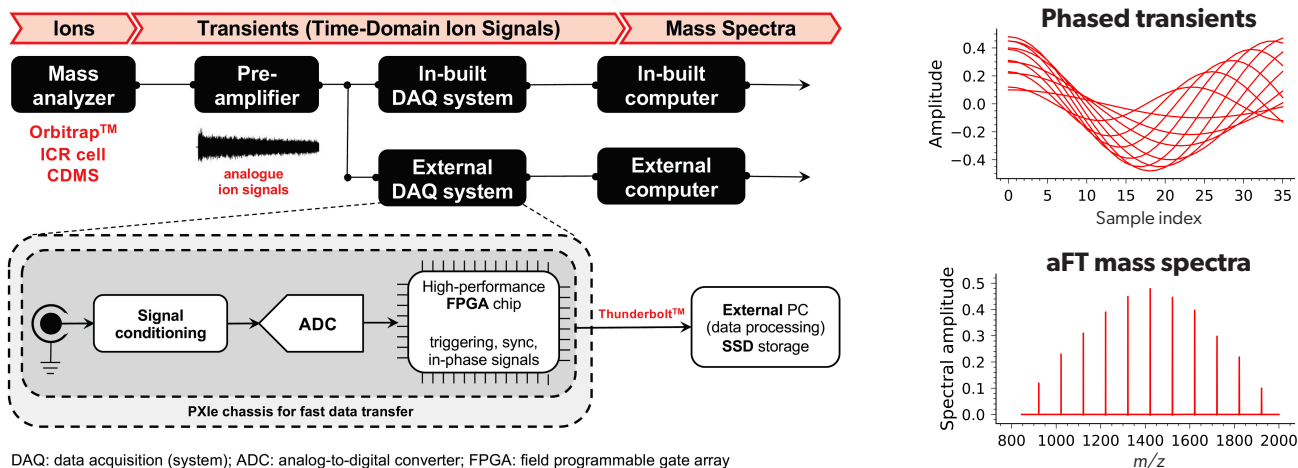


Spectroswiss Sàrl | EPFL Innovation Park | 1015 Lausanne | Switzerland
www.spectroswiss.ch

Access the unreduced data behind FTMS performance

Time-domain ion signals - transients - are the foundation of FTMS performance. FTMS Booster systems provide flexible access to high-quality transient data, enabling advanced acquisition, processing, and method development across Orbitrap™ and FT-ICR MS platforms.

FTMS BOOSTER SYSTEMS ARCHITECTURE



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
- **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 PXI amplifier*
- Detection of ion signals across the full m/z range
- **User-defined first m/z value** to minimize data sizes and maximize processing speeds
- Acquires transients of any length, e.g., >25 s
- Takes care of the heavy data sets
- Calibrated signal amplitudes to provide complementary data (e.g. ion charges for CDMS applications, ion transmission tuning)
- Data visualization modes: single scan and transient averaging (micro-scans average, moving average, cumulative average)
- Acquisition of an arbitrary long signal (continuous data stream) for R&D set-ups
- Auxiliary real-time high-dynamic range digital filters for R&D set-ups
- Auxiliary DC-level adjustment of input signals for R&D set-ups
- Option: a stand-alone powerful **data analysis workstation**



PXI Amplifier

*Patent US 11,222,774 from 2022

FT-ICR MS TRANSIENT ACQUISITION & PROCESSING

FTMS Booster X3T

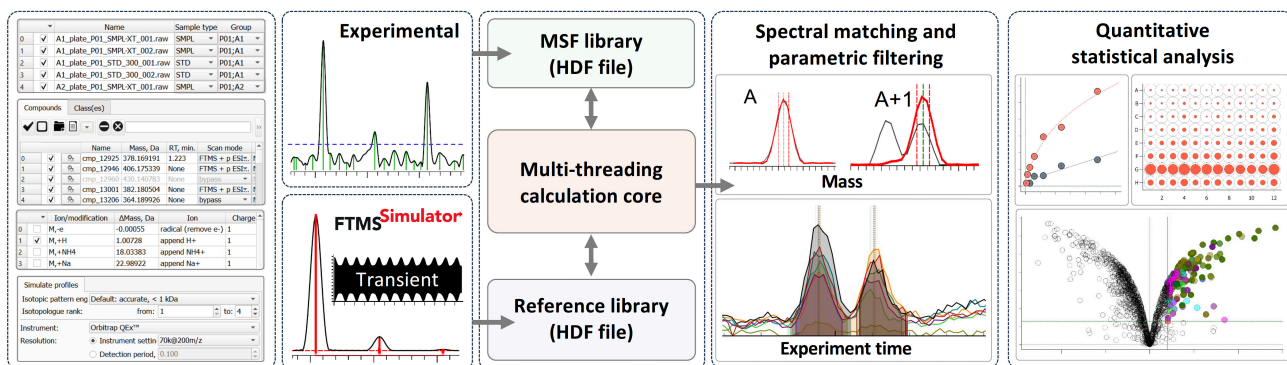
- Easy add-on to any FT-ICR MS, as well as any Orbitrap™ FTMS
- **Thunderbolt™** technology for remote control and rapid data transfer
- Acquisition of both excite and detect waveforms in FT-ICR MS
- All capabilities of the FTMS Booster X2T
- Two reserved slots for hardware extension modules
- Option: a stand-alone, powerful **data analysis workstation**



Software tools for data processing and analysis

Spectroswiss software tools are designed to process large, complex, multi-vendor MS datasets with high computational efficiency and application-specific workflows - from FTMS simulation and transient processing to MSI, biopharma and breath analysis, CDMS, metabolomics, proteomics, and custom workflows.

PEAK-BY-PEAK FRAMEWORK CONCEPT



PEAK-BY-PEAK APPLICATION-SPECIFIC WORKFLOWS

Real-time process monitoring
(GC-MS, EI-MS, etc.)

Metabolomics, lipidomics, protein-ligand interactions

MS Imaging: MALDI & DESI

Complex mixture analysis
(direct infusion & LC-MS)

Volatilomics: breath, nose-space, and headspace analysis

Quantitative bottom-up proteomics, glycoproteomics, PTMs analysis

Proteoforms sequencing: Waterfall-powered top-down analysis

Charge detection mass spectrometry (CDMS)

Isotopic analysis: stable isotopic labeling, isotopic ratios

Proteins & proteoforms: intact mass & quantitation

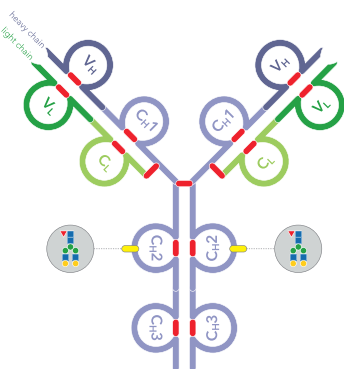
Custom workflows, e.g., Cyclic peptide analysis & Super-resolution MS

FTMS Simulator: desktop and web-app versions, www.peakbypeak.com

Expert services for advanced FTMS applications

Spectroswiss combines proprietary FTMS hardware, software, and scientific expertise to support routine and challenging analytical workflows. We offer CRO services, consulting, diagnostics, and training for academic, biotech, pharma, and analytical laboratories.

CRO SERVICES FOR PROTEIN THERAPEUTICS



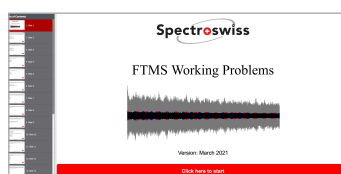
- Leverage multiple Orbitrap™-based LC-MS platforms in Switzerland, matched to your sample type, analytical goals, and molecular complexity
- Characterize complex biologics with industry-standard and proprietary MS workflows for mAbs, multi-specific antibodies, ADCs/AOCs, conjugated AAVs, and other protein-based modalities
- Increase analytical confidence with enhanced Orbitrap™ acquisition and processing, including unreduced workflows, full-profile mass spectra, time-domain ion signals, and replicate-based spectral averaging
- Support discovery and confirmation with untargeted and targeted proteomics for protein sequencing, PTM profiling, site-specific PTM analysis, and relative quantitation
- Resolve complex glycosylation patterns using N- and O-glycosylation workflows supported by complementary ETD/HCD fragmentation
- Apply intact mass, middle-up, middle-/top-down, and bottom-up MS strategies for comprehensive characterization of protein complexes and subunits
- Analyze high-mass and heterogeneous assemblies using Orbitrap™-based Charge Detection Mass Spectrometry, including intact ligand-free and conjugated AAV capsids
- Extend your internal capabilities with expert analytical support, released glycan analysis, custom data interpretation, and advanced MS data analysis services

FTMS INSTRUMENT & WORKFLOW DIAGNOSTICS



- Evaluate platform strengths and limitations
- Understand timing, duty cycle, and experiment logistics
- Explore ultra-high-resolution and transient-based capabilities
- Improve acquisition, processing, and reporting workflows

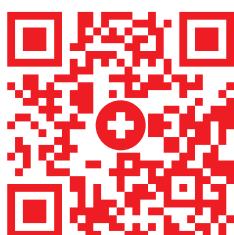
FTMS EDUCATION & TRAINING



- FTMS fundamentals and FTMS data-processing courses
- Orbitrap™-focused best practices
- Online or on-site customized programs
- Lectures, practical workshops, and hands-on problem solving

COMPANY PROFILE

Spectroswiss is a 2014 spin-out from the Biomolecular Mass Spectrometry Laboratory at EPFL in Lausanne, Switzerland. The company develops advanced hardware and software for FTMS data acquisition, processing, simulation, visualization, and analysis. Building on deep FTMS expertise and proprietary technologies, Spectroswiss also provides CRO services, consulting, workflow diagnostics, and training for advanced and routine mass spectrometry applications. Spectroswiss operates from Lausanne, Switzerland. Welcome!



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